SUPER SOURCEBOOK

SPEARS® MANUFACTURING COMPANY
Since 1969
SYLMAR, CALIFORNIA

LIST PRICE & TECHNICAL INFORMATION CATALOG

PLASTIC FITTINGS, VALVES, PIPE & CEMENT

MADE IN THE U.S.A. WITH PRIDE

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FOR ALL YOUR PLASTIC PIPING NEEDS

SSB-1-0513

Spears® Super Sourcebook

Your One-Stop Source For Plastic Fittings, Valves, Pipe & Cement

Welcome to…

Spears® SUPER SOURCEBOOK List Price & Technical Information Catalog for Plastic Fittings, Valves, Pipe & Cement - a comprehensive pricing and technical information listing of all Spears® Plastic Fittings, Valves, Pipe & Cement catalogued product for all your plastic piping needs.

NEW LAYOUT - This catalog provides both List Pricing and Technical Information sections in a consecutive format. For example, *Schedule 40 Fittings & Accessories* list pricing section is immediately followed by *Schedule 40 Fittings & Accessories Technical Information section.*

List Prices Sections

Each section groups common categories of products and accessories. Periodic references are given for location of other related products for convenient use and versatility in finding the products you need. Take a few minutes to peruse the Table of Content for an overview of organization and content. Product are sold only through authorized distributors Contact your servicing Spears® Regional Distribution Center for additional information.

Technical Information Sections

Each section provides available Weights & Dimensions and other Technical Information on a host of Spears® product lines. Technical Information Sections immediately follow the applicable List Price Sections for ease of locating desired information. Again, take a few minutes to peruse the Table of Content for an overview of organization and content.

Tab Locators

"Tab Locator" pages let you quickly thumb to each category by matching shaded tabs in the outer margin of each page. There are two Tab Locator pages. Tab Locator I covers the 1st half of the catalog and Tab Locator II covers the 2nd half. Colored Tabs with the Dollar Sign ($) are for Pricing sections and Tabs of the same color with the Tape Measure ( ) designate Technical Information section applicable to the preceding Pricing section.

Pricing Part Number Index

Spears® Part Number Index allows quick page number location for pricing of Spears® standard catalogued parts. Simply look up known part number in the numerical index to find designated page on which the part can be found. Please note that certain special and custom parts are not catalogued.

On-line Catalog Resources

See also **Spears® On-line Catalog** for *Current Catalog List Price Updated Daily* and **Catalog Downloads** for *Super Sourcebook List Price & Tech Info Updated Weekly* on the Spears® website. These can be accessed to verify pricing and check for any changes or adjustments that may occur between catalog publications. Both can be downloaded to your personal computer for added convenience at www.spearsmfg.com

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See Spears® Regional Distribution Centers on back cover

TAB LOCATOR I

Convenient "Tab Locator" page lets you quickly thumb to each category matching shaded tabs in the outer margin of each page.
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Understanding Column Header & Configuration Information

A variety of Column Header layouts are used to list product part numbers, options, product codes, and list price. The following are the most typical used:

Typical Fitting Column Header label identifies the following product particulars:

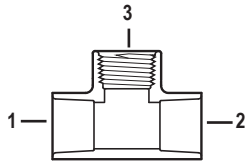
Part Number	The number used to order the part.
Size	Nominal diameter of pipe with which the fitting is to be used. NOTE: Fittings may be same size (only one size designation) or reducing (multiple sizes designated).
Standard Pack (Std Pk)	The quantity of parts packaged in an individual box or bag.
Master Carton (Mstr Ctn)	The total quantity of parts contained in individual boxes or bags which are packaged together.
Product Code (Prod Code)	Identification code for applicable Product Groups used on Distributor programs.
Price Each	The designated list price of the product.

Fitting Configuration Drawings are accompanied by the product's name and an abbreviated configuration description of the fitting outlet connections. Line drawing illustrations are general representations of the fittings in the group, but may not be an exact depiction of all configurations listed. Line drawings are correlated to the configuration description. The drawing is read left to right for Elbow and Adapter configurations. Tees have an additional outlet branch and are read left to right (run) then top (branch). Drawings for Wyes and Crosses are read top to bottom then left to right and bushings drawings are read as outside x inside configuration. The configuration description also correlates to the size designation. As with the nominal size designations, only one description is given when all outlets are the same. Reducing sizes list run configuration x branch configuration.

Example

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
402-003	3/8	50	200	040	.97
402-005	1/2	50	300	040	1.01
402-007	3/4	50	0	040	1.58

Product Name Abbreviated Configuration Description — Tee; Soc x Fipt



In this example, outlet description is "Soc x Fipt" which indicates:
1. Socket x
2. Socket x
3. Female Iron Pipe Thread

Typical Valve Column Header label identifies the following product particulars. Headers are generally preceded by identification of material type and configuration descriptions. Again, variations exist according to product type and configurations.

Size	The nominal diameter of the pipe with which the valve is to be used.
Seal Type (i.e., EPDM, FKM)	Designated elastomer seal (O-ring, Seat, Diaphragm, etc.) NOTE: Part Number and List Price are typically specified under the seal type columns. Certain products may have other column header designations under which part number and pricing are specified in a similar manner.
Standard Pack (Std Pk)	The quantity of parts packaged in an individual box or bag.
Master Pack (Mstr Pk)	The total quantity of parts contained in a single packaging of multiple Standard Packs.
Product Code (Prod Code)	Identification code for applicable Product Groups used on Distributor programs.

Valve Illustrations may be as photos or line drawings. Illustrations are general representations of the valve or product specified, but may not depict all configurations listed.

Example

Product Type (Page Heading)

True Union 2000 Industrial Ball Valves

Typical Presentation Photo

Material — **PVC Industrial**

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code

End Connector — **Socket Ends**

Part Number

1/2	1829-005 XX.XX	1829-005 XX.XX	1	18	101

Price

Technical Data

Socket Style

Pressure Rating @ 73°F (23°C) Water

1/2" - 4"	235 psi
6" - 8"	150 psi
Flanged	150 psi

Maximum Service Temperature
PVC=140°F (60°C)
CPVC=200°F (93°C)

Temperature/Pressure De-ratings Apply

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PVC White Schedule 40 Pipe

PRICING

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC White Schedule 40 Pipe

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each

Pipe, Schedule 40 White Plain End

20' Lengths, Price Per Foot

List Price Per Foot

PD-400-005	**1/2**	20	0	947	1.12
PD-400-007	**3/4**	20	0	947	1.37
PD-400-010	**1**	20	0	947	2.18
PD-400-012	**1-1/4**	20	0	947	2.90
PD-400-015	**1-1/2**	20	0	947	3.29
PD-400-020	**2**	20	0	947	4.52
PD-400-025	**2-1/2**	20	0	947	7.62
PD-400-030	**3**	20	0	947	8.90
PD-400-040	**4**	20	0	947	12.46
PD-400-050	**5**	20	0	947	20.45
PD-400-060	**6**	20	0	947	22.53
PD-400-080	**8**	20	0	947	39.95
PD-400-100	**10**	20	0	947	54.37
PD-400-120	**12**	20	0	947	78.75
PD-400-140	**14**	20	0	947	99.58
PD-400-160	**16**	20	0	947	105.07

Schedule 40 Fittings

PRICING

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Schedule 40 Fittings

Tee
Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
401-003	3/8	50	400	040	2.48
401-005	1/2	50	300	040	.80
401-007	3/4	50	0	040	.92
401-010	1	50	0	040	1.72
401-012	1-1/4	25	0	040	2.68
401-015	1-1/2	25	0	040	3.26
401-020	2	25	0	040	4.75
401-025	2-1/2	10	0	040	15.67
401-030	3	10	0	040	20.59
401-040	4	6	0	040	37.25
401-050	5	5	0	040	89.96
401-060	6	4	0	040	125.37
401-080	8	2	0	040	290.76
401-100	10	1	0	041	963.41
401-100F	10	1	0	047	712.86
401-120	12	1	0	041	1423.49
401-120F	12	1	0	047	1004.45
401-140	14	1	0	044	2169.27
401-140F	14	1	0	047	1564.14
401-160F	16	1	0	047	2264.16
401-180F	18	1	0	047	2750.32
401-200F	20	1	0	047	3351.79
401-240F	24	1	0	047	4556.13

Tee - Reducing
Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
401-053	3/8X1/2	50	0	040	2.20
401-074	1/2X3/4	50	0	040	1.71
401-075	1/2X1	50	0	040	3.17
401-094	3/4X1/2X1/2	50	0	040	1.55
401-095	3/4X1/2X3/4	50	0	040	1.55
401-101	3/4X1/2	50	0	040	1.06
D401-101	3/4X1/2	50	0	040	1.47
401-102	3/4X1	50	0	040	3.04
401-122	1X1/2X1	50	0	040	3.04
401-124	1X3/4X1/2	50	0	040	3.04
401-125	1X3/4X3/4	50	0	040	3.04
401-126	1X3/4X1	50	0	040	3.04
401-130	1X1/2	50	0	040	1.81
D401-130	1X1/2	50	0	040	2.96
401-131	1X3/4	50	0	040	1.98
401-132	1X1-1/4	25	0	040	4.07
401-133	1X1-1/2	25	0	040	5.26
401-134	1X2	25	0	040	7.39
401-156	1-1/4X1X1/2	25	0	040	4.15
401-157	1-1/4X1X3/4	25	0	040	4.15
401-158	1-1/4X1X1	25	0	040	4.15
401-166	1-1/4X1/2	25	0	040	2.95
D401-166	1-1/4X1/2	25	0	040	2.95
401-167	1-1/4X3/4	25	0	040	2.95
401-168	1-1/4X1	25	0	040	2.95
401-169	1-1/4X1-1/2	25	0	040	5.39
401-170	1-1/4X2	25	0	040	7.39
401-199	1-1/2X1-1/4X1/2	25	0	040	5.17
401-201	1-1/2X1-1/4X3/4	25	0	040	5.17
401-202	1-1/2X1-1/4X1	25	0	040	5.17
401-209	1-1/2X1/2	25	0	040	5.17
D401-209	1-1/2X1/2	25	0	040	5.31
401-210	1-1/2X3/4	25	0	040	5.17
401-211	1-1/2X1	25	0	040	5.17
401-212	1-1/2X1-1/4	25	0	040	5.17
401-213	1-1/2X2	25	0	040	7.39

Tee - Reducing (continued)
Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
401-214	1-1/2X2-1/2	25	0	040	16.28
401-233	2X1X2	10	0	040	7.39
401-238	2X1-1/2X3/4	10	0	040	7.39
401-239	2X1-1/2X1	10	0	040	7.39
401-241	2X1-1/2X1-1/2	10	0	040	7.39
401-247	2X1/2	10	0	040	5.08
D401-247	2X1/2	10	0	040	7.39
401-248	2X3/4	10	0	040	5.08
401-249	2X1	10	0	040	5.08
401-250	2X1-1/4	10	0	040	5.08
401-251	2X1-1/2	10	0	040	5.08
401-253[1]	2X3	10	0	040	34.19
401-254[1]	2X4	6	0	040	67.67
401-287	2-1/2X1/2	10	0	040	15.63
401-288	2-1/2X3/4	10	0	040	15.63
401-289	2-1/2X1	10	0	040	15.63
401-290	2-1/2X1-1/4	10	0	040	15.63
401-291	2-1/2X1-1/2	10	0	040	15.63
401-292	2-1/2X2	10	0	040	15.63
401-293[1]	2-1/2X3	10	0	040	34.93
401-294[1]	2-1/2X4	6	0	040	67.67
401-333	3X1/2	10	0	040	22.40
401-334	3X3/4	10	0	040	22.40
401-335	3X1	10	0	040	22.40
401-336	3X1-1/4	10	0	040	22.40
401-337	3X1-1/2	10	0	040	22.40
401-338	3X2	6	0	040	22.36
401-339	3X2-1/2	6	0	040	27.97
401-342	3X4	6	0	040	38.48
401-344[1]	3X6	4	0	040	200.62
401-415[1]	4X1/2	6	0	040	38.69
401-416	4X3/4	6	0	040	37.25
401-417	4X1	6	0	040	37.25
401-418	4X1-1/4	10	0	040	37.25
401-419	4X1-1/2	10	0	040	37.25
401-420	4X2	10	0	040	37.25
401-421[1]	4X2-1/2	6	0	040	43.17
401-422	4X3	6	0	040	37.25
401-426[1]	4X6	4	0	040	200.62
401-428[1]	4X8	2	0	040	553.74
401-486[1]	5X2	5	0	040	87.34
401-487[1]	5X2-1/2	4	0	040	96.09
401-488	5X3	4	0	040	87.34
401-490	5X4	3	0	040	87.34
401-492[1]	5X6	4	0	040	204.87
401-494[1]	5X8	1	2	040	704.86
401-526[1]	6X1-1/4	4	0	040	128.23
401-527[1]	6X1-1/2	5	0	040	128.23
401-528	6X2	3	0	040	125.37
401-529[1]	6X2-1/2	5	0	040	134.88
401-530	6X3	5	0	040	125.37
401-532	6X4	2	0	040	125.37
401-533[1]	6X5	4	0	040	166.41
401-535[1]	6X8	2	0	040	553.74
401-537[1]	6X10	1	0	041	1589.98
401-578[1]	8X2	2	0	040	303.64
401-579[1]	8X2-1/2	4	0	040	303.64
401-580	8X3	1	0	040	290.76
401-582	8X4	2	0	040	290.76
401-583[1]	8X5	2	0	040	335.16
401-585	8X6	2	0	040	290.76
401-589[1]	8X10	1	0	041	1589.98
401-621[1]	10X2	1	0	041	863.35
401-621F	10X2	1	0	047	566.63
401-622F	10X2-1/2	1	2	047	597.93

PVC Schedule 40 Fittings

Tee - Reducing (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
401-623[1]	10X3	1	0	041	863.35
401-623F	10X3	1	0	047	607.77
401-624[1]	10X4	1	0	041	863.35
401-624F	10X4	1	0	047	629.60
401-625[1]	10X5	1	0	041	863.35
401-625F	10X5	1	0	047	738.67
401-626	10X6	1	0	041	825.62
401-626F	10X6	1	0	047	711.99
401-628[1]	10X8	1	0	041	1057.06
401-628F	10X8	1	0	047	798.78
401-632[1]	10X12	1	0	041	1759.45
401-634F	10X14	1	0	047	1804.71
401-636F	10X16	1	0	047	2247.38
401-661F	12X2	1	0	047	732.69
401-662F	12X2-1/2	1	0	047	773.08
401-663F	12X3	1	0	047	789.23
401-664[1]	12X4	1	0	041	1351.39
401-664F	12X4	1	0	047	837.26
401-665F	12X5	1	0	047	993.12
401-666[1]	12X6	1	0	041	1351.39
401-666F	12X6	1	0	047	890.59
401-668	12X8	1	0	041	1192.86
401-668F	12X8	1	0	047	991.93
401-670[1]	12X10	1	0	041	1858.69
401-670F	12X10	1	0	047	1102.17
401-674F	12X14	1	0	047	2083.20
401-676F	12X16	1	0	047	2515.47
401-678F	12X18	1	0	047	4467.56
401-691F	14X2	1	0	047	918.09
401-693F	14X3	1	0	047	1000.22
401-694F	14X4	1	0	047	1063.72
401-695F	14X5	1	0	047	1110.13
401-696F	14X6	1	0	047	1127.21
401-698F	14X8	1	0	047	1187.92
401-700F	14X10	1	0	047	1390.32
401-702	14X12	1	0	044	1624.68
401-702F	14X12	1	0	047	1579.24
401-706F	14X16	1	0	047	3051.73
401-751F	16X2	1	0	047	1020.12
401-753F	16X3	1	0	047	1075.91
401-754F	16X4	1	0	047	1141.00
401-756F	16X6	1	0	047	1216.69
401-758F	16X8	1	0	047	1337.32
401-760F	16X10	1	0	047	1457.80
401-762F	16X12	1	0	047	1698.32
401-764F	16X14	1	0	047	2030.45
401-768F	16X18	1	0	047	4545.36
401-781F	18X2	1	0	047	1133.67
401-783F	18X3	1	0	047	1162.85
401-784F	18X4	1	0	047	1176.16
401-786F	18X6	1	0	047	1348.82
401-788F	18X8	1	0	047	1479.98
401-790F	18X10	1	0	047	1759.27
401-792F	18X12	1	0	047	1824.32
401-794F	18X14	1	0	047	2406.14
401-796F	18X16	1	0	047	2762.14
401-811F	20X2	1	0	047	1435.19
401-813F	20X3	1	0	047	1462.59
401-814F	20X4	1	0	047	1484.69
401-816F	20X6	1	0	047	1508.23
401-818F	20X8	1	0	047	1568.46
401-820F	20X10	1	0	047	1943.21
401-822F	20X12	1	0	047	2115.47
401-824F	20X14	1	0	047	2673.49
401-826F	20X16	1	0	047	3156.02

Tee - Reducing (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
401-828F	20X18	1	0	047	3507.78
401-901F	24X2	1	0	047	2372.20
401-903F	24X3	1	0	047	2467.92
401-904F	24X4	1	0	047	2953.34
401-906F	24X6	1	0	047	3033.57
401-908F	24X8	1	0	047	3167.79
401-910F	24X10	1	0	047	3237.25
401-912F	24X12	1	0	047	3328.96
401-914F	24X14	1	0	047	3573.79
401-916F	24X16	1	0	047	3754.69
401-918F	24X18	1	0	047	4102.93
401-920F	24X20	1	0	047	4406.42

[1]Outlet sized with Bushing

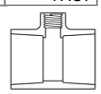
Tee

Soc x Fipt

402-003	3/8	50	200	040	2.51
402-005	1/2	50	300	040	1.06
402-007	3/4	50	0	040	1.64
402-010	1	50	0	040	3.04
402-012	1-1/4	25	0	040	4.85
402-015	1-1/2	25	0	040	6.31
402-020	2	10	0	040	8.00
402-025	2-1/2	10	0	040	24.32
402-030	3	10	0	040	30.99
402-040	4	6	0	040	47.37

Tee - Reducing

Soc x Fipt



402-071	1/2X1/8	50	300	040	2.28
402-072	1/2X1/4	50	200	040	2.28
402-074	1/2X3/4	50	0	040	2.28
402-094	3/4X1/2X1/2	50	0	040	1.60
402-095	3/4X1/2X3/4	50	0	040	1.60
402-097	3/4X1/8	50	0	040	9.92
402-101	3/4X1/2	50	0	040	1.41
402-124	1X3/4X1/2	50	0	040	3.04
402-125	1X3/4X3/4	50	0	040	3.04
402-130	1X1/2	50	0	040	2.13
402-131	1X3/4	50	0	040	3.04
402-156	1-1/4X1X1/2	25	0	040	4.85
402-157	1-1/4X1X3/4	25	0	040	4.85
402-158	1-1/4X1X1	25	0	040	4.85
402-166	1-1/4X1/2	25	0	040	5.08
402-167	1-1/4X3/4	25	0	040	5.08
402-168	1-1/4X1	25	0	040	5.08
402-199	1-1/2X1-1/4X1/2	25	0	040	6.31
402-201	1-1/2X1-1/4X3/4	25	0	040	6.31
402-202	1-1/2X1-1/4X1	25	0	040	6.31
402-209	1-1/2X1/2	25	0	040	6.31
402-210	1-1/2X3/4	25	0	040	6.31
402-211	1-1/2X1	25	0	040	6.31
402-212	1-1/2X1-1/4	25	0	040	6.31
402-238	2X1-1/2X3/4	10	0	040	7.94
402-239	2X1-1/2X1	10	0	040	7.94
402-247	2X1/2	10	0	040	7.94
402-248	2X3/4	10	0	040	7.94
402-249	2X1	10	0	040	7.94
402-250	2X1-1/4	10	0	040	7.94
402-251	2X1-1/2	10	0	040	7.94
402-287	2-1/2X1/2	10	0	040	17.18
402-288	2-1/2X3/4	10	0	040	17.18

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Schedule 40 Fittings

Tee - Reducing (continued)

Soc x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
402-289	2-1/2X1	10	0	040	17.18
402-290	2-1/2X1-1/4	10	0	040	17.18
402-291	2-1/2X1-1/2	10	0	040	17.18
402-292	2-1/2X2	10	0	040	17.18
402-333	3X1/2	10	0	040	24.54
402-334	3X3/4	10	0	040	24.54
402-335	3X1	10	0	040	24.54
402-336	3X1-1/4	10	0	040	24.54
402-337	3X1-1/2	10	0	040	24.54
402-338	3X2	6	0	040	24.54
402-417	4X1	6	0	040	41.01
402-419	4X1-1/2	10	0	040	41.01
402-420	4X2	10	0	040	41.01
402-422	4X3	6	0	040	41.01
402-490	5X4	3	0	040	107.13
402-525[1]	6X1	3	0	040	139.00
402-528	6X2	3	0	040	139.00
402-530	6X3	5	0	040	139.00
402-532	6X4	2	0	040	139.00
402-578[1]	8X2	3	0	040	300.60
402-580[1]	8X3	2	0	040	300.60
402-582[1]	8X4	2	0	040	300.60
402-621F	10X2	1	0	047	584.85
402-622F	10X2-1/2	1	0	047	588.97
402-623F	10X3	1	0	047	625.91
402-624F	10X4	1	0	047	678.69
402-661F	12X2	1	0	047	750.88
402-663F	12X3	1	0	047	809.00
402-664F	12X4	1	0	047	875.84

[1]Outlet-sized with Bushing

Tee - Special Reinforced

Soc x SR Fipt - Stainless Steel Collar

402-005SR	1/2	25	200	046	8.06
402-012SR	1-1/4	25	0	046	15.85

Tee - Special Reinforced Reducing

Soc x SR Fipt - Stainless Steel Collar

402-072SR	1/2X1/4	25	150	046	8.06
402-098SR	3/4X1/4	25	100	046	10.47
402-101SR	3/4X1/2	50	0	046	10.47
402-166SR	1-1/4X1/2	15	0	046	17.52
402-168SR	1-1/4X1	10	0	046	17.87
402-212SR	1-1/2X1-1/4	10	0	046	19.35
402-287SR	2-1/2X1/2	10	0	046	23.55
402-288SR	2-1/2X3/4	10	0	046	24.88
402-289SR	2-1/2X1	10	0	046	25.13
402-290SR	2-1/2X1-1/4	10	0	046	24.74
402-291SR	2-1/2X1-1/2	10	0	046	25.72
402-292SR	2-1/2X2	10	0	046	25.93
402-333SR	3X1/2	10	0	046	31.40
402-334SR	3X3/4	10	0	046	31.40
402-335SR	3X1	10	0	046	32.03
402-336SR	3X1-1/4	10	0	046	32.78
402-337SR	3X1-1/2	10	0	046	32.49
402-338SR	3X2	6	0	046	34.42
402-417SR	4X1	6	0	046	41.59
402-419SR	4X1-1/2	10	0	046	45.68
402-420SR	4X2	10	0	046	47.17
402-422SR	4X3	6	0	046	74.11

Tee

Soc x Mipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
402B-010	1	50	0	040	3.46

Tee

Soc x Fipt x Soc

403-007	3/4	50	0	040	1.80

Tee - Reducing

Soc x Fipt x Soc

403-095	3/4X1/2X3/4	50	0	040	4.31

Tee - Special Reinforced Reducing

Soc x SR Fipt-Stainless Steel Collar x Soc

403-095SR	3/4X1/2X3/4	50	0	046	2.73

Tee

Fipt

405-005	1/2	50	0	040	2.94
405-007	3/4	50	0	040	4.61
405-010	1	50	0	040	6.38
405-012	1-1/4	25	0	040	8.83
405-015	1-1/2	25	0	040	9.11
405-020	2	10	0	040	12.06
405-025[1]	2-1/2	5	0	040	42.94

[1]Outlet sized with Bushing

Tee - Street

Spig x Soc x Soc

444-005	1/2	25	200	040	4.14
444-007	3/4	15	120	040	5.52
444-010	1	15	0	040	7.13
444-012	1-1/4	10	0	040	11.46
444-015	1-1/2	10	0	040	15.83
444-020	2	10	0	040	27.54

Manifold Tee - O-ring Sealed

O-ring Sealed MIPT x Fipt x MIPT

EPDM O-ring Seal on Tee run

451A-010	1	50	0	019	4.49

O-ring end MIPT is designed to assemble to corresponding Manifold Tee FIPT Only. Multiple Mainifold Tee-to-Maniffold Tee assemblies can be made with NO Thread Sealant required. Branch MIPT and Terminal MIPT in manifilold assembly can be joined without O-ring to standard FIPT using thread sealant.

Manifold Tee

Spig x Soc x Mipt

476-010	1	20	0	020	5.98

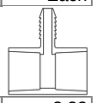
Manifold Tee

Spig x Soc x Fipt

477-010	1	25	0	020	5.98

PVC Schedule 40 Fittings

Transition Tee for P.E. Hose Laterals
Soc x Insert (.580 I.D.)

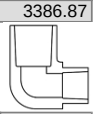


Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1102-007	3/4	50	0	040	3.22
1102-130	1X1/2	200	0	040	3.61
1102-248	2X2X3/4	10	0	040	5.08
1102-250	2X1-1/4	10	0	040	5.08

90° Ell
Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
406-003	3/8	50	600	040	3.23
406-005	1/2	50	400	040	.64
406-007	3/4	50	300	040	.72
406-010	1	50	0	040	1.29
406-012	1-1/4	25	0	040	2.28
406-015	1-1/2	25	0	040	2.46
406-020	2	25	0	040	3.85
406-025	2-1/2	10	0	040	11.73
406-030	3	10	0	040	14.03
406-040	4	8	0	040	25.09
406-045F	4-1/2	1	5	047	178.54
406-050	5	4	0	040	64.84
406-060	6	4	0	040	79.80
406-080	8	2	0	040	205.47
406-100	10	1	0	041	773.92
406-100F	10	1	0	047	412.87
406-120	12	1	0	041	1037.97
406-120F	12	1	0	047	674.80
406-140	14	1	0	044	1381.25
406-140F	14	1	0	047	972.61
406-160F	16	1	0	047	1391.76
406-180F	18	1	0	047	1494.04
406-200F	20	1	0	047	2260.04
406-240F	24	1	0	047	3386.87

90° Ell - Reducing
Soc



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
406-053	3/8X1/2	50	0	040	1.88
406-101	3/4X1/2	50	0	040	1.29
D406-101	3/4X1/2	50	0	040	1.57
406-130	1X1/2	50	0	040	1.93
D406-130	1X1/2	50	0	040	2.76
406-131	1X3/4	50	0	040	2.29
406-166	1-1/4X1/2	25	0	040	3.67
D406-166	1-1/4X1/2	25	0	040	4.21
406-167	1-1/4X3/4	25	0	040	3.67
406-168	1-1/4X1	25	0	040	3.67
406-209	1-1/2X1/2	25	0	040	5.80
406-211	1-1/2X1	25	0	040	5.80
406-212	1-1/2X1-1/4	25	0	040	5.80
406-249	2X1	10	0	040	7.15
406-250	2X1-1/4	10	0	040	7.15
406-251	2X1-1/2	10	0	040	9.89
406-251N	2X1-1/2	10	0	015	9.89
406-292	2-1/2X2	10	0	040	11.59
406-292N	2-1/2X2 (2-1/2 Spigot)	10	0	040	11.59

90° Ell - Sweep
Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
406-005S	1/2	25	300	040	4.92
406-007S	3/4	25	100	040	5.63
406-010S	1	25	0	040	9.22

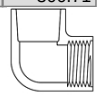
90° Ell - Sweep (continued)
Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
406-012S	1-1/4	25	0	040	12.16
406-015S	1-1/2	25	0	040	13.14
406-020S	2	25	0	040	15.84
406-025S	2-1/2	20	0	040	18.53

90° Ell - Long Sweep
Soc

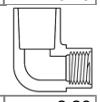
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
406-025LSF	2-1/2	1	7	047	53.27
406-030LSF	3	1	5	047	75.03
406-040LSF	4	1	4	047	97.68
406-060LSF	6	1	2	047	151.04
406-080LSF	8	1	0	047	300.71

90° Ell
Soc x Fipt



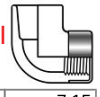
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
407-005	1/2	50	400	040	.80
407-007	3/4	50	300	040	.92
407-010	1	50	0	040	1.72
407-012	1-1/4	25	0	040	2.87
407-015	1-1/2	25	0	040	3.19
407-020	2	10	0	040	8.24
407-025	2-1/2	10	0	040	20.37
407-030	3	8	0	040	30.54
407-040	4	8	0	040	46.29

90° Ell - Reducing
Soc x Fipt



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
407-053	3/8X1/2	50	600	040	2.20
407-074	1/2X3/4	50	0	040	1.72
407-101	3/4X1/2	50	300	040	.95
407-130	1X1/2	50	0	040	2.64
407-131	1X3/4	50	0	040	2.64
407-168	1-1/4X1	25	0	040	3.85
407-211	1-1/2X1	25	0	040	6.39
407-212	1-1/2X1-1/4	20	0	040	6.65
407-249	2X1	10	0	040	11.06
407-250	2X1-1/4	10	0	040	11.06
407-251	2X1-1/2	10	0	040	11.06

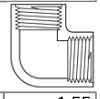
90° Ell - Special Reinforced & Reducing 90° Ell
Soc x SR Fipt - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
407-005SR	1/2	50	400	046	7.15
407-007SR	3/4	75	0	046	9.18
407-010SR	1	50	0	046	9.28
407-012SR	1-1/4	25	0	046	11.22
407-131SR	1X3/4	50	0	046	3.94
407-168SR[1]	1-1/4X1	25	0	046	15.55
407-249SR	2X1	10	0	046	17.68
407-251SR	2X1-1/2	10	0	046	18.65

Sized with SR Adapter

90° Ell
Fipt



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
408-005	1/2	50	400	040	1.55
408-007	3/4	50	0	040	2.29
408-010	1	50	0	040	4.91
408-012	1-1/4	25	0	040	5.25
408-015	1-1/2	25	0	040	6.64
408-020	2	10	0	040	10.07

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

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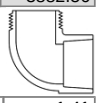
PVC Schedule 40 Fittings

90° Street Ell
Spig x Soc

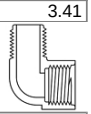
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
409-005	1/2	50	400	040	1.81
409-007	3/4	50	0	040	2.23
409-010	1	50	0	040	3.85
409-012	1-1/4	25	0	040	4.61
409-015	1-1/2	25	0	040	5.08
409-020	2	10	0	040	9.81
409-025	2-1/2	10	0	040	17.59
409-030	3	5	0	040	21.72
409-040	4	6	0	040	40.39
409-050	5	2	0	040	96.62
409-060	6	2	0	040	122.09
409-080	8	2	0	040	312.31
409-100	10	1	0	041	1153.13
409-120	12	1	0	041	1276.99
409-140F	14	1	0	047	1343.31
409-160F	16	1	0	047	1411.15
409-180F	18	1	0	047	1765.28
409-200F	20	1	0	047	2510.82
409-240F	24	1	0	047	3882.56

90° Street Ell
Mipt x Soc



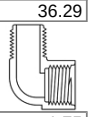
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
410-005	1/2	50	750	040	1.41
410-007	3/4	50	0	040	1.64
410-010	1	50	0	040	2.76
410-012	1-1/4	25	0	040	3.85
410-015	1-1/2	25	0	040	4.03
410-020	2	10	0	040	9.91
410-030	3	10	0	040	35.40
410-101	3/4X1/2	50	400	040	2.01
410-102	3/4X1	50	0	040	3.41

90° Street Ell
Mipt x Fipt



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
412-005	1/2	50	600	040	1.88
412-007	3/4	50	0	040	2.29
412-010	1	50	0	040	3.96
412-012	1-1/4	25	0	040	4.91
412-015	1-1/2	25	0	040	5.33
412-020	2	10	0	040	10.16
412-030	3	8	0	040	36.29

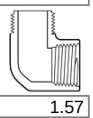
HDPE 90° Street Ell
Mipt x Fipt



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
M412-005	1/2	50	450	040	1.75
M412-007	3/4	50	0	040	2.12
M412-010	1	50	0	040	3.69
M412-012	1-1/4	25	0	040	4.87
M412-015	1-1/2	25	0	040	5.52

High Density Polyethylene - Not NSF-listed - Not pressure rated. For use on open ended irrigation systems.

HDPE 90° Street Ell
Mipt x Fipt (Short Pattern)



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
MS412-005	1/2	50	700	040	1.57
MS412-007	3/4	50	400	040	1.89
MS412-010	1	50	0	040	3.32

High Density Polyethylene - Not NSF-listed - Not pressure rated. For use on open ended irrigation systems.

HDPE Reducing 90° Street Ell
Mipt x Fipt (Short Pattern)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
MS412-101	3/4X1/2	50	400	040	2.54

High Density Polyethylene - Not NSF-listed - Not pressure rated. For use on open ended irrigation systems.

Side Outlet Ell
Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
413-005	1/2	50	0	040	3.49
413-007	3/4	50	0	040	4.75
413-010	1	25	0	040	6.08
413-015	1-1/2	10	0	040	6.67
413-020	2	10	0	040	9.26

Side Outlet Ell
Soc x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
414-005	1/2	50	0	040	3.40
414-007	3/4	50	0	040	5.22
414-101	3/4X1/2	50	0	040	4.40
414-130	1X1/2	50	0	040	5.77

11-1/4° Ell
Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
411-005F	1/2	52	0	047	21.59
411-007F	3/4	52	0	047	21.73
411-010F	1	1	52	047	23.78
411-012F	1-1/4	25	0	047	25.74
411-015	1-1/2	25	0	040	5.57
411-015F	1-1/2	25	0	047	26.11
411-020	2	10	0	040	6.45
411-025F	2-1/2	1	25	047	31.93
411-030	3	10	0	040	26.01
411-040	4	4	0	040	46.72
411-045F	4-1/2	1	15	047	65.07
411-050F	5	1	15	047	57.03
411-060F	6	1	10	047	66.07
411-080F	8	1	4	047	111.69
411-100F	10	1	2	047	168.54
411-120F	12	1	2	047	266.62
411-140F	14	1	0	047	419.17
411-160F	16	1	0	047	571.40
411-180F	18	1	0	047	686.21
411-200F	20	1	0	047	848.25
411-240F	24	1	0	047	1689.55

30° Ell
Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
415-005F	1/2	1	25	047	21.59
415-007F	3/4	25	0	047	21.73
415-010F	1	1	25	047	23.78
415-012F	1-1/4	1	15	047	25.74
415-015F	1-1/2	1	25	047	26.11
415-020F	2	1	25	047	27.07
415-025F	2-1/2	25	0	047	31.93
415-030F	3	1	20	047	34.15
415-040F	4	1	6	047	41.13
415-045F	4-1/2	1	15	047	65.07
415-050F	5	1	6	047	57.03
415-060F	6	1	10	047	66.07
415-080F	8	1	4	047	111.69

PVC Schedule 40 Fittings

30° Ell (continued)
Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
415-100F	10	1	2	047	168.54
415-120F	12	1	0	047	266.62
415-140F	14	1	0	047	419.17
415-160F	16	1	0	047	571.40
415-180F	18	1	0	047	686.21
415-200F	20	1	0	047	848.25
415-240F	24	1	0	047	1689.55

22-1/2° Ell
Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
416-005	1/2	20	240	040	1.51
416-007	3/4	20	240	040	2.35
416-010	1	20	160	040	2.81
416-012	1-1/4	20	0	040	3.93
416-015	1-1/2	20	0	040	4.93
416-015F	1-1/2	1	25	047	26.11
416-020	2	20	0	040	6.45
416-025	2-1/2	5	0	040	16.77
416-025F	2-1/2	25	0	047	31.93
416-030	3	5	0	040	26.01
416-040	4	4	0	040	46.72
416-045F	4-1/2	1	15	047	65.07
416-050F	5	1	10	047	57.03
416-060	6	4	0	040	115.34
416-060F	6	1	5	047	66.07
416-080	8	4	0	040	277.46
416-080F	8	1	4	047	111.69
416-100F	10	1	0	047	168.54
416-120F	12	1	0	047	266.62
416-140F	14	1	0	047	419.17
416-160F	16	1	0	047	571.40
416-180F	18	1	0	047	686.21
416-200F	20	1	0	047	848.25
416-240F	24	1	0	047	1689.55

45° Ell
Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
417-005	1/2	50	600	040	1.06
417-007	3/4	50	300	040	1.64
417-010	1	50	0	040	1.98
417-012	1-1/4	25	0	040	2.76
417-015	1-1/2	25	0	040	3.46
417-020	2	25	0	040	4.51
417-025	2-1/2	10	0	040	11.75
417-030	3	10	0	040	18.23
417-040	4	5	0	040	32.68
417-045F	4-1/2	1	15	047	67.15
417-050	5	5	0	040	64.84
417-050F	5	1	2	047	87.00
417-060	6	8	0	040	80.76
417-080	8	3	0	040	194.22
417-080F	8	1	4	047	183.81
417-100	10	1	0	041	505.60
417-100F	10	1	2	047	290.39
417-120	12	1	0	041	749.24
417-120F	12	1	2	047	307.99
417-140	14	1	0	044	1002.14
417-140F	14	1	0	047	646.07
417-160F	16	1	0	047	853.85
417-180F	18	1	0	047	902.80
417-200F	20	1	0	047	1169.47
417-240F	24	1	0	047	1881.75

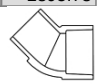
15° Ell
Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
418-005F	1/2	1	25	047	21.59
418-007F	3/4	23	0	047	21.73
418-010F	1	20	0	047	23.78
418-012F	1-1/4	15	0	047	25.74
418-015F	1-1/2	25	0	047	26.11
418-020F	2	1	25	047	27.07
418-025F	2-1/2	18	0	047	31.93
418-030F	3	1	35	047	34.15
418-040F	4	1	20	047	41.13
418-045F	4-1/2	1	15	047	65.07
418-050F	5	1	15	047	57.03
418-060F	6	1	10	047	66.07
418-080F	8	1	4	047	111.69
418-100F	10	1	2	047	168.54
418-120F	12	1	2	047	266.62
418-140F	14	1	0	047	419.17
418-160F	16	1	0	047	571.40
418-180F	18	1	0	047	686.21
418-200F	20	1	0	047	848.25
418-240F	24	1	0	047	1689.55

60° Ell
Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
424-005F	1/2	7	0	047	69.87
424-007F	3/4	6	0	047	77.68
424-010F	1	1	3	047	78.89
424-012F	1-1/4	16	0	047	84.12
424-015F	1-1/2	1	16	047	97.06
424-020F	2	1	16	047	127.54
424-025F	2-1/2	10	0	047	139.81
424-030F	3	8	0	047	159.40
424-040F	4	1	4	047	187.15
424-045F	4-1/2	1	4	047	209.64
424-050F	5	1	4	047	215.51
424-060F	6	1	4	047	262.04
424-080F	8	1	2	047	348.46
424-100F	10	1	2	047	715.66
424-120F	12	1	0	047	911.02
424-140F	14	1	0	047	962.79
424-160F	16	1	0	047	1158.63
424-180F	18	1	0	047	1718.01
424-240F	24	1	0	047	2895.78

45° Street Ell
Spig x Soc



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
427-005	1/2	50	400	040	1.06
427-007	3/4	50	0	040	1.64
427-010	1	50	0	040	1.98
427-012	1-1/4	25	0	040	2.76
427-015	1-1/2	25	0	040	3.46
427-020	2	25	0	040	4.51
427-025	2-1/2	10	0	040	14.68
427-030	3	10	0	040	18.23
427-040	4	5	0	040	32.68
427-050	5	4	0	040	98.27
427-060	6	4	0	040	100.94
427-080	8	2	0	040	242.78
427-100	10	1	0	041	638.82
427-120	12	1	0	041	936.57
427-140F	14	1	0	047	697.99
427-160F	16	1	0	047	948.73

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Schedule 40 Fittings

45° Street Ell (continued)

Spig x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
427-180F	18	1	0	047	1035.62
427-200F	20	1	0	047	1314.52
427-240F	24	1	0	047	2070.62

22-1/2° Street Ell

Spig x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
442-005	1/2	50	400	040	1.51
442-007	3/4	50	0	040	2.35
442-010	1	50	0	040	2.81
442-012	1-1/4	20	0	040	3.93
442-015	1-1/2	25	0	040	4.93
442-020	2	20	0	040	6.45
442-025	2-1/2	5	0	040	24.35
442-025F	2-1/2	1	18	047	36.53
442-030	3	5	0	040	37.68
442-040	4	4	0	040	58.15
442-060	6	4	0	040	143.56
442-060F	6	1	5	047	84.72
442-080	8	1	4	040	345.31
442-080F	8	1	4	047	127.60
442-100F	10	1	0	047	197.47
442-120F	12	1	0	047	296.41

Cross

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
420-005	1/2	50	0	040	2.46
420-007	3/4	50	0	040	4.08
420-010	1	50	0	040	5.08
420-012	1-1/4	25	0	040	6.72
420-015	1-1/2	25	0	040	7.62
420-020	2	10	0	040	11.23
420-025	2-1/2	10	0	040	23.82
420-030	3	5	0	040	29.22
420-040	4	4	0	040	43.28
420-050F	5	1	3	047	618.29
420-060F	6	1	0	047	609.52
420-080F	8	1	0	047	785.12
420-100F	10	1	0	047	950.24
420-120F	12	1	0	047	1339.13
420-140F	14	1	0	047	2381.20
420-160F	16	1	0	047	3018.71
420-180F	18	1	0	047	3435.15
420-200F	20	1	0	047	5123.86
420-240F	24	1	0	047	7473.22

Cross - Reducing

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
420-101[1]	3/4X1/2	50	0	040	9.48
420-130[1]	1X1/2	25	0	040	11.13
420-131	1X3/4	20	0	040	11.13
420-166[1]	1-1/4X1/2	4	0	040	13.63
420-167[1]	1-1/4X3/4	25	0	040	13.63
420-168[1]	1-1/4X1	4	32	040	13.63
420-209[1]	1-1/2X1/2	20	0	040	14.75
420-210[1]	1-1/2X3/4	4	0	040	14.75
420-211[1]	1-1/2X1	4	0	040	14.75
420-212[1]	1-1/2X1-1/4	4	0	040	14.75
420-247[1]	2X1/2	4	0	040	17.33
420-248[1]	2X3/4	10	0	040	17.33
420-249	2X1	25	0	040	17.33
420-250[1]	2X1-1/4	10	0	040	17.33

Cross - Reducing (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
420-251[1]	2X1-1/2	10	0	040	17.33
420-287[1]	2-1/2X1/2	4	0	040	33.63
420-288[1]	2-1/2X3/4	4	0	040	33.63
420-289[1]	2-1/2X1	15	0	040	33.63
420-290	2-1/2X1-1/4	5	0	040	33.63
420-291[1]	2-1/2X1-1/2	10	0	040	33.63
420-292[1]	2-1/2X2	10	0	040	33.63
420-334[1]	3X3/4	5	0	040	43.71
420-335[1]	3X1	5	0	040	43.71
420-336[1]	3X1-1/4	4	0	040	43.71
420-337[1]	3X1-1/2	5	0	040	43.71
420-338[1]	3X2	5	0	040	43.71
420-339[1]	3X2-1/2	4	0	040	43.71
420-420[1]	4X2	3	0	040	75.22
420-421[1]	4X2-1/2	3	0	040	75.22
420-422[1]	4X3	3	0	040	75.22
420-528F	6X2	1	2	047	402.74
420-529F	6X2 1/2	1	2	047	411.83
420-530F	6X3	1	2	047	418.88
420-532F	6X4	1	2	047	480.94
420-578F	8X2	1	2	047	527.62
420-579F	8X2 1/2	1	0	047	542.39
420-580F	8X3	1	0	047	549.62
420-582F	8X4	1	0	047	577.57
420-585F	8X6	1	0	047	657.53
420-621F	10X2	1	0	047	666.75
420-622F	10X2-1/2	1	0	047	682.88
420-623F	10X3	1	0	047	718.69
420-624F	10X4	1	0	047	744.78
420-626F	10X6	1	0	047	798.31
420-628F	10X8	1	0	047	848.22
420-661F	12X2	1	0	047	749.45
420-662F	12X2-1/2	1	0	047	776.75
420-663F	12X3	1	0	047	804.25
420-664F	12X4	1	0	047	842.49
420-666F	12X6	1	0	047	886.04
420-668F	12X8	1	0	047	955.88
420-670F	12X10	1	0	047	1089.28
420-691F	14X2	1	0	047	1035.99
420-693F	14X3	1	0	047	1110.64
420-694F	14X4	1	0	047	1134.75
420-696F	14X6	1	0	047	1331.76
420-698F	14X8	1	0	047	1482.95
420-700F	14X10	1	0	047	1685.44
420-702F	14X12	1	0	047	1914.46
420-751F	16X2	1	0	047	1265.98
420-753F	16X3	1	0	047	1361.63
420-754F	16X4	1	0	047	1407.23
420-756F	16X6	1	0	047	1522.20
420-758F	16X8	1	0	047	1783.02
420-760F	16X10	1	0	047	1921.55
420-762F	16X12	1	0	047	2168.38
420-764F	16X14	1	0	047	2399.26
420-781F	18X2	1	0	047	1423.39
420-783F	18X3	1	0	047	1509.00
420-784F	18X4	1	0	047	1524.42
420-786F	18X6	1	0	047	1628.94
420-788F	18X8	1	0	047	1890.39
420-790F	18X10	1	0	047	2403.94
420-792F	18X12	1	0	047	2581.58
420-794F	18X14	1	0	047	2986.72
420-796F	18X16	1	0	047	3076.73
420-811F	20X2	1	0	047	1505.92
420-813F	20X3	1	0	047	1607.46
420-814F	20X4	1	0	047	1701.97

Cross - Reducing (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
420-816F	**20X6**	1	0	047	1821.69
420-818F	**20X8**	1	0	047	1994.57
420-820F	**20X10**	1	0	047	3397.94
420-822F	**20X12**	1	0	047	3597.97
420-824F	**20X14**	1	0	047	3814.86
420-826F	**20X16**	1	0	047	4450.96
420-828F	**20X18**	1	0	047	4964.02
420-901F	**24X2**	1	0	047	2509.01
420-903F	**24X3**	1	0	047	2583.73
420-904F	**24X4**	1	0	047	2671.00
420-906F	**24X6**	1	0	047	2823.59
420-908F	**24X8**	1	0	047	3039.72
420-910F	**24X10**	1	0	047	4364.01
420-912F	**24X12**	1	0	047	4449.71
420-914F	**24X14**	1	0	047	4604.69
420-916F	**24X16**	1	0	047	5705.99
420-918F	**24X18**	1	0	047	6274.36
420-920F	**24X20**	1	0	047	7294.55

[1]Outlet sized with Bushing

Cross

Soc x Mipt

421A-010	**1**	50	0	040	5.98

Coupling

Soc

429-003	**3/8**	50	300	040	1.16
429-005	**1/2**	50	600	040	.42
429-005N	**1/2**	50	300	040	.42
429-007	**3/4**	50	400	040	.58
429-007N	**3/4**	50	400	040	.58
429-010	**1**	50	0	040	1.02
429-010N	**1**	50	0	040	1.02
429-012	**1-1/4**	25	150	040	1.41
429-015	**1-1/2**	25	0	040	1.51
429-020	**2**	25	0	040	2.29
429-025	**2-1/2**	12	0	040	5.08
429-030	**3**	10	0	040	7.96
429-040	**4**	6	0	040	11.52
429-045F	**4-1/2**	1	10	047	51.25
429-050	**5**	5	0	040	21.08
429-060	**6**	5	0	040	36.41
429-080	**8**	8	0	040	67.99
429-100	**10**	1	0	041	198.15
429-100F	**10**	1	0	047	123.99
429-120	**12**	1	0	041	394.79
429-120F	**12**	1	0	047	131.99
429-140	**14**	1	0	044	577.23
429-140F	**14**	1	0	047	214.37
429-160F	**16**	1	0	047	239.05
429-180F	**18**	1	0	047	407.66
429-200F	**20**	1	0	047	711.17
429-240F	**24**	1	0	047	987.67

Coupling - Reducer

Soc

429-101	**3/4X1/2**	50	200	040	1.06
429-130[1]	**1X1/2**	25	200	040	2.53
429-131	**1X3/4**	50	0	040	1.81
429-166[1]	**1-1/4X1/2**	25	0	040	4.78
429-167	**1-1/4X3/4**	25	0	040	4.78

Coupling - Reducer (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
429-168	**1-1/4X1**	25	0	040	3.04
429-209[1]	**1-1/2X1/2**	8	48	040	3.98
429-210	**1-1/2X3/4**	25	0	040	3.22
429-211[1]	**1-1/2X1**	25	0	040	4.98
429-212	**1-1/2X1-1/4**	25	0	040	3.22
429-247[1]	**2X1/2**	10	0	040	7.02
429-248[1]	**2X3/4**	10	0	040	7.02
429-249[1]	**2X1**	25	0	040	7.39
429-250	**2X1-1/4**	10	40	040	7.02
429-251	**2X1-1/2**	10	40	040	5.14
429-291[1]	**2-1/2X1-1/2**	10	0	040	13.73
429-292	**2-1/2X2**	10	0	040	10.57
429-335[1]	**3X1**	10	0	040	31.12
429-337[1]	**3X1-1/2**	8	0	040	31.12
429-338	**3X2**	10	0	040	27.62
429-339	**3X2-1/2**	10	0	040	23.44
429-340F	**3X2-1/2**	1	10	047	29.54
429-416[1]	**4X3/4**	10	0	040	36.13
429-417[1]	**4X1**	8	0	040	57.37
429-420	**4X2**	4	0	040	33.45
429-421[1]	**4X2-1/2**	6	0	040	42.14
429-422	**4X3**	4	0	040	34.51
429-460F	**4-1/2X4**	1	4	047	55.02
429-486F	**5X2**	1	4	047	121.98
429-487F	**5X2-1/2**	1	10	047	105.52
429-488F	**5X3**	1	6	047	93.89
429-490F	**5X4**	1	6	047	60.63
429-491F	**5X4-1/2**	1	15	047	58.18
429-528F	**6X2**	1	4	047	89.85
429-530F	**6X3**	1	15	047	78.78
429-532	**6X4**	1	4	040	45.54
429-533F	**6X5**	1	15	047	69.46
429-534F	**6X4-1/2**	1	15	047	83.94
429-578F	**8X2**	1	4	047	200.02
429-580F	**8X3**	1	4	047	178.97
429-582	**8X4**	2	0	040	105.60
429-583F	**8X5**	1	4	047	135.08
429-585	**8X6**	2	0	040	116.62
429-621F	**10X2**	1	2	047	285.19
429-623F	**10X3**	1	2	047	253.38
429-624	**10X4**	1	2	041	559.34
429-624F	**10X4**	1	2	047	211.83
429-626	**10X6**	1	0	041	559.34
429-626F	**10X6**	1	4	047	197.41
429-628	**10X8**	1	0	041	559.34
429-628F	**10X8**	1	2	047	138.17
429-664F	**12X4**	1	2	047	376.89
429-666	**12X6**	1	0	041	636.86
429-666F	**12X6**	1	2	047	347.27
429-668	**12X8**	1	0	041	636.86
429-668F	**12X8**	1	0	047	336.73
429-670F	**12X10**	1	0	047	201.13
429-693F	**14X3**	1	0	047	716.46
429-694F	**14X4**	1	0	047	627.97
429-696F	**14X6**	1	0	047	570.42
429-698F	**14X8**	1	0	047	565.27
429-700F	**14X10**	1	0	047	447.31
429-702F	**14X12**	1	0	047	336.89
429-751F	**16X2**	1	0	047	792.14
429-754F	**16X4**	1	0	047	734.99
429-756F	**16X6**	1	0	047	727.75
429-758F	**16X8**	1	0	047	558.99
429-760F	**16X10**	1	0	047	518.37
429-762F	**16X12**	1	0	047	424.02
429-764F	**16X14**	1	0	047	404.32

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Coupling - Reducer (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
429-786F	18X6	1	0	047	1067.38
429-788F	18X8	1	0	047	1000.17
429-790F	18X10	1	0	047	894.44
429-792F	18X12	1	0	047	711.55
429-794F	18X14	1	0	047	660.40
429-796F	18X16	1	0	047	597.87
429-814F	20X4	1	0	047	1718.56
429-816F	20X6	1	0	047	1430.35
429-818F	20X8	1	0	047	1404.92
429-820F	20X10	1	0	047	1350.91
429-822F	20X12	1	0	047	1299.23
429-824F	20X14	1	0	047	1217.75
429-826F	20X16	1	0	047	1116.02
429-828F	20X18	1	0	047	1014.77
429-906F	24X6	1	0	047	2546.73
429-908F	24X8	1	0	047	2343.18
429-910F	24X10	1	0	047	2137.31
429-912F	24X12	1	0	047	2103.63
429-914F	24X14	1	0	047	2022.61
429-916F	24X16	1	0	047	1945.19
429-918F	24X18	1	0	047	1722.47
429-920F	24X20	1	0	047	1549.42

[1]Outlet sized with Bushing

Coupling - Eccentric Reducer

Soc

429-131FE	1X3/4	1	15	047	29.54
429-168FE	1-1/4X1	1	12	047	26.81
429-212FE	1-1/2X1-1/4	1	25	047	27.78
429-249FE	2X1	1	25	047	43.57
429-250FE	2X1-1/4	1	25	047	38.18
429-251FE	2X1-1/2	1	20	047	36.89
429-290FE[2]	2-1/2X1-1/4	1	25	047	56.21
429-291FE[2]	2-1/2X1-1/2	1	10	047	56.14
429-292FE	2-1/2X2	1	10	047	43.62
429-335FE[3]	3X1	1	10	047	60.78
429-336FE[2]	3X1-1/4	1	10	047	59.40
429-337FE[2]	3X1-1/2	1	20	047	54.85
429-338E	3X2	20	0	040	35.05
429-338FE	3X2	1	20	047	33.63
429-339FE	3X2-1/2	1	24	047	31.96
429-417FE[3]	4X1	1	10	047	92.09
429-418FE[3]	4X1-1/4	1	12	047	88.96
429-419FE[3]	4X1-1/2	1	10	047	84.92
429-420E	4X2	15	0	040	50.83
429-420FE[2]	4X2	1	6	047	45.67
429-421FE[2]	4X2-1/2	1	5	047	44.93
429-422FE	4X3	1	10	047	42.21
429-490FE	5X4	1	6	047	68.26
429-528FE[2]	6X2	1	4	047	148.53
429-529FE[3]	6X2-1/2	1	4	047	135.58
429-530FE[2]	6X3	1	6	047	94.96
429-532E	6X4	10	0	040	60.53
429-532FE	6X4	1	6	047	47.48
429-533FE	6X5	1	10	047	47.06
429-578FE[4]	8X2	1	3	047	207.95
429-580FE[3]	8X3	1	2	047	195.86
429-582FE[2]	8X4	1	2	047	97.80
429-583FE[2]	8X5	1	2	047	92.65
429-585FE	8X6	1	4	047	79.06
429-624FE[2]	10X4	1	2	047	223.63
429-626FE	10X6	1	2	047	205.62
429-628FE	10X8	1	2	047	193.86
429-664FE[3]	12X4	1	0	047	417.24

Coupling - Eccentric Reducer (continued)

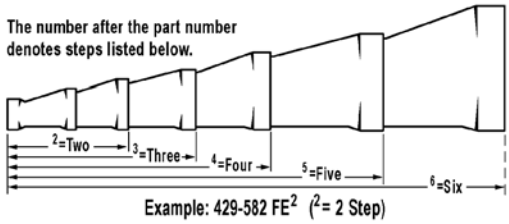
Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
429-666FE[2]	12X6	1	0	047	342.84
429-668FE[2]	12X8	1	0	047	227.35
429-670FE	12X10	1	0	047	197.12
429-696FE[2]	14X6	1	0	047	696.46
429-698FE[2]	14X8	1	0	047	570.52
429-700FE	14X10	1	0	047	517.91
429-702FE	14X12	1	0	047	285.47
429-756FE[3]	16X6	1	0	047	679.37
429-758FE[3]	16X8	1	0	047	566.96
429-760FE[2]	16X10	1	0	047	510.12
429-762FE[1]	16X12	1	0	047	478.42
429-764FE	16X14	1	0	047	448.63
429-786FE[4]	18X6	1	0	047	1074.09
429-788FE[4]	18X8	1	0	047	1058.79
429-790FE[3]	18X10	1	0	047	946.11
429-792FE[2]	18X12	1	0	047	853.85
429-794FE[2]	18X14	1	0	047	754.93
429-796FE	18X16	1	0	047	608.98

Eccentric Reducer Coupling Footnotes

Multi-Step Configurations

The number after the part number denotes steps listed below.



Example: 429-582 FE[2] ([2]= 2 Step)

Coupling

Fipt

430-005	1/2	50	600	040	.81
430-007	3/4	50	400	040	1.51
430-010	1	50	0	040	1.98
430-012	1-1/4	10	120	040	6.66

Coupling - Special Reinforced

SR Fipt - Stainless Steel Collar

430-005SR	1/2	25	300	046	3.69
430-007SR	3/4	25	300	046	5.25
430-010SR	1	25	200	046	5.61
430-012SR	1-1/4	10	120	046	6.99
430-015SR	1-1/2	10	60	046	15.47
430-020SR	2	10	0	046	16.22

Coupling - Reducer

Fipt

430-101	3/4X1/2	50	200	040	1.95

Coupling - Special Reinforced Reducer

SR Fipt - Stainless Steel Collar

430-101SR	3/4X1/2	50	200	046	7.96

PVC Schedule 40 Fittings

Coupling - Deep Socket
Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
479-005N	1/2	50	400	040	.82
479-007	3/4	50	0	040	1.99
479-010	1	50	0	040	2.84
479-015	1-1/2	50	0	040	3.93
479-020	2	60	0	040	6.51
479-025	2-1/2	25	0	040	8.37
479-030	3	15	0	040	12.61
479-040	4	8	0	040	25.33
479-050F	5	1	4	047	85.56

IPS to PIP Adapter
Spig x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
431-060	6	5	0	040	27.67
431-080	8	10	0	040	34.09
431-100F	10	1	10	047	46.57
431-120F	12	1	8	047	71.11

Female Adapter
Soc x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
435-003	3/8	50	600	040	2.36
435-005	1/2	50	600	040	.72
D435-005	1/2	50	400	040	1.05
435-007	3/4	50	400	040	.92
D435-007	3/4	50	400	040	1.41
435-010	1	50	0	040	1.06
435-012	1-1/4	25	0	040	1.64
435-015	1-1/2	25	0	040	1.88
435-020	2	10	80	040	2.53
435-025	2-1/2	10	0	040	6.39
435-030	3	5	0	040	8.60
435-040	4	6	0	040	14.25
435-050	5	5	0	040	36.91
435-060	6	5	0	040	52.44
435-080	8	2	0	040	98.88
435-100F	10	1	2	047	185.75
435-120F	12	1	0	047	276.77

"D" prefix indicates Deep Socket Adapter

Female Adapter - Reducing
Soc x Fipt

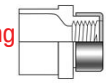
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
435-072	1/2X1/4	50	300	040	1.29
435-073	1/2X3/8	50	300	040	1.29
435-074	1/2X3/4	50	400	040	1.29
435-098	3/4X1/4	25	150	040	1.80
435-101	3/4X1/2	50	400	040	1.29
435-102	3/4X1	50	0	040	1.72
435-130	1X1/2	50	0	040	1.72
435-131	1X3/4	50	0	040	1.72
435-133	1X1-1/2	25	0	040	3.46
435-168	1-1/4X1	25	0	040	4.44
435-247	2X1/2	25	0	040	5.97
435-460F[1]	4-1/2X4	1	8	047	58.26
435-532[1]	6X4	4	0	040	76.39
435-578F[1]	8X2	1	8	047	153.18
435-582F[1]	8X4	1	8	047	176.63
435-628F	10X8	1	2	047	193.32

[1]Outlet sizes with Threaded Adapter

Female Adapter - Special Reinforced
Soc x SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
435-002SR	1/4	25	450	046	5.59
435-003SR	3/8	25	300	046	5.59
435-005SR	1/2	25	300	046	3.11
435-007SR	3/4	25	300	046	4.52
435-010SR	1	25	200	046	6.72
435-012SR	1-1/4	10	60	046	10.86
435-015SR	1-1/2	10	80	046	13.37
435-020SR	2	10	0	046	23.32
435-025SR	2-1/2	5	0	046	36.79
435-030SR	3	10	0	046	41.45
435-040SR	4	5	0	046	71.24

Female Adapter - Special Reinforced Reducing
Soc x SR Fipt - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
435-072SR	1/2X1/4	50	600	046	4.06
435-073SR	1/2X3/8	50	600	046	3.66
435-074SR	1/2X3/4	50	400	046	4.52
435-098SR	3/4X1/4	25	150	046	4.52
435-101SR	3/4X1/2	50	400	046	4.52
435-102SR	3/4X1	50	0	046	6.72
435-130SR	1X1/2	50	0	046	6.72
435-131SR	1X3/4	25	200	046	6.72
435-247SR	2X1/2	25	0	046	23.32

Male Adapter
Mipt x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
436-003	3/8	50	300	040	2.20
436-005	1/2	50	300	040	.58
436-007	3/4	50	400	040	.64
436-010	1	50	300	040	1.16
436-012	1-1/4	25	0	040	1.41
436-015	1-1/2	25	0	040	1.88
436-020	2	25	0	040	2.47
436-025	2-1/2	10	0	040	7.29
436-030	3	10	0	040	10.67
436-040	4	5	0	040	13.61
436-050	5	5	0	040	22.42
436-060	6	7	0	040	35.48
436-080	8	3	0	040	161.27
436-100F	10	1	2	047	208.56
436-120F	12	1	0	047	309.94

Male Adapter - Reducing
Mipt x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
436-053	3/8X1/2	50	300	040	1.16
436-073	1/2X3/8	50	300	040	1.16
436-074	1/2X3/4	50	200	040	1.16
436-075	1/2X1	50	200	040	1.56
436-101	3/4X1/2	50	300	040	1.06
436-102	3/4X1	50	0	040	1.64
436-131	1X3/4	50	400	040	3.54
436-132	1X1-1/4	50	0	040	3.85
436-133	1X1-1/2	50	0	040	4.34
436-168	1-1/4X1	25	200	040	4.34
436-169	1-1/4X1-1/2	25	0	040	4.34
436-212	1-1/2X1-1/4	25	0	040	5.24
436-213	1-1/2X2	25	0	040	5.24
436-251	2X1-1/2	10	80	040	5.98
436-252	2X2-1/2	10	0	040	9.31

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Schedule 40 Fittings

Male Adapter - Reducing (continued)

Mipt x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
436-253	2X3	10	0	040	10.46
436-294	2-1/2X3	10	0	040	11.26
436-296	2-1/2X4	10	0	040	17.29
436-342	3X4	5	0	040	18.02
436-492F	5X6	1	15	047	98.40
436-535F	6X8	1	2	047	130.80
436-537F	6X10	1	2	047	254.94

IPT Adapter

Mipt x Fipt

446-003	3/8	50	300	040	1.98
446-012	1-1/4	25	100	040	4.51
446-053	3/8X1/2	50	300	040	1.98
446-074	1/2X3/4	50	300	040	2.47

Insert Adapter (White PVC)

Insert x I.P.S. Spigot x I.P.S. Socket

460-007N	3/4X3/4X1/2	50	200	040	2.97
460-012N	1-1/4X1-1/4X1	20	160	040	3.20
460-131N	3/4X1X3/4	20	160	040	3.46
460-132N	1X1-1/4X1	20	160	040	3.74

ASTM D 2609 - Plastic Insert Fitting for Polyethylene (PE) pipe
N=Nesting

Insert Adapter (White PVC)

Insert x I.P.S. Spigot

460-005	1/2	50	300	040	2.26
460-007	3/4	50	200	040	2.97
460-010	1	50	0	040	3.11
460-012	1-1/4	20	160	040	3.20
460-015	1-1/2	25	0	040	3.44
460-020	2	10	0	040	5.72
460-030	3	25	0	040	19.31
460-040	4	10	0	040	22.24
1432-060	6	8	0	140	95.61
1432-080*	8	4	0	140	189.82

ASTM D 2609 - Plastic Insert Fitting for Polyethylene (PE) pipe
*Fabricated

Male Spigot Adapter

Spig x Mipt

461-005	1/2	50	300	040	1.02
461-007	3/4	50	400	040	1.16
461-010	1	50	0	040	2.00
461-131	1X3/4	50	200	040	5.91
461-012	1-1/4	25	100	040	2.47
461-015	1-1/2	25	0	040	3.31
461-020	2	25	0	040	4.07

Insert Adapter (White PVC)

Insert x Soc

474-005	1/2	50	600	040	2.06
474-007	3/4	50	400	040	2.47
474-010	1	50	0	040	2.62
474-012	1-1/4	25	0	040	4.16
474-015	1-1/2	25	0	040	4.61
474-020	2	25	0	040	8.54
474-030	3	15	0	040	25.45
474-040	4	15	0	040	29.09

Insert Adapter (White PVC) (continued)

Insert x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
474-060F	6	1	4	047	150.35
474-080F	8	1	4	047	238.85

ASTM D 2609 Plastic Insert Fittings for Polyethylene (PE) pipe

Female Spigot Adapter

Spig x Fipt

478-005	1/2	50	600	040	.81
478-007	3/4	25	300	040	.95
478-010	1	50	0	040	1.52
478-012	1-1/4	25	0	040	2.12
478-015	1-1/2	20	0	040	2.62
478-020	2	20	0	040	3.85
478-030	3	10	0	040	13.05
478-040	4	5	0	040	21.67

Female Spigot Adapter - Special Reinforced

Spig x SR Fipt - Stainless Steel Collar

478-005SR	1/2	50	600	046	4.08
478-007SR	3/4	25	300	046	4.81
478-010SR	1	50	0	046	7.41
478-012SR	1-1/4	25	0	046	11.80
478-015SR	1-1/2	25	0	046	14.15
478-020SR	2	15	0	046	23.55
478-030SR	3	5	0	046	43.28
478-040SR	4	5	0	046	66.85

Female Spigot Adapter - Special Reinforced Reducing

Spig x SR Fipt - Stainless Steel Collar

478-072SR	1/2X1/4	25	450	046	11.35
478-098SR	3/4X1/4	50	300	046	16.53
478-128SR	1X1/4	50	400	046	17.04

Spears® SR Series reinforced spigot adapters can be user-installed in a variety of socket type tees, elbows and reducer bushings for superior thread reinforcement demanding applications.

Riser Extension

Fipt x Mipt

(See also Polyethylene Cut-Off Riser Extensions in this catalog)

434-005	1/2	50	300	040	1.18
434-007	3/4	50	300	040	1.98
434-010	1	50	0	040	2.47

Riser Extension - Polyethylene Cut-Off

Fipt x Mipt

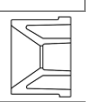
(1/2" = 3-Section Cut-Off; 3/4" = 4-Section Cut-Off)

M434-005-3	1/2X3	50	600	120	1.42
M434-007-4	3/4X4	50	0	120	1.88

High Density Polyethylene - Not NSF-listed - Not pressure rated. For use on open ended irrigation systems.

Reducer Bushing Flush Style

Spig x Soc



437-072	1/2X1/4	50	300	040	1.22
437-073	1/2X3/8	50	300	040	1.22
437-101	3/4X1/2	50	350	040	.67
437-130	1X1/2	50	300	040	1.22
437-131	1X3/4	50	300	040	1.22
437-166	1-1/4X1/2	25	300	040	1.64

PVC Schedule 40 Fittings

Reducer Bushing Flush Style (continued)

Spig x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
437-167	1-1/4X3/4	25	300	040	1.64
437-168	1-1/4X1	25	300	040	1.64
437-209	1-1/2X1/2	25	200	040	1.74
437-210	1-1/2X3/4	25	200	040	1.74
437-211	1-1/2X1	25	200	040	1.74
437-212	1-1/2X1-1/4	25	200	040	1.74
437-247	2X1/2	10	120	040	2.87
437-248	2X3/4	10	60	040	2.87
437-249	2X1	10	60	040	2.87
437-250	2X1-1/4	10	120	040	2.87
437-251	2X1-1/2	25	0	040	2.87
437-287	2-1/2X1/2	10	80	040	4.62
437-288	2-1/2X3/4	10	0	040	4.62
437-289	2-1/2X1	10	40	040	4.62
437-290	2-1/2X1-1/4	10	40	040	4.62
437-291	2-1/2X1-1/2	10	80	040	4.62
437-292	2-1/2X2	10	80	040	4.62
437-333[1]	3X1/2	10	0	040	9.09
437-334	3X3/4	10	0	040	6.80
437-335	3X1	10	0	040	6.80
437-336	3X1-1/4	10	0	040	6.80
437-337	3X1-1/2	10	0	040	6.80
437-338	3X2	10	0	040	6.80
437-339	3X2-1/2	15	0	040	6.80
437-420	4X2	6	0	040	15.23
437-421	4X2-1/2	6	0	040	15.23
437-422	4X3	6	0	040	15.23
437-486	5X2	5	0	040	21.41
437-488	5X3	5	0	040	21.41
437-490	5X4	4	0	040	21.41
437-528	6X2	5	0	040	37.72
437-530	6X3	5	0	040	37.72
437-532	6X4	5	0	040	37.72
437-534	6X5	5	0	040	37.72
437-578[1]	8X2	4	0	040	148.75
437-580[1]	8X3	4	0	040	148.75
437-582	8X4	4	0	040	131.47
437-583[1]	8X5	4	0	040	171.79
437-585	8X6	4	0	040	131.47
437-623[1]	10X3	2	0	041	394.56
437-624[1]	10X4	2	0	041	394.56
437-626	10X6	3	0	041	357.89
437-628	10X8	3	0	041	357.89
437-664[1]	12X4	2	0	041	532.94
437-666[1]	12X6	2	0	041	532.94
437-666F	12X6	1	2	047	393.51
437-668	12X8	1	2	041	398.02
437-670	12X10	2	0	041	398.02
437-696F	14X6	1	3	047	965.78
437-698F	14X8	1	3	047	691.95
437-700F	14X10	1	3	047	461.60
437-702F	14X12	1	3	047	161.11
437-756F	16X6	1	0	047	1150.64
437-758F	16X8	1	2	047	907.41
437-760F	16X10	1	0	047	651.96
437-762F	16X12	1	2	047	376.62
437-764F	16X14	1	2	047	394.17
437-786F	18X6	1	0	047	1931.96
437-788F	18X8	1	0	047	1774.75
437-790F	18X10	1	0	047	1451.53
437-792F	18X12	1	0	047	934.35
437-794F	18X14	1	0	047	910.41
437-796F	18X16	1	0	047	429.23
437-816F	20X6	1	0	047	2674.61
437-818F	20X8	1	0	047	2513.74

Reducer Bushing Flush Style (continued)

Spig x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
437-820F	20X10	1	0	047	2329.65
437-822F	20X12	1	0	047	2034.75
437-824F	20X14	1	0	047	1667.55
437-826F	20X16	1	0	047	1332.84
437-828F	20X18	1	0	047	664.62
437-906F	24X6	1	0	047	4259.46
437-908F	24X8	1	0	047	4082.60
437-910F	24X10	1	0	047	3594.11
437-912F	24X12	1	0	047	3284.87
437-914F	24X14	1	0	047	3029.82
437-916F	24X16	1	0	047	2536.46
437-918F	24X18	1	0	047	2522.54
437-920F	24X20	1	0	047	2053.58

[1] Sized with Bushing

Reducer Bushing Flush Style

Spig x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
438-071	1/2X1/8	50	350	040	1.41
438-072	1/2X1/4	50	350	040	1.41
438-073	1/2X3/8	50	350	040	1.41
438-098	3/4X1/4	50	300	040	1.41
438-101	3/4X1/2	50	300	040	1.06
438-127	1X1/8	25	150	040	1.72
438-128	1X1/4	50	200	040	1.72
438-129	1X3/8	50	200	040	1.72
438-130	1X1/2	50	300	040	1.72
438-131	1X3/4	50	300	040	1.72
438-166	1-1/4X1/2	25	150	040	2.64
438-167	1-1/4X3/4	25	150	040	2.64
438-168	1-1/4X1	25	100	040	2.64
438-206	1-1/2X1/8	25	100	040	3.04
438-207	1-1/2X1/4	25	200	040	3.04
438-209	1-1/2X1/2	25	100	040	3.04
438-210	1-1/2X3/4	25	100	040	3.04
438-211	1-1/2X1	25	100	040	3.04
438-212	1-1/2X1-1/4	25	100	040	3.04
438-245	2X1/4	10	60	040	4.08
438-247	2X1/2	10	120	040	4.08
438-248	2X3/4	10	60	040	4.08
438-249	2X1	10	120	040	4.08
438-250	2X1-1/4	10	120	040	4.08
438-251	2X1-1/2	10	120	040	4.08
438-287	2-1/2X1/2	10	0	040	5.92
438-288	2-1/2X3/4	10	40	040	5.92
438-289	2-1/2X1	10	40	040	5.92
438-290	2-1/2X1-1/4	10	40	040	5.92
438-291	2-1/2X1-1/2	10	40	040	5.92
438-292	2-1/2X2	10	40	040	5.92
438-334	3X3/4	10	0	040	6.80
438-335	3X1	10	0	040	6.80
438-336	3X1-1/4	10	0	040	6.80
438-337	3X1-1/2	10	0	040	6.80
438-338	3X2	10	0	040	6.80
438-339	3X2-1/2	10	0	040	6.80
438-420	4X2	6	0	040	15.20
438-421	4X2-1/2	6	0	040	15.20
438-422	4X3	6	0	040	15.20
438-488	5X3	5	0	040	29.64
438-490	5X4	6	0	040	29.64
438-528	6X2	5	0	040	55.63
438-530	6X3	5	0	040	55.63
438-532	6X4	5	0	040	55.63
438-534	6X5	5	0	040	55.63

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Schedule 40 Fittings

Reducer Bushing - Special Reinforced Flush Style

Spig x SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
438-128SR	1X1/4	25	150	046	3.31
438-166SR	1-1/4X1/2	25	100	046	6.04
438-207SR	1-1/2X1/4	25	100	046	8.43
438-209SR	1-1/2X1/2	25	100	046	8.43
438-210SR	1-1/2X3/4	25	100	046	8.43
438-247SR	2X1/2	10	80	046	10.32
438-248SR	2X3/4	10	80	046	10.32
438-249SR	2X1	10	80	046	10.32
438-334SR	3X3/4	10	0	046	40.38
438-335SR	3X1	10	0	046	40.38
438-336SR	3X1-1/4	10	0	046	40.38
438-337SR	3X1-1/2	10	0	046	40.38
438-420SR	4X2	6	0	046	62.07
438-421SR	4X2-1/2	6	0	046	69.86
438-528SR	6X2	5	0	046	71.48
438-530SR	6X3	5	0	046	64.35
438-532SR	6X4	5	0	046	71.48

Reducer (T.T.) Bushing

Mipt x Fipt

439-052	3/8X1/4	50	450	040	3.04
439-071	1/2X1/8	50	300	040	3.04
439-072	1/2X1/4	50	300	040	3.04
439-073	1/2X3/8	50	300	040	3.04
439-098	3/4X1/4	50	300	040	1.88
439-099	3/4X3/8	50	300	040	1.88
439-101	3/4X1/2	50	300	040	1.88
439-128	1X1/4	25	150	040	2.64
439-130	1X1/2	50	300	040	2.64
439-131	1X3/4	50	800	040	2.64
439-166	1-1/4X1/2	25	150	040	3.93
439-167	1-1/4X3/4	25	150	040	3.93
439-168	1-1/4X1	25	150	040	3.93
439-209	1-1/2X1/2	25	300	040	4.75
439-210	1-1/2X3/4	25	300	040	4.75
439-211	1-1/2X1	25	300	040	4.75
439-212	1-1/2X1-1/4	25	300	040	4.75
439-247	2X1/2	10	60	040	5.08
439-248	2X3/4	10	60	040	5.08
439-249	2X1	10	60	040	5.08
439-250	2X1-1/4	10	60	040	5.08
439-251	2X1-1/2	10	60	040	5.08
439-292	2-1/2X2	10	80	040	17.77
439-337	3X1-1/2	10	0	040	21.02
439-338	3X2	10	0	040	21.02
439-339	3X2-1/2	10	0	040	21.02
439-420	4X2	6	0	040	62.83
439-422	4X3	6	0	040	48.59

Reducer Bushing - Special Reinforced Flush Style

Mipt X SR Fipt - Stainless Steel Collar

439-209SR	1-1/2X1/2	25	300	046	8.74
439-210SR	1-1/2X3/4	25	300	046	8.74
439-247SR	2X1/2	10	60	046	5.08
439-248SR	2X3/4	10	60	046	7.91
439-249SR	2X1	10	120	046	12.83
439-420SR	4X2	6	0	046	48.59

Cap

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
447-003	3/8	50	1000	040	1.64
447-005	1/2	50	600	040	.58
447-007	3/4	50	300	040	.67
447-010	1	50	200	040	1.06
447-012	1-1/4	25	100	040	1.51
447-015	1-1/2	25	0	040	1.64
447-020	2	25	0	040	1.98
447-025	2-1/2	10	0	040	6.31
447-030	3	10	0	040	6.89
447-040	4	6	0	040	15.67
447-045F	4-1/2	10	0	047	50.37
447-050	5	5	0	040	26.32
447-060	6	4	0	040	37.57
447-080	8	3	0	040	94.38
447-100F	10	1	5	047	210.39
447-120F	12	1	5	047	305.66
447-140F	14	1	2	047	383.61
447-160F	16	1	2	047	457.86
447-180F	18	1	2	047	806.80
447-200F	20	1	0	047	1225.11
447-240F	24	1	0	047	1949.91

Cap

Fipt

448-003	3/8	50	1000	040	2.21
448-005	1/2	50	600	040	1.22
448-007	3/4	50	300	040	1.41
448-010	1	50	200	040	2.13
448-012	1-1/4	25	100	040	2.53
448-015	1-1/2	25	100	040	2.64
448-020	2	10	120	040	4.67
448-025	2-1/2	10	0	040	6.89
448-030	3	10	0	040	9.01
448-040	4	6	0	040	15.81
448-050	5	5	0	040	30.63
448-060	6	8	0	040	37.37
448-080F	8	1	2	047	182.38
448-100F	10	1	2	047	370.62
448-120F	12	1	0	047	740.53

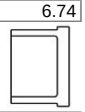
Cap - Special Reinforced

SR Fipt - Stainless Steel Collar

448-012SR	1-1/4	25	100	046	6.74

Plug

Spig



449-003	3/8	50	700	040	1.74
449-005	1/2	50	1000	040	1.41
449-007	3/4	50	300	040	1.64
449-010	1	50	200	040	1.98
449-012	1-1/4	25	150	040	2.64
449-015	1-1/2	25	100	040	3.36
449-020	2	10	120	040	4.16
449-025	2-1/2	10	0	040	7.13
449-030	3	10	0	040	9.41
449-040	4	6	0	040	21.31
449-060	6	6	0	040	28.85
449-060F[4]	6	1	6	047	73.00
449-080F[4]	8	1	6	047	112.39

Plug (continued)

Spig

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
449-100F[4]	10	1	0	047	258.01
449-120F[4]	12	1	0	047	421.87
449-140F[4]	14	1	2	047	462.49
449-160F[4]	16	1	0	047	511.44
449-180F[4]	18	1	0	047	912.68
449-200F[4]	20	1	0	047	1669.72
449-240F[4]	24	1	0	047	2222.62

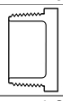
[4] Plug fabricated using Cap and pipe spigot.

Plug - Counter Sunk

Spig

449-007CS	3/4	50	300	040	1.64
449-010CS	1	50	300	040	1.98

Plug

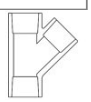


Mipt

450-003	3/8	50	700	040	1.89
450-005	1/2	50	500	040	1.74
450-007	3/4	50	300	040	1.87
450-010	1	50	400	040	3.04
450-012	1-1/4	25	300	040	3.20
450-015	1-1/2	25	150	040	3.44
450-020	2	10	120	040	4.44
450-025	2-1/2	10	80	040	6.17
450-030	3	10	0	040	9.34
450-040	4	6	0	040	21.07
450-060	6	6	0	040	61.78
450-080F[4]	8	1	4	047	234.89
450-100F[4]	10	1	3	047	376.41
450-120F[4]	12	1	0	047	455.63

[4] Plug fabricated using Cap and threaded pipe.

Wye



Soc

1/2" - 2" - 235 psi Maximum Internal Pressure Rating @ 73°F (23°C)
2-1/2" - 6" - 150 psi Maximum Internal Pressure Rating @ 73°F (23°C)
8" - Larger & All Fabricated Sizes- 100 psi Maximum Internal Pressure Rating @ 73°F (23°C)

475-005	1/2	25	100	040	2.76
475-007	3/4	20	0	040	4.33
475-010	1	25	0	040	6.06
475-012	1-1/4	20	0	040	9.32
475-015	1-1/2	20	0	040	11.95
475-020	2	10	0	040	35.85
475-025	2-1/2	8	0	040	81.96
475-030	3	5	0	040	60.40
475-040	4	4	0	040	113.92
475-050F	5	1	3	047	444.56
475-060	6	3	0	040	241.02
475-080	8	1	0	040	387.67
475-100	10	1	0	041	1284.57
475-100F*	10	1	0	047	1077.91
475-120	12	1	0	041	1898.02
475-120F*	12	1	0	047	1465.32
475-140F*	14	1	0	047	2075.98
475-160F*	16	1	0	047	2683.45
475-180F*	18	1	0	047	3435.76
475-200F*	20	1	0	047	4062.04
475-240F*	24	1	0	047	5051.87

Wye (continued)

Soc

[1] Sized with Bushing

* An asterisk (*) appearing after a fabricated fitting part number indicates the item is fiberglass reinforced.

Wye - Reducing

Soc

1/2" - 2" - 235 psi Maximum Internal Pressure Rating @ 73°F (23°C)
2-1/2" - 6" - 150 psi Maximum Internal Pressure Rating @ 73°F (23°C)
8" - Larger & All Fabricated Sizes - 100 psi Maximum Internal Pressure Rating @ 73°F (23°C)

475-101[1]	3/4X1/2	20	0	040	8.54
475-130[1]	1X1/2	20	0	040	10.86
475-131[1]	1X3/4	20	0	040	10.86
475-166[1]	1-1/4X1/2	20	0	040	14.61
475-167[1]	1-1/4X3/4	20	0	040	14.61
475-168[1]	1-1/4X1	20	0	040	14.61
475-209[1]	1-1/2X1/2	20	0	040	17.39
475-210[1]	1-1/2X3/4	20	0	040	17.39
475-211[1]	1-1/2X1	20	0	040	17.39
475-212[1]	1-1/2X1-1/4	20	0	040	17.39
475-247[1]	2X1/2	10	0	040	39.51
475-248[1]	2X3/4	10	0	040	39.51
475-249[1]	2X1	10	0	040	39.51
475-250[1]	2X1-1/4	10	0	040	39.51
475-251[1]	2X1-1/2	10	0	040	39.51
475-292[1]	2-1/2X2	4	0	040	88.03
475-334[1]	3X3/4	5	0	040	68.60
475-335[1]	3X1	5	0	040	68.60
475-336[1]	3X1-1/4	5	0	040	68.60
475-337[1]	3X1-1/2	5	0	040	68.60
475-338[1]	3X2	5	0	040	68.60
475-339[1]	3X2-1/2	5	0	040	68.60
475-420	4X2	4	0	040	131.78
475-421[1]	4X2-1/2	4	0	040	131.78
475-422[1]	4X3	4	0	040	131.78
475-488F*	5X3	1	4	047	353.59
475-490F*	5X4	1	4	047	368.20
475-528[1]	6X2	4	0	040	284.43
475-529[1]	6X2-1/2	5	0	040	284.43
475-530[1]	6X3	5	0	040	284.43
475-532	6X4	5	0	040	309.89
475-578F*	8X2	1	2	047	532.21
475-579F*	8X2-1/2	1	0	047	564.77
475-580F*	8X3	1	2	047	578.25
475-582F*	8X4	1	2	047	596.45
475-585F*	8X6	1	0	047	614.53
475-621F*	10X2	1	0	047	639.77
475-622F*	10X2-1/2	1	0	047	650.77
475-623F*	10X3	1	0	047	685.51
475-624F*	10X4	1	0	047	725.43
475-626	10X6	1	0	041	1100.84
475-626F*	10X6	1	0	047	801.01
475-628	10X8	1	0	041	1223.16
475-628F*	10X8	1	0	047	857.09
475-661F*	12X2	1	0	047	868.42
475-663F*	12X3	1	0	047	889.14
475-664F*	12X4	1	0	047	930.55
475-666F*	12X6	1	0	047	935.02
475-668F*	12X8	1	0	047	1084.33
475-670F*	12X10	1	0	047	1239.80
475-691F*	14X2	1	0	047	1032.35
475-693F*	14X3	1	0	047	1117.36
475-694F*	14X4	1	0	047	1171.81

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Wye - Reducing (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
475-696F*	14X6	1	0	047	1320.22
475-698F*	14X8	1	0	047	1512.75
475-700F*	14X10	1	0	047	1689.82
475-702F*	14X12	1	0	047	1893.25
475-751F*	16X2	1	0	047	1199.41
475-753F*	16X3	1	0	047	1296.59
475-754F*	16X4	1	0	047	1348.37
475-756F*	16X6	1	0	047	1517.35
475-758F*	16X8	1	0	047	1727.99
475-760F*	16X10	1	0	047	1923.22
475-762F*	16X12	1	0	047	2143.16
475-764F*	16X14	1	0	047	2425.75
475-781F*	18X2	1	0	047	1308.67
475-783F*	18X3	1	0	047	1368.57
475-784F*	18X4	1	0	047	1388.89
475-786F*	18X6	1	0	047	2661.03
475-788F*	18X8	1	0	047	1985.98
475-790F*	18X10	1	0	047	2209.00
475-792F*	18X12	1	0	047	2562.64
475-794F*	18X14	1	0	047	2813.63
475-796F*	18X16	1	0	047	2950.83
475-811F*	20X2	1	0	047	1376.09
475-813F*	20X3	1	0	047	1491.22
475-814F*	20X4	1	0	047	1510.54
475-816F*	20X6	1	0	047	1538.88
475-818F*	20X8	1	0	047	2080.20
475-820F*	20X10	1	0	047	2312.57
475-822F*	20X12	1	0	047	2787.00
475-824F*	20X14	1	0	047	3118.99
475-826F*	20X16	1	0	047	3457.07
475-828F*	20X18	1	0	047	3710.88
475-901F*	24X2	1	0	047	1737.02
475-903F*	24X3	1	0	047	1775.23
475-904F*	24X4	1	0	047	1824.16
475-906F*	24X6	1	0	047	3210.71
475-908F*	24X8	1	0	047	3502.38
475-910F*	24X10	1	0	047	3539.38
475-912F*	24X12	1	0	047	3746.56
475-914F*	24X14	1	0	047	3875.11
475-916F*	24X16	1	0	047	4058.18
475-918F*	24X18	1	0	047	4411.72
475-920F*	24X20	1	0	047	4822.38

[1] Sized with Bushing

* An asterisk (*) appearing after a fabricated fitting part number indicates the item is fiberglass reinforced.

Double Wye

Soc

100 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
476-020F*	2	1	4	047	278.43
476-030F*	3	1	3	047	458.60
476-040F*	4	1	2	047	510.84
476-060F*	6	1	0	047	581.76
476-080F*	8	1	0	047	708.48
476-100F*	10	1	0	047	1299.16
476-120F*	12	1	0	047	1546.67

* An asterisk (*) appearing after a fabricated fitting part number indicates the item is fiberglass reinforced.

For larger sizes please contact your Regional Spears® Distribution Center.

Double Wye - Reducing

Soc

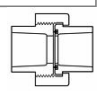
Size 3" is 150 psi, all Fabricated Sizes- 100 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
476-338	3X2	5	0	040	100.68
476-420F*	4X2	1	4	047	452.25
476-421F*	4X2-1/2	1	2	047	471.85
476-422F*	4X3	1	3	047	485.42
476-528F*	6X2	1	2	047	455.41
476-529F*	6X2-1/2	1	2	047	495.79
476-530F*	6X3	1	2	047	515.27
476-532F*	6X4	1	0	047	523.33
476-578F*	8X2	1	2	047	555.58
476-579F*	8X2-1/2	1	2	047	577.67
476-580F*	8X3	1	0	047	621.64
476-582F*	8X4	1	0	047	629.64
476-585F*	8X6	1	0	047	660.09
476-621F*	10X2	1	0	047	827.76
476-622F*	10X2-1/2	1	0	047	877.01
476-623F*	10X3	1	0	047	902.16
476-624F*	10X4	1	0	047	991.25
476-626F*	10X6	1	0	047	1111.88
476-628F*	10X8	1	0	047	1159.46
476-661F*	12X2	1	0	047	1180.96
476-662F*	12X2 1/2	1	0	047	1194.37
476-663F*	12X3	1	0	047	1258.47
476-664F*	12X4	1	0	047	1283.05
476-666F*	12X6	1	0	047	1355.85
476-668F*	12X8	1	0	047	1390.63
476-670F*	12X10	1	0	047	1473.23

* An asterisk (*) appearing after a fabricated fitting part number indicates the item is fiberglass reinforced.

For larger sizes please contact your Regional Spears® Distribution Center.

Union - Socket/Buna

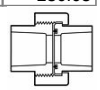


Soc x Soc with Buna-N O-ring Seal

150 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
457-005	1/2	20	120	040	6.31
457-007	3/4	15	90	040	7.17
457-010	1	10	60	040	7.39
457-012	1-1/4	5	30	040	23.81
457-015	1-1/2	5	20	040	24.79
457-020	2	5	0	040	33.45
457-025	2-1/2	5	0	040	46.82
457-030	3	5	0	040	74.77
457-040	4	4	0	040	103.53
457-060	6	1	0	040	230.05

Union - Socket/EPDM



Soc x Soc with EPDM O-ring Seal

150 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
497-005	1/2	20	120	040	6.94
497-007	3/4	15	90	040	7.94
497-010	1	10	60	040	8.11
497-012	1-1/4	5	30	040	26.18
497-015	1-1/2	5	20	040	27.29
497-020	2	5	0	040	36.80
497-025	2-1/2	5	0	040	51.52
497-030	3	5	0	040	82.17
497-040	4	4	0	040	110.54
497-060	6	1	0	040	245.64

PVC Schedule 40 Fittings & Schedule 40 Tank Adapters

Unions

Union - Fipt/Buna

Fipt x Fipt with Buna O-ring Seal

150 psi 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
458-005	**1/2**	20	120	040	7.06
458-007	**3/4**	15	90	040	11.80
458-010	**1**	10	60	040	16.12
458-012	**1-1/4**	5	30	040	27.67
458-015	**1-1/2**	5	30	040	28.28
458-020	**2**	5	20	040	34.72
458-025	**2-1/2**	5	0	040	49.45
458-030	**3**	5	0	040	79.37
458-040	**4**	4	0	040	105.33
458-060	**6**	1	0	040	234.09

Union - Fipt/EPDM

Fipt x Fipt with EPDM O-ring Seal

150 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
498-005	**1/2**	10	60	040	7.78
498-007	**3/4**	15	90	040	13.00
498-010	**1**	10	60	040	17.71
498-012	**1-1/4**	5	20	040	30.40
498-015	**1-1/2**	5	30	040	31.13
498-020	**2**	5	20	040	38.23
498-025	**2-1/2**	5	0	040	53.53
498-030	**3**	5	0	040	86.27
498-040	**4**	4	0	040	116.26
498-060	**6**	1	0	040	258.37

Union - Special Reinforced Fipt/Buna

Soc x SR Fipt with Buna O-ring Seal - Stainless Steel Collar

235 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
459-002SR	**1/4**	25	150	046	15.32
459-003SR	**3/8**	25	100	046	15.32
459-005SR	**1/2**	10	60	046	8.32
459-007SR	**3/4**	10	60	046	11.45
459-010SR	**1**	10	40	046	15.24
459-012SR	**1-1/4**	5	20	046	29.09
459-015SR	**1-1/2**	5	0	046	36.01
459-020SR	**2**	5	0	046	55.46
459-030SR	**3**	5	0	046	130.95
459-040SR	**4**	4	0	046	150.35

Union - Special Reinforced Fipt/Buna (continued)

Soc x SR Fipt with Buna O-ring Seal - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
459-060SR	**6**	1	0	046	334.11

Union - Special Reinforced Fipt/EPDM

Soc x SR Fipt with EPDM O-ring Seal - Stainless Steel Collar

235 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
499-002SR	**1/4**	25	150	046	16.82
499-003SR	**3/8**	25	100	046	16.82
499-005SR	**1/2**	10	60	046	9.14
499-007SR	**3/4**	10	40	046	12.59
499-010SR	**1**	10	40	046	16.73
499-012SR	**1-1/4**	5	20	046	31.97
499-015SR	**1-1/2**	5	0	046	39.58
499-020SR	**2**	5	0	046	60.95
499-030SR	**3**	5	0	046	143.91
499-040SR	**4**	4	0	046	165.21
499-060SR	**6**	1	0	046	367.16

Union - Brass Fipt/Buna

Soc x Fipt with Brass Thread Insert & Buna-N O-ring Seal

235 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
459-010BR	**1**	10	0	046	64.74
459-012BR	**1-1/4**	5	20	046	108.76
459-015BR	**1-1/2**	5	0	046	143.89
459-020BR	**2**	5	0	046	191.94

Not intended to convey or dispense water for human consumption through drinking or cooking

Union - Brass Fipt/EPDM

Soc x Fipt with Brass Thread Insert & EPDM O-ring Seal

235 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
499-010BR	**1**	10	0	046	64.74
499-012BR	**1-1/4**	5	20	046	108.76
499-015BR	**1-1/2**	5	0	046	143.89
499-020BR	**2**	5	0	046	191.94

Not intended to convey or dispense water for human consumption through drinking or cooking

Schedule 40 Tank Adapters

Tank Adapters with EPDM Gasket, Schedule 40

Socket(Male Pipe Thread)

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4170E-005	**1/2 Soc(1 MPT)**	25	0	029	31.05
4170E-007	3/4 Soc(1-1/4 MPT)	25	0	029	36.49
4170E-010	**1 Soc(1-1/2 MPT)**	25	0	029	42.27
4170E-012	**1-1/4 Soc(2 MPT)**	20	0	029	52.42
4170E-015	**1-1/2 Soc(2 MPT)**	30	0	029	58.68
4170E-020	**2 Soc(2-1/2 MPT)**	10	0	029	75.77
4170E-025	**2-1/2 Soc(3 MPT)**	8	0	029	126.11

Tank Adapters with EPDM Gasket, Schedule 40 (continued)

Socket(Male Pipe Thread)

Note: These tank adapters have both Socket and size larger Male Pipe Thread connection on external end. Adapter Nut has left hand thread to prevent loosening when installing threaded connection. End lugs allow holding body when tightening Adapter Nut.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC White Saddles & Hot-Tap Saddles

PRICING

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Glue-On Saddles

Saddle
IPS O.D. x Soc

NSF-61

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
463-288	2-1/2X3/4	10	0	040	27.57
463-333[1]	3X1/2	10	0	040	30.21
463-335[1]	3X1	10	0	040	30.21
463-336[1]	3X1-1/4	10	0	040	30.21
463-337	3X1-1/2	10	0	040	27.57
463-338[2]	3X2	10	0	040	30.21
463-415[1]	4X1/2	10	0	040	40.32
463-416[1]	4X3/4	10	0	040	49.59
463-417[1]	4X1	10	0	040	40.32
463-418[1]	4X1-1/4	10	0	040	40.32
463-419	4X1-1/2	10	0	040	36.83
463-420[2]	4X2	10	0	040	40.32
463-485[1]	5X1-1/2	6	0	040	50.35
463-486	5X2	6	0	040	45.97
463-523[1]	6X1/2	5	0	040	60.48
463-525[1]	6X1	10	0	040	60.48
463-526[1]	6X1-1/4	5	0	040	60.48
463-527	6X1-1/2	5	0	040	55.27
463-528[2]	6X2	5	0	040	60.48
463-530[1]	6X3	5	0	040	86.33
463-532	6X4	5	0	040	69.54
463-573[1]	8X1/2	5	0	040	90.19
463-575[1]	8X1	5	0	040	90.19
463-576[1]	8X1-1/4	5	0	040	90.19
463-577	8X1-1/2	5	0	040	82.36
463-578[2]	8X2	5	0	040	90.19
463-580[1]	8X3	5	0	040	104.59
463-582	8X4	5	0	040	88.29
463-624	10X4	5	0	041	101.23

[1] Outlet-sized with Bushing
[2] Outlet-sized with Coupling

Note: See following Installation Instructions

Saddle
IPS O.D. x Fipt

NSF-61

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
464-288	2-1/2X3/4	10	0	040	27.57
464-337	3X1-1/2	10	0	040	27.57
464-419	4X1-1/2	10	0	040	36.83
464-486	5X2	6	0	040	45.97
464-527	6X1-1/2	5	0	040	55.24
464-532	6X4	5	0	040	69.54
464-577	8X1-1/2	5	0	040	82.36
464-582	8X4	5	0	040	88.29
464-624	10X4	5	0	041	101.23

Saddle Installation Instructions:
When Assembling Spears® Saddles to PVC pipe, Spears® Manufacturing Company recommends Spears® PVC-19 Extra Heavy Body Solvent Cement and Spears ® PRIMER-68 or PRIMER-70, or equivalent. Although good connections may be accomplished without saddle straps, Spears® Manufacturing Company recommends the use of clamp or strap device during the assembly step to ensure good compression between the pipe and fitting surfaces as the solvent cures. Solvent cemented saddles are non pressure rated. For additional information, contact Spears® Technical Service.

Snap-On Saddle
IPS O.D. x Soc

NSF-61

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
463-005	1/2	25	300	040	1.44
463-007	3/4	25	200	040	1.60
463-010	1	50	0	040	3.05

Snap-On Saddle (continued)
IPS O.D. x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
463-012	1-1/4	50	0	040	4.75
463-015	1-1/2	25	0	040	5.77
463-020	2	20	0	040	8.43
463-101	3/4X1/2	25	300	040	1.87
463-130	1X1/2	50	0	040	3.05

Note: See following installation instructions

Snap-On Saddle
IPS O.D. x Fipt

464-005	1/2	25	300	040	1.87
464-007	3/4	25	200	040	2.94
464-010	1	50	0	040	5.39
464-071	1/2X1/8	50	300	040	1.87
464-097	3/4X1/8	50	200	040	2.47
464-101	3/4X1/2	25	300	040	2.47
464-130	1X1/2	50	0	040	4.45
464-131	1X3/4	50	0	040	4.45
464-210	1-1/2X3/4	25	0	040	11.21

Snap-On Saddle Installation Instructions
urface to be joined must be wiped clean.
an appropriate applicator, apply a coat of primer to the fitting and

the primer is still wet, apply a generous coat of medium bodied
nt first to the pipe, then to the fitting and then to the pipe again,
ing an area of the pipe slightly larger than the saddle.
ut delay, push the saddle onto the pipe and rotate the fitting
ximately 15ß° in each direction to evenly distribute the cement.
cement to cure.
tting and pipe with the recommended size hole saw.
ve debris from the line.
v all safe handling precautions.
Solvent cemented saddles are non pressure rated. For additional information, contact Spearsß® Technical Service.

Saddle
IPS O.D.x Socket Schedule 40

Non Pressure Rated

3763-528	6X2	1	10	390	35.83
3763-530	6X3	1	10	390	36.68
3763-532	6X4	1	10	390	38.15
3763-578	8X2	1	10	390	52.81
3763-580	8X3	1	10	390	53.33
3763-582	8X4	1	10	390	53.98
3763-585	8X6	1	10	390	55.51
3763-621	10X2	1	5	390	66.74
3763-623	10X3	1	10	390	67.67
3763-624	10X4	1	8	390	67.95
3763-626	10X6	1	5	390	79.52
3763-628	10X8	1	5	390	127.61
3763-661	12X2	1	5	390	78.93
3763-663	12X3	1	10	390	80.39
3763-664	12X4	1	10	390	82.11
3763-666	12X6	1	4	390	95.22
3763-668	12X8	1	5	390	151.80
3763-670	12X10	1	4	390	219.51
3763-691	14X2	1	10	390	101.16
3763-693	14X3	1	8	390	168.11
3763-694	14X4	1	5	390	115.48
3763-696	14X6	1	10	390	117.80
3763-698	14X8	1	4	390	180.77
3763-700	14X10	1	3	390	232.54
3763-702	14X12	1	0	390	256.32
3763-751	16X2	1	5	390	107.66
3763-753	16X3	1	5	390	109.14

Glue-On Saddles

Saddle (continued)

IPS O.D.x Socket Schedule 40

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
3763-754	16X4	1	10	390	110.80
3763-756	16X6	1	8	390	126.94
3763-758	16X8	1	3	390	188.67
3763-760	16X10	1	0	390	239.80
3763-762	16X12	1	0	390	265.75
3763-764	16X14	1	0	390	276.25
3763-781	18X2	1	5	390	157.82
3763-783	18X3	1	5	390	160.89
3763-784	18X4	1	10	390	163.35
3763-786	18X6	1	4	390	173.93
3763-788	18X8	1	0	390	253.79
3763-790	18X10	1	0	390	281.34
3763-792	18X12	1	0	390	289.11
3763-794	18X14	1	0	390	436.77
3763-796	18X16	1	0	390	570.18
3763-811	20X2	1	8	390	158.19
3763-813	20X3	1	4	390	160.36
3763-814	20X4	1	4	390	168.19
3763-816	20X6	1	0	390	175.66
3763-818	20X8	1	5	390	253.46
3763-820	20X10	1	0	390	281.35
3763-822	20X12	1	0	390	401.12
3763-824	20X14	1	0	390	437.67
3763-826	20X16	1	0	390	572.27
3763-828	20X18	1	0	390	648.56
3763-901	24X2	1	5	390	150.91
3763-903	24X3	1	5	390	166.80
3763-904	24X4	1	5	390	168.65
3763-906	24X6	1	5	390	178.92
3763-908	24X8	1	5	390	255.81
3763-910	24X10	1	0	390	284.56
3763-912	24X12	1	0	390	402.54
3763-914	24X14	1	0	390	450.77
3763-916	24X16	1	0	390	506.61
3763-918	24X18	1	0	390	682.74
3763-920	24X20	1	0	390	764.43

Stub Saddle

IPS O.D x Socket Schedule 40

Non Pressure Rated

3765-528	6X2	1	8	390	38.53
3765-530	6X3	1	4	390	39.44
3765-532	6X4	1	10	390	41.03
3765-578	8X2	1	10	390	56.79
3765-580	8X3	1	4	390	57.34
3765-582	8X4	1	8	390	58.04
3765-585	8X6	1	4	390	59.69
3765-621	10X2	1	5	390	71.75
3765-623	10X3	1	5	390	72.77
3765-624	10X4	1	4	390	92.22
3765-626	10X6	1	2	390	85.51
3765-628	10X8	1	2	390	137.21
3765-661	12X2	1	6	390	84.86
3765-663	12X3	1	5	390	86.44
3765-664	12X4	1	2	390	88.28
3765-666	12X6	1	2	390	102.32
3765-668	12X8	1	2	390	163.23
3765-670	12X10	1	2	390	236.03
3765-691	14X2	1	10	390	108.77
3765-693	14X3	1	2	390	110.00
3765-694	14X4	1	5	390	111.38
3765-696	14X6	1	3	390	126.67
3765-698	14X8	1	0	390	193.11
3765-700	14X10	1	0	390	250.04

Stub Saddle (continued)

IPS O.D x Socket Schedule 40

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
3765-702	14X12	1	0	390	275.62
3765-751	16X2	1	4	390	115.76
3765-753	16X3	1	5	390	117.35
3765-754	16X4	1	5	390	119.13
3765-756	16X6	1	2	390	136.48
3765-758	16X8	1	0	390	202.87
3765-760	16X10	1	0	390	257.85
3765-762	16X12	1	0	390	285.75
3765-764	16X14	1	0	390	297.04
3765-781	18X2	1	4	390	169.68
3765-783	18X3	1	10	390	133.45
3765-784	18X4	1	10	390	175.64
3765-786	18X6	1	2	390	187.02
3765-788	18X8	1	0	390	272.88
3765-790	18X10	1	0	390	302.51
3765-792	18X12	1	0	390	310.86
3765-794	18X14	1	0	390	469.63
3765-796	18X16	1	0	390	612.58
3765-811	20X2	1	0	390	170.09
3765-813	20X3	1	2	390	172.43
3765-814	20X4	1	2	390	180.85
3765-816	20X6	1	0	390	188.89
3765-818	20X8	1	0	390	272.54
3765-820	20X10	1	0	390	302.52
3765-822	20X12	1	0	390	431.33
3765-824	20X14	1	0	390	470.62
3765-826	20X16	1	0	390	615.34
3765-828	20X18	1	0	390	697.38
3765-901	24X2	1	4	390	162.25
3765-903	24X3	1	2	390	179.34
3765-904	24X4	1	4	390	181.35
3765-906	24X6	1	3	390	192.39
3765-908	24X8	1	0	390	275.06
3765-910	24X10	1	0	390	305.96
3765-912	24X12	1	0	390	432.83
3765-914	24X14	1	0	390	484.71
3765-916	24X16	1	0	390	544.75
3765-918	24X18	1	0	390	734.11
3765-920	24X20	1	0	390	821.97

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Clamp-On Saddles

Clamp-On Saddle x Soc Single Outlet, PVC White

with Buna-N O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
466-247	2X1/2	3/4	1	10	046	28.43
466-248	2X3/4	7/8	1	10	046	28.43
466-249	2X1	1-1/8	1	10	046	28.43
466-250	2X1-1/4	1-1/2	1	10	046	28.43
466-251	2X1-1/2	1-1/2	1	10	046	28.43
466-291	2-1/2X1-1/2	1-3/4	1	10	046	38.57
466-333[1]	3X1/2	7/8	1	10	046	38.57
466-334	3X3/4	7/8	1	10	046	38.57
466-335	3X1	1-1/8	1	10	046	38.57
466-336[1]	3X1-1/4	2-1/4	1	10	046	38.57
466-337[1]	3X1-1/2	2-1/4	1	10	046	38.57
466-338	3X2	2-1/4	1	10	046	38.57
466-415[1]	4X1/2	1-1/8	1	10	046	49.42
466-416[1]	4X3/4	1-1/8	1	10	046	49.42
466-417	4X1	1-1/8	1	8	046	49.42
466-418[1]	4X1-1/4	1-3/4	1	8	046	49.42
466-419	4X1-1/2	1-3/4	1	8	046	49.42
466-420	4X2	2-1/4	1	8	046	49.42
466-421[1]	4X2-1/2	3	1	4	046	55.92
466-422	4X3	3	1	4	046	61.42
466-523[1]	6X1/2	1-1/8	1	4	046	85.03
466-524[1]	6X3/4	1-1/8	1	4	046	85.03
466-525	6X1	1-1/8	1	4	046	85.03
466-526[1]	6X1-1/4	2-1/4	1	4	046	85.03
466-527[1]	6X1-1/2	2-1/4	1	4	046	85.03
466-528	6X2	2-1/4	1	4	046	85.03
466-529[1]	6X2-1/2	3	1	4	046	93.48
466-530	6X3	3	1	4	046	97.40
466-532	6X4	4	1	4	046	102.54
466-573[1]	8X1/2	4	1	0	046	132.20
466-574[1]	8X3/4	4	1	0	046	132.20
466-575[1]	8X1	4	1	0	046	132.20
466-576[1]	8X1-1/4	4	1	0	046	132.20
466-577[1]	8X1-1/2	4	1	0	046	132.20
466-578[1]	8 X 2	4	1	0	046	132.20
466-579[1]	8X2-1/2	4	1	0	046	145.36
466-580[1]	8X3	4	1	0	046	154.14
466-582	8X4	4	1	0	046	163.23
466-585	8X6	6	1	0	046	181.28
466-620[1]	10X1-1/2	4	1	0	046	215.72
466-624	10X4	4	1	0	046	215.72
466-626	10X6	6	1	0	046	248.04
466-660[1]	12X1-1/2	4	1	0	046	270.41
466-664	12X4	4	1	0	046	270.41
466-666	12X6	6	1	0	046	313.58

[1]Outlet-sized with Bushing

Clamp-On Saddle x Soc Single Outlet, PVC White

with Buna-N O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
466S-247	2X1/2	3/4	1	10	046	46.74
466S-248	2X3/4	7/8	1	10	046	46.74
466S-249	2X1	1-1/8	1	10	046	46.74
466S-250	2X1-1/4	1-1/2	1	10	046	46.74
466S-251	2X1-1/2	1-1/2	1	10	046	46.74
466S-291	2-1/2X1-1/2	1-3/4	1	10	046	62.88
466S-333[1]	3X1/2	7/8	1	10	046	62.88
466S-334	3X3/4	7/8	1	10	046	62.88
466S-335	3X1	1-1/8	1	10	046	62.88
466S-336[1]	3X1-1/4	2-1/4	1	10	046	62.88
466S-337[1]	3X1-1/2	2-1/4	1	10	046	62.88

Clamp-On Saddle x Soc Single Outlet, PVC White (continued)

with Buna-N O-ring Seal & SS Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
466S-338	3X2	2-1/4	1	10	046	62.88
466S-415[1]	4X1/2	1-1/8	1	10	046	79.12
466S-416[1]	4X3/4	1-1/8	1	10	046	79.12
466S-417	4X1	1-1/8	1	10	046	79.12
466S-418[1]	4X1-1/4	1-3/4	1	8	046	79.12
466S-419	4X1-1/2	1-3/4	1	8	046	79.12
466S-420	4X2	2-1/4	1	8	046	79.12
466S-421[1]	4X2-1/2	3	1	4	046	86.45
466S-422	4X3	3	1	4	046	89.93
466S-523[1]	6X1/2	1-1/8	1	4	046	129.59
466S-524[1]	6X3/4	1-1/8	1	4	046	129.59
466S-525	6X1	1-1/8	1	4	046	129.59
466S-526[1]	6X1-1/4	2-1/4	1	4	046	129.59
466S-527[1]	6X1-1/2	2-1/4	1	4	046	129.59
466S-528	6X2	2-1/4	1	4	046	129.59
466S-529[1]	6X2-1/2	3	1	4	046	133.85
466S-530	6X3	3	1	4	046	136.61
466S-532	6X4	4	1	4	046	142.69
466S-573[1]	8X1/2	4	1	0	046	189.20
466S-574[1]	8X3/4	4	1	0	046	189.20
466S-575[1]	8X1	4	1	0	046	189.20
466S-576[1]	8X1-1/4	4	1	0	046	189.20
466S-577[1]	8X1-1/2	4	1	0	046	189.20
466S-578[1]	8 X 2	4	1	0	046	189.20
466S-579[1]	8X2-1/2	4	1	0	046	208.13
466S-580[1]	8X3	4	1	0	046	218.56
466S-582	8X4	4	1	0	046	231.73
466S-585	8X6	6	1	0	046	257.17
466S-620[1]	10X1-1/2	4	1	0	046	306.02
466S-624	10X4	4	1	0	046	306.02
466S-626	10X6	6	1	0	046	351.94
466S-664	12X4	4	1	0	046	383.59
466S-666	12X6	6	1	0	046	444.99

[1]Outlet-sized with Bushing

Clamp-On Saddle x Soc Single Outlet, PVC White

with EPDM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
466E-247	2X1/2	3/4	1	10	046	30.63
466E-248	2X3/4	7/8	1	10	046	30.63
466E-249	2X1	1-1/8	1	10	046	30.63
466E-250	2X1-1/4	1-1/2	1	10	046	30.63
466E-251	2X1-1/2	1-1/2	1	10	046	30.63
466E-291	2-1/2X1-1/2	1-3/4	1	10	046	39.58
466E-333[1]	3X1/2	7/8	1	10	046	39.58
466E-334	3X3/4	7/8	1	10	046	39.58
466E-335	3X1	1-1/8	1	10	046	39.58
466E-336[1]	3X1-1/4	2-1/4	1	10	046	39.58
466E-337[1]	3X1-1/2	2-1/4	1	10	046	39.58
466E-338	3X2	2-1/4	1	10	046	39.58
466E-415[1]	4X1/2	1-1/8	1	10	046	50.68
466E-416[1]	4X3/4	1-1/8	1	10	046	50.68
466E-417	4X1	1-1/8	1	8	046	50.68
466E-418[1]	4X1-1/4	1-3/4	1	8	046	50.68
466E-419	4X1-1/2	1-3/4	1	8	046	50.68
466E-420	4X2	2-1/4	1	8	046	50.68
466E-421[1]	4X2-1/2	3	1	4	046	61.67
466E-422	4X3	3	1	4	046	68.99
466E-523[1]	6X1/2	1-1/8	1	4	046	90.93
466E-524[1]	6X3/4	1-1/8	1	4	046	90.93
466E-525	6X1	1-1/8	1	4	046	90.93
466E-526[1]	6X1-1/4	2-1/4	1	4	046	90.93

Clamp-On Saddles

Clamp-On Saddle x Soc Single Outlet, PVC White
(continued)
with EPDM O-ring Seal & Zinc-Plated Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
466E-527[1]	6X1-1/2	1-1/8	1	4	046	90.93
466E-528	6X2	2-1/4	1	4	046	90.93
466E-529[1]	6X2-1/2	3	1	4	046	101.12
466E-530	6X3	3	1	4	046	106.82
466E-532	6X4	4	1	4	046	112.56
466E-573	8X1/2	4	1	0	046	139.77
466E-574	8X3/4	4	1	0	046	139.77
466E-575	8X1	4	1	0	046	139.77
466E-576[1]	8X1-1/4	4	1	0	046	139.77
466E-577[1]	8X1-1/2	4	1	0	046	139.77
466E-578[1]	8 X 2	4	1	0	046	139.77
466E-579	8X2-1/2	4	1	0	046	153.79
466E-580[1]	8X3	4	1	0	046	161.36
466E-582	8X4	4	1	0	046	171.17
466E-585	8X6	6	1	0	046	189.93
466E-624	10X4	4	1	0	046	226.02
466E-626	10X6	6	1	0	046	259.94
466E-664	12X4	4	1	0	046	283.31
466E-666	12X6	6	1	0	046	334.75

[1]Outlet-sized with Bushing

Clamp-On Saddle x Soc Single Outlet, PVC White
with EPDM O-ring & Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
466SE-247	2X1/2	3/4	1	10	046	48.21
466SE-248	2X3/4	7/8	1	10	046	48.21
466SE-249	2X1	1-1/8	1	10	046	48.21
466SE-250	2X1-1/4	1-1/2	1	10	046	48.21
466SE-251	2X1-1/2	1-1/2	1	10	046	48.21
466SE-291	2-1/2X1-1/2	1-3/4	1	10	046	64.84
466SE-333[1]	3X1/2	7/8	1	10	046	64.84
466SE-334	3X3/4	7/8	1	10	046	64.84
466SE-335	3X1	1-1/8	1	10	046	64.84
466SE-336[1]	3X1-1/4	2-1/4	1	10	046	64.84
466SE-337[1]	3X1-1/2	2-1/4	1	10	046	64.84
466SE-338	3X2	2-1/4	1	10	046	64.84
466SE-415[1]	4X1/2	1-1/8	1	10	046	80.05
466SE-416[1]	4X3/4	1-1/8	1	10	046	80.05
466SE-417	4X1	1-1/8	1	8	046	80.05
466SE-418[1]	4X1-1/4	1-3/4	1	8	046	80.05
466SE-419	4X1-1/2	1-3/4	1	8	046	80.05
466SE-420	4X2	2-1/4	1	8	046	80.05
466SE-421[1]	4X2-1/2	3	1	4	046	86.56
466SE-422	4X3	3	1	4	046	95.89
466SE-523[1]	6X1/2	1-1/8	1	4	046	136.20
466SE-524[1]	6X3/4	1-1/8	1	4	046	136.20
466SE-525	6X1	1-1/8	1	4	046	136.20
466SE-526[1]	6X1-1/4	2-1/4	1	4	046	136.20
466SE-527[1]	6X1-1/2	2-1/4	1	4	046	136.20
466SE-528	6X2	2-1/4	1	4	046	136.20
466SE-529[1]	6X2-1/2	3	1	4	046	143.06
466SE-530	6X3	3	1	4	046	147.56
466SE-532	6X4	4	1	4	046	154.76
466SE-573	8X1/2	4	1	0	046	197.84
466SE-574[1]	8X3/4	4	1	0	046	197.84
466SE-575[1]	8X1	4	1	0	046	197.84
466SE-576	8X1-1/4	4	1	0	046	197.84
466SE-577[1]	8X1-1/2	4	1	0	046	197.84
466SE-578[1]	8X2	4	1	0	046	197.84
466SE-579[1]	8X2-1/2	4	1	0	046	217.61
466SE-580[1]	8X3	4	1	0	046	228.45
466SE-582	8X4	4	1	0	046	242.11

Clamp-On Saddle x Soc Single Outlet, PVC White
(continued)
with EPDM O-ring & Seal & SS Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
466SE-585	8X6	6	1	0	046	268.78
466SE-624	10X4	4	1	0	046	319.78
466SE-626	10X6	6	1	0	046	367.76
466SE-664	12X4	4	1	0	046	400.80
466SE-666	12X6	4	1	0	046	464.96

[1]Outlet-sized with Bushing

Clamp-On Saddle x SR Thread Single Outlet, PVC White
with Buna-N O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
467-247SR	2X1/2	3/4	1	10	046	31.77
467-248SR	2X3/4	7/8	1	10	046	31.77
467-249SR	2X1	1-1/8	1	10	046	31.77
467-250SR	2X1-1/4	1-1/2	1	10	046	31.77
467-251SR	2X1-1/2	1-1/2	1	10	046	31.77
467-291SR	2-1/2X1-1/2	1-3/4	1	10	046	43.45
467-333SR[1]	3X1/2	7/8	1	10	046	43.45
467-334SR	3X3/4	7/8	1	10	046	43.45
467-335SR	3X1	1-1/8	1	10	046	43.45
467-336SR[1]	3X1-1/4	2-1/4	1	10	046	43.45
467-337SR[1]	3X1-1/2	2-1/4	1	10	046	43.45
467-338SR	3X2	2-1/4	1	10	046	43.45
467-415SR[1]	4X1/2	1-1/8	1	10	046	54.71
467-416SR[1]	4X3/4	1-1/8	1	10	046	54.71
467-417SR	4X1	1-1/8	1	8	046	54.71
467-418SR[1]	4X1-1/4	1-3/4	1	8	046	54.71
467-419SR	4X1-1/2	1-3/4	1	8	046	54.71
467-420SR	4X2	2-1/4	1	8	046	54.71
467-421SR[1]	4X2-1/2	3	1	4	046	59.18
467-422SR	4X3	3	1	4	046	64.53
467-523SR[1]	6X1/2	1-1/8	1	4	046	95.54
467-524SR[1]	6X3/4	1-1/8	1	4	046	95.54
467-525SR	6X1	1-1/8	1	4	046	95.54
467-526SR[1]	6X1-1/4	2-1/4	1	4	046	95.54
467-527SR[1]	6X1-1/2	2-1/4	1	4	046	95.54
467-528SR	6X2	2-1/4	1	4	046	95.54
467-529SR[1]	6X2-1/2	3	1	4	046	112.74
467-530SR	6X3	3	1	4	046	119.95
467-532SR	6X4	4	1	4	046	124.87
467-573SR[1]	8X1/2	4	1	0	046	145.61
467-574SR[1]	8X3/4	4	1	0	046	145.61
467-575SR[1]	8X1	4	1	0	046	145.61
467-576SR[1]	8X1-1/4	4	1	0	046	145.61
467-577SR[1]	8X1-1/2	4	1	0	046	145.61
467-578SR[1]	8X2	4	1	0	046	145.61
467-579SR[1]	8X2-1/2	4	1	0	046	160.14
467-580SR[1]	8X3	4	1	0	046	168.23
467-582SR	8X4	4	1	0	046	178.29
467-585SR	8X6	6	1	0	046	196.12
467-624SR	10X4	4	1	0	046	233.45
467-626SR	10X6	6	1	0	046	268.33
467-664SR	12X4	4	1	0	046	292.43
467-666SR	12X6	6	1	0	046	339.20

[1] Outlet-sized with Bushing

Clamp-On Saddle x SR Thread Single Outlet, PVC White
with Buna-N O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
467S-247SR	2X1/2	3/4	1	10	046	51.96
467S-248SR	2X3/4	7/8	1	10	046	51.96
467S-249SR	2X1	1-1/8	1	10	046	51.96

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Clamp-On Saddles

Clamp-On Saddle x SR Thread Single Outlet, PVC White
(continued)
with Buna-N O-ring Seal & SS Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
467S-250SR	2X1-1/4	1-1/2	1	10	046	51.96
467S-251SR	2X1-1/2	1-1/2	1	10	046	51.96
467S-291SR	2-1/2X1-1/2	1-3/4	1	10	046	69.87
467S-333SR[1]	3X1/2	7/8	1	10	046	69.87
467S-334SR	3X3/4	7/8	1	10	046	69.87
467S-335SR	3X1	1-1/8	1	10	046	69.87
467S-336SR[1]	3X1-1/4	2-1/4	1	10	046	69.87
467S-337SR[1]	3X1-1/2	2-1/4	1	10	046	69.87
467S-338SR	3X2	2-1/4	1	10	046	69.87
467S-415SR[1]	4X1/2	1-1/8	1	10	046	87.91
467S-416SR[1]	4X3/4	1-1/8	1	10	046	87.91
467S-417SR	4X1	1-1/8	1	8	046	87.91
467S-418SR[1]	4X1-1/4	1-3/4	1	8	046	87.91
467S-419SR	4X1-1/2	1-3/4	1	8	046	87.91
467S-420SR	4X2	2-1/4	1	8	046	87.91
467S-421SR[1]	4X2-1/2	3	1	4	046	93.48
467S-422SR	4X3	3	1	4	046	98.73
467S-523SR[1]	6X1/2	1-1/8	1	4	046	146.49
467S-524SR[1]	6X3/4	1-1/8	1	4	046	146.49
467S-525SR	6X1	1-1/8	1	4	046	146.49
467S-526SR[1]	6X1-1/4	2-1/4	1	4	046	146.49
467S-527SR[1]	6X1-1/2	2-1/4	1	4	046	146.49
467S-528SR	6X2	2-1/4	1	4	046	146.49
467S-529SR[1]	6X2-1/2	3	1	4	046	157.65
467S-530SR	6X3	3	1	4	046	162.26
467S-532SR	6X4	4	1	4	046	168.55
467S-573SR[1]	8X1/2	4	1	0	046	210.98
467S-574SR[1]	8X3/4	4	1	0	046	210.98
467S-575SR[1]	8X1	4	1	0	046	210.98
467S-576SR[1]	8X1-1/4	4	1	0	046	210.98
467S-577SR[1]	8X1-1/2	4	1	0	046	210.98
467S-578SR[1]	8X2	4	1	0	046	210.98
467S-579SR[1]	8X2-1/2	4	1	0	046	229.13
467S-580SR[1]	8X3	4	1	0	046	240.56
467S-582SR	8X4	4	1	0	046	255.02
467S-585SR	8X6	6	1	0	046	280.38
467S-624SR	10X4	4	1	0	046	333.72
467S-626SR	10X6	6	1	0	046	383.76
467S-664SR	12X4	4	1	0	046	418.33
467S-666SR	12X6	6	1	0	046	485.08

[1]Outlet-sized with Bushing

Clamp-On Saddle x SR Thread Single Outlet, PVC White
with EPDM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
467E-247SR	2X1/2	3/4	1	10	046	34.19
467E-248SR	2X3/4	7/8	1	10	046	34.19
467E-249SR	2X1	1-1/8	1	10	046	34.19
467E-250SR	2X1-1/4	1-1/2	1	10	046	34.19
467E-251SR	2X1-1/2	1-1/2	1	10	046	34.19
467E-291SR	2-1/2X1-1/2	1-3/4	1	10	046	47.67
467E-333SR[1]	3X1/2	7/8	1	10	046	47.67
467E-334SR	3X3/4	7/8	1	10	046	47.67
467E-335SR	3X1	1-1/8	1	10	046	47.67
467E-336SR[1]	3X1-1/4	2-1/4	1	10	046	47.67
467E-337SR[1]	3X1-1/2	2-1/4	1	10	046	47.67
467E-338SR	3X2	2-1/4	1	10	046	47.67
467E-415SR[1]	4X1/2	1-1/8	1	10	046	59.60
467E-416SR[1]	4X3/4	1-1/8	1	10	046	59.60
467E-417SR	4X1	1-1/8	1	8	046	59.60
467E-418SR[1]	4X1-1/4	1-3/4	1	8	046	59.60
467E-419SR	4X1-1/2	1-3/4	1	8	046	59.60

Clamp-On Saddle x SR Thread Single Outlet, PVC White
(continued)
with EPDM O-ring Seal & Zinc-Plated Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
467E-420SR	4X2	2-1/4	1	8	046	59.60
467E-421SR[1]	4X2-1/2	3	1	4	046	63.87
467E-422SR	4X3	3	1	4	046	68.47
467E-523SR[1]	6X1/2	1-1/8	1	4	046	99.45
467E-524SR[1]	6X3/4	1-1/8	1	4	046	99.45
467E-525SR	6X1	1-1/8	1	4	046	99.45
467E-526SR[1]	6X1-1/4	2-1/4	1	4	046	99.45
467E-527SR[1]	6X1-1/2	2-1/4	1	4	046	99.45
467E-528SR	6X2	2-1/4	1	4	046	99.45
467E-529SR[1]	6X2-1/2	3	1	4	046	123.19
467E-530SR	6X3	3	1	4	046	129.60
467E-532SR	6X4	4	1	4	046	136.13
467E-573SR[1]	8X1/2	4	1	0	046	150.67
467E-574SR[1]	8X3/4	4	1	0	046	150.67
467E-575SR[1]	8X1	4	1	0	046	150.67
467E-576SR[1]	8X1-1/4	4	1	0	046	150.67
467E-577SR[1]	8X1-1/2	4	1	0	046	150.67
467E-578SR[1]	8X2	4	1	0	046	150.67
467E-579SR[1]	8X2-1/2	4	1	0	046	165.74
467E-580SR[1]	8X3	4	1	0	046	174.07
467E-582SR	8X4	4	1	0	046	184.51
467E-585SR	8X6	6	1	0	046	204.69
467E-624SR	10X4	4	1	0	046	243.57
467E-626SR	10X6	6	1	0	046	280.05
467E-664SR	12X4	4	1	0	046	305.33
467E-666SR	12X6	6	1	0	046	354.19

[1]Outlet-sized with Bushing

Clamp-On Saddle x SR Thread Single Outlet, PVC White
with EPDM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
467SE-247SR	2X1/2	3/4	1	10	046	53.52
467SE-248SR	2X3/4	7/8	1	10	046	53.52
467SE-249SR	2X1	1-1/8	1	10	046	53.52
467SE-250SR	2X1-1/4	1-1/2	1	10	046	53.52
467SE-251SR	2X1-1/2	1-1/2	1	10	046	53.52
467SE-291SR	2-1/2X1-1/2	1-3/4	1	10	046	71.82
467SE-333SR[1]	3X1/2	7/8	1	10	046	71.82
467SE-334SR	3X3/4	7/8	1	10	046	71.82
467SE-335SR	3X1	1-1/8	1	10	046	71.82
467SE-336SR[1]	3X1-1/4	2-1/4	1	10	046	71.82
467SE-337SR[1]	3X1-1/2	2-1/4	1	10	046	71.82
467SE-338SR	3X2	2-1/4	1	10	046	71.82
467SE-415SR[1]	4X1/2	1-1/8	1	10	046	90.12
467SE-416SR[1]	4X3/4	1-1/8	1	10	046	90.12
467SE-417SR	4X1	1-1/8	1	8	046	90.12
467SE-418SR[1]	4X1-1/4	1-3/4	1	8	046	90.12
467SE-419SR	4X1-1/2	1-3//4	1	8	046	90.12
467SE-420SR	4X2	2-1/4	1	8	046	90.12
467SE-421SR[1]	4X2-1/2	3	1	4	046	93.96
467SE-422SR	4X3	3	1	4	046	99.18
467SE-523SR[1]	6X1/2	1-1/8	1	4	046	151.43
467SE-524SR[1]	6X3/4	1-1/8	1	4	046	151.43
467SE-525SR	6X1	1-1/8	1	4	046	151.43
467SE-526SR[1]	6X1-1/4	2-1/4	1	4	046	151.43
467SE-527SR[1]	6X1-1/2	2-1/4	1	4	046	151.43
467SE-528SR	6X2	2-1/4	1	4	046	151.43
467SE-529SR[1]	6X2-1/2	3	1	4	046	164.37
467SE-530SR	6X3	3	1	4	046	170.51
467SE-532SR	6X4	4	1	4	046	173.58
467SE-573SR[1]	8X1/2	4	1	0	046	217.25
467SE-574SR[1]	8X3/4	4	1	0	046	217.25

Clamp-On Saddles

Clamp-On Saddle x SR Thread Single Outlet, PVC White (continued)

with EPDM O-ring Seal & SS Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
467SE-575SR[1]	8X1	4	1	0	046	217.25
467SE-576SR[1]	8X1-1/4	4	1	0	046	217.25
467SE-577SR[1]	8X1-1/2	4	1	0	046	217.25
467SE-578SR[1]	8X2	4	1	0	046	217.25
467SE-579SR[1]	8X2-1/2	4	1	0	046	239.09
467SE-580SR[1]	8X3	4	1	0	046	250.98
467SE-582SR	8X4	4	1	0	046	266.12
467SE-585SR	8X6	6	1	0	046	292.68
467SE-624SR	10X4	4	1	0	046	348.17
467SE-626SR	10X6	6	1	0	046	400.64
467SE-666SR	12X6	6	1	0	046	506.42

[1]Outlet-sized with Bushing

Clamp-On Saddle x Soc Double Outlet, PVC White

with Buna-N O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
468-247	2X1/2	3/4	1	10	046	34.34
468-248	2X3/4	7/8	1	10	046	34.34
468-249	2X1	1-1/8	1	10	046	34.34
468-250	2X1-1/4	1-1/2	1	10	046	34.34
468-251	2X1-1/2	1-1/2	1	10	046	34.34
468-291	2-1/2X1-1/2	1-3/4	1	10	046	45.84
468-333[1]	3X1/2	7/8	1	10	046	45.84
468-334	3X3/4	7/8	1	10	046	45.84
468-335	3X1	1-1/8	1	10	046	45.84
468-336[1]	3X1-1/4	2-1/4	1	10	046	45.84
468-337[1]	3X1-1/2	2-1/4	1	10	046	45.84
468-338	3X2	2-1/4	1	10	046	45.84
468-415[1]	4X1/2	1-1/8	1	10	046	58.08
468-416[1]	4X3/4	1-1/8	1	10	046	58.08
468-417	4X1	1-1/8	1	8	046	58.08
468-418[1]	4X1-1/4	1-3/4	1	8	046	58.08
468-419	4X1-1/2	1-3/4	1	8	046	58.08
468-420	4X2	2-1/4	1	8	046	58.08
468-421[1]	4X2-1/2	3	1	4	046	60.80
468-422	4X3	3	1	4	046	68.64
468-523[1]	6X1/2	1-1/8	1	4	046	95.64
468-524[1]	6X3/4	1-1/8	1	4	046	95.64
468-525	6X1	1-1/8	1	4	046	95.64
468-526[1]	6X1-1/4	2-1/4	1	4	046	95.64
468-527[1]	6X1-1/2	2-1/4	1	4	046	95.64
468-528	6X2	2-1/4	1	4	046	95.64
468-529[1]	6X2-1/2	3	1	4	046	108.85
468-530	6X3	3	1	4	046	113.80
468-532	6X4	4	1	4	046	122.33
468-573[1]	8X1/2	4	1	0	046	137.27
468-574[1]	8X3/4	4	1	0	046	137.27
468-575[1]	8X1	4	1	0	046	137.27
468-576[1]	8X1-1/4	4	1	0	046	137.27
468-577[1]	8X1-1/2	4	1	0	046	137.27
468-578[1]	8X2	4	1	0	046	137.27
468-579[1]	8X2-1/2	4	1	0	046	150.94
468-580[1]	8X3	4	1	0	046	158.53
468-582	8X4	4	1	0	046	168.07
468-585	8X6	6	1	0	046	186.46
468-624	10X4	4	1	0	046	221.89
468-626	10X6	6	1	0	046	255.09
468-664	12X4	4	1	0	046	278.15
468-666	12X6	6	1	0	046	322.69

[1]Outlet-sized with Bushing

Clamp-On Saddle x Soc Double Outlet, PVC White

with Buna-N O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
468S-247	2X1/2	3/4	1	10	046	55.11
468S-248	2X3/4	7/8	1	10	046	55.11
468S-249	2X1	1-1/8	1	10	046	55.11
468S-250	2X1-1/4	1-1/2	1	10	046	55.11
468S-251	2X1-1/2	1-1/2	1	10	046	55.11
468S-291	2-1/2X1-1/2	1-3/4	1	10	046	73.57
468S-333[1]	3X1/2	7/8	1	10	046	73.57
468S-334	3X3/4	7/8	1	10	046	73.57
468S-335	3X1	1-1/8	1	10	046	73.57
468S-336[1]	3X1-1/4	2-1/4	1	10	046	73.57
468S-337[1]	3X1-1/2	2-1/4	1	10	046	73.57
468S-338	3X2	2-1/4	1	10	046	73.57
468S-415[1]	4X1/2	1-1/8	1	10	046	91.82
468S-416[1]	4X3/4	1-1/8	1	10	046	91.82
468S-417	4X1	1-1/8	1	8	046	91.82
468S-418[1]	4X1-1/4	1-3/4	1	8	046	91.82
468S-419	4X1-1/2	1-3/4	1	8	046	91.82
468S-420	4X2	2-1/4	1	8	046	91.82
468S-421[1]	4X2-1/2	3	1	4	046	96.49
468S-422	4X3	3	1	4	046	105.88
468S-523[1]	6X1/2	1-1/8	1	4	046	151.67
468S-524[1]	6X3/4	1-1/8	1	4	046	151.67
468S-525	6X1	1-1/8	1	4	046	151.67
468S-526[1]	6X1-1/4	2-1/4	1	4	046	151.67
468S-527[1]	6X1-1/2	2-1/4	1	4	046	151.67
468S-528	6X2	2-1/4	1	4	046	151.67
468S-529[1]	6X2-1/2	3	1	4	046	158.47
468S-530	6X3	3	1	4	046	161.20
468S-532	6X4	4	1	4	046	166.43
468S-573[1]	8X1/2	4	1	0	046	204.02
468S-574[1]	8X3/4	4	1	0	046	204.02
468S-575[1]	8X1	4	1	0	046	204.02
468S-576[1]	8X1-1/4	4	1	0	046	204.02
468S-577[1]	8X1-1/2	4	1	0	046	204.02
468S-578[1]	8X2	4	1	0	046	204.02
468S-579[1]	8X2-1/2	4	1	0	046	224.39
468S-580[1]	8X3	4	1	0	046	235.75
468S-582	8X4	4	1	0	046	249.77
468S-585	8X6	6	1	0	046	274.71
468S-624	10X4	4	1	0	046	326.82
468S-626	10X6	6	1	0	046	375.94
468S-664	12X4	4	1	0	046	409.76
468S-666	12X6	6	1	0	046	475.29

[1]Outlet-sized with Bushing.

Clamp-On Saddle x Soc Double Outlet, PVC White

with EPDM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
468E-247	2X1/2	3/4	1	10	046	36.11
468E-248	2X3/4	7/8	1	10	046	36.11
468E-249	2X1	1-1/8	1	10	046	36.11
468E-250	2X1-1/4	1-1/2	1	10	046	36.11
468E-251	2X1-1/2	1-1/2	1	10	046	36.11
468E-291	2-1/2X1-1/2	1-3/4	1	10	046	49.87
468E-333[1]	3X1/2	7/8	1	10	046	49.87
468E-334	3X3/4	7/8	1	10	046	49.87
468E-335	3X1	1-1/8	1	10	046	49.87
468E-336[1]	3X1-1/4	2-1/4	1	10	046	49.87
468E-337[1]	3X1-1/2	2-1/4	1	10	046	49.87
468E-338	3X2	2-1/4	1	10	046	49.87
468E-415[1]	4X1/2	1-1/8	1	10	046	60.64

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Clamp-On Saddles

Clamp-On Saddle x Soc Double Outlet, PVC White (continued)
with EPDM O-ring Seal & Zinc-Plated Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
468E-416[1]	4X3/4	1-1/8	1	10	046	60.64
468E-417	4X1	1-1/8	1	8	046	60.64
468E-418[1]	4X1-1/4	1-3/4	1	8	046	60.64
468E-419	4X1-1/2	1-3/4	1	8	046	60.64
468E-420	4X2	2-1/4	1	8	046	60.64
468E-421[1]	4X2-1/2	3	1	4	046	65.03
468E-422	4X3	3	4	0	046	72.47
468E-523[1]	6X1/2	1-1/8	1	4	046	101.80
468E-524[1]	6X3/4	1-1/8	1	4	046	101.80
468E-525	6X1	1-1/8	1	4	046	101.80
468E-526[1]	6X1-1/4	2-1/4	1	4	046	101.80
468E-527[1]	6X1-1/2	2-1/4	1	4	046	101.80
468E-528	6X2	2-1/4	1	4	046	101.80
468E-529[1]	6X2-1/2	3	1	4	046	113.85
468E-530	6X3	3	1	4	046	122.48
468E-532	6X4	4	1	4	046	129.05
468E-573[1]	8X1/2	4	1	0	046	153.59
468E-574[1]	8X3/4	4	1	0	046	153.59
468E-575[1]	8X1	4	1	0	046	153.59
468E-576[1]	8X1-1/4	4	1	0	046	153.59
468E-577[1]	8X1-1/2	4	1	0	046	153.59
468E-578[1]	8X2	4	1	0	046	153.59
468E-579[1]	8X2-1/2	4	1	0	046	169.02
468E-580[1]	8X3	4	1	0	046	177.53
468E-582	8X4	4	1	0	046	188.20
468E-585	8X6	6	1	0	046	206.95
468E-624	10X4	4	1	0	046	246.33
468E-626	10X6	6	1	0	046	283.15
468E-664	12X4	4	1	0	046	308.77
468E-666	12X6	6	1	0	046	358.05

[1]Outlet-sized with Bushing

Clamp-On Saddle x Soc Double Outlet, PVC White
with EPDM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
468SE-247	2X1/2	3/4	1	10	046	58.93
468SE-248	2X3/4	7/8	1	10	046	58.93
468SE-249	2X1	1-1/8	1	10	046	58.93
468SE-250	2X1-1/4	1-1/2	1	10	046	58.93
468SE-251	2X1-1/2	1-1/2	1	10	046	58.93
468SE-291	2-1/2X1-1/2	1-3/4	1	10	046	77.93
468SE-333[1]	3X1/2	7/8	1	10	046	77.93
468SE-334	3X3/4	7/8	1	10	046	77.93
468SE-335	3X1	1-1/8	1	10	046	77.93
468SE-336[1]	3X1-1/4	2-1/4	1	10	046	77.93
468SE-337[1]	3X1-1/2	2-1/4	1	10	046	77.93
468SE-338	3X2	2-1/4	1	10	046	77.93
468SE-415[1]	4X1/2	1-1/8	1	10	046	97.27
468SE-416[1]	4X3/4	1-1/8	1	10	046	97.27
468SE-417	4X1	1-1/8	1	8	046	97.27
468SE-418[1]	4X1-1/4	1-3/4	1	8	046	97.27
468SE-419	4X1-1/2	1-3/4	1	8	046	97.27
468SE-420	4X2	2-1/4	1	8	046	97.27
468SE-421[1]	4X2-1/2	3	1	4	046	106.18
468SE-422	4X3	3	4	0	046	113.18
468SE-523[1]	6X1/2	1-1/8	1	4	046	162.15
468SE-524[1]	6X3/4	1-1/8	1	4	046	162.15
468SE-525	6X1	1-1/8	1	4	046	162.15
468SE-526[1]	6X1-1/4	2-1/4	1	4	046	162.15
468SE-527[1]	6X1-1/2	2-1/4	1	4	046	162.15
468SE-528	6X2	2-1/4	1	4	046	162.15
468SE-529[1]	6X2-1/2	3	1	4	046	166.53

Clamp-On Saddle x Soc Double Outlet, PVC White (continued)
with EPDM O-ring Seal & SS Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
468SE-530	6X3	3	1	4	046	172.31
468SE-532	6X4	4	1	4	046	182.24
468SE-573[1]	8X1/2	4	1	0	046	231.01
468SE-574[1]	8X3/4	4	1	0	046	231.01
468SE-575[1]	8X1	4	1	0	046	231.01
468SE-576[1]	8X1-1/4	4	1	0	046	231.01
468SE-577[1]	8X1-1/2	4	1	0	046	231.01
468SE-578[1]	8X2	4	1	0	046	231.01
468SE-579[1]	8X2-1/2	4	1	0	046	254.16
468SE-580[1]	8X3	4	1	0	046	262.84
468SE-582	8X4	4	1	0	046	283.21
468SE-585	8X6	6	1	0	046	313.93
468SE-624	10X4	4	1	0	046	373.54
468SE-626	10X6	6	1	0	046	429.51
468SE-664	12X4	4	1	0	046	468.41
468SE-666	12X6	6	1	0	046	543.23

[1]Outlet-sized with Bushing

Clamp-On Saddle x SR Thread Double Outlet, PVC White
with Buna-N O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
469-247SR	2X1/2	3/4	1	10	046	38.82
469-248SR	2X3/4	7/8	1	10	046	38.82
469-249SR	2X1	1-1/8	1	10	046	38.82
469-250SR	2X1-1/4	1-1/2	1	10	046	38.82
469-251SR	2X1-1/2	1-1/2	1	10	046	38.82
469-291SR	2-1/2X1-1/2	1-3/4	1	10	046	51.55
469-333SR[1]	3X1/2	7/8	1	10	046	51.55
469-334SR	3X3/4	7/8	1	10	046	51.55
469-335SR	3X1	1-1/8	1	10	046	51.55
469-336SR[1]	3X1-1/4	2-1/4	1	10	046	51.55
469-337SR[1]	3X1-1/2	2-1/4	1	10	046	51.55
469-338SR	3X2	2-1/4	1	10	046	51.55
469-415SR[1]	4X1/2	1-1/8	1	10	046	77.39
469-416SR[1]	4X3/4	1-1/8	1	10	046	77.39
469-417SR	4X1	1-1/8	1	8	046	77.39
469-418SR[1]	4X1-1/4	1-3/4	1	8	046	77.39
469-419SR	4X1-1/2	1-3/4	1	8	046	77.39
469-420SR	4X2	2-1/4	1	8	046	77.39
469-421SR[1]	4X2-1/2	3	1	4	046	83.14
469-422SR	4X3	3	1	4	046	198.35
469-523SR[1]	6X1/2	1-1/8	1	4	046	126.16
469-524SR[1]	6X3/4	1-1/8	1	4	046	126.16
469-525SR	6X1	1-1/8	1	4	046	126.16
469-526SR[1]	6X1-1/4	2-1/4	1	4	046	126.16
469-527SR[1]	6X1-1/2	2-1/4	1	4	046	126.16
469-528SR	6X2	2-1/4	1	4	046	126.16
469-529SR[1]	6X2-1/2	3	1	4	046	151.31
469-530SR	6X3	3	1	4	046	158.84
469-532SR	6X4	4	1	4	046	166.33
469-573SR[1]	8X1/2	4	1	0	046	184.92
469-574SR[1]	8X3/4	4	1	0	046	184.92
469-575SR[1]	8X1	4	1	0	046	184.92
469-576SR[1]	8X1-1/4	4	1	0	046	184.92
469-577SR[1]	8X1-1/2	4	1	0	046	184.92
469-578SR[1]	8X2	4	1	0	046	184.92
469-579SR[1]	8X2-1/2	4	1	0	046	204.69
469-580SR[1]	8X3	4	1	0	046	214.59
469-582SR	8X4	4	1	0	046	227.57
469-585SR	8X6	6	1	0	046	250.29
469-624SR	10X4	4	1	0	046	297.85
469-626SR	10X6	6	1	0	046	342.31

Clamp-On Saddles

Clamp-On Saddle x SR Thread Double Outlet, PVC White (continued)

with Buna-N O-ring Seal & Zinc-Plated Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
469-666SR	12X6	6	1	0	046	433.04

[1]Outlet-sized with Bushing

Clamp-On Saddle x SR Thread Double Outlet, PVC White

with Buna-N O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
469S-247SR	2X1/2	3/4	1	10	046	61.25
469S-248SR	2X3/4	7/8	1	10	046	61.25
469S-249SR	2X1	1-1/8	1	10	046	61.25
469S-250SR	2X1-1/4	1-1/2	1	10	046	61.25
469S-251SR	2X1-1/2	1-1/2	1	10	046	61.25
469S-291SR	2-1/2X1-1/2	1-3/4	1	10	046	81.73
469S-333SR[1]	3X1/2	7/8	1	10	046	81.73
469S-334SR	3X3/4	7/8	1	10	046	81.73
469S-335SR	3X1	1-1/8	1	10	046	81.73
469S-336SR[1]	3X1-1/4	2-1/4	1	10	046	81.73
469S-337SR[1]	3X1-1/2	2-1/4	1	10	046	81.73
469S-338SR	3X2	2-1/4	1	10	046	81.73
469S-415SR[1]	4X1/2	1-1/8	1	10	046	103.85
469S-416SR[1]	4X3/4	1-1/8	1	10	046	103.85
469S-417SR	4X1	1-1/8	1	8	046	103.85
469S-418SR[1]	4X1-1/4	1-3/4	1	8	046	103.85
469S-419SR	4X1-1/2	1-3/4	1	8	046	103.85
469S-420SR	4X2	2-1/4	1	8	046	103.85
469S-421SR[1]	4X2-1/2	3	1	4	046	109.55
469S-422SR	4X3	3	4	0	046	119.95
469S-523SR[1]	6X1/2	1-1/8	1	4	046	170.62
469S-524SR[1]	6X3/4	1-1/8	1	4	046	170.62
469S-525SR	6X1	1-1/8	1	4	046	170.62
469S-526SR[1]	6X1-1/4	2-1/4	1	4	046	170.62
469S-527SR[1]	6X1-1/2	2-1/4	1	4	046	170.62
469S-528SR	6X2	2-1/4	1	4	046	170.62
469S-529SR[1]	6X2-1/2	3	1	4	046	178.60
469S-530SR	6X3	3	1	4	046	188.92
469S-532SR	6X4	4	1	4	046	197.27
469S-573SR[1]	8X1/2	4	1	0	046	241.95
469S-574SR[1]	8X3/4	4	1	0	046	241.95
469S-575SR[1]	8X1	4	1	0	046	241.95
469S-576SR[1]	8X1-1/4	4	1	0	046	241.95
469S-577SR[1]	8X1-1/2	4	1	0	046	241.95
469S-578SR[1]	8X2	4	1	0	046	241.95
469S-579SR[1]	8X2-1/2	4	1	0	046	266.12
469S-580SR[1]	8X3	4	1	0	046	279.35
469S-582SR	8X4	4	1	0	046	295.86
469S-585SR	8X6	6	1	0	046	328.55
469S-624SR	10X4	4	1	0	046	391.00
469S-626SR	10X6	6	1	0	046	449.64
469S-664SR	12X4	4	1	0	046	490.07
469S-666SR	12X6	6	1	0	046	568.35

[1]Outlet-sized with Bushing

Clamp-On Saddle x SR Thread Double Outlet, PVC White

with EPDM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
469E-247SR	2X1/2	3/4	1	10	046	42.67
469E-248SR	2X3/4	7/8	1	10	046	42.67
469E-249SR	2X1	1-1/8	1	10	046	42.67
469E-250SR	2X1-1/4	1-1/2	1	10	046	42.67
469E-251SR	2X1-1/2	1-1/2	1	10	046	42.67
469E-291SR	2-1/2X1-1/2	1-3/4	1	10	046	57.86
469E-333SR[1]	3X1/2	7/8	1	10	046	57.86
469E-334SR	3X3/4	7/8	1	10	046	57.86
469E-335SR	3X1	1-1/8	1	10	046	57.86
469E-336SR[1]	3X1-1/4	2-1/4	1	10	046	57.86
469E-337SR[1]	3X1-1/2	2-1/4	1	10	046	57.86
469E-338SR	3X2	2-1/4	1	16	046	57.86
469E-415SR[1]	4X1/2	1-1/8	1	10	046	90.19
469E-416SR[1]	4X3/4	1-1/8	1	10	046	90.19
469E-417SR	4X1	1-1/8	1	8	046	90.19
469E-418SR[1]	4X1-1/4	1-3/4	1	8	046	90.19
469E-419SR	4X1-1/2	1-3/4	1	8	046	90.19
469E-420SR	4X2	2-1/4	1	8	046	90.19
469E-421SR[1]	4X2-1/2	3	1	4	046	91.98
469E-422SR	4X3	3	4	0	046	117.47
469E-523SR[1]	6X1/2	1-1/8	1	4	046	138.29
469E-524SR[1]	6X3/4	1-1/8	1	4	046	138.29
469E-525SR	6X1	1-1/8	1	4	046	138.29
469E-526SR[1]	6X1-1/4	2-1/4	1	4	046	138.29
469E-527SR[1]	6X1-1/2	2-1/4	1	4	046	138.29
469E-528SR	6X2	2-1/4	1	4	046	138.29
469E-529SR[1]	6X2-1/2	3	1	4	046	154.78
469E-530SR	6X3	3	1	4	046	167.41
469E-532SR	6X4	4	1	4	046	178.02
469E-573SR[1]	8X1/2	4	1	0	046	200.39
469E-574SR[1]	8X3/4	4	1	0	046	200.39
469E-575SR[1]	8X1	4	1	0	046	200.39
469E-576SR[1]	8X1-1/4	4	1	0	046	200.39
469E-577SR[1]	8X1-1/2	4	1	0	046	200.39
469E-578SR	8X2	4	1	0	046	200.39
469E-579SR[1]	8X2-1/2	4	1	0	046	220.53
469E-580SR[1]	8X3	4	1	0	046	231.55
469E-582SR	8X4	4	1	0	046	245.48
469E-585SR	8X6	6	1	0	046	272.46
469E-624SR	10X4	4	1	0	046	324.24
469E-626SR	10X6	6	1	0	046	372.76
469E-666SR	12X6	6	1	0	046	471.51

[1]Outlet-sized with Bushing

Clamp-On Saddle x SR Thread Double Outlet, PVC White

with EPDM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
469SE-247SR	2X1/2	3/4	1	10	046	65.17
469SE-248SR	2X3/4	7/8	1	10	046	65.17
469SE-249SR	2X1	1-1/8	1	10	046	65.17
469SE-250SR	2X1-1/4	1-1/2	1	10	046	65.17
469SE-251SR	2X1-1/2	1-1/2	1	10	046	65.17
469SE-291SR	2-1/2X1-1/2	1-3/4	1	10	046	86.80
469SE-333SR[1]	3X1/2	7/8	1	10	046	86.80
469SE-334SR	3X3/4	7/8	1	10	046	86.80
469SE-335SR	3X1	1-1/8	1	10	046	86.80
469SE-336SR[1]	3X1-1/4	2-1/4	1	10	046	86.80
469SE-337SR[1]	3X1-1/2	2-1/4	1	10	046	86.80
469SE-338SR	3X2	2-1/4	1	10	046	86.80
469SE-415SR[1]	4X1/2	1-1/8	1	10	046	111.98
469SE-416SR[1]	4X3/4	1-1/8	1	10	046	111.98
469SE-417SR	4X1	1-1/8	1	8	046	111.98
469SE-418SR[1]	4X1-1/4	1-3/4	1	8	046	111.98
469SE-419SR	4X1-1/2	1-3/4	1	8	046	111.98
469SE-420SR	4X2	2-1/4	1	8	046	111.98
469SE-421SR[1]	4X2-1/2	3	1	4	046	116.16
469SE-422SR	4X3	3	4	0	046	127.12
469SE-523SR[1]	6X1/2	1-1/8	1	4	046	174.99
469SE-524SR[1]	6X3/4	1-1/8	1	4	046	174.99

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Clamp-On Saddles

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
Clamp-On Saddle x SR Thread Double Outlet, PVC White (continued)						
with EPDM O-ring Seal & SS Hardware						
469SE-525SR	6X1	1-1/8	1	4	046	174.99
469SE-526SR[1]	6X1-1/4	2-1/4	1	4	046	174.99
469SE-527SR[1]	6X1-1/2	2-1/4	1	4	046	174.99
469SE-528SR	6X2	2-1/4	1	4	046	174.99
469SE-529SR[1]	6X2-1/2	3	1	4	046	187.18
469SE-530SR	6X3	3	1	4	046	197.64
469SE-532SR	6X4	4	1	4	046	209.36
469SE-573SR[1]	8X1/2	4	1	0	046	247.54
469SE-574SR[1]	8X3/4	4	1	0	046	247.54
469SE-575SR[1]	8X1	4	1	0	046	247.54
469SE-576SR[1]	8X1-1/4	4	1	0	046	247.54

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
Clamp-On Saddle x SR Thread Double Outlet, PVC White (continued)						
with EPDM O-ring Seal & SS Hardware						
469SE-577SR[1]	8X1-1/2	4	1	0	046	247.54
469SE-578SR[1]	8X2	4	1	0	046	247.54
469SE-579SR[1]	8X2-1/2	4	1	0	046	272.31
469SE-580SR[1]	8X3	4	1	0	046	285.91
469SE-582SR	8X4	4	1	0	046	297.93
469SE-585SR	8X6	6	1	0	046	336.29
469SE-624SR	10X4	4	1	0	046	400.12
469SE-626SR	10X6	6	1	0	046	460.13
469SE-664SR	12X4	4	1	0	046	500.57
469SE-666SR	12X6	6	1	0	046	581.43

[1]Outlet-sized with Bushing

Hot-Tap Saddles

Part Number	**Size**	Std Pk	Mstr Ctn	Prod Code	Price Each
Hot-Tap Saddle, PVC White					
EPDM Saddle x Soc (Spigot) Zinc Plated Bolts					
2"- 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)					
HT2-248W	**2X3/4 (1)**	1	5	049	51.19
HT2-251W	**2X1-1/2 (2)**	1	5	049	105.76
HT2-288W	**2-1/2X3/4 (1)**	1	5	049	54.71
HT2-291W	**2-1/2x1-1/2 (2)**	1	5	049	109.28
HT2-334W	**3X3/4 (1)**	1	5	049	62.65
HT2-337W	**3X1-1/2 (2)**	1	5	049	120.45
HT2-416W	**4X3/4 (1)**	1	0	049	72.36
HT2-419W	**4X1-1/2 (2)**	1	0	049	127.36
HT2-524W	**6X3/4 (1)**	1	0	049	81.34
HT2-527W	**6X1-1/2 (2)**	1	0	049	135.60
HT2-574W	**8X3/4 (1)**	1	0	049	90.01
HT2-577W	**8X1-1/2 (2)**	1	0	049	144.58
Not intended to convey or dispense water for human consumption through drinking or cooking					

Part Number	**Size**	Std Pk	Mstr Ctn	Prod Code	Price Each
Hot-Tap Saddles, PVC White					
EPDM Saddle x Soc (Spigot) SS316 Bolts					
2"- 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)					
HT2S-248W	**2X3/4 (1)**	1	5	049	79.71
HT2S-251W	**2X1-1/2 (2)**	1	5	049	164.57
HT2S-288W	**2-1/2X3/4 (1)**	1	5	049	85.15
HT2S-291W	**2-1/2X1-1/2 (2)**	1	5	049	170.01
HT2S-334W	**3X3/4 (1)**	1	5	049	97.53
HT2S-337W	**3X1-1/2 (2)**	1	5	049	187.53
HT2S-416W	**4X3/4 (1)**	1	5	049	112.66
HT2S-419W	**4X1-1/2 (2)**	1	0	049	198.25
HT2S-524W	**6X3/4 (1)**	1	5	049	126.49
HT2S-527W	**6X1-1/2 (2)**	1	0	049	210.89
HT2S-574W	**8X3/4 (1)**	1	0	049	139.42
HT2S-577W	**8X1-1/2 (2)**	1	0	049	224.14
Not intended to convey or dispense water for human consumption through drinking or cooking					

PVC White Schedule 40 - Hard to Find Configurations - Pool & Spa Specialties

PRICING

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com
Spears® Manufacturing Company

Pool & Spa Fittings

All Pool & Spa Specialty Fittings have a maximum use service pressure of 150 psi @ 73° F (22° C). Standard pressure de-ratings must be applied for use at elevated temperatures with a maximum service temperature of 140°F (60° C).

Short Socket Tees

Socket Style Sch 40

Special short-socket end allows close connection at pumps, filters and other areas with minimum available space.

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
S401-249	**2X2X1**	25	0	015	7.88
S401-251	**2x2x1-1/2**	25	0	015	7.88

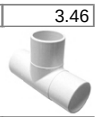
Male Thread Tee (Branch)

Socket x Socket x Mipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
402B-010	**1**	50	0	040	3.46

Spigot Tee, 2"

Spigot x Spigot x Spigot Sch 40



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
404A-020	**2**	30	0	015	8.22

90° Ell, 2"x1-1/2" Reducing , Socket/Spigot

2"x2" 90° Street Ell, Socket x Spigot Sch 40

Handy dual-purpose configuration is 2"x1-1/2" Socket Reducing 90° Ell and also a 2" Socket x 2" Spigot 90° Street Ell.

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
406-251N	**2X1-1/2**	10	0	015	9.89

90° Ell 2-1/2"x2" Reducing Socket/Spigot

2-1/2"x2-1/2" 90° Street Ell, Socket x Spigot Sch 40

Handy dual-purpose configuration is 2-1/2" x 2" Socket Reducing 90° Ell and also a 2-1/2" Socket x 2-1/2" Spigot 90° Street Ell.

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
406-292N	2-1/2X2 (2-1/2 Spigot)	10	0	040	11.59

90° Spigot Ell, 1-1/2"

Spigot x Spigot Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
422-015	**1-1/2**	25	0	015	7.94

45° Street Ell -Short Spigot

Spigot x Socket Sch 40

Special short-spigot end allows close connection in extra-tight spaces.

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
S427-020	**2**	10	0	015	7.01

45° Street Ell

Spig x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
427-005	**1/2**	50	400	040	1.06
427-007	**3/4**	50	0	040	1.64
427-010	**1**	50	0	040	1.98
427-012	**1-1/4**	25	0	040	2.76
427-015	**1-1/2**	25	0	040	3.46
427-020	**2**	25	0	040	4.51
427-025	**2-1/2**	10	0	040	14.68
427-030	**3**	10	0	040	18.23
427-040	**4**	5	0	040	32.68
427-050	**5**	4	0	040	98.27
427-060	**6**	4	0	040	100.94
427-080	**8**	2	0	040	242.78
427-100	**10**	1	0	041	638.82

45° Street Ell (continued)

Spig x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
427-120	**12**	1	0	041	936.57
427-140F	**14**	1	0	047	697.99
427-160F	**16**	1	0	047	948.73
427-180F	**18**	1	0	047	1035.62
427-200F	**20**	1	0	047	1314.52
427-240F	**24**	1	0	047	2070.62

22-1/2° Street Ell

Spig x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
442-005	**1/2**	50	400	040	1.51
442-007	**3/4**	50	0	040	2.35
442-010	**1**	50	0	040	2.81
442-012	**1-1/4**	20	0	040	3.93
442-015	**1-1/2**	25	0	040	4.93
442-020	**2**	20	0	040	6.45
442-025F	**2-1/2**	1	18	047	36.53
442-030	**3**	5	0	040	37.68
442-040	**4**	4	0	040	58.15
442-060	**6**	4	0	040	143.56
442-060F	**6**	1	5	047	84.72
442-080	**8**	1	4	040	345.31
442-080F	**8**	1	4	047	127.60
442-100F	**10**	1	0	047	197.47
442-120F	**12**	1	0	047	296.41

Grated Coupling, 2" Sch 40

Socket Style Sch 40

Specially designed internal grate at pipe stop gives extra protection to pumps, filters and equipment from damaging gravel and debris.

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
429GR-020	**2**	25	0	015	4.33

Smooth Barb Adapter

1/2" Smooth Barb x 3/4" Spigot

Special adapter for making connections to 1/2" Vinyl Hose

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
432-007525	**3/4X1/2**	100	600	015	1.86

Venturied Tee, Multi Configuration - Socket Style Sch 40

1-1/2" Socket (2" Spigot) x 1-1/2" Socket x 3/4" Socket (1" Spigot)

Special spa jet fitting with standard 7/16" nozzle plus optional 3/8" or 1/4".

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
473-210	**with 7/16" Nozzle**	25	0	015	7.82
473-210-3/8	**with 3/8" Nozzle**	25	0	015	7.82
473-210-1/4	**with 1/4" Nozzle**	25	0	015	7.82

Venturied Tee, Multi Configuration - Socket Style Sch 40

1" Socket x 3/4" Socket (1" Spigot) x 3/4" Socket (1" Spigot)

Special spa jet fitting with standard 7/16" nozzle plus optional 3/8" or 1/4".

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
473-825	**with 7/16" Nozzle**	50	0	015	6.39
473-825-3/8	**with 3/8" Nozzle**	50	0	015	6.39
473-825-1/4	**with 1/4" Nozzle**	50	0	015	6.39

Pool & Spa Fittings

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each

Venturied Tee, Multi Configuration - Socket Style Sch 40

Individual Nozzles Only

Special spa jet fitting with standard 7/16" nozzle plus optional 3/8" or 1/4".

473-1	**7/16" Nozzle**	100	600	015	2.06
473-2	**1/4" Nozzle**	100	600	015	2.06
473-3	**3/8" Nozzle**	100	600	015	2.06

120° Wye,1-1/2"x1"x1"

Spigot x Socket x Socket Sch 40

Unique spigot end take off with 120° branched wye pattern for special distribution connections.

475-21131T	**1-1/2X1X1**	25	0	015	11.12

120° Wye, 2"

Socket

475-020120	**2**	10	0	015	13.06

Nesting Union

2" Socket x 1-1/2" Socket (2" Spigot) Buna-N O-ring

235 psi @ 73°F (23°C)

8057-251W	**2X1-1/2 (2)**	5	0	080	61.99

Nesting Union

2" Socket x 1-1/2" Socket (2" Spigot) EPDM O-ring

235 psi @ 73°F (23°C)

8097-251W	**2X1-1/2 (2)**	5	0	080	72.95

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Spears® Manufacturing Company

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Compression & Repair Fittings

PRICING

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Spears® Manufacturing Company

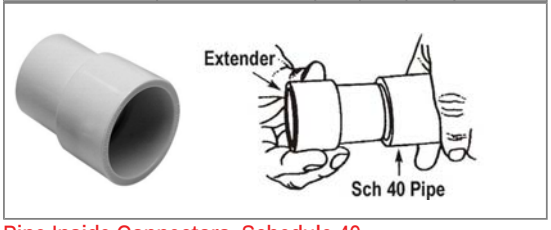
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Schedule 40 Repair Fittings

Schedule 40 Pipe Repair Fittings
Allows Difficult Broken Pipe Repair To Be Made Easily

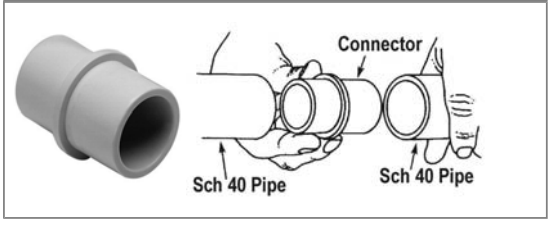
Pipe Extenders, Schedule 40

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Pipe O.D. Spigot x Pipe I.D. Spigot					
* Fabricated, Non-Pressure Rated					
S0301-05	**1/2**	100	600	894	1.63
S0301-07	**3/4**	50	300	894	2.68
S0301-10	**1**	50	200	894	3.40
S0301-12	**1-1/4**	50	0	894	4.07
S0301-15	**1-1/2**	50	0	894	4.64
S0301-20	**2**	25	0	894	5.14
S0301-25	**2-1/2**	25	0	894	6.12
S0301-30	**3**	25	0	894	14.31
S0301-40	**4**	20	0	894	16.86
S0301-60F*	**6**	1	10	392	69.63
S0301-80F*	**8**	1	2	392	139.88
S0301-100F*	**10**	1	0	392	217.07
S0301-120F*	**12**	1	0	392	314.77



Pipe Inside Connectors, Schedule 40

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Pipe I.D. Spigot x Pipe I.D. Spigot					
S0302-10	**1**	50	300	894	3.40
S0302-15	**1-1/2**	50	0	894	4.64
S0302-20	**2**	20	0	894	5.14
S0302-30	**3**	25	0	894	16.13
S0302-40	**4**	5	0	894	19.15



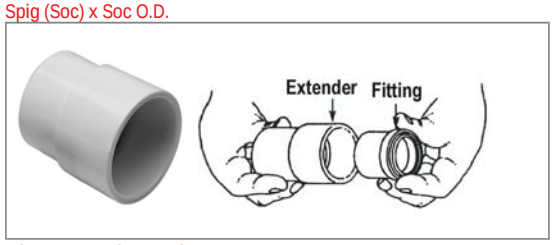
Schedule 40 Fitting Extender

Fitting Extenders, Schedule 40

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Spig (Soc) x Soc O.D.					
Spigot End also functions as next size down Socket					
S0303-15	**1-1/2**	25	0	894	6.45
S0303-20	**2**	25	0	894	7.99

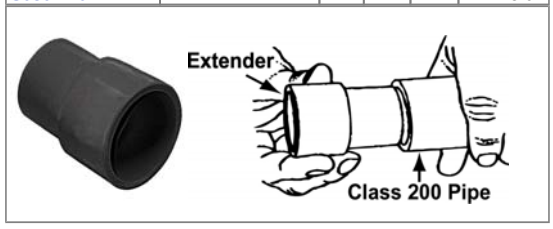
Fitting Extenders, Schedule 40 (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Spig (Soc) x Soc O.D.					



Pipe Extenders, Class 200

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Pipe O.D. Spigot x Pipe I.D. Spigot					
Fits Class 200 Pipe I.D.					
S0304-10	**1**	25	150	894	3.76
S0304-12	**1-1/4**	48	0	894	4.12
S0304-15	**1-1/2**	48	0	894	4.48
S0304-20	**2**	25	0	894	5.02



Repair Couplings & Short Repair Couplings

Repair Couplings

- Multi-function Telescoping Design
- Regular and Short configurations
- Socket x Socket Configuration for Pipe Repair or Use as a Short-Stroke Expansion Joint
- Spigot x Socket Configuration for Replacing Damaged Fittings
- Both Configurations can be Easily Modified for Opposite Use
- Double O-ring Seal in EPDM
- 1/2" - 2" Pressure Rated to 235 PSI @ 73°F (23°C)
- 2-1/2" - 4" Pressure Rated to 200 PSI @ 73°F (23°C)
- 6" Pressure Rated to 150 PSI @ 73°F (23°C)
- NSF® Certified for Potable Water Use

Versatile Repair Capability

Spears® Repair Couplings provide a variety of system repair and alteration solutions. Use Socket x Socket configurations for quick pipe damage repair - can also be used as a short-stroke expansion joint to compensate for thermal expansion & contraction. Spigot x Socket configurations are excellent for lateral and riser add-ons, damaged fitting replacement, or for installing valves in existing piping systems. Order the wrong configuration? Simply cut coupling from Socket shaft end to function as a spigot or add a coupling to Spigot shaft end for Socket connections.

Repair Coupling - Spig x Soc

PVC White with EPDM O-ring

Can be used as short-stroke Expansion Joint

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
S118-05	**1/2**	25	0	025	5.56
S118-07	**3/4**	30	0	025	6.32
S118-10	**1**	15	0	025	7.29
S118-12	**1-1/4**	25	0	025	13.74
S118-15	**1-1/2**	25	0	025	14.96
S118-20	**2**	12	0	025	23.14
S118-25	**2-1/2**	5	0	025	33.57
S118-30	**3**	4	0	025	41.94
S118-40	**4**	2	0	025	73.40
S118-60	**6**	1	0	025	179.60

Repair Coupling - Soc x Soc

PVC White with EPDM O-ring

Can be used as short-stroke Expansion Joint

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
S119-05	**1/2**	30	0	025	5.56
S119-07	**3/4**	24	0	025	6.32
S119-10	**1**	20	0	025	7.29
S119-12	**1-1/4**	10	0	025	13.74
S119-15	**1-1/2**	16	0	025	14.96

Repair Coupling - Soc x Soc (continued)

PVC White with EPDM O-ring

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
S119-20	**2**	10	0	025	23.14
S119-25	**2-1/2**	5	0	025	33.57
S119-30	**3**	4	0	025	41.94
S119-40	**4**	2	0	025	73.40
S119-60	**6**	1	0	025	179.60

Repair Coupling, Schedule 40 Fabricated

Gasket x Gasket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
428-020F	**2**	1	10	047	62.31
428-030F	**3**	1	8	047	80.73
428-040F	**4**	1	4	047	93.48
428-060F	**6**	1	3	047	126.72
428-080F	**8**	1	2	047	173.78
428-100F	**10**	1	0	047	260.34
428-120F	**12**	1	0	047	338.97
428-140F	**14**	1	0	047	663.36
428-160F	**16**	1	0	047	928.27
428-180F	**18**	1	0	047	1428.76
428-200F	**20**	1	0	047	1705.29
428-240F	**24**	1	0	047	2380.68

Short Repair Couplings

Repair Coupling- Short, Spig x Soc

PVC White with EPDM O-ring

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
SH118-05	**1/2**	36	0	025	5.56
SH118-07	**3/4**	30	0	025	6.32
SH118-10	**1**	35	0	025	7.29
SH118-12	**1-1/4**	25	0	025	13.74
SH118-15	**1-1/2**	32	0	025	14.96
SH118-20	**2**	15	0	025	23.14

Repair Coupling - Short, Soc x Soc

PVC White with EPDM O-ring

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
SH119-05	**1/2**	40	0	025	5.56
SH119-07	**3/4**	30	0	025	6.32
SH119-10	**1**	30	0	025	7.29
SH119-12	**1-1/4**	20	0	025	13.74
SH119-15	**1-1/2**	21	0	025	14.96

Repair Coupling - Short, Soc x Soc (continued)

PVC White with EPDM O-ring

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
SH119-20	**2**	12	0	025	23.14

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

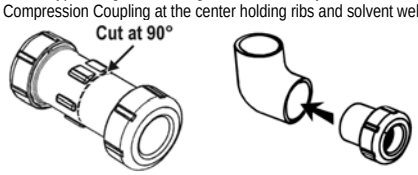
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Compression Couplings & Nut Wrenches

- Designed for Quick Connections, System Modifications or Repairs
- Completely Redesigned for Improved Versatility
- PVC White plus New Industrial PVC Gray
- Easy-Thread Compression Nut
- New Spigot Conversion Capability
- Full Service 200 PSI Pressure Rating
- NSF® Certified for Potable Water Use

Option: Convert Fittings to Compression Outlet

Socket-type fittings 3/4" through 3" can be easily converted to compression outlet sizes 1/2" through 2-1/2" by simply cutting the Compression Coupling at the center holding ribs and solvent welding the spigot body into a fitting socket.



Compression Coupling Size (in.)	Body Spigot Size (in.)
1/2	3/4
3/4	1
1	1-1/4
1-1/4	1-1/2
1-1/2	2
2	2-1/2
2-1/2	3

Compression Coupling, PVC White

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Buna-N Gasket					
S110-05	**1/2**	28	0	024	3.86
S110-07	**3/4**	24	0	024	5.22
S110-10	**1**	20	0	024	6.77
S110-12	**1-1/4**	10	0	024	10.38
S110-15	**1-1/2**	16	0	024	10.72
S110-20	**2**	12	0	024	13.94
S110-25	**2-1/2**	6	0	024	26.21
S110-30	**3**	4	0	024	34.32
S110-40	**4**	4	0	024	56.44
S110-60	**6**	1	0	024	128.36

Compression Coupling, PVC White

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
EPDM Gasket					
S110E-05	**1/2**	28	0	024	4.51
S110E-07	**3/4**	24	0	024	5.86
S110E-10	**1**	20	0	024	7.78
S110E-12	**1-1/4**	10	0	024	12.01
S110E-15	**1-1/2**	16	0	024	12.50
S110E-20	**2**	12	0	024	15.61
S110E-25	**2-1/2**	6	0	024	29.21
S110E-30	**3**	4	0	024	38.19
S110E-40	**4**	4	0	024	62.44
S110E-60	**6**	1	0	024	148.40

Compression Coupling, PVC Gray

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
EPDM Gasket					
S110E-05G	**1/2**	28	0	024	4.60
S110E-07G	**3/4**	24	0	024	6.17
S110E-10G	**1**	15	0	024	7.96
S110E-12G	**1-1/4**	10	0	024	12.27
S110E-15G	**1-1/2**	16	0	024	12.67
S110E-20G	**2**	12	0	024	16.44
S110E-25G	**2-1/2**	6	0	024	30.96
S110E-30G	**3**	4	0	024	40.48
S110E-40G	**4**	4	0	024	66.60
S110E-60G	**6**	1	0	024	151.46

Compression Coupling Nut Wrench Set

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Fits all Spears® Compression Fittings					
CCW-000	**Set**	1	25	299	99.68
Complete Set of Wrenches, Sizes 1/2 - 3					

Compression Coupling Nut Wrenches

Fits all Spears® Compression Fittings

CCW-005	**1/2**	1	50	299	11.93
CCW-007	**3/4**	1	50	299	12.14
CCW-010	**1**	1	50	299	12.65
CCW-012	**1-1/4**	1	50	299	14.32
CCW-015	**1-1/2**	1	50	299	15.44
CCW-020*	**2**	1	50	299	17.25
CCW-030**	**3**	1	25	299	21.22
CCW-060	**6**	8	0	299	31.92

* CCW-20 - Wrench also fits 2-1/2" Coupling Body
**CCW-30 - Wrench also fits 4" Coupling Body

Compression Male Adapters

- Quickly Adapts Pipe to MIPT Thread
- Easy-Thread Compression Nut
- PVC White with Buna-N or EPDM Gasket
- 200 psi Pressure Rating
- NSF® Certified for Potable Water Use

Uses same Nut Wrench sets available for Compression Couplings

Compression Male Adapters, PVC

Buna-N Gasket

Uses Regular Compression Coupling Nut Wrenches

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
S130-05	**1/2**	25	150	024	3.14
S130-07	**3/4**	25	200	024	3.79
S130-10	**1**	25	0	024	4.81
S130-12	**1-1/4**	25	0	024	7.39
S130-15	**1-1/2**	25	0	024	7.58
S130-20	**2**	25	0	024	9.45

Compression Male Adapters, PVC

EPDM Gasket

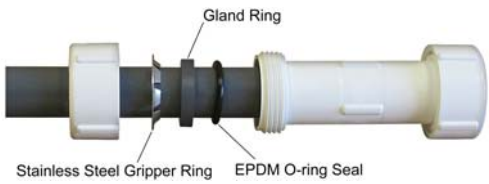
Uses Regular Compression Coupling Nut Wrenches

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
S130E-05	**1/2**	25	150	024	6.67
S130E-07	**3/4**	25	200	024	7.65
S130E-10	**1**	25	0	024	10.32
S130E-12	**1-1/4**	25	0	024	13.06
S130E-15	**1-1/2**	25	0	024	13.68
S130E-20	**2**	25	0	024	16.01

GripLoc™ Compression Couplings

GripLoc™ Compression Coupling

Tightening nut compresses special stainless steel Gripper Ring to firmly grip pipe and prevent potential pull-out. Compressed Gland Ring ensures positive O-ring seal against pipe.



GripLoc™ Compression Couplings

EPDM Gasket

Hand Tighten ONLY - No Nut Wrenches Required

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
S112-05	**1/2**	28	0	024	18.37

GripLoc™ Compression Couplings (continued)

EPDM Gasket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
S112-07	**3/4**	24	0	024	20.30
S112-10	**1**	20	0	024	25.48
S112-12	**1-1/4**	10	0	024	31.07
S112-15	**1-1/2**	16	0	024	37.63
S112-20	**2**	12	0	024	44.35

GripLoc™ Compression Adapters

GripLoc™ Compression Male Adapter

Mipt x EPDM GripLoc™ Gasket

Hand Tighten ONLY - No Nut Wrenches Required

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
S135-05	**1/2**	25	150	024	11.01
S135-07	**3/4**	25	200	024	12.92
S135-10	**1**	25	0	024	14.76
S135-12	**1-1/4**	25	0	024	17.03
S135-15	**1-1/2**	25	0	024	19.40
S135-20	**2**	25	0	024	23.85

GripLoc™ Compression Female Adapter

Fipt x EPDM GripLoc™ Gasket

Hand Tighten ONLY - No Nut Wrenches Required

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
S136-05	**1/2**	28	0	024	17.78
S136-07	**3/4**	24	0	024	19.85
S136-10	**1**	20	0	024	23.14
S136-12	**1-1/4**	10	0	024	31.82
S136-15	**1-1/2**	25	0	024	40.29
S136-20	**2**	25	0	024	49.50

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Pipe Flanges

PRICING

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Pipe Flanges

Flange Van Stone Style -PIP

Flange x PIP Soc

125 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
354-060F	**6X6.140**	1	4	320	133.67
354-080F	**8X8.160**	1	2	320	202.42
354-100F	**10X10.200**	1	2	320	284.61
354-120F	**12X12.240**	1	2	320	412.21
354-150F	**14X15.300**	1	0	320	1098.76
354-151F	**16X15.300**	1	0	320	1253.46
354-181F	**18X18.701**	1	0	320	1904.21
354-182F	**18X18.360**	1	0	320	1904.21
354-201F	**20X22.047**	1	0	320	2900.51
354-241F	**24X24.803**	1	0	320	4247.72

For more information, refer to 80, 100 & 125 psi PIP Fabrication Fittings.

PIP = Plastic Irrigation Pipe (dimensions are NOT the same as IPS dimensions)

Sizes 6" - 16" are furnished with plastic ring.
Sizes 18" - 24" are furnished with steel ring.

Flange One Piece

Soc

1/2" - 16" 150 psi Maximum Internal Pressure Rating @73°F (23°C)
18" - 24" 50 psi Maximum Internal Pressure Rating @73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
851-005	**1/2**	25	0	080	18.11
851-007	**3/4**	25	0	080	19.35
851-010	**1**	15	0	080	21.55
851-012	**1-1/4**	15	0	080	22.20
851-015	**1-1/2**	20	0	080	22.68
851-020	**2**	10	0	080	30.19
851-025	**2-1/2**	10	0	080	46.60
851-030	**3**	10	0	080	51.46
851-040	**4**	5	0	080	65.16
851-050	**5**	5	0	080	102.45
851-060	**6**	5	0	080	102.45
851-080	**8**	2	0	080	183.33
851-100F	**10**	1	2	083	498.18
851-120F	**12**	1	0	083	604.96
851-140F	**14**	1	0	083	1112.65
851-160F	**16**	1	0	083	1526.99
851-180F	**18**	1	0	083	3230.20
851-200F	**20**	1	0	083	3955.61
851-240F	**24**	1	0	083	5253.52

Flange One Piece

Fipt

150 psi Maximum Internal Pressure Rating @73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
852-005	**1/2**	25	0	080	21.67
852-007	**3/4**	25	0	080	25.39
852-010	**1**	15	0	080	27.80
852-012	**1-1/4**	15	0	080	38.33
852-015	**1-1/2**	20	0	080	41.83
852-020	**2**	10	0	080	42.78
852-025	**2-1/2**	10	0	080	98.36
852-030	**3**	10	0	080	101.24
852-040	**4**	5	0	080	190.22
852-060F	**6**	1	5	083	228.52
852-080F	**8**	1	2	083	573.52

Flange - Special Reinforced One Piece

SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
852-005SR	**1/2**	25	0	086	11.91
852-007SR	**3/4**	25	0	086	13.99
852-010SR	**1**	15	0	086	15.29
852-012SR	**1-1/4**	15	0	086	21.07
852-015SR	**1-1/2**	15	0	086	23.06
852-020SR	**2**	10	0	086	23.62
852-025SR	**2-1/2**	10	0	086	54.09
852-030SR	**3**	10	0	086	55.69
852-040SR	**4**	5	0	086	104.69

Flange - Blind

1/2" - 12" Molded - 150 psi Maximum Internal Pressure Rating @ 73°F (23°C)
14" - 24" Fabricated - 50 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
853-005	**1/2**	25	0	080	25.38
853-007	**3/4**	25	0	080	30.23
853-010	**1**	15	0	080	41.29
853-012	**1-1/4**	20	0	080	50.68
853-015	**1-1/2**	15	0	080	50.68
853-020	**2**	10	0	080	75.73
853-025	**2-1/2**	10	0	080	123.38
853-030	**3**	10	0	080	148.89
853-040	**4**	8	0	080	185.48
853-050F	**5**	1	5	083	464.95
853-060	**6**	5	0	080	225.40
853-080	**8**	5	0	080	282.13
853-100	**10**	3	0	081	471.77
853-120	**12**	2	0	081	734.75
853-140F	**14**	1	0	083	1397.79
853-160F	**16**	1	0	083	1657.51
853-180F	**18**	1	0	083	1864.09
853-200F	**20**	1	0	083	3013.01
853-240F	**24**	1	0	083	4016.97

Flange Van Stone Style with PVC Ring

Soc

1/2" - 18" molded - 150 psi = maximum internal pressure rating @ 73°F (23°C)
18" - 24" fabricated - 50 psi = maximum internal pressure rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
854-005	**1/2**	25	0	080	18.08
854-007	**3/4**	25	0	080	19.34
854-010	**1**	15	0	080	21.54
854-012	**1-1/4**	15	0	080	22.18
854-015	**1-1/2**	20	0	080	22.63
854-020	**2**	10	0	080	30.14
854-025	**2-1/2**	10	0	080	46.55
854P-030	**3**	10	0	080	51.44
854P-040	**4**	5	0	080	65.07
854P-050	**5**	5	0	080	102.36
854P-060	**6**	5	0	080	102.36
854P-080	**8**	2	0	080	166.68
854P-100	**10**	2	0	081	215.79
854P-120	**12**	2	0	081	232.66
854P-140	**14**	1	0	082	898.21
854P-160	**16**	1	0	082	1201.40
854P-180	**18**	1	0	082	1937.69
854-180FP	**18**	1	0	083	3065.76
854-200FP	**20**	1	0	083	3749.88

Pipe Flanges

Flange Van Stone Style with PVC Ring (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
854-240FP	24	1	0	083	5101.07

Flange Van Stone Style with Glass Filled PVC Ring

Soc

3" - 18" molded - 150 psi = maximum internal pressure rating @ 73°F (23°C)

854-030	3	10	0	080	51.44
854-040	4	5	0	080	65.07
854-050	5	5	0	080	102.36
854-060	6	5	0	080	102.36
854-080	8	2	0	080	166.68
854-100	10	2	0	081	215.79
854-120	12	2	0	081	232.66
854-140	14	1	0	082	898.21
854-160	16	1	0	082	1201.40
854-180	18	1	0	082	1937.69

18" flange has 4-section ring

Flange Van Stone Style PVC with Solid Ring

Soc

150 psi Maximum Internal Pressure Rating @73°F (23°C)

S854-020	2	10	0	080	37.68
S854-030	3	10	0	080	64.32
S854-040	4	5	0	080	81.36

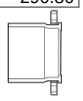
Flange Van Stone Style PVC with Glass Filled PVC Solid Ring

Soc

150 psi Maximum Internal Pressure Rating @73°F (23°C)

S854-060	6	5	0	080	127.97
S854-080	8	2	0	080	208.35
S854-100	10	2	0	081	269.73
S854-120	12	2	0	081	290.80

Flange Van Stone Style with Steel Ring



Soc

150 psi Maximum Internal Pressure Rating @73°F (23°C)

854-180FS	18	1	0	083	1809.89
854-200FS	20	1	0	083	2193.19
854-240FS	24	1	0	083	2951.69

Flange Van Stone Style Class 300 Bolt Pattern Fabricated with PVC Ring

Soc

1/2" - 16" molded with fab ring - 150 psi = maximum internal pressure rating @ 73°F (23°C)

18" - 24" fabricated - 50 psi = maximum internal pressure rating @ 73°F (23°C)

854-005CL300	1/2	1	25	083	148.64
854-007CL300	3/4	1	25	083	172.71
854-010CL300	1	1	15	083	271.37
854-012CL300	1-1/4	1	15	083	277.09
854-015CL300	1-1/2	1	20	083	287.83
854-020CL300	2	1	10	083	303.05
854-025CL300	2-1/2	1	10	083	332.76
854-030CL300	3	1	10	083	365.45
854-040CL300	4	1	3	083	619.67
854-060CL300	6	1	4	083	1180.24
854-080CL300	8	1	3	083	1343.43
854-100CL300	10	1	2	083	1581.60
854-120CL300	12	1	0	083	2026.35
854-140CL300	14	1	0	083	2234.24
854-160CL300	16	1	0	083	2326.72

Flange Van Stone Style Class 300 Bolt Pattern Fabricated with PVC Ring (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
854-180CL300	18	1	0	083	3253.11
854-200CL300	20	1	0	083	5640.22
854-240CL300	24	1	0	083	8284.99

Flange Van Stone Style with PVC Ring

Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

855-005	1/2	25	0	080	21.63
855-007	3/4	25	0	080	25.38
855-010	1	15	0	080	27.76
855-012	1-1/4	15	0	080	38.26
855-015	1-1/2	20	0	080	41.79
855-020	2	10	0	080	42.76
855-025	2-1/2	10	0	080	98.29

Flange Van Stone Style with Glass Filled PVC Ring

Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

855-030	3	10	0	080	101.11
855-040	4	5	0	080	183.83
855-060	6	1	4	080	289.09
855-060F	6	1	4	083	256.97
855-080	8	2	0	080	358.24
855-080F	8	1	2	083	318.82
855-100F	10	1	2	083	359.19

Flange Van Stone Style with PVC Ring

Spig

1/2" - 16" = 150 psi maximum internal pressure rating @ 73°F (23°C)

18" - 24" = 50 psi maximum internal pressure rating @ 73°F (23°C)

856-005	1/2	25	0	080	18.18
856-007	3/4	25	0	080	19.48
856-010	1	15	0	080	21.72
856-012	1-1/4	15	0	080	22.40
856-015	1-1/2	15	0	080	22.85
856-020	2	10	0	080	30.37
856-025	2-1/2	10	0	080	46.94
856P-030	3	10	0	080	51.85
856P-040	4	5	0	080	65.61
856P-060	6	4	0	080	103.20
856P-080	8	2	0	080	184.61
856P-100	10	2	0	081	215.79
856P-120	12	2	0	081	232.66
856-200FP	20	1	0	083	3749.88
856-240FP	24	1	0	083	5101.07

Flange Van Stone Style with Glass Filled PVC Ring

Spig

3" - 12" molded, 14" - 18" molded/fabricated - 150 psi = maximum internal pressure rating @ 73°F (23°C)

856-030	3	10	0	080	51.85
856-040	4	5	0	080	65.61
856-060	6	4	0	080	103.20
856-080	8	2	0	080	184.61
856-100	10	2	0	081	215.79
856-120	12	2	0	081	232.66
856-140FP	14	1	0	083	1926.95
856-160FP	16	1	0	083	2337.92

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Pipe Flanges

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each

Flange Van Stone Style with Glass Filled PVC Ring (continued)
Spig

856-180FP	**18**	1	0	083	3065.76

** Fabricated from molded socket flanges with pipe spigot.
18" flange uses 4-piece ring

Flange Van Stone Style with Steel Ring
Spig

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

856-140FS	**14**	1	0	083	975.22
856-160FS	**16**	1	0	083	1192.01
856-180FS	**18**	1	0	083	1350.67
856-200FS	**20**	1	0	083	1626.87
856-240FS	**24**	1	0	083	2209.11

Flange, One Piece PVC Multi-Bolt Pattern*
ASTM Socket x Multi-bolt Pattern Ring

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

M851-100	**10**	2	0	081	189.75
M851-120	**12**	2	0	081	326.80

Hubs fit 10" and 12" ASTM IPS pipe. Rings are manufactured to accept bolt patterns in size 10" and 12" in ANSI Class 150, B.S. 4504 PN10, B.S. 4504 PN16, Table E & JIS 10K for size 10", Table D & E for size 12" Consult Spears® Manufacturing Company Technical Services for additional information. Not for use with wafer valves.

Flange Van Stone Style with Multi-Bolt Pattern PVC Ring*
ASTM Soc x Multi-bolt Pattern Ring

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

M854-020	**2**	10	0	080	30.14

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each

Flange Van Stone Style with Multi-Bolt Pattern PVC Ring* (continued)
ASTM Soc x Multi-bolt Pattern Ring

* Hubs fit 2" ASTM IPS pipe. Rings are manufactured to accept bolt patterns in size 2" in ANSI Class 150, B.S. 4504 PN10 B.S. 4504 PN16 (except 8"), B.S. 10 Table D and B.S. 10 Table E. Consult Spears® Manufacturing Company Technical Services for additional information. Not for use with wafer valves.

Flange Van Stone Style with Multi-Bolt Pattern Glass Filled PVC Ring*
ASTM Soc x Multi-bolt Pattern Ring

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

M854-060	**6**	5	0	080	102.36
M854-080	**8**	2	0	080	166.68

* Hubs fit 6" and 8" ASTM IPS pipe. Rings are manufactured to accept bolt patterns in size 6" and 8" in ANSI Class 150, B.S. 4504 PN10 B.S. 4504 PN16 (except 8"), B.S. 10 Table D and B.S. 10 Table E. Consult Spears® Manufacturing Company Technical Services for additional information. Not for use with wafer valves.

Flange Van Stone Style with Multi-Bolt Pattern PVC Ring*
ASTM Spig x Multi-bolt Pattern Ring

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

M856-020	**2**	10	0	080	30.37

* Spigots fit 2" ASTM IPS fitting socket. Rings are manufactured to accept bolt patterns in size 2" in ANSI Class 150, B.S. 4504 NP10 B.S. 4504 NP16 (except 8"), B.S. 10 Table D and B.S. 10 Table E. Consult Spears® Manufacturing Company Technical Services for additional information. Not for use with wafer valves.

Flange Van Stone Style with Multi-Bolt Pattern Glass Filled PVC Ring*
ASTM Spig x Multi-bolt Pattern Ring

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

M856-060	**6**	4	0	080	103.20
M856-080	**8**	2	0	080	167.94

Flange Bolt Kits & Flange Gaskets - Full-Faced

Flange Bolt Kits

Flange Bolt Hardware Kits - Zinc Plated Steel

For Connection of 2-Spears® Flanges Includes Bolts, Nuts & Flat Washers

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
HK-005	**1/2**	1	10	017	10.03
HK-010	**3/4 & 1**	1	10	017	12.54
HK-015	**1-1/4 & 1-1/2**	1	10	017	18.85
HK-020	**2**	1	10	017	25.23
HK-025	**2-1/2**	1	10	017	30.25
HK-030	**3**	1	10	017	34.81
HK-040	**4**	1	5	017	72.12
HK-060	**5 & 6**	1	5	017	80.21
HK-080	**8**	1	0	017	94.00
HK-120	**10 & 12**	1	0	017	127.18

Flange Bolt Hardware Kits - Type 316 Stainless Steel

For Connection of 2-Spears® Flanges Includes Bolts, Nuts & Flat Washers

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
HK1-005	**1/2**	1	10	017	30.11
HK1-010	**3/4 & 1**	1	10	017	43.37
HK1-015	**1-1/4 & 1-1/2**	1	10	017	47.78
HK1-020	**2**	1	10	017	57.46

Flange Bolt Hardware Kits - Type 316 Stainless Steel (continued)

For Connection of 2-Spears® Flanges Includes Bolts, Nuts & Flat Washers

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
HK1-025	**2-1/2**	1	10	017	61.59
HK1-030	**3**	1	10	017	81.26
HK1-040	**4**	1	5	017	162.96
HK1-060	**5 & 6**	1	5	017	212.54
HK1-080	**8**	1	0	017	266.69
HK1-120	**10 & 12**	1	0	017	542.58

Flange Bolt Hardware Kits - Type 304 Stainless Steel

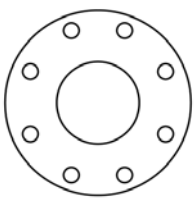
For Connection of 2-Spears® Flanges Includes Bolts, Nuts, & Flat Washers

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
HK2-005	**1/2**	1	10	017	26.34
HK2-010	**3/4 & 1**	1	10	017	37.57
HK2-015	**1-1/4 & 1-1/2**	1	10	017	44.26
HK2-020	**2**	1	10	017	52.06
HK2-025	**2-1/2**	1	10	017	55.20
HK2-030	**3**	1	10	017	68.55
HK2-040	**4**	1	5	017	137.09
HK2-060	**5 & 6**	1	5	017	144.51
HK2-080	**8**	1	0	017	190.02
HK2-120	**10 & 12**	1	0	017	336.78

Flange Gaskets - Full-Faced

Gasket Selection Guide

Flange Size	Bolt Holes	Gasket Part Number		
		Buna-N	EPDM	FKM
1/2	4	GK1-005	GK2-005	GK3-005
3/4	4	GK1-007	GK2-007	GK3-007
1	4	GK1-010	GK2-010	GK3-010
1-1/4	4	GK1-012	GK2-012	GK3-012
1-1/2	4	GK1-015	GK2-015	GK3-015
2	4	GK1-020	GK2-020	GK3-020
2-1/2	4	GK1-025	GK2-025	GK3-025
3	4	GK1-030	GK2-030	GK3-030
4	8	GK1-040	GK2-040	GK3-040
5	8	GK1-050	GK2-050	GK3-050
6	8	GK1-060	GK2-060	GK3-060
8	8	GK1-080	GK2-080	GK3-080
10	12	GK1-100	GK2-100	GK3-100
12	12	GK1-120	GK2-120	GK3-120



Order Gaskets & Bolt Kits Separately

- 1/8" Full-Face design with ANSI Class 150 Bolt Patterns
- Pressure rated to 150 psi @ 73°F
- Available in Buna-N, EPDM, or FKM

Flange Gaskets - Full-Faced Buna-N

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
GK1-005	**1/2**	1	25	017	3.22
GK1-007	**3/4**	1	25	017	3.69
GK1-010	**1**	1	25	017	3.80
GK1-012	**1-1/4**	1	25	017	3.89
GK1-015	**1-1/2**	1	25	017	4.18
GK1-020	**2**	1	25	017	4.67
GK1-025	**2-1/2**	1	25	017	5.14
GK1-030	**3**	1	25	017	7.91
GK1-040	**4**	1	25	017	8.84
GK1-050	**5**	1	25	017	10.48
GK1-060	**6**	1	25	017	10.77
GK1-080	**8**	1	25	017	14.20
GK1-100	**10**	1	25	017	18.02

Flange Gaskets - Full-Faced Buna-N (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
GK1-120	**12**	1	25	017	24.31
GK1-140	**14**	1	25	017	47.02
GK1-160	**16**	1	25	017	226.21
GK1-180	**18**	1	25	017	257.63
GK1-240	**24**	1	25	017	311.31

Flange Gaskets - Full-Faced EPDM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
GK2-005	**1/2**	1	25	017	4.27
GK2-007	**3/4**	1	25	017	4.55
GK2-010	**1**	1	25	017	4.75
GK2-012	**1-1/4**	1	25	017	4.99
GK2-015	**1-1/2**	1	25	017	5.36
GK2-020	**2**	1	25	017	6.54

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Flange Gaskets - Full-Faced

Flange Gaskets - Full-Faced EPDM (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
GK2-025	**2-1/2**	1	25	017	7.85
GK2-030	**3**	1	25	017	11.54
GK2-040	**4**	1	25	017	13.14
GK2-050	**5**	1	25	017	16.43
GK2-060	**6**	1	25	017	17.24
GK2-080	**8**	1	25	017	22.97
GK2-100	**10**	1	25	017	29.93
GK2-120	**12**	1	25	017	41.18
GK2-140	**14**	1	25	017	100.45
GK2-160	**16**	1	25	017	178.22
GK2-180	**18**	1	25	017	208.16
GK2-200	**20**	1	25	017	241.60
GK2-240	**24**	1	25	017	364.73

Flange Gaskets - Full-Faced FKM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
GK3-005	**1/2**	1	25	017	15.25
GK3-007	**3/4**	1	25	017	18.11
GK3-010	**1**	1	25	017	20.01
GK3-012	**1-1/4**	1	5	017	22.59
GK3-015	**1-1/2**	1	25	017	28.49
GK3-020	**2**	1	25	017	39.83
GK3-025	**2-1/2**	1	25	017	53.27
GK3-030	**3**	1	25	017	119.04
GK3-040	**4**	1	25	017	137.42
GK3-050	**5**	1	25	017	160.20
GK3-060	**6**	1	25	017	181.75
GK3-080	**8**	1	25	017	258.94
GK3-100	**10**	1	25	017	344.42
GK3-120	**12**	1	25	017	485.28
GK3-140	**14**	1	25	017	711.26
GK3-160	**16**	1	25	017	810.63
GK3-180	**18**	1	25	017	912.00
GK3-240	**24**	1	25	017	1160.91

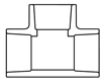
PVC Beige Ultra Violet Resistant (UVR) Schedule 40 Fittings

PRICING

UVR Sch 40 Beige Fittings

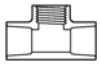
Ultra Violet Resistant (UVR) Fittings

Tee
Soc x Soc x Soc



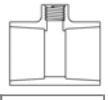
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
401-005UV	**1/2**	50	300	042	2.65
401-007UV	**3/4**	50	0	042	3.13
401-010UV	**1**	50	0	042	6.20
401-012UV	**1-1/4**	25	0	042	8.57
401-015UV	**1-1/2**	25	0	042	12.26
401-020UV	**2**	25	0	042	16.24
401-025UV	**2-1/2**	10	0	042	41.34
401-030UV	**3**	10	0	042	53.16
401-040UV	**4**	6	0	042	143.12

Tee
Soc x Soc x Fipt



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
402-005UV	**1/2**	50	300	042	2.95
402-007UV	**3/4**	50	0	042	3.36

Reducing Tee
Soc x Soc x Fipt

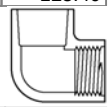


Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
402-101UV	**3/4X1/2**	50	0	042	3.84
402-130UV	**1X1/2**	50	0	042	6.48
402-131UV	**1X3/4**	50	0	042	6.48
402-166UV	**1-1/4X1/2**	25	0	042	10.33
402-167UV	**1-1/4X3/4**	25	0	042	10.33
402-209UV	**1-1/2X1/2**	25	0	042	15.51
402-210UV	**1-1/2X3/4**	25	0	042	15.51
402-247UV	**2X1/2**	10	0	042	17.72
402-248UV	**2X3/4**	10	0	042	17.72

90° Ell
Soc x Soc

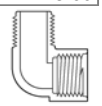
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
406-005UV	**1/2**	50	400	042	2.12
406-007UV	**3/4**	50	300	042	2.65
406-010UV	**1**	50	0	042	4.42
406-012UV	**1-1/4**	25	0	042	6.35
406-015UV	**1-1/2**	25	0	042	9.58
406-020UV	**2**	25	0	042	13.27
406-025UV	**2-1/2**	10	0	042	30.98
406-030UV	**3**	10	0	042	48.72
406-040UV	**4**	8	0	042	125.40

90° Ell
Soc x Fipt



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
407-005UV	**1/2**	50	400	042	2.78
407-007UV	**3/4**	50	300	042	3.13
407-101UV	**3/4X1/2**	50	300	042	4.08
407-131UV	**1X3/4**	50	0	042	5.60

90° Street Ell
Mipt x Fipt



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
412-005UV	**1/2**	50	300	042	4.28
412-007UV	**3/4**	50	0	042	5.28

45° Ell
Soc x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
417-005UV	**1/2**	50	400	042	2.95
417-007UV	**3/4**	50	300	042	3.84
417-010UV	**1**	50	0	042	4.61
417-012UV	**1-1/4**	25	0	042	7.46
417-015UV	**1-1/2**	25	0	042	9.01

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

UVR Sch 40 Beige Fittings

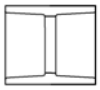
45° Ell (continued)

Soc x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
417-020UV	**2**	25	0	042	12.85
417-025UV	**2-1/2**	10	0	042	35.42
417-030UV	**3**	10	0	042	54.58
417-040UV	**4**	5	0	042	123.93

Coupling

Soc x Soc



429-005UV	**1/2**	50	600	042	2.20
429-007UV	**3/4**	50	400	042	2.95
429-010UV	**1**	50	0	042	4.42
429-012UV	**1-1/4**	25	150	042	5.93
429-015UV	**1-1/2**	25	0	042	6.79
429-020UV	**2**	25	0	042	10.33
429-025UV	**2-1/2**	12	0	042	23.58
429-030UV	**3**	10	0	042	32.45
429-040UV	**4**	6	0	042	84.81

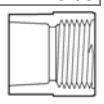
Coupling

Fipt x Fipt

430-005UV	**1/2**	50	600	042	3.36
430-007UV	**3/4**	50	400	042	5.93

Female Adapter

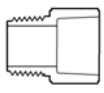
Soc x Fipt



435-005UV	**1/2**	50	600	042	2.65
435-007UV	**3/4**	50	400	042	3.34

Male Adapter

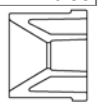
Mipt x Soc



436-074UV	**1/2X3/4**	50	200	042	5.76
436-005UV	**1/2**	50	300	042	2.00
436-007UV	**3/4**	50	400	042	2.34
436-010UV	**1**	50	300	042	2.95
436-012UV	**1-1/4**	25	0	042	4.14
436-015UV	**1-1/2**	25	0	042	5.02
436-020UV	**2**	25	0	042	8.11
436-025UV	**2-1/2**	10	0	042	20.65
436-030UV	**3**	10	0	042	26.53

Reducer Bushing

Spig x Soc Flush Style



437-101UV	**3/4X1/2**	50	300	042	2.34
437-130UV	**1X1/2**	50	200	042	3.36
437-131UV	**1X3/4**	50	300	042	3.36
437-167UV	**1-1/4X3/4**	25	300	042	4.87
437-168UV	**1-1/4X1**	25	300	042	4.87
437-210UV	**1-1/2X3/4**	25	200	042	5.77
437-211UV	**1-1/2X1**	25	200	042	5.77
437-212UV	**1-1/2X1-1/4**	25	200	042	5.77
437-249UV	**2X1**	10	80	042	7.09
437-250UV	**2X1-1/4**	10	120	042	7.09
437-251UV	**2X1-1/2**	25	0	042	7.09
437-288UV	**2-1/2X3/4**	10	0	042	13.27
437-289UV	**2-1/2X1**	10	0	042	13.27
437-290UV	**2-1/2X1-1/4**	10	40	042	13.27
437-292UV	**2-1/2X2**	10	0	042	13.27
437-335UV	**3X1**	10	0	042	16.97
437-336UV	**3X1-1/4**	10	0	042	16.97
437-337UV	**3X1-1/2**	10	0	042	16.97

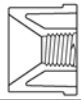
Reducer Bushing (continued)

Spig x Soc Flush Style

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
437-338UV	**3X2**	10	0	042	16.97
437-339UV	**3X2-1/2**	15	0	042	16.97
437-422UV	**4X3**	6	0	042	73.02

Reducer Bushing

Spig x Fipt Flush Style



438-130UV	**1X1/2**	50	200	042	3.36
438-131UV	**1X3/4**	50	200	042	3.36

Schedule 80 Nipple

882-060UV	**1/2X6**	25	150	042	2.62
882-080UV	**1/2X8**	25	0	042	3.34
882-100UV	**1/2X10**	25	0	042	4.05
882-120UV	**1/2X12**	25	0	042	5.11
883-060UV	**3/4X6**	25	200	042	3.58
883-080UV	**3/4X8**	25	0	042	4.05
883-100UV	**3/4X10**	25	0	042	4.85
883-120UV	**3/4X12**	25	0	042	5.80

PVC Gray Schedule 40 Fittings

PRICING

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Gray Sch 40 Fittings

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Tee					
Soc					
401-005G	**1/2**	50	300	043	.91
401-007G	**3/4**	50	0	043	1.02
401-010G	**1**	50	0	043	1.89
401-012G	**1-1/4**	25	0	043	2.99
401-015G	**1-1/2**	25	0	043	3.66
401-020G	**2**	25	0	043	5.26
401-025G	**2-1/2**	10	0	043	17.42
401-030G	**3**	10	0	043	22.85
401-040G	**4**	6	0	043	41.36
401-050G	**5**	5	0	043	99.96
401-060G	**6**	4	0	043	139.29
401-080G	**8**	2	0	043	323.08
401-100G	**10**	1	0	044	1070.48
401-120G	**12**	1	0	044	1581.68
Tee - Reducing					
Soc					
401-101G	**3/4X1/2**	50	0	043	1.18
401-130G	**1X1/2**	50	0	043	2.00
401-131G	**1X3/4**	50	0	043	2.17
401-166G	**1-1/4X1/2**	25	0	043	3.26
401-167G	**1-1/4X3/4**	25	0	043	3.26
401-168G	**1-1/4X1**	25	0	043	3.26
401-209G	**1-1/2X1/2**	25	0	043	5.77
401-210G	**1-1/2X3/4**	25	0	043	5.77
401-211G	**1-1/2X1**	25	0	043	5.77
401-212G	**1-1/2X1-1/4**	25	0	043	5.77
401-247G	**2X1/2**	10	0	043	5.63
D401-247G	**2X1/2**	10	0	043	8.20
401-248G	**2X3/4**	10	0	043	5.63
401-249G	**2X1**	10	0	043	5.63
401-250G	**2X1-1/4**	10	0	043	5.63
401-251G	**2X1-1/2**	10	0	043	5.63
401-337G	**3X1-1/2**	10	0	043	24.88
401-338G	**3X2**	6	0	043	24.87
401-420G	**4X2**	10	0	043	41.36
401-422G	**4X3**	6	0	043	41.36

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Tee - Reducing (continued)					
Soc					
401-532G	**6X4**	2	0	043	139.29
401-585G	**8X6**	2	0	043	323.06
Tee					
Soc x Fipt					
402-005G	**1/2**	50	300	043	1.18
402-007G	**3/4**	50	0	043	1.81
402-010G	**1**	50	0	043	3.40
402-012G	**1-1/4**	25	0	043	5.40
Tee - Reducing					
Soc x Fipt					
402-101G	**3/4X1/2**	50	0	043	1.54
402-130G	**1X1/2**	50	0	043	2.36
402-131G	**1X3/4**	50	0	043	3.40
402-166G	**1-1/4X1/2**	25	0	043	5.63
402-167G	**1-1/4X3/4**	25	0	043	5.63
402-168G	**1-1/4X1**	25	0	043	5.63
402-199G	**1-1/2X1-1/4X1/2**	25	0	043	6.99
402-209G	**1-1/2X1/2**	25	0	043	6.99
402-210G	**1-1/2X3/4**	25	0	043	6.99
402-211G	**1-1/2X1-1/2X1**	25	0	043	6.99
402-212G	**1-1/2X1-1/4**	25	0	043	6.99
402-247G	**2X1/2**	10	0	043	8.82
402-248G	**2X3/4**	10	0	043	8.82
402-249G	**2X1**	10	0	043	8.82
402-250G	**2X1-1/4**	10	0	043	8.82
402-251G	**2X1-1/2**	10	0	043	8.82
Tee					
Fipt					
405-005G	**1/2**	50	0	043	3.25
405-007G	**3/4**	50	0	043	5.11
405-010G	**1**	50	0	043	7.09
405-012G	**1-1/4**	25	0	043	9.81
405-015G	**1-1/2**	25	0	043	10.09
405-020G	**2**	10	0	043	13.37

Made in the U.S.A.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Gray Sch 40 Fittings

90° Ell
Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
406-003G	3/8	50	600	043	3.58
406-005G	1/2	50	400	043	.72
406-007G	3/4	50	300	043	.80
406-010G	1	50	0	043	1.44
406-012G	1-1/4	25	0	043	2.54
406-015G	1-1/2	25	0	043	2.68
406-020G	2	25	0	043	4.33
406-025G	2-1/2	10	0	043	13.00
406-030G	3	10	0	043	15.58
406-040G	4	8	0	043	27.87
406-050G	5	4	0	043	72.05
406-060G	6	4	0	043	88.66
406-080G	8	2	0	043	228.33
406-100G	10	1	0	044	859.88
406-120G	12	1	0	044	1153.31

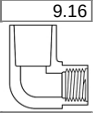
90° Ell - Reducing
Soc

406-101G	3/4X1/2	50	0	043	1.44
406-130G	1X1/2	50	0	043	2.14

90° Ell
Soc x Fipt

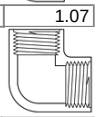
407-005G	1/2	50	400	043	.91
407-007G	3/4	50	300	043	1.02
407-010G	1	50	0	043	1.89
407-012G	1-1/4	25	0	043	3.19
407-015G	1-1/2	25	0	043	3.54
407-020G	2	10	0	043	9.16

90° Ell - Reducing
Soc x Fipt



407-101G	3/4X1/2	50	300	043	1.07

90° Ell
Fipt

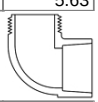


408-005G	1/2	50	400	043	1.74
408-007G	3/4	50	0	043	2.58
408-010G	1	50	0	043	5.45
408-012G	1-1/4	25	0	043	5.84
408-015G	1-1/2	25	0	043	7.38
408-020G	2	10	0	043	11.21

90° Street Ell
Spig x Soc

409-005G	1/2	50	400	043	2.00
409-007G	3/4	50	0	043	2.47
409-010G	1	50	0	043	4.28
409-012G	1-1/4	25	0	043	5.11
409-015G	1-1/2	25	0	043	5.63

90° Street Ell
Mipt x Soc



410-005G	1/2	50	400	043	1.54
410-007G	3/4	50	0	043	1.81

90° Street Ell
Mipt x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
412-005G	1/2	50	400	043	2.12
412-007G	3/4	50	0	043	2.58
412-010G	1	50	0	043	4.40
412-015G	1-1/2	25	0	043	5.93

22-1/2° Ell
Soc

416-060GF	6	1	5	045	92.25
416-120GF	12	1	2	045	296.38

45° Ell
Soc

417-005G	1/2	50	400	043	1.19
417-007G	3/4	50	300	043	1.81
417-010G	1	50	0	043	2.17
417-012G	1-1/4	25	0	043	3.11
417-015G	1-1/2	25	0	043	3.85
417-020G	2	25	0	043	5.02
417-025G	2-1/2	10	0	043	13.01
417-030G	3	10	0	043	20.23
417-040G	4	5	0	043	36.35
417-050G	5	5	0	043	72.05
417-060G	6	8	0	043	89.73
417-080G	8	3	0	043	215.79

Cross
Soc

420-005G	1/2	50	0	043	2.74
420-007G	3/4	50	0	043	4.52
420-010G	1	50	0	043	5.63
420-012G	1-1/4	25	0	043	7.46
420-015G	1-1/2	25	0	043	8.45
420-020G	2	10	0	043	12.48
420-025G	2-1/2	10	0	043	26.47
420-030G	3	5	0	043	32.45
420-040G	4	4	0	043	48.11

Coupling
Soc

429-005G	1/2	50	600	043	.48
429-007G	3/4	50	400	043	.67
429-010G	1	50	0	043	1.15
429-012G	1-1/4	25	150	043	1.54
429-015G	1-1/2	25	0	043	1.67
429-020G	2	25	0	043	2.61
429-025G	2-1/2	12	0	043	5.63
429-030G	3	10	0	043	8.84
429-040G	4	6	0	043	12.78
429-050G	5	5	0	043	23.41
429-060G	6	5	0	043	40.47
429-080G	8	8	0	043	75.54

Coupling - Reducer
Soc

429-101G	3/4X1/2	50	200	043	1.18
429-131G	1X3/4	50	0	043	2.00
429-168G	1-1/4X1	25	0	043	3.40

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Gray Sch 40 Fittings

Coupling - Reducer (continued)
Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
429-212G	1-1/2X1-1/4	25	0	043	3.58
429-251G	2X1-1/2	10	80	043	5.69
429-338G	3X2	8	0	043	29.09
429-422G	4X3	4	0	043	38.35

Coupling
Fipt

430-005G	1/2	50	300	043	.92
430-007G	3/4	50	400	043	1.69
430-010G	1	50	0	043	2.17

Female Adapter
Soc x Fipt

435-005G	1/2	50	600	043	.80
435-007G	3/4	50	400	043	1.02
435-010G	1	50	0	043	1.19
435-012G	1-1/4	25	0	043	1.81
435-015G	1-1/2	25	0	043	2.12
435-020G	2	10	80	043	2.83
435-025G	2-1/2	10	0	043	7.13
435-030G	3	5	0	043	9.57
435-040G	4	6	0	043	15.85
435-050G	5	5	0	043	41.02
435-060G	6	5	0	043	58.26

Female Adapter - Reducing
Soc x Fipt

435-073G	1/2X3/8	50	600	043	1.44
435-101G	3/4X1/2	50	400	043	1.44
435-131G	1X3/4	50	0	043	1.89

Female Adapter - Spigot
Spig x Fipt

478-005G	1/2	50	600	043	.92
478-007G	3/4	25	300	043	1.06
478-010G	1	50	0	043	1.71
478-012G	1-1/4	25	0	043	2.34
478-015G	1-1/2	20	0	043	2.92
478-020G	2	20	0	043	4.28
478-030G	3	10	0	043	14.53
478-040G	4	5	0	043	24.06

Male Adapter
Mipt x Soc

436-005G	1/2	50	300	043	.63
436-007G	3/4	50	400	043	.72
436-010G	1	50	300	043	1.27
436-012G	1-1/4	25	200	043	1.54
436-015G	1-1/2	25	0	043	2.12
436-020G	2	25	0	043	2.74
436-025G	2-1/2	10	0	043	8.09
436-030G	3	10	0	043	11.87
436-040G	4	5	0	043	15.11
436-050G	5	5	0	043	24.91
436-060G	6	5	0	043	39.45

Male Adapter - Reducing
Mipt x Soc

436-074G	1/2X3/4	50	200	043	1.27
436-101G	3/4X1/2	50	300	043	1.18

Reducer Bushing Flush Style
Spig x Soc

437-101G	3/4X1/2	50	300	043	.75
437-130G	1X1/2	50	200	043	1.38
437-131G	1X3/4	50	300	043	1.38
437-166G	1-1/4X1/2	25	300	043	1.81
437-167G	1-1/4X3/4	25	300	043	1.81
437-168G	1-1/4X1	25	300	043	1.81
437-209G	1-1/2X1/2	25	200	043	1.93
437-210G	1-1/2X3/4	25	200	043	1.93
437-211G	1-1/2X1	25	200	043	1.93
437-212G	1-1/2X1-1/4	25	200	043	1.93
437-247G	2X1/2	10	120	043	3.19
437-248G	2X3/4	10	120	043	3.19
437-249G	2X1	10	80	043	3.19
437-250G	2X1-1/4	10	120	043	3.19
437-251G	2X1-1/2	25	0	043	3.19
437-290G	2-1/2X1-1/4	10	40	043	5.12
437-291G	2-1/2X1-1/2	10	0	043	5.12
437-292G	2-1/2X2	10	80	043	5.12
437-334G	3X3/4	10	0	043	7.58
437-335G	3X1	10	0	043	7.58
437-336G	3X1-1/4	10	0	043	7.58
437-337G	3X1-1/2	10	0	043	7.58
437-338G	3X2	10	0	043	7.58
437-339G	3X2-1/2	10	0	043	7.58
437-420G	4X2	6	0	043	16.94
437-421G	4X2-1/2	6	0	043	16.94
437-422G	4X3	6	0	043	16.94
437-490G	5X4	5	0	043	23.79
437-532G	6X4	5	0	043	41.88
437-534G	6X5	5	0	043	41.94
437-582G	8X4	4	0	043	146.13
437-585G	8X6	4	0	043	146.13

Reducer Bushing Flush Style
Spig x Fipt

438-072G	1/2X1/4	50	300	043	1.54
438-073G	1/2X3/8	50	300	043	1.54
438-098G	3/4X1/4	50	300	043	1.54
438-101G	3/4X1/2	50	300	043	1.18
438-130G	1X1/2	50	200	043	1.89
438-131G	1X3/4	50	300	043	1.89
438-166G	1-1/4X1/2	25	100	043	2.95
438-167G	1-1/4X3/4	25	100	043	2.95
438-168G	1-1/4X1	25	100	043	2.95
438-209G	1-1/2X1/2	25	100	043	3.40
438-210G	1-1/2X3/4	25	100	043	3.40
438-211G	1-1/2X1	25	100	043	3.40
438-212G	1-1/2X1-1/4	25	100	043	3.40
438-247G	2X1/2	10	80	043	4.52
438-248G	2X3/4	10	80	043	4.52
438-249G	2X1	10	80	043	4.52
438-250G	2X1-1/4	10	120	043	4.52
438-251G	2X1-1/2	10	120	043	4.52
438-291G	2-1/2X1-1/2	10	0	043	6.56
438-292G	2-1/2X2	10	40	043	6.56
438-338G	3X2	10	0	043	7.58

PVC Gray Sch 40 Fittings

Reducer Bushing Flush Style (continued)

Spig x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
438-420G	4X2	6	0	043	16.89
438-422G	4X3	6	0	043	16.89
438-490G	5X4	4	0	043	32.93
438-532G	6X4	5	0	043	61.85

Reducer (T.T.) Bushing

Mipt x Fipt

439-101G	3/4X1/2	50	300	043	2.12
439-130G	1X1/2	50	300	043	2.95
439-131G	1X3/4	50	200	043	2.95
439-166G	1-1/4X1/2	25	300	043	4.37
439-167G	1-1/4X3/4	25	300	043	4.37
439-168G	1-1/4X1	25	150	043	4.37
439-210G	1-1/2X3/4	25	100	043	5.26
439-211G	1-1/2X1	25	100	043	5.26
439-212G	1-1/2X1-1/4	25	100	043	5.26
439-249G	2X1	10	120	043	5.63
439-250G	2X1-1/4	10	120	043	5.63
439-251G	2X1-1/2	10	60	043	5.63

Cap

Soc

447-003G	3/8	50	300	043	1.81
447-005G	1/2	50	300	043	.67
447-007G	3/4	50	300	043	.76
447-010G	1	50	200	043	1.19
447-012G	1-1/4	25	100	043	1.67
447-015G	1-1/2	25	0	043	1.81
447-020G	2	10	80	043	2.20
447-025G	2-1/2	10	0	043	7.02
447-030G	3	10	0	043	7.65
447-040G	4	6	0	043	17.42
447-050G	5	5	0	043	29.24
447-060G	6	4	0	043	41.75
447-080G	8	3	0	043	104.85

Cap

Fipt

448-003G	3/8	50	300	043	2.47
448-005G	1/2	50	300	043	1.38
448-007G	3/4	50	300	043	1.55
448-010G	1	50	200	043	2.36
448-012G	1-1/4	25	100	043	2.81
448-015G	1-1/2	25	100	043	2.95
448-020G	2	10	120	043	5.21
448-030G	3	10	0	043	10.02
448-040G	4	6	0	043	17.55

Plug

Spig

449-005G	1/2	50	300	043	1.54
449-007G	3/4	50	300	043	1.81
449-010G	1	50	200	043	2.17
449-012G	1-1/4	25	150	043	2.95
449-015G	1-1/2	25	100	043	3.73
449-020G	2	10	120	043	4.64
449-030G	3	10	0	043	10.48

Plug

Mipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
450-003G	3/8	50	300	043	1.99
450-005G	1/2	50	400	043	1.93
450-007G	3/4	50	300	043	2.11
450-010G	1	50	400	043	3.40
450-012G	1-1/4	25	300	043	3.55
450-015G	1-1/2	25	100	043	3.84
450-020G	2	10	120	043	4.92
450-025G	2-1/2	10	0	043	6.83
450-030G	3	10	0	043	10.37
450-040G	4	6	0	043	23.39

Wye

Soc

100 psi maximum internal pressure rating @ 73°F (23°C)

475-100G	10	1	0	044	1427.27
475-120G	12	1	0	044	2108.92

Union - Socket/Buna

Soc x Soc with Buna-N O-ring Seal

150 psi @ 73°F (23°C)

457-005G	1/2	20	120	043	6.99
457-007G	3/4	15	90	043	8.02
457-010G	1	10	60	043	8.20
457-012G	1-1/4	5	20	043	26.45
457-015G	1-1/2	5	20	043	27.57
457-020G	2	5	0	043	37.16

Union - Socket/EPDM

Soc x Soc with EPDM O-ring Seal

150 psi @ 73°F (23°C)

497-005G	1/2	20	120	043	7.71
497-007G	3/4	15	90	043	8.82
497-010G	1	10	60	043	9.01
497-012G	1-1/4	5	30	043	29.08
497-015G	1-1/2	5	20	043	30.34
497-020G	2	5	0	043	40.88

Union - FIPT/Buna

Fipt with Buna-N O-ring Seal

150 psi @ 73°F (23°C)

458-005G	1/2	20	120	043	7.85
458-007G	3/4	15	90	043	13.12
458-010G	1	10	60	043	17.89
458-012G	1-1/4	5	20	043	30.75
458-015G	1-1/2	5	30	043	31.42
458-020G	2	5	0	043	38.58

Union - Fipt/EPDM

Fipt x Fipt with EPDM O-ring Seal

150 psi @ 73°F (23°C)

498-005G	1/2	10	60	043	8.62
498-007G	3/4	15	90	043	14.43
498-010G	1	10	60	043	19.66
498-012G	1-1/4	5	20	043	33.73
498-015G	1-1/2	5	30	043	34.63
498-020G	2	5	0	043	42.45

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Black Schedule 40 Pipe & Fittings

PRICING

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Black Schedule 40 Pipe & Fittings

Pipe, Schedule 40 Black PVC

20' Lengths, Price Per Foot

List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PD-400-005B	1/2	20	0	744	1.78
PD-400-007B	3/4	20	0	744	2.37
PD-400-010B	1	20	0	744	3.46

Tee

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
401-005B	1/2	50	300	011	.85
401-007B	3/4	50	0	011	.96
401-010B	1	50	0	011	1.82
401-012B	1-1/4	25	0	011	2.84
401-015B	1-1/2	25	0	011	3.46
401-020B	2	25	0	011	5.03
401-025B	2-1/2	0	0	011	17.41
401-030B	3	10	0	011	22.88

Tee - Reducing

Soc x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
402-101B	3/4X1/2	50	0	011	1.47

Tee

Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
405-005B	1/2	50	0	011	3.11
405-007B	3/4	50	0	011	4.87
405-010B	1	50	0	011	6.77
405-012B	1-1/4	25	0	011	9.36
405-015B	1-1/2	25	0	011	9.64
405-020B	2	10	0	011	12.77

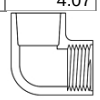
90° Ell

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
406-005B	1/2	50	400	011	.69
406-007B	3/4	50	300	011	.76
406-010B	1	50	0	011	1.38
406-012B	1-1/4	25	0	011	2.43
406-015B	1-1/2	25	0	011	2.60
406-020B	2	25	0	011	4.07

90° Ell

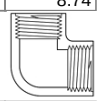
Soc x Fipt



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
407-005B	1/2	50	400	011	.85
407-007B	3/4	50	300	011	.96
407-010B	1	50	0	011	1.82
407-012B	1-1/4	25	0	011	3.05
407-015B	1-1/2	25	0	011	3.37
407-020B	2	10	0	011	8.74

90° Ell

Fipt



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
408-005B	1/2	50	400	011	1.64
408-007B	3/4	50	0	011	2.45
408-010B	1	50	0	011	5.21

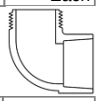
90° Street Ell

Spig x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
409-015B	1-1/2	25	0	011	5.39
409-020B	2	10	0	011	10.39

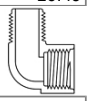
PVC Black Schedule 40 Pipe & Fittings

90° Street Ell
Mipt x Soc



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
410-005B	1/2	50	400	011	1.47
410-007B	3/4	50	0	011	1.75
410-010B	1	50	0	011	2.92
410-012B	1-1/4	25	0	011	4.07
410-015B	1-1/2	25	0	011	4.26
410-020B	2	10	0	011	10.49

90° Street Ell
Mipt x Fipt



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
412-005B	1/2	50	400	011	2.00

45° Ell
Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
417-005B	1/2	50	400	011	1.12
417-007B	3/4	50	300	011	1.75
417-010B	1	50	0	011	2.09
417-012B	1-1/4	25	0	011	2.92
417-015B	1-1/2	25	0	011	3.66
417-020B	2	25	0	011	4.77

45° Street Ell
Spig x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
427-020B	2	25	0	011	4.77

Cross
Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
420-015B	1-1/2	25	0	011	8.06
420-020B	2	10	0	011	11.91

Coupling
Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
429-005B	1/2	50	600	011	.45
429-007B	3/4	50	400	011	.62
429-010B	1	50	0	011	1.07
429-012B	1-1/4	25	150	011	1.47
429-015B	1-1/2	25	0	011	1.58
429-020B	2	25	0	011	2.45

Coupling - Reducer
Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
429-422B	4X3	4	0	011	36.53

Female Adapter
Soc x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
435-005B	1/2	50	600	011	.76
435-007B	3/4	50	400	011	.96
435-010B	1	50	0	011	1.12
435-012B	1-1/4	25	0	011	1.75
435-015B	1-1/2	25	0	011	2.00
435-020B	2	10	80	011	2.66

Male Adapter
Mipt x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
436-005B	1/2	50	300	011	.62
436-007B	3/4	50	400	011	.69
436-010B	1	50	300	011	1.22
436-012B	1-1/4	25	0	011	1.47
436-015B	1-1/2	25	0	011	2.00
436-020B	2	25	0	011	2.62
436-030B	3	10	0	011	11.29

Male Adapter - Reducing
Mipt x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
436-101B	3/4X1/2	50	300	011	1.12
436-251B	2X1-1/2	10	80	011	6.34

Reducer Bushing
Spig x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
437-251B	2X1-1/2	25	0	011	3.05
437-335B	3X1	10	0	011	7.22
437-337B	3X1-1/2	10	0	011	7.22

Reducer Bushing
Spig x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
438-072B	1/2X1/4	50	350	011	1.47

IPT Adapter
Mipt x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
446-074B	1/2X3/4	50	200	011	2.62

Cap
Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
447-005B	1/2	50	300	011	.62
447-007B	3/4	50	300	011	.71
447-010B	1	50	200	011	1.12
447-012B	1-1/4	25	100	011	1.58
447-015B	1-1/2	25	0	011	1.75
447-020B	2	10	80	011	2.09
447-040B	4	6	0	011	16.60
447-060B	6	4	0	011	39.79

Cap
Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
448-005B	1/2	50	300	011	1.29
448-007B	3/4	50	300	011	1.52

Plug
Mipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
450-005B	1/2	50	300	011	1.83
450-007B	3/4	50	300	011	1.98
450-010B	1	50	400	011	3.22
450-012B	1-1/4	25	300	011	3.38

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Clear Schedule 40 Pipe & Fittings

PRICING

PVC Clear Sch 40 Pipe & Fittings

Pipe, Schedule 40 Clear PVC

10' Lengths, Price Per Foot

List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PL-002	**1/4**	190	0	742	1.02
PL-003	**3/8**	100	0	742	1.38
PL-005	**1/2**	420	0	742	2.06
PL-007	**3/4**	360	0	742	2.77
PL-010	**1**	360	0	742	4.09
PL-012	**1-1/4**	360	0	742	5.55
PL-015	**1-1/2**	160	0	742	6.64
PL-020	**2**	180	0	742	8.95
PL-025	**2-1/2**	40	0	742	14.14
PL-030	**3**	80	0	742	18.46
PL-040	**4**	40	0	742	27.80
PL-060	**6**	10	0	038	50.82
PL-080	**8**	10	0	038	76.21
PL-100	**10**	10	0	038	122.68
PL-120	**12**	10	0	038	162.05

Tee

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
401-002L	**1/4**	25	150	039	11.29
401-003L	**3/8**	50	200	039	7.27
401-005L	**1/2**	50	300	039	8.52
401-007L	**3/4**	50	0	039	9.71
401-010L	**1**	50	0	039	18.17
401-012L	**1-1/4**	25	0	039	28.56
401-015L	**1-1/2**	25	0	039	34.63
401-020L	**2**	10	0	039	50.33
401-025L	**2-1/2**	10	0	039	165.89
401-030L	**3**	10	0	039	217.58
401-040L	**4**	6	0	039	393.88
401-060L	**6**	4	0	039	709.01
401-080L	**8**	2	0	039	1276.20

90° Ell

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
406-002L	**1/4**	25	150	039	9.19
406-003L	**3/8**	50	300	039	9.19
406-005L	**1/2**	50	200	039	6.94
406-007L	**3/4**	50	300	039	7.59
406-010L	**1**	50	0	039	13.78
406-012L	**1-1/4**	25	0	039	24.26
406-015L	**1-1/2**	25	0	039	25.77
406-020L	**2**	25	0	039	40.84
406-025L	**2-1/2**	10	0	039	123.92
406-030L	**3**	10	0	039	148.26
406-040L	**4**	8	0	039	265.47
406-060L	**6**	5	0	039	477.86
406-080L	**8**	2	0	039	860.15

90° Street Ell

Spig x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
409-005L	**1/2**	50	400	039	6.94
409-007L	**3/4**	50	0	039	7.59
409-010L	**1**	50	0	039	13.78
409-012L	**1-1/4**	25	0	039	24.26
409-015L	**1-1/2**	25	0	039	25.77
409-020L	**2**	10	0	039	40.84
409-025L	**2-1/2**	10	0	039	123.92

45° Ell

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
417-002L	**1/4**	25	150	039	14.75
417-003L	**3/8**	25	150	039	14.75
417-005L	**1/2**	50	400	039	11.20
417-007L	**3/4**	50	300	039	17.29
417-010L	**1**	50	0	039	20.77
417-012L	**1-1/4**	25	0	039	29.37
417-015L	**1-1/2**	25	0	039	36.63
417-020L	**2**	10	0	039	47.75

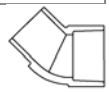
45° Ell (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
417-025L	**2-1/2**	10	0	039	124.09
417-030L	**3**	10	0	039	192.64
417-040L	**4**	5	0	039	346.01
417-060L	**6**	8	0	039	622.81
417-080L	**8**	3	0	039	1121.06

45° Street Ell

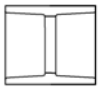
Spig x Soc



427-005L	**1/2**	50	400	039	11.20
427-007L	**3/4**	50	0	039	17.29
427-010L	**1**	50	0	039	20.77
427-012L	**1-1/4**	25	0	039	29.37
427-015L	**1-1/2**	25	0	039	36.63
427-020L	**2**	25	0	039	47.75
427-025L	**2-1/2**	10	0	039	124.09
427-030L	**3**	10	0	039	192.64
427-040L	**4**	5	0	039	346.01

Coupling

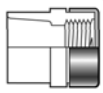
Soc



429-002L	**1/4**	25	150	039	6.17
429-003L	**3/8**	50	300	039	6.17
429-005L	**1/2**	50	300	039	4.59
429-007L	**3/4**	50	200	039	6.18
429-010L	**1**	50	0	039	10.74
429-012L	**1-1/4**	25	150	039	14.62
429-015L	**1-1/2**	25	0	039	15.74
429-020L	**2**	10	60	039	24.53
429-025L	**2-1/2**	10	0	039	53.75
429-030L	**3**	10	0	039	84.33
429-040L	**4**	6	0	039	121.74
429-060L	**6**	5	0	039	219.15
429-080L	**8**	6	0	039	394.44

Female Adapter

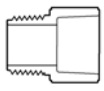
Soc x SR Fipt



435-002SRL	**1/4**	25	450	039	12.95
435-003SRL	**3/8**	25	150	039	12.95
435-005SRL	**1/2**	25	300	039	7.67
435-007SRL	**3/4**	25	300	039	9.60
435-010SRL	**1**	25	200	039	11.09
435-012SRL	**1-1/4**	10	80	039	17.04
435-015SRL	**1-1/2**	10	80	039	19.99
435-020SRL	**2**	10	0	039	26.92
435-025SRL	**2-1/2**	5	0	039	55.95
435-030SRL	**3**	10	0	039	91.33
435-040SRL	**4**	6	0	039	151.06

Male Adapter

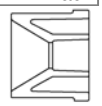
Mipt x Soc



436-003L	**3/8**	50	300	039	8.28
436-005L	**1/2**	50	300	039	6.18
436-007L	**3/4**	50	400	039	6.94
436-010L	**1**	50	300	039	12.18
436-012L	**1-1/4**	25	0	039	14.71
436-015L	**1-1/2**	25	0	039	19.97
436-020L	**2**	25	0	039	26.04
436-025L	**2-1/2**	10	0	039	77.24
436-030L	**3**	10	0	039	112.84
436-040L	**4**	5	0	039	143.91

Reducer Bushing

Spig x Soc



437-101L	**3/4X1/2**	50	300	039	7.14
437-131L	**1X3/4**	50	200	039	13.13
437-168L	**1-1/4X1**	25	150	039	17.29
437-211L	**1-1/2X1**	25	100	039	18.26
437-212L	**1-1/2X1-1/4**	25	100	039	18.26
437-251L	**2X1-1/2**	10	80	039	30.24
437-292L	**2-1/2X2**	10	40	039	48.64
437-338L	**3X2**	10	0	039	72.17
437-339L	**3X2-1/2**	10	0	039	72.17
437-422L	**4X3**	6	0	039	161.25
437-532L	**6X4**	5	0	039	324.51
437-585L	**8X6**	4	0	039	522.47

Cap

Soc

447-002L	**1/4**	25	150	039	8.28
447-003L	**3/8**	50	300	039	8.28
447-005L	**1/2**	50	300	039	6.18
447-007L	**3/4**	50	300	039	7.14
447-010L	**1**	50	200	039	11.31
447-012L	**1-1/4**	25	100	039	15.74
447-015L	**1-1/2**	25	0	039	17.29
447-020L	**2**	10	80	039	20.84
447-025L	**2-1/2**	10	0	039	66.68
447-030L	**3**	10	0	039	65.65
447-040L	**4**	6	0	039	149.31
447-060L	**6**	4	0	039	268.76
447-080L	**8**	3	0	039	483.75

Wyes & Reducing Wyes

Soc

1/2" - 2" - 235 psi Maximum Internal Pressure Rating @ 73°F (23°C)
2-1/2" - 6" - 150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

475-015L	**1-1/2**	20	0	039	45.67
475-020L	**2**	10	0	039	67.23
475-030L	**3**	4	0	039	280.03
475-040L	**4**	4	0	039	509.85
475-060L	**6**	3	0	039	871.62
475-532L	**6X4**	5	0	039	871.62

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Clear Ultra Violet Resistant (UVR) PVC Pipe

PRICING

Clear Ultra Violet Resistant (UVR) PVC Pipe

Designed to Promote Algae Growth in Bioreactor, Biofuel, Bioremediation, Research and Aquaculture Applications

Spears® Clear UV Resistant (UVR) PVC piping is suitable for use where exposure to sunlight is desired. The modified clear PVC material allows light in but blocks the harmful wavelengths that damage the plastic pipe. This specialty pipe can be joined with Spears® PVC Clear solvent cements and primers using standard solvent cement welding practices.

Produced in both Thin Walled UVR pipe down to 0.091" and Schedule 40 UVR pipe to allow rapid growth of algae and provide pressure ratings needed for circulation. Use Spears® PVC Clear Solvent Cements and Primers for joining.

See Plastic Pipe Engineering Guide Tab: "Special Pipe - Clear Ultra Violet Resistant (UVR) PVC" for Additional Details

Pipe, Thin Walled Clear UVR PVC

10' Lengths, Price Per Foot

List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PL091-020UVR-10	**2**	180	0	742	4.75
PL135-030UVR-10	**3**	10	0	742	10.06
PL172-040UVR-10	**4**	40	0	742	17.38
PL172-060UVR-10	**6**	10	0	742	27.45
PL172-080UVR-10	**8**	10	0	742	35.96
PL172-100UVR-10	**10**	10	0	742	51.04
PL172-120UVR-10	**12**	10	0	742	60.71

* Size (in.) = Wall Thickness (in.)

2 = 0.091

3 = 0.135

4-12 = 0.172

See application information above
Custom lengths available, contact Spears®

Pipe, Schedule 40 Clear UVR PVC

10' Lengths, Price Per Foot

List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PL400-005UVR-10	**1/2**	90	0	742	1.73
PL400-007UVR-10	**3/4**	360	0	742	2.32
PL400-010UVR-10	**1**	90	0	742	2.44
PL400-012UVR-10	**1-1/4**	360	0	742	4.66
PL400-015UVR-10	**1-1/2**	50	0	742	5.58
PL400-020UVR-10	**2**	180	0	742	7.51
PL400-025UVR-10	**2-1/2**	40	0	742	11.86
PL400-030UVR-10	**3**	10	0	742	15.50
PL400-035UVR-10	**3-1/2**	10	0	742	19.69
PL400-040UVR-10	**4**	40	0	742	23.33
PL400-060UVR-10	**6**	10	0	742	42.66

See application information above
Custom lengths available, contact Spears®

Schedule 40 PVC Pipe Dimensions & Pressure Ratings

Schedule 40 Pipe

Nom. Pipe Size (in)	O.D.	Average I.D.	Min. Wall	Nominal Wt./Ft.	Maximum W.P. PSI*
1/8	0.405	0.249	0.068	0.051	810
1/4	0.540	0.344	0.088	0.086	780
3/8	0.675	0.473	0.091	0.115	620
1/2	0.840	0.602	0.109	0.170	600
3/4	1.050	0.804	0.113	0.226	480
1	1.315	1.029	0.133	0.333	450
1-1/4	1.660	1.360	0.140	0.450	370
1-1/2	1.900	1.590	0.145	0.537	330
2	2.375	2.047	0.154	0.720	280
2-1/2	2.875	2.445	0.203	1.136	300
3	3.500	3.042	0.216	1.488	260
3-1/2	4.000	3.521	0.226	1.789	240
4	4.500	3.998	0.237	2.118	220
5	5.563	5.016	0.258	2.874	190
6	6.625	6.031	0.280	3.733	180
8	8.625	7.942	0.322	5.619	160
10	10.750	9.976	0.365	7.966	140
12	12.750	11.889	0.406	10.534	130
14	14.000	13.073	0.437	12.462	130
16	16.000	14.940	0.500	16.286	130
18	18.000	16.809	0.562	20.587	130
20	20.000	18.743	0.593	24.183	120
24	24.000	22.544	0.687	33.652	120

Maximum PVC Service Temperature 140 °F
Spears® does not recommend threading Schedule 40 Pipe.
Use Schedule 40 Male Adapters, Schedule 40 Female Adapters or Spears® Special Reinforced (SR) Female Adapters

Pressure De-rating at Elevated Temperatures

The pressure ratings given above are for water, non-shock, @ 73°F. The specified derating factors for PVC are suitable for pipe conveying water at elevated temperatures. To determine elevated temperature rating, multiply 73°F [23°C] pressure rating by appropriate factor shown in the table for desired operating temperature. When working near maximum specified temperature, solvent cement joints are recommended in place of threaded connections. Where disassembly is required at elevated temperatures use Spears® Special reinforced (SR) adapters, flanges, unions or grooved coupling connections. Spears® recommends that only Schedule 80 or heavier wall thickness pipe should be threaded.

PVC Pipe

Operating Temp (°F)	De-Rating Factor
73	1.00
80	0.88
90	0.75
100	0.62
110	0.51
120	0.40
130	0.31
140	0.22

See Plastic Pipe Engineering Guide for additional information

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Schedule 40 Fittings, Unions, & Saddles

TECHNICAL INFORMATION
WEIGHTS & DIMENSIONS

Contact Spears® for any information not found.

Performance Engineered & Tested

SPEARS® Schedule 40 PVC fitting designs combine years of proven experience with computer generated stress analysis to yield the optimum physical structure and performance for each fitting. Material reinforcement is uniformly placed in stress concentration areas for substantially improved pressure handling capability. Resulting products are subjected to numerous verification tests to assure the very best PVC fittings available.

Full 1/4" Through 14" Availability

Spears® comprehensive line of PVC fittings offers a variety of injection molded configurations in Schedule 40 sizes 1/4" through 14" conforming to ASTM D 2466.

Exceptional Chemical & Corrosion Resistance

Unlike metal, PVC fittings never rust, scale, or pit, and will provide many years of maintenance-free service and extended system life.

High Temperature Ratings

PVC thermoplastic can handle fluids at service temperatures up to 140°F (60°C), allowing a wide range of process applications, including corrosive fluids.

Lower Installation Costs

Substantially lower material costs than steel alloys or lined steel, combined with lighter weight and ease of installation, can reduce installation costs by as much as 60% over conventional metal systems.

Higher Flow Capacity

Smooth interior walls result in lower pressure loss and higher volume than conventional metal fittings.

Additional Fabricated Configurations through 36"

Extra large, hard-to-find, and custom configurations are fabricated from NSF® Certified pipe. Fittings are engineered and tested to provide full pressure handling capabilities according to Spears® specifications.

PVC Valves

SPEARS® PVC Valve products are available for total system compatibility and uniformity.

Advanced Design Specialty Fittings

Spears® wide range of innovative, improved products include numerous metal-to-plastic transition fittings and unions with Spears® patented special reinforced (SR) plastic threads.

1/2" Through 16" Industrial Pipe Availability

Spears® premium quality Industrial PVC pipe is offered in Schedule 40 White sizes 1/2" through 16".

Sample Engineering Specifications

All PVC Schedule 40 fittings shall be produced by Spears® Manufacturing Company from PVC Type I cell classification 12454, conforming to ASTM D 1784. All injection molded PVC Schedule 40 fittings shall be Certified for potable water service by NSF International and manufactured in strict compliance to ASTM D 2466. All fabricated fittings shall be produced in accordance with Spears® General Specifications for Fabricated Fittings.

The information contained in this publication is based on current information and Product design at the time of publication and is subject to change without notification. Our ongoing commitment to product improvement may result in some variation. No representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or results to be obtained therefrom. For verification of technical data or additional information not contained herein, please contact Spears® Technical Services Department [West Coast: (818) 364-1611 — East Coast: (678) 985-1263].

General Information

Recommendations For Installers And Users

Plastic piping systems should be **ENGINEERED, INSTALLED** and **OPERATED** in accordance with **ESTABLISHED DESIGN AND ENGINEERING STANDARDS AND PROCEDURES** for plastic piping systems. Suitability for the intended service application should be determined by the installer and/or user prior to installation of a plastic piping system. **PRIOR TO ASSEMBLY, all piping system components should be inspected for damage or irregularities. Mating components should be checked to assure that tolerances and engagements are compatible. Do not use any components that appear irregular or do not fit properly . Contact the appropriate manufacturer of the component product in question to determine usability Consult all applicable codes and regulations for compliance prior to installation.**

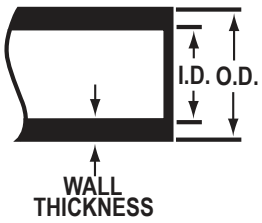
Solvent Weld Connections — Use quality solvent cements and primers formulated for the intended service application, pipe size and type of joint. While the pipe and fitting materials may be compatible with the intended medium, the solvent cement may not be. Consult the manufacturers for suitability of use. Read and follow the cement and primer manufacturers' applications and cure time instructions thoroughly. Be sure to use the correct size applicator.

Threaded Connections — Use a quality grade thread sealant. **WARNING: SOME PIPE JOINT COMPOUNDS OR PTFE P ASTES MAY CONTAIN SUBSTANCES THAT COULD CAUSE STRESS CRACKING TO PLASTIC.** Spears® Manufacturing Company recommends the use of Spears® **BLUE 75™** Thread Sealant which has been tested for compatibility with Spears® products. Please follow the sealant manufacturers' application / installation instructions. Choice of an appropriate thread sealant other than those listed above is at the discretion of the installer. 1 to 2 turns beyond **FINGER TIGHT** is generally all that is required to make a sound plastic threaded connection. Unnecessary **OVERTIGHTENING** will cause **DAMAGE TO BOTH PIPE AND FITTING.**

"Lead Free" low lead certification – unless otherwise specified, all Spears® Schedule 40 fittings specified here-in are certified by NSF International to ANSI/NSF® Standard 61, Annex G and is in compliance with California's Health & Safety Code Section 116825 (commonly known as AB1953) and Vermont Act 193. Weighted average lead content <=0.25%.

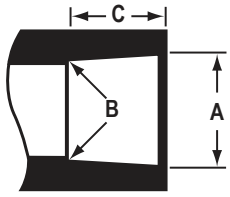
ASTM STANDARD DIMENSIONS

SCHEDULE 40 PIPE DIMENSIONS ASTM D 1785



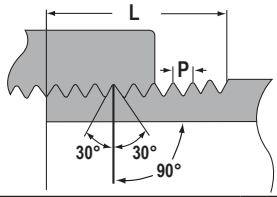
Nominal Pipe Size In.	Mean Outside Diameter In.	O. D. Tolerance In.	Minimum Wall Thickness In.
1/8	.405	± .004	.068
1/4	.540	± .004	.088
3/8	.675	± .004	.091
1/2	.840	± .004	.109
3/4	1.050	± .004	.113
1	1.315	± .005	.133
1-1/4	1.660	± .005	.140
1-1/2	1.900	± .006	.145
2	2.375	± .006	.154
2-1/2	2.875	± .007	.203
3	3.500	± .008	.216
4	4.500	± .009	.237
5	5.563	± .010	.258
6	6.625	± .011	.280
8	8.625	± .015	.322
10	10.750	± .015	.365
12	12.750	± .015	.408

SCHEDULE 40 SOCKET DIMENSIONS ASTM D 2466



Nominal Size In.	Diameter			Socket Length Minimum C
	Entrance A	Bottom B	Tolerance A	
1/8	.417	.401	± .004	.500
1/4	.552	.536	± .004	.500
3/8	.687	.671	± .004	.594
1/2	.848	.836	± .004	.688
3/4	1.058	1.046	± .004	.719
1	1.325	1.310	± .005	.875
1-1/4	1.670	1.655	± .005	.938
1-1/2	1.912	1.894	± .006	1.094
2	2.387	2.369	± .006	1.156
2-1/2	2.889	2.868	± .007	1.750
3	3.516	3.492	± .008	1.875
4	4.518	4.491	± .009	2.000
5	5.583	5.553	± .010	3.000
6	6.647	6.614	± .011	3.000
8	8.655	8.610	± .015	4.000
10	10.780	10.735	± .015	5.000
12	12.780	12.735	± .015	6.000

AMERICAN NATIONAL STANDARD TAPER PIPE THREADS (NPT) ANSI B1.20.1,ASTM F 1498



Nominal Size In.	Threads Per Inch.	Effective Thread Length L	Pitch Of Thread P
1/8	27	.2639	.03704
1/4	18	.4018	.05556
3/8	18	.4078	.05556
1/2	14	.5337	.07143
3/4	14	.5457	.07143
1	11-1/2	.6828	.08696
1-1/4	11-1/2	.7068	.08696
1-1/2	11-1/2	.7235	.08696
2	11-1/2	.7565	.08696
2-1/2	8	1.1375	.12500
3	8	1.2000	.12500
4	8	1.3000	.12500
5	8	1.4063	.12500
6	8	1.5125	.12500
8	8	1.7125	.12500

Molded Schedule 40 products are manufactured to ASTM D 2466 for use with pipe manufactured to ASTM D 1785. Certain products carry reduced pressure handling capability and have maximum internal pressure ratings at 73°F noted.

Fabricated Schedule 40 pressure fittings (part numbers ending with **"F"**) are manufactured to Spears® specifications for use with pipe manufactured to ASTM D 1785. See publication FAB-7, General Specifications for Standard Fabricated Fittings for additional information.

All specified Schedule 40 products are manufactured from materials certified by NSF® for use in potable water service.

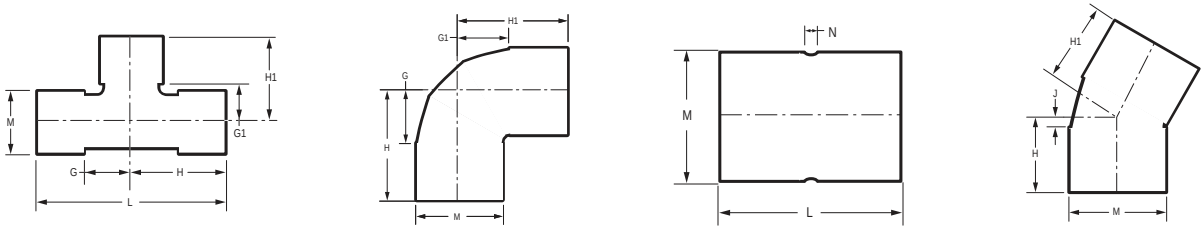
Injection Molded Dimension References:

G = (LAYING LENGTH) intersection of center lines to bottom of socket/thread; 90° elbows, tees, crosses; ± 1/32 inch.
H = Intersection of center lines to face of fitting; 90° elbows tees, crosses; ± 1/32 inch.
J = Intersection of center lines to bottom of socket/thread; 45° elbows; ± 1/32 inch
L = Overall length of fittings; ± 1/16 inch.
M = Outside diameter of socket/thread hub; ± 1/16 inch.
N = Socket bottom to socket bottom; couplings; ± 1/16 inch.
W = Height of cap; ± 1/16 inch.

Fabricated Dimension References:

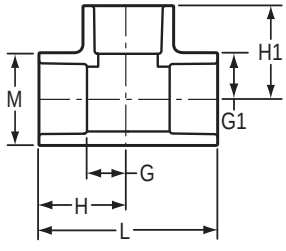
G = (LAYING LENGTH) intersection of center lines to bottom of socket/thread; 90° elbows, tees, crosses; ± 1/4 inch; 14" & larger ± 1/2 inch.
H = Intersection of center lines to face of fitting; 90° elbows, tees, crosses; ± 1/4 inch.; wyes ± 1/2 inch; 14" & larger ± 1/2 inch.
J = Intersection of center lines to bottom of socket/thread; 45° elbows; ± 1/4 inch; 14" & larger ± 1/2 inch.
L = Overall length of fittings; ± 1/2 inch.; wyes ± 1 inch; 14" & larger ± 1 inch.
M = Outside diameter of socket/thread hub; ± 1/4 inch.
N = Socket bottom to socket bottom; couplings; ± 1/2 inch.
W = Height of cap; ± 1/4 inch.

Typical Fabricated Dimension References



TEE

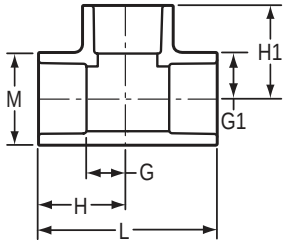
Socket x Socket x Socket



Part Number	Size	G	G1	H	H1	L	M	Approx. Wt. (Lbs.)
401-003	3/8	3/8	3/8	1-1/8	1-1/8	2-1/4	31/32	.04
401-005	1/2	1/2	1/2	1-1/4	1-1/4	2-1/2	1-3/32	.06
401-007	3/4	9/16	9/16	1-9/16	1-9/16	3-1/8	1-5/16	.10
401-010	1	11/16	11/16	1-3/4	1-3/4	3-1/2	1-5/8	.16
401-012	1-1/4	7/8	7/8	2-1/8	2-1/8	4-1/4	2	.25
401-015	1-1/2	1-3/32	1-3/32	2-11/32	2-11/32	4-11/16	2-1/4	.36
401-020	2	1-3/8	1-3/8	2-3/4	2-3/4	5-1/2	2-3/4	.51
401-025	2-1/2	1-21/32	1-21/32	3-13/32	3-13/32	6-13/16	3-11/32	1.03

TEE (continued)

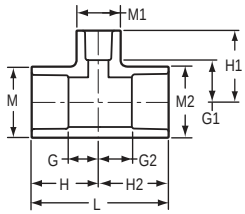
Socket x Socket x Socket



Part Number	Size	G	G1	H	H1	L	M	Approx. Wt. (Lbs.)
401-030	3	1-15/16	1-15/16	3-27/32	3-27/32	7-11/16	4	1.43
401-040	4	2-13/32	2-13/32	4-7/16	4-7/16	8-7/8	5-1/32	2.22
401-050	5	3	3	6	6	12	6-5/32	4.59
401-060	6	3-5/8	3-5/8	6-21/32	6-21/32	13-5/16	7-9/32	6.00
401-080	8	4-1/2	4-1/2	8-17/32	8-17/32	17-1/16	9-3/8	11.81
401-100	10	5-13/16	5-13/16	10-27/32	10-27/32	21-11/16	11-21/32	24.25
401-100F	10	9-7/8	9-3/8	15-1/8	14-5/8	30-1/4	11-1/2	36.21
401-120	12	6-27/32	6-27/32	12-27/32	12-27/32	25-11/16	13-3/4	37.94
401-120F	12	10-3/4	10-3/16	17	16-7/16	34	13-9/16	56.32
401-140	14	7-1/32	7-1/32	14-7/32	14-1/32	28-7/16	15-21/32	64.02
401-140F	14	11-3/8	11	18-3/8	18	36-3/4	14-7/8	75.11
401-160F	16	15	12-7/8	23	20-7/8	46	17	111.00
401-180F	18	15-7/8	13-3/8	24-7/8	22-3/8	49-3/4	19-1/8	151.26
401-200F	20	18-1/4	15-1/2	28-1/4	25-1/2	56-1/2	21-3/16	206.74
401-240F	24	21-1/8	17-1/2	33-1/8	29-1/2	66-1/4	25-3/8	337.03

REDUCING TEE

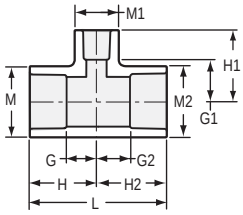
Socket x Socket x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
401-053	3/8x3/8x1/2	17/32	21/32	17/32	2-1/32	1-3/4	2-1/32	4-1/16	7/8	1-3/32	7/8	.08
401-074	1/2x1/2x3/4	9/16	9/16	9/16	1-5/16	1-9/16	1-5/16	2-5/8	1-1/16	1-9/32	1-1/16	.07
401-075	1/2x1/2x1	25/32	17/32	25/32	1-17/32	1-11/16	1-17/32	3-1/16	1-1/16	1-5/8	1-1/16	.11
401-094	3/4x1/2x1/2	17/32	21/32	17/32	1-17/32	1-13/32	1-9/32	2-13/16	1-5/16	1-3/32	1-3/32	.08
401-095	3/4x1/2x3/4	13/16	11/16	5/8	1-13/16	1-15/32	1-3/8	3-3/16	1-5/16	1-5/16	1-1/16	.10
401-101	3/4x3/4x1/2	17/32	5/8	17/32	1-7/16	1-3/8	1-7/16	2-29/32	1-5/16	1-1/8	1-5/16	.08
D401-101	3/4x3/4x1/2	9/16	19/32	17/32	1-17/32	1-27/32	1-17/32	3-1/16	1-5/16	1-3/32	1-5/16	.11
401-102	3/4x3/4x1	23/32	5/8	23/32	1-21/32	1-21/32	1-21/32	3-5/16	1-5/16	1-5/8	1-5/16	.11
401-122	1x1/2x1	23/32	23/32	27/32	1-25/32	1-25/32	1-19/32	3-7/16	1-5/8	1-5/8	1-3/32	.14

REDUCING TEE (continued)

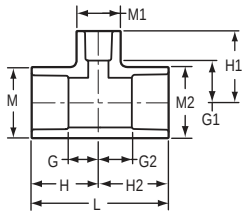
Socket x Socket x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
401-124	1x3/4x1/2	5/8	23/32	19/32	1-21/32	1-15/32	1-1/2	3-5/32	1-5/8	1-3/32	1-5/16	.12
401-125	1x3/4x3/4	21/32	25/32	5/8	1-25/32	1-25/32	1-5/8	3-7/16	1-19/32	1-5/16	1-5/16	.14
401-126	1x3/4x1	3/4	13/16	13/16	1-29/32	1-15/16	1-13/16	3-3/4	1-5/8	1-5/8	1-5/16	.17
401-130	1x1x1/2	9/16	13/16	9/16	1-5/8	1-9/16	1-5/8	3-3/16	1-5/8	1-1/16	1-5/8	.13
D401-130	1x1x1/2	11/16	25/32	11/16	1-23/32	2-1/32	1-23/32	3-15/32	1-5/8	1-1/8	1-5/8	.15
401-131	1x1x3/4	19/32	3/4	19/32	1-5/8	1-21/32	1-5/8	3-9/32	1-5/8	1-5/16	1-5/8	.14
401-132	1x1x1-1/4	31/32	27/32	31/32	2-3/32	2-3/32	2-3/32	4-3/16	1-5/8	1-31/32	1-5/8	.22
401-133	1x1x1-1/2	1-1/8	13/16	1-1/8	2-1/4	2-1/8	2-1/4	4-1/2	1-5/8	2-9/32	1-5/8	.24
401-134	1x1x2	1-7/16	27/32	1-7/16	2-1/2	2-1/4	2-1/2	5	1-5/8	2-3/4	1-5/8	.31
401-156	1-1/4x1x1/2	11/16	1	11/16	1-15/16	1-3/4	1-23/32	3-21/32	2	1-1/8	1-5/8	.19
401-157	1-1/4x1x3/4	25/32	1-1/16	25/32	2-1/32	2	1-27/32	3-7/8	2	1-11/32	1-5/8	.22
401-158	1-1/4x1x1	31/32	1-1/16	7/8	2-5/32	2-3/32	1-29/32	4-1/16	2	1-11/16	1-5/8	.24
401-166	1-1/4x1-1/4x1/2	17/32	29/32	17/32	1-25/32	1-21/32	1-25/32	3-9/16	1-31/32	1-3/32	1-31/32	.18
D401-166	1-1/4x1-1/4x1/2	23/32	31/32	23/32	1-31/32	2-3/16	1-31/32	3-29/32	2	1-1/8	2	.22
401-167	1-1/4x1-1/4x3/4	21/32	31/32	21/32	1-29/32	1-31/32	1-29/32	3-13/16	2	1-11/32	2	.22
401-168	1-1/4x1-1/4x1	13/16	1	13/16	1-15/16	2	1-15/16	3-27/32	2	1-5/8	2	.22
401-169	1-1/4x1-1/4x1-1/2	1-3/32	1	1-3/32	2-11/32	2-5/16	2-11/32	4-11/16	1-31/32	2-7/32	1-31/32	.30
401-170	1-1/4x1-1/4x2	1-11/32	1	1-11/32	2-19/32	2-3/8	2-19/32	5-3/16	2	2-3/4	2	.38
401-199	1-1/2x1-1/4x1/2	11/16	1-1/8	11/16	2	1-7/8	1-15/16	3-15/16	2-1/4	1-1/8	2	.24
401-201	1-1/2x1-1/4x3/4	21/32	1-5/32	21/32	1-15/16	2-3/16	1-15/16	3-7/8	2-1/4	1-11/32	2	.26
401-202	1-1/2x1-1/4x1	13/16	1-3/16	13/16	2-1/8	2-9/32	2-1/16	4-3/16	2-1/4	1-5/8	2	.30
401-209	1-1/2x1-1/2x1/2	17/32	1-3/32	17/32	1-27/32	1-27/32	1-27/32	3-11/16	2-7/32	1-1/8	2-7/32	.22
D401-209	1-1/2x1-1/2x1/2	17/32	1-1/16	17/32	1-27/32	2-5/16	1-27/32	3-11/16	2-7/32	1-1/16	2-7/32	.23
401-210	1-1/2x1-1/2x3/4	21/32	1-3/32	21/32	1-31/32	2-3/32	1-31/32	3-29/32	2-7/32	1-5/16	2-7/32	.24
401-211	1-1/2x1-1/2x1	25/32	27/32	25/32	2-3/32	1-31/32	2-3/32	4-3/16	2-7/32	1-5/8	2-7/32	.28
401-212	1-1/2x1-1/2x1-1/4	1	1-3/16	1	2-9/32	2-7/16	2-9/32	4-19/32	2-1/4	2	2-1/4	.31
401-213	1-1/2x1-1/2x2	1-5/16	1-3/16	1-5/16	2-5/8	2-9/16	2-5/8	5-7/32	2-1/4	2-3/4	2-1/4	.39
401-214	1-1/2x1-1/2x2-1/2	1-21/32	1-3/16	1-21/32	2-31/32	2-15/16	2-31/32	5-15/16	2-1/4	3-11/32	2-1/4	.58
401-233	2x1x2	1-1/4	1-1/4	1-7/32	2-19/32	2-19/32	2-11/32	5	2-3/4	2-3/4	1-5/8	.40
401-238	2x1-1/2x3/4	21/32	1-13/32	21/32	2-1/32	2-13/32	1-31/32	4	2-23/32	1-5/16	2-1/4	.31
401-239	2x1-1/2x1	13/16	1-1/2	13/16	2-1/8	2-5/8	2-1/8	4-9/32	2-3/4	1-5/8	2-1/4	.38
401-241	2x1-1/2x1-1/2	1	1-9/32	1-1/32	2-3/8	2-9/16	2-5/16	4-11/16	2-23/32	2-7/32	2-7/32	.37
401-247	2x2x1/2	17/32	1-11/32	17/32	1-29/32	2-3/32	1-29/32	3-27/32	2-23/32	1-3/32	2-23/32	.30
D401-247	2x2x1/2	9/16	1-7/32	9/16	1-15/16	2-1/2	1-15/16	3-7/8	2-23/32	1-1/16	2-23/32	.31

REDUCING TEE (continued)

Socket x Socket x Socket

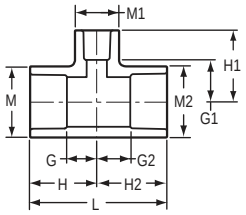


Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
401-248	2x2x3/4	21/32	1-1/2	21/32	2-1/32	2-1/16	2-1/32	4-1/16	2-3/4	1-11/32	2-3/4	.32
401-249	2x2x1	13/16	1-3/8	13/16	2-3/16	2-1/2	2-3/16	4-3/8	2-23/32	1-5/8	2-23/32	.36
401-250	2x2x1-1/4	1	1-3/8	1	2-3/8	2-5/8	2-3/8	4-23/32	2-23/32	1-31/32	2-23/32	.39
401-251	2x2x1-1/2	1-1/16	1-5/16	1-1/16	2-3/8	2-9/16	2-3/8	4-3/4	2-23/32	2-1/4	2-23/32	.42
401-253[1]	2x2x3	2-7/8	1-13/16	2-7/8	4-1/4	3-13/16	4-1/4	8-1/2	4	4	3-15/16	2.64
401-254[1]	2x2x4	3-13/32	2-3/8	3-13/32	4-25/32	4-3/8	4-25/32	9-9/16	5-1/16	5-1/16	5-1/16	3.89
401-287	2-1/2x2-1/2x1/2	25/32	1-15/32	25/32	2-17/32	2-7/32	2-17/32	5-1/16	3-5/16	1-1/16	3-5/16	.56
401-288	2-1/2x2-1/2x3/4	7/8	1-9/16	7/8	2-5/8	2-1/2	2-5/8	5-9/32	3-5/16	1-5/16	3-5/16	.60
401-289	2-1/2x2-1/2x1	13/16	1-17/32	13/16	2-13/16	2-21/32	2-13/16	5-5/8	3-5/16	1-5/8	3-5/16	.67
401-290	2-1/2x2-1/2x1-1/4	1-7/32	1-21/32	1-7/32	2-31/32	2-29/32	2-31/32	5-31/32	3-11/32	2-1/32	3-11/32	.77
401-291	2-1/2x2-1/2x1-1/2	1-3/16	1-5/8	1-3/16	2-31/32	2-15/16	2-31/32	5-15/16	3-11/32	2-1/4	3-11/32	.76
401-292	2-1/2x2-1/2x2	1-13/32	1-21/32	1-13/32	3-3/16	3-1/32	3-3/16	6-3/8	3-5/16	2-3/4	3-5/16	.78
401-293[1]	2-1/2x2-1/2x3	2-1/4	1-31/32	2-1/4	4-1/4	3-13/16	4-1/4	8-15/32	4	4	4	2.37
401-294[1]	2-1/2x2-1/2x4	2-3/4	2-3/8	2-3/4	4-3/4	4-3/8	4-3/4	9-1/2	5-1/16	5	5-1/16	4.03
401-333	3x3x1/2	11/16	1-13/16	11/16	2-9/16	2-17/32	2-9/16	5-1/32	3-31/32	1-3/32	3-31/32	.76
401-334	3x3x3/4	3/4	2	3/4	2-21/32	3	2-21/32	5-9/32	4	1-11/32	4	.84
401-335	3x3x1	29/32	1-25/32	29/32	2-51/64	2-29/32	2-51/64	5-19/32	3-31/32	1-19/32	3-31/32	.85
401-336	3x3x1-1/4	1-7/32	1-31/32	1-7/32	2-31/32	3-7/32	2-31/32	5-15/16	4	2	4	.92
401-337	3x3x1-1/2	1-7/32	1-13/16	1-7/32	3-3/32	3-1/8	3-3/32	6-3/16	4-1/16	2-7/32	4-1/16	1.00
401-338	3x3x2	1-7/16	1-13/16	1-7/16	3-11/32	3-3/16	3-11/32	6-11/16	3-31/32	2-23/32	3-31/32	1.05
401-339	3x3x2-1/2	1-3/4	1-31/32	1-3/4	3-5/8	3-11/16	3-5/8	7-1/4	4-3/16	3-17/32	4-3/16	1.91
401-342	3x3x4	2-1/2	2-1/16	2-1/2	4-1/2	4-1/16	4-1/2	9	3-31/32	5	3-31/32	1.87
401-344[1]	3x3x6	5-1/2	4	5-1/2	7-1/2	7	7-1/2	15	7-1/4	7-1/4	7-1/4	11.75
401-416	4x4x3/4	25/32	2-9/32	25/32	2-13/16	3-9/32	2-13/16	5-5/8	5-3/32	1-5/16	5-3/32	1.24
401-417	4x4x1	13/16	2-9/16	13/16	2-13/16	3-5/8	2-13/16	5-19/32	5-1/32	1-19/32	5-1/32	1.19
401-418	4x4x1-1/4	1-1/16	2-9/32	1-1/16	3-3/32	3-17/32	3-3/32	6-3/16	5	1-31/32	5	1.33
401-419	4x4x1-1/2	1-3/16	2-17/32	1-3/16	3-3/16	3-27/32	3-3/16	6-13/32	5-1/16	2-1/4	5-1/16	1.40
401-420	4x4x2	1-13/32	2-3/4	1-13/32	3-7/16	4-5/32	3-7/16	6-7/8	5-1/32	2-3/4	5-1/32	1.49
401-421[1]	4x4x2-1/2	1-31/32	3-3/32	2-1/32	4-3/32	4-27/32	4-3/32	8-5/32	5-5/32	4-1/16	5-5/32	2.67
401-422	4x4x3	2-1/32	2-5/8	2-1/32	4-3/32	4-1/2	4-3/32	8-5/32	5-5/32	4-1/16	5-5/32	2.31
401-426[1]	4x4x6	5-1/2	3-1/2	5-1/2	7-1/2	7	7-1/2	14-15/16	6-7/8	7-1/2	6-7/8	10.38
401-428[1]	4x4x8	6-3/4	4-1/2	6-3/4	8-3/4	8-1/2	8-3/4	17-1/2	9-1/4	9-5/8	9-5/8	18.30
401-486	5x5x2	1-11/32	3-1/32	1-11/32	4-23/64	4-13/32	4-23/64	8-23/32	6-1/8	2-23/32	6-1/8	2.39
401-487[1]	5x5x2-1/2	2	3-5/8	2	5-1/32	5-3/8	5-1/32	10-1/16	6-5/32	4-1/32	6-5/32	3.63
401-488	5x5x3	2	3-3/16	2	5-1/32	5-1/16	5-1/32	10-1/16	6-5/32	4-1/32	6-5/32	3.23
401-490	5x5x4	2-1/2	3-5/32	2-1/2	5-9/16	5-3/16	5-9/16	11-1/8	6-5/32	5-1/32	6-5/32	3.61
401-526[1]	6x6x1-1/4	1-3/8	4-1/16	1-3/8	4-27/32	5-5/16	4-27/32	9-11/16	7-1/4	2-3/4	7-1/4	3.61

[1] Outlet sized with bushing

REDUCING TEE (continued)

Socket x Socket x Socket

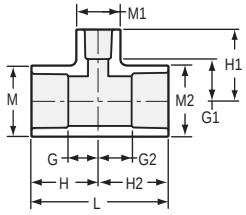


Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
401-527[1]	6x6x1-1/2	1-3/8	3-7/8	1-3/8	4-27/32	5-3/16	4-27/32	9-11/16	7-1/4	2-11/16	7-1/4	3.60
401-528	6x6x2	1-13/32	3-5/8	1-13/32	4-13/32	4-31/32	4-13/32	8-27/32	7-1/4	2-3/4	7-1/4	3.28
401-529[1]	6x6x2-1/2	1-31/32	4-1/8	1-31/32	4-31/32	5-7/8	4-31/32	9-15/16	7-1/4	4-1/32	7-1/4	4.28
401-530	6x6x3	1-31/32	3-5/8	1-31/32	4-31/32	5-1/2	4-31/32	10	7-1/4	4	7-1/4	3.90
401-532	6x6x4	2-3/32	3-5/8	2-3/32	5-9/16	5-5/8	5-9/16	11-1/8	7-7/32	5	7-7/32	4.35
401-533[1]	6x6x5	3-1/2	4-1/2	3-1/2	7	7-1/2	7	14	7-3/16	7-3/16	7-3/8	8.46
401-535[1]	6x6x8	5-3/8	5-1/2	5-3/8	8-7/8	9-1/2	8-7/8	17-3/4	9-1/2	9-3/4	9-1/2	19.21
401-537[1]	6x6x10	8	5-13/16	8	11-3/8	10-13/16	11-3/8	22-3/4	11-1/2	11-9/16	11-1/2	38.30
401-578[1]	8x8x2	2	5-7/8	2	6	7	6	12	9-1/4	4	9-1/4	11.71
401-579[1]	8x8x2-1/2	2	5-5/16	2	6	7-5/16	6	12	9-5/16	4	9-5/16	6.62
401-580	8x8x3	1-31/32	4-3/4	1-31/32	6-1/32	6-3/4	6-1/32	12-1/16	9-11/32	4	9-11/32	6.44
401-582	8x8x4	2-17/32	4-11/16	2-17/32	6-17/32	6-11/16	6-17/32	13-1/16	9-9/32	4-31/32	9-9/32	7.02
401-583[1]	8x8x5	3-21/32	5-1/4	3-21/32	7-21/32	8-1/4	7-21/32	15-5/16	9-5/16	7-1/4	9-5/16	10.60
401-585	8x8x6	3-5/8	4-3/4	3-5/8	7-21/32	7-25/32	7-21/32	15-11/32	9-11/32	7-1/4	9-11/32	8.90
401-589[1]	8x8x10	6-23/32	5-11/16	6-23/32	11-7/32	10-1/2	11-7/32	22-7/16	11-9/16	11-9/16	11-9/16	34.76
401-621F	10x10x2	4-7/8	7-1/4	4-7/8	10-1/8	9	10-1/8	20-1/4	11-1/2	2-11/16	11-1/2	19.60
401-622F	10x10x2-1/2	5-5/8	7-3/4	5-5/8	10-7/8	9-3/4	10-7/8	21-3/4	11-1/2	3-1/4	11-1/2	20.26
401-623[1]	10x10x3	3-13/16	7	3-13/16	9-3/8	9	9-3/8	18-3/4	12	7-1/2	12	25.54
401-624[1]	10x10x4	3-27/32	7-3/8	3-27/32	9-11/32	9-3/8	9-11/32	18-11/16	12	7-1/2	12	25.63
401-626F	10x10x6	6-7/8	8-3/8	6-7/8	12-1/8	11-5/8	12-1/8	24-1/4	11-1/2	7-3/16	11-1/2	26.48
401-628[1]	10x10x8	5-3/4	7-3/16	5-3/4	10-7/8	11-1/4	10-7/8	21-11/16	11-11/16	11-11/16	11-1/2	29.85
401-661F	12x12x2	5-1/4	8-1/4	5-1/4	11-1/2	10	11-1/2	23	13-9/16	2-11/16	13-1/2	25.00
401-662F	12x12x2-1/2	5-3/4	8-3/4	5-3/4	12	10-3/4	12	24	13-9/16	3-1/4	13-9/16	28.61
401-663F	12x12x3	5-3/4	9	5-3/4	12	11-1/4	12	24	13-9/16	3-15/16	13-9/16	31.41
401-664F	12x12x4	7	9-5/16	7	13-1/4	11-9/16	13-1/4	26-1/2	13-9/16	5	13-9/16	32.40
401-666[1]	12x12x6	4-7/8	8-5/16	4-7/8	11-7/16	11-3/4	11-7/16	22-13/16	14-1/4	9-3/4	14-1/4	44.02
401-668	12x12x8	4-27/32	7-1/8	4-27/32	11-13/32	11-1/8	11-13/32	22-13/16	14-1/4	9-3/4	14-1/4	40.00
401-670	12x12x10	6-13/16	7-3/8	6-13/16	12-13/16	13-1/4	12-13/16	25-5/8	13-3/4	13-3/4	13-3/4	50.00
401-670F	12x12x10	10-1/4	10-3/8	10-1/4	16-1/2	15-5/8	16-1/2	33	13-9/16	11-1/2	13-9/16	50.00
401-676F	12x12x16	18-1/2	12-3/4	18-1/2	30-1/4	20-3/4	30-1/4	60-1/2	14-1/8	17	14-1/8	144.87
401-678F	12x12x18	14-1/4	13	17-7/8	23-1/4	22	23-7/8	47-3/4	19-1/8	19-1/8	19-1/8	252.00
401-691F	14x14x2	5-7/8	8-13/16	5-7/8	12-7/8	10-9/16	12-7/8	25-3/4	14-7/8	2-11/16	14-7/8	35.53
401-693F	14x14x3	6-1/2	9-9/16	6-1/2	13-1/2	11-13/16	13-1/2	27	14-7/8	3-15/16	14-7/8	38.35
401-694F	14x14x4	7-3/8	9-7/8	7-3/8	14-3/8	12-1/8	14-3/8	28-3/4	14-7/8	5	14-7/8	38.58
401-696F	14x14x6	7-7/8	9-15/16	7-7/8	14-7/8	13-3/16	14-7/8	29-3/4	14-7/8	7-3/16	14-7/8	45.70
401-698F	14x14x8	8-7/8	9-7/8	8-7/8	15-7/8	14-1/8	15-7/8	31-3/4	14-7/8	9-1/4	14-7/8	51.99

[1] Outlet sized with bushing

REDUCING TEE (continued)

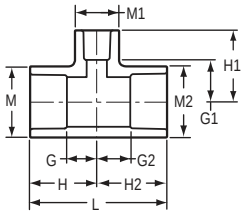
Socket x Socket x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
401-700F	14x14x10	10-3/8	10-15/16	10-3/8	17-3/8	16-3/16	17-3/8	34-3/4	14-7/8	11-1/2	14-7/8	61.56
401-702	14x14x12	7-1/32	7-13/32	7-1/32	14-1/32	13-13/32	14-1/32	28-1/16	15-21/32	14-11/32	15-21/32	62.65
401-702F	14x14x12	11-3/8	10-3/4	11-3/8	18-3/8	17	18-3/8	36-3/4	14-7/8	13-9/16	14-7/8	62.78
401-751F	16x16x2	6-3/8	9-3/4	6-3/8	14-3/8	11-1/2	14-3/8	28-3/4	17	2-11/16	17	51.76
401-753F	16x16x3	6-1/2	10-1/2	6-1/2	14-1/2	12-3/4	14-1/2	29	17	3-15/16	17	57.67
401-754F	16x16x4	8	10-13/16	8	16	13-1/16	16	32	17	5	17	58.90
401-756F	16x16x6	9	10-7/8	9	17	14-1/8	17	34	17	7-3/16	17	66.52
401-758F	16x16x8	10	10-13/16	10	18	15-1/16	18	36	17	9-1/4	17	73.17
401-760F	16x16x10	11	11-7/8	11	19	17-1/8	19	38	17	11-1/2	17	73.88
401-762F	16x16x12	12	11-11/6	12	20	17-15/16	20	40	17	13-9/16	17	85.48
401-764F	16x16x14	13	11-15/16	13	21	18-15/16	21	42	17	14-7/8	17	95.95
401-781F	18x18x2	6-1/4	10-11/16	6-1/4	15-1/4	12-7/16	15-1/4	30-1/2	19-1/8	2-11/16	19-1/8	65.63
401-783F	18x18x3	7-1/4	11-7/16	7-1/4	16-1/4	13-11/16	16-1/4	32-1/2	19-1/8	3-15/16	19-1/8	---
401-784F	18x18x4	7-3/4	11-3/4	7-3/4	16-3/4	14	16-3/4	33-1/2	19-1/8	5	19-1/8	82.00
401-786F	18x18x6	8-3/4	11-13/16	8-3/4	17-3/4	15-1/16	17-3/4	35-1/2	19-1/8	7-3/16	19-1/8	88.04
401-788F	18x18x8	9-3/4	11-3/4	9-3/4	18-3/4	16	18-3/4	37-1/2	19-1/8	9-1/4	19-1/8	107.00
401-790F	18x18x10	10-3/4	12-13/16	10-3/4	19-3/4	18-1/16	19-3/4	39-1/2	19-1/8	11-1/2	19-1/8	105.41
401-792F	18x18x12	11-3/4	12-5/8	11-3/4	20-3/4	18-7/8	20-3/4	41-1/2	19-1/8	13-9/16	19-1/8	113.48
401-794F	18x18x14	12-7/8	12-7/8	12-7/8	21-7/8	19-7/8	21-7/8	43-3/4	19-1/8	14-7/8	19-1/8	116.67
401-796F	18x18x16	13-7/8	13-13/16	13-7/8	22-7/8	21-13/16	22-7/8	45-3/4	19-1/8	17	19-1/8	134.41
401-811F	20x20x2	6-3/4	12-7/16	6-3/4	16-3/4	14-3/16	16-3/4	33-1/2	21-3/16	21-11/16	21-3/16	81.39
401-813F	20x20x3	7-1/4	12-7/16	7-1/4	17-1/4	14-11/16	17-1/4	34-1/2	21-3/16	3-15/16	21-3/16	91.14
401-814F	20x20x4	8-1/4	12-3/4	8-1/4	18-1/4	15	18-1/4	36-1/2	21-3/16	5	21-3/16	72.10
401-816F	20x20x6	9-1/4	12-13/16	9-1/4	19-1/4	16-1/16	19-1/4	38-1/2	21-3/16	7-3/16	21-3/16	106.19
401-818F	20x20x8	10-1/4	12-3/4	10-1/4	20-1/4	17	20-1/4	40-1/2	21-3/16	9-1/4	21-3/16	115.35
401-820F	20x20x10	11-1/4	13-13/16	11-1/4	21-1/4	19-1/16	21-1/4	42-1/2	21-3/16	11-1/2	21-3/16	125.44
401-822F	20x20x12	12-1/4	13-5/8	12-1/4	22-1/4	19-7/8	22-1/4	44-1/2	21-3/16	13-9/16	21-3/16	129.36
401-824F	20x20x14	13-1/4	13-7/8	13-1/4	23-1/4	20-7/8	23-1/4	46-1/2	21-3/16	14-7/8	21-3/16	123.55
401-826F	20x20x16	14-1/4	14-13/16	14-1/4	24-1/4	22-13/16	24-1/4	48-1/2	21-3/16	17	21-3/16	154.48
401-828F	20x20x18	15-1/4	14-3/8	15-1/4	25-1/4	23-3/8	25-1/4	50-1/2	21-3/16	19-1/8	21-3/16	176.98
401-901F	24x24x2	8-1/8	14-5/16	8-1/8	20-1/8	16-1/16	20-1/8	40-1/4	25-3/8	2-11/16	25-3/8	156.00
401-903F	24x24x3	8-5/8	14-5/16	8-5/8	20-5/8	16-9/16	20-5/8	41-1/4	25-3/8	3-15/16	25-3/8	161.00
401-904F	24x24x4	9-1/8	14-5/8	9-1/8	21-1/8	16-7/8	21-1/8	42-1/4	25-3/8	5	25-3/8	148.46
401-906F	24x24x6	10-1/8	14-11/16	10-1/8	22-1/8	17-15/16	22-1/8	44-1/4	25-3/8	7-3/16	25-3/8	159.56
401-908F	24x24x8	11-1/8	14-5/8	11-1/8	23-1/8	18-7/8	23-1/8	46-1/4	25-3/8	9-1/4	25-3/8	171.52
401-910F	24x24x10	12-1/8	15-11/16	12-1/8	24-1/8	20-15/16	24-1/8	48-1/4	25-3/8	11-1/2	25-3/8	213.94
401-912F	24x24x12	13-1/8	15-1/2	13-1/8	25-1/8	21-3/4	25-1/8	50-1/4	25-3/8	13-9/16	25-3/8	199.98

REDUCING TEE (continued)

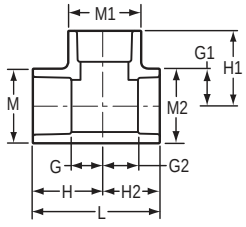
Socket x Socket x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
401-914F	24x24x14	13-3/4	15-3/4	13-3/4	25-3/4	22-3/4	25-3/4	51-1/2	25-3/8	14-7/8	25-3/8	232.53
401-916F	24x24x16	14-3/4	16-11/16	14-3/4	26-3/4	24-11/16	26-3/4	53-1/2	25-3/8	17	25-3/8	224.32
401-918F	24x24x18	15-3/4	16-1/4	15-3/4	27-3/4	25-1/4	27-3/4	55-1/2	25-3/8	19-1/8	25-3/8	237.92
401-920F	24x24x20	16-3/4	17-3/8	16-3/4	28-3/4	27-3/8	28-3/4	57-1/2	25-3/8	21-3/16	25-3/8	244.92

REDUCING SHORT SOCKET TEE

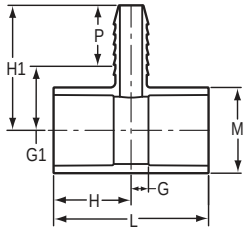
Socket x Socket x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
S401-249	2x2x1	11/16	2-7/32	11/16	2-3/32	1-1/4	1-11/32	3-7/16	2-23/32	1-5/8	2-23/32	.28
S401-251	2x2x1-1/2	1	1-1/4	31/32	2-3/8	2-3/8	1-5/8	4	2-23/32	2-7/32	2-23/32	.34

TRANSITION TEE

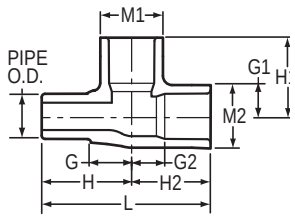
Socket x Socket x Insert



Part Number	Size	G	G1	H	H1	L	M	P	Approx. Wt. (Lbs.)
1102-007	3/4	13/32	3/4	1-13/32	2-1/4	2-13/16	1-5/16	1-1/2	.09
1102-130	1x1x1/2	3/16	13/16	1-7/16	2-5/16	2-7/8	1-19/32	1-1/2	.11
1102-248	2x2x3/4	1/2	1-7/16	1-27/32	2-15/16	3-11/16	2-23/32	1-1/2	.27
1102-250	2x2x1-1/4	11/16	1-15/32	2-1/16	2-31/32	4-1/8	2-3/4	1-1/2	.34

STREET TEE

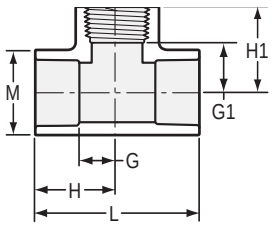
Spigot x Socket x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M1	M2	Approx. Wt. (Lbs.)
444-005	1/2	23/32	23/32	1/2	1-19/32	1-21/32	1-19/32	3-5/32	1-3/16	1-3/16	.10
444-007	3/4	13/16	27/32	7/8	1-13/16	1-7/8	1-13/16	3-5/8	1-13/32	1-13/32	.15
444-010	1	1	1-31/32	1-31/32	2-1/8	2	2-1/8	4-7/32	1-3/4	1-3/4	.25
444-012	1-1/4	1-1/4	1-5/32	1-1/8	2-7/16	2-5/16	2-7/16	4-27/32	2-3/32	2-3/32	.39
444-015	1-1/2	1-13/16	1-1/8	1-1/8	2-7/8	2-9/16	2-9/16	5-3/8	2-11/32	2-11/32	.51
444-020	2	1-19/32	1-11/16	1-19/32	3-3/32	3-3/16	3-3/32	6-5/32	2-7/8	2-7/8	.78

TEE

Socket x Socket x Fipt

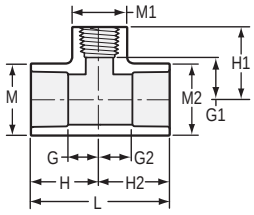


Part Number	Size	G	G1	H	H1	L	M	Approx. Wt. (Lbs.)
402-003	3/8	7/16	1/2	1-11/16	1-1/16	3-3/8	29/32	.06
402-005	1/2	1/2	1/2	1-1/4	1-7/32	2-1/2	1-3/32	.07
402-007	3/4	21/32	23/32	1-21/32	1-7/16	3-9/32	1-5/16	.11
402-010	1	13/16	7/8	1-15/16	1-7/8	3-7/8	1-5/8	.17
402-012	1-1/4	29/32	1-1/8	2-5/32	2-1/16	4-5/16	2	.30
402-015	1-1/2	1-1/32	1-1/8	2-11/32	2-1/16	4-11/16	2-1/4	.37
402-020	2	1-5/16	1-15/32	2-5/8	2-13/32	5-7/32	2-3/4	.50
402-025	2-1/2	1-1/2	1-11/16	3-1/4	2-31/32	6-1/2	3-3/8	.96
402-030	3	1-13/16	2-1/32	3-11/16	3-3/8	7-11/32	4	1.38
402-040	4	2-5/16	2-15/32	4-11/32	3-15/16	8-21/32	5-1/16	2.22

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

REDUCING TEE

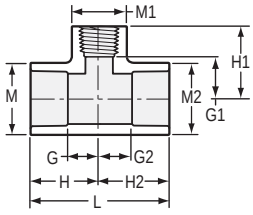
Socket x Socket x Fipt



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
402-071	1/2x1/2x1/8	9/32	17/32	9/32	1-1/32	1	1-1/32	2-1/16	1-3/32	9/16	1-3/32	.04
402-072	1/2x1/2x1/4	3/8	9/16	3/8	1-1/8	1-1/8	1-1/8	2-1/4	1-1/16	13/16	1-1/16	.05
402-074	1/2x1/2x3/4	21/32	1/2	21/32	1-13/32	1-5/16	1-13/32	2-13/16	1-1/16	1-11/32	1-3/32	.08
402-094	3/4x1/2x1/2	1/2	11/16	9/16	1-1/2	1-7/16	1-5/16	2-13/16	1-9/32	1-1/16	1-3/32	.10
402-095	3/4x1/2x3/4	13/16	21/32	5/8	1-13/16	1-7/16	1-3/8	3-3/16	1-5/16	1-5/16	1-3/32	.11
402-097	3/4x3/4x1/8	9/32	5/8	9/32	1-7/32	1-3/32	1-7/32	2-7/16	1-5/16	9/16	1-5/16	.06
402-101	3/4x3/4x1/2	17/32	11/16	17/32	1-17/32	1-13/32	1-17/32	3-1/16	1-5/16	1-1/8	1-5/16	.10
402-124	1x3/4x1/2	17/32	13/16	17/32	1-21/32	1-9/16	1-17/32	3-3/16	1-5/8	1-1/16	1-5/16	.13
402-125	1x3/4x3/4	9/16	23/32	11/16	1-11/16	1-17/32	1-11/16	3-3/8	1-19/32	1-9/32	1-9/32	.13
402-130	1x1x1/2	1/2	7/8	1/2	1-5/8	1-1/2	1-5/8	3-1/4	1-5/8	1-1/8	1-5/8	.14
402-131	1x1x3/4	21/32	13/16	21/32	1-25/32	1-17/32	1-25/32	3-9/16	1-5/8	1-5/16	1-5/8	.15
402-156	1-1/4x1x1/2	19/32	1-9/32	19/32	1-25/32	1-25/32	1-3/4	3-17/32	2	1-1/8	1-5/8	.19
402-157	1-1/4x1x3/4	13/16	1-1/32	3/4	1-13/16	1-23/32	1-3/4	3-9/16	2	1-5/16	1-5/8	.18
402-158	1-1/4x1x1	13/16	1-5/32	13/16	2-1/16	2-1/8	1-15/16	4	1-31/32	1-21/32	1-5/8	.26
402-166	1-1/4x1-1/4x1/2	23/32	15/16	23/32	1-31/32	1-21/32	1-31/32	3-15/16	1-31/32	1-3/32	1-31/32	.21
402-167	1-1/4x1-1/4x3/4	13/16	1-1/16	13/16	2-1/16	1-3/4	2-1/16	4-1/8	2	1-5/16	2	.19
402-168	1-1/4x1-1/4x1	21/32	1-1/32	21/32	1-7/8	1-27/32	1-7/8	3-25/32	1-31/32	1-5/8	1-31/32	.22
402-199	1-1/2x1-1/4x1/2	19/32	1-9/32	19/32	1-27/32	1-29/32	27/32	3-23/32	2-1/4	1-1/8	2	.24
402-201	1-1/2x1-1/4x3/4	11/16	1-5/32	5/8	1-31/32	2-5/32	1-29/32	3-7/8	2-1/4	1-5/16	2	.26
402-202	1-1/2x1-1/4x1	13/16	1-1/8	3/4	2-1/8	2-1/4	2-1/16	4-3/16	2-1/4	1-5/8	2	.30
402-209	1-1/2x1-1/2x1/2	7/16	1-3/32	7/16	1-3/4	1-13/16	1-3/4	3-1/2	2-7/32	1-3/32	2-7/32	.21
402-210	1-1/2x1-1/2x3/4	21/32	1-3/32	21/32	1-31/32	1-27/32	1-31/32	3-29/32	2-1/4	1-5/16	2-1/4	.24
402-211	1-1/2x1-1/2x1	25/32	1-1/16	25/32	2-3/32	1-15/16	2-3/32	4-3/16	2-1/4	1-5/8	2-1/4	.27
402-212	1-1/2x1-1/2x1-1/4	1	1-3/32	1	2-9/32	2-1/32	2-9/32	4-19/32	2-1/4	2	2-1/4	.32
402-238	2x1-1/2x3/4	11/16	1-13/32	5/8	2-1/32	2-13/32	1-31/32	4	2-3/4	1-5/16	2-1/4	.32
402-239	2x1-1/2x1	13/16	1-13/32	3/4	2-3/16	2-17/32	2-1/8	4-5/16	2-3/4	1-5/8	2-1/4	.38
402-247	2x2x1/2	21/32	1-3/8	21/32	2-1/32	2-1/8	2-1/32	4-1/16	2-3/4	1-1/8	2-3/4	.33
402-248	2x2x3/4	21/32	1-11/32	21/32	2-1/32	2-3/32	2-1/32	4-1/32	2-3/4	1-11/32	2-3/4	.33
402-249	2x2x1	13/16	1-13/32	13/16	2-3/16	2-1/4	2-3/16	4-3/8	2-23/32	1-5/8	2-23/32	.35
402-250	2x2x1-1/4	1	1-3/8	1	2-3/8	2-5/16	2-3/8	4-3/4	2-23/32	1-31/32	2-23/32	.40
402-251	2x2x1-1/2	1-1/16	1-1/4	1-1/16	2-5/16	2-3/16	2-5/16	4-19/32	2-3/4	2-1/4	2-3/4	.41
402-287	2-1/2x2-1/2x1/2	1/2	1-11/16	1/2	2-1/4	2-3/8	2-1/4	4-1/2	3-3/8	1-3/16	3-3/8	.55
402-288	2-1/2x2-1/2x3/4	13/16	1-11/16	13/16	2-9/16	2-7/16	2-9/16	5-1/8	3-3/8	1-3/8	3-3/8	.64
402-289	2-1/2x2-1/2x1	1	1-23/32	1	2-3/4	2-5/8	2-3/4	5-1/2	3-11/32	1-11/16	3-11/32	.73
402-290	2-1/2x2-1/2x1-1/4	1-1/32	1-25/32	1-1/32	2-25/32	2-21/32	2-25/32	5-9/16	3-11/32	2-1/32	3-11/32	.75
402-291	2-1/2x2-1/2x1-1/2	1-1/16	1-25/32	1-1/16	2-13/16	2-3/4	2-13/16	5-5/8	3-3/8	2-13/32	3-3/8	.77
402-292	2-1/2X2-1/2X2	1-1/2	1-27/32	1-1/2	3-1/4	2-27/32	3-1/4	6-17/32	3-11/32	3	3-11/32	.98
402-333	3x3x1/2	19/32	2-1/16	19/32	2-15/32	2-25/32	2-15/32	4-15/16	3-31/32	1-3/16	3-31/32	.77

REDUCING TEE (continued)

Socket x Socket x Fipt

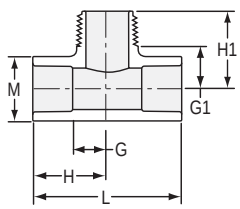


Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
402-334	3x3x3/4	13/16	2-1/32	13/16	2-23/32	2-25/32	2-23/32	5-13/32	4	1-3/8	4	.83
402-335	3x3x1	31/32	2-1/8	31/32	2-7/8	3	2-7/8	5-23/32	4-1/32	1-11/16	4-1/32	.92
402-336	3x3x1-1/4	1	2-1/32	1	2-31/32	3-1/32	2-31/32	5-31/32	4	2	4	.95
402-337	3x3x1-1/2	1-7/32	2-1/8	1-7/32	3-3/32	3-1/16	3-3/32	6-3/16	4	2-13/32	4	1.05
402-338	3x3x2	1-1/2	2-1/8	1-1/2	3-13/32	3-1/8	3-13/32	6-25/32	4	3	4	1.21
402-417	4x4x1	27/32	2-5/8	27/32	2-7/8	3-1/2	2-7/8	5-3/4	5-1/32	1-11/16	5-1/32	1.26
402-419	4x4x1-1/2	1-1/8	2-1/2	1-1/8	3-1/8	3-1/2	3-1/8	6-1/4	5	2-1/4	5	1.33
402-420	4x4x2	1-3/8	2-3/4	1-3/8	3-13/32	3-3/4	3-13/32	6-25/32	5-1/32	3	5-1/32	1.67
402-422	4x4x3	2	2-1/2	2	4-1/32	3-29/32	4-1/32	8-1/16	5-1/16	4-9/32	5-1/16	2.18
402-490	5x5x4	2-1/2	3-1/8	2-1/2	5-17/32	4-29/32	5-17/32	11-1/16	6-3/32	5-1/32	6-3/32	3.69
402-525[1]	6x6x1	1-3/8	4-11/32	1-3/8	4-27/32	5-11/32	4-27/32	9-11/16	7-7/32	2-23/32	7-7/32	3.66
402-528	6x6x2	1-3/8	3-19/32	1-3/8	4-27/32	4-23/32	4-27/32	9-23/32	7-1/4	2-25/32	7-1/4	3.58
402-530	6x6x3	2	3-19/32	2	5-15/32	5-7/32	5-15/32	10-15/16	7-1/4	4-1/32	7-1/4	4.22
402-532	6x6x4	2-1/2	3-5/8	2-1/2	6	5-11/32	6	12	7-7/32	5-1/16	7-7/32	4.73
402-578[1]	8x8x2	2	6-1/8	2	6	7-1/8	6	12	9-5/16	3-15/16	9-5/16	6.81
402-580[1]	8x8x3	2-9/16	5-23/32	1-31/32	6-9/16	7-5/16	6-9/16	13-1/8	9-5/16	5	9-5/16	7.69
402-582[1]	8x8x4	2-1/2	4-15/16	2-1/2	6-31/32	6-21/32	6-31/32	13-15/16	9-5/16	5	9-5/16	11.20
402-621F	10x10x2	5-1/4	6-11/16	5-1/4	10-1/2	7-3/4	10-1/2	21	11-9/16	2-13/16	11-9/16	17.51
402-622F	10x10x2-1/2	5-1/2	8-1/2	5-1/2	10-3/4	10-1/4	10-3/4	21-1/2	11-9/16	3-5/16	11-9/16	14.80
402-624F	10x10x4	6-3/8	7	6-3/8	11-5/8	8-3/4	11-5/8	23-1/4	11-1/2	5-1/16	11-1/2	22.95
402-661F	12x12x2	5-3/4	7-13/16	5-3/4	12	8-7/8	12	24	13-5/8	2-13/16	13-5/8	26.92
402-663F	12x12x3	6-1/4	9	6-1/4	12-1/2	10-5/8	12-1/2	25	13-5/8	4	13-5/8	29.30
402-664F	12x12x4	6-7/8	8-1/4	6-7/8	13-1/8	10	13-1/8	26-1/4	13-9/16	5-1/16	13-9/16	31.48

[1] Outlet sized with bushing

TEE

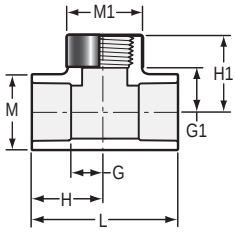
Socket x Socket x Mipt



Part Number	Size	G	G1	H	H1	L	M	Approx Wt. (Lbs.)
402B-010	1	5/8	1-1/16	1-3/4	2	3-7/16	1-5/8	.15

SPECIAL REINFORCED TEE

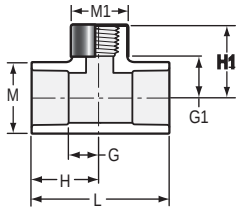
Socket x Socket x SR Fipt



Part Number	Size	G	G1	H	H1	L	M	M1	Approx Wt. (Lbs.)
402-005SR	1/2	19/32	15/32	1-15/32	1-11/32	2-15/16	1-5/32	13/16	.13
402-012SR	1-1/4	29/32	1-1/8	2-5/32	2-1/16	4-5/16	1-31/32	2-1/16	.31

SPECIAL REINFORCED REDUCING TEE

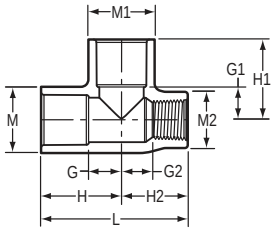
Socket x Socket x SR Fipt



Part Number	Size	G	G1	H	H1	L	M	M1	Approx Wt. (Lbs.)
402-072SR	1/2x1/2x1/4	15/32	11/16	1-5/16	1-7/32	2-5/8	1-5/32	13/16	.09
402-098SR	3/4x3/4x1/4	7/16	13/16	1-7/16	1-11/32	2-7/8	1-3/8	13/16	.12
402-101SR	3/4x3/4x1/2	25/32	1/2	1-5/8	1-7/16	3-1/4	1-3/8	1-3/16	.15
402-166SR	1-1/4x1-1/4x1/2	7/16	1-1/8	1-11/16	1-7/8	3-3/8	2-3/32	1-3/16	.27
402-168SR	1-1/4x1-1/4x1	27/32	1-1/32	2-3/32	1-29/32	4-7/32	2-3/32	1-23/32	.35
402-212SR	1-1/2x1-1/2x1-1/4	1-1/32	1-5/32	2-7/16	2-3/32	4-27/32	2-3/8	2-1/16	.49
402-287SR	2-1/2x2-1/2x1/2	1/2	1-11/16	2-1/4	2-3/8	4-1/2	3-3/8	1-3/16	.56
402-288SR	2-1/2x2-1/2x3/4	13/16	1-23/32	2-9/16	2-7/16	5-1/8	3-3/8	1-3/8	.66
402-289SR	2-1/2x2-1/2x1	1	1-23/32	2-3/4	2-5/8	5-1/2	3-11/32	1-11/16	.75
402-290SR	2-1/2x2-1/2x1-1/4	1-1/32	1-25/32	2-25/32	2-21/32	5-9/16	3-11/32	2-1/32	.77
402-291SR	2-1/2x2-1/2x1-1/2	1-1/16	1-25/32	2-13/16	2-3/4	5-5/8	3-3/8	2-7/16	.80
402-292SR	2-1/2x2-1/2x2	1-1/2	1-27/32	3-1/4	2-27/32	6-17/32	3-11/32	3	1.02
402-333SR	3x3x1/2	19/32	2-1/16	2-15/32	2-25/32	4-15/16	3-31/32	1-3/16	.78
402-334SR	3x3x3/4	13/16	2-1/32	2-23/32	2-25/32	5-13/32	4	1-3/8	.84
402-335SR	3x3x1	31/32	2-1/8	2-7/8	3	5-23/32	4-1/32	1-23/32	.94
402-336SR	3x3x1-1/4	1-1/32	2-3/32	2-29/32	3-3/32	5-13/16	4	2-1/16	1.00
402-337SR	3x3x1-1/2	1-7/32	2-1/8	3-3/32	3-3/32	6-9/32	3-31/32	2-7/16	1.06
402-338SR	3x3x2	1-1/2	2-1/16	3-13/32	3-1/16	6-7/8	4	3	1.20
402-417SR	4x4x1	27/32	2-5/8	27/32	3-17/32	5-3/4	5-1/32	1-23/32	1.28
402-419SR	4x4x1-1/2	1-1/8	2-25/32	3-1/8	3-3/4	6-9/32	5-1/32	2-7/16	1.52
402-420SR	4x4x2	1-3/8	2-25/32	3-13/32	3-25/32	6-25/32	5-1/32	3-1/32	1.71
402-422SR	4x4x3	2	2-1/2	4-1/32	3-15/16	8-1/16	5-1/16	4-9/32	2.19

REDUCING TEE

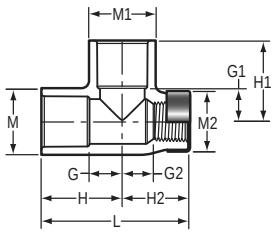
Socket x Fipt x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
403-095	3/4x1/2x3/4	11/16	11/16	11/16	1-11/16	1-11/16	1-3/8	3-3/32	1-13/32	1-13/32	1-3/16	.15

SPECIAL REINFORCED REDUCING TEE

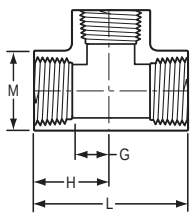
Socket x SR Fipt x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
403-095SR	3/4x1/2x3/4	11/16	11/16	11/16	1-11/16	1-11/16	1-13/32	3-1/8	1-13/32	1-13/32	1-7/32	.16

TEE

Fipt x Fipt x Fipt



Part Number	Size	G	H	L	M	Approx. Wt. (Lbs.)
405-005	1/2	17/32	1-1/4	2-1/2	1-3/32	.08
405-007	3/4	19/32	1-3/8	2-3/4	1-9/32	.10
405-010	1	11/16	1-19/32	3-3/16	1-23/32	.19
405-012	1-1/4	15/16	1-15/16	3-7/8	2-7/32	.48
405-015	1-1/2	1	2	4-1/32	2-7/32	.34
405-020	2	1-1/4	2-5/16	4-19/32	2-23/32	.56
405-025[1]	2-1/2	2-13/16	4-11/32	8-11/16	4-1/32	2.89

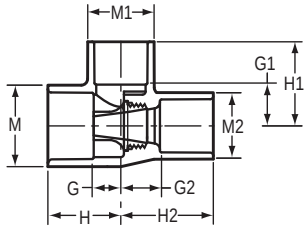
[1] Outlet sized with bushing

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

VENTURIED TEE

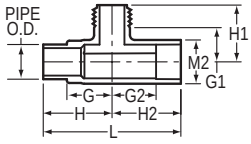
1" Socket x 3/4" Socket (1" Spigot) x 3/4" Socket (1" Spigot)



Part Number	Size	G	G1	G2	H	H1	H2	M	M1	M2	Approx. Wt. (Lbs.)
473-825	1x3/4x3/4	19/32	27/32	3/4	1-1/2	1-11/16	1-25/32	1-5/8	1-5/16	1-5/16	.15

MANIFOLD TEE

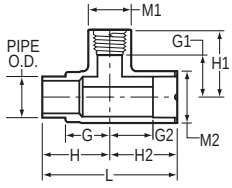
Spigot x Socket x Mipt



Part Number	Size	G	G1	G2	H	H1	H2	L	M2	Approx. Wt. (Lbs.)
476-010	1	1-23/32	1-11/32	1-11/16	2-5/8	2-5/32	2-5/8	5-1/4	1-21/32	.24

MANIFOLD TEE

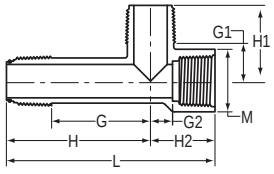
Spigot x Socket x Fipt



Part Number	Size	G	G1	G2	H	H1	H2	L	M1	M2	Approx. Wt. (Lbs.)
477-010	1	1-23/32	1-1/4	1-11/16	2-5/8	2-5/32	2-5/8	5-1/4	1-21/32	1-21/32	.27

O-RING SEALED MANIFOLD TEE

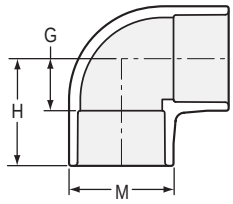
O-ring Sealed Mipt x Fipt x Mipt



Part Number	Size	G	G1	G2	H	H1	H2	L	M	Approx. Wt. (Lbs.)
451A-010	1	2-19/32	31/32	3/4	3-13/16	1-31/32	1-11/16	5-1/2	1-21/32	.19

90° ELBOW

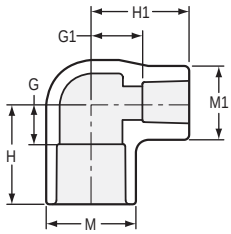
Socket x Socket



Part Number	Size	G	H	M	Approx. Wt. (Lbs.)
406-003	3/8	3/8	1-1/8	7/8	.03
406-005	1/2	1/2	1-1/4	1-1/8	.05
406-007	3/4	9/16	1-1/2	1-11/32	.07
406-010	1	11/16	1-13/16	1-5/8	.12
406-012	1-1/4	31/32	2-5/32	2	.20
406-015	1-1/2	1-1/16	2-11/32	2-1/4	.25
406-020	2	1-5/16	2-11/16	2-3/4	.38
406-025	2-1/2	1-1/2	3-1/4	3-11/32	.73
406-030	3	1-27/32	3-23/32	4	1.03
406-040	4	2-13/32	4-13/32	5-1/32	1.73
406-045F	4-1/2	8-5/8	6-1/8	5-7/16	3.13
406-050	5	3-1/16	6-1/8	6-5/32	3.58
406-060	6	3-17/32	6-9/16	7-9/32	4.52
406-080	8	4-13/32	8-7/16	9-3/8	8.84
406-100	10	5-13/16	10-27/32	11-19/32	15.75
406-100F	10	9-1/2	14-3/4	11-1/2	17.40
406-120	12	7-1/16	13-9/16	14-1/4	27.98
406-120F	12	10-1/2	16-3/4	13-9/16	25.94
406-140	14	7-1/2	14-1/2	15-11/16	53.35
406-140F	14	12-1/4	19-1/4	14-7/8	47.26
406-160F	16	14-1/8	22-1/8	17	69.70
406-180F	18	17-1/4	26-1/4	19-1/8	104.20
406-200F	20	18-3/4	28-3/4	21-3/16	131.93
406-240F	24	22-1/4	34-1/4	25-3/8	216.00

REDUCING 90° ELBOW

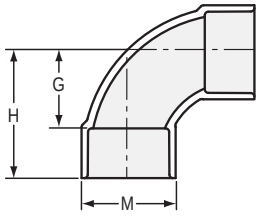
Socket x Socket



Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
406-053	3/8x1/2	7/16	15/32	1-11/16	1-15/16	1-1/8	29/32	.06
406-101	3/4x1/2	1/2	19/32	1-1/2	1-11/32	1-5/16	1-3/32	.06
D406-101	3/4x1/2	1/2	11/16	1-1/2	1-15/16	1-5/16	1-1/8	.08
406-130	1x1/2	9/16	1-1/16	1-11/16	1-13/16	1-5/8	1-1/8	.08
D406-130	1x1/2	9/16	19/32	1-11/16	1-27/32	1-5/8	1-3/32	.13
406-131	1x3/4	21/32	23/32	1-25/32	1-23/32	1-19/32	1-5/16	.12
406-166	1-1/4x1/2	9/16	1	1-13/16	1-3/4	2	1-3/32	.11
D406-166	1-1/4x1/2	9/16	1	1-25/32	2-1/4	2	1-3/32	.14
406-167	1-1/4x3/4	23/32	1	1-31/32	1-15/16	2	1-5/16	.13
406-168	1-1/4x1	11/16	7/8	1-15/16	2	2	1-21/32	.16
406-209	1-1/2x1/2	17/32	1-1/8	1-27/32	1-7/8	2-7/32	1-3/32	.16
406-211	1-1/2x1	13/16	1-3/32	2-1/8	2-5/32	2-1/4	1-5/8	.20
406-212	1-1/2x1-1/4	31/32	1-3/32	2-9/32	2-11/32	2-7/32	1-31/32	.24
406-249	2x1	27/32	1-11/32	2-7/32	2-15/32	2-23/32	1-19/32	.26
406-250	2x1-1/4	1	1-3/8	2-3/8	2-19/32	2-3/4	2	.30
406-251	2x1-1/2	1-1/8	1-5/16	2-15/32	2-9/16	2-3/4	2-1/4	.32
406-251N	2x1-1/2(2)	1-1/16	1-21/32	2-7/16	2-15/16	2-3/4	2-3/8	.43
406-292	2-1/2x2	1-1/4	1-1/2	3	2-7/8	3-11/32	2-23/32	.56
406-292N	2-1/2x2(2-1/2)	1-1/4	2-9/32	3	3-3/16	3-5/16	2-7/8	.71

90° SWEEP ELBOW

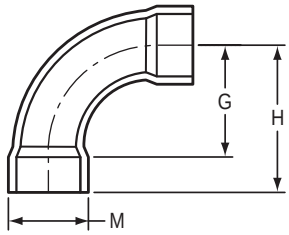
Socket x Socket



Part Number	Size	G	H	M	Approx. Wt. (Lbs.)
406-005S	1/2	27/32	1-23/32	1-3/16	.08
406-007S	3/4	1-1/32	2-1/32	1-13/32	.12
406-010S	1	1-5/16	2-7/16	1-23/32	.20
406-012S	1-1/4	1-9/16	2-13/16	2-3/32	.30
406-015S	1-1/2	1-3/4	3-5/32	2-11/32	.36
406-020S	2	2-5/16	3-13/16	2-7/8	.68
406-025S	2-1/2	3-3/16	4-31/32	3-11/32	.88
406-030S	3	3-1/32	4-15/16	4	1.25

LONG SWEEP ELBOW

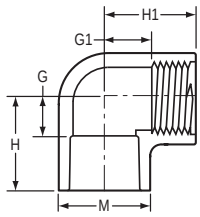
Socket x Socket



Part Number	Size	G	H	M	Approx. Wt. (Lbs.)
406-025LSF	2-1/2	5-7/16	7-7/16	3-1/4	1.26
406-030LSF	3	6-3/8	8-5/8	3-15/16	1.87
406-040LSF	4	8-3/8	10-5/8	5	2.69
406-060LSF	6	13	16-1/4	7-3/16	6.92
406-080LSF	8	22-7/16	26-11/16	9-1/4	19.43

90° ELBOW

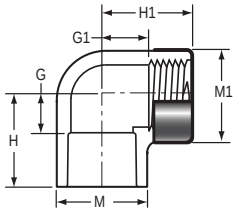
Socket x Fipt



Part Number	Size	G	G1	H	H1	M	Approx. Wt. (Lbs.)
407-005	1/2	1/2	1/2	1-1/4	1-1/4	1-3/32	.06
407-007	3/4	9/16	9/16	1-9/16	1-9/32	1-5/16	.08
407-010	1	11/16	21/32	1-13/16	1-9/16	1-5/8	.14
407-012	1-1/4	7/8	1-5/32	2-1/8	2-1/32	2-1/16	.26
407-015	1-1/2	1	1-1/16	2-5/16	2	2-1/4	.25
407-020	2	1-3/16	1-9/32	2-11/32	2-11/32	2-11/32	.47
407-025	2-1/2	1-1/2	1-1/2	3-1/2	3-1/16	3-5/16	.94
407-030	3	1-13/16	1-31/32	3-11/16	3-21/32	4	1.14
407-040	4	2-5/16	2-15/32	4-5/16	3-15/16	5-1/16	1.85

SPECIAL REINFORCED 90° ELBOW

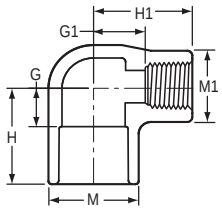
Socket x SR Fipt



Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
407-005SR	1/2	1/2	9/16	1-1/4	1-9/32	1-3/32	1-7/32	.07
407-007SR	3/4	9/16	21/32	1-13/32	1-13/32	1-3/8	1-13/32	.11
407-010SR	1	19/32	13/16	1-23/32	1-23/32	1-11/16	1-23/32	.20
407-012SR	1-1/4	7/8	1-5/32	2-1/8	2-1/32	2-1/16	2-1/16	.28

REDUCING 90° ELBOW

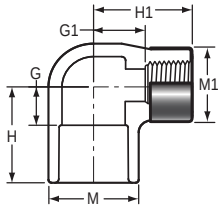
Socket x Fipt



Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
407-053	3/8x1/2	17/32	17/32	1-9/32	1-9/32	7/8	1-3/32	.04
407-074	1/2x3/4	21/32	9/16	1-13/32	1-11/32	1-5/16	1-3/32	.07
407-101	3/4x1/2	9/16	5/8	1-1/2	1-3/8	1-5/16	1-3/32	.07
407-130	1x1/2	7/16	11/16	1-9/16	1-7/16	1-5/8	1-3/32	.10
407-131	1x3/4	11/16	7/8	1-13/16	1-5/8	1-5/8	1-5/16	.11
407-168	1-1/4x1	1	1-1/32	2-1/4	2	2	1-5/8	.19
407-211	1-1/2x1	13/16	1-1/8	2-3/32	2	2-1/4	1-5/8	.21
407-212	1-1/2x1-1/4	15/16	1-1/4	2-1/4	2-7/32	2-3/16	1-15/16	.24
407-249	2x1	13/16	1-9/16	2-5/16	2-3/8	2-3/4	1-11/16	.31
407-250	2x1-1/4	1	1-1/4	2-3/8	2-7/32	2-3/4	2	.31
407-251	2x1-1/2	1-1/8	1-9/16	2-1/2	2-1/2	2-23/32	2-13/32	.42

SPECIAL REINFORCED REDUCING 90° ELBOW

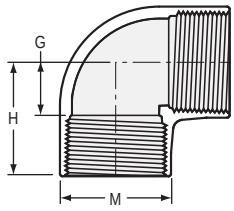
Socket x SR Fipt



Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
407-249SR	2x1	1-3/16	1-9/16	2-5/16	2-3/8	2-3/4	1-1/16	.33
407-251SR	2x1-1/2	1-1/8	1-19/32	2-1/2	2-17/32	2-23/32	2-7/16	.45

90° ELBOW

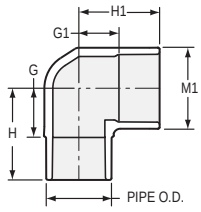
Fipt x Fipt



Part Number	Size	G	H	M	Approx. Wt. (Lbs.)
408-005	1/2	1/2	1-7/32	1-3/32	.06
408-007	3/4	1/2	1-1/4	1-5/16	.09
408-010	1	5/8	1-17/32	1-5/8	.16
408-012	1-1/4	1	2	1-31/32	.26
408-015	1-1/2	1	2	1-15/16	.34
408-020	2	1-5/16	2-11/32	2-3/4	.50

90° STREET ELBOW

Spigot x Socket



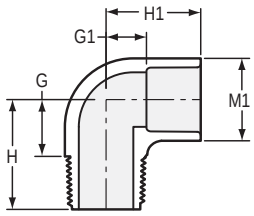
Part Number	Size	G	G1	H	H1	M1	Approx. Wt. (Lbs.)
409-005	1/2	3/4	15/32	15/32	1-1/4	1-3/32	.04
409-007	3/4	27/32	17/32	1-27/32	1-17/32	1-11/32	.08
409-010	1	1	23/32	2-1/8	1-13/16	1-5/8	.12
409-012	1-1/4	1-3/16	13/16	2-15/32	2-1/16	1-31/32	.19
409-015	1-1/2	1-11/32	1-1/16	2-5/8	2-3/8	2-1/4	.25
409-020	2	1-19/32	1-1/4	3	2-5/8	2-23/32	.36
409-025	2-1/2	1-15/32	1-17/32	3-23/32	3-3/8	3-11/32	.76
409-030	3	2-9/32	1-13/16	4-5/32	3-11/16	4	1.09
409-040	4	2-29/32	2-5/16	4-15/16	4-11/32	5-1/16	1.86
409-050	5	4-1/2	3	7-3/4	6	6-1/8	4.36
409-060	6	5-1/16	3-9/16	8-5/16	6-9/16	7-1/4	5.95
409-080	8	6-3/8	4-15/32	10-9/16	8-1/2	9-5/16	10.37
409-080F	8	7-1/2	7-1/2	11-3/4	11-3/4	9-1/4	10.02
409-100F	10	8-1/4	5-3/4	13-1/2	13-3/4	11-1/2	18.20
409-140F	14	12-1/4	12-1/4	19-1/4	19-1/4	14-7/8	39.38
409-160F	16	18-5/8	14-1/8	27-5/8	22-1/8	17	75.48
409-180F	18	21-3/4	17-1/4	31-3/4	26-1/4	19-1/8	115.96
409-200F	20	25-3/4	18-3/4	34-3/4	28-3/4	21-3/16	151.63

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

90° STREET ELBOW

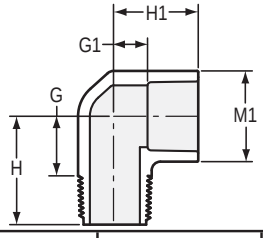
Mipt x Socket



Part Number	Size	G	G1	H	H1	M1	Approx. Wt. (Lbs.)
410-005	1/2	21/32	3/8	1-11/32	1-5/32	1-3/32	.04
410-007	3/4	27/32	15/32	1-17/32	1-15/32	1-5/16	.08
410-010	1	1-1/32	11/16	1-29/32	1-13/16	1-5/8	.13
410-012	1-1/4	1-3/16	3/4	2-3/32	2	2	.18
410-015	1-1/2	1-13/32	1	2-13/32	2-5/16	2-7/32	.40
410-020	2	1-5/8	1-11/32	2-9/16	2-23/32	2-23/32	.41
410-030	3	2-11/16	1-27/32	3-31/32	3-23/32	4	1.22

REDUCING 90° STREET ELBOW

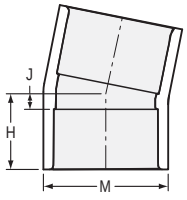
Mipt x Socket



Part Number	Size	G	G1	H	H1	M1	Approx. Wt. (Lbs.)
410-101	3/4x1/2	23/32	13/32	1-7/16	1-1/4	1-3/32	.06
410-102	3/4x1	3/4	1/2	1-3/4	1-11/32	1-5/8	.09

11-1/4° ELBOW

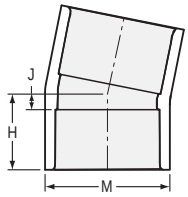
Socket x Socket



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
411-005F	1/2	1-5/16	5/16	1-1/16	.05
411-007F	3/4	1-5/16	5/16	1-1/4	.07
411-010F	1	1-9/16	5/16	1-9/16	.10
411-012F	1-1/4	2	1/2	1-5/16	.21
411-015	1-1/2	1-19/32	7/32	2-3/8	.24

11-1/4° ELBOW (continued)

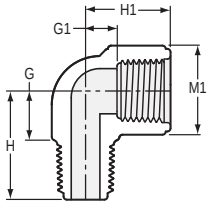
Socket x Socket



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
411-015F	1-1/2	2	1/2	2-3/16	.21
411-020	2	1-3/4	1/4	2-13/16	.33
411-025F	2-1/2	2-11/16	11/16	3-1/4	.57
411-030	3	1-7/8	5/16	4-1/8	.88
411-040	4	2-21/32	13/32	5-1/4	1.51
411-045F	4-1/2	3-1/4	3/4	5-7/16	1.32
411-050F	5	3-13/16	13/16	6-1/16	2.18
411-060F	6	4-1/4	1	7-3/16	2.75
411-080F	8	5-5/16	1-1/16	9-1/4	5.29
411-100F	10	6-27/32	1-15/32	11-1/2	9.42
411-120F	12	7-31/32	1-23/32	13-5/8	14.08
411-140F	14	8-3/4	1-3/4	14-7/8	18.71
411-160F	16	10-1/4	2-1/4	17	28.40
411-180F	18	12	3-1/8	19-1/8	45.02
411-200F	20	13-3/8	3-3/8	21-3/16	57.11
411-240F	24	15-1/8	4-1/8	25-1/2	90.42

90° STREET ELBOW

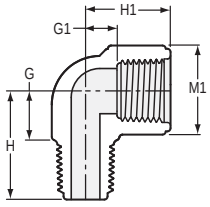
Mipt x Fipt



Part Number PVC	Size	G	G1	H	H1	M1	Approx. Wt. (Lbs.) PVC
412-005	1/2	23/32	11/32	1-13/32	1-1/16	1-1/8	.05
412-007	3/4	13/16	7/16	1-17/32	1-3/16	1-11/32	.07
412-010	1	15/16	9/16	1-25/32	1-7/16	1-5/8	.13
412-012	1-1/4	1-7/32	7/8	2-7/32	1-7/8	1-31/32	.19
412-015	1-1/2	1-5/16	1	2-11/32	2-1/32	2-7/32	.25
412-020	2	1-19/32	1-1/4	2-3/4	2-5/16	2-23/32	.39
412-030	3	2-25/32	1-7/8	4-15/32	3	4-3/4	1.50

90° STREET ELBOW

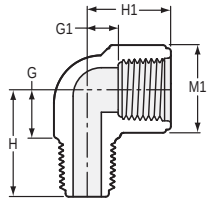
Mipt x Fipt



Part Number HDPE	Size	G	G1	H	H1	M1	Approx. Wt. (Lbs.) HDPE
M412-005	1/2	23/32	11/32	1-13/32	1-1/16	1-1/8	.04
M412-007	3/4	13/16	7/16	1-17/32	1-3/16	1-11/32	.04
M412-010	1	15/16	9/16	1-25/32	1-7/16	1-5/8	.08
M412-012	1-1/4	1-7/32	7/8	2-7/32	1-7/8	1-31/32	.15
M412-015	1-1/2	1-11/32	1-1/16	2-11/32	2-1/8	2-13/32	.20

90° STREET ELBOW (Short Pattern)

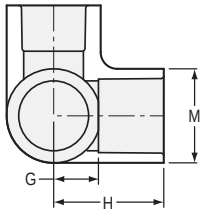
Mipt x Fipt



Part Number - HDPE	Size	G	G1	H	H1	M1	Approx. Wt. (Lbs.)
MS412-005	1/2	21/32	5/16	1-3/16	31/32	1-1/16	.02
MS412-007	3/4	3/4	7/16	1-5/16	1-3/32	1-9/32	.03
MS412-010	1	7/8	9/16	1-9/16	1-3/8	1-9/16	.06
MS412-101	3/4x1/2	21/32	1/2	1-7/32	1-1/8	1	.03

SIDE OUTLET ELBOW

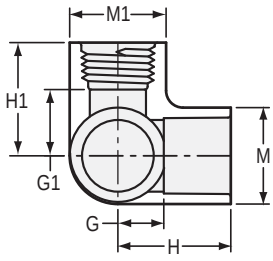
Socket x Socket x Socket



Part Number	Size	G	H	M	Approx. Wt. (Lbs.)
413-005	1/2	1/2	1-1/4	1-3/32	.06
413-007	3/4	9/16	1-9/16	1-5/16	.10
413-010	1	3/16	1-7/8	1-5/8	.17
413-015	1-1/2	1-1/16	2-5/16	2-1/4	.31
413-020	2	1-5/16	2-5/8	2-3/4	.47

SIDE OUTLET ELBOW (continued)

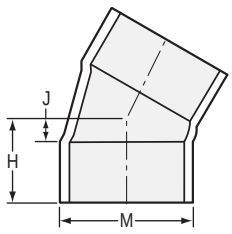
Socket x Socket x Fipt



Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
414-101	3/4x3/4x1/2	9/16	21/32	1-9/16	1-13/32	1-5/16	1-1/16	.09
414-130	1x1x1/2	11/16	13/16	1-13/16	1-9/16	1-5/8	1-1/16	.14

30° ELBOW

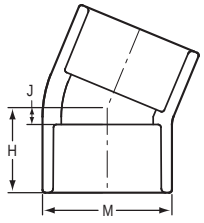
Socket x Socket



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
415-005F	1/2	1-3/8	3/8	1-1/16	0.04
415-007F	3/4	1-7/16	7/16	1-1/4	0.07
415-010F	1	1-3/4	1/2	1-9/16	0.12
415-012F	1-1/4	2-1/8	5/8	1-15/16	0.17
415-015F	1-1/2	2-3/16	11/16	2-3/16	0.19
415-020F	2	2-1/2	3/4	2-11/16	0.34
415-025F	2-1/2	2-15/16	15/16	3-1/4	0.62
415-030F	3	3-5/16	1-1/16	3-15/16	0.93
415-040F	4	3-7/16	1-3/16	5	1.39
415-045F	4-1/2	3-3/4	1-1/4	5-7/16	1.48
415-050F	5	4-5/16	1-5/16	6-1/16	2.27
415-060F	6	4-7/8	1-5/8	7-3/16	3.25
415-080F	8	6-1/8	1-7/8	9-1/4	5.40
415-100F	10	7-1/4	2	11-1/2	10.67
415-120F	12	9-5/16	2-9/16	13-1/2	16.56
415-140F	14	9-3/4	2-3/4	14-7/8	20.68
415-160F	16	11-7/8	3-7/8	17	32.27
415-180F	18	13-1/2	4-1/2	19-1/8	48.74
415-200F	20	15-1/4	5-1/4	21-1/4	63.01
415-240F	24	17	6	25-1/2	104.12

22-1/2° ELBOW

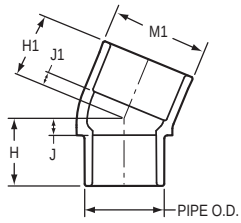
Socket x Socket



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
416-005	1/2	1-1/16	3/16	1-5/32	.06
416-007	3/4	1-3/16	3/16	1-7/16	.09
416-010	1	1-3/8	9/32	1-23/32	.13
416-012	1-1/4	1-1/2	11/32	2-3/32	.21
416-015	1-1/2	1-11/32	11/32	2-11/32	.26
416-020	2	1-23/32	3/8	2-25/32	.24
416-025	2-1/2	2-1/4	1/2	3-1/2	.69
416-025F	2-1/2	2-13/16	13/16	3-1/4	.63
416-030	3	2-13/32	9/16	4-5/32	.83
416-040	4	2-27/32	19/32	5-3/16	1.69
416-045F	4-1/2	3-9/16	1-1/16	5-7/16	1.59
416-050F	5	4-1/8	1-1/8	6-1/16	2.27
416-060	6	4-9/16	1-9/32	7-3/16	4.39
416-060F	6	4-5/8	1-3/8	7-3/16	3.25
416-080	8	5-7/8	1-3/4	9-3/4	8.38
416-080F	8	5-13/16	1-9/16	9-1/4	5.73
416-100F	10	7-7/16	2-3/16	11-1/2	10.04
416-120F	12	8-1/2	2-1/4	13-9/16	15.74
416-140F	14	9-1/2	2-1/2	15	19.69
416-160F	16	11-1/4	3-1/4	17	30.98
416-180F	18	13-1/2	4-1/2	19-3/16	45.38
416-200F	20	14-1/2	4-1/2	21-3/16	59.07
416-240F	24	16-1/8	5-1/8	25-1/2	98.64

22-1/2° STREET ELBOW

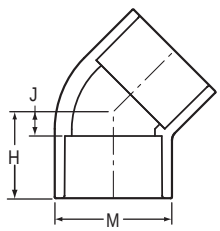
Spigot x Socket



Part Number	Size	H	H1	J	J1	M1	Approx. Wt. (Lbs.)
442-005	1/2	1-1/16	1	1/4	1/4	1-5/32	.05
442-010	1	1-15/32	1-3/8	11/32	9/32	1-11/16	.13
442-012	1-1/4	1-1/2	1-3/8	3/16	1-11/16	2-1/16	.20
442-015	1-1/2	1-21/32	1-7/8	9/32	1/2	2-3/8	.26
442-020	2	2	1-29/32	15/32	13/32	2-7/8	.40
442-025	2-1/2	2-7/32	2-7/32	15/32	15/32	3-1/2	.66
442-025F	2-1/2	4-9/16	1-13/16	13/16	3/16	3-1/4	.81
442-030	3	2-1/2	2-5/16	21/32	7/16	4-5/32	.95
442-040	4	4-3/8	2-7/8	1-7/8	5/8	5-1/4	2.14
442-060	6	5-11/16	3-15/16	2-3/8	7/8	7-5/8	5.87
442-080	8	7-3/8	5-1/8	3-1/8	1-1/8	9-3/4	11.34

45° ELBOW

Socket x Socket

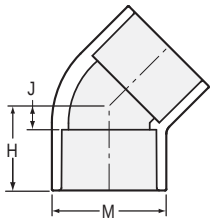


Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
417-005	1/2	1	1/4	1-3/32	.04
417-007	3/4	1-3/8	7/16	1-5/16	.07
417-010	1	1-1/2	15/32	1-21/32	.11
417-012	1-1/4	1-19/32	3/8	1-31/32	.15
417-015	1-1/2	1-29/32	19/32	2-1/4	.22
417-020	2	2-1/16	11/16	2-3/4	.31
417-025	2-1/2	2-7/16	11/16	3-3/8	.57
417-030	3	2-27/32	27/32	4	.84
417-040	4	3-3/32	1-3/32	5-1/32	1.22
417-045F	4-1/2	4-3/16	1-11/16	5-7/16	1.59
417-050	5	4-3/8	1-3/8	6-5/32	2.47
417-060	6	4-3/4	1-23/32	7-9/32	3.61
417-080	8	6	2	9-3/8	6.58
417-100	10	8-1/8	3-1/8	11-1/2	20.72

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

45° ELBOW (continued)

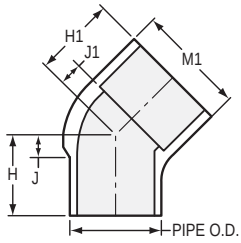
Socket x Socket



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
417-120	12	9-19/32	3-3/32	14-5/16	34.15
417-120F	12	9-19/32	3-11/32	13-9/16	17.39
417-140	14	10-5/16	3-5/16	15-5/8	40.10
417-140F	14	10-7/8	3-7/8	14-7/8	24.61
417-160F	16	12-1/2	4-1/2	17	34.85
417-180F	18	14-7/8	5-7/8	19-1/8	52.10
417-200F	20	16-1/2	6-1/2	21-3/16	68.92
417-240F	24	19-7/8	7-7/8	25-1/2	112.34

45° STREET ELBOW

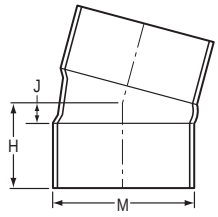
Spigot x Socket



Part Number	Size	H	H1	J	J1	M1	Approx. Wt. (Lbs.)
427-005	1/2	1-9/32	1-9/32	11/32	13/32	1-3/16	.06
427-007	3/4	1-1/2	1-17/32	7/16	17/32	1-13/32	.09
427-010	1	1-9/16	1-3/8	5/8	5/16	1-5/8	.10
427-012	1-1/4	1-25/32	1-29/32	1/2	21/32	2-3/32	.22
427-015	1-1/2	2-1/32	2-3/32	19/32	23/32	2-11/32	.19
427-020	2	2	2	5/8	5/8	2-23/32	.30
427-025	2-1/2	2-5/8	2-5/8	3/4	7/8	3-11/32	.59
427-030	3	2-31/32	3-1/32	1	1-7/32	4-5/32	1.19
427-040	4	3-21/32	3-13/16	1-9/32	1-9/16	5-3/16	2.07
427-050	5	6-1/8	4-3/8	2-7/8	1-3/8	6-1/16	3.49
427-060	6	5-1/4	6-1/4	1-3/4	3	7-5/8	6.16
427-080	8	6-5/8	5-31/32	2-19/32	1-3/4	9-3/4	10.60

15° ELBOW

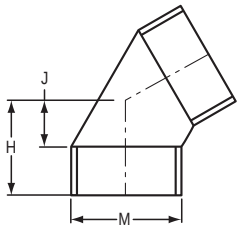
Socket x Socket



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
418-005F	1/2	1-5/16	5/16	1-1/16	.05
418-007F	3/4	1-5/16	5/16	1-1/4	.07
418-010F	1	1-5/8	3/8	1-9/16	.11
418-012F	1-1/4	2	1/2	1-15/16	.14
418-015F	1-1/2	2	1/2	2-3/16	.20
418-020F	2	2-5/16	9/16	2-11/16	.34
418-025F	2-1/2	2-3/4	3/4	3-1/4	.57
418-030F	3	3	3/4	3-15/16	.82
418-040F	4	3	13/16	5	1.39
418-045F	4-1/2	3-3/8	7/8	5-7/16	1.36
418-050F	5	3-7/8	7/8	6-1/16	1.88
418-060F	6	4-3/8	1-1/8	7-3/16	2.95
418-080F	8	5-1/2	1-1/4	9-1/4	5.29
418-100F	10	6-31/32	1-19/32	11-1/2	9.42
418-120F	12	8-1/4	2	13-9/16	14.91
418-140F	14	9-1/8	2-1/8	15	19.69
418-160F	16	10-5/8	2-5/8	17	29.69
418-180F	18	12-1/4	3-1/4	19-1/8	43.70
418-200F	20	13-5/8	3-5/8	21-1/4	57.11
418-240F	24	14-7/8	3-7/8	25-1/2	90.42

60° ELBOW

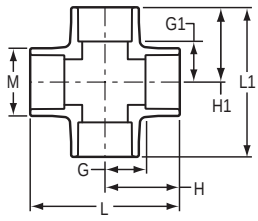
Socket x Socket



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
424-005F	1/2	1-5/8	5/8	1-1/16	.13
424-007F	3/4	1-11/16	11/16	1-1/4	.07
424-010F	1	2	3/4	1-9/16	.17
424-012F	1-1/4	2-1/2	1	1-15/16	.38
424-015F	1-1/2	2-9/16	1-1/16	2-3/16	.27
424-020F	2	2-15/16	1-3/16	2-11/16	.59
424-025F	2-1/2	3-1/2	1-1/2	3-1/4	1.38
424-030F	3	3-5/8	1-3/8	3-15/16	1.70
424-040F	4	4-1/4	2	5	1.52
424-045F	4-1/2	4-5/8	2-1/8	5-7/16	2.96
424-050F	5	5-5/16	2-5/16	6-1/16	2.42
424-060F	6	6-1/16	2-13/16	7-3/16	6.20
424-080F	8	7-5/8	3-3/8	9-1/4	11.89
424-100F	10	9-1/4	4	11-1/2	20.09
424-120F	12	11	4-3/4	13-9/16	31.47
424-140F	14	17-1/2	10-1/2	15	42.32
424-160F	16	20-1/4	12-1/4	17	36.39
424-180F	18	22-7/8	13-7/8	19-3/16	94.11
424-200F	20	26-1/4	16-1/4	21-1/4	122.09
424-240F	24	31	20	25-1/2	199.58

CROSS

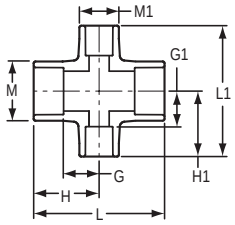
Socket x Socket x Socket x Socket



Part Number	Size	G	G1	H	H1	L	L1	M	Approx. Wt. (Lbs.)
420-005	1/2	17/32	17/32	1-9/32	1-9/32	2-17/32	2-17/32	1-3/32	.07
420-007	3/4	9/16	9/16	1-9/16	1-9/16	3-1/8	3-1/8	1-5/16	.12
420-010	1	13/16	13/16	1-15/16	1-15/16	3-7/8	3-7/8	1-5/8	.25
420-012	1-1/4	1-3/32	1-3/32	2-11/32	2-11/32	4-23/32	4-23/32	2-1/16	.43
420-015	1-1/2	1-1/4	1-1/4	2-19/32	2-19/32	5-5/32	5-5/32	2-5/16	.54
420-020	2	1-17/32	1-17/32	2-29/32	2-29/32	5-27/32	5-27/32	2-13/16	.78
420-025	2-1/2	1-21/32	1-21/32	3-21/32	3-21/32	7-11/32	7-11/32	3-3/8	1.61
420-030	3	2-1/16	2-1/16	3-15/16	3-15/16	7-29/32	7-29/32	4-1/32	1.74
420-040	4	2-1/2	2-1/2	4-1/2	4-1/2	9-1/32	9-1/32	5-1/32	3.22
420-050F	5	6	6	9	9	18	18	6-1/16	13.68
420-060F	6	6-3/16	6-3/16	9-7/16	9-7/16	18-7/8	18-7/8	7-3/16	12.36
420-080F	8	8-9/16	8-9/16	12-13/16	12-13/16	25-5/8	25-5/8	9-1/4	26.10
420-100F	10	9-7/8	9-3/8	15-1/8	14-5/8	30-1/4	29-1/4	11-1/2	43.81
420-120F	12	10-3/4	10-3/16	17	16-7/16	34	32-7/8	13-9/16	66.22
420-140F	14	11-1/4	11	18-3/8	18	36-3/4	36	14-7/8	84.87
420-160F	16	15	12-7/8	23	20-7/8	46	41-3/4	17	128.99
420-180F	18	15-7/8	13-3/8	24-7/8	22-3/8	49-3/4	44-3/4	19-1/8	176.46
420-200F	20	18-1/4	15-1/2	28-1/4	25-1/2	56-1/2	51	21-3/16	153.70
420-240F	24	21-1/8	17-1/2	33-1/8	29-1/2	66-1/4	59	25-3/8	253.36

REDUCING CROSS

Socket x Socket x Socket x Socket



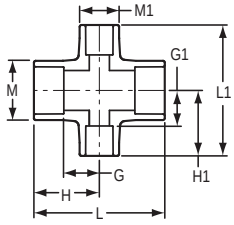
Part Number	Size	G	G1	H	H1	L	L1	M	M1	Approx. Wt. (Lbs.)
420-101[1]	3/4x3/4x1/2x1/2	1-7/16	1-1/16	1-9/16	1-13/16	3-1/8	3-5/8	1-5/16	1-5/16	.17
420-131	1x1x3/4x3/4	23/32	5/8	1-5/8	1-5/8	3-1/4	3-1/4	1-7/8	1-17/32	.30
420-167[1]	1-1/4x1-1/4x3/4x3/4	1-1/8	1-21/32	2-11/32	2-21/32	4-11/16	5-5/16	2-1/32	2-1/32	.71
420-168[1]	1-1/4x1-1/4x1x1	1-3/32	1-9/16	2-11/32	2-5/8	4-23/32	5-7/32	2-1/16	2-1/16	.56
420-248	2x2x3/4x3/4	11/16	1-7/16	2-7/32	2-7/16	4-13/32	4-7/8	2-29/32	1-13/32	.55
420-249	2x2x1x1	13/16	1-3/8	2-3/16	2-1/2	4-3/8	5	2-3/4	1-5/8	.39
420-250[1]	2x2x1-1/4x1-1/4	1-9/16	2-1/16	2-15/16	3-15/16	5-27/32	6-5/8	2-13/16	2-13/16	1.34
420-251[1]	2x2x1-1/2x1-1/2	1-17/32	1-25/32	2-29/32	3-1/8	5-13/16	6-1/4	2-25/32	2-25/32	1.18
420-288[1]	2-1/2x2-1/2x3/4x3/4	1-21/32	3-3/32	3-21/32	4-3/32	7-11/32	8-7/32	3-3/8	3-3/8	2.33
420-289	2-1/2x2-1/2x1x1	7/8	1-23/32	2-11/16	2-7/8	5-11/32	5-3/4	3-1/2	1-3/4	.97
420-335[1]	3x3x1x1	1-15/16	3-1/4	3-15/16	4-3/8	7-7/8	8-3/4	4	4	3.12
420-336[1]	3x3x1-1/4x1-1/4	2	3-1/8	3-15/16	4-3/8	7-7/8	8-3/4	4	4	3.11
420-337[1]	3x3x1-1/2x1-1/2	1-31/32	3-1/16	3-31/32	4-3/8	7-15/16	8-23/32	4-1/32	4-1/32	3.14
420-338[1]	3x3x2x2	2-1/16	2-5/8	3-31/32	4-9/32	7-29/32	8-9/16	4-1/32	4-1/32	2.72
420-339[1]	3x3x2-1/2x2-1/2	1-15/16	2-11/32	3-15/16	4-11/32	7-7/8	8-11/16	4	4	2.97
420-420[1]	4x4x2x2	2-1/2	3-17/32	4-1/2	4-29/32	9-1/32	9-13/16	5-1/32	5-1/4	4.99
420-420F	4x4x2x2	4-1/2	4-1/4	6-3/4	6	13-1/2	12	5-1/16	2-11/16	3.37
420-421[1]	4x4x2-1/2x2-1/2	2-1/2	2-15/16	4-1/2	4-15/16	9	9-7/8	5	5	5.08
420-422[1]	4x4x3x3	2-1/2	2-15/16	4-1/2	4-15/16	9	9-7/8	5	5	4.90
420-528F	6x6x2x2	5-1/8	5-5/16	8-3/8	7-1/16	16-3/4	14-1/8	7-3/16	2-11/16	7.71
420-529F	6x6x2-1/2x2-1/2	5-3/8	5-13/16	8-5/8	7-13/16	17-1/4	15-5/8	7-3/16	3-1/4	9.21
420-530F	6x6x3x3	5-7/8	6-1/16	9-1/8	8-5/16	18-1/4	16-5/8	7-3/16	3-15/16	9.21
420-532F	6x6x4x4	6-1/2	6-3/8	9-3/4	8-5/8	19-1/2	17-1/4	7-3/16	5	10.35
420-578F	8x8x2x2	5-5/16	6-1/4	9-9/16	8	19-1/8	16	9-1/4	2-11/16	11.23
420-580F	8x8x3x3	5-11/16	7	9-15/16	9-1/4	19-7/8	18-1/2	9-1/4	3-15/16	14.45
420-582F	8x8x4x4	6-5/16	7-5/16	10-9/16	9-9/16	21-1/8	19-1/8	9-1/4	5	16.52
420-585F	8x8x6x6	7-5/16	7-3/8	11-9/16	10-5/8	23-1/8	21-1/4	9-1/4	7-3/16	20.11
420-621F	10x10x2x2	4-7/8	7-1/4	10-1/8	9	20-1/4	18	11-1/2	2-11/16	16.08
420-622F	10x10x2-1/2	5-5/8	7-3/4	10-7/8	9-3/4	21-3/4	19-1/2	11-1/2	3-1/4	20.48
420-623F	10x10x3x3	5-3/8	8	10-5/8	10-1/4	21-1/4	20-1/2	11-1/2	3-15/16	22.78
420-624F	10x10x4x4	5-7/8	8-5/16	11-1/8	10-9/16	22-1/4	21-1/8	11-1/2	5	22.73
420-626F	10x10x6x6	6-7/8	8-3/8	12-1/8	11-5/8	24-1/4	23-1/4	11-1/2	7-3/16	30.13
420-628F	10x10x8x8	8-1/2	8-5/16	13-3/4	12-9/16	27-1/2	25-1/8	11-1/2	9-1/4	35.40
420-661F	12x12x2x2	5-1/4	8-1/4	11-1/2	10	23	20	13-9/16	2-11/16	29.47
420-662F	12x12x2-1/2x2-1/2	5-3/4	8-3/4	12	10-3/4	24	21-1/2	13-9/16	3-1/4	29.06

[1] Outlet sized with bushing

REDUCING CROSS

Socket x Socket x Socket x Socket

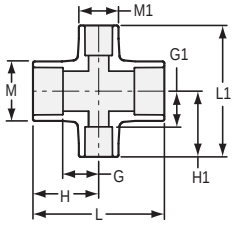
(continued)



Part Number	Size	G	G1	H	H1	L	L1	M	M1	Approx. Wt. (Lbs.)
420-663F	12x12x3x3	5-3/4	9	12	11-1/4	24	22-1/2	13-9/16	3-15/16	34.47
420-664F	12x12x4x4	7	9-5/16	13-1/4	11-9/16	26-1/2	23-1/8	13-9/16	5	33.96
420-666F	12x12x6x6	8	9-3/8	14-1/4	12-5/8	28-1/2	25-1/4	13-9/16	7-3/16	39.69
420-668F	12x12x8x8	8-3/4	9-5/16	15	13-9/16	30	27-1/8	13-9/16	9-1/4	45.81
420-670F	12x12x10x10	10-1/4	10-3/8	16-1/2	15-5/8	33	31-1/4	13-9/16	11-1/2	53.90
420-691F	14x14x2x2	5-7/8	8-13/16	12-7/8	10-9/16	25-3/4	21-1/8	14-7/8	2-11/16	34.95
420-693F	14x14x3x3	6-1/2	9-9/16	13-1/2	11-13/16	27	23-5/8	14-7/8	3-15/16	38.68
420-694F	14x14x4x4	7-3/8	9-7/8	14-3/8	12-1/8	28-3/4	24-1/4	14-7/8	5	40.35
420-696F	14x14x6x6	7-7/8	9-15/16	14-7/8	13-3/16	29-3/4	26-3/8	14-7/8	7-3/16	46.98
420-698F	14x14x8x8	8-7/8	9-7/8	15-7/8	14-1/8	31-3/4	28-1/4	14-7/8	9-1/4	44.67
420-700F	14x14x10x10	10-3/8	10-15/16	17-3/8	16-3/16	34-3/4	32-3/8	14-7/8	11-1/2	44.43
420-702F	14x14x12x12	11-3/8	10-3/4	18-3/8	17	36-3/4	34	14-7/8	13-9/16	66.57
420-751F	16x16x2x2	6-3/8	9-3/4	14-3/8	11-1/2	28-3/4	23	17	2-11/16	50.82
420-753F	16x16x3x3	6-1/2	10-1/2	14-1/2	12-3/4	29	25-1/2	17	3-15/16	56.76
420-754F	16x16x4x4	8	10-13/16	16	13-1/16	32	26-1/8	17	5	62.49
420-756F	16x16x6x6	9	10-7/8	17	14-1/8	34	28-1/4	17	7-3/16	66.61
420-758F	16x16x8x8	10	10-13/16	18	15-1/16	36	30-1/8	17	9-1/4	77.97
420-760F	16x16x10x10	11	11-7/8	19	17-1/8	38	34-1/4	17	11-1/2	86.09
420-762F	16x16x12x12	12	11-11/16	20	17-15/16	40	35-7/8	17	13-9/16	91.41
420-764F	16x16x14x14	13	11-15/16	21	18-15/16	42	37-7/8	17	14-7/8	109.43
420-781F	18x18x2x2	6-1/4	10-11/16	15-1/4	12-7/16	30-1/2	24-7/8	19-1/8	2-11/16	66.00
420-783F	18x18x3x3	7-1/4	11-7/16	16-1/4	13-11/16	32-1/2	27-3/8	19-1/8	3-15/16	73.00
420-784F	18x18x4x4	7-3/4	11-3/4	16-3/4	14	33-1/2	28	19-1/8	5	76.00
420-786F	18x18x6x6	8-3/4	11-13/16	17-3/4	15-1/16	35-1/2	30-1/8	19-1/8	7-3/16	84.00
420-788F	18x18x8x8	9-3/4	11-3/4	18-3/4	16	37-1/2	32	19-1/8	9-1/4	93.50
420-790F	18x18x10x10	10-3/4	12-13/16	19-3/4	18-1/16	39-1/2	36-1/8	19-1/8	11-1/2	---
420-792F	18x18x12x12	11-3/4	12-5/8	20-3/4	18-7/8	41-1/2	37-3/4	19-1/8	13-9/16	111.65
420-794F	18x18x14x14	12-7/8	12-7/8	21-7/8	19-7/8	43-3/4	39-3/4	19-1/8	14-7/8	129.34
420-796F	18x18x16x16	13-7/8	13-13/16	22-7/8	21-13/16	45-3/4	43-5/8	19-1/8	17	145.80
420-811F	20x20x2x2	6-3/4	12-7/16	16-3/4	14-3/16	33-1/2	28-3/8	21-3/16	2-11/16	83.00
420-813F	20x20x3x3	7-1/4	12-7/16	17-1/4	14-11/16	34-1/2	29-3/8	21-3/16	3-15/16	92.00
420-814F	20x20x4x4	8-1/4	12-3/4	18-1/4	15	36-1/2	30	21-3/16	5	95.82
420-816F	20x20x6x6	19-1/4	12-13/16	19-1/4	16-1/16	38-1/2	32-1/8	21-3/16	7-3/16	105.00

REDUCING CROSS (continued)

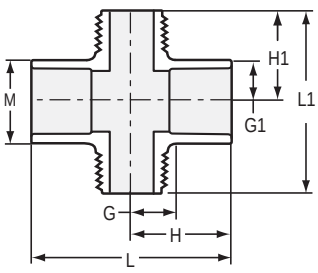
Socket x Socket x Socket x Socket



Part Number	Size	G	G1	H	H1	L	L1	M	M1	Approx. Wt. (Lbs.)
420-818F	20x20x8x8	10-1/4	12-3/4	20-1/4	17	40-1/2	34	21-3/16	9-1/4	115.00
420-820F	20x20x10x10	11-1/4	13-13/16	21-1/4	19-1/16	42-1/2	38-1/8	21-3/16	11-1/2	126.30
420-822F	20x20x12x12	12-1/4	13-5/8	22-1/4	19-7/8	44-1/2	39-3/4	21-3/16	13-9/16	140.46
420-824F	20x20x14x14	13-1/4	13-7/8	23-1/4	20-7/8	46-1/2	41-3/4	21-3/16	14-7/8	140.77
420-826F	20x20x16x16	14-1/4	14-13/16	24-1/4	22-13/16	48-1/2	45-5/8	21-3/16	17	165.34
420-828F	20x20x18x18	15-1/4	14-3/8	25-1/4	23-3/8	50-1/2	46-3/4	21-3/16	19-1/8	193.92
420-901F	24x24x2x2	8-1/8	14-5/16	20-1/8	16-1/16	40-1/4	32-1/8	25-3/8	2-11/16	156.00
420-903F	24x24x3x3	8-5/8	14-5/6	20-5/8	16-9/16	41-1/4	33-1/8	25-3/8	3-15/16	162.00
420-904F	24x24x4x4	9-1/8	14-5/8	21-1/8	16-7/8	42-1/4	33-3/4	25-3/8	5	167.00
420-906F	24x24x6x6	10-1/8	14-11/16	22-1/8	17-15/16	44-1/4	35-7/8	25-3/8	7-3/16	179.90
420-908F	24x24x8x8	11-1/8	14-5/8	23-1/8	18-7/8	46-1/4	37-3/4	25-3/8	9-1/4	193.00
420-910F	24x24x10x10	12-1/8	15-11/16	24-1/8	20-15/16	48-1/4	41-7/8	25-3/8	11-1/2	190.14
420-912F	24x24x12x12	13-1/8	15-1/2	25-1/8	21-3/4	50-1/4	43-1/2	25-3/8	13-9/16	205.85
420-914F	24x24x14x14	13-3/4	15-3/4	25-3/4	22-3/4	51-1/2	45-1/2	25-3/8	14-7/8	103.61
420-916F	24x24x16x16	14-3/4	16-11/16	26-3/4	24-11/16	53-1/2	49-3/8	25-3/8	17	243.82
420-918F	24x24x18x18	15-3/4	16-1/4	27-3/4	25-1/4	55-1/2	50-1/2	25-3/8	19-1/8	268.14
420-920F	24x24x20x20	16-3/4	17-3/8	28-3/4	27-3/8	57-1/2	54-3/4	25-3/8	21-3/16	292.79

CROSS

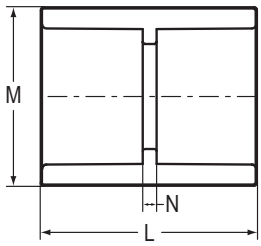
Socket x Mipt x Socket x Mipt



Part Number	Size	G	G1	H	H1	L	L1	M	Approx. Wt. (Lbs.)
421A-010	1x1x1x1	21/32	1-1/32	1-23/32	1-7/8	3-7/16	3-3/4	1-5/8	.19

COUPLING

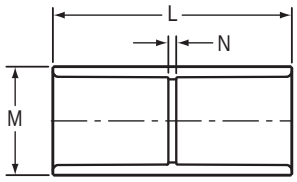
Socket x Socket



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
429-003	3/8	2-5/8	7/8	1/8	.03
429-005	1/2	1-19/32	1-3/32	3/32	.03
429-005N	1/2	1-5/8	1-1/16	1/8	.02
429-007	3/4	2-3/32	1-5/16	3/32	.05
429-007N	3/4	2-3/32	1-5/16	3/32	.05
429-010	1	2-1/8	1-19/32	1/8	.07
429-010N	1	2-11/32	1-21/32	3/32	.10
429-012	1-1/4	2-11/32	1-31/32	3/32	.11
429-015	1-1/2	2-5/8	2-7/32	1/16	.13
429-020	2	2-7/8	2-3/4	3/32	.21
429-025	2-1/2	3-3/4	3-5/16	3/16	.41
429-030	3	3-31/32	4	3/16	.57
429-040	4	4-1/4	5-1/32	3/16	.85
429-045F	4-1/2	6-1/4	5-7/16	1-1/4	1.43
429-050	5	6-3/16	6-1/8	3/16	1.67
429-060	6	6-5/16	7-1/4	1/4	2.11
429-080	8	8-11/32	9-11/32	1/4	4.22
429-100	10	10-3/8	11-9/16	15/32	7.24
429-100F	10	12-3/8	11-1/2	1-7/8	8.16
429-120	12	12-3/8	13-21/32	3/8	11.68
429-120F	12	14-3/4	13-9/16	2-1/4	13.25
429-140	14	14-13/32	15-5/8	7/16	27.27
429-140F	14	16-1/4	14-7/8	2-1/4	18.22
429-160F	16	18-5/8	17	2-5/8	23.23
429-180F	18	21-3/4	19-1/8	3-3/4	38.65
429-200F	20	24	21-3/16	4	48.63
429-240F	24	29-1/4	25-3/8	5-1/4	82.20

DEEP SOCKET COUPLING

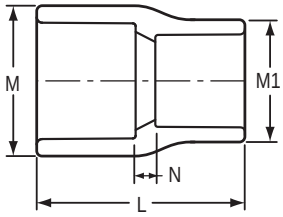
Socket x Socket



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
479-005N	1/2	2-1/2	1-1/16	3/16	.04
479-007	3/4	2-7/8	1-5/16	3/32	.07
479-010	1	3-5/8	1-5/8	3/32	.13
479-015	1-1/2	4-5/8	2-1/4	1/8	.24
479-020	2	5-3/32	2-3/4	3/32	.36
479-025	2-1/2	7-1/2	3-5/16	1/4	.79
479-030	3	8	4	1/4	1.06
479-040	4	8-3/16	5	5/16	1.53
479-045F	4-1/2	9-1/2	5-7/16	1-1/2	1.92
479-060F	6	12	7-3/16	1-1/2	3.72

REDUCER COUPLING

Socket x Socket

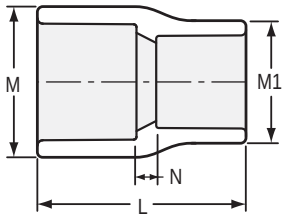


Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
429-101	3/4x1/2	1-25/32	1-5/16	1-3/32	1/8	.04
429-130	1x1/2	2-7/32	1-5/8	1-3/32	13/32	.07
429-131	1x3/4	2-1/8	1-5/8	1-5/16	1/8	.07
429-166	1-1/4x1/2	2-9/16	2-3/32	1-5/32	7/16	.13
429-167	1-1/4x3/4	2-19/32	2-3/32	1-5/8	11/32	.17
429-168	1-1/4x1	2-11/16	2-1/8	1-3/4	5/16	.17
429-210	1-1/2x3/4	2-13/16	2-11/32	1-13/32	7/16	.19
429-211	1-1/2x1	2-23/32	2-7/32	1-5/8	3/8	.13
429-212	1-1/2x1-1/4	2-13/16	2-13/32	2-1/8	5/32	.22
429-247	2x1/2	3-3/32	2-7/8	1-5/32	11/16	.30
429-248	2x3/4	3-7/32	2-7/8	1-13/32	23/32	.30
429-249	2x1	3-1/2	2-13/16	2-5/16	3/4	.41
429-250	2x1-1/4	3-1/16	2-23/32	1-31/32	17/32	.20
429-251	2x1-1/2	2-13/16	2-27/32	2-1/4	1/8	.19
429-291	2-1/2x1-1/2	3-3/4	3-1/2	2-3/8	19/32	.52
429-292	2-1/2x2	3-5/8	3-15/32	2-7/8	7/16	.48
429-335[1]	3x1	4-3/16	4-5/32	2-7/8	1-1/4	.91
429-337[1]	3x1-1/2	4-3/16	4-5/32	2-29/32	1	.87

[1] Outlet sized with bushing

REDUCER COUPLING (continued)

Socket x Socket

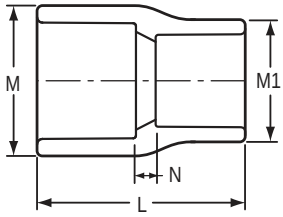


Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
429-338	3x2	4	4-5/32	2-7/8	5/8	.75
429-339[1]	3x2-1/2	4-5/16	4	4	21/32	.95
429-340F	3x2-1/2	5-5/8	3-7/8	3-1/4	1-3/8	.68
429-416[1]	4x3/4	5-7/32	5-1/32	2-25/32	2-3/16	1.04
429-417	4x1	5-1/4	5-1/32	2-25/32	2-5/32	1.04
429-420	4x2	5	5-1/32	2-3/4	1-5/8	.87
429-421	4x2-1/2	5	5-1/4	4-1/8	3/4	1.63
429-422	4x3	4-5/8	5-1/4	4-5/32	15/32	1.25
429-422F	4x3	6-1/2	4-15/16	3-15/16	2	1.04
429-460F	4-1/2x4	6-11/16	5-7/16	5	1-15/16	1.39
429-488F	5x3	8	6-1/16	5-1/4	3-1/8	2.29
429-490F	5x4	7-11/16	6-1/16	5	2-7/16	1.60
429-491F	5x4-1/2	7-7/16	6-1/16	5-7/16	1-15/16	1.59
429-528F	6x2	9-1/4	7-1/8	5-1/16	4-5/8	2.75
429-530F	6x3	9-3/16	7-1/8	5-1/4	4-1/16	2.89
429-532	6x4	6-15/32	7-1/4	5-1/32	1-11/32	2.05
429-532F	6x4	8-7/8	7-1/8	5	3-3/8	1.80
429-533F	6x5	8-5/8	7-1/8	6-1/16	2-3/8	2.50
429-534F	6x4-1/2	8-11/16	7-1/8	5-7/16	2-15/16	2.05
429-578F	8x2	14-7/8	9-3/16	5	9-1/4	5.75
429-580F	8x3	14-13/16	9-3/16	5	8-11/16	5.71
429-582	8x4	8-7/16	9-11/32	5-1/16	2-11/32	4.02
429-582F	8x4	14-1/2	9-3/16	5	8	5.11
429-583F	8x5	14-1/4	9-3/16	6-1/16	7	5.07
429-585	8x6	8-13/32	9-11/32	7-9/32	1-11/32	4.07
429-585F	8x6	11	9-3/16	7-3/16	3-1/2	4.63
429-621F	10x2	17-5/8	11-3/8	5	11	8.15
429-623F	10x3	17-9/16	11-3/8	5	10-7/16	7.97
429-624	10x4	10-7/16	11-17/32	5-1/16	3-11/32	7.40
429-624F	10x4	17-1/4	11-3/8	5	9-3/4	7.18
429-625F	10x5	17	11-3/8	6-1/16	8-3/4	7.31
429-626	10x6	10-7/16	11-9/16	7-9/32	2-1/4	7.11
429-626F	10x6	13-7/8	11-3/8	7-1/4	5-3/8	6.61
429-628	10x8	10-7/16	11-5/8	9-3/8	1-3/8	7.07
429-628F	10x8	13-1/4	11-9/16	9-7/16	3-3/4	8.95
429-661F	12x2	24-3/8	13-9/16	5	16-3/4	19.16
429-663F	12x3	24-5/16	13-9/16	5	16-3/16	14.92
429-664F	12x4	24	13-9/16	5	15-1/2	15.20
429-665F	12x5	23-3/4	13-9/16	6-1/16	14-1/2	21.03

[1] Outlet sized with bushing

REDUCER COUPLING (continued)

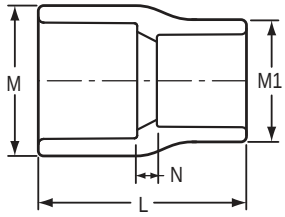
Socket x Socket



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
429-666	12x6	12-13/32	13-21/32	7-9/32	3-9/32	10.73
429-666F	12x6	20-1/2	13-9/16	7-1/4	11	14.23
429-668	12x8	12-13/32	13-21/32	9-3/8	2-1/4	10.58
429-668F	12x8	15-3/4	13-9/16	9-7/16	5-1/4	12.31
429-670	12x10	12-3/8	13-21/32	11-19/32	1-9/32	10.84
429-670F	12x10	15-1/8	13-9/16	11-9/16	3-5/8	13.16
429-693F	14x3	26-3/16	14-13/16	5	17-5/16	39.67
429-694F	14x4	25-7/8	14-13/16	5	16-5/8	17.51
429-696F	14x6	22-3/8	14-13/16	7-1/4	12-1/8	20.57
429-698F	14x8	21-13/16	14-3/4	9-1/4	10-9/16	18.37
429-700F	14x10	17	14-13/16	11-9/16	4-3/4	15.36
429-702F	14x12	16-1/2	15	13-3/4	3-1/4	19.59
429-751F	16x2	32-7/8	17	5	23-1/2	33.96
429-754F	16x4	32-1/2	17	5	22-1/4	29.74
429-756F	16x6	29	17	7-3/16	17-3/4	33.53
429-758F	16x8	24-3/4	17	9-7/16	12-1/2	33.90
429-760F	16x10	24	17	11-9/16	10-3/4	35.66
429-762F	16x12	18-7/8	17	13-3/4	4-5/8	22.40
429-764F	16x14	18-1/2	16-7/8	14-7/8	3-1/2	21.66
429-786F	18x6	38	19	7-3/16	25-3/4	60.39
429-788F	18x8	33-3/4	19	9-7/16	20-1/2	43.61
429-790F	18x10	33	19	11-9/16	18-3/4	46.43
429-792F	18x12	27-7/8	19	13-5/8	12-5/8	44.78
429-794F	18x14	27-1/2	19	14-7/8	11-1/2	43.23
429-796F	18x16	21-5/8	19	17	4-5/8	30.98
429-814F	20x4	50-1/2	21-1/8	5	38-1/4	---
429-816F	20x6	47	21-1/8	7-3/16	33-3/4	74.45
429-818F	20x8	42-3/4	21-1/8	9-7/16	28-1/2	97.93
429-820F	20x10	42	21-1/8	11-9/16	26-3/4	82.76
429-822F	20x12	36-7/8	21-1/8	13-3/4	20-5/8	74.24
429-824F	20x14	36-1/2	21-3/8	14-7/8	19-1/2	71.00
429-826F	20x16	30-5/8	21-1/8	17	12-5/8	58.53
429-828F	20x18	23-1/4	21-1/8	19-1/8	4-1/4	45.38
429-906F	24x6	59-1/4	25-3/16	7-3/16	44	120.00
429-908F	24x8	55	25-3/16	9-7/16	38-3/4	124.96
429-910F	24x10	54-1/4	25-3/16	11-9/16	37	126.88
429-912F	24x12	49-1/8	25-3/16	13-3/4	30-7/8	120.00
429-914F	24x14	48-3/4	25-3/16	14-7/8	29-3/4	111.51
429-916F	24x16	42-7/8	25-3/16	17	22-7/8	107.16

REDUCER COUPLING (continued)

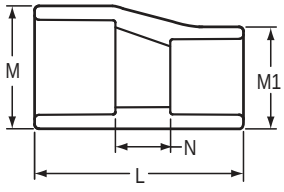
Socket x Socket



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
429-918F	24x18	35-1/2	25-3/16	19-1/8	14-1/2	84.69
429-920F	24x20	28-3/4	25-3/16	21-3/16	6-3/4	61.04

ECCENTRIC REDUCER COUPLING

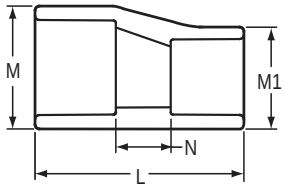
Socket x Socket



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
429-168FE	1-1/4x1	4-7/8	1-15/16	1-9/16	2-1/8	.28
429-212FE	1-1/2x1-1/4	4-5/8	2-3/16	1-15/16	1-5/8	.24
429-250FE	2x1-1/4	5-3/4	2-5/8	1-15/16	2-1/2	.26
429-251FE	2x1-1/2	5-1/2	2-11/16	2-3/16	2-1/4	.29
429-290FE	2-1/2x1-1/4	9-5/8	3-3/16	1-15/16	6-1/8	.81
429-291FE	2-1/2x1-1/2	9-3/8	3-3/16	2-3/16	5-7/8	.79
429-292FE	2-1/2x2	6-3/8	3-3/16	2-11/16	2-5/8	.44
429-336FE	3x1-1/4	11-1/8	3-13/16	1-15/16	7-3/8	.85
429-337FE	3x1-1/2	10-7/8	3-13/16	2-3/16	7-1/8	.77
429-338E	3x2	5-7/8	4-5/32	2-7/8	2-15/32	1.01
429-338FE	3x2	7-15/16	3-13/16	2-11/16	3-15/16	.63
429-339FE	3x2-1/2	6-3/4	3-7/8	3-1/4	2-1/2	.79
429-418FE	4x1-1/4	16-1/8	4-15/16	1-15/16	12-3/8	1.96
429-419FE	4x1-1/2	15-7/8	4-15/16	2-3/16	12-1/8	1.72
429-420E	4x2	7-15/32	5	2-23/32	4-1/16	1.24
429-420FE	4x2	12-13/16	4-15/16	2-11/16	8-13/16	1.65
429-421FE	4x2-1/2	11-3/4	4-15/16	3-1/4	7-1/2	1.78
429-422FE	4x3	8-5/8	4-15/16	3-15/16	4-1/8	1.28
429-490FE	5x4	9-7/16	6-1/16	5	4-3/16	5.95
429-527FE	6x1-1/2	23-9/16	7-1/8	2-3/16	18-13/16	6.23
429-528FE	6x2	15-7/8	7-1/8	2-11/16	11-1/4	4.41

ECCENTRIC REDUCER COUPLING (continued)

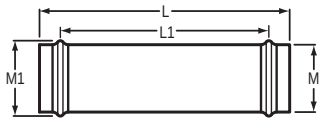
Socket x Socket



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
429-529FE	6x2-1/2	19-7/16	7-1/8	3-1/4	14-3/16	3.77
429-530FE	6x3	16-5/16	7-1/8	3-15/16	10-13/16	3.92
429-532E	6x4	8-31/32	7-9/32	5-1/32	3-15/16	2.90
429-532FE	6x4	11-1/8	7-1/8	5	5-5/8	2.27
429-533FE	6x5	10-5/8	7-1/8	6-1/16	4-3/8	2.84
429-578FE	8x2	27-1/8	9-3/16	2-11/16	21-1/2	8.22
429-580FE	8x3	25-5/16	9-3/16	3-15/16	18-13/16	7.20
429-582FE	8x4	19-5/8	9-3/16	5	13-3/8	8.22
429-583FE	8x5	15-5/8	9-3/16	6-1/16	12-3/8	6.81
429-585FE	8x6	14-3/8	9-3/16	7-3/16	6-7/8	5.53
429-624FE	10x4	22-3/8	11-3/8	5	15-1/8	12.85
429-625FE	10x5	22-3/8	11-3/8	6-1/16	14-1/8	10.65
429-626FE	10x6	17-1/8	11-3/8	7-1/4	8-5/8	7.49
429-628FE	10x8	16-5/16	11-3/8	9-1/4	6-13/16	9.69
429-664FE	12x4	32-3/8	13-1/2	5	24-1/8	20.84
429-665FE	12x5	32-3/8	13-1/2	6-1/16	23-1/8	20.37
429-666FE	12x6	27-1/8	13-1/2	7-1/4	17-5/8	16.81
429-668FE	12x8	26-5/16	13-1/2	9-1/4	15-3/16	23.88
429-670FE	12x10	18-3/8	13-1/2	11-1/2	6-7/8	15.07
429-696FE	14x6	31-3/8	15	7-1/4	21-1/8	26.82
429-698FE	14x8	30-9/16	15	9-1/4	19-5/16	26.76
429-700FE	14x10	22-3/4	15	11-3/4	10-1/2	23.23
429-702FE	14x12	19	15	13-3/4	5-3/4	25.66
429-756FE	16x6	43-5/8	17	7-1/4	32-3/8	49.49
429-758FE	16x8	42-13/16	17	9-1/4	30-9/16	47.87
429-760FE	16x10	34-7/8	17	11-1/2	21-5/8	39.76
429-762FE	16x12	26-1/2	17	13-3/4	12-1/4	34.02
429-764FE	16x14	19	16-7/8	14-7/8	6-3/4	24.61
429-786FE	18x6	56	19	7-1/4	43-3/4	71.11
429-788FE	18x8	55-3/16	19	9-1/4	41-15/16	70.93
429-790FE	18x10	47-1/4	19	11-1/2	33	65.32
429-792FE	18x12	38-7/8	19	13-3/4	23-5/8	62.16
429-794FE	18x14	34-1/8	19	14-7/8	18-1/8	54.24
429-796FE	18x16	25	19	17	8	38.72

FABRICATED REPAIR COUPLING

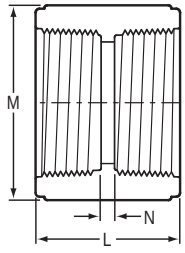
Gasket x Gasket



Part Number	Size	L	L1	M	M1	Approx. Wt. (Lbs.)
428-020F	2	9-1/8	6	2-11/16	3-1/16	.72
428-030F	3	15-1/2	11-3/4	3-15/16	4-9/16	1.99
428-040F	4	19-1/2	15	5-5/8	5-3/4	4.18
428-060F	6	23-1/2	19-3/4	7-3/8	7-3/4	8.33
428-080F	8	26-1/8	21-1/4	9-3/8	10-1/8	14.01
428-100F	10	27	22-1/8	11-1/2	12-11/16	20.95
428-120F	12	28-3/8	22-3/8	13-3/4	14-11/16	28.49
428-140F	14	18-3/8	12	14-7/8	16-1/4	24.45
428-160F	16	21	14-3/4	17	18-1/2	36.03

COUPLING

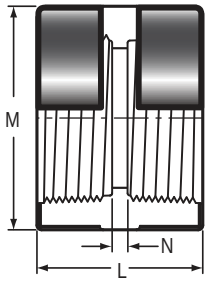
Fipt x Fipt



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
430-005	1/2	1-9/16	1-1/8	7/32	.04
430-007	3/4	1-9/16	1-11/32	3/32	.05
430-010	1	2-1/16	1-11/16	3/32	.09
430-012	1-1/4	2-3/16	2-9/32	3/16	.21

SPECIAL REINFORCED COUPLING

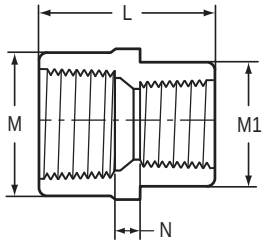
SR Fipt x SR Fipt



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
430-005SR	1/2	1-9/16	1-3/16	1/16	.07
430-007SR	3/4	1-29/32	1-3/8	3/32	.08
430-010SR	1	1-15/16	1-23/32	1/16	.13
430-012SR	1-1/4	2-1/16	2-1/16	3/16	.19
430-015SR	1-1/2	2-3/16	2-7/16	1/4	.29
430-020SR	2	2-1/4	3	1/4	.42

REDUCER COUPLING

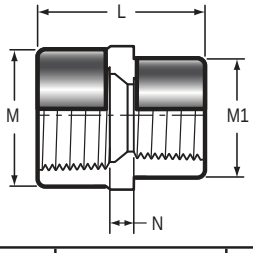
Fipt x Fipt



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
430-101	3/4x1/2	1-11/16	1-3/8	1-3/16	1/4	.06

SPECIAL REINFORCED REDUCER COUPLING

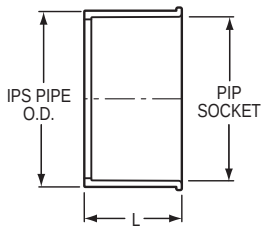
SR Fipt x SR Fipt



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
430-101SR	3/4x1/2	1-3/4	1-3/8	1-7/32	1/4	.08

IPS TO PIP ADAPTER

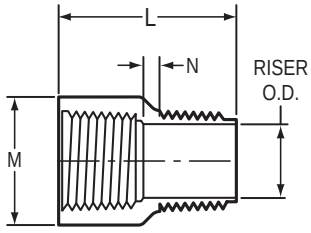
Spigot x Socket



Part Number	Size	L	Approx. Wt. (Lbs.)
431-060	6	3-9/16	.91
431-080	8	4-21/32	1.43
431-100F	10	5-5/8	2.71
431-120F	12	6-3/4	3.61

RISER EXTENSION

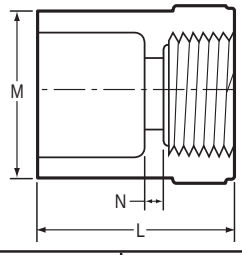
Fipt x Mipt



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
434-005	1/2	1-1/2	1-1/8	1/8	.03
434-007	3/4	1-17/32	1-5/16	5/32	.04
434-010	1	1-29/32	1-5/8	3/16	.07

FEMALE ADAPTER

Socket x Fipt



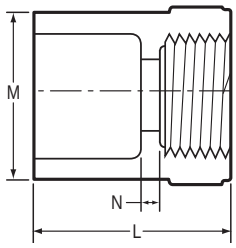
Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
435-003	3/8	1-7/16	1	3/32	.03
435-005	1/2	1-19/32	1-3/32	3/32	.04
D435-005	1/2	2-1/8	1-1/8	1/8	.04
435-007	3/4	1-27/32	1-5/16	3/32	.05

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

FEMALE ADAPTER (continued)

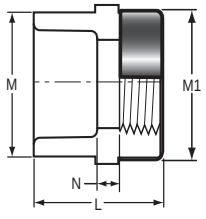
Socket x Fipt



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
D435-007	3/4	2-7/32	1-5/16	3/32	.06
435-010	1	2	1-21/32	3/32	.08
435-012	1-1/4	2-9/32	1-31/32	1/16	.11
435-015	1-1/2	2-5/16	2-7/32	3/32	.14
435-020	2	2-1/2	2-3/4	1/8	.19
435-025	2-1/2	3-1/4	3-5/16	3/16	.41
435-030	3	3-1/2	4	1/4	.56
435-040	4	3-23/32	5-1/32	3/16	.82
435-050	5	5-1/16	6-5/16	3/16	1.47
435-060	6	5-3/4	7-3/16	5/16	2.07
435-080	8	6-15/16	9-3/8	1/4	3.88
435-100F	10	10-1/4	11-15/16	3	10.88
435-120F	12	11-1/8	14-1/8	2-5/8	16.56

SPECIAL REINFORCED FEMALE ADAPTER

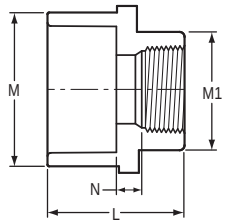
Socket x SR Fipt



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
435-002SR	1/4	1-5/16	13/16	13/16	5/32	.03
435-003SR	3/8	1-7/16	15/16	15/16	1/16	.04
435-005SR	1/2	1-3/4	1-3/16	1-3/16	3/16	.06
435-007SR	3/4	1-7/8	1-13/32	1-3/8	3/32	.08
435-010SR	1	2-1/8	1-3/4	1-3/4	1/8	.13
435-012SR	1-1/4	2-5/16	2-3/32	2-3/32	1/8	.19
435-015SR	1-1/2	2-7/16	2-7/16	2-7/16	1/8	.27
435-020SR	2	2-11/16	3	3	1/4	.43
435-025SR	2-1/2	3-1/4	3-9/16	3-9/16	1/4	.68
435-030SR	3	3-1/2	4-9/32	4-5/16	5/16	.95
435-040SR	4	3-15/16	5-7/32	5-7/32	3/16	1.37

REDUCING FEMALE ADAPTER

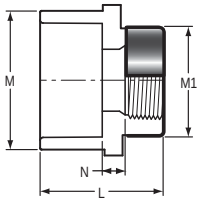
Socket x Fipt



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
435-072	1/2x1/4	1-19/32	1-3/32	13/16	1/4	.03
435-073	1/2x3/8	1-17/32	1-3/32	15/16	3/16	.03
435-074	1/2x3/4	1-19/32	1-3/32	1-5/16	3/16	.05
435-098	3/4x1/4	1-15/16	1-13/32	27/32	13/32	.06
435-101	3/4x1/2	1-13/16	1-5/16	1-1/8	3/32	.05
435-102	3/4x1	1-15/16	1-5/8	1-5/16	3/32	.07
435-130	1x1/2	1-27/32	1-5/8	1-1/8	3/32	.07
435-131	1x3/4	2-1/8	1-5/8	1-5/16	3/8	.07
435-133	1x1-1/2	2-3/8	1-5/8	2-7/32	1/4	.13
435-168	1-1/4x1	2-1/2	1-31/32	1-5/8	11/32	.12
435-247	2x1/2	2-25/32	2-23/32	1-3/16	21/32	.19
435-460F	4-1/2x4	8-1/4	5-5/8	5	3-7/8	1.92
435-578F	8x2	14-7/8	8-5/8	5-1/16	9-5/8	5.75
435-582F	8x4	15-3/16	9-1/4	5	9-7/16	5.99
435-628F	8x10	11	11-3/4	9-1/4	4-1/16	6.60

SPECIAL REINFORCED REDUCING FEMALE ADAPTER

Socket x SR Fipt

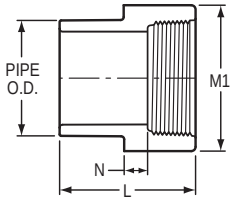


Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
435-072SR	1/2x1/4	1-5/8	1-3/32	27/32	1/4	.04
435-073SR	1/2x3/8	1-17/32	1-3/32	31/32	3/16	.04
435-074SR	1/2x1/4	1-3/4	1-3/16	1-3/8	1/8	.07
435-098SR	3/4x1/4	1-15/16	1-13/32	27/32	13/32	---
435-101SR	3/4x1/2	1-7/8	1-3/8	1-3/16	1/4	.07
435-102SR	3/4x1	2-1/16	1-13/32	1-23/32	1/4	.12
435-130SR	1x1/2	2	1-11/16	1-3/16	5/32	.10
435-131SR	1x3/4	2-1/16	1-3/4	1-3/8	7/32	.12
435-247SR	2x1/2	2-13/16	2-23/32	1-3/16	21/32	.20

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

SPIGOT FEMALE ADAPTER

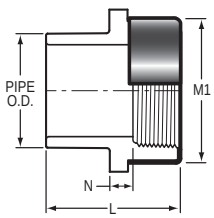
Spigot x Fipt



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
478-005	1/2	1-19/32	1-3/32	3/16	.03
478-007	3/4	1-15/16	1-3/8	5/32	.06
478-010	1	2-7/16	1-23/32	5/32	.10
478-012	1-1/4	2-9/16	2-1/16	9/32	.14
478-015	1-1/2	2-5/8	2-5/16	7/32	.17
478-020	2	2-3/4	2-27/32	3/16	.27
478-030	3	3-7/8	4	9/32	.57
478-040	4	4	5	3/8	.83

SPECIAL REINFORCED SPIGOT FEMALE ADAPTER

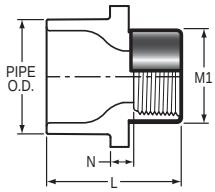
Spigot x SR Fipt



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
478-005SR	1/2	1-3/4	1-3/16	5/32	.05
478-007SR	3/4	1-15/16	1-3/8	11/32	.07
478-010SR	1	2-1/4	1-23/32	5/16	.12
478-012SR	1-1/4	2-7/16	2-1/16	3/8	.18
478-015SR	1-1/2	2-5/8	2-13/32	13/32	.25
478-020SR	2	2-13/16	3	3/8	.39
478-030SR	3	3-13/16	4-1/4	15/32	.91
478-040SR	4	4-3/8	5-7/32	9/16	1.44

SPECIAL REINFORCED SPIGOT REDUCING FEMALE ADAPTER

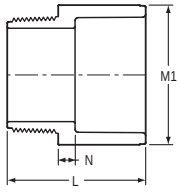
Spigot x SR Fipt



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
478-072SR	1/2x1/4	1-3/8	27/32	3/16	.03
478-098SR	3/4x1/4	2-1/16	27/32	1/2	.05
478-128SR	1x1/4	2-3/8	27/32	11/16	.08

MALE ADAPTER

Mipt x Socket



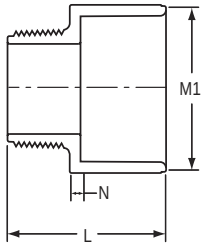
Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
436-003	3/8	1-3/8	7/8	7/32	.02
436-005	1/2	1-17/32	1-1/8	5/32	.03
436-007	3/4	1-23/32	1-5/16	5/32	.04
436-010	1	2-1/16	1-5/8	7/32	.08
436-012	1-1/4	2-7/16	1-31/32	3/16	.11
436-015	1-1/2	2-17/32	2-1/4	3/16	.15
436-020	2	2-21/32	2-3/4	7/32	.20
436-025	2-1/2	3-13/16	3-13/32	9/32	.43
436-030	3	3-29/32	4-3/32	9/32	.57
436-040	4	4-1/32	5-1/8	9/32	.82
436-050	5	5-5/32	6-1/4	5/16	1.42
436-060	6	5-11/16	7-9/32	11/16	2.36
436-080	8	6-15/16	9-3/8	13/32	4.04
436-100F	10	10-3/8	11-15/16	3-3/16	11.17
436-120F	12	11-1/8	14-1/8	2-3/4	16.44

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

REDUCING MALE ADAPTER

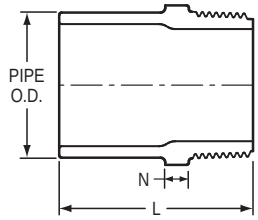
Mipt x Socket



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
436-053	3/8x1/2	1-11/16	1-3/16	1/4	.04
436-073	1/2x3/8	1-17/32	15/16	1/8	.02
436-074	1/2x3/4	1-25/32	1-5/16	5/32	.04
436-075	1/2x1	2-9/32	1-5/8	17/32	.07
436-101	3/4x1/2	1-17/32	1-1/8	3/32	.03
436-102	3/4x1	1-15/16	1-21/32	3/16	.07
436-131	1x3/4	1-29/32	1-3/16	3/16	.05
436-132	1x1-1/4	2-1/4	1-31/32	7/32	.10
436-133	1x1-1/2	2-3/8	2-1/4	1/4	.12
436-168	1-1/4x1	2-1/4	1-5/8	3/16	.09
436-169	1-1/4x1-1/2	2-17/32	2-7/32	3/16	.14
436-212	1-1/2x1-1/4	2-15/32	2	7/32	.12
436-213	1-1/2x2	2-5/8	2-3/4	15/32	.22
436-251	2x1-1/2	2-9/16	2-7/32	3/16	.18
436-252	2x2-1/2	3-3/32	3-5/16	1/4	.36
436-253	2x3	3-13/16	4	1	.52
436-294	2-1/2x3	4-3/32	4-1/32	5/8	.57
436-296	2-1/2x4	3-29/32	5-3/16	5/16	.80
436-342	3x4	4-5/8	5-1/16	7/8	.97
436-537F	6x10	15-1/2	11-3/8	7-15/16	8.50

MALE ADAPTER

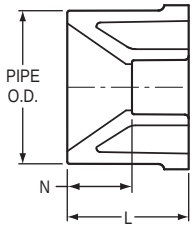
Spigot x Mipt



Part Number	Size	L	N	Approx. Wt. (Lbs.)
461-005	1/2	1-11/16	11/32	.03
461-007	3/4	2	13/32	.04
461-010	1	2-1/4	11/32	.06
461-131	1x3/4	1-15/16	1/4	.06
461-012	1-1/4	2-9/32	9/32	.09
461-015	1-1/2	2-7/16	5/16	.12
461-020	2	2-9/16	3/8	.17

REDUCER BUSHING (Flush Style)

Spigot x Socket



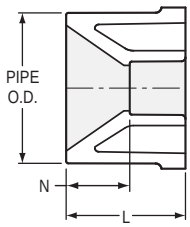
Part Number	Size	L	N	Approx. Wt. (Lbs.)
437-052	3/8x1/4	31/32	5/16	.01
437-072	1/2x1/4	1-3/32	13/32	.02
437-073	1/2x3/8	7/8	3/8	.02
437-101	3/4x1/2	1-1/16	9/32	.02
437-130	1x1/2	1-1/4	15/32	.05
437-131	1x3/4	1-1/4	5/16	.03
437-166	1-1/4x1/2	1-13/32	21/32	.08
437-167	1-1/4x3/4	1-1/2	19/32	.09
437-168	1-1/4x1	1-1/2	7/16	.06
437-209	1-1/2x1/2	1-15/32	23/32	.11
437-210	1-1/2x3/4	1-7/16	7/16	.12
437-211	1-1/2x1	1-17/32	1/2	.12
437-212	1-1/2x1-1/4	1-17/32	9/32	.06
437-247	2x1/2	1-5/8	7/8	.17
437-248	2x3/4	1-9/16	9/16	.16
437-249	2x1	1-9/16	17/32	.17
437-250	2x1-1/4	1-19/32	11/32	.18
437-251	2x1-1/2	1-9/16	1/4	.13
437-287	2-1/2x1/2	2-1/4	1-7/16	.32

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

REDUCER BUSHING (Flush Style) (continued)

Spigot x Socket

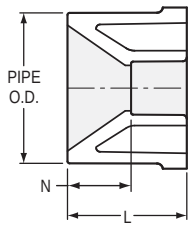


Part Number	Size	L	N	Approx. Wt. (Lbs.)
437-288	2-1/2x3/4	2-3/8	1-3/8	.33
437-289	2-1/2x1	2-1/32	29/32	.37
437-290	2-1/2x1-1/4	2-3/16	1-1/8	.37
437-291	2-1/2x1-1/2	2-5/32	1-3/16	.34
437-292	2-1/2x2	2-1/16	11/16	.23
437-333[1]	3x1/2	2-13/32	1-5/8	.53
437-334	3x3/4	2-5/16	1-5/16	.49
437-335	3x1	2-7/32	1-1/4	.48
437-336	3x1-1/4	2-9/32	1-1/32	.49
437-337	3x1-1/2	2-9/32	31/32	.48
437-338	3x2	2-7/32	9/16	.47
437-339	3x2-1/2	2-7/32	7/16	.37
437-417[1]	4x1	2-19/32	1-9/16	1.03
437-418[1]	4x1-1/4	2-19/32	1-7/16	1.04
437-419[1]	4x1-1/2	2-19/32	1-1/4	.99
437-420	4x2	2-13/32	1-1/32	.86
437-421	4x2-1/2	2-5/16	9/16	.75
437-422	4x3	2-11/32	15/32	.78
437-486	5x2	3-13/32	2-1/32	1.54
437-488	5x3	3-7/16	1-15/32	1.40
437-490	5x4	2-31/32	23/32	1.31
437-528	6x2	3-17/32	2-5/32	2.15
437-530	6x3	3-17/32	1-5/8	2.21
437-532	6x4	3-9/16	1-1/2	2.12
437-534	6x5	3-17/32	7/8	1.93
437-578[1]	8x2	5	3-5/8	4.92
437-580	8x3	5-1/4	3-1/4	4.92
437-582	8x4	4-17/32	2-1/2	3.96
437-583[1]	8x5	4-3/4	1-3/4	5.61
437-585	8x6	4-13/32	1-3/8	4.04
437-621[1]	10x2	6	4	9.88
437-623[1]	10x3	6	3-17/32	9.32
437-624	10x4	6	3-3/4	9.57
437-626	10x6	5-11/32	2-5/16	6.86
437-628	10x8	5-1132	1-5/16	7.02
437-666[1]	12x6	6-11/16	3-3/4	13.96
437-666F	12x6	6-7/16	3-3/8	18.74

[1]Outlet sized with bushing

REDUCER BUSHING (Flush Style) (continued)

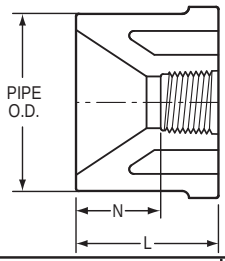
Spigot x Socket



Part Number	Size	L	N	Approx. Wt. (Lbs.)
437-668	12x8	6-1/2	2-7/16	9.60
437-670	12x10	6-11/32	1-9/32	11.74
437-670F	12x10	6	1	11.32
437-696F	14x6	7-11/16	4-11/16	23.05
437-698F	14x8	7-5/16	3-5/16	19.00
437-700F	14x10	7-1/2	2-1/2	22.00
437-702F	14x12	7	1	9.18
437-756F	16x6	8-11/16	5-11/16	42.60
437-758F	16x8	8-5/16	4-5/16	37.86
437-760F	16x10	8-1/2	3-1/2	40.97
437-762F	16x12	8	2	27.95
437-764F	16x14	8	1	18.68
437-786F	18x6	9-11/16	6-11/16	66.03
437-788F	18x8	9-5/16	5-5/16	59.63
437-790F	18x10	9-1/2	4-1/2	64.56
437-792F	18x12	9	3	52.44
437-794F	18x14	9	2	43.08
437-796F	18x16	9	1	20.03
437-816F	20x6	10-11/16	7-11/16	122.62
437-818F	20x8	10-5/16	6-5/16	112.44
437-820F	20x10	10-1/2	5-1/2	95.06
437-822F	20x12	10	4	82.84
437-824F	20x14	10	3	73.74
437-826F	20x16	10	2	54.05
437-828F	20x18	10	1	30.35
437-906F	24x6	12-11/16	9-11/16	208.00
437-908F	24x8	12-5/16	8-5/16	172.22
437-910F	24x10	12-1/2	7-1/2	177.27
437-912F	24x12	12	6	164.19
437-914F	24x14	12	5	153.83
437-916F	24x16	12	4	136.15
437-918F	24x18	13	3	109.14
437-920F	24x20	12	2	80.40

REDUCER BUSHING (Flush Style)

Spigot x Fipt

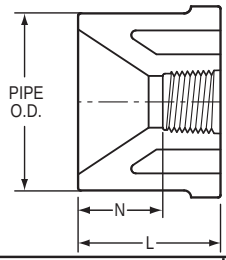


Part Number	Size	L	N	Approx. Wt. (Lbs.)
438-052	3/8x1/4	31/32	3/8	.01
438-071	1/2x1/8	1	9/16	.02
438-072	1/2x1/4	1-1/32	7/16	.02
438-073	1/2x3/8	1	7/16	02
438-098	3/4x1/4	1-7/32	5/8	.04
438-101	3/4x1/2	1-1/4	1/2	.03
438-127	1x1/8	1-3/8	13/16	.06
438-128	1x1/4	1-13/32	25/32	.07
438-129	1x3/8	1-13/32	19/32	.07
438-130	1x1/2	1-3/8	21/32	.05
438-131	1x3/4	1-1/16	3/8	.04
438-166	1-1/4x1/2	1-15/32	23/32	.10
438-167	1-1/4x3/4	1-15/32	23/32	.09
438-168	1-1/4x1	1-7/16	1/2	.07
438-206	1-1/2x1/8	1-11/16	1-1/4	.14
438-207	1-1/2x1/4	1-19/32	15/16	.11
438-209	1-1/2x1/2	1-23/32	31/32	.17
438-210	1-1/2x3/4	1-9/16	27/32	.13
438-211	1-1/2x1	1-23/32	13/16	.15
438-212	1-1/2x1-1/4	1-1/2	9/16	.07
438-245	2x1/4	1-3/4	1-5/32	.18
438-247	2x1/2	1-29/32	1-5/32	.26
438-248	2x3/4	1-7/8	1-5/32	.26
438-249	2x1	1-7/8	1	.26
438-250	2x1-1/4	1-5/8	13/16	.18
438-251	2x1-1/2	1-19/32	5/8	.14
438-287	2-1/2x1/2	2-3/8	1-5/8	.41
438-288	2-1/2x3/4	2-3/8	1-9/16	.44
438-289	2-1/2x1	2-5/32	1-1/4	.33
438-290	2-1/2x1-1/4	2-3/8	1-3/8	.43
438-291	2-1/2x1-1/2	2-3/8	1-3/8	.33
438-292	2-1/2x2	2-1/16	1-1/16	.26
438-334	3x3/4	2-9/32	1-9/16	.58
438-335	3x1	2-1/4	1-11/32	.58
438-336	3x1-1/4	2-1/4	1-5/16	.62
438-337	3x1-1/2	2-1/4	1-1/4	.58
438-338	3x2	2-3/16	1-7/32	.56
438-339	3x2-1/2	2-3/8	3/4	.46

REDUCER BUSHING (Flush Style)

Spigot x Fipt

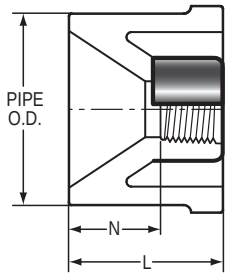
(continued)



Part Number	Size	L	N	Approx. Wt. (Lbs.)
438-420	4x2	2-13/32	1-13/32	.79
438-421	4x2-1/2	2-21/32	1-3/32	1.09
438-422	4x3	2-13/32	1	.77
438-488	5x3	3-7/16	1-13/16	1.57
438-490	5x4	2-15/16	1-11/32	1.19
438-528	6x2	3-17/32	2-17/32	2.92
438-530	6x3	3-17/32	2-1/8	2.31
438-532	6x4	3-17/32	2-1/32	2.54
438-534	6x5	3-31/32	2-3/16	1.91

SPECIAL REINFORCED REDUCER BUSHING (Flush Style)

Spigot x SR Fipt



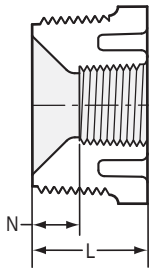
Part Number	Size	L	N	Approx. Wt. (Lbs.)
438-128SR	1x1/4	1-13/32	25/32	.07
438-207SR	1-1/2x1/4	1-19/32	15/16	.13
438-209SR	1-1/2x1/2	1-11/16	15/16	.17
438-210SR	1-1/2x3/4	1-9/16	7/8	.13
438-247SR	2x1/2	1-29/32	1-5/32	.26
438-248SR	2x3/4	1-7/8	1-1/8	.26
438-249SR	2x1	1-29/32	31/32	.27
438-334SR	3x3/4	2-1/4	1-1/2	.58
438-335SR	3x1	2-1/4	1-11/32	.59
438-336SR	3x1-1/4	2-1/4	1-5/16	.59
438-337SR	3x1-1/2	2-1/4	1-3/8	.68
438-420SR	4x2	2-13/32	1-13/32	.85
438-528SR	6x2	3-5/16	2-9/32	2.63
438-530SR	6x3	3-9/32	1-7/8	2.70
438-532SR	6x4	3-1/2	2-1/32	2.60

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

REDUCER (T.T.) BUSHING (Flush Style)

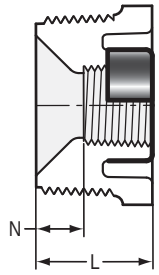
Mipt x Fipt



Part Number	Size	L	N	Approx. Wt. (Lbs.)
439-052	3/8x1/4	13/16	1/4	.01
439-071	1/2x1/8	27/32	13/32	.02
439-072	1/2x1/4	29/32	3/8	.02
439-073	1/2x3/8	15/16	3/8	.01
439-098	3/4x1/4	1-1/32	15/32	.03
439-099	3/4x3/8	1-1/32	7/16	.03
439-101	3/4x1/2	15/16	3/16	.02
439-128	1x1/4	1-1/8	17/32	.05
439-130	1x1/2	1-1/16	5/16	.04
439-131	1x3/4	1-1/8	13/32	.04
439-166	1-1/4x1/2	1-5/16	9/16	.09
439-167	1-1/4x3/4	1-9/32	9/16	.08
439-168	1-1/4x1	1-3/16	9/32	.06
439-209	1-1/2x1/2	1-11/32	19/32	.11
439-210	1-1/2x3/4	1-11/32	19/32	.11
439-211	1-1/2x1	1-11/32	7/16	.10
439-212	1-1/2x1-1/4	1-11/32	13/32	.06
439-247	2x1/2	1-3/8	21/32	.16
439-248	2x3/4	1-3/8	5/8	.16
439-249	2x1	1-3/8	15/32	.17
439-250	2x1-1/4	1-3/8	7/16	.16
439-251	2x1-1/2	1-3/8	13/32	.12
439-292	2-1/2x2	1-29/32	7/8	.22
439-337	3x1-1/2	1-15/16	29/32	.50
439-338	3x2	1-15/16	15/16	.45
439-339	3x2-1/2	1-15/16	5/8	.37
439-420	4x2	2-1/8	1-1/8	.83
439-422	4x3	2-1/8	1/2	.72

SPECIAL REINFORCED REDUCER (T.T.) BUSHING (Flush Style)

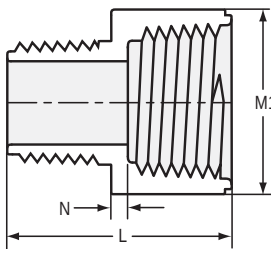
Mipt x SR Fipt



Part Number	Size	L	N	Approx. Wt. (Lbs.)
439-209SR	1-1/2x1/2	1-11/32	19/32	.13
439-210SR	1-1/2x3/4	1-11/32	19/32	.12
439-247SR	2x1/2	1-3/8	21/32	.18
439-248SR	2x3/4	1-3/8	5/8	.18
439-249SR	2x1	1-3/8	15/32	.19
439-420SR	4x2	2-1/8	1-1/8	.88

IPT ADAPTER

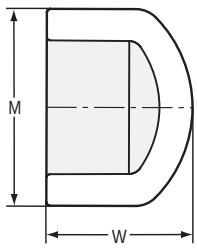
Mipt x Fipt



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
446-003	3/8	1-13/32	29/32	5/32	.02
446-012	1-1/4	2-3/16	2	5/32	.11
446-053	3/8x1/2	1-1/2	1-1/16	3/16	.03
446-074	1/2x3/4	1-17/32	1-5/16	5/32	.04

CAP

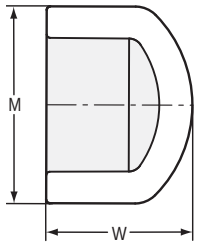
Socket



Part Number	Size	M	W	Approx. Wt. (Lbs.)
447-003	3/8	7/8	1	.01
447-005	1/2	1-3/32	1-1/16	.02
447-007	3/4	1-5/16	19/32	.06
447-010	1	1-9/16	1-9/16	.06
447-012	1-1/4	1-31/32	1-3/4	.09
447-015	1-1/2	2-1/4	1-29/32	.12
447-020	2	2-23/32	2-1/32	.17
447-025	2-1/2	3-5/16	2-9/16	.33

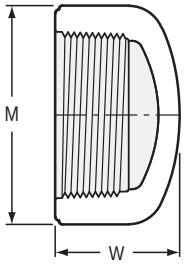
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CAP
Socket **(continued)**



Part Number	Size	M	W	Approx. Wt. (Lbs.)
447-030	3	4	2-29/32	.49
447-040	4	5-1/16	3-1/8	.79
447-045F	4-1/2	5-7/16	3-5/8	.31
447-050	5	6-1/8	4-13/32	1.43
447-060	6	7-1/4	5	2.34
447-080	8	9-9/16	6-3/8	4.26
447-100F	10	11-13/16	5-1/4	5.22
447-120F	12	13-7/8	6-7/8	8.22
447-140F	14	15	7-3/8	8.75
447-160F	16	17-1/16	9	12.15
447-180F	18	19-1/8	9	17.58
447-200F	20	21-3/16	12-1/4	26.48
447-240F	24	25-5/16	14-1/8	40.26

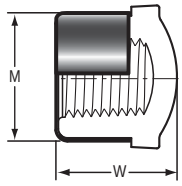
CAP
Fipt



Part Number	Size	M	W	Approx. Wt. (Lbs.)
448-003	3/8	15/16	25/32	.01
448-005	1/2	1-1/8	1-1/32	.02
448-007	3/4	1-11/32	1-1/16	.03
448-010	1	1-5/8	1-5/16	.06
448-012	1-1/4	2-1/16	1-1/2	.09
448-015	1-1/2	2-1/4	1-9/16	.11
448-020	2	2-3/4	1-23/32	.16
448-025	2-1/2	3-9/32	2-5/16	.35
448-030	3	4	2-13/32	.49
448-040	4	5-5/32	2-13/16	.81
448-050	5	6-11/32	3-3/32	1.39
448-060	6	7-5/16	3-5/32	1.59
448-080F	8	9-3/8	4-3/8	3.83
448-100F	10	11-5/8	5-3/4	7.44
448-120F	12	13-13/16	6-3/16	37.94

SPECIAL REINFORCED CAP

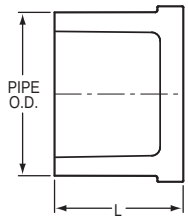
SR Fipt



Part Number	Size	M	W	Approx. Wt. (Lbs.)
448-012SR	1-1/4	2-1/16	1-3/8	.09

PLUG

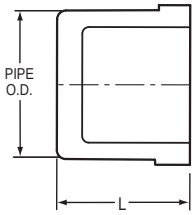
Spigot



Part Number	Size	L	Approx. Wt. (Lbs.)
449-003	3/8	31/32	.01
449-005	1/2	7/8	.02
449-007	3/4	1-1/8	.02
449-010	1	1-3/8	.05
449-012	1-1/4	1-17/32	.09
449-015	1-1/2	1-5/8	.11
449-020	2	1-3/4	.17
449-025	2-1/2	2-3/8	.35
449-030	3	2-3/32	.39
449-040	4	2-5/8	.76
449-060	6	3-1/2	1.74
449-060F	6	9-1/2	4.53
449-080F	8	10-15/16	8.55
449-100F	10	11-1/4	11.98
449-120F	12	13-7/8	18.15
449-140F	14	15-3/8	19.10
449-160F	16	17-1/2	32.07
449-180F	18	19	42.58
449-200F	20	23-1/4	63.91
449-240F	24	27-1/8	105.13

COUNTER SUNK PLUG

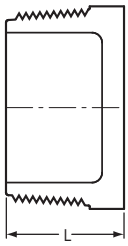
Spigot



Part Number	Size	L	Approx. Wt. (Lbs.)
449-007CS	3/4	1-1/4	.03
449-010CS	1	1-5/32	.04

PLUG

Mipt

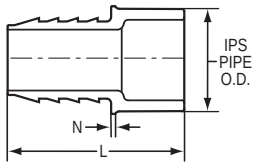


Part Number	Size	L	Approx. Wt. (Lbs.)
450-003	3/8	25/32	.01
450-005	1/2	13/16	.02
450-007	3/4	7/8	.02
450-010	1	1-7/32	.06
450-012	1-1/4	1-9/32	.07
450-015	1-1/2	1-11/32	.10
450-020	2	1-3/8	.15
450-025	2-1/2	1-31/32	.27
450-030	3	1-7/8	.39
450-040	4	2-1/8	.77
450-060	6	2-1/16	1.71
450-080F	8	9	8.33
450-100F	10	8-1/2	12.68
450-120F	12	10-7/8	19.62

INSERT ADAPTER (PVC White)

Insert x I.P.S. Spigot Adapter

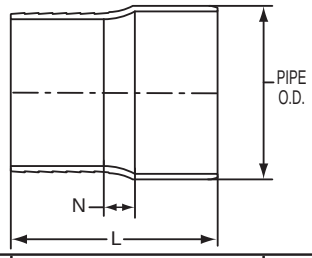
ASTM D 2609



Part Number	Size	L	N	Approx. Wt. (Lbs.)
460-005	1/2	2-7/16	7/32	.03
460-007	3/4	2-23/32	7/32	.04
460-010	1	2-9/16	1/16	.07
460-012	1-1/4	3-1/32	1/4	.11
460-015	1-1/2	3-5/16	5/16	.12
460-020	2	3-1/2	3/8	.19
460-030	3	4-11/16	7/16	.58
460-040	4	5-11/32	5/16	.73

INSERT ADAPTER (PVC White)

Insert x I.P.S. Spigot



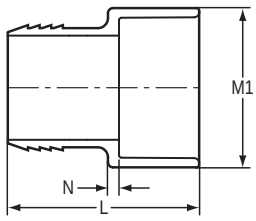
Part Number	Size	L	N	Approx. Wt. (Lbs.)
1432-060	6	7-27/32	1	1.69
1432-080*	8	9-7/8	5/8	5.23

*Fabricated

INSERT ADAPTER

Insert x Socket

ASTM D 2609



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
474-005	1/2	2-3/8	1-1/16	1/8	.03
474-007	3/4	2-7/16	1-5/16	5/32	.05
474-010	1	2-5/8	1-5/8	1/8	.07
474-012	1-1/4	2-11/16	2	3/16	.10
474-015	1-1/2	3-1/16	2-1/4	3/16	.14
474-020	2	3	2-11/16	3/16	.17
474-030	3	4-3/4	4	5/16	.51
474-040	4	5-5/8	5	3/8	.81

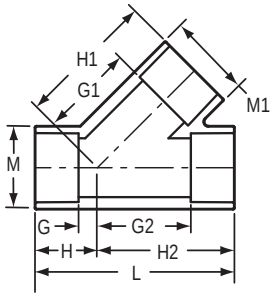
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

WYE

Socket x Socket x Socket

Pressure Rating
1/2" -2" 235 psi @ 73°F
2-1/2" -6" 150 psi @ 73°F
8" & Up 100 psi @ 73°F



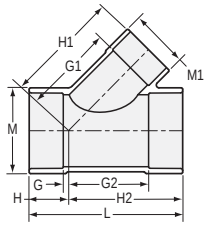
Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)
475-005	1/2	1/4	1-3/16	1-3/16	1-1/8	2-1/16	2-1/16	3-3/16	1-5/32	1-5/32	.12
475-007	3/4	5/16	1-3/8	1-3/8	1-5/16	2-3/8	2-3/8	3-23/32	1-3/8	1-3/8	.18
475-010	1	7/16	1-7/8	1-7/8	1-13/32	2-29/32	2-29/32	4-13/32	1-5/8	1-5/8	.23
475-012	1-1/4	3/8	2-1/4	2-1/4	1-5/8	3-1/2	3-1/2	5-1/8	2-1/16	2-1/16	.50
475-015	1-1/2	9/16	2-19/32	2-19/32	1-7/8	3-29/32	3-29/32	5-25/32	2-7/32	2-7/32	.47
475-020	2	19/32	3-5/16	3-5/16	1-31/32	4-11/16	4-11/16	6-5/8	2-23/32	2-23/32	.70
475-025	2-1/2	11/16	4-5/32	4-5/32	2-7/16	5-29/32	5-27/32	8-9/32	3-11/32	3-11/32	1.40
475-030	3	7/8	4-7/8	4-25/32	2-3/4	6-3/4	6-21/32	9-13/32	4	4	2.03
475-040	4	1-1/4	5-7/8	5-7/8	3-9/32	7-29/32	7-7/8	11-5/16	5-1/32	5-1/32	3.35
475-050F	5	3-3/4	9-3/8	9-3/8	6-3/4	12-3/8	12-3/8	19-1/8	6-1/16	6-1/16	13.26
475-060	6	1-5/32	8-25/32	8-3/16	4-3/16	11-25/32	11-3/16	15-3/8	7-9/16	7-9/16	12.01
475-080	8	1-15/16	11-11/32	11-11/32	5-31/32	15-11/32	15-11/32	21-5/16	9-3/4	9-3/4	25.44
475-080F	8	5-5/8	14-5/16	14-5/16	9-7/8	18-9/16	18-9/16	28-7/16	9-1/4	9-1/4	25.46
475-100	10	2-1/2	16-7/8	13-31/32	7-1/2	22-1/8	18-31/32	26-15/32	11-9/16	11-9/16	26.92
475-100F	10	6-9/16	17-1/4	17-1/4	11-13/16	22-1/2	22-1/2	34-5/16	11-1/2	11-1/2	45.11
475-120	12	2-11/16	16-1/8	16-7/32	8-3/4	22-7/32	22-9/32	31-1/32	13-21/32	13-21/32	41.85
475-120F	12	7-5/16	20-1/16	20-1/16	13-9/16	26-5/16	26-5/16	39-7/8	13-9/16	13-9/16	63.02
475-140F	14	7-3/16	21-3/16	21-3/16	14-3/16	28-3/16	28-3/16	42-3/8	14-7/8	14-7/8	90.24
475-160F	16	8-3/4	24-3/4	24-3/4	16-3/4	32-3/4	32-3/4	49-1/2	17	17	93.06
475-180F	18	9-7/16	27-7/16	27-7/16	18-7/16	36-7/16	36-7/16	54-7/8	19-1/8	19-1/8	151.20
475-200F	20	11-7/16	30-5/16	30-5/16	21-7/16	40-5/16	40-5/16	61-3/4	21-3/16	21-3/16	191.78
475-240F	24	11	35	35	23	47	47	70	25-3/8	25-3/8	420.00

[1] Outlet sized with bushing

REDUCING WYE

Socket x Socket x Socket

Pressure Rating
1/2" -2" 235 psi @ 73°F
2-1/2" -6" 150 psi @ 73°F
8" & Up 100 psi @ 73°F



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)
475-101[1]	3/4x3/4x1/2	5/16	2-5/32	1-3/8	1-5/16	2-15/16	2-3/8	3-11/16	1-3/8	1-3/8	.21
475-131[1]	1x1x3/4	11/32	2	1-3/4	1-15/32	3-9/32	2-7/8	4-11/32	1-23/32	1-23/32	.36
475-167[1]	1-1/4x1-1/4x3/4	3/8	2-3/4	2-1/4	1-5/8	3-3/4	3-1/2	5-1/8	2-1/16	2-1/16	.63
475-168[1]	1-1/4x1-1/4x1	3/8	2-5/8	2-1/4	1-5/8	3-3/4	3-1/2	5-1/8	2-1/16	2-1/16	.58
475-210[1]	1-1/2x1-1/2x3/4	1/2	3-1/2	2-9/16	1-7/8	4-1/2	3-15/16	5-13/16	2-11/32	2-11/32	.82
475-211[1]	1-1/2x1-1/2x1	1/2	3	2-9/16	1-7/8	4-5/32	3-15/16	5-13/16	2-11/32	2-11/32	.84
475-212[1]	1-1/2x1-1/2x1-1/4	1/2	3-1/4	2-9/16	1-7/8	4-1/2	3-15/16	5-13/16	2-11/32	2-11/32	.77
475-248[1]	2x2x3/4	5/8	4-1/4	3-1/4	2-1/8	5-1/8	4-3/4	6-7/8	2-7/8	2-7/8	1.41
475-249[1]	2x2x1	15/32	4-3/32	3-11/32	2	5-1/8	4-7/8	6-7/8	2-7/8	2-7/8	1.38
475-251[1]	2x2x1-1/2	19/32	3-7/16	3-7/32	2-1/8	4-7/8	4-3/4	6-7/8	2-7/8	2-7/8	1.35
475-292[1]	2-1/2x2-1/2x2	1	5-9/16	4-1/2	3	6-15/16	6-1/2	9-9/16	4-3/16	4-3/16	4.00
475-335[1]	3x3x1	11/16	5-7/8	4-7/32	2-9/16	6-15/16	6-1/8	8-23/32	4-3/16	4-3/16	3.14
475-336[1]	3x3x1-1/4	7/8	5-3/4	4-1/8	2-3/4	7	6	8-3/4	4-3/16	4-3/16	3.06
475-337[1]	3x3x1-1/2	1-1/16	5-19/32	4-19/32	2-15/16	6-29/32	6-15/32	9-13/32	4	4	2.53
475-338[1]	3x3x2	3/4	5-9/16	4-1/4	2-5/8	6-15/16	6-1/8	8-3/4	4-3/16	4-3/16	3.19
475-339[1]	3x3x2-1/2	7/8	4-1/8	4-21/32	2-3/4	6-3/4	6	8-3/4	4-3/16	4-3/16	2.59
475-420	4x4x2	-1/8	4-13/16	4-5/16	1-7/8	6-3/16	6-5/16	8-3/16	5-1/32	2-23/32	1.98
475-422	4x4x3	5/8	5-5/16	5-1/8	2-5/8	7-7/32	7-1/8	9-3/4	5-1/32	4	2.66
475-528[1]	6x6x2	1/16	8-5/8	6-5/8	3	10	6-11/16	12-11/16	7-9/16	4-3/4	9.30
475-530[1]	6x6x3	1/32	8-1/4	6-21/32	3-1/32	10-1/4	9-21/32	12-11/16	7-9/16	5-7/16	9.29
475-532	6x6x4	31/32	6-9/16	5-11/16	3-15/16	8-27/32	8-23/32	21-21/32	7-9/16	5-7/16	8.61
475-532F	6x6x4	2-9/16	10-9/16	9-3/16	5-13/16	12-3/16	12-7/16	18-1/4	7-3/16	5	6.71
475-578F	8x8x2	9/16	9-3/4	9-3/16	4-13/16	11-1/2	13-7/16	18-1/4	9-1/4	2-11/16	12.62
475-580F	8x8x3	1-5/16	10-7/8	9-15/16	5-9/16	13-1/8	14-3/16	19-3/4	9-1/4	3-15/16	14.36
475-582	8x8x4	11/16	9-1/8	8-3/16	3-5/16	11-3/8	12-3/16	15-1/2	9-23/32	5-1/4	14.32
475-582F	8x8x4	2-1/16	11-7/8	10-11/16	6-5/16	14-1/8	14-15/16	21-1/4	9-1/4	5	16.32
475-585F	8x8x6	3-1/2	12-13/16	12-1/8	7-3/4	16-1/16	16-3/8	24-1/8	9-1/4	7-3/16	19.47
475-621F	10x10x2	1/2	11-3/16	10-1/4	4-3/4	12-15/16	15-1/2	20-1/4	11-1/2	2-11/16	17.95
475-623F	10x10x3	1/2	12-5/16	11-1/4	5-3/4	14-9/16	16-1/2	22-1/4	11-1/2	3-15/16	18.96
475-624F	10x10x4	1-7/16	13-5/16	12-3/16	6-11/16	15-9/16	17-7/16	24-1/8	11-1/2	5	22.97
475-626	10x10x6	-3/16	12	11	4-13/16	15	16	20-25/32	12-1/16	7-21/32	28.27

[1] Outlet sized with bushing

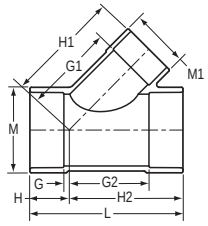
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

REDUCING WYE (continued)

Socket x Socket x Socket

Pressure Rating
1/2" -2" 235 psi @ 73°F
2-1/2" -6" 150 psi @ 73°F
8" & Up 100 psi @ 73°F

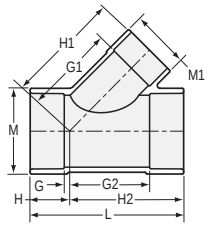


Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)
475-626F	10x10x6	3-1/2	14-1/4	14-1/4	8-3/4	17-1/2	19-1/2	28-1/4	11-1/2	7-3/16	21.45
475-628	10x10x8	1-7/32	12-3/4	12-1/4	6-7/32	16-25/32	17-9/32	23-1/2	12-1/32	9-23/32	35.50
475-628F	10x10x8	5-1/8	15-11/16	15-7/8	10-3/8	19-15/16	21-1/8	31-1/2	11-1/2	9-1/4	28.02
475-661F	12x12x2	1-1/8	12-9/16	11-5/8	5-1/8	14-5/16	17-7/8	23	13-9/16	2-11/16	40.46
475-663F	12x12x3	3/8	13-11/16	12-3/8	5-7/8	15-15/16	18-5/8	24-1/2	13-9/16	3-15/16	28.74
475-664F	12x12x4	3/8	14-11/16	13-1/8	6-5/8	16-15/16	19-3/8	26	13-9/16	5	23.93
475-666F	12x12x6	2-3/8	15-5/8	15-1/8	8-5/8	18-7/8	21-3/8	30	13-9/16	7-3/16	28.92
475-668F	12x12x8	3-7/8	17-1/16	16-5/8	10-1/8	21-5/16	22-7/8	33	13-9/16	9-1/4	45.53
475-670F	12x12x10	5-3/8	18-1/8	18-1/8	11-5/8	23-3/8	24-3/8	36	13-9/16	11-1/2	40.69
475-691F	14x14x2	2	13-7/16	12	5	15-3/16	19	24	14-7/8	2-11/16	29.36
475-693F	14x14x3	3/4	14-9/16	13-1/4	6-1/4	16-13/16	20-1/4	26-1/2	14-7/8	3-15/16	33.06
475-694F	14x14x4	0	15-9/16	14	7	17-13/16	21	28	14-7/8	5	37.45
475-696F	14x14x6	1-1/2	16-1/2	15-1/2	8-1/2	19-3/4	22-1/2	31	14-7/8	7-3/16	48.96
475-698F	14x14x8	3	17-15/16	17	10	22-3/16	24	34	14-7/8	9-1/8	48.96
475-700F	14x14x10	4-1/2	19	18-1/2	11-1/2	24-1/4	25-1/2	37	14-7/8	11-1/2	60.73
475-702F	14x14x12	7	20-15/16	21	14	27-3/16	28	42	14-7/8	13-9/16	69.34
475-751F	16x16x2	2	14-3/4	14	6	16-1/2	22	28	17	2-11/16	37.81
475-753F	16x16x3	1-1/8	15-7/8	14-7/8	6-7/8	18-1/8	22-7/8	29-3/4	17	3-15/16	40.93
475-754F	16x16x4	1/2	16-7/8	15-1/2	7-1/2	19-1/8	23-1/2	31	17	5	50.95
475-756F	16x16x6	1-7/8	17-13/16	17-7/8	9-7/8	21-1/16	25-7/8	35-3/4	17	7-3/16	60.24
475-758F	16x16x8	2-1/2	19-1/4	18-1/2	10-1/2	23-1/2	26-1/2	37	17	9-1/4	70.40
475-760F	16x16x10	4	20-5/16	20	12	25-9/16	28	40	17	11-1/2	73.02
475-762F	16x16x12	5-1/2	22-1/4	21-1/2	13-1/2	28-1/2	29-1/2	43	17	13-9/16	90.59
475-764F	16x16x14	6-3/8	22-1/2	22-3/8	14-3/8	29-1/2	30-3/8	44-3/4	17	14-7/8	100.41
475-786F	18x18x6	7/8	19-1/8	18-7/8	9-7/8	22-3/8	27-7/8	37-3/4	19-1/8	7-3/16	81.78
475-788F	18x18x8	2-3/8	20-9/16	20-3/8	11-3/8	24-13/16	29-3/8	40-3/4	19-1/8	9-1/4	101.85
475-790F	18x18x10	3-3/8	21-5/8	21-3/8	12-3/8	26-7/8	30-3/8	42-3/4	19-1/8	11-1/2	83.99
475-792F	18x18x12	4-7/8	23-9/16	22-7/8	13-7/8	29-13/16	31-7/8	45-3/4	19-1/8	13-9/16	92.98
475-794F	18x18x14	5-3/8	23-13/16	23-3/8	14-3/8	30-13/16	32-3/8	46-3/4	19-1/8	14-7/8	116.88
475-796F	18x18x16	7-7/8	26-1/16	25-7/8	16-7/8	34-1/16	34-7/8	51-3/4	19-1/8	17	121.63
475-816F	20x20x6	1/8	20-1/2	19-7/8	9-7/8	23-3/4	29-7/8	39-3/4	21-3/16	7-3/16	101.52
475-818F	20x20x8	1-3/8	21-15/16	21-3/8	11-3/8	26-3/16	31-3/8	42-3/4	21-3/16	9-1/4	109.36
475-820F	20x20x10	2-3/8	23	22-3/8	12-3/8	28-1/4	32-3/8	44-3/4	21-3/16	11-1/2	120.53
475-822F	20x20x12	4-3/8	24-15/16	24-3/8	14-3/8	31-3/16	34-3/8	48-3/4	21-3/16	13-9/16	135.66
475-824F	20x20x14	4-7/8	25-3/16	24-7/8	14-7/8	32-3/16	34-7/8	49-3/4	21-3/16	14-7/8	129.00

REDUCING WYE (continued)

Socket x Socket x Socket

Pressure Rating
1/2" -2" 235 psi @ 73°F
2-1/2" -6" 150 psi @ 73°F
8" & Up 100 psi @ 73°F

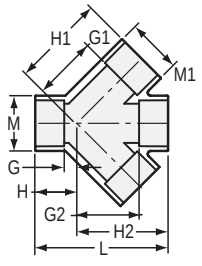


Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)
475-826F	20x20x16	6-3/8	27-7/16	26-3/8	16-3/8	35-7/16	36-3/8	52-3/4	21-3/16	17	161.54
475-828F	20x20x18	7-7/8	28-13/16	27-7/8	17-7/8	37-13/16	37-7/8	55-3/4	21-3/16	19-1/8	158.46
475-906F	24x24x6	1-1/4	23-3/16	22-3/4	10-3/4	26-7/16	34-3/4	45-1/2	25-3/8	7-3/16	135.24
475-908F	24x24x8	1/4	24-5/8	24-1/4	12-1/4	28-7/8	36-1/4	48-1/2	25-3/8	9-1/4	145.74
475-910F	24x24x10	1-3/8	25-11/16	25-3/8	13-3/8	30-15/16	37-3/8	50-3/4	25-3/8	11-1/2	176.10
475-912F	24x24x12	3-1/4	27-5/8	27-1/4	15-1/4	33-7/8	39-1/4	54-1/2	25-3/8	13-9/16	153.58
475-914F	24x24x14	4	27-7/8	28	16	34-7/8	40	56	25-3/8	14-7/8	184.50
475-916F	24x24x16	6-3/8	30-1/8	30-3/8	18-3/8	38-1/8	42-3/8	60-3/4	25-3/8	17	185.70
475-918F	24x24x18	7-7/8	31-1/2	31-7/8	19-7/8	40-1/2	43-7/8	63-3/4	25-3/8	19-1/8	185.70
475-920F	24x24x20	9-1/8	33	33-1/8	21-1/8	43	45-1/8	66-1/4	25-3/8	21-3/16	232.49

DOUBLE WYE

Socket x Socket x Socket x Socket

Pressure Rating
150 psi @ 73°F



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)
476-020F	2	3-5/16	5-11/16	5-11/16	4-11/16	7-1/16	7-1/16	11-3/4	2-3/4	2-3/4	1.25
476-030F	3	4-7/8	8-3/8	8-3/8	6-3/4	10-1/14	10-1/4	17	4	4	5.42
476-040F	4	4-5/8	9-3/4	9-1/8	6-7/8	11-11/16	11-3/8	18-1/4	5	5-1/16	10.09
476-060F	6	4-7/8	11-1/2	11-1/2	8-1/8	14-3/4	14-3/4	22-7/8	7-3/16	7-3/16	20.91
476-080F	8	5-5/8	14-5/16	14-5/16	9-7/8	18-9/16	18-9/16	28-7/16	9-1/4	9-1/4	25.02
476-100F	10	6-9/16	17-1/4	17-1/4	11-13/16	22-1/2	22-1/2	34-5/16	11-1/2	11-1/2	37.91
476-120F	12	7-5/16	20-1/16	20-1/16	13-9/16	26-5/16	26-5/16	39-7/8	13-9/16	13-9/16	63.02
476-140F	14	7-3/16	21-3/16	21-3/16	14-3/16	28-3/16	28-3/16	42-3/8	14-7/8	14-7/8	110.64

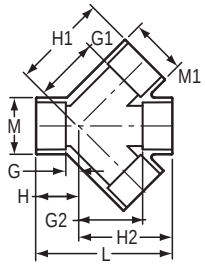
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

REDUCING DOUBLE WYE

Socket x Socket x Socket x Socket

Pressure Rating
150 psi @ 73°F

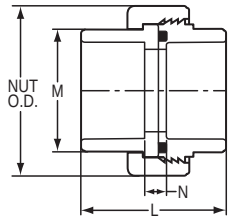


Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)
476-338	3x2	7/32	4-1/4	4-1/32	2-3/32	5-3/4	5-29/32	8	4-3/16	2-7/8	2.27
476-528F	6x2	7/8	8-7/16	7-1/2	4-1/8	10-3/16	10-3/4	14-7/8	7-3/16	2-11/16	5.87
476-530F	6x3	1-13/16	9-9/16	8-7/16	5-1/16	11-13/16	11-11/16	16-3/4	7-3/16	3-15/16	10.29
476-532F	6x4	2-9/16	10-9/16	9-3/16	5-13/16	12-13/16	12-7/16	18-1/4	7-3/16	5	9.52
476-578F	8x2	9/16	9-3/4	9-3/16	4-13/16	11-1/2	13-7/16	18-1/4	9-1/4	2-11/16	12.49
476-580F	8x3	1-5/16	10-7/8	9-15/16	5-9/16	13-1/8	14-3/16	19-3/4	9-1/4	3-15/16	15.79
476-582F	8x4	2-1/16	11-7/8	10-11/16	6-5/16	14-1/8	14-15/16	21-1/4	9-1/4	5	12.73
476-585F	8x6	3-1/2	12-13/16	12-1/8	7-3/4	16-1/16	16-3/8	24-1/8	9-1/4	7-3/16	24.52
476-621F	10x2	1/2	11-3/16	10-1/4	4-3/4	12-15/16	15-1/2	20-1/4	11-1/2	2-11/16	13.93
476-623F	10x3	1/2	12-5/16	11-1/4	5-3/4	14-9/16	16-1/2	22-1/4	11-1/2	3-15/16	16.31
476-624F	10x4	1-7/16	13-5/16	12-3/16	6-11/16	15-9/16	17-7/16	24-1/8	11-1/2	5	18.71
476-626F	10x6	3-1/2	14-1/4	14-1/4	8-3/4	17-1/2	19-1/2	28-1/4	11-1/2	7-3/16	24.65
476-628F	10x8	5-1/8	15-11/16	15-7/8	10-3/8	19-15/16	21-1/8	31-1/2	11-1/2	9-1/4	31.59
476-661F	12x2	1-1/8	12-9/16	11-5/8	5-1/8	14-5/16	17-7/8	23	13-9/16	2-11/16	32.18
476-663F	12x3	3/8	13-11/16	12-3/8	5-7/8	15-15/16	18-5/8	24-1/2	13-9/16	3-15/16	35.93
476-664F	12x4	3/8	14-11/16	13-1/8	6-5/8	16-15/16	19-3/8	26	13-9/16	5	25.49
476-666F	12x6	2-3/8	15-5/8	15-1/8	8-5/8	18-7/8	21-3/8	30	13-9/16	7-3/16	42.56
476-668F	12x8	3-7/8	17-1/16	16-5/8	10-1/8	21-5/16	22-7/8	33	13-9/16	9-1/4	37.86
476-670F	12x10	5-3/8	18-1/8	18-1/8	11-5/8	23-3/8	24-3/8	36	13-9/16	11-1/2	67.89
476-756F	16x6	1-7/8	17-13/16	17-7/8	9-7/8	21-1/16	25-7/8	35-3/4	17	7-3/16	64.27
476-786F	18x6	7/8	19-1/8	18-7/8	9-7/8	22-3/8	27-7/8	37-3/4	19-1/8	7-3/16	91.45

UNION

Socket x Socket w/O-ring Seal

Pressure Rating 150 psi @ 73°F

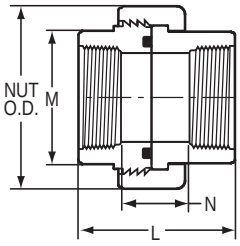


Part Number w/O-ring Seal		Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
BUNA-N	EPDM						
457-005	497-005	1/2	1-27/32	1-3/32	11/32	1-23/32	.08
457-007	497-007	3/4	2-3/16	1-5/16	11/32	1-31/32	.12
457-010	497-010	1	2-7/16	1-5/8	11/32	2-3/8	.18
457-012	497-012	1-1/4	2-29/32	1-31/32	13/32	2-11/16	.24
457-015	497-015	1-1/2	3-1/32	2-1/4	3/8	3-3/32	.32
457-020	497-020	2	3-9/32	2-23/32	17/32	3-5/8	.54
457-025	497-025	2-1/2	4-1/16	3-11/32	9/16	4-3/8	.85
457-030	497-030	3	4-11/32	4	11/16	5-3/32	1.26
457-040	497-040	4	4-5/8	5-1/32	19/32	6-3/16	1.78
457-060	497-060	6	6-7/8	7-9/32	13/16	8-7/8	5.22

UNION

Fipt x Fipt w/O-ring Seal

Pressure Rating 150 psi @ 73°F



Part Number w/O-ring Seal		Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
BUNA-N	EPDM						
458-005	498-005	1/2	1-25/32	1-3/32	5/16	1-23/32	.09
458-007	498-007	3/4	1-25/32	1-5/16	11/32	1-31/32	.12
458-010	498-010	1	2-1/8	1-5/8	11/32	2-3/8	.19
458-012	498-012	1-1/4	2-1/4	1-31/32	13/32	2-11/16	.24
458-015	498-015	1-1/2	2-9/32	2-1/4	3/8	3-3/32	.31
458-020	498-020	2	2-1/2	2-23/32	1/2	3-5/8	.47
458-025	498-025	2-1/2	3-5/32	3-11/32	9/16	4-3/8	.86
458-030	498-030	3	3-13/32	4	5/8	5-3/32	1.26
458-040	498-040	4	3-9/16	5-1/32	5/8	6-3/16	1.74
458-060	498-060	6	4-27/32	7-1/4	1-1/2	8-7/8	4.83

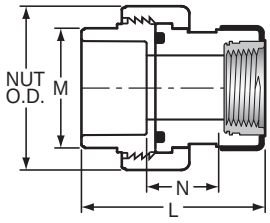
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

TRANSITION UNION

Socket x Fipt w/Metal Thread Insert and O-ring Seal

Pressure Rating 235 psi @ 73°F



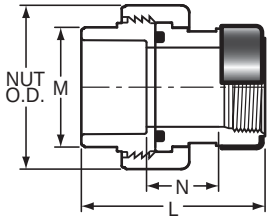
Part Number w/O-ring Seal		Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
BUNA-N	EPDM						
459-010BR	499-010BR	1	2-13/16	1-7/8	1-1/32	2-7/8	.52
459-012BR	499-012BR	1-1/4	3-9/32	2-7/32	1-1/16	3-5/16	.68
459-015BR	499-015BR	1-1/2	3-1/2	2-9/16	1-3/32	3-17/32	.89
459-020BR	499-020BR	2	3-5/8	2-7/8	1-1/4	4-5/16	1.59

Not intended to convey or dispense water for human consumption through drinking or cooking

SPECIAL REINFORCED UNION

Socket x SR Fipt w/O-ring Seal

Pressure Rating 235 psi @ 73°F



Part Number w/O-ring Seal		Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
BUNA-N	EPDM						
459-002SR	499-002SR	1/4	2-1/8	7/8	29/32	1-11/16	.10
459-003SR	499-003SR	3/8	2-5/16	1	1	1-13/16	.06
459-005SR	499-005SR	1/2	2-9/32	1-9/32	21/32	1-31/32	.17
459-007SR	499-007SR	3/4	2-19/32	1-17/32	27/32	2-1/2	.28
459-010SR	499-010SR	1	2-15/16	1-11/16	7/8	2-7/8	.42
459-012SR	499-012SR	1-1/4	3-7/32	2-1/16	31/32	3-5/16	.55
459-015SR	499-015SR	1-1/2	3-7/16	2-9/16	1-1/16	3-9/16	.68
459-020SR	499-020SR	2	4-1/8	3	1-9/16	4-5/32	1.11
459-030SR	499-030SR	3	5-9/32	4-5/16	1-31/32	5-13/16	2.55
459-040SR	499-040SR	4	5-15/16	5-1/4	2-1/8	5-3/4	4.04

SADDLES & SNAP-ON SADDLES

When Assembling Spears® Saddles to PVC pipe, Spears® Manufacturing Company recommends Spears® PVC-19 Solvent Cement and Spears® Primer-68/Primer-70 or equivalent. Although good connections may be accomplished without saddle straps, Spears® Manufacturing Company recommends the use of clamp or strap device during the assembly step to ensure good compression between the pipe and fitting surfaces as the solvent cures. Solvent cemented saddles are non pressure rated. For additional information, contact Spears® Technical Service.

LARGE DIAMETER NPR SADDLE INSTALLATION

Spears® Large Diameter Non-Pressure Rated (NPR) Saddles are designed for use with PVC pipe in open ended, drainage applications. A supplemental clamping strap must be used to eliminate gaps and insure good compression and proper fit between the pipe and the saddle surfaces as the solvent cement cures. Clamping straps/kits are commercially available and are not included with saddle. Proper installation requires adequate application of solvent cement and immediate clamping in position with the clamping straps.

Additional Items Needed

Marking Pen	60-Grit Sandpaper	Large Roller Applicator
1/2" Wrench	Primer (Spears® Primer-68/Primer-70)	Clamping Straps
Hole Saw	Solvent Cement (Spears® PVC-19)	
Power Drill	Primer & Cement Use Containers	

Step 1: Dry-fit Saddle, Mark Location of Saddle and Hole, Prepare Clamping Straps

Check for adequate clearance of saddle and that clamping straps can be installed. Position saddle on pipe aligning branch and desired hole centers. Mark outline of saddle, branch hole and center. Prepare two (2) clamping straps of appropriate length (one strap will be used on each side of branch).

Step 2: Cut Hole in Pipe

Remove saddle; verify system is drained. Drill hole at marked center location using appropriate size hole saw.

Step 3: Sand Pipe and Saddle Contact Areas with 60-Grit Sandpaper

Thoroughly rough up the marked outline area on the pipe and on the underside of the saddle using 60-grit sandpaper. Sand in direction of pipe (parallel), then crosswise of pipe (perpendicular) until rough and all gloss is removed. Give attention to area around the branch on both pipe and saddle.

Step 4: Apply Primer to Pipe and Saddle

Work several coats into the roughened pipe area and underside of saddle, giving attention to the area around the branch on both. Primer until the surfaces are softened using a large roller applicator.

Step 5: Apply a Liberal Quantity of Cement to Pipe and Saddle

Apply several coats (minimum 3) one after the other to build up cement on pipe and saddle contact areas. Avoid removing previous coat with each application. **DO NOT** allow cement to dry out between coats. Again, give attention to area around the branch on both pipe and saddle. For threaded saddles, avoid runs or drips in the branch fitting threads.

Step 6: Immediately Install Saddle and Tighten Clamping Straps

Position saddle and locate clamping straps midway between branch and end on each side of branch. This should be done immediately while cement is still wet. Avoid excessive movement that might dislocate proper positioning (assistance is recommended). Tighten straps tight to firmly press saddle onto pipe. A thick glue-bead should be forced out around the saddle edges and inside the branch joint. If no bead, quickly remove saddle and apply more cement.

Step 7: Allow Cement Joint to Cure

Cure for same time and conditions as required for standard solvent cement pipe joints of the same size in the system.

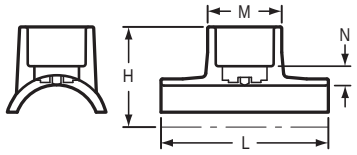
Snap-On Saddle Installation Instructions

- The surface to be joined must be wiped clean.
- Using an appropriate applicator, apply a coat of primer to the fitting and pipe.
- While the primer is still wet, apply a generous coat of medium bodied cement first to the pipe, then to the fitting and then to the pipe again, covering an area of the pipe slightly larger than the saddle.
- Without delay, push the saddle onto the pipe and rotate the fitting approximately 15° in each direction to evenly distribute the cement.
- Allow cement to cure.
- Drill fitting and pipe with the recommended size hole saw.
- Remove debris from the line.
- Follow all safe handling precautions.

Solvent cemented saddles are non pressure rated. For additional information, contact Spears® Technical Service.

SADDLE

(IPS O.D. x Socket)
Non-Pressure Rated. Contact Spears® Technical Services for additional information

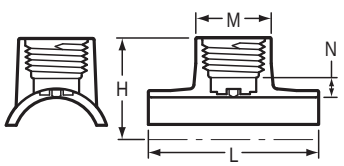


Part Number	Size	H	L	M	N	Approx. Wt. (Lbs.)
463-288	2-1/2x3/4	2-9/16	5-5/16	1-11/32	1/16	.24
463-333[1]	3x1/2	3-19/32	6-11/32	2-3/8	1-5/16	.65
463-335[1]	3x1	3-5/8	6-11/32	2-3/8	7/8	.67
463-336	3x1-1/4	3-21/32	6-5/16	2-3/8	21/32	.59
463-337	3x1-1/2	3-5/16	6-3/8	2-3/8	5/16	.52
463-338	3x2	5	6-5/16	2-3/4	1-7/8	.71
463-415	4x1/2	4-1/8	6-5/16	2-3/8	1-1/8	.65
463-417	4x1	4-7/32	6-5/16	2-3/8	13/16	.67
463-418	4x1-1/4	4-3/16	6-1/4	2-3/8	11/16	.60
463-419	4x1-1/2	3-3/4	6-1/4	2-13/32	1/4	.57
463-420	4x2	5-1/2	6-1/4	2-3/4	1-13/16	.73
463-485	5x1-1/2	5-3/8	7-1/8	2-25/32	1-5/32	1.05
463-486	5x2	5	7-1/8	2-3/4	9/32	.89
463-523[1]	6x1/2	4-5/16	6-15/32	2-3/8	1-1/4	.84
463-525	6x1	5-11/32	6-3/8	2-7/8	7/8	.86
463-526	6x1-1/4	5-3/8	6-5/16	2-3/8	3/4	.80
463-527	6x1-1/2	4-15/16	6-5/16	2-13/32	5/16	.69
463-528	6x2	6-9/16	6-5/16	2-3/4	1-7/8	.92
463-530[1]	6x3	5-15/16	11-15/16	5-1/16	5/8	2.79
463-532	6x4	5-1/2	11-15/16	5	1/4	1.95
463-573[1]	8x1/2	6-9/16	6-11/32	2-3/8	1-1/2	.93
463-575[1]	8x1	3-3/8	6-11/32	2-3/8	1-7/32	.95
463-576[1]	8x1-1/4	3-21/32	6-11/32	2-3/8	1	.84
463-577	8x1-1/2	6-7/32	6-5/16	2-3/8	19/32	.83
463-578	8x2	7-11/16	6-5/16	2-3/4	2	.96
463-580[1]	8x3	6	11-7/8	5	3/4	2.96
463-582	8x4	5-9/16	11-15/16	5-1/32	7/32	2.11
463-624	10x4	7-5/8	11-7/8	5	5/16	2.19

[1]Outlet sized with bushing

SADDLE

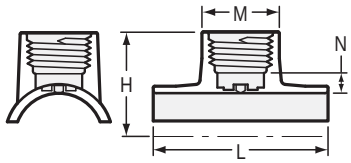
(IPS O.D. x Fipt)
Non-Pressure Rated. Contact Spears® Technical Services for additional information



Part Number	Size	H	L	M	N	Approx. Wt. (Lbs.)
464-071	1/2x1/8	1	2-1/8	9/16	1/8	.03
464-097	3/4x1/8	1-1/8	2-1/8	9/16	5/32	.04
464-288	2-1/2x3/4	2-9/16	5-9/32	1-11/32	5/16	.24
464-337	3x1-1/2	3-9/32	6-5/16	2-3/8	13/32	.53
464-419	4x1-1/2	3-3/4	6-1/4	2-3/8	7/16	.56
464-486	5x2	4-15/16	7-1/16	2-3/4	1-3/32	1.00

SADDLE (continued)

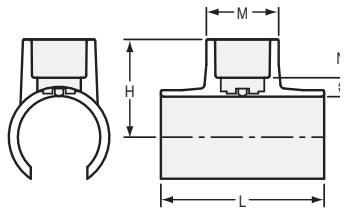
(IPS O.D. x Fipt)
Non-Pressure Rated. Contact Spears®
Technical Services for additional information



Part Number	Size	H	L	M	N	Approx. Wt. (Lbs.)
464-527	6x1-1/2	4-15/16	6-5/16	2-3/8	3/8	.70
464-532	6x4	5-9/32	11-15/16	5	9/32	1.92
464-577	8x1-1/2	6-7/32	6-5/16	2-3/8	19/32	.79
464-582	8x4	6-1/4	11-7/8	5	1/4	2.16
464-624	10x4	7-5/16	11-7/8	5	1/4	2.04

SNAP-ON SADDLE

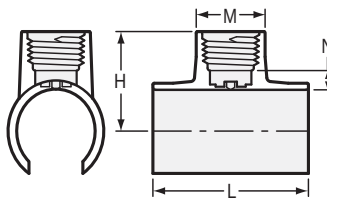
(IPS O.D. x Socket)
Non-Pressure Rated. Contact Spears®
Technical Services for additional information



Part Number	Size	H	L	M	N	Approx. Wt. (Lbs.)
463-005	1/2x1/2	1-11/32	2-1/2	1-3/32	5/32	.05
463-007	3/4x3/4	1-3/4	3-1/8	1-5/16	7/32	.08
463-010	1x1	1-29/32	3-5/8	1-5/8	1/8	.14
463-012	1-1/4x1-1/4	2-1/4	4-1/4	2	11/32	.20
463-015	1-1/2x1-1/2	2-13/32	4-7/16	2-7/32	3/16	.25
463-020	2x2	2-23/32	5-1/4	2-11/16	7/32	.40
463-101	3/4x1/2	1-11/32	2-3/4	1-3/32	7/32	.06
463-130	1x1/2	1-13/32	3-1/2	1-3/32	1-3/16	.09

SNAP-ON SADDLE

(IPS O.D. x Fipt)
Non-Pressure Rated. Contact Spears®
Technical Services for additional information.



Part Number	Size	H	L	M	N	Approx. Wt. (Lbs.)
464-005	1/2x1/2	1-3/8	2-1/2	1-1/16	3/16	.05
464-007	3/4x3/4	1-3/4	3-5/32	1-5/16	13/32	.09
464-010	1x1	1-15/16	3-5/8	1-5/8	1/4	.15
464-101	3/4x1/2	1-7/16	2-3/8	1-3/32	3/16	.06
464-130	1x1/2	1-19/32	3-1/2	1-1/16	5/32	.08
464-131	1x3/4	1-7/16	3	1-1/4	3/16	.09
464-210	1-1/2x3/4	1-15/16	3-17/32	1-5/16	5/32	.15

CLAMP-ON SADDLES
Simple Two-Piece Design Engineered for Reliability

Spears® PVC & CPVC Clamp-On Saddles allow quick, easy and reliable addition of branch lines to existing piping system lines. These versatile saddle units can be used in either temporary or permanent installations on all types of pipe with IPS (Iron Pipe size) outside diameter, such as PVC, CPVC, Polyethylene, Polypropylene and Steel.

Excellent Metal-to-Plastic System Transition
Easily installs on metal pipe as a transition to plastic system.

PVC & CPVC Tee or Cross Configurations
Available in PVC White, PVC Gray or CPVC in 2" - 12" IPS pipe saddle with socket outlets in sizes 1/2" - 6" and Special Reinforced (SR) threaded outlets in sizes 1/2" - 6", single Tee or double Cross configurations.

Patented SR Design Female Threads
Patented Special Reinforced (SR) design on female thread outlets for superior strength.

O-ring Options
Choice of high grade Buna-N or EPDM O-rings for Schedule 40 and EPDM or FKM O-rings for Schedule 80, for application specific selection for optimum chemical resistance.

Multi-Bolt Design, Choice of Hardware
Positive attachment eliminates splitting problems associated with plastic wedge fasteners and outperforms 2-Bolt clamp saddle designs. Choose zinc plated or stainless steel nut, bolt and washer hardware.

Excellent Pressure Capabilities
Maximum internal pressure rating of 235 psi through 4", 200 psi for 6", and 150 psi for 8" - 12" at 73°F.

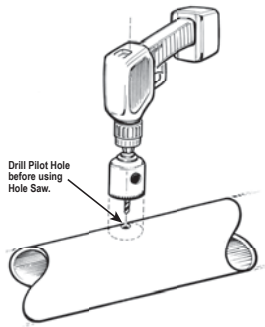
Sample Engineering Specification
All thermoplastic saddles shall be clamp-on type with O-ring seal constructed from PVC Type I cell classification 12454 or CPVC Type IV cell classification 23447. All O-rings shall be Buna-N, EPDM or FKM. All saddles shall be piloted at O-ring area for positive positioning in pipe. All bolt clamping hardware shall be zinc plated steel or stainless steel. All threaded saddle outlets shall be Special Reinforced (SR) design. Saddles shall be pressure rated at 235 psi for use on pipe sizes through 4" nominal IPS diameters, 200 psi for use on 6" pipe, and 150 psi for use on 8" - 12" pipe, maximum internal pressure for water at 73° F, as manufactured by Spears® Manufacturing Company.

Schedule 40 Saddles Dimensions & Information

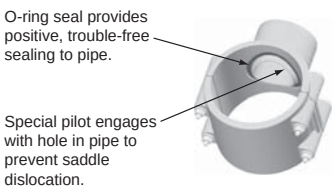
Spears® Two-Piece Clamp-On Saddle Design Clamps onto Pipe for Quick and Easy Installation

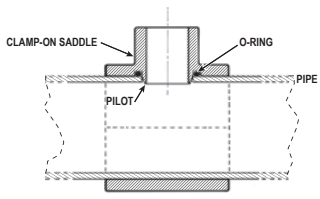
Clamp-On Saddle Installation Instructions

1. Using a standard industrial grade hole-saw, cut specified hole in desired position on pipe according to recommended hole saw size engraved on the saddle. **Note:** Care must be taken to deburr hole and remove all residue from hole area to assure tight fit and avoid leakage.
2. Fully seat O-ring in groove on underside of saddle outlet component. Position over hole and fully seat saddle onto pipe. Note: Certain saddle outlets are piloted. Be sure pilot lip fully engages with hole in pipe.
3 Place strap component opposite outlet and secure with bolts (4), nuts (4) and washers (8). Important: Washers MUST be placed under each bolt head (1) and under each nut (1) to avoid damage to saddle.
4. Tighten bolts to specified torque.

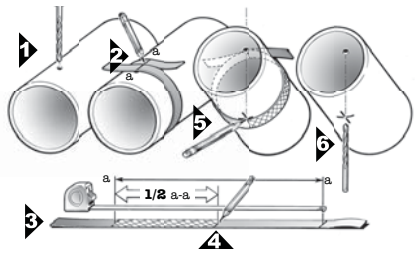


Saddle Size	2	3	4	6 & up
Recommended Bolt-Torque - ft/lb	8	8	8	10





For Double Outlet Saddle Installation — Determine second outlet hole position as shown



Saddle x Outlet Size	Recommended Hole Size	Recommended Bolt Torque ft./lbs.
2 x 1/2	3/4	8
2 x 3/4	7/8	8
2 x 1	1-1/8	8
2 x 1-1/4	1-1/2	8
2 x 1-1/2	1-1/2	8
2-1/2 x 1-1/2	1-3/4	8
3 x 1/2[1]	7/8	8
3 x 3/4	7/8	8
3 x 1	1-1/8	8
3 x 1-1/4[1]	2-1/4	8
3 x 1-1/2[1]	2-1/4	8
3 x 2	2-1/4	8
4 x 1/2[1]	1-1/8	8
4 x 3/4[1]	1-1/8	8
4 x 1	1-1/8	8
4 x 1-1/4[1]	1-3/4	8
4 x 1-1/2	1-3/4	8
4 x 2	2-1/4	8
4 x 2-1/2[1]	3	8
4 x 3	3	8
6 x 1/2[1]	1-1/8	10
6 x 3/4[1]	1-1/8	10

Saddle x Outlet Size	Recommended Hole Size	Recommended Bolt Torque ft./lb.s
6 x 1	1-1/8	10
6 x 1-1/4[1]	2-1/4	10
6 x 1-1/2[1]	2-1/4	10
6 x 2	2-1/4	10
6 x 2-1/2[1]	3	10
6 x 3	3	10
6 x 4	4	10
8 x 1/2[1]	4	10
8 x 3/4[1]	4	10
8 x 1[1]	4	10
8 x 1-1/4[1]	4	10
8 x 1-1/2[1]	4	10
8 x 2[1]	4	10
8 x 2-1/2[1]	4	10
8 x 3[1]	4	10
8 x 4	4	10
8 x 6	6	10
10 x 4	4	10
10 x 6	6	10
12 x 4	4	10
12 x 6	6	10

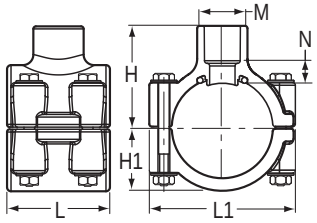
1: Outlet-Sized with Bushing

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CLAMP-ON SADDLE x SOCKET SINGLE OUTLET

Dimensions Also Applicable to
466**S**-XXX 466**E**-XXX 466**SE**-XXX

Pressure Rating
2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



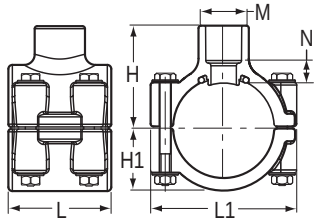
Part Number	Size	H	H1	L	L1	M	N	Hole Size	Bolt Torque ft./lbs.	Approx. Wt. (Lbs.)
466-247	2x1/2	2-3/8	1-1/2	2-7/16	3-7/16	1-3/16	5/16	3/4	8	.60
466-248	2x3/4	2-1/2	1-1/2	2-7/16	3-7/16	1-3/8	5/16	7/8	8	.61
466-249	2x1	2-5/8	1-1/2	2-7/16	3-7/16	1-11/16	5/16	1-1/8	8	.63
466-250	2x1-1/4	2-3/4	1-1/2	2-7/16	3-7/16	2-1/16	5/16	1-1/2	8	.71
466-251	2x1-1/2	2-15/16	1-1/2	2-7/16	3-7/16	2-3/8	3/8	1-1/2	8	.71
466-291	2-1/2x1-1/2	3-3/16	1-11/16	4-1/16	4	2-3/8	3/8	1-3/4	8	1.02
466-333	3x1/2	3-5/16	2-1/16	3	4-5/8	1-3/8	13/16	7/8	8	.88
466-334	3x3/4	3-1/16	2-1/16	3	4-5/8	1-3/8	9/32	7/8	8	.86
466-335	3x1	3-3/16	2-1/16	3	4-5/8	1-11/16	5/16	1-1/8	8	.87
466-336	3x1-1/4	4-1/32	2-1/16	4-3/32	4-5/8	3	1-1/32	2-1/4	8	1.47
466-337	3x1-1/2	4-1/32	2-1/16	4-3/32	4-5/8	3	29/32	2-1/4	8	1.41
466-338	3x2	3-5/8	2-1/16	4-3/32	4-5/8	3	3/8	2-1/4	8	1.25
466-415	4x1/2	4-3/32	2-5/8	3	5-9/16	2-3/8	31/32	1-1/8	8	1.31
466-416	4x3/4	4-3/32	2-5/8	3	5-9/16	2-3/8	27/32	1-1/8	8	1.28
466-417	4x1	3-13/16	2-5/8	3	5-5/8	1-11/16	7/16	1-1/8	8	1.24
466-418	4x1-1/4	4-13/32	2-5/8	4-3/32	5-5/8	2-3/8	29/32	1-3/4	8	1.70
466-419	4x1-1/2	4-1/8	2-5/8	4-3/32	5-9/16	2-3/8	1/2	1-3/4	8	1.63
466-420	4x2	4-3/16	2-5/8	4-1/8	5-5/8	3	7/16	2-1/4	8	1.70
466-421	4x2-1/2	5	2-5/8	5-7/16	5-23/32	4-9/32	3/4	3	8	2.82
466-422	4x3	4-5/8	2-19/32	5-7/16	5-11/16	4-1/4	1/2	3	8	2.41
466-523	6x1/2	5-13/32	3-7/8	3	7-3/4	1-11/16	1-7/32	1-1/8	10	2.35
466-524	6x3/4	5-7/16	3-7/8	3	7-3/4	1-11/16	1-1/8	1-1/8	10	2.33
466-525	6x1	5-1/8	3-7/8	3	7-15/16	1-11/16	11/16	1-1/8	10	2.29
466-526	6x1-1/4	5-15/16	3-7/8	4-1/8	7-3/4	3	1-3/8	2-1/4	10	3.26
466-527[1]	6x1-1/2	5-23/32	3-7/8	4-1/8	7-31/32	3	1-1/32	2-1/4	10	3.20
466-528	6x2	5-1/2	3-7/8	4-1/8	7-3/4	3	11/16	2-1/4	10	3.04

[1] Outlet sized with bushing

CLAMP-ON SADDLE x SOCKET SINGLE OUTLET (continued)

Dimensions Also Applicable to
466**S**-XXX 466**E**-XXX 466**SE**-XXX

Pressure Rating
2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



Part Number	Size	H	H1	L	L1	M	N	Hole Size	Bolt Torque ft./lbs.	Approx. Wt. (Lbs.)
466-529	6x2-1/2	6-7/16	3-7/8	6	7-15/16	4-1/4	1-1/8	3	10	4.75
466-530	6x3	5-15/16	3-7/8	6	7-15/16	4-1/4	25/32	3	10	4.33
466-532	6x4	6	3-29/32	6	7-15/16	5-3/16	5/8	4	10	5.12
466-573	8x1/2	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-3/16	4	10	9.35
466-574	8x3/4	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-3/4	4	10	9.36
466-575	8x1	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-5/8	4	10	9.37
466-576	8x1-1/4	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-1/2	4	10	9.39
466-577	8x1-1/2	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-3/8	4	10	9.32
466-578	8x2	7-11/16	4-7/8	8-1/2	10-1/8	5-1/4	1-7/8	4	10	9.17
466-579	8x2-1/2	8-1/8	4-7/8	8-1/2	10-1/8	5-1/4	1-11/16	4	10	9.24
466-580	8x3	7-11/16	4-7/8	8-1/2	10-1/8	5-1/4	1-7/16	4	10	9.15
466-582	8x4	7-5/16	4-7/8	8-1/2	10-1/8	5-1/4	11/16	4	10	8.35
466-585	8x6	8-3/32	4-7/8	8-1/2	10-1/8	7-5/8	11/16	6	10	9.47
466-620[1]	10x1-1/2	8-7/8	6-1/8	8-1/2	11-7/8	5-1/4	3-1/4	4	10	12.78
466-624	10x4	8-15/32	6-1/32	8-1/2	12-5/16	5-1/4	13/16	4	10	11.79
466-626	10x6	9-1/8	6	8-7/16	12	7-5/8	1-1/8	6	10	12.86
466-664	12x4	9-9/16	7-5/32	8-1/2	14-5/16	5-1/4	7/8	4	10	15.48
466-666	12x6	10-3/8	7-5/32	8-1/2	14-5/16	7-5/8	7/8	6	10	16.30

[1]Outlet sized with bushing

1) Clamp-On Saddle Standard Hardware: Zinc Bolts w/BUNA-N O-ring Seal
e.g.) Part Number 466-247 = 2x1/2 PVC Clamp On Saddle, Socket, BUNA-N O-ring, Zinc Bolts.

2) Clamp-On Saddles w/Stainless Steel (SS) Bolts,Add The Letter **"S"** Before The Dash.
e.g.) Part Number 466**S**-247 = 2x1/2 PVC Clamp On Saddle, Socket, BUNA-N O-ring, Stainless Steel Bolts.

3) Clamp-On Saddles Standard Hardware: Zinc Bolts w/EPDM O-ring Seal, Add The Letter **"E"** Before The Dash.
e.g.) Part Number 466**E**-247 = 2x1/2 PVC Clamp-On Saddle, Socket, EPDM O-ring, Zinc Bolts.

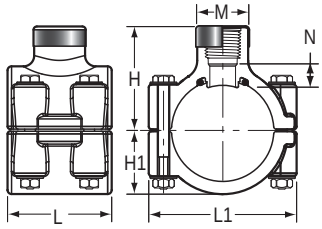
4) Clamp-On Saddles w/Stainless Steel Bolts & EPDM O-ring Seal, Add The Letter **"SE"** Before The Dash.
e.g.) Part Number 466**SE**-247 = 2x1/2 PVC Clamp On Saddle, Socket EPDM O-ring, Stainless Steel Bolts.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CLAMP-ON SADDLE x SR FIPT SINGLE OUTLET

Dimensions Also Applicable to
467**S**-XXXSR 467**E**-XXXSR 467**SE**-XXXSR

Pressure Rating
2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F

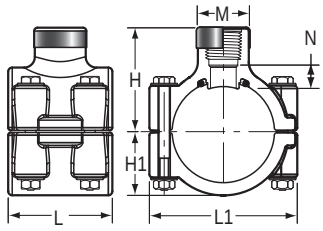


Part Number	Size	H	H1	L	L1	M	N	Hole Size	Bolt Torque ft./lbs.	Approx. Wt. (Lbs.)
467-247SR	2x1/2	2-3/8	1-1/2	2-7/16	3-7/16	1-3/16	5/16	3/4	8	.62
467-248SR	2x3/4	2-1/2	1-1/2	2-7/16	3-7/16	1-3/8	5/8	7/8	8	.63
467-249SR	2x1	2-5/8	1-1/2	2-7/16	3-7/16	1-11/16	9/16	1-1/8	8	.65
467-250SR	2x1-1/4	2-3/4	1-1/2	2-7/16	3-7/16	2-1/16	11/16	1-1/2	8	.57
467-251SR	2x1-1/2	2-15/16	1-1/2	2-7/16	3-7/16	2-3/8	3/4	1-1/2	8	.76
467-291SR	2-1/2x1-1/2	3-3/16	1-11/16	4-1/16	4	2-3/8	13/16	1-3/4	8	1.09
467-333SR	3x1/2	3-5/16	2-1/16	3	4-5/8	1-3/8	15/16	7/8	8	.89
467-334SR	3x3/4	3-1/16	2-1/16	3	4-5/8	1-3/8	9/16	7/8	8	.88
467-335SR	3x1	3-3/16	2-1/16	3	4-5/8	1-11/16	9/16	1-1/8	8	.90
467-336SR	3x1-1/4	4-1/32	2-1/16	4-3/32	4-5/8	3	1-5/16	2-1/4	8	1.52
467-337SR	3x1-1/2	4-1/32	2-1/16	4-3/32	4-5/8	3	2-11/16	2-1/4	8	1.48
467-338SR	3X2	3-5/8	2-1/16	4-3/32	4-5/8	3	7/8	2-1/4	8	1.34
467-415SR	4x1/2	4-3/32	2-5/8	3	5-9/16	2-3/8	1-1/8	1-1/8	8	1.32
467-416SR	4x3/4	4-3/32	2-5/8	3	5-9/16	2-3/8	1-1/8	1-1/8	8	1.31
467-417SR	4x1	3-13/16	2-5/8	3	5-5/8	1-11/16	11/16	1-1/8	8	1.28
467-418SR	4x1-1/4	4-13/32	2-5/8	4-3/32	5-5/8	2-3/8	1-7/32	1-3/4	8	1.75
467-419SR	4x1-1/2	4-1/8	2-5/8	4-3/32	5-9/16	2-3/8	15/16	1-3/4	8	1.70
467-420SR	4x2	4-3/16	2-5/8	4-1/8	5-5/8	3	15/16	2-1/4	8	1.80
467-421SR	4x2-1/2	5	2-5/8	5-7/16	5-23/32	4-9/32	1-7/32	3	8	2.92
467-422SR	4x3	4-5/8	2-19/32	5-7/16	5-11/16	4-1/4	31/32	3	8	2.59
467-523SR	6x1/2	5-13/32	3-7/8	3	7-3/4	1-11/16	1-3/8	1-1/8	10	2.37
467-524SR	6x3/4	5-7/16	3-7/8	3	7-3/4	1-11/16	1-3/8	1-1/8	10	2.35
467-525SR	6x1	5-1/8	3-7/8	3	7-15/16	1-11/16	15/16	1-1/8	10	2.32
467-526SR	6x1-1/4	5-15/16	3-7/8	4-1/8	7-3/4	3	1-11/16	2-1/4	10	3.32
467-527SR	6x1-1/2	5-15/16	3-7/8	4-1/8	7-3/4	3	1-3/4	2-1/4	10	3.27
467-528SR	6x2	5-1/2	3-7/8	4-1/8	7-3/4	3	1-7/32	2-1/4	10	3.14
467-529SR	6x2-1/2	6-7/16	3-7/8	6	7-15/16	4-1/4	1-9/16	3	10	4.85
467-530SR	6x3	5-15/16	3-7/8	6	7-15/16	4-1/4	1-1/4	3	10	4.50

CLAMP-ON SADDLE x SR FIPT SINGLE OUTLET (continued)

Dimensions Also Applicable to
467**S**-XXXSR 467**E**-XXXSR 467**SE**-XXXSR

Pressure Rating
2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



Part Number	Size	H	H1	L	L1	M	N	Hole Size	Bolt Torque ft./lbs.	Approx. Wt. (Lbs.)
467-532SR	6x4	6	3-29/32	6	7-15/16	5-3/16	1-3/8	4	10	5.48
467-573SR	8x1/2	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	3	4	10	9.42
467-574SR	8x3/4	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	3	4	10	9.43
467-575SR	8x1	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-13/16	4	10	9.43
467-576SR	8x1-1/4	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-3/4	4	10	9.56
467-577SR	8x1-1/2	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-3/4	4	10	9.39
467-578SR	8x2	7-11/16	4-7/8	8-1/2	10-1/8	5-1/4	2-3/8	4	10	9.21
467-579SR	8x2-1/2	8-1/8	4-7/8	8-1/2	10-1/8	5-1/4	2-1/2	4	10	9.15
467-580SR	8x3	7-11/16	4-7/8	8-1/2	10-1/8	5-1/4	1-15/16	4	10	10.06
467-582SR	8x4	7-5/16	4-7/8	8-1/2	10-1/8	5-1/4	1-1/2	4	10	8.51
467-585SR	8x6	8-3/32	4-7/8	8-1/2	10-1/8	7-5/8	2-3/32	6	10	10.20
467-624SR	10x4	8-15/32	6-1/32	8-1/2	12-5/16	5-1/4	2-3/16	4	10	12.09
467-626SR	10x6	9-9/32	6-1/32	8-1/2	12-5/16	7-5/8	3-3/16	6	10	13.45
467-664SR	12x4	9-9/16	7-5/32	8-1/2	14-5/16	5-1/4	1-5/8	4	10	15.69
467-666SR	12x6	10-3/8	7-5/32	8-1/2	14-5/16	7-5/8	2-1/4	6	10	16.92

1) Clamp-On Saddle Standard Hardware: Zinc Bolts w/BUNA-N O-ring Seal
e.g.) Part Number 467-247SR = 2x1/2 PVC Clamp On Saddle, Socket, BUNA-N O-ring, Zinc Bolts.

2) Clamp-On Saddles w/Stainless Steel (SS) Bolts,Add The Letter **"S"** Before The Dash.
e.g.) Part Number 467**S**-247SR = 2x1/2 PVC Clamp On Saddle, Socket, BUNA-N O-ring, Stainless Steel Bolts.

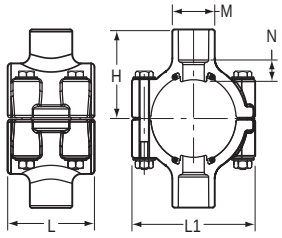
3) Clamp-On Saddles Standard Hardware: Zinc Bolts w/EPDM O-ring Seal, Add The Letter **"E"** Before The Dash.
e.g.) Part Number 467**E**-247SR = 2x1/2 PVC Clamp-On Saddle, Socket, EPDM O-ring, Zinc Bolts.

4) Clamp-On Saddles w/Stainless Steel Bolts & EPDM O-ring Seal, Add The Letter **"SE"** Before The Dash.
e.g.) Part Number 467**SE**-247SR = 2x1/2 PVC Clamp On Saddle, Socket EPDM O-ring, Stainless Steel Bolts.

CLAMP-ON SADDLE x SOCKET DOUBLE OUTLET

Dimensions Also Applicable to
468**S**-Xxx 468**E**-Xxx 468**SE**-Xxx

Pressure Rating
2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F

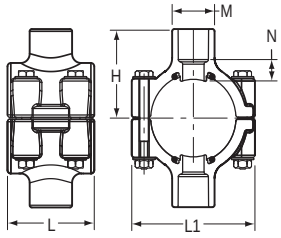


Part Number	Size	H	L	L1	M	N	Hole Size	Bolt Torque ft./lbs.	Approx. Wt. (Lbs.)
468-247	2x1/2	2-3/8	2-7/16	3-7/16	1-3/16	5/16	3/4	8	.63
468-248	2x3/4	2-1/2	2-7/16	3-7/16	1-3/8	5/16	7/8	8	.65
468-249	2x1	2-5/8	2-7/16	3-7/16	1-11/16	5/16	1-1/8	8	.68
468-250	2x1-1/4	2-3/4	2-7/16	3-7/16	2-1/16	5/16	1-1/2	8	.73
468-251	2x1-1/2	2-15/16	2-7/16	3-7/16	2-3/8	3/8	1-1/2	8	.85
468-291	2-1/2x1-1/2	3-3/16	4-1/16	4	2-3/8	3/8	1-3/4	8	1.15
468-333	3x1/2	3-5/16	3	4-5/8	1-3/8	13/16	7/8	8	.93
468-334	3x3/4	3-1/16	3	4-5/8	1-3/8	9/32	7/8	8	.89
468-335	3x1	3-3/16	3	4-5/8	1-11/16	5/16	1-1/8	8	.91
468-336	3x1-1/4	4-1/32	4-3/32	4-5/8	3	1-1/32	2-1/4	8	1.93
468-337	3x1-1/2	4-1/32	4-3/32	4-5/8	3	29/32	2-1/4	8	1.80
468-338	3x2	3-5/8	4-3/32	4-5/8	3	3/8	2-1/4	8	1.48
468-415	4x1/2	4-3/32	3	5-9/16	2-3/8	31/32	1-1/8	8	1.43
468-416	4x3/4	4-3/32	3	5-9/16	2-3/8	27/32	1-1/8	8	1.37
468-417	4x1	3-13/16	3	5-5/8	1-11/16	7/16	1-1/8	8	1.30
468-418	4x1-1/4	4-13/32	4-3/32	5-5/8	2-3/8	29/32	1-3/4	8	1.91
468-419	4x1-1/2	4-1/8	4-3/32	5-9/16	2-3/8	1/2	1-3/4	8	1.76
468-420	4x2	4-3/16	4-1/8	5-5/8	3	7/16	2-1/4	8	1.91
468-421	4x2-1/2	5	5-7/16	5-23/32	4-9/32	3/4	3	8	3.77
468-422	4x3	4-5/8	5-7/16	5-11/16	4-1/4	1/2	3	8	2.95
468-523	6x1/2	5-13/32	3	7-3/4	1-11/16	1-7/32	1-1/8	10	2.48
468-524	6x3/4	5-7/16	3	7-3/4	1-11/16	1-1/8	1-1/8	10	2.44
468-525	6x1	5-1/8	3	7-15/16	1-11/16	11/16	1-1/8	10	2.35
468-526	6x1-1/4	5-15/16	4-1/8	7-3/4	3	1-3/8	2-1/4	10	3.70
468-527	6x1-1/2	5-15/16	4-1/8	7-3/4	3	1-1/4	2-1/4	10	3.57
468-528	6x2	5-1/2	4-1/8	7-3/4	3	11/16	2-1/4	10	3.26
468-529	6x2-1/2	6-7/16	6	7-15/16	4-1/4	1-1/8	3	10	5.61
468-530	6x3	5-15/16	6	7-15/16	4-1/4	25/32	3	10	4.78

CLAMP-ON SADDLE x SOCKET DOUBLE OUTLET (continued)

Dimensions Also Applicable to
468**S**-Xxx 468**E**-Xxx 468**SE**-Xxx

Pressure Rating
2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



Part Number	Size	H	L	L1	M	N	Hole Size	Bolt Torque ft./lbs.	Approx. Wt. (Lbs.)
468-532	6x4	6	6	7-15/16	5-3/16	5/8	4	10	5.63
468-573	8x1/2	8-3/32	8-1/2	10-1/8	5-1/4	2-3/16	4	10	11.07
468-574	8x3/4	8-3/32	8-1/2	10-1/8	5-1/4	2-3/4	4	10	11.04
468-575	8x1	8-3/32	8-1/2	10-1/8	5-1/4	2-5/8	4	10	11.06
468-576	8x1-1/4	8-3/32	8-1/2	10-1/8	5-1/4	2-1/2	4	10	11.08
468-577	8x1-1/2	8-3/32	8-1/2	10-1/8	5-1/4	2-3/8	4	10	10.96
468-578	8x2	7-11/16	8-1/2	10-1/8	5-1/4	1-7/8	4	10	10.64
468-579	8x2-1/2	8-1/8	8-1/2	10-1/8	5-1/4	1-11/16	4	10	10.78
468-580	8x3	7-11/16	8-1/2	10-1/8	5-1/4	1-7/16	4	10	10.62
468-582	8x4	7-5/16	8-1/2	10-1/8	5-1/4	11/16	4	10	9.02
468-585	8x6	8-3/32	8-1/2	10-1/8	7-5/8	11/16	6	10	11.25
468-624	10x4	8-15/32	8-1/2	12-5/16	5-1/4	13/16	4	10	12.37
468-626	10x6	9-9/32	8-1/2	12-5/16	7-5/8	13/16	6	10	14.51
468-664	12x4	9-9/16	8-1/2	14-5/16	5-1/4	7/8	4	10	16.06
468-666	12x6	10-3/8	8-1/2	14-5/16	7-5/8	7/8	6	10	17.70

1) Clamp-On Saddle Standard Hardware: Zinc Bolts w/BUNA-N O-ring Seal
e.g.) Part Number 468-247 = 2x1/2 PVC Clamp On Saddle, Socket, BUNA-N O-ring, Zinc Bolts.

2) Clamp-On Saddles w/Stainless Steel (SS) Bolts,Add The Letter **"S"** Before The Dash.
e.g.) Part Number 468**S**-247 = 2x1/2 PVC Clamp On Saddle, Socket, BUNA-N O-ring, Stainless Steel Bolts.

3) Clamp-On Saddles Standard Hardware: Zinc Bolts w/EPDM O-ring Seal, Add The Letter **"E"** Before The Dash.
e.g.) Part Number 468**E**-247 = 2x1/2 PVC Clamp-On Saddle, Socket, EPDM O-ring, Zinc Bolts.

4) Clamp-On Saddles w/Stainless Steel Bolts & EPDM O-ring Seal, Add The Letter **"SE"** Before The Dash.
e.g.) Part Number 468**SE**-247 = 2x1/2 PVC Clamp On Saddle, Socket EPDM O-ring, Stainless Steel Bolt

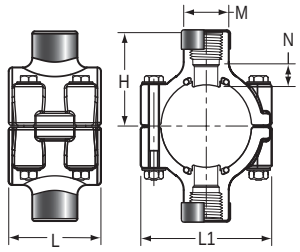
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CLAMP-ON SADDLE x SR FIPT DOUBLE OUTLET

Dimensions Also Applicable to
469**S**-XXXSR 469**E**-XXXSR 469**SE**-XXXSR

Pressure Rating
2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F

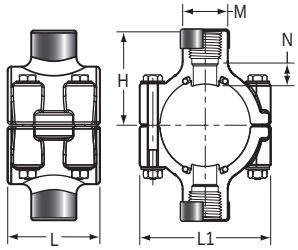


Part Number	Size	H	L	L1	M	N	Hole Size	Bolt Torque ft./lbs.	Approx. Wt. (Lbs.)
469-247SR	2x1/2	2-3/8	2-7/16	3-7/16	1-3/16	5/16	3/4	8	.66
469-248SR	2x3/4	2-1/2	2-7/16	3-7/16	1-3/8	5/16	7/8	8	.67
469-249SR	2x1	2-5/8	2-7/16	3-7/16	1-11/16	5/16	1-1/8	8	.73
469-250SR	2x1-1/4	2-3/4	2-7/16	3-7/16	2-1/16	5/16	1-1/2	8	.79
469-251SR	2x1-1/2	2-15/16	2-7/16	3-7/16	2-3/8	3/8	1-1/2	8	.93
469-291SR	2-1/2x1-1/2	3-3/16	4-1/16	4	2-3/8	3/8	1-3/4	8	1.30
469-333SR	3x1/2	3-5/16	3	4-5/8	1-3/8	13/16	7/8	8	.96
469-334SR	3x3/4	3-1/16	3	4-5/8	1-3/8	9/32	7/8	8	.93
469-335SR	3x1	3-3/16	3	4-5/8	1-11/16	5/16	1-1/8	8	.98
469-336SR	3x1-1/4	4-1/32	4-3/32	4-5/8	3	1-1/32	2-1/4	8	2.04
469-337SR	3x1-1/2	4-1/32	4-3/32	4-5/8	3	2-11/16	2-1/4	8	1.94
469-338SR	3x2	3-5/8	4-3/32	4-5/8	3	3/8	2-1/4	8	1.67
469-415SR	4x1/2	4-3/32	3	5-9/16	2-3/8	31/32	1-1/8	8	1.46
469-416SR	4x3/4	4-3/32	3	5-9/16	2-3/8	27/32	1-1/8	8	1.44
469-417SR	4x1	3-13/16	3	5-5/8	1-11/16	7/16	1-1/8	8	1.37
469-418SR	4x1-1/4	4-13/32	4-3/32	5-5/8	2-3/8	29/32	1-3/4	8	2.00
469-419SR	4x1-1/2	4-1/8	4-3/32	5-9/16	2-3/8	1/2	1-3/4	8	1.89
469-420SR	4x2	4-3/16	4-1/8	5-5/8	3	7/16	2-1/4	8	2.10
469-421SR	4x2-1/2	5	5-7/16	5-23/32	4-9/32	3/4	3	8	3.98
469-422SR	4x3	4-5/8	5-7/16	5-11/16	4-1/4	1/2	3	8	3.31
469-523SR	6x1/2	5-13/32	3	7-3/4	1-11/16	1-7/32	1-1/8	10	2.51
469-524SR	6x3/4	5-7/16	3	7-3/4	1-11/16	1-1/8	1-1/8	10	2.48
469-525SR	6x1	5-1/8	3	7-15/16	1-11/16	11/16	1-1/8	10	2.42
469-526SR	6x1-1/4	5-15/16	4-1/8	7-3/4	3	1-3/8	2-1/4	10	3.81
469-527SR	6x1-1/2	5-15/16	4-1/8	7-3/4	3	1-1/4	2-1/4	10	3.71
469-528SR	6x2	5-1/2	4-1/8	7-3/4	3	11/16	2-1/4	10	3.45
469-529SR	6x2-1/2	6-7/16	6	7-15/16	4-1/4	1-1/8	3	10	5.82
469-530SR	6x3	5-15/16	6	7-15/16	4-1/4	25/32	3	10	5.12

CLAMP-ON SADDLE x SR FIPT DOUBLE OUTLET (continued)

Dimensions Also Applicable to
469**S**-XXXSR 469**E**-XXXSR 469**SE**-XXXSR

Pressure Rating
2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



Part Number	Size	H	L	L1	M	N	Hole Size	Bolt Torque ft./lbs.	Approx. Wt. (Lbs.)
469-532SR	6x4	6	6	7-15/16	5-3/16	5/8	4	10	6.35
469-573SR	8x1/2	8-3/32	8-1/2	10-1/8	5-1/4	2-3/16	4	10	11.07
469-574SR	8x3/4	8-3/32	8-1/2	10-1/8	5-1/4	2-3/4	4	10	11.18
469-575SR	8x1	8-3/32	8-1/2	10-1/8	5-1/4	2-5/8	4	10	11.09
469-576SR	8x1-1/4	8-3/32	8-1/2	10-1/8	5-1/4	2-1/2	4	10	11.44
469-577SR	8x1-1/2	8-3/32	8-1/2	10-1/8	5-1/4	2-3/8	4	10	11.46
469-578SR	8x2	7-11/16	8-1/2	10-1/8	5-1/4	1-7/8	4	10	10.73
469-579SR	8x2-1/2	8-1/8	8-1/2	10-1/8	5-1/4	1-11/16	4	10	10.62
469-580SR	8x3	7-11/16	8-1/2	10-1/8	5-1/4	1-7/16	4	10	10.76
469-582SR	8x4	7-5/16	8-1/2	10-1/8	5-1/4	11/16	4	10	9.33
469-585SR	8x6	8-3/32	8-1/2	10-1/8	7-5/8	11/16	6	10	12.70
469-624SR	10x4	8-15/32	8-1/2	12-5/16	5-1/4	13/16	4	10	12.97
469-626SR	10x6	9-9/32	8-1/2	12-5/16	7-5/8	13/16	6	10	15.69
469-664SR	12x4	9-9/16	8-1/2	14-5/16	5-1/4	7/8	4	10	16.45
469-666SR	12x6	10-3/8	8-1/2	14-5/16	7-5/8	7/8	6	10	18.95

1) Clamp-On Saddle Standard Hardware: Zinc Bolts w/BUNA-N O-ring Seal
e.g.) Part Number 469-247SR = 2x1/2 PVC Clamp On Saddle, Socket, BUNA-N O-ring, Zinc Bolts.

2) Clamp-On Saddles w/Stainless Steel (SS) Bolts,Add The Letter **"S"** Before The Dash.
e.g.) Part Number 469**S**-247SR = 2x1/2 PVC Clamp On Saddle, Socket, BUNA-N O-ring, Stainless Steel Bolts.

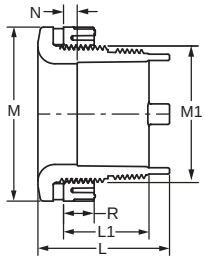
3) Clamp-On Saddles Standard Hardware: Zinc Bolts w/EPDM O-ring Seal, Add The Letter **"E"** Before The Dash.
e.g.) Part Number 469**E**-247SR = 2x1/2 PVC Clamp-On Saddle, Socket, EPDM O-ring, Zinc Bolts.

4) Clamp-On Saddles w/Stainless Steel Bolts & EPDM O-ring Seal, Add The Letter **"SE"** Before The Dash.
e.g.) Part Number 469**SE**-247SR = 2x1/2 PVC Clamp On Saddle, Socket EPDM O-ring, Stainless Steel Bolt

TANK ADAPTER WITH EPDM GASKET

Socket (Male Pipe Thread)

Pressure Rating
150 psi @ 73°F



Part Number	Size	L	L1	M	M1	N	R	Outlet	
								Socket	Thread MIPT
4170E-005	1/2	2-5/16	1-1/2	2-3/16	1-7/16	3/4	9/16	1/2	1
4170E-007	3/4	2-3/8	1-1/2	2-1/2	1-13/16	9/16	9/16	3/4	1-1/4
4170E-010	1	2-3/8	1-1/2	2-3/4	2-1/16	1/2	9/16	1	1-1/2
4170E--012	1-1/4	2-3/8	1-9/16	3-3/16	2-1/2	5/16	9/16	1-1/4	2
4170E--015	1-1/2	2-3/8	1-9/16	3-3/16	2-1/2	1/4	9/16	1-1/2	2
4170E--020	2	3-1/4	2-3/8	3-13/16	3-1/16	1	5/8	2	2-1/2
4170E--025	2-1/2	3-1/2	2-9/16	4-1/2	3-11/16	13/16	5/8	2-1/2	3

Tank Adapter Hole Size Requirements			
Tank Adapter Size	Recommended Minimum Hole Size	Minimum Inside Curvature Radius (inches)	Maximum Tank Wall Thickness (inches)
1/2	1-1/2	5.50	.44
3/4	1-7/8	7.50	.44
1	2-1/8	9.00	.44
1-1/4	2-1/2	12.00	.44
1-1/2	2-1/2	12.00	.44
2	3-1/8	17.50	.75
2-1/2	3-3/4	24.50	.88

Hot-Tap Saddles Dimensions & Information

Allows Connection to Existing Pipelines Under Pressure

Specially designed tapping saddle allows pipe branch connection to pressurized “Hot” lines without system shut-down. Available in PVC White, Gray or CPVC Gray configurations.

- Industrial Grade Bolt-on Saddle with EPDM or FKM O-ring Seals and Choice of Zinc Plated Steel or Type 316 Stainless Steel Hardware.
- Built-in Brass or Stainless Steel Cutter Easily Cuts Hole in PVC, CPVC, HDPE and PP Pipe. Special Design Captures and Retains Coupon from Hole.
- Pressure Rated to 235 psi @ 73°F.
- Available to fit IPS Pipe 2" through 8" with Versatile 3/4" Socket - 1" Spigot Combination Branch Outlet or 1"-1/2" Socket - 2" Spigot Combination Branch Outlet

TECHNICAL DATA

Maximum Service Temperatures

PVC	140°F
CPVC	200°F

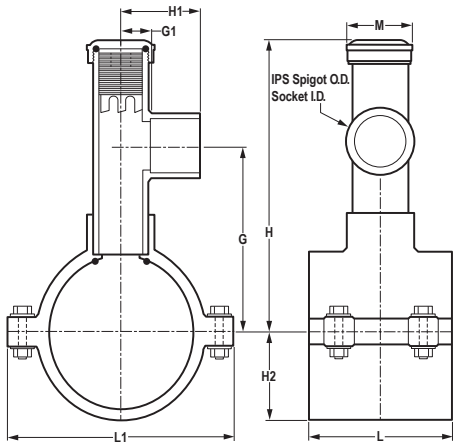
Note: Elevated service temperatures require system pressure de-rating.

Pressure Rating @ 73°F

2" – 4"	235 psi
6"	200 psi
8"	150 psi

Not for Distribution of Compressed Air or Gas

Some leakage is possible during the tapping process, therefore “hot-taps” are not recommended for corrosive or dangerous fluid medium.



Dimensions - EPDM Saddle x Socket (Spigot) Zinc Plated Bolds

Part Number	Size	G	G1	H	H 1	H2	L	L1	M
HT2-248	2 x 3/4 (1)	3-9/16	1	6-3/16	2	1-1/2	2-7/16	3-1/2	2
HT2-251	2 x 1-1/2 (2)	4-9/16	1-1/4	8-15/16	2-11/16	1-1/2	2-7/16	3-1/2	2-7/8
HT2-288	2-1/2 x 3/4 (1)	3-15/16	1	6-9/16	2	1-3/4	4-1/8	4-1/8	2
HT2-291	2-1/2 x 1-1/2 (2)	4-13/16	1-1/4	9-3/16	2-11/16	1-3/4	4-1/8	4-1/8	2-7/8
HT2-334	3 x 3/4 (1)	4-1/6	1	6-11/16	2	2	3	4-3/4	2
HT2-337	3 x 1-1/2 (2)	5-1/4	1-1/4	9-5/8	2-11/16	2	4-1/8	4-3/4	2-7/8
HT2-416	4 x 3/4 (1)	4-11/16	1	7-5/16	2	2-5/8	3	5-13/16	2
HT2-419	4 x 1-1/2 (2)	5-13/16	1-1/4	10-3/16	2-11/16	2-5/8	4-1/8	5-13/16	2-7/8
HT2-524	6 x 3/4 (1)	6	1	8-5/8	2	3-7/8	3	8-1/8	2
HT2-527	6 x 1-1/2 (2)	7-1/8	1-1/4	11-1/2	2-11/16	3-7/8	4-1/8	8-1/8	2-7/8
HT2-574	8 x 3/4 (1)	7-1/4	1	9-7/8	2	4-7/8	8-1/2	10-1/8	2
HT2-577	8 x 1-1/2 (2)	8-9/16	1-1/4	12-9/16	2-11/16	4-7/8	8-1/2	10-1/8	2-7/8

EPDM Saddle x Socket (Spigot) SS316 Bolts, Add The Letter **“S”** Before The Dash. e.g. Part Number HT2**S**-248 = 2x3/4 PVC Bolt On Saddle, EPDM O-ring, Stainless Steel Hardware.
FKM Saddle x Socket (Spigot) Zinc Plated Bolts, Add The Number **“3”** Before The Dash. e.g. Part Number HT**3**-248 = 2x3/4 PVC Bolt On Saddle, FKM O-ring, Zink Plated Hardware.
FKM Saddle x Socket (Spigot) SS316 Bolts, Add **“3S”** Before The Dash. e.g. Part Number HT**3S**-248 = 2x3/4 PVC Bolt On Saddle, FKM O-ring, Stainless Steel Hardware.
EPDM with Stainless Steel Cutter & Bolts, Add **“S2S”** Before The Dash. e.g. Part Number HT**S2S**-248 = 2x3/4 PVC Bolt On Saddle, EPDM O-ring, Stainless Steel Cutter & Hardware.
FKM with Stainless Steel Cutter & Bolts, Add **“S3S”** Before The Dash. e.g. Part Number HT**S3S**-248 = 2x3/4 PVC Bolt On Saddle, FKM O-ring, Stainless Steel Cutter & Hardware.
Note: For PVC White, Add The Letter **“W”** After The Part Number. e.g. Part Number HT2-524**W**

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg

Basic Installation

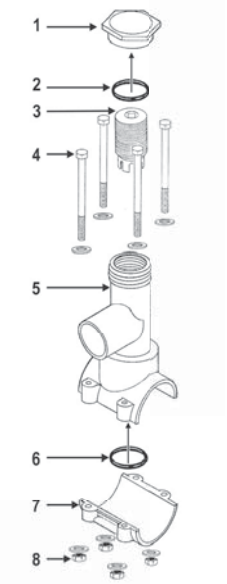
Hot-Tap Saddles are designed for adding branch connections to piping systems under live ("hot") pressure. Hot-Tap Saddle branch outlets are either 3/4" socket (with 1" Spigot O.D.) or 1-1/2" socket (with 2" Spigot O.D.) in saddle sizes 2" through 8" to fit IPS pipe using a built-in O-ring seal. Internal cutter is operated using conventional ratchet and drive extension and permanently retains coupon cut from pipe. Maximum operating pressure at 73°F is 235 psi for saddle sizes 2" - 4", 200 psi for 6" saddles & 150 psi for 8".

SEE PRODUCT INSTALLATION INSTRUCTION (HT-3A) FOR DETAILS

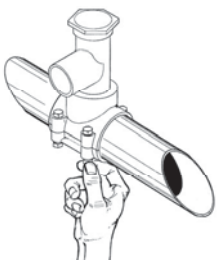
COMPONENTS

The Hot-Tap Saddle includes the following components:

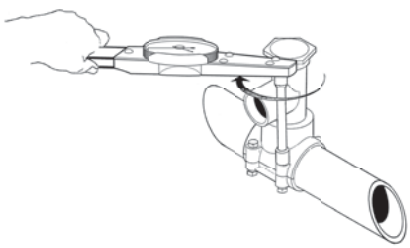
1. Cap
2. Upper O-ring
3. Hot-Tap Cutter
4. Bolt/Washer
5. Saddle Body
6. Lower O-ring
7. Saddle Bottom
8. Nut/Washer



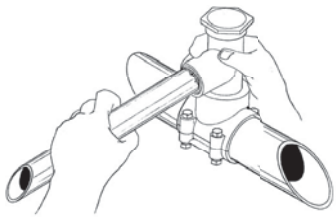
STEP 1 Assemble on Pipe



STEP 2 Torque to Specifications

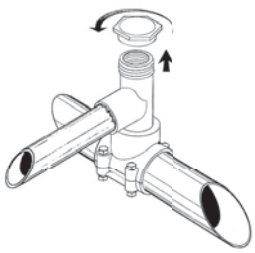


STEP 3 Cement Branch Take-off

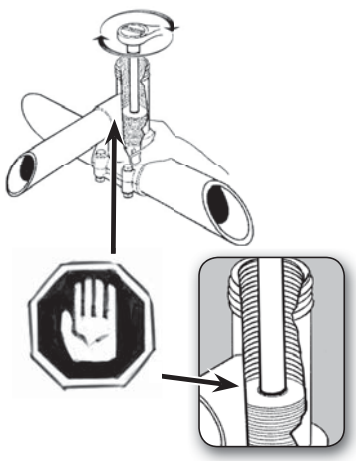


Allow joint to cure.

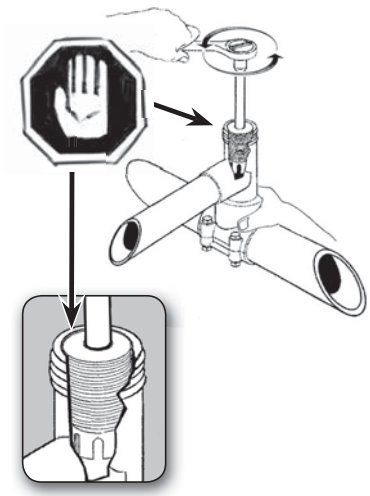
STEP 4 Remove Cap



STEP 5 Tap to Required Depth



STEP 6 Back-off Cutter to Top to Open Flow

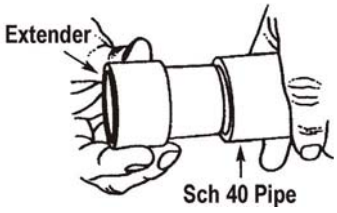


STEP 7 Reinstall Opening Sealed Cap

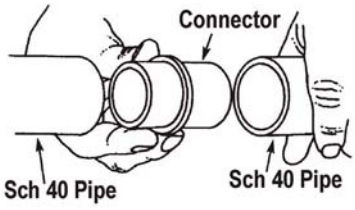
Schedule 40 Repair Fittings

Schedule 40 Pipe Repair Fittings Allows Difficult Broken Pipe Repair To Be Made Easily

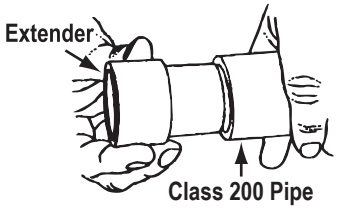
Pipe Extenders



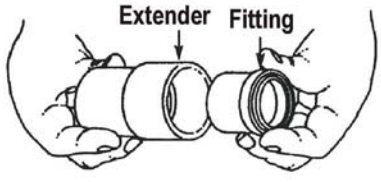
Inside Connectors



Pipe Extenders, Class 200



Extender Fittings



Repair Couplings

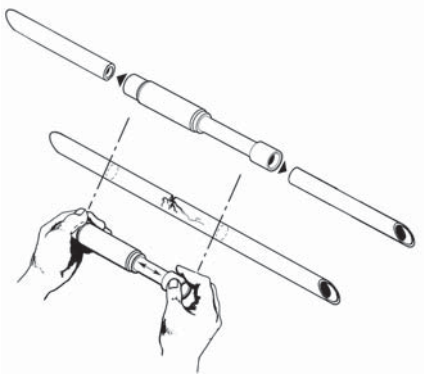
(S119) Socket x Socket

(S118) Spigot x Socket

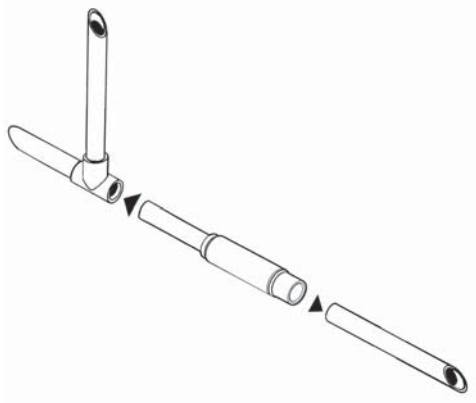
- Multi-function Telescoping Design
- Socket x Socket Configuration for Pipe Repair or Use as a Short-Stroke Expansion Joint
- Spigot x Socket Configuration for Replacing Damaged Fittings
- Both Configurations can be Easily Modified for Opposite Use
- Available in PVC White
- Double O-ring Seal in EPDM or high-grade FKM
- 1/2" - 2" Pressure Rated to 235 PSI @ 73°F (23°C)
- 2-1/2" - 4" Pressure Rated to 200 PSI @ 73°F (23°C)
- 6" Pressure Rated to 150 PSI @ 73°F (23°C)
- NSF® Certified for Potable Water Use

Versatile Repair Capability

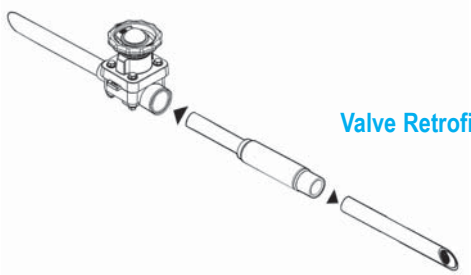
Spears® Repair Couplings provide a variety of system repair and alteration solutions. Use Socket x Socket configurations for quick pipe damage repair - can also be used as a short-stroke expansion joint to compensate for thermal expansion & contraction. Spigot x Socket configurations are excellent for lateral and riser add-ons, damaged fitting replacement, or for installing valves in existing piping systems. Order the wrong configuration? Simply cut coupling from Socket shaft end to function as a spigot or add a coupling to Spigot shaft end for Socket connections.



Pipe Damage Repair
Or Use as Expansion Joint



Lateral Add-on Or Fitting Replacement

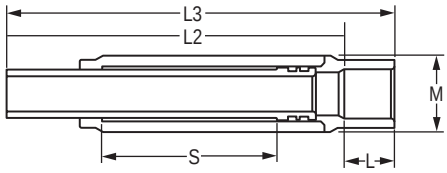


Valve Retrofit Installation

Repair Couplings

Spigot x Socket
EPDM O-ring

Pressure Rating
1/2" -2" 235 psi @ 73°F
2-1/2" -4" 200 psi @ 73°F
6" & Up 150 psi @ 73°F



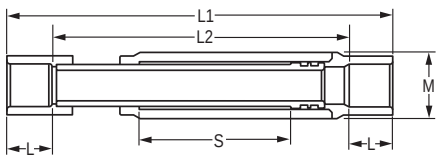
Part Number	Size	L	L2	L3	M	S	Approx. Wt. (Lbs.)
S118-05	1/2	7/8	5-7/8	6-3/4	1-7/16	3	.25
S118-07	3/4	1	7-3/8	8-1/4	1-3/4	4	.42
S118-10	1	1-1/8	7-7/8	8-7/8	2-1/16	4	.62
S118-12	1-1/4	1-1/4	8-3/8	9-5/8	2-7/16	4	.87
S118-15	1-1/2	1-3/8	8-5/8	9-7/8	2-11/16	4	1.03
S118-20	2	1-1/2	9-1/4	10-5/8	3-3/16	4	1.50
S118-25	2-1/2	1-3/4	12-3/8	13-7/8	3-15/16	6	3.48
S118-30	3	1-7/8	12-3/8	14-1/8	4-9/16	6	4.32
S118-40	4	2-1/4	13-1/4	15-1/4	5-11/16	6	6.40
S118-60	6	3	16	18-3/4	8-3/8	6	14.53

INSTALLATION NOTE: For expansion joint applications, install with unit 1/2 extended. System must be supported and blocked against thrusts and movement under pressure. May be installed with flow in either direction

Repair Couplings

Socket x Socket
EPDM O-ring

Pressure Rating
1/2" -2" 235 psi @ 73°F
2-1/2" -4" 200 psi @ 73°F
6" & Up 150 psi @ 73°F



Part Number	Size	L	L1	L2	M	S	Approx. Wt. (Lbs.)
S119-05	1/2	7/8	7-5/8	5-7/8	1-7/16	3	.28
S119-07	3/4	1	9-3/8	7-3/8	1-3/4	4	.47
S119-10	1	1-1/8	10-1/8	7-7/8	2-1/16	4	.70
S119-12	1-1/4	1-1/4	10-7/8	8-3/8	2-7/16	4	.98
S119-15	1-1/2	1-3/8	11-3/8	8-5/8	2-11/16	4	1.17
S119-20	2	1-1/2	12-1/4	9-1/4	3-3/16	4	1.72
S119-25	2-1/2	1-3/4	15-7/8	12-3/8	3-15/16	6	3.87
S119-30	3	1-7/8	16-1/8	12-3/8	4-9/16	6	4.86
S119-40	4	2-1/4	17-3/4	13-1/4	5-11/16	6	7.27
S119-60	6	3	22	16	8-3/8	6	17.17

INSTALLATION NOTE: For expansion joint applications, install with unit 1/2 extended. System must be supported and blocked against thrusts and movement under pressure. May be installed with flow in either direction

Short Repair Couplings

Space Saving, Compact Version of Standard Repair Coupling Requires 1/3 less Space

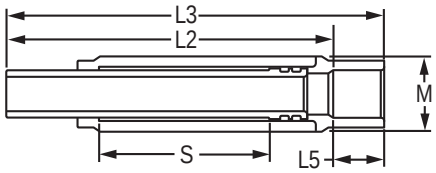
(SH119) Socket x Socket

(SH118) Spigot x Socket

- Compact Telescoping Design
- Socket x Socket Configuration for Pipe Repair or Use as a Short-Stroke Expansion Joint
- Spigot x Socket Configuration for Replacing Damaged Fittings
- Both Configurations can be Easily Modified for Opposite Use
- Available in PVC White, Sizes 1/2" - 2"
- EPDM Double O-ring Seal
- Pressure Rated to 235 PSI @ 73°F (23°C)
- NSF® Certified for Potable Water Use

Short Repair Couplings

Spigot x Socket
EPDM O-ring



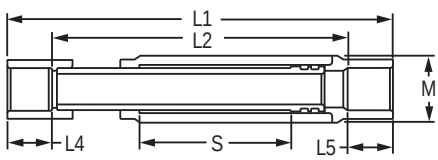
Pressure Rating
235 psi @ 73°F

Part Number	Size	L2	L3	L5	M	S	Approx. Wt. (Lbs.)
SH118-05	1/2	4-5/16	4-15/16	3/4	1-7/16	2	.19
SH118-07	3/4	4-3/4	5-7/16	13/16	1-3/4	2-1/4	.31
SH118-10	1	4-3/4	5-9/16	15/16	2-1/16	2-3/16	.39
SH118-12	1-1/4	5-11/16	6-5/8	1	2-7/16	2-1/2	.61
SH118-15	1-1/2	5-13/16	6-3/4	1-1/8	2-11/16	2-13/16	.76
SH118-20	2	7-3/8	8-5/16	1-3/16	3-1/4	3-1/8	1.17

INSTALLATION NOTE: For expansion joint applications, install with unit 1/2 extended. System must be supported and blocked against thrusts and movement under pressure. May be installed with flow in either direction.

Short Repair Couplings

Socket x Socket
EPDM O-ring



Pressure Rating
235 psi @ 73°F

Part Number	Size	L1	L2	L4	L5	M	S	Approx. Wt. (Lbs.)
SH119-05	1/2	5-7/8	4-5/16	7/8	3/4	1-7/16	2	.23
SH119-07	3/4	6-9/16	4-3/4	1	13/16	1-3/4	2-1/4	.36
SH119-10	1	6-13/16	4-3/4	1-1/8	15/16	2-1/16	2-3/16	.47
SH119-12	1-1/4	7-15/16	5-11/16	1-1/4	1	2-7/16	2-1/2	.73
SH119-15	1-1/2	8-1/4	5-13/16	1-3/8	1-1/8	2-11/16	2-13/16	.91
SH119-20	2	10-1/16	7-3/8	1-1/2	1-3/16	3-1/4	3-1/8	1.39

INSTALLATION NOTE: For expansion joint applications, install with unit 1/2 extended. System must be supported and blocked against thrusts and movement under pressure. May be installed with flow in either direction.

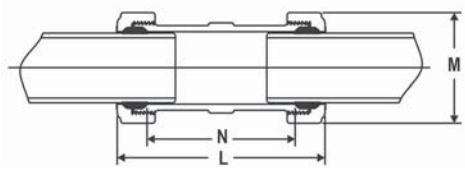
PVC Compression Couplings

Multi-Featured Design • PVC White and Industrial PVC Gray • Easy-Thread Compression Nut • Converts to Spigot Coupling

Excellent for quick connections, system modifications and repairs. Spears® redesigned Compression Coupling provides improved function, broader application and increased versatility. Standard PVC White units have been a long standing choice for Irrigation and Pool & Spa applications. PVC Gray Industrial unit provides broader range of Industrial and Chemical processing applications. Compression nut features strong Buttress threads engineered for easier tightening during installation. New body design has pipe-spigot dimensions allowing unit to be used to convert a socket fitting to a compression fitting. Available in IPS sizes 1/2" through 6".

- **PVC White & PVC Gray Industrial Construction**
  Heavy bodied, chemical and corrosion resistant PVC white or new PVC Gray Industrial units provide for a broad range of applications.
- **Buna-N or EPDM Compression Gaskets**
  PVC White unit comes with Buna-N compression gaskets while new PVC Gray Industrial unit is offered with EPDM gaskets.
- **Strong, Buttress Threaded Compression Nuts**
  Revised Nut design features increased strength of Buttress thread plus greater ease of Nut installation onto Body. Superior to standard pipe or square-cut ACME type threads.
- **Full Service 200 PSI Pressure Rating**
  200 psi maximum internal pressure rating @ 73°F.
- **NSF® Certif ed for Potable Water Use**
  Compression Couplings with EPDM are certified by NSF International for use in potable water systems.
- **Spigot Conversion Capability**
  Convert socket-outlet plastic pipe fitting to compression-outlet fitting. Simply cut the Compression Coupling in half next to center holding ribs. Body now functions as a spigot for solvent weld attachment to fitting socket (for Compression Couplings through 2" only – see reverse side illustration).

Compression Couplings



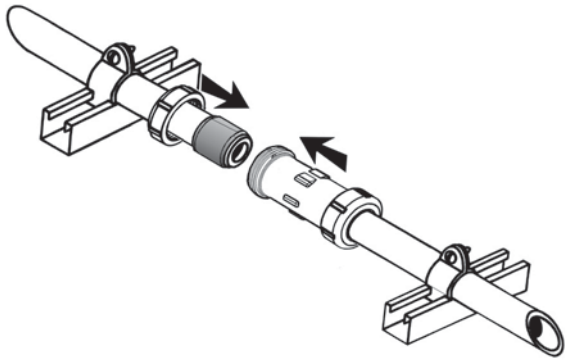
Part Number	Size (in.)	L	M	N
S110-05	1/2	5-3/16	1-13/16	3-3/8
S110-07	3/4	5-7/16	2-1/8	3-9/16
S110-10	1	5-11/16	2-1/2	3-3/4
S110-12	1-1/4	6-1/4	2-15/16	4-1/8
S110-15	1-1/2	6-1/2	3-5/16	4-5/8
S110-20	2	7-1/8	3-15/16	5-1/16
S110-25	2-1/2	8-11/16	4-7/8	5-7/8
S110-30	3	9-1/2	5-1/2	6-3/16
S110-40	4	11-5/16	6-3/4	7-3/8
S110-60	6	11-5/8	9-5/16	7-9/16

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

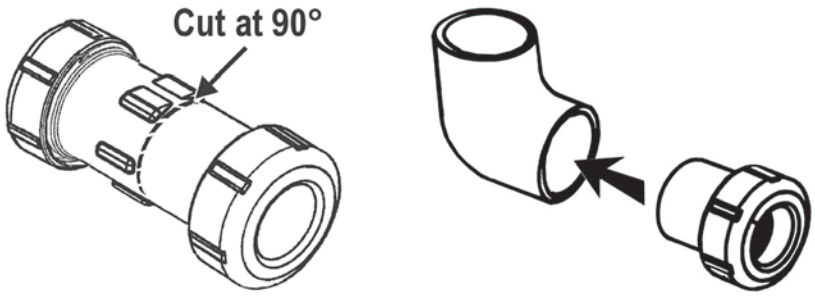
Easy Installation

Spears® Compression Couplings easily install by simply sliding nut over pipe, slip on gasket, then insert into body and tighten nuts.



Convert Fittings to Compression Outlet

Socket type fittings 3/4" through 2-1/2" can be easily converted to compression outlets sizes 1/2" through 2" by simply cutting the Compression Coupling at the center holding ribs and solvent welding the spigot body into a fitting socket.



Compression Coupling Size (in.)	Body Spigot Size (in.)
1/2	3/4
3/4	1
1	1-1/4
1-1/4	1-1/2
1-1/2	2
2	2-1/2
2-1/2	3

Important Installation Note

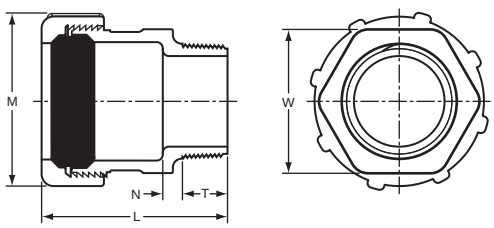
WARNING: The compression joints provide a positive seal but do not restrain pipe from thrusts and movement under pressure. Use of compression joint requires blocking connecting pipe to prevent any movement. Failure to do so can result in system failure or severe personal injury. Use in cold water/fluid applications only.

Compression Male Adapters

- Quickly Adapts Pipe to MIPT Thread
- Easy-Thread Compression Nut
- PVC White with Buna-N or EPDM Gasket
- 200 psi Pressure Rating
- NSF® Certified for Potable Water Use

Uses same Nut Wrench sets available for Compression Couplings

PVC Compression Male Adapters

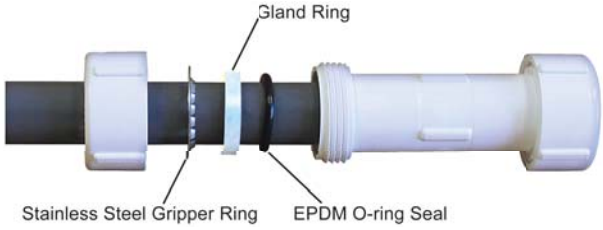


Part No.		Size	L	M	N	T	W
Buna-N	EPDM						
S130-05	S130E-05	1/2	2-11/16	1-13/16	1/4	11/16	1-1/8
S130-07	S130E-07	3/4	2-15/16	2-1/8	5/16	11/16	1-3/8
S130-10	S130E-10	1	3-3/16	2-1/2	5/16	7/8	1-11/16
S130-12	S130E-12	1-1/4	3-3/8	2-15/16	5/16	7/8	2
S130-15	S130E-15	1-1/2	3-9/16	3-5/16	3/8	29/32	2-3/8
S130-20	S130E-20	2	3-7/8	3-15/16	13/32	15/16	3

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

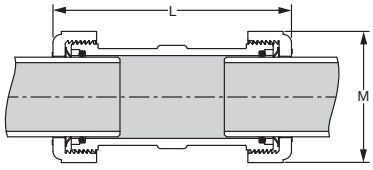
GripLoc™ Compression Couplings



GripLoc™ Compression Coupling

Tightening nut compresses special stainless steel Gripper Ring to firmly grip pipe and prevent potential pull-out. Compressed Gland Ring ensures positive O-ring seal against pipe.

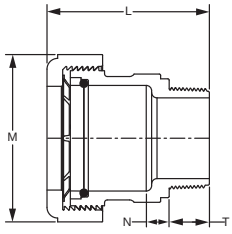
Griploc™ Compression Coupling



Part Number	Size (in.)	L	M
S112-05	1/2	4-13/16	1-13/16
S112-07	3/4	5-1/8	2-1/8
S112-10	1	5-1/2	2-1/2
S112-12	1-1/4	6	2-15/16
S112-15	1-1/2	6-11/16	3-5/16
S112-20	2	7-5/16	3-15/16

GripLoc™ Compression Couplings

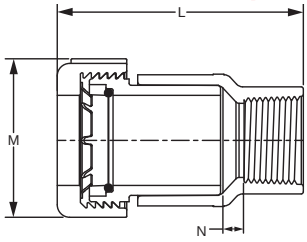
GripLoc™ Compression Male Adapters



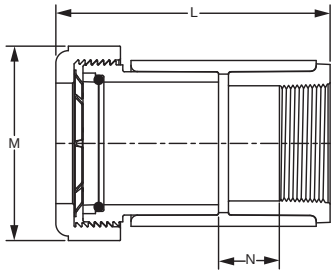
Part No. EPDM	Size	L	M	N	T
S135-05	1/2	2-9/16	1-13/16	1/4	11/16
S135-07	3/4	2-13/16	2-1/8	5/16	11/16
S135-10	1	3-1/8	2-1/2	5/16	7/8
S135-12	1-1/4	3-5/16	2-15/16	5/16	7/8
S135-15	1-1/2	3-1/2	3-5/16	3/8	29/32
S135-20	2	3-13/16	3-15/16	13/32	3

GripLoc™ Compression Female Adapters

1/2" - 1"



1-1/4" - 2"



Part No. EPDM	Size	L	M	N
S136-05	1/2	2-7/8	1-13/16	3/32
S136-07	3/4	3-5/16	2-1/8	1/4
S136-10	1	3-11/16	2-1/2	11/32
S136-12	1-1/4	4-3/16	2-15/16	9/16
S136-15	1-1/2	4-1/2	3-5/16	9/32
S136-20	2	5-1/2	3-15/16	1-1/32

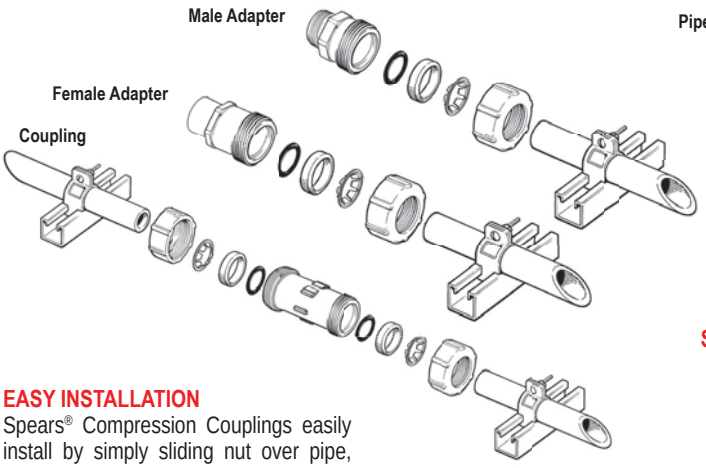
GripLoc™ Compression Male Adapters

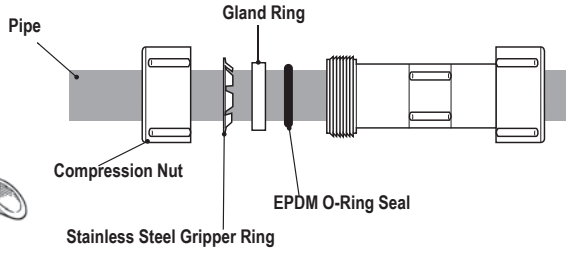
GripLoc™ Compression Female Adapters

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

GripLoc™ Compression Fittings Installation





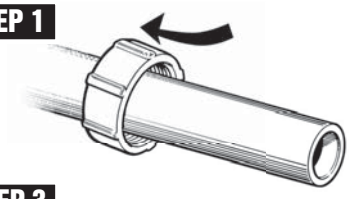
EASY INSTALLATION

Spears® Compression Couplings easily install by simply sliding nut over pipe, slip on components in order shown, then insert into body and tighten nuts.

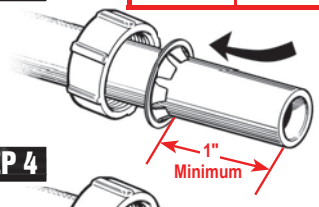
STEP 2: POSITIONING OF LOCK RING FROM END OF PIPE

Size (In.)	Coupling (Max. In.)	Male Adapter (Max. In.)	Female Adapter (Max. In)	Min. In.
1/2	2	1-3/16	1-5/8	1
3/4	2-1/8	1-3/8	1-7/8	
1	2-1/4	1-716	2	
1-1/4	2-1/2	1-5/8	2-1/8	
1-1/2	2-3/4	1-11/16	2-38	
2	3	1-7/8	2-3/4	

STEP 1

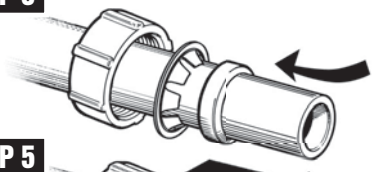


STEP 2

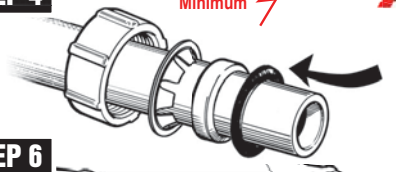


POSITIONING IS CRITICAL, LOCK RING WILL NOT MOVE BACK.

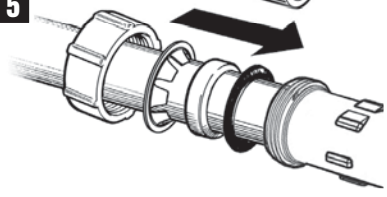
STEP 3



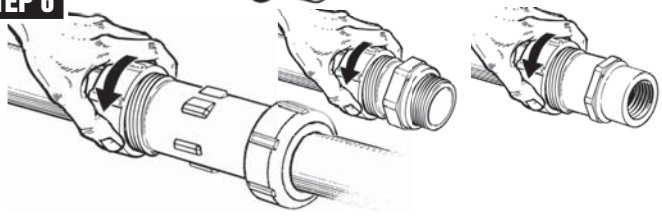
STEP 4



STEP 5



STEP 6



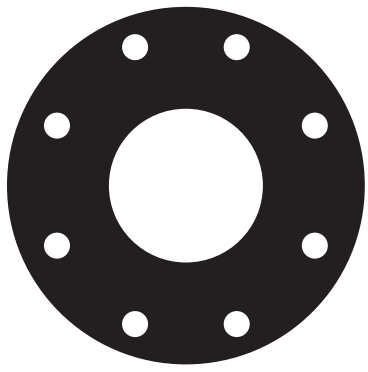
CONVERT FITTINGS TO COMPRESSION OUTLET

Socket-type fittings 3/4" through 2-1/2" can be easily converted to GripLoc™ compression outlet sizes 1/2" through 2" by simply cutting the Griploc™ Compression Coupling at the center holding ribs and solvent welding the spigot body into a fitting socket.

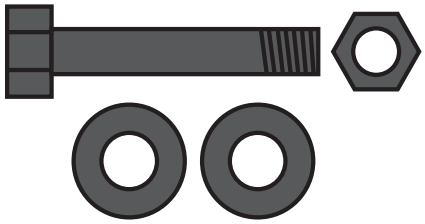
Compression Coupling Size (in.)	Body Spigot Size (in.)
1/2	3/4
3/4	1
1	1-1/4
1-1/4	1-1/2
1-1/2	2
2	2-1/2

Flanges - See Schedule 80 PVC Flange Technical Information

FLANGE CUT-IN KIT



GASKETS

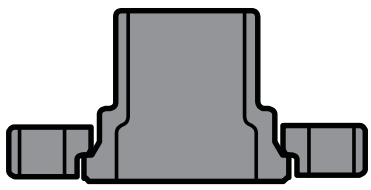


BOLT KIT

Flange One Piece

Blind Flange

Flange Van Stone Style with Glass Filled PVC Ring



Flange Van Stone Style with PVC Ring

EverTUFF® TURF™ Fittings For Golf Course & Turf Applications

PRICING

EverTUFF® TURF™ Fittings For Golf Course & Turf Applications

Spears® EverTUFF® TURF™ Fittings are specifically engineered to meet the demanding system requirements of today's golf course and turf irrigation applications. This patented design provides greater surge resistance than Schedule 80 fittings for the most reliable turf fittings on the market. Produced in a distinct Blue color injection molded from specially balanced PVC materials or optional CPVC Gray, these performance fittings are Class 315 rated (315 psi) and available in IPS sizes 1" through 4".

- Over 50% Stronger than Any Other Solvent Weld Turf Fitting
- Full Class 315 Pressure Rating
- Patented Special Reinforced (SR) Threads on All Female Threaded Fittings
- Produced in Standard Configurations
- Optional CPVC for Higher Temperatures
- NSF® Certified

Selection Guide for Choosing PVC or High Temperature CPVC Materials

Heat can play a significant part in performance of any piping system. As with all thermoplastic products, pressure rating reduction is required as temperatures increase. This can apply to primary and secondary heat sources, such as basic ambient temperature and absorbed temperature from solar exposure or solar heated water supply sources. The following table shows applicable Class 315 (315 psi) pressure de-rating as temperatures elevate.

PVC & CPVC Class 315 Pressure Ratings at Elevated Temperatures, PSI

Application Temperature	73° F (23° C)	90° F (32° C)	100° F (38° C)	110° F (43° C)	120° F (49° C)	130° F (54° C)	140° F (60° C)	150° F (66° C)	160° F (71° C)	170° F (77° C)	180° F (82° C)	200° F (99° C)
PVC	315	236	195	161	126	98	69	--	--	--	--	--
CPVC	315	287	258	227	205	180	158	132	126	91	79	62

EverTUFF® TURF™ PVC Tee

Soc

Class 315

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
401-010T	**1**	50	0	031	2.58
401-012T	**1-1/4**	25	0	031	4.03
401-015T	**1-1/2**	25	0	031	4.89
401-020T	**2**	25	0	031	7.13
401-025T	**2-1/2**	10	0	031	23.52
401-030T	**3**	10	0	031	30.89
401-040T	**4**	8	0	031	55.89

EverTUFF® TURF™ PVC Tee - Reducing

Soc

Class 315

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
401-168T	**1-1/4X1**	25	0	031	4.42
401-212T	**1-1/2X1-1/4**	25	0	031	7.76
401-251T	**2X1-1/2**	10	0	031	9.84
401-292T	**2-1/2X2**	10	0	031	23.45
401-338T	**3X2**	6	0	031	33.55
401-422T	**4X3**	6	0	031	55.89

EverTUFF® TURF™ PVC 90° Elbow

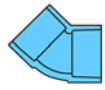
Soc

Class 315

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
406-010T	**1**	50	0	031	1.95
406-012T	**1-1/4**	25	0	031	3.43
406-015T	**1-1/2**	25	0	031	3.69
406-020T	**2**	25	0	031	5.78
406-025T	**2-1/2**	10	0	031	17.59
406-030T	**3**	10	0	031	21.05
406-040T	**4**	8	0	031	37.65

EverTUFF® TURF™ PVC 45° Elbow

Soc

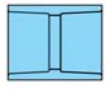


Class 315

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
417-010T	**1**	50	0	031	2.98
417-012T	**1-1/4**	25	0	031	4.14
417-015T	**1-1/2**	25	0	031	5.20
417-020T	**2**	25	0	031	6.75
417-025T	**2-1/2**	10	0	031	17.62
417-030T	**3**	10	0	031	27.35
417-040T	**4**	5	0	031	49.04

EverTUFF® TURF™ PVC Couplings

Soc

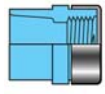


Class 315

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
429-010T	**1**	50	0	031	1.53
429-012T	**1-1/4**	25	0	031	2.12
429-015T	**1-1/2**	25	0	031	2.25
429-020T	**2**	25	0	031	3.44
429-025T	**2-1/2**	12	0	031	7.62
429-030T	**3**	10	0	031	11.95
429-040T	**4**	5	0	031	17.26

EverTUFF® TURF™ PVC Female Adapter

Soc x SR Fipt - Stainless Steel Collar



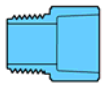
Class 315

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
435-010SRT	**1**	25	200	031	10.07
435-012SRT	**1-1/4**	10	60	031	16.29
435-015SRT	**1-1/2**	10	80	031	20.05
435-020SRT	**2**	10	0	031	34.97
435-025SRT	**2-1/2**	5	0	031	55.18
435-030SRT	**3**	10	0	031	62.18
435-040SRT	**4**	5	0	031	106.86

EverTUFF® TURF™ Fittings For Golf Course & Turf Applications

EverTUFF® TURF™ PVC Male Adapter

Mipt x Soc



Class 315

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
436-010T	**1**	50	0	031	1.73
436-012T	**1-1/4**	25	0	031	2.12
436-015T	**1-1/2**	25	0	031	2.82
436-020T	**2**	25	0	031	3.72
436-025T	**2-1/2**	10	0	031	10.94
436-030T	**3**	10	0	031	16.01
436-040T	**4**	5	0	031	20.41

EverTUFF® TURF™ PVC Reducer Bushing Flush Style

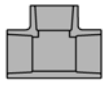
Spig x Soc

Class 315

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
437-250T	**2X1-1/4**	10	120	031	4.32
437-251T	**2X1-1/2**	25	0	031	4.32
437-292T	**2-1/2X2**	15	0	031	6.94
437-338T	**3X2**	10	0	031	10.20
437-422T	**4X3**	6	0	031	21.47

EverTUFF® TURF™ CPVC Tee

Soc



Class 315

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
401-010TC	**1**	50	0	032	5.14
401-012TC	**1-1/4**	25	0	032	8.06
401-015TC	**1-1/2**	25	0	032	9.78
401-020TC	**2**	25	0	032	14.24
401-025TC	**2-1/2**	10	0	032	47.03
401-030TC	**3**	10	0	032	61.78
401-040TC	**4**	8	0	032	111.77

EverTUFF® TURF™ CPVC Tee - Reducing

Soc

Class 315

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
401-168TC	**1-1/4X1**	25	0	032	8.83
401-212TC	**1-1/2X1-1/4**	25	0	032	15.52
401-251TC	**2X1-1/2**	10	0	032	23.83
401-292TC	**2-1/2X2**	10	0	032	46.89
401-338TC	**3X2**	6	0	032	67.08
401-422TC	**4X3**	6	0	032	111.77

EverTUFF® TURF™ CPVC 90° Elbow

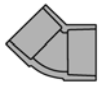
Soc

Class 315

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
406-010TC	**1**	50	0	032	3.89
406-012TC	**1-1/4**	25	0	032	6.85
406-015TC	**1-1/2**	25	0	032	7.39
406-020TC	**2**	25	0	032	11.56
406-025TC	**2-1/2**	10	0	032	35.17
406-030TC	**3**	10	0	032	42.09
406-040TC	**4**	8	0	032	75.28

EverTUFF® TURF™ CPVC 45° Elbow

Soc



Class 315

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
417-010TC	**1**	50	0	032	5.96
417-012TC	**1-1/4**	25	0	032	8.26
417-015TC	**1-1/2**	25	0	032	10.38
417-020TC	**2**	25	0	032	10.38

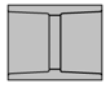
EverTUFF® TURF™ CPVC 45° Elbow (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
417-025TC	**2-1/2**	10	0	032	35.24
417-030TC	**3**	10	0	032	54.69
417-040TC	**4**	5	0	032	98.06

EverTUFF® TURF™ CPVC Couplings

Soc

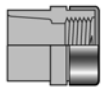


Class 315

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
429-010TC	**1**	50	0	032	3.05
429-012TC	**1-1/4**	25	0	032	4.23
429-015TC	**1-1/2**	25	0	032	4.51
429-020TC	**2**	25	0	032	6.88
429-025TC	**2-1/2**	12	0	032	15.25
429-030TC	**3**	10	0	032	23.88
429-040TC	**4**	5	0	032	34.54

EverTUFF® TURF™ CPVC Female Adapter - Special Reinforced

Soc x SR Fipt - Stainless Steel Collar

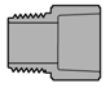


Class 315

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
435-010SRTC	**1**	25	200	032	20.16
435-012SRTC	**1-1/4**	10	60	032	32.59
435-015SRTC	**1-1/2**	10	80	032	40.12
435-020SRTC	**2**	10	0	032	69.95
435-025SRTC	**2-1/2**	5	0	032	110.36
435-030SRTC	**3**	10	0	032	124.37
435-040SRTC	**4**	5	0	032	213.73

EverTUFF® TURF™ CPVC Male Adapter

Mipt x Soc

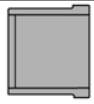


Class 315

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
436-010TC	**1**	50	0	032	3.46
436-012TC	**1-1/4**	25	0	032	4.23
436-015TC	**1-1/2**	25	0	032	5.64
436-020TC	**2**	25	0	032	7.42
436-025TC	**2-1/2**	10	0	032	21.87
436-030TC	**3**	5	0	032	32.01
436-040TC	**4**	5	0	032	40.82

EverTUFF® TURF™ CPVC Reducer Bushing Flush Style

Spig x Soc



Class 315

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
437-250TC	**2X1-1/4**	10	200	032	8.63
437-251TC	**2X1-1/2**	25	0	032	8.63
437-292TC	**2-1/2X2**	15	0	032	13.87
437-338TC	**3X2**	10	0	032	20.39
437-422TC	**4X3**	6	0	032	42.95

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

EverTUFF® TURF™ Repair Fittings

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each

EverTUFF™ TURF™ PVC Repair Coupling - Spig x Soc

EPDM O-rings

Can be used as a short-stroke Expansion Joint

S118-10T	**1**	15	0	031	12.15
S118-12T	**1-1/4**	25	0	031	22.90
S118-15T	**1-1/2**	25	0	031	24.93
S118-20T	**2**	12	0	031	38.57
S118-25T	**2-1/2**	5	0	031	55.95
S118-30T	**3**	4	0	031	69.90
S118-40T	**4**	2	0	031	122.33
S118-60T	**6**	1	0	031	299.33

EverTUFF™ TURF™ PVC Repair Coupling - Soc x Soc

EPDM O-rings

Can be used as a short-stroke Expansion Joint

S119-10T	**1**	20	0	031	12.15
S119-12T	**1-1/4**	10	0	031	22.90
S119-15T	**1-1/2**	16	0	031	24.93
S119-20T	**2**	10	0	031	38.57
S119-25T	**2-1/2**	5	0	031	55.95
S119-30T	**3**	4	0	031	69.90
S119-40T	**4**	2	0	031	122.33
S119-60T	**6**	1	0	031	299.33

EverTUFF™ TURF™ PVC Repair Coupling - Short, Spig x Soc

EPDM O-ring

SH118-10T	**1**	35	0	031	12.15
SH118-12T	**1-1/4**	35	0	031	22.90
SH118-15T	**1-1/2**	32	0	031	24.93
SH118-20T	**2**	15	0	031	38.57

EverTUFF™ TURF™ PVC Repair Coupling - Short, Soc x Soc

EPDM O-ring

SH119-10T	**1**	30	0	031	12.15
SH119-12T	**1-1/4**	20	0	031	22.90
SH119-15T	**1-1/2**	21	0	031	24.93
SH119-20T	**2**	12	0	031	38.57

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

EverTUFF® TURF™ Mechanical Clamp-on Transition Saddles

PRICING

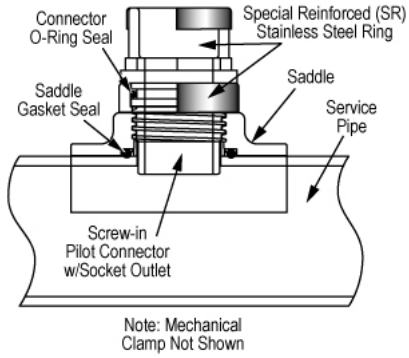
EverTUFF® TURF™ Mechanical Clamp-on Transition Saddles

Designed for HDPE-to-PVC pipe transition to provide HDPE mainline take-off for PVC irrigation laterals and irrigation extensions, but fully suitable for any IPS pipe (metal or plastic) transition to PVC. Eliminates costly and cumbersome HDPE fusion process, which is generally cost prohibitive. Depending on the region and location, it has been found that the installed cost of HDPE laterals can be 25% higher than PVC laterals!

Pilot on lateral connector prevents saddle movement on pipe. Exceptionally strong Special Reinforced (SR) outlet on both Saddle outlet and Pilot Connector socket provide unparalleled strength. Injection molded in distinct blue EverTUFF® PVC proprietary material. Pilot Connectors are replaceable and interchangeable with any size EverTUFF® Mechanical Saddle for greater versatility.

Easy Installation - Clamp saddle to pipe, drill hole, install screw-in Pilot Connector with socket outlet. Available for a variety of mainline sizes and can be easily bushed for reduced lateral take-off sizes or special connections.

- Socket Outlet
- 315 psi Pressure Rating @ 73° F
- Stainless Steel Mechanical Clamp
- Elastomer Gasket & O-ring Seals
- Interchangeable 1-1/2" & 2" Lateral Connector Sizes
- Stainless Steel Reinforcing Rings for Extra Strength



EverTUFF® TURF™ Mechanical Clamp-on Transition Saddles

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Pipe O.D. x Socket					
For Polyethylene (or any IPS pipe, metal or plastic) - To - PVC Transitions					
865-419	**4X1-1/2**	2	0	086	733.37
865-420	**4X2**	1	0	086	743.42
865-527	**6X1-1/2**	1	0	086	804.53
865-528	**6X2**	1	0	086	838.42
865-577	**8X1-1/2**	1	0	086	941.68
865-578	**8X2**	1	0	086	978.32

EverTUFF® TURF™ Mechanical Clamp-on Transition Saddles

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Pipe O.D. x Spigot					
For Polyethylene (or any IPS pipe, metal or plastic) - To - PVC Transitions					
865S-420	**4X2**	1	0	086	700.83
865S-528	**6X2**	1	0	086	966.70
865S-578	**8X2**	1	0	086	1075.10

EverTUFF® TURF™ Swing Joint Riser Assemblies

PRICING

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

EverTUFF® TURF™ Swing Joint Riser Assemblies

Many Configurations may be created and furnished by using the following Swing Joint Riser Numbering System.

X X X X - X X X X X

Code	Swing Arm Riser Style
58	Male Buttress Threaded Riser Style
59	Cut & Solvent Cemented Riser Style

Code	Inlet x Outlet Style Combination
01	Soc x Soc
02	Spig x Soc
03	Mipt x Soc
04	Tee x Soc
05	Soc x Mipt
06	Spig x Mipt
07	Mipt x Mipt
08	Tee x Mipt
09	Soc x Mat
10	Spig x Mat
11	Mipt x Mat
12	Tee x Mat
13	Soc x Fipt
14	Spig x Fipt
15	Mipt x Fipt
16	Tee x Fipt
17	Soc x SR Fipt
18	Spig x SR Fipt
19	Mipt x SR Fipt
20	Tee x SR Fipt
21†	Gmpt 2-1/2" Npl x Mat
22	Mat x Mat
23	Mat x Mpt
24	Mat x Fipt
25	Mat x SR Fipt
26	Spig x Fbt
27	Spig x Fat
28	Extended Spig x Fipt
29	Extended Spig x Mipt
30	Open
31†	Mipt x Gmpt 2-1/2" Npl
32†	Gmpt 2-1/2" Npl x Fipt
33†	Gmpt 2-1/2" Npl x Soc
34†	Gmpt 2-1/2" Npl x SR Fipt
35†	Soc x Gmpt 2-1/2" Npl
36†	Spig x Gmpt 2-1/2" Npl
37†	Gmpt x Gmpt 2-1/2" Npl
38†	Tee x Gmpt 2-1/2" Npl
39†	Gmpt 2-1/2" Npl x Mipt
40†	Open
41†	Mipt x Gmpt 3" Npl
42†	Gmpt 3" Npl x Fipt
43†	Gmpt 3" Npl x Soc
44†	Gmpt 3" Npl x SR Fipt
45†	Soc x Gmpt 3" Npl
46†	Spig x Gmpt 3" Npl
47†	Gmpt x Gmpt 3" Npl
48†	Tee x Gmpt 3" Npl
49†	Gmpt 3" Npl x Mipt
50†	Gmpt 3" Npl x Mat

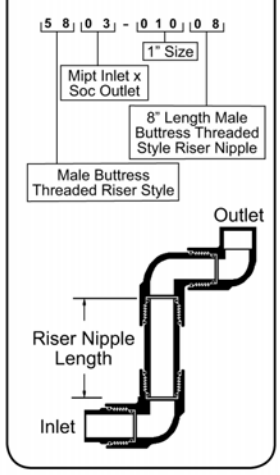
Code	Inlet x Outlet Style Combination
51‡	Soc x Soc Multi-Ell
52‡	Spig x Soc Multi-Ell
53‡	Mipt x Soc Multi-Ell
54‡	Tee x Soc Multi-Ell
55‡	Soc x Mipt Multi-Ell
56‡	Spig x Mipt Multi-Ell
57‡	Mipt x Mipt Multi-Ell
58‡	Tee x Mipt Multi-Ell
59‡	Soc x Mat Multi-Ell
60‡	Spig x Mat Multi-Ell
61‡	Mipt x Mat Multi-Ell
62‡	Tee x Mat Multi-Ell
63‡	Soc x Fipt Multi-Ell
64‡	Spig x Fipt Multi-Ell
65‡	Mipt x Fipt Multi-Ell
66‡	Tee x Fipt Multi-Ell
67‡	Soc x SR Fipt Multi-Ell
68‡	Spig x SR Fipt Multi-Ell
69‡	Mipt x SR Fipt Multi-Ell
70‡	Tee x SR Fipt Multi-Ell
71†‡	Soc x Gmpt 2-1/2" Npl Multi-Ell
72†‡	Spig x Gmpt 2-1/2" Npl Multi-Ell
73†‡	Mipt x Gmpt 2-1/2" Npl Multi-Ell
74†‡	Tee x Gmpt 2-1/2" Npl Multi-Ell
75†‡	Soc x Gmpt 3" Npl Multi-Ell
76†‡	Spig x Gmpt 3" Npl Multi-Ell
77†‡	Mipt x Gmpt 3" Npl Multi-Ell
78†‡	Tee x Gmpt 3" Npl Multi-Ell
79†‡	Gmpt 3" Npl x Mipt Multi-Ell
80†‡	Gmpt 3" Npl x Soc Multi-Ell
81†‡	Gmpt 3" Npl x Gmpt 3" Npl Multi-Ell
82‡	Mat x Mat Multi-Ell
83	Mipt x Mat Top Mount
84	Open
85	Open
86	Open
87	Open
88	Bsp x Bsp Multi-Ell
89	Bsp x Bsp Top Mount
90	Bsp x Mat
91	Bsp x Mipt
92	Mipt x Bsp
93	Bsp x Bsp
94	Astm Soc x Bsp
95	Astm Spig x Bsp
96	Din Spig x Bsp
97	Din Spig x Mipt
98	Jis Spig x Jis Mipt
99	Jis Spig x Mipt

Code	Size
010	1"
132	1" x 1-1/4"
133	1" x 1-1/2"
012	1-1/4"
015	1-1/2"
168	1-1/4" x 1"
169	1-1/4" x 1-1/2"
211	1-1/2" x 1"
212	1-1/2" x 1-1/4"
249	2" x 1" (Tee)
250	2" x 1-1/4" (Tee)
251	2" x 1-1/2" (Tee)

* Buttress Threaded Riser Lengths may be extended with the use of Riser Extension Couplings.

** Additional Nipple lengths are available. Please contact your servicing Spears® Regional Distribution Center.

Sample Assembly



Riser Nipple Length	
Code	Size
5800 Series* Male Buttress Threaded Style	
08	8"
10	10"
12	12"
14	14"
16	16"
18	18"
20	20"
24	24"
5900 Series Cut & Solvent Cemented Style**	
00	(No Nipple)
06	6"
07	7"
08	8"
10	10"
11	11"
12	12"
13	13"
14	14"
15	15"
16	16"
17	17"
18	18"
19	19"
20	20"
21	21"
22	22"
23	23"
24	24"

† Gmpt - A 2-1/2" Toe Nipple is solvent cemented in place. If a 3" Nipple is required, change the first digit from a "3" to a "4".

EXAMPLE:

38 = Tee x 2-1/2" Gmpt

48 = Tee x 3" Gmpt

‡ Multi-Ell - Two additional Elbows are located at the outlet of the Swing Joint Riser to allow 360° adjustment.

EverTUFF® TURF™ Swing Joint Riser Assemblies

Most common configurations of Swing Joint Risers appear on the following pages. For those not shown, you may use the following worksheet to create various configurations. For assistance, please contact your servicing Spears® Regional Distribution Center.

Ordering Male Buttress Thread Riser Nipple Lengths Not Listed in Catalog

Swing Joint Risers on the following pages are shown with 8", 10", and 12" Nipple Lengths (LG). Additional standard Nipple lengths of 14", 16", 18", 20" and 24", plus virtually any custom lengths are available.

To order desired standard riser nipple length, replace the last two digits of the listed part number with the desired length in inches.

Example: 5805-01016 = 16" Nipple Length
5805-01018 = 18" Nipple Length

Contact your servicing Spears® Regional Distribution Center for pricing on these additional standard lengths or for custom produced nipple lengths.

Sample

SWING ARM RISER STYLE CODE		INLET x OUTLET STYLE COMBINATION CODE		—	SIZE CODE			RISER NIPPLE LENGTH CODE	
5	8	0	3	—	0	1	0	1	6
Male Buttress Threaded Riser Style		MIPT Inlet x SOC Outlet			1" Size			16" Length Male Buttress Threaded Style Riser Nipple	

Worksheet

SWING ARM RISER STYLE CODE		INLET x OUTLET STYLE COMBINATION CODE		—	SIZE CODE			RISER NIPPLE LENGTH CODE	
				—					
				—					
				—					
				—					
				—					
				—					
				—					
				—					
				—					

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

EverTUFF® TURF™ Swing Joint Riser Assemblies

Swing Joint SOC Inlet x MIPT Outlet

8"-10"-12" Nipple Length (LG) shown. See previous pages for ordering other lengths.

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
5805-01008	**1X8LG**	25	0	030	51.80
5805-01010	**1X10LG**	25	0	030	54.58
5805-01012	**1X12LG**	25	0	030	57.56
5805-01208	**1-1/4X8LG**	20	0	030	68.81
5805-01210	**1-1/4X10LG**	20	0	030	72.43
5805-01212	**1-1/4X12LG**	20	0	030	76.22
5805-16808	**1-1/4X1X8LG**	20	0	030	68.81
5805-16810	**1-1/4X1X10LG**	20	0	030	72.43
5805-16812	**1-1/4X1X12LG**	20	0	030	76.22
5805-16908	**1-1/4X1-1/2X8LG**	20	0	030	68.81
5805-16910	**1-1/4X1-1/2X10LG**	20	0	030	72.43
5805-16912	**1-1/4X1-1/2X12LG**	20	0	030	76.22
5805-01508	**1-1/2X8LG**	15	0	030	83.80
5805-01510	**1-1/2X10LG**	15	0	030	88.05
5805-01512	**1-1/2X12LG**	15	0	030	92.64

Swing Joint SPIG Inlet x MIPT Outlet

8"-10"-12" Nipple Length (LG) shown. See previous pages for ordering other lengths.

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
5806-01008	**1X8LG**	25	0	030	51.80
5806-01010	**1X10LG**	25	0	030	54.58
5806-01012	**1X12LG**	25	0	030	57.56
5806-01208	**1-1/4X8LG**	20	0	030	68.81
5806-01210	**1-1/4X10LG**	20	0	030	72.43
5806-01212	**1-1/4X12LG**	20	0	030	76.22
5806-16808	**1-1/4X1X8LG**	20	0	030	68.81
5806-16810	**1-1/4X1X10LG**	20	0	030	72.43
5806-16812	**1-1/4X1X12LG**	20	0	030	76.22
5806-16908	**1-1/4X1-1/2X8LG**	20	0	030	68.81
5806-16910	**1-1/4X1-1/2X10LG**	20	0	030	72.43
5806-16912	**1-1/4X1-1/2X12LG**	20	0	030	76.22
5806-01508	**1-1/2X8LG**	15	0	030	83.80
5806-01510	**1-1/2X10LG**	15	0	030	88.05
5806-01512	**1-1/2X12LG**	15	0	030	92.64

Swing Joint MIPT Inlet x MIPT Outlet

8"-10"-12" Nipple Length (LG) shown. See previous pages for ordering other lengths.

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
5807-01008	**1X8LG**	25	0	030	51.80
5807-01010	**1X10LG**	25	0	030	54.58
5807-01012	**1X12LG**	25	0	030	57.56
5807-01208	**1-1/4X8LG**	20	0	030	68.81
5807-01210	**1-1/4X10LG**	20	0	030	72.43
5807-01212	**1-1/4X12LG**	20	0	030	76.22
5807-16808	**1-1/4X1X8LG**	20	0	030	68.81
5807-16810	**1-1/4X1X10LG**	20	0	030	72.43
5807-16812	**1-1/4X1X12LG**	20	0	030	76.22
5807-16908	**1-1/4X1-1/2X8LG**	20	0	030	68.81
5807-16910	**1-1/4X1-1/2X10LG**	20	0	030	72.43
5807-16912	**1-1/4X1-1/2X12LG**	20	0	030	76.22
5807-01508	**1-1/2X8LG**	15	0	030	83.80
5807-01510	**1-1/2X10LG**	15	0	030	88.05
5807-01512	**1-1/2X12LG**	15	0	030	92.64

Swing Joint SOC TEE Inlet x MIPT Outlet

8"-10"-12" Nipple Length (LG) shown. See previous pages for ordering other lengths.

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
5808-24908	**2X1 X8LG**	15	0	030	73.94
5808-24910	**2X1 X10LG**	15	0	030	77.91
5808-24912	**2X1 X12LG**	15	0	030	82.05
5808-25008	**2X1-1/4X8LG**	15	0	030	90.28
5808-25010	**2X1-1/4X10LG**	15	0	030	95.04
5808-25012	**2X1-1/4X12LG**	10	0	030	100.03
5808-25108	**2X1-1/2X8LG**	10	0	030	119.38
5808-25110	**2X1-1/2X10LG**	10	0	030	125.83
5808-25112	**2X1-1/2X12LG**	10	0	030	132.66

Swing Joint SOC Inlet x MAT Outlet

8"-10"-12" Nipple Length (LG) shown. See previous pages for ordering other lengths.

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
5809-01008	**1X8LG**	25	0	030	51.80
5809-01010	**1X10LG**	25	0	030	54.58
5809-01012	**1X12LG**	25	0	030	57.56
5809-01208	**1-1/4X8LG**	20	0	030	68.81
5809-01210	**1-1/4X10LG**	20	0	030	72.43
5809-01212	**1-1/4X12LG**	20	0	030	76.22
5809-01508	**1-1/2X8LG**	15	0	030	83.80
5809-01510	**1-1/2X10LG**	15	0	030	88.05
5809-01512	**1-1/2X12LG**	15	0	030	92.64

Swing Joint SPIG Inlet x MAT Outlet

8"-10"-12" Nipple Length (LG) shown. See previous pages for ordering other lengths.

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
5810-01008	**1X8LG**	25	0	030	51.80
5810-01010	**1X10LG**	25	0	030	54.58
5810-01012	**1X12LG**	25	0	030	57.56
5810-01208	**1-1/4X8LG**	20	0	030	68.81
5810-01210	**1-1/4X10LG**	20	0	030	72.43
5810-01212	**1-1/4X12LG**	20	0	030	76.22
5810-01508	**1-1/2X8LG**	15	0	030	83.80
5810-01510	**1-1/2X10LG**	15	0	030	88.05
5810-01512	**1-1/2X12LG**	15	0	030	92.64

Swing Joint MIPT Inlet x MAT Outlet

8"-10"-12" Nipple Length (LG) shown. See previous pages for ordering other lengths.

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
5811-01008	**1X8LG**	25	0	030	51.80
5811-01010	**1X10LG**	25	0	030	54.58
5811-01012	**1X12LG**	25	0	030	57.56
5811-01208	**1-1/4X8LG**	20	0	030	68.81
5811-01210	**1-1/4X10LG**	20	0	030	72.43
5811-01212	**1-1/4X12LG**	20	0	030	76.22
5811-01508	**1-1/2X8LG**	15	0	030	83.80
5811-01510	**1-1/2X10LG**	15	0	030	88.05
5811-01512	**1-1/2X12LG**	15	0	030	92.64

Swing Joint SOC TEE Inlet x MAT Outlet

8"-10"-12" Nipple Length (LG) shown. See previous pages for ordering other lengths.

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
5812-24908	**2X1 X8LG**	15	0	030	73.94
5812-24910	**2X1 X10LG**	15	0	030	77.91
5812-24912	**2X1 X12LG**	15	0	030	82.05
5812-25008	**2X1-1/4X8LG**	20	0	030	90.28
5812-25010	**2X1-1/4X10LG**	15	0	030	95.04
5812-25012	**2X1-1/4X12LG**	15	0	030	100.03
5812-25108	**2X1-1/2X8LG**	10	0	030	119.38
5812-25110	**2X1-1/2X10LG**	10	0	030	125.83
5812-25112	**2X1-1/2X12LG**	10	0	030	132.66

Swing Joint SOC Inlet x MIPT Outlet Multi EII

8"-10"-12" Nipple Length (LG) shown. See previous pages for ordering other lengths.

5855-01008	**1X8LG**	20	0	030	74.83
5855-01010	**1X10LG**	15	0	030	80.48
5855-01012	**1X12LG**	15	0	030	83.26
5855-01208	**1-1/4X8LG**	20	0	030	95.45
5855-01210	**1-1/4X10LG**	15	0	030	101.09
5855-01212	**1-1/4X12LG**	15	0	030	103.87
5855-01508	**1-1/2X8LG**	10	0	030	115.95
5855-01510	**1-1/2X10LG**	10	0	030	121.54
5855-01512	**1-1/2X12LG**	10	0	030	124.34

Swing Joint SPIG Inlet x MIPT Outlet Multi-EII

8"-10"-12" Nipple Length (LG) shown. See previous pages for ordering other lengths.

5856-01008	**1X8LG**	20	0	030	74.83
5856-01010	**1X10LG**	15	0	030	80.48
5856-01012	**1X12LG**	15	0	030	83.26
5856-01208	**1-1/4X8LG**	20	0	030	95.45
5856-01210	**1-1/4X10LG**	15	0	030	101.09
5856-01212	**1-1/4X12LG**	15	0	030	103.87
5856-01508	**1-1/2X8LG**	10	0	030	115.95
5856-01510	**1-1/2X10LG**	10	0	030	121.54
5856-01512	**1-1/2X12LG**	10	0	030	124.34

Swing Joint MIPT Inlet x MIPT Outlet Multi-EII

8"-10"-12" Nipple Length (LG) shown. See previous pages for ordering other lengths.

5857-01008	**1X8LG**	20	0	030	74.83
5857-01010	**1X10LG**	15	0	030	80.48
5857-01012	**1X12LG**	15	0	030	83.26
5857-01208	**1-1/4X8LG**	20	0	030	95.45
5857-01210	**1-1/4X10LG**	15	0	030	101.09
5857-01212	**1-1/4X12LG**	15	0	030	103.87
5857-01508	**1-1/2X8LG**	10	0	030	115.95
5857-01510	**1-1/2X10LG**	10	0	030	121.54
5857-01512	**1-1/2X12LG**	10	0	030	124.34

Swing Joint TEE Inlet x MIPT Outlet Multi-EII

8"-10"-12" Nipple Length (LG) shown. See previous pages for ordering other lengths.

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
5858-24908	**2X1 X8LG**	15	0	030	106.95
5858-24910	**2X1 X10LG**	15	0	030	114.97
5858-24912	**2X1 X12LG**	10	0	030	118.94
5858-25008	**2X1-1/4X8LG**	10	0	030	136.37
5858-25010	**2X1-1/4X10LG**	10	0	030	144.40
5858-25012	**2X1-1/4X12LG**	10	0	030	148.41
5858-25108	**2X1-1/2X8LG**	10	0	030	165.62
5858-25110	**2X1-1/2X10LG**	10	0	030	173.58
5858-25112	**2X1-1/2X12LG**	10	0	030	177.62

Swing Joint Solvent Cemented Riser Nipple Style

SOC Inlet x MIPT Outlet

Assembly Without Nipple (part numbers ending in "00") & Optional Factory Assembled Unit With Customer Specified Nipple Length (see below)

5905-01000	**1**	1	10	030	42.40
5905-010__*	**1**	25	0	030	70.80
5905-010__**	**1**	25	0	030	80.48
5905-01200	**1-1/4**	1	10	030	56.09
5905-012__*	**1-1/4**	20	0	030	94.40
5905-012__**	**1-1/4**	20	0	030	107.33
5905-01500	**1-1/2**	1	8	030	69.78
5905-015__*	**1-1/2**	15	0	030	109.15
5905-015__**	**1-1/2**	15	0	030	124.03

Factory Assembled With Solvent Cemented Riser

Specifiy desired nipple length by filling in blank at end of Part Number with appropriate two-digit code (06 - 24) representing 1" increments.

* = Pricing for assembly with 6" to 18" length cemented Riser Nipple
** = Pricing for assembly with 19" to 24" length cemented Riser Nipple

Note: Cement Assembled Risers are Non-cancelable and Non-Returnable

Swing Joint Solvent Cemented Riser Nipple Style

SPIG Inlet x MIPT Outlet

Assembly Without Nipple (part numbers ending in "00") & Optional Factory Assembled Unit With Customer Specified Nipple Length (see below)

5906-01000	**1**	1	10	030	42.40
5906-010__*	**1**	25	0	030	70.80
5906-010__**	**1**	25	0	030	80.48
5906-01200	**1-1/4**	1	10	030	56.09
5906-012__*	**1-1/4**	20	0	030	94.40
5906-012__**	**1-1/4**	20	0	030	107.33
5906-01500	**1-1/2**	1	8	030	69.78
5906-015__*	**1-1/2**	15	0	030	109.15
5906-015__**	**1-1/2**	15	0	030	124.03

Factory Assembled With Solvent Cemented Riser

Specifiy desired nipple length by filling in blank at end of Part Number with appropriate two-digit code (06 - 24) representing 1" increments.

* = Pricing for assembly with 6" to 18" length cemented Riser Nipple
** = Pricing for assembly with 19" to 24" length cemented Riser Nipple

Note: Cement Assembled Risers are Non-cancelable and Non-Returnable

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

EverTUFF® TURF™ Swing Joint Riser Assemblies

Swing Joint Solvent Cemented Riser Nipple Style

MIPT Inlet x MIPT Outlet

Assembly Without Nipple (part numbers ending in "00") & Optional Factory Assembled Unit With Customer Specified Nipple Length (see below)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
5907-01000	**1**	1	10	030	42.40
5907-010__ *	**1**	25	0	030	70.80
5907-010__ **	**1**	25	0	030	80.48
5907-01200	**1-1/4**	1	10	030	56.09
5907-012__ **	**1-1/4**	10	0	030	107.33
5907-012__ *	**1-1/4**	15	0	030	94.40
5907-01500	**1-1/2**	1	8	030	69.78
5907-015__ *	**1-1/2**	15	0	030	109.15
5907-015__ **	**1-1/2**	0	0	030	124.03

Factory Assembled With Solvent Cemented Riser

Specifiy desired nipple length by filling in blank at end of Part Number with appropriate two-digit code (06 - 24) representing 1" increments.

* = Pricing for assembly with 6" to 18" length cemented Riser Nipple
** = Pricing for assembly with 19" to 24" length cemented Riser Nipple

Note: Cement Assembled Risers are Non-cancelable and Non-Returnable

Swing Joint Solvent Cemented Riser Nipple Style

SOC TEE Inlet x MIPT Outlet

Assembly Without Nipple (part numbers ending in "00") & Optional Factory Assembled Unit With Customer Specified Nipple Length (see below)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
5908-24900	**2X1**	1	8	030	49.88
5908-249__ *	**1**	15	0	030	83.51
5908-249__ **	**1**	15	0	030	94.87
5908-25000	**2X1-1/4**	5	0	030	63.33
5908-250__ *	**1-1/4**	15	0	030	105.08
5908-250__ **	**1-1/4**	15	0	030	112.81
5908-25100	**2X1-1/2**	1	6	030	70.80
5908-251__ *	**1/2**	10	0	030	110.82
5908-251__ **	**1/2**	10	0	030	125.96

Factory Assembled With Solvent Cemented Riser

Specifiy desired nipple length by filling in blank at end of Part Number with appropriate two-digit code (06 - 24) representing 1" increments.

* = Pricing for assembly with 6" to 18" length cemented Riser Nipple
** = Pricing for assembly with 19" to 24" length cemented Riser Nipple

Note: Cement Assembled Risers are Non-cancelable and Non-Returnable

Swing Joint Cap

FAT

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
548-010-28A	**1**	50	0	030	1.98
548-012-28A	**1-1/4**	25	0	030	2.41
548-015-28A	**1-1/2**	25	0	030	2.58

Swing Joint Outlet Adapter

MAT x MIPT with O-rings

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
559-010-21AR	**1**	1	25	030	7.43
559-012-21AR	**1-1/4**	1	25	030	9.16
559-015-21AR	**1-1/2**	1	25	030	12.14

Swing Joint Outlet Adapter

MAT x SR FIPT with O-rings

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
559-010-22SRAR	**1**	1	25	030	9.84
559-012-22SRAR	**1-1/4**	1	250	030	18.29
559-015-22SRAR	**1-1/2**	1	80	030	27.54

Swing Joint Outlet Adapter

FAT x MAT with O-rings

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
559-212-101AR	**1-1/2X1-1/4**	1	100	030	18.56

Swing Joint Outlet Adapter

MAT x FAT with O-rings

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
559-212-85AR	**1-1/2X1-1/4**	1	80	030	19.88

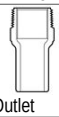
Swing Joint Inlet/Outlet Male Adapter - Spigot

MIPT x SPIG

May be used with SOC Inlet or Outlet to convert to MIPT Inlet or Outlet

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
590-015	**1-1/2**	25	0	030	11.23
590-211	**1-1/2X1**	25	0	030	6.48
590-212	**1-1/2X1-1/4**	25	0	030	6.48

Swing Joint Inlet/Outlet Reinforced Male Adapter - Spigot



R MIPT x SPIG Adapter

May be used with SOC Inlet or Outlet to convert to MIPT Inlet or Outlet

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
590-168R	**1-1/4X1**	50	0	030	76.67

Swing Joint Inlet Adapter

SOC x MBT with O-rings

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
591-010-3AR	**1**	1	25	030	12.69
591-012-3AR	**1-1/4**	1	10	030	15.99
591-015-3AR	**1-1/2**	1	25	030	19.33

Swing Joint Inlet Adapter

SPIG x MBT with O-rings

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
592-010-4AR	**1**	1	25	030	18.26
592-012-4AR	**1-1/4**	1	10	030	20.22
592-015-4AR	**1-1/2**	1	25	030	22.14

Swing Joint Inlet Adapter

JIS SPIG x MBT with O-rings

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
594-010-4AR	**25**	1	10	030	18.26
594-012-4AR	**32**	1	10	030	20.22
594-015-4AR	**40**	1	10	030	22.14

Swing Joint Inlet Adapter

DIN SPIG x MBT with O-rings

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
595-010-4AR	**32**	1	10	030	18.26
595-012-4AR	**40**	1	10	030	20.22
595-015-4AR	**50**	1	10	030	22.14

Swing Joint Inlet Adapter

MIPT x MBT with O-rings

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
596-010-4AR	**1**	1	25	030	15.51
596-012-4AR	**1-1/4**	1	10	030	18.11
596-015-4AR	**1-1/2**	1	25	030	20.65

Swing Joint Inlet Adapter - Reducing

MIPT x MBT with O-rings

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
596-212-4AR	**1-1/2X1-1/4**	1	25	030	27.61

EverTUFF® TURF™ Swing Joint Riser Assemblies

Swing Joint Inlet Adapter
BSP x MBT with O-rings

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
597-010-4AR	**1**	1	25	030	15.51
597-012-4AR	**1-1/4**	1	10	030	18.11
597-015-4AR	**1-1/2**	1	25	030	20.65

Swing Joint Long Spigot Inlet
SPIG x MBT with O-ring (4" in length)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
598-010-4AR	**1**	1	25	030	18.26
598-012-4AR	**1-1/4**	1	25	030	20.23
598-015-4AR	**1-1/2**	1	25	030	22.14

Swing Joint Reducer Bushing
SPIGOT x FAT (Female Acme Thread)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
598-168-27	**1-1/4X1**	20	120	030	4.24
598-212-27	**1-1/2X1-1/4**	15	90	030	5.17
598-251-27	**2X1-1/2**	10	60	030	5.66

Swing Joint Reducer Bushing
SPIGOT x FBT (Female Buttress Thread)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
598-168-26	**1-1/4X1**	20	120	030	4.16
598-212-26	**1-1/2X1-1/4**	10	60	030	4.66
598-251-26	**2X1-1/2**	10	60	030	5.47

Swing Joint Tee - Reducing
SOC x FBT

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
593-249-5A	**2X1**	30	0	030	32.40
593-250-5A	**2X1-1/4**	30	0	030	32.40
593-251-5A	**2X1-1/2**	25	0	030	32.40

Swing Joint 90° Ell Outlet
FBT x SOC

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
591-010-2A	**1**	115	0	030	20.11
591-012-2A	**1-1/4**	80	0	030	23.33
591-015-2A	**1-1/2**	50	0	030	26.49

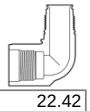
Swing Joint 90° Street Ell Outlet
FBT x MIPT

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
591-010-4A	**1**	140	0	030	17.17
591-012-4A	**1-1/4**	1	90	030	20.37
591-015-4A	**1-1/2**	1	60	030	23.55
591-168-4A	**1-1/4X1**	110	0	030	39.83

Swing Joint 90° Street Ell Outlet
FBT x BSP

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
591-010-5A	**1**	140	0	030	20.11
591-012-5A	**1-1/4**	1	100	030	20.37
591-015-5A	**1-1/2**	60	0	030	26.49

Swing Joint 90° Street Ell Outlet
FBT x MAT with O-rings



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
591-010-7AR	**1**	1	25	030	22.42
591-012-7AR	**1-1/4**	1	25	030	26.12
591-015-7AR	**1-1/2**	1	25	030	29.79
591-132-7AR	**1X1-1/4**	1	25	030	26.12

Swing Joint 90° Street Ell Outlet (continued)
FBT x MAT with O-rings

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
591-133-7AR	**1X1-1/2**	1	25	030	23.45
591-168-7AR	**1-1/4X1**	1	10	030	25.82
591-211-7AR	**1-1/2X1**	1	25	030	29.54
591-212-7AR	**1-1/2X1-1/4**	1	25	030	28.91

Swing Joint 90° Ell Outlet - Special Reinforced
FBT x SR FIPT

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
591-010-8SRA	**1**	15	0	030	28.55
591-012-8SRA	**1-1/4**	15	0	030	32.61
591-015-8SRA	**1-1/2**	15	0	030	35.01

Swing Joint Brass Thread 90° Ell Outlet
FBT x FIPT with Brass Thread Insert

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
591-010-8BRA	**1**	15	0	030	35.51
591-012-8BRA	**1-1/4**	10	0	030	78.63
591-015-8BRA	**1-1/2**	10	0	030	113.67

Not intended to convey or dispense water for human consumption through drinking or cooking

Swing Joint 90° Street Ell Outlet
MBT x FBT with O-rings

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
591-010-1AR	**1**	1	25	030	22.42
591-012-1AR	**1-1/4**	1	10	030	26.12
591-015-1AR	**1-1/2**	1	25	030	29.79

Swing Joint Riser Extension Coupling

May be used with 5800 Series Buttress Threaded Nipples to Extend Height of Riser

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
58-010-1	**1**	140	0	030	15.20
58-012-1	**1-1/4**	100	0	030	15.98
58-015-1	**1-1/2**	80	0	030	17.92

Swing Joint Riser Nipple
MBT (8" Length) with O-rings

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
59-010-08R	**1X8**	1	25	030	16.53
59-012-08R	**1-1/4X8**	1	10	030	21.54
59-015-08R	**1-1/2X8**	1	25	030	26.53

Swing Joint Riser Nipple
MBT (10" Length) with O-rings

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
59-010-10R	**1X10**	1	25	030	17.72
59-012-10R	**1-1/4X10**	1	10	030	22.87
59-015-10R	**1-1/2X10**	1	25	030	28.04

Swing Joint Riser Nipple
MBT (12" Length) with O-rings

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
59-010-12R	**1X12**	1	25	030	20.09
59-012-12R	**1-1/4X12**	1	10	030	24.77
59-015-12R	**1-1/2X12**	1	25	030	29.52

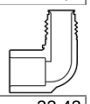
Swing Joint Riser Nipple
MBT (14" Length) with O-rings

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
59-010-14R	**1**	1	25	030	14.34
59-012-14R	**1-1/4**	1	15	030	17.47

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

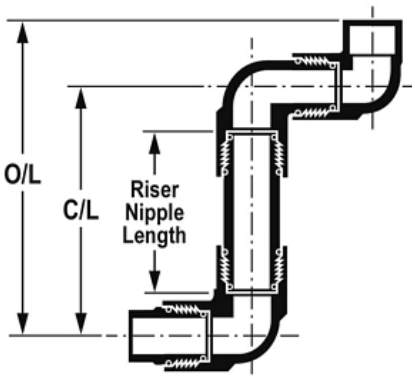
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Swing Joint Riser Nipple (continued)					
MBT (14" Length) with O-rings					
59-015-14R	**1-1/2**	1	15	030	19.66
Swing Joint Riser Nipple					
MBT (16" Length) with O-rings					
59-010-16R	**1**	1	45	030	15.61
59-012-16R	**1-1/4**	1	25	030	19.49
59-015-16R	**1-1/2**	1	20	030	22.07
Swing Joint 90° Street Ell Outlet					
SOC x MBT with O-rings					
593-010-1AR	**1**	1	25	030	22.42
593-012-1AR	**1-1/4**	1	10	030	26.12
593-015-1AR	**1-1/2**	1	25	030	29.79
Swing Joint 90° Ell Outlet					
FBT x FBT					
591-010-6A	**1**	95	0	030	18.26
591-012-6A	**1-1/4**	1	65	030	20.37
591-015-6A	**1-1/2**	50	0	030	26.72
Swing Joint Wire Holder					
Holds up to 4-wires, #12 or #14 gauge single feeder irrigation control cable. Snaps onto Spears® Swing Joint Risers.					
58WH-010	**1**	1500	0	030	2.23
58WH-012	**1-1/4**	450	0	030	2.43
58WH-015	**1-1/2**	400	0	030	2.76



Swing Joint Riser Dimensions

RISER NIPPLE LENGTH (IN.)	CENTER TO CENTER C/L			OVERALL LENGTH O/L		
	1"	1-1/4"	1-1/2"	1"	1-1/4"	1-1/2"
5800 SERIES* — MALE BUTTRESS THREADED STYLE						
8	9-11/16	10-3/16	10-7/16	12-1/16	12-11/16	13-1/4
10	11-11/16	12-3/16	12-7/16	14-1/16	14-11/16	15-1/4
12	13-11/16	14-3/16	14-7/16	16-1/16	16-11/16	17-1/4
14	15-11/16	16-3/16	16-7/16	18-1/16	18-11/16	19-1/4
16	17-11/16	18-3/16	18-7/16	20-1/16	20-11/16	21-1/4
18	19-11/16	20-3/16	20-7/16	22-1/16	22-11/16	23-1/4
20	21-11/16	22-3/16	22-7/16	24-1/16	24-11/16	25-1/4
24	25-11/16	26-3/16	26-7/16	28-1/16	28-11/16	29-1/4
5900 SERIES** — CUT & SOLVENT CEMENTED STYLE						
6	9-11/16	10-3/16	10-7/16	12-1/16	12-11/16	12-1/4
7	10-11/16	11-3/16	11-7/16	13-1/16	13-11/16	14-1/4
8	11-11/16	12-3/16	12-7/16	14-1/16	14-11/16	15-1/4
9	12-11/16	13-3/16	13-7/16	15-1/16	15-11/16	16-1/4
10	13-11/16	14-3/16	14-7/16	16-1/16	16-11/16	17-1/4
11	14-11/16	15-3/16	15-7/16	17-1/16	17-11/16	18-1/4
12	15-11/16	16-3/16	16-7/16	18-1/16	18-11/16	19-1/4
13	16-11/16	17-3/16	17-7/16	19-1/16	19-11/16	20-1/4
14	17-11/16	18-3/16	18-7/16	20-1/16	20-11/16	21-1/4
15	18-11/16	19-3/16	19-7/16	21-1/16	21-11/16	22-1/4
16	19-11/16	20-3/16	20-7/16	22-1/16	22-11/16	23-1/4
17	20-11/16	21-3/16	21-7/16	23-1/16	23-11/16	24-1/4
18	21-11/16	22-3/16	22-7/16	24-1/16	24-11/16	25-1/4
19	22-11/16	23-3/16	23-7/16	25-1/16	25-11/16	26-1/4
20	23-11/16	24-3/16	24-7/16	26-1/16	26-11/16	27-1/4
21	24-11/16	25-3/16	25-7/16	27-1/16	27-11/16	28-1/4
22	25-11/16	26-3/16	26-7/16	28-1/16	28-11/16	29-1/4
23	26-11/16	27-3/16	27-7/16	29-1/16	29-11/16	30-1/4
24	27-11/16	28-3/16	28-7/16	30-1/16	30-11/16	31-1/4



BSP	=	British Standard Pipe
C/L	=	Centerline to Centerline
DIN	=	European Metric Standard
FAT	=	Female Acme Thread
FBT	=	Female Buttress Thread
FIPT	=	Female Iron Pipe Thread
GMPT	=	Glued Male Pipe Thread
JIS	=	Japanese Industrial Standard
MAT	=	Male Acme Thread
MBT	=	Male Buttress Thread
MIPT	=	Male Iron Pipe Thread
NPL	=	Nipple
O/L	=	Overall Length
SOC	=	IPS Solvent Weld Socket
SPIG	=	Spigot End
SR FIPT	=	Special Reinforced Female Iron Pipe Thread

* Buttress Threaded Riser Lengths may be extended with the use of Riser Extension Couplings.

** Additional Nipple lengths are available. Please contact your servicing Spears® Regional Distribution center.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Turf Swivel Joints

PRICING

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

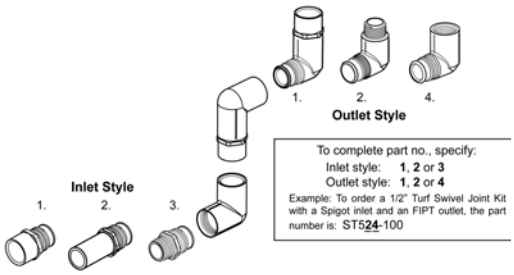
Turf Swivel Kits

3-Ell Swivel Joint Kits

Complete kit for field assembly with any length of user supplied pipe. Kit includes upper and lower Elbow assemblies with choice of the following Inlet & Outlet Options:

Inlet Code:
1 = Socket
2 = Spigot
3 = Mipt

Outlet Code:
1 = Socket
2 = Mipt
4 = Fipt



To complete part no., specify:
Inlet style: **1**, **2** or **3**
Outlet style: **1**, **2** or **4**
Example: To order a 1/2" Turf Swivel Joint Kit with a Spigot inlet and an FIPT outlet, the part number is: ST5**24**-100

Turf Swivel Joint Kit

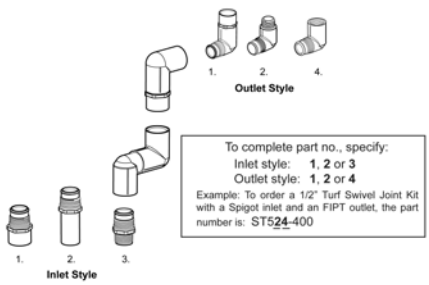
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
3-Ell Swivel Joint Kits					
ST5__-100	**1/2**	10	0	030	19.61
ST7__-100	**3/4**	10	0	030	22.14
ST9__-100	**1**	10	0	030	25.77

4-Ell Swivel Joint Kits

Complete kit for field assembly with any length of user supplied pipe. Kit includes upper and lower Elbow assemblies with choice of the following Inlet & Outlet Options:

Inlet Code:
1 = Socket
2 = Spigot
3 = Mipt

Outlet Code:
1 = Socket
2 = Mipt
4 = Fipt



To complete part no., specify:
Inlet style: **1**, **2** or **3**
Outlet style: **1**, **2** or **4**
Example: To order a 1/2" Turf Swivel Joint Kit with a Spigot inlet and an FIPT outlet, the part number is: ST5**24**-400

4-Ell Swivel Joint Kits					
ST5__-400	**1/2**	10	0	030	20.82
ST7__-400	**3/4**	10	0	030	23.38
ST9__-400	**1**	10	0	030	28.21

Turf Swivel Joints

Complete Factory Assembly. Available in sizes 1/2", 3/4" and 1" with the following Lay Length Options:

8"	=	8L
12"	=	12L
15"	=	15L
19"	=	19L

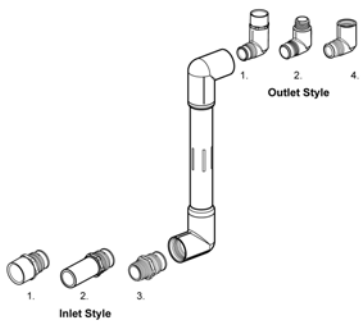
Choice of the following Inlet & Outlet Options:

Inlet Code			Outlet Code		
1	=	Socket	1	=	Socket
2	=	Spigot	2	=	Mipt
3	=	Mipt	4	=	Fipt

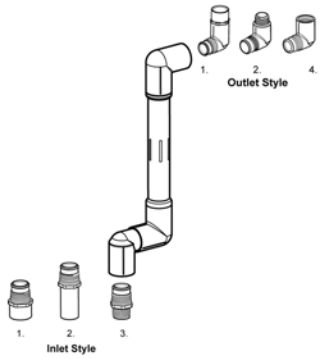
To complete part no., specify:
Inlet style: 1, 2, or 3
Outlet style: 1, 2, or 4

Example: To order a 1/2" 3-Ell Turf Swivel Joint with an 8" lay length, a Spigot inlet and an FIPT outlet, the part number is: ST5 2 4 -208

3-Ell Turf Swivel Joint



4-Ell Turf Swivel Joint



Turf Swivel Joints

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
3-Ell Turf Swivel Joints					
ST5__-208	**1/2X8L**	10	0	030	30.74
ST5__-212	**1/2X12L**	10	0	030	31.11
ST5__-215	**1/2X15L**	10	0	030	32.06
ST5__-219	**1/2X19L**	10	0	030	33.09
ST7__-208	**3/4X8L**	10	0	030	33.14
ST7__-212	**3/4X12L**	10	0	030	34.71
ST7__-215	**3/4X15L**	10	0	030	35.38
ST7__-219	**3/4X19L**	10	0	030	36.22
ST9__-208	**1X8L**	10	0	030	36.49
ST9__-212	**1X12L**	10	0	030	37.64
ST9__-215	**1X15L**	10	0	030	38.62
ST9__-219	**1X19L**	10	0	030	39.95
ST57__-208	**1/2X3/4X8L**	10	0	030	30.74
ST57__-212	**1/2X3/4X12L**	10	0	030	31.11
ST57__-215	**1/2X3/4X15L**	10	0	030	32.06
ST57__-219	**1/2X3/4X19L**	10	0	030	33.09
ST75__-208	**3/4X1/2X8L**	10	0	030	33.14
ST75__-212	**3/4X1/2X12L**	10	0	030	34.71
ST75__-215	**3/4X1/2X15L**	10	0	030	35.38
ST75__-219	**3/4X1/2X19L**	10	0	030	35.38
4-Ell Turf Swivel Joints					
ST5__-408	**1/2X8L**	10	0	030	31.40
ST5__-412	**1/2X12L**	10	0	030	31.77
ST5__-415	**1/2X15L**	10	0	030	32.65
ST5__-419	**1/2X19L**	10	0	030	33.61
ST7__-408	**3/4X8L**	10	0	030	33.80
ST7__-412	**3/4X12L**	10	0	030	35.29
ST7__-415	**3/4X15L**	10	0	030	35.97
ST7__-419	**3/4X19L**	10	0	030	36.74
ST9__-408	**1X8L**	10	0	030	38.39
ST9__-412	**1X12L**	10	0	030	39.45
ST9__-415	**1X15L**	10	0	030	40.41
ST9__-419	**1X19L**	10	0	030	41.67
ST57__-408	**1/2X3/4X8L**	10	0	030	31.40
ST57__-412	**1/2X3/4X12L**	10	0	030	31.77
ST57__-415	**1/2X3/4X15L**	10	0	030	32.65
ST57__-419	**1/2X3/4X19L**	10	0	030	33.61
ST75__-408	**3/4X1/2X8L**	10	0	030	35.38
ST75__-412	**3/4X1/2X12L**	10	0	030	36.74
ST75__-415	**3/4X1/2X15L**	10	0	030	36.74

Turf Swivel Joints (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4-Ell Turf Swivel Joints					
ST75__-419	**3/4X1/2X19L**	10	0	030	36.74

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

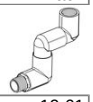
Compact Turf Swivel Joints

Factory Assembled
All Inlets are Swivel Male Threads
Three Outlet Choices:

Series ST11 & ST41 = Female Pipe Threads
Series ST12 & ST42 = Swivel Male Pipe Threads
Series ST13 & ST43 = Male Pipe Threads

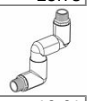
Also available in 1" MBSP inlet x 1" MBSP outlet. Contact Spears® for pricing and availability.

3-Ell Compact Turf Swivel Joints
Swivel Mipt x Fipt



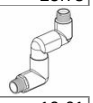
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
ST1105	1/2	10	0	030	19.61
ST1107	3/4	10	0	030	22.14
ST1110	1	10	0	030	25.78

3-Ell Compact Turf Swivel Joints
Swivel Mipt x Swivel Mipt



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
ST1205	1/2	10	0	030	19.61
ST1207	3/4	10	0	030	22.14
ST1210	1	10	0	030	25.78

3-Ell Compact Turf Swivel Joints
Swivel Mipt x Mipt



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
ST1305	1/2	10	0	030	19.61

3-Ell Compact Turf Swivel Joints (continued)
Swivel Mipt x Mipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
ST1307	3/4	10	0	030	22.14
ST1310	1	10	0	030	25.78

4-Ell Compact Turf Swivel Joints
Swivel Mipt x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
ST4105	1/2	10	0	030	20.82
ST4107	3/4	10	0	030	23.38
ST4110	1	10	0	030	28.21

4-Ell Compact Turf Swivel Joints
Swivel Mipt x Swivel Mipt

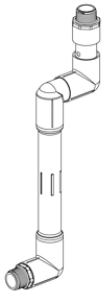
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
ST4205	1/2	10	0	030	20.82
ST4207	3/4	10	0	030	23.38
ST4210	1	10	0	030	28.21

4-Ell Compact Turf Swivel Joints
Swivel Mipt x Mipt

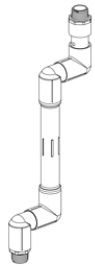
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
ST4305	1/2	10	0	030	20.82
ST4307	3/4	10	0	030	23.38
ST4310	1	10	0	030	28.21

Pressure Regulated Swivel Joints

3-Ell Pressure Regulated Swivel Joint



4-Ell Pressure Regulated Swivel Joint



Pressure Regulated Turf Swivel Joints

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
3-Ell - Mipt x Mipt					
ST73PR-208	3/4X8L	10	0	030	61.38
ST73PR-212	3/4X12L	10	0	030	63.05
ST73PR-215	3/4X15L	10	0	030	63.78
ST73PR-219	3/4X19L	10	0	030	64.64
ST93PR-208	1X8L	10	0	030	66.36
ST93PR-212	1X12L	10	0	030	67.57
ST93PR-215	1X15L	10	0	030	68.62
ST93PR-219	1X19L	10	0	030	70.02
4-Ell - Mipt x Mipt					
ST73PR-408	3/4X8L	10	0	030	64.78
ST73PR-412	3/4X12L	10	0	030	66.47
ST73PR-415	3/4X15L	10	0	030	67.18
ST73PR-419	3/4X19L	10	0	030	68.06
ST93PR-408	1X8L	10	0	030	71.80

Pressure Regulated Turf Swivel Joints (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4-Ell - Mipt x Mipt					
ST93PR-412	1X12L	10	0	030	73.00
ST93PR-415	1X15L	10	0	030	74.05
ST93PR-419	1X19L	10	0	030	75.44

Complete Factory Assembly. Available in sizes 3/4" and 1" with Mipt Inlet x Mipt Outlet and the following Lay Length Options:

8"	=	8L
12"	=	12L
15"	=	15L
19"	=	19L

Maintains constant, uniform pressure to sprinkler at the following pre-set nominal values:
45 psi for 3/4" Turf Swivel Joint
70 psi for 1" Turf Swivel Joint

Not recommended for use in systems with pressures equal to or less than regulated pressures above.
Pressure Rating @ 73°F (23°C), Water 315 psi

Turf Swivel Joint Replacement Parts

Turf Swivel Joint Coupling
FAT x FAT

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
ST430-007	**3/4**	1	350	030	6.47
ST430-010	**1**	1	240	030	8.60

Turf Swivel Joint 90° Elbow
FAT x FAT

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
ST1101-005	**1/2**	1	300	030	3.74
ST1101-007	**3/4**	1	250	030	4.32
ST1101-101	**3/4X1/2**	1	270	030	3.94
ST1101-010	**1**	1	175	030	7.12

Turf Swivel Joint 90° Elbow
FAT x SOC

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
ST1102-005	**1/2**	1	350	030	3.74
ST1102-007	**3/4**	1	250	030	4.32
ST1102-010	**1**	1	160	030	7.12

Turf Swivel Joint 90° Street Ell
MAT x FAT

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
ST425-005	**1/2**	1	200	030	5.44
ST425-007	**3/4**	1	300	030	5.81
ST425-010	**1**	1	200	030	8.08

Turf Swivel Joint Socket Inlet #1
SOC x MAT

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
ST436-005	**1/2**	1	350	030	3.49
ST436-007	**3/4**	1	50	030	3.86
ST436-010	**1**	1	100	030	7.24

Turf Swivel Joint Spigot Inlet #2
SPG x MAT

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
ST105-035	**1/2**	1	350	030	3.72
ST107-035	**3/4**	1	50	030	4.16
ST110-040	**1**	1	140	030	7.58

Turf Swivel Joint Male Thread Inlet #3
Mipt x MAT

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
ST205-020	**1/2**	1	25	030	3.29
ST207-020	**3/4**	1	350	030	3.86
ST210-020	**1**	1	150	030	4.19

Turf Swivel Joint Socket Outlet #1
MAT x SOC

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
ST410-005	**1/2**	1	50	030	7.42
ST410-007	**3/4**	1	200	030	8.13
ST410-010	**1**	1	25	030	8.52

Turf Swivel Joint Male Thread Outlet #2
MAT x Mipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
ST408-005	**1/2**	1	250	030	5.44
ST408-007	**3/4**	1	25	030	5.81
ST408-010	**1**	1	100	030	8.60

Turf Swivel Joint Female Thread Outlet #4
MAT x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
ST412-005	**1/2**	1	250	030	5.44
ST412-007	**3/4**	1	25	030	5.81
ST412-010	**1**	1	200	030	8.08

Turf Swivel Joint Molded Nipples
MAT x MAT

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
ST207-065	**3/4X6-1/2**	1	200	030	7.69
ST207-105	**3/4X10-1/2**	1	115	030	17.73
ST210-065	**1X6-1/2**	1	120	030	9.89
ST210-105	**1X10-1/2**	1	25	030	23.44

Turf Swivel Joint O-ring Seal

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
B-113	**1/2**	100	0	901	.07
B-115	**3/4**	100	0	901	.07
B-120	**1**	100	0	901	.18

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

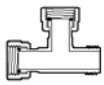
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Irrigation Manifold Systems

PRICING

High Strength 1" Manifold Systems

Manifold Tee
Swivel x Mipt x Swivel with O-ring Seal



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
MA0101-010	**1**	25	0	019	9.91

Manifold 2 - Port Tee
Swivel x Mipt x Swivel Branch with O–ring Seal

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
MA0101-010-2	**1**	25	0	019	14.38

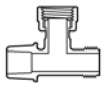
Manifold 3 - Port Tee
Swivel x Mipt x Swivel Branch with O–ring Seal

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
MA0101-010-3	**1**	25	0	019	19.80

Manifold 4 - Port Tee
Swivel x Mipt x Swivel Branch with O–ring Seal

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
MA0101-010-4	**1**	25	0	019	25.26

Manifold Tee
Soc(Spig) x Mipt x Swivel with O-ring Seal



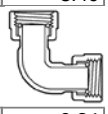
For Solvent Cement Connection

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
MA0109-010	**1 (1-1/4)**	25	0	019	8.81

Manifold 90° Street Ell
Mipt x Swivel with O-ring Seal

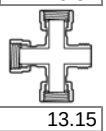
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
MA0602-010	**1**	25	0	019	8.46

Manifold 90° Ell
Swivel x Swivel with O-ring Seal



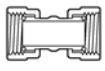
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
MA0603-010	**1**	20	0	019	9.34

Manifold Cross
Swivel x Mipt x Swivel x Swivel with O–ring Seal



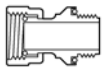
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
MA2004-010	**1**	25	0	019	13.15

Manifold Swivel Coupling
Swivel x Swivel with O-ring Seal



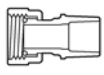
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
MA2903-010	**1**	25	200	019	7.01

Manifold Nipple Coupling
Swivel x Mipt with O-ring Seal



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
MA2907-010	**n/a**	25	200	019	5.12

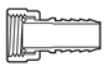
Manifold Socket (Spig) Coupling
Swivel x Soc (Spig) with O-ring Seal



For Solvent Cement Connection

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
MA2908-010	**1 (1-1/4)**	25	0	019	5.12

Manifold Insert Coupling
Swivel x Barbed Insert with O-ring Seal

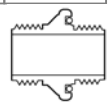


Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
MA3505-007	**1X3/4**	25	200	019	5.09
MA3505-010	**1**	25	200	019	5.43

Manifold Cap
Fipt with O-ring Seal

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
MA4800-010	**1**	50	600	019	2.14

Manifold Nipple
Mipt x Mipt with O-ring Seal



1" Nipple End Uses MA-218 O-ring
3/4" Nipple End Uses MA-214 O-ring

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
MA8306-010	**1**	25	200	019	2.29
MA8306-131	**1X3/4**	25	200	019	2.01

Manifold Replacement O–ring
For All 1" Cap/Swivel Connectors & For 3/4" Nipple End

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
MA-214	**1 & 3/4**	50	500	901	.49

Manifold Nipple Replacement O–ring
For 1" Nipple & For 1" Nippled Coupling End

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
MA-218	**1**	50	500	901	.53

Four-In-One • Cut-Off Nipples

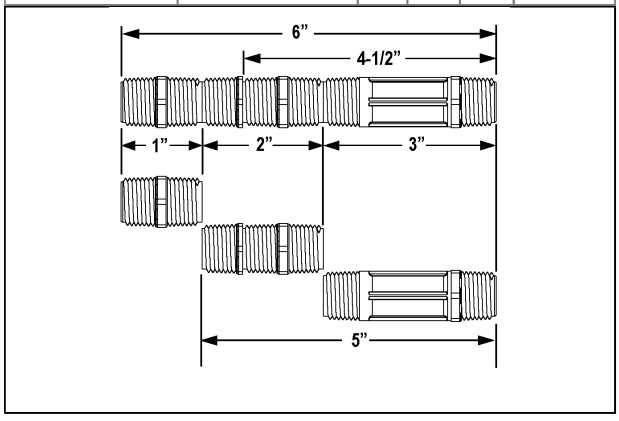
PRICING

Four-In-One • Cut-Off Nipples

- High quality polyethylene construction
- Reduces inventory
- Reduces contractor down time
- Choice of sizes from just one nipple
- Eliminates waste

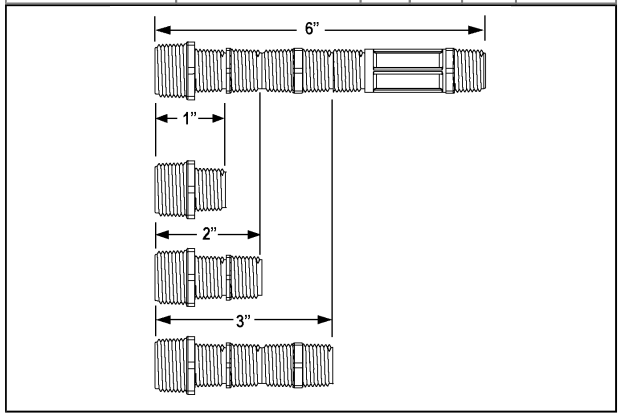
Four-In-One Cut-Off Nipple

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
M481-005	**1/2X6**	50	350	123	1.08
M481-007	**3/4X6**	25	200	123	1.55



Four-In-One Cut-Off Nipple - Reducing

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
M481-101	**3/4X1/2X6**	50	300	123	1.18



PVC Irrigation Specialty Products

PRICING

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

• Hose Fittings • Solvent Weld For Flexible PVC Hose

FHT = Female Hose Thread
Fipt = Female Iron Pipe Thread
HS = Hose Socket
Ins = Male Insert Barb

MHT = Male Hose Thread
Mipt = Male Iron Pipe Thread
Soc = IPS Solvent Weld Socket

Hose Coupling

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
C-44	**1/2**	200	0	020	.93
C-55	**5/8**	100	0	020	1.23
C-66	**3/4**	100	0	020	2.35

Hose 90° Ell
MHT x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
EHP-007	**3/4**	50	0	020	2.62
EHP-101	**3/4X1/2**	50	0	020	2.24

Hose Tee
MHT x MHT x FHT Swivel with Washer

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
AP-101	**3/4**	50	0	020	4.54

W-100

W-101

Hose Washer

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Washer Only					
W-100	**3/4**	50	1500	020	.15
W-101	**3/4**	400	2400	020	1.21

Hose Swivel Adapter
Fipt x FHT Swivel with Washer

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
AP-105	**1/2X3/4**	50	200	020	2.95
AP-106	**3/4**	50	200	020	2.95

Hose Swivel Adapter
Mipt x FHT Swivel with Washer

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
AP-109	**3/4**	50	200	020	2.95

Hose Swivel Adapter (continued)
Mipt x FHT Swivel with Washer

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
AP-112	**1/2X3/4**	50	200	020	2.95

Hose Swivel Adapter
FHT Swivel x FHT Swivel with Washer

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
AP-110	**3/4**	50	200	020	2.95

Hose Female Adapter
FHT Swivel x HS with Washer

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
F-64	**3/4X1/2**	100	0	020	2.28
F-65	**3/4X5/8**	100	0	020	2.43
F-66	**3/4**	100	0	020	2.51
FHT Swivel x Soc					
F-64-P	**3/4X1/2**	100	0	020	2.28
F-66-P	**3/4**	100	0	020	2.51

Hose Male Adapter
Mipt x HS

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
M-44	**1/2X1/2**	50	300	020	1.27
MHT x HS					
M-64	**3/4X1/2**	50	300	020	1.29
M-65	**3/4X5/8**	50	200	020	2.06
M-66	**3/4**	50	200	020	2.39
MHT x Soc					
M-64-P	**3/4X1/2**	50	200	020	1.27
M-66-P	**3/4**	50	200	020	2.39

• Hose Fittings • For 1/2" Polyethylene (.580 I.D.) Hose

PE Hose PVC Female Compression Adapter
FHT x Poly Adapter with Insert Expander

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
F-64B	**3/4X1/2**	50	600	020	2.06

PE Hose PVC Male Compression Adapter
MHT x Poly Adapter with Insert Expander

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
M-64B	**3/4X1/2**	100	0	020	1.58

PE Hose PVC Insert Tee
Ins x Ins x FHT Swivel

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
AP-101B	**1/2X3/4**	50	0	020	3.54

PE Hose PVC Transition Tee
Soc x Soc x Ins

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1102-007	**3/4**	50	0	040	3.22
1102-130	**1X1/2**	200	0	040	3.61
1102-250	**2X1-1/4**	10	0	040	5.08

• Hose Fittings • For 1/2" Polyethylene (.580 I.D.) Hose

PE Hose PVC Insert Coupling
Ins x Ins

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1429-005A	**1/2**	200	0	140	.98

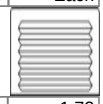
PE Hose PVC Insert Male Adapter
Ins x Mipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1436-005A	**1/2**	200	0	140	.82

PE Hose PVC Plug
MHT

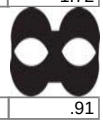
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
HPL-6	**3/4**	100	600	020	2.06

PE Hose PVC Cap
FHT with Washer



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
AP-100	**3/4**	200	0	020	1.72

PE Hose PVC Closure
For 1/2" Poly Hose



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
S-HC-1	**1/2**	200	0	020	.91

Irrigation Accessories

Spears® PVC Adapter System offers a unique method for expanding field irrigation systems that lends versatility and economy to your project. These adapters are designed to use 1/2", 5/8" or 3/4" vinyl hose, and the Rebar fittings and crosses accept a 1/2" or 3/4" sprinkler base. Transition to the existing system can be accomplished with any one of the threaded outlets offered.

New Installation — Spears® PVC Adapter System is designed with threaded or swivel thread connections which simplify the initial installation and minimize material, manpower and installation costs. Additional savings accrue through a reduction of the number of laterals required.

Improving Existing Systems — The Spears® Adapter System is ideal for updating existing systems because it readily adapts to aluminum or PVC mains and laterals. Expansion or refinement of the irrigation system is easily accomplished through the versatility afforded the user in the location of the new sprinkler heads.

BSW	=	British Standard Whitworth Thread
FHT	=	Female Hose Thread
Fipt	=	Female Iron Pipe Thread
MHT	=	Male Hose Thread
Mipt		Male Iron Pipe Thread
NFT	=	National Fine Thread
Rebar	=	Accepts 1/2" Rebar
Soc	=	IPS Solvent Weld Socket
Spig	=	Spigot

Hose System Riser
Soc x Mipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
RM-64	**1/2**	75	0	020	5.04
RM-66	**3/4**	75	0	020	5.04

Hose System Riser
Soc x MHT

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
RM-66-H	**3/4**	75	0	020	5.04

Hose System Riser
Soc x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
RF-64	**1/2**	75	0	020	6.28
RF-66	**3/4**	70	0	020	6.28

Trickle Irrigation Hex Cap
Fipt (Less Holes)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
T-1	**1/2**	800	0	020	1.64

Shrub Adapter
Fipt x NFT

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PA2010-01	**1/2X10-32**	50	300	020	1.27
PA2010-03	**1/2X5/16**	50	300	020	1.27

Shrub Adapter
Fipt x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PA2010-02	**1/2X1/8**	50	300	020	1.27

Fipt x BSW

PA2010-04	**1/2X3/8**	50	300	020	1.27

Shrub Adapter
Soc x NFT

PA2020-01	**1/2X10-32**	50	300	020	1.27
PA2020-03	**1/2X5/16**	50	300	020	1.27

Soc x Fipt

PA2020-02	**1/2X1/8**	50	300	020	1.27

Soc x BSW

PA2020-04	**1/2X3/8**	50	300	020	1.27

Hose Transition Nipple
Mipt x MHT (1.790 Length)

N-1	**3/4X3/4**	50	300	020	1.35

Mipt x Mipt (1.410 Length)

N-2	**3/8X1/2**	50	300	020	1.35

Mipt x MHT (1.872 Length)

N-3	**1/2X3/4**	50	300	020	1.35

Transition Nipple

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each

Mipt x Mipt Polypropylene (1.480 Length)

N-4	**3/4X1/2**	50	300	020	1.35

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Irrigation Accessories & Hose Adapters & Sprinkler Accessories

Irrigation Accessories

Pipe Support (90° Clip to Body)
Without Nail Holes

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PS4-90	1/2	750	0	020	.60

With Nail Holes

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PS4-90N	1/2	750	0	020	.76

Manifold Tee
Spig x Soc x Mipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
476-010	1	20	0	020	5.98

Manifold Tee
Spig x Soc x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
477-010	1	25	0	020	5.98

Hose Adapters
For Solid Set Or Moveable Aluminum Systems

Fipt = Female Iron Pipe Thread
MHT = Male Hose Thread
Mipt = Male Iron Pipe Thread
Rebar = Accepts 1/2" Rebar

Hose Cross
MHT x MHT x Fipt x MHT

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
P-101	3/4X3/4X1/2X3/4	125	0	020	8.91

MHT x MHT x Fipt x Mipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
P-100	3/4	125	0	020	8.91
P-102	3/4X3/4X1/2X3/4	100	0	020	8.91
P-103	3/4X3/4X1/2X1/2	50	0	020	8.91

Hose Rebar Cross
MHT x MHT x Fipt x Rebar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PR-101	3/4X1/2	50	0	020	9.58
PR-103	3/4X3/4X1/2X1/2	50	0	020	9.58

Hose Rebar Ell
MHT x Fipt x Rebar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PR-100	3/4X1/2X1/2	100	0	020	5.04
PR-102	3/4X3/4X1/2	100	0	020	5.04

Sprinkler Accessories

Irrigation Sprinkler Stand
Hose Socket Inlet x Hose Socket Outlet x IPS Riser Outlet

Shown without adapters

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
ES-443†	1/2X3/8	100	0	020	7.82
ES-444†	1/2X1/2	100	0	020	7.82
ES-543*	5/8X1/2X3/8	75	0	020	9.08
ES-544*	5/8X1/2X1/2	75	0	020	9.08
ES-553*	5/8X3/8	75	0	020	10.11
ES-554*	5/8X1/2	75	0	020	10.11
ES-653*	3/4X5/8X3/8	75	0	020	11.07
ES-654*	3/4X5/8X1/2	75	0	020	11.07
ES-663*	3/4X3/8	75	0	020	11.59
ES-664*	3/4X1/2	75	0	020	11.59

† Dual Connection — Hose Socket Inlets and Outlets accept 1/2" irrigation hose inside, and have 3/4" MHT on the outside.
* Item assembled when ordered — by providing either the ES-443 or ES-444 and one (1) or two (2) F-60 FHT Adapters with the applicable hose Socket size. Check with your servicing Regional Distribution Center for delivery lead time.

Irrigation Easy Pull Sled
Hose Socket Inlet x Hose Socket Outlet x IPS Riser Outlet

Shown without adapters

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
EP-443†	1/2X3/8	20	0	020	18.93
EP-444†	1/2	20	0	020	18.93
EP-543*	5/8X1/2X3/8	20	0	020	20.20
EP-544*	5/8X1/2X1/2	20	0	020	20.20
EP-553*	5/8X3/8	20	0	020	21.43
EP-554*	5/8X1/2	20	0	020	21.43
EP-653*	3/4X5/8X3/8	20	0	020	21.71
EP-654*	3/4X5/8X1/2	20	0	020	21.71
EP-663*	3/4X3/8	20	0	020	22.20
EP-664*	3/4X1/2	20	0	020	22.20

† Dual Connection — Hose Socket Inlets and Outlets accept 1/2" irrigation hose inside, and have 3/4" MHT on the outside.
* Item assembled when ordered — by providing either the EP-443 or EP-444 and one (1) or two (2) F-60 FHT Adapters with the applicable hose Socket size. Check with your servicing Regional Distribution Center for delivery lead time.

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each

Irrigation Tow-Line Tee

Soc

Assembled as shown

TL-112	**1X1X1/2**	15	0	020	12.61
TL-123	**2X2X1/2**	25	0	020	15.12

Soc x Soc x Fipt

TL-112-1	**1X1X1/2**	30	0	020	13.62
TL-116-1	**1-1/4X1-1/4X1/2**	30	0	020	13.88
TL-120-1	**1-1/2X1-1/2X1/2**	25	0	020	14.39
TL-123-1	**2X2X1/2**	25	0	020	15.64

NOTE: The Tow-Line Tee is used in conjunction with PVC Schedule 40 Pipe with solvent weld connection.

Irrigation Hose Cross - with Legs

Hose Socket Inlet x Hose Socket Outlet x IPS Riser Outlet

Shown without adapters

HC-443†	**1/2X3/8**	60	0	020	9.08
HC-444†	**1/2X1/2**	60	0	020	9.08
HC-543*	**5/8X1/2X3/8**	60	0	020	10.35
HC-544*	**5/8X1/2X1/2**	60	0	020	10.35
HC-553*	**5/8X3/8**	60	0	020	11.59
HC-554*	**5/8X1/2**	60	0	020	11.59
HC-653*	**3/4X5/8X3/8**	60	0	020	12.36
HC-654*	**3/4X5/8X1/2**	60	0	020	12.36
HC-663*	**3/4X3/8**	60	0	020	13.12
HC-664*	**3/4X1/2**	60	0	020	13.12

† Dual Connection — Hose Socket Inlets and Outlets accept 1/2" irrigation hose inside, and have 3/4" MHT on the outside.
* Item assembled when ordered — by providing either the HC-443 or HC-444 and one (1) or two (2) F-60 FHT Adapters with the applicable hose Socket size. Check with your servicing Regional Distribution Center for delivery lead time.
NOTE: Hose Crosses are standard with 4" legs. 8" legs are available upon request. Add "-8" at the end of above Part Numbers for 8" legs (for example: HC-443-8). Contact your servicing Regional Distribution Center for pricing.

Irrigation Hose Cross - Less Legs

Hose Socket Inlet x Hose Socket Inlet x IPS Riser Outlet

Shown without adapters

HC-443-1†	**1/2X3/8**	220	0	020	4.54
HC-444-1†	**1/2X1/2**	200	0	020	4.54
HC-543-1*	**5/8X1/2X3/8**	60	0	020	6.28
HC-544-1*	**5/8X1/2X1/2**	60	0	020	6.28
HC-553-1*	**5/8X3/8**	50	0	020	8.32
HC-554-1*	**5/8X1/2**	50	0	020	8.32
HC-653-1*	**3/4X5/8X3/8**	60	0	020	8.59
HC-654-1*	**3/4X5/8X1/2**	60	0	020	8.59
HC-663-1*	**3/4X3/8**	60	0	020	9.08
HC-664-1*	**3/4X1/2**	60	0	020	9.08

† Dual Connection — Hose Socket Inlets and Outlets accept 1/2" irrigation hose inside, and have 3/4" MHT on the outside.
* Item assembled when ordered — by providing either the HC-443-1 or HC-444-1 and one (1) or two (2) F-60 FHT Adapters with the applicable hose Socket size. Check with your servicing Regional Distribution Center for delivery lead time.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

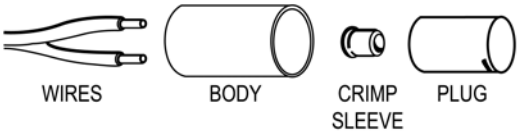
Dri-Splice Wire Connectors

For use in electrical systems with 30v or less.

The Spears® Dri-Splice Seal designed into each wire hole enables you to stock one connector for all applications. The Dri-Splice Seal features an interference webbing which expands to accommodate #18 through #6 gauge wire sizes. In the event only two holes are used, the Dri-Splice Seal prevents sealant from leaking out through the third hole.

SOLD IN STANDARD PACK QUANTITIES ONLY

DS-100/DS-150 & DS-400/DS-450 Dri-Splice Wire Connector Installation Information



1. Insert wires through holes in base of body.
2. Twist stripped wires together and apply crimp sleeve with an indent type crimping tool. Trim excess bare wire.
3. DS-100 & DS-150 ONLY — Fill Plug to brim with DS-300 sealant.
4. Invert body and insert plug into body until it snaps tight.
5. Push wires all the way into the plug to completely seal the crimp sleeve.
6. DS-100 & DS-150 ONLY — Be certain sealant has formed into all holes in body.

allows easy insertion of wire, expands to appropriate wire size and seals any unused holes to prevent sealant run out

DS-100 & DS-150 Dri-Splice

- DS-100 fits AWG #18, #14, #12, or #10
- DS-150 fits AWG #14, #12, #10, #8, or #6
- Designed to insure waterproof connections
- Easily installed in the field without special tools
- Permanent protection for underground wire splices
- Requires the use of DS-300 Sealant

DS-400 & DS-450 Pre-Filled Dri-Splice

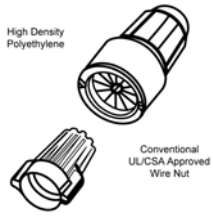
- All the features of the DS-100 or DS-150, plus the added benefit of being pre-filled with Dielectric Silicone Sealant
- Reduced inventory requirements
- Insures proper amount and type of Sealant every time
- Eliminates costly waste and clean-up
- Makes installations quick, clean and efficient

Dri-Splice Wire Connectors

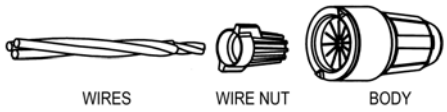
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Dri-Splice Wire Connector with Crimp Sleeve (Sealant sold separately)					
DS-100	AWG #18, #14, #12, #10	25	400	020	1.46
DS-150	AWG #14, #12, #10, #8, #6	25	400	020	1.75

Dri-Splice Wire Connectors

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Pre-Filled Dri-Splice Wire Connector with Crimp Sleeve					
DS-400	AWG #18, #14, #12, #10	25	400	020	3.19
DS-450	AWG #14, #12, #10, #8, #6	25	400	020	3.47
Crimp Sleeves					
DS-200	AWG #18, #14, #12, #10	25	15000	901	.25
DS-250	AWG #14, #12, #10, #8, #6	25	12500	901	.53
Dri-Splice Sealant For DS-100 and DS-150 (Approx. 30 connections per 5 oz. tube)					
DS-300	AWG #18, #14, #12, #10	24	0	022	15.29



DS-500 Dri-Splice Wire Connector Installation Information

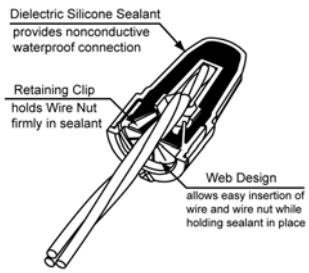


1. Strip wires and install wire nut.
2. Align wire nut wings with arrows and insert fully into body.

Dri-Splice Wire Connector General Information

Sealant:	DS-300 Sealant* (for DS-100 & DS-150) *-MSDS available upon request.* DS-400 & DS-450 Dielectric Silicone Sealant**-defined as an Article, per OSHA 29 CFR 1910, 1200, which does not require an MSDS.* DS-500 Dielectric Silicone Sealant**-defined as an Article, per OSHA 29 CFR 1910, 1200, which does not require an MSDS.*
Shelf Life:	DS-300 (unopened tube)— One Year* DS-400 & DS-450 — Indefinite at 73°F (23°C)* DS-500— Indefinite at 73°F (23°C)*
Electrical Systems:	For use in electrical systems with 30v or less. UL Listing NOT required in most areas.
DS-100/DS-150 & DS-400/DS-450 Components:	Plug— PVC Body— PVC Crimp Sleeve— UL and CSA Listed for 18 - 10 awg solid or stranded copper conductors.
DS-500 Components:	Body— Polyethylene Wire Nut— Twist-On Spring Type - UL/CSA Listed for 22 - 10 awg solid or stranded copper wire.

* Information developed and furnished by the Sealant Manufacturers. For additional information, please contact Spears® Technical Services Department.



DS-500 Dri-Splice Wire Connector

For use in electrical systems with 30v or less.

Spears® NEW DS-500 Dri Splice Wire Connector is the fast, reliable and clean way of making positive, waterproof connections you can depend on. Simply twist Wire Nut on and insert into Dielectric Silicone Sealant Cartridge. The DS-500 is specially designed for irrigation systems and low voltage lighting, marine and security systems and suitable for direct burial.

- Allows full assembly and check of connection prior to sealing
- Accepts wire combinations from 3 #22 to 3 #10 AWG solid or stranded copper wire
- Special "No-Mess" cartridge design fully encloses sealant
- Internal interlock prevents disengagement of wire nut from sealant cartridge

Dri-Splice Wire Connectors

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Pre-Filled Dri-Splice Wire Connector with Wire Nut					
DS-500	**3 AWG #22-#10**	25	500	020	3.19

Made in the U.S.A.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

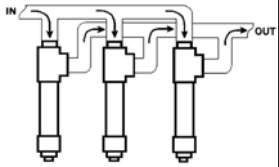
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Filters

Specially designed for agricultural and irrigation applications. Suitable for any application where cool, filtered water is required. Standard units utilize an internal-to-external filter cartridge. See following page for reverse flow (external to internal) filters.

- 200 psi Working Pressure Non-Shock @ 73°F (23°C)
- Filter Body is made from NSF®-PW Approved PVC Material
- Optional Screen Meshes
- Compact Design, Easy to Clean
- Lightweight, Easy to Install
- Filter Screens are designed using a standard perforated Stainless Steel Screen
- Mesh Sizes include an inner Stainless Steel Cloth with Spring Support (external cloth on reverse flow filters)
- Pressure loss: 100 GPM – 3 psi 50 GPM – 1.25 psi
- May be bushed to required pipe size

When more than 100 gpm is required, filters may be installed in parallel
When installing filter, allow space for removing filter screen for cleaning
Remove stainless steel filter screen before solvent welding filter to pipe manifold
When filters are installed in the direct sun, it is suggested the filter body be coated with a water-base latex paint having a high reflectance
Installation in a shaded area is preferred



—CAUTION—

- WATER HAMMER MAY CAUSE SEVERE DAMAGE TO THE FILTER ASSEMBLY.
- BACK FLUSHING IS NOT RECOMMENDED.
- QUALITY GRADE THREAD SEALANT IS RECOMMENDED FOR ALL THREADED PVC CONNECTIONS.

Mesh Size	Hole Size (in.)	Part Number Extension
1/16" Holes	.0625	-16
1/32" Holes	.0312	-32
50 Mesh	.0117	-50
76 Mesh	.0095	-76
100 Mesh	.0059	-100
150 Mesh	.0041	-150
200 Mesh	.0029	-200

Additional Mesh Sizes available on request.

Irrigation Filter Assembly with Stainless Steel Screen

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
100 GPM					
FL-16*	**2-1/2 /3 x 4**	1	0	020	555.11
FL-32*	**2-1/2 /3 x 4**	1	0	020	567.73
FL-50	**2-1/2 /3 x 4**	1	0	020	643.40
FL-76	**2-1/2 /3 x 4**	1	0	020	777.14
FL-100	**2-1/2 /3 x 4**	1	0	020	706.48
FL-150	**2-1/2 /3 x 4**	1	0	020	731.74
FL-200	**2-1/2 /3 x 4**	1	0	020	794.81
*Standard FL-16 and FL-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet. NOTE: Filter Assemblies are furnished standard with a 1-1/4" IPS tapped cap (FL4a) for use with a valve, or may be plugged off (plug not furnished). Optional cap available with 1/4" IPS tapping for use with a pressure gauge — specify FL-5a when ordering.					
50 GPM					
MFL-16*	**2-1/2 /3 x 2**	1	0	020	466.82
MFL-32*	**2-1/2 /3 x 2**	1	0	020	474.37
MFL-50	**2-1/2 /3 x 2**	1	0	020	489.48
MFL-76	**2-1/2 /3 x 2**	1	0	020	592.98
MFL-100	**2-1/2 /3 x 2**	1	0	020	517.27
MFL-150	**2-1/2 /3 x 2**	1	0	020	542.49
MFL-200	**2-1/2 /3 x 2**	1	0	020	605.57
*Standard FL-16 and FL-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet. NOTE: Filter Assemblies are furnished standard with a 1-1/4" IPS tapped cap (FL4a) for use with a valve, or may be plugged off (plug not furnished). Optional cap available with 1/4" IPS tapping for use with a pressure gauge — specify FL-5a when ordering.					

Irrigation Filter Replacement Screens

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
100 GPM (24" Length)					
FL-16-1	**1/16" Holes**	3	0	020	222.04
FL-32-1	**1/32" Holes**	3	0	020	242.22
FL-50-1	**50 Mesh**	3	0	020	479.42
FL-76-1	**76 Mesh**	3	0	020	474.37
FL-100-1	**100 Mesh**	3	0	020	373.45
FL-150-1	**150 Mesh**	3	0	020	403.71
FL-200-1	**200 Mesh**	3	0	020	499.60
NOTE: When ordering replacement screens for FL and MFL Series Filters, please provide exact length of old screen within 1/64" to ensure proper fit of new screen in your filter body.					
50 GPM (12" Length)					
MFL-16-1	**1/16" Holes**	3	0	020	222.04
MFL-32-1	**1/32" Holes**	3	0	020	232.14

Irrigation Filter Replacement Screens (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
50 GPM (12" Length)					
MFL-50-1	**50 Mesh**	3	0	020	252.33
MFL-76-1	**76 Mesh**	3	0	020	358.29
MFL-100-1	**100 Mesh**	3	0	020	277.57
MFL-150-1	**150 Mesh**	3	0	020	307.85
MFL-200-1	**200 Mesh**	3	0	020	378.46
NOTE: When ordering replacement screens for FL and MFL Series Filters, please provide exact length of old screen within 1/64" to ensure proper fit of new screen in your filter body.					

Irrigation Filter Replacement Components

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
100 GPM Filter Body					
FL-11	**2-1/2 /3 X 4**	1	0	020	378.46
50 GPM Filter Body					
MFL-11	**2-1/2 /3 X 2**	1	0	020	290.17

Irrigation Filter Components for Old-Style w/3" Bottom Cap

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Filter Cap w/Gasket					
FL-4A	**3X1-1/4**	70	0	020	31.55
FL-5A	**3X1/4**	70	0	020	31.55
Cap Gasket Only					
FCG-5	**3**	2	0	020	10.04

Irrigation Filter Components - New Style Body w/4" Bottom Cap

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Filter Cap w/O-rings					
FL-4B	**4X1-1/4**	25	0	020	57.97
FL-5B	**4X1/4**	1	0	020	93.78
Includes Cap with Cap O-ring (1) and bottom Filter Bushing O-ring (1)					

Irrigation Filter Components - New Style Body

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Cap O-Ring Only					
B-242	**- - -**	100	0	901	.83
Filter Bushing O-Rings					
B-335-60	**- - -**	100	0	901	3.66
Each filter uses two (2) Filter Bushing O-rings for top and bottom screen seals					

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Reverse Flow Filters

Filter cartridge specially designed for external-to-internal filtration

Irrigation Reverse Flow Filter with Stainless Steel Screen - 100 GPM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Socket x Socket/Spigot					
FLR-16*	**4X2-1/2 /3**	1	0	020	555.11
FLR-32*	**4X2-1/2 /3**	1	0	020	567.73
FLR-50	**4X2-1/2 /3**	1	0	020	643.40
FLR-76	**4X2-1/2 /3**	1	0	020	777.14
FLR-100	**4X2-1/2 /3**	1	0	020	706.48
FLR-150	**4X2-1/2 /3**	1	0	020	731.74
FLR-200	**4X2-1/2 /3**	1	0	020	794.81

*Standard FL-16 and FL-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

Irrigation Reverse Flow Filter with Stainless Steel Screen - 50 GPM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Socket x Socket/Spigot					
MFLR-16*	**2X2-1/2 /3**	1	0	020	466.82
MFLR-32*	**2X2-1/2 /3**	1	0	020	474.37
MFLR-50	**2X2-1/2 /3**	1	0	020	489.48
MFLR-76	**2X2-1/2 /3**	1	0	020	592.98
MFLR-100	**2X2-1/2 /3**	1	0	020	517.27
MFLR-150	**2X2-1/2 /3**	1	0	020	542.49
MFLR-200	**2X2-1/2 /3**	1	0	020	605.57

*Standard MFL-16 and MFL-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

Irrigation Filter Reverse Flow SS Replacement Screens (24" Length)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
100 GPM					
FL-16-1	**1/16" Holes**	3	0	020	222.04
FL-32-1	**1/32" Holes**	3	0	020	242.22
FLR-50-1	**50 Mesh**	3	0	020	243.39
FLR-76-1	**76 Mesh**	3	0	020	474.37
FLR-100-1	**100 Mesh**	3	0	020	337.02
FLR-150-1	**150 Mesh**	3	0	020	383.52
FLR-200-1	**200 Mesh**	3	0	020	474.62

Irrigation Filter Reverse Flow SS Replacement Screens (12" Length)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
50 GPM					
MFL-16-1	**1/16" Holes**	3	0	020	222.04
MFL-32-1	**1/32" Holes**	3	0	020	232.14
MFLR-50-1	**50 Mesh**	3	0	020	256.21
MFLR-76-1	**76 Mesh**	3	0	020	358.29
MFLR-100-1	**100 Mesh**	3	0	020	263.67
MFLR-150-1	**150 Mesh**	3	0	020	292.44
MFLR-200-1	**200 Mesh**	3	0	020	359.53

In-line Tee Style Filters and Reverse In–line Tee Style Filters

100 GPM and 50 GPM • PVC White • Buna O-ring Seal

100 GPM 50 GPM

- In-line Design Simplifies Installation.
- Allows Easy Parallel Filter Configuration for Increased Flow and Filtration.
- Removable Type 304 Stainless Steel Filter Cartridges in Assorted Perforations and Screen Mesh.
- Standard Flow Filter (Internal-to-External) Traps Sediment on Inside of Cartridge, Reverse Flow Filter (External-to-Internal) Traps Sediment on Outside of Cartridge.
- Convenient Bottom Drain with 1-1/4" NPT Stainless Steel Reinforced Plastic Thread and Plug. Optional Cap with 1/4" Outlet Available.
- 200 psi Working Pressure for Water @ 73°F (23°C).
- Manufactured from NSF® Certified PVC Material.

Mesh Size	Hole Size (in.)	Part Number Extension
1/16" Holes	.0625	-16
1/32" Holes	.0312	-32
50 Mesh	.0117	-50
76 Mesh	.0095	-76
100 Mesh	.0059	-100
150 Mesh	.0041	-150
200 Mesh	.0029	-200

Additional Mesh Sizes available on request.
Example: TF-50 = 50 Mesh

Irrigation Tee Filter - 100 GPM PVC White

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Buna-N O-ring Seal with Stainless Steel Screen					
TF-16*	2-1/2 /3 x 2-1/2 /3	1	0	020	555.11
TF-32*	2-1/2 /3 x 2-1/2 /3	1	0	020	567.73
TF-50	2-1/2 /3 x 2-1/2 /3	1	0	020	643.40
TF-76	2-1/2 /3 x 2-1/2 /3	1	0	020	777.14
TF-100	2-1/2 /3 x 2-1/2 /3	1	0	020	706.48
TF-150	2-1/2 /3 x 2-1/2 /3	1	0	020	731.74
TF-200	2-1/2 /3 x 2-1/2 /3	1	0	020	794.81

Irrigation Tee Filter - 50 GPM PVC White

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Buna-N O-ring Seal with Stainless Steel Screen					
MTF-16*	2-1/2 /3 x 2-1/2 /3	1	0	020	466.82
MTF-32*	2-1/2 /3 x 2-1/2 /3	1	0	020	474.37
MTF-50	2-1/2 /3 x 2-1/2 /3	1	0	020	489.48
MTF-76	2-1/2 /3 x 2-1/2 /3	1	0	020	592.98
MTF-100	2-1/2 /3 x 2-1/2 /3	1	0	020	517.27
MTF-150	2-1/2 /3 x 2-1/2 /3	1	0	020	542.49
MTF-200	2-1/2 /3 x 2-1/2 /3	1	0	020	605.57

Irrigation Reverse Flow Tee Filter - 100 GPM PVC White

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Buna-N O-ring Seal with Stainless Steel Screen					
TF-16*	2-1/2 /3 x 2-1/2 /3	1	0	020	555.11
TF-32*	2-1/2 /3 x 2-1/2 /3	1	0	020	567.73
TFR-50	2-1/2 /3 x 2-1/2 /3	1	0	020	643.40
TFR-76	2-1/2 /3 x 2-1/2 /3	1	0	020	777.14
TFR-100	2-1/2 /3 x 2-1/2 /3	1	0	020	706.48
TFR-150	2-1/2 /3 x 2-1/2 /3	1	0	020	731.74
TFR-200	2-1/2 /3 x 2-1/2 /3	1	0	020	794.81

Irrigation Reverse Flow Tee Filter - 50 GPM PVC White

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Buna-N O-ring Seal with Stainless Steel Screen					
MTF-16*	2-1/2 /3 x 2-1/2 /3	1	0	020	466.82
MTF-32*	2-1/2 /3 x 2-1/2 /3	1	0	020	474.37
MTFR-50	2-1/2 /3 x 2-1/2 /3	1	0	020	489.48
MTFR-76	2-1/2 /3 x 2-1/2 /3	1	0	020	592.98
MTFR-100	2-1/2 /3 x 2-1/2 /3	1	0	020	517.27
MTFR-150	2-1/2 /3 x 2-1/2 /3	1	0	020	542.49
MTFR-200	2-1/2 /3 x 2-1/2 /3	1	0	020	605.57

*Standard TF-16, TF-32, MTF-16 & MTF-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

Irrigation Reverse Flow Tee Filter - 100 GPM Replacement Screens for TF Filters (24" Length)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
FL-16-1	**1/16" Holes**	3	0	020	222.04
FL-32-1	**1/32" Holes**	3	0	020	242.22
FL-50-1	**50 Mesh**	3	0	020	479.42
FL-76-1	**76 Mesh**	3	0	020	474.37
FL-100-1	**100 Mesh**	3	0	020	373.45
FL-150-1	**150 Mesh**	3	0	020	403.71
FL-200-1	**200 Mesh**	3	0	020	499.60

NOTE: When ordering replacement screens for TF and MTF Series Filters, please provide exact length of old screen within 1/64" to insure proper fit of new screen in your filter body.

Irrigation Reverse Flow Tee Filter - 50 GPM Filter Replacement Screens for MTF Filters (12" Length)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
MFL-16-1	**1/16" Holes**	3	0	020	222.04
MFL-32-1	**1/32" Holes**	3	0	020	232.14
MFL-50-1	**50 Mesh**	3	0	020	252.33
MFL-76-1	**76 Mesh**	3	0	020	358.29
MFL-100-1	**100 Mesh**	3	0	020	277.57
MFL-150-1	**150 Mesh**	3	0	020	307.85
MFL-200-1	**200 Mesh**	3	0	020	378.46

NOTE: When ordering replacement screens for TF and MTF Series Filters, please provide exact length of old screen within 1/64" to insure proper fit of new screen in your filter body.

Irrigation Reverse Flow Tee Filter - 100 GPM Replacement Screens for TFR Filters(24" Length)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
FL-16-1	**1/16" Holes**	3	0	020	222.04
FL-32-1	**1/32" Holes**	3	0	020	242.22
FLR-50-1	**50 Mesh**	3	0	020	243.39
FLR-76-1	**76 Mesh**	3	0	020	474.37
FLR-100-1	**100 Mesh**	3	0	020	337.02
FLR-150-1	**150 Mesh**	3	0	020	383.52
FLR-200-1	**200 Mesh**	3	0	020	474.62

Irrigation Reverse Flow Tee Filter - 50 GPM Replacement Screens for MTFR Filters (12" Length)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
MFL-16-1	**1/16" Holes**	3	0	020	222.04
MFL-32-1	**1/32" Holes**	3	0	020	232.14
MFLR-50-1	**50 Mesh**	3	0	020	256.21
MFLR-76-1	**76 Mesh**	3	0	020	358.29
MFLR-100-1	**100 Mesh**	3	0	020	263.67
MFLR-150-1	**150 Mesh**	3	0	020	292.44
MFLR-200-1	**200 Mesh**	3	0	020	359.53

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Hose Filters

7 GPM Steel

7 GPM Plastic/Nylon

NOTE: It is recommended to connect the inlet of the Hose Filter to the system with a swivel adapter such as Spears® AP Series, to facilitate servicing of the filter element (refer to Hose Fittings).

Mesh Size	Hole Size (in.)	Part Number Extension
20 Mesh	.0331	-20
30 Mesh	.0232	-30
50 Mesh	.0117	-50
80 Mesh	.0070	-80
100 Mesh	.0059	-100
150 Mesh	.0041	-150
200 Mesh	.0029	-200

Additional Mesh Sizes available on request.
Example: HF-50 = 50 Mesh

Hose Filter Assembly - 7 GPM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
with Stainless Steel Screen					
HF-20	3/4	10	60	020	18.71
HF-30	3/4	10	60	020	18.71
HF-50	3/4	10	60	020	18.71
HF-80	3/4	10	60	020	18.71
HF-100	3/4	10	60	020	19.43
HF-150	3/4	10	60	020	19.67
HF-200	3/4	10	60	020	20.20
with Plastic/Nylon Screen					
HF-150N	3/4	10	60	020	19.67

Hose Filter Replacement Screen

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Stainless Steel Screen					
HF-20-1W	5	25	150	020	6.84
HF-30-1W	5	25	150	020	6.84
HF-50-1W	5	25	150	020	6.84
HF-80-1W	5	25	150	020	6.84
HF-100-1W	5	25	150	020	10.11
HF-150-1W	5	25	150	020	10.11
HF-200-1W	5	25	150	020	10.11
Plastic/Nylon Screen					
HF-150-1NW	4-3/4	25	150	020	10.11

Hose Filter Body Components - 7 GPM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Hose Filter Body w/o screen					
HF	3/4	10	60	020	14.07
Hose Washer					
W-100	3/4	50	1500	020	.15
Screen Washer					
S-W	- - -	600	0	901	.21

PVC Low Head PIP Fabricated Fittings, Risers & Accessories

PRICING

PVC Low Head PIP Fabricated Fittings, Risers & Accessories

Low Head PIP Coupling
Soc x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
280-100001	**4 IPS**	1	10	300	15.89
280-100002	**6**	1	5	300	19.61
280-100003	**8**	1	6	300	22.07
280-100004	**10**	1	4	300	30.68
280-100005	**12**	1	4	300	41.73
280-100006	**15**	1	0	300	73.61
280-100007	**18**	1	0	300	131.24
280-100008	**20**	1	0	300	161.93

Low Head PIP 90° Elbow
Soc x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
280-100812	**6**	1	4	300	73.61
280-100813	**8**	1	2	300	90.75
280-100814	**10**	1	0	300	144.79
280-100815	**12**	1	0	300	190.15
280-100816	**15**	1	0	300	310.38
280-100817	**18**	1	0	300	537.36
280-100818	**20**	1	0	300	723.93

Low Head PIP 11-1/4° Elbow
Soc x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
280-100114	**6**	1	10	300	23.32
280-100115	**8**	1	4	300	33.15
280-100116	**10**	1	2	300	47.82
280-100117	**12**	1	2	300	66.24
280-100118	**15**	1	0	300	114.09
280-100119	**18**	1	0	300	196.32
280-100120	**20**	1	0	300	249.05

Low Head PIP 15° Elbow
Soc x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
280-100234	**6**	1	10	300	23.32
280-100235	**8**	1	4	300	33.15
280-100236	**10**	1	2	300	47.82
280-100237	**12**	1	2	300	66.24
280-100238	**15**	1	0	300	114.09
280-100239	**18**	1	0	300	199.97
280-100240	**20**	1	0	300	258.84

Low Head PIP 22-1/2° Elbow
Soc x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
280-100354	**6**	1	4	300	23.32
280-100355	**8**	1	3	300	33.15
280-100356	**10**	1	2	300	47.82
280-100357	**12**	1	2	300	66.24
280-100358	**15**	1	0	300	114.09
280-100359	**18**	1	0	300	199.97
280-100360	**20**	1	0	300	258.84

Low Head PIP 30° Elbow
Soc x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
280-100474	**6**	1	8	300	39.23
280-100475	**8**	1	4	300	57.61
280-100476	**10**	1	2	300	71.15
280-100477	**12**	1	2	300	116.59
280-100478	**15**	1	0	300	187.72
280-100479	**18**	1	0	300	332.45

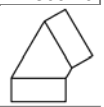
Low Head PIP 30° Elbow (continued)
Soc x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
280-100480	**20**	1	0	300	369.29

Low Head PIP 45° Elbow
Soc x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
280-100592	**6**	1	4	300	39.23
280-100593	**8**	1	4	300	57.61
280-100594	**10**	1	2	300	71.15
280-100595	**12**	1	2	300	116.59
280-100596	**15**	1	0	300	187.72
280-100597	**18**	1	0	300	332.45
280-100598	**20**	1	0	300	369.29

Low Head PIP 60° Elbow
Soc x Soc



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
280-100702	**6**	1	4	300	73.61
280-100703	**8**	1	2	300	90.75
280-100704	**10**	1	0	300	144.79
280-100705	**12**	1	0	300	190.15
280-100706	**15**	1	0	300	310.38
280-100707	**18**	1	0	300	537.36
280-100708	**20**	1	0	300	723.93

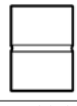
Low Head PIP Coupling - Reducer
Soc x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
280-100928	**8X6**	1	2	300	34.35
2829-626	**10X6**	1	4	300	138.38
280-100931	**10X8**	1	4	300	52.76
280-100933	**12X6**	1	6	300	197.32
280-100934	**12X8**	1	4	300	153.36
280-100935	**12X10**	1	4	300	76.09
2829-726	**15X6**	1	0	300	342.43
2829-728	**15X8**	1	0	309	245.95
280-100939	**15X10**	1	0	300	174.87
280-100940	**15X12**	1	0	300	115.28
2829-786	**18X6**	1	0	300	514.23
2829-788	**18X8**	1	0	300	483.79
280-100944	**18X10**	1	0	300	423.29
280-100945	**18X12**	1	0	300	379.04
280-100946	**18X15**	1	0	300	185.26
2829-816	**20X6**	1	0	300	791.83
2829-818	**20X8**	1	0	300	753.89
2829-820	**20X10**	1	0	300	697.04
2829-822	**20X12**	1	0	300	640.64
2829-825	**20X15**	1	0	300	523.91
280-100953	**20X18**	1	0	300	271.12

Low Head PIP x IPS Coupling - Reducer
Soc x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
280-101536	**6X4**	1	4	300	27.59
280-101537	**8X6**	1	8	300	39.88
280-101538	**10X8**	1	4	300	52.76
280-101534	**12X8**	1	4	300	153.36
280-101539	**12X10**	1	4	300	92.00
280-101540	**15X12**	1	0	300	147.18

Low Head IPS X PIP Adapter
Soc x Soc



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
280-101649	**6**	1	4	300	30.68
280-101650	**8**	1	4	300	45.36

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Low Head PIP Fabricated Fittings, Risers & Accessories

Low Head IPS X PIP Adapter (continued)

Soc x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
280-101651	**10**	1	4	300	71.15
280-101652	**12**	1	4	300	100.59

Low Head PIP Concrete Adapter

Soc x Concrete

280-101761	**6X6**	1	5	300	29.44
280-101762	**8X8**	1	6	300	42.92
280-101763	**10X10**	1	4	300	66.24
280-101764	**12X12**	1	4	300	93.20
280-101765	**12X14**	1	0	300	99.34
280-101766	**15X14**	1	0	300	137.37
280-101767	**15X15**	1	0	300	141.09
280-101768	**15X16**	1	0	300	143.55
280-101769	**18X18**	1	0	300	166.85
280-101770	**20X20**	1	0	300	208.56

Low Head PIP Linegate Valve Adapter

Linegate x Soc

280-101777	**6**	1	6	300	24.45
280-101778	**8**	1	6	300	27.74
280-101779	**10**	1	4	300	44.20
280-101780	**12**	1	4	300	62.58
280-101781	**15**	1	0	300	107.94
2845-180	**18**	1	0	300	155.42

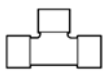
Low Head PIP Linegate Valve PIP Adapter

Linegate x Soc

2845-180P	**18**	1	0	300	155.42

Low Head PIP Tee

Soc x Soc x Soc



280-102502	**6**	1	8	300	46.59
280-102499	**6X2**	1	6	300	36.79
280-102500	**6X3**	1	4	300	39.88
280-102501	**6X4**	1	4	300	41.73
280-102507	**8**	1	2	300	73.79
280-102503	**8X2**	1	2	300	47.46
280-102504	**8X3**	1	3	300	56.39
280-102505	**8X4**	1	2	300	58.85
280-102506	**8X6**	1	0	300	67.43
280-102508	**10X2**	1	0	300	74.81
280-102509	**10X3**	1	0	300	76.04
280-102510	**10X4**	1	0	300	77.93
280-102511	**10X6**	1	0	300	79.73
280-102512	**10X8**	1	0	300	85.49
280-102513	**10**	1	0	300	92.01
280-102520	**12**	1	0	300	149.65
280-102514	**12X2**	1	2	300	98.14
280-102515	**12X3**	1	0	300	104.32
280-102516	**12X4**	1	0	300	109.16
280-102517	**12X6**	1	0	300	111.33
280-102518	**12X8**	1	0	300	116.59
280-102519	**12X10**	1	0	300	127.58
280-102528	**15**	1	0	300	296.92
280-102521	**15X2**	1	0	300	159.47
280-102522	**15X3**	1	0	300	159.47
280-102523	**15X4**	1	0	300	165.62
280-102524	**15X6**	1	0	300	170.51
280-102525	**15X8**	1	0	300	190.15
280-102526	**15X10**	1	0	300	212.21

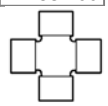
Low Head PIP Tee (continued)

Soc x Soc x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
280-102527	**15X12**	1	0	300	247.80
280-102537	**18**	1	0	300	516.55
280-102529	**18X2**	1	0	300	300.56
280-102530	**18X3**	1	0	300	302.98
280-102531	**18X4**	1	0	300	305.48
280-102532	**18X6**	1	0	300	311.61
280-102533	**18X8**	1	0	300	316.54
280-102534	**18X10**	1	0	300	345.99
280-102535	**18X12**	1	0	300	381.59
280-102536	**18X15**	1	0	300	417.15
280-102547	**20**	1	0	300	639.23
280-102538	**20X2**	1	0	300	380.34
280-102539	**20X3**	1	0	300	384.27
280-102540	**20X4**	1	0	300	390.14
280-102541	**20X6**	1	0	300	402.44
280-102542	**20X8**	1	0	300	411.01
280-102543	**20X10**	1	0	300	455.16
280-102544	**20X12**	1	0	300	483.40
280-102545	**20X15**	1	0	300	519.02
280-102546	**20X18**	1	0	300	584.00

Low Head PIP Cross

Soc x Soc x Soc x Soc



280-103286	**6**	1	0	300	77.27
280-103283	**6X2**	1	0	300	61.33
280-103284	**6X3**	1	0	300	61.33
280-103285	**6X4**	1	4	300	67.43
280-103291	**8**	1	0	300	105.54
280-103287	**8X2**	1	0	300	85.85
280-103288	**8X3**	1	0	300	85.85
280-103289	**8X4**	1	0	300	92.00
280-103290	**8X6**	1	0	300	96.87
280-103297	**10**	1	0	300	143.55
280-103292	**10X2**	1	2	300	85.85
280-103293	**10X3**	1	0	300	88.95
280-103294	**10X4**	1	0	300	92.00
280-103295	**10X6**	1	0	300	103.06
280-103296	**10X8**	1	0	300	117.73
280-103304	**12**	1	0	300	199.97
280-103303	**12X10**	1	0	300	170.51
280-103298	**12X2**	1	0	300	115.95
280-103299	**12X3**	1	0	300	117.13
280-103300	**12X4**	1	0	300	120.20
280-103301	**12X6**	1	0	300	130.04
280-103302	**12X8**	1	0	300	141.09
280-103321	**15**	1	0	300	381.59
280-103313	**15X2**	1	0	300	170.51
280-103314	**15X3**	1	0	300	174.21
280-103315	**15X4**	1	0	300	182.82
280-103316	**15X6**	1	0	300	193.84
280-103317	**15X8**	1	0	300	208.56
280-103318	**15X10**	1	0	300	246.62
280-103319	**15X12**	1	0	300	296.92
280-103342	**18**	1	0	300	612.22
280-103332	**18X2**	1	0	300	331.26
280-103333	**18X3**	1	0	300	334.35
280-103334	**18X4**	1	0	300	337.42
280-103335	**18X6**	1	0	300	345.99
280-103336	**18X8**	1	0	300	355.79
280-103337	**18X10**	1	0	300	404.84
280-103338	**18X12**	1	0	300	430.69
280-103340	**18X15**	1	0	300	490.80
280-103354	**20**	1	0	300	806.11
280-103343	**20X2**	1	0	300	464.98

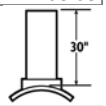
Low Head PIP Cross (continued)

Soc x Soc x Soc x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
280-103344	**20X3**	1	0	300	468.66
280-103345	**20X4**	1	0	300	472.38
280-103346	**20X6**	1	0	300	483.40
280-103347	**20X8**	1	0	300	495.68
280-103348	**20X10**	1	0	300	531.23
280-103349	**20X12**	1	0	300	571.75
280-103351	**20X15**	1	0	300	598.73
280-103353	**20X18**	1	0	300	703.03

Low Head PIP Orchard Riser

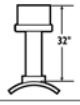
Saddle x Riser



2880-04030	**4X4**	1	0	301	35.52
2880-53230	**6X4**	1	25	301	35.52
2880-06030	**6X6**	1	25	301	61.33
2880-58230	**8X4**	1	25	301	35.52
2880-58530	**8X6**	1	25	301	46.59
2880-08030	**8X8**	1	12	301	85.89
2880-62430	**10X4**	1	30	301	36.79
2880-62630	**10X6**	1	20	301	46.59
2880-62830	**10X8**	1	16	301	63.79
2880-10030	**10X10**	1	6	301	122.65
2880-66430	**12X4**	1	25	301	38.01
2880-66630	**12X6**	1	20	301	46.59
2880-66830	**12X8**	1	12	301	63.79
2880-67030	**12X10**	1	9	301	88.31
2880-12030	**12X12**	1	6	301	171.75
2880-72430	**15X4**	1	25	301	40.46
2880-72630	**15X6**	1	25	301	53.94
2880-72830	**15X8**	1	12	301	72.39
2880-73030	**15X10**	1	9	301	100.59
2880-73230	**15X12**	1	6	301	138.62
2880-15030	**15X15**	1	4	301	287.08
2880-78430	**18X4**	1	25	301	44.20
2880-78630	**18X6**	1	25	301	52.46
2880-78830	**18X8**	1	10	301	76.09
2880-79030	**18X10**	1	9	301	101.82
2880-79230	**18X12**	1	6	301	157.01
2880-79530	**18X15**	1	4	301	226.96
2880-18030	**18X18**	1	3	301	430.62
2880-81430	**20X4**	1	0	301	46.62
2880-81630	**20X6**	1	12	301	61.36
2880-81830	**20X8**	1	12	301	92.00
2880-82030	**20X10**	1	6	301	143.56
2880-82230	**20X12**	1	5	301	174.21
2880-82530	**20X15**	1	4	301	256.46
2880-82830	**20X18**	1	0	301	315.31
2880-20030	**20X20**	1	2	301	555.82

Low Head PIP Erosion Pot Riser

Saddle x Riser x Pot



2881-53232	**6X4X8**	1	16	301	67.99
2881-06032	**6X6X10**	1	0	301	81.36
2881-58232	**8X4X8**	1	20	301	67.99
2881-58532	**8X6X10**	1	0	301	81.36
2881-08032	**8X8X12**	1	0	301	115.05
2881-62432	**10X4X8**	1	16	301	67.99
2881-62632	**10X6X10**	1	0	301	81.36
2881-62832	**10X8X12**	1	12	301	115.05
2881-10032	**10X10X15**	1	0	301	158.07
2881-66432	**12X4X8**	1	20	301	67.99
2881-66632	**12X6X10**	1	12	301	81.36
2881-66832	**12X8X12**	1	12	301	115.05
2881-67032	**12X10X15**	1	0	301	158.07

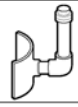
Low Head PIP Erosion Pot Riser (continued)

Saddle x Riser x Pot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
2881-12032	**12X12X18**	1	0	301	209.24
2881-72432	**15X4X8**	1	0	301	67.99
2881-72632	**15X6X10**	1	12	301	81.36
2881-72832	**15X8X12**	1	0	301	115.05
2881-73032	**15X10X15**	1	0	301	158.07
2881-73232	**15X12X18**	1	0	301	209.24
2881-15032	**15X15X20**	1	0	301	308.03
2881-78432	**18X4X8**	1	0	301	67.99
2881-78632	**18X6X10**	1	0	301	81.36
2881-78832	**18X8X12**	1	0	301	115.05
2881-79032	**18X10X15**	1	0	301	158.07
2881-79232	**18X12X18**	1	0	301	209.24
2881-79532	**18X15X20**	1	0	301	308.03
2881-81432	**20X4X8**	1	0	301	67.99
2881-81632	**20X6X10**	1	0	301	81.36
2881-81832	**20X8X12**	1	0	301	115.05
2881-82032	**20X10X15**	1	0	301	158.07
2881-82232	**20X12X18**	1	0	301	209.24
2881-82532	**20X15X20**	1	0	301	308.03

Low Head PIP Mechanical Vent Assembly

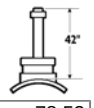
Saddle x Riser/Vent



2882-420	**4X2**	1	10	301	67.43
2882-422	**4X3**	1	0	301	104.24
2882-528	**6X2**	1	10	301	67.43
2882-530	**6X3**	1	5	301	104.24
2882-532	**6X4**	1	5	301	144.79
2882-578	**8X2**	1	8	301	67.43
2882-580	**8X3**	1	4	301	104.24
2882-582	**8X4**	1	8	301	144.79
2882-621	**10X2**	1	10	301	67.43
2882-623	**10X3**	1	5	301	104.24
2882-624	**10X4**	1	3	301	144.79
2882-661	**12X2**	1	10	301	67.43
2882-663	**12X3**	1	5	301	104.24
2882-664	**12X4**	1	4	301	144.79
2882-721	**15X2**	1	0	301	67.44
2882-723	**15X3**	1	6	301	104.24
2882-724	**15X4**	1	4	301	144.79
2882-781	**18X2**	1	0	301	67.44
2882-783	**18X3**	1	0	301	104.24
2882-784	**18X4**	1	4	301	144.79
2882-811	**20X2**	1	0	301	67.44
2882-813	**20X3**	1	0	301	104.24
2882-814	**20X4**	1	0	301	144.79

Low Head PIP Mechanical Vent Riser

Saddle x Riser/Vent x Chamber



2883-52842	**6X2X4**	1	0	301	78.52
2883-57842	**8X2X6**	1	0	301	84.66
2883-58042	**8X3X6**	1	0	301	106.71
2883-62142	**10X2X8**	1	12	301	103.06
2883-62342	**10X3X8**	1	8	301	122.65
2883-62442	**10X4X8**	1	12	301	144.79
2883-66142	**12X2X10**	1	0	301	132.48
2883-66342	**12X3X10**	1	16	301	150.88
2883-66442	**12X4X10**	1	12	301	171.75
2883-72442	**15X4X12**	1	6	301	223.27
2883-78442	**18X4X15**	1	0	301	288.31
2883-81442	**20X4X18**	1	0	301	406.12

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Low Head PIP Fabricated Fittings, Risers & Accessories

Low Head PIP Vent Base

Saddle x Riser x Outlet

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
2888-532020	**6X4X2**	1	2	301	50.94
2888-585030	**8X6X3**	1	0	301	157.60
2888-585040	**8X6X4**	1	4	301	79.73
2888-628060	**10X8X6**	1	0	301	122.65
2888-670060	**12X10X6**	1	0	301	130.04
2888-732080	**15X12X8**	1	0	301	195.05
2888-795080	**18X15X8**	1	0	301	269.94
2888-828080	**20X18X8**	1	0	301	488.35

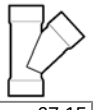
Low Head PIP Wye

Soc x Soc

2875-060	**6**	1	2	300	86.11
2875-080	**8**	1	0	300	113.89
2875-100	**10**	1	0	300	148.17
2875-120	**12**	1	0	300	206.43
2875-150	**15**	1	0	300	319.35
2875-183	**18**	1	0	300	767.89
2875-200	**20**	1	0	300	1029.76

Low Head PIP Wye - Reducing

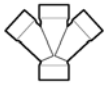
Soc x Soc



2875-532	**6X4**	1	4	300	67.15
2875-585	**8X6**	1	0	300	99.34
2875-626	**10X6**	1	0	300	127.04
2875-628	**10X8**	1	0	300	134.01
2875-666	**12X6**	1	0	300	139.62
2875-668	**12X8**	1	0	300	160.28
2875-670	**12X10**	1	0	300	171.22
2875-726	**15X6**	1	0	300	188.21
2875-728	**15X8**	1	0	300	203.99
2875-730	**15X10**	1	0	300	223.41
2875-732	**15X12**	1	0	300	245.28
2875-786	**18X6**	1	0	300	303.59
2875-788	**18X8**	1	0	300	308.39
2875-790	**18X10**	1	0	300	337.00
2875-792	**18X12**	1	0	300	371.67
2875-795	**18X15**	1	0	300	406.34
2875-816	**20X6**	1	0	300	379.47
2875-818	**20X8**	1	0	300	385.47
2875-820	**20X10**	1	0	300	421.24
2875-822	**20X12**	1	0	300	464.58
2875-825	**20X15**	1	0	300	507.94
2875-828	**20X18**	1	0	300	893.68

Low Head PIP Double Wye

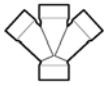
Soc x Soc



2876-060	**6**	1	0	300	135.23
2876-080	**8**	1	0	300	154.05
2876-100	**10**	1	0	300	257.96
2876-120	**12**	1	0	300	308.09
2876-150	**15**	1	0	300	476.64
2876-183	**18**	1	0	300	1292.38
2876-200	**20**	1	0	300	1837.24

Low Head PIP Double Wye - Reducing

Soc x Soc



2876-585	**8X6**	1	0	300	108.76
2876-626	**10X6**	1	0	300	154.05

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each

Low Head PIP Double Wye - Reducing (continued)

Soc x Soc

2876-628	**10X8**	1	0	300	170.38
2876-666	**12X6**	1	0	300	208.39
2876-668	**12X8**	1	0	300	239.23
2876-670	**12X10**	1	0	300	286.01
2876-726	**15X6**	1	0	300	280.91
2876-728	**15X8**	1	0	300	304.45
2876-730	**15X10**	1	0	300	333.47
2876-732	**15X12**	1	0	300	452.14
2876-786	**18X6**	1	0	300	453.14
2876-788	**18X8**	1	0	300	460.28
2876-790	**18X10**	1	0	300	502.98
2876-792	**18X12**	1	0	300	554.74
2876-795	**18X15**	1	0	300	606.48
2876-816	**20X6**	1	0	300	625.86
2876-818	**20X8**	1	0	300	642.18
2876-820	**20X10**	1	0	300	657.37
2876-822	**20X12**	1	0	300	693.40
2876-825	**20X15**	1	0	300	758.11
2876-828	**20X18**	1	0	300	1402.01

Low Head PIP End Cap

Soc

280-107539	**4 IPS**	1	10	300	11.04
280-107540	**6**	1	10	300	12.26
280-107541	**8**	10	0	300	20.83
280-107542	**10**	1	10	300	33.15
280-107543	**12**	1	10	300	51.52
280-107545	**15**	1	5	300	72.39
280-107547	**18**	1	5	300	132.48
280-107548	**20**	1	5	300	177.89

Low Head PIP Surface Reducer

Soc

280-102013	**6X2**	1	10	300	19.61
280-102015	**6X3**	1	10	300	19.61
280-102016	**6X4**	1	10	300	19.61
280-102018	**8X2**	1	10	300	26.95
280-102020	**8X3**	1	10	300	26.95
280-102021	**8X4**	1	10	300	26.95
280-102022	**8X6**	1	10	300	26.95
280-102024	**10X2**	1	10	300	53.94
280-102026	**10X3**	1	10	300	53.94
280-102027	**10X4**	1	10	300	53.94
280-102028	**10X6**	1	10	300	53.94
280-102029	**10X8**	1	10	300	53.94
280-102031	**12X2**	1	10	300	66.24
280-102033	**12X3**	1	10	300	66.24
280-102034	**12X4**	1	10	300	66.24
280-102035	**12X6**	1	10	300	66.24
280-102036	**12X8**	1	10	300	66.24
280-102037	**12X10**	1	10	300	66.24
280-102048	**15X2**	1	5	300	93.20
280-102050	**15X3**	1	5	300	93.20
280-102051	**15X4**	1	5	300	93.20
280-102052	**15X6**	1	5	300	93.20
280-102053	**15X8**	1	5	300	93.20
280-102054	**15X10**	1	5	300	93.20
280-102055	**15X12**	1	5	300	93.20
280-102067	**18X2**	1	5	300	139.85
280-102069	**18X3**	1	4	300	139.85
280-102070	**18X4**	1	5	300	139.85
280-102071	**18X6**	1	5	300	139.85
280-102072	**18X8**	1	5	300	139.85

PVC Low Head PIP Fabricated Fittings, Risers & Accessories & Glue-On Saddles

Caps

Low Head PIP Surface Reducer (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
280-102073	**18X10**	1	5	300	139.85
280-102074	**18X12**	1	5	300	139.85
280-102075	**18X15**	1	5	300	139.85
280-102077	**20X2**	1	0	300	185.26
280-102136	**20X3**	1	0	300	185.26
280-102137	**20X4**	1	5	300	185.26

Low Head PIP Surface Reducer (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
280-102138	**20X6**	1	5	300	185.26
280-102139	**20X8**	1	5	300	185.26
280-102140	**20X10**	1	5	300	185.26
280-102141	**20X12**	1	5	300	185.26
280-102142	**20X15**	1	5	300	185.26
280-102143	**20X18**	1	5	300	185.26

Glue-On Saddles

Low Head PIP Saddle

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
280-101788	**4X2**	1	40	300	19.61
280-101789	**6X2**	1	10	300	19.61
280-101790	**8X2**	1	10	300	19.61
280-101791	**10X2**	1	10	300	19.61
280-101792	**12X2**	1	10	300	19.61
280-101793	**15X2**	1	10	300	19.61
280-101794	**18X2**	1	20	300	19.61
280-101795	**20X2**	1	10	300	20.83
280-101796	**4X3**	1	5	300	20.83
280-101797	**6X3**	1	10	300	20.83
280-101798	**8X3**	1	10	300	20.83
280-101799	**10X3**	1	10	300	20.83
280-101800	**12X3**	1	10	300	20.83
280-101801	**15X3**	1	10	300	20.83
280-101802	**18X3**	1	20	300	20.83
280-101803	**20X3**	1	10	300	30.92
280-101804	**6X4**	1	10	300	23.32
280-101805	**8X4**	1	10	300	23.32
280-101806	**10X4**	1	10	300	23.32
280-101807	**12X4**	1	10	300	23.32
280-101808	**15X4**	1	10	300	23.32
280-101809	**18X4**	1	10	300	23.32
280-101810	**20X4**	1	8	300	23.32
280-101811	**8X6**	1	8	300	29.44
280-101812	**10X6**	1	8	300	29.44
280-101813	**12X6**	1	8	300	29.44
280-101814	**15X6**	1	8	300	29.44
280-101815	**18X6**	1	10	300	29.44
280-101816	**20X6**	1	7	300	33.15
280-101817	**10X8**	1	8	300	34.35
280-101818	**12X8**	1	8	300	34.35
280-101819	**15X8**	1	8	300	34.35
280-101820	**18X8**	1	8	300	38.01
280-101821	**20X8**	1	8	300	53.94
280-101822	**12X10**	1	10	300	41.73
280-101823	**15X10**	1	10	300	47.82
280-101824	**18X10**	1	10	300	49.05
280-101825	**20X10**	1	7	300	90.75
280-101826	**15X12**	1	5	300	63.79
280-101827	**18X12**	1	3	300	82.16
280-101828	**20X12**	1	0	300	99.34
280-101829	**18X15**	1	0	300	106.71
280-101830	**20X15**	1	0	300	136.16
280-101831	**20X18**	1	0	300	150.88

Low Head PIP Stub Saddle

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
280-101883	**4X2**	1	10	300	24.45
280-101884	**6X2**	1	10	300	24.45
280-101885	**8X2**	1	10	300	24.45
280-101886	**10X2**	1	10	300	24.45
280-101887	**12X2**	1	10	300	25.75
280-101888	**15X2**	1	10	300	28.22
280-101889	**18X2**	1	10	300	28.22
280-101890	**20X2**	1	10	300	31.88
280-101891	**4X3**	1	10	300	29.44
280-101892	**6X3**	1	5	300	29.44
280-101893	**8X3**	1	5	300	29.44
280-101894	**10X3**	1	5	300	29.44
280-101895	**12X3**	1	5	300	31.88
280-101896	**15X3**	1	5	300	31.88
280-101897	**18X3**	1	10	300	31.88
280-101898	**20X3**	1	5	300	34.35
280-101899	**6X4**	1	10	300	34.35
280-101900	**8X4**	1	10	300	34.35
280-101901	**10X4**	1	10	300	34.35
280-101902	**12X4**	1	10	300	34.35
280-101903	**15X4**	1	10	300	34.35
280-101904	**18X4**	1	10	300	36.09
280-101905	**20X4**	1	10	300	36.79
280-101906	**8X6**	1	6	300	40.46
280-101907	**10X6**	1	8	300	40.46
280-101908	**12X6**	1	6	300	40.46
280-101909	**15X6**	1	8	300	42.92
280-101910	**18X6**	1	10	300	42.92
280-101911	**20X6**	1	7	300	49.05
280-101912	**10X8**	1	4	300	53.94
280-101913	**12X8**	1	3	300	53.94
280-101914	**15X8**	1	5	300	57.61
280-101915	**18X8**	1	5	300	61.33
280-101916	**20X8**	1	0	300	77.27
280-101917	**12X10**	1	3	300	71.15
280-101918	**15X10**	1	5	300	74.84
280-101919	**18X10**	1	4	300	76.09
280-101920	**20X10**	1	0	300	117.73
280-101921	**15X12**	1	0	300	106.71
280-101922	**18X12**	1	0	300	123.91
280-101923	**20X12**	1	0	300	141.09
280-101924	**18X15**	1	0	300	166.85
280-101925	**20X15**	1	0	300	197.51
280-101926	**20X18**	1	0	300	240.45

Low Head PIP Same Size Saddle

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
280-101937	**6X6**	1	10	300	33.71

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Low Head PIP Same Size Saddle (continued)

Soc

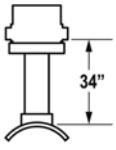
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
280-101938	**8X8**	1	5	300	49.05
280-101939	**10X10**	1	5	300	67.43
280-101940	**12X12**	1	4	300	98.14
280-101941	**15X15**	1	0	300	147.18
280-101942	**18X18**	1	0	300	251.52
280-101943	**20X20**	1	0	300	343.53

Low Head PIP Same Size Stub Saddle

Soc

280-101949	**6X6**	1	5	300	58.85
280-101950	**8X8**	1	4	300	94.21
280-101951	**10X10**	1	0	300	115.28
280-101952	**12X12**	1	0	300	131.24
280-101953	**15X15**	1	0	300	196.32
280-101954	**18X18**	1	0	300	341.08
280-101955	**20X20**	1	0	300	398.72

Size	Prod Code	Part Number List Price Each	
Distributing Gate Riser (Saddle x Riser x Pot)			
Gates Not Included In Price (See CHART #1 on Next Page)			
6x4x8	301	2884-53234 103.08	– – –
8x4x8	301	2884-58234 103.08	– – –
8x6x10	301	2884-58534 132.48	– – –
10x4x8	301	2884-62434 103.08	– – –
10x6x10	301	2884-62634 132.48	– – –
10x8x12	301	2884-62834 196.32	– – –
12x4x8	301	2884-66434 103.08	– – –
12x6x10	301	2884-66634 132.48	– – –
12x8x12	301	2884-66834 196.32	– – –
12x10x15	301	2884-67034 280.36	– – –
15x4x8	301	2884-72334 103.08	– – –
15x6x10	301	2884-72634 132.48	– – –
15x8x12	301	2884-72834 196.32	– – –
15x10x15	301	2884-73034 281.00	– – –
15x12x18	301	2884-73234 510.40	– – –
18x4x8	301	2884-78434 103.08	– – –
18x6x10	301	2884-78634 132.48	– – –
18x8x12	301	2884-78834 196.32	– – –
18x10x15	301	2884-79034 280.36	– – –
18x12x18	301	2884-79234 510.40	– – –
20x4x8	301	2884-81434 103.08	– – –
20x6x10	301	2884-81634 132.48	– – –
20x8x12	301	2884-81834 196.34	– – –
20x10x15	301	2884-82034 280.36	– – –
20x12x18	301	2884-82234 510.40	– – –



HOW TO ORDER A DISTRIBUTING GATE RISER

Choose the Distributing Gate Riser size required:
Example: 6 x 4 x 8
(6" Saddle x 4" Riser x 8" Pot)
Part Number 2884-53234 _ _ _

Next, choose the Gate size required from CHART #1:
Example: 2-1/2" Gates
(Code Number "2")

Next, add this Code Number to the end of the Part Number:
Example: 2884-53234 2 _ _

Next, choose the position required for the gates from CHART #2:
Example: Standard 2-Way Gates
(Code Number "05")

Next, add this Code Number to the very end of the Part Number:
Example: 2884-532342 05

The Part Number is now complete for a
6" Saddle x 4" Riser x 8" Pot
with 2-1/2" Standard 2-Way Gates –

2884–53234205

HOW TO CALCULATE A DISTRIBUTING GATE RISER TOTAL LIST PRICE EACH WITH GATES INSTALLED

Find the base unit List Price Each at left:
Example: $103.08

Next, find the List Price Each for the size of Gate required from CHART #1:
Example: 2-1/2" Gate – $15.92 each

Next, multiply the Gate price by the number of Gates required:
Example: $15.92 x 2 = $31.84

Next, add this amount to the base unit price, for the Total List Price Each:
Example: $103.08 + $31.84 = $134.92

The Total List Price Each for a
6" Saddle x 4" Riser x 8" Pot with 2-1/2"
Standard 2-Way Gates installed is

$134.92

CHART #1

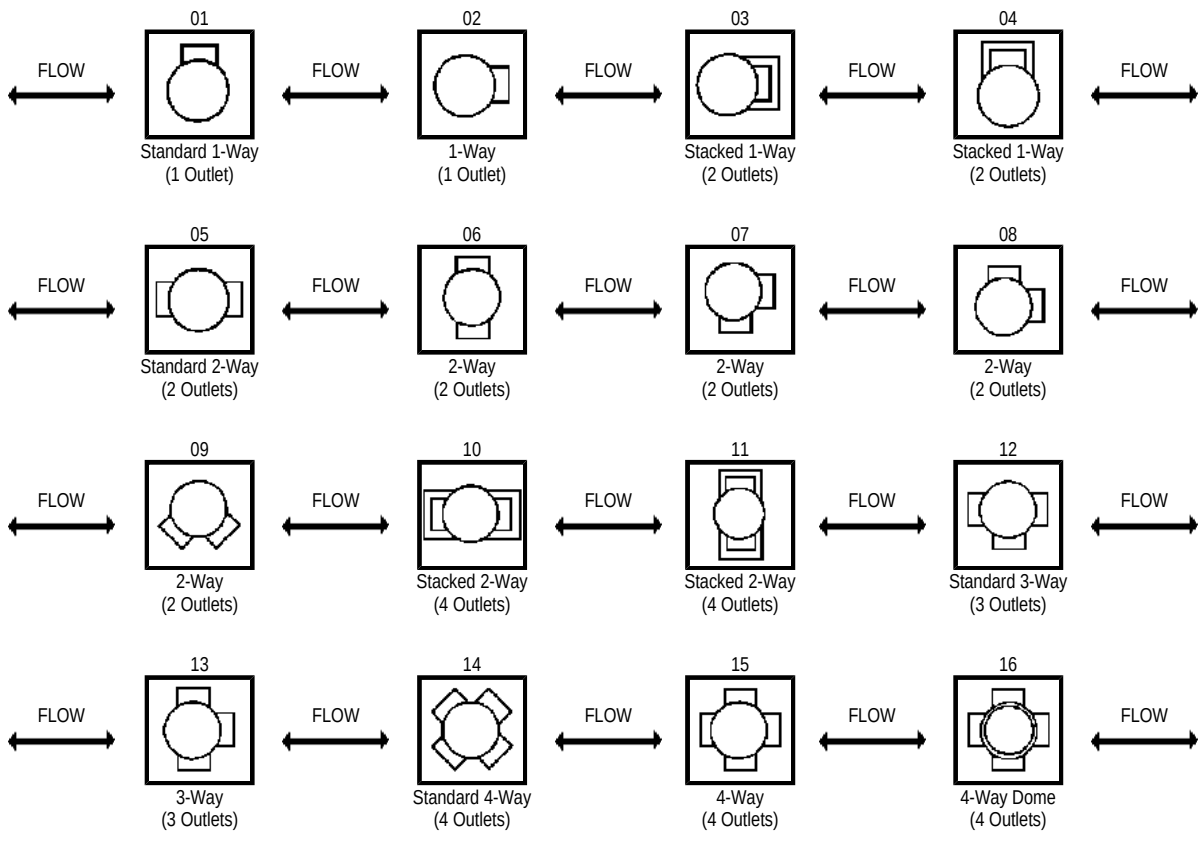
Gate/Hole Size	Distributing Gate Size Code	Prod Code	List Price Each Installed
2" Gate	1	301	13.49
2- 1/2" Gate	2	301	15.92
3" Gate	3	301	18.38
4" Gate	4	301	26.98
2" Hole*	5	301	—
2- 1/2" Hole*	6	301	—
3" Hole*	7	301	—
4" Hole*	8	301	—

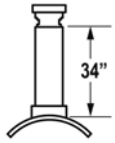
* Hole Size Codes MUST be chosen ONLY when ordering with NO GATES INSTALLED.

Number code for Gate Hole positioning must also be chosen from CHART #2 below.

CHART #2

Number Codes for Gate Quantity & Positioning on Saddle



Part Number Size	Prod Code	List Price Each			
Rite Flo Riser (Saddle x Riser)					
Gates Not Included In Price (See CHART #3 on Next Page)		1 Outlet	2 Outlets	3 Outlets	4 Outlets
					
2885-58534 _ _ _ 8x6	301	124.62	128.53	131.15	133.41
2885-62634 _ _ _ 10x6	301	124.62	128.53	131.15	133.41
2885-66634 _ _ _ 12x6	301	124.62	128.53	131.15	133.41
2885-72634 _ _ _ 15x6	301	124.62	128.53	131.15	133.41
2885-78634 _ _ _ 18x6	301	124.62	128.53	131.15	133.41
2885-81634 _ _ _ 20x6	301	124.62	128.53	131.15	133.41

HOW TO ORDER A RITE FLO RISER

Choose the Rite Flo Riser size required:
Example: 8 x 6 Riser
(8" Saddle x 6" Riser)
Part Number 2885-58534 _ _ _

Next, choose the Gate size required from CHART #3:
Example: 3" Gates
(Code Number "3")

Next, add this Code Number to the end of the Part Number:
Example: 2885-58534 3 _ _

Next, choose the position required for the gates from CHART #4:
Example: Standard 2-Way (2 Outlets)
(Code Number "05")

Next, add this Code Number to the very end of the Part Number:
Example: 2885-585343 0 5

The Part Number is now complete for an 8" Saddle x 6" Standard 2-Way Riser with 3" Gates –

2885–58534305

HOW TO CALCULATE A RITE FLO RISER TOTAL LIST PRICE EACH WITH GATES INSTALLED

Find the base unit List Price Each at left:
Example: $133.41

Next, find the List Price Each for the 3" Gate required from CHART #3:
Example: 3" Gate – $47.20 each

Next, multiply the Gate price by the number of Gates required:
Example: $47.20 x 4 = $188.80

Next, add this amount to the base unit price, for the Total List Price Each:
Example: $133.41 + $188.80 = $322.21

The Total List Price Each for a
8" Saddle x 6" 4-Way Dome Riser
with 3" Gates installed is

$322.21

CHART #3

Gate/Hole Size	Gate Size Code	Prod Code	Rite Flo List Price Each Installed
3" Gate	3	301	47.20
2" Hole*	5	301	—
3" Hole*	7	301	—

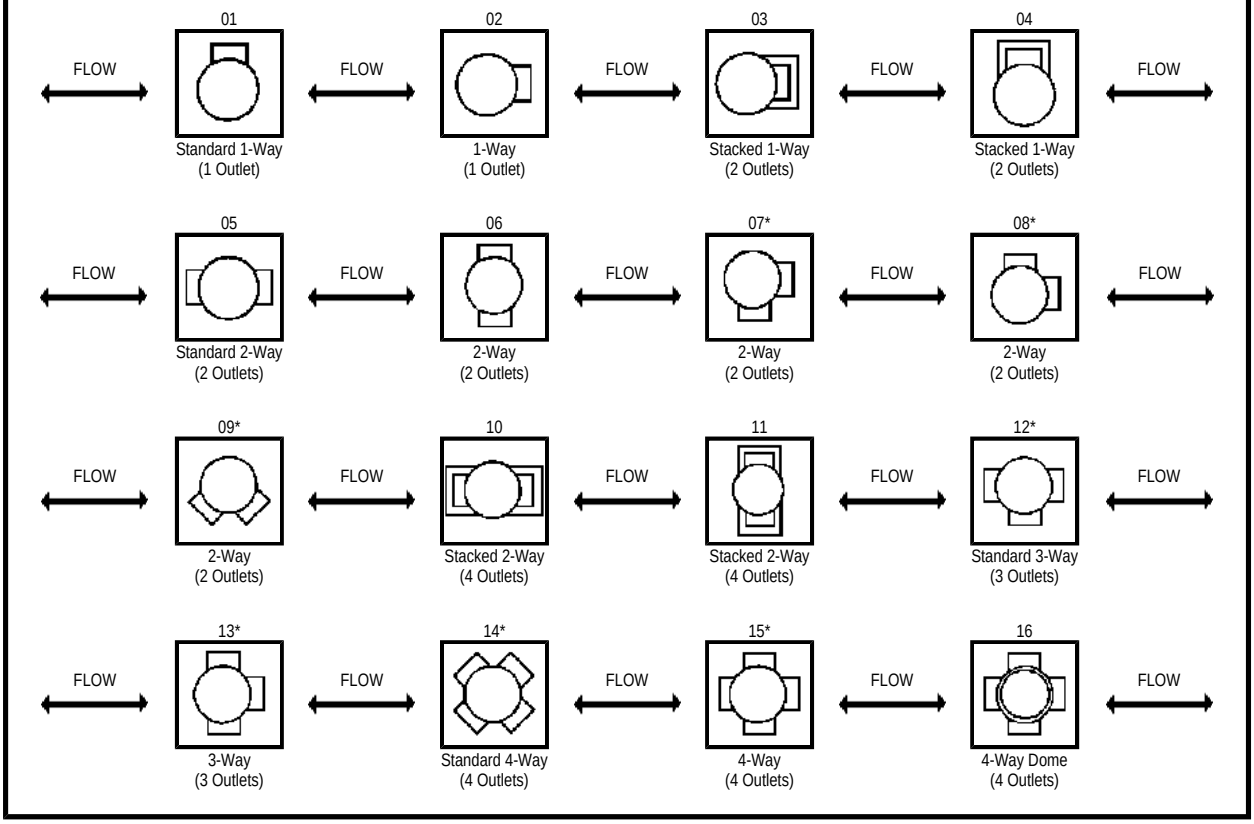
* Hole Size Codes MUST be chosen ONLY when ordering with NO GATES INSTALLED.

Number code for Gate Hole positioning must also be chosen from CHART #4 below.

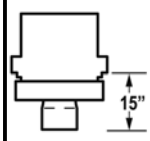
NOTE: 3" Rite Flo Gates can be installed on 6" Risers ONLY.

CHART #4

Number Codes for Gate Quantity & Positioning on Saddle



*Staggered gates are provided for Rite Flo Risers to allow adequate room for gates to operate properly.

	Size	Prod Code	Part Number List Price Each
Distributing Gate Repair Unit (Riser x Pot)			
Gates Not Included In Price (See CHART #5 on Next Page)			
	4x8	301	28840-42715 _ _ _ 85.89
	6x10	301	28840-53715 _ _ _ 115.33
	8x12	301	28840-59115 _ _ _ 165.61
	10x15	301	28840-63515 _ _ _ 218.92
	12x18	301	28840-67815 _ _ _ 413.51

HOW TO ORDER DISTRIBUTING GATE AND RITE FLO RISER REPAIR UNITS

Choose the Repair Unit size required:
Example: 4 x 8 Distributing Gate Repair Unit
(4" Riser x 8" Pot)
Part Number 28840-42715 _ _ _

Next, choose the Gate size required from CHART #5:
Example: 2" Gate
(Code Number "1")

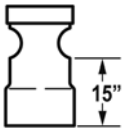
Next, add this Code Number to the end of the Part Number:
Example: 28840-42715 1 _ _

Next, choose the position required for the gates from CHART #6:
Example: 4-Way
(Code Number "14")

Next, add this Code Number to the very end of the Part Number:
Example: 28840-427151 1 4

The Part Number is now complete for a
4" Riser x 8" Pot Distributing Gate Riser Repair Unit with 2" 4-Way Gates –

28840–42715114

	Part Number Size	Prod Code	List Price Each			
Rite Flo Riser Repair Unit						
Gates Not Included In Price (See CHART #5 on Next Page)			1 Outlet	2 Outlets	3 Outlets	4 Outlets
	28850-06015 _ _ _ 6"	301	62.95	68.18	73.39	78.67

HOW TO CALCULATE DISTRIBUTING GATE AND RITE FLO RISER REPAIR UNITS TOTAL LIST PRICE EACH WITH GATES INSTALLED

Find the base unit List Price Each above:
Example: $85.89

Next, find the List Price Each for the size of Gate required from CHART #5:
Example: 2" Gate – $13.50 each

Next, multiply the Gate price by the number of Gates required:
Example: $13.50 x 4 = $54.00

Next, add this amount to the base unit price, for the Total List Price Each:
Example: $85.89 + $54.00 = $139.89

The Total List Price Each for a
4" Riser x 8" Pot Distributing Gate Riser Repair Unit
with 2" 4-Way Gates installed is

$139.89

CHART #5

Gate/Hole Size	Gate Size Code	Prod Code	Distributing Gate List Price Each Installed	Rite Flo Gate List Price Each Installed
2" Gate	1	301	13.49	—
2- 1/2" Gate	2	301	15.92	—
3" Gate	3	301	18.38	47.20
4" Gate	4	301	26.98	—
2" Hole*	5	301	—	—
2- 1/2" Hole*	6	301	—	—
3" Hole*	7	301	—	—
4" Hole*	8	301	—	—

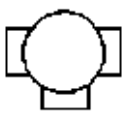
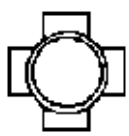
* Hole Size Codes MUST be chosen ONLY when ordering with NO GATES INSTALLED.

Number code for Gate Hole positioning must also be chosen from CHART #6 below.

NOTE: 3" Rite Flo Gates can be installed on 6" Risers ONLY.

CHART #6

Repair Unit Number Codes for Gate Quantity & Positioning

02 1-Way (1 Outlet)	04 Stacked 1-Way (2 Outlets)	06 2-Way (2 Outlets)	08* 2-Way (2 Outlets)
10 Stacked 2-Way (4 Outlets)	12*  3-Way (3 Outlets)	14* 4-Way (4 Outlets)	16  4-Way Dome (4 Outlets)

*Staggered gates are provided for Rite Flo Riser Repair Units
to allow adequate room for gate to operate properly.

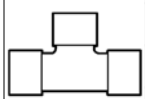
All Low Head PIP Fabricated Fittings showing size outlets of 4" and under are IPS size on that outlet

PVC 80, 100 & 125 PSI PIP Fabricated Fittings

PRICING

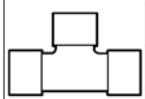
PVC 80, 100 & 125 PSI PIP Fabricated Fittings

PIP Tee (Socket)



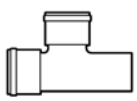
Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-102502 **89.55**	300-102502 **107.15**	3301-060P **107.73**
6X2	290-102499 **62.58**	300-102499 **72.39**	3301-528P **81.24**
6X3	290-102500 **67.43**	300-102500 **77.27**	3301-530P **87.42**
6X4	290-102501 **69.93**	300-102501 **80.94**	3301-532P **90.69**
8	290-102507 **154.43**	300-102507 **158.24**	3301-080P **215.97**
8X2	290-102503 **77.27**	300-102503 **89.55**	3301-578P **122.51**
8X3	290-102504 **85.85**	300-102504 **96.87**	3301-580P **133.51**
8X4	290-102505 **96.87**	300-102505 **105.54**	3301-582P **144.42**
8X6	290-102506 **115.28**	300-102506 **130.04**	3301-585P **178.94**
10	290-102513 **223.27**	300-102513 **254.00**	3301-100P **322.38**
10X2	290-102508 **112.85**	300-102508 **123.91**	3301-621P **170.32**
10X3	290-102509 **123.91**	300-102509 **158.24**	3301-623P **216.73**
10X4	290-102510 **143.55**	300-102510 **161.93**	3301-624P **223.28**
10X6	290-102511 **158.24**	300-102511 **165.62**	3301-626P **244.97**
10X8	290-102512 **182.82**	300-102512 **220.85**	3301-628P **303.81**
12	290-102520 **316.54**	300-102520 **404.84**	3301-120P **506.86**
12X2	290-102514 **149.65**	300-102514 **179.06**	3301-661P **266.96**
12X3	290-102515 **176.69**	300-102515 **214.68**	3301-663P **295.07**
12X4	290-102516 **199.97**	300-102516 **238.01**	3301-664P **325.83**
12X6	290-102517 **210.99**	300-102517 **258.84**	3301-666P **356.63**
12X8	290-102518 **249.05**	300-102518 **305.48**	3301-668P **422.18**
12X10	290-102519 **287.08**	300-102519 **352.11**	3301-670P **468.41**
15	290-102528 **592.58**	300-102528 **696.89**	3301-150P **905.48**
15X2	290-102521 **276.06**	300-102521 **322.65**	3301-721P **404.84**
15X3	290-102522 **290.78**	300-102522 **339.85**	3301-723P **430.69**
15X4	290-102523 **299.36**	300-102523 **354.58**	3301-724P **445.36**
15X6	290-102524 **325.09**	300-102524 **390.14**	3301-726P **504.26**
15X8	290-102525 **375.41**	300-102525 **436.78**	3301-728P **580.36**
15X10	290-102526 **425.73**	300-102526 **516.55**	3301-730P **656.39**
15X12	290-102527 **487.04**	300-102527 **580.36**	3301-732P **757.67**
18	290-102537 **917.74**	300-102537 **1069.86**	3301-180P **1523.89**
18X2	290-102529 **479.53**	300-102529 **523.85**	3301-781P **639.23**
18X3	290-102530 **494.45**	300-102530 **537.36**	3301-783P **715.27**
18X4	290-102531 **547.19**	300-102531 **591.39**	3301-784P **761.92**
18X6	290-102532 **563.14**	300-102532 **612.22**	3301-786P **780.33**
18X8	290-102533 **586.47**	300-102533 **637.99**	3301-788P **871.11**
18X10	290-102534 **619.59**	300-102534 **685.85**	3301-790P **952.08**

PIP Tee (Socket) (continued)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
18X12	290-102535 **685.85**	300-102535 **814.69**	3301-792P **1069.86**
18X15	290-102536 **795.05**	300-102536 **985.22**	3301-795P **1245.38**
21	290-102558 **1693.18**	300-102558 **1992.56**	3301-210P **2271.07**
21X2	290-102548 **695.20**	300-102548 **873.56**	3301-841P **993.81**
21X3	290-102549 **712.15**	300-102549 **879.68**	3301-843P **1011.02**
21X4	290-102550 **736.14**	300-102550 **889.52**	3301-844P **1055.17**
21X6	290-102551 **780.33**	300-102551 **1078.45**	3301-846P **1209.78**
21X8	290-102552 **833.06**	300-102552 **1110.36**	3301-848P **1260.05**
21X10	290-102553 **888.27**	300-102553 **1152.07**	3301-850P **1318.97**
21X12	290-102554 **972.97**	300-102554 **1163.14**	3301-852P **1640.42**
21X15	290-102555 **1072.34**	300-102555 **1333.66**	3301-855P **1874.77**
21X18	290-102556 **1251.44**	300-102556 **1523.89**	3301-858P **2138.60**
24	290-102570 **2311.60**	300-102570 **2666.15**	3301-240P **2725.08**
24X2	290-102559 **917.74**	300-102559 **1084.60**	3301-901P **1171.69**
24X3	290-102560 **976.61**	300-102560 **1143.51**	3301-903P **1230.60**
24X4	290-102561 **1031.86**	300-102561 **1230.60**	3301-904P **1318.97**
24X6	290-102562 **1087.08**	300-102562 **1318.97**	3301-906P **1406.08**
24X8	290-102563 **1158.23**	300-102563 **1406.08**	3301-908P **1523.89**
24X10	290-102564 **1192.57**	300-102564 **1523.89**	3301-910P **1640.42**
24X12	290-102565 **1289.53**	300-102565 **1640.42**	3301-912P **1758.20**
24X15	290-102566 **1415.85**	300-102566 **1787.67**	3301-915P **1933.69**
24X18	290-102567 **1612.21**	300-102567 **2022.00**	3301-918P **2197.47**
24X21	290-102569 **1813.39**	300-102569 **2166.74**	3301-921P **2607.26**
27	2901-270 **3501.91**	3001-270 **4148.83**	3301-270P **5133.46**
27X4	2901-934 **1248.57**	3001-934 **1567.65**	3301-934P **1958.03**
27X6	2901-936 **1317.42**	3001-936 **1687.79**	3301-936P **2109.55**
27X8	2901-938 **1402.36**	3001-938 **1806.63**	3301-938P **2259.69**
27X10	2901-940 **1420.94**	3001-940 **1931.77**	3301-940P **2416.06**
27X12	2901-942 **1561.67**	3001-942 **2087.01**	3301-942P **2608.71**
27X15	2901-945 **1714.12**	3001-945 **2297.20**	3301-945P **2872.63**
27X18	2901-948 **1952.92**	3001-948 **2604.86**	3301-948P **3255.45**
27X21	2901-951 **2197.16**	3001-951 **2771.29**	3301-951P **3463.31**
27X24	2901-954 **2801.35**	3001-954 **3421.93**	3301-954P **4276.42**

PIP Tee (Gasket x Spigot x Gasket)



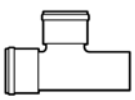
Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-103062 **184.02**	300-103062 **190.15**	3301-060232P **202.88**
6X4	290-103061 **159.47**	300-103061 **177.89**	3301-532232P **191.69**
8	290-103067 **233.13**	300-103067 **254.00**	3301-080232P **305.08**

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

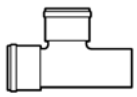
PVC 80, 100 & 125 PSI PIP Fabricated Fittings

PIP Tee (Gasket x Spigot x Gasket) (continued)



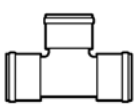
Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
8X4	290-103065 **196.32**	300-103065 **215.91**	3301-582232P **229.00**
8X6	290-103066 **220.85**	300-103066 **228.21**	3301-585232P **267.02**
10	290-103073 **348.45**	300-103073 **386.49**	3301-100232P **457.88**
10X4	290-103070 **304.27**	300-103070 **316.54**	3301-624232P **331.04**
10X6	290-103071 **310.38**	300-103071 **330.02**	3301-626232P **368.09**
10X8	290-103072 **342.29**	300-103072 **354.58**	3301-628232P **400.12**
12	290-103080 **480.94**	300-103080 **525.13**	3301-120232P **634.93**
12X4	290-103076 **354.58**	300-103076 **398.72**	3301-664232P **444.23**
12X6	290-103077 **364.38**	300-103077 **412.21**	3301-666232P **476.63**
12X8	290-103078 **422.05**	300-103078 **424.52**	3301-668232P **508.14**
12X10	290-103079 **434.34**	300-103079 **468.66**	3301-670232P **571.55**
15	290-103088 **768.05**	300-103088 **949.65**	3301-150232P **1138.56**
15X4	290-103083 **569.29**	300-103083 **601.16**	3301-724232P **791.36**
15X6	290-103084 **576.38**	300-103084 **696.89**	3301-726232P **841.64**
15X8	290-103085 **607.31**	300-103085 **709.17**	3301-728232P **873.56**
15X10	290-103086 **653.92**	300-103086 **727.59**	3301-730232P **917.74**
15X12	290-103087 **696.89**	300-103087 **791.36**	3301-732232P **976.27**
18	290-103097 **1224.46**	300-103097 **1423.23**	3301-180232P **1834.27**
18X4	290-103091 **738.60**	300-103091 **823.26**	3301-784232P **1012.20**
18X6	290-103092 **791.36**	300-103092 **885.82**	3301-786232P **1107.92**
18X8	290-103093 **808.55**	300-103093 **999.97**	3301-788232P **1202.40**
18X10	290-103094 **899.35**	300-103094 **1044.12**	3301-790232P **1296.87**
18X12	290-103095 **975.40**	300-103095 **1107.92**	3301-792232P **1360.71**
18X15	290-103096 **1019.57**	300-103096 **1170.48**	3301-795232P **1455.14**
21	2901-210232 **1927.53**	3001-210232 **2371.74**	3301-210232P **2896.81**
21X4	290-103110 **1145.98**	300-103110 **1392.60**	3301-844232P **1676.01**
21X6	290-103111 **1158.23**	300-103111 **1423.23**	3301-846232P **1707.89**
21X8	290-103112 **1219.57**	300-103112 **1499.33**	3301-848232P **1790.09**
21X10	290-103113 **1257.60**	300-103113 **1518.94**	3301-850232P **1847.74**
21X12	290-103114 **1380.34**	300-103114 **1613.43**	3301-852232P **2024.46**
21X15	290-103115 **1494.43**	300-103115 **1676.01**	3301-855232P **2182.71**
21X18	290-103116 **1690.73**	300-103116 **2024.46**	3301-858232P **2467.40**
24	2901-240232 **4322.97**	3001-240232 **4579.35**	3301-240232P **6243.22**
24X6	2901-906232 **3074.15**	3001-906232 **3483.32**	3301-906232P **4354.19**
24X8	2901-908232 **3235.31**	3001-908232 **3612.11**	3301-908232P **4579.20**
24X10	2901-910232 **3400.77**	3001-910232 **3677.29**	3301-910232P **4879.46**
24X12	2901-912232 **3584.27**	3001-912232 **3773.58**	3301-912232P **5095.95**

PIP Tee (Gasket x Spigot x Gasket) (continued)



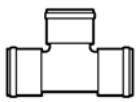
Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
24X15	2901-915232 **3772.13**	3001-915232 **3935.01**	3301-915232P **5353.69**
24X18	2901-918232 **3967.42**	3001-918232 **4127.62**	3301-918232P **5611.53**
24X21	2901-921232 **4177.64**	3001-921232 **4386.61**	3301-921232P **5934.20**
27	2901-270232 **6503.11**	3001-270232 **7255.56**	3301-270232P **9191.09**
27X6	2901-936232 **3842.27**	3001-936232 **4354.06**	3301-936232P **5482.61**
27X8	2901-938232 **4043.65**	3001-938232 **4579.28**	3301-938232P **5740.28**
27X10	2901-940232 **4251.53**	3001-940232 **4837.07**	3301-940232P **5998.07**
27X12	2901-942232 **4481.67**	3001-942232 **5095.99**	3301-942232P **6288.28**
27X15	2901-945232 **4716.81**	3001-945232 **5353.69**	3301-945232P **6514.74**
27X18	2901-948232 **4960.88**	3001-948232 **5643.92**	3301-948232P **7030.25**
27X21	2901-951232 **5222.40**	3001-951232 **5934.33**	3301-951232P **7416.87**
27X24	2901-954232 **5497.60**	3001-954232 **6192.08**	3301-954232P **7836.11**

PIP Tee (Gasketed)



Size			
6	290-103174 **184.02**	300-103174 **190.15**	3301-0602P **202.88**
6X4	290-103173 **159.47**	300-103173 **177.89**	3301-5322P **191.69**
8	290-103179 **233.13**	300-103179 **254.00**	3301-0802P **305.08**
8X4	290-103177 **196.32**	300-103177 **215.91**	3301-5822P **229.00**
8X6	290-103178 **220.85**	300-103178 **228.21**	3301-5852P **267.02**
10	290-103185 **348.45**	300-103185 **386.49**	3301-1002P **457.88**
10X4	290-103182 **304.27**	300-103182 **316.54**	3301-6242P **331.04**
10X6	290-103183 **310.38**	300-103183 **330.02**	3301-6262P **368.09**
10X8	290-103184 **342.29**	300-103184 **354.58**	3301-6282P **400.12**
12	290-103192 **480.94**	300-103192 **525.13**	3301-1202P **634.93**
12X4	290-103188 **354.58**	300-103188 **398.72**	3301-6642P **444.23**
12X6	290-103189 **364.38**	300-103189 **412.21**	3301-6662P **476.62**
12X8	290-103190 **422.05**	300-103190 **424.52**	3301-6682P **508.14**
12X10	290-103191 **434.34**	300-103191 **468.66**	3301-6702P **571.55**
15	290-103200 **768.05**	300-103200 **949.65**	3301-1502P **1138.56**
15X4	290-103195 **569.29**	300-103195 **601.16**	3301-7242P **791.36**
15X6	290-103196 **576.38**	300-103196 **696.89**	3301-7262P **841.64**
15X8	290-103197 **607.31**	300-103197 **709.17**	3301-7282P **873.56**
15X10	290-103198 **653.92**	300-103198 **727.59**	3301-7302P **917.74**
15X12	290-103199 **696.89**	300-103199 **791.36**	3301-7322P **980.33**
18	290-103209 **1224.46**	300-103209 **1423.23**	3301-1802P **1834.27**
18X4	290-103203 **738.60**	300-103203 **823.26**	3301-7842P **1012.20**
18X6	290-103204 **791.36**	300-103204 **885.82**	3301-7862P **1107.92**
18X8	290-103205 **808.55**	300-103205 **999.97**	3301-7882P **1202.40**

PIP Tee (Gasketed) (continued)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
18X10	290-103206 **899.35**	300-103206 **1044.12**	3301-7902P **1296.87**
18X12	290-103207 **975.40**	300-103207 **1107.92**	3301-7922P **1360.71**
18X15	290-103208 **1019.57**	300-103208 **1170.48**	3301-7952P **1455.14**
21	290-103230 **1927.53**	300-103230 **2371.74**	3301-2102P **2896.81**
21X4	290-103222 **1145.98**	300-103222 **1392.60**	3301-8442P **1676.01**
21X6	290-103223 **1158.23**	300-103223 **1423.23**	3301-8462P **1707.89**
21X8	290-103224 **1219.57**	300-103224 **1499.33**	3301-8482P **1790.09**
21X10	290-103225 **1257.60**	300-103225 **1518.94**	3301-8502P **1847.74**
21X12	290-103226 **1380.34**	300-103226 **1613.43**	3301-8522P **2024.46**
21X15	290-103227 **1494.43**	300-103227 **1676.01**	3301-8552P **2182.71**
21X18	290-103228 **1690.73**	300-103228 **2024.46**	3301-8582P **2467.40**
24	2901-2402 **4322.97**	3001-2402 **4579.35**	3301-2402P **6243.22**
24X6	2901-9062 **3074.15**	3001-9062 **3483.32**	3301-9062P **4354.19**
24X8	2901-9082 **3235.31**	3001-9082 **3612.11**	3301-9082P **4579.20**
24X10	2901-9102 **3400.77**	3001-9102 **3677.29**	3301-9102P **4879.46**
24X12	2901-9122 **3584.27**	3001-9122 **3773.58**	3301-9122P **5095.95**
24X15	2901-9152 **3772.13**	3001-9152 **3935.01**	3301-9152P **5353.69**
24X18	2901-9182 **3967.42**	3001-9182 **4127.62**	3301-9182P **5611.53**
24X21	2901-9212 **4177.64**	3001-9212 **4386.61**	3301-9212P **5934.20**
27	2901-2702 **6503.11**	3001-2702 **7255.56**	3301-2702P **9191.09**
27X6	2901-9362 **3842.27**	3001-9362 **4354.06**	3301-9362P **5482.61**
27X8	2901-9382 **4043.65**	3001-9382 **4579.28**	3301-9382P **5740.28**
27X10	2901-9402 **4251.53**	3001-9402 **4837.07**	3301-9402P **5998.07**
27X12	2901-9422 **4481.67**	3001-9422 **5095.99**	3301-9422P **6288.28**
27X15	2901-9452 **4716.81**	3001-9452 **5353.69**	3301-9452P **6514.74**
27X18	2901-9482 **4960.88**	3001-9482 **5643.92**	3301-9482P **7030.25**
27X21	2901-9512 **5222.40**	3001-9512 **5934.33**	3301-9512P **7416.87**
27X24	2901-9542 **5497.60**	3001-9542 **6192.08**	3301-9542P **7836.11**

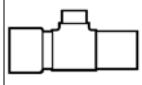
PIP Reinforced Tee (Soc x Soc x Fipt)

Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6X2	---	300-202152 **75.27**	3302-528P **114.54**
6X3	---	300-202154 **82.16**	3302-530P **131.24**
6X4	---	300-202155 **92.00**	3302-532P **134.95**
8X2	---	300-202157 **114.09**	3302-578P **185.38**
8X3	---	300-202159 **120.20**	3302-580P **197.95**
8X4	---	300-202160 **130.04**	3302-582P **167.85**
10X2	---	300-202162 **155.83**	3302-621P **209.27**
10X3	---	300-202164 **191.37**	3302-623P **259.22**

PIP Reinforced Tee (Soc x Soc x Fipt) (continued)

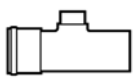
Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
10X4	---	300-202165 **204.89**	3302-624P **255.07**
12X2	---	300-202167 **238.01**	3302-661P **257.58**
12X3	---	300-202169 **263.75**	3302-663P **283.15**
12X4	---	300-202170 **301.80**	3302-664P **331.39**
15X2	---	300-202172 **392.28**	3302-721P **453.93**
15X3	---	300-202174 **417.29**	3302-723P **478.49**
15X4	---	300-202175 **447.51**	3302-724P **490.80**

PIP Reinforced Tee (Soc x Spig x Fipt)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6X2	---	300-202222 **62.58**	---
6X3	---	300-202224 **73.61**	---
6X4	---	300-202225 **85.85**	---
8X2	---	300-202227 **100.59**	---
8X3	---	300-202229 **110.41**	---
8X4	---	300-202230 **120.20**	---
10X2	---	300-202232 **149.61**	---
10X3	---	300-202234 **182.82**	---
10X4	---	300-202235 **193.84**	---
12X2	---	300-202237 **223.27**	---
12X3	---	300-202239 **255.17**	---
12X4	---	300-202240 **290.78**	---
15X2	---	300-202242 **390.14**	3302-72113P **441.69**
15X3	---	300-202244 **413.46**	3302-72313P **472.38**
15X4	---	300-202245 **440.43**	3302-72413P **484.61**

PIP Reinforced Tee (Gasket x Spig x Fipt)



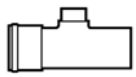
Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6X2	---	300-202362 **107.94**	---
6X3	---	300-202364 **139.85**	---
6X4	---	300-202365 **146.01**	---
8X2	---	300-202367 **152.13**	---
8X3	---	300-202369 **177.89**	---
8X4	---	300-202370 **196.32**	---
10X2	---	300-202372 **228.21**	---
10X3	---	300-202374 **240.45**	---
10X4	---	300-202375 **250.25**	---
12X2	---	300-202377 **316.54**	---
12X3	---	300-202379 **342.29**	---
12X4	---	300-202380 **354.58**	---
15X2	---	300-202382 **442.92**	3302-72123P **539.55**
15X3	---	300-202384 **468.66**	3302-72323P **578.24**

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Tees

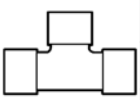
PIP Reinforced Tee (Gasket x Spig x Fipt) (continued)

	Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
	15X4	---	300-202385 **506.71**	3302-72423P **630.48**

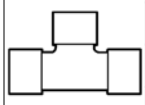
PIP Reinforced Tee (Gasket x Fipt)

	Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
	6X2	---	300-202432 **114.09**	---
	6X3	---	300-202434 **139.85**	---
	6X4	---	300-202435 **152.13**	---
	8X2	---	300-202437 **171.75**	---
	8X3	---	300-202439 **187.72**	---
	8X4	---	300-202440 **202.42**	---
	10X2	---	300-202442 **247.80**	---
	10X3	---	300-202444 **272.35**	---
	10X4	---	300-202445 **291.97**	---
	12X2	---	300-202447 **348.45**	---
	12X3	---	300-202449 **366.82**	---
	12X4	---	300-202450 **392.63**	---
	15X2	---	300-202452 **506.71**	3302-7212P **619.11**
	15X3	---	300-202454 **525.13**	3302-7232P **672.68**
	15X4	---	300-202455 **550.91**	3302-7242P **707.42**

PIP X IPS Tee (Socket)

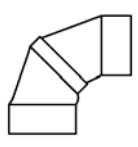
	Size	80 PIP Prod Code: 310 Part Number Price Each	100 PIP Prod Code: 320 Part Number Price Each	125 PIP Prod Code: 330 Part Number Price Each
	6	2901-060PXI **84.18**	3001-060PXI **107.15**	3301-060PXI **107.73**
	8	2901-080PXI **154.43**	3001-080PXI **215.28**	3301-080PXI **215.97**
	8X6	2901-585PXI **212.44**	3001-585PXI **130.04**	3301-585PXI **168.20**

PIP X IPS Tee (Socket) (continued)

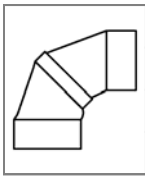
	Size	80 PIP Prod Code: 310 Part Number Price Each	100 PIP Prod Code: 320 Part Number Price Each	125 PIP Prod Code: 330 Part Number Price Each
	10	2901-100PXI **209.87**	3001-100PXI **254.00**	3301-100PXI **322.38**
	10X6	2901-626PXI **148.75**	300-102821 **165.62**	3301-626PXI **230.27**
	10X8	2901-628PXI **171.85**	3001-628PXI **339.99**	3301-628PXI **285.58**
	12	2901-120PXI **316.54**	3001-120PXI **404.84**	3301-120PXI **476.45**
	12X6	2901-666PXI **251.54**	300-102599 **258.84**	3301-666PXI **335.23**
	12X8	2901-668PXI **234.11**	300-102607 **305.48**	3301-668PXI **396.85**
	12X10	2901-670PXI **287.08**	3001-670PXI **352.11**	3301-670PXI **440.31**
	15X6	2901-726PXI **305.59**	300-102708 **390.14**	3301-726PXI **474.01**
	15X8	2901-728PXI **352.88**	300-102709 **492.14**	3301-728PXI **545.54**
	15X10	2901-730PXI **400.18**	3001-730PXI **516.55**	3301-730PXI **617.01**
	15X12	2901-732PXI **457.82**	300-102817 **580.36**	3301-732PXI **712.21**
	18X6	2901-786PXI **529.35**	3001-786PXI **612.22**	3301-786PXI **733.51**
	18X8	2901-788PXI **551.28**	3001-788PXI **637.99**	3301-788PXI **818.84**
	18X10	2901-790PXI **619.59**	3001-790PXI **685.85**	3301-790PXI **894.96**
	18X12	2901-792PXI **685.85**	3001-792PXI **814.69**	3301-792PXI **1005.67**
	21X6	2901-846PXI **780.33**	3001-846PXI **1078.08**	3301-846PXI **1137.19**
	21X8	2901-848PXI **783.08**	3001-848PXI **1110.36**	3301-848PXI **1184.45**
	21X10	2901-850PXI **888.27**	3001-850PXI **1152.07**	3301-850PXI **1239.83**
	21X12	2901-852PXI **914.59**	3001-852PXI **1163.14**	3301-852PXI **1542.00**
	24X6	2901-906PXI **1087.08**	3001-906PXI **1318.97**	3301-906PXI **1321.72**
	24X8	2901-908PXI **1158.23**	3001-908PXI **1406.08**	3301-908PXI **1432.46**
	24X10	2901-910PXI **1192.57**	3001-910PXI **1523.89**	3301-910PXI **1542.00**
	24X12	2901-912PXI **1212.16**	3001-912PXI **1640.42**	3301-912PXI **1652.71**

90° Ells

PIP 90° Elbow (Socket)

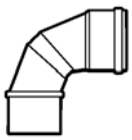
	Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
	6	290-100812 **121.46**	300-100812 **142.33**	3306-060P **176.45**
	8	290-100813 **164.40**	300-100813 **224.55**	3306-080P **256.04**
	10	290-100814 **269.93**	300-100814 **316.54**	3306-100P **353.34**
	12	290-100815 **347.17**	300-100815 **444.11**	3306-120P **459.67**
	15	290-100816 **579.12**	300-100816 **688.32**	3306-150P **787.68**

PIP 90° Elbow (Socket) (continued)

	Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
	18	290-100817 **871.11**	300-100817 **1025.67**	3306-180P **1348.39**
	21	290-100819 **1363.12**	300-100819 **1652.67**	3306-210P **2030.60**
	24	290-100820 **3046.54**	300-100820 **3633.02**	3306-240P **3826.83**
	27	2906-270 **3245.43**	3006-270 **3853.56**	3306-270P **4260.29**

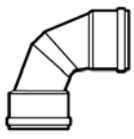
90° Ells

PIP 90° Elbow (Gasket x Spigot)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-100878 **147.18**	300-100878 **159.47**	3306-06023P **234.72**
8	290-100879 **233.13**	300-100879 **255.17**	3306-08023P **304.95**
10	290-100880 **347.17**	300-100880 **393.81**	3306-10023P **471.04**
12	290-100881 **472.38**	300-100881 **559.47**	3306-12023P **677.71**
15	290-100882 **905.48**	300-100882 **1143.51**	3306-15023P **1289.53**
18	290-100883 **1518.94**	300-100883 **1758.20**	3306-18023P **1787.67**
21	290-100885 **2201.15**	300-100885 **2639.19**	3306-21023P **3187.65**
24	2906-24023 **3513.18**	3006-24023 **3992.52**	3306-24023P **4992.22**
27	2906-27023 **4767.00**	3006-27023 **5521.54**	3306-27023P **6563.63**

PIP 90° Elbow (Gasketed)



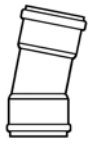
Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-100900 **147.18**	300-100900 **159.47**	3306-0602P **234.72**
8	290-100901 **233.13**	300-100901 **255.17**	3306-0802P **304.95**
10	290-100902 **347.17**	300-100902 **393.81**	3306-1002P **471.04**
12	290-100903 **472.38**	300-100903 **559.47**	3306-1202P **677.71**
15	290-100904 **905.48**	300-100904 **1143.51**	3306-1502P **1289.53**
18	290-100905 **1518.94**	300-100905 **1758.20**	3306-1802P **1787.67**
21	290-100907 **2201.15**	300-100907 **2639.19**	3306-2102P **3187.65**
24	2906-2402 **3513.18**	3006-2402 **3992.52**	3306-2402P **4992.22**
27	2906-2702 **4767.00**	3006-2702 **5521.54**	3306-2702P **6563.63**

Non 90° Ells

PIP 11-1/4° Elbow (Socket)

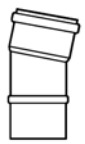
Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PIP Prod Code: 330 Part Number Price Each
6	290-100114 **33.15**	300-100114 **39.23**	3311-060P **48.57**
8	290-100115 **53.94**	300-100115 **58.85**	3311-080P **72.28**
10	290-100116 **96.87**	300-100116 **111.63**	3311-100P **140.02**
12	290-100117 **137.37**	300-100117 **155.83**	3311-120P **192.71**
15	290-100118 **213.47**	300-100118 **261.29**	3311-150P **339.85**
18	290-100119 **366.82**	300-100119 **434.34**	3311-180P **539.85**
21	290-100121 **612.22**	300-100121 **698.09**	3311-210P **909.17**
24	290-100122 **823.26**	300-100122 **909.17**	3311-240P **981.54**
27	2911-270 **1032.16**	3011-270 **1102.41**	3311-270P **1433.89**

PIP 11-1/4° Elbow (Gasketed)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PIP Prod Code: 330 Part Number Price Each
6	290-100210 **98.14**	300-100210 **120.20**	3311-0602P **139.99**
8	290-100211 **159.47**	300-100211 **177.89**	3311-0802P **208.33**
10	290-100212 **239.24**	300-100212 **263.75**	3311-1002P **305.67**
12	290-100213 **325.09**	300-100213 **380.34**	3311-1202P **441.98**
15	290-100214 **572.98**	300-100214 **628.17**	3311-1502P **743.53**
18	290-100215 **907.92**	300-100215 **1040.43**	3311-1802P **1236.77**
21	290-100217 **1341.02**	300-100217 **1442.91**	3311-2102P **1875.99**
24	2911-2402 **2219.44**	3011-2402 **2511.59**	3311-2402P **3152.73**
27	2911-2702 **2871.55**	3011-2702 **3248.12**	3311-2702P **3925.54**

PIP 11-1/4° Elbow (Gasket x Spigot)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-100186 **98.14**	300-100186 **120.20**	3311-06023P **139.99**
8	290-100187 **159.47**	300-100187 **177.89**	3311-08023P **208.33**
10	290-100188 **239.24**	300-100188 **263.75**	3311-10023P **305.67**
12	290-100189 **325.09**	300-100189 **380.34**	3311-12023P **441.98**
15	290-100190 **572.98**	300-100190 **628.17**	3311-15023P **743.53**
18	290-100191 **907.92**	300-100191 **1040.43**	3311-18023P **1236.77**
21	290-100193 **1341.02**	300-100193 **1442.91**	3311-21023P **1875.99**
24	2911-24023 **2219.44**	3011-24023 **2511.59**	3311-24023P **3152.73**
27	2911-27023 **2871.55**	3011-27023 **3248.12**	3311-27023P **3925.54**

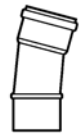
PIP 15° Elbow (Socket)

Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-100234 **33.15**	300-100234 **39.23**	3318-060P **48.57**
8	290-100235 **53.94**	300-100235 **58.85**	3318-080P **72.28**
10	290-100236 **96.87**	300-100236 **111.63**	3318-100P **140.02**
12	290-100237 **137.37**	300-100237 **155.83**	3318-120P **192.71**
15	290-100238 **213.47**	300-100238 **261.29**	3318-150P **339.85**
18	290-100239 **366.82**	300-100239 **434.34**	3318-180P **539.85**
21	290-100241 **612.22**	300-100241 **698.09**	3318-210P **909.17**
24	290-100242 **823.26**	300-100242 **909.17**	3318-240P **981.54**
27	2918-270 **1032.16**	3018-270 **1102.41**	3318-270P **1433.89**

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

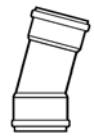
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PIP 15° Elbow (Gasket x Spigot)



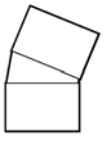
Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PIP Prod Code: 330 Part Number Price Each
6	290-100306 **98.14**	300-100306 **120.20**	3318-06023P **139.99**
8	290-100307 **159.47**	300-100307 **177.89**	3318-08023P **208.33**
10	290-100308 **239.24**	300-100308 **263.75**	3318-10023P **305.67**
12	290-100309 **325.09**	300-100309 **380.34**	3318-12023P **441.98**
15	290-100310 **572.98**	300-100310 **628.17**	3318-15023P **743.53**
18	290-100311 **907.92**	300-100311 **1040.43**	3318-18023P **1236.77**
21	290-100313 **1341.02**	300-100313 **1442.91**	3318-21023P **1875.99**
24	2918-24023 **2219.44**	3018-24023 **2511.59**	3318-24023P **3152.73**
27	2918-27023 **2871.55**	3018-27023 **3248.12**	3318-27023P **3925.54**

PIP 15° Elbow (Gasketed)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-100330 **98.14**	300-100330 **120.20**	3318-0602P **139.99**
8	290-100331 **159.47**	300-100331 **177.89**	3318-0802P **208.33**
10	290-100332 **239.24**	300-100332 **263.75**	3318-1002P **305.67**
12	290-100333 **325.09**	300-100333 **380.34**	3318-1202P **441.98**
15	290-100334 **572.98**	300-100334 **628.17**	3318-1502P **743.53**
18	290-100335 **907.92**	300-100335 **1040.43**	3318-1802P **1236.77**
21	290-100336 **1341.06**	300-100336 **1442.91**	3318-2102P **1875.99**
24	2918-2402 **2219.44**	3018-2402 **2511.59**	3318-2402P **3152.73**
27	2918-2702 **2871.55**	3018-2702 **3248.12**	3318-2702P **3925.54**

PIP 22-1/2° Elbow (Socket)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-100354 **33.15**	300-100354 **39.23**	3316-060P **47.84**
8	290-100355 **53.94**	300-100355 **58.85**	3316-080P **71.68**
10	290-100356 **96.87**	300-100356 **111.63**	3316-100P **140.02**
12	290-100357 **137.37**	300-100357 **155.83**	3316-120P **192.71**
15	290-100358 **213.47**	300-100358 **261.29**	3316-150P **339.85**
18	290-100359 **366.82**	300-100359 **434.34**	3316-180P **539.85**
21	290-100361 **612.22**	300-100361 **698.09**	3316-210P **909.17**
24	290-100362 **823.26**	300-100362 **909.17**	3316-240P **981.54**
27	2916-270 **1032.16**	3016-270 **1102.41**	3316-270P **1433.89**

PIP 22-1/2° Elbow (Gasket x Spigot)

Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-100426 **98.14**	300-100426 **120.20**	3316-06023P **139.99**
8	290-100427 **159.47**	300-100427 **177.89**	3316-08023P **208.33**
10	290-100428 **239.24**	300-100428 **263.75**	3316-10023P **305.67**
12	290-100429 **325.09**	300-100429 **380.34**	3316-12023P **441.98**
15	290-100430 **572.98**	300-100430 **628.17**	3316-15023P **743.53**
18	290-100431 **907.92**	300-100431 **1040.43**	3316-18023P **1236.77**
21	290-100433 **1341.02**	300-100433 **1442.91**	3316-21023P **1875.99**
24	2916-24023 **2219.44**	3016-24023 **2511.59**	3316-24023P **3152.73**

PIP 22-1/2° Elbow (Gasket x Spigot) (continued)

Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
27	2916-27023 **2871.55**	3016-27023 **3248.12**	3316-27023P **3925.54**

PIP 22-1/2° Elbow (Gasketed)

Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-100450 **98.14**	300-100450 **120.20**	3316-0602P **139.99**
8	290-100451 **159.47**	300-100451 **177.89**	3316-0802P **208.33**
10	290-100452 **239.24**	300-100452 **263.75**	3316-1002P **305.67**
12	290-100453 **325.09**	300-100453 **380.34**	3316-1202P **441.98**
15	290-100454 **572.98**	300-100454 **628.17**	3316-1502P **743.53**
18	290-100455 **907.92**	300-100455 **1040.43**	3316-1802P **1236.77**
21	290-100457 **1341.02**	300-100457 **1442.91**	3316-2102P **1875.99**
24	2916-2402 **2219.44**	3016-2402 **2511.59**	3316-2402P **3152.73**
27	2916-2702 **2871.55**	3016-2702 **3248.12**	3316-2702P **3925.54**

PIP 30° Elbow (Socket)

Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-100474 **50.27**	300-100474 **52.76**	3315-060P **67.48**
8	290-100475 **76.09**	300-100475 **92.00**	3315-080P **113.92**
10	290-100476 **117.73**	300-100476 **138.62**	3315-100P **172.42**
12	290-100477 **169.27**	300-100477 **206.12**	3315-120P **228.61**
15	290-100478 **267.44**	300-100478 **320.22**	3315-150P **396.27**
18	290-100479 **436.78**	300-100479 **533.71**	3315-180P **668.65**
21	290-100481 **706.72**	300-100481 **861.34**	3315-210P **1084.60**
24	290-100482 **2015.89**	300-100482 **2343.47**	3315-240P **2460.04**
27	2915-270 **2221.92**	3015-270 **2499.78**	3315-270P **2753.83**

PIP 30° Elbow (Gasket x Spigot)

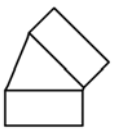
Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-100546 **122.65**	300-100546 **141.09**	3315-06023P **168.47**
8	290-100547 **184.02**	300-100547 **199.97**	3315-08023P **237.75**
10	290-100548 **258.84**	300-100548 **287.08**	3315-10023P **336.21**
12	290-100549 **348.45**	300-100549 **408.57**	3315-12023P **480.14**
15	290-100550 **709.17**	300-100550 **826.96**	3315-15023P **923.86**
18	290-100551 **996.25**	300-100551 **1171.69**	3315-18023P **1464.93**
21	290-100553 **1484.59**	300-100553 **1268.36**	3315-21023P **2085.81**
24	2915-24023 **2381.81**	3015-24023 **3266.20**	3315-24023P **3383.18**
27	2915-27023 **3217.97**	3015-27023 **3755.29**	3315-27023P **4397.72**

PVC 80, 100 & 125 PSI PIP Fabricated Fittings

PIP 30° Elbow (Gasketed)

Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-100570 **122.65**	300-100570 **141.09**	3315-0602P **168.47**
8	290-100571 **184.02**	300-100571 **199.97**	3315-0802P **237.75**
10	290-100572 **258.84**	300-100572 **287.08**	3315-1002P **336.21**
12	290-100573 **348.45**	300-100573 **408.57**	3315-1202P **480.14**
15	290-100574 **709.17**	300-100574 **826.96**	3315-1502P **923.86**
18	290-100575 **996.25**	300-100575 **1171.69**	3315-1802P **1464.93**
21	290-100577 **1484.59**	300-100577 **1268.36**	3315-2102P **2085.81**
24	2915-2402 **2382.07**	3015-2402 **3266.20**	3315-2402P **3383.18**
27	2915-2702 **3217.97**	3015-2702 **3755.29**	3315-2702P **4397.72**

PIP 45°Elbow (Socket)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-100592 **50.27**	300-100592 **52.76**	3317-060P **67.51**
8	290-100593 **76.09**	300-100593 **92.00**	3317-080P **113.92**
10	290-100594 **117.73**	300-100594 **138.62**	3317-100P **172.42**
12	290-100595 **169.27**	300-100595 **206.12**	3317-120P **228.61**
15	290-100596 **267.44**	300-100596 **320.22**	3317-150P **396.27**
18	290-100597 **436.78**	300-100597 **533.71**	3317-180P **668.65**
21	290-100599 **706.72**	300-100599 **861.34**	3317-210P **1084.60**
24	290-100600 **2015.89**	300-100600 **2343.47**	3317-240P **2460.04**
27	2917-270 **2221.92**	3017-270 **2499.78**	3317-270P **2753.83**

PIP 45°Elbow (Gasket x Spigot)

Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-100658 **122.65**	300-100658 **141.09**	3317-06023P **168.47**
8	290-100659 **184.02**	300-100659 **199.97**	3317-08023P **237.75**
10	290-100660 **258.84**	300-100660 **287.08**	3317-10023P **336.21**
12	290-100661 **348.45**	300-100661 **408.57**	3317-12023P **480.14**
15	290-100662 **709.17**	300-100662 **826.96**	3317-15023P **923.86**
18	290-100663 **996.25**	300-100663 **1171.69**	3317-18023P **1464.93**
21	290-100665 **1484.59**	300-100665 **1268.36**	3317-21023P **2085.81**
24	2917-24023 **2382.07**	3017-24023 **3266.20**	3317-24023P **3383.18**
27	2917-27023 **3217.97**	3017-27023 **3755.29**	3317-27023P **4397.72**

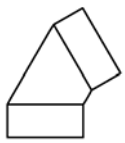
PIP 45°Elbow (Gasketed)

Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-100680 **122.65**	300-100680 **141.09**	3317-0602P **168.47**
8	290-100681 **184.02**	300-100681 **199.97**	3317-0802P **237.75**
10	290-100682 **258.84**	300-100682 **287.08**	3317-1002P **336.21**
12	290-100683 **348.45**	300-100683 **408.57**	3317-1202P **480.14**
15	290-100684 **709.17**	300-100684 **826.96**	3317-1502P **923.86**
18	290-100685 **996.25**	300-100685 **1171.69**	3317-1802P **1464.93**
21	290-100687 **1484.59**	300-100687 **1765.59**	3317-2102P **2085.81**
24	2917-2402 **2382.07**	3017-2402 **3266.20**	3317-2402P **3383.18**

PIP 45°Elbow (Gasketed) (continued)

Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
27	2917-2702 **3217.97**	3017-2702 **3755.29**	3317-2702P **4397.72**

PIP 60° Elbow (Socket)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-100702 **121.46**	300-100702 **142.33**	3324-060P **176.45**
8	290-100703 **164.40**	300-100703 **224.55**	3324-080P **256.01**
10	290-100704 **269.93**	300-100704 **316.54**	3324-100P **353.34**
12	290-100705 **347.17**	300-100705 **444.11**	3324-120P **459.67**
15	290-100706 **579.12**	300-100706 **688.32**	3324-150P **787.68**
18	290-100707 **871.11**	300-100707 **1025.67**	3324-180P **1348.39**
21	290-100709 **1363.12**	300-100709 **1652.67**	3324-210P **2030.60**
24	290-100710 **3046.54**	300-100710 **3633.02**	3324-240P **3826.83**
27	2924-270 **3245.43**	3024-270 **3853.56**	3324-270P **4260.29**

PIP 60° Elbow (Gasket x Spigot)

Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-100768 **147.18**	300-100768 **159.47**	3324-06023P **234.72**
8	290-100769 **233.13**	300-100769 **255.17**	3324-08023P **304.95**
10	290-100770 **347.17**	300-100770 **393.81**	3324-10023P **471.04**
12	290-100771 **472.38**	300-100771 **559.47**	3324-12023P **677.71**
15	290-100772 **905.48**	300-100772 **1143.51**	3324-15023P **1289.53**
18	290-100773 **1518.94**	300-100773 **1758.20**	3324-18023P **1787.67**
21	290-100775 **2201.15**	300-100775 **2639.19**	3324-21023P **3187.65**
24	2924-24023 **3513.18**	3024-24023 **3992.52**	3324-24023P **4992.22**
27	2924-27023 **4767.00**	3024-27023 **5521.54**	3324-27023P **6563.63**

PIP 60° Elbow (Gasketed)

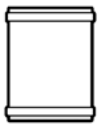
Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-100790 **147.18**	300-100790 **159.47**	3324-0602P **234.72**
8	290-100791 **233.13**	300-100791 **255.17**	3324-0802P **304.95**
10	290-100792 **347.17**	300-100792 **393.81**	3324-1002P **471.04**
12	290-100793 **472.38**	300-100793 **559.47**	3324-1202P **677.71**
15	290-100794 **905.48**	300-100794 **1143.51**	3324-1502P **1289.53**
18	290-100795 **1518.94**	300-100795 **1758.20**	3324-1802P **1787.67**
21	290-100797 **2201.15**	300-100797 **2639.19**	3324-2102P **3187.65**
24	2924-2402 **3513.18**	3024-2402 **3992.52**	3324-2402P **4992.22**
27	2924-2702 **4767.00**	3024-2702 **5521.54**	3324-2702P **6563.63**

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

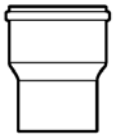
Couplings

PIP Repair Coupling (Gasketed)



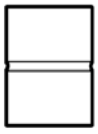
Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	2928-060 **98.24**	3028-060 **111.63**	3328-060P **127.58**
8	2928-080 **137.62**	3028-080 **158.24**	3328-080P **190.12**
10	2928-100 **237.58**	3028-100 **254.00**	3328-100P **299.59**
12	2928-120 **331.39**	3028-120 **348.45**	3328-120P **414.85**
15	2928-150 **494.45**	3028-150 **519.02**	3328-150P **628.17**
18	2928-180 **823.82**	3028-180 **949.65**	3328-180P **1307.73**
21	2928-210 **1138.33**	3028-210 **1366.62**	3328-210P **1837.55**
24	2928-240 **1578.09**	3028-240 **1894.93**	3328-240P **2570.13**
27	2928-270 **2021.01**	3028-270 **2522.91**	3328-270P **3211.64**

PIP Coupling (Gasket x Spigot)



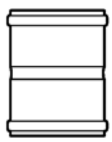
Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-100068 **61.33**	300-100068 **65.01**	3329-06023P **81.35**
8	290-100069 **93.20**	300-100069 **100.59**	3329-08023P **128.77**
10	290-100070 **138.62**	300-100070 **147.18**	3329-10023P **191.23**
12	290-100071 **170.51**	300-100071 **199.97**	3329-12023P **250.99**
15	290-100072 **263.75**	300-100072 **398.72**	3329-15023P **463.79**
18	290-100073 **442.92**	300-100073 **539.85**	3329-18023P **610.22**
21	290-100075 **647.83**	300-100075 **837.99**	3329-21023P **929.94**
24	2929-24023 **791.36**	3029-24023 **1053.89**	3329-24023P **1316.86**
27	2929-27023 **1027.62**	3029-27023 **1284.38**	3329-27023P **1605.76**

PIP Coupling (Socket)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-100002 **29.44**	300-100002 **33.15**	3329-060P **43.92**
8	290-100003 **36.79**	300-100003 **45.36**	3329-080P **55.85**
10	290-100004 **61.33**	300-100004 **72.39**	3329-100P **89.37**
12	290-100005 **92.00**	300-100005 **111.63**	3329-120P **145.09**
15	290-100006 **139.85**	300-100006 **191.37**	3329-150P **217.99**
18	290-100007 **320.22**	300-100007 **402.44**	3329-180P **490.69**
21	290-100009 **425.73**	300-100009 **703.03**	3329-210P **793.75**
24	290-100010 **747.17**	300-100010 **937.36**	3329-240P **954.62**
27	2929-270 **905.76**	3029-270 **1128.48**	3329-270P **1743.17**
30	2929-300 **1187.95**	3029-300 **1832.56**	---

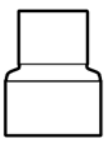
PIP Coupling (Gasketed)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-100090 **73.61**	300-100090 **82.16**	3329-0602P **106.32**
8	290-100091 **134.95**	300-100091 **152.28**	3329-0802P **174.62**
10	290-100092 **172.69**	300-100092 **193.84**	3329-1002P **256.74**
12	290-100093 **217.18**	300-100093 **283.68**	3329-1202P **285.58**
15	290-100094 **349.64**	300-100094 **521.42**	3329-1502P **542.26**
18	290-100095 **584.00**	300-100095 **615.94**	3329-1802P **770.05**
21	290-100097 **730.02**	300-100097 **996.25**	3329-2102P **1133.41**
24	2929-2402 **1225.75**	3029-2402 **1326.19**	3329-2402P **1591.69**
27	2929-2702 **1412.60**	3029-2702 **1657.74**	3329-2702P **2073.12**

Reducer Couplings

PIP Reducer Coupling (Socket)

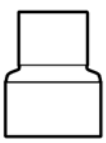


Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6X2	2929-528 **62.74**	3029-528 **111.20**	---
6X2-1/2	---	3029-529 **92.82**	---
6X3	---	3029-530 **96.87**	---
6X4	2929-532 **36.24**	3029-532 **40.48**	3329-532P **43.17**
8X2	2929-578 **156.55**	---	---
8X2-1/2	---	3029-579 **161.92**	---
8X3	---	3029-580 **169.72**	---
8X4	2929-582 **103.05**	300-100927 **110.57**	3329-582P **128.64**
8X6	2929-585 **53.65**	300-100928 **62.58**	3329-585P **72.54**

PIP Reducer Coupling (Socket) (continued)

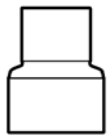
Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
10X2	2929-621 **185.06**	3029-621 **227.92**	---
10X2-1/2	---	3029-622 **187.26**	---
10X3	---	3029-623 **133.67**	---
10X4	2929-624 **141.76**	3029-624 **164.38**	3329-624P **180.64**
10X6	2929-626 **117.21**	300-100930 **128.77**	3329-626P **126.52**
10X8	2929-628 **73.69**	300-100931 **85.85**	3329-628P **160.42**
12X2	---	3029-661 **455.60**	---
12X2-1/2	---	3029-662 **311.31**	---
12X3	---	3029-663 **281.94**	---

PIP Reducer Coupling (Socket) (continued)



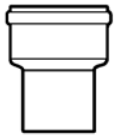
Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
12X4	2929-664 **203.46**	3029-664 **212.21**	3329-664P **309.44**
12X6	2929-666 **186.56**	300-100933 **198.77**	3329-666P **286.61**
12X8	2929-668 **130.00**	300-100934 **137.79**	3329-668P **250.87**
12X10	2929-670 **107.36**	300-100935 **123.91**	3329-670P **236.67**
15X2	2929-721 **464.68**	---	---
15X3	2929-723 **422.94**	3029-723 **487.43**	---
15X4	2929-724 **438.67**	3029-724 **469.40**	3329-724P **556.32**
15X6	2929-726 **414.73**	3029-726 **443.76**	3329-726P **482.86**
15X8	2929-728 **389.20**	3029-728 **420.35**	3329-728P **453.02**
15X10	2929-730 **268.53**	3029-730 **336.16**	3329-730P **365.64**
15X12	2929-732 **173.34**	300-100940 **199.97**	3329-732P **344.96**
18X4	2929-784 **853.66**	3029-784 **958.60**	3329-784P **1015.27**
18X6	2929-786 **889.07**	3029-786 **937.97**	3329-786P **994.15**
18X8	2929-788 **819.58**	3029-788 **868.76**	3329-788P **929.58**
18X10	2929-790 **527.42**	3029-790 **568.67**	3329-790P **642.64**
18X12	2929-792 **517.04**	3029-792 **534.17**	3329-792P **605.64**
18X15	2929-795 **310.71**	300-100946 **364.38**	3329-795P **442.92**
21X3	2929-843 **1060.92**	---	---
21X4	2929-844 **1084.28**	3029-844 **1142.83**	3329-844P **1234.27**
21X6	2929-846 **1038.74**	3029-846 **1101.05**	3329-846P **1172.63**
21X8	2929-848 **866.92**	3029-848 **910.63**	3329-848P **934.56**
21X10	2929-850 **803.05**	3029-850 **848.03**	3329-850P **876.77**
21X12	2929-852 **808.61**	3029-852 **776.64**	3329-852P **823.25**
21X15	2929-855 **711.96**	3029-855 **754.59**	3329-855P **904.83**
21X18	2929-858 **428.55**	300-100960 **501.79**	3329-858P **629.44**
24X3	2929-903 **1684.06**	3029-903 **1016.94**	---
24X6	2929-906 **1719.93**	3029-906 **1834.22**	3329-906P **1999.29**
24X8	2929-908 **1631.80**	3029-908 **1711.24**	3329-908P **1804.79**
24X10	2929-910 **1553.34**	3029-910 **1637.21**	3329-910P **1758.00**
24X12	2929-912 **1359.62**	3029-912 **1440.82**	3329-912P **1538.79**
24X15	2929-915 **989.16**	3029-915 **1068.29**	3329-915P **1081.53**
24X18	2929-918 **938.59**	3029-918 **1004.28**	3329-918P **1072.17**
24X20	---	3029-920 **1380.34**	---
24X21	2929-921 **635.31**	300-100969 **738.60**	3329-921P **898.09**
27X6	2929-936 **2236.27**	3029-936 **2387.36**	3329-936P **2578.36**
27X8	2929-938 **2080.05**	3029-938 **2257.80**	3329-938P **2411.02**
27X10	2929-940 **1950.16**	3029-940 **2077.73**	3329-940P **2220.99**

PIP Reducer Coupling (Socket) (continued)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
27X12	2929-942 **1832.18**	3029-942 **1942.12**	3329-942P **2097.17**
27X15	2929-945 **1443.26**	3029-945 **1542.17**	3329-945P **1645.57**
27X18	2929-948 **1353.89**	3029-948 **1448.05**	3329-948P **1524.12**
27X21	2929-951 **1122.86**	3029-951 **1344.85**	3329-951P **1437.85**
27X24	2929-954 **873.35**	3029-954 **1089.17**	3329-954P **1358.20**
30X18	2929-978 **2702.25**	3029-978 **3375.63**	---
30X21	---	3029-981 **2847.40**	---
30X24	2929-984 **2022.41**	3029-984 **2539.97**	---
30X27	2929-987 **2006.92**	3029-987 **2160.51**	---

PIP Reducer Coupling (Gasket x Spigot)

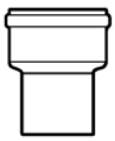


6X4	2929-53223 **87.36**	300-101310 **89.55**	3329-53223P **127.69**
8X4	2929-58223 **198.41**	300-100927 **110.57**	3329-58223P **247.40**
8X6	2929-58523 **105.15**	300-101312 **127.58**	3329-58523P **165.67**
10X4	2929-62423 **290.01**	3029-62423 **316.12**	3329-62423P **347.38**
10X6	2929-62623 **225.41**	300-100930 **128.77**	3329-62623P **282.65**
10X8	2929-62823 **171.39**	300-101315 **184.02**	3329-62823P **253.20**
12X4	2929-66423 **391.26**	3029-66423 **408.09**	3329-66423P **572.17**
12X6	2929-66623 **358.76**	300-100933 **198.77**	3329-66623P **551.16**
12X8	2929-66823 **249.99**	300-100934 **137.79**	3329-66823P **482.45**
12X10	2929-67023 **240.05**	300-101319 **269.93**	3329-67023P **329.66**
15X4	2929-72423 **843.62**	3029-72423 **902.68**	3329-72423P **1138.13**
15X6	2929-72623 **797.55**	3029-72623 **853.38**	3329-72623P **872.87**
15X8	2929-72823 **748.47**	3029-72823 **808.37**	3329-72823P **858.23**
15X10	2929-73023 **516.38**	3029-73023 **646.46**	3329-73023P **749.65**
15X12	2929-73223 **412.58**	300-101324 **449.05**	3329-73223P **579.58**
18X4	2929-78423 **1746.44**	3029-78423 **1843.46**	3329-78423P **1952.44**
18X6	2929-78623 **1709.75**	3029-78623 **1803.79**	3329-78623P **1911.80**
18X8	2929-78823 **1575.99**	3029-78823 **1670.67**	3329-78823P **1787.64**
18X10	2929-79023 **1014.26**	3029-79023 **1093.62**	3329-79023P **1235.85**
18X12	2929-79223 **994.33**	3029-79223 **1027.24**	3329-79223P **1164.69**
18X15	2929-79523 **726.66**	300-101330 **853.97**	3329-79523P **885.82**
21X6	2929-84623 **1997.56**	3029-84623 **2117.48**	3329-84623P **2255.06**
21X8	2929-84823 **1733.84**	3029-84823 **1750.52**	3329-84823P **1797.23**
21X10	2929-85023 **1544.35**	3029-85023 **1630.82**	3329-85023P **1686.08**
21X12	2929-85223 **1436.22**	3029-85223 **1493.54**	3329-85223P **1583.17**
21X15	2929-85523 **1369.15**	3029-85523 **1451.15**	3329-85523P **1541.57**
21X18	2929-85823 **1076.09**	300-101344 **1364.54**	3329-85823P **1455.14**

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

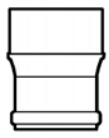
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PIP Reducer Coupling (Gasket x Spigot) (continued)



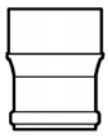
Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
24X6	2929-90623 **3307.55**	3029-90623 **3527.34**	3329-90623P **3844.22**
24X8	2929-90823 **3138.08**	3029-90823 **3290.84**	3329-90823P **3470.75**
24X10	2929-91023 **2987.18**	3029-91023 **3147.78**	3329-91023P **3380.76**
24X12	2929-91223 **2614.64**	3029-91223 **2769.77**	3329-91223P **2959.20**
24X15	2929-91523 **1902.23**	3029-91523 **2054.42**	3329-91523P **2689.13**
24X18	2929-91823 **1804.97**	3029-91823 **2026.63**	3329-91823P **2559.72**
24X21	2929-92123 **1605.79**	3029-92123 **1992.56**	3329-92123P **2440.59**
27X6	2929-93623 **4300.52**	3029-93623 **4591.08**	3329-93623P **4957.64**
27X8	2929-93823 **3999.88**	3029-93823 **4341.37**	3329-93823P **4634.60**
27X10	2929-94023 **3750.31**	3029-94023 **4007.35**	3329-94023P **4270.36**
27X12	2929-94223 **3521.21**	3029-94223 **3734.26**	3329-94223P **4032.09**
27X15	2929-94523 **2774.36**	3029-94523 **2964.51**	3329-94523P **3521.21**
27X18	2929-94823 **2595.66**	3029-94823 **2783.52**	3329-94823P **3405.93**
27X21	2929-95123 **2295.54**	3029-95123 **2584.20**	3329-95123P **3358.55**
27X24	2929-95423 **2247.96**	3029-95423 **2826.59**	3329-95423P **3323.27**

PIP Reducer Coupling (Spigot x Gasket)



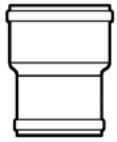
Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6X4	2929-53232 **83.20**	300-101383 **86.25**	3329-53232P **110.99**
8X4	2929-58232 **190.48**	3029-58232 **204.15**	3329-58232P **237.51**
8X6	2929-58532 **100.95**	300-101385 **120.20**	3329-58532P **128.27**
10X4	2929-62432 **278.41**	3029-62432 **303.47**	3329-62432P **333.49**
10X6	2929-62632 **216.38**	3029-62632 **237.74**	3329-62632P **271.36**
10X8	2929-62832 **158.63**	300-101388 **179.34**	3329-62832P **229.05**
12X4	2929-66432 **375.62**	3029-66432 **391.77**	3329-66432P **549.28**
12X6	2929-66632 **344.40**	3029-66632 **366.97**	3329-66632P **529.11**
12X8	2929-66832 **240.00**	3029-66832 **277.26**	3329-66832P **463.05**
12X10	2929-67032 **229.49**	300-101392 **254.00**	3329-67032P **323.96**
15X4	2929-72432 **809.86**	3029-72432 **866.57**	3329-72432P **1092.61**
15X6	2929-72632 **765.64**	3029-72632 **819.26**	3329-72632P **891.44**
15X8	2929-72832 **718.55**	3029-72832 **776.03**	3329-72832P **823.89**
15X10	2929-73032 **495.62**	3029-73032 **620.59**	3329-73032P **719.66**
15X12	2929-73232 **337.00**	300-101397 **392.63**	3329-73232P **557.00**
18X4	2929-78432 **1676.59**	3029-78432 **1769.72**	3329-78432P **1874.35**
18X6	2929-78632 **1641.35**	3029-78632 **1731.62**	3329-78632P **1835.34**
18X8	2929-78832 **1512.95**	3029-78832 **1603.84**	3329-78832P **1716.14**
18X10	2929-79032 **973.45**	3029-79032 **1049.86**	3329-79032P **1186.42**
18X12	2929-79232 **954.54**	3029-79232 **986.16**	3329-79232P **1118.11**
18X15	2929-79532 **660.74**	300-101403 **759.46**	3329-79532P **852.76**

PIP Reducer Coupling (Spigot x Gasket) (continued)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
21X6	2929-84632 **1917.66**	3029-84632 **2032.79**	3329-84632P **2164.85**
21X8	2929-84832 **1664.48**	3029-84832 **1680.49**	3329-84832P **1773.22**
21X10	2929-85032 **1458.75**	3029-85032 **1565.58**	3329-85032P **1618.64**
21X12	2929-85232 **1378.79**	3029-85232 **1433.80**	3329-85232P **1518.66**
21X15	2929-85532 **1314.38**	3029-85532 **1392.96**	3329-85532P **1479.87**
21X18	2929-85832 **1015.26**	300-101417 **1144.72**	3329-85832P **1328.80**
24X6	2929-90632 **3175.24**	3029-90632 **3386.24**	3329-90632P **3690.55**
24X8	2929-90832 **3012.56**	3029-90832 **3159.20**	3329-90832P **3331.92**
24X10	2929-91032 **2867.69**	3029-91032 **3021.87**	3329-91032P **3245.66**
24X12	2929-91232 **2510.31**	3029-91232 **2658.98**	3329-91232P **2840.82**
24X15	2929-91532 **1826.41**	3029-91532 **1973.86**	3329-91532P **2581.57**
24X18	2929-91832 **1732.77**	3029-91832 **1945.56**	3329-91832P **2456.55**
24X21	2929-92132 **1580.17**	3029-92132 **1902.99**	3329-92132P **2116.43**
27X6	2929-93632 **4128.48**	3029-93632 **4407.61**	3329-93632P **4759.34**
27X8	2929-93832 **3839.89**	3029-93832 **4167.44**	3329-93832P **4445.21**
27X10	2929-94032 **3600.20**	3029-94032 **3847.06**	3329-94032P **4099.54**
27X12	2929-94232 **3380.36**	3029-94232 **3584.91**	3329-94232P **3870.82**
27X15	2929-94532 **2663.56**	3029-94532 **2845.92**	3329-94532P **3379.47**
27X18	2929-94832 **2491.83**	3029-94832 **2672.18**	3329-94832P **3269.68**
27X21	2929-95132 **2203.71**	3029-95132 **2480.83**	3329-95132P **3030.51**
27X24	2929-95432 **2208.33**	3029-95432 **2644.97**	3329-95432P **3189.63**

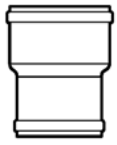
PIP Reducer Coupling (Gasketed)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6X4	2929-5322 **101.18**	300-101456 **120.20**	3329-5322P **152.82**
8X4	2929-5822 **226.66**	3029-5822 **242.94**	3329-5822P **282.62**
8X6	2929-5852 **127.97**	300-101458 **158.24**	3329-5852P **196.69**
10X4	2929-6242 **331.29**	3029-6242 **361.13**	3329-6242P **395.51**
10X6	2929-6262 **257.91**	3029-6262 **282.92**	3329-6262P **322.93**
10X8	2929-6282 **224.53**	300-101461 **254.00**	3329-6282P **317.47**
12X4	2929-6642 **446.99**	3029-6642 **466.41**	3329-6642P **653.65**
12X6	2929-6662 **409.84**	3029-6662 **436.69**	3329-6662P **629.64**
12X8	2929-6682 **334.02**	3029-6682 **389.87**	3329-6682P **551.03**
12X10	2929-6702 **301.62**	300-101465 **348.45**	3329-6702P **438.95**
15X4	2929-7242 **964.94**	3029-7242 **1031.35**	3329-7242P **1300.27**
15X6	2929-7262 **911.12**	3029-7262 **974.92**	3329-7262P **1061.81**
15X8	2929-7282 **855.06**	3029-7282 **923.48**	3329-7282P **980.43**
15X10	2929-7302 **589.69**	3029-7302 **719.88**	3329-7302P **856.41**
15X12	2929-7322 **444.96**	300-101470 **506.71**	3329-7322P **633.08**

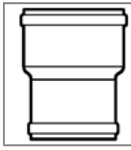
Reducer Couplings

PIP Reducer Coupling (Gasketed) (continued)



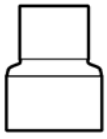
Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
18X4	2929-7842 **1994.62**	3029-7842 **2105.94**	3329-7842P **2229.96**
18X6	2929-7862 **1953.20**	3029-7862 **2060.64**	3329-7862P **2184.05**
18X8	2929-7882 **1800.41**	3029-7882 **1908.58**	3329-7882P **2042.23**
18X10	2929-7902 **1158.40**	3029-7902 **1249.34**	3329-7902P **1411.83**
18X12	2929-7922 **1135.85**	3029-7922 **1173.53**	3329-7922P **1331.17**
18X15	2929-7952 **794.96**	300-101476 **885.82**	3329-7952P **1012.20**
21X6	2929-8462 **2281.98**	3029-8462 **2419.01**	3329-8462P **2576.17**
21X8	2929-8482 **1980.74**	3029-8482 **1998.88**	3329-8482P **2109.45**
21X10	2929-8502 **1735.92**	3029-8502 **1862.79**	3329-8502P **1926.59**
21X12	2929-8522 **1640.77**	3029-8522 **1706.22**	3329-8522P **1807.51**
21X15	2929-8552 **1563.66**	3029-8552 **1657.22**	3329-8552P **1760.72**
21X18	2929-8582 **1301.41**	300-101489 **1392.60**	3329-8582P **1549.64**
24X6	2929-9062 **3778.03**	3029-9062 **4030.37**	3329-9062P **4390.45**
24X8	2929-9082 **3585.23**	3029-9082 **3759.45**	3329-9082P **3964.98**
24X10	2929-9102 **3412.27**	3029-9102 **3595.15**	3329-9102P **3861.67**
24X12	2929-9122 **2986.98**	3029-9122 **3164.19**	3329-9122P **3381.08**
24X15	2929-9152 **2173.25**	3029-9152 **2348.89**	3329-9152P **3072.04**
24X18	2929-9182 **2122.01**	3029-9182 **2315.02**	3329-9182P **2923.18**
24X21	2929-9212 **2097.08**	3029-9212 **2289.48**	3329-9212P **2902.71**
27X6	2929-9362 **4913.56**	3029-9362 **5202.76**	3329-9362P **5663.49**
27X8	2929-9382 **4570.49**	3029-9382 **4958.93**	3329-9382P **5289.24**
27X10	2929-9402 **4284.12**	3029-9402 **4577.58**	3329-9402P **4878.12**
27X12	2929-9422 **4021.82**	3029-9422 **4265.69**	3329-9422P **4605.94**
27X15	2929-9452 **3169.85**	3029-9452 **3385.34**	3329-9452P **4020.45**
27X18	2929-9482 **2964.31**	3029-9482 **3179.78**	3329-9482P **3890.02**
27X21	2929-9512 **2741.77**	3029-9512 **3070.28**	3329-9512P **3836.15**

PIP Reducer Coupling (Gasketed) (continued)



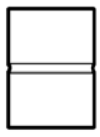
Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
27X24	2929-9542 **2644.95**	3029-9542 **2935.37**	3329-9542P **3740.96**

PIP X IPS Reducer (Socket)



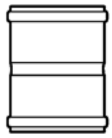
Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6X4	2929-532 **36.24**	---	---
8X6	---	300-101537 **47.82**	---
10X6	---	3029-626PXI **147.37**	---
10X8	---	300-101538 **108.75**	---
12X10	---	300-101539 **131.24**	---
15X10	---	300-101541 **331.26**	---
15X12	---	300-101540 **225.75**	---

IPS X PIP Adapter (Socket)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	---	300-101649 **39.23**	---
8	---	300-101650 **56.39**	---
10	---	300-101651 **94.48**	---
12	---	300-101652 **147.18**	---

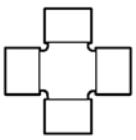
IPS X PIP Adapter (Gasketed)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	---	300-101747 **95.66**	---
8	---	300-101748 **156.15**	---
10	---	300-101749 **224.58**	---
12	---	300-101750 **316.54**	---

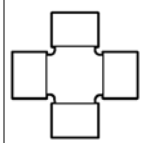
Crosses

PIP Cross (Socket)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-103286 **101.82**	300-103286 **141.09**	3320-060P **175.58**
6X2	290-103283 **77.27**	300-103283 **89.55**	3320-528P **109.28**
6X3	290-103284 **84.66**	300-103284 **100.59**	3320-530P **118.02**
6X4	290-103285 **92.00**	300-103285 **107.94**	3320-532P **124.01**
8	290-103291 **172.97**	300-103291 **206.12**	3320-080P **254.14**
8X2	290-103287 **95.66**	300-103287 **115.28**	3320-578P **132.56**

PIP Cross (Socket) (continued)



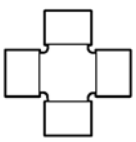
Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
8X3	290-103288 **104.24**	300-103288 **126.35**	3320-580P **148.58**
8X4	290-103289 **111.63**	300-103289 **134.95**	3320-582P **168.12**
8X6	290-103290 **130.04**	300-103290 **155.83**	3320-585P **192.71**
10	290-103297 **293.21**	300-103297 **354.58**	3320-100P **411.99**
10X2	290-103292 **147.18**	300-103292 **153.36**	3320-621P **171.88**
10X3	290-103293 **158.24**	300-103293 **179.06**	3320-623P **194.53**

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

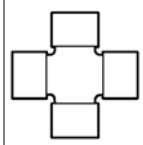
PVC 80, 100 & 125 PSI PIP Fabricated Fittings

PIP Cross (Socket) (continued)



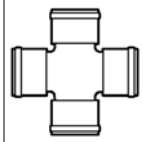
Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
10X4	290-103294 **176.69**	300-103294 **191.37**	3320-624P **236.41**
10X6	290-103295 **199.97**	300-103295 **214.68**	3320-626P **264.92**
10X8	290-103296 **234.31**	300-103296 **261.29**	3320-628P **323.76**
12	290-103304 **455.16**	300-103304 **536.17**	3320-120P **662.04**
12X2	290-103298 **220.85**	300-103298 **225.75**	3320-661P **285.98**
12X3	290-103299 **244.14**	300-103299 **246.62**	3320-663P **311.48**
12X4	290-103300 **249.05**	300-103300 **269.93**	3320-664P **333.67**
12X6	290-103301 **267.44**	300-103301 **296.92**	3320-666P **367.91**
12X8	290-103302 **311.61**	300-103302 **345.99**	3320-668P **378.88**
12X10	290-103303 **366.82**	300-103303 **417.15**	3320-670P **514.80**
15	290-103321 **761.92**	300-103321 **923.86**	3320-150P **1177.87**
15X2	290-103313 **311.61**	300-103313 **352.11**	3320-721P **411.01**
15X3	290-103314 **316.54**	300-103314 **373.00**	3320-723P **449.05**
15X4	290-103315 **331.26**	300-103315 **381.59**	3320-724P **466.20**
15X6	290-103316 **364.38**	300-103316 **422.05**	3320-726P **483.40**
15X8	290-103317 **430.69**	300-103317 **483.40**	3320-728P **660.09**
15X10	290-103318 **498.12**	300-103318 **601.16**	3320-730P **799.95**
15X12	290-103319 **586.47**	300-103319 **703.03**	3320-732P **914.01**
18	290-103342 **1318.97**	300-103342 **1494.43**	3320-180P **1904.21**
18X2	290-103332 **466.20**	300-103332 **545.97**	3320-781P **711.58**
18X3	290-103333 **478.49**	300-103333 **571.75**	3320-783P **750.88**
18X4	290-103334 **495.68**	300-103334 **584.00**	3320-784P **797.46**
18X6	290-103335 **531.23**	300-103335 **630.63**	3320-786P **879.68**
18X8	290-103336 **588.91**	300-103336 **689.54**	3320-788P **996.25**
18X10	290-103337 **650.25**	300-103337 **747.17**	3320-790P **1143.51**
18X12	290-103338 **759.46**	300-103338 **923.86**	3320-792P **1295.65**
18X15	290-103340 **920.20**	300-103340 **1201.20**	3320-795P **1538.60**
21	290-103367 **1947.19**	300-103367 **2461.23**	3320-210P **2929.97**
21X2	290-103355 **711.58**	300-103355 **907.92**	3320-841P **932.46**
21X3	290-103356 **742.28**	300-103356 **956.99**	3320-843P **1055.17**
21X4	290-103357 **785.22**	300-103357 **996.25**	3320-844P **1177.87**
21X6	290-103358 **835.49**	300-103358 **1055.17**	3320-846P **1272.29**
21X8	290-103359 **903.01**	300-103359 **1143.51**	3320-848P **1406.08**
21X10	290-103360 **976.61**	300-103360 **1260.05**	3320-850P **1553.32**
21X12	290-103361 **1093.20**	300-103361 **1406.08**	3320-852P **1728.78**
21X15	290-103363 **1253.93**	300-103363 **1640.42**	3320-855P **1992.56**
21X18	290-103365 **1502.99**	300-103365 **1963.12**	3320-858P **2431.81**

PIP Cross (Socket) (continued)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
24	290-103381 **2783.93**	300-103381 **3280.85**	3320-240P **4511.54**
24X2	290-103368 **981.54**	300-103368 **1177.87**	3320-901P **1226.94**
24X3	290-103369 **1030.59**	300-103369 **1226.94**	3320-903P **1282.16**
24X4	290-103370 **1093.20**	300-103370 **1289.53**	3320-904P **1348.39**
24X6	290-103371 **1186.43**	300-103371 **1374.16**	3320-906P **1435.54**
24X8	290-103372 **1260.05**	300-103372 **1494.43**	3320-908P **1582.75**
24X10	290-103373 **1348.39**	300-103373 **1612.21**	3320-910P **1758.20**
24X12	290-103374 **1464.93**	300-103374 **1787.67**	3320-912P **1933.69**
24X15	290-103376 **1758.20**	300-103376 **2022.00**	3320-915P **2197.47**
24X18	290-103378 **1992.56**	300-103378 **2343.47**	3320-918P **2636.73**
24X21	290-103380 **2372.92**	300-103380 **2783.93**	3320-921P **3193.74**
27	2920-270 **4215.02**	3020-270 **4967.07**	3320-270P **6456.02**
27X4	2920-934 **1246.62**	3020-934 **1561.47**	3320-934P **2029.38**
27X6	2920-936 **1438.81**	3020-936 **1666.69**	3320-936P **2168.18**
27X8	2920-938 **1527.60**	3020-938 **1811.69**	3320-938P **2355.95**
27X10	2920-940 **1632.80**	3020-940 **1953.22**	3320-940P **2539.85**
27X12	2920-942 **1774.16**	3020-942 **2165.78**	3320-942P **2815.11**
27X15	2920-945 **2129.36**	3020-945 **2449.77**	3320-945P **3184.38**
27X18	2920-948 **2412.35**	3020-948 **2839.00**	3320-948P **3675.84**
27X21	2920-951 **2875.19**	3020-951 **3371.97**	3320-951P **4385.44**
27X24	2920-954 **3371.93**	3020-954 **3973.74**	3320-954P **5164.61**

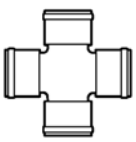
PIP Cross (Gasketed)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-104001 **245.32**	300-104001 **252.69**	3320-0602P **303.23**
6X4	290-104000 **227.32**	300-104000 **233.13**	3320-5322P **260.82**
8	290-104006 **343.53**	300-104006 **364.38**	3320-0802P **438.25**
8X4	290-104004 **273.45**	300-104004 **282.15**	3320-5822P **352.88**
8X6	290-104005 **311.24**	300-104005 **318.99**	3320-5852P **379.64**
10	290-104012 **510.38**	300-104012 **512.84**	3320-1002P **604.24**
10X4	290-104009 **364.06**	300-104009 **368.07**	3320-6242P **433.96**
10X6	290-104010 **398.72**	300-104010 **411.01**	3320-6262P **458.31**
10X8	290-104011 **427.60**	300-104011 **460.11**	3320-6282P **515.01**
12	290-104019 **732.51**	300-104019 **761.92**	3320-1202P **916.42**
12X4	290-104015 **441.69**	300-104015 **472.38**	3320-6642P **600.67**
12X6	290-104016 **478.49**	300-104016 **515.27**	3320-6662P **639.71**
12X8	290-104017 **539.85**	300-104017 **588.91**	3320-6682P **656.60**
12X10	290-104018 **625.72**	300-104018 **662.58**	3320-6702P **777.35**
15	290-104036 **1143.51**	300-104036 **1318.97**	3320-1502P **1656.36**

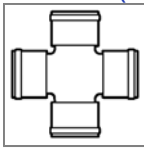
PVC 80, 100 & 125 PSI PIP Fabricated Fittings

PIP Cross (Gasketed) (continued)



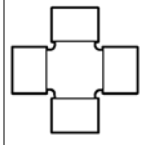
Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
15X4	290-104030 **662.58**	300-104030 **834.32**	3320-7242P **886.45**
15X6	290-104031 **711.58**	300-104031 **889.52**	3320-7262P **923.18**
15X8	290-104032 **797.46**	300-104032 **950.86**	3320-7282P **981.54**
15X10	290-104033 **920.20**	300-104033 **1042.91**	3320-7302P **1104.26**
15X12	290-104034 **977.92**	300-104034 **1165.60**	3320-7322P **1318.97**
18	290-104057 **1758.20**	300-104057 **1992.56**	3320-1802P **2515.26**
18X4	290-104049 **981.54**	300-104049 **1104.26**	3320-7842P **1128.76**
18X6	290-104050 **1067.42**	300-104050 **1226.94**	3320-7862P **1282.45**
18X8	290-104051 **1202.40**	300-104051 **1349.63**	3320-7882P **1368.99**
18X10	290-104052 **1288.28**	300-104052 **1472.36**	3320-7902P **1524.79**
18X12	290-104053 **1411.01**	300-104053 **1595.01**	3320-7922P **1668.69**
18X15	2920-7952 **1614.22**	3020-7952 **1814.67**	3320-7952P **2143.55**
21	290-104082 **2910.36**	300-104082 **3875.43**	3320-2102P **4101.00**
21X4	290-104072 **1570.49**	300-104072 **2657.15**	3320-8442P **3147.16**
21X6	290-104073 **1680.88**	300-104073 **2760.37**	3320-8462P **3212.73**
21X8	290-104074 **1840.40**	300-104074 **2879.75**	3320-8482P **3356.98**
21X10	290-104075 **2024.46**	300-104075 **3045.68**	3320-8502P **3435.63**
21X12	290-104076 **2269.87**	300-104076 **3212.21**	3320-8522P **3593.00**
21X15	290-104078 **2515.26**	300-104078 **3359.35**	3320-8552P **3615.11**
21X18	290-104080 **2699.29**	300-104080 **3709.48**	3320-8582P **3804.26**
24	2920-2402 **5516.67**	3020-2402 **6595.12**	3320-2402P **8222.40**
24X4	2920-9042 **2877.74**	3020-9042 **3199.51**	3320-9042P **3998.76**
24X6	2920-9062 **2889.88**	3020-9062 **3230.39**	3320-9062P **4014.24**
24X8	2920-9082 **3120.58**	3020-9082 **3468.63**	3320-9082P **4334.80**
24X10	2920-9102 **3377.53**	3020-9102 **3751.98**	3320-9102P **4688.87**
24X12	2920-9122 **3634.61**	3020-9122 **4037.34**	3320-9122P **5045.31**
24X15	2920-9152 **4211.38**	3020-9152 **4678.82**	3320-9152P **5848.73**
24X18	2920-9182 **4652.59**	3020-9182 **5168.58**	3320-9182P **6461.76**
24X21	2920-9212 **5350.72**	3020-9212 **5945.69**	3320-9212P **7431.11**
27	2920-2702 **7673.88**	3020-2702 **11029.28**	3320-2702P **13751.19**
27X4	2920-9342 **3382.29**	3020-9342 **4000.89**	3320-9342P **4998.58**
27X6	2920-9362 **3630.57**	3020-9362 **4016.54**	3320-9362P **5071.82**
27X8	2920-9382 **3891.62**	3020-9382 **4336.81**	3320-9382P **5421.37**
27X10	2920-9402 **4221.51**	3020-9402 **4688.98**	3320-9402P **5862.76**
27X12	2920-9422 **4543.27**	3020-9422 **5049.19**	3320-9422P **6310.13**
27X15	2920-9452 **5263.71**	3020-9452 **5848.56**	3320-9452P **7311.73**
27X18	2920-9482 **5816.17**	3020-9482 **6461.76**	3320-9482P **8075.85**

PIP Cross (Gasketed) (continued)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
27X21	2920-9512 **6688.39**	3020-9512 **7431.11**	3320-9512P **9290.89**
27X24	2920-9542 **7240.95**	3020-9542 **8222.56**	3320-9542P **10278.47**

PIP X IPS Cross (Socket)



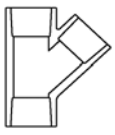
Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	2920-060PXI **101.82**	3020-060PXI **141.09**	3320-060PXI **175.58**
8	2920-080PXI **172.97**	3020-080PXI **206.12**	3320-080PXI **254.14**
8X6	2920-585PXI **122.24**	3020-585PXI **155.83**	3320-585PXI **192.71**
10	2920-100PXI **293.21**	3020-100PXI **354.58**	3320-100PXI **411.99**
10X6	2920-626PXI **187.97**	300-103700 **214.68**	3320-626PXI **249.02**
10X8	2920-628PXI **220.24**	3020-628PXI **291.83**	3320-628PXI **304.34**
12	2920-120PXI **455.16**	3020-120PXI **536.17**	3320-120PXI **662.04**
12X6	2920-666PXI **267.44**	3020-666PXI **296.92**	3320-666PXI **345.83**
12X8	2920-668PXI **311.61**	3020-668PXI **345.99**	3320-668PXI **729.43**
12X10	2920-670PXI **344.81**	3020-670PXI **417.15**	3320-670PXI **483.92**
15X6	2920-726PXI **342.52**	3020-726PXI **422.05**	3320-726PXI **454.40**
15X8	2920-728PXI **404.85**	3020-728PXI **483.40**	3320-728PXI **620.48**
15X10	2920-730PXI **468.23**	3020-730PXI **601.16**	3320-730PXI **751.95**
15X12	2920-732PXI **551.28**	3020-732PXI **703.03**	3320-732PXI **859.17**
18X6	2920-786PXI **531.23**	3020-786PXI **630.63**	3320-786PXI **879.68**
18X8	2920-788PXI **553.57**	3020-788PXI **689.54**	3320-788PXI **936.47**
18X10	2920-790PXI **650.25**	3020-790PXI **747.17**	3320-790PXI **1074.89**
18X12	2920-792PXI **759.46**	3020-792PXI **923.86**	3320-792PXI **1217.92**
21X6	2920-846PXI **875.21**	3020-846PXI **1055.17**	3320-846PXI **1195.96**
21X8	2920-848PXI **903.01**	3020-848PXI **1143.51**	3320-848PXI **1321.72**
21X10	2920-850PXI **976.61**	3020-850PXI **1260.05**	3320-850PXI **1460.12**
21X12	2920-852PXI **1027.61**	3020-852PXI **1406.08**	3320-852PXI **1625.05**
24X6	2920-906PXI **1186.43**	3020-906PXI **1374.16**	3320-906PXI **1349.40**
24X8	2920-908PXI **1260.05**	3020-908PXI **1494.43**	3320-908PXI **1487.78**
24X10	2920-910PXI **1348.39**	3020-910PXI **1612.21**	3320-910PXI **1652.71**
24X12	2920-912PXI **1464.93**	3020-912PXI **1787.67**	3320-912PXI **1817.67**

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

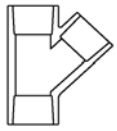
Wyes

PIP Wyes (Socket)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	2975-060 **193.72**	---	---
6X4	2975-532 **108.97**	---	---
8	2975-080 **205.64**	---	---
8X4	2975-582 **178.48**	---	---
8X6	2975-585 **290.84**	---	---
10	2975-100 **323.82**	---	---
10X4	2975-624 **198.36**	---	---
10X6	2975-626 **208.63**	---	---
10X8	2975-628 **266.78**	---	---
12	2975-120 **463.55**	---	---
12X4	2975-664 **235.29**	---	---
12X6	2975-666 **257.32**	---	---
12X8	2975-668 **290.76**	---	---
12X10	2975-670 **310.29**	---	---
15	2975-150 **928.65**	---	---

PIP Wyes (Socket) (continued)



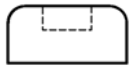
Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
15X4	2975-724 **373.21**	---	---
15X6	2975-726 **399.42**	---	---
15X8	2975-728 **483.19**	---	---
15X10	2975-730 **519.02**	---	---
15X12	2975-732 **717.49**	---	---
18	2975-187 **1356.41**	---	---
18X4	2975-784 **585.98**	---	---
18X6	2975-786 **621.27**	---	---
18X8	2975-788 **686.02**	---	---
18X10	2975-790 **715.55**	---	---
18X12	2975-792 **938.63**	---	---
18X15	2975-795 **1176.62**	---	---

Surface Reducers

PIP Surface Reducer (Socket)

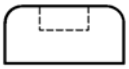
Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6X2	---	300-102013 **49.05**	---
6X3	---	300-102015 **49.05**	---
8X2	---	300-102018 **92.00**	---
8X3	---	300-102020 **92.00**	---
8X4	---	300-102021 **92.00**	---
10X2	---	300-102024 **116.59**	---
10X3	---	300-102026 **116.59**	---
10X4	---	300-102027 **116.59**	---
10X6	---	300-102028 **116.59**	---
12X2	---	300-102031 **171.75**	---
12X3	---	300-102033 **171.75**	---
12X4	---	300-102034 **171.75**	---
12X6	---	300-102035 **171.75**	---
12X8	---	300-102036 **171.75**	---
15X2	---	300-102048 **312.75**	---
15X3	---	300-102050 **312.75**	---
15X4	---	300-102051 **312.75**	---

PIP Surface Reducer (Socket) (continued)

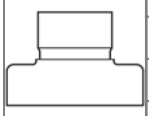


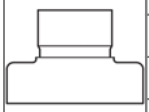
Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
15X6	---	300-102052 **312.75**	---
15X8	---	300-102053 **312.75**	---
15X10	---	300-102054 **312.75**	---
18X2	---	300-102067 **472.38**	---
18X3	---	300-102069 **472.38**	---
18X4	---	300-102070 **472.38**	---
18X6	---	300-102071 **472.38**	---
18X8	---	300-102072 **472.38**	---
18X10	---	300-102073 **472.38**	---
18X12	---	300-102074 **472.38**	---
21X2	---	300-102088 **779.13**	---
21X3	---	300-102089 **779.13**	---
21X4	---	300-102090 **779.13**	---
21X6	---	300-102091 **779.13**	---
21X8	---	300-102092 **779.13**	---
21X10	---	300-102093 **779.13**	---
21X12	---	300-102094 **779.13**	---

Surface Reducers

	Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
PIP Surface Reducer (Socket) (continued)				
	**21X15**	**---**	300-102095 **779.13**	**---**

Stub Surface Reducers

	Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
PIP Stub Surface Reducer (Socket)				
	**6X4**	**---**	30040-532 **120.85**	**---**
	8X4	**---**	30040-582 **138.64**	**---**
	8X6	**---**	30040-585 **148.02**	**---**
	10X4	**---**	30040-624 **157.51**	**---**
	10X6	**---**	30040-626 **166.36**	**---**
	10X8	**---**	30040-628 **174.94**	**---**
	12X4	**---**	30040-664 **177.31**	**---**
	12X6	**---**	30040-666 **180.89**	**---**
	12X8	**---**	30040-668 **208.49**	**---**
	12X10	**---**	30040-670 **240.16**	**---**
	15X4	**---**	30040-724 **290.84**	**---**
	15X6	**---**	30040-726 **304.26**	**---**
	15X8	**---**	30040-728 **319.22**	**---**
	15X10	**---**	30040-730 **352.28**	**---**
	15X12	**---**	30040-732 **363.27**	**---**
	18X4	**---**	30040-784 **695.20**	**---**
	18X6	**---**	30040-786 **715.28**	**---**
	18X8	**---**	30040-788 **730.60**	**---**
	18X10	**---**	30040-790 **757.43**	**---**
	18X12	**---**	30040-792 **778.33**	**---**
	18X15	**---**	30040-795 **891.63**	**---**
	21X4	**---**	30040-844 **964.83**	**---**

	Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
PIP Stub Surface Reducer (Socket) (continued)				
	**21X6**	**---**	30040-846 **974.55**	**---**
	21X8	**---**	30040-848 **1001.13**	**---**
	21X10	**---**	30040-850 **1034.19**	**---**
	21X12	**---**	30040-852 **1047.96**	**---**
	21X15	**---**	30040-855 **1161.64**	**---**
	21X18	**---**	30040-858 **1282.81**	**---**
	24X4	**---**	30040-904 **1089.32**	**---**
	24X6	**---**	30040-906 **1096.77**	**---**
	24X8	**---**	30040-908 **1124.53**	**---**
	24X10	**---**	30040-910 **1157.58**	**---**
	24X12	**---**	30040-912 **1172.25**	**---**
	24X15	**---**	30040-915 **1286.03**	**---**
	24X18	**---**	30040-918 **1407.25**	**---**
	24X21	**---**	30040-921 **1669.24**	**---**

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Caps

PIP Cap (Socket)

Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	---	300-107540 **49.05**	---
8	---	300-107541 **62.58**	---
10	---	300-107542 **100.59**	---
12	---	300-107543 **132.48**	---
15	---	300-107545 **215.91**	---
18	---	300-107547 **421.81**	---

PIP Cap (Socket) (continued)

Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
21	---	300-107549 **645.34**	---
24	---	300-107550 **882.46**	---
27	---	3047-270 **1107.38**	---
30	---	3047-300 **2705.66**	---

Glue-On Saddles

PIP Saddle (Socket)

Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6X2	---	300-101789 **61.33**	---
6X3	---	300-101797 **73.61**	---
6X4	---	300-101804 **85.85**	---
8X2	---	300-101790 **61.33**	---
8X3	---	300-101798 **73.61**	---
8X4	---	300-101805 **85.85**	---
8X6	---	300-101811 **98.14**	---
10X2	---	300-101791 **61.33**	---
10X3	---	300-101799 **73.61**	---
10X4	---	300-101806 **85.85**	---
10X6	---	300-101812 **98.14**	---
10X8	---	300-101817 **110.41**	---
12X2	---	300-101792 **61.33**	---
12X3	---	300-101800 **73.61**	---
12X4	---	300-101807 **85.85**	---
12X6	---	300-101813 **98.14**	---
12X8	---	300-101818 **110.41**	---
12X10	---	300-101822 **122.65**	---
15X2	---	300-101793 **61.33**	---
15X3	---	300-101801 **88.61**	---
15X4	---	300-101808 **85.85**	---
15X6	---	300-101814 **98.14**	---
15X8	---	300-101819 **110.41**	---
15X10	---	300-101823 **122.65**	---
15X12	---	300-101826 **170.62**	---

PIP Saddle (Socket) (continued)

Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
18X2	---	300-101794 **61.33**	---
18X3	---	300-101802 **131.61**	---
18X4	---	300-101809 **167.82**	---
18X6	---	300-101815 **202.64**	---
18X8	---	300-101820 **216.49**	---
18X10	---	300-101824 **249.22**	---
18X12	---	300-101827 **262.77**	---
18X15	---	300-101829 **402.01**	---

NOTE: When assembling Spears® Saddles to PVC pipe, Spears® Manufacturing Company recommends Industrial Polychemical Service (IPS) #719 Solvent Cement and #P-68 Primer, or equivalent. Although good connections may be accomplished without Saddle Straps, Spears® Manufacturing Company recommends the use of clamp or strap device during the asssembly step to insure good compression between the pipe and fitting surfaces as the solvent cures. PVC Fabricated Saddle connections are designed for use in low pressure open ended systems and are not intended for use in high pressure applications. For further details, contact Spears® Technical Services Department.

PIP Stub Saddle (Socket)

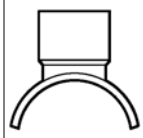
Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6X2	---	300-101884 **85.85**	---
6X3	---	300-101892 **94.48**	---
6X4	---	300-101899 **109.16**	---
8X2	---	300-101885 **85.85**	---
8X3	---	300-101893 **94.48**	---
8X4	---	300-101900 **109.16**	---
8X6	---	300-101906 **134.95**	---
10X2	---	300-101886 **85.85**	---
10X3	---	300-101894 **94.48**	---
10X4	---	300-101901 **109.16**	---
10X6	---	300-101907 **134.95**	---
10X8	---	300-101912 **176.69**	---

Glue-On Saddles

PIP Stub Saddle (Socket) (continued)

Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
12X2	---	300-101887 **85.85**	---
12X3	---	300-101895 **94.48**	---
12X4	---	300-101902 **109.16**	---
12X6	---	300-101908 **134.95**	---
12X8	---	300-101913 **176.69**	---
12X10	---	300-101917 **191.37**	---
15X2	---	300-101888 **123.91**	---
15X3	---	300-101896 **137.37**	---
15X4	---	300-101903 **143.55**	---
15X6	---	300-101909 **148.43**	---
15X8	---	300-101914 **176.69**	---
15X10	---	300-101918 **203.64**	---
15X12	---	300-101921 **268.67**	---
18X2	---	300-101889 **202.42**	---

PIP Stub Saddle (Socket) (continued)

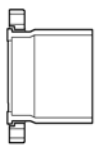


Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
18X3	---	300-101897 **207.34**	---
18X4	---	300-101904 **250.25**	---
18X6	---	300-101910 **318.99**	---
18X8	---	300-101915 **341.08**	---
18X10	---	300-101919 **392.63**	---
18X12	---	300-101922 **452.77**	---
18X15	---	300-101924 **633.08**	---

NOTE: When assembling Spears® Saddles to PVC pipe, Spears® Manufacturing Company recommends Industrial Polychemical Service (IPS) #719 Solvent Cement and #P-68 Primer, or equivalent. Although good connections may be accomplished without Saddle Straps, Spears® Manufacturing Company recommends the use of clamp or strap device during the assembly step to insure good compression between the pipe and fitting surfaces as the solvent cures. PVC Fabricated Saddle connections are designed for use in low pressure open ended systems and are not intended for use in high pressure applications. For further details, contact Spears® Technical Services Department.

Pipe Flanges

Flange x PIP (Socket)



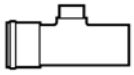
Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6X6.140	---	---	354-060F **133.67**
8X8.160	---	---	354-080F **202.42**
10X10.200	---	---	354-100F **284.61**
12X12.240	---	---	354-120F **412.21**
14X15.300	---	---	354-150F **1098.76**
16X15.300	---	---	354-151F **1253.46**
18X18.360	---	354-182F **1904.21**	---
18X18.701	---	354-181F **1904.21**	---
20X22.047	---	354-201F **2900.51**	---
24X24.803	---	354-241F **4247.72**	---

PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125

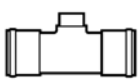
PRICING

PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125

Class Tee (Gasket x Spigot x Fipt)

	Size	CLASS 63 Prod Code: 340 Part Number Price Each	CLASS 100 Prod Code: 350 Part Number Price Each	CLASS 125 Prod Code: 360 Part Number Price Each	CLASS 160 Prod Code: 370 Part Number Price Each	CLASS 200 Prod Code: 380 Part Number Price Each
	4X1-1/2	---	---	---	340-102356 **189.49**	350-102356 **220.87**
	4X2	---	---	---	340-102357 **189.49**	350-102357 **220.87**
	4X2-1/2	---	---	---	340-102358 **202.32**	350-102358 **234.83**
	4X3	---	---	---	340-102359 **202.32**	---
	6X1-1/2	---	---	---	340-102361 **275.58**	350-102361 **287.19**
	6X2	---	---	---	340-102362 **275.58**	350-102362 **287.19**
	6X2-1/2	---	---	---	340-102363 **293.03**	350-102363 **299.97**
	6X3	---	---	---	340-102364 **293.03**	350-102364 **299.97**
	6X4	---	---	---	340-102365 **304.60**	350-102365 **316.24**
	8X1-1/2	---	---	---	340-102366 **336.01**	350-102366 **409.26**
	8X2	---	---	---	340-102367 **336.01**	350-102367 **409.26**
	8X2-1/2	---	---	---	340-102368 **353.45**	350-102368 **426.69**
	8X3	---	---	---	340-102369 **353.45**	350-102369 **426.69**
	8X4	---	---	---	340-102370 **382.52**	350-102370 **444.12**
	10X2	---	---	---	340-102372 **570.87**	350-102372 **623.20**
	10X2-1/2	---	---	---	340-102373 **605.77**	---
	10X3	---	---	---	340-102374 **605.77**	350-102374 **653.43**
	10X4	---	---	---	340-102375 **637.13**	350-102375 **687.17**
	12X2	---	---	---	340-102377 **760.40**	350-102377 **818.52**
	12X2-1/2	---	---	---	340-102378 **792.95**	---
	12X3	---	---	---	340-102379 **792.95**	350-102379 **862.69**
	12X4	---	---	---	340-102380 **830.18**	350-102380 **906.91**

Class Tee (Gasket x Gasket x Fipt)

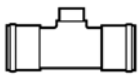
	4X1-1/2	---	---	---	340-102426 **209.28**	350-102426 **229.06**
	4X2	---	---	---	340-102427 **209.28**	350-102427 **229.06**
	4X2-1/2	---	---	---	340-102428 **227.86**	350-102428 **246.48**
	4X3	---	---	---	340-102429 **227.86**	350-102429 **246.48**
	6X1-1/2	---	---	---	340-102431 **301.12**	350-102431 **316.24**
	6X2	---	---	---	340-102432 **301.12**	350-102432 **316.24**
	6X2-1/2	---	---	---	340-102433 **312.76**	350-102433 **331.39**
	6X3	---	---	---	340-102434 **312.76**	350-102434 **331.39**
	6X4	---	---	---	340-102435 **322.06**	350-102435 **345.33**
	8X1-1/2	---	---	---	340-102436 **368.59**	350-102436 **441.82**
	8X2	---	---	---	340-102437 **368.59**	350-102437 **441.82**
	8X2-1/2	---	---	---	340-102438 **390.66**	350-102438 **465.06**
	8X3	---	---	---	340-102439 **390.66**	350-102439 **465.06**
	8X4	---	---	---	340-102440 **415.07**	350-102440 **641.20**

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

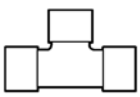
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125

Class Tee (Gasket x Gasket x Fipt) (continued)

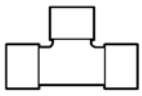
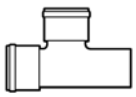
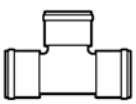
	Size	CLASS 63 Prod Code: 340 Part Number Price Each	CLASS 100 Prod Code: 350 Part Number Price Each	CLASS 125 Prod Code: 360 Part Number Price Each	CLASS 160 Prod Code: 370 Part Number Price Each	CLASS 200 Prod Code: 380 Part Number Price Each
	10X2	---	---	---	340-102442 **624.35**	350-102442 **687.17**
	10X2-1/2	---	---	---	340-102443 **653.43**	350-102443 **725.55**
	10X3	---	---	---	340-102444 **653.43**	350-102444 **725.55**
	10X4	---	---	---	340-102445 **689.44**	350-102445 **754.56**
	12X2	---	---	---	340-102447 **805.40**	350-102447 **876.67**
	12X2-1/2	---	---	---	340-102448 **845.27**	---
	12X3	---	---	---	340-102449 **845.27**	350-102449 **920.85**
	12X4	---	---	---	340-102450 **888.27**	350-102450 **965.04**

Class Tee (Soc x Soc x Soc)

	Size					
	6	310-102502 **72.27**	320-102502 **145.69**	330-102502 **161.97**	340-102502 **285.59**	350-102502 **302.22**
	6X2	310-102499 **57.08**	320-102499 **75.75**	330-102499 **90.89**	340-102499 **226.69**	350-102499 **235.45**
	6X3	310-102500 **60.60**	320-102500 **85.06**	330-102500 **96.71**	340-102500 **241.20**	350-102500 **247.16**
	6X4	310-102501 **66.44**	320-102501 **93.25**	330-102501 **108.38**	340-102501 **249.94**	350-102501 **264.61**
	8	310-102507 **121.25**	320-102507 **184.15**	330-102507 **217.99**	340-102507 **447.66**	350-102507 **532.53**
	8X2	310-102503 **79.25**	320-102503 **100.23**	330-102503 **108.38**	340-102503 **288.35**	350-102503 **318.58**
	8X3	310-102504 **85.06**	320-102504 **111.86**	330-102504 **121.25**	340-102504 **323.23**	350-102504 **345.33**
	8X4	310-102505 **90.89**	320-102505 **127.00**	330-102505 **138.65**	340-102505 **341.83**	350-102505 **362.76**
	8X6	310-102506 **108.38**	320-102506 **163.18**	330-102506 **172.48**	340-102506 **396.48**	350-102506 **430.18**
	10	310-102513 **180.64**	320-102513 **256.38**	330-102513 **354.32**	340-102513 **695.27**	350-102513 **845.27**
	10X2	310-102508 **108.38**	320-102508 **132.83**	330-102508 **170.15**	340-102508 **408.12**	350-102508 **485.98**
	10X3	310-102509 **127.00**	320-102509 **153.83**	330-102509 **200.47**	340-102509 **438.36**	350-102509 **517.37**
	10X4	310-102510 **144.54**	320-102510 **172.48**	330-102510 **226.09**	340-102510 **474.39**	350-102510 **555.75**
	10X6	310-102511 **157.35**	320-102511 **189.98**	330-102511 **250.55**	340-102511 **522.04**	350-102511 **611.55**
	10X8	310-102512 **167.83**	320-102512 **220.28**	330-102512 **298.36**	340-102512 **588.33**	350-102512 **687.17**
	12	310-102520 **248.24**	320-102520 **404.44**	330-102520 **531.47**	340-102520 **989.47**	350-102520 **1306.84**
	12X2	310-102514 **186.52**	320-102514 **200.47**	330-102514 **262.27**	340-102514 **539.46**	350-102514 **640.65**
	12X3	310-102515 **192.29**	320-102515 **212.13**	330-102515 **284.38**	340-102515 **575.55**	350-102515 **690.63**
	12X4	310-102516 **199.32**	320-102516 **236.60**	330-102516 **314.71**	340-102516 **615.07**	350-102516 **737.09**
	12X6	310-102517 **205.12**	320-102517 **270.40**	330-102517 **354.32**	340-102517 **683.68**	350-102517 **835.96**
	12X8	310-102518 **216.80**	320-102518 **298.36**	330-102518 **398.65**	340-102518 **761.55**	350-102518 **891.78**
	12X10	310-102519 **222.58**	320-102519 **356.66**	330-102519 **473.19**	340-102519 **851.09**	350-102519 **1044.09**
	15X2	310-102521** **221.46**	---	---	---	---
	15X3	310-102522** **233.09**	---	---	---	---
	15X4	310-102523** **258.75**	---	---	---	---
	15X6	310-102524** **264.58**	---	---	---	---
	15X8	310-102525** **284.38**	---	---	---	---
	15X10	310-102526** **298.36**	---	---	---	---

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

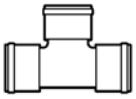
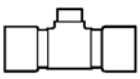
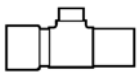
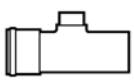
PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125

	Size	CLASS 63 Prod Code: 340 Part Number Price Each	CLASS 100 Prod Code: 350 Part Number Price Each	CLASS 125 Prod Code: 360 Part Number Price Each	CLASS 160 Prod Code: 370 Part Number Price Each	CLASS 200 Prod Code: 380 Part Number Price Each
Class Tee (Soc x Soc x Soc) (continued)						
	**15X12**	310-102527** **336.83**	---	---	---	---
	15X15	310-102528* **428.92**	---	---	---	---
* 15" PIP O.D. ** 15" PIP O.D. x IPS						
Class Tee (Gasket x Spigot x Gasket)						
	**4**	---	320-103058 **116.54**	330-103058 **121.25**	340-103058 **221.46**	350-103058 **248.47**
	6	---	320-103062 **169.01**	330-103062 **180.64**	340-103062 **342.98**	350-103062 **395.29**
	6X4	---	320-103061 **144.54**	330-103061 **174.81**	340-103061 **304.60**	350-103061 **327.86**
	8	---	320-103067 **233.62**	330-103067 **300.71**	340-103067 **509.26**	350-103067 **640.65**
	8X4	---	320-103065 **182.35**	330-103065 **199.32**	340-103065 **380.18**	350-103065 **462.75**
	8X6	---	320-103066 **212.13**	330-103066 **251.77**	340-103066 **420.89**	350-103066 **526.69**
	10	---	320-103073 **396.29**	330-103073 **481.38**	340-103073 **833.66**	350-103073 **1051.96**
	10X4	---	320-103070 **272.73**	330-103070 **348.47**	340-103070 **559.27**	350-103070 **702.26**
	10X6	---	320-103071 **300.71**	330-103071 **378.82**	340-103071 **611.55**	350-103071 **766.20**
	10X8	---	320-103072 **334.52**	330-103072 **420.76**	340-103072 **687.17**	350-103072 **865.04**
	12	---	320-103080 **554.80**	330-103080 **662.03**	---	---
	12X4	---	320-103076 **368.32**	330-103076 **451.12**	340-103076 **731.31**	350-103076 **918.49**
	12X6	---	320-103077 **392.79**	330-103077 **456.89**	340-103077 **804.58**	350-103077 **1011.55**
	12X8	---	320-103078 **434.74**	330-103078 **481.38**	340-103078 **891.78**	350-103078 **1110.36**
	12X10	---	320-103079 **495.37**	330-103079 **540.83**	340-103079 **1009.22**	350-103079 **1256.85**
	12X12	---	---	---	340-103080 **1183.57**	---
Class Tee (Gasket x Gasket x Gasket)						
	**4**	---	320-103170 **139.85**	330-103170 **191.08**	340-103170 **219.76**	350-103170 **272.07**
	6	---	320-103174 **163.18**	330-103174 **216.80**	340-103174 **366.24**	350-103174 **397.61**
	6X4	---	320-103173 **144.54**	330-103173 **205.12**	340-103173 **316.24**	350-103173 **339.49**
	8	---	320-103179 **289.04**	330-103179 **312.76**	340-103179 **570.87**	350-103179 **673.19**
	8X4	---	320-103177 **216.80**	330-103177 **241.26**	340-103177 **447.66**	350-103177 **497.60**
	8X6	---	320-103178 **222.58**	330-103178 **272.73**	340-103178 **497.60**	350-103178 **549.98**
	10	---	320-103185 **420.76**	330-103185 **529.14**	340-103185 **935.96**	350-103185 **1098.76**
	10X4	---	320-103182 **322.86**	330-103182 **400.95**	340-103182 **702.26**	350-103182 **716.20**
	10X6	---	320-103183 **346.18**	330-103183 **418.42**	340-103183 **745.28**	350-103183 **777.87**
	10X8	---	320-103184 **376.47**	330-103184 **487.22**	340-103184 **833.66**	350-103184 **876.67**
	12	---	320-103192 **585.13**	330-103192 **765.77**	340-103192 **1301.06**	350-103192 **1519.65**
	12X4	---	320-103188 **412.58**	330-103188 **487.22**	340-103188 **891.78**	350-103188 **932.47**
	12X6	---	320-103189 **423.12**	330-103189 **501.17**	340-103189 **974.32**	350-103189 **1031.31**
	12X8	---	320-103190 **445.26**	330-103190 **601.45**	340-103190 **1067.56**	350-103190 **1127.79**

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

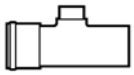
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125

	Size	CLASS 63 Prod Code: 340 Part Number Price Each	CLASS 100 Prod Code: 350 Part Number Price Each	CLASS 125 Prod Code: 360 Part Number Price Each	CLASS160 Prod Code: 370 Part Number Price Each	CLASS 200 Prod Code: 380 Part Number Price Each
Class Tee (Gasket x Gasket x Gasket) (continued)						
	**12X10**	---	320-103191 **529.14**	330-103191 **641.08**	340-103191 **1198.77**	350-103191 **1276.62**
Class Reinforced Tee (Soc x Soc x Fipt)						
	**6X2**	---	---	330-202152 **81.59**	---	---
	6X3	---	---	330-202154 **93.25**	---	---
	6X4	---	---	330-202155 **106.03**	---	---
	8X2	---	---	330-202157 **117.71**	---	---
	8X3	---	---	330-202159 **137.52**	---	---
	8X4	---	---	330-202160 **150.31**	---	---
	10X2	---	---	330-202162 **181.79**	---	---
	10X3	---	---	330-202164 **212.13**	---	---
	10X4	---	---	330-202165 **231.92**	---	---
	12X2	---	---	330-202167 **262.27**	---	---
	12X3	---	---	330-202169 **292.57**	---	---
	12X4	---	---	330-202170 **322.86**	---	---
Class Reinforced Tee (Soc x Spigot x Fipt)						
	**6X2**	---	---	330-202222 **81.59**	---	---
	6X3	---	---	330-202224 **93.25**	---	---
	6X4	---	---	330-202225 **106.03**	---	---
	8X2	---	---	330-202227 **116.54**	---	---
	8X3	---	---	330-202229 **130.48**	---	---
	8X4	---	---	330-202230 **143.32**	---	---
	10X2	---	---	330-202232 **172.48**	---	---
	10X3	---	---	330-202234 **201.61**	---	---
	10X4	---	---	330-202235 **222.58**	---	---
	12X2	---	---	330-202237 **249.41**	---	---
	12X3	---	---	330-202239 **278.57**	---	---
	12X4	---	---	330-202240 **310.05**	---	---
Class Reinforced Tee (Gasket x Spigot x Fipt)						
	**6X2**	---	---	330-202362 **139.85**	---	---
	6X3	---	---	330-202364 **159.64**	---	---
	6X4	---	---	330-202365 **169.01**	---	---
	8X2	---	---	330-202367 **174.81**	---	---
	8X3	---	---	330-202369 **186.52**	---	---

PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125

Class Reinforced Tee (Gasket x Spigot x Fipt) (continued)

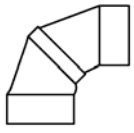


Size	CLASS 63 Prod Code: 340 Part Number Price Each	CLASS 100 Prod Code: 350 Part Number Price Each	CLASS 125 Prod Code: 360 Part Number Price Each	CLASS 160 Prod Code: 370 Part Number Price Each	CLASS 200 Prod Code: 380 Part Number Price Each
8X4	---	---	330-202370 **199.32**	---	---
10X2	---	---	330-202372 **264.58**	---	---
10X3	---	---	330-202374 **285.55**	---	---
10X4	---	---	330-202375 **313.53**	---	---
12X2	---	---	330-202377 **361.31**	---	---
12X3	---	---	330-202379 **391.61**	---	---
12X4	---	---	330-202380 **420.76**	---	---

Class Reinforced Tee (Gasket x Gasket x Fipt)

6X2	---	---	330-202432 **169.01**	---	---
6X3	---	---	330-202434 **180.64**	---	---
6X4	---	---	330-202435 **192.29**	---	---
8X2	---	---	330-202437 **210.96**	---	---
8X3	---	---	330-202439 **222.58**	---	---
8X4	---	---	330-202440 **241.26**	---	---
10X2	---	---	330-202442 **328.69**	---	---
10X3	---	---	330-202444 **346.18**	---	---
10X4	---	---	330-202445 **382.29**	---	---
12X2	---	---	330-202447 **445.26**	---	---
12X3	---	---	330-202449 **487.22**	---	---
12X4	---	---	330-202450 **509.40**	---	---

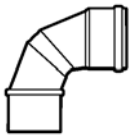
Class 90° Elbow (Soc x Soc)



6	310-100812 **79.25**	320-100812 **102.53**	330-100812 **114.20**	340-100812 **294.15**	350-100812 **318.58**
8	310-100813 **108.38**	320-100813 **157.35**	330-100813 **187.62**	340-100813 **408.12**	350-100813 **462.75**
10	310-100814 **169.01**	320-100814 **245.93**	330-100814 **297.21**	340-100814 **620.88**	350-100814 **762.71**
12	310-100815 **241.26**	320-100815 **342.64**	330-100815 **454.58**	340-100815 **899.91**	350-100815 **1023.18**
15	310-100816* **451.12**	---	---	---	---

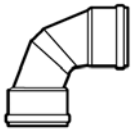
* 15" PIP O.D.

Class 90° Elbow (Gasket x Spigot)



4	---	---	330-100877 **177.00**	---	---
6	---	320-100878 **207.48**	330-100878 **238.94**	340-100878 **389.47**	350-100878 **409.26**
8	---	320-100879 **314.71**	330-100879 **385.82**	340-100879 **555.75**	350-100879 **596.47**
10	---	320-100880 **458.07**	330-100880 **607.23**	340-100880 **804.58**	350-100880 **982.45**
12	---	320-100881 **614.26**	330-100881 **723.83**	340-100881 **1081.34**	350-100881 **1242.91**

Class 90° Elbow (Gasket x Gasket)

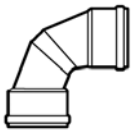
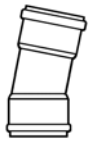


4	---	---	330-100899 **177.00**	340-100899 **263.92**	350-100899 **293.03**
6	---	320-100900 **207.48**	330-100900 **238.94**	340-100900 **389.47**	350-100900 **409.26**
8	---	320-100901 **314.71**	330-100901 **385.82**	340-100901 **555.75**	350-100901 **596.47**
10	---	320-100902 **458.07**	330-100902 **607.23**	340-100902 **804.58**	350-100902 **982.45**

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

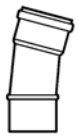
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded
Class 125

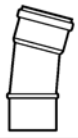
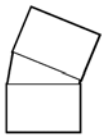
	Size	CLASS 63 Prod Code: 340 Part Number Price Each	CLASS 100 Prod Code: 350 Part Number Price Each	CLASS 125 Prod Code: 360 Part Number Price Each	CLASS 160 Prod Code: 370 Part Number Price Each	CLASS 200 Prod Code: 380 Part Number Price Each
Class 90° Elbow (Gasket x Gasket) (continued)						
	**12**	---	320-100903 **614.26**	330-100903 **723.83**	3406-1202 **900.63**	350-100903 **1242.91**
Class 11-1/4° Elbow (Soc x Soc)						
	4	---	---	330-100113 **33.76**	340-100113 **37.38**	350-100113 **44.84**
	6	310-100114 **30.25**	320-100114 **39.64**	330-100114 **47.76**	340-100114 **52.31**	350-100114 **55.79**
	8	310-100115 **47.76**	320-100115 **60.60**	330-100115 **94.37**	340-100115 **90.68**	350-100115 **102.31**
	10	310-100116 **67.57**	320-100116 **96.71**	330-100116 **134.04**	340-100116 **156.98**	350-100116 **210.40**
	12	310-100117 **109.51**	320-100117 **151.53**	330-100117 **217.99**	340-100117 **246.48**	350-100117 **351.15**
	15	310-100118 **184.15**	---	---	---	---
Class 11-1/4° Elbow (Gasket x Spigot)						
	4	---	---	330-100185 **121.25**	340-100185 **134.55**	350-100185 **165.57**
	6	---	320-100186 **135.19**	330-100186 **169.01**	340-100186 **186.87**	350-100186 **204.63**
	8	---	320-100187 **165.51**	330-100187 **252.93**	340-100187 **274.06**	350-100187 **330.20**
	10	---	320-100188 **283.25**	330-100188 **336.83**	340-100188 **389.47**	350-100188 **573.17**
	12	---	320-100189 **378.82**	330-100189 **456.89**	340-100189 **567.40**	350-100189 **789.48**
Class 11-1/4° Elbow (Gasket x Gasket)						
	**4**	---	---	330-100209 **121.25**	340-100209 **134.55**	350-100209 **165.57**
	6	---	320-100210 **135.19**	330-100210 **169.01**	340-100210 **186.87**	350-100210 **204.63**
	8	---	320-100211 **165.51**	330-100211 **252.93**	340-100211 **274.06**	350-100211 **330.20**
	10	---	320-100212 **283.25**	330-100212 **336.83**	340-100212 **389.47**	350-100212 **573.17**
	12	---	320-100213 **378.82**	330-100213 **456.89**	340-100213 **567.40**	350-100213 **789.48**
Class 15° Elbow (Soc x Soc)						
	4	---	---	330-100233 **33.76**	340-100233 **37.38**	350-100233 **44.84**
	6	310-100234 **30.25**	320-100234 **39.64**	330-100234 **47.76**	340-100234 **52.31**	350-100234 **55.79**
	8	310-100235 **47.76**	320-100235 **60.60**	330-100235 **73.39**	340-100235 **90.68**	350-100235 **104.32**
	10	310-100236 **67.57**	320-100236 **96.71**	330-100236 **134.04**	340-100236 **156.98**	350-100236 **210.40**
	12	310-100237 **109.51**	320-100237 **151.53**	330-100237 **217.99**	340-100237 **246.48**	350-100237 **351.15**
	15	310-100238* **184.15**	---	---	---	---

* 15" PIP O.D.

Class 15° Elbow (Gasket x Spigot)

	**4**	---	---	330-100305 **121.25**	340-100305 **134.55**	350-100305 **165.57**
	6	---	320-100306 **135.19**	330-100306 **169.01**	340-100306 **186.87**	350-100306 **204.63**
	8	---	320-100307 **165.51**	330-100307 **252.93**	340-100307 **274.06**	350-100307 **330.20**
	10	---	320-100308 **283.25**	330-100308 **336.83**	340-100308 **389.47**	350-100308 **573.17**

PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125

	Size	CLASS 63 Prod Code: 340 Part Number Price Each	CLASS 100 Prod Code: 350 Part Number Price Each	CLASS 125 Prod Code: 360 Part Number Price Each	CLASS 160 Prod Code: 370 Part Number Price Each	CLASS 200 Prod Code: 380 Part Number Price Each
Class 15° Elbow (Gasket x Spigot) (continued)						
	**12**	---	320-100309 **378.82**	330-100309 **456.89**	340-100309 **567.40**	350-100309 **789.48**
Class 15° Elbow (Gasket x Gasket)						
	4	---	---	330-100329 **121.25**	340-100329 **134.55**	350-100329 **165.57**
	6	---	320-100330 **135.19**	330-100330 **169.01**	340-100330 **186.87**	350-100330 **204.63**
	8	---	320-100331 **177.89**	330-100331 **252.93**	340-100331 **274.06**	350-100331 **330.20**
	10	---	320-100332 **263.75**	330-100332 **336.83**	340-100332 **389.47**	350-100332 **573.17**
	12	---	320-100333 **380.32**	330-100333 **456.89**	340-100333 **567.40**	350-100333 **789.48**
Class 22-1/2° Elbow (Soc x Soc)						
	**4**	---	---	330-100353 **33.76**	340-100353 **37.38**	350-100353 **44.84**
	6	310-100354 **30.25**	320-100354 **39.64**	330-100354 **47.76**	340-100354 **52.31**	350-100354 **55.79**
	8	310-100355 **47.76**	320-100355 **60.60**	330-100355 **73.39**	340-100355 **90.68**	350-100355 **104.32**
	10	310-100356 **67.57**	320-100356 **96.71**	330-100356 **134.04**	340-100356 **156.98**	350-100356 **210.40**
	12	310-100357 **109.51**	320-100357 **151.53**	330-100357 **217.99**	340-100357 **246.48**	350-100357 **351.15**
	15	310-100358* **184.15**	---	---	---	---
* 15" PIP O.D.						
Class 22-1/2° Elbow (Gasket x Spigot)						
	4	---	---	330-100425 **121.25**	340-100425 **134.55**	350-100425 **165.57**
	6	---	320-100426 **135.19**	330-100426 **169.01**	340-100426 **186.87**	350-100426 **204.63**
	8	---	320-100427 **165.51**	330-100427 **252.93**	340-100427 **274.06**	350-100427 **330.20**
	10	---	320-100428 **283.25**	330-100428 **336.83**	340-100428 **389.47**	350-100428 **573.17**
	12	---	320-100429 **378.82**	330-100429 **456.89**	340-100429 **567.40**	350-100429 **789.48**
Class 22-1/2° Elbow (Gasket x Gasket)						
	4	---	---	330-100449 **121.25**	340-100449 **134.55**	350-100449 **165.57**
	6	---	320-100450 **135.19**	330-100450 **169.01**	340-100450 **186.87**	350-100450 **204.63**
	8	---	320-100451 **165.51**	330-100451 **252.93**	340-100451 **274.06**	350-100451 **330.20**
	10	---	320-100452 **283.25**	330-100452 **336.83**	340-100452 **389.47**	350-100452 **573.17**
	12	---	320-100453 **378.82**	330-100453 **456.89**	340-100453 **567.40**	350-100453 **789.48**
Class 30° Elbow (Soc x Soc)						
	4	---	---	330-100473 **41.94**	340-100473 **88.31**	350-100473 **146.81**
	6	310-100474 **41.94**	320-100474 **52.46**	330-100474 **59.42**	340-100474 **216.26**	350-100474 **261.36**
	8	310-100475 **61.74**	320-100475 **87.41**	330-100475 **92.05**	340-100475 **294.15**	350-100475 **351.15**
	10	310-100476 **89.75**	320-100476 **134.04**	330-100476 **189.98**	340-100476 **455.78**	350-100476 **549.98**
	12	310-100477 **145.69**	320-100477 **195.80**	330-100477 **278.57**	340-100477 **660.40**	350-100477 **768.54**
	15	310-100478 **217.99**	---	---	---	---

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125

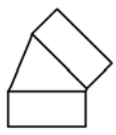
Class 30° Elbow (Gasket x Spigot)

	Size	CLASS 63 Prod Code: 340 Part Number Price Each	CLASS 100 Prod Code: 350 Part Number Price Each	CLASS 125 Prod Code: 360 Part Number Price Each	CLASS 160 Prod Code: 370 Part Number Price Each	CLASS 200 Prod Code: 380 Part Number Price Each
	4	---	---	330-100545 **139.13**	340-100545 **167.42**	350-100545 **175.56**
	6	---	320-100546 **180.64**	330-100546 **192.29**	340-100546 **248.82**	350-100546 **304.60**
	8	---	320-100547 **222.58**	330-100547 **270.40**	340-100547 **366.24**	350-100547 **453.43**
	10	---	320-100548 **313.53**	330-100548 **397.42**	340-100548 **608.07**	350-100548 **756.95**
	12	---	320-100549 **433.61**	330-100549 **576.95**	340-100549 **804.58**	350-100549 **949.93**

Class 30° Elbow (Gasket x Gasket)

	Size	CLASS 63 Prod Code: 340 Part Number Price Each	CLASS 100 Prod Code: 350 Part Number Price Each	CLASS 125 Prod Code: 360 Part Number Price Each	CLASS 160 Prod Code: 370 Part Number Price Each	CLASS 200 Prod Code: 380 Part Number Price Each
	4	---	---	330-100569 **139.13**	340-100569 **167.42**	350-100569 **175.56**
	6	---	320-100570 **180.64**	330-100570 **192.29**	340-100570 **248.82**	350-100570 **304.60**
	8	---	320-100571 **222.58**	330-100571 **270.40**	340-100571 **366.24**	350-100571 **453.43**
	10	---	320-100572 **313.53**	330-100572 **397.42**	340-100572 **608.07**	350-100572 **756.95**
	12	---	320-100573 **433.61**	330-100573 **576.95**	340-100573 **804.58**	350-100573 **949.93**

Class 45° Elbow (Soc x Soc)

	Size	CLASS 63 Prod Code: 340 Part Number Price Each	CLASS 100 Prod Code: 350 Part Number Price Each	CLASS 125 Prod Code: 360 Part Number Price Each	CLASS 160 Prod Code: 370 Part Number Price Each	CLASS 200 Prod Code: 380 Part Number Price Each
	6	310-100592 **41.94**	320-100592 **52.46**	330-100592 **59.42**	340-100592 **216.26**	350-100592 **225.54**
	8	310-100593 **61.74**	320-100593 **87.41**	330-100593 **92.05**	340-100593 **294.15**	350-100593 **351.15**
	10	310-100594 **89.75**	320-100594 **134.04**	330-100594 **189.98**	340-100594 **455.78**	350-100594 **549.98**
	12	310-100595 **145.69**	320-100595 **195.80**	330-100595 **278.57**	340-100595 **660.40**	350-100595 **768.54**
	15	310-100596* **217.99**	---	---	---	---

* 15" PIP O.D.

Class 45° Elbow (Gasket x Spigot)

	Size	CLASS 63 Prod Code: 340 Part Number Price Each	CLASS 100 Prod Code: 350 Part Number Price Each	CLASS 125 Prod Code: 360 Part Number Price Each	CLASS 160 Prod Code: 370 Part Number Price Each	CLASS 200 Prod Code: 380 Part Number Price Each
	4	---	---	330-100657 **139.13**	340-100657 **167.42**	350-100657 **175.56**
	6	---	320-100658 **141.09**	330-100658 **192.29**	340-100658 **248.82**	350-100658 **304.60**
	8	---	320-100659 **199.97**	330-100659 **270.40**	340-100659 **366.24**	350-100659 **453.43**
	10	---	320-100660 **287.06**	330-100660 **397.42**	340-100660 **608.07**	350-100660 **755.13**
	12	---	320-100661 **408.54**	330-100661 **576.95**	340-100661 **804.58**	350-100661 **949.93**

Class 45° Elbow (Gasket x Gasket)

	Size	CLASS 63 Prod Code: 340 Part Number Price Each	CLASS 100 Prod Code: 350 Part Number Price Each	CLASS 125 Prod Code: 360 Part Number Price Each	CLASS 160 Prod Code: 370 Part Number Price Each	CLASS 200 Prod Code: 380 Part Number Price Each
	4	---	---	330-100679 **139.13**	340-100679 **167.42**	350-100679 **175.56**
	6	---	320-100680 **141.09**	330-100680 **192.29**	340-100680 **248.82**	350-100680 **304.60**
	8	---	320-100681 **199.97**	330-100681 **270.40**	340-100681 **366.24**	350-100681 **453.43**
	10	---	320-100682 **287.06**	330-100682 **397.42**	340-100682 **608.07**	350-100682 **756.95**
	12	---	320-100683 **433.58**	330-100683 **576.95**	340-100683 **804.58**	350-100683 **949.93**

Class 60° Elbow (Soc x Soc)

	Size	CLASS 63 Prod Code: 340 Part Number Price Each	CLASS 100 Prod Code: 350 Part Number Price Each	CLASS 125 Prod Code: 360 Part Number Price Each	CLASS 160 Prod Code: 370 Part Number Price Each	CLASS 200 Prod Code: 380 Part Number Price Each
	4	---	---	330-100701 **75.01**	---	---
	6	310-100702 **79.25**	320-100702 **102.53**	330-100702 **114.20**	340-100702 **294.15**	350-100702 **318.58**
	8	310-100703 **108.38**	320-100703 **157.35**	330-100703 **187.62**	340-100703 **408.12**	350-100703 **462.75**
	10	310-100704 **169.01**	320-100704 **245.93**	330-100704 **297.21**	340-100704 **620.88**	350-100704 **762.71**
	12	310-100705 **241.26**	320-100705 **342.64**	330-100705 **454.58**	340-100705 **899.91**	350-100705 **1023.18**
	15	310-100706* **451.12**	---	---	---	---

* 15" PIP O.D.

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125

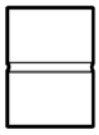
Class 60° Elbow (Gasket x Spigot)

Size	CLASS 63 Prod Code: 340	CLASS 100 Prod Code: 350	CLASS 125 Prod Code: 360	CLASS 160 Prod Code: 370	CLASS 200 Prod Code: 380
	Part Number Price Each	Part Number Price Each	Part Number Price Each	Part Number Price Each	Part Number Price Each
4	---	---	330-100767 **177.00**	340-100767 **263.92**	350-100767 **293.03**
6	---	320-100768 **207.48**	330-100768 **238.94**	340-100768 **389.47**	350-100768 **409.26**
8	---	320-100769 **314.71**	330-100769 **385.82**	340-100769 **555.75**	350-100769 **596.47**
10	---	320-100770 **458.07**	330-100770 **607.23**	340-100770 **804.58**	350-100770 **982.45**
12	---	320-100771 **614.26**	330-100771 **723.83**	340-100771 **1081.34**	350-100771 **1242.91**

Class 60° Elbow (Gasket x Gasket)

Size	CLASS 63 Prod Code: 340	CLASS 100 Prod Code: 350	CLASS 125 Prod Code: 360	CLASS 160 Prod Code: 370	CLASS 200 Prod Code: 380
	Part Number Price Each	Part Number Price Each	Part Number Price Each	Part Number Price Each	Part Number Price Each
4	---	---	330-100789 **177.00**	340-100789 **263.92**	350-100789 **293.03**
6	---	320-100790 **207.48**	330-100790 **238.94**	340-100790 **389.47**	350-100790 **409.26**
8	---	320-100791 **314.71**	330-100791 **385.82**	340-100791 **555.75**	350-100791 **596.47**
10	---	320-100792 **458.07**	330-100792 **607.23**	340-100792 **804.58**	350-100792 **982.45**
12	---	320-100793 **614.26**	330-100793 **723.83**	340-100793 **1081.34**	350-100793 **1242.91**

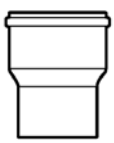
Coupling (Soc x Soc)



Size	CLASS 63 Prod Code: 340	CLASS 100 Prod Code: 350	CLASS 125 Prod Code: 360	CLASS 160 Prod Code: 370	CLASS 200 Prod Code: 380
	Part Number Price Each	Part Number Price Each	Part Number Price Each	Part Number Price Each	Part Number Price Each
6	310-100002 **22.15**	320-100002 **26.77**	330-100002 **30.25**	340-100002 **36.02**	350-100002 **44.20**
8	310-100003 **38.44**	320-100003 **46.60**	330-100003 **50.13**	340-100003 **66.31**	350-100003 **84.86**
10	310-100004 **45.46**	320-100004 **76.92**	330-100004 **92.05**	340-100004 **105.28**	350-100004 **184.87**
12	310-100005 **69.93**	320-100005 **120.03**	330-100005 **148.04**	340-100005 **168.60**	350-100005 **277.88**
15	310-100006* **104.91**	---	---	---	---

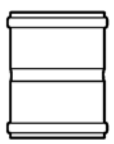
* 15" PIP O.D.

Coupling (Gasket x Spigot)



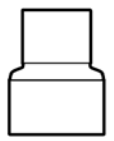
Size	CLASS 63 Prod Code: 340	CLASS 100 Prod Code: 350	CLASS 125 Prod Code: 360	CLASS 160 Prod Code: 370	CLASS 200 Prod Code: 380
	Part Number Price Each	Part Number Price Each	Part Number Price Each	Part Number Price Each	Part Number Price Each
4	---	320-100067 **40.77**	330-100067 **52.46**	340-100067 **58.54**	350-100067 **70.88**
6	---	320-100068 **64.06**	330-100068 **69.93**	340-100068 **94.19**	350-100068 **99.99**
8	---	320-100069 **103.72**	330-100069 **125.84**	340-100069 **150.00**	350-100069 **167.42**
10	---	320-100070 **137.52**	330-100070 **167.83**	340-100070 **219.76**	350-100070 **277.88**
12	---	320-100071 **189.98**	330-100071 **228.44**	340-100071 **330.20**	350-100071 **397.61**

Coupling (Gasket x Gasket)



Size	CLASS 63 Prod Code: 340	CLASS 100 Prod Code: 350	CLASS 125 Prod Code: 360	CLASS 160 Prod Code: 370	CLASS 200 Prod Code: 380
	Part Number Price Each	Part Number Price Each	Part Number Price Each	Part Number Price Each	Part Number Price Each
4	---	320-100089 **64.06**	330-100089 **75.75**	340-100089 **83.03**	350-100089 **91.33**
6	---	320-100090 **96.71**	330-100090 **108.38**	340-100090 **113.89**	350-100090 **144.16**
8	---	320-100091 **144.54**	330-100091 **157.35**	340-100091 **170.56**	350-100091 **190.68**
10	---	320-100092 **205.12**	330-100092 **228.44**	340-100092 **275.58**	350-100092 **330.20**
12	---	320-100093 **270.40**	330-100093 **313.53**	340-100093 **362.76**	350-100093 **491.79**

Class Reducer Coupling (Soc x Soc)



Size	CLASS 63 Prod Code: 340	CLASS 100 Prod Code: 350	CLASS 125 Prod Code: 360	CLASS 160 Prod Code: 370	CLASS 200 Prod Code: 380
	Part Number Price Each	Part Number Price Each	Part Number Price Each	Part Number Price Each	Part Number Price Each
6X4	310-100926 **30.25**	320-100926 **33.76**	330-100926 **38.44**	340-100926 **40.65**	350-100926 **51.15**
8X6	310-100928 **39.64**	320-100928 **53.58**	330-100928 **59.42**	340-100928 **65.09**	350-100928 **70.88**
10X8	310-100931 **55.93**	320-100931 **106.44**	330-100931 **95.56**	340-100931 **120.91**	350-100931 **144.16**
12X10	310-100935 **97.93**	320-100935 **145.69**	330-100935 **181.79**	340-100935 **222.06**	350-100935 **237.19**
15X12	310-100940** **184.15**	---	---	---	---

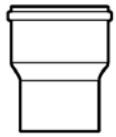
** 15" PIP O.D. x IPS

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

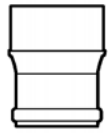
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125

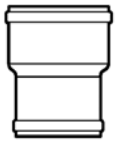
Class Reducer Coupling (Gasket x Spigot)

	Size	CLASS 63 Prod Code: 340	CLASS 100 Prod Code: 350	CLASS 125 Prod Code: 360	CLASS 160 Prod Code: 370	CLASS 200 Prod Code: 380
		Part Number Price Each	Part Number Price Each	Part Number Price Each	Part Number Price Each	Part Number Price Each
	6X4	---	320-101310 **96.51**	330-101310 **114.20**	340-101310 **133.67**	350-101310 **147.65**
	8X6	---	320-101312 **138.65**	330-101312 **169.01**	340-101312 **208.09**	350-101312 **231.38**
	10X8	---	320-101315 **192.29**	330-101315 **228.44**	340-101315 **286.03**	350-101315 **325.54**
	12X10	---	320-101319 **272.73**	330-101319 **328.69**	340-101319 **462.75**	350-101319 **522.04**

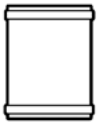
Class Reducer Coupling (Spigot x Gasket)

	6X4	---	320-101383 **90.89**	330-101383 **102.53**	340-101383 **111.63**	350-101383 **127.87**
	8X6	---	320-101385 **121.25**	330-101385 **144.54**	340-101385 **184.87**	350-101385 **210.40**
	10X8	---	320-101388 **180.64**	330-101388 **222.58**	340-101388 **268.60**	350-101388 **316.24**
	12X10	---	320-101392 **270.40**	330-101392 **310.05**	340-101392 **436.00**	350-101392 **511.57**

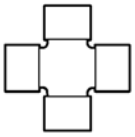
Class Reducer Coupling (Gasket x Gasket)

	6X4	---	320-101456 **121.25**	330-101456 **132.83**	340-101456 **156.98**	350-101456 **172.06**
	8X6	---	320-101458 **174.81**	330-101458 **192.29**	340-101458 **252.28**	350-101458 **275.58**
	10X8	---	320-101461 **241.26**	330-101461 **300.71**	340-101461 **360.39**	350-101461 **526.69**
	12X10	---	320-101465 **334.52**	330-101465 **378.82**	340-101465 **478.53**	350-101465 **783.66**

Class Repair Coupling (Gasket x Gasket)

	4	---	3228-040 **70.78**	3328-040 **75.75**	3428-040 **100.04**	3528-040 **121.36**
	6	---	3228-060 **99.16**	3328-060 **102.53**	3428-060 **127.95**	3528-060 **148.20**
	8	---	3228-080 **151.31**	3328-080 **157.35**	3428-080 **183.17**	3528-080 **199.64**
	10	---	3228-100 **216.02**	3328-100 **234.27**	3428-100 **288.46**	3528-100 **320.23**
	12	---	3228-120 **289.41**	3328-120 **313.53**	3428-120 **375.58**	3528-120 **447.24**
	14	---	3228-140 **415.63**	3328-140 **437.32**	3428-140 **474.68**	---
	16	---	3228-160 **548.04**	3328-160 **622.56**	3428-160 **675.27**	---

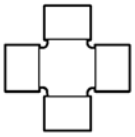
Class Cross (Soc x Soc x Soc x Soc)

	4X2	---	320-103280 **58.25**	330-103280 **87.41**	---	---
	4X3	---	320-103281 **64.06**	330-103281 **90.33**	---	---
	6	310-103286 **96.71**	320-103286 **167.83**	330-103286 **189.98**	340-103286 **391.80**	350-103286 **430.18**
	6X2	310-103283 **66.44**	320-103283 **72.27**	330-103283 **96.71**	340-103283 **287.19**	350-103283 **289.52**
	6X3	310-103284 **75.75**	320-103284 **90.89**	330-103284 **121.25**	340-103284 **298.80**	350-103284 **304.60**
	6X4	310-103285 **81.59**	320-103285 **102.53**	330-103285 **138.65**	340-103285 **322.06**	350-103285 **345.33**
	8	310-103291 **125.84**	320-103291 **217.99**	330-103291 **264.58**	340-103291 **590.63**	350-103291 **631.35**
	8X2	310-103287 **85.06**	320-103287 **108.38**	330-103287 **121.25**	340-103287 **368.59**	350-103287 **374.22**
	8X3	310-103288 **90.89**	320-103288 **121.25**	330-103288 **132.83**	340-103288 **380.18**	350-103288 **420.89**
	8X4	310-103289 **103.72**	320-103289 **138.65**	330-103289 **159.64**	340-103289 **406.92**	350-103289 **444.12**
	8X6	310-103290 **114.20**	320-103290 **169.01**	330-103290 **200.47**	340-103290 **474.39**	350-103290 **509.26**
	10	310-103297 **203.97**	320-103297 **325.17**	330-103297 **456.89**	340-103297 **976.66**	350-103297 **1041.43**
	10X2	310-103292 **103.72**	320-103292 **150.31**	330-103292 **178.32**	340-103292 **570.87**	350-103292 **619.75**
	10X3	310-103293 **114.20**	320-103293 **170.15**	330-103293 **214.43**	340-103293 **579.01**	350-103293 **634.80**

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

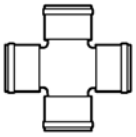
PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125

Class Cross (Soc x Soc x Soc x Soc) (continued)

	Size	CLASS 63 Prod Code: 340 Part Number Price Each	CLASS 100 Prod Code: 350 Part Number Price Each	CLASS 125 Prod Code: 360 Part Number Price Each	CLASS 160 Prod Code: 370 Part Number Price Each	CLASS 200 Prod Code: 380 Part Number Price Each
	10X4	310-103294 **125.84**	320-103294 **189.98**	330-103294 **242.43**	340-103294 **628.99**	350-103294 **666.22**
	10X6	310-103295 **139.85**	320-103295 **210.96**	330-103295 **282.06**	340-103295 **702.26**	350-103295 **742.97**
	10X8	310-103296 **159.64**	320-103296 **258.75**	330-103296 **350.84**	340-103296 **789.48**	350-103296 **845.27**
	12	310-103304 **318.19**	320-103304 **501.17**	330-103304 **737.80**	340-103304 **1446.39**	350-103304 **1671.94**
	12X2	310-103298 **148.04**	320-103298 **198.14**	330-103298 **289.04**	340-103298 **725.55**	350-103298 **731.31**
	12X3	310-103299 **161.97**	320-103299 **228.44**	330-103299 **300.71**	340-103299 **764.03**	350-103299 **803.57**
	12X4	310-103300 **172.48**	320-103300 **273.16**	330-103300 **336.83**	340-103300 **862.69**	350-103300 **876.67**
	12X6	310-103301 **181.79**	320-103301 **284.38**	330-103301 **386.96**	340-103301 **947.58**	350-103301 **965.04**
	12X8	310-103302 **209.79**	320-103302 **332.17**	330-103302 **454.58**	340-103302 **1058.02**	350-103302 **1081.34**
	12X10	310-103303 **250.55**	320-103303 **412.58**	330-103303 **576.95**	340-103303 **1212.65**	350-103303 **1256.85**
	15	310-103321* **540.83**	---	---	---	---
	15X2	310-103313** **233.09**	---	---	---	---
	15X3	310-103314** **262.27**	---	---	---	---
	15X4	310-103315** **289.04**	---	---	---	---
	15X6	310-103316** **331.03**	---	---	---	---
	15X8	310-103317** **361.31**	---	---	---	---
	15X10	310-103318** **391.61**	---	---	---	---
	15X12	310-103319** **433.61**	---	---	---	---

* 15" PIP O.D.
** 15" PIP O.D. x IPS

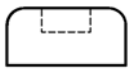
Class Cross (Gasket x Gasket x Gasket x Gasket)

	4	---	320-103997 **203.97**	330-103997 **221.46**	340-103997 **276.84**	350-103997 **298.99**
	6	---	320-104001 **237.75**	330-104001 **298.36**	340-104001 **497.60**	350-104001 **631.35**
	6X4	---	320-104000 **215.63**	330-104000 **273.89**	340-104000 **391.80**	350-104000 **491.79**
	8	---	320-104006 **389.31**	330-104006 **445.26**	340-104006 **772.04**	350-104006 **959.24**
	8X4	---	320-104004 **291.38**	330-104004 **337.99**	340-104004 **534.78**	350-104004 **642.96**
	8X6	---	320-104005 **349.64**	330-104005 **384.60**	340-104005 **641.80**	350-104005 **748.76**
	10	---	320-104012 **585.13**	330-104012 **773.98**	340-104012 **1285.93**	350-104012 **1432.42**
	10X4	---	320-104009 **407.94**	330-104009 **495.37**	340-104009 **695.27**	350-104009 **830.18**
	10X6	---	320-104010 **466.20**	330-104010 **512.85**	340-104010 **851.09**	350-104010 **947.58**
	10X8	---	320-104011 **524.52**	330-104011 **670.22**	340-104011 **1046.43**	350-104011 **1081.34**
	12	---	320-104019 **793.75**	330-104019 **1086.36**	340-104019 **1791.69**	350-104019 **2017.25**
	12X4	---	320-104015 **582.79**	330-104015 **641.08**	340-104015 **1019.64**	350-104015 **1169.65**
	12X6	---	320-104016 **641.08**	330-104016 **676.03**	340-104016 **1169.16**	350-104016 **1247.56**
	12X8	---	320-104017 **699.34**	330-104017 **792.60**	340-104017 **1319.61**	350-104017 **1348.72**
	12X10	---	320-104018 **745.99**	330-104018 **955.78**	340-104018 **1546.39**	350-104018 **1578.94**

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

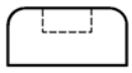
Surface Reducers

Class Surface Reducer (Soc)



Size	CLASS 63 Prod Code: 340 Part Number Price Each		CLASS 125 Prod Code: 360 Part Number Price Each
6X2	310-102013 **32.62**	---	330-102013 **46.60**
6X3	310-102015 **32.62**	---	330-102015 **46.60**
6X4	310-102016 **32.62**	---	---
8X2	310-102018 **44.23**	---	330-102018 **93.25**
8X3	310-102020 **44.23**	---	330-102020 **93.25**
8X4	310-102021 **44.23**	---	330-102021 **93.25**
8X6	310-102022 **44.23**	---	3340-585 **93.25**
10X2	310-102024 **71.07**	---	330-102024 **145.69**
10X3	310-102026 **71.07**	---	330-102026 **145.69**
10X4	310-102027 **71.07**	---	330-102027 **145.69**

Class Surface Reducer (Soc) (continued)



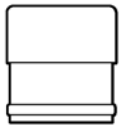
Size	CLASS 63 Prod Code: 340 Part Number Price Each		CLASS 125 Prod Code: 360 Part Number Price Each
10X6	310-102028 **71.07**	---	330-102028 **145.69**
10X8	310-102029 **71.07**	---	330-102029 **145.69**
12X2	310-102031 **87.41**	---	330-102031 **262.27**
12X3	310-102033 **87.41**	---	330-102033 **262.27**
12X4	310-102034 **87.41**	---	330-102034 **262.27**
12X6	310-102035 **87.41**	---	330-102035 **262.27**
12X8	310-102036 **87.41**	---	330-102036 **262.27**
12X10	310-102037 **87.41**	---	330-102037 **262.27**

Caps

Class Cap (Soc)

Size	CLASS 63 Prod Code: 340 Part Number Price Each		CLASS 125 Prod Code: 360 Part Number Price Each
6	310-107540 **22.15**	---	330-107540 **43.11**
8	310-107541 **40.77**	---	330-107541 **55.93**
10	310-107542 **69.93**	---	330-107542 **89.75**
12	310-107543 **85.59**	---	330-107543 **172.48**

Class Cap (Gasket)



Size	CLASS 63 Prod Code: 340 Part Number Price Each		CLASS 125 Prod Code: 360 Part Number Price Each
4	---	---	330-107565 **78.64**
6	---	---	330-107566 **111.86**
8	---	---	330-107567 **189.98**
10	---	---	330-107568 **306.51**
12	---	---	330-107569 **462.73**

Glue-On Saddles

Class Saddle (Soc)

Size	CLASS 63 Prod Code: 340 Part Number Price Each	CLASS 100 Prod Code: 350 Part Number Price Each	CLASS 125 Prod Code: 360 Part Number Price Each	CLASS 160 Prod Code: 370 Part Number Price Each	CLASS 200 Prod Code: 380 Part Number Price Each
6	310-101937 **31.47**	---	---	---	---
6X2	310-101789 **24.44**	---	330-101789 **69.93**	---	---
6X3	310-101797 **26.77**	---	330-101797 **81.59**	---	---
6X4	310-101804 **30.25**	---	330-101804 **93.25**	---	---
8	310-101938 **46.60**	---	---	---	---
8X2	310-101790 **24.44**	---	330-101790 **69.93**	---	---
8X3	310-101798 **26.77**	---	330-101798 **81.59**	---	---
8X4	310-101805 **30.25**	---	330-101805 **93.25**	---	---
8X6	310-101811 **31.47**	---	330-101811 **104.91**	---	---
10	310-101939 **72.27**	---	---	---	---

Glue-On Saddles

Class Saddle (Soc) (continued)

Size	CLASS 63 Prod Code: 340 Part Number / Price Each	CLASS 100 Prod Code: 350 Part Number / Price Each	CLASS 125 Prod Code: 360 Part Number / Price Each	CLASS 160 Prod Code: 370 Part Number / Price Each	CLASS 200 Prod Code: 380 Part Number / Price Each
8X6	310-101811 **31.47**	---	330-101811 **104.91**	---	---
10	310-101939 **72.27**	---	---	---	---
10X2	310-101791 **24.44**	---	330-101791 **69.93**	---	---
10X3	310-101799 **26.77**	---	330-101799 **81.59**	---	---
10X4	310-101806 **30.25**	---	330-101806 **93.25**	---	---
10X6	310-101812 **31.47**	---	330-101812 **104.91**	---	---
10X8	310-101817 **46.60**	---	330-101817 **116.54**	---	---
12	310-101940 **108.12**	---	---	---	---
12X2	310-101792 **32.78**	---	330-101792 **69.93**	---	---
12X3	310-101800 **26.77**	---	330-101800 **81.59**	---	---
12X4	310-101807 **30.25**	---	330-101807 **93.25**	---	---
12X6	310-101813 **31.47**	---	330-101813 **104.91**	---	---
12X8	310-101818 **46.60**	---	330-101818 **116.54**	---	---
12X10	310-101822 **72.27**	---	330-101822 **128.20**	---	---

Class Stub Saddle (Soc)

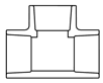
Size	CLASS 63 Prod Code: 340 Part Number / Price Each	CLASS 100 Prod Code: 350 Part Number / Price Each	CLASS 125 Prod Code: 360 Part Number / Price Each	CLASS 160 Prod Code: 370 Part Number / Price Each	CLASS 200 Prod Code: 380 Part Number / Price Each
6	310-101949 **51.25**	---	---	---	---
6X2	310-101884 **33.76**	---	330-101884 **61.74**	---	---
6X3	310-101892 **39.64**	---	330-101892 **67.57**	---	---
6X4	310-101899 **45.46**	---	330-101899 **75.75**	---	---
8	310-101950 **69.93**	---	---	---	---
8X2	310-101885 **33.76**	---	330-101885 **61.74**	---	---
8X3	310-101893 **39.64**	---	330-101893 **67.57**	---	---
8X4	310-101900 **45.46**	---	330-101900 **75.75**	---	---
8X6	310-101906 **51.25**	---	330-101906 **92.05**	---	---
10	310-101951 **96.71**	---	---	---	---
10X2	310-101886 **33.76**	---	330-101886 **61.74**	---	---
10X3	310-101894 **39.64**	---	330-101894 **67.57**	---	---
10X4	310-101901 **45.46**	---	330-101901 **75.75**	---	---
10X6	310-101907 **51.25**	---	330-101907 **92.05**	---	---
10X8	310-101912 **69.93**	---	330-101912 **106.03**	---	---
12	310-101952 **121.25**	---	---	---	---
12X2	310-101887 **33.76**	---	330-101887 **61.74**	---	---
12X3	310-101895 **39.64**	---	330-101895 **67.57**	---	---
12X4	310-101902 **45.46**	---	330-101902 **87.44**	---	---
12X6	310-101908 **51.25**	---	330-101908 **92.05**	---	---
12X8	310-101913 **69.93**	---	330-101913 **106.03**	---	---
12X10	310-101917 **96.71**	---	330-101917 **111.86**	---	---

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each

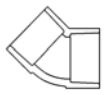


Molded Class 125 Tee

12501-100	**10**	1	0	361	378.71
12501-120	**12**	1	0	361	568.02

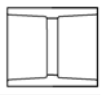
Molded Class 125 90° Elbow

12506-100	**10**	1	0	361	317.65
12506-120	**12**	1	0	361	485.84



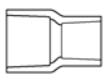
Molded Class 125 45° Elbow

12517-100	**10**	1	0	361	203.04
12517-120	**12**	1	0	361	297.73



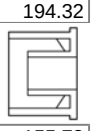
Molded Class 125 Coupling

12529-100	**10**	1	0	361	98.39
12529-120	**12**	1	0	361	158.24



Molded Class 125 Reducer Coupling

12529-626	**10X6**	1	0	361	164.04
12529-628	**10X8**	1	0	361	102.16
12529-668	**12X8**	1	0	361	244.08
12529-670	**12X10**	1	0	361	194.32



Molded Class 125 Reducer Bushing

12537-626	**10X6**	3	0	361	155.73
12537-628	**10X8**	1	4	361	155.73
12537-668	**12X8**	1	2	361	280.33
12537-670	**12X10**	1	2	361	278.63

EverTUFF® TURF™ FITTINGS

TECHNICAL INFORMATION WEIGHTS & DIMENSIONS

Contact Spears® for any information not found.

EverTUFF® TURF™ Overview

Spears® **EverTUFF® TURF™** Fittings are specifically engineered to meet the demanding system requirements of today's golf course and sports turf irrigation applications. This patented design provides greater surge resistance than Schedule 80 fittings for the most reliable turf fittings on the market. Produced in a distinct Blue color injection molded from specially balanced PVC materials or optional CPVC Gray, these performance fittings are Class 315 rated (315 psi) and available in IPS sizes 1" through 4".

Design Tested

EverTUFF® TURF™ Fittings have been computer engineered through Finite Element Analysis (FEA) studies for optimum material placement, strength and performance. Spears® Research & Development testing has shown the resulting design to best handle proper solvent cementing and correctly applied cyclic conditions of modern sports turf irrigation systems.

Full Class 315 Pressure Rating

Unlike the varying pressure ratings assigned to PVC Schedule piping, the **EverTUFF® TURF™** Class 315 designation maintains a uniform 315 psi pressure rating for all fitting sizes.

Full Selection of Basic Configurations

EverTUFF® TURF™ Fittings are produced in the basic configurations including Tees, Reducing Tees, 90° and 90° Sweep Elbows, 45° Elbows, Couplings, Reducer Bushings, Male Adapters and Special Reinforced (SR) Female Adapters – in sizes 1" through 4", plus Mechanical Clamp-on Transition Saddles sizes 4", 6" and 8".

Optional CPVC for Higher Temperatures

Where heat and excess temperature can be a major concern, **EverTUFF® TURF™** Fittings are available in higher temperature CPVC gray material.

EverTUFF® TURF™ Overview

NSF® Certified

EverTUFF® TURF™ Fittings are NSF® Certified for use in potable water systems and are naturally lead-free.

The Performance Difference – Patented Design

Spears® EverTUFF® TURF™ Fittings form a class of their own by merging different design parameters for conventional fittings with special PVC material selection to collectively produce a unique, highly surge resistant line of fittings that has been awarded a U.S. Patent.

EverTUFF® TURF™ Proven 2X Stronger Than Competitor Special "surge" Fittings

Independent 3rd party high-stress failure testing was conducted by the Center for Irrigation Technology (CIT) at California State University, Fresno. **Identical test is designed to force fittings to failure demonstrated that Spears® EverTUFF® TURF™ Fittings are over 2X stronger than competitor's special "surge" fittings.**

Product Test	Average Cycles To Failure
Competitor Special "surge" Tees	6,107.6
Spears® EverTUFF® TURF™ Tees	14,234.4

Performance that is a direct result of Spears® engineering and unparalleled processing capability!

Lifetime Warranty*

We are so confident in this fitting that it carries a Lifetime Warranty!

Selection Guide for Choosing PVC or High Temperature CPVC Materials

Heat can play a significant part in performance of any piping system. As with all thermoplastic products, pressure rating reduction is required as temperatures increase. This can apply to primary and secondary heat sources, such as basic ambient temperature and absorbed temperature from solar exposure or solar heated water supply sources. The following table shows applicable Class 315 (315 psi) pressure de-rating as temperatures elevate.

PVC & CPVC Class 315 Pressure Ratings at Elevated Temperatures, PSI												
Application Temperature	**73°F (23°C)**	**90°F (32°C)**	**100°F (38°C)**	**110°F (43°C)**	**120°F (49°C)**	**130°F (54°C)**	**140°F (60°C)**	**150°F (66°C)**	**160°F (71°C)**	**170°F (77°C)**	**180°F (82°C)**	**200°F (99°C)**
PVC	315	236	195	161	126	98	69	--	--	--	--	--
CPVC	315	287	258	227	205	180	158	132	126	91	79	62

Maximum Service Temperature: PVC = 140°F; CPVC = 200°F

*See Spears® Limited Lifetime Warranty for additional warranty details.

The information contained in this publication is based on current information and Product design at the time of publication and is subject to change without notification. Our ongoing commitment to product improvement may result in some variation. No representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or results to be obtained therefrom. For verification of technical data or additional information not contained herein, please contact Spears® Technical Services Department [West Coast: (818) 364-1611 — East Coast: (678) 985-1263].

General Information

Plastic piping systems should be engineered, installed, operated and maintained in accordance with accepted standards and procedures for plastic piping systems. It is absolutely necessary that all design, installation, operation and maintenance personnel be trained in proper handling, installation requirements and precautions for installation and use of plastic piping systems before starting.

"Lead Free" low lead certification – unless otherwise specified, all Spears® EverTUFF® TURF fittings specified here-in are certified by NSF International to ANSI/NSF® Standard 61, Annex G and is in compliance with California's Health & Safety Code Section 116825 (commonly known as AB1953) and Vermont Act 193. Weighted average lead content <=0.25%.

EverTUFF® TURF™ Mechanical Clamp-On Saddles

Designed for HDPE-to-PVC pipe transition to provide HDPE mainline take-off for PVC irrigation laterals and irrigation extensions, but fully suitable for any IPS pipe (metal or plastic) transition to PVC. Eliminates costly and cumbersome HDPE fusion process, which is generally cost prohibitive. Depending on the region and location, it has been found that the installed cost of HDPE laterals can be 25% higher than PVC laterals!

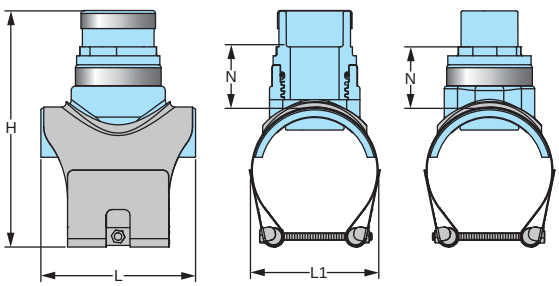
Pilot on lateral connector prevents saddle movement on pipe. Exceptionally strong Special Reinforced (SR) outlet on both Saddle outlet and Pilot Connector socket provide unparalleled strength. Injection molded in distinct blue EverTUFF® PVC proprietary material. Pilot Connectors are replaceable and interchangeable with any size EverTUFF® Mechanical Saddle for greater versatility.

Easy Installation - Clamp saddle to pipe, drill hole, install screw-in Pilot Connector with socket outlet. Available for a variety of mainline sizes and can be easily bushed for reduced lateral take-off sizes or special connections.

- Socket Outlet
- 315 psi Pressure Rating @ 73°F
- Stainless Steel Mechanical Clamp
- Elastomer Gasket & O-ring Seals
- Interchangeable 1-1/2" & 2" Lateral Connector Sizes
- Stainless Steel Reinforcing Rings for Extra Strength

MECHANICAL CLAMP-ON TRANSITION SADDLES

Pipe O.D. x Socket or Spigot
For Polyethylene (or any IPS pipe, metal or plastic) - To - PVC Transitions



Part Number	Size	H	L	L1	N	
					Socket	Spigot
865-419	4x1-1/2	9-3/4	6-1/2	5-1/8	2-9/16	---
865-420	4x2	9-3/4	6-1/2	5-1/8	2-9/16	---
865S-420	4x2 SPIGOT	9-3/4	6-1/2	5-1/8	---	2-9/16
865-527	6x1-1/2	11-3/4	7	7-3/8	2-1/2	---
865-528	6x2	11-3/4	7	7-3/8	2-1/2	---
865S-528	6x2 SPIGOT	11-3/4	7	7-3/8	---	2-1/2
865-577	8x1-1/2	14	7	9-1/2	2-5/8	---
865-578	8x2	14	7	9-1/2	2-5/8	---
865S-578	8x2 SPIGOT	14	7	9-1/2	---	2-5/8

EverTUFF® TURF™ Repair Couplings

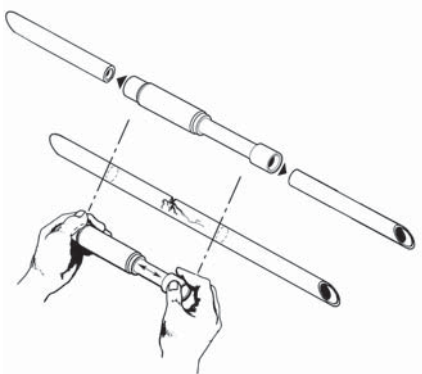
SOC x SOC (S119-xxxT)

SPIG x SOC (S118-xxxT)

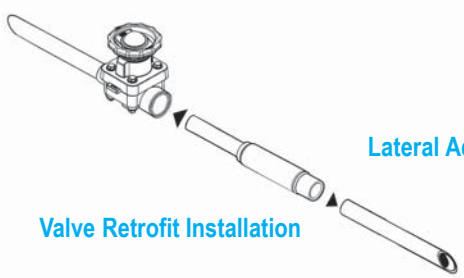
- ✔ Injection molded from Specially Balanced PVC Material in Distinct Blue color
- ✔ Multi-function Telescoping Design
- ✔ Regular and Short conf gurations
- ✔ Socket x Socket Conf guration for Pipe Repair or Use as a Short-Stroke Expansion Joint
- ✔ Sizes 1" through 6"
- ✔ Spigot x Socket Conf guration for Replacing Damaged Fittings
- ✔ Both Conf gurations can be Easily Modif ed for Opposite Use
- ✔ Full Class 315 Pressure Rating
- ✔ Double O-ring Seal in EPDM
- ✔ NSF® Certif ed for Potable Water Use

Versatile Repair Capability

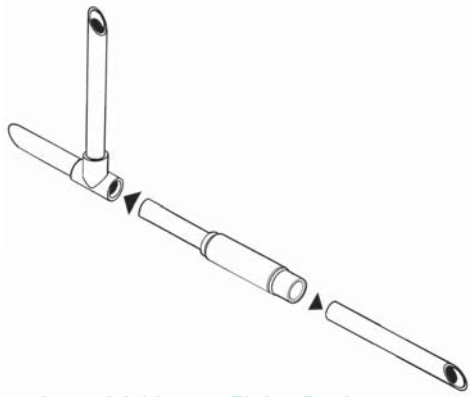
Spears® Repair Couplings provide a variety of system repair and alteration solutions. Use Socket x Socket conf gurations for quick pipe damage repair - can also be used as a short-stroke expansion joint to compensate for thermal expansion & contraction. Spigot x Socket con f gurations are excellent for lateral and riser add-ons, damaged f tting replacement, or for installing valves in existing piping systems. Order the wrong conf guration? Simply cut coupling from Socket shaft end to function as a spigot o r add a coupling to Spigot shaft end for Socket connections.



Pipe Damage Repair
or Use as Expansion Joint



Valve Retrofit Installation



Lateral Add-on or Fitting Replacement

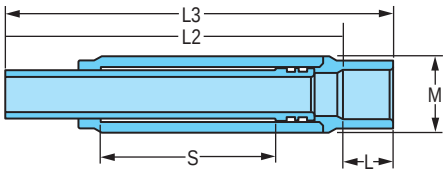
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Repair Couplings

Class 315 Pressure Rating

Spigot x Socket
EPDM O-ring



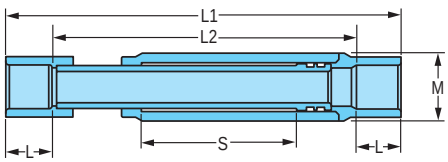
Part Number	Size	L	L2	L3	M	S	Approx. Wt. (Lbs.)
S118-10T	1	1-1/8	7-7/8	8-7/8	2-1/16	4	.62
S118-12T	1-1/4	1-1/4	8-3/8	9-5/8	2-7/16	4	.87
S118-15T	1-1/2	1-3/8	8-5/8	9-7/8	2-11/16	4	1.03
S118-20T	2	1-1/2	9-1/4	10-5/8	3-3/16	4	1.50
S118-25T	2-1/2	1-3/4	12-3/8	13-7/8	3-15/16	6	3.48
S118-30T	3	1-7/8	12-3/8	14-1/8	4-9/16	6	4.32
S118-40T	4	2-1/4	13-1/4	15-1/4	5-11/16	6	6.40
S118-60T	6	3	16	18-3/4	8-3/8	6	14.53

INSTALLATION NOTE: For expansion joint applications, install with unit 1/2 extended. System must be supported and blocked against thrusts and movement under pressure.
May be installed with flow in either direction.

Repair Couplings

Class 315 Pressure Rating

Socket x Socket
EPDM O-ring



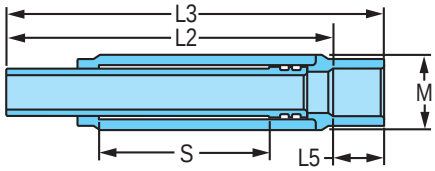
Part Number	Size	L	L1	L2	M	S	Approx. Wt. (Lbs.)
S119-10T	1	1-1/8	10-1/8	7-7/8	2-1/16	4	.70
S119-12T	1-1/4	1-1/4	10-7/8	8-3/8	2-7/16	4	.98
S119-15T	1-1/2	1-3/8	11-3/8	8-5/8	2-11/16	4	1.17
S119-20T	2	1-1/2	12-1/4	9-1/4	3-3/16	4	1.72
S119-25T	2-1/2	1-3/4	15-7/8	12-3/8	3-15/16	6	3.87
S119-30T	3	1-7/8	16-1/8	12-3/8	4-9/16	6	4.86
S119-40T	4	2-1/4	17-3/4	13-1/4	5-11/16	6	7.27
S119-60T	6	3	22	16	8-3/8	6	17.17

INSTALLATION NOTE: For expansion joint applications, install with unit 1/2 extended. System must be supported and blocked against thrusts and movement under pressure.
May be installed with flow in either direction.

Short Repair Couplings

Class 315 Pressure Rating

Spigot x Socket
EPDM O-ring



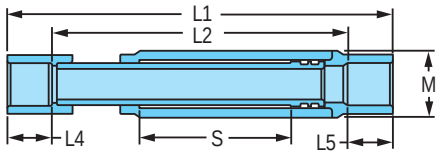
Part Number	Size	L2	L3	L5	S	M	Approx. Wt. (Lbs.)
SH118-10T	1	4-3/4	5-9/16	15/16	2-3/16	2-1/16	.39
SH118-12T	1-1/4	5-11/16	6-5/8	1	2-1/2	2-7/16	.61
SH118-15T	1-1/2	5-13/16	6-3/4	1-1/8	2-13/16	2-11/16	.76
SH118-20T	2	7-3/8	8-5/16	1-3/16	3-1/8	3-1/4	1.17

INSTALLATION NOTE: For expansion joint applications, install with unit 1/2 extended. System must be supported and blocked against thrusts and movement under pressure.
May be installed with flow in either direction.

Short Repair Couplings

Class 315 Pressure Rating

Socket x Socket
EPDM O-ring



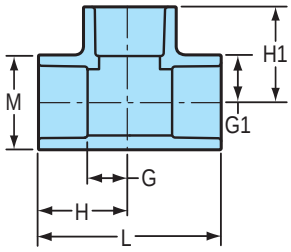
Part Number	Size	L1	L2	L4	L5	S	M	Approx. Wt. (Lbs.)
SH119-10T	1	6-13/16	4-3/4	1-1/8	15/16	2-3/16	2-1/16	.47
SH119-12T	1-1/4	7-15/16	5-11/16	1-1/4	1	2-1/2	2-7/16	.73
SH119-15T	1-1/2	8-1/4	5-13/16	1-3/8	1-1/8	2-13/16	2-11/16	.91
SH119-20T	2	10-1/16	7-3/8	1-1/2	1-3/16	3-1/8	3-1/4	1.39

INSTALLATION NOTE: For expansion joint applications, install with unit 1/2 extended. System must be supported and blocked against thrusts and movement under pressure.
May be installed with flow in either direction.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC & CPVC TEE

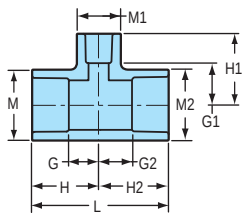
Socket x Socket x Socket



Part Number		Size	G	G1	H	H1	L	M
PVC	CPVC							
401-010T	401-010TC	1	13/16	13/16	1-31/32	1-31/32	3-15/16	1-11/16
401-012T	401-012TC	1-1/4	1	1	2-9/32	2-9/32	4-17/32	2-1/32
401-015T	401-015TC	1-1/2	1-1/8	1-1/8	2-17/32	2-17/32	5-1/32	2-9/32
401-020T	401-020TC	2	1-3/8	1-3/8	2-7/8	2-7/8	5-25/32	2-25/32
401-025T	401-025TC	2-1/2	1-11/16	1-11/16	3-7/16	3-7/16	6-7/8	3-3/8
401-030T	401-030TC	3	2-1/32	2-1/32	3-29/32	3-29/32	7-13/16	4-1/16
401-040T	401-040TC	4	2-19/32	2-19/32	4-7/8	4-7/8	9-25/32	5-7/32

PVC & CPVC REDUCING TEE

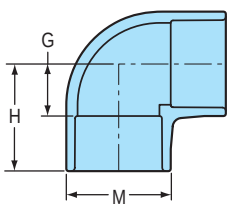
Socket x Socket x Socket



Part Number		Size	G	G1	G2	H	H1	H2	L	M	M1	M2
PVC	CPVC											
401-168T	401-168TC	1-1/4x1-1/4x1	13/16	1	13/16	2-3/32	2-5/32	2-3/32	4-5/32	2-1/32	1-11/16	2-1/32
401-212T	401-212TC	1-1/2x1-1/2x1-1/4	1	1-1/8	1	2-13/32	2-3/8	2-13/32	4-25/32	2-9/32	2-1/32	2-9/32
401-251T	401-251TC	2x2x1-1/2	1-3/8	1-3/8	1-3/8	2-21/32	2-3/4	2-21/32	5-5/16	2-25/32	2-5/16	2-25/32
401-292T	401-292TC	2-1/2x2-1/2x2	1-3/8	1-11/16	1-3/8	3-1/8	3-3/16	3-1/8	6-9/32	3-11/32	2-25/32	3-13/32
401-338T	401-338TC	3x3x2	1-3/8	2-1/32	1-3/8	3-1/4	3-17/32	3-1/4	6-17/32	4-1/16	2-25/32	4-1/16
401-422T	401-422TC	4x4x3	2-1/32	2-19/32	2-1/32	4-9/32	4-15/32	4-9/32	8-9/16	5-7/32	4-3/32	5-7/32

PVC & CPVC 90° ELBOW

Socket x Socket



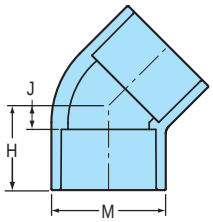
Part Number		Size	G	H	M
PVC	CPVC				
406-010T	406-010TC	1	29/32	2-1/32	1-21/32
406-012T	406-012TC	1-1/4	1-1/32	2-9/32	2-1/32
406-015T	406-015TC	1-1/2	1-5/32	2-17/32	2-9/32
406-020T	406-020TC	2	1-3/8	2-7/8	2-25/32
406-025T	406-025TC	2-1/2	1-23/32	3-15/32	3-3/8
406-030T	406-030TC	3	2	3-7/8	4-1/16
406-040T	406-040TC	4	2-11/16	4-15/16	5-7/32

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC & CPVC 45° ELBOW

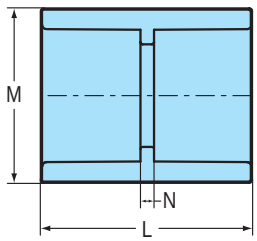
Socket x Socket



Part Number		Size	H	J	M
PVC	CPVC				
417-010T	417-010TC	1	1-5/8	15/32	1-11/16
417-012T	417-012TC	1-1/4	1-13/16	9/16	2-1/32
417-015T	417-015TC	1-1/2	1-31/32	19/32	2-9/32
417-020T	417-020TC	2	2-7/32	23/32	2-25/32
417-025T	417-025TC	2-1/2	2-5/8	7/8	3-3/8
417-030T	417-030TC	3	2-7/8	1	4-1/16
417-040T	417-040TC	4	3-9/16	1-5/16	5-7/32

PVC & CPVC COUPLING

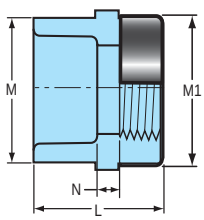
Socket x Socket



Part Number		Size	L	M	N
PVC	CPVC				
429-010T	429-010TC	1	2-11/32	1-21/32	3/32
429-012T	429-012TC	1-1/4	2-19/32	2-1/32	3/32
429-015T	429-015TC	1-1/2	2-7/8	2-9/32	3/32
429-020T	429-020TC	2	3-1/8	2-25/32	3/32
429-025T	429-025TC	2-1/2	3-11/16	3-3/8	3/16
429-030T	429-030TC	3	3-31/32	4-1/16	3/16
429-040T	429-040TC	4	4-25/32	5-1/4	1/4

PVC & CPVC SPECIAL REINFORCED FEMALE ADAPTER

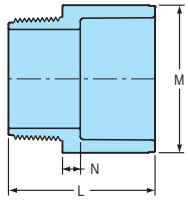
Socket x SR Fipt



Part Number		Size	L	M	M1	N
PVC	CPVC					
435-010SRT	435-010SRTC	1	2-5/32	1-3/16	1-25/32	3/32
435-012SRT	435-012SRTC	1-1/4	2-5/16	2-3/32	2-1/16	3/32
435-015SRT	435-015SRTC	1-1/2	2-7/16	2-13/32	2-7/16	3/16
435-020SRT	435-020SRTC	2	2-11/16	3	3-1/32	9/32
435-025SRT	435-025SRTC	2-1/2	3-9/32	3-9/16	3-19/32	7/32
435-030SRT	435-030SRTC	3	3-1/2	4-1/4	4-9/32	3/16
435-040SRT	435-040SRTC	4	3-31/32	5-7/32	5-7/32	7/32

PVC & CPVC MALE ADAPTER

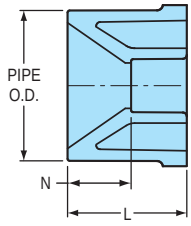
Mipt x Socket



Part Number		Size	L	M	N
PVC	CPVC				
436-010T	436-010TC	1	1-1/8	1-11/16	7/32
436-012T	436-012TC	1-1/4	2-1/2	2-1/16	7/32
436-015T	436-015TC	1-1/2	2-5/8	2-5/16	7/32
436-020T	436-020TC	2	2-25/32	2-25/32	7/32
436-025T	436-025TC	2-1/2	3-19/32	3-3/8	9/32
436-030T	436-030TC	3	3-13/16	4-3/32	5/32
436-040T	436-040TC	4	4-13/32	5-1/4	13/32

PVC & CPVC REDUCER BUSHING (Flush Style)

Spigot x Socket



Part Number		Size	L	N
PVC	CPVC			
437-292	437-292C	2-1/2x2	2-1/16	17/32
437-338	437-338C	3x2	2-7/32	9/16
437-422	437-422C	4x3	2-19/32	11/16

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

SWING JOINT TECHNICAL DATA

- **Temperature / Pressure Rating**

  Spears® Swing Joint Riser Assemblies carry a rated working pressure of 315 psi at 73° F and are pressure tested to Schedule 80 specifications per ASTM D 1599, long term (1000 hours) and pressure tested to Class 315 specifications per ASTM D 1598.*

- **Schedule 80+ Wall Thickness**

  The wall thickness of these assemblies is Schedule 80+ which is substantially thicker than other PVC swing joints manufactured to Schedule 40 or Class 200 specifications. This provides more material in critical areas that are more susceptible to stress. Spears® assemblies have been cyclic-pressure tested from 0 - 600 psi at the rate of ten cycles per minute.*

- **Variety of Inlet/Outlet Conf gurations**

  Spears® offers the broadest selection of inlet and outlet connections including a specially designed inlet tee, a female brass thread outlet adapter and a male acme thread O-ring seal outlet adapter.

- **Double O-ring Seal**

  Spears® Manufacturing Company uses two O-rings in its swing joint assembly. The larger, inner O-ring provides a leak-free pressure seal. The outer O-ring prevents dirt, dust, sand, etc., from entering the threads and causing damage to the swing joint components. The swing joint components are manufactured with no mold parting lines in critical areas. The Swing Joint assemblies are leak tested to Class 315 specifications per ASTM D 3139, with only the primary O-rings installed.*

- **Strong Buttress Style Threads**

  Spears® uses a buttress style form of thread in its assembly. This thread has the advantage in applications involving high stresses along the thread axis in one direction. Due to the design, the buttress thread offers a greater degree of safety from surge type failures and allows free movement of the joints without restriction.

- **Sweep Style Fittings**

  The medium sweep style fitting design offers less friction loss than conventional block or square elbow patterns. The Cv factors are: 1" = 13 gpm; 1-1/4" = 24 gpm and 1-1/2" = 35 gpm.* Large finger knurls are provided for ease of installation or adjustments eliminating the need for wrenches or other tools.

- **Lifetime Warranty**

  Spears® Swing Joint Riser Assemblies have a Limited Lifetime Warranty against any defects in materials or workmanship.

EverTUFF® TURF™ Swing Joint Overview

STANDARDS AND TESTING CRITERIA FOR SPEARS® EverTUFF® TURF™ SWING JOINT RISER ASSEMBLIES

Spears® Swing Joint Riser Assemblies are tested to the following specifications and standards.

Test	Reference Standard	Requirement
HYDROSTATIC BURST Test per ASTM D 1599, 60-70 seconds	ASTM D 1785 / D 2464 / D 2467 (Schedule 80 Pipe & Fittings)	1" = 2020 psi, minimum 1-1/4" = 1660 psi, minimum 1-1/2" = 1510 psi, minimum
SUSTAINED PRESSURE Test per ASTM D 1598, 1000 hours	ASTM D 2241, SDR 13.5 (315 psi Pressure Rating)	All sizes = 670 psi, minimum
HYDROSTATIC LEAK* Test per ASTM D 3139, 1 hour @ 2.5 x Pressure Rating	ASTM D 3139	No Pressure Loss
VACUUM* Test per ASTM D 3139, 1 hour @ 22 in. Hg	ASTM D 3139	No Leakage
DIMENSIONS Measured per ASTM D 2122	ASTM D 2464 / D 2467	Sockets = Schedule 80 Wall = Exceeds Schedule 80
O-RING TYPE (Dimensions per AS 568A)	(Standard Industrial)	Nitrile (Buna-N)

SPEARS® SWING JOINT ASSEMBLY Cv FACTORS** Cv factors are based on assemblies using 12" riser and 6" inlet nipples	1" 1-1/4" 1-1/2"	= = =	13 gpm 24 gpm 35 gpm
SWING JOINT ASSEMBLY CYCLIC PRESSURE TEST** 0 - 600 psi, 10 cpm @ 73°F	1" avg 1-1/2" avg	= =	29,500 cycles 13,000 cycles

* Test conducted with primary O-ring only on each assembly joint
(secondary O-ring is to protect joint-threads from external debris)

** Friction loss and cyclic pressure testing was conducted by the Agricultural Engineering Department of CAL Poly University, Pomona, California.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

SWING JOINT RISER SPECIALTY OUTLETS

Male ACME Thread 90° Street Ell Outlet with O-ring

Designed for use with female acme thread O-ring seal style rotors. Provides faster installation and positive O-ring seal. Reduces the risk of over tightening and eliminates the need for thread sealants. Available as an individual component.

Size	Part Number
1"	591-010-7AR
1-1/4"	591-012-7AR
1-1/2"	591-015-7AR
1" x 1-1/4"	591-132-7AR

May also be purchased as part of Swing Joint Riser Assembly. Male Buttress Thread Riser Nipple Style is available with 8" through 24" Risers. Solvent Cemented Riser Nipple Style Kit is available without riser nipple or with choice of 6" through 24" nipple lengths. Both styles are available with choice of Socket, Spigot, Socket Tee, Male Iron Pipe Thread, BSP Thread, DIN Spigot or JIS Spigot Inlets.

Special Reinforced Female 90° Ell Outlet

Designed for use where over tightening of threads is a problem. This unique precompression design compensates for expansion forces generated from tapered pipe thread joint make-up. Radial stress is reduced in normal installations and contained in severe over tightening situations. Available as an individual component.

Size	Part Number
1"	591-010-8SRA
1-1/4"	591-012-8SRA
1-1/2"	591-015-8SRA

May also be purchased as part of Swing Joint Riser Assembly. Male Buttress Thread Riser Nipple Style is available with 8" through 24" Risers. Solvent Cemented Riser Nipple Style Kit is available without riser nipple or with choice of 6" through 24" nipple lengths. Both styles are available with choice of Socket, Spigot, Socket Tee, Male Iron Pipe Thread, BSP Thread, DIN Spigot or JIS Spigot Inlets.

Metal Female Thread 90° Ell Outlet

Designed for use with quick coupler valves. Spears® patented threaded Metal Insert is molded-in-place as an integral part of each fitting for superior strength. Secondary O-ring seal compensates for expansion and contraction variations between materials. Available as an individual component.

Size	Part Number
1"	591-010-8BRA
1-1/4"	591-012-8BRA
1-1/2"	591-015-8BRA

May also be purchased as part of Swing Joint Riser Assembly. Male Buttress Thread Riser Nipple Style is available with 8" through 24" Risers. Solvent Cemented Riser Nipple Style Kit is available without riser nipple or with choice of 6" through 24" nipple lengths. Both styles are available with choice of Socket, Spigot, Socket Tee, Male Iron Pipe Thread, BSP Thread, DIN Spigot or JIS Spigot Inlets.

EverTUFF® TURF™ Swing Joint Specialty Outlets

Many Configurations may be created and furnished by using the following Swing Joint Riser Numbering System.

X X X X - X X X X X

Code	Swing Arm Riser Style
58	Male Buttress Threaded Riser Style
59	Cut & Solvent Cemented Riser Style

Code	Inlet x Outlet Style Combination
01	Soc x Soc
02	Spig x Soc
03	Mipt x Soc
04	Tee x Soc
05	Soc x Mipt
06	Spig x Mipt
07	Mipt x Mipt
08	Tee x Mipt
09	Soc x Mat
10	Spig x Mat
11	Mipt x Mat
12	Tee x Mat
13	Soc x Fipt
14	Spig x Fipt
15	Mipt x Fipt
16	Tee x Fipt
17	Soc x SR Fipt
18	Spig x SR Fipt
19	Mipt x SR Fipt
20	Tee x SR Fipt
21†	Gmpt 2-1/2" Npl x Mat
22	Mat x Mat
23	Mat x Mpt
24	Mat x Fipt
25	Mat x SR Fipt
26	Spig x Fbt
27	Spig x Fat
28	Extended Spig x Fipt
29	Extended Spig x Mipt
30	Open
31†	Mipt x Gmpt 2-1/2" Npl
32†	Gmpt 2-1/2" Npl x Fipt
33†	Gmpt 2-1/2" Npl x Soc
34†	Gmpt 2-1/2" Npl x SR Fipt
35†	Soc x Gmpt 2-1/2" Npl
36†	Spig x Gmpt 2-1/2" Npl
37†	Gmpt x Gmpt 2-1/2" Npl
38†	Tee x Gmpt 2-1/2" Npl
39†	Gmpt 2-1/2" Npl x Mipt
40†	Open
41†	Mipt x Gmpt 3" Npl
42†	Gmpt 3" Npl x Fipt
43†	Gmpt 3" Npl x Soc
44†	Gmpt 3" Npl x SR Fipt
45†	Soc x Gmpt 3" Npl
46†	Spig x Gmpt 3" Npl
47†	Gmpt x Gmpt 3" Npl
48†	Tee x Gmpt 3" Npl
49†	Gmpt 3" Npl x Mipt
50†	Gmpt 3" Npl x Mat

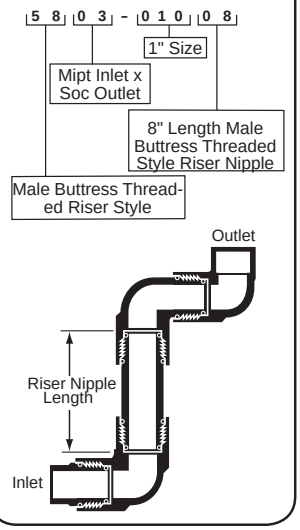
Code	Inlet x Outlet Style Combination
51‡	Soc x Soc Multi-Ell
52‡	Spig x Soc Multi-Ell
53‡	Mipt x Soc Multi-Ell
54‡	Tee x Soc Multi-Ell
55‡	Soc x Mipt Multi-Ell
56‡	Spig x Mipt Multi-Ell
57‡	Mipt x Mipt Multi-Ell
58‡	Tee x Mipt Multi-Ell
59‡	Soc x Mat Multi-Ell
60‡	Spig x Mat Multi-Ell
61‡	Mipt x Mat Multi-Ell
62‡	Tee x Mat Multi-Ell
63‡	Soc x Fipt Multi-Ell
64‡	Spig x Fipt Multi-Ell
65‡	Mipt x Fipt Multi-Ell
66‡	Tee x Fipt Multi-Ell
67‡	Soc x SR Fipt Multi-Ell
68‡	Spig x SR Fipt Multi-Ell
69‡	Mipt x SR Fipt Multi-Ell
70‡	Tee x SR Fipt Multi-Ell
71†‡	Soc x Gmpt 2-1/2" Npl Multi-Ell
72†‡	Spig x Gmpt 2-1/2" Npl Multi-Ell
73†‡	Mipt x Gmpt 2-1/2" Npl Multi-Ell
74†‡	Tee x Gmpt 2-1/2" Npl Multi-Ell
75†‡	Soc x Gmpt 3" Npl Multi-Ell
76†‡	Spig x Gmpt 3" Npl Multi-Ell
77†‡	Mipt x Gmpt 3" Npl Multi-Ell
78†‡	Tee x Gmpt 3" Npl Multi-Ell
79†‡	Gmpt 3" Npl x Mipt Multi-Ell
80†‡	Gmpt 3" Npl x Soc Multi-Ell
81†‡	Gmpt 3" Npl x Gmpt 3" Npl Multi-Ell
82‡	Mat x Mat Multi-Ell
83	Mipt x Mat Top Mount
84	Open
85	Open
86	Open
87	Open
88	Bsp x Bsp Multi-Ell
89	Bsp x Bsp Top Mount
90	Bsp x Mat
91	Bsp x Mipt
92	Mipt x Bsp
93	Bsp x Bsp
94	Astm Soc x Bsp
95	Astm Spig x Bsp
96	Din Spig x Bsp
97	Din Spig x Mipt
98	Jis Spig x Jis Mipt
99	Jis Spig x Mipt

Code	Size
010	1"
132	1" x 1-1/4"
133	1" x 1-1/2"
012	1-1/4"
015	1-1/2"
168	1-1/4" x 1"
169	1-1/4" x 1-1/2"
211	1-1/2"x 1"
212	1-1/2" x 1-1/4"
249	2" x 1" (Tee)
250	2" x 1-1/4" (Tee)
251	2" x 1-1/2"(Tee)

* Buttress Threaded Riser Lengths may be extended with the use of Riser Extension Couplings.
** Additional Nipple lengths are available. Please contact your servicing Spears® Regional Distribution Center.

Riser Nipple Length	
Code	**Size**
5800 Series* Male Buttress Threaded Style	
08	8"
10	10"
12	12"
14	14"
16	16"
18	18"
20	20"
24	24"
5900 Series Cut & Solvent Cemented Style**	
00	(No Nipple)
06	6"
07	7"
08	8"
10	10"
11	11"
12	12"
13	13"
14	14"
15	15"
16	16"
17	17"
18	18"
19	19"
20	20"
21	21"
22	22"
23	23"
24	24"

Sample Assembly



† Gmpt - A 2-1/2" Toe Nipple is solvent cemented in place. If a 3" Nipple is required, change the first digit from a "3" to a "4".
EXAMPLE:
38 = Tee x 2-1/2" Gmpt
48 = Tee x 3" Gmpt

‡ Multi-Ell - Two additional Elbows are located at the outlet of the Swing Joint Riser to allow 360° adjustment.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Lasco, Dura & Rain Bird Part Numbers Cross-Referenced to Spears® Part Numbers

Cross-Referenced to Spears® Part Numbers

This cross-reference is intended as an aid in determining the closest approximation of an "equal" when ordering Spears® Buttress Thread Riser Swing Joint Assemblies as an alternative to Lasco, Dura, or Rain Bird products. Because of critical differences in the way each manufacturer engineers their product, no true exact equal can be determined for any manufacturer's product. The following considerations should be noted when using this cross-reference.

The length as called out by the part number is determined by Spears® as the length of the buttress thread riser nipple. The length as called out by the Lasco, Rain Bird and Dura part number are determined by the "Lay Length" which is described as the "Centerline to Centerline" measurement on the Spears® assemblies. A Spears® 8" riser is longer than a Lasco, Rain Bird or Dura 8" riser. A Spears® 10" riser is 'roughly equivalent' to a Lasco or Dura 12" riser. A Spears® 12" riser is slightly longer than a Lasco, Rain Bird or Dura 14" riser, and a Spears® 16" Riser is 'roughly equivalent' to a Dura, Lasco, and Rain Bird 18" Riser. For exact "overall length" and "centerline to centerline" measurements, consult Turf & Irrigation Pricing section, EverTUFF® TURF™ Swing Joint Riser Assemblies.

Spears® metal insert FIPT outlet risers are designed for use with 'quick coupler valves'. Spears® outlet elbows do not incorporate the "ears" or "retaining lugs" for rebar stabilizing rods. This method of stabilization defeats the intended purpose of the swing joint assembly. Rebar driven perpendicular to the supply line can be driven through the pipeline.

In all cases the Spears® products meet and exceed the minimum Specifications for Dura 'Unibody' Lasco 'Unitized', and Rain Bird swing joint assemblies.

Allegations regarding PVC thread styles, specifically with regards to PVC ACME vs. Buttress style threads are misleading and inaccurate at best. Contact the Spears® Technical Services Department for more information regarding ACME vs. Buttress style thermoplastic threads.

Spears®, Rain Bird, Lasco and Dura swing joints are rated at 315 psi @ 73°F when tested in accordance with ASTM 3139. Additionally, Spears® swing joints are fully tested for the most demanding applications through ASTM D 1599 hydrostatic burst test, and ASTM D 1598 sustained pressure tests.

Test	Reference Standard	Spears®	Lasco	Dura	Rain Bird
Hydrostatic Burst-Test per ASTM D 1599, 60-70 secs.	ASTM D 1785 / D 2467	1" = 1020 psi 1-1/4" = 1660 psi 1-1/2" = 1510 psi	Not Available	Not Available	Not Available
Sustained Pressure Test per ASTM D 1598, 1000 hrs.	ASTM D 2241, SDR 13.5 (315 psi Pressure rating)	All sizes = 670 psi, min.	Not Available	Not Available	Not Available
Hydrostatic Leak - Test 1 hr. @ 2.5 x Pressure Rating	ASTM D 3139	No Pressure Loss	Not Available	Not Available	No Pressure Loss
Vacuum* - Test per ASTM D 3139	ASTM D 3139	No Leakage	Not Available	Not Available	Not Available
Dimensions - measured per ASTM D 2122	ASTM D 2467	Sockets = Sch 80 Wall = Exceed Sch 80	Schedule 80	Schedule 80	Schedule 80
O-ring Type and Dimensions	AS 568A	Nitrile (Buna-N)	Not Available	Not Available	Not Available
Warranty		Lifetime Limited Warranty	5 Years	5 Years	5 Years

"Lay Length" measurements are determined from the same point of the assemblies. Lasco, Rain Bird and Dura "Lay Length" is measured from the points determined as the Spears® "Centerline to Centerline". Due to differences in product engineering, it is difficult to arrive at an 'exact' equivalent. This cross reference represents the most commonly accepted 'equals.'

Others Lay Length	Spears® Riser Nipple Length	Spears® C/L Dimension 1"	Spears® C/L Dimension 1-1/4"	Spears® C/L Dimension 1-1/2"
6"	N/A	N/A	N/A	N/A
8"	N/A	N/A	N/A	N/A
10"	8"	9-11/16"	10-3/16"	10-7/16"
12"	10"	11-11/16"	12-3/16"	12-7/16"
14"	12"	13-11/16"	14-3/16"	14-7/16"
16"	14"	15-11/16"	16-3/16"	16-7/16"
18"	16"	17-11/16"	18-3/16"	18-7/16"

*Spears® Manufacturing Company believes this information to be accurate at time of printing. Spears® Manufacturing shall not be held responsible for any errors or omissions. Any problems arising out of the use of this document is the sole responsibility of the user. Verification of this data is recommended.

EverTUFF® TURF™ Swing Joint Cross Reference

DESCRIPTION	SPEARS®	LASCO	DURA	RAIN BIRD
1” Soc Inlet x Mipt Outlet			1-A4-3-1-6	
1” Soc Inlet x Mipt Outlet		G112-208	1-A4-3-1-8	SJ-8-100-61
1” Soc Inlet x Mipt Outlet	5805-01008		1-A4-3-1-10	
1” Soc Inlet x Mipt Outlet	5805-01010	G112-212	1-A4-3-1-12	SJ-12-100-61
1” Soc Inlet x Mipt Outlet	5805-01012		1-A4-3-1-14	
1” Soc Inlet x Mipt Outlet	5805-01014		1-A4-3-1-16	
1” Soc Inlet x Mipt Outlet	5805-01016	G112-218	1-A4-3-1-18	SJ-18-100-61
1” Soc Inlet x Mipt Outlet	5805-01024			
1-1/4” Soc Inlet x Mipt Outlet			2-A4-3-1-6	
1-1/4” Soc Inlet x Mipt Outlet		G212-208	2-A4-3-1-8	SJ-8-125-61
1-1/4” Soc Inlet x Mipt Outlet	5805-01208		2-A4-3-1-10	
1-1/4” Soc Inlet x Mipt Outlet	5805-01210	G212-212	2-A4-3-1-12	SJ-12-125-61
1-1/4” Soc Inlet x Mipt Outlet	5805-01212		2-A4-3-1-14	
1-1/4” Soc Inlet x Mipt Outlet	5805-01214		2-A4-3-1-16	
1-1/4” Soc Inlet x Mipt Outlet	5805-01216	G212-218	2-A4-3-1-18	SJ-18-125-61
1-1/2” Soc Inlet x Mipt Outlet			3-A4-3-1-6	
1-1/2” Soc Inlet x Mipt Outlet		G312-208	3-A4-3-1-8	SJ-8-150-61
1-1/2” Soc Inlet x Mipt Outlet	5805-01508		3-A4-3-1-10	
1-1/2” Soc Inlet x Mipt Outlet	5805-01510	G312-212	3-A4-3-1-12	SJ-12-150-61
1-1/2” Soc Inlet x Mipt Outlet	5805-01512		3-A4-3-1-14	
1-1/2” Soc Inlet x Mipt Outlet	5805-01514		3-A4-3-1-16	
1-1/2” Soc Inlet x Mipt Outlet	5805-01516	G312-218	3-A4-3-1-18	SJ-18-150-61
1-1/2” Soc Inlet x Mipt Outlet	5805-01518			
1” Soc Inlet x 1-1/4” Mipt Outlet			1-A4-4-1-6	
1” Soc Inlet x 1-1/4” Mipt Outlet		G114-208	1-A4-4-1-8	SJ-8-100-64
1” Soc Inlet x 1-1/4” Mipt Outlet	5805-13208		1-A4-4-1-10	
1” Soc Inlet x 1-1/4” Mipt Outlet	5805-13210	G114-212	1-A4-4-1-12	SJ-10-100-64
1” Soc Inlet x 1-1/4” Mipt Outlet	5805-13212		1-A4-4-1-14	
1” Soc Inlet x 1-1/4” Mipt Outlet	5805-13214		1-A4-4-1-16	
1” Soc Inlet x 1-1/4” Mipt Outlet	5805-13216	G114-218	1-A4-4-1-18	SJ-18-100-64
1” Soc Inlet x 1-1/2” Mipt Outlet			1-A4-5-1-6	
1” Soc Inlet x 1-1/2” Mipt Outlet		G113-208	1-A4-5-1-8	
1” Soc Inlet x 1-1/2” Mipt Outlet	5805-13308		1-A4-5-1-10	
1” Soc Inlet x 1-1/2” Mipt Outlet	5805-13310	G113-212	1-A4-5-1-12	
1” Soc Inlet x 1-1/2” Mipt Outlet	5805-13312		1-A4-5-1-14	
1” Soc Inlet x 1-1/2” Mipt Outlet	5805-13314		1-A4-5-1-16	
1” Soc Inlet x 1-1/2” Mipt Outlet	5805-13316	G113-218	1-A4-5-1-18	
1-1/4” Soc Inlet x 1” Mipt Outlet			2-A4-7-1-6	
1-1/4” Soc Inlet x 1” Mipt Outlet		G217-208	2-A4-7-1-8	
1-1/4” Soc Inlet x 1” Mipt Outlet	5805-16808		2-A4-7-1-10	
1-1/4” Soc Inlet x 1” Mipt Outlet	5805-16810	G217-212	2-A4-7-1-12	
1-1/4” Soc Inlet x 1” Mipt Outlet	5805-16812		2-A4-7-1-14	
1-1/4” Soc Inlet x 1” Mipt Outlet	5805-16814		2-A4-7-1-16	
1-1/4” Soc Inlet x 1” Mipt Outlet	5805-16816	G113-218	2-A4-7-1-18	
1-1/4” Soc Inlet x 1-1/2” Mipt Outlet			2-A4-6-1-6	
1-1/4” Soc Inlet x 1-1/2” Mipt Outlet			2-A4-6-1-8	SJ-8-125-64
1-1/4” Soc Inlet x 1-1/2” Mipt Outlet	5805-16908		2-A4-6-1-10	
1-1/4” Soc Inlet x 1-1/2” Mipt Outlet	5805-16910		2-A4-6-1-12	SJ-12-125-64

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

EverTUFF® TURF™ Swing Joint Cross Reference

DESCRIPTION	SPEARS®	LASCO	DURA	RAIN BIRD
1-1/4" Soc Inlet x 1-1/2" Mipt Outlet	5805-16912		2-A4-6-1-14	
1-1/4" Soc Inlet x 1-1/2" Mipt Outlet	5805-16914		2-A4-6-1-16	
1-1/4" Soc Inlet x 1-1/2" Mipt Outlet	5805-16916	G213-218	2-A4-6-1-18	SJ-18-125-64
1-1/2" Soc Inlet x 1" Mipt Outlet			3-A4-8-1-6	
1-1/2" Soc Inlet x 1" Mipt Outlet		G317-208	3-A4-8-1-8	
1-1/2" Soc Inlet x 1" Mipt Outlet	5805-21108		3-A4-8-1-10	
1-1/2" Soc Inlet x 1" Mipt Outlet	5805-21110	G317-212	3-A4-8-1-12	
1-1/2" Soc Inlet x 1" Mipt Outlet	5805-21112		3-A4-8-1-14	
1-1/2" Soc Inlet x 1" Mipt Outlet	5805-21114		3-A4-8-1-16	
1-1/2" Soc Inlet x 1" Mipt Outlet	5805-21116	G317-218	3-A4-8-1-18	
1-1/2" Soc Inlet x 1-1/4" Mipt Outlet			3-A4-9-1-6	
1-1/2" Soc Inlet x 1-1/4" Mipt Outlet		G314-208	3-A4-9-1-8	
1-1/2" Soc Inlet x 1-1/4" Mipt Outlet	5805-21208		3-A4-9-1-10	
1-1/2" Soc Inlet x 1-1/4" Mipt Outlet	5805-21210	G314-212	3-A4-9-1-12	
1-1/2" Soc Inlet x 1-1/4" Mipt Outlet	5805-21212		3-A4-9-1-14	
1-1/2" Soc Inlet x 1-1/4" Mipt Outlet	5805-21214		3-A4-9-1-16	
1-1/2" Soc Inlet x 1-1/4" Mipt Outlet	5805-21216	G314-218	3-A4-9-1-18	
1" Spig Inlet x Mipt Outlet			1-A2-3-1-6	
1" Spig Inlet x Mipt Outlet		G122-208	1-A2-3-1-8	SJ-8-100-41
1" Spig Inlet x Mipt Outlet	5806-01008		1-A2-3-1-10	
1" Spig Inlet x Mipt Outlet	5806-01010	G122-212	1-A2-3-1-12	SJ-12-100-41
1" Spig Inlet x Mipt Outlet	5806-01012		1-A2-3-1-14	
1" Spig Inlet x Mipt Outlet	5806-01014		1-A2-3-1-16	
1" Spig Inlet x Mipt Outlet	5806-01016	G122-218	1-A2-3-1-18	SJ-18-100-41
1" Spig Inlet x Mipt Outlet	5806-01018			
1-1/4" Spig Inlet x Mipt Outlet			2-A2-3-1-6	
1-1/4" Spig Inlet x Mipt Outlet		G222-208	2-A2-3-1-8	SJ-8-125-41
1-1/4" Spig Inlet x Mipt Outlet	5806-01208		2-A2-3-1-10	
1-1/4" Spig Inlet x Mipt Outlet	5806-01210	G222-212	2-A2-3-1-12	SJ-12-125-41
1-1/4" Spig Inlet x Mipt Outlet	5806-01212		2-A2-3-1-14	
1-1/4" Spig Inlet x Mipt Outlet	5806-01214		2-A2-3-1-16	
1-1/4" Spig Inlet x Mipt Outlet	5806-01216	G222-218	2-A2-3-1-18	SJ-18-125-41
1-1/2" Spig Inlet x Mipt Outlet			3-A2-3-1-6	
1-1/2" Spig Inlet x Mipt Outlet		G322-208	3-A2-3-1-8	SJ-8-150-41
1-1/2" Spig Inlet x Mipt Outlet	5806-01508		3-A2-3-1-10	
1-1/2" Spig Inlet x Mipt Outlet	5806-01510	G322-212	3-A2-3-1-12	SJ-12-150-41
1-1/2" Spig Inlet x Mipt Outlet	5806-01512		3-A2-3-1-14	
1-1/2" Spig Inlet x Mipt Outlet	5806-01514		3-A2-3-1-16	
1-1/2" Spig Inlet x Mipt Outlet	5806-01516	G322-218	3-A2-3-1-18	SJ-18-150-41
1" Spig Inlet x 1-1/4" Mipt Outlet			1-A2-4-1-6	
1" Spig Inlet x 1-1/4" Mipt Outlet		G124-208	1-A2-4-1-8	SJ-8-100-44
1" Spig Inlet x 1-1/4" Mipt Outlet	5806-13208		1-A2-4-1-10	
1" Spig Inlet x 1-1/4" Mipt Outlet	5806-13210	G124-212	1-A2-4-1-12	SJ-12-100-44
1" Spig Inlet x 1-1/4" Mipt Outlet	5806-13212		1-A2-4-1-14	
1" Spig Inlet x 1-1/4" Mipt Outlet	5806-13214		1-A2-4-1-16	
1" Spig Inlet x 1-1/4" Mipt Outlet	5806-13216	G124-218	1-A2-4-1-18	SJ-18-100-44

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EverTUFF® TURF™ Swing Joint Cross Reference

DESCRIPTION	SPEARS®	LASCO	DURA	RAIN BIRD
1” Spig Inlet x 1-1/2” Mipt Outlet			1-A2-5-1-6	
1” Spig Inlet x 1-1/2” Mipt Outlet		G123-208	1-A2-5-1-8	
1” Spig Inlet x 1-1/2” Mipt Outlet	5806-13308		1-A2-5-1-10	
1” Spig Inlet x 1-1/2” Mipt Outlet	5806-13310	G123-212	1-A2-5-1-12	
1” Spig Inlet x 1-1/2” Mipt Outlet	5806-13312		1-A2-5-1-14	
1” Spig Inlet x 1-1/2” Mipt Outlet	5806-13314		1-A2-5-1-16	
1” Spig Inlet x 1-1/2” Mipt Outlet	5806-13316	G123-218	1-A2-5-1-18	
1-1/4” Spig Inlet x 1” Mipt Outlet			2-A2-7-1-6	
1-1/4” Spig Inlet x 1” Mipt Outlet		G227-208	2-A2-7-1-8	
1-1/4” Spig Inlet x 1” Mipt Outlet	5806-16808		2-A2-7-1-10	
1-1/4” Spig Inlet x 1” Mipt Outlet	5806-16810	G227-212	2-A2-7-1-12	
1-1/4” Spig Inlet x 1” Mipt Outlet	5806-16812		2-A2-7-1-14	
1-1/4” Spig Inlet x 1” Mipt Outlet	5806-16814		2-A2-7-1-16	
1-1/4” Spig Inlet x 1” Mipt Outlet	5805-16816	G227-218	2-A2-7-1-18	
1-1/4” Spig Inlet x 1-1/2” Mipt Outlet			2-A2-6-1-6	
1-1/4” Spig Inlet x 1-1/2” Mipt Outlet		G223-208	2-A2-6-1-8	SJ-8-125-44
1-1/4” Spig Inlet x 1-1/2” Mipt Outlet	5806-16908		2-A2-6-1-10	
1-1/4” Spig Inlet x 1-1/2” Mipt Outlet	5806-16910	G223-212	2-A2-6-1-12	SJ-12-125-44
1-1/4” Spig Inlet x 1-1/2” Mipt Outlet	5806-16912		2-A2-6-1-14	
1-1/4” Spig Inlet x 1-1/2” Mipt Outlet	5806-16914		2-A2-6-1-16	
1-1/4” Spig Inlet x 1-1/2” Mipt Outlet	5806-16916	G223-218	2-A2-6-1-18	SJ-18-125-44
1-1/2” Spig Inlet x 1” Mipt Outlet			3-A2-8-1-6	
1-1/2” Spig Inlet x 1” Mipt Outlet		G327-208	3-A2-8-1-8	
1-1/2” Spig Inlet x 1” Mipt Outlet	5806-21108		3-A2-8-1-10	
1-1/2” Spig Inlet x 1” Mipt Outlet	5806-21110	G327-212	3-A2-8-1-12	
1-1/2” Spig Inlet x 1” Mipt Outlet	5806-21112		3-A2-8-1-14	
1-1/2” Spig Inlet x 1” Mipt Outlet	5806-21114		3-A2-8-1-16	
1-1/2” Spig Inlet x 1” Mipt Outlet	5806-21116	G327-218	3-A2-8-1-18	
1-1/2” Spig Inlet x 1-1/4” Mipt Outlet			3-A2-9-1-6	
1-1/2” Spig Inlet x 1-1/4” Mipt Outlet		G324-208	3-A2-9-1-8	
1-1/2” Spig Inlet x 1-1/4” Mipt Outlet	5806-21208		3-A2-9-1-10	
1-1/2” Spig Inlet x 1-1/4” Mipt Outlet	5806-21210	G324-212	3-A2-9-1-12	
1-1/2” Spig Inlet x 1-1/4” Mipt Outlet	5806-21212		3-A2-9-1-14	
1-1/2” Spig Inlet x 1-1/4” Mipt Outlet	5806-21214		3-A2-9-1-16	
1-1/2” Spig Inlet x 1-1/4” Mipt Outlet	5806-21216	G324-218	3-A2-9-1-18	
1” Mipt Inlet x Mipt Outlet			1-A1-3-1-6	
1” Mipt Inlet x Mipt Outlet		G132-208	1-A1-3-1-8	SJ-8-100-11
1” Mipt Inlet x Mipt Outlet	5807-01008		1-A1-3-1-10	
1” Mipt Inlet x Mipt Outlet	5807-01010	G132-212	1-A1-3-1-12	SJ-12-100-11
1” Mipt Inlet x Mipt Outlet	5807-01012		1-A1-3-1-14	
1” Mipt Inlet x Mipt Outlet	5807-01014		1-A1-3-1-16	
1” Mipt Inlet x Mipt Outlet	5807-01016	G132-218	1-A1-3-1-18	SJ-18-100-11
1-1/4” Mipt Inlet x Mipt Outlet			2-A4-3-1-6	
1-1/4” Mipt Inlet x Mipt Outlet		G232-208	2-A4-3-1-8	SJ-8-125-11
1-1/4” Mipt Inlet x Mipt Outlet	5807-01208		2-A4-3-1-10	
1-1/4” Mipt Inlet x Mipt Outlet	5807-01210	G232-212	2-A4-3-1-12	SJ-12-125-11

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

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EverTUFF® TURF™ Swing Joint Cross Reference

DESCRIPTION	SPEARS®	LASCO	DURA	RAIN BIRD
1-1/4" Mipt Inlet x Mipt Outlet	5807-01212		2-A1-3-1-14	
1-1/4" Mipt Inlet x Mipt Outlet	5807-01214		2-A1-3-1-16	
1-1/4" Mipt Inlet x Mipt Outlet	5807-01216	G232-218	2-A1-3-1-18	SJ-18-125-11
1-1/2" Mipt Inlet x Mipt Outlet			3-A1-3-1-6	
1-1/2" Mipt Inlet x Mipt Outlet		G332-208	3-A1-3-1-8	SJ-8-150-11
1-1/2" Mipt Inlet x Mipt Outlet	5807-01508		3-A1-3-1-10	
1-1/2" Mipt Inlet x Mipt Outlet	5807-01510	G332-212	3-A1-3-1-12	SJ-12-150-11
1-1/2" Mipt Inlet x Mipt Outlet	5807-01512		3-A1-3-1-14	
1-1/2" Mipt Inlet x Mipt Outlet	5807-01514		3-A1-3-1-16	
1-1/2" Mipt Inlet x Mipt Outlet	5807-01516	G332-218	3-A1-3-1-18	SJ-18-150-11
1" Mipt Inlet x 1-1/4" Mipt Outlet			1-A1-4-1-6	
1" Mipt Inlet x 1-1/4" Mipt Outlet		G134-208	1-A1-4-1-8	SJ-8-100-14
1" Mipt Inlet x 1-1/4" Mipt Outlet	5807-13208		1-A1-4-1-10	
1" Mipt Inlet x 1-1/4" Mipt Outlet	5807-13210	G134-212	1-A1-4-1-12	SJ-12-100-14
1" Mipt Inlet x 1-1/4" Mipt Outlet	5807-13212		1-A1-4-1-14	
1" Mipt Inlet x 1-1/4" Mipt Outlet	5807-13214		1-A1-4-1-16	
1" Mipt Inlet x 1-1/4" Mipt Outlet	5807-13216	G134-218	1-A1-4-1-18	SJ-18-100-14
1" Mipt Inlet x 1-1/2" Mipt Outlet			1-A1-5-1-6	
1" Mipt Inlet x 1-1/2" Mipt Outlet		G133-208	1-A1-5-1-8	
1" Mipt Inlet x 1-1/2" Mipt Outlet	5807-13308		1-A1-5-1-10	
1" Mipt Inlet x 1-1/2" Mipt Outlet	5807-13310	G133-212	1-A1-5-1-12	
1" Mipt Inlet x 1-1/2" Mipt Outlet	5807-13312		1-A1-5-1-14	
1" Mipt Inlet x 1-1/2" Mipt Outlet	5807-13314		1-A1-5-1-16	
1" Mipt Inlet x 1-1/2" Mipt Outlet	5807-13316	G133-218	1-A1-5-1-18	
1-1/4" Mipt Inlet x 1" Mipt Outlet			2-A1-7-1-6	
1-1/4" Mipt Inlet x 1" Mipt Outlet		G237-208	2-A1-7-1-8	
1-1/4" Mipt Inlet x 1" Mipt Outlet	5807-16808		2-A1-7-1-10	
1-1/4" Mipt Inlet x 1" Mipt Outlet	5807-16810	G237-212	2-A1-7-1-12	
1-1/4" Mipt Inlet x 1" Mipt Outlet	5807-16812		2-A1-7-1-14	
1-1/4" Mipt Inlet x 1" Mipt Outlet	5807-16814		2-A1-7-1-16	
1-1/4" Mipt Inlet x 1" Mipt Outlet	5807-16816	G237-218	2-A1-7-1-18	
1-1/4" Mipt Inlet x 1-1/2" Mipt Outlet			2-A1-6-1-6	
1-1/4" Mipt Inlet x 1-1/2" Mipt Outlet		G233-208	2-A1-6-1-8	SJ-8-125-14
1-1/4" Mipt Inlet x 1-1/2" Mipt Outlet	5807-16908		2-A1-6-1-10	
1-1/4" Mipt Inlet x 1-1/2" Mipt Outlet	5807-16910	G233-212	2-A1-6-1-12	SJ-12-125-14
1-1/4" Mipt Inlet x 1-1/2" Mipt Outlet	5807-16912		2-A1-6-1-14	
1-1/4" Mipt Inlet x 1-1/2" Mipt Outlet	5807-16914		2-A1-6-1-16	
1-1/4" Mipt Inlet x 1-1/2" Mipt Outlet	5807-16916	G233-218	2-A1-6-1-18	SJ-18-125-14
1-1/2" Mipt Inlet x 1" Mipt Outlet			3-A1-8-1-6	
1-1/2" Mipt Inlet x 1" Mipt Outlet		G327-208	3-A1-8-1-8	
1-1/2" Mipt Inlet x 1" Mipt Outlet	5807-21108		3-A1-8-1-10	
1-1/2" Mipt Inlet x 1" Mipt Outlet	5807-21110	G327-212	3-A1-8-1-12	
1-1/2" Mipt Inlet x 1" Mipt Outlet	5807-21112		3-A1-8-1-14	
1-1/2" Mipt Inlet x 1" Mipt Outlet	5807-21114		3-A1-8-1-16	
1-1/2" Mipt Inlet x 1" Mipt Outlet	5807-21116	G327-218	3-A1-8-1-18	

EverTUFF® TURF™ Swing Joint Cross Reference

DESCRIPTION	SPEARS®	LASCO	DURA	RAIN BIRD
1-1/2” Mipt Inlet x 1-1/4” Mipt Outlet			3-A1-9-1-6	
1-1/2” Mipt Inlet x 1-1/4” Mipt Outlet		G324-208	3-A1-9-1-8	
1-1/2” Mipt Inlet x 1-1/4” Mipt Outlet	5807-21208		3-A1-9-1-10	
1-1/2” Mipt Inlet x 1-1/4” Mipt Outlet	5807-21210	G324-212	3-A1-9-1-12	
1-1/2” Mipt Inlet x 1-1/4” Mipt Outlet	5807-21212		3-A1-9-1-14	
1-1/2” Mipt Inlet x 1-1/4” Mipt Outlet	5807-21214		3-A1-9-1-16	
1-1/2” Mipt Inlet x 1-1/4” Mipt Outlet	5807-21216	G324-218	3-A1-9-1-18	
1” Ext Spig Inlet x Mipt Outlet			1-A8-3-1-6	
1” Ext Spig Inlet x Mipt Outlet		G172-208	1-A8-3-1-8	
1” Ext Spig Inlet x Mipt Outlet	5829-01008		1-A8-3-1-10	
1” Ext Spig Inlet x Mipt Outlet	5829-01010	G172-212	1-A8-3-1-12	
1” Ext Spig Inlet x Mipt Outlet	5829-01012		1-A8-3-1-14	
1” Ext Spig Inlet x Mipt Outlet	5829-01014		1-A8-3-1-16	
1” Ext Spig Inlet x Mipt Outlet	5829-01016	G172-218	1-A8-3-1-18	
1-1/4” Ext Spig Inlet x Mipt Outlet			2-A8-3-1-6	
1-1/4” Ext Spig Inlet x Mipt Outlet		G272-208	2-A8-3-1-8	
1-1/4” Ext Spig Inlet x Mipt Outlet	5829-01208		2-A8-3-1-10	
1-1/4” Ext Spig Inlet x Mipt Outlet	5829-01210	G272-212	2-A8-3-1-12	
1-1/4” Ext Spig Inlet x Mipt Outlet	5829-01212		2-A8-3-1-14	
1-1/4” Ext Spig Inlet x Mipt Outlet	5829-01214		2-A8-3-1-16	
1-1/4” Ext Spig Inlet x Mipt Outlet	5829-01216	G272-218	2-A8-3-1-18	
1-1/2” Ext Spig Inlet x Mipt Outlet			3-A8-3-1-6	
1-1/2” Ext Spig Inlet x Mipt Outlet		G372-208	3-A8-3-1-8	
1-1/2” Ext Spig Inlet x Mipt Outlet	5829-01508		3-A8-3-1-10	
1-1/2” Ext Spig Inlet x Mipt Outlet	5829-01510	G372-212	3-A8-3-1-12	
1-1/2” Ext Spig Inlet x Mipt Outlet	5829-01512		3-A8-3-1-14	
1-1/2” Ext Spig Inlet x Mipt Outlet	5829-01514		3-A8-3-1-16	
1-1/2” Ext Spig Inlet x Mipt Outlet	5829-01516	G372-218	3-A8-3-1-18	
1” Ext Spig Inlet x 1-1/4” Mipt Outlet			1-A8-4-1-6	
1” Ext Spig Inlet x 1-1/4” Mipt Outlet		G174-208	1-A8-4-1-8	
1” Ext Spig Inlet x 1-1/4” Mipt Outlet	5829-13208		1-A8-4-1-10	
1” Ext Spig Inlet x 1-1/4” Mipt Outlet	5829-13210	G174-212	1-A8-4-1-12	
1” Ext Spig Inlet x 1-1/4” Mipt Outlet	5829-13212		1-A8-4-1-14	
1” Ext Spig Inlet x 1-1/4” Mipt Outlet	5829-13214		1-A8-4-1-16	
1” Ext Spig Inlet x 1-1/4” Mipt Outlet	5829-13216	G174-218	1-A8-4-1-18	
1” Ext Spig Inlet x 1-1/2” Mipt Outlet			1-A8-5-1-6	
1” Ext Spig Inlet x 1-1/2” Mipt Outlet		G173-208	1-A8-5-1-8	
1” Ext Spig Inlet x 1-1/2” Mipt Outlet	5829-13308		1-A8-5-1-10	
1” Ext Spig Inlet x 1-1/2” Mipt Outlet	5829-13310	G173-212	1-A8-5-1-12	
1” Ext Spig Inlet x 1-1/2” Mipt Outlet	5829-13312		1-A8-5-1-14	
1” Ext Spig Inlet x 1-1/2” Mipt Outlet	5829-13314		1-A8-5-1-16	
1” Ext Spig Inlet x 1-1/2” Mipt Outlet	5829-13316	G173-218	1-A8-5-1-18	
1-1/4” Ext Spig Inlet x 1” Mipt Outlet			2-A8-7-1-6	
1-1/4” Ext Spig Inlet x 1” Mipt Outlet		G277-208	2-A8-7-1-8	
1-1/4” Ext Spig Inlet x 1” Mipt Outlet	5829-16808		2-A8-7-1-10	
1-1/4” Ext Spig Inlet x 1” Mipt Outlet	5829-16810	G277-212	2-A8-7-1-12	

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

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EverTUFF® TURF™ Swing Joint Cross Reference

DESCRIPTION	SPEARS®	LASCO	DURA	RAIN BIRD
1-1/4" Ext Spig Inlet x 1" Mipt Outlet	5829-16812		2-A8-7-1-14	
1-1/4" Ext Spig Inlet x 1" Mipt Outlet	5829-16814		2-A8-7-1-16	
1-1/4" Ext Spig Inlet x 1" Mipt Outlet	5829-16816	G277-218	2-A8-3-1-18	
1-1/4" Ext Spig Inlet x 1-1/2" Mipt Outlet			2-A8-6-1-6	
1-1/4" Ext Spig Inlet x 1-1/2" Mipt Outlet		G273-208	2-A8-6-1-8	
1-1/4" Ext Spig Inlet x 1-1/2" Mipt Outlet	5829-16908		2-A8-6-1-10	
1-1/4" Ext Spig Inlet x 1-1/2" Mipt Outlet	5829-16910	G273-212	2-A8-6-1-12	
1-1/4" Ext Spig Inlet x 1-1/2" Mipt Outlet	5829-16912		2-A8-6-1-14	
1-1/4" Ext Spig Inlet x 1-1/2" Mipt Outlet	5829-16914		2-A8-6-1-16	
1-1/4" Ext Spig Inlet x 1-1/2" Mipt Outlet	5829-16916	G273-218	2-A8-6-1-18	
1-1/2" Ext Spig Inlet x 1" Mipt Outlet			3-A8-8-1-6	
1-1/2" Ext Spig Inlet x 1" Mipt Outlet		G377-208	3-A8-8-1-8	
1-1/2" Ext Spig Inlet x 1" Mipt Outlet	5829-21108		3-A8-8-1-10	
1-1/2" Ext Spig Inlet x 1" Mipt Outlet	5829-21110	G377-212	3-A8-8-1-12	
1-1/2" Ext Spig Inlet x 1" Mipt Outlet	5829-21112		3-A8-8-1-14	
1-1/2" Ext Spig Inlet x 1" Mipt Outlet	5829-21114		3-A8-8-1-16	
1-1/2" Ext Spig Inlet x 1" Mipt Outlet	5829-21116	G377-218	3-A8-8-1-18	
1-1/2" Ext Spig Inlet x 1-1/4" Mipt Outlet			3-A8-20-1-6	
1-1/2" Ext Spig Inlet x 1-1/4" Mipt Outlet		G374-208	3-A8-20-1-8	
1-1/2" Ext Spig Inlet x 1-1/4" Mipt Outlet	5829-21208		3-A8-20-1-10	
1-1/2" Ext Spig Inlet x 1-1/4" Mipt Outlet	5829-21210	G374-212	3-A8-20-1-12	
1-1/2" Ext Spig Inlet x 1-1/4" Mipt Outlet	5829-21212		3-A8-20-1-14	
1-1/2" Ext Spig Inlet x 1-1/4" Mipt Outlet	5829-21214		3-A8-20-1-16	
1-1/2" Ext Spig Inlet x 1-1/4" Mipt Outlet	5829-21216	G374-218	3-A8-20-1-18	
2" Tee Inlet x 1" Mipt Outlet			1-A1-3-5-6	
2" Tee Inlet x 1" Mipt Outlet			1-A1-3-5-8	SJ-8-100-G1
2" Tee Inlet x 1" Mipt Outlet	5808-24908		1-A1-3-5-10	
2" Tee Inlet x 1" Mipt Outlet	5808-24910		1-A1-3-5-12	SJ-12-100-G1
2" Tee Inlet x 1" Mipt Outlet	5808-24912		1-A1-3-5-14	
2" Tee Inlet x 1" Mipt Outlet	5808-24914		1-A1-3-5-16	
2" Tee Inlet x 1" Mipt Outlet	5808-24916		1-A1-3-5-18	SJ-18-100-G1
2" Tee Inlet x 1-1/4" Mipt Outlet			2-A2-3-5-6	
2" Tee Inlet x 1-1/4" Mipt Outlet			2-A2-3-5-8	SJ-8-125-G1
2" Tee Inlet x 1-1/4" Mipt Outlet	5808-25008		2-A2-3-5-10	
2" Tee Inlet x 1-1/4" Mipt Outlet	5808-25010		2-A2-3-5-12	SJ-12-125-G1
2" Tee Inlet x 1-1/4" Mipt Outlet	5808-25012		2-A2-3-5-14	
2" Tee Inlet x 1-1/4" Mipt Outlet	5808-25014		2-A2-3-5-16	
2" Tee Inlet x 1-1/4" Mipt Outlet	5808-25016		2-A2-3-5-18	SJ-18-125-G1
2" Tee Inlet x 1-1/2" Mipt Outlet			3-A3-3-5-6	
2" Tee Inlet x 1-1/2" Mipt Outlet			3-A3-3-5-8	SJ-8-150-G1
2" Tee Inlet x 1-1/2" Mipt Outlet	5808-25108		3-A3-3-5-10	
2" Tee Inlet x 1-1/2" Mipt Outlet	5808-25110		3-A3-3-5-12	SJ-12-150-G1
2" Tee Inlet x 1-1/2" Mipt Outlet	5808-25112		3-A3-3-5-14	
2" Tee Inlet x 1-1/2" Mipt Outlet	5808-25114		3-A3-3-5-16	
2" Tee Inlet x 1-1/2" Mipt Outlet	5808-25116		3-A3-3-5-18	SJ-18-150-G1

EverTUFF® TURF™ Swing Joint Cross Reference

DESCRIPTION	SPEARS®	LASCO	DURA	RAIN BIRD
1” Soc Inlet x MAT Outlet			1-A4-13-1-6	
1” Soc Inlet x MAT Outlet		G110-208	1-A4-13-1-8	SJ-8-100-63
1” Soc Inlet x MAT Outlet	5809-01008		1-A4-13-1-10	
1” Soc Inlet x MAT Outlet	5809-01010	G110-212	1-A4-13-1-12	SJ-12-100-63
1” Soc Inlet x MAT Outlet	5809-01012		1-A4-13-1-14	
1” Soc Inlet x MAT Outlet	5809-01014		1-A4-13-1-16	
1” Soc Inlet x MAT Outlet	5809-01016	G110-218	1-A4-13-1-18	SJ-18-100-63
1-1/4” Soc Inlet x MAT Outlet			2-A4-17-1-6	
1-1/4” Soc Inlet x MAT Outlet		G210-208	2-A4-17-1-8	SJ-8-125-63
1-1/4” Soc Inlet x MAT Outlet	5809-01208		2-A4-17-1-10	
1-1/4” Soc Inlet x MAT Outlet	5809-01210	G210-212	2-A4-17-1-12	SJ-12-125-63
1-1/4” Soc Inlet x MAT Outlet	5809-01212		2-A4-17-1-14	
1-1/4” Soc Inlet x MAT Outlet	5809-01214		2-A4-17-1-16	
1-1/4” Soc Inlet x MAT Outlet	5809-01216	G210-218	2-A4-17-1-18	SJ-18-125-63
1-1/2” Soc Inlet x MAT Outlet			3-A4-21-1-6	
1-1/2” Soc Inlet x MAT Outlet		G310-208	3-A4-21-1-8	SJ-8-150-63
1-1/2” Soc Inlet x MAT Outlet	5809-01508		3-A4-21-1-10	
1-1/2” Soc Inlet x MAT Outlet	5809-01510	G310-212	3-A4-21-1-12	SJ-12-150-63
1-1/2” Soc Inlet x MAT Outlet	5809-01512		3-A4-21-1-14	
1-1/2” Soc Inlet x MAT Outlet	5809-01514		3-A4-21-1-16	
1-1/2” Soc Inlet x MAT Outlet	5809-01516	G310-218	3-A4-21-1-18	SJ-18-150-63
1” Soc Inlet x 1-1/4” MAT Outlet			1-A4-14-1-6	
1” Soc Inlet x 1-1/4” MAT Outlet		G11A-208	1-A4-14-1-8	SJ-8-100-66
1” Soc Inlet x 1-1/4” MAT Outlet	5809-13208		1-A4-14-1-10	
1” Soc Inlet x 1-1/4” MAT Outlet	5809-13210	G11A-212	1-A4-14-1-12	SJ-12-100-66
1” Soc Inlet x 1-1/4” MAT Outlet	5809-13212		1-A4-14-1-14	
1” Soc Inlet x 1-1/4” MAT Outlet	5809-13214		1-A4-14-1-16	
1” Soc Inlet x 1-1/4” MAT Outlet	5809-13216	G11A-218	1-A4-14-1-18	SJ-18-100-66
1” Soc Inlet x 1-1/2” MAT Outlet			1-A4-15-1-6	
1” Soc Inlet x 1-1/2” MAT Outlet		G118-208	1-A4-15-1-8	
1” Soc Inlet x 1-1/2” MAT Outlet	5809-13308		1-A4-15-1-10	
1” Soc Inlet x 1-1/2” MAT Outlet	5809-13310	G118-212	1-A4-15-1-12	
1” Soc Inlet x 1-1/2” MAT Outlet	5809-13312		1-A4-15-1-14	
1” Soc Inlet x 1-1/2” MAT Outlet	5809-13314		1-A4-15-1-16	
1” Soc Inlet x 1-1/2” MAT Outlet	5809-13316	G118-218	1-A4-15-1-18	
1-1/4” Soc Inlet x 1” MAT Outlet			2-A4-16-1-6	
1-1/4” Soc Inlet x 1” MAT Outlet		G21C-208	2-A4-16-1-8	
1-1/4” Soc Inlet x 1” MAT Outlet	5809-16808		2-A4-16-1-10	
1-1/4” Soc Inlet x 1” MAT Outlet	5809-16810	G21C-212	2-A4-16-1-12	
1-1/4” Soc Inlet x 1” MAT Outlet	5809-16812		2-A4-16-1-14	
1-1/4” Soc Inlet x 1” MAT Outlet	5809-16814		2-A4-16-1-16	
1-1/4” Soc Inlet x 1” MAT Outlet	5809-16816	G21C-218	2-A4-16-1-18	
1-1/4” Soc Inlet x 1-1/2” MAT Outlet			2-A4-18-1-6	
1-1/4” Soc Inlet x 1-1/2” MAT Outlet		G218-208	2-A4-18-1-8	SJ-8-125-66
1-1/4” Soc Inlet x 1-1/2” MAT Outlet	5809-16908		2-A4-18-1-10	
1-1/4” Soc Inlet x 1-1/2” MAT Outlet	5809-16910	G218-212	2-A4-18-1-12	SJ-12-125-66

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

EverTUFF® TURF™ Swing Joint Cross Reference

DESCRIPTION	SPEARS®	LASCO	DURA	RAIN BIRD
1-1/4" Soc Inlet x 1-1/2" MAT Outlet	5809-16912		2-A4-18-1-14	
1-1/4" Soc Inlet x 1-1/2" MAT Outlet	5809-16914		2-A4-18-1-16	
1-1/4" Soc Inlet x 1-1/2" MAT Outlet	5809-16916	G218-218	2-A4-18-1-18	SJ-18-125-66
1-1/2" Soc Inlet x 1" MAT Outlet				
1-1/2" Soc Inlet x 1" MAT Outlet		G31C-208		
1-1/2" Soc Inlet x 1" MAT Outlet	5809-21108			
1-1/2" Soc Inlet x 1" MAT Outlet	5809-21110	G31C-212		
1-1/2" Soc Inlet x 1" MAT Outlet	5809-21112			
1-1/2" Soc Inlet x 1" MAT Outlet	5809-21114			
1-1/2" Soc Inlet x 1" MAT Outlet	5809-21116	G31C-218		
1-1/2" Soc Inlet x 1-1/4" MAT Outlet			3-A4-20-1-6	
1-1/2" Soc Inlet x 1-1/4" MAT Outlet		G31A-208	3-A4-20-1-8	
1-1/2" Soc Inlet x 1-1/4" MAT Outlet	5809-21208		3-A4-20-1-10	
1-1/2" Soc Inlet x 1-1/4" MAT Outlet	5809-21210	G31A-212	3-A4-20-1-12	
1-1/2" Soc Inlet x 1-1/4" MAT Outlet	5809-21212		3-A4-20-1-14	
1-1/2" Soc Inlet x 1-1/4" MAT Outlet	5809-21214		3-A4-20-1-16	
1-1/2" Soc Inlet x 1-1/4" MAT Outlet	5809-21216	G31A-218	3-A4-20-1-18	
1" Spig Inlet x MAT Outlet			1-A2-13-1-6	
1" Spig Inlet x MAT Outlet		G120-208	1-A2-13-1-8	SJ-8-100-43
1" Spig Inlet x MAT Outlet	5810-01008		1-A2-13-1-10	
1" Spig Inlet x MAT Outlet	5810-01010	G120-212	1-A2-13-1-12	SJ-12-100-43
1" Spig Inlet x MAT Outlet	5810-01012		1-A2-13-1-14	
1" Spig Inlet x MAT Outlet	5810-01014		1-A2-13-1-16	
1" Spig Inlet x MAT Outlet	5810-01016	G120-218	1-A2-13-1-18	SJ-18-100-43
1-1/4" Spig Inlet x MAT Outlet			2-A2-17-1-6	
1-1/4" Spig Inlet x MAT Outlet		G220-208	2-A2-17-1-8	SJ-8-125-43
1-1/4" Spig Inlet x MAT Outlet	5810-01208		2-A2-17-1-10	
1-1/4" Spig Inlet x MAT Outlet	5810-01210	G220-212	2-A2-17-1-12	SJ-12-125-43
1-1/4" Spig Inlet x MAT Outlet	5810-01212		2-A2-17-1-14	
1-1/4" Spig Inlet x MAT Outlet	5810-01214		2-A2-17-1-16	
1-1/4" Spig Inlet x MAT Outlet	5810-01216	G220-218	2-A2-17-1-18	SJ-18-125-43
1-1/2" Spig Inlet x MAT Outlet			3-A2-21-1-6	
1-1/2" Spig Inlet x MAT Outlet		G320-208	3-A2-21-1-8	SJ-8-150-43
1-1/2" Spig Inlet x MAT Outlet	5810-01508		3-A2-21-1-10	
1-1/2" Spig Inlet x MAT Outlet	5810-01510	G320-212	3-A2-21-1-12	SJ-12-150-43
1-1/2" Spig Inlet x MAT Outlet	5810-01512		3-A2-21-1-14	
1-1/2" Spig Inlet x MAT Outlet	5810-01514		3-A2-21-1-16	
1-1/2" Spig Inlet x MAT Outlet	5810-01516	G320-218	3-A2-21-1-18	SJ-18-150-43
1" Spig Inlet x 1-1/4" MAT Outlet			1-A2-14-1-6	
1" Spig Inlet x 1-1/4" MAT Outlet		G12A-208	1-A2-14-1-8	SJ-8-100-46
1" Spig Inlet x 1-1/4" MAT Outlet	5810-13208		1-A2-14-1-10	
1" Spig Inlet x 1-1/4" MAT Outlet	5810-13210	G12A-212	1-A2-14-1-12	SJ-12-100-46
1" Spig Inlet x 1-1/4" MAT Outlet	5810-13212		1-A2-14-1-14	
1" Spig Inlet x 1-1/4" MAT Outlet	5810-13214		1-A2-14-1-16	
1" Spig Inlet x 1-1/4" MAT Outlet	5810-13216	G12A-218	1-A2-14-1-18	SJ-18-100-46

EverTUFF® TURF™ Swing Joint Cross Reference

DESCRIPTION	SPEARS®	LASCO	DURA	RAIN BIRD
1” Spig Inlet x 1-1/2” MAT Outlet			1-A2-15-1-6	
1” Spig Inlet x 1-1/2” MAT Outlet		G128-208	1-A2-15-1-8	
1” Spig Inlet x 1-1/2” MAT Outlet	5810-13308		1-A2-15-1-10	
1” Spig Inlet x 1-1/2” MAT Outlet	5810-13310	G128-212	1-A2-15-1-12	
1” Spig Inlet x 1-1/2” MAT Outlet	5810-13312		1-A2-15-1-14	
1” Spig Inlet x 1-1/2” MAT Outlet	5810-13314		1-A2-15-1-16	
1” Spig Inlet x 1-1/2” MAT Outlet	5810-13316	G128-218	1-A2-15-1-18	
1-1/4” Spig Inlet x 1” MAT Outlet				
1-1/4” Spig Inlet x 1” MAT Outlet		G22C-208		
1-1/4” Spig Inlet x 1” MAT Outlet	5810-16808			
1-1/4” Spig Inlet x 1” MAT Outlet	5810-16810	G22C-212	2-A8-16-1-12	
1-1/4” Spig Inlet x 1” MAT Outlet	5810-16812			
1-1/4” Spig Inlet x 1” MAT Outlet	5810-16814			
1-1/4” Spig Inlet x 1” MAT Outlet	5810-16816	G22C-218		
1-1/4” Spig Inlet x 1-1/2” MAT Outlet			2-A2-18-1-6	
1-1/4” Spig Inlet x 1-1/2” MAT Outlet		G228-208	2-A2-18-1-8	SJ-8-125-46
1-1/4” Spig Inlet x 1-1/2” MAT Outlet	5810-16908		2-A2-18-1-10	
1-1/4” Spig Inlet x 1-1/2” MAT Outlet	5810-16910	G228-212	2-A2-18-1-12	SJ-12-125-46
1-1/4” Spig Inlet x 1-1/2” MAT Outlet	5810-16912		2-A2-18-1-14	
1-1/4” Spig Inlet x 1-1/2” MAT Outlet	5810-16914		2-A2-18-1-16	
1-1/4” Spig Inlet x 1-1/2” MAT Outlet	5810-16916	G228-218	2-A2-18-1-18	SJ-18-125-46
1-1/2” Spig Inlet x 1” MAT Outlet				
1-1/2” Spig Inlet x 1” MAT Outlet		G32C-208		
1-1/2” Spig Inlet x 1” MAT Outlet	5810-21108			
1-1/2” Spig Inlet x 1” MAT Outlet	5810-21110	G32C-212		
1-1/2” Spig Inlet x 1” MAT Outlet	5810-21112			
1-1/2” Spig Inlet x 1” MAT Outlet	5810-21114			
1-1/2” Spig Inlet x 1” MAT Outlet	5810-21116	G32C-218		
1-1/2” Spig Inlet x 1-1/4” MAT Outlet			3-A2-20-1-6	
1-1/2” Spig Inlet x 1-1/4” MAT Outlet		G32A-208	3-A2-20-1-8	
1-1/2” Spig Inlet x 1-1/4” MAT Outlet	5810-21208		3-A2-20-1-10	
1-1/2” Spig Inlet x 1-1/4” MAT Outlet	5810-21210	G32A-212	3-A2-20-1-12	
1-1/2” Spig Inlet x 1-1/4” MAT Outlet	5810-21212		3-A2-20-1-14	
1-1/2” Spig Inlet x 1-1/4” MAT Outlet	5810-21214		3-A2-20-1-16	
1-1/2” Spig Inlet x 1-1/4” MAT Outlet	5810-21216	G32A-218	3-A2-20-1-18	
1” Mipt Inlet x MAT Outlet			1-A1-13-1-6	
1” Mipt Inlet x MAT Outlet		G130-208	1-A1-13-1-8	SJ-8-100-13
1” Mipt Inlet x MAT Outlet	5811-01008		1-A1-13-1-10	
1” Mipt Inlet x MAT Outlet	5811-01010	G130-212	1-A1-13-1-12	SJ-12-100-13
1” Mipt Inlet x MAT Outlet	5811-01012		1-A1-13-1-14	
1” Mipt Inlet x MAT Outlet	5811-01014		1-A1-13-1-16	
1” Mipt Inlet x MAT Outlet	5811-01016	G130-218	1-A1-13-1-18	SJ-18-100-13
1-1/4” Mipt Inlet x MAT Outlet			2-A1-17-1-6	
1-1/4” Mipt Inlet x MAT Outlet		G230-208	2-A1-17-1-8	SJ-8-125-13
1-1/4” Mipt Inlet x MAT Outlet	5811-01208		2-A1-17-1-10	
1-1/4” Mipt Inlet x MAT Outlet	5811-01210	G230-212	2-A1-17-1-12	SJ-12-125-13

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

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EverTUFF® TURF™ Swing Joint Cross Reference

DESCRIPTION	SPEARS®	LASCO	DURA	RAIN BIRD
1-1/4" Mipt Inlet x MAT Outlet	5811-01212		2-A1-17-1-14	
1-1/4" Mipt Inlet x MAT Outlet	5811-01214		2-A1-17-1-16	
1-1/4" Mipt Inlet x MAT Outlet	5811-01216	G230-218	2-A1-17-1-18	SJ-18-125-13
1-1/2" Mipt Inlet x MAT Outlet			3-A1-21-1-6	
1-1/2" Mipt Inlet x MAT Outlet		G330-208	3-A1-21-1-8	SJ-8-150-13
1-1/2" Mipt Inlet x MAT Outlet	5811-01508		3-A1-21-1-10	
1-1/2" Mipt Inlet x MAT Outlet	5811-01510	G330-212	3-A1-21-1-12	SJ-12-150-13
1-1/2" Mipt Inlet x MAT Outlet	5811-01512		3-A1-21-1-14	
1-1/2" Mipt Inlet x MAT Outlet	5811-01514		3-A1-21-1-16	
1-1/2" Mipt Inlet x MAT Outlet	5811-01516	G330-218	3-A1-21-1-18	SJ-18-150-13
1" Mipt Inlet x 1-1/4" MAT Outlet			1-A1-14-1-6	
1" Mipt Inlet x 1-1/4" MAT Outlet		G13A-208	1-A1-14-1-8	SJ-8-100-16
1" Mipt Inlet x 1-1/4" MAT Outlet	5811-13208		1-A1-14-1-10	
1" Mipt Inlet x 1-1/4" MAT Outlet	5811-13210	G13A-212	1-A1-14-1-12	SJ-12-100-16
1" Mipt Inlet x 1-1/4" MAT Outlet	5811-13212		1-A1-14-1-14	
1" Mipt Inlet x 1-1/4" MAT Outlet	5811-13214		1-A1-14-1-16	
1" Mipt Inlet x 1-1/4" MAT Outlet	5811-13216	G13A-218	1-A1-14-1-18	SJ-18-100-16
1" Mipt Inlet x 1-1/2" MAT Outlet			1-A1-15-1-6	
1" Mipt Inlet x 1-1/2" MAT Outlet		G138-208	1-A1-15-1-8	
1" Mipt Inlet x 1-1/2" MAT Outlet	5811-13308		1-A1-15-1-10	
1" Mipt Inlet x 1-1/2" MAT Outlet	5811-13310	G138-212	1-A1-15-1-12	
1" Mipt Inlet x 1-1/2" MAT Outlet	5811-13312		1-A1-15-1-14	
1" Mipt Inlet x 1-1/2" MAT Outlet	5811-13314		1-A1-15-1-16	
1" Mipt Inlet x 1-1/2" MAT Outlet	5811-13316	G138-218	1-A1-15-1-18	
1-1/4" Mipt Inlet x 1" MAT Outlet			1-A1-16-1-6	
1-1/4" Mipt Inlet x 1" MAT Outlet		G23C-208	1-A1-16-1-8	
1-1/4" Mipt Inlet x 1" MAT Outlet	5811-16808		1-A1-16-1-10	
1-1/4" Mipt Inlet x 1" MAT Outlet	5811-16810	G23C-212	1-A1-16-1-12	
1-1/4" Mipt Inlet x 1" MAT Outlet	5811-16812		1-A1-16-1-14	
1-1/4" Mipt Inlet x 1" MAT Outlet	5811-16814		1-A1-16-1-16	
1-1/4" Mipt Inlet x 1" MAT Outlet	5811-16816	G23C-218	1-A1-16-1-18	
1-1/4" Mipt Inlet x 1-1/2" MAT Outlet			2-A1-18-1-6	
1-1/4" Mipt Inlet x 1-1/2" MAT Outlet		G238-208	2-A1-18-1-8	SJ-8-125-16
1-1/4" Mipt Inlet x 1-1/2" MAT Outlet	5811-16908		2-A1-18-1-10	
1-1/4" Mipt Inlet x 1-1/2" MAT Outlet	5811-16910	G238-212	2-A1-18-1-12	SJ-12-125-16
1-1/4" Mipt Inlet x 1-1/2" MAT Outlet	5811-16912		2-A1-18-1-14	
1-1/4" Mipt Inlet x 1-1/2" MAT Outlet	5811-16914		2-A1-18-1-16	
1-1/4" Mipt Inlet x 1-1/2" MAT Outlet	5811-16916	G238-218	2-A1-18-1-18	SJ-18-125-16
1-1/2" Mipt Inlet x 1" MAT Outlet				
1-1/2" Mipt Inlet x 1" MAT Outlet		G33C-208		
1-1/2" Mipt Inlet x 1" MAT Outlet	5811-21108		3-A1-19-1-12	
1-1/2" Mipt Inlet x 1" MAT Outlet	5811-21110	G33C-212		
1-1/2" Mipt Inlet x 1" MAT Outlet	5811-21112		3-A1-19-1-14	
1-1/2" Mipt Inlet x 1" MAT Outlet	5811-21114			
1-1/2" Mipt Inlet x 1" MAT Outlet	5811-21116	G33C-218		

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EverTUFF® TURF™ Swing Joint Cross Reference

DESCRIPTION	SPEARS®	LASCO	DURA	RAIN BIRD
1-1/2" Mipt Inlet x 1-1/4" MAT Outlet			3-A1-20-1-6	
1-1/2" Mipt Inlet x 1-1/4" MAT Outlet		G338-208	3-A1-20-1-8	
1-1/2" Mipt Inlet x 1-1/4" MAT Outlet	5811-21208		3-A1-20-1-10	
1-1/2" Mipt Inlet x 1-1/4" MAT Outlet	5811-21210	G338-212	3-A1-20-1-12	
1-1/2" Mipt Inlet x 1-1/4" MAT Outlet	5811-21212		3-A1-20-1-14	
1-1/2" Mipt Inlet x 1-1/4" MAT Outlet	5811-21214		3-A1-20-1-16	
1-1/2" Mipt Inlet x 1-1/4" MAT Outlet	5811-21216	G338-218	3-A1-20-1-18	
1" Soc Inlet x Metal Fipt Outlet			1-A4-1-11-6	
1" Soc Inlet x Metal Fipt Outlet		G11S-208	1-A4-1-11-8	
1" Soc Inlet x Metal Fipt Outlet	5813-01008		1-A4-1-11-10	
1" Soc Inlet x Metal Fipt Outlet	5813-01010	G11S-212	1-A4-1-11-12	
1" Soc Inlet x Metal Fipt Outlet	5813-01012		1-A4-1-11-14	
1" Soc Inlet x Metal Fipt Outlet	5813-01014		1-A4-1-11-16	
1" Soc Inlet x Metal Fipt Outlet	5813-01016	G11S-218	1-A4-1-11-18	
1" Spig Inlet x Metal Fipt Outlet			1-A2-1-11-6	
1" Spig Inlet x Metal Fipt Outlet			1-A2-1-11-8	
1" Spig Inlet x Metal Fipt Outlet	5814-01008		1-A2-1-11-10	
1" Spig Inlet x Metal Fipt Outlet	5814-01010		1-A2-1-11-12	
1" Spig Inlet x Metal Fipt Outlet	5814-01012		1-A2-1-11-14	
1" Spig Inlet x Metal Fipt Outlet	5814-01014		1-A2-1-11-16	
1" Spig Inlet x Metal Fipt Outlet	5814-01016		1-A2-1-11-18	
1" Mipt Inlet x Metal Fipt Outlet			1-A1-1-11-6	
1" Mipt Inlet x Metal Fipt Outlet			1-A1-1-11-8	
1" Mipt Inlet x Metal Fipt Outlet	5815-01008		1-A1-1-11-10	
1" Mipt Inlet x Metal Fipt Outlet	5815-01010		1-A1-1-11-12	
1" Mipt Inlet x Metal Fipt Outlet	5815-01012		1-A1-1-11-14	
1" Mipt Inlet x Metal Fipt Outlet	5815-01014		1-A1-1-11-16	
1" Mipt Inlet x Metal Fipt Outlet	5815-01016		1-A1-1-11-18	
1" Matt Inlet x Mat Outlet	5822-01008			
1" Matt Inlet x Mat Outlet	5822-01010			
1" Matt Inlet x Mat Outlet	5822-01012		1-13-13-1-12	
1" Matt Inlet x Mat Outlet	5822-01016			
1" Matt Inlet x Mat Outlet	5822-01018		1-13-13-1-18	
1" Matt Inlet x Mat Outlet	5822-01024			

• Spears® also carries Metal reinforced outlet elbows in 1-¼" and 1-½", as well as Steel Reinforced outlet elbows in 1", 1-¼" and 1-½".

* Lasco Brass Threaded Outlet Elbows are molded with "Stabilizer" retaining lugs.

"Lay Length" measurements are determined from the same points of the assemblies. Lasco, Rain Bird and Dura "Lay Length" is measured from the points determined as the Spears® "Centerline to Centerline." Due to differences in product engineering, it is difficult to arrive at an 'exact' equivalent. This cross-reference represents the most commonly accepted 'equals'.

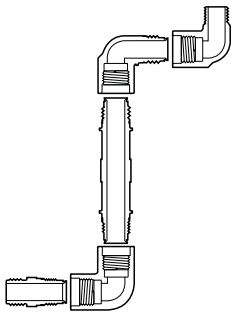
Triple Top-Out (Lasco, Rain Bird), Ultra (Dura), or Multi-Ell (Spears®) Swing Joint Riser Assemblies are available. It should be noted that the Spears® Buttress style thread nipple provides an extra plane of rotation that is not available in the standard Lasco Unitized, Dura 'Unibody', or Rain Bird type of swing joint.

Spears® Manufacturing Company believes this information to be accurate at the time of printing. Verification of the above information is recommended.

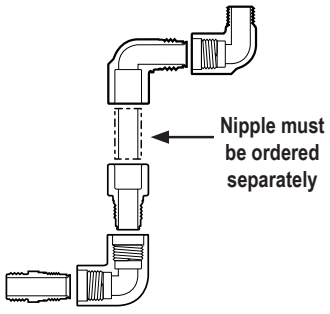
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

INSTALLATION INFORMATION

5800 Series
MALE BUTTRESS THREAD RISER NIPPLE STYLE

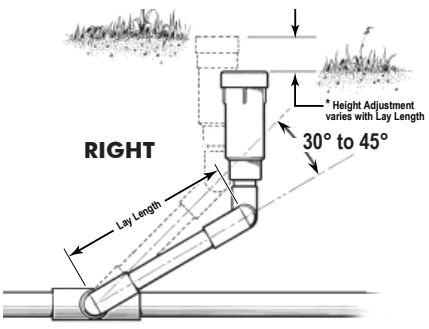


5900 Series
SOLVENT CEMENT RISER NIPPLE STYLE

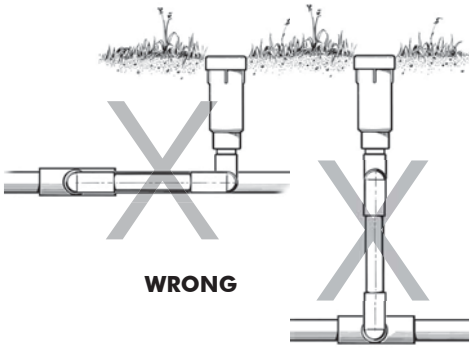


RECOMMENDATIONS FOR INSTALLERS AND USERS:

Plastic piping systems should be **ENGINEERED, INSTALLED,** and **OPERATED** in accordance with **ESTABLISHED DESIGN AND ENGINEERING STANDARDS AND PROCEDURES.** Suitability for the intended service application should be determined by the installer and/or user prior to installation. **PRIOR TO ASSEMBLY**, all piping components should be inspected for damage or irregularities. Mating components should be checked to assure that tolerances and engagements are compatible. Do not use any components that appear irregular or do not fit properly. Contact the appropriate manufacturer of the component product in question to determine usability.



Swing Joint Riser Assemblies should NOT be installed perpendicular or parallel to the supply line.



I. **The 5800 and 5900 Style Swing Joint RiserAssemblies** are pre-assembled from the factory with O-ring threaded joints. **These joints are pre-lubricated and should not be disassembled, as dirt, sand or other foreign objects could damage the O-ring or threads and cause leakage.**

II. **Prior to beginning installation,** tighten each O-ring thread joint completely, and then back out the male part one full turn to allow the joint to swivel a full 360°.

III. **Trench Installations:**

Spears® Manufacturing Company recommends installing our Swing Joint Riser Assemblies in a 30° to 45° orientation to the lateral piping to which they are attached. Installing Swing Joint Riser Assemblies in a perpendicular or parallel fashion to the lateral is not recommended. Trenching must be deep enough to accommodate the height of the sprinkler and riser to allow for proper surface grading while providing adequate protection of the piping system.

IV. **For Threaded Inlets Or Outlets:**

When making up the threaded connection to the service line, or the sprinkler head, Spears Manufacturing Company recommends the use of a quality grade thread sealant. *WARNING: SOME PIPE JOINT COMPOUNDS OR PTFE PASTES MAY CONTAIN SUBSTANCES THAT COULD CAUSE STRESS CRACKING TO PLASTIC.* Spears® Manufacturing Company recommends the use of **Spears® BLUE 75™** thread sealant which has been tested for compatibility with Spears® products. Check with application/installation instructions. Choice of an appropriate thread sealant other than those listed above is at the discretion of the installer. 1 to 2 turns beyond FINGER TIGHT is generally all that is required to make a sound plastic threaded connection. Unnecessary OVERTIGHTENING will cause DAMAGE TO BOTH PIPE AND FITTING.

V. For Solvent Cemented Joints:

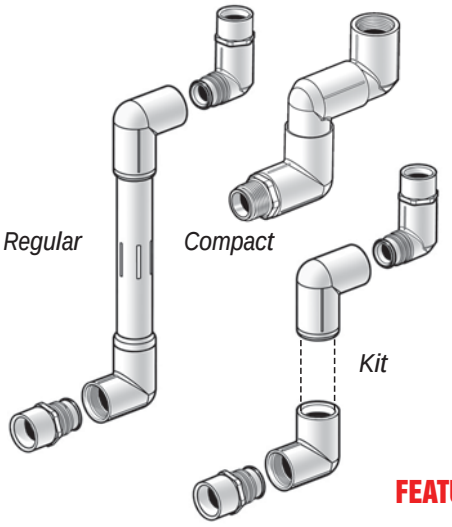
Read and follow all solvent cement and primer manufacturer 's application/installation instructions and safety precautions thoroughly. It is absolutely necessary that the installer become familiar with the proper solvent cementing procedures before performing this step. Incorrect solvent cementing procedures will produce unsound connections. Cut or order the riser nipple and inlet/outlet nipples to desired lengths, as required, and solvent cement them to the Swing Joint Riser Assembly. Care must be taken to prevent solvent cement or primer from coming in contact with the O-rings or buttress threads. Since Spears® Schedule 80 "Plus" Swing Joint Riser components have interference fit sockets, a Medium Bodied Cement may be used.

• CAUTION •

- **WATER HAMMER —** Spears® Manufacturing Company recommends that all PVC and CPVC plastic piping systems be designed and constructed to **AVOID EXCESSIVE WATER HAMMER.** Water hammer can cause damage and failure to pipe, valves, and fittings within the piping system.
- Spears® Manufacturing Company **DOES NOT RECOMMEND** the use of thermoplastic piping products for systems to transport or store compressed air or gases, or the testing of thermoplastic piping systems with compressed air or gases in above and below ground locations. The use of Spears® products in exposed, compressed air or gas systems automatically voids Spears® warranty for such products, and their use against our recommendation is entirely the responsibility and liability of the installer.
- Spears® Manufacturing Company **WILL NOT ACCEPT RESPONSIBILITY** for damage or impairment of its products, or other consequential or incidental damages caused by misapplication, incorrect assembly, and/or exposure to harmful substances or conditions.
- **SYSTEM DAMAGE AND SERIOUS OR F ATAL BODILY INJURIES MA Y RESULT FROM IMPROPER DESIGN, INST ALLATION, OPERATION AND USE OF COMPRESSED AIR OR GAS FOR TESTING PURPOSES.**
- **BEFORE APPLYING PRIMER AND CEMENT,** appropriate safety precautions should be taken. **Read and follow all solvent cement and primer manufacturer's application/installation instructions and safety precautions thoroughly.** Primer and Cement should be stored in the shade between 40°F and 110°F. Solvent cement and primer are flammable. Eliminate all ignition sources. Avoid breathing of vapors. Use only with adequate ventilation; explosion-proof general mechanical ventilation or local exhaust is recommended to maintain vapor concentrations below recommended exposure limits. In confined or partially enclosed areas, a NIOSH-approved organic vapor cartridge respirator with full face-piece is recommended. Containers should be kept tightly closed when not in use, and covered as much as possible when in use. Avoid frequent contact with skin; wearing PVA coated protective gloves and impervious apron are recommended. Avoid any contact with eyes; splash-proof chemical goggles are recommended.

The information contained in this publication is based on current information and product design at the time of publication and is subject to change without notification. Our ongoing commitment to product improvement may result in some variations. No representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular application or results to be obtained therefrom. For information not contained herein, please contact Spears® Technical Services Department — West Coast: (818) 364-1611 — East Coast: (717) 938-9006.

Turf Swivel Joint Installation

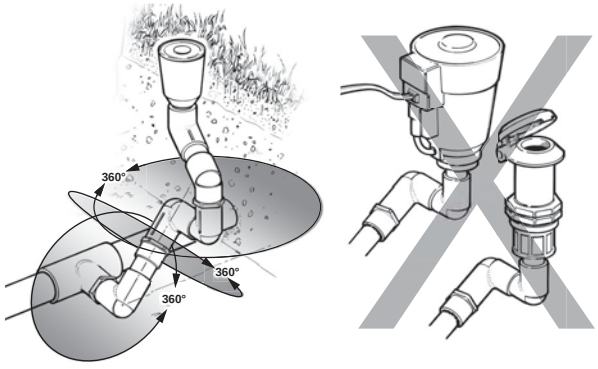


Spears® Turf Swivel Joints, Compact Turf Swivel Joints and Turf Swivel Joint Kits are designed for use in residential and commercial open discharge irrigation systems. Swivel Joint Kits are designed for solvent cement assembly with user supplied PVC pipe. Spears® Turf Swivel Joints allow the greatest degree of flexibility and adjustment during installation and maintenance. Proper installation of these components is essential for reliable performance. Illustrations are "typical" since many variations and configurations can be made.

Read all applicable instructions and procedures thoroughly before starting.

FEATURES AND RESTRICTIONS

- Provides 360° adjustment in multiple planes to place sprinklers at desired locations.
- Can be used with bottom or side sprinklers.
- Are designed for open discharge systems and are *not to be used with valve-in-head sprinklers or quick coupler valves.*

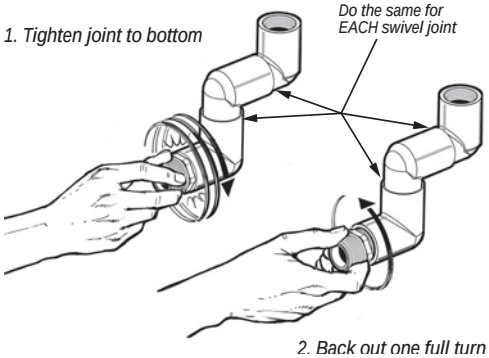


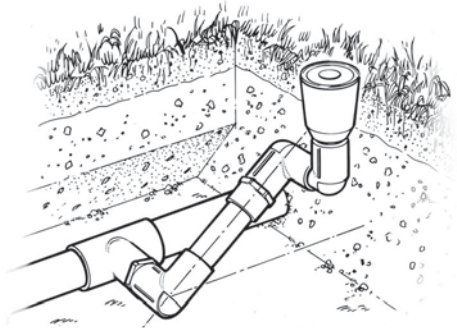
INSTALLATION GUIDELINES

I. **Turf Swivel Joints and Compact Turf Swivel Joints** are pre-assembled from the factory with O-ring threaded joints. **Turf Swivel Joint Kits** are provided as two assemblies for use with user supplied pipe in solvent welded field assembly. **These joints are pre-lubricated and should not be disassembled, as dirt, sand or other foreign objects could damage the O-ring or threads and cause leakage.**

II. **Prior to beginning installation,** tighten each O-ring swivel joint until it bottoms out, and then back out the male part one full turn to allow the joint to swivel a full 360°.

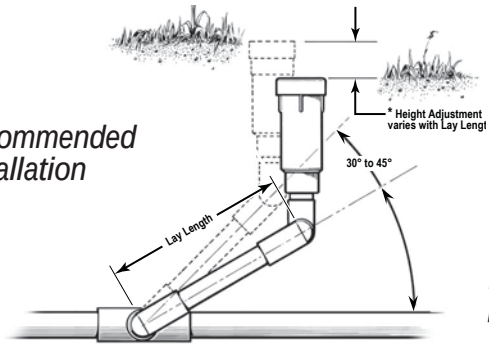
III. **Trench Installations:**
Spears® Manufacturing Company recommends installing our Turf Swivel Joint Assemblies in a 30° to 45° orientation to the lateral piping to which they are attached. Installing Swing Joint Riser Assemblies in a perpendicular or parallel fashion to the lateral is not recomended. Trenching must be deep enough to accommodate the height of the sprinkler and riser to allow for proper surface grading while providing adequate protection of the piping system.

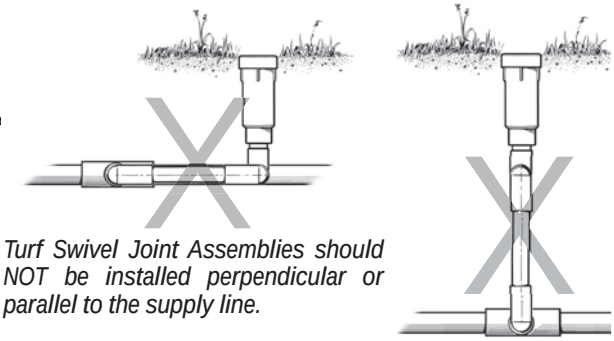




Typical in-trench application

Turf Swivel Joint Installation





Turf Swivel Joint Assemblies should NOT be installed perpendicular or parallel to the supply line.

IV. For Threaded Inlets Or Outlets:

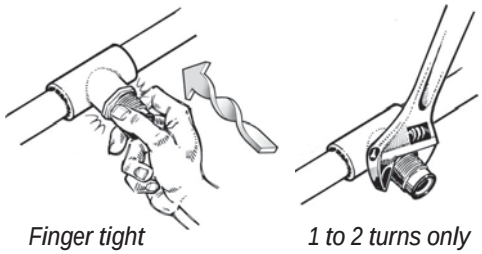
WARNING: SOME PIPE JOINT COMPOUNDS OR PTFE PASTES MAY CONTAIN SUBSTANCES THAT COULD CAUSE STRESS CRACKING TO PLASTIC. TRANSITIONS TO METAL PIPE REQUIRE THOROUGH CLEANING AND DEGREASING TO REMOVE ANY PIPE THREAD CUTTING OIL. Spears® Manufacturing Company recommends the use of Spears® **BLUE 75™** thread sealant which has been tested for compatibility with Spears® products. Check with application/installation instructions. Choice of an appropriate thread sealant other than those listed above is at the discretion of the installer.

DO NOT APPLY SEALANTS TO O-RING SWIVEL THREADS.

Apply thread sealant

V. Tighten Threaded Fittings.

1 to 2 turns beyond FINGER TIGHT is generally all that is required to make a sound plastic threaded connection. Unnecessary OVERTIGHTENING will cause DAMAGE TO BOTH PIPE AND FITTING. Do not use pipe wrenches on plastic fittings. An adjustable wrench on wrench flats or a commercial strap wrench on fittings is recommended.



Finger tight *1 to 2 turns only*

SOLVENT CEMENT WELDING PROCEDURES

VI. For Solvent Cemented Joints: Read and follow all solvent cement and primer manufacturer's application/installation instructions and safety precautions thoroughly. It is absolutely necessary that the installer become familiar with the proper solvent cementing procedures before performing this step. Incorrect solvent cementing procedures will produce unsound connections. Cut or order the riser nipple and inlet/outlet nipples to desired lengths, as required, and solvent cement them to the Swing Joint Riser Assembly. Care must be taken to prevent solvent cement or primer from coming in contact with the O-rings or threads. Since Turf Swivel Joint components have interference fit sockets, a Medium Bodied Cement may be used.

PRECAUTIONS AND WARNINGS

PVC and CPVC piping systems must be engineered, installed, operated and maintained in accordance with accepted standards and procedures for thermoplastic piping systems. It is absolutely necessary that all personnel associated with the above be properly trained in these procedures before starting.

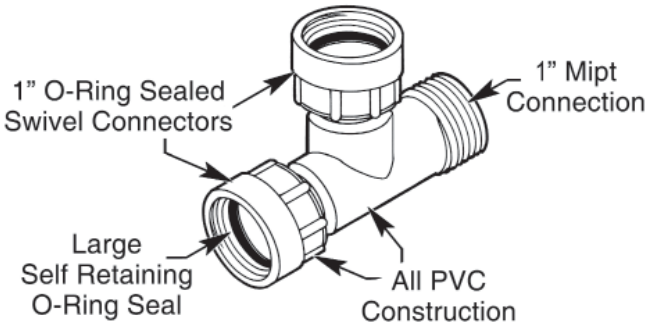
CAUTION: *The system must be designed and installed so that all stress loads associated with bending or shifting are avoided. All system joints must be supported and thrust blocked.*

CAUTION: *BEFORE THE SYSTEM IS CYCLED, all dirt, sand, grit or other material must be wiped externally from the swivel joints and internally flushed from the system. This is to prevent scarring of internal components.*

WARNING: *Systems must not be operated or flushed out at flow velocities greater than 5 feet per second.*

LUBRICATION WARNING: ***Some Lubricants, including vegetable oils, are known to cause stress cracking in thermoplastic materials. Lubricants are not required for installation of Spears® Expansion Joints.***

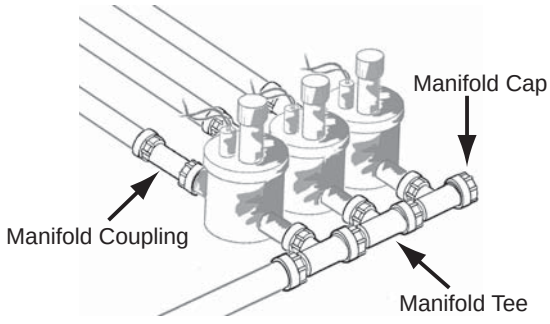
1" Manifold Tees & Companion Fitting Conf gurations
Designed For Uniform Irrigation Control Valve Installations

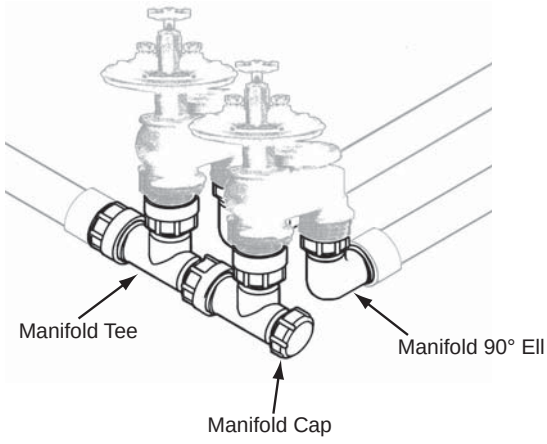


Manifold Tee
(1" Swivel x 1" Mipt x 1" Swivel)

- O-ring Sealed Swivel Connections Require No Thread Sealants - Large Cross-section O-ring Allows Hand Tight Assembly for Positive Seal
- Compatible with all 1" IPS Pipe Thread Outlets
- Pressure Rated to 150 psi @ 73°F (23°C)

Typical Application
Hundreds of Variation Possibilities



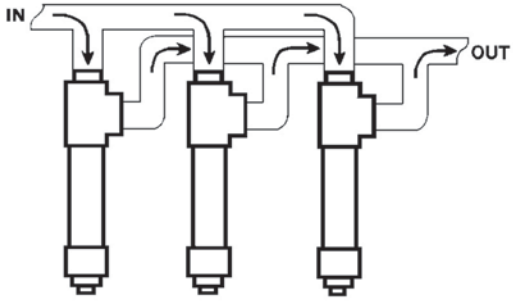


Filters

Specially designed for agricultural and irrigation applications. Suitable for any application where cool, filtered water is required. Standard units utilize an internal-to-external filter cartridge. See following page for reverse flow (external to internal) filters.

- 200 psi Working Pressure Non-Shock @ 73°F (23°C)
- Filter Body is made from NSF®-PW Approved PVC Material
- Optional Screen Meshes
- Compact Design, Easy to Clean
- Lightweight, Easy to Install
- Filter Screens are designed using a standard perforated Stainless Steel Screen
- Mesh Sizes include an inner Stainless Steel Cloth with Spring Support (external cloth on reverse flow filters)
- Pressure loss: 100 GPM – 3 psi 50 GPM – 1.25 psi
- May be bushed to required pipe size

- When more than 100 gpm is required, filters may be installed in parallel
- When installing filter, allow space for removing filter screen for cleaning
- Remove stainless steel filter screen before solvent welding filter to pipe manifold
- When filters are installed in the direct sun, it is suggested the filter body be coated with a water-base latex paint having a high reflectance
- Installation in a shaded area is preferred



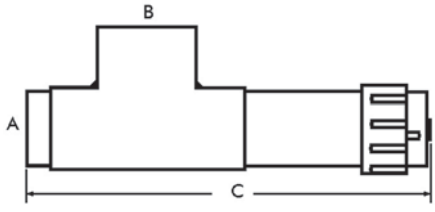
—CAUTION—

- WATER HAMMER MAY CAUSE SEVERE DAMAGE TO THE FILTER ASSEMBLY.
- BACK FLUSHING IS NOT RECOMMENDED.
- QUALITY GRADE THREAD SEALANT IS RECOMMENDED FOR ALL THREADED PVC CONNECTIONS.

Mesh Size	Hole Size (in.)	Part Number Extension
1/16" Holes	.0625	**-16**
1/32" Holes	.0312	**-32**
50 Mesh	.0117	**-50**
76 Mesh	.0095	**-76**
100 Mesh	.0059	**-100**
150 Mesh	.0041	**-150**
200 Mesh	.0029	**-200**

Additional Mesh Sizes available on request.
Example: TF-50 = 50 Mesh

Filter Dimensions & Weights



Series	A Inlet		B Outlet	C Overall Length	Screen Length	Filter Approx. Weight
	Socket	Spigot				
FLR	2-1/2	3	4	28	24	8
MFLR	2-1/2	3	4	16	12	4-3/4

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Reverse Flow Filters

100 GPM

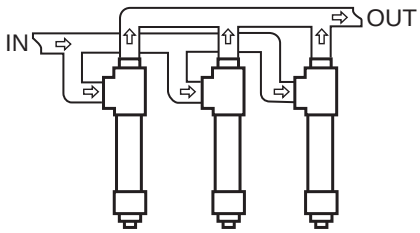
50 GPM

- Filter cartridge specially designed for external-to-internal filtration
- Traps sediment and debris on outside of filter (standard filters use internal-to-external flow)
- 100 GPM and 50 GPM styles available

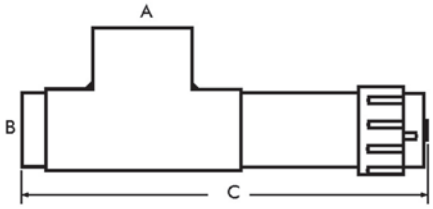
Mesh Size	Hole Size (in.)	Part Number Extension
1/16" Holes	.0625	-16
1/32" Holes	.0312	-32
50 Mesh	.0117	-50
76 Mesh	.0095	-76
100 Mesh	.0059	-100
150 Mesh	.0041	-150
200 Mesh	.0029	-200

Additional Mesh Sizes available on request.
Example: FLR-50 = 50 Mesh

Typical Reverse Flow Application



- When more than 100 gpm is required, filters may be installed in parallel
- When installing filter, allow space for removing filter screen for cleaning
- Remove stainless steel filter screen before solvent welding filter to pipe manifold
- When filters are installed in direct sunlight, it is suggested the filter body be coated with a water-base latex paint having a high reflectance
- Installation in a shaded area is preferred



Series	A Inlet	B Outlet		C Overall Length	Screen Length	Filter Approx. Weight
		Socket	Spigot			
FLR	4	2-1/2	3	28	24	8
MFLR	4	2-1/2	3	16	12	4-3/4

In-line Tee Style Filters and Reverse In-line Tee Style Filters

100 GPM and 50 GPM • PVC White • Buna O-ring Seal

- In-line Design Simplifies Installation.
- Allows Easy Parallel Filter Configuration for Increased Flow and Filtration.
- Removable Type 304 Stainless Steel Filter Cartridges in Assorted Perforations and Screen Mesh.
- Standard Flow Filter (Internal-to-External) Traps Sediment on Inside of Cartridge, Reverse Flow Filter (External-to-Internal) Traps Sediment on Outside of Cartridge.
- Convenient Bottom Drain with 1-1/4" NPT Stainless Steel Reinforced Plastic Thread and Plug. Optional Cap with 1/4" Outlet Available.
- 200 psi Working Pressure for Water @ 73°F (23°C).
- Manufactured from NSF® Certified PVC Material.

Mesh Size	Hole Size (in.)	Part Number Extension
1/16" Holes	.0625	-16
1/32" Holes	.0312	-32
50 Mesh	.0117	-50
76 Mesh	.0095	-76
100 Mesh	.0059	-100
150 Mesh	.0041	-150
200 Mesh	.0029	-200

Additional Mesh Sizes available on request.
Example: TF-50 = 50 Mesh

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

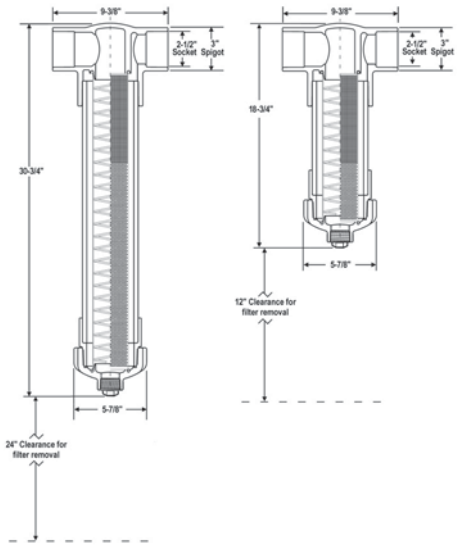
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

In-line Tee Style Filters and Reverse In-line Tee Style Filters

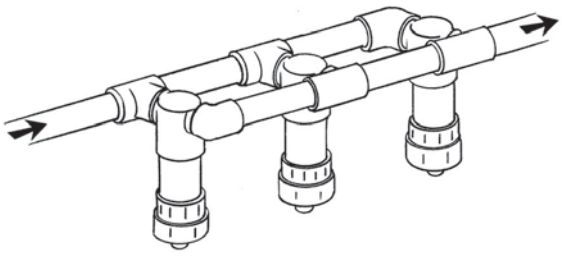
IN-LINE TECHNICAL INFORMATION

Dimensions

Filter includes drain plug for 1-1/4" NPT outlet. Optional valve for blow-out or filter cap with 1/4" NPT outlet can be purchased separately.

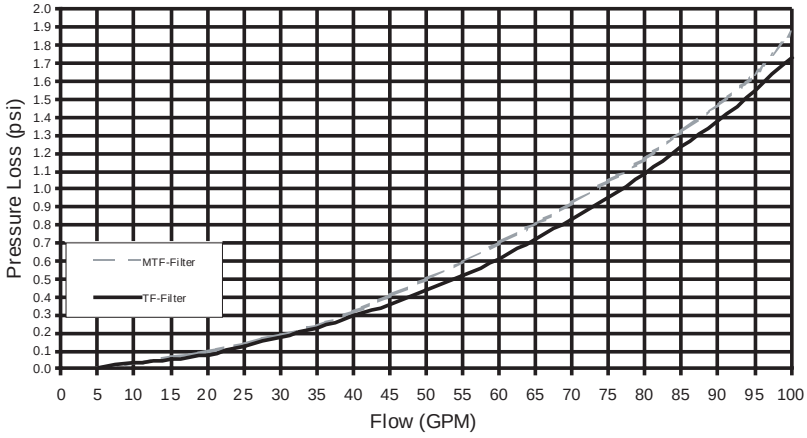


Parallel Filter Installation



- When more than 100 gpm is required, filters may be installed in parallel.
- When installing filter, allow space for removing filter screen for cleaning.
- Remove stainless steel filter screen before solvent welding filter to pipe manifold to avoid cement contact with screen.
- When filters are installed in the direct sun, it is suggested the filter body be coated with a water-base latex paint having a high reflectance.
- Installation in a shaded area is preferred.

Pressure Loss



Hose Filters

7 GPM Steel

7 GPM Plastic/Nylon

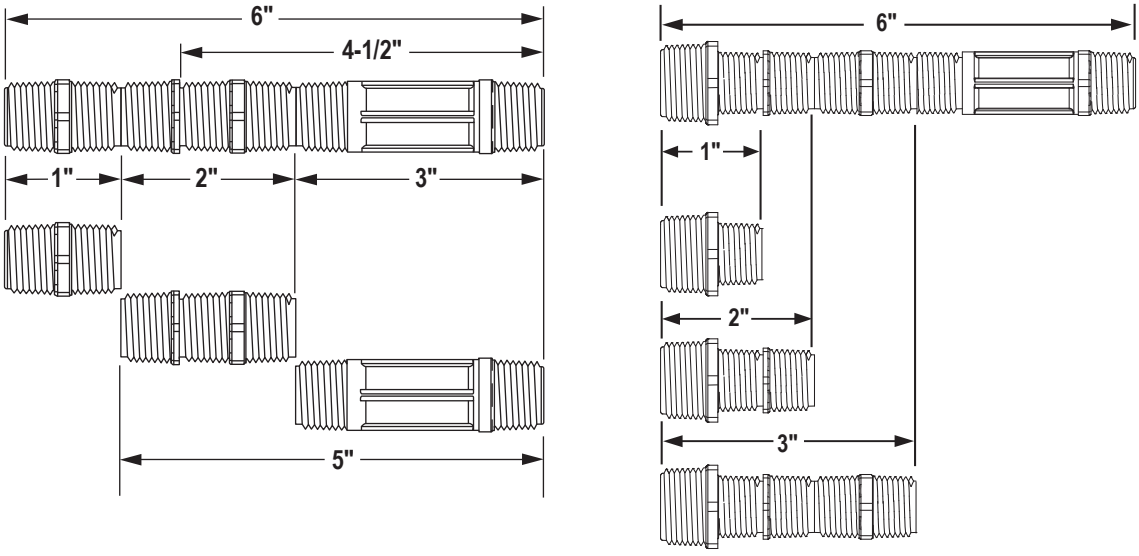
NOTE: It is recommended to connect the inlet of the Hose Filter to the system with a swivel adapter such as Spears® AP Series, to facilitate servicing of the filter element (refer to Hose Fittings).

Mesh Size	Hole Size (in.)	Part Number Extension
20 Mesh	.0331	-20
30 Mesh	.0232	-30
50 Mesh	.0117	-50
80 Mesh	.0070	-80
100 Mesh	.0059	-100
150 Mesh	.0041	-150
200 Mesh	.0029	-200

Additional Mesh Sizes available on request.
Example: HF-50 = 50 Mesh

Four-In-One • Cut-Off Nipples

- High quality polyethylene construction
- Choice of sizes from just one nipple
- Reduces inventory
- Eliminates waste
- Reduces contractor down time

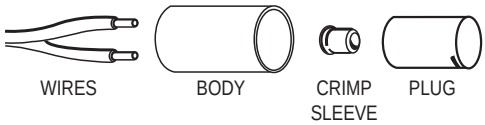


Dri-Splice Wire Connectors

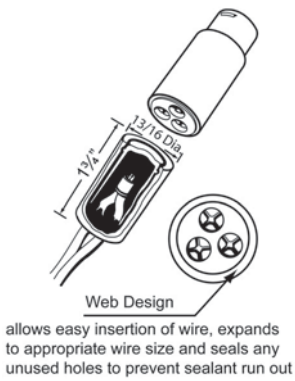
For use in electrical systems with 30v or less.

The Spears® Dri-Splice Seal designed into each wire hole enables you to stock one connector for all applications. The Dri-Splice Seal features an interference webbing which expands to accommodate #18 through #6 gauge wire sizes. In the event only two holes are used, the Dri-Splice Seal prevents sealant from leaking out through the third hole.

SOLD IN STANDARD PACK QUANTITIES ONLY
DS-100/DS-150 & DS-400/DS-450 Dri-Splice Wire Connector Installation Information

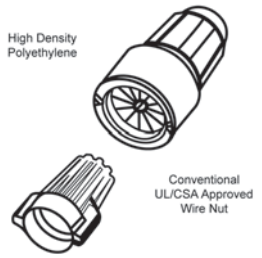


1. Insert wires through holes in base of body.
2. Twist stripped wires together and apply crimp sleeve with an indent type crimping tool. Trim excess bare wire.
3. DS-100 & DS-150 ONLY — Fill Plug to brim with DS-300 sealant.
4. Invert body and insert plug into body until it snaps tight.
5. Push wires all the way into the plug to completely seal the crimp sleeve.
6. DS-100 & DS-150 ONLY — Be certain sealant has formed into all holes in body.

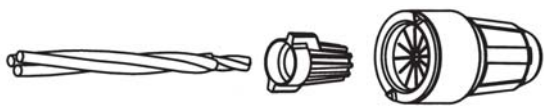


DS-100 & DS-150 Dri-Splice
- DS-100 fits AWG #18, #14, #12, or #10
- DS-150 fits AWG #14, #12, #10, #8, or #6
- Designed to insure waterproof connections
- Easily installed in the field without special tools
- Permanent protection for underground wire splices
- Requires the use of DS-300 Sealant

DS-400 & DS-450 Pre-Filled Dri-Splice
- All the features of the DS-100 or DS-150, plus the added benefit of being pre-filled with Dielectric Silicone Sealant
- Reduced inventory requirements
- Insures proper amount and type of Sealant every time
- Eliminates costly waste and clean-up
- Makes installations quick, clean and efficient



DS-500 Dri-Splice Wire Connector Installation Information

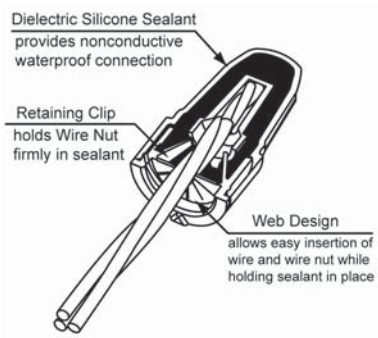


1. Strip wires and install wire nut.
2. Align wire nut wings with arrows and insert fully into body.

Dri-Splice Wire Connector General Information

Sealant:	**DS-300 Sealant*** (for DS-100 & DS-150) -MSDS available upon request. **DS-400 & DS-450 Dielectric Silicone Sealant*** - defined as an Article, per OSHA 29 CFR 1910, 1200, which does not require an MSDS. **DS-500 Dielectric Silicone Sealant*** - defined as an Article, per OSHA 29 CFR 1910, 1200, which does not require an MSDS.
Shelf Life:	**DS-300** (unopened tube) — One Year* **DS-400 & DS-450** — Indefinite at 73°F (23°C)* **DS-500** — Indefinite at 73°F (23°C)*
Electrical Systems:	For use in electrical systems with 30v or less. UL Listing NOT required in most areas.
DS-100/DS-150 & DS-400/DS-450 Components:	**Plug** — PVC **Body** — PVC **Crimp Sleeve** — UL and CSA Listed for 18 - 10 awg solid or stranded copper conductors.
DS-500 Components:	**Body**— Polyethylene **Wire Nut** — Twist-On Spring Type - UL/CSA Listed for 22 - 10 awg solid or stranded copper wire.

* Information developed and furnished by the Sealant Manufacturers. For additional information, please contact Spears® Technical Services Department



DS-500 Dri-Splice Wire Connector
For use in electrical systems with 30v or less.

Spears® NEW DS-500 Dri Splice Wire Connector is the fast, reliable and clean way of making positive, waterproof connections you can depend on. Simply twist Wire Nut on and insert into Dielectric Silicone Sealant Cartridge. The DS-500 is specially designed for irrigation systems and low voltage lighting, marine and security systems and suitable for direct burial.
- Allows full assembly and check of connection prior to sealing
- Accepts wire combinations from 3 #22 to 3 #10 AWG solid or stranded copper wire
- Special "No-Mess" cartridge design fully encloses sealant
- Internal interlock prevents disengagement of wire nut from sealant cartridge

Understanding PIP and IPS Pipe Sizing

Both are industry standards. IPS (Iron Pipe Size) is a standard that matches Schedule 40 (plumbing) iron pipe or stronger Schedule 80 iron pipe and is larger than PIP (Plastic Irrigation Pipe), a standard that is most commonly used today in agriculture. In contrast, IPS plastic pipe is typically used in industrial applications and turf irrigation such as homes, parks and golf courses. IPS and PIP pipe have different outside diameters and are not interchangeable without use of special IPS x PIP adapters offered by Spears®. Within each of these standards, many variations exist.

IPS (Iron Pipe Size) PVC plastic pipe is most commonly produced in either different “Schedules” (i.e. IPS Schedule 40, 80, 120, etc.) that have different pressure ratings for each size or in different SDR for “Standard Dimension Ratio” that has the same pressure rating for all sizes within a given SDR value. SDR is simply the ratio of the nominal O.D./ the minimum wall thickness (i.e. IPS SDR 41, 32.5, 26, 13.5, etc.). IPS SDR pipe can also be categorized as to “Pressure Class” that represents its pressure rating in psi (i.e. Class 100, 125, 160, 200, 315, etc.). PIP PVC pipe can also be categorized by its pressure rating in psi (i.e. 80 #, 100#, 125# PIP, etc). IPS Schedule pipe size range is typically 1/8" through 24" nominal diameter and IPS SDR pipe in 1/8" through 36" nominal diameter. While IPS PVC pipe is most commonly joined by solvent cement welding, it can be joined using Gasket end connections.

PIP (Plastic Irrigation Pipe) is also produced in Standard Dimensional Ratios (SDR), but has different outside diameters than IPS Schedule or SDR pipe. PIP pipe also has the same pressure rating for all sizes in any given SDR value (i.e. PIP SDR 64, 51, 41, 32.5, etc). PIP PVC pipe can also be categorized by its pressure rating in psi (i.e. 63#, 80#, 100#, 125# PIP, etc). PIP size range is typically 6" through 27" nominal diameters. While PIP PVC pipe can be joined by solvent cement welding, it is most commonly joined using Gasket end connections. Spears® offers a wide variety of both types. Please note that PIP fittings with a 4" nominal size connection are 4" IPS size.

Example of PIP and IPS O.D. Size Differences

Nominal Size (in.)	Average PIP Diameter (in.)	Average IPS Diameter (in.)
4	none	4.500
6	6.140	6.625
8	8.160	8.625
10	10.200	10.750
12	12.240	12.750
14	none	14.000
15	15.300	none
16	none	16.000
18	18.701	18.000
20	none	20.000
21	22.047	none
24	24.803	24.000
27	27.593	none
30	none	30.000

Barbed Insert Fittings

PRICING

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Barbed Insert Fittings

Twist Lock Coupling - PVC
Loc Insert x Loc Insert

Requires NO Clamps

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1429TL-005	1/2	50	600	140	5.98
1429TL-007	3/4	50	600	140	7.27
1429TL-010	1	50	400	140	8.65

Spiral Barb Tee - PVC
Spiral Barb

3/8" Spiral Barb accepts .490 Irrigation Pipe.

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1401-003	3/8	50	800	140	1.81

Spiral Barb Tee - PVC
Insert x Insert x Spiral Barb

3/8" Spiral Barb accepts .490 Irrigation Pipe.

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1401-099	3/4X3/8	25	450	140	3.29
1401-129	1X3/8	25	200	140	3.58

Spiral Barb 90° Ell - PP
Mipt x Spiral Barb

3/8" Spiral Barb accepts .490 Irrigation Pipe.

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1413-073	1/2X3/8	50	200	140	1.29
1413-099	3/4X3/8	50	200	140	1.29

Spiral Barb Coupling - PVC
Spiral Barb x Spiral Barb

3/8" Spiral Barb accepts .490 Irrigation Pipe.

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1429-003	3/8	50	300	140	1.95

Spiral Barb Coupling - PVC
Insert x Spiral Barb

3/8" Spiral Barb accepts .490 Irrigation Pipe.

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1429-099	3/4X3/8	50	600	140	2.13
1429-129	1X3/8	50	200	140	2.27

Spiral Barb Male Adapter - PP
Mipt x Spiral Barb

3/8" Spiral Barb accepts .490 Irrigation Pipe.

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1436-073	1/2X3/8	50	300	140	1.29
1436-099	3/4X3/8	50	300	140	1.29

Insert Adapter - PVC White
Insert x I.P.S. Spigot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
460-005	1/2	50	300	040	2.26
460-007	3/4	50	200	040	2.97
460-007N	3/4X3/4X1/2	50	200	040	2.97
460-010	1	50	0	040	3.11
460-012	1-1/4	20	160	040	3.20
460-012N	1-1/4X1-1/4X1	20	160	040	3.20
460-015	1-1/2	25	0	040	3.44
460-020	2	10	0	040	5.72
460-030	3	25	0	040	19.31
460-040	4	10	0	040	22.24
460-131N	3/4X1X3/4	20	160	040	3.46
460-132N	1X1-1/4X1	20	160	040	3.74
1432-060	6	8	0	140	95.61

Insert Adapter - PVC White (continued)
Insert x I.P.S. Spigot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1432-080*	8	4	0	140	189.82

N = Nesting
* Fabricated

Insert Adapter - PVC Gray
Insert x I.P.S. Spigot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
460-005G	1/2	50	300	043	2.51
460-007G	3/4	50	200	043	3.31
460-010G	1	50	0	043	3.44
460-012G	1-1/4	20	160	043	3.56
460-015G	1-1/2	25	0	043	3.82
460-020G	2	10	0	043	6.36
460-030G	3	25	0	043	21.45
460-040G	4	10	0	043	23.75
1432-060G*	6	4	0	140	106.24

* Fabricated

Insert Adapter - PVC White
Insert x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
474-005	1/2	50	600	040	2.06
474-007	3/4	50	400	040	2.47
474-010	1	50	0	040	2.62
474-012	1-1/4	25	0	040	4.16
474-015	1-1/2	25	0	040	4.61
474-020	2	25	0	040	8.54
474-030	3	15	0	040	25.45
474-040	4	15	0	040	29.09

Insert Adapter 90° Ell - PVC White
Insert x I.P.S. Spigot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
460A-015	1-1/2	10	80	040	6.83

Insert Adapter - PVC Gray
Insert x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
474-005G	1/2	50	600	043	2.28
474-007G	3/4	50	400	043	2.76
474-010G	1	50	0	043	2.92
474-012G	1-1/4	25	0	043	4.62
474-015G	1-1/2	25	0	043	4.79
474-020G	2	25	0	043	9.48

Tee - PVC
Insert x Insert x Insert

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1401-005	1/2	50	400	140	2.11
1401-007	3/4	50	0	140	2.28
1401-010	1	25	150	140	2.97
1401-012	1-1/4	10	80	140	4.64
1401-015	1-1/2	10	0	140	5.26
1401-020	2	10	0	140	10.38
1401-040*	4	2	0	140	159.86
1401-060*	6	1	0	140	299.44

* Assembled molded components

Tee - CPVC
Insert x Insert x Insert

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1401-005C	1/2	50	400	143	3.52

Barbed Insert Fittings

Tee, Reducing - PVC
Insert x Insert x Insert

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1401-074	1/2X3/4	25	400	140	5.69
1401-094	3/4X1/2X1/2	25	300	140	2.85
1401-101	3/4X1/2	25	150	140	2.58
1401-102	3/4X1	25	275	140	6.56
1401-124	1X3/4X1/2	25	200	140	4.15
1401-125	1X3/4X3/4	25	200	140	4.93
1401-130	1X1/2	25	200	140	3.02
1401-131	1X3/4	25	200	140	3.05
1401-132	1X1-1/4	25	0	140	9.16
1401-156	1-1/4X1X1/2	25	0	140	5.66
1401-157	1-1/4X1X3/4	25	0	140	5.66
1401-158	1-1/4X1X1	25	0	140	5.66
1401-166	1-1/4X1/2	25	0	140	3.98
1401-167	1-1/4X3/4	25	0	140	3.98
1401-168	1-1/4X1	25	0	140	3.98
1401-169	1-1/4X1-1/2	25	0	140	3.98
1401-201	1-1/2X1-1/4X3/4	10	80	140	7.13
1401-202	1-1/2X1-1/4X1	10	80	140	7.13
1401-203	1-1/2X1-1/4X1-1/4	10	0	140	7.13
1401-209	1-1/2X1/2	10	80	140	6.94
1401-210	1-1/2X3/4	10	80	140	6.94
1401-211	1-1/2X1	10	80	140	6.94
1401-212	1-1/2X1-1/4	10	0	140	6.94
1401-241	2X1-1/2X1-1/2	10	0	140	9.16
1401-247	2X1/2	10	0	140	9.87
1401-248	2X3/4	10	0	140	9.87
1401-249	2X1	10	0	140	9.87
1401-250	2X1-1/4	10	0	140	10.34
1401-251	2X1-1/2	10	0	140	10.64
1401-335*	3X1	5	0	140	110.40
1401-338*	3X2	5	0	140	121.67

* Assembled molded components

Tee - PVC
Insert x Insert x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1402-005	1/2	50	400	140	2.28
1402-007	3/4	50	0	140	3.44
1402-010	1	25	0	140	4.05
1402-012	1-1/4	10	0	140	5.95
1402-015	1-1/2	10	0	140	10.34
1402-020	2	10	0	140	12.82

Tee, Reducing - PVC
Insert x Insert x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1402-094	3/4X1/2X1/2	25	200	140	3.73
1402-101	3/4X1/2	25	150	140	2.85
1402-124	1X3/4X1/2	25	200	140	4.66
1402-125	1X3/4X3/4	25	0	140	5.56
1402-130	1X1/2	25	200	140	3.74
1402-131	1X3/4	25	200	140	3.74
1402-156	1-1/4X1X1/2	25	0	140	6.89
1402-157	1-1/4X1X3/4	25	0	140	8.06
1402-166	1-1/4X1/2	25	0	140	5.11
1402-167	1-1/4X3/4	25	0	140	5.63
1402-168	1-1/4X1	25	0	140	5.95
1402-199	1-1/2X1-1/4X1/2	25	0	140	10.85
1402-201	1-1/2X1-1/4X3/4	10	0	140	12.08
1402-202	1-1/2X1-1/4X1	10	0	140	13.82
1402-209	1-1/2X1/2	10	80	140	7.85
1402-210	1-1/2X3/4	10	80	140	9.29
1402-211	1-1/2X1	10	0	140	9.29

Tee, Reducing - PVC (continued)
Insert x Insert x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1402-212	1-1/2X1-1/4	10	0	140	9.53
1402-247	2X1/2	10	0	140	10.53
1402-248	2X3/4	10	0	140	11.12
1402-249	2X1	10	0	140	12.24
1402-251	2X1-1/2	10	0	140	12.82

Tee, Reducing - PVC
Insert x Insert x Mipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1403-130	1X1X1/2	25	200	140	4.87
1403-131	1X1X3/4	25	0	140	4.87

Tee - PVC
Insert x Insert x Mipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1403-005	1/2	50	500	140	2.92
1403-007	3/4	50	0	140	3.98
1403-010	1	25	0	140	5.11
1403-012	1-1/4	10	80	140	6.64
1403-015	1-1/2	10	0	140	7.43
1403-020	2	10	0	140	11.56

Tee - PVC
Insert x Insert x Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1404-010	1	25	0	140	4.05

Tee, Reducing - PVC
Insert x Insert x Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1404-102	3/4X3/4X1	100	0	140	6.56

90° Ell - PVC
Insert x Insert

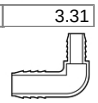
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1406-005	1/2	50	1000	140	1.93
1406-007	3/4	50	400	140	2.36
1406-010	1	25	200	140	2.61
1406-012	1-1/4	10	180	140	2.92
1406-015	1-1/2	10	80	140	3.44
1406-020	2	10	0	140	4.80
1406-025	2-1/2	10	0	140	21.67
1406-040*	4	2	0	140	71.74

* Assembled

90° Ell - CPVC
Insert x Insert

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1407-007C	3/4	50	0	142	3.31

90° Ell, Reducing - PVC
Insert x Insert



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1406-101	3/4X1/2	25	300	140	2.23
1406-131	1X3/4	25	300	140	2.74
1406-168	1-1/4X1	25	0	140	4.05
1406-212	1-1/2X1-1/4	10	80	140	4.80
1406-251	2X1-1/2	10	0	140	5.28

90° Ell, Reducing - CPVC
Insert x Insert

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1407-074C	1/2X3/4	20	160	143	6.59

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Barbed Insert Fittings

90° Ell - PVC
Insert x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1407-005	1/2	50	400	140	2.17
1407-007	3/4	50	0	140	2.36
1407-010	1	25	0	140	3.02
1407-012	1-1/4	10	140	140	4.48
1407-015	1-1/2	10	0	140	5.11
1407-020	2	10	0	140	8.62

90° Ell, Reducing - PVC
Insert x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1407-074	1/2X3/4	50	400	140	2.23
1407-101	3/4X1/2	50	400	140	2.23
1407-130	1X1/2	25	300	140	2.36
1407-131	1X3/4	25	200	140	2.74
1407-166	1-1/4X1/2	25	200	140	4.05
1407-167	1-1/4X3/4	25	250	140	4.05
1407-168	1-1/4X1	25	0	140	4.05
1407-211	1-1/2X1	10	80	140	4.61
1407-212	1-1/2X1-1/4	10	80	140	5.01
1407-251	2X1-1/2	10	0	140	8.18

90° Ell - PVC
Insert x Mipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1413-005	1/2	50	600	140	2.42
1413-007	3/4	50	400	140	3.35
1413-010	1	25	200	140	4.40
1413-012	1-1/4	10	120	140	5.85
1413-015	1-1/2	10	80	140	7.77
1413-015H	1-1/2	10	80	140	7.77
1413-020	2	10	0	140	12.26

90° Ell - CPVC
Insert x Mipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1413-020C	2	10	0	140	15.27

90° Ell Reducing - PVC
Insert x Mipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1413-055	3/8X3/4	50	200	140	2.61
1413-101	3/4X1/2	50	300	140	4.19
1413-130	1X1/2	50	400	140	4.77
1413-131	1X3/4	50	0	140	5.12

90° Side Outlet Ell - PVC
Insert x Insert x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1414-101	3/4X3/4X1/2	50	0	140	5.56
1414-130	1X1X1/2	25	200	140	5.97
1414-131	1X3/4	50	0	140	5.97

Side Outlet Tee - PVC
Insert x Insert x Insert x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1416-007	3/4X3/4	50	0	140	7.16

Side Outlet Tee, Reducing - PVC
Insert x Insert x Insert x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1416-101	3/4X1/2	50	0	140	7.16

Side Outlet Tee, Reducing - PVC (continued)
Insert x Insert x Insert x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1416-130	1X1/2	50	0	140	7.62
1416-131	1X3/4	50	0	140	7.62

Cross - PVC
Insert

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1420-005	1/2	50	0	140	4.07
1420-007	3/4	25	150	140	5.52
1420-010	1	25	0	140	6.86

Coupling - PVC
Insert x Insert

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1429-005	1/2	50	600	140	.98
1429-007	3/4	50	600	140	1.18
1429-010	1	50	400	140	1.23
1429-012	1-1/4	25	200	140	1.82
1429-015	1-1/2	25	0	140	2.16
1429-020	2	25	0	140	4.08
1429-025	2-1/2	10	0	140	10.58
1429-030	3	10	0	140	17.97
1429-040	4	10	0	140	24.46
1429-060	6	8	0	140	69.32
1429-080*	8	4	0	140	150.06

* Fabricated

Coupling - CPVC
Insert x Insert

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1429-005C	1/2	50	600	142	1.39
1429-007C	3/4	50	600	142	2.01
1429-010C	1	50	400	143	1.75

Coupling, Reducer - PVC
Insert x Insert

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1429-101	3/4X1/2	50	600	140	1.60
1429-130	1X1/2	50	400	140	2.20
1429-131	1X3/4	50	400	140	1.64
1429-1315	1X7/8	50	400	140	3.36
1429-167	1-1/4X3/4	25	300	140	3.36
1429-168	1-1/4X1	25	200	140	2.61
1429-210	1-1/2X3/4	25	275	140	4.08
1429-211	1-1/2X1	25	200	140	3.93
1429-212	1-1/2X1-1/4	25	0	140	3.05
1429-249	2X1	10	80	140	5.56
1429-250	2X1-1/4	10	80	140	5.17
1429-251	2X1-1/2	10	80	140	4.92
1429-291	2-1/2X1-1/2	10	0	140	14.07
1429-338*	3X2	12	0	140	39.79
1429-422	4X3	18	0	140	69.95
1429-532	6X4	8	0	140	79.57

* Fabricated

Female Adapter - PVC
Fipt x Insert

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1435-005	1/2	50	300	140	4.28
1435-007	3/4	50	400	140	4.66
1435-010	1	50	0	140	5.17
1435-012	1-1/4	25	0	140	6.35
1435-015	1-1/2	25	0	140	8.06
1435-020	2	10	0	140	10.24

Barbed Insert Fittings

Female Adapter, Reducing - PVC
Fipt x Insert

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1435-074	1/2X3/4	50	500	140	5.97
1435-101	3/4X1/2	50	600	140	5.53
1435-102	3/4X1	50	0	140	6.17
1435-131	1X3/4	50	0	140	4.07

Female Adapter - CPVC
Fipt x Insert

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1435-005C	1/2	50	300	143	4.87
1435-007C	3/4	50	400	143	6.65
1435-010C	1	50	0	143	7.56
1435-012C	1-1/4	25	0	143	8.29
1435-015C	1-1/2	25	0	143	10.47
1435-020C	2	10	0	143	13.72

Female Adapter, Special Reinforced - PVC
SR Fipt x Insert

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1435-005SR	1/2	50	400	142	5.73
1435-007SR	3/4	50	400	142	6.77
1435-010SR	1	50	0	142	8.07
1435-015SR	1-1/2	20	0	142	22.78

Male Adapter - PVC
Mipt x Insert

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1436-002	1/4	200	1200	140	.96
1436-005	1/2	50	600	140	.96
1436-007	3/4	50	400	140	1.18
1436-010	1	50	0	140	1.22
1436-012	1-1/4	20	160	140	1.93
1436-015	1-1/2	25	0	140	2.16
1436-015W	1-1/2	20	0	001	2.16
1436-020	2	10	0	140	4.14
1436-025	2-1/2	10	0	140	17.00
1436-030	3	10	0	140	19.61
1436-040	4	10	0	140	27.26
1436-060G[1]	6	1	4	140	153.72
1436-060[2]	6	4	0	140	138.35

1 Fabricated - Gray PVC
2 Fabricated - White PVC

Male Adapter - CPVC
Mipt x Insert

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1436-005C	1/2	1400	0	143	1.39
1436-007C	3/4	50	400	143	1.69
1436-010C	1	50	0	143	1.74
1436-012C	1-1/4	20	160	143	2.61
1436-015C	1-1/2	25	0	143	3.11
1436-020C	2	10	0	143	5.92
1436-030C	3	10	0	143	26.77
1436-040C	4	10	0	143	41.38
1436-060C	6	4	0	143	307.63
1436-080CF	8	1	0	002	160.42

Male Adapter, Reducing - PVC
Mipt x Insert

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1436-074	1/2X3/4	50	300	140	3.05
1436-075	1/2X1	50	200	140	3.17
1436-101	3/4X1/2	50	600	140	2.76

Male Adapter, Reducing - PVC (continued)
Mipt x Insert

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1436-102	3/4X1	50	400	140	3.17
1436-131	1X3/4	50	0	140	2.85
1436-132	1X1-1/4	25	200	140	3.85
1436-133	1X1-1/2	25	0	140	5.80
1436-167	1-1/4X3/4	25	200	140	3.36
1436-168	1-1/4X1	25	200	140	3.61
1436-169	1-1/4X1-1/2	10	120	140	5.80
1436-211	1-1/2X1	25	0	140	4.40
1436-212	1-1/2X1-1/4	25	0	140	4.40
1436-213	1-1/2X2	10	80	140	7.46
1436-251	2X1-1/2	10	80	140	7.40
1436-252*	2X2-1/2	10	0	140	13.44
1436-292*	2-1/2X2	10	0	140	59.29

*Assembled molded components

Male Adapter, Reducing - CPVC
Mipt x Insert

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1436-073C	1/2X3/8	50	300	143	1.53
1436-074C	1/2X3/4	50	300	142	3.48
1436-101C	3/4X1/2	50	600	142	3.93
1436-212C	1-1/2X1-1/4	25	0	143	6.09

Female Hose Adapter - PVC
Female Hose Thread x Insert

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1435-007FHT	3/4	50	400	140	5.56

Male Hose Adapter - PVC
Male Hose Thread x Insert

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1436-007MHT	3/4	50	400	140	2.87

Male Hose Adapter, Reducing - PVC
Male Hose Thread x Insert

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1436-101MHT	3/4X1/2	50	600	140	2.74
1436-102MHT	3/4X1	50	400	140	3.14

Pool Adapter - PVC
Mipt x Hose ID

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1436-204	1-1/2X1-1/2X1-1/4	25	0	140	5.52

Pool Adapter - PP
Mipt x Hose ID

Not NSF Approved

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1436-204P	1-1/2X1-1/2X1-1/4	25	0	140	5.52

Plug - PVC
Insert

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1449-005	1/2	100	600	140	1.75
1449-007	3/4	100	1200	140	1.82
1449-010	1	50	600	140	2.46
1449-012	1-1/4	25	300	140	3.13
1449-015	1-1/2	25	300	140	3.40
1449-020	2	10	120	140	5.99

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Barbed Insert Fittings

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each

Lay Flat Plug - PVC

Insert

For Lay Flat Type Hose

1449-030LF	**3**	1	4	140	23.21
1449-040LF	**4**	4	0	140	30.42
1449-060LF	**6**	1	6	140	165.19

PVC & PP INSERT FITTINGS

FOR USE WITH POLYETHYLENE PIPE

TECHNICAL INFORMATION
WEIGHTS & DIMENSIONS

Contact Spears® for any information not found.

The PVC Barbed-Insert Fitting of Choice

Engineered to provide positive grip and ease of installation. High quality and reliability have made Spears® insert fittings the preferred choice for irrigation and O.E.M. applications. A wide variety of PVC insert configurations and adapters are available for use with polyethylene pipe sizes 1/2" through 4", plus 6" & 8" Couplings and Adapters for lay-flat type irrigation hose. Special 3/8" barbed configurations in PVC and PP allow clamp-free connection to 1/2" I.D. polyethylene irrigation hose.

Superior Choice for Use with Polyethylene Pipe

Spears® PVC Insert Fittings are designed for use with either ASTM D 2104 Schedule 40 or D 2239 SIDR pressure rated polyethylene pipe. Chemical and corrosion resistant, rigid PVC barbed inserts provide excellent grip with polyethylene materials.

Conform to ASTM D 2609

Spears® Insert Fittings are manufactured from high quality PVC materials to meet or exceed the applicable requirements of ASTM D 2609, Standard Specification for Plastic Insert Fittings for Polyethylene (PE) Plastic Pipe.

Full Assortment of Configurations and Adapters

Spears® broad line of gray PVC Insert Fittings includes popular configurations of elbows, tees, couplings and crosses. Numerous male and female NPT threaded adapters, elbows and tees plus white PVC Schedule 40 solvent-cement socket and spigot adapters allow easy connection of insert fittings to supply or distribution systems.

Twist Lock Insert Adapter with Built-in Clamping

Special Insert Fittings design uses built-in lock ring for easy connection without clamps to Polyethylene (PE) Plastic Pipe used with standard Insert Fittings.

Clamp-Free Spiral Barb Irrigation Hose Insert Adapters

Specially designed nominal 3/8" barb configurations allow connection of pipe Insert Fittings to conventional 1/2" polyethylene irrigation hose. Special spiral barb allows “twist-on” connection of hose without need for clamping in open end irrigation applications.

NSF® Certified for Use with Potable Water

Spears® Insert Fittings are tested and Certified by the NSF International for use in potable water systems.

The information contained in this publication is based on current information and Product design at the time of publication and is subject to change without notification. Our ongoing commitment to product improvement may result in some variation. No representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or results to be obtained therefrom. For verification of technical data or additional information not contained herein, please contact Spears® Technical Services Department [West Coast: (818) 364-1611 — East Coast: (678) 985-1263].

Installation Information

RECOMMENDATIONS FOR INSTALLERS AND USERS:

Plastic piping systems should be **ENGINEERED, INSTALLED**, and **OPERATED** in accordance with **ESTABLISHED DESIGN AND ENGINEERING STANDARDS AND PROCEDURES** for plastic piping systems. Suitability for the intended service application should be determined by the installer and/or user prior to installation of a plastic piping system. **PRIOR TO ASSEMBLY**, **all piping system components should be inspected for damage or irregularities. Mating components should be checked to assure that tolerances and engagements are compatible. Do not use any components that appear irregular or do not fit properly. Contact the appropriate manufacturer of the component product in question to determine usability . Consult all applicable codes and regulations fo r compliance prior to installation.**

SOLVENT WELD CONNECTIONS — Use quality solvent cements and primers formulated for the intended service application, pipe size and type of joint. While the pipe and fitting materials may be compatible with the intended medium, the solvent cement may not be. Consult the manufacturer for suitability of use. Read and follow the cement and primer manufacturers' applications and cure time instructions thoroughly. Be sure to use the correct size applicator.

THREADED CONNECTIONS — Use a quality grade thread sealant. **WARNING: SOME PIPE JOINT COMPOUNDS OR PTFE P ASTES MAY CONTAIN SUBSTANCES THAT COULD CAUSE STRESS CRACKING TO PLASTIC.** Spears® Manufacturing Company recommends the use of Spears® **BLUE 75™ Thread Sealant** which has been tested for compatibility with Spears® products. Please follow the sealant manufacturers' application/ installation instructions. Choice of an appropriate thread sealant other than those listed above is at the discretion of the installer. 1 to 2 turns beyond **FINGER TIGHT** is generally all that is required to make a sound plastic threaded connection. Unnecessary **OVER TIGHTENING** will cause **DAMAGE TO BOTH PIPE AND FITTING.**

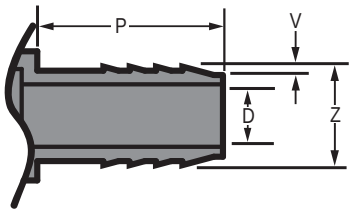
INSERT FITTING INSTALLATION – Pipe is cut to length with handsaw or knife. When installing flexible lines, (a) snake line one foot or more per 100 lineal feet, (b) cold water should be run through lines prior to backfilling to permit pipe to contract, (c) care should be taken to prevent large and sharp-edged rocks from being in position to crush pipe. Insert fittings are used to join lengths of flexible pipe. Stainless steel clamps are first slipped over ends of pipe, fitting is inserted and steel clamps are tightened securely over barbs on fittings. **DO NOT** use oil or detergent on any fittings. Use plain water or soapy water as lubricant on fitting. For attachment to previously installe d metallic systems or threaded fixtures, the insert adapter is utilized. Apply thread sealant to the threaded end of adapter and tighten into female connection. Steel clamp is then slipped over pipe end and pipe slipped over serrated end of insert adapter. Steel clamp is then positioned over serrations on insert adapter and securely tightened with a screwdriver.

TWIST LOCK INSERT INSTALLATION – Twist Lock Fittings with built in lock ring are installed the same as regular Insert Fittings, but do not require steel clamps. Check that lock ring component is fully threaded onto fitting. Slip pipe over serrated end of insert adapter. Twist lock ring back over pipe and barb to seal.

SPIRAL BARB FITTING INSTALLATION – Spiral Barb fittings are designed for use with 1/2" (.490) polyethylene irrigation hose and do not require steel clamps. Install with a twisting motion to fully engage barbs.

"Lead Free" low lead certification – unless otherwise specified, all Spears® PVC & PP Insert Fittings specified here-in are certified by NSF International to ANSI/NSF® Standard 61, Annex G and is in compliance with California's Health & Safety Code Section 116825 (commonly known as AB1953) and Vermont Act 193. Weighted average lead content <=0.25%.

Barbed Insert Fittings Weights & Dimensions



Dimensions of Insert Ends ASTM D 2609

Nominal Size in.	Insert Length "P" min.	Barb O.D. "Z" max.	Barb O.D. "Z" min.	Barb Depth "V" min.	Inside Diameter "D" min.
1/2	1-1/4	.665	.635	.015	.406
3/4	1-1/4	.865	.835	.015	.562
1	1-1/4	1.095	1.065	.020	.750
1-1/4	1-1/4	1.425	1.395	.025	.995
1-1/2	1-1/2	1.665	1.630	.030	1.125
2	1-1/2	2.125	2.085	.030	1.656
2-1/2	2	2.520	2.487	.030	2.062
3	2-1/8	3.125	3.086	.030	2.600
4	3	4.090	4.044	.030	3.525

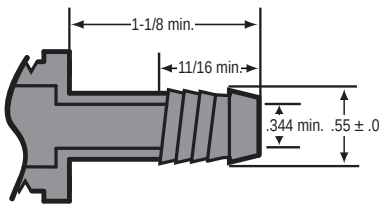
Dimensions of Polyethylene Pipe ASTM D 2104 and D 2239

Nominal Size in.	Average I.D. in.	Tolerance in.
1/2	.622	+.010 - .010
3/4	.824	+.010 - .015
1	1.049	+.010 - .020
1-1/4	1.380	+.010 - .020
1-1/2	1.610	+.015 - .020
2	2.067	+.015 - .020
2-1/2	2.469	+.015 - .025
3	3.068	+.015 - .030
4	4.026	+.015 - .035

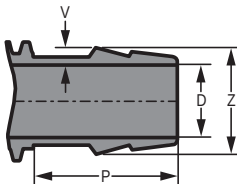
Insert Fittings Dimensions

G = (LAYING LENGTH) Intersection of center lines to insert bottom or thread bottom; 90° elbows, tees & crosses; ± 1/32 inch.
H = Intersection of center lines to end of insert or face of fitting; 90° elbows, tees & crosses; ± 1/32 inch.
L = Overall length of fittings; ± 1/16 inch.
N = (LAYING LENGTH) Insert bottom to insert bottom or thread bottom; couplings & straight adapters; ± 1/16 inch.

Dimensions of Spiral Barb Ends



Dimensions of Twist Lock Coupling



Nominal Size in.	Insert Length "P" min.	Barb O.D. "Z" max.	Barb Depth "V" min.	Inside Diameter "D" min.
1/2	.90	.675	.055	.460
3/4	.90	.875	.055	.600
1	.96	1.105	.055	.775

STANDARDS & SPECIFICATIONS

• ASTM D 2609
Plastic Insert Fittings for Polyethylene (PE) Plastic Pipe.

National Sanitation Foundation (NSF®)
Standard 14 Plastic Fittings for Potable Water.

• Material
Spears® Insert Fittings are produced from PVC Type 1, Minimum Cell Classification 12454. CPVC Minimum Cell Classification 23447.

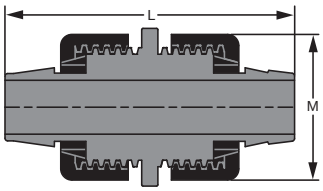
It is the users responsibility to determine the suitability for the intended service application.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC TWIST LOCK COUPLING

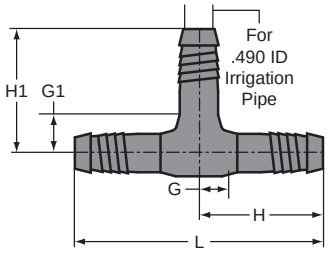
Loc Insert x Loc Insert



Part Number	Size	L	M	Approx. Wt. (Lbs.)
1429TL-005	1/2	3-3/16	1-1/16	.05
1429TL-007	3/4	3-3/16	1-5/16	.08
1429TL-010	1	3-3/16	1-5/8	.11

PVC SPIRAL BARB TEE

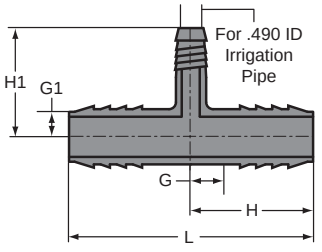
3/8" Spiral Barb x 3/8" Spiral Barb x 3/8" Spiral Barb



Part Number	Size	G	G1	H	H1	L	Approx. Wt. (Lbs.)
1401-003	3/8	9/16	19/32	1-25/32	1-13/16	3-9/16	.04

PVC SPIRAL BARB TEE

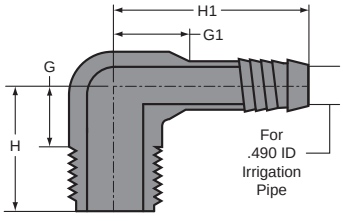
Insert x Insert x 3/8" Spiral Barb



Part Number	Size	G	G1	H	H1	L	Approx. Wt. (Lbs.)
1401-099	3/4x3/8	17/32	9/16	2-1/32	1-27/32	4-1/32	.05
1401-129	1x3/8	11/16	7/16	2-3/16	1-31/32	4-1/8	.08

PP SPIRAL BARB 90° ELBOW

Mipt x 3/8" Spiral Barb

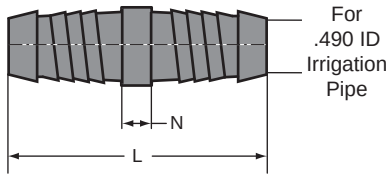


Part Number	Size	G	G1	H	H1	Approx. Wt. (Lbs.)
1413-073	1/2x3/8	7/16	5/8	1-1/8	1-13/16	.02
1413-099	3/4x3/8	1/2	23/32	1-3/16	1-29/32	.03

Barbed Insert Fittings Weights & Dimensions

PVC SPIRAL BARB COUPLING

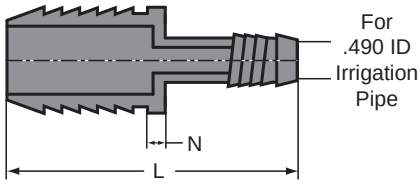
Spiral Barb x Spiral Barb



Part Number	Size	L	N	Approx. Wt. (Lbs.)
1429-003	3/8	2-7/8	5/16	.02

PVC SPIRAL BARB COUPLING

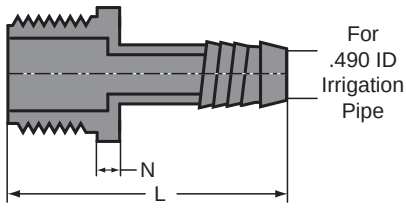
Insert x 3/8" Spiral Barb



Part Number	Size	L	N	Approx. Wt. (Lbs.)
1429-099	3/4x3/8	3	1/16	.02
1429-129	1x3/8	3-3/32	3/16	.04

PP SPIRAL BARB MALE ADAPTER

Mipt x 3/8" Spiral Barb



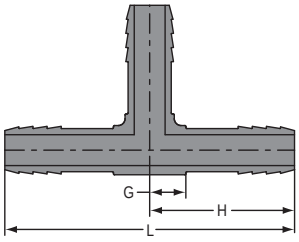
Part Number	Size	L	N	Approx. Wt. (Lbs.)
1436-073	1/2x3/8	2-11/32	1/4	.02
1436-099	3/4x3/8	2-11/32	1/4	.02

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC TEE

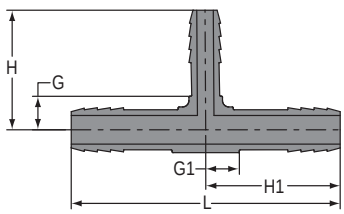
Insert x Insert x Insert



Part Number	Size	G	H	L	Approx. Wt. (Lbs.)
1401-005	1/2	7/16	1-15/16	3-13/16	.05
1401-007	3/4	17/32	2-1/32	4-1/16	.06
1401-010	1	11/16	2-3/16	4-15/32	.10
1401-012	1-1/4	31/32	2-15/32	4-15/16	.16
1401-015	1-1/2	15/16	2-11/16	5-3/8	.22
1401-020	2	1-9/32	3-11/32	6-11/16	.43

PVC REDUCING TEE

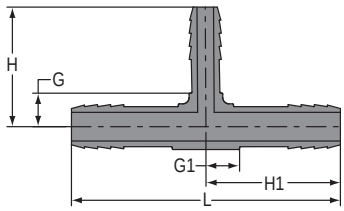
Insert x Insert x Insert



Part Number	Size	G	G1	H	H1	L	Approx. Wt. (Lbs.)
1401-074	1/2x1/2x3/4	21/32	9/16	2-5/32	2-1/16	4-5/16	.05
1401-094	3/4x1/2x1/2	9/16	9/16	2-1/16	2-1/16	4-7/16	.06
1401-101	3/4x3/4x1/2	17/32	17/32	2-1/32	2-1/32	4-1/16	.06
1401-102	3/4x3/4x1	23/32	3/4	2-7/32	2-1/4	4-1/2	.08
1401-124	1x3/4x1/2	9/16	9/16	2-1/16	2-1/16	4-5/32	.07
1401-125	1x3/4x3/4	21/32	9/16	2-1/8	2-1/32	4-3/32	.07
1401-130	1x1x1/2	5/8	13/32	2-1/8	1-29/32	3-27/32	.07
1401-131	1x1x3/4	21/32	9/16	2-5/32	2-1/32	4-3/32	.08
1401-132	1x1x1-1/4	21/32	13/16	2-5/16	2-5/16	4-21/32	.12
1401-156	1-1/4x1x1/2	9/16	21/32	2-1/16	2-5/32	4-7/16	.10
1401-157	1-1/4x1x3/4	21/32	21/32	2-5/32	2-5/32	4-3/8	.11
1401-158	1-1/4x1x1	3/4	23/32	2-1/4	2-7/32	4-1/2	.14
1401-166	1-1/4x1-1/4x1/2	9/16	23/32	2-1/16	2-7/32	4-1/8	.09
1401-167	1-1/4x1-1/4x3/4	27/32	29/32	2-11/32	2-13/32	4-11/16	.13
1401-168	1-1/4x1-1/4x1	11/16	11/16	2-7/32	2-3/16	4-13/32	.13
1401-169	1-1/4x1-1/4x1-1/2	13/16	31/32	2-9/16	2-7/16	4-29/32	.18
1401-201	1-1/2x1-1/4x3/4	21/32	1-1/16	2-13/32	2-9/16	4-9/16	.15

PVC REDUCING TEE (continued)

Insert x Insert x Insert

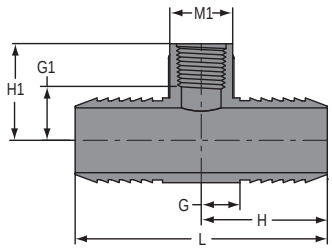


Part Number	Size	G	G1	H	H1	L	Approx. Wt. (Lbs.)
1401-202	1-1/2x1-1/4x1	3/4	1-3/32	2-1/2	2-19/32	4-3/4	.16
1401-203	1-1/2x1-1/4x1-1/4	15/16	1-1/16	2-11/16	2-9/16	5-1/8	.18
1401-209	1-1/2x1-1/2x1/2	11/16	9/16	2-5/16	2-5/16	4-5/8	.14
1401-210	1-1/2x1-1/2x3/4	21/32	1-1/16	2-13/32	2-9/16	4-13/16	.17
1401-211	1-1/2x1-1/2x1	1-1/16	3/4	2-9/16	2-1/2	5	.18
1401-212	1-1/2x1-1/2x1-1/4	15/16	1-1/16	2-11/16	2-9/16	5-3/8	.20
1401-241	2x1-1/2x1-1/2	1-1/16	1-1/2	2-13/16	3	5-5/8	.27
1401-247	2x2x1/2	1/2	1-5/16	2-1/4	2-7/8	4-9/16	.20
1401-248	2x2x3/4	21/32	1-11/32	2-13/32	2-25/32	4-25/32	.21
1401-249	2x2x1	3/4	1-9/32	2-1/2	2-25/32	5	.22
1401-250	2x2x1-1/4	15/16	1-9/32	2-11/16	2-25/32	5-3/8	.25
1401-251	2x2x1-1/2	1-1/16	13/16	2-13/16	3	5-5/8	.28
1401-338*	3x3x2	3-5/8	3-3/4	5-3/8	6-1/32	12-1/16	2.44

*Assembled

PVC TEE

Insert x Insert x Fipt



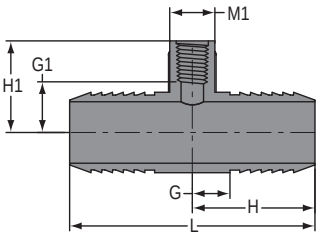
Part Number	Size	G	G1	H	H1	L	M1	Approx. Wt. (Lbs.)
1402-005	1/2	17/32	5/16	2-1/32	1-1/32	4-1/16	1	.05
1402-007	3/4	21/32	13/32	2-5/32	1-1/8	4-5/16	1-1/4	.07
1402-010	1	13/16	17/32	2-5/16	1-7/16	4-19/32	1-19/32	.13
1402-012	1-1/4	1-1/8	11/16	2-5/8	1-11/16	5-1/4	2	.21
1402-015	1-1/2	1-1/4	27/32	3	1-27/32	6	2-1/4	.28
1402-020	2	1-3/8	1-1/16	3-1/8	2-1/8	6-1/4	2-3/4	.42

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC REDUCING TEE

Insert x Insert x Fipt

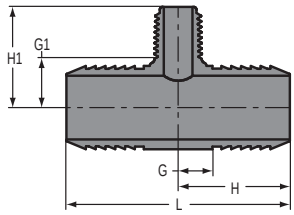


Part Number	Size	G	G1	H	H1	L	M1	Approx. Wt. (Lbs.)
1402-094	3/4x1/2x1/2	5/8	13/32	2-1/8	1-5/32	4-5/16	1-3/32	.07
1402-101	3/4x3/4x1/2	3/4	7/16	2-3/16	1-1/4	4-1/8	1-1/16	.06
1402-124	1x3/4x1/2	23/32	17/32	2-7/32	1-9/32	4-7/16	1-3/32	.10
1402-125	1x3/4x3/4	27/32	15/32	2-11/32	1-9/32	4-11/16	1-5/16	.12
1402-130	1x1x1/2	17/32	1/2	2-1/32	1-7/32	4-1/16	1	.08
1402-131	1x1x3/4	21/32	1/2	2-5/32	1-1/4	4-9/32	1-7/32	.09
1402-156	1-1/4x1x1/2	11/16	11/16	2-3/16	1-7/16	4-3/8	1-1/16	.14
1402-157	1-1/4x1x3/4	25/32	21/32	2-9/32	1-15/32	4-17/32	1-5/16	.16
1402-166	1-1/4x1-1/4x1/2	21/32	21/32	2-5/32	1-7/16	4-5/16	1-1/8	.14
1402-167	1-1/4x1-1/4x3/4	25/32	21/32	2-9/32	1-15/32	4-9/16	1-13/32	.15
1402-168	1-1/4x1-1/4x1	15/16	3/4	2-7/16	1-5/8	4-7/8	1-5/8	.17
1402-199	1-1/2x1-1/4x1/2	21/32	3/4	2-9/32	1-1/2	4-9/16	1-3/16	.17
1402-201	1-1/2x1-1/4x3/4	13/16	11/16	2-9/16	1-1/2	4-13/16	1-5/16	.19
1402-202	1-1/2x1-1/4x1	1	25/32	2-3/4	1-25/32	5-3/32	1-5/8	.22
1402-209	1-1/2x1-1/2x1/2	21/32	25/32	2-13/32	1-17/32	4-13/16	1-3/16	.17
1402-210	1-1/2x1-1/2x3/4	13/16	25/32	2-9/16	1-9/16	5-1/8	1-3/8	.19
1402-211	1-1/2x1-1/2x1	15/16	25/32	2-11/16	1-3/4	5-3/8	1-21/32	.22
1402-212	1-1/2x1-1/2x1-1/4	29/32	5/8	2-21/32	1-5/8	5-23/32	2	.26
1402-247	2x2x1/2	13/16	1-3/16	2-5/16	2-1/16	4-7/8	1-1/16	.24
1402-248	2x2x3/4	11/16	1	2-7/16	1-7/8	5-1/16	1-5/16	.26
1402-249	2x2x1	15/16	31/32	2-11/16	2	5-11/32	1-23/32	.30
1402-251	2x2x1-1/2	1-1/4	31/32	3	2	6	2-1/4	.38

Barbed Insert Fittings Weights & Dimensions

PVC TEE

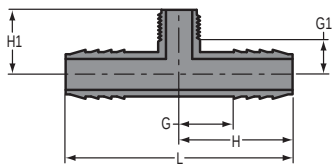
Insert x Insert x Mipt



Part Number	Size	G	G1	H	H1	L	Approx. Wt. (Lbs.)
1403-005	1/2	9/16	21/32	2-1/16	1-9/32	4-1/8	.04
1403-007	3/4	5/8	13/16	2-5/32	1-7/16	4-5/16	.06
1403-010	1	11/16	11/16	2-3/16	1-5/8	4-3/8	.10
1403-012	1-1/4	15/16	1-1/16	2-7/16	2-1/16	4-7/8	.17
1403-015	1-1/2	1	1-3/16	2-13/16	2-3/16	5-5/8	.22
1403-020	2	1-5/16	1-7/16	3-1/16	2-15/32	6-3/32	.32

PVC REDUCING TEE

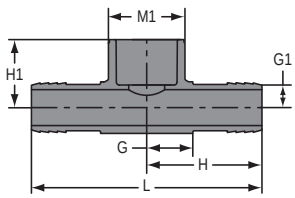
Insert x Insert x Mipt



Part Number	Size	G	G1	H	H1	L	Approx. Wt. (Lbs.)
1403-130	1x1x1/2	11/16	23/32	2-3/16	1-3/8	4-3/8	.08
1403-131	1x1x3/4	11/16	11/16	2-3/16	1-13/32	4-3/8	.09

PVC TEE

Insert x Insert x Socket



Part Number	Size	G	G1	H	H1	L	M1	Approx. Wt. (Lbs.)
1404-010	1	1	15/32	2-1/2	1-15/32	5	1-5/8	.15

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

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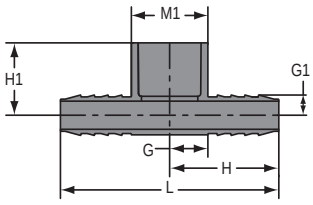
Barbed Insert Fitting Weights & Dimensions

PVC REDUCING TEE

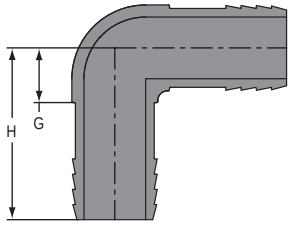
Insert x Insert x Socket



Part Number	Size	G	G1	H	H1	L	M1	Approx. Wt. (Lbs.)
1404-102	3/4x3/4x1	27/32	11/32	2-11/32	1-15/32	4-21/32	1-5/8	.09

PVC 90° ELBOW

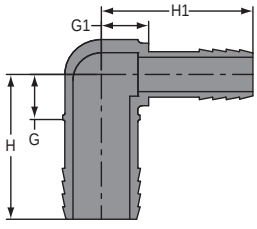
Insert x Insert



Part Number	Size	G	H	Approx. Wt. (Lbs.)
1406-005	1/2	7/16	1-15/16	.03
1406-007	3/4	17/32	2-1/32	.04
1406-010	1	11/16	2-3/16	.07
1406-012	1-1/4	7/8	2-7/16	.12
1406-015	1-1/2	1	2-3/4	.17
1406-020	2	1-3/16	2-15/16	.23
1406-025	2-1/2	1-9/16	3-3/4	.43

PVC 90° REDUCING ELBOW

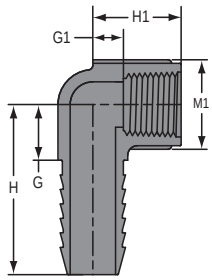
Insert x Insert



Part Number	Size	G	G1	H	H1	Approx. Wt. (Lbs.)
1406-101	3/4x1/2	21/32	9/16	2-5/32	2-1/16	.04
1406-131	1x3/4	3/4	5/8	2-1/4	2-1/8	.06
1406-168	1-1/4x1	23/32	21/32	2-1/4	2-1/4	.10
1406-212	1-1/2x1-1/4	15/16	3/4	2-11/16	2-9/32	.14
1406-251	2x1-1/2	1-1/4	31/32	3	2-23/32	.22

PVC 90° ELBOW

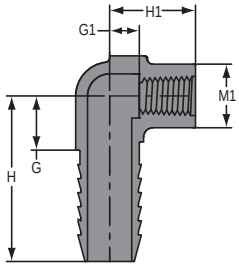
Insert x Fipt



Part Number	Size	G	G1	H	H1	M1	Approx. Wt. (Lbs.)
1407-005	1/2	11/16	5/16	2-1/8	1	1-1/16	.04
1407-007	3/4	27/32	13/32	2-1/4	1-3/32	1-9/32	.06
1407-010	1	15/16	3/8	2-3/8	1-3/8	1-19/32	.11
1407-012	1-1/4	1-3/32	3/4	2-19/32	1-3/4	2	.18
1407-015	1-1/2	1-7/32	13/16	2-31/32	1-7/8	2-3/8	.24
1407-020	2	1-15/32	1-1/16	3-7/32	2-1/8	2-27/32	.35

PVC 90° REDUCING ELBOW

Insert x Fipt



Part Number	Size	G	G1	H	H1	M1	Approx. Wt. (Lbs.)
1407-074	1/2x3/4	13/16	3/8	2-5/16	1-1/8	1-11/32	.06
1407-101	3/4x1/2	23/32	15/32	2-7/32	1-5/32	1-3/32	.06
1407-130	1x1/2	11/16	17/32	2-3/16	1-1/4	1-1/8	.07
1407-131	1x3/4	27/32	9/16	2-11/32	1-5/16	1-5/16	.09
1407-166	1-1/4x1/2	21/32	3/4	2-5/32	1-3/8	1-3/32	.10
1407-167	1-1/4x3/4	25/32	3/4	2-9/32	1-1/2	1-5/16	.11
1407-168	1-1/4x1	15/16	11/16	2-7/16	1-21/32	1-11/16	.14
1407-211	1-1/2x1	29/32	3/4	2-21/32	1-3/4	1-11/16	.18
1407-212	1-1/2x1-1/4	1-1/8	13/16	2-7/8	1-13/16	2	.20
1407-251	2x1-1/2	1-7/32	1	2-31/32	2-1/32	2-5/16	.29

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

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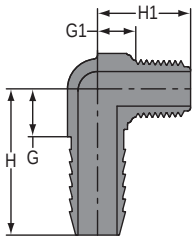
PVC 90° ELBOW

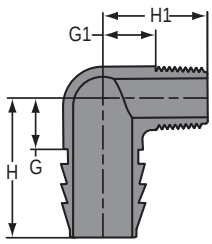
Insert x Mipt



Part Number	Size	G	G1	H	H1	Approx. Wt. (Lbs.)
1413-005	1/2	1/2	5/8	2	1-1/4	.03
1413-007	3/4	17/32	21/32	2	1-9/32	.04
1413-010	1	11/16	23/32	2-3/16	1-19/32	.07
1413-012	1-1/4	27/32	31/32	2-11/32	1-27/32	.12
1413-015	1-1/2	15/16	1-3/32	2-23/32	2-1/8	.17
1413-020	2	1-1/4	1-3/8	3	2-7/16	.24

PVC 90° REDUCING ELBOW

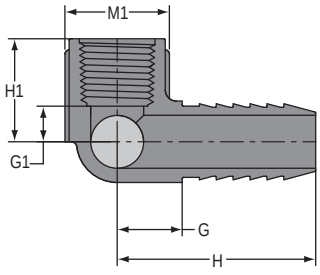
Insert x Mipt



Part Number	Size	G	G1	H	H1	Approx. Wt. (Lbs.)
1413-055	3/8x3/4	7/16	3/4	1-1/4	1-1/2	.03
1413-101	3/4x1/2	1/2	1/2	2-1/16	1-7/32	.04
1413-130	1x1/2	23/32	3/4	2-3/16	1-11/32	.06
1413-131	1x3/4	11/16	23/32	2-5/32	1-13/32	.06

PVC SIDE OUTLET ELBOW

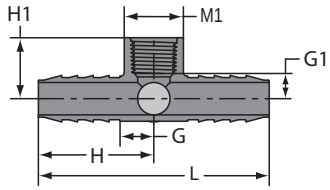
Insert x Insert x Fipt



Part Number	Size	G	G1	H	H1	M1	Approx. Wt. (Lbs.)
1414-101	3/4x3/4x1/2	5/8	13/32	2-1/8	1-1/8	1-3/32	.07
1414-130	1x1x1/2	11/16	9/16	2-3/16	1-1/4	1-5/16	.10
1414-131	1x3/4	15/16	15/32	2-9/32	1-3/16	1-5/16	.11

PVC SIDE OUTLET TEE

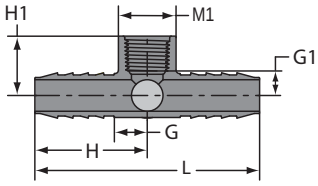
Insert x Insert x Insert x Fipt



Part Number	Size	G	G1	H	H1	L	M1	Approx. Wt. (Lbs.)
1416-007	3/4x3/4	23/32	27/32	2-7/32	1-1/8	4-7/16	1-3/32	.08

PVC REDUCING SIDE OUTLET TEE

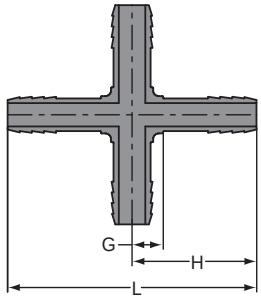
Insert x Insert x Insert x Fipt



Part Number	Size	G	G1	H	H1	L	M1	Approx. Wt. (Lbs.)
1416-101	3/4x1/2	5/8	23/32	2-1/8	2-7/32	4-1/4	1-3/32	.08
1416-130	1x1/2	1/2	1/2	1-1/4	1-1/4	2-1/2	1-5/16	.11
1416-131	1x3/4	23/32	27/32	2-7/32	2-11/32	4-7/16	1-5/16	.12

PVC CROSS

Insert



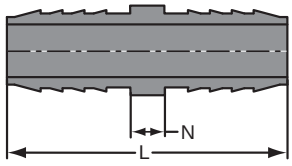
Part Number	Size	G	H	L	Approx. Wt. (Lbs.)
1420-005	1/2	13/32	1-29/32	3-13/16	.05
1420-007	3/4	1/2	2-7/16	4-27/32	.09
1420-010	1	11/16	2-3/16	4-3/8	.12

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC COUPLING

Insert x Insert

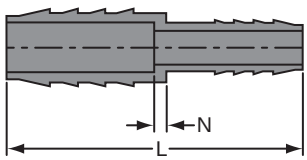


Part Number	Size	L	N	Approx. Wt. (Lbs.)
1429-005	1/2	3-1/8	1/8	.02
1429-007	3/4	3-1/16	1/16	.03
1429-010	1	3-3/16	3/16	.05
1429-012	1-1/4	3-3/16	3/16	.08
1429-015	1-1/2	3-19/32	3/32	.11
1429-020	2	3-17/32	1/16	.13
1429-025	2-1/2	4-19/32	7/32	.23
1429-030	3	4-13/16	5/16	.34
1429-040	4	6-13/32	3/8	.62
1429-060	6	7-27/32	13/32	1.65
1429-080*	8	9-7/8	3/16	3.55

*Fabricated PVC White

PVC REDUCER COUPLING

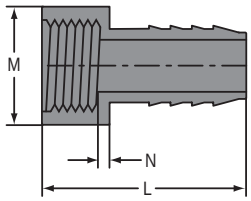
Insert x Insert



Part Number	Size	L	N	Approx. Wt. (Lbs.)
1429-101	3/4x1/2	3-1/8	1/8	.03
1429-130	1x1/2	3-1/8	1/8	.04
1429-131	1x3/4	3-3/16	3/16	.04
1429-1315	1x7/8	3-1/4	1/4	.05
1429-167	1-1/4x3/4	3-1/8	1/8	.06
1429-168	1-1/4x1	3-1/16	1/16	.06
1429-210	1-1/2x3/4	3-3/8	1/8	.09
1429-211	1-1/2x1	3-3/8	1/8	.09
1429-212	1-1/2x1-1/4	3-3/8	1/8	.09
1429-249	2x1	3-3/8	1/8	.12
1429-250	2x1-1/4	3-3/8	1/8	.13
1429-251	2x1-1/2	3-5/8	1/8	.14
1429-291	2-1/2x1-1/2	4	1/8	.17
1429-422	4x3	5-9/16	5/16	.50
1429-532	6x4	8-15/32	2-3/16	1.52

PVC & CPVC FEMALE ADAPTER

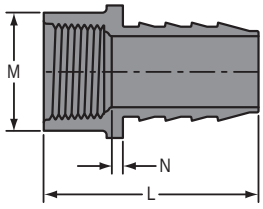
Fipt x Insert



Part Number		Size	L	M	N	Approx. Wt. (Lbs.)	
PVC	CPVC					PVC	CPVC
1435-005	1435-005C	1/2	2-13/32	1-3/16	3/16	.04	.04
1435-007	1435-007C	3/4	2-7/16	1-13/32	1/4	.05	.05
1435-010	1435-010C	1	2-9/16	1-21/32	3/16	.08	.08
1435-012	1435-012C	1-1/4	2-11/16	2-1/8	5/32	.11	.12
1435-015	1435-015C	1-1/2	3-1/16	2-5/16	3/16	.15	.17
1435-020	1435-020C	2	3	2-13/16	3/16	.19	.22

PVC REDUCING FEMALE ADAPTER

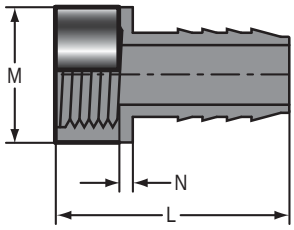
Fipt x Insert



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
1435-074	1/2x3/4	2-3/8	1-1/8	5/32	.04
1435-101	3/4x1/2	2-3/8	1-11/32	5/32	.04
1435-102	3/4x1	2-3/8	1-5/16	5/32	.05

PVC SPECIAL REINFORCED FEMALE ADAPTER

SR Fipt x Insert



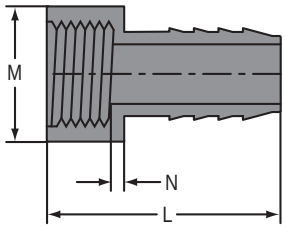
Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
1435-005SR	1/2	2-7/16	1-3/32	9/32	.03
1435-007SR	3/4	2-7/16	1-13/32	1/4	.05
1435-010SR	1	2-5/8	1-23/32	1/4	.08

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC FEMALE HOSE ADAPTER

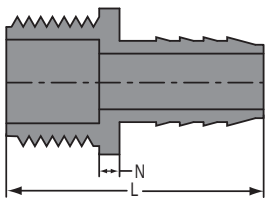
Female Hose Thread x Insert



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
1435-007FHT	3/4	2-7/16	1-13/32	7/16	.05

PVC & CPVC MALE ADAPTER

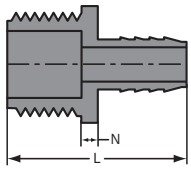
Mipt x Insert



Part Number		Size	L	N	Approx. Wt. (Lbs.)	
PVC	CPVC				PVC	CPVC
1436-002	---	1/4	1-19/32	5/32	.01	---
1436-005	1436-005C	1/2	2-13/32	1/4	.02	.03
1436-007	1436-007C	3/4	2-7/16	1/4	.04	.05
1436-010	1436-010C	1	2-5/8	1/4	.06	.07
1436-012	1436-012C	1-1/4	2-9/16	3/16	.04	.06
1436-015	1436-015C	1-1/2	2-31/32	5/16	.12	.14
1436-020	1436-020C	2	2-13/16	1/8	.16	.18
1436-025	---	2-1/2	4-3/16	7/16	.33	---
1436-030	1436-030C	3	4-9/32	13/32	.47	.48
1436-040	1436-040C	4	5-1/4	3/8	.76	.84

PVC & CPVC REDUCING MALE ADAPTER

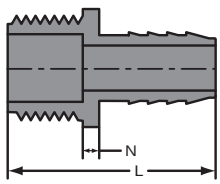
Mipt x Insert



Part Number		Size	L	N	Approx. Wt. (Lbs.)	
PVC	CPVC				PVC	CPVC
1436-074	1436-074C	1/2x3/4	2-5/16	1/8	.03	.03
1436-075	---	1/2x1	2-5/8	7/16	.05	---
1436-101	1436-101C	3/4x1/2	2-5/16	1/8	.03	.04
1436-102	---	3/4x1	2-9/16	1/4	.04	---
1436-131	---	1x3/4	2-9/16	3/16	.06	---
1436-132	---	1x1-1/4	2-5/8	1/4	.07	---
1436-133	---	1x1-1/2	3-1/16	5/16	.11	---
1436-167	---	1-1/4x3/4	2-25/32	9/32	.08	---
1436-168	---	1-1/4x1	2-25/32	9/32	.09	---
1436-169	---	1-1/4x1-1/2	3-1/16	5/16	.11	---
1436-211	---	1-1/2x1	2-13/16	5/16	.11	---
1436-212	1436-212C	1-1/2x1-1/4	2-27/32	11/32	.12	.13
1436-213	---	1-1/2x2	3-3/32	5/16	.14	---
1436-251	---	2x1-1/2	3-7/32	13/32	.18	---

PVC HOSE ADAPTER

Male Hose Thread x Insert



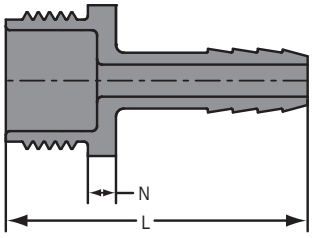
Part Number	Size	L	N	Approx. Wt. (Lbs.)
1436-007MHT	3/4	2-3/8	7/32	.03

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC REDUCING HOSE ADAPTER

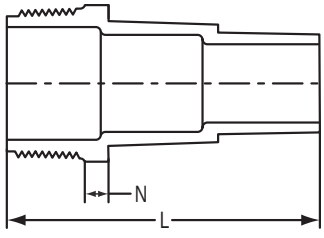
Male Hose Thread x Insert



Part Number	Size	L	N	Approx. Wt. (Lbs.)
1436-101MHT	3/4x1/2	2-3/8	7/32	.03
1436-102MHT	3/4x1	2-3/8	7/32	.04

PVC POOL ADAPTER (PVC White)

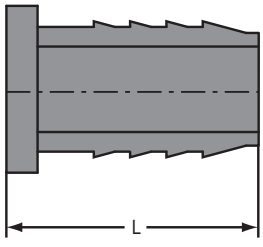
Mipt x Hose ID



Part Number	Size	L	N	Approx. Wt. (Lbs.)
1436-204	1-1/2x1-1/2x1-1/4	4	1/8	.09

PVC PLUG

Insert

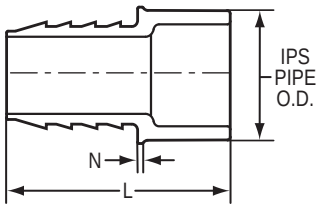


Part Number	Size	L	Approx. Wt. (Lbs.)
1449-005	1/2	1-5/8	.01
1449-007	3/4	1-19/32	.02
1449-010	1	1-11/16	.03
1449-012	1-1/4	1-5/8	.05
1449-015	1-1/2	1-7/8	.07
1449-020	2	1-7/8	.10

Barbed Insert Fittings Weights & Dimensions

SPIGOT ADAPTER (PVC WHITE)

Insert x I.P.S. Spigot

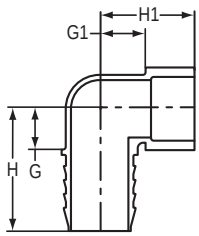


Part Number	Size	L	N	Approx. Wt. (Lbs.)
460-005	1/2	2-7/16	7/32	.03
460-007	3/4	2-23/32	7/32	.04
460-010	1	2-9/16	1/16	.07
460-012	1-1/4	3-1/32	1/4	.11
460-012N	1-1/4	3	9/32	.11
460-015	1-1/2	3-5/16	5/16	.14
460-020	2	3-1/2	3/8	.19
460-030	3	4-11/16	7/16	.58
460-040	4	5-11/32	5/16	.73

N = Nested

INSERT ADAPTER 90° ELBOW (PVC WHITE)

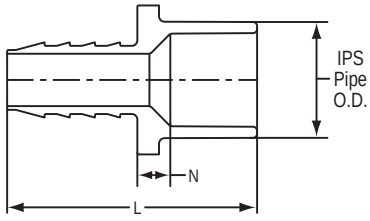
Insert x Spigot



Part Number	Size	G	G1	H	H1	Approx. Wt. (Lbs.)
460A-015	1-1/2	1	1	2-5/32	2-3/16	.18

REDUCING SPIGOT ADAPTER (PVC WHITE)

Insert x Spigot (Socket)



Part Number	Size	L	N	Approx. Wt. (Lbs.)
460-131N	3/4x1x3/4	2-7/8	5/8	.07
460-132N	1x1-1/4x1	3	5/16	.10

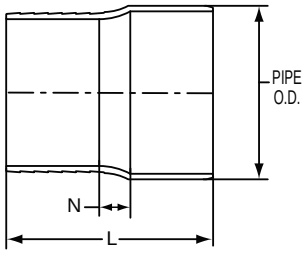
N = Nested

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

SPIGOT ADAPTER (PVC WHITE)

Insert x Spigot

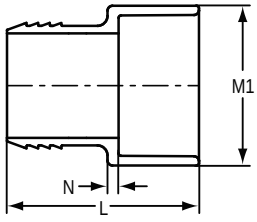


Part Number	Size	L	N	Approx. Wt. (Lbs.)
1432-060	6	7-27/32	1	1.69
1432-080*	8	9-7/8	5/8	5.23

*Fabricated

SOCKET ADAPTER (PVC WHITE)

Insert x Socket



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
474-005	1/2	2-3/8	1-1/16	1/8	.03
474-007	3/4	2-7/16	1-5/16	5/32	.05
474-010	1	2-5/8	1-5/8	1/8	.07
474-012	1-1/4	2-11/16	2	3/16	.10
474-015	1-1/2	3-1/16	2-1/4	3/16	.14
474-020	2	3	2-11/16	3/16	.17
474-030	3	4-3/4	4	5/16	.51
474-040	4	5-5/8	5	3/8	.81

PVC, CPVC & PE Nipples

PRICING

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC, CPVC & PE Nipples

- PVC/CPVC Nipples furnished may be produced from extruded stock, or from molding grade PVC/CPVC compounds. Both processes provide quality products meeting ASTM requirements.
- Half Size Nipples not shown are priced the same as the next full size.
  For example: 7-1/2" is priced the same as 8".
- CONTACT YOUR LOCAL SPEARS® REPRESENTATIVE FOR PRICE AND AVAILABILITY OF SIZES, LENGTHS, AND/OR CONFIGURATIONS NOT SHOWN.

PVC Schedule 80 Nipple

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Prod Code
1/8" Diameter						
1/8XCLOSE	879-005 **1.18**	1879-005 **1.18**	879-005P **1.18**	25	800	120
1/8X1-1/2	879-015 **1.18**	1879-015 **1.18**	879-015P **1.18**	25	800	120
1/8X2	879-020 **1.34**	1879-020 **1.34**	879-020P **1.34**	25	800	120
1/8X2-1/2	879-025 **1.41**	1879-025 **1.41**	879-025P **1.41**	25	800	120
1/8X3	879-030 **1.41**	1879-030 **1.41**	879-030P **1.41**	25	800	120
1/8X3-1/2	879-035 **1.56**	1879-035 **1.56**	879-035P **1.56**	25	800	120
1/8X4	879-040 **1.56**	1879-040 **1.56**	879-040P **1.56**	25	800	120
1/8X4-1/2	879-045 **1.76**	1879-045 **1.76**	879-045P **1.76**	25	600	120
1/8X5	879-050 **1.76**	1879-050 **1.76**	879-050P **1.76**	25	600	120
1/8X5-1/2	879-055 **2.01**	1879-055 **2.01**	879-055P **2.01**	25	600	120
1/8X6	879-060 **2.01**	1879-060 **2.01**	879-060P **2.01**	25	600	120
1/8X7	879-070 **2.34**	1879-070 **2.34**	879-070P **2.34**	25	450	120
1/8X8	879-080 **2.65**	1879-080 **2.65**	879-080P **2.65**	25	600	120
1/8X9	879-090 **2.79**	1879-090 **2.79**	879-090P **2.79**	25	400	120
1/8X10	879-100 **3.20**	1879-100 **3.20**	879-100P **3.20**	25	400	120
1/8X11	879-110 **3.47**	1879-110 **3.47**	879-110P **3.47**	25	400	120
1/8X12	879-120 **3.47**	1879-120 **3.47**	879-120P **3.47**	25	400	120
1/8X13	879-130 **4.48**	1879-130 **4.48**	879-130P **4.48**	25	400	120
1/8X14	879-140 **4.89**	1879-140 **4.89**	879-140P **4.89**	25	250	120
1/8X15	879-150 **5.14**	1879-150 **5.14**	879-150P **5.14**	25	300	120
1/8X16	879-160 **5.68**	1879-160 **5.68**	879-160P **5.68**	25	250	120
1/8X17	879-170 **5.91**	1879-170 **5.91**	879-170P **5.91**	25	250	120
1/8X18	879-180 **6.07**	1879-180 **6.07**	879-180P **6.07**	25	0	120
1/8X19	879-190 **6.46**	1879-190 **6.46**	879-190P **6.46**	5	0	120
1/8X20	879-200 **6.89**	1879-200 **6.89**	879-200P **6.89**	25	0	120
1/8X22	879-220 **7.35**	1879-220 **7.35**	879-220P **7.35**	25	0	120
1/8X24	879-240 **8.02**	1879-240 **8.02**	879-240P **8.02**	25	0	120
1/8X30	879-300 **10.22**	1879-300 **10.22**	879-300P **10.22**	25	0	120
1/8X36	879-360 **12.04**	1879-360 **12.04**	879-360P **12.04**	25	0	120
1/8X42	879-420 **14.02**	1879-420 **14.02**	879-420P **14.02**	25	0	120
1/8X48	879-480 **16.03**	1879-480 **16.03**	879-480P **16.03**	25	0	120
1/4" Diameter						
1/4XCLOSE	880-005 **1.23**	1880-005 **1.23**	880-005P **1.23**	25	1200	120

PVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Prod Code
1/4" Diameter						
1/4X1-1/2	880-015 **1.23**	1880-015 **1.23**	880-015P **1.23**	25	1200	120
1/4X2	880-020 **1.51**	1880-020 **1.51**	880-020P **1.51**	25	500	120
1/4X2-1/2	880-025 **1.51**	1880-025 **1.51**	880-025P **1.51**	25	500	120
1/4X3	880-030 **2.01**	1880-030 **2.01**	880-030P **2.01**	25	550	120
1/4X3-1/2	880-035 **2.01**	1880-035 **2.01**	880-035P **2.01**	25	500	120
1/4X4	880-040 **2.34**	1880-040 **2.34**	880-040P **2.34**	25	300	120
1/4X4-1/2	880-045 **2.34**	1880-045 **2.34**	880-045P **2.34**	25	250	120
1/4X5	880-050 **2.54**	1880-050 **2.54**	880-050P **2.54**	25	250	120
1/4X5-1/2	880-055 **2.54**	1880-055 **2.54**	880-055P **2.54**	25	250	120
1/4X6	880-060 **2.65**	1880-060 **2.65**	880-060P **2.65**	25	250	120
1/4X7	880-070 **2.74**	1880-070 **2.74**	880-070P **2.74**	25	250	120
1/4X8	880-080 **2.89**	1880-080 **2.89**	880-080P **2.89**	25	250	120
1/4X9	880-090 **2.97**	1880-090 **2.97**	880-090P **2.97**	25	250	120
1/4X10	880-100 **3.04**	1880-100 **3.04**	880-100P **3.04**	25	250	120
1/4X11	880-110 **3.26**	1880-110 **3.26**	880-110P **3.26**	25	250	120
1/4X12	880-120 **3.59**	1880-120 **3.59**	880-120P **3.59**	25	250	120
1/4X13	880-130 **5.22**	1880-130 **5.22**	880-130P **5.22**	25	250	120
1/4X14	880-140 **5.26**	1880-140 **5.26**	880-140P **5.26**	25	250	120
1/4X15	880-150 **5.58**	1880-150 **5.58**	880-150P **5.58**	25	500	120
1/4X16	880-160 **7.02**	1880-160 **7.02**	880-160P **7.02**	25	250	120
1/4X17	880-170 **7.38**	1880-170 **7.38**	880-170P **7.38**	25	300	120
1/4X18	880-180 **7.53**	1880-180 **7.53**	880-180P **7.53**	25	300	120
1/4X19	880-190 **7.89**	1880-190 **7.89**	880-190P **7.89**	25	300	120
1/4X20	880-200 **8.01**	1880-200 **8.01**	880-200P **8.01**	25	200	120
1/4X22	880-220 **8.38**	1880-220 **8.38**	880-220P **8.38**	25	300	120
1/4X24	880-240 **8.53**	1880-240 **8.53**	880-240P **8.53**	25	200	120
1/4X30	880-300 **10.47**	1880-300 **10.47**	880-300P **10.47**	25	0	120
1/4X36	880-360 **12.68**	1880-360 **12.68**	880-360P **12.68**	25	0	120
1/4X42	880-420 **14.92**	1880-420 **14.92**	880-420P **14.92**	25	0	120
1/4X48	880-480 **16.59**	1880-480 **16.59**	880-480P **16.59**	25	0	120
3/8' Diameter						
3/8XCLOSE	881-005 **1.28**	1881-005 **1.28**	881-005P **1.28**	25	800	120
3/8X1-1/2	881-015 **1.28**	1881-015 **1.28**	881-015P **1.28**	25	800	120

PVC, CPVC & PE Nipples

PVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Prod Code
3/8' Diameter						
3/8X2	881-020 1.64	1881-020 1.64	881-020P 1.64	25	600	120
3/8X2-1/2	881-025 1.64	1881-025 1.64	881-025P 1.64	25	600	120
3/8X3	881-030 1.64	1881-030 1.64	881-030P 1.64	25	400	120
3/8X3-1/2	881-035 2.34	1881-035 2.34	881-035P 2.34	25	400	120
3/8X4	881-040 2.54	1881-040 2.54	881-040P 2.54	25	300	120
3/8X4-1/2	881-045 2.54	1881-045 2.54	881-045P 2.54	25	250	120
3/8X5	881-050 2.74	1881-050 2.74	881-050P 2.74	25	250	120
3/8X5-1/2	881-055 2.74	1881-055 2.74	881-055P 2.74	25	250	120
3/8X6	881-060 2.83	1881-060 2.83	881-060P 2.83	25	250	120
3/8X7	881-070 2.91	1881-070 2.91	881-070P 2.91	25	200	120
3/8X8	881-080 3.13	1881-080 3.13	881-080P 3.13	25	200	120
3/8X9	881-090 3.36	1881-090 3.36	881-090P 3.36	25	200	120
3/8X10	881-100 3.47	1881-100 3.47	881-100P 3.47	25	200	120
3/8X11	881-110 3.67	1881-110 3.67	881-110P 3.67	25	200	120
3/8X12	881-120 3.89	1881-120 3.89	881-120P 3.89	25	200	120
3/8X13	881-130 5.60	1881-130 5.60	881-130P 5.60	25	0	120
3/8X14	881-140 5.80	1881-140 5.80	881-140P 5.80	25	200	120
3/8X15	881-150 6.08	1881-150 6.08	881-150P 6.08	25	200	120
3/8X16	881-160 6.24	1881-160 6.24	881-160P 6.24	25	200	120
3/8X17	881-170 6.46	1881-170 6.46	881-170P 6.46	25	0	120
3/8X18	881-180 6.69	1881-180 6.69	881-180P 6.69	25	200	120
3/8X19	881-190 6.83	1881-190 6.83	881-190P 6.83	25	0	120
3/8X20	881-200 7.02	1881-200 7.02	881-200P 7.02	25	250	120
3/8X22	881-220 7.60	1881-220 7.60	881-220P 7.60	25	0	120
3/8X24	881-240 7.78	1881-240 7.78	881-240P 7.78	25	200	120
3/8X30	881-300 10.49	1881-300 10.49	881-300P 10.49	25	0	120
3/8X36	881-360 13.45	1881-360 13.45	881-360P 13.45	25	0	120
3/8X42	881-420 15.13	1881-420 15.13	881-420P 15.13	25	0	120
3/8X48	881-480 17.13	1881-480 17.13	881-480P 17.13	25	0	120
1/2" Diameter						
1/2XCLOSE	882-005 1.11	1882-005 1.11	882-005P 1.11	25	675	120
1/2X1-1/2	882-015 1.11	1882-015 1.11	882-015P 1.11	25	600	120
1/2X2	882-020 1.18	1882-020 1.18	882-020P 1.18	25	150	120
1/2X2-1/2	882-025 1.18	1882-025 1.18	882-025P 1.18	50	600	120
1/2X3	882-030 1.34	1882-030 1.34	882-030P 1.34	25	300	120
1/2X3-1/2	882-035 1.34	1882-035 1.34	882-035P 1.34	25	300	120
1/2X4	882-040 1.56	1882-040 1.56	882-040P 1.56	25	300	120

PVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Prod Code
1/2" Diameter						
1/2X4-1/2	882-045 1.56	1882-045 1.56	882-045P 1.56	25	300	120
1/2X5	882-050 1.74	1882-050 1.74	882-050P 1.74	25	300	120
1/2X5-1/2	882-055 1.74	1882-055 1.74	882-055P 1.74	25	300	120
1/2X6	882-060 1.82	1882-060 1.82	882-060P 1.82	25	300	120
1/2X7	882-070 2.12	1882-070 2.12	882-070P 2.12	25	200	120
1/2X8	882-080 2.27	1882-080 2.27	882-080P 2.27	25	0	120
1/2X9	882-090 2.34	1882-090 2.34	882-090P 2.34	25	0	120
1/2X10	882-100 2.48	1882-100 2.48	882-100P 2.48	25	0	120
1/2X11	882-110 2.65	1882-110 2.65	882-110P 2.65	25	0	120
1/2X12	882-120 2.74	1882-120 2.74	882-120P 2.74	25	0	120
1/2X13	882-130 3.13	1882-130 3.13	882-130P 3.13	25	0	120
1/2X14	882-140 3.19	1882-140 3.19	882-140P 3.19	100	0	120
1/2X15	882-150 3.44	1882-150 3.44	882-150P 3.44	100	0	120
1/2X16	882-160 3.84	1882-160 3.84	882-160P 3.84	100	0	120
1/2X17	882-170 3.95	1882-170 3.95	882-170P 3.95	100	0	120
1/2X18	882-180 4.19	1882-180 4.19	882-180P 4.19	25	100	120
1/2X19	882-190 4.33	1882-190 4.33	882-190P 4.33	100	0	120
1/2X20	882-200 4.44	1882-200 4.44	882-200P 4.44	100	0	120
1/2X22	882-220 4.44	1882-220 4.44	882-220P 4.44	100	0	120
1/2X24	882-240 5.42	1882-240 5.42	882-240P 5.42	25	100	120
1/2X30	882-300 6.83	1882-300 6.83	882-300P 6.83	25	0	120
1/2X36	882-360 9.25	1882-360 9.25	882-360P 9.25	25	0	120
1/2X42	882-420 12.34	1882-420 12.34	882-420P 12.34	25	0	120
1/2X48	882-480 12.98	1882-480 12.98	882-480P 12.98	25	0	120
3/4" Diameter						
3/4XCLOSE	883-005 1.18	1883-005 1.18	883-005P 1.18	25	450	120
3/4X1-1/2	883-015 1.18	1883-015 1.18	883-015P 1.18	25	500	120
3/4X2	883-020 1.18	1883-020 1.18	883-020P 1.18	25	150	120
3/4X2-1/2	883-025 1.34	1883-025 1.34	883-025P 1.34	25	150	120
3/4X3	883-030 1.34	1883-030 1.34	883-030P 1.34	25	300	120
3/4X3-1/2	883-035 1.56	1883-035 1.56	883-035P 1.56	25	300	120
3/4X4	883-040 1.82	1883-040 1.82	883-040P 1.82	25	300	120
3/4X4-1/2	883-045 1.82	1883-045 1.82	883-045P 1.82	25	200	120
3/4X5	883-050 2.18	1883-050 2.18	883-050P 2.18	25	200	120
3/4X5-1/2	883-055 2.18	1883-055 2.18	883-055P 2.18	25	200	120
3/4X6	883-060 2.27	1883-060 2.27	883-060P 2.27	25	200	120
3/4X7	883-070 2.34	1883-070 2.34	883-070P 2.34	25	200	120

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC, CPVC & PE Nipples

PVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Prod Code
3/4" Diameter						
3/4X8	883-080 **2.65**	1883-080 **2.65**	883-080P **2.65**	25	0	120
3/4X9	883-090 **2.74**	1883-090 **2.74**	883-090P **2.74**	25	0	120
3/4X10	883-100 **3.04**	1883-100 **3.04**	883-100P **3.04**	25	0	120
3/4X11	883-110 **3.26**	1883-110 **3.26**	883-110P **3.26**	25	0	120
3/4X12	883-120 **3.44**	1883-120 **3.44**	883-120P **3.44**	25	0	120
3/4X13	883-130 **3.72**	1883-130 **3.72**	883-130P **3.72**	25	0	120
3/4X14	883-140 **3.72**	1883-140 **3.72**	883-140P **3.72**	100	0	120
3/4X15	883-150 **3.89**	1883-150 **3.89**	883-150P **3.89**	100	0	120
3/4X16	883-160 **4.33**	1883-160 **4.33**	883-160P **4.33**	100	0	120
3/4X17	883-170 **4.44**	1883-170 **4.44**	883-170P **4.44**	100	0	120
3/4X18	883-180 **4.54**	1883-180 **4.54**	883-180P **4.54**	25	100	120
3/4X19	883-190 **5.07**	1883-190 **5.07**	883-190P **5.07**	100	0	120
3/4X20	883-200 **5.39**	1883-200 **5.39**	883-200P **5.39**	100	0	120
3/4X22	883-220 **5.59**	1883-220 **5.59**	883-220P **5.59**	100	0	120
3/4X24	883-240 **6.52**	1883-240 **6.52**	883-240P **6.52**	25	100	120
3/4X30	883-300 **9.02**	1883-300 **9.02**	883-300P **9.02**	25	0	120
3/4X36	883-360 **11.17**	1883-360 **11.17**	883-360P **11.17**	25	0	120
3/4X42	883-420 **13.06**	1883-420 **13.06**	883-420P **13.06**	25	0	120
3/4X48	883-480 **14.75**	1883-480 **14.75**	883-480P **14.75**	25	0	120
1" Diameter						
1XCLOSE	884-005 **1.56**	1884-005 **1.56**	884-005P **1.56**	25	300	120
1X1-1/2	884-015 **1.74**	1884-015 **1.74**	884-015P **1.74**	25	300	120
1X2	884-020 **1.74**	1884-020 **1.74**	884-020P **1.74**	25	300	120
1X2-1/2	884-025 **1.82**	1884-025 **1.82**	884-025P **1.82**	25	300	120
1X3	884-030 **1.98**	1884-030 **1.98**	884-030P **1.98**	25	200	120
1X3-1/2	884-035 **2.12**	1884-035 **2.12**	884-035P **2.12**	25	200	120
1X4	884-040 **2.27**	1884-040 **2.27**	884-040P **2.27**	25	200	120
1X4-1/2	884-045 **2.48**	1884-045 **2.48**	884-045P **2.48**	25	200	120
1X5	884-050 **2.74**	1884-050 **2.74**	884-050P **2.74**	25	0	120
1X5-1/2	884-055 **3.04**	1884-055 **3.04**	884-055P **3.04**	25	0	120
1X6	884-060 **3.13**	1884-060 **3.13**	884-060P **3.13**	25	0	120
1X7	884-070 **3.44**	1884-070 **3.44**	884-070P **3.44**	25	0	120
1X8	884-080 **3.67**	1884-080 **3.67**	884-080 **3.67**	25	0	120
1X9	884-090 **4.16**	1884-090 **4.16**	884-090P **4.16**	25	0	120
1X10	884-100 **4.33**	1884-100 **4.33**	884-100P **4.33**	25	0	120
1X11	884-110 **4.67**	1884-110 **4.67**	884-110P **4.67**	25	0	120
1X12	884-120 **5.01**	1884-120 **5.01**	884-120P **5.01**	25	0	120

PVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Prod Code
1" Diameter						
1X13	884-130 **5.77**	1884-130 **5.77**	884-130P **5.77**	25	0	120
1X14	884-140 **5.77**	1884-140 **5.77**	884-140P **5.77**	50	0	120
1X15	884-150 **6.17**	1884-150 **6.17**	884-150P **6.17**	50	0	120
1X16	884-160 **6.21**	1884-160 **6.21**	884-160P **6.21**	50	0	120
1X17	884-170 **7.02**	1884-170 **7.02**	884-170P **7.02**	50	0	120
1X18	884-180 **7.38**	1884-180 **7.38**	884-180P **7.38**	50	0	120
1X19	884-190 **7.55**	1884-190 **7.55**	884-190P **7.55**	50	0	120
1X20	884-200 **7.91**	1884-200 **7.91**	884-200P **7.91**	50	0	120
1X22	884-220 **8.06**	1884-220 **8.06**	884-220P **8.06**	50	0	120
1X24	884-240 **8.32**	1884-240 **8.32**	884-240P **8.32**	50	0	120
1X30	884-300 **11.63**	1884-300 **11.63**	884-300P **11.63**	15	0	120
1X36	884-360 **15.47**	1884-360 **15.47**	884-360P **15.47**	15	0	120
1X42	884-420 **18.89**	1884-420 **18.89**	884-420P **18.89**	15	0	120
1X48	884-480 **19.73**	1884-480 **19.73**	884-480P **19.73**	15	0	120
1-1/4" Diameter						
1-1/4XCLOSE	885-005 **2.27**	1885-005 **2.27**	885-005P **2.27**	25	200	120
1-1/4X2	885-020 **2.34**	1885-020 **2.34**	885-020P **2.34**	25	200	120
1-1/4X2-1/2	885-025 **2.56**	1885-025 **2.56**	885-025P **2.56**	25	200	120
1-1/4X3	885-030 **2.65**	1885-030 **2.65**	885-030P **2.65**	25	0	120
1-1/4X3-1/2	885-035 **3.04**	1885-035 **3.04**	885-035P **3.04**	25	0	120
1-1/4X4	885-040 **3.04**	1885-040 **3.04**	885-040P **3.04**	25	0	120
1-1/4X4-1/2	885-045 **3.47**	1885-045 **3.47**	885-045P **3.47**	25	0	120
1-1/4X5	885-050 **3.47**	1885-050 **3.47**	885-050P **3.47**	25	0	120
1-1/4X5-1/2	885-055 **3.89**	1885-055 **3.89**	885-055P **3.89**	25	0	120
1-1/4X6	885-060 **3.89**	1885-060 **3.89**	885-060P **3.89**	25	0	120
1-1/4X7	885-070 **4.44**	1885-070 **4.44**	885-070P **4.44**	25	0	120
1-1/4X8	885-080 **4.67**	1885-080 **4.67**	885-080P **4.67**	25	0	120
1-1/4X9	885-090 **5.07**	1885-090 **5.07**	885-090P **5.07**	25	0	120
1-1/4X10	885-100 **5.45**	1885-100 **5.45**	885-100P **5.45**	25	0	120
1-1/4X11	885-110 **5.83**	1885-110 **5.83**	885-110P **5.83**	25	0	120
1-1/4X12	885-120 **6.17**	1885-120 **6.17**	885-120P **6.17**	25	0	120
1-1/4X13	885-130 **7.15**	1885-130 **7.15**	885-130P **7.15**	25	0	120
1-1/4X14	885-140 **7.41**	1885-140 **7.41**	885-140P **7.41**	25	0	120
1-1/4X15	885-150 **7.82**	1885-150 **7.82**	885-150P **7.82**	25	0	120
1-1/4X16	885-160 **8.15**	1885-160 **8.15**	885-160P **8.15**	25	0	120
1-1/4X17	885-170 **8.93**	1885-170 **8.93**	885-170P **8.93**	25	0	120
1-1/4X18	885-180 **9.74**	1885-180 **9.74**	885-180P **9.74**	25	0	120

PVC, CPVC & PE Nipples

PVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Prod Code
1-1/4" Diameter						
1-1/4X19	885-190 **10.83**	1885-190 **10.83**	885-190P **10.83**	25	0	120
1-1/4X20	885-200 **11.05**	1885-200 **11.05**	885-200P **11.05**	25	0	120
1-1/4X22	885-220 **11.26**	1885-220 **11.26**	885-220P **11.26**	25	0	120
1-1/4X24	885-240 **11.43**	1885-240 **11.43**	885-240P **11.43**	25	0	120
1-1/4X30	885-300 **14.92**	1885-300 **14.92**	885-300P **14.92**	10	0	120
1-1/4X36	885-360 **16.31**	1885-360 **16.31**	885-360P **16.31**	10	0	120
1-1/4X42	885-420 **20.71**	1885-420 **20.71**	885-420P **20.71**	10	0	120
1-1/4X48	885-480 **21.55**	1885-480 **21.55**	885-480P **21.55**	10	0	120
1-1/2" Diameter						
1-1/2XCLOSE	886-005 **2.48**	1886-005 **2.48**	886-005P **2.48**	25	0	120
1-1/2X2	886-020 **2.74**	1886-020 **2.74**	886-020P **2.74**	25	0	120
1-1/2X2-1/2	886-025 **2.91**	1886-025 **2.91**	886-025P **2.91**	25	0	120
1-1/2X3	886-030 **3.13**	1886-030 **3.13**	886-030P **3.13**	25	0	120
1-1/2X3-1/2	886-035 **3.47**	1886-035 **3.47**	886-035P **3.47**	25	0	120
1-1/2X4	886-040 **4.16**	1886-040 **4.16**	886-040P **4.16**	25	0	120
1-1/2X4-1/2	886-045 **4.16**	1886-045 **4.16**	886-045P **4.16**	25	0	120
1-1/2X5	886-050 **4.67**	1886-050 **4.67**	886-050P **4.67**	25	0	120
1-1/2X5-1/2	886-055 **4.67**	1886-055 **4.67**	886-055P **4.67**	25	0	120
1-1/2X6	886-060 **5.01**	1886-060 **5.01**	886-060P **5.01**	25	0	120
1-1/2X7	886-070 **5.59**	1886-070 **5.59**	886-070P **5.59**	25	0	120
1-1/2X8	886-080 **6.17**	1886-080 **6.17**	886-080P **6.17**	25	0	120
1-1/2X9	886-090 **6.54**	1886-090 **6.54**	886-090P **6.54**	25	0	120
1-1/2X10	886-100 **6.89**	1886-100 **6.89**	886-100P **6.89**	25	0	120
1-1/2X11	886-110 **7.41**	1886-110 **7.41**	886-110P **7.41**	25	0	120
1-1/2X12	886-120 **8.32**	1886-120 **8.32**	886-120P **8.32**	25	0	120
1-1/2X13	886-130 **8.54**	1886-130 **8.54**	886-130P **8.54**	25	0	120
1-1/2X14	886-140 **9.25**	1886-140 **9.25**	886-140P **9.25**	25	0	120
1-1/2X15	886-150 **9.65**	1886-150 **9.65**	886-150P **9.65**	25	0	120
1-1/2X16	886-160 **10.41**	1886-160 **10.41**	886-160P **10.41**	25	0	120
1-1/2X17	886-170 **10.64**	1886-170 **10.64**	886-170P **10.64**	25	0	120
1-1/2X18	886-180 **11.33**	1886-180 **11.33**	886-180P **11.33**	25	0	120
1-1/2X19	886-190 **12.58**	1886-190 **12.58**	886-190P **12.58**	25	0	120
1-1/2X20	886-200 **12.98**	1886-200 **12.98**	886-200P **12.98**	25	0	120
1-1/2X22	886-220 **13.13**	1886-220 **13.13**	886-220P **13.13**	25	0	120
1-1/2X24	886-240 **13.51**	1886-240 **13.51**	886-240P **13.51**	25	0	120
1-1/2X30	886-300 **18.43**	1886-300 **18.43**	886-300P **18.43**	5	0	120
1-1/2X36	886-360 **19.34**	1886-360 **19.34**	886-360P **19.34**	5	0	120

PVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Prod Code
1-1/2" Diameter						
1-1/2X42	886-420 **25.96**	1886-420 **25.96**	886-420P **25.96**	5	0	120
1-1/2X48	886-480 **27.44**	1886-480 **27.44**	886-480P **27.44**	5	0	120
2" Diameter						
2XCLOSE	887-005 **3.26**	1887-005 **3.26**	887-005P **3.26**	25	0	120
2X2	887-020 **3.79**	1887-020 **3.79**	887-020P **3.79**	25	0	120
2X2-1/2	887-025 **3.84**	1887-025 **3.84**	887-025P **3.84**	25	0	120
2X3	887-030 **3.89**	1887-030 **3.89**	887-030P **3.89**	25	0	120
2X3-1/2	887-035 **4.54**	1887-035 **4.54**	887-035P **4.54**	25	0	120
2X4	887-040 **5.39**	1887-040 **5.39**	887-040P **5.39**	25	0	120
2X4-1/2	887-045 **5.39**	1887-045 **5.39**	887-045P **5.39**	25	0	120
2X5	887-050 **5.83**	1887-050 **5.83**	887-050P **5.83**	25	0	120
2X5-1/2	887-055 **5.83**	1887-055 **5.83**	887-055P **5.83**	25	0	120
2X6	887-060 **7.15**	1887-060 **7.15**	887-060P **7.15**	25	0	120
2X7	887-070 **7.41**	1887-070 **7.41**	887-070P **7.41**	25	0	120
2X8	887-080 **7.91**	1887-080 **7.91**	887-080P **7.91**	25	0	120
2X9	887-090 **8.54**	1887-090 **8.54**	887-090P **8.54**	25	0	120
2X10	887-100 **9.25**	1887-100 **9.25**	887-100P **9.25**	25	0	120
2X11	887-110 **9.68**	1887-110 **9.68**	887-110P **9.68**	25	0	120
2X12	887-120 **10.43**	1887-120 **10.43**	887-120P **10.43**	25	0	120
2X13	887-130 **10.83**	1887-130 **10.83**	887-130P **10.83**	25	0	120
2X14	887-140 **11.04**	1887-140 **11.04**	887-140P **11.04**	20	0	120
2X15	887-150 **11.95**	1887-150 **11.95**	887-150P **11.95**	20	0	120
2X16	887-160 **12.75**	1887-160 **12.75**	887-160P **12.75**	20	0	120
2X17	887-170 **13.92**	1887-170 **13.92**	887-170P **13.92**	20	0	120
2X18	887-180 **15.53**	1887-180 **15.53**	887-180P **15.53**	20	0	120
2X19	887-190 **16.63**	1887-190 **16.63**	887-190P **16.63**	25	0	120
2X20	887-200 **16.86**	1887-200 **16.86**	887-200P **16.86**	20	0	120
2X22	887-220 **17.29**	1887-220 **17.29**	887-220P **17.29**	20	0	120
2X24	887-240 **17.38**	1887-240 **17.38**	887-240P **17.38**	20	0	120
2X30	887-300 **22.44**	1887-300 **22.44**	887-300P **22.44**	5	0	120
2X36	887-360 **29.81**	1887-360 **29.81**	887-360P **29.81**	5	0	120
2X42	887-420 **36.26**	1887-420 **36.26**	887-420P **36.26**	5	0	120
2X48	887-480 **38.37**	1887-480 **38.37**	887-480P **38.37**	5	0	120
2-1/2" Diameter						
2-1/2XCLOSE	888-005 **11.17**	1888-005 **11.17**	888-005P **11.17**	25	0	120
2-1/2X2-1/2	888-025 **12.73**	1888-025 **12.73**	888-025P **12.73**	25	0	121
2-1/2X3	888-030 **12.73**	1888-030 **12.73**	888-030P **12.73**	30	0	120

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC, CPVC & PE Nipples

PVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Prod Code
2-1/2" Diameter						
2-1/2X3-1/2	888-035 14.55	1888-035 14.55	888-035P 14.55	25	0	120
2-1/2X4	888-040 16.46	1888-040 16.46	888-040P 16.46	25	0	120
2-1/2X4-1/2	888-045 16.46	1888-045 16.46	888-045P 16.46	25	0	120
2-1/2X5	888-050 18.54	1888-050 18.54	888-050P 18.54	25	0	120
2-1/2X5-1/2	888-055 18.54	1888-055 18.54	888-055P 18.54	25	0	120
2-1/2X6	888-060 20.31	1888-060 20.31	888-060P 20.31	25	0	120
2-1/2X7	888-070 21.40	1888-070 21.40	888-070P 21.40	16	0	120
2-1/2X8	888-080 22.44	1888-080 22.44	888-080P 22.44	16	0	120
2-1/2X9	888-090 25.96	1888-090 25.96	888-090P 25.96	16	0	120
2-1/2X10	888-100 27.51	1888-100 27.51	888-100P 27.51	16	0	120
2-1/2X11	888-110 29.81	1888-110 29.81	888-110P 29.81	16	0	120
2-1/2X12	888-120 30.03	1888-120 30.03	888-120P 30.03	16	0	120
2-1/2X13	888-130 32.40	1888-130 32.40	888-130P 32.40	25	0	120
2-1/2X14	888-140 33.72	1888-140 33.72	888-140P 33.72	25	0	120
2-1/2X15	888-150 36.26	1888-150 38.82	888-150P 36.26	25	0	120
2-1/2X16	888-160 38.82	1888-160 38.82	888-160P 38.82	20	0	120
2-1/2X17	888-170 39.54	1888-170 39.54	888-170P 39.54	20	0	120
2-1/2X18	888-180 40.21	1888-180 40.21	888-180P 40.21	20	0	120
2-1/2X19	888-190 42.79	1888-190 42.79	888-190P 42.79	25	0	120
2-1/2X20	888-200 44.53	1888-200 44.53	888-200P 44.53	12	0	120
2-1/2X22	888-220 49.48	1888-220 49.48	888-220P 49.48	25	0	120
2-1/2X24	888-240 50.47	1888-240 50.47	888-240P 50.47	10	0	120
2-1/2X30	888-300 61.48	1888-300 61.48	888-300P 61.48	3	0	120
2-1/2X36	888-360 75.14	1888-360 75.14	888-360P 75.14	3	0	120
2-1/2X42	888-420 86.80	1888-420 86.80	888-420P 86.80	3	0	120
2-1/2X48	888-480 93.87	1888-480 93.87	888-480P 93.87	3	0	120
3" Diameter						
3XCLOSE	889-005 13.34	1889-005 13.34	889-005P 13.34	25	0	120
3X3	889-030 14.55	1889-030 14.55	889-030P 14.55	20	0	120
3X3-1/2	889-035 17.00	1889-035 17.00	889-035P 17.00	30	0	120
3X4	889-040 19.44	1889-040 19.44	889-040P 19.44	30	0	120
3X4-1/2	889-045 19.44	1889-045 19.44	889-045P 19.44	20	0	120
3X5	889-050 21.79	1889-050 21.79	889-050P 21.79	20	0	120
3X5-1/2	889-055 21.79	1889-055 21.79	889-055P 21.79	20	0	120
3X6	889-060 27.23	1889-060 27.23	889-060P 27.23	20	0	120
3X7	889-070 28.74	1889-070 28.74	889-070P 28.74	10	0	120
3X8	889-080 29.58	1889-080 29.58	889-080P 29.58	10	0	120

PVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Prod Code
3" Diameter						
3X9	889-090 31.11	1889-090 31.11	889-090P 31.11	10	0	120
3X10	889-100 33.86	1889-100 33.86	889-100P 34.18	10	0	120
3X11	889-110 36.26	1889-110 36.26	889-110P 36.26	10	0	120
3X12	889-120 36.88	1889-120 36.88	889-120P 36.88	10	0	120
3X13	889-130 38.23	1889-130 38.23	889-130P 38.23	20	0	120
3X14	889-140 41.47	1889-140 41.47	889-140P 41.47	20	0	120
3X15	889-150 44.03	1889-150 44.03	889-150P 44.03	20	0	120
3X16	889-160 46.60	1889-160 46.60	889-160P 46.60	20	0	120
3X17	889-170 47.93	1889-170 47.93	889-170P 47.93	10	0	120
3X18	889-180 50.47	1889-180 50.47	889-180P 50.47	10	0	120
3X19	889-190 58.26	1889-190 58.26	889-190P 58.26	10	0	120
3X20	889-200 61.48	1889-200 61.48	889-200P 61.48	10	0	120
3X22	889-220 62.85	1889-220 62.85	889-220P 62.85	10	0	120
3X24	889-240 69.26	1889-240 69.26	889-240P 69.26	10	0	120
3X30	889-300 88.21	1889-300 88.21	889-300P 88.21	3	0	120
3X36	889-360 91.24	1889-360 91.24	889-360P 91.24	3	0	120
3X42	889-420 106.82	1889-420 106.82	889-420P 106.82	3	0	120
3X48	889-480 119.14	1889-480 119.14	889-480P 119.14	3	0	120
4" Diameter						
4XCLOSE	890-005 21.79	1890-005 21.79	890-005P 21.79	25	0	120
4X2-1/2	890-025 22.85	1890-025 22.85	890-025P 22.85	18	0	120
4X3	890-030 22.85	1890-030 22.85	890-030P 22.85	25	0	120
4X3-1/2	890-035 27.33	1890-035 27.33	890-035P 27.33	25	0	120
4X4	890-040 30.25	1890-040 30.25	890-040P 30.25	18	0	120
4X4-1/2	890-045 30.25	1890-045 30.25	890-045P 30.25	12	0	120
4X5	890-050 30.25	1890-050 30.25	890-050P 30.25	12	0	120
4X5-1/2	890-055 30.25	1890-055 30.25	890-055P 30.25	12	0	120
4X6	890-060 32.40	1890-060 32.40	890-060P 32.40	12	0	120
4X7	890-070 35.56	1890-070 35.56	890-070P 35.56	16	0	120
4X8	890-080 37.61	1890-080 37.61	890-080P 37.61	16	0	120
4X9	890-090 37.85	1890-090 37.85	890-090P 37.85	16	0	120
4X10	890-100 40.21	1890-100 40.21	890-100P 40.21	16	0	120
4X11	890-110 45.38	1890-110 45.38	890-110P 45.38	16	0	120
4X12	890-120 52.39	1890-120 52.39	890-120P 52.39	16	0	120
4X13	890-130 54.36	1890-130 54.36	890-130P 54.36	16	0	120
4X14	890-140 55.69	1890-140 55.69	890-140P 55.69	15	0	120
4X15	890-150 58.26	1890-150 58.26	890-150P 58.26	12	0	120

PVC, CPVC & PE Nipples

PVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Prod Code
4" Diameter						
4X16	890-160 **60.89**	1890-160 **60.89**	890-160P **60.89**	12	0	120
4X17	890-170 **64.77**	1890-170 **64.77**	890-170P **64.77**	12	0	120
4X18	890-180 **73.05**	1890-180 **73.05**	890-180P **73.05**	4	0	120
4X19	890-190 **73.78**	1890-190 **73.78**	890-190P **73.78**	12	0	120
4X20	890-200 **78.99**	1890-200 **78.99**	890-200P **78.99**	4	0	120
4X22	890-220 **81.56**	1890-220 **81.56**	890-220P **81.56**	8	0	120
4X24	890-240 **86.95**	1890-240 **86.95**	890-240P **86.95**	4	0	120
4X30	890-300 **103.59**	1890-300 **103.59**	890-300P **103.59**	3	0	120
4X36	890-360 **123.04**	1890-360 **123.04**	890-360P **123.04**	3	0	120
4X42	890-420 **150.20**	1890-420 **150.20**	890-420P **150.20**	3	0	120
4X48	890-480 **184.38**	1890-480 **184.38**	890-480P **184.38**	3	0	120
6" Diameter						
6XCLOSE	892-005 **23.91**	1892-005 **23.91**	892-005P **23.91**	8	0	120
6X4	892-040 **30.57**	1892-040 **30.57**	892-040P **30.57**	4	0	120
6X4-1/2	892-045 **33.88**	1892-045 **33.88**	892-045P **33.88**	4	0	120
6X5	892-050 **37.19**	1892-050 **37.19**	892-050P **37.19**	1	2	120
6X5-1/2	892-055 **40.54**	1892-055 **40.54**	892-055P **40.54**	1	2	120
6X6	892-060 **44.23**	1892-060 **44.23**	892-060P **44.23**	1	2	120
6X7	892-070 **50.82**	1892-070 **50.82**	892-070P **50.82**	1	2	120
6X8	892-080 **57.55**	1892-080 **57.55**	892-080P **57.55**	1	0	120
6X9	892-090 **64.19**	1892-090 **64.19**	892-090P **64.19**	1	0	120
6X10	892-100 **71.26**	1892-100 **71.26**	892-100P **71.26**	1	0	120
6X11	892-110 **77.93**	1892-110 **77.93**	892-110P **77.93**	1	0	120
6X12	892-120 **84.58**	1892-120 **84.58**	892-120P **84.58**	1	0	120
6X13	892-130 **91.22**	1892-130 **91.22**	892-130P **91.22**	1	0	120
6X14	892-140 **97.87**	1892-140 **97.87**	892-140P **97.87**	1	0	120
6X15	892-150 **104.52**	1892-150 **104.52**	892-150P **104.52**	1	0	120
6X16	892-160 **111.18**	1892-160 **111.18**	892-160P **111.18**	1	2	120
6X17	892-170 **118.58**	1892-170 **118.58**	892-170P **118.58**	1	2	120
6X18	892-180 **124.45**	1892-180 **124.45**	892-180P **124.45**	1	6	120
6X19	892-190 **131.99**	1892-190 **131.99**	892-190P **131.99**	1	0	120
6X20	892-200 **137.76**	1892-200 **137.76**	892-200P **137.76**	2	0	120
6X22	892-220 **151.71**	1892-220 **151.71**	892-220P **151.71**	1	0	120
6X24	892-240 **164.98**	1892-240 **164.98**	892-240P **164.98**	1	3	120
6X30	892-300 **204.89**	1892-300 **204.89**	892-300P **204.89**	1	0	120
6X36	892-360 **245.80**	1892-360 **245.80**	892-360P **245.80**	1	0	120
6X42	892-420 **285.67**	1892-420 **285.67**	892-420P **285.67**	1	0	120

PVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Prod Code
6" Diameter						
6X48	892-480 **325.75**	1892-480 **325.75**	892-480P **325.75**	1	0	120
8" Diameter						
8XCLOSE	893-005 **66.13**	1893-005 **66.13**	893-005P **66.13**	2	0	120
8X4-1/2	893-045 **75.69**	1893-045 **75.69**	893-045P **75.69**	1	0	120
8X5	893-050 **78.91**	1893-050 **78.91**	893-050P **78.91**	1	0	120
8X5-1/2	893-055 **82.09**	1893-055 **82.09**	893-055P **82.09**	1	0	120
8X6	893-060 **85.29**	1893-060 **85.29**	893-060P **85.29**	4	0	120
8X7	893-070 **91.71**	1893-070 **91.71**	893-070P **91.71**	4	0	120
8X8	893-080 **98.12**	1893-080 **98.12**	893-080P **98.12**	4	0	120
8X9	893-090 **104.49**	1893-090 **104.49**	893-090P **104.49**	2	0	120
8X10	893-100 **110.89**	1893-100 **110.89**	893-100P **110.89**	1	0	120
8X11	893-110 **117.32**	1893-110 **117.32**	893-110P **117.32**	1	0	120
8X12	893-120 **123.71**	1893-120 **123.71**	893-120P **123.71**	1	0	120
8X13	893-130 **130.09**	1893-130 **130.09**	893-130P **130.09**	1	0	120
8X14	893-140 **136.49**	1893-140 **136.49**	893-140P **136.49**	1	0	120
8X15	893-150 **142.92**	1893-150 **142.92**	893-150P **142.92**	1	0	120
8X16	893-160 **149.29**	1893-160 **149.29**	893-160P **149.29**	1	0	120
8X17	893-170 **155.67**	1893-170 **155.67**	893-170P **155.67**	4	0	120
8X18	893-180 **162.06**	1893-180 **162.06**	893-180P **162.03**	4	0	120
8X19	893-190 **168.17**	1893-190 **168.17**	893-190P **168.17**	2	0	120
8X20	893-200 **174.88**	1893-200 **174.88**	893-200P **174.88**	2	0	120
8X22	893-220 **187.67**	1893-220 **187.67**	893-220P **187.67**	1	0	120
8X24	893-240 **201.06**	1893-240 **201.06**	893-240P **201.06**	1	2	120
8X30	893-300 **240.17**	1893-300 **240.17**	893-300P **240.17**	4	0	120
8X36	893-360 **277.25**	1893-360 **277.25**	893-360P **277.25**	4	0	120
8X42	893-420 **315.61**	1893-420 **315.61**	893-420P **315.61**	1	0	120
8X48	893-480 **354.03**	1893-480 **354.03**	893-480P **354.03**	1	0	120
10" Diameter						
10XCLOSE	894-005 **75.89**	1894-005 **75.89**	894-005P **75.89**	1	0	120
10X2	894-020 **76.74**	1894-020 **76.74**	894-020P **76.74**	1	6	120
10X4-1/2	894-045 **90.39**	1894-045 **90.39**	894-045P **90.39**	1	0	120
10X5	894-050 **94.81**	1894-050 **94.81**	894-050P **94.81**	1	0	120
10X5-1/2	894-055 **100.04**	1894-055 **100.04**	894-055P **100.04**	1	0	120
10X6	894-060 **104.87**	1894-060 **104.87**	894-060P **104.87**	2	0	120
10X7	894-070 **114.53**	1894-070 **114.53**	894-070P **114.53**	1	0	120
10X8	894-080 **124.18**	1894-080 **124.18**	894-080P **124.18**	1	0	120
10X9	894-090 **133.66**	1894-090 **133.66**	894-090P **133.66**	1	0	120

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Nipples

PVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Prod Code
10" Diameter						
10X10	894-100 **143.52**	1894-100 **143.52**	894-100P **143.52**	1	0	120
10X11	894-110 **153.17**	1894-110 **153.17**	894-110P **153.17**	1	0	120
10X12	894-120 **162.83**	1894-120 **162.83**	894-120P **162.83**	1	0	120
10X13	894-130 **172.47**	1894-130 **172.47**	894-130P **172.47**	1	0	120
10X14	894-140 **182.15**	1894-140 **182.15**	894-140P **182.15**	1	0	120
10X15	894-150 **191.80**	1894-150 **191.80**	894-150P **191.80**	1	0	120
10X16	894-160 **201.45**	1894-160 **201.45**	894-160P **201.45**	1	0	120
10X17	894-170 **211.12**	1894-170 **211.12**	894-170P **211.12**	1	0	120
10X18	894-180 **220.78**	1894-180 **220.78**	894-180P **220.78**	1	2	120
10X19	894-190 **230.42**	1894-190 **230.42**	894-190P **230.42**	1	0	120
10X20	894-200 **240.09**	1894-200 **240.09**	894-200P **240.09**	1	0	120
10X22	894-220 **260.21**	1894-220 **260.21**	894-220P **260.21**	1	0	120
10X24	894-240 **278.74**	1894-240 **278.74**	894-240P **278.74**	1	2	120
10X30	894-300 **336.68**	1894-300 **336.68**	894-300P **336.68**	1	0	120
10X36	894-360 **394.63**	1894-360 **394.63**	894-360P **394.63**	1	0	120
10X42	894-420 **452.59**	1894-420 **452.59**	894-420P **452.59**	1	0	120
10X48	894-480 **510.56**	1894-480 **510.56**	894-480P **510.56**	1	0	120
12" Diameter						
12XCLOSE	895-005 **92.13**	1895-005 **92.13**	895-005P **92.13**	1	0	120
12X5	895-050 **113.31**	1895-050 **113.31**	895-050P **113.31**	1	0	120
12X5-1/2	895-055 **119.96**	1895-055 **119.60**	895-055P **119.96**	1	0	120
12X6	895-060 **126.59**	1895-060 **126.61**	895-060P **126.59**	1	0	120
12X7	895-070 **139.85**	1895-070 **139.85**	895-070P **139.85**	1	0	120

PVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Prod Code
12" Diameter						
12X8	895-080 **152.67**	1895-080 **152.67**	895-080P **152.67**	1	0	120
12X9	895-090 **166.43**	1895-090 **166.43**	895-090P **166.43**	1	0	120
12X10	895-100 **179.69**	1895-100 **179.69**	895-100P **179.69**	1	0	120
12X11	895-110 **192.99**	1895-110 **192.99**	895-110P **192.99**	1	0	120
12X12	895-120 **206.25**	1895-120 **206.25**	895-120P **206.25**	1	0	120
12X13	895-130 **219.54**	1895-130 **219.54**	895-130P **219.54**	1	0	120
12X14	895-140 **232.82**	1895-140 **232.82**	895-140P **232.82**	1	0	120
12X15	895-150 **246.12**	1895-150 **246.12**	895-150P **246.12**	1	0	120
12X16	895-160 **259.38**	1895-160 **259.38**	895-160P **259.38**	1	0	120
12X17	895-170 **272.65**	1895-170 **272.65**	895-170P **272.65**	1	0	120
12X18	895-180 **285.93**	1895-180 **285.93**	895-180P **285.93**	1	0	120
12X19	895-190 **299.20**	1895-190 **299.20**	895-190P **299.20**	1	0	120
12X20	895-200 **312.47**	1895-200 **312.47**	895-200P **312.47**	1	0	120
12X22	895-220 **339.05**	1895-220 **339.05**	895-220P **339.05**	1	0	120
12X24	895-240 **365.61**	1895-240 **365.61**	895-240P **365.61**	1	0	120
12X30	895-300 **445.27**	1895-300 **445.27**	895-300P **445.27**	1	0	120
12X36	895-360 **524.96**	1895-360 **524.96**	895-360P **524.96**	1	0	120
12X42	895-420 **631.17**	1895-420 **631.17**	895-420P **631.17**	1	0	120
12X48	895-480 **684.27**	1895-480 **684.27**	895-480P **684.27**	1	0	120

Machined PVC Nipple Options - Threaded Both Ends (TBE)

The following nipples are normally injection molded, but are optionally available as machined nipples listed below. All other nipples are normally machined.

PVC Schedule 80 Machined Nipples

1/4" Diameter

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
880-005M	**1/4XCLOSE**	25	1200	120	4.06
880-015M	**1/4X1-1/2**	25	1200	120	4.32
880-020M	**1/4X2**	25	500	120	2.96
880-030M	**1/4X3**	25	500	120	2.01
880-040M	**1/4X4**	25	250	120	5.13
880-050M	**1/4X5**	25	250	120	5.39

PVC Schedule 80 Machined Nipples

3/8" Diameter

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
881-015M	**3/8X1-1/2**	25	800	120	4.63
881-020M	**3/8X2**	25	600	120	4.63
881-030M	**3/8X3**	25	400	120	4.63
881-040M	**3/8X4**	25	300	120	5.86

PVC Schedule 80 Machined Nipples

1/2" Diameter

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
882-005M	**1/2XCLOSE**	25	450	120	3.42
882-015M	**1/2X1-1/2**	25	600	120	3.43
882-020M	**1/2X2**	25	300	120	3.43
882-025M	**1/2X2-1/2**	25	300	120	3.43

PVC, CPVC & PE Nipples

Machined PVC Nipple Options - Threaded Both Ends (TBE)

PVC Schedule 80 Machined Nipples (continued)

1/2" Diameter

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
882-030M	1/2X3	25	300	120	3.55
882-040M	1/2X4	25	300	120	3.73
882-045M	1/2X4-1/2	25	300	120	3.99
882-050M	1/2X5	25	300	120	4.16
882-060M	1/2X6	25	300	120	4.34
882-070M	1/2X7	25	200	120	4.59
882-080M	1/2X8	25	0	120	4.94
882-100M	1/2X10	25	0	120	5.47
882-120M	1/2X12	25	0	120	6.00

PVC Schedule 80 Machined Nipples

3/4" Diameter

883-005M	3/4XCLOSE	25	300	120	3.74
883-015M	3/4X1-1/2	25	300	120	3.74
883-020M	3/4X2	25	300	120	4.01
883-025M	3/4X2-1/2	25	300	120	4.06
883-030M	3/4X3	25	300	120	4.09
883-035M	3/4X3-1/2	25	300	120	4.15
883-040M	3/4X4	25	300	120	4.44
883-045M	3/4X4-1/2	25	200	120	4.52
883-050M	3/4X5	25	200	120	4.84
883-060M	3/4X6	25	200	120	5.19
883-080M	3/4X8	25	0	120	5.52
883-100M	3/4X10	25	0	120	6.18
883-120M	3/4X12	25	0	120	6.91

PVC Schedule 80 Machined Nipples

1" Diameter

884-005M	1XCLOSE	25	300	120	4.30
884-020M	1X2	25	300	120	4.60
884-025M	1X2-1/2	25	200	120	4.56
884-030M	1X3	25	200	120	4.64
884-040M	1X4	25	200	120	5.18
884-050M	1X5	25	0	120	5.75
884-060M	1X6	25	0	120	6.29
884-080M	1X8	25	0	120	7.40

PVC Schedule 80 Machined Nipples (continued)

1" Diameter

884-100M	1X10	25	0	120	8.63
884-120M	1X12	25	0	120	9.80

PVC Schedule 80 Machined Nipples

1-1/4" Diameter

885-005M	1-1/4XCLOSE	25	200	120	4.38
885-020M	1-1/4X2	25	200	120	4.69
885-030M	1-1/4X3	25	0	120	5.03
885-040M	1-1/4X4	25	0	120	5.75
885-060M	1-1/4X6	25	0	120	3.89
885-120M	1-1/4X12	25	0	120	10.93

PVC Schedule 80 Machined Nipples

1-1/2" Diameter

886-005M	1-1/2XCLOSE	25	0	120	4.97
886-020M	1-1/2X2	25	0	120	5.32
886-030M	1-1/2X3	25	0	120	3.13
886-040M	1-1/2X4	25	0	120	6.63
886-060M	1-1/2X6	25	0	120	8.27
886-070M	1-1/2X7	25	0	120	9.17
886-080M	1-1/2X8	25	0	120	10.02
886-100M	1-1/2X10	25	0	120	11.76
886-120M	1-1/2X12	25	0	120	13.48

PVC Schedule 80 Machined Nipples

2" Diameter

887-005M	2XCLOSE	25	0	120	5.93
887-030M	2X3	25	0	120	7.21
887-040M	2X4	25	0	120	8.34
887-060M	2X6	25	0	120	10.79

PVC Reducing Nipples

PVC Reducing Nipples

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
882-101	3/4X1/2	50	300	120	1.55
884-130R	1X1/2	25	300	120	2.09

PVC Reducing Nipples (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
884-131	1X3/4	50	200	120	2.17

CPVC Nipples

CPVC Schedule 80 Nipple

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Prod Code
1/4" Diameter						
1/4XCLOSE	880-005C 2.54	1880-005C 2.54	880-005CP 2.54	25	1200	121
1/4X1-1/2	880-015C 2.74	1880-015C 2.74	880-015CP 2.74	25	1200	121
1/4X2	880-020C 2.96	1880-020C 2.96	880-020CP 2.96	25	500	121
1/4X2-1/2	880-025C 3.44	1880-025C 3.44	880-025CP 3.44	25	500	121
1/4X3	880-030C 3.44	1880-030C 3.44	880-030CP 3.44	25	500	121
1/4X3-1/2	880-035C 3.89	1880-035C 3.89	880-035CP 3.89	25	500	121

CPVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Prod Code
1/4" Diameter						
1/4X4	880-040C 3.89	1880-040C 3.89	880-040CP 3.89	25	250	121
1/4X4-1/2	880-045C 4.36	1880-045C 4.36	880-045CP 4.36	25	250	121
1/4X5	880-050C 4.36	1880-050C 4.36	880-050CP 4.36	25	250	121
1/4X5-1/2	880-055C 4.74	1880-055C 4.74	880-055CP 4.74	25	250	121
1/4X6	880-060C 4.74	1880-060C 4.74	880-060CP 4.74	25	250	121
1/4X7	880-070C 7.17	1880-070C 7.17	880-070CP 7.17	25	250	121

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Spears® Manufacturing Company

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC, CPVC & PE Nipples

CPVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Prod Code
1/4" Diameter						
1/4X8	880-080C 7.71	1880-080C 7.71	880-080CP 7.71	25	250	121
1/4X9	880-090C 8.19	1880-090C 8.19	880-090CP 8.19	25	250	121
1/4X10	880-100C 8.62	1880-100C 8.62	880-100CP 8.62	25	250	121
1/4X11	880-110C 9.14	1880-110C 9.14	880-110CP 9.14	25	250	121
1/4X12	880-120C 9.53	1880-120C 9.53	880-120CP 9.53	25	250	121
1/4X13	880-130C 12.07	1880-130C 12.07	880-130CP 12.07	25	250	121
1/4X14	880-140C 15.51	1880-140C 15.51	880-140CP 15.51	25	250	121
1/4X15	880-150C 16.13	1880-150C 16.13	880-150CP 16.13	25	500	121
1/4X16	880-160C 16.33	1880-160C 16.33	880-160CP 16.33	25	250	121
1/4X17	880-170C 17.19	1880-170C 17.19	880-170CP 17.19	25	0	121
1/4X18	880-180C 18.59	1880-180C 18.59	880-180CP 18.59	25	300	121
1/4X19	880-190C 18.97	1880-190C 18.97	880-190CP 18.97	25	0	121
1/4X20	880-200C 19.47	1880-200C 19.47	880-200CP 19.47	25	0	121
1/4X22	880-220C 20.18	1880-220C 20.18	880-220CP 20.18	25	300	121
1/4X24	880-240C 23.33	1880-240C 23.33	880-240CP 23.33	25	0	121
1/4X30	880-300C 28.24	1880-300C 28.24	880-300CP 28.24	25	0	121
1/4X36	880-360C 33.34	1880-360C 33.34	880-360CP 33.34	25	0	121
1/4X42	880-420C 39.12	1880-420C 39.12	880-420CP 39.12	25	0	121
1/4X48	880-480C 40.85	1880-480C 40.85	880-480CP 40.85	25	0	121
3/8" Diameter						
3/8XCLOSE	881-005C 2.91	1881-005C 2.91	881-005CP 2.91	25	800	121
3/8X1-1/2	881-015C 3.04	1881-015C 3.04	881-015CP 3.04	25	800	121
3/8X2	881-020C 3.44	1881-020C 3.44	881-020CP 3.44	25	600	121
3/8X2-1/2	881-025C 3.88	1881-025C 3.88	881-025CP 3.88	25	600	121
3/8X3	881-030C 4.07	1881-030C 4.07	881-030CP 4.07	25	400	121
3/8X3-1/2	881-035C 4.54	1881-035C 4.54	881-035CP 4.54	25	400	121
3/8X4	881-040C 4.92	1881-040C 4.92	881-040CP 4.92	25	300	121
3/8X4-1/2	881-045C 5.39	1881-045C 5.39	881-045CP 5.39	25	250	121
3/8X5	881-050C 5.80	1881-050C 5.80	881-050CP 5.80	25	250	121
3/8X5-1/2	881-055C 6.37	1881-055C 6.37	881-055CP 6.37	25	250	121
3/8X6	881-060C 7.05	1881-060C 7.05	881-060CP 7.05	25	250	121
3/8X7	881-070C 8.46	1881-070C 8.46	881-070CP 8.46	25	200	121
3/8X8	881-080C 8.85	1881-080C 8.85	881-080CP 8.85	25	200	121
3/8X9	881-090C 9.86	1881-090C 9.86	881-090CP 9.86	25	200	121
3/8X10	881-100C 10.04	1881-100C 10.04	881-100CP 10.04	25	200	121
3/8X11	881-110C 10.67	1881-110C 10.67	881-110CP 10.67	25	200	121
3/8X12	881-120C 10.87	1881-120C 10.87	881-120CP 10.87	25	200	121

CPVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Prod Code
3/8" Diameter						
3/8X13	881-130C 13.94	1881-130C 13.94	881-130CP 13.94	25	0	121
3/8X14	881-140C 16.97	1881-140C 16.97	881-140CP 16.97	25	200	121
3/8X15	881-150C 17.35	1881-150C 17.35	881-150CP 17.35	25	200	121
3/8X16	881-160C 17.76	1881-160C 17.76	881-160CP 17.76	25	200	121
3/8X17	881-170C 18.38	1881-170C 18.38	881-170CP 18.38	25	0	121
3/8X18	881-180C 19.01	1881-180C 19.01	881-180CP 19.01	25	200	121
3/8X19	881-190C 19.60	1881-190C 19.60	881-190CP 19.60	25	0	121
3/8X20	881-200C 20.22	1881-200C 20.22	881-200CP 20.22	25	0	121
3/8X22	881-220C 20.87	1881-220C 20.87	881-220CP 20.87	25	0	121
3/8X24	881-240C 21.82	1881-240C 21.82	881-240CP 21.82	25	0	121
3/8X30	881-300C 33.37	1881-300C 33.37	881-300CP 33.37	25	0	121
3/8X36	881-360C 41.21	1881-360C 41.21	881-360CP 41.21	25	0	121
3/8X42	881-420C 42.19	1881-420C 42.19	881-420CP 42.19	25	0	121
3/8X48	881-480C 43.65	1881-480C 43.65	881-480CP 43.65	25	0	121
1/2" Diameter						
1/2XCLOSE	882-005C 2.74	1882-005C 2.74	882-005CP 2.74	25	450	121
1/2X1-1/2	882-015C 2.96	1882-015C 2.96	882-015CP 2.96	25	600	121
1/2X2	882-020C 3.26	1882-020C 3.26	882-020CP 3.26	25	300	121
1/2X2-1/2	882-025C 3.47	1882-025C 3.47	882-025CP 3.47	25	300	121
1/2X3	882-030C 3.72	1882-030C 3.72	882-030CP 3.72	25	300	121
1/2X3-1/2	882-035C 4.36	1882-035C 4.36	882-035CP 4.36	25	300	121
1/2X4	882-040C 4.36	1882-040C 4.36	882-040CP 4.36	25	300	121
1/2X4-1/2	882-045C 4.89	1882-045C 4.89	882-045CP 4.89	25	300	121
1/2X5	882-050C 4.89	1882-050C 4.89	882-050CP 4.89	25	300	121
1/2X5-1/2	882-055C 5.52	1882-055C 5.52	882-055CP 5.52	25	300	121
1/2X6	882-060C 5.52	1882-060C 5.52	882-060CP 5.52	25	300	121
1/2X7	882-070C 8.06	1882-070C 8.06	882-070CP 8.06	25	200	121
1/2X8	882-080C 8.60	1882-080C 8.60	882-080CP 8.60	25	0	121
1/2X9	882-090C 9.28	1882-090C 9.28	882-090CP 9.28	25	0	121
1/2X10	882-100C 9.77	1882-100C 9.77	882-100CP 9.77	25	0	121
1/2X11	882-110C 10.41	1882-110C 10.41	882-110CP 10.41	25	0	121
1/2X12	882-120C 11.04	1882-120C 11.04	882-120CP 11.04	25	0	121
1/2X13	882-130C 13.61	1882-130C 13.61	882-130CP 13.61	25	0	121
1/2X14	882-140C 16.17	1882-140C 16.17	882-140CP 16.17	100	0	121
1/2X15	882-150C 16.67	1882-150C 16.67	882-150CP 16.67	100	0	121
1/2X16	882-160C 17.22	1882-160C 17.22	882-160CP 17.22	100	0	121
1/2X17	882-170C 17.96	1882-170C 17.96	882-170CP 17.96	100	0	121

CPVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Prod Code
1/2" Diameter						
1/2X18	882-180C 18.26	1882-180C 18.26	882-180CP 18.26	25	100	121
1/2X19	882-190C 18.93	1882-190C 18.93	882-190CP 18.93	100	0	121
1/2X20	882-200C 19.57	1882-200C 19.57	882-200CP 19.57	100	0	121
1/2X22	882-220C 21.07	1882-220C 21.07	882-220CP 21.07	100	0	121
1/2X24	882-240C 22.13	1882-240C 22.13	882-240CP 22.13	100	0	121
1/2X30	882-300C 33.23	1882-300C 33.23	882-300CP 33.23	25	0	121
1/2X36	882-360C 36.56	1882-360C 36.56	882-360CP 36.56	25	0	121
1/2X42	882-420C 40.05	1882-420C 40.05	882-420CP 40.05	25	0	121
1/2X48	882-480C 44.18	1882-480C 44.18	882-480CP 44.18	25	0	121
3/4" Diameter						
3/4XCLOSE	883-005C 3.36	1883-005C 3.36	883-005CP 3.36	25	300	121
3/4X1-1/2	883-015C 3.61	1883-015C 3.61	883-015CP 3.61	25	300	121
3/4X2	883-020C 3.89	1883-020C 3.89	883-020CP 3.89	25	300	121
3/4X2-1/2	883-025C 4.44	1883-025C 4.44	883-025CP 4.44	25	300	121
3/4X3	883-030C 4.44	1883-030C 4.44	883-030CP 4.44	25	300	121
3/4X3-1/2	883-035C 5.14	1883-035C 5.14	883-035CP 5.14	25	300	121
3/4X4	883-040C 5.14	1883-040C 5.14	883-040CP 5.14	25	300	121
3/4X4-1/2	883-045C 5.69	1883-045C 5.69	883-045CP 5.69	25	200	121
3/4X5	883-050C 5.69	1883-050C 5.69	883-050CP 5.69	25	200	121
3/4X5-1/2	883-055C 6.36	1883-055C 6.36	883-055CP 6.36	25	200	121
3/4X6	883-060C 6.36	1883-060C 6.36	883-060CP 6.36	25	200	121
3/4X7	883-070C 9.57	1883-070C 9.57	883-070CP 9.57	25	200	121
3/4X8	883-080C 10.11	1883-080C 10.11	883-080CP 10.11	25	0	121
3/4X9	883-090C 10.83	1883-090C 10.83	883-090CP 10.83	25	0	121
3/4X10	883-100C 11.36	1883-100C 11.36	883-100CP 11.36	25	0	121
3/4X11	883-110C 12.06	1883-110C 12.06	883-110CP 12.06	25	0	121
3/4X12	883-120C 12.78	1883-120C 12.78	883-120CP 12.78	25	0	121
3/4X13	883-130C 15.97	1883-130C 15.97	883-130CP 15.97	25	0	121
3/4X14	883-140C 19.15	1883-140C 19.15	883-140CP 19.15	100	0	121
3/4X15	883-150C 19.67	1883-150C 19.67	883-150CP 19.67	100	0	121
3/4X16	883-160C 20.25	1883-160C 20.23	883-160CP 20.25	100	0	121
3/4X17	883-170C 20.92	1883-170C 20.92	883-170CP 20.92	100	0	121
3/4X18	883-180C 21.60	1883-180C 21.60	883-180CP 21.60	100	0	121
3/4X19	883-190C 22.17	1883-190C 22.17	883-190CP 22.17	100	0	121
3/4X20	883-200C 22.75	1883-200C 22.75	883-200CP 22.75	100	0	121
3/4X22	883-220C 24.14	1883-220C 24.14	883-220CP 24.14	100	0	121
3/4X24	883-240C 25.55	1883-240C 25.55	883-240CP 25.55	100	0	121

CPVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Prod Code
3/4" Diameter						
3/4X30	883-300C 38.96	1883-300C 38.96	883-300CP 38.96	25	0	121
3/4X36	883-360C 42.47	1883-360C 42.47	883-360CP 42.37	25	0	121
3/4X42	883-420C 46.63	1883-420C 46.63	883-420CP 46.63	25	0	121
3/4X48	883-480C 49.72	1883-480C 49.72	883-480CP 49.72	25	0	121
1" Diameter						
1XCLOSE	884-005C 4.07	1884-005C 4.07	884-005CP 4.07	25	300	121
1X2	884-020C 4.44	1884-020C 4.44	884-020CP 4.44	25	300	121
1X2-1/2	884-025C 5.52	1884-025C 5.52	884-025CP 5.52	25	200	121
1X3	884-030C 5.52	1884-030C 5.52	884-030CP 5.52	25	200	121
1X3-1/2	884-035C 6.36	1884-035C 6.36	884-035CP 6.36	25	200	121
1X4	884-040C 6.36	1884-040C 6.36	884-040CP 6.36	25	200	121
1X4-1/2	884-045C 7.17	1884-045C 7.17	884-045CP 7.17	25	200	121
1X5	884-050C 7.17	1884-050C 7.17	884-050CP 7.17	25	0	121
1X5-1/2	884-055C 8.32	1884-055C 8.32	884-055CP 8.32	25	0	121
1X6	884-060C 8.32	1884-060C 8.32	884-060CP 8.32	25	0	121
1X7	884-070C 11.63	1884-070C 11.63	884-070CP 11.63	25	0	121
1X8	884-080C 12.74	1884-080C 12.74	884-080CP 12.74	25	0	121
1X9	884-090C 13.82	1884-090C 13.82	884-090CP 13.82	25	0	121
1X10	884-100C 14.84	1884-100C 14.84	884-100CP 14.84	25	0	121
1X11	884-110C 15.52	1884-110C 15.52	884-110CP 15.52	25	0	121
1X12	884-120C 16.68	1884-120C 16.68	884-120CP 16.68	25	0	121
1X13	884-130C 19.95	1884-130C 19.95	884-130CP 19.95	25	0	121
1X14	884-140C 23.26	1884-140C 23.26	884-140CP 23.26	50	0	121
1X15	884-150C 24.38	1884-150C 24.38	884-150CP 24.38	50	0	121
1X16	884-160C 25.52	1884-160C 25.52	884-160CP 25.52	50	0	121
1X17	884-170C 26.59	1884-170C 26.59	884-170CP 26.59	50	0	121
1X18	884-180C 27.67	1884-180C 27.67	884-180CP 27.67	50	0	121
1X19	884-190C 28.26	1884-190C 28.26	884-190CP 28.26	50	0	121
1X20	884-200C 28.94	1884-200C 28.94	884-200CP 28.94	50	0	121
1X22	884-220C 31.41	1884-220C 31.41	884-220CP 31.41	50	0	121
1X24	884-240C 33.26	1884-240C 33.26	884-240CP 33.26	50	0	121
1X30	884-300C 48.81	1884-300C 48.81	884-300CP 48.81	15	0	121
1X36	884-360C 55.32	1884-360C 55.32	884-360CP 55.32	15	0	121
1X42	884-420C 58.63	1884-420C 58.63	884-420CP 58.63	15	0	121
1X48	884-480C 66.57	1884-480C 66.57	884-480CP 66.57	15	0	121
1-1/4" Diameter						
1-1/4XCLOSE	885-005C 5.14	1885-005C 5.14	885-005CP 5.14	25	200	121

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC, CPVC & PE Nipples

CPVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Prod Code
1-1/4" Diameter						
1-1/4X2	885-020C 5.69	1885-020C 5.69	885-020CP 5.69	25	200	121
1-1/4X2-1/2	885-025C 7.17	1885-025C 7.17	885-025CP 7.17	25	200	121
1-1/4X3	885-030C 7.58	1885-030C 7.58	885-030CP 7.58	25	0	121
1-1/4X3-1/2	885-035C 8.93	1885-035C 8.93	885-035CP 8.93	25	0	121
1-1/4X4	885-040C 8.93	1885-040C 8.93	885-040CP 8.93	25	0	121
1-1/4X4-1/2	885-045C 10.49	1885-045C 10.49	885-045CP 10.49	25	0	121
1-1/4X5	885-050C 10.49	1885-050C 10.49	885-050CP 10.49	25	0	121
1-1/4X5-1/2	885-055C 12.06	1885-055C 12.06	885-055CP 12.06	25	0	121
1-1/4X6	885-060C 12.06	1885-060C 12.06	885-060CP 12.06	25	0	121
1-1/4X7	885-070C 17.71	1885-070C 17.71	885-070CP 17.71	25	0	121
1-1/4X8	885-080C 18.43	1885-080C 18.43	885-080CP 18.43	25	0	121
1-1/4X9	885-090C 19.25	1885-090C 19.25	885-090CP 19.25	25	0	121
1-1/4X10	885-100C 20.95	1885-100C 20.95	885-100CP 20.95	25	0	121
1-1/4X11	885-110C 22.54	1885-110C 22.54	885-110CP 22.54	25	0	121
1-1/4X12	885-120C 24.08	1885-120C 24.08	885-120CP 24.08	25	0	121
1-1/4X13	885-130C 28.22	1885-130C 28.22	885-130CP 28.22	25	0	121
1-1/4X14	885-140C 32.35	1885-140C 32.35	885-140CP 32.35	25	0	121
1-1/4X15	885-150C 33.88	1885-150C 33.88	885-150CP 33.88	25	0	121
1-1/4X16	885-160C 35.42	1885-160C 35.42	885-160CP 35.42	25	0	121
1-1/4X17	885-170C 37.00	1885-170C 37.00	885-170CP 37.00	25	0	121
1-1/4X18	885-180C 39.32	1885-180C 39.32	885-180CP 39.32	25	0	121
1-1/4X19	885-190C 40.25	1885-190C 40.25	885-190CP 40.25	25	0	121
1-1/4X20	885-200C 41.93	1885-200C 41.93	885-200CP 41.93	25	0	121
1-1/4X22	885-220C 45.04	1885-220C 45.04	885-220CP 45.04	25	0	121
1-1/4X24	885-240C 51.47	1885-240C 51.47	885-240CP 51.47	25	0	121
1-1/4X30	885-300C 67.77	1885-300C 67.77	885-300CP 67.77	10	0	121
1-1/4X36	885-360C 71.54	1885-360C 71.54	885-360CP 71.54	10	0	121
1-1/4X42	885-420C 86.74	1885-420C 86.74	885-420CP 86.74	10	0	121
1-1/4X48	885-480C 96.33	1885-480C 96.33	885-480CP 96.33	10	0	121
1-1/2" Diameter						
1-1/2XCLOSE	886-005C 5.69	1886-005C 5.69	886-005CP 5.69	25	0	121
1-1/2X2	886-020C 6.36	1886-020C 6.36	886-020CP 6.36	25	0	121
1-1/2X2-1/2	886-025C 7.91	1886-025C 7.91	886-025CP 7.91	25	0	121
1-1/2X3	886-030C 7.91	1886-030C 7.91	886-030CP 7.91	25	0	121
1-1/2X3-1/2	886-035C 9.57	1886-035C 9.57	886-035CP 9.57	25	0	121
1-1/2X4	886-040C 9.57	1886-040C 9.57	886-040CP 9.57	25	0	121
1-1/2X4-1/2	886-045C 11.17	1886-045C 11.17	886-045CP 11.17	25	0	121

CPVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Prod Code
1-1/2" Diameter						
1-1/2X5	886-050C 12.73	1886-050C 12.73	886-050CP 12.73	25	0	121
1-1/2X5-1/2	886-055C 12.73	1886-055C 12.73	886-055CP 12.73	25	0	121
1-1/2X6	886-060C 12.73	1886-060C 12.73	886-060CP 12.73	25	0	121
1-1/2X7	886-070C 19.09	1886-070C 19.09	886-070CP 19.09	25	0	121
1-1/2X8	886-080C 20.68	1886-080C 20.68	886-080CP 20.68	25	0	121
1-1/2X9	886-090C 21.28	1886-090C 21.28	886-090CP 21.28	25	0	121
1-1/2X10	886-100C 23.20	1886-100C 23.20	886-100CP 23.20	25	0	121
1-1/2X11	886-110C 23.93	1886-110C 23.93	886-110CP 23.93	25	0	121
1-1/2X12	886-120C 25.52	1886-120C 25.52	886-120CP 25.52	25	0	121
1-1/2X13	886-130C 30.22	1886-130C 30.22	886-130CP 30.22	25	0	121
1-1/2X14	886-140C 34.91	1886-140C 34.91	886-140CP 34.91	25	0	121
1-1/2X15	886-150C 36.96	1886-150C 36.96	886-150CP 36.96	25	0	121
1-1/2X16	886-160C 39.68	1886-160C 39.68	886-160CP 39.68	25	0	121
1-1/2X17	886-170C 40.16	1886-170C 40.16	886-170CP 40.16	25	0	121
1-1/2X18	886-180C 41.34	1886-180C 41.34	886-180CP 41.34	25	0	121
1-1/2X19	886-190C 42.98	1886-190C 42.98	886-190CP 42.98	25	0	121
1-1/2X20	886-200C 44.59	1886-200C 44.59	886-200CP 44.59	25	0	121
1-1/2X22	886-220C 47.79	1886-220C 47.79	886-220CP 47.79	25	0	121
1-1/2X24	886-240C 51.00	1886-240C 51.00	886-240CP 51.00	25	0	121
1-1/2X30	886-300C 73.15	1886-300C 73.15	886-300CP 73.15	5	0	121
1-1/2X36	886-360C 82.69	1886-360C 82.69	886-360CP 82.69	5	0	121
1-1/2X42	886-420C 92.38	1886-420C 92.38	886-420CP 92.38	5	0	121
1-1/2X48	886-480C 101.98	1886-480C 101.98	886-480CP 101.98	5	0	121
2" Diameter						
2XCLOSE	887-005C 8.81	1887-005C 8.81	887-005CP 8.81	25	0	121
2X2	887-020C 10.49	1887-020C 10.49	887-020CP 10.49	25	0	121
2X2-1/2	887-025C 10.49	1887-025C 10.49	887-025CP 10.49	25	0	121
2X3	887-030C 12.44	1887-030C 12.44	887-030CP 12.44	25	0	121
2X3-1/2	887-035C 12.44	1887-035C 12.44	887-035CP 12.44	25	0	121
2X4	887-040C 14.38	1887-040C 14.38	887-040CP 14.38	25	0	121
2X4-1/2	887-045C 14.38	1887-045C 14.38	887-045CP 14.38	25	0	121
2X5	887-050C 16.31	1887-050C 16.31	887-050CP 16.31	25	0	121
2X5-1/2	887-055C 16.31	1887-055C 16.31	887-055CP 16.31	25	0	121
2X6	887-060C 22.93	1887-060C 22.93	887-060CP 22.93	25	0	121
2X7	887-070C 23.63	1887-070C 23.63	887-070CP 23.63	25	0	121
2X8	887-080C 24.87	1887-080C 24.87	887-080CP 24.87	25	0	121
2X9	887-090C 27.04	1887-090C 27.04	887-090CP 27.04	25	0	121

CPVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Prod Code
2" Diameter						
2X10	887-100C 28.99	1887-100C 28.99	887-100CP 28.99	25	0	121
2X11	887-110C 30.69	1887-110C 30.69	887-110CP 30.69	25	0	121
2X12	887-120C 32.65	1887-120C 32.65	887-120CP 32.65	25	0	121
2X13	887-130C 39.20	1887-130C 39.20	887-130CP 39.20	25	0	121
2X14	887-140C 45.88	1887-140C 45.88	887-140CP 45.88	25	0	121
2X15	887-150C 47.77	1887-150C 47.77	887-150CP 47.77	25	0	121
2X16	887-160C 49.71	1887-160C 49.71	887-160CP 49.71	25	0	121
2X17	887-170C 52.92	1887-170C 52.92	887-170CP 52.92	20	0	121
2X18	887-180C 56.09	1887-180C 56.09	887-180CP 56.09	20	0	121
2X19	887-190C 59.68	1887-190C 59.68	887-190CP 59.68	25	0	121
2X20	887-200C 60.76	1887-200C 60.76	887-200CP 60.76	20	0	121
2X22	887-220C 62.21	1887-220C 62.21	887-220CP 62.21	20	0	121
2X24	887-240C 65.27	1887-240C 65.27	887-240CP 65.27	20	0	121
2X30	887-300C 95.57	1887-300C 95.57	887-300CP 95.57	5	0	121
2X36	887-360C 114.47	1887-360C 114.47	887-360CP 114.47	5	0	121
2X42	887-420C 131.79	1887-420C 131.79	887-420CP 131.79	5	0	121
2X48	887-480C 149.63	1887-480C 149.63	887-480CP 149.63	5	0	121
2-1/2" Diameter						
2-1/2XCLOSE	888-005C 15.99	1888-005C 15.99	888-005CP 15.99	25	0	121
2-1/2X3	888-030C 17.55	1888-030C 17.55	888-030CP 17.55	25	0	121
2-1/2X3-1/2	888-035C 21.40	1888-035C 21.40	888-035CP 21.40	25	0	121
2-1/2X4	888-040C 21.40	1888-040C 21.40	888-040CP 21.40	25	0	121
2-1/2X4-1/2	888-045C 25.57	1888-045C 25.57	888-045CP 25.57	25	0	121
2-1/2X5	888-050C 25.57	1888-050C 25.57	888-050CP 25.57	25	0	121
2-1/2X5-1/2	888-055C 30.00	1888-055C 30.00	888-055CP 30.00	25	0	121
2-1/2X6	888-060C 30.00	1888-060C 30.00	888-060CP 30.00	25	0	121
2-1/2X7	888-070C 38.37	1888-070C 38.45	888-070CP 38.37	16	0	121
2-1/2X8	888-080C 42.76	1888-080C 42.76	888-080CP 42.76	16	0	121
2-1/2X9	888-090C 46.92	1888-090C 46.92	888-090CP 46.92	25	0	121
2-1/2X10	888-100C 51.11	1888-100C 51.11	888-100CP 51.11	16	0	121
2-1/2X11	888-110C 55.54	1888-110C 55.54	888-110CP 55.54	16	0	121
2-1/2X12	888-120C 59.97	1888-120C 59.97	888-120CP 59.97	16	0	121
2-1/2X13	888-130C 68.35	1888-130C 68.35	888-130CP 68.35	25	0	121
2-1/2X14	888-140C 76.72	1888-140C 76.72	888-140CP 76.72	25	0	121
2-1/2X15	888-150C 82.01	1888-150C 82.01	888-150CP 82.01	25	0	121
2-1/2X16	888-160C 87.49	1888-160C 87.49	888-160CP 87.49	20	0	121
2-1/2X17	888-170C 90.42	1888-170C 90.42	888-170CP 90.42	20	0	121

CPVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Prod Code
2-1/2" Diameter						
2-1/2X18	888-180C 93.85	1888-180C 93.85	888-180CP 93.85	20	0	121
2-1/2X19	888-190C 98.03	1888-190C 98.03	888-190CP 98.03	25	0	121
2-1/2X20	888-200C 102.22	1888-200C 102.22	888-200CP 102.22	12	0	121
2-1/2X22	888-220C 111.06	1888-220C 111.06	888-220CP 111.06	25	0	121
2-1/2X24	888-240C 120.17	1888-240C 120.17	888-240CP 120.17	10	0	121
2-1/2X30	888-300C 125.79	1888-300C 125.79	888-300CP 125.79	3	0	121
2-1/2X36	888-360C 151.76	1888-360C 151.76	888-360CP 151.76	3	0	121
2-1/2X42	888-420C 174.42	1888-420C 174.42	888-420CP 174.42	3	0	121
2-1/2X48	888-480C 198.63	1888-480C 198.63	888-480CP 198.63	3	0	121
3" Diameter						
3XCLOSE	889-005C 20.71	1889-005C 20.71	889-005CP 20.71	25	0	121
3X3	889-030C 20.71	1889-030C 20.71	889-030CP 20.71	20	0	121
3X3-1/2	889-035C 27.08	1889-035C 27.08	889-035CP 27.08	30	0	121
3X4	889-040C 27.08	1889-040C 27.08	889-040CP 27.08	30	0	121
3X4-1/2	889-045C 31.53	1889-045C 31.53	889-045CP 31.53	20	0	121
3X5	889-050C 36.01	1889-050C 36.01	889-050CP 36.01	20	0	121
3X5-1/2	889-055C 36.01	1889-055C 36.01	889-055CP 36.01	20	0	121
3X6	889-060C 42.38	1889-060C 42.38	889-060CP 42.38	20	0	121
3X7	889-070C 45.38	1889-070C 45.38	889-070CP 45.38	10	0	121
3X8	889-080C 52.29	1889-080C 52.29	889-080CP 52.29	10	0	121
3X9	889-090C 58.46	1889-090C 58.46	889-090CP 58.46	10	0	121
3X10	889-100C 68.43	1889-100C 68.43	889-100CP 68.43	10	0	121
3X11	889-110C 74.25	1889-110C 74.25	889-110CP 74.25	10	0	121
3X12	889-120C 78.74	1889-120C 78.74	889-120CP 78.74	10	0	121
3X13	889-130C 81.40	1889-130C 81.40	889-130CP 81.40	20	0	121
3X14	889-140C 90.71	1889-140C 90.71	889-140CP 90.71	20	0	121
3X15	889-150C 101.16	1889-150C 101.16	889-150CP 101.16	20	0	121
3X16	889-160C 104.59	1889-160C 104.59	889-160CP 104.59	20	0	121
3X17	889-170C 114.91	1889-170C 114.91	889-170CP 114.91	10	0	121
3X18	889-180C 116.97	1889-180C 116.97	889-180CP 116.97	10	0	121
3X19	889-190C 126.39	1889-190C 126.39	889-190CP 126.39	10	0	121
3X20	889-200C 133.85	1889-200C 133.85	889-200CP 133.85	10	0	121
3X22	889-220C 138.63	1889-220C 138.63	889-220CP 138.63	10	0	121
3X24	889-240C 144.19	1889-240C 144.19	889-240CP 144.19	10	0	121
3X30	889-300C 191.79	1889-300C 191.79	889-300CP 191.79	3	0	121
3X36	889-360C 233.88	1889-360C 233.88	889-360CP 233.88	3	0	121
3X42	889-420C 266.00	1889-420C 266.00	889-420CP 266.00	3	0	121

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC, CPVC & PE Nipples

CPVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Prod Code
3" Diameter						
3X48	889-480C 288.32	1889-480C 288.32	889-480CP 288.32	3	0	121
4" Diameter						
4XCLOSE	890-005C 31.93	1890-005C 31.93	890-005CP 31.93	25	0	121
4X3	890-030C 36.47	1890-030C 36.47	890-030CP 36.47	25	0	121
4X3-1/2	890-035C 36.47	1890-035C 36.47	890-035CP 36.47	25	0	121
4X4	890-040C 38.33	1890-040C 38.33	890-040CP 38.33	18	0	121
4X4-1/2	890-045C 44.64	1890-045C 44.64	890-045CP 44.64	12	0	121
4X5	890-050C 44.64	1890-050C 44.64	890-050CP 44.64	12	0	121
4X5-1/2	890-055C 51.01	1890-055C 51.01	890-055CP 51.01	12	0	121
4X6	890-060C 60.60	1890-060C 60.60	890-060CP 60.60	12	0	121
4X7	890-070C 64.03	1890-070C 64.03	890-070CP 64.03	16	0	121
4X8	890-080C 76.60	1890-080C 76.60	890-080CP 76.60	16	0	121
4X9	890-090C 82.95	1890-090C 82.95	890-090CP 82.95	16	0	121
4X10	890-100C 89.36	1890-100C 89.36	890-100CP 89.36	16	0	121
4X11	890-110C 98.60	1890-110C 98.60	890-110CP 98.60	16	0	121
4X12	890-120C 102.06	1890-120C 102.06	890-120CP 102.06	16	0	121
4X13	890-130C 113.16	1890-130C 113.16	890-130CP 113.16	16	0	121
4X14	890-140C 121.79	1890-140C 121.79	890-140CP 121.79	16	0	121
4X15	890-150C 137.20	1890-150C 137.20	890-150CP 137.20	12	0	121
4X16	890-160C 153.18	1890-160C 153.47	890-160CP 153.18	12	0	121
4X17	890-170C 159.55	1890-170C 159.55	890-170CP 159.55	12	0	121
4X18	890-180C 165.92	1890-180C 165.92	890-180CP 165.92	4	0	121
4X19	890-190C 178.66	1890-190C 178.66	890-190CP 178.66	12	0	121
4X20	890-200C 185.28	1890-200C 185.28	890-200CP 185.28	8	0	121
4X22	890-220C 189.68	1890-220C 189.68	890-220CP 189.68	8	0	121
4X24	890-240C 206.68	1890-240C 206.68	890-240CP 206.68	4	0	121
4X30	890-300C 274.42	1890-300C 274.39	890-300CP 274.42	3	0	121
4X36	890-360C 334.55	1890-360C 334.55	890-360CP 334.55	3	0	121
4X42	890-420C 370.95	1890-420C 370.95	890-420CP 370.95	3	0	120
4X48	890-480C 401.48	1890-480C 401.48	890-480CP 401.48	3	0	121
6" Diameter						
6XCLOSE	892-005C 75.56	1892-005C 75.56	892-005CP 75.56	1	8	121
6X3	892-030C 85.77	1892-030C 85.77	892-030CP 85.77	1	4	121
6X4	892-040C 117.32	1892-040C 117.32	892-040CP 117.32	1	0	121
6X4-1/2	892-045C 122.74	1892-045C 122.74	892-045CP 122.74	1	4	121
6X5	892-050C 131.57	1892-050C 131.57	892-050CP 131.57	1	2	121
6X5-1/2	892-055C 139.36	1892-055C 139.99	892-055CP 139.36	1	2	121

CPVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Prod Code
6" Diameter						
6X6	892-060C 153.55	1892-060C 153.55	892-060CP 153.55	1	0	121
6X7	892-070C 162.82	1892-070C 162.82	892-070CP 162.82	1	2	121
6X8	892-080C 180.55	1892-080C 180.55	892-080CP 180.55	1	0	121
6X9	892-090C 196.09	1892-090C 196.09	892-090CP 196.09	1	0	121
6X10	892-100C 211.60	1892-100C 211.60	892-100CP 211.60	1	0	121
6X11	892-110C 227.14	1892-110C 227.14	892-110CP 227.14	1	0	121
6X12	892-120C 242.65	1892-120C 242.65	892-120CP 242.65	1	0	121
6X13	892-130C 258.19	1892-130C 258.19	892-130CP 258.19	1	0	121
6X14	892-140C 273.74	1892-140C 273.74	892-140CP 273.74	1	0	121
6X15	892-150C 289.24	1892-150C 289.24	892-150CP 289.24	1	0	121
6X16	892-160C 304.78	1892-160C 304.52	892-160CP 304.78	1	0	121
6X17	892-170C 320.32	1892-170C 320.32	892-170CP 320.32	1	0	121
6X18	892-180C 330.73	1892-180C 330.73	892-180CP 330.73	1	6	121
6X19	892-190C 351.41	1892-190C 351.41	892-190CP 351.41	1	0	121
6X20	892-200C 366.89	1892-200C 366.89	892-200CP 366.89	1	0	121
6X22	892-220C 397.96	1892-220C 397.96	892-220CP 397.96	1	0	121
6X24	892-240C 458.37	1892-240C 458.37	892-240CP 458.37	1	3	121
6X30	892-300C 522.18	1892-300C 522.18	892-300CP 522.18	1	0	121
6X36	892-360C 615.38	1892-360C 615.38	892-360CP 615.38	1	0	121
6X42	892-420C 708.56	1892-420C 708.56	892-420CP 708.56	1	0	121
6X48	892-480C 801.75	1892-480C 801.75	892-480CP 801.75	1	0	121
8" Diameter						
8XCLOSE	893-005C 110.80	1893-005C 110.80	893-005CP 110.80	2	0	121
8X4-1/2	893-045C 142.73	1893-045C 142.73	893-045CP 142.73	1	0	121
8X5	893-050C 153.36	1893-050C 153.36	893-050CP 153.36	1	0	121
8X5-1/2	893-055C 164.01	1893-055C 164.01	893-055CP 164.01	1	0	121
8X6	893-060C 174.64	1893-060C 174.64	893-060CP 174.64	1	0	121
8X7	893-070C 195.94	1893-070C 195.94	893-070CP 195.94	1	0	121
8X8	893-080C 217.22	1893-080C 217.22	893-080CP 217.22	4	0	121
8X9	893-090C 240.35	1893-090C 240.35	893-090CP 240.35	1	0	121
8X10	893-100C 259.80	1893-100C 259.80	893-100CP 259.80	1	0	121
8X11	893-110C 281.07	1893-110C 281.07	893-110CP 281.07	1	0	121
8X12	893-120C 308.71	1893-120C 308.71	893-120CP 308.71	1	0	121
8X13	893-130C 323.65	1893-130C 323.65	893-130CP 323.65	1	0	121
8X14	893-140C 344.95	1893-140C 344.95	893-140CP 344.95	1	0	121
8X15	893-150C 366.22	1893-150C 366.22	893-150CP 366.22	1	0	121
8X16	893-160C 387.52	1893-160C 387.52	893-160CP 387.52	1	0	121

CPVC Schedule 80 Nipple (continued)

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Prod Code
8" Diameter						
8X17	893-170C **408.80**	1893-170C **408.53**	893-170CP **408.80**	1	0	121
8X18	893-180C **430.07**	1893-180C **430.07**	893-180CP **430.07**	4	0	121
8X19	893-190C **451.39**	1893-190C **451.39**	893-190CP **451.39**	1	0	121
8X20	893-200C **472.67**	1893-200C **472.67**	893-200CP **472.67**	2	0	121
8X22	893-220C **493.96**	1893-220C **493.96**	893-220CP **493.96**	1	0	121
8X24	893-240C **515.24**	1893-240C **515.24**	893-240CP **515.24**	2	2	121
8X30	893-300C **742.57**	1893-300C **742.57**	893-300CP **742.57**	4	0	121
8X36	893-360C **905.78**	1893-360C **905.78**	893-360CP **905.78**	4	0	121
8X42	893-420C **958.58**	1893-420C **958.58**	893-420CP **958.58**	1	0	121
8X48	893-480C **1051.26**	1893-480C **1051.26**	893-480CP **1051.26**	1	0	121
10" Diameter						
10XCLOSE	894-005C **154.63**	1894-005C **154.63**	894-005CP **154.63**	1	0	121
10X4-1/2	894-045C **208.47**	1894-045C **208.47**	894-045CP **208.47**	1	0	121
10X5	894-050C **226.39**	1894-050C **226.39**	894-050CP **226.39**	1	0	121
10X5-1/2	894-055C **244.36**	1894-055C **244.36**	894-055CP **244.36**	1	0	121
10X6	894-060C **262.31**	1894-060C **262.31**	894-060CP **262.31**	1	0	121
10X7	894-070C **298.21**	1894-070C **298.21**	894-070CP **298.21**	1	0	121
10X8	894-080C **334.11**	1894-080C **334.11**	894-080CP **334.11**	1	0	121
10X9	894-090C **370.00**	1894-090C **370.00**	894-090CP **370.00**	1	0	121
10X10	894-100C **405.91**	1894-100C **405.91**	894-100CP **405.91**	1	0	121
10X11	894-110C **441.81**	1894-110C **441.81**	894-110CP **441.81**	1	0	121
10X12	894-120C **477.72**	1894-120C **477.72**	894-120CP **477.72**	1	0	121
10X13	894-130C **525.89**	1894-130C **525.89**	894-130CP **525.89**	1	0	121
10X14	894-140C **558.64**	1894-140C **558.64**	894-140CP **558.64**	1	0	121
10X15	894-150C **585.41**	1894-150C **585.41**	894-150CP **585.41**	1	0	121
10X16	894-160C **657.03**	1894-160C **657.03**	894-160CP **657.03**	1	0	121
10X17	894-170C **663.81**	1894-170C **663.81**	894-170CP **663.81**	1	0	121
10X18	894-180C **693.09**	1894-180C **693.09**	894-180CP **693.09**	1	0	121
10X19	894-190C **760.53**	1894-190C **760.53**	894-190CP **760.53**	1	0	121
10X20	894-200C **801.32**	1894-200C **801.32**	894-200CP **801.32**	1	0	121
10X22	894-220C **840.21**	1894-220C **840.21**	894-220CP **840.21**	1	0	121
10X24	894-240C **991.55**	1894-240C **991.55**	894-240CP **991.55**	1	2	121
10X30	894-300C **1074.47**	1894-300C **1074.47**	894-300CP **1074.47**	1	0	121
10X36	894-360C **1309.05**	1894-360C **1309.05**	894-360CP **1309.05**	1	0	121
10X42	894-420C **1526.43**	1894-420C **1526.43**	894-420CP **1526.43**	1	0	121
10X48	894-480C **1726.49**	1894-480C **1726.49**	894-480CP **1726.49**	1	0	121

CPVC Schedule 80 Nipple

Size	Threaded Both Ends	Threaded One End	Plain End	Std Pk	Mstr Pk	Prod Code
12" Diameter						
12XCLOSE	895-005C **217.04**	1895-005C **217.04**	895-005CP **217.04**	1	0	121
12X5	895-050C **290.24**	1895-050C **290.24**	895-050CP **290.24**	1	0	121
12X5-1/2	895-055C **314.55**	1895-055C **314.55**	895-055CP **314.55**	1	0	121
12X6	895-060C **337.78**	1895-060C **337.78**	895-060CP **337.78**	1	0	121
12X7	895-070C **387.57**	1895-070C **387.57**	895-070CP **387.57**	1	0	121
12X8	895-080C **436.24**	1895-080C **436.24**	895-080CP **436.24**	1	0	121
12X9	895-090C **433.31**	1895-090C **433.31**	895-090CP **433.31**	1	0	121
12X10	895-100C **533.56**	1895-100C **533.56**	895-100CP **533.56**	1	0	121
12X11	895-110C **582.23**	1895-110C **582.23**	895-110CP **582.23**	1	0	121
12X12	895-120C **630.88**	1895-120C **630.88**	895-120CP **630.88**	1	0	121
12X13	895-130C **679.54**	1895-130C **679.54**	895-130CP **679.54**	1	0	121
12X14	895-140C **728.23**	1895-140C **728.23**	895-140CP **728.23**	1	0	121
12X15	895-150C **776.86**	1895-150C **776.86**	895-150CP **776.86**	1	0	121
12X16	895-160C **825.54**	1895-160C **825.54**	895-160CP **825.54**	1	0	121
12X17	895-170C **874.20**	1895-170C **874.20**	895-170CP **874.20**	1	0	121
12X18	895-180C **922.86**	1895-180C **922.86**	895-180CP **922.86**	1	0	121
12X19	895-190C **971.52**	1895-190C **971.52**	895-190CP **971.52**	1	0	121
12X20	895-200C **1020.20**	1895-200C **1020.20**	895-200CP **1020.20**	1	0	121
12X22	895-220C **1068.85**	1895-220C **1068.85**	895-220CP **1068.85**	1	0	121
12X24	895-240C **1316.74**	1895-240C **1316.74**	895-240CP **1316.74**	1	0	121
12X30	895-300C **1527.00**	1895-300C **1527.00**	895-300CP **1527.00**	1	0	121
12X36	895-360C **1798.81**	1895-360C **1798.81**	895-360CP **1798.81**	1	0	121
12X42	895-420C **2010.58**	1895-420C **2010.58**	895-420CP **2010.58**	1	0	121
12X48	895-480C **2382.77**	1895-480C **2382.77**	895-480CP **2382.77**	1	0	121

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com
Spears® Manufacturing Company

Machined CPVC Nipple Options -Threaded Both Ends (TBE)

The following nipples are normally injection molded, but are optionally available as machined nipples listed below. All other nipples are normally machined.

CPVC Schedule 80 Machined Nipples
1/4" Diameter

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
880-005CM	1/4XCLOSE	25	1200	121	4.76

CPVC Schedule 80 Machined Nipples
1/2" Diameter

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
882-020CM	1/2X2	25	300	121	3.95
882-030CM	1/2X3	25	300	121	4.93
882-040CM	1/2X4	25	150	121	5.61

CPVC Schedule 80 Machined Nipples
3/4" Diameter

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
883-030CM	3/4X3	25	300	121	7.14
883-060CM	3/4X6	25	200	121	10.00

CPVC Schedule 80 Machined Nipples
1" Diameter

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
884-005CM	1XCLOSE	25	300	121	7.52
884-020CM	1X2	25	300	121	7.02

PE Nipples

Polyethylene Schedule 40 Nipple
1/2" Diameter

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
P42-005	1/2XCLOSE	25	450	120	.94
P42-015	1/2X1-1/2	25	300	120	.94
P42-020	1/2X2	25	300	120	.94
P42-025	1/2X2-1/2	25	300	120	1.11
P42-030	1/2X3	25	300	120	1.11
P42-035	1/2X3-1/2	25	300	120	1.18
P42-040	1/2X4	25	300	120	1.18
P42-045	1/2X4-1/2	25	300	120	1.34
P42-050	1/2X5	25	300	120	1.34
P42-055	1/2X5-1/2	25	300	120	1.56
P42-060	1/2X6	25	300	120	1.56
P42-070	1/2X7	25	200	120	2.34
P42-080	1/2X8	25	100	120	2.38
P42-090	1/2X9	25	0	120	2.48
P42-100	1/2X10	25	0	120	2.53
P42-110	1/2X11	25	0	120	2.65
P42-120	1/2X12	25	0	120	2.66
P42-140	1/2X14	100	0	120	3.67
P42-150	1/2X15	100	0	120	4.07
P42-160	1/2X16	100	0	120	4.44
P42-180	1/2X18	100	0	120	4.81
P42-240	1/2X24	100	0	120	7.02

Polyethylene Schedule 40 Nipple
3/4" Diameter

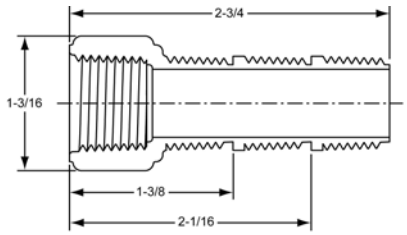
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
P43-005	3/4XCLOSE	25	300	120	1.11
P43-020	3/4X2	25	300	120	1.11
P43-025	3/4X2-1/2	25	300	120	1.56
P43-030	3/4X3	25	300	120	1.56
P43-035	3/4X3-1/2	25	300	120	1.74
P43-040	3/4X4	25	300	120	1.74
P43-045	3/4X4-1/2	25	200	120	1.82
P43-050	3/4X5	25	200	120	1.82
P43-055	3/4X5-1/2	25	200	120	1.98
P43-060	3/4X6	25	200	120	1.98
P43-070	3/4X7	25	200	120	6.09
P43-080	3/4X8	25	0	120	6.37
P43-090	3/4X9	25	0	120	6.95
P43-100	3/4X10	25	0	120	7.49

Polyethylene Schedule 40 Nipple (continued)
3/4" Diameter

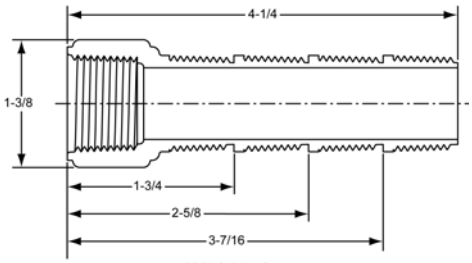
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
P43-110	3/4X11	25	0	120	7.86
P43-120	3/4X12	25	0	120	8.06

Polyethylene Cut-Off Nipples

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
491-060	1/2"MPTx6"Cut-Off	50	400	120	.94
492-060	1/2"x3/4"MPTx6"Cut-Off	50	350	120	1.41
493-060	3/4"MPTx6"Cut-Off	50	300	120	1.41



M434-005-3



M434-007-4

Polyethylene Cut-Off Riser Extension

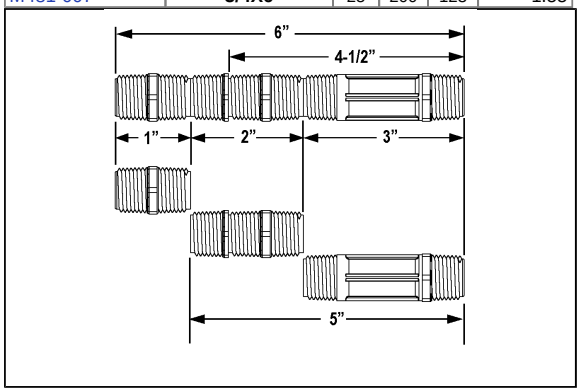
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
FIPT x MIPT Cut-Off (1/2" = 3 - Section Cut-Off; 3/4" = 4 - Section Cut-Off)					
M434-005-3	1/2X3	50	600	120	1.42
M434-007-4	3/4X4	50	0	120	1.88

Four-In-One • Cut-Off Nipples

- High quality polyethylene construction
- Reduces inventory
- Reduces contractor down time
- Choice of sizes from just one nipple
- Eliminates waste

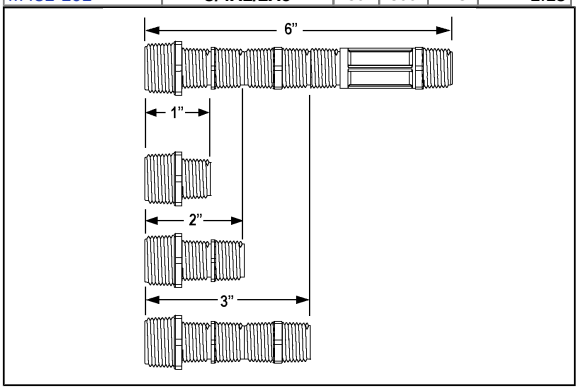
Four-In-One Cut-Off Nipple

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
M481-005	**1/2X6**	50	350	123	1.08
M481-007	**3/4X6**	25	200	123	1.55



Four-In-One Cut-Off Nipple - Reducing

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
M481-101	**3/4X1/2X6**	50	300	123	1.18



Grooved Nipples

PVC Schedule 80 Grooved Nipple

Size	Groove X Groove	Plain X Groove	Thread X Groove	Std Pk	Mstr Pk	Prod Code
1-1/2" Diameter						
1-1/2X3	886-030GG **3.13**	886-030PG **3.13**	886-030TG **3.13**	25	0	120
1-1/2X4	886-040GG **5.39**	886-040PG **4.89**	886-040TG **5.39**	25	0	120
1-1/2X6	886-060GG **7.58**	886-060PG **7.17**	886-060TG **7.17**	25	0	120
2" Diameter						
2X3	887-030GG **6.83**	887-030PG **6.83**	887-030TG **6.83**	25	0	120
2X4	887-040GG **7.91**	887-040PG **7.91**	887-040TG **7.91**	25	0	120
2X6	887-060GG **10.49**	887-060PG **10.79**	887-060TG **10.79**	25	0	120
3" Diameter						
3X3	889-030GG **14.55**	889-030PG **14.55**	889-030TG **17.00**	20	0	120
3X4	889-040GG **19.44**	889-040PG **19.44**	889-040TG **19.44**	30	0	120
3X6	889-060GG **27.23**	889-060PG **27.23**	889-060TG **27.23**	20	0	120
4" Diameter						
4X3	890-030GG **22.85**	890-030PG **22.85**	890-030TG **22.85**	25	0	120
4X4	890-040GG **30.25**	890-040PG **30.25**	890-040TG **30.25**	18	0	120
4X6	890-060GG **30.45**	890-060PG **30.45**	890-060TG **30.45**	12	0	120
6" Diameter						
6X3	892-030GG **25.68**	892-030PG **25.68**	892-030TG **25.68**	1	4	121
6X4	892-040GG **30.57**	892-040PG **30.57**	892-040TG **30.57**	4	0	120

PVC Schedule 80 Grooved Nipple (continued)

Size	Groove X Groove	Plain X Groove	Thread X Groove	Std Pk	Mstr Pk	Prod Code
6" Diameter						
6X6	892-060GG **44.23**	892-060PG **44.23**	892-060TG **44.23**	2	0	120

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Schedule 80 Grooved Nipple (continued)

Size	Groove X Groove	Plain X Groove	Thread X Groove	Std Pk	Mstr Pk	Prod Code
6" Diameter						
6X4	892-040GG **30.57**	892-040PG **30.57**	892-040TG **30.57**	4	0	120
6X6	892-060GG **44.23**	892-060PG **44.23**	892-060TG **44.23**	2	0	120

PVC, CPVC & PE Nipples

PVC/CPVC/PE Nipples furnished may be produced from extruded stock, or from molding grade PVC/CPVC compounds. Both processes provide quality products meeting ASTM requirements. Spears® thermoplastic nipples are produced in a variety of styles, several of which are illustrated below. These are referred to as Plain (no threads), TOE (Threaded One End), TBE (Threaded Both Ends), Grooved (which can be Plain x Groove, Groove x Thread, & Groove x Groove). Special varieties of Polyethylene Nipples include Cut-off, Four-In-One Cut-off and Four-In-One Cut-off Reducing.

Plain x Groove

TOE (Threaded One End)

PE Riser Extension Cut-Off Nipple

Groove x Thread

Plain

PE Cut-Off Nipple

Groove x Groove

TBE (Threaded Both Ends)

PE Four-In-One Cut-Off Nipple

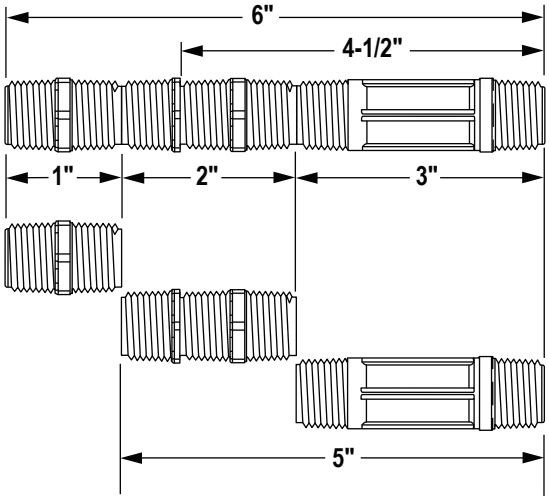
Close Nipples are simply two (2) threads back to back. Short Nipples is a term commonly used to designate a slightly longer nipple that is usually the smallest length above “close”. The following table shows length of Close and Short nipples:

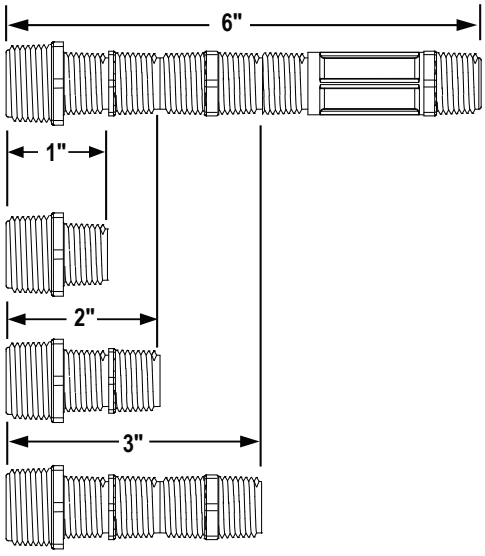
Length of Close & Short Nipples

Size	1/8"	1/4"	3/8"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	6"	8"	10"	12"
Close	3/4	7/8	1	1-1/8	1-3/8	1-1/2	1-5/8	1-3/4	2	2-1/2	2-5/8	2-7/8	3-3/4	3-5/8	4	4-3/8
Short	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2	2	2	2	2-1/2	3	3	3-1/2	4-1/2	4-1/2	4-1/2	5

Four-In-One • Cut-Off Nipples

- High quality polyethylene construction
- Choice of sizes from just one nipple
- Reduces inventory
- Eliminates waste
- Reduces contractor down time





PVC Industrial Pipe

PRICING

Schedule 80 PVC Industrial Pipe

PVC Schedule 80 Plain End

10' Lengths, Price Per Foot

List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PD-800-001-10	**1/8**	250	0	744	1.97
PD-800-002-10	**1/4**	250	0	744	2.94
PD-800-003-10	**3/8**	570	0	744	4.08
PD-800-005-10	**1/2**	10	0	744	1.23
PD-800-007-10	**3/4**	10	0	744	1.66
PD-800-010-10	**1**	10	0	744	2.44
PD-800-012-10	**1-1/4**	10	0	744	3.37
PD-800-015-10	**1-1/2**	10	0	744	3.82
PD-800-020-10	**2**	10	0	744	5.29
PD-800-025-10	**2-1/2**	10	0	744	8.92
PD-800-030-10	**3**	10	0	744	10.82
PD-800-040-10	**4**	10	0	744	15.83
PD-800-060-10	**6**	10	0	744	30.23
PD-800-080-10	**8**	10	0	744	45.85
PD-800-100-10	**10**	10	0	744	68.03
PD-800-120-10	**12**	10	0	744	93.53
PD-800-140-10	**14**	10	0	947	128.21
PD-800-160-10	**16**	10	0	947	145.75
PD-800-180-10	**18**	10	0	947	214.48
PD-800-200-10	**20**	10	0	947	270.21
PD-800-240-10	**24**	10	0	947	339.02

20' Lengths, Price Per Foot

List Price Per Foot

PD-800-001	**1/8**	500	0	744	1.97
PD-800-002	**1/4**	500	0	744	2.94
PD-800-003	**3/8**	500	0	744	4.08
PD-800-005	**1/2**	20	0	744	1.23
PD-800-007	**3/4**	20	0	744	1.66
PD-800-010	**1**	20	0	744	2.44
PD-800-012	**1-1/4**	20	0	744	3.37
PD-800-015	**1-1/2**	20	0	744	3.82
PD-800-020	**2**	20	0	744	5.29
PD-800-025	**2-1/2**	20	0	744	8.92
PD-800-030	**3**	20	0	744	10.82
PD-800-040	**4**	20	0	744	15.83
PD-800-050	**5**	20	0	744	21.73
PD-800-060	**6**	20	0	744	30.23

PVC Schedule 80 Plain End (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
20' Lengths, Price Per Foot					
PD-800-080	**8**	20	0	744	45.85
PD-800-100	**10**	20	0	744	68.03
PD-800-120	**12**	20	0	744	93.53
PD-800-140	**14**	20	0	947	128.21
PD-800-160	**16**	20	0	947	145.75
PD-800-180	**18**	20	0	947	214.48
PD-800-200	**20**	20	0	947	270.21
PD-800-240	**24**	20	0	947	339.02

- Pipe sold in individual lengths or lift quantities. No cut lengths.
- No return on Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.
- See Spears® Manufacturing Company Terms and Conditions of Sale for freight requirements.

ASTM D-1784 ASTM D-1785		Schedule 80 PVC Plain End Pipe				
Size	Max Work Pressure	Avg OD	Min Wall	10' Length Skid Quantity FT/Pieces	20' Length Skid Quantity FT/Pieces	Weight Per FT
1/8"	1230	0.405	0.095	2850/285	5700/285	0.063
1/4"	1130	0.540	0.119	2850/285	5700/285	0.105
3/8"	920	0.675	0.126	2850/285	5700/285	0.146
1/2"	850	0.840	0.147	2430/243	4860/243	0.213
3/4"	690	1.050	0.154	1540/154	3080/154	0.289
1"	630	1.315	0.179	2520/252	5040/252	0.124
1-1/4"	520	1.660	0.191	1230/123	2460/123	0.586
1-1/2"	470	1.900	0.200	1720/172	3440/172	0.717
2"	400	2.375	0.218	1230/123	2460/123	0.984
2-1/2"	420	2.875	0.276	540/54	1080/54	1.500
3"	370	3.500	0.300	460/46	920/46	2.010
4"	320	4.500	0.337	340/34	680/34	2.938
6"	280	6.625	0.432	170/17	340/17	5.610
8"	250	8.625	0.500	90/9	180/9	8.522
10"	230	10.750	0.593	110/11	220/11	12.635
12"	230	12.750	0.687	80/8	160/8	17.384

Schedule 80 Clear Pipe

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each

PVC Clear Schedule 80 Pipe

10' Lengths, Price Per Foot

List Price Per Foot

PD-800-002L-10	**1/4**	1000	0	742	1.29
PD-800-003L-10	**3/8**	1100	0	742	1.79
PD-800-005L-10	**1/2**	420	0	742	2.62
PD-800-007L-10	**3/4**	360	0	742	3.54
PD-800-010L-10	**1**	360	0	742	5.21
PD-800-012L-10	**1-1/4**	360	0	742	7.18
PD-800-015L-10	**1-1/2**	160	0	742	8.73
PD-800-020L-10	**2**	180	0	742	12.07
PD-800-025L-10	**2-1/2**	40	0	742	18.40
PD-800-030L-10	**3**	80	0	742	24.67
PD-800-040L-10	**4**	40	0	742	36.06
PD-800-060L-10	**6**	10	0	742	68.88

PVC Schedule 80 Fittings

PRICING

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Schedule 80 Fittings

Tee
Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
801-002	1/4	50	300	080	9.32
801-003	3/8	25	150	080	9.32
801-005	1/2	25	200	080	9.32
801-007	3/4	15	120	080	9.77
801-010	1	15	0	080	12.22
801-012	1-1/4	10	0	080	33.57
801-015	1-1/2	10	0	080	33.57
801-020	2	10	0	080	41.97
801-025	2-1/2	10	0	080	45.64
801-030	3	5	0	080	57.04
801-040	4	5	0	080	66.09
801-050	5	5	0	080	161.21
801-050F	5	1	4	083	376.81
801-060	6	2	0	080	225.66
801-080	8	2	0	080	523.37
801-080F	8	1	0	083	493.67
801-100	10	1	0	081	1729.11
801-100F	10	1	0	083	877.32
801-120	12	1	0	081	2441.99
801-120F	12	1	0	083	1236.18
801-140	14	1	0	082	3074.46
801-140F	14	1	0	083	2593.45
801-160F	16	1	0	083	3372.26
801-180F	18	1	0	083	4017.12
801-200F	20	1	0	083	5179.05
801-240F	24	1	0	083	6883.12

Tee - Reducing
Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
801-101	3/4X1/2	15	120	080	7.14
801-130	1X1/2	15	0	080	10.33
801-131	1X3/4	15	0	080	10.33
801-157	1-1/4X1X3/4	15	0	080	17.04
801-158	1-1/4X1X1	15	0	080	17.04
801-159	1-1/4X1X1-1/4	15	0	080	17.04
801-166[1]	1-1/4X1/2	10	0	080	28.48
801-167	1-1/4X3/4	10	0	080	22.41
801-168	1-1/4X1	15	0	080	22.41
801-202	1-1/2X1-1/4X1	10	0	080	22.41
801-209	1-1/2X1/2	10	0	080	22.41
801-210	1-1/2X3/4	15	0	080	22.41
801-211	1-1/2X1	10	0	080	22.41
801-212	1-1/2X1-1/4	10	0	080	22.41
801-247	2X1/2	10	0	080	28.40
801-248	2X3/4	10	0	080	28.40
801-249	2X1	10	0	080	28.40
801-250[1]	2X1-1/4	10	0	080	43.29
801-251	2X1-1/2	10	0	080	28.40
801-254[1]	2X2X4	5	0	080	198.31
801-287	2-1/2X1/2	10	0	080	43.41
801-288	2-1/2X3/4	10	0	080	43.41
801-289	2-1/2X1	10	0	080	37.05
801-290	2-1/2X1-1/4	10	0	080	37.05
801-291	2-1/2X1-1/2	10	0	080	37.05
801-292	2-1/2X2	10	0	080	37.05
801-333[1]	3X1/2	5	0	080	52.05
801-334[1]	3X3/4	5	0	080	58.74
801-335	3X1	5	0	080	52.05
801-336[1]	3X1-1/4	5	0	080	52.05
801-337	3X1-1/2	5	0	080	52.05
801-338	3X2	5	0	080	52.05
801-339	3X2-1/2	6	0	080	52.05

Tee - Reducing (continued)
Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
801-416[1]	4X3/4	5	0	080	102.95
801-417[1]	4X1	5	0	080	102.95
801-418[1]	4X1-1/4	5	0	080	102.95
801-419	4X1-1/2	5	0	080	84.11
801-420	4X2	5	0	080	84.11
801-421[1]	4X2-1/2	5	0	080	151.42
801-422	4X3	5	0	080	84.11
801-426[1]	4X6	4	0	080	412.22
801-482[1]	5X1-1/4	4	0	080	333.52
801-482F	5X1-1/4	1	5	083	222.99
801-484[1]	5X1-1/2	4	0	080	363.59
801-484F	5X1-1/2	1	5	083	227.20
801-486[1]	5X2	4	0	080	316.36
801-486F	5X2	1	5	083	227.20
801-487[1]	5X2-1/2	4	0	080	368.03
801-487F	5X2-1/2	1	4	083	259.08
801-488[1]	5X3	4	0	080	316.36
801-488F	5X3	1	4	083	267.56
801-490[1]	5X4	4	0	080	250.94
801-490F	5X4	1	4	083	285.62
801-523[1]	6X1/2	4	0	080	218.75
801-525	6X1	6	0	080	168.07
801-526[1]	6X1-1/4	4	0	080	218.75
801-527[1]	6X1-1/2	4	0	080	218.75
801-528	6X2	4	0	080	168.07
801-529[1]	6X2-1/2	4	0	080	218.57
801-530	6X3	5	0	080	168.07
801-532	6X4	5	0	080	225.66
801-533F	6X5	1	3	083	475.01
801-537F	6X10	1	0	083	1848.89
801-539F	6X12	1	0	083	2052.88
801-573[1]	8X1/2	2	0	080	642.20
801-575[1]	8X1	2	0	080	642.59
801-578[1]	8X2	2	0	080	611.02
801-578F	8X2	1	2	083	419.13
801-579[1]	8X2-1/2	2	0	080	672.29
801-579F	8X2-1/2	1	2	083	423.02
801-580[1]	8X3	2	0	080	611.02
801-580F	8X3	1	2	083	427.76
801-582[1]	8X4	2	0	080	611.02
801-582F	8X4	1	2	083	449.80
801-583F	8X5	1	0	083	608.07
801-585	8X6	2	0	080	523.37
801-591[1]	8X12	1	0	081	3733.67
801-621F	10X2	1	2	083	629.60
801-622F	10X2-1/2	1	0	083	657.58
801-623[1]	10X3	1	0	081	1611.03
801-623F	10X3	1	0	083	675.24
801-624[1]	10X4	1	0	081	1611.03
801-624F	10X4	1	0	083	699.53
801-625F	10X5	1	0	083	752.27
801-626	10X6	1	0	081	1521.63
801-626F	10X6	1	0	083	791.13
801-628[1]	10X8	1	0	081	1790.76
801-628F	10X8	1	0	083	887.53
801-632F	10X12	1	0	083	2186.24
801-661F	12X2	1	0	083	814.14
801-662F	12X2-1/2	1	0	083	849.28
801-663F	12X3	1	0	083	876.99
801-664[1]	12X4	1	0	081	2920.84
801-664F	12X4	1	0	083	930.33
801-665F	12X5	1	0	083	974.92
801-666[1]	12X6	1	0	081	2755.74
801-666F	12X6	1	0	083	1027.26
801-668	12X8	1	0	081	2263.74

PVC Schedule 80 Fittings

Tee - Reducing (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
801-668	12X8	1	0	081	2263.74
801-668F	12X8	1	0	083	1102.11
801-670[1]	12X10	1	0	081	3031.45
801-670F	12X10	1	0	083	1224.68
801-678F	12X18	1	0	083	5458.97
801-691F	14X2	1	0	083	1020.11
801-692F	14X2-1/2	1	0	083	1071.69
801-693F	14X3	1	0	083	1252.40
801-694F	14X4	1	0	083	1380.16
801-696F	14X6	1	0	083	1489.88
801-698[1]	14X8	1	0	082	3507.22
801-698F	14X8	1	0	083	1566.69
801-700[1]	14X10	1	0	082	2490.66
801-700F	14X10	1	0	083	1673.75
801-702	14X12	1	0	082	2899.32
801-702F	14X12	1	0	083	1767.38
801-706F	14X16	1	0	083	5718.92
801-751F	16X2	1	0	083	1308.13
801-752F	16X2-1/2	1	0	083	1391.37
801-753F	16X3	1	0	083	1411.31
801-754F	16X4	1	0	083	1544.03
801-756F	16X6	1	0	083	1642.60
801-758F	16X8	1	0	083	1824.44
801-760F	16X10	1	0	083	1977.71
801-762F	16X12	1	0	083	2179.49
801-764F	16X14	1	0	083	2513.14
801-781F	18X2	1	0	083	1503.78
801-783F	18X3	1	0	083	1830.92
801-784F	18X4	1	0	083	2811.82
801-786F	18X6	1	0	083	3045.48
801-788F	18X8	1	0	083	3175.88
801-790F	18X10	1	0	083	3402.34
801-792F	18X12	1	0	083	3595.58
801-794F	18X14	1	0	083	3821.21
801-796F	18X16	1	0	083	3870.03
801-814F	20X4	1	0	083	3448.54
801-816F	20X6	1	0	083	3641.28
801-818F	20X8	1	0	083	3753.20
801-820F	20X10	1	0	083	3908.31
801-822F	20X12	1	0	083	4190.71
801-824F	20X14	1	0	083	4493.97
801-826F	20X16	1	0	083	4816.71
801-828F	20X18	1	0	083	5062.75
801-904F	24X4	1	0	083	4293.87
801-906F	24X6	1	0	083	4458.31
801-908F	24X8	1	0	083	4574.25
801-910F	24X10	1	0	083	4855.74
801-912F	24X12	1	0	083	5034.93
801-914F	24X14	1	0	083	5242.69
801-916F	24X16	1	0	083	5484.55
801-918F	24X18	1	0	083	6633.87
801-920F	24X20	1	0	083	6759.89

[1] Sized with Bushing

Tee

Soc x Fipt

802-002	1/4	25	150	080	21.55
802-005	1/2	20	160	080	14.74
802-007	3/4	20	160	080	19.07
802-010	1	15	0	080	22.32
802-012	1-1/4	15	0	080	23.85
802-015	1-1/2	10	0	080	28.03
802-020	2	10	0	080	34.57

Tee (continued)

Soc x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
802-030	3	5	0	080	73.78
802-040	4	5	0	080	138.62
802-060F	6	1	2	083	285.47
802-080F	8	1	2	084	611.31

Tee - Reducing

Soc x Fipt

802-101	3/4X1/2	15	120	080	13.54
802-130	1X1/2	50	0	080	14.07
802-131	1X3/4	15	0	080	18.08
802-166	1-1/4X1/2	25	0	080	23.01
802-167[1]	1-1/4X3/4	15	0	080	23.01
802-168	1-1/4X1	10	0	080	45.67
802-209	1-1/2X1/2	25	0	080	28.48
802-210[1]	1-1/2X3/4	20	0	080	28.48
802-211	1-1/2X1	10	0	080	28.48
802-212	1-1/2X1-1/4	10	0	080	28.48
802-247	2X1/2	10	0	080	32.54
802-248	2X3/4	10	0	080	32.54
802-249	2X1	10	0	080	43.29
802-250[1]	2X1-1/4	10	0	080	43.29
802-251[1]	2X1-1/2	10	0	080	60.36
802-287	2-1/2X1/2	10	0	080	74.92
802-288[1]	2-1/2X3/4	10	0	080	74.92
802-289[1]	2-1/2X1	10	0	080	74.92
802-290[1]	2-1/2X1-1/4	10	0	080	74.92
802-291[1]	2-1/2X1-1/2	10	0	080	74.92
802-292[1]	2-1/2X2	10	0	080	83.65
802-333[1]	3X1/2	5	0	080	58.74
802-334[1]	3X3/4	5	0	080	58.74
802-335[1]	3X1	5	0	080	70.65
802-336[1]	3X1-1/4	5	0	080	70.65
802-337[1]	3X1-1/2	5	0	080	70.65
802-338[1]	3X2	5	0	080	90.22
802-339[1]	3X2-1/2	5	0	080	126.89
802-415[1]	4X1/2	5	0	080	103.37
802-416[1]	4X3/4	5	0	080	103.37
802-417[1]	4X1	5	0	080	103.37
802-418[1]	4X1-1/4	5	0	080	103.37
802-419[1]	4X1-1/2	5	0	080	103.37
802-420[1]	4X2	5	0	080	154.52
802-421[1]	4X2-1/2	5	0	080	154.52
802-422[1]	4X3	5	0	080	172.98
802-525[1]	6X1	4	0	080	240.54
802-526[1]	6X1-1/4	4	0	080	240.54
802-527[1]	6X1-1/2	4	0	080	240.54
802-528[1]	6X2	4	0	080	240.54
802-528F*	6X2	1	3	083	438.05
802-529[1]	6X2-1/2	4	0	080	240.54
802-530[1]	6X3	4	0	080	335.81
802-532[1]	6X4	2	0	080	351.83
802-532F*	6X4	1	4	083	542.85
802-578[1]	8X2	2	0	080	655.62
802-578F	8X2	1	2	083	586.67
802-580[1]	8X3	2	0	080	655.62
802-580F	8X3	1	2	083	586.67
802-582[1]	8X4	2	0	080	655.62
802-582F*	8X4	1	2	083	650.24
802-621[1]	10X2	1	0	081	1674.26
802-621F	10X2	1	0	083	712.39
802-623[1]	10X3	1	0	080	1674.26
802-623F	10X3	1	0	083	770.05
802-624[1]	10X4	1	0	081	1674.26
802-624F*	10X4	1	0	083	855.49

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Schedule 80 Fittings

Tee - Reducing (continued)
Soc x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
802-661[1]	12X2	1	0	081	2652.85
802-661F	12X2	1	0	083	904.88
802-663[1]	12X3	1	0	081	2652.85
802-663F	12X3	1	0	083	981.88
802-664[1]	12X4	1	0	081	2652.85
802-664F	12X4	1	0	083	1083.75

[1] Sized with Bushing

* An asterisk (*) appearing after a fabricated fitting part number indicates the item is fiberglass reinforced.

Tee - Special Reinforced
Soc x SR Fipt - Stainless Steel Collar

802-005SR	1/2	25	200	086	8.06
802-007SR	3/4	15	120	086	11.40
802-010SR	1	15	0	086	13.39
802-012SR	1-1/4	25	0	086	15.93
802-020SR	2	10	0	086	32.93
802-030SR	3	5	0	086	71.16
802-040SR	4	5	0	086	133.45

Tee - Special Reinforced Reducing
Soc x SR Fipt - Stainless Steel Collar

802-072SR	1/2X1/4	25	150	086	8.06
802-098SR	3/4X1/4	25	100	086	10.47
802-101SR	3/4X1/2	50	0	086	10.47
802-128SR[1]	1X1/4	10	80	086	24.79
802-130SR	1X1/2	50	0	086	12.92
802-131SR	1X3/4	15	0	086	24.79
802-164SR[1]	1-1/4X1/4	5	0	086	26.43
802-166SR	1-1/4X1/2	25	0	086	17.52
802-168SR	1-1/4X1	10	0	086	17.87
802-207SR[1]	1-1/2X1/4	10	0	086	30.84
802-211SR	1-1/2X1	10	0	086	19.35
802-212SR	1-1/2X1-1/4	10	0	086	19.35
802-245SR[1]	2X1/4	10	0	086	35.62
802-247SR	2X1/2	10	0	086	35.62
802-248SR	2X3/4	10	0	086	35.62
802-287SR	2-1/2X1/2	10	0	086	26.25
802-331SR[1]	3X1/4	5	0	086	68.00
802-333SR[1]	3X1/2	5	0	086	69.97
802-413SR[1]	4X1/4	5	0	086	93.64
802-415SR[1]	4X1/2	5	0	086	101.77

[1] Sized with Bushing

Tee - Brass Transition
Soc x Fipt With Brass Thread Insert

802-005BR	1/2	20	120	086	32.92
802-007BR	3/4	20	80	086	65.97

Not intended to convey or dispense water for human consumption through drinking or cooking

Tee - Brass Transition Reducing
Soc x Fipt With Brass Thread Insert

802-072BR	1/2X1/4	20	120	086	35.48
802-101BR	3/4X1/2	50	0	086	41.08

Not intended to convey or dispense water for human consumption through drinking or cooking

Tee - Reducing
Soc x Fipt x Soc

803-095	3/4X1/2X3/4	50	0	080	12.69

Tee - Special Reinforced Reducing
Soc x SR Fipt - Stainless Steel Collar x Soc

(See also Gauge & Instrument Fittings for additional configurations)

803-095SR	3/4X1/2X3/4	15	0	086	13.19

Tee
Fipt

805-002	1/4	25	150	080	10.77
805-003	3/8	25	150	080	10.77
805-005	1/2	20	240	080	10.77
805-007	3/4	15	120	080	11.99
805-010	1	15	0	080	26.47
805-012	1-1/4	10	0	080	28.06
805-015	1-1/2	10	0	080	34.02
805-020	2	10	0	080	36.57
805-025	2-1/2	5	0	080	133.15
805-030	3	5	0	080	139.06
805-040	4	5	0	080	226.00
805-060F	6	1	2	083	355.13
805-080F	8	1	0	083	655.33

Tee - Special Reinforced
SR Fipt - Stainless Steel Collar

805-002SR	1/4	25	150	086	9.38
805-003SR	3/8	25	150	086	9.38
805-005SR	1/2	25	150	086	9.68
805-007SR	3/4	25	100	086	10.64
805-010SR	1	15	0	086	25.29
805-015SR	1-1/2	10	0	086	29.60
805-020SR	2	10	0	086	31.12

Tee - Street
Spig x Soc x Soc

844-005	1/2	25	200	080	11.65
844-007	3/4	15	120	080	12.22
844-010	1	15	0	080	15.27
844-012	1-1/4	10	0	080	41.97
844-015	1-1/2	10	0	080	41.97
844-020	2	10	0	080	52.45

90° Ell
Soc

806-002	1/4	50	300	080	3.31
806-003	3/8	25	150	080	3.31
806-005	1/2	20	240	080	3.31
806-007	3/4	20	160	080	4.22
806-010	1	25	0	080	6.80
806-012	1-1/4	10	0	080	9.11
806-015	1-1/2	10	0	080	9.76
806-020	2	25	0	080	11.79
806-025	2-1/2	5	0	080	27.59
806-030	3	5	0	080	31.01
806-040	4	5	0	080	47.16
806-045F	4-1/2	1	2	083	216.82
806-050	5	4	0	080	120.91

PVC Schedule 80 Fittings

90° Ell (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
806-050	5	4	0	080	120.91
806-050F	5	1	4	083	242.08
806-060	6	4	0	080	134.19
806-080	8	2	0	080	369.86
806-100	10	1	0	081	1655.26
806-100F	10	1	0	083	660.59
806-120	12	1	0	081	2157.75
806-120F	12	1	0	083	1079.76
806-140	14	1	0	082	2419.32
806-140F	14	1	0	083	1377.35
806-160F	16	1	0	083	1712.98
806-180F	18	1	0	083	2448.07
806-200F	20	1	0	083	2923.53
806-240F	24	1	0	083	4489.44
806-338[1]	3X2	5	0	080	76.01
806-422[1]	4X3	5	0	080	113.54

[1] Sized with Bushing

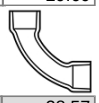
90° Ell Sweep

Soc x Soc

806-005S	1/2	25	150	080	8.24
806-007S	3/4	25	100	080	10.67
806-010S	1	25	0	080	17.19
806-012S	1-1/4	25	0	080	22.73
806-015S	1-1/2	25	0	080	24.43
806-020S	2	25	0	080	29.60

90° Ell - Long Sweep

Soc



806-005LSF	1/2	1	25	083	28.57
806-007LSF	3/4	1	25	083	32.06
806-010LSF	1	1	25	083	35.84
806-012LSF	1-1/4	1	25	083	60.62
806-015LSF	1-1/2	1	25	083	61.39
806-020LSF	2	1	10	083	66.37
806-025LSF	2-1/2	1	7	083	113.97
806-030LSF	3	1	5	083	124.34
806-040LSF	4	1	4	083	139.43
806-060LSF	6	1	2	083	213.55

Not Listed for Electrical Conduit Use

90° Ell

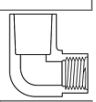
Soc x Fipt

807-002	1/4	25	450	080	13.00
807-003	3/8	25	150	080	13.00
807-005	1/2	20	240	080	13.00
807-007	3/4	20	160	080	15.29
807-010	1	20	0	080	16.54
807-012	1-1/4	10	0	080	19.07
807-015	1-1/2	10	0	080	22.75
807-020	2	10	0	080	29.47
807-030	3	5	0	080	70.39
807-040	4	5	0	080	132.74
807-060[1]	6	3	0	080	307.99

[1]Thread outlet sized with Female Adapter

90° Ell - Reducing

Soc x Fipt



807-101	3/4X1/2	10	60	080	7.88
807-130[1]	1X1/2	10	80	080	12.58

90° Ell - Reducing (continued)

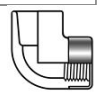
Soc x Fipt

807-131[1]	1X3/4	10	80	080	12.58

[1] Sized with Bushing

90° Ell - Special Reinforced

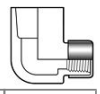
Soc x SR Fipt - Stainless Steel Collar



807-005SR	1/2	20	240	086	7.72
807-007SR	3/4	75	0	086	9.18
807-010SR	1	50	0	086	9.28
807-012SR	1-1/4	25	0	086	12.47
807-015SR	1-1/2	10	0	086	15.41
807-020SR	2	10	0	086	17.68
807-030SR	3	5	0	086	44.89
807-040SR	4	5	0	086	79.32

90° Ell - Special Reinforced Reducing

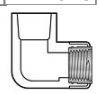
Soc x SR Fipt - Stainless Steel Collar



807-101SR	3/4X1/2	50	0	086	9.16
807-130SR	1X1/2	50	0	086	10.28

90° Ell - Brass Transition

Soc x Fipt With Brass Thread Insert

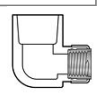


807-005BR	1/2	20	240	086	28.92
807-007BR	3/4	20	160	086	51.19

Not intended to convey or dispense water for human consumption through drinking or cooking

90° Ell - Brass Transition Reducing

Soc x Fipt With Brass Thread Insert

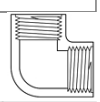


807-101BR	3/4X1/2	20	120	086	36.09

Not intended to convey or dispense water for human consumption through drinking or cooking

90° Ell

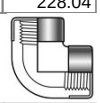
Fipt



808-002	1/4	25	450	080	8.20
808-003	3/8	25	150	080	8.20
808-005	1/2	20	120	080	7.65
808-007	3/4	20	240	080	9.53
808-010	1	15	120	080	11.99
808-012	1-1/4	10	0	080	12.92
808-015	1-1/2	10	0	080	18.32
808-020	2	10	0	080	20.64
808-025	2-1/2	5	0	080	80.37
808-030	3	5	0	080	129.60
808-040	4	5	0	080	228.04

90° Ell - Special Reinforced

SR Fipt - Stainless Steel Collar



808-003SR	3/8	25	150	086	4.51
808-005SR	1/2	20	120	086	4.51
808-007SR	3/4	20	120	086	5.67
808-010SR	1	50	0	086	6.60
808-012SR	1-1/4	25	0	086	7.05
808-015SR	1-1/2	10	0	086	11.00
808-020SR	2	10	0	086	12.39

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Schedule 80 Fittings

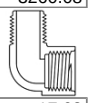
90° Street Ell (continued)

Spig x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
809-012	1-1/4	25	0	080	11.40
809-015	1-1/2	10	0	080	12.22
809-020	2	25	0	080	14.75
809-030	3	5	0	080	41.38
809-040	4	4	0	080	62.87
809-060	6	1	0	080	178.93
809-080	8	2	0	080	493.16
809-100	10	1	0	081	2206.41
809-120	12	1	0	081	2876.12
809-140	14	1	0	082	3260.08

90° Street Ell

Mipt x Fipt



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
812-002	1/4	50	300	080	17.63
812-005[1]	1/2	25	150	080	14.64
812-007	3/4	25	150	080	16.63
812-010[1]	1	50	0	080	22.60
812-012[1]	1-1/4	10	0	080	25.97
812-015[1]	1-1/2	10	0	080	42.56

[1] Sized with Adapter

11-1/4° Ell

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
811-005F	1/2	1	52	083	26.75
811-007F	3/4	1	52	083	26.94
811-010F	1	1	50	083	29.47
811-012F	1-1/4	1	26	083	31.92
811-015	1-1/2	25	0	080	26.68
811-020	2	10	0	080	32.71
811-025F	2-1/2	1	25	083	39.09
811-030	3	10	0	080	83.84
811-040	4	4	0	080	150.66
811-045F	4-1/2	1	18	083	85.19
811-050F	5	1	4	083	102.17
811-060F	6	1	10	083	104.56
811-080F	8	1	4	083	171.15
811-100F	10	1	2	083	303.33
811-120F	12	1	2	083	443.33
811-140F	14	1	0	083	678.69
811-160F	16	1	0	083	907.22
811-180F	18	1	0	083	1171.17
811-200F	20	1	0	083	2020.52
811-240F	24	1	0	083	2410.66

30° Ell

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
815-005F	1/2	1	25	083	26.75
815-007F	3/4	1	25	083	26.94
815-010F	1	1	30	083	29.47
815-012F	1-1/4	1	15	083	31.92
815-015F	1-1/2	1	25	083	32.36
815-020F	2	1	25	083	35.28
815-025F	2-1/2	1	18	083	39.09
815-030F	3	1	20	083	42.65
815-040F	4	1	6	083	55.93
815-045F	4-1/2	1	18	083	85.19
815-050F	5	1	2	083	102.17
815-060	6	5	0	080	189.69
815-080F	8	1	3	083	171.15
815-100F	10	1	2	083	303.33
815-120F	12	1	2	083	443.33

30° Ell (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
815-140F	14	1	0	083	678.69
815-160F	16	1	0	083	907.22
815-180F	18	1	0	083	1393.67
815-200F	20	1	0	083	2020.52
815-240F	24	1	0	083	2410.66

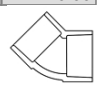
22-1/2° Ell

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
816-005	1/2	20	240	080	7.34
816-007	3/4	20	240	080	11.20
816-010	1	20	160	080	16.78
816-010F	1	1	25	083	16.18
816-015F	1-1/2	1	25	083	28.22
816-012	1-1/4	20	0	080	21.36
816-015	1-1/2	20	0	080	25.25
816-020	2	20	0	080	32.71
816-025	2-1/2	5	0	080	67.20
816-025F	2-1/2	1	18	083	39.09
816-030	3	5	0	080	83.84
816-040	4	4	0	080	150.66
816-045F	4-1/2	1	18	083	85.19
816-050F	5	1	8	083	102.17
816-060	6	4	0	080	189.69
816-060F	6	1	8	083	104.56
816-080	8	4	0	080	411.35
816-080F	8	1	4	083	171.15
816-100F	10	1	2	083	303.33
816-120F	12	1	2	083	443.33
816-140F	14	1	0	083	678.69
816-160F	16	1	0	083	907.22
816-180F	18	1	0	083	1171.17
816-200F	20	1	0	083	2020.52
816-240F	24	1	0	083	2410.66

45° Ell

Soc



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
817-002	1/4	25	450	080	11.87
817-003	3/8	25	150	080	11.87
817-005	1/2	20	240	080	6.22
817-007	3/4	20	240	080	9.51
817-010	1	15	120	080	14.25
817-012	1-1/4	10	80	080	18.15
817-015	1-1/2	10	0	080	21.46
817-020	2	10	0	080	27.83
817-025	2-1/2	5	0	080	58.42
817-030	3	5	0	080	71.11
817-040	4	5	0	080	128.05
817-045F	4-1/2	1	2	083	88.71
817-050	5	4	0	080	153.20
817-050F	5	1	4	083	121.05
817-060	6	4	0	080	161.26
817-080	8	2	0	080	349.63
817-100	10	1	0	081	1100.75
817-100F	10	1	2	083	464.54
817-120	12	1	0	081	1419.89
817-120F	12	1	0	083	653.56
817-140	14	1	0	082	1667.16
817-140F	14	1	0	083	1065.27
817-160F	16	1	0	083	1304.15
817-180F	18	1	0	083	1587.37
817-200F	20	1	0	083	2180.34
817-240F	24	1	0	083	2700.68

PVC Schedule 80 Fittings

15° Ell
Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
818-005F	1/2	1	25	083	26.75
818-007F	3/4	1	23	083	26.94
818-010F	1	1	20	083	29.47
818-012F	1-1/4	15	0	083	31.92
818-015F	1-1/2	1	25	083	32.36
818-020F	2	1	25	083	35.28
818-025F	2-1/2	1	18	083	115.19
818-030F	3	1	35	083	42.65
818-040F	4	1	20	083	55.93
818-045F	4-1/2	1	18	083	85.19
818-050F	5	1	2	083	102.17
818-060F	6	1	8	083	104.56
818-080F	8	1	4	083	171.15
818-100F	10	1	2	083	303.33
818-120F	12	1	2	083	443.33
818-140F	14	1	0	083	678.69
818-160F	16	1	0	083	907.22
818-180F	18	1	0	083	1171.17
818-200F	20	1	0	083	2020.52
818-240F	24	1	0	083	2410.66

45° Ell
Fipt

819-002	1/4	25	450	080	13.46
819-003	3/8	25	150	080	13.46
819-005	1/2	25	150	080	12.28
819-007	3/4	10	60	080	13.20
819-010	1	10	60	080	16.56
819-012	1-1/4	10	80	080	25.26
819-015	1-1/2	10	0	080	31.76
819-020	2	10	0	080	47.08
819-025	2-1/2	5	0	080	93.16
819-030	3	5	0	080	149.84
819-040	4	5	0	080	215.01

45° Ell - Special Reinforced
SR Fipt - Stainless Steel Collar

819-005SR	1/2	25	150	086	7.10
819-007SR	3/4	10	120	086	7.76
819-010SR	1	10	60	086	12.83

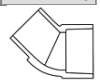
60° Ell
Soc

824-005F	1/2	1	7	083	74.22
824-007F	3/4	1	25	083	87.64
824-010F	1	1	25	083	95.36
824-012F	1-1/4	1	16	083	97.22
824-015F	1-1/2	1	16	083	103.85
824-020F	2	1	16	083	131.75
824-025F	2-1/2	1	10	083	155.11
824-030F	3	1	4	083	155.39
824-040F	4	1	4	083	199.67
824-060F	6	1	2	083	356.59
824-080F	8	1	2	083	432.20
824-100F	10	1	2	083	738.44
824-120F	12	1	0	083	964.51
824-140F	14	1	0	083	1201.02
824-160F	16	1	0	083	1357.04
824-180F	18	1	0	083	2403.19

60° Ell (continued)
Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
824-200F	20	1	0	083	2651.38
824-240F	24	1	0	083	4421.29

45° Street Ell
Spig x Soc



827-005	1/2	50	400	080	6.22
827-007	3/4	50	0	080	9.51
827-010	1	50	0	080	14.25
827-012	1-1/4	25	0	080	18.15
827-015	1-1/2	25	0	080	21.46
827-020	2	10	0	080	27.83
827-025	2-1/2	12	0	080	36.69
827-030	3	10	0	080	71.11
827-040	4	5	0	080	128.05
827-050F	5	1	2	083	154.92
827-060	6	4	0	080	189.69
827-080	8	2	0	080	411.35
827-100	10	1	0	081	1295.03
827-120	12	1	0	081	1670.46
827-140F	14	1	0	083	983.22
827-160F	16	1	0	083	1577.21
827-180F	18	1	0	083	1763.17
827-200F	20	1	0	083	2319.57
827-240F	24	1	0	083	3688.31

22-1/2° Street Ell
Spig x Soc

842-005	1/2	50	400	080	7.62
842-007	3/4	50	0	080	11.71
842-010	1	50	0	080	18.40
842-012	1-1/4	20	0	080	22.91
842-015	1-1/2	25	0	080	25.97
842-020	2	20	0	080	32.71
842-025	2-1/2	5	0	080	85.38
842-030	3	5	0	080	93.73
842-040	4	4	0	080	164.84
842-040F	4	1	5	084	105.02
842-060	6	6	0	080	234.28
842-060F	6	1	6	083	131.75
842-080	8	1	2	080	506.54
842-080F	8	1	4	083	173.88
842-100F	10	1	0	083	355.36
842-120F	12	1	2	084	463.03

Cross
Soc

820-002	1/4	25	150	080	45.94
820-005	1/2	50	0	080	45.94
820-007	3/4	50	0	080	48.35
820-010	1	50	0	080	56.61
820-012	1-1/4	25	0	080	67.93
820-015	1-1/2	25	0	080	73.23
820-020	2	10	0	080	90.67
820-025	2-1/2	10	0	080	123.63
820-030	3	5	0	080	154.20
820-040	4	3	0	080	268.29
820-060F	6	1	0	083	644.71
820-080F	8	1	0	083	942.69
820-100F	10	1	0	083	1520.48
820-120F	12	1	0	083	2141.20
820-140F	14	1	0	083	3441.27

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Schedule 80 Fittings

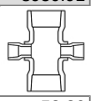
Cross (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
820-160F	16	1	0	083	3900.04
820-180F	18	1	0	083	4090.77
820-200F	20	1	0	083	5956.54
820-240F	24	1	0	083	8950.91

Cross - Reducing

Soc



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
820-101[1]	3/4X1/2	50	0	080	53.26
820-130[1]	1X1/2	25	0	080	69.00
820-131	1X3/4	20	0	080	69.00
820-166[1]	1-1/4X1/2	25	0	080	66.27
820-167	1-1/4X3/4	25	0	080	61.15
820-168[1]	1-1/4X1	25	0	080	87.14
820-209[1]	1-1/2X1/2	20	0	080	98.83
820-210	1-1/2X3/4	15	0	080	98.83
820-211[1]	1-1/2X1	25	0	080	98.83
820-212[1]	1-1/2X1-1/4	25	0	080	98.83
820-247[1]	2X1/2	10	0	080	126.80
820-248[1]	2X3/4	10	0	080	126.80
820-249[1]	2X1	10	0	080	126.80
820-250[1]	2X1-1/4	10	0	080	126.80
820-251[1]	2X1-1/2	10	0	080	126.80
820-289	2-1/2X1	15	0	080	126.80
820-290[1]	2-1/2X1-1/4	10	0	080	185.73
820-291[1]	2-1/2X1-1/2	10	0	080	185.73
820-292[1]	2-1/2X2	4	0	080	185.73
820-335[1]	3X1	4	0	080	251.86
820-336[1]	3X1-1/4	4	0	080	251.86
820-337[1]	3X1-1/2	4	0	080	251.86
820-338[1]	3X2	4	0	080	251.86
820-339[1]	3X2-1/2	4	0	080	251.86
820-420[1]	4X2	3	0	080	404.64
820-420F*	4X2	1	4	083	395.17
820-422[1]	4X3	3	0	080	404.64
820-527F	6X1-1/2	1	0	083	468.90
820-528F	6X2	1	4	083	500.35
820-530F	6X3	1	2	083	526.02
820-532F	6X4	1	2	083	626.97
820-533F*	6X5	1	2	083	743.35
820-578F	8X2	1	0	083	645.65
820-580F	8X3	1	0	083	679.67
820-582F	8X4	1	0	083	701.95
820-585F	8X6	1	0	083	758.55
820-621F	10X2	1	0	083	859.47
820-622F	10X2-1/2	1	0	083	883.56
820-623F	10X3	1	0	083	931.92
820-624F	10X4	1	0	083	967.35
820-626F	10X6	1	0	083	1012.33
820-628F	10X8	1	0	083	1301.89
820-661F	12X2	1	0	083	961.58
820-663F	12X3	1	0	083	1035.99
820-664F	12X4	1	0	083	1102.59
820-666F	12X6	1	0	083	1280.39
820-668F	12X8	1	0	083	1529.51
820-670F	12X10	1	0	083	1040.24
820-691F	14X2	1	0	083	1379.79
820-693F	14X3	1	0	083	1484.94
820-694F	14X4	1	0	083	1630.41
820-696F	14X6	1	0	083	1800.81
820-698F	14X8	1	0	083	2048.53
820-700F	14X10	1	0	083	2366.88
820-702F	14X12	1	0	083	2677.14
820-751F	16X2	1	0	083	1726.16
820-753F	16X3	1	0	083	1858.93

Cross - Reducing (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
820-754F	16X4	1	0	083	2062.17
820-756F	16X6	1	0	083	2230.31
820-758F	16X8	1	0	083	2494.58
820-760F	16X10	1	0	083	2718.33
820-762F	16X12	1	0	083	3053.15
820-764F	16X14	1	0	083	3823.62
820-784F	18X4	1	0	083	2910.95
820-786F	18X6	1	0	083	3038.26
820-788F	18X8	1	0	083	3260.62
820-790F	18X10	1	0	083	3482.81
820-792F	18X12	1	0	083	3647.03
820-794F	18X14	1	0	083	3864.17
820-796F	18X16	1	0	083	4026.45
820-814F	20X4	1	0	083	3650.09
820-816F	20X6	1	0	083	4204.38
820-818F	20X8	1	0	083	4251.60
820-820F	20X10	1	0	083	4545.29
820-822F	20X12	1	0	083	4873.76
820-824F	20X14	1	0	083	5442.01
820-826F	20X16	1	0	083	5548.12
820-828F	20X18	1	0	083	5847.82
820-904F	24X4	1	0	083	4357.68
820-906F	24X6	1	0	083	4631.88
820-908F	24X8	1	0	083	4812.75
820-910F	24X10	1	0	083	4881.51
820-912F	24X12	1	0	083	5104.49
820-914F	24X14	1	0	083	6073.65
820-916F	24X16	1	0	083	6486.02
820-918F	24X18	1	0	083	7442.09
820-920F	24X20	1	0	083	8898.58

[1] Sized with Bushing

Repair Coupling- Fabricated

Gasket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
828-020F	2	1	15	083	82.17
828-030F	3	1	10	083	104.67
828-040F	4	1	4	083	130.43
828-060F	6	1	2	083	151.11
828-080F	8	1	2	083	198.66
828-100F	10	1	0	083	355.72
828-120F	12	1	0	083	453.13
828-140F	14	1	0	083	1038.74
828-160F	16	1	0	083	1239.54
828-180F	18	1	0	083	2139.17
828-200F	20	1	0	083	2310.32
828-240F	24	1	0	083	3170.72

Coupling

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
829-002	1/4	25	450	080	9.57
829-003	3/8	25	150	080	9.57
829-005	1/2	25	150	080	5.98
829-007	3/4	25	300	080	8.09
829-010	1	25	200	080	8.32
829-012	1-1/4	10	60	080	12.67
829-015	1-1/2	10	80	080	13.66
829-020	2	20	0	080	14.67
829-025	2-1/2	10	0	080	36.11
829-030	3	5	0	080	41.46
829-040	4	5	0	080	51.93
829-050	5	5	0	080	102.98
829-050F	5	1	5	083	64.27

PVC Schedule 80 Fittings

Coupling (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
829-060	6	4	0	080	111.76
829-080	8	4	0	080	152.09
829-100	10	1	0	081	522.01
829-100F	10	1	0	083	175.80
829-120	12	1	0	081	601.61
829-120F	12	1	0	083	202.64
829-140	14	1	0	082	765.42
829-140F	14	1	0	083	405.21
829-160F	16	1	0	083	481.75
829-180F	18	1	0	083	949.59
829-200F	20	1	0	083	1170.80
829-240F	24	1	0	083	1285.55

Coupling - Reducer

Soc

829-101	3/4X1/2	50	400	080	7.32
829-130	1X1/2	25	200	080	10.22
829-131	1X3/4	25	200	080	10.67
829-166	1-1/4X1/2	25	0	080	21.67
829-167	1-1/4X3/4	25	0	080	21.67
829-168	1-1/4X1	25	0	080	21.67
829-209	1-1/2X1/2	25	0	080	22.68
829-210	1-1/2X3/4	25	0	080	22.68
829-211	1-1/2X1	25	0	080	22.68
829-212	1-1/2X1-1/4	25	0	080	28.03
829-247	2X1/2	25	0	080	25.58
829-248	2X3/4	10	80	080	25.58
829-249	2X1	25	0	080	25.58
829-250	2X1-1/4	10	40	080	25.58
829-251	2X1-1/2	10	40	080	25.58
829-291	2-1/2X1-1/2	10	0	080	34.12
829-292	2-1/2X2	10	0	080	34.12
829-335[1]	3X1	8	0	080	78.02
829-336[1]	3X1-1/4	6	0	080	78.02
829-337[1]	3X1-1/2	8	0	080	78.02
829-338	3X2	8	0	080	62.83
829-339	3X2-1/2	10	0	080	89.59
829-339F	3X2-1/2	1	9	083	109.27
829-416[1]	4X3/4	6	0	080	129.75
829-417[1]	4X1	6	0	080	129.75
829-419[1]	4X1-1/2	6	0	080	129.75
829-420	4X2	6	0	080	119.78
829-421	4X2-1/2	4	0	080	119.78
829-422	4X3	4	0	080	118.37
829-460F	4-1/2X4	1	20	083	78.36
829-487F	5X2-1/2	1	6	083	116.34
829-488F	5X3	1	6	083	112.79
829-490F	5X4	1	8	083	60.84
829-491F	5X4-1/2	1	10	083	85.89
829-528[1]	6X2	6	0	080	296.38
829-529[1]	6X2-1/2	4	0	080	355.41
829-530[1]	6X3	12	0	080	299.40
829-530F	6X3	1	10	083	111.73
829-532	6X4	4	0	080	241.43
829-534F	6X4-1/2	1	5	083	97.68
829-533F	6X5	1	5	083	102.43
829-579F	8X2-1/2	1	6	083	309.23
829-580F	8X3	1	6	083	283.37
829-582F	8X4	1	6	083	264.44
829-583F	8X5	1	4	083	290.69
829-585	8X6	2	0	080	731.23
829-621F	10X2	1	2	083	456.13
829-623F	10X3	1	2	083	427.03
829-624F	10X4	1	2	083	403.03

Coupling - Reducer (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
829-625F	10X5	1	4	083	366.45
829-626	10X6	1	0	081	856.06
829-626F	10X6	1	4	083	330.28
829-628	10X8	1	0	081	856.06
829-663F	12X3	1	2	083	658.40
829-664F	12X4	1	2	083	562.44
829-665F	12X5	1	2	083	521.81
829-666F	12X6	1	0	083	486.53
829-668	12X8	1	0	081	974.12
829-668F	12X8	1	0	083	376.71
829-670F	12X10	1	0	083	254.49
829-691F	14X2	1	0	083	981.38
829-694F	14X4	1	0	083	819.47
829-696F	14X6	1	0	083	692.18
829-698F	14X8	1	0	083	633.39
829-700F	14X10	1	0	083	619.49
829-702F	14X12	1	0	083	371.57
829-754F	16X4	1	0	083	1216.69
829-756F	16X6	1	0	083	1100.40
829-758F	16X8	1	0	083	966.45
829-760F	16X10	1	0	083	858.45
829-762F	16X12	1	0	083	723.59
829-764F	16X14	1	0	083	549.29
829-783F	18X3	1	0	083	2640.07
829-784F	18X4	1	0	083	2567.20
829-786F	18X6	1	0	083	2399.75
829-788F	18X8	1	0	083	2272.17
829-790F	18X10	1	0	083	2055.42
829-792F	18X12	1	0	083	1691.86
829-794F	18X14	1	0	083	1145.33
829-796F	18X16	1	0	083	977.80
829-814F	20X4	1	0	083	2541.55
829-816F	20X6	1	0	083	2340.06
829-818F	20X8	1	0	083	2236.65
829-820F	20X10	1	0	083	2158.20
829-822F	20X12	1	0	083	1867.04
829-824F	20X14	1	0	083	1862.11
829-826F	20X16	1	0	083	1710.54
829-828F	20X18	1	0	083	1179.55
829-904F	24X4	1	0	083	4065.45
829-906F	24X6	1	0	083	4003.55
829-908F	24X8	1	0	083	3916.79
829-910F	24X10	1	0	083	3822.32
829-912F	24X12	1	0	083	3477.16
829-914F	24X14	1	0	083	3207.22
829-916F	24X16	1	0	083	2922.93
829-918F	24X18	1	0	083	2669.89
829-920F	24X20	1	0	083	2520.93

[1] Sized with Bushing

Coupling - Eccentric Reducer

Soc

829-101FE	3/4X1/2	1	25	083	38.56
829-130FE	1X1/2	1	16	083	27.05
829-131FE	1X3/4	1	15	083	39.69
829-168FE	1-1/4X1	1	12	083	31.46
829-209FE	1-1/2X1/2	1	20	083	49.82
829-210FE	1-1/2X3/4	1	25	083	51.56
829-212FE	1-1/2X1-1/4	1	20	083	32.67
829-249FE	2X1	1	25	083	46.59
829-250FE	2X1-1/4	1	25	083	43.29
829-251FE	2X1-1/2	1	10	083	41.31
829-290FE[2]	2-1/2X1-1/4	1	10	083	64.17
829-291FE[2]	2-1/2X1-1/2	1	20	083	62.38

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

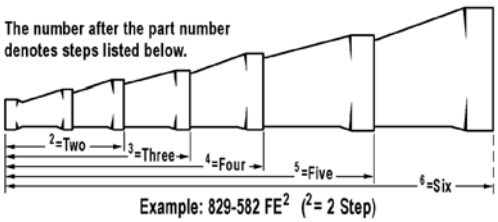
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Coupling - Eccentric Reducer (continued)
Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
829-292FE	2-1/2X2	1	10	083	48.17
829-335FE[2]	3X1	1	10	083	63.21
829-336FE[2]	3X1-1/4	1	10	083	60.88
829-337FE[2]	3X1-1/2	1	10	083	58.49
829-338E	3X2	15	0	080	62.83
829-338FE	3X2	1	20	083	37.36
829-339FE	3X2-1/2	1	10	083	121.31
829-417FE[3]	4X1	1	18	083	153.63
829-418FE[3]	4X1-1/4	1	6	083	150.91
829-419FE[3]	4X1-1/2	1	6	083	146.11
829-420FE[2]	4X2	1	10	083	102.01
829-421FE[2]	4X2-1/2	1	6	083	85.06
829-422FE	4X3	1	10	083	77.15
829-490FE	5X4	1	8	083	102.66
829-528FE[3]	6X2	1	6	083	180.80
829-529FE[3]	6X2-1/2	1	2	083	165.03
829-530FE[2]	6X3	1	6	083	159.27
829-532FE	6X4	1	5	083	115.31
829-533FE	6X5	1	5	083	106.34
829-575FE[5]	8X1	1	0	083	368.84
829-577FE[5]	8X1-1/2	1	0	083	360.56
829-578FE[4]	8X2	1	0	083	320.35
829-580FE[3]	8X3	1	2	083	244.15
829-582FE[2]	8X4	1	2	083	199.43
829-583FE[2]	8X5	1	2	083	199.01
829-585FE	8X6	1	4	083	153.36
829-624FE[3]	10X4	1	0	083	337.48
829-625FE[3]	10X5	1	0	083	384.21
829-626FE[2]	10X6	1	2	083	286.43
829-628FE	10X8	1	2	083	264.67
829-664FE[4]	12X4	1	0	083	516.08
829-666FE[3]	12X6	1	0	083	424.73
829-668FE[2]	12X8	1	0	083	366.94
829-670FE	12X10	1	2	083	234.55
829-696FE[3]	14X6	1	0	083	840.68
829-698FE[2]	14X8	1	0	083	691.34
829-700FE	14X10	1	0	083	573.39
829-702FE	14X12	1	0	083	368.36
829-756FE[4]	16X6	1	0	083	1553.20
829-758FE[3]	16X8	1	0	083	1422.29
829-760FE[2]	16X10	1	0	083	1034.67
829-762FE[2]	16X12	1	0	083	918.62
829-764FE	16X14	1	0	083	711.53
829-786FE[5]	18X6	1	0	083	2144.06
829-788FE[4]	18X8	1	0	083	2052.44
829-790FE[3]	18X10	1	0	083	1917.95
829-792FE[3]	18X12	1	0	083	1711.92
829-794FE[2]	18X14	1	0	083	1411.37
829-796FE	18X16	1	0	083	1377.17

Eccentric Reducer Coupling Footnotes
Multi-Step Configurations

The number after the part number denotes steps listed below.



Example: 829-582 FE[2] ([2]= 2 Step)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each

Coupling
Fipt

830-002	1/4	25	450	080	7.17
830-003	3/8	25	150	080	7.17
830-005	1/2	25	150	080	6.69
830-007	3/4	25	300	080	9.54
830-010	1	15	90	080	10.24
830-012	1-1/4	10	120	080	12.67
830-015	1-1/2	10	80	080	28.20
830-020	2	10	0	080	29.60
830-025	2-1/2	5	0	080	70.66
830-030	3	5	0	080	82.86
830-040	4	5	0	080	143.48
830-060F	6	1	8	083	180.83
830-080F	8	1	6	083	265.92
830-100F	10	1	2	083	361.68

Coupling - Special Reinforced
SR Fipt - Stainless Steel Collar

830-005SR	1/2	25	150	086	3.69
830-007SR	3/4	25	150	086	5.25
830-010SR	1	25	200	086	5.61
830-012SR	1-1/4	10	120	086	6.99
830-015SR	1-1/2	10	80	086	15.47
830-020SR	2	10	0	086	16.22

Coupling - Reducer
Fipt

830-073[1]	1/2X3/8	25	150	080	9.02
830-101	3/4X1/2	50	200	080	7.96
830-211[1]	1-1/2X1	10	40	080	38.80

[1] Sized with Bushing

Coupling - Special Reinforced Reducer
SR Fipt - Stainless Steel Collar

830-101SR	3/4X1/2	50	200	086	4.78
830-130SR	1X1/2	50	0	086	7.09
830-131SR	1X3/4	25	200	086	7.09
830-168SR	1-1/4X1	25	0	086	15.22
830-210SR	1-1/2X3/4	25	0	086	22.59
830-211SR	1-1/2X1	10	80	086	22.59
830-212SR	1-1/2X1-1/4	10	80	086	22.59
830-249SR	2X1	25	0	086	29.94
830-251SR	2X1-1/2	10	0	086	29.94

Grooved Coupling Adapter
Groove x Soc

833-012	1-1/4	10	60	080	16.60
833-015	1-1/2	10	80	080	18.55
833-020	2	10	80	080	21.58
833-025	2-1/2	5	0	080	46.60
833-030	3	5	0	080	55.55
833-040	4	5	0	080	63.04
833-050F	5	1	7	084	121.01
833-060	6	5	0	080	136.12
833-080F	8	1	4	084	156.09
833-100F	10	1	0	084	191.68
833-120F	12	1	0	084	258.95

PVC Schedule 80 Fittings

Female Adapter
Soc x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
835-002	1/4	25	450	080	10.12
835-003	3/8	25	400	080	10.12
835-005	1/2	25	150	080	5.60
835-007	3/4	25	150	080	8.32
835-010	1	15	90	080	12.26
835-012	1-1/4	10	120	080	19.86
835-015	1-1/2	10	80	080	24.35
835-020	2	10	0	080	42.48
835-025	2-1/2	5	0	080	67.07
835-030	3	5	0	080	75.51
835-040	4	5	0	080	129.77
835-060	6	6	0	080	153.66
835-060F	6	1	8	083	201.78
835-080	8	3	0	080	288.88
835-080F	8	1	6	083	238.53
835-100F	10	1	2	083	261.45
835-120F	12	1	0	083	329.96

Female Adapter - Brass Transition
Soc x Fipt With Brass Thread Insert

835-005BR	1/2	25	150	086	24.97
835-007BR	3/4	15	90	086	35.86
835-010BR	1	15	90	086	61.80
835-012BR	1-1/4	15	60	086	101.77
835-015BR	1-1/2	10	40	086	133.69
835-020BR	2	8	32	086	165.59

Not intended to convey or dispense water for human consumption through drinking or cooking

Female Adapter - Brass Transition Reducing
Soc x Fipt With Brass Thread Insert

835-101BR	3/4X1/2	50	0	086	37.07
835-131BR	1X3/4	50	0	086	63.01

Not intended to convey or dispense water for human consumption through drinking or cooking

Female Adapter - Special Reinforced
Soc x SR Fipt - Stainless Steel Collar

835-002SR	1/4	25	450	086	5.59
835-003SR	3/8	25	300	086	5.59
835-005SR	1/2	25	300	086	3.11
835-007SR	3/4	25	300	086	4.52
835-010SR	1	25	200	086	6.72
835-012SR	1-1/4	10	60	086	10.86
835-015SR	1-1/2	10	80	086	13.37
835-020SR	2	10	0	086	23.32
835-025SR	2-1/2	5	0	086	36.79
835-030SR	3	15	0	086	41.45
835-040SR	4	5	0	086	71.24
835-060SR	6	6	0	086	92.56

Female Adapter - Special Reinforced Reducing
Soc x SR Fipt - Stainless Steel Collar

835-074SR	1/2X3/4	50	400	086	4.52
835-098SR	3/4X1/4	25	150	086	14.05
835-101SR	3/4X1/2	50	400	086	4.52
835-102SR	3/4X1	50	0	086	6.72
835-130SR	1X1/2	50	0	086	6.72
835-131SR	1X3/4	25	200	086	6.72

Female Adapter - Stainless Steel Transition
Soc x Fipt With 316 Stainless Steel Thread Insert

NSF Certified Lead Free

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
835-005SS	1/2	25	150	086	48.93
835-007SS	3/4	15	90	086	70.32
835-010SS	1	15	90	086	119.65
835-012SS	1-1/4	15	60	086	199.83
835-015SS	1-1/2	10	40	086	261.04
835-020SS	2	8	32	086	334.87

Female Adapter - Encapsulated Special Reinforced
Soc x ESR Fipt

835-002ESR	1/4	25	450	086	8.09
835-003ESR	3/8	25	300	086	8.09
835-005ESR	1/2	25	300	086	5.02
835-007ESR	3/4	25	300	086	7.41
835-010ESR	1	25	200	086	9.81
835-012ESR	1-1/4	10	80	086	15.83
835-015ESR	1-1/2	10	80	086	22.87
835-020ESR	2	10	0	086	34.00

Female Spigot Adapter, - Brass Transition
Spig x Fipt With Brass Thread Insert

878-005BR	1/2	25	150	086	21.00
878-007BR	3/4	15	90	086	34.01
878-010BR	1	15	90	086	66.81

Not intended to convey or dispense water for human consumption through drinking or cooking

Female Spigot Adapter - Special Reinforced, Spigot
Spig x SR Fipt - Stainless Steel Collar

878-005SR	1/2	50	600	086	4.08
878-007SR	3/4	25	300	086	4.81
878-010SR	1	50	0	086	7.41
878-012SR	1-1/4	25	0	086	11.80
878-015SR	1-1/2	25	0	086	14.15
878-020SR	2	15	0	086	23.55
878-030SR	3	5	0	086	43.28
878-040SR	4	5	0	086	73.48

Female Spigot Adapter - Encapsulated Special Reinforced, Spigot
Spig x ESR Fipt

878-005ESR	1/2	50	600	086	5.57
878-007ESR	3/4	25	300	086	7.67
878-010ESR	1	50	0	086	10.53
878-012ESR	1-1/4	25	0	086	16.20
878-015ESR	1-1/2	25	0	086	23.00
878-020ESR	2	15	0	086	34.66

Male Adapter
Mipt x Soc

836-053	3/8X1/2	50	900	080	6.96
836-005	1/2	25	150	080	6.99
836-007	3/4	25	300	080	7.71
836-102	3/4X1	50	0	080	16.51
836-131	1X3/4	50	400	080	16.51
836-010	1	20	120	080	13.34
836-012	1-1/4	10	120	080	15.60
836-015	1-1/2	10	120	080	22.41

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Schedule 80 Fittings

Male Adapter (continued)

Mipt x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
836-251[1]	2X1-1/2	10	0	080	59.42
836-020	2	10	80	080	32.41
836-025	2-1/2	5	0	080	36.84
836-030	3	5	0	080	40.89
836-040	4	4	0	080	72.76
836-050F	5	1	8	083	221.20
836-060	6	5	0	080	161.62
836-080F	8	1	2	083	174.26
836-100F	10	1	2	083	208.56
836-120F	12	1	0	083	309.94

1- Sized With Bushing

Male Adapter - Internal Reinforced

R Mipt x Soc - Stainless Steel Sleeve

NSF Certified Lead Free

836-005R	1/2	25	150	086	3.84
836-007R	3/4	25	300	086	4.21
836-010R	1	10	60	086	7.38

Male Adapter - PVC Lined Brass Transiton

Brass Mipt x Socket

NSF Certified Lead Free

836-005BR	1/2	40	160	086	27.48
836-007BR	3/4	40	160	086	41.44
836-010BR	1	10	60	086	67.39
836-012BR	1-1/4	10	60	086	113.52
836-015BR	1-1/2	10	40	086	150.63
836-020BR	2	8	32	086	187.13

Male Spigot Adapter

Spig x Mipt

861-005	1/2	50	300	080	7.03
861-007	3/4	25	300	080	10.37
861-010	1	50	0	080	15.32
861-131	1X3/4	50	200	080	15.80
861-012	1-1/4	25	0	080	16.60
861-015	1-1/2	25	0	080	18.55
861-020	2	25	0	080	21.58

Female Spigot Adapter - Stainleess Steel Transition

Spig x Fipt With 316 Stainless Steel Thread Insert

878-010SS	1	15	90	086	84.78
878-005SS	1/2	25	150	086	48.93
878-007SS	3/4	15	90	086	65.70

Female Spigot Adapter - Special Reinforced Reducing

Spig x SR Fipt - Stainless Steel Collar

878-072SR	1/2X1/4	25	450	086	11.35
878-098SR	3/4X1/4	50	400	086	15.64
878-128SR	1X1/4	50	400	086	16.13

Reducer Bushing Flush Style

Spig x Soc

837-052	3/8X1/4	50	450	080	5.28
837-072	1/2X1/4	50	300	080	5.28
837-073	1/2X3/8	50	600	080	5.28
837-101	3/4X1/2	50	600	080	1.93

Reducer Bushing Flush Style (continued)

Spig x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
837-129[1]	1X3/8	50	200	080	11.01
837-130	1X1/2	50	300	080	5.52
837-131	1X3/4	50	400	080	5.52
837-166	1-1/4X1/2	25	150	080	8.65
837-167	1-1/4X3/4	25	300	080	8.65
837-168	1-1/4X1	25	150	080	8.65
837-209	1-1/2X1/2	25	200	080	11.79
837-210	1-1/2X3/4	25	200	080	11.79
837-211	1-1/2X1	25	200	080	11.79
837-212	1-1/2X1-1/4	25	200	080	11.79
837-247	2X1/2	10	120	080	16.81
837-248	2X3/4	10	120	080	16.81
837-249	2X1	10	120	080	16.81
837-250	2X1-1/4	10	120	080	16.81
837-251	2X1-1/2	10	120	080	16.81
837-287[1]	2-1/2X1/2	10	40	080	39.04
837-288[1]	2-1/2X3/4	10	40	080	39.04
837-289	2-1/2X1	10	40	080	39.04
837-290	2-1/2X1-1/4	10	80	080	29.19
837-291	2-1/2X1-1/2	10	40	080	29.19
837-292	2-1/2X2	15	0	080	29.19
837-333[1]	3X1/2	10	0	080	53.75
837-334[1]	3X3/4	10	0	080	52.04
837-335	3X1	10	0	080	46.31
837-336	3X1-1/4	10	0	080	46.31
837-337	3X1-1/2	10	0	080	46.31
837-338	3X2	10	0	080	46.31
837-339	3X2-1/2	15	0	080	46.31
837-415[1]	4X1/2	6	0	080	82.32
837-416[1]	4X3/4	6	0	080	82.32
837-417[1]	4X1	6	0	080	82.32
837-418[1]	4X1-1/4	6	0	080	82.32
837-419[1]	4X1-1/2	6	0	080	82.32
837-420	4X2	6	0	080	64.12
837-421	4X2-1/2	6	0	080	64.12
837-422	4X3	6	0	080	64.12
837-486[1]	5X2	3	0	080	72.17
837-488[1]	5X3	5	0	080	95.05
837-490	5X4	4	0	080	84.71
837-490F	5X4	1	4	083	90.34
837-524[1]	6X3/4	5	0	080	107.02
837-525[1]	6X1	5	0	080	101.67
837-526[1]	6X1-1/4	5	0	080	107.02
837-527[1]	6X1-1/2	5	0	080	107.02
837-528	6X2	5	0	080	89.16
837-529*	6X2-1/2	5	0	080	138.23
837-530	6X3	5	0	080	89.16
837-532	6X4	5	0	080	89.16
837-533F	6X5	1	5	083	290.07
837-534	6X5	5	0	080	89.16
837-577[1]	8X1-1/2	4	0	080	329.85
837-578[1]	8X2	4	0	080	312.28
837-580[1]	8X3	6	0	080	312.28
837-582[1]	8X4	6	0	080	216.89
837-583[1]	8X5	2	0	080	315.54
837-583F	8X5	1	6	083	513.40
837-585	8X6	4	0	080	216.89
837-621[1]	10X2	2	0	081	603.87
837-622[1]	10X2-1/2	2	0	081	657.96
837-623[1]	10X3	2	0	081	603.87
837-624[1]	10X4	2	0	081	603.87
837-625F	10X5	1	4	083	786.54
837-626	10X6	3	0	081	509.51
837-628	10X8	3	0	081	509.51
837-628F	10X8	1	6	083	197.05

PVC Schedule 80 Fittings

Reducer Bushing Flush Style (continued)

Spig x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
837-663[1]	12X3	2	0	081	894.88
837-664[1]	12X4	2	0	081	894.88
837-666[1]	12X6	2	0	081	822.16
837-666F[1]	12X6	1	2	083	578.84
837-668	12X8	2	0	081	588.82
837-668F[1]	12X8	1	2	083	560.07
837-670	12X10	2	0	081	588.82
837-670F	12X10	1	3	083	224.34
837-694F	14X4	1	3	083	1276.08
837-696F	14X6	1	0	083	1136.21
837-698F	14X8	1	0	083	814.08
837-700F	14X10	1	3	083	508.22
837-702F	14X12	1	3	083	218.02
837-754F	16X4	1	0	083	1457.79
837-756F	16X6	1	0	083	1353.68
837-758F	16X8	1	0	083	1065.78
837-760F	16X10	1	0	083	772.51
837-762F	16X12	1	2	083	455.93
837-764F	16X14	1	2	083	445.39
837-786F	18X6	1	0	083	2294.89
837-788F	18X8	1	0	083	2102.60
837-790F	18X10	1	0	083	1725.99
837-792F	18X12	1	0	083	1099.87
837-794F	18X14	1	0	083	1089.40
837-796F	18X16	1	0	083	503.14
837-816F	20X6	1	0	083	3201.57
837-818F	20X8	1	0	083	2960.99
837-820F	20X10	1	0	083	2741.03
837-822F	20X12	1	0	083	2430.46
837-824F	20X14	1	0	083	1998.45
837-826F	20X16	1	0	083	1568.04
837-828F	20X18	1	0	083	818.56
837-906F	24X6	1	0	083	5029.45
837-908F	24X8	1	0	083	4876.32
837-910F	24X10	1	0	083	4283.33
837-912F	24X12	1	0	083	3864.53
837-914F	24X14	1	0	083	3619.45
837-916F	24X16	1	0	083	3423.78
837-918F	24X18	1	0	083	2967.67
837-920F	24X20	1	0	083	2452.61

[1] Sized with Bushing

Reducer Bushing Flush Style

Spig x Fipt

838-052	3/8X1/4	50	450	080	5.28
838-071	1/2X1/8	50	600	080	5.28
838-072	1/2X1/4	50	350	080	5.28
838-073	1/2X3/8	50	500	080	5.28
838-098	3/4X1/4	50	600	080	3.49
838-099	3/4X3/8	50	600	080	3.49
838-101	3/4X1/2	50	300	080	3.49
838-127	1X1/8	25	150	080	5.52
838-129	1X3/8	50	400	080	5.52
838-130	1X1/2	50	300	080	5.52
838-131	1X3/4	50	400	080	5.52
838-166	1-1/4X1/2	25	300	080	11.21
838-167	1-1/4X3/4	25	300	080	11.21
838-168	1-1/4X1	25	300	080	11.21
838-206	1-1/2X1/8	25	100	080	14.04
838-207	1-1/2X1/4	25	200	080	13.34
838-209	1-1/2X1/2	25	200	080	14.04
838-210	1-1/2X3/4	25	200	080	14.04
838-211	1-1/2X1	25	200	080	14.04
838-212	1-1/2X1-1/4	25	200	080	14.04

Reducer Bushing Flush Style (continued)

Spig x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
838-247	2X1/2	10	60	080	17.18
838-248	2X3/4	10	60	080	17.18
838-249	2X1	10	120	080	17.18
838-250	2X1-1/4	10	120	080	17.18
838-251	2X1-1/2	10	120	080	17.18
838-287	2-1/2X1/2	10	0	080	36.37
838-288	2-1/2X3/4	10	40	080	36.37
838-289	2-1/2X1	10	40	080	36.37
838-290	2-1/2X1-1/4	10	40	080	36.37
838-291	2-1/2X1-1/2	10	0	080	36.37
838-292	2-1/2X2	10	40	080	36.37
838-334	3X3/4	10	0	080	67.33
838-335	3X1	10	0	080	67.33
838-336	3X1-1/4	10	0	080	67.33
838-337	3X1-1/2	10	0	080	67.33
838-338	3X2	10	0	080	67.33
838-339	3X2-1/2	10	0	080	67.33
838-419	4X1-1/2	6	0	080	130.13
838-420	4X2	6	0	080	103.43
838-421	4X2-1/2	6	0	080	103.43
838-422	4X3	6	0	080	103.43
838-528	6X2	5	0	080	119.14
838-530	6X3	5	0	080	119.14
838-532	6X4	5	0	080	119.14

Special Reinforced Reducer Bushing Flush Style

Spig x SR Fipt - Stainless Steel Collar

838-128SR	1X1/4	25	150	086	3.31
838-207SR	1-1/2X1/4	25	200	086	8.43
838-166SR	1-1/4X1/2	25	100	086	6.04
838-209SR	1-1/2X1/2	10	60	086	8.43
838-210SR	1-1/2X3/4	25	200	086	8.43
838-247SR	2X1/2	10	80	086	10.32
838-248SR	2X3/4	10	80	086	10.32
838-249SR	2X1	10	80	086	10.32
838-334SR	3X3/4	10	0	086	40.38
838-335SR	3X1	10	0	086	40.38
838-336SR	3X1-1/4	10	0	086	40.38
838-337SR	3X1-1/2	10	0	086	40.38
838-528SR	6X2	5	0	086	71.48
838-530SR	6X3	5	0	086	64.35
838-532SR	6X4	5	0	086	71.48

Reducer Bushing (T.T.) Flush Style

Mipt x Fipt

839-041	1/4X1/8	25	500	080	12.05
839-052	3/8X1/4	50	450	080	12.05
839-072	1/2X1/4	50	300	080	12.05
839-073	1/2X3/8	50	300	080	12.05
839-098	3/4X1/4	50	300	080	8.98
839-099	3/4X3/8	50	300	080	8.98
839-101	3/4X1/2	50	300	080	7.40
839-128	1X1/4	25	150	080	14.49
839-129	1X3/8	50	600	080	11.59
839-130	1X1/2	50	300	080	11.59
839-131	1X3/4	50	700	080	11.59
839-166	1-1/4X1/2	25	150	080	12.29
839-167	1-1/4X3/4	25	150	080	12.29
839-168	1-1/4X1	25	300	080	12.29
839-209	1-1/2X1/2	25	150	080	14.57
839-210	1-1/2X3/4	25	300	080	14.57
839-211	1-1/2X1	25	300	080	14.57

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Schedule 80 Fittings

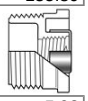
Reducer Bushing (T.T.) Flush Style (continued)

Mipt x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
839-212	1-1/2X1-1/4	25	300	080	14.57
839-247	2X1/2	10	60	080	21.35
839-248	2X3/4	10	60	080	21.35
839-249	2X1	10	60	080	21.35
839-250	2X1-1/4	10	60	080	21.35
839-251	2X1-1/2	10	60	080	21.35
839-292	2-1/2X2	10	80	080	28.91
839-337	3X1-1/2	10	0	080	39.29
839-338	3X2	10	0	080	39.29
839-339	3X2-1/2	10	0	080	39.29
839-420	4X2	6	0	080	80.99
839-422	4X3	6	0	080	103.43
839-532	6X4	5	0	080	135.89

Reducer Bushing - Special Reinforced

Mipt x SR Fipt - Stainless Steel Collar



839-128SR	1X1/4	25	150	086	5.98
839-209SR	1-1/2X1/2	25	300	086	8.74
839-210SR	1-1/2X3/4	25	300	086	8.74
839-247SR	2X1/2	10	60	086	12.83
839-248SR	2X3/4	10	60	086	12.83
839-249SR	2X1	10	120	086	12.83
839-420SR	4X2	6	0	086	48.59

Cap

Soc

847-002	1/4	25	450	080	7.60
847-003	3/8	25	450	080	7.60
847-005	1/2	25	150	080	5.85
847-007	3/4	25	300	080	6.17
847-010	1	15	90	080	10.96
847-012	1-1/4	10	60	080	13.22
847-015	1-1/2	10	120	080	13.22
847-020	2	10	80	080	26.11
847-025	2-1/2	5	40	080	53.31
847-030	3	5	0	080	62.38
847-040	4	5	0	080	105.19
847-050F	5	1	6	083	133.59
847-060	6	4	0	080	261.68
847-080	8	3	0	080	335.98
847-100F	10	1	5	083	343.68
847-120F	12	1	4	083	515.79
847-140F	14	1	2	083	571.21
847-160F	16	1	2	083	740.00
847-180F	18	1	0	083	1080.38
847-200F	20	1	0	083	1448.29
847-240F	24	1	0	083	2694.45

Cap

Fipt

848-002	1/4	25	450	080	7.32
848-003	3/8	25	450	080	7.32
848-005	1/2	25	300	080	7.32
848-007	3/4	25	300	080	8.20
848-010	1	15	90	080	10.33
848-012	1-1/4	10	60	080	12.29
848-015	1-1/2	10	120	080	14.04
848-020	2	10	40	080	27.59
848-025	2-1/2	5	40	080	55.19
848-030	3	5	0	080	64.97
848-040	4	5	0	080	114.40

Cap (continued)

Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
848-060F	6	1	4	083	190.86
848-080F	8	1	3	083	248.39

Cap - Special Reinforced

SR Fipt - Stainless Steel Collar

848-002SR	1/4	25	500	086	4.03
848-003SR	3/8	25	450	086	4.03
848-005SR	1/2	50	300	086	4.41
848-007SR	3/4	25	300	086	5.65
848-030SR	3	5	0	086	34.84

Plug

Spig

849-005	1/2	50	300	080	5.47
849-007	3/4	50	300	080	6.09
849-010	1	50	200	080	6.87
849-012	1-1/4	25	100	080	8.77
849-015	1-1/2	10	120	080	9.62
849-020	2	10	120	080	12.73
849-025F[4]	2-1/2	1	4	083	29.80
849-030F[4]	3	1	4	083	35.94
849-040F[4]	4	1	4	083	78.61
849-060F[4]	6	1	6	083	218.58
849-080F[4]	8	1	6	083	284.60
849-100F[4]	10	1	2	083	462.79
849-120F[4]	12	1	0	083	857.31

[4] Plug fabricated using Cap and pipe spigot.

Plug

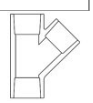
Mipt

850-002	1/4	50	900	080	6.32
850-003	3/8	50	600	080	6.32
850-005	1/2	50	500	080	5.63
850-007	3/4	50	300	080	5.85
850-010	1	15	90	080	7.17
850-012	1-1/4	10	120	080	10.57
850-015	1-1/2	10	120	080	12.85
850-020	2	10	120	080	13.20
850-025	2-1/2	5	60	080	36.84
850-030	3	5	40	080	42.99
850-040	4	6	0	080	83.69
850-060	6	6	0	080	99.49
850-080F[4]	8	1	2	083	245.58
850-100F[4]	10	1	3	083	359.93
850-120F[4]	12	1	0	083	492.98

[4] Plug fabricated using Cap and threaded pipe.

Wye

Soc



1/2" - 2" - 235 psi Maximum Internal Pressure Rating @ 73°F (23°C)
2-1/2" - 6" - 150 psi Maximum Internal Pressure Rating @ 73°F (23°C)
8" - Larger & All Fabricated Sizes - 100 psi Maximum Internal Pressure Rating @ 73°F (23°C)

875-005	1/2	25	100	080	13.68
875-007	3/4	25	0	080	14.38
875-010	1	20	0	080	23.01
875-012	1-1/4	20	0	080	35.28
875-015	1-1/2	20	0	080	35.28

PVC Schedule 80 Fittings

Wye (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
875-020	2	10	0	080	101.22
875-025[1]	2-1/2	6	0	080	461.20
875-030	3	5	0	080	325.38
875-040	4	4	0	080	403.17
875-050F*	5	1	2	083	630.71
875-060	6	2	0	080	550.66
875-080	8	1	0	080	1107.40
875-080F	8	1	0	083	853.29
875-100F*	10	1	0	083	1338.99
875-120F*	12	1	0	083	1701.91
875-140F*	14	1	0	083	2842.43
875-160F*	16	1	0	083	3733.88
875-180F*	18	1	0	083	4186.18
875-200F*	20	1	0	083	5591.94
875-240F*	24	1	0	083	7442.15

[1] Sized with Bushing

* An asterisk (*) appearing after a fabricated fitting part number indicates the item is fiberglass reinforced.

Wye - Reducing

Soc

1/2" - 2" - 235 psi Maximum Internal Pressure Rating @ 73°F (23°C)
3" - 6" - 150 psi Maximum Internal Pressure Rating @ 73°F (23°C)
8" - Larger & All Fabricated Sizes - 100 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
875-101[1]	3/4X1/2	25	0	080	16.60
875-130[1]	1X1/2	20	0	080	29.11
875-131[1]	1X3/4	20	0	080	29.11
875-166[1]	1-1/4X1/2	20	0	080	44.84
875-167[1]	1-1/4X3/4	20	0	080	44.84
875-168[1]	1-1/4X1	20	0	080	44.84
875-209[1]	1-1/2X1/2	20	0	080	48.03
875-210[1]	1-1/2X3/4	20	0	080	48.03
875-211[1]	1-1/2X1	20	0	080	48.03
875-212[1]	1-1/2X1-1/4	20	0	080	48.03
875-247[1]	2X1/2	10	0	080	120.41
875-248[1]	2X3/4	10	0	080	120.41
875-249[1]	2X1	10	0	080	120.41
875-250[1]	2X1-1/4	10	0	080	120.41
875-251[1]	2X1-1/2	10	0	080	120.41
875-292[1]	2-1/2X2-1/2X2	5	0	080	468.76
875-335[1]	3X1	5	0	080	379.27
875-336[1]	3X1-1/4	5	0	080	379.27
875-337[1]	3X1-1/2	5	0	080	379.27
875-338[1]	3X2	4	0	080	379.27
875-339[1]	3X2-1/2	5	0	080	379.27
875-420	4X2	4	0	080	476.83
875-420F*	4X2	1	5	083	397.41
875-421[1]	4X2-1/2	4	0	080	528.54
875-421F*	4X2-1/2	1	4	083	444.12
875-422[1]	4X3	4	0	080	476.83
875-525[1]	6X1	5	0	080	584.64
875-528[1]	6X2	5	0	080	519.19
875-528F*	6X2	1	3	083	408.28
875-530[1]	6X3	5	0	080	519.19
875-530F*	6X3	1	2	083	443.57
875-532	6X4	5	0	080	419.66
875-578[1]	8X2	2	0	080	1448.65
875-578F*	8X2	1	2	083	660.56
875-579F*	8X2-1/2	1	2	083	675.37
875-580[1]	8X3	1	0	080	1448.65
875-580F*	8X3	1	2	083	670.95
875-582	8X4	2	0	080	1448.65

Wye - Reducing (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
875-582F*	8X4	1	2	083	711.42
875-585[1]	8X6	1	0	080	1351.33
875-585F*	8X6	1	0	083	838.92
875-621F*	10X2	1	0	083	889.24
875-622F*	10X2-1/2	1	0	083	895.43
875-623F*	10X3	1	0	083	906.56
875-624F*	10X4	1	0	083	988.04
875-625F*	10X5	1	0	083	1107.33
875-626	10X6	1	0	081	1564.51
875-626F*	10X6	1	0	083	1124.31
875-628	10X8	1	0	081	1991.86
875-628F*	10X8	1	0	083	1300.27
875-661F*	12X2	1	0	083	986.82
875-662F*	12X2-1/2	1	0	083	1075.84
875-663F*	12X3	1	0	083	1177.29
875-664F*	12X4	1	0	083	1246.79
875-666F*	12X6	1	0	083	1421.92
875-668F*	12X8	1	0	083	1557.75
875-670F*	12X10	1	0	083	1650.80
875-694F*	14X4	1	0	083	1542.98
875-696F*	14X6	1	0	083	1632.80
875-698F*	14X8	1	0	083	1670.46
875-700F*	14X10	1	0	083	1865.06
875-702F*	14X12	1	0	083	2113.86
875-754F*	16X4	1	0	083	1680.47
875-756F*	16X6	1	0	083	1687.76
875-758F*	16X8	1	0	083	1904.77
875-760F*	16X10	1	0	083	2144.28
875-762F*	16X12	1	0	083	2336.28
875-764F*	16X14	1	0	083	2705.55
875-784F*	18X4	1	0	083	3016.78
875-786F*	18X6	1	0	083	3406.48
875-788F*	18X8	1	0	083	3533.01
875-790F*	18X10	1	0	083	3797.31
875-792F*	18X12	1	0	083	3811.79
875-794F*	18X14	1	0	083	4116.92
875-796F*	18X16	1	0	083	4145.94
875-814F*	20X4	1	0	083	3727.95
875-816F*	20X6	1	0	083	4017.12
875-818F*	20X8	1	0	083	4245.20
875-820F*	20X10	1	0	083	4388.98
875-822F*	20X12	1	0	083	4546.60
875-824F*	20X14	1	0	083	4908.17
875-826F*	20X16	1	0	083	5314.37
875-828F*	20X18	1	0	083	5516.26
875-904F*	24X4	1	0	083	4638.11
875-906F*	24X6	1	0	083	4797.68
875-908F*	24X8	1	0	083	4920.49
875-910F*	24X10	1	0	083	5143.16
875-912F*	24X12	1	0	083	5470.07
875-914F*	24X14	1	0	083	5682.24
875-916F*	24X16	1	0	083	6062.14
875-918F*	24X18	1	0	083	6990.88
875-920F*	24X20	1	0	083	7318.35

[1] Sized with Bushing

* An asterisk (*) appearing after a fabricated fitting part number indicates the item is fiberglass reinforced.

Double Wye

Soc

100 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
876-020F*	2	1	4	083	334.67
876-030F*	3	1	4	083	421.77

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Schedule 80 Fittings

Double Wye (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
876-040F*	4	1	2	083	765.93
876-060F*	6	1	0	083	895.23
876-080F*	8	1	0	083	1066.61
876-100F*	10	1	0	083	1900.60
876-120F*	12	1	0	083	2676.48

For larger sizes please contact your Regional Spears® Distribution Center.

Double Wye - Reducing

Soc

Size 3" is 150 psi, all Fabricated Sizes- 100 psi Maximum Internal Pressure Rating @ 73°F (23°C)

876-338	3X2	5	0	080	406.99
876-420F*	4X2	1	2	083	531.52
876-421F*	4X2-1/2	1	2	083	601.79
876-422F*	4X3	1	2	083	622.46
876-528F*	6X2	1	2	083	625.44
876-529F*	6X2-1/2	1	2	083	653.28
876-530F*	6X3	1	2	083	657.53
876-532F*	6X4	1	0	083	783.78
876-578F*	8X2	1	2	083	806.75
876-579F*	8X2-1/2	1	2	083	844.83
876-580F*	8X3	1	0	083	849.99
876-582F*	8X4	1	0	083	877.41
876-585F*	8X6	1	0	083	990.69
876-621F*	10X2	1	0	083	1075.73
876-622F*	10X2-1/2	1	0	083	1157.96
876-623F*	10X3	1	0	083	1164.83
876-624F*	10X4	1	0	083	1209.04
876-626F*	10X6	1	0	083	1265.54
876-628F*	10X8	1	0	083	1626.46
876-661F*	12X2	1	0	083	1201.98
876-662F*	12X2-1/2	1	0	083	1273.29
876-663F*	12X3	1	0	083	1293.39
876-664F*	12X4	1	0	083	1377.71
876-666F*	12X6	1	0	083	1598.79
876-668F*	12X8	1	0	083	1909.69
876-670F*	12X10	1	0	083	2178.07

* An asterisk (*) appearing after a fabricated fitting part number indicates the item is fiberglass reinforced.

For larger sizes please contact your Regional Spears® Distribution Center.

Union 2000 - Socket/FKM

Soc X Soc with FKM O-ring Seal

235 psi Maximum Internal Pressure rating @ 73°F (23°C)

857-002	1/4	25	150	080	22.91
857-003	3/8	25	150	080	22.91
8057-005	1/2	20	120	080	12.26
8057-007	3/4	20	80	080	15.58
8057-010	1	15	90	080	17.77
8057-012	1-1/4	10	0	080	35.31
8057-015	1-1/2	10	0	080	39.99
8057-020	2	5	0	080	54.21
8057-025	2-1/2	5	0	080	86.82
8057-030	3	5	0	080	100.94
8057-040	4	4	0	080	140.59
8057-060	6	1	0	080	312.46

Union 2000 - Socket/EPDM

Soc x Soc with EPDM O-ring Seal

235 psi Maximum Internal Pressure rating @ 73°F (23°C)

897-002	1/4	25	150	080	22.62

Union 2000 - Socket/EPDM (continued)

Soc x Soc with EPDM O-ring Seal

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
897-003	3/8	25	150	080	22.62
8097-005	1/2	20	120	080	12.08
8097-007	3/4	20	80	080	15.38
8097-010	1	15	90	080	17.60
8097-012	1-1/4	10	0	080	34.89
8097-015	1-1/2	10	0	080	39.48
8097-020	2	5	0	080	53.57
8097-025	2-1/2	5	0	080	85.16
8097-030	3	5	0	080	99.68
8097-040	4	4	0	080	137.88
8097-060	6	1	0	080	306.41

Union 2000 - Socket/Fipt/FKM

Soc x Fipt with FKM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

859-002	1/4	25	150	080	24.67
859-003	3/8	25	150	080	24.67
8059-005	1/2	20	120	080	14.93
8059-007	3/4	20	80	080	20.88
8059-010	1	15	90	080	27.77
8059-012	1-1/4	10	0	080	53.05
8059-015	1-1/2	10	0	080	65.66
8059-020	2	5	0	080	101.09
8059-025	2-1/2	5	0	080	179.63
8059-030	3	5	0	080	238.58
8059-040	4	4	0	080	274.19
8059-060	6	1	0	080	609.34

Union 2000 - Socket/Fipt/EPDM

Soc x Fipt with EPDM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

899-002	1/4	25	150	080	24.38
899-003	3/8	25	150	080	24.38
8099-005	1/2	20	120	080	14.74
8099-007	3/4	20	80	080	20.62
8099-010	1	15	90	080	27.42
8099-012	1-1/4	10	0	080	52.42
8099-015	1-1/2	10	0	080	64.88
8099-020	2	5	0	080	99.83
8099-025	2-1/2	5	0	080	141.15
8099-030	3	5	0	080	235.59
8099-040	4	4	0	080	270.51
8099-060	6	1	0	080	601.12

Union 2000 - Socket/Spigot/FKM

Soc x Spig with FKM O-ring Seal

235 psi Maximum Internal Pressure rating @ 73°F (23°C)

8056-005	1/2	20	120	080	12.26
8056-007	3/4	20	160	080	15.58
8056-010	1	15	90	080	17.77
8056-012	1-1/4	10	0	080	35.31
8056-015	1-1/2	10	0	080	39.99
8056-020	2	5	0	080	54.21
8056-025	2-1/2	5	0	080	86.82
8056-030	3	5	0	080	100.94
8056-040	4	4	0	080	140.59
8056-060	6	1	0	080	312.46

PVC Schedule 80 Fittings

Union 2000 - Socket/Spigot/EPDM

Soc x Spig with EPDM O-ring Seal

235 psi Maximum Internal Pressure rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8096-005	1/2	20	160	080	12.08
8096-007	3/4	20	80	080	15.38
8096-010	1	15	90	080	17.60
8096-012	1-1/4	10	0	080	34.89
8096-015	1-1/2	10	0	080	39.48
8096-020	2	5	0	080	53.57
8096-025	2-1/2	5	0	080	85.16
8096-030	3	5	0	080	99.68
8096-040	4	4	0	080	137.88
8096-060	6	1	0	080	306.41

Union 2000 - Socket/Special Reinforced Fipt/FKM

Soc x SR Fipt with FKM O-ring Seal - Stainless Steel Collar

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8059-005SR	1/2	20	120	086	8.32
8059-007SR	3/4	20	80	086	11.45
8059-010SR	1	15	90	086	14.88
8059-012SR	1-1/4	10	0	086	28.44
8059-015SR	1-1/2	10	0	086	35.09
8059-020SR	2	5	0	086	53.59
8059-025SR	2-1/2	5	0	086	115.19
8059-030SR	3	5	0	086	130.95
8059-040SR	4	4	0	086	150.35
8059-060SR	6	1	0	086	334.11

Union 2000 - Socket/Special Reinforced Fipt/EPDM

Soc x SR Fipt with EPDM O-ring Seal - Stainless Steel Collar

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8099-005SR	1/2	20	160	086	8.00
8099-007SR	3/4	20	80	086	11.40
8099-010SR	1	15	90	086	14.71
8099-012SR	1-1/4	10	0	086	25.58
8099-015SR	1-1/2	10	0	086	33.15
8099-020SR	2	5	0	086	53.35
8099-025SR	2-1/2	5	0	086	114.12
8099-030SR	3	5	0	086	127.04
8099-040SR	4	4	0	086	144.99
8099-060SR	6	1	0	086	322.21

Union 2000 - FIPT/FKM

Fipt x Fipt with FKM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
858-002	1/4	25	150	080	24.67
858-003	3/8	25	150	080	24.67
8058-005	1/2	20	120	080	14.21
8058-007	3/4	20	80	080	19.91
8058-010	1	15	90	080	26.48
8058-012	1-1/4	10	0	080	50.53
8058-015	1-1/2	10	0	080	62.57
8058-020	2	5	0	080	96.26
8058-025	2-1/2	5	0	080	162.82
8058-030	3	5	0	080	244.18
8058-040	4	4	0	080	286.98
8058-060	6	1	0	080	637.71

Union 2000 - FIPT/EPDM

Fipt with EPDM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
898-002	1/4	25	150	080	24.38
898-003	3/8	25	150	080	24.38
8098-005	1/2	20	240	080	14.04
8098-007	3/4	20	80	080	19.64
8098-010	1	15	90	080	26.16
8098-012	1-1/4	10	0	080	49.89
8098-015	1-1/2	10	0	080	61.78
8098-020	2	5	0	080	95.06
8098-025	2-1/2	5	0	080	127.31
8098-030	3	5	0	080	241.16
8098-040	4	4	0	080	282.05
8098-060	6	1	0	080	626.59

Union 2000 - Special Reinforced Fipt/FKM

SR Fipt x SR Fipt with FKM O-ring Seal - Stainless Steel Collar

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8058-005SR	1/2	20	120	086	8.56
8058-007SR	3/4	20	80	086	11.59
8058-010SR	1	15	90	086	15.51
8058-012SR	1-1/4	10	0	086	29.54
8058-015SR	1-1/2	10	0	086	36.35
8058-020SR	2	5	0	086	56.44
8058-025SR	2-1/2	5	0	086	118.02
8058-030SR	3	5	0	086	134.25
8058-040SR	4	4	0	086	158.04
8058-060SR	6	1	0	086	351.19

Union 2000 - Special Reinforced Fipt/EPDM

SR Fipt x SR Flpt with EPDM O-ring Seal - Stainless Steel Collar

235 psi Maximum Internal Pressure rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8098-005SR	1/2	20	120	086	8.43
8098-007SR	3/4	20	80	086	11.48
8098-010SR	1	15	90	086	15.20
8098-012SR	1-1/4	10	0	086	28.26
8098-015SR	1-1/2	10	0	086	35.55
8098-020SR	2	5	0	086	55.86
8098-025SR	2-1/2	5	0	086	112.75
8098-030SR	3	5	0	086	132.97
8098-040SR	4	4	0	086	152.65
8098-060SR	6	1	0	086	339.26

Union (Old Style) - Socket/FKM

Soc with FKM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
857-005	1/2	15	90	080	12.26
857-007	3/4	10	60	080	15.58
857-010	1	10	40	080	17.77
857-012	1-1/4	5	20	080	35.31
857-015	1-1/2	5	0	080	39.99
857-020	2	5	0	080	54.21
857-025	2-1/2	5	0	080	86.82
857-030	3	5	0	080	100.94
857-040	4	4	0	080	140.59

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Schedule 80 Fittings

Union (Old Style) - Socket/EPDM

Soc with EPDM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
897-005	1/2	15	90	080	12.08
897-007	3/4	10	60	080	15.38
897-010	1	10	40	080	17.60
897-012	1-1/4	5	20	080	34.89
897-015	1-1/2	5	0	080	39.48
897-020	2	5	0	080	53.57
897-025	2-1/2	5	0	080	85.16
897-030	3	5	0	080	99.68
897-040	4	4	0	080	137.88

Union (Old Style) - Socket/Fipt/FKM

Soc x Fipt with FKM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
859-005	1/2	15	90	080	14.93
859-007	3/4	10	60	080	20.88
859-010	1	10	40	080	27.77
859-012	1-1/4	5	20	080	53.05
859-015	1-1/2	5	0	080	65.66
859-020	2	5	0	080	101.09
859-025	2-1/2	5	0	080	179.63
859-030	3	5	0	080	238.58
859-040	4	4	0	080	274.19

Union (Old Style) - Socket/Fipt/EPDM

Soc x Fipt with EPDM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
899-005	1/2	15	90	080	14.74
899-007	3/4	10	60	080	20.62
899-010	1	10	40	080	27.42
899-012	1-1/4	5	20	080	52.42
899-015	1-1/2	5	0	080	64.88
899-020	2	5	0	080	99.83
899-025	2-1/2	5	0	080	141.15
899-030	3	5	0	080	235.59
899-040	4	4	0	080	270.51

Union (Old Style) - Special Reinforced Fipt/FKM

Soc x SR Fipt with FKM O-ring Seal - Stainless Steel Collar

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
859-002SR	1/4	25	150	086	15.32
859-003SR	3/8	25	100	086	15.32
859-005SR	1/2	10	60	086	8.32
859-007SR	3/4	10	40	086	11.45
859-010SR	1	10	40	086	14.88
859-012SR	1-1/4	5	20	086	28.44
859-015SR	1-1/2	5	0	086	35.09
859-020SR	2	5	0	086	53.59
859-030SR	3	5	0	086	130.95
859-040SR	4	4	0	086	150.35

Union (Old Style) - Special Reinforced Fipt/EPDM

Soc x SR Fipt with EPDM O-ring Seal - Stainless Steel Collar

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
899-002SR	1/4	25	150	086	15.11

Union (Old Style) - Special Reinforced Fipt/EPDM (continued)

Soc x SR Fipt with EPDM O-ring Seal - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
899-003SR	3/8	25	100	086	15.11
899-005SR	1/2	10	60	086	8.00
899-007SR	3/4	10	40	086	11.40
899-010SR	1	10	40	086	14.71
899-012SR	1-1/4	5	20	086	25.58
899-015SR	1-1/2	5	0	086	33.15
899-020SR	2	5	0	086	53.35
899-030SR	3	5	0	086	127.04
899-040SR	4	4	0	086	144.99

Union - Socket/Brass Fipt/FKM

Soc x Fipt with Brass Thread Insert & FKM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

859-007BR	3/4	10	40	086	53.19
859-010BR	1	10	0	086	65.64
859-012BR	1-1/4	5	20	086	113.29
859-015BR	1-1/2	5	0	086	149.94
859-020BR	2	5	0	086	199.26

Not intended to convey or dispense water for human consumption through drinking or cooking

Union - Socket/Brass Fipt/EPDM

Soc x Fipt with Brass Thread Insert & EPDM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

899-007BR	3/4	10	60	086	47.96
899-010BR	1	10	0	086	64.68
899-012BR	1-1/4	5	20	086	108.77
899-015BR	1-1/2	5	0	086	143.96
899-020BR	2	5	0	086	191.89

Not intended to convey or dispense water for human consumption through drinking or cooking

Union (Old Style) - Fipt/FKM

Fipt x Fipt with FKM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

858-005	1/2	15	90	080	14.21
858-007	3/4	10	60	080	19.91
858-010	1	10	40	080	26.48
858-012	1-1/4	5	20	080	50.53
858-015	1-1/2	5	0	080	62.57
858-020	2	5	0	080	96.26
858-025	2-1/2	5	0	080	162.82
858-030	3	5	0	080	244.18
858-040	4	4	0	080	286.98

Union (Old Style) - Fipt/EPDM

Fipt x Fipt with EPDM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

898-005	1/2	15	90	080	14.04
898-007	3/4	10	60	080	19.64
898-010	1	10	40	080	26.16
898-012	1-1/4	5	20	080	49.89
898-015	1-1/2	5	0	080	61.78
898-020	2	5	0	080	95.06
898-025	2-1/2	5	0	080	127.31
898-030	3	5	0	080	241.16
898-040	4	4	0	080	282.05

PVC Schedule 80 Fittings

Union -Transition JIS to ASTM/FKM

JIS (mm) Soc x ASTM (in.) Fipt with FKM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8258-016	**16 DN X 1/2**	20	160	197	13.45
8258-020	**20 DN X 3/4**	20	80	197	18.80
8258-025	**25 DN X 1**	15	90	197	25.01
8258-030	**30 DN X 1-1/4**	10	0	197	47.76
8258-040	**40 DN X 1-1/2**	10	0	197	59.12
8258-075	**75 DN X 3**	5	0	197	214.72
8258-100	**100 DN X 4**	4	0	197	246.77

Union -Transition JIS to ASTM/EPDM

JIS (mm) Soc x ASTM (in.) Fipt with EPDM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8298-016	**16 DN X 1/2**	20	160	197	13.26
8298-020	**20 DN X 3/4**	20	80	197	18.56
8298-025	**25 DN X 1**	15	90	197	24.69
8298-030	**30 DN X 1-1/4**	10	0	197	46.94
8298-040	**40 DN X 1-1/2**	10	0	197	58.38
8298-050	**50 DN X 2**	5	0	197	89.84
8298-075	**75 DN X 3**	5	0	197	212.03
8298-100	**100 DN X 4**	4	0	197	243.45

Union - Transition BSP to ASTM/FKM

BSP Thread (in.) x ASTM (in.) Soc with FKM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8359-005	**1/2**	20	160	197	13.45
8359-007	**3/4**	20	80	197	18.80
8359-010	**1**	15	90	197	25.01
8359-012	**1-1/4**	10	0	197	47.76
8359-015	**1-1/2**	10	0	197	59.12
8359-020	**2**	5	0	197	90.96
8359-030	**3**	5	0	197	214.72
8359-040	**4**	4	0	197	246.77

Union - Transition BSP to ASTM/EPDM

BSP Thread (in.) x ASTM (in.) Soc with EPDM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8399-005	**1/2**	10	60	197	13.26
8399-007	**3/4**	20	80	197	18.56
8399-010	**1**	15	90	197	24.69
8399-012	**1-1/4**	10	0	197	47.17
8399-015	**1-1/2**	10	0	197	58.38
8399-020	**2**	5	0	197	89.84
8399-030	**3**	5	0	197	212.03
8399-040	**4**	4	0	197	243.45

Union - Transition DIN to ASTM/FKM

DIN (mm) Soc x ASTM (in.) Soc with FKM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8657-020	**20 d X 1/2**	10	60	197	11.01
8657-025	**25 d X 3/4**	10	40	197	14.02
8657-032	**32 d X1**	10	40	197	16.00
8657-040	**40 d X 1-1/4**	10	0	197	31.78
8657-050	**50 d X 1-1/2**	10	0	197	35.99
8657-063	**63 d X 2**	5	0	197	48.81
8657-090	**90 d X 3**	5	0	197	90.85
8657-110	**110 d X 4**	4	0	197	126.54

Union - Transition DIN to ASTM/EPDM

DIN (mm) Soc x ASTM (in.) Soc with EPDM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8697-020	**20 d X1/2**	20	240	197	10.87
8697-025	**25 d X 3/4**	10	60	197	13.85
8697-032	**32d X 1**	15	90	197	15.84
8697-040	**40 d X 1-1/4**	10	0	197	31.40
8697-050	**50 d X 1-1/2**	10	0	197	35.55
8697-063	**63 d X 2**	5	0	197	48.21
8697-090	**90 d X 3**	5	0	197	89.72
8697-110	**110 d X 4**	4	0	197	124.08

Union - Transition DIN to ASTM/FKM

DIN (mm) Soc x ASTM (in.) Fipt with FKM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8658-020	**20 d X 1/2**	10	60	197	13.45
8658-025	**25 d X 3/4**	20	80	197	18.80
8658-032	**32 d X1**	15	90	197	25.01
8658-040	**40 d X 1-1/4**	10	0	197	47.76
8658-050	**50 d X 1-1/2**	10	0	197	59.12
8658-063	**63 d X 2**	5	0	197	90.96
8658-090	**90 d X 3**	5	0	197	214.72
8658-110	**110 d X 4**	4	0	197	246.77

Union - Transition DIN to ASTM/EPDM

DIN (mm) Soc x ASTM (in.) Fipt with EPDM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8698-020	**20 d X 1/2**	20	160	197	13.26
8698-025	**25 d X 3/4**	20	80	197	18.56
8698-032	**32 d X 1**	15	90	197	24.69
8698-040	**40 d X 1-1/4**	10	0	197	46.94
8698-050	**50 d X 1-1/2**	10	0	197	58.38
8698-063	**63 d X 2**	5	0	197	89.84
8698-090	**90 d X 3**	5	0	197	212.03
8698-110	**110 d X 4**	4	0	197	243.45

Union -Transition JIS to ASTM/FKM

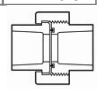
JIS (mm) Soc x ASTM (in.) Soc with FKM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8257-016	**16 DN X 1/2**	20	160	197	11.01
8257-020	**20 DN X 3/4**	10	40	197	14.02
8257-025	**25 DN X1**	15	90	197	16.00
8257-030	**30 DN X 1-1/4**	10	0	197	31.78
8257-040	**40 DN X 1-1/2**	10	0	197	35.99
8257-050	**50 DN X 2**	5	0	197	48.81
8257-075	**75 DN X 3**	5	0	197	90.85
8257-100	**100 DN X 4**	4	0	197	126.54

Union -Transition JIS to ASTM/EPDM

JIS (mm) Soc x ASTM (in.) Soc with EPDM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8297-016	**16 DN X 1/2**	20	160	197	10.87
8297-020	**20 DN X 3/4**	20	80	197	13.85
8297-025	**25 DN X 1**	15	90	197	15.84
8297-030	**30 DN X 1-1/4**	10	0	197	31.40
8297-040	**40 DN X 1-1/2**	10	0	197	35.55
8297-050	**50 DN X 2**	5	0	197	48.21
8297-075	**75 DN X 3**	5	0	197	89.72
8297-100	**100 DN X 4**	4	0	197	124.08

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Union - Transition BSP to ASTM/FKM

BSP Thread (in.) x ASTM (in.) Fipt with FKM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8358-005	**1/2**	20	160	197	12.82
8358-007	**3/4**	20	80	197	17.91
8358-010	**1**	15	90	197	23.84
8358-012	**1-1/4**	10	0	197	45.48
8358-015	**1-1/2**	10	0	197	56.31
8358-020	**2**	5	0	197	86.64
8358-030	**3**	5	0	197	219.76
8358-040	**4**	4	0	197	258.26

Union - Transition BSP to ASTM/EPDM

BSP Thread (in.) x ASTM (in.) Fipt with EPDM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8398-005	**1/2**	10	60	197	12.63
8398-007	**3/4**	10	60	197	17.68
8398-010	**1**	10	40	197	23.54
8398-012	**1-1/4**	5	20	197	44.92
8398-015	**1-1/2**	5	0	197	55.60
8398-020	**2**	5	0	197	89.33
8398-030	**3**	5	0	197	217.04
8398-040	**4**	4	0	197	253.84

Tank Adapters

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each

Tank Adapters, PVC New Style Standard with Neoprene Gaskets

Soc

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8170-002	**1/4**	25	150	100	34.34
8170-003	**3/8**	25	150	100	34.34
8170-005	**1/2**	25	0	100	34.34
8170-007	**3/4**	25	0	100	39.15
8170-010	**1**	25	0	100	43.49
8170-012	**1-1/4**	20	0	100	52.40
8170-015	**1-1/2**	20	0	100	57.49
8170-020	**2**	15	0	100	85.22
8170-025	**2-1/2**	4	0	100	131.69
8170-030	**3**	4	0	100	156.77
8170-040	**4**	2	0	100	308.81
8170-060	**6**	1	0	100	599.42
8170-080	**8**	1	0	100	1330.24

Tank Adapters, PVC New Style Standard with EPDM Gaskets

Soc

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8170E-002	**1/4**	25	150	100	35.39
8170E-003	**3/8**	25	150	100	35.39
8170E-005	**1/2**	25	0	100	35.39
8170E-007	**3/4**	25	0	100	39.93
8170E-010	**1**	25	0	100	48.14
8170E-012	**1-1/4**	20	0	100	57.22
8170E-015	**1-1/2**	20	0	100	62.33
8170E-020	**2**	15	0	100	91.72
8170E-025	**2-1/2**	4	0	100	152.86
8170E-030	**3**	4	0	100	162.62
8170E-040	**4**	2	0	100	316.61
8170E-060	**6**	1	0	100	620.94
8170E-080	**8**	1	0	100	1379.57

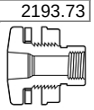
Tank Adapters, PVC New Style Standard with FKM Gaskets

Soc

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8170V-002	**1/4**	25	150	100	58.35
8170V-003	**3/8**	25	150	100	58.35
8170V-005	**1/2**	25	0	100	58.35
8170V-007	**3/4**	25	0	100	63.97
8170V-010	**1**	25	0	100	76.60
8170V-012	**1-1/4**	20	0	100	80.77
8170V-015	**1-1/2**	20	0	100	88.96
8170V-020	**2**	15	0	100	145.96
8170V-025	**2-1/2**	4	0	100	220.01
8170V-030	**3**	4	0	100	261.92
8170V-040	**4**	2	0	100	655.21
8170V-060	**6**	1	0	100	1178.46
8170V-080	**8**	1	0	100	2193.73

Tank Adapters, PVC New Style Standard with Neoprene Gaskets



Soc x Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8171-002	**1/4**	25	150	100	34.34
8171-003	**3/8**	25	200	100	34.34
8171-005	**1/2**	25	0	100	34.34
8171-007	**3/4**	25	0	100	39.15
8171-010	**1**	25	0	100	43.49
8171-012	**1-1/4**	20	0	100	52.40
8171-015	**1-1/2**	20	0	100	57.49

Tank Adapters, PVC New Style Standard with Neoprene Gaskets (continued)

Soc x Fipt

8171-020	**2**	15	0	100	85.22
8171-025	**2-1/2**	4	0	100	131.69
8171-030	**3**	4	0	100	156.77
8171-040	**4**	2	0	100	308.81
8171-060	**6**	1	0	100	599.42

Tank Adapters, PVC New Style Standard with EPDM Gaskets

Soc x Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8171E-002	**1/4**	25	150	100	35.39
8171E-003	**3/8**	25	200	100	35.39
8171E-005	**1/2**	25	0	100	35.39
8171E-007	**3/4**	25	0	100	39.93
8171E-010	**1**	25	0	100	48.14
8171E-012	**1-1/4**	20	0	100	57.22
8171E-015	**1-1/2**	20	0	100	62.33
8171E-020	**2**	15	0	100	91.72
8171E-025	**2-1/2**	4	0	100	152.86
8171E-030	**3**	4	0	100	162.62
8171E-040	**4**	2	0	100	316.61
8171E-060	**6**	1	0	100	620.94

Tank Adapters, PVC New Style Standard with FKM Gaskets

Soc x Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8171V-002	**1/4**	25	150	100	58.35
8171V-003	**3/8**	25	200	100	58.35
8171V-005	**1/2**	25	0	100	58.35
8171V-007	**3/4**	25	0	100	63.97
8171V-010	**1**	25	0	100	76.60
8171V-012	**1-1/4**	20	0	100	80.77
8171V-015	**1-1/2**	20	0	100	88.96
8171V-020	**2**	15	0	100	145.96
8171V-025	**2-1/2**	4	0	100	220.01
8171V-030	**3**	4	0	100	261.92
8171V-040	**4**	2	0	100	655.21
8171V-060	**6**	1	0	100	1178.46

Tank Adapters, PVC New Style Special Reinforced (SR) Threaded with Neoprene Gaskets

Soc x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8171-002SR	**1/4**	25	150	100	35.58
8171-003SR	**3/8**	25	200	100	35.58
8171-005SR	**1/2**	25	0	100	35.58
8171-007SR	**3/4**	25	0	100	41.22
8171-010SR	**1**	25	0	100	46.42
8171-012SR	**1-1/4**	20	0	100	57.06
8171-015SR	**1-1/2**	20	0	100	65.49
8171-020SR	**2**	15	0	100	93.86
8171-025SR	**2-1/2**	4	0	100	151.13
8171-030SR	**3**	4	0	100	179.89
8171-040SR	**4**	2	0	100	332.76
8171-060SR	**6**	1	0	100	622.77

Tank Adapters, PVC New Style Special Reinforced (SR) Threaded with EPDM Gaskets

Soc x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8171E-002SR	**1/4**	25	150	100	36.83

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Tank Adapters

Tank Adapters, PVC New Style Special Reinforced (SR) Threaded with EPDM Gaskets (continued)

Soc x SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8171E-003SR	3/8	25	200	100	36.83
8171E-005SR	1/2	25	0	100	36.83
8171E-007SR	3/4	25	0	100	42.00
8171E-010SR	1	25	0	100	51.06
8171E-012SR	1-1/4	20	0	100	61.86
8171E-015SR	1-1/2	20	0	100	70.31
8171E-020SR	2	15	0	100	100.36
8171E-025SR	2-1/2	4	0	100	156.03
8171E-030SR	3	4	0	100	185.76
8171E-040SR	4	2	0	100	340.58
8171E-060SR	6	1	0	100	644.19

Tank Adapters, PVC New Style Special Reinforced (SR) Threaded with FKM Gaskets

Soc x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8171V-002SR	1/4	25	150	100	59.79
8171V-003SR	3/8	25	200	100	59.79
8171V-005SR	1/2	25	0	100	59.79
8171V-007SR	3/4	25	0	100	65.61
8171V-010SR	1	25	0	100	80.87
8171V-012SR	1-1/4	20	0	100	90.56
8171V-015SR	1-1/2	20	0	100	102.08
8171V-020SR	2	15	0	100	156.33
8171V-025SR	2-1/2	4	0	100	238.00
8171V-030SR	3	4	0	100	283.32
8171V-040SR	4	2	0	100	680.71
8171V-060SR	6	2	0	100	1206.42

Tank Adapters, PVC New Style Standard with Neoprene Gaskets

Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172-002	1/4	25	150	100	46.12
8172-003	3/8	25	200	100	46.12
8172-005	1/2	25	0	100	46.12
8172-007	3/4	25	0	100	50.58
8172-010	1	25	0	100	55.32
8172-012	1-1/4	20	0	100	73.75
8172-015	1-1/2	20	0	100	80.39
8172-020	2	15	0	100	105.86
8172-025	2-1/2	4	0	100	154.95
8172-030	3	4	0	100	184.43
8172-040	4	2	0	100	345.61
8172-060	6	1	0	100	691.64

Tank Adapters, PVC New Style Standard with EPDM Gaskets

Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172E-002	1/4	25	150	100	47.48
8172E-003	3/8	25	200	100	47.48
8172E-005	1/2	25	0	100	47.48
8172E-007	3/4	25	0	100	51.57
8172E-010	1	25	0	100	61.26
8172E-012	1-1/4	20	0	100	80.53
8172E-015	1-1/2	20	0	100	87.09
8172E-020	2	15	0	100	113.93
8172E-025	2-1/2	4	0	100	160.72
8172E-030	3	4	0	100	191.36
8172E-040	4	2	0	100	354.42
8172E-060	6	1	0	100	716.49

Tank Adapters, PVC New Style Standard with FKM Gaskets

Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8172V-002	1/4	25	150	100	71.35
8172V-003	3/8	25	200	100	71.35
8172V-005	1/2	25	0	100	71.35
8172V-007	3/4	25	0	100	76.04
8172V-010	1	25	0	100	86.85
8172V-012	1-1/4	20	0	100	98.56
8172V-015	1-1/2	20	0	100	112.49
8172V-020	2	15	0	100	166.68
8172V-025	2-1/2	4	0	100	238.07
8172V-030	3	4	0	100	283.49
8172V-040	4	2	0	100	690.93
8172V-060	6	1	0	100	1321.96

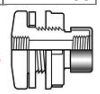
Tank Adapters, PVC New Style Special Reinforced (SR) Threaded with Neoprene Gaskets

Fipt x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172-002SR	1/4	25	150	100	47.57
8172-003SR	3/8	25	200	100	47.57
8172-005SR	1/2	25	0	100	47.57
8172-007SR	3/4	25	0	100	52.66
8172-010SR	1	25	0	100	58.24
8172-012SR	1-1/4	20	0	100	78.43
8172-015SR	1-1/2	20	0	100	88.39
8172-020SR	2	15	0	100	114.53
8172-025SR	2-1/2	4	0	100	174.37
8172-030SR	3	4	0	100	207.59
8172-040SR	4	2	0	100	369.57
8172-060SR	6	1	0	100	714.88

Tank Adapters, PVC New Style Special Reinforced (SR) Threaded with EPDM Gaskets

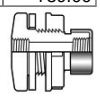


Fipt x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172E-002SR	1/4	25	150	100	48.94
8172E-003SR	3/8	25	200	100	48.94
8172E-005SR	1/2	25	0	100	48.94
8172E-007SR	3/4	25	0	100	53.65
8172E-010SR	1	25	0	100	64.19
8172E-012SR	1-1/4	20	0	100	85.21
8172E-015SR	1-1/2	20	0	100	95.06
8172E-020SR	2	15	0	100	122.60
8172E-025SR	2-1/2	4	0	100	180.17
8172E-030SR	3	4	0	100	214.46
8172E-040SR	4	2	0	100	378.38
8172E-060SR	6	1	0	100	739.66

Tank Adapters, PVC New Style Special Reinforced (SR) Threaded with FKM Gaskets



Fipt x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172V-002SR	1/4	25	150	100	72.79
8172V-003SR	3/8	25	200	100	72.79
8172V-005SR	1/2	25	0	100	72.79
8172V-007SR	3/4	25	0	100	78.15
8172V-010SR	1	25	0	100	89.78
8172V-012SR	1-1/4	20	0	100	103.21
8172V-015SR	1-1/2	20	0	100	120.48
8172V-020SR	2	15	0	100	175.36
8172V-025SR	2-1/2	4	0	100	257.49
8172V-030SR	3	4	0	100	306.62

Tank Adapters

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each

Tank Adapters, PVC New Style Special Reinforced (SR) Threaded with FKM Gaskets (continued)

Fipt x SR Fipt - Stainless Steel Collar

8172V-040SR	**4**	2	0	100	714.88
8172V-060SR	**6**	2	0	100	1349.89

Tank Adapter, PVC Self Aligning with Neoprene Gasket

Fipt

75 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172SA-010	**1**	5	0	100	147.85
8172SA-020	**2**	4	0	100	229.91
8172SA-030	**3**	2	0	100	347.87

Tank Adapter, PVC Self Aligning with EPDM Gasket

Fipt

75 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172ESA-010	**1**	5	0	100	155.59
8172ESA-020	**2**	4	0	100	236.11
8172ESA-030	**3**	2	0	100	366.29

Tank Adapter, PVC Self Aligning with FKM Gasket

Fipt

75 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172VSA-010	**1**	5	0	100	403.15
8172VSA-020	**2**	4	0	100	572.35
8172VSA-030	**3**	2	0	100	899.32

Tank Adapter, Spigot PVC with EPDM Gasket

Spig

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8173E-005	**1/2**	25	150	100	35.39
8173E-007	**3/4**	25	100	100	39.93
8173E-010	**1**	25	0	100	48.14
8173E-015	**1-1/2**	20	0	100	62.33
8173E-020	**2**	12	0	100	91.72

Install with threaded end, gasket and one nut inside tank. Use thread sealant on internal nut.

Tank Adapter, PVC Old Style with Neoprene Gasket

Soc x Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

871-005	**1/2**	25	0	100	34.34
871-007	**3/4**	25	0	100	39.15
871-010	**1**	25	0	100	43.49
871-012	**1-1/4**	20	0	100	52.40
871-015	**1-1/2**	20	0	100	57.49
871-020	**2**	15	0	100	85.22
871-030	**3**	4	0	100	156.77
871-040	**4**	2	0	100	308.81

Tank Adapter, PVC Old Style with EPDM Gasket

Soc x Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

871E-005	**1/2**	25	0	100	35.39
871E-007	**3/4**	25	0	100	39.93
871E-010	**1**	25	0	100	48.14
871E-012	**1-1/4**	20	0	100	57.22
871E-015	**1-1/2**	20	0	100	62.33
871E-020	**2**	15	0	100	91.72

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each

Tank Adapter, PVC Old Style with EPDM Gasket (continued)

Soc x Fipt

871E-030	**3**	4	0	100	162.62
871E-040	**4**	2	0	100	316.61

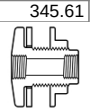
Tank Adapter, PVC Old Style with Neoprene Gasket

Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

872-005	**1/2**	25	0	100	46.12
872-007	**3/4**	25	0	100	50.58
872-010	**1**	25	0	100	55.32
872-012	**1-1/4**	20	0	100	73.75
872-015	**1-1/2**	20	0	100	80.39
872-020	**2**	15	0	100	105.86
872-030	**3**	4	0	100	184.43
872-040	**4**	2	0	100	345.61

Tank Adapter, PVC Old Style with EPDM Gasket



Fipt

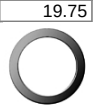
150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

872E-005	**1/2**	25	0	100	47.48
872E-007	**3/4**	25	0	100	51.57
872E-010	**1**	25	0	100	61.26
872E-012	**1-1/4**	20	0	100	80.53
872E-015	**1-1/2**	20	0	100	87.09
872E-020	**2**	15	0	100	113.93
872E-030	**3**	4	0	100	191.36
872E-040	**4**	2	0	100	354.42

Tank Adapter Gasket Only - Neoprene (Old Style)

2N-005	**1/2**	10	0	901	2.71
2N-007	**3/4**	10	0	901	2.91
2N-010	**1**	10	0	901	3.09
2N-015	**1-1/4 OR 1-1/2**	10	0	901	5.01
2N-020	**2**	10	0	901	6.56
2N-030	**3**	10	0	901	7.14
2N-040	**4**	10	0	901	19.75

Tank Adapter Gasket Only - EPDM (Old Style)



2E-005	**1/2**	10	0	901	3.15
2E-007	**3/4**	10	0	901	3.25
2E-010	**1**	10	0	901	5.64
2E-015	**1-1/4 OR 1-1/2**	10	0	901	8.48
2E-020	**2**	10	0	901	9.71
2E-030	**3**	10	0	901	14.79
2E-040	**4**	10	0	901	22.28

Tank Adapter Gasket Only - Neoprene (New Style)

3N-002	**1/4**	100	0	901	2.71
3N-003	**3/8**	50	0	901	2.71
3N-005	**1/2**	10	0	901	2.71
3N-007	**3/4**	10	0	901	2.91
3N-010	**1**	10	0	901	3.09
3N-012	**1-1/4**	10	0	901	4.27
3N-015	**1-1/2**	10	0	901	5.01
3N-020	**2**	10	0	901	6.56

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Tank Adapters & Pipe Flanges

Tank Adapters

Tank Adapter Gasket Only - Neoprene (New Style) (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
3N-025	2-1/2	10	0	901	6.84
3N-030	3	10	0	901	7.14
3N-040	4	10	0	901	19.75
2N-060	6	10	0	901	24.67
3N-080	8	10	0	901	113.14

Tank Adapter Gasket Only - EPDM (New Style)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
3E-002	1/4	10	0	901	3.15
3E-003	3/8	10	0	901	3.15
3E-005	1/2	10	0	901	3.15
3E-007	3/4	10	0	901	3.25
3E-010	1	10	0	901	5.64
3E-012	1-1/4	10	0	901	8.26
3E-015	1-1/2	10	0	901	8.48
3E-020	2	10	0	901	9.71
3E-025	2-1/2	10	0	901	13.76
3E-030	3	10	0	901	14.79
3E-040	4	10	0	901	22.28
2E-060	6	10	0	901	40.22
3E-080	8	10	0	901	145.99

Tank Adapter Gasket Only - FKM (New Style)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
3V-002	1/4	10	0	901	11.53
3V-003	3/8	10	0	901	13.59
3V-005	1/2	10	0	901	20.28
3V-007	3/4	10	0	901	25.12
3V-010	1	10	0	901	34.34
3V-012	1-1/4	10	0	901	54.61
3V-015	1-1/2	10	0	901	58.99
3V-020	2	10	0	901	94.48
3V-025	2-1/2	10	0	901	104.38
3V-030	3	10	0	901	108.76
3V-040	4	10	0	901	246.09
2V-060	6	10	0	901	616.03
3V-080	8	10	0	901	1033.18

Tank Adapter Wrench Sets (New Style)

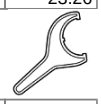
Body Wrench & Nut Wrench

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
TAW-002	1/4	1	25	299	21.89
TAW-003	3/8	1	25	299	21.89
TAW-005	1/2	1	25	299	21.89
TAW-007	3/4	1	25	299	22.32
TAW-010	1	1	25	299	23.21
TAW-012	1-1/4	1	20	299	26.18
TAW-015	1-1/2	1	20	299	28.40
TAW-020	2	1	10	299	32.35
TAW-025	2-1/2	1	10	299	35.79
TAW-030	3	1	10	299	39.44
TAW-040	4	1	10	299	42.26

Tank Adapter Individual Body Wrench (New Style)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
TAW1-002	1/4	500	0	299	12.28
TAW1-003	3/8	400	0	299	12.28
TAW1-005	1/2	250	0	299	12.28
TAW1-007	3/4	220	0	299	12.52
TAW1-010	1	200	0	299	13.03
TAW1-012	1-1/4	300	0	299	14.76
TAW1-015	1-1/2	150	0	299	15.89
TAW1-020	2	100	0	299	17.25
TAW1-025	2-1/2	80	0	299	18.03
TAW1-030	3	74	0	299	22.61
TAW1-040	4	35	0	299	23.26

Tank Adapter Individual Nut Wrench (New Style)



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
TAW2-002	1/4	300	0	299	12.28
TAW2-003	3/8	250	0	299	12.28
TAW2-005	1/2	200	0	299	12.28
TAW2-007	3/4	160	0	299	12.52
TAW2-010	1	110	0	299	13.03
TAW2-012	1-1/4	200	0	299	14.76
TAW2-015	1-1/2	120	0	299	15.89
TAW2-020	2	100	0	299	17.25
TAW2-025	2-1/2	50	0	299	18.03
TAW2-030	3	40	0	299	22.61
TAW2-040	4	35	0	299	23.26

Pipe Flanges

Flange Van Stone Style -PIP

Flange x PIP Soc

125 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
354-060F	6X6.140	1	4	320	133.67
354-080F	8X8.160	1	2	320	202.42
354-100F	10X10.200	1	2	320	284.61
354-120F	12X12.240	1	2	320	412.21
354-150F	14X15.300	1	0	320	1098.76
354-151F	16X15.300	1	0	320	1253.46
354-181F	18X18.701	1	0	320	1904.21
354-182F	18X18.360	1	0	320	1904.21

Flange Van Stone Style -PIP (continued)

Flange x PIP Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
354-201F	20X22.047	1	0	320	2900.51
354-241F	24X24.803	1	0	320	4247.72

For more information, refer to 80, 100 & 125 psi PIP Fabrication Fittings.

PIP = Plastic Irrigation Pipe (dimensions are NOT the same as IPS dimensions)

Sizes 6" - 16" are furnished with plastic ring.
Sizes 18" - 24" are furnished with steel ring.

Pipe Flanges

Flange One Piece
Soc

1/2" - 16" 150 psi Maximum Internal Pressure Rating @73°F (23°C)
18" - 24" 50 psi Maximum Internal Pressure Rating @73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
851-005	1/2	25	0	080	18.11
851-007	3/4	25	0	080	19.35
851-010	1	15	0	080	21.55
851-012	1-1/4	15	0	080	22.20
851-015	1-1/2	20	0	080	22.68
851-020	2	10	0	080	30.19
851-025	2-1/2	10	0	080	46.60
851-030	3	10	0	080	51.46
851-040	4	5	0	080	65.16
851-050	5	5	0	080	102.45
851-060	6	5	0	080	102.45
851-080	8	2	0	080	183.33
851-100	10	2	0	081	251.63
851-100F	10	1	2	083	498.18
851-120	12	2	0	081	330.10
851-120F	12	1	0	083	604.96
851-140F	14	1	0	083	1112.65
851-160F	16	1	0	083	1526.99
851-180F	18	1	0	083	3230.20
851-200F	20	1	0	083	3955.61
851-240F	24	1	0	083	5253.52

Flange One Piece
Fipt

150 psi Maximum Internal Pressure Rating @73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
852-005	1/2	25	0	080	21.67
852-007	3/4	25	0	080	25.39
852-010	1	15	0	080	27.80
852-012	1-1/4	15	0	080	38.33
852-015	1-1/2	20	0	080	41.83
852-020	2	10	0	080	42.78
852-025	2-1/2	10	0	080	98.36
852-030	3	10	0	080	101.24
852-040	4	5	0	080	190.22
852-060F	6	1	5	083	228.52
852-080F	8	1	2	083	573.52

Flange - Special Reinforced One Piece
SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
852-005SR	1/2	25	0	086	11.91
852-007SR	3/4	25	0	086	13.99
852-010SR	1	15	0	086	15.29
852-012SR	1-1/4	15	0	086	21.07
852-015SR	1-1/2	15	0	086	23.06
852-020SR	2	10	0	086	23.62
852-025SR	2-1/2	10	0	086	54.09
852-030SR	3	10	0	086	55.69
852-040SR	4	5	0	086	104.69

Flange - Blind

1/2" - 12" Molded - 150 psi Maximum Internal Pressure Rating @ 73°F (23°C)
14" - 24" Fabricated - 50 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
853-005	1/2	25	0	080	25.38
853-007	3/4	25	0	080	30.23
853-010	1	15	0	080	41.29

Flange - Blind (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
853-012	1-1/4	20	0	080	50.68
853-015	1-1/2	15	0	080	50.68
853-020	2	10	0	080	75.73
853-025	2-1/2	10	0	080	123.38
853-030	3	10	0	080	148.89
853-040	4	8	0	080	185.48
853-050F	5	1	5	083	464.95
853-060	6	5	0	080	225.40
853-080	8	5	0	080	282.13
853-100	10	3	0	081	471.77
853-120	12	2	0	081	734.75
853-140F	14	1	0	083	1397.79
853-160F	16	1	0	083	1657.51
853-180F	18	1	0	083	1864.09
853-200F	20	1	0	083	3013.01
853-240F	24	1	0	083	4016.97

Flange Van Stone Style with PVC Ring
Soc

1/2" - 18" molded - 150 psi = maximum internal pressure rating @ 73°F (23°C)
18" - 24" fabricated - 50 psi = maximum internal pressure rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
854-005	1/2	25	0	080	18.08
854-007	3/4	25	0	080	19.34
854-010	1	15	0	080	21.54
854-012	1-1/4	15	0	080	22.18
854-015	1-1/2	20	0	080	22.63
854-020	2	10	0	080	30.14
854-025	2-1/2	10	0	080	46.55
854P-030	3	10	0	080	51.44
854P-040	4	5	0	080	65.07
854P-050	5	5	0	080	102.36
854P-060	6	5	0	080	102.36
854P-080	8	2	0	080	166.68
854P-100	10	2	0	081	215.79
854P-120	12	2	0	081	232.66
854P-140	14	1	0	082	898.21
854P-160	16	1	0	082	1201.40
854P-180	18	1	0	082	1937.69
854-180FP	18	1	0	083	3065.76
854-200FP	20	1	0	083	3749.88
854-240FP	24	1	0	083	5101.07

Flange Van Stone Style with Glass Filled PVC Ring
Soc

3" - 18" molded - 150 psi = maximum internal pressure rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
854-030	3	10	0	080	51.44
854-040	4	5	0	080	65.07
854-050	5	5	0	080	102.36
854-060	6	5	0	080	102.36
854-080	8	2	0	080	166.68
854-100	10	2	0	081	215.79
854-120	12	2	0	081	232.66
854-140	14	1	0	082	898.21
854-160	16	1	0	082	1201.40
854-180	18	1	0	082	1937.69

18" flange has 4-section ring

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Pipe Flanges

Flange Van Stone Style Class 300 Bolt Pattern Fabricated with PVC Ring

Soc

1/2" - 16" molded with fab ring - 150 psi = maximum internal pressure rating @ 73°F (23°C)
18" - 24" fabricated - 50 psi = maximum internal pressure rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
854-005CL300	1/2	1	25	083	148.64
854-007CL300	3/4	1	25	083	172.71
854-010CL300	1	1	15	083	271.37
854-012CL300	1-1/4	1	15	083	277.09
854-015CL300	1-1/2	1	20	083	287.83
854-020CL300	2	10	0	083	303.05
854-025CL300	2-1/2	1	10	083	332.76
854-030CL300	3	1	10	083	365.45
854-040CL300	4	1	3	083	619.67
854-060CL300	6	1	4	083	1180.24
854-080CL300	8	1	3	083	1343.43
854-100CL300	10	1	2	083	1581.60
854-120CL300	12	1	0	083	2026.35
854-140CL300	14	1	0	083	2234.24
854-160CL300	16	1	0	083	2326.72
854-180CL300	18	1	0	083	3253.11
854-200CL300	20	1	0	083	5640.22
854-240CL300	24	1	0	083	8284.99

Flange Van Stone Style with PVC Ring

Spig

1/2" - 16" = 150 psi maximum internal pressure rating @ 73°F (23°C)
18" - 24" = 50 psi maximum internal pressure rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
856-005	1/2	25	0	080	18.18
856-007	3/4	25	0	080	19.48
856-010	1	15	0	080	21.72
856-012	1-1/4	15	0	080	22.40
856-015	1-1/2	15	0	080	22.85
856-020	2	10	0	080	30.37
856-025	2-1/2	10	0	080	46.94
856P-030	3	10	0	080	51.85
856P-040	4	5	0	080	65.61
856P-060	6	4	0	080	103.20
856P-080	8	2	0	080	184.61
856P-100	10	2	0	081	215.79
856P-120	12	2	0	081	232.66
856-140FP	14	1	0	083	1926.95
856-160FP	16	1	0	083	2337.92
856-180FP	18	1	0	083	3065.76
856-200FP	20	1	0	083	3749.88
856-240FP	24	1	0	083	5101.07

Flange Van Stone Style with Glass Filled PVC Ring

Spig

3" - 12" molded, 14" - 18" molded/fabricated - 150 psi = maximum internal pressure rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
856-030	3	10	0	080	51.85
856-040	4	5	0	080	65.61
856-060	6	4	0	080	103.20
856-080	8	2	0	080	184.61
856-100	10	2	0	081	215.79
856-120	12	2	0	081	232.66
856-140FP	14	1	0	083	1926.95
856-160FP	16	1	0	083	2337.92
856-180FP	18	1	0	083	3065.76

** Fabricated from molded socket flanges with pipe spigot.
18" flange uses 4-piece ring

Flange Van Stone Style with Steel Ring

Soc

150 psi Maximum Internal Pressure Rating @73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
854-120FS	12	1	0	083	2381.68
854-140FS	14	1	0	083	1226.44
854-160FS	16	1	0	083	1485.55
854-180FS	18	1	0	083	1809.89
854-200FS	20	1	0	083	2193.19
854-240FS	24	1	0	083	2951.69

Flange Van Stone Style with Steel Ring

Spig

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
856-140FS	14	1	0	083	975.22
856-160FS	16	1	0	083	1192.01
856-180FS	18	1	0	083	1350.67
856-200FS	20	1	0	083	1626.87
856-240FS	24	1	0	083	2209.11

Flange Van Stone Style PVC with Solid Ring

Soc

150 psi Maximum Internal Pressure Rating @73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
S854-020	2	10	0	080	37.68
S854-030	3	10	0	080	64.32
S854-040	4	5	0	080	81.36

Flange Van Stone Style PVC with Glass Filled PVC Solid Ring

Soc

150 psi Maximum Internal Pressure Rating @73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
S854-060	6	5	0	080	127.97
S854-080	8	2	0	080	208.35
S854-100	10	2	0	081	269.73
S854-120	12	2	0	081	290.80

Flange, One Piece PVC Multi-Bolt Pattern*

ASTM Socket x Multi-bolt Pattern Ring

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
M851-100	10	2	0	081	189.75
M851-120	12	2	0	081	326.80

Hubs fit 10" and 12" ASTM IPS pipe. Rings are manufactured to accept bolt patterns in size 10" and 12" in ANSI Class 150, B.S. 4504 PN10, B.S. 4504 PN16, Table E & JIS 10K for size 10", Table D & E for size 12" Consult Spears® Manufacturing Company Technical Services for additional information. Not for use with wafer valves.

Flange Van Stone Style with Multi-Bolt Pattern PVC Ring*

ASTM Soc x Multi-bolt Pattern Ring

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
M854-020	2	10	0	080	30.14

* Hubs fit 2" ASTM IPS pipe. Rings are manufactured to accept bolt patterns in size 2" in ANSI Class 150, B.S. 4504 PN10 B.S. 4504 PN16 (except 8"), B.S. 10 Table D and B.S. 10 Table E. Consult Spears® Manufacturing Company Technical Services for additional information. Not for use with wafer valves.

Flange Van Stone Style with Multi-Bolt Pattern Glass Filled PVC Ring*

ASTM Soc x Multi-bolt Pattern Ring

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
M854-060	6	5	0	080	102.36
M854-080	8	2	0	080	166.68

Pipe Flanges & Van Stone Style Flange Replacement Split Rings

Pipe Flanges

Flange Van Stone Style with Multi-Bolt Pattern Glass Filled PVC Ring* (continued)

ASTM Soc x Multi-bolt Pattern Ring

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each

* Hubs fit 6" and 8" ASTM IPS pipe. Rings are manufactured to accept bolt patterns in size 6" and 8" in ANSI Class 150, B.S. 4504 PN10 B.S. 4504 PN16 (except 8"), B.S. 10 Table D and B.S. 10 Table E. Consult Spears® Manufacturing Company Technical Services for additional information. Not for use with wafer valves.

Flange Van Stone Style with Multi-Bolt Pattern PVC Ring*

ASTM Spig x Multi-bolt Pattern Ring

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

M856-020	**2**	10	0	080	30.37

* Spigots fit 2" ASTM IPS fitting socket. Rings are manufactured to accept bolt patterns in size 2" in ANSI Class 150, B.S. 4504 NP10 B.S. 4504 NP16 (except 8"), B.S. 10 Table D and B.S. 10 Table E. Consult Spears® Manufacturing Company Technical Services for additional information. Not for use with wafer valves.

Flange Van Stone Style with Multi-Bolt Pattern Glass Filled PVC Ring*

ASTM Spig x Multi-bolt Pattern Ring

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

M856-060	**6**	4	0	080	103.20
M856-080	**8**	2	0	080	167.94

* Spigots fit 6" and 8" ASTM IPS fitting socket. Rings are manufactured to accept bolt patterns in size 6" and 8" in ANSI Class 150, B.S. 4504 PN10 B.S. 4504 PN16 (except 8"), B.S. 10 Table D and B.S. 10 Table E. Consult Spears® Manufacturing Company Technical Services for additional information. Not for use with wafer valves.

Flange Van Stone Style with PVC Ring

Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

855-005	**1/2**	25	0	080	21.63
855-007	**3/4**	25	0	080	25.38
855-010	**1**	15	0	080	27.76
855-012	**1-1/4**	15	0	080	38.26
855-015	**1-1/2**	20	0	080	41.79

Flange Van Stone Style with PVC Ring (continued)

Fipt

855-020	**2**	10	0	080	42.76
855-025	**2-1/2**	10	0	080	98.29

Flange Van Stone Style with Glass Filled PVC Ring

Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

855-030	**3**	10	0	080	101.11
855-040	**4**	5	0	080	183.83
855-060	**6**	1	4	080	289.09
855-060F	**6**	1	4	083	256.97
855-080	**8**	2	0	080	358.24
855-080F	**8**	1	2	083	318.82
855-100F	**10**	1	2	083	359.19

Flange Van Stone Style with Table D&E Drilling PVC ring*

ASTM Socket x Table D&E Drilling

150 psi

854-030DE	**3"/80 nom.**	10	0	080	51.44
854-040DE	**4"/110 nom.**	5	0	080	65.07

* Hubs fit 3"or 4" ASTM IPS Pipe. Rings are manufactured to BS 10 Table D & Table E bolt patterns.

Flange Van Stone Style withPN/ 10/16 Drilling PVC Ring*

ASTM Socket x DIN PN 10/16 Drilling

150 psi

854-030DIN	**3"/80 nom.**	10	0	080	51.44
854-040DIN	**4"/110 nom.**	5	0	080	65.07

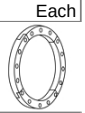
* Hubs fit 3" or 4" ASTM IPS Pipe. Rings are manufactured to DIN 8063-4 PN 10 and PN 16 bolt patterns.

Van Stone Style Flange Replacement Split Rings

Application & Use of Van Stone Style Flange Replacement Split Rings

Designed for easy Van Stone style flange ring replacement in the event of system modification, repair, or improper assembly without having to remove existing flange hub. Split rings are made as a direct replacement of existing one-piece rings used on Spears® brand only of Van Stone style flanges with ANSI Class 150 bolt pattern plastic rings. Remove old ring to be replaced then simply place the split ring sections around hub and install flange bolts (not included) through special designed section overlap to hold in position. Install appropriate user supplied bolts, washers and gasket (see Flange Gasket and Bolt Hardware Kits in this catalog); torque to specifications according to normal flange assembly. Split rings are a set of either 2-pieces or 4-pieces (illustrated) sections depending on size, in regular PVC, Glass Filled PVC, or CPVC for flange type and sizes listed.

Flange Replacement Split Rings, PVC



For Spears® flanges with regular PVC Rings

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
854P-005-1S	**1/2**	10	0	080	54.98
854P-007-1S	**3/4**	10	0	080	58.37
854P-010-1S	**1**	15	0	080	65.27
854P-012-1S	**1-1/4**	15	0	080	66.55
854P-015-1S	**1-1/2**	10	0	080	68.18
854P-020-1S	**2**	10	0	080	90.49
854P-025-1S	**2-1/2**	10	0	080	104.68
854P-030-1S	**3**	10	0	080	116.06
854P-040-1S	**4**	10	0	080	124.42

Flange Replacement Split Rings, PVC (continued)

For Spears® flanges with regular PVC Rings

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
854P-050-1S	**5**	10	0	080	168.49
854P-060-1S	**6**	5	0	080	199.38
854P-080-1S	**8**	4	0	080	227.80
854P-100-1S	**10**	4	0	081	287.57
854P-120-1S	**12**	2	0	081	356.43
854P-140-1S	**14**	2	0	082	488.20
854P-160-1S	**16**	1	0	082	606.48
854P-180-1S	**18**	1	0	082	658.69
854P-200-1S	**20**	1	0	083	3496.06
854P-240-1S	**24**	1	0	083	4283.55

Fits 854-xxx Socket, 855-xxx Threaded, and 856-xxx Spigot hub configurations

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Van Stone Style Flange Replacement Split Rings & Flange Insulating Joints

Van Stone Style Flange Replacement Split Rings

Flange Replacement Split Rings, Glass Filled PVC

For Spears® flanges with Glass Filled PVC Rings

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
854-030-1S	**3**	10	0	080	116.06
854-040-1S	**4**	10	0	080	124.42
854-050-1S	**5**	5	0	080	168.49
854-060-1S	**6**	5	0	080	199.38
854-080-1S	**8**	4	0	080	227.80

Flange Replacement Split Rings, Glass Filled PVC (continued)

For Spears® flanges with Glass Filled PVC Rings

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
854-100-1S	**10**	4	0	081	287.57
854-120-1S	**12**	2	0	081	356.43
854-140-1S	**14**	2	0	081	488.20
854-160-1S	**16**	1	0	082	606.48
854-180-1S	**18**	1	0	082	658.69

Fits 854-xxx Socket, 855-xxx Threaded, and 856-xxx Spigot hub configurations

Flange Insulating Joints

Flange Insulating Joints - Class 150 Bolt Pattern

PP Flange Spacer with PVC Bolt Isolators

Size = Nominal Flange Diameter x Thickness (in.)
For Dielectric Insulation Between Dissimilar Metal Flanges
300 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
IJ-030-010P	**3X1**	1	0	016	460.69
IJ-040-010P	**4X1**	1	0	016	514.74
IJ-060-010P	**6X1**	1	0	016	611.82
IJ-080-010P	**8X1**	1	0	016	710.06
IJ-100-010P	**10X1**	1	0	016	1443.20
IJ-120-010P	**12X1**	1	0	016	1563.13
IJ-140-010P	**14X1**	1	0	016	2025.46
IJ-160-010P	**16X1**	1	0	016	2573.78
IJ-180-010P	**18X1**	1	0	016	3445.23
IJ-200-010P	**20X1**	1	0	016	4447.74
IJ-240-010P	**24X1**	1	0	016	6177.09

Flange Insulating Joints - Class 300 Bolt Pattern

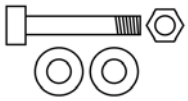
PP Flange Spacer with PVC Bolt Isolators

Size = Nominal Flange Diameter x Thickness (in.)
For Dielectric Insulation Between Dissimilar Metal Flanges
300 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
IJ300-030-010P	**3X1**	1	0	016	678.67
IJ300-040-010P	**4X1**	1	0	016	754.83
IJ300-060-010P	**6X1**	1	0	016	1156.18
IJ300-080-010P	**8X1**	1	0	016	1442.38
IJ300-100-010P	**10X1**	1	0	016	2392.84
IJ300-120-010P	**12X1**	1	0	016	3144.45
IJ300-140-010P	**14X1**	1	0	016	3961.23
IJ300-160-010P	**16X1**	1	0	016	4223.97
IJ300-180-010P	**18X1**	1	0	016	5278.95
IJ300-200-010P	**20X1**	1	0	016	6116.11
IJ300-240-010P	**24X1**	1	0	016	7509.49

Flange Bolt Kits

Bolt Kit Selection Guide



Order Gaskets & Bolt Kits Separately

- Kit Contains All Bolts, Nuts, & Flat Washers for Specified Flange Size
- For Connecting Two (2) Mating Spears® Flanges
- Pre-coated, Anti-seize Lubricated Bolts
- Available in Zinc Coated Steel, Type 304 Stainless Steel or Type 316 Stainless Steel

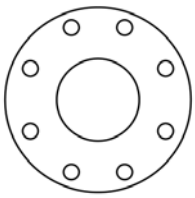
Flange Size	Bolts[1] Per Kit	Diameter (in.-TPI)	Length (in.)	Hardware Kit Part Number		
				Zinc	316 SS	304 SS
1/2 & 3/4	4	1/2-13	2	HK-005	HK1-005	HK2-005
1 & 1-1/4	4	1/2-13	2-1/4	HK-010	HK1-010	HK2-010
1-1/2	4	1/2-13	2-1/2	HK-015	HK1-015	HK2-015
2	4	5/8-11	3	HK-020	HK1-020	HK2-020
2-1/2	4	5/8-11	3-1/4	HK-025	HK1-025	HK2-025
3	4	5/8-11	3-1/2	HK-030	HK1-030	HK2-030
4	8	5/8-11	3-1/2	HK-040	HK1-040	HK2-040
5 & 6	8	3/4-10	4	HK-060	HK1-060	HK2-060
8	8	3/4-10	4-1/2	HK-080	HK1-080	HK2-080
10 & 12	12	7/8-9	5	HK-120	HK1-120	HK2-120
1 - Each Bolt includes Nut & two (2) Flat Washers						

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Flange Bolt Hardware Kits - Zinc Plated Steel For Connection of 2-Spears® Flanges Includes Bolts, Nuts & Flat Washers					
HK-005	**1/2**	1	10	017	10.03
HK-010	**3/4 & 1**	1	10	017	12.54
HK-015	**1-1/4 & 1-1/2**	1	10	017	18.85
HK-020	**2**	1	10	017	25.23
HK-025	**2-1/2**	1	10	017	30.25
HK-030	**3**	1	10	017	34.81
HK-040	**4**	1	5	017	72.12
HK-060	**5 & 6**	1	5	017	80.21
HK-080	**8**	1	0	017	94.00
HK-120	**10 & 12**	1	0	017	127.18
Flange Bolt Hardware Kits - Type 316 Stainless Steel For Connection of 2-Spears® Flanges Includes Bolts, Nuts & Flat Washers					
HK1-005	**1/2**	1	10	017	30.11
HK1-010	**3/4 & 1**	1	10	017	43.37
HK1-015	**1-1/4 & 1-1/2**	1	10	017	47.78
HK1-020	**2**	1	10	017	57.46
HK1-025	**2-1/2**	1	10	017	61.59
HK1-030	**3**	1	10	017	81.26
HK1-040	**4**	1	5	017	162.96
HK1-060	**5 & 6**	1	5	017	212.54
HK1-080	**8**	1	0	017	266.69
HK1-120	**10 & 12**	1	0	017	542.58
Flange Bolt Hardware Kits - Type 304 Stainless Steel For Connection of 2-Spears® Flanges Includes Bolts, Nuts, & Flat Washers					
HK2-005	**1/2**	1	10	017	26.34
HK2-010	**3/4 & 1**	1	10	017	37.57
HK2-015	**1-1/4 & 1-1/2**	1	10	017	44.26
HK2-020	**2**	1	10	017	52.06
HK2-025	**2-1/2**	1	10	017	55.20
HK2-030	**3**	1	10	017	68.55
HK2-040	**4**	1	5	017	137.09
HK2-060	**5 & 6**	1	5	017	144.51
HK2-080	**8**	1	0	017	190.02
HK2-120	**10 & 12**	1	0	017	336.78

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Flange Gaskets - Full-Faced



Order Gaskets & Bolt Kits Separately

- 1/8" Full-Face design with ANSI Class 150 Bolt Patterns
- Pressure rated to 150 psi @ 73°F
- Available in Buna-N, EPDM, or FKM

Gasket Selection Guide

Flange Size	Bolt Holes	Gasket Part Number		
		Buna-N	EPDM	FKM
1/2	4	GK1-005	GK2-005	GK3-005
3/4	4	GK1-007	GK2-007	GK3-007
1	4	GK1-010	GK2-010	GK3-010
1-1/4	4	GK1-012	GK2-012	GK3-012
1-1/2	4	GK1-015	GK2-015	GK3-015
2	4	GK1-020	GK2-020	GK3-020
2-1/2	4	GK1-025	GK2-025	GK3-025
3	4	GK1-030	GK2-030	GK3-030
4	8	GK1-040	GK2-040	GK3-040
5	8	GK1-050	GK2-050	GK3-050
6	8	GK1-060	GK2-060	GK3-060
8	8	GK1-080	GK2-080	GK3-080
10	12	GK1-100	GK2-100	GK3-100
12	12	GK1-120	GK2-120	GK3-120

Flange Gaskets - Full-Faced Buna-N

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
GK1-005	**1/2**	1	25	017	3.22
GK1-007	**3/4**	1	25	017	3.69
GK1-010	**1**	1	25	017	3.80
GK1-012	**1-1/4**	1	25	017	3.89
GK1-015	**1-1/2**	1	25	017	4.18
GK1-020	**2**	1	25	017	4.67
GK1-025	**2-1/2**	1	25	017	5.14
GK1-030	**3**	1	25	017	7.91
GK1-040	**4**	1	25	017	8.84
GK1-050	**5**	1	25	017	10.48
GK1-060	**6**	1	25	017	10.77
GK1-080	**8**	1	25	017	14.20
GK1-100	**10**	1	25	017	18.02
GK1-120	**12**	1	25	017	24.31
GK1-140	**14**	1	25	017	47.02
GK1-160	**16**	1	25	017	226.21
GK1-180	**18**	1	25	017	257.63
GK1-240	**24**	1	25	017	311.31

Flange Gaskets - Full-Faced EPDM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
GK2-005	**1/2**	1	25	017	4.27
GK2-007	**3/4**	1	25	017	4.55
GK2-010	**1**	1	25	017	4.75
GK2-012	**1-1/4**	1	25	017	4.99
GK2-015	**1-1/2**	1	25	017	5.36
GK2-020	**2**	1	25	017	6.54
GK2-025	**2-1/2**	1	25	017	7.85
GK2-030	**3**	1	25	017	11.54
GK2-040	**4**	1	25	017	13.14
GK2-050	**5**	1	25	017	16.43
GK2-060	**6**	1	25	017	17.24
GK2-080	**8**	1	25	017	22.97
GK2-100	**10**	1	25	017	29.93
GK2-120	**12**	1	25	017	41.18
GK2-140	**14**	1	25	017	100.45
GK2-160	**16**	1	25	017	178.22
GK2-180	**18**	1	25	017	208.16
GK2-200	**20**	1	25	017	241.60
GK2-240	**24**	1	25	017	364.73

Flange Gaskets - Full-Faced FKM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
GK3-005	**1/2**	1	25	017	15.25

Flange Gaskets - Full-Faced FKM (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
GK3-007	**3/4**	1	25	017	18.11
GK3-010	**1**	1	25	017	20.01
GK3-012	**1-1/4**	1	5	017	22.59
GK3-015	**1-1/2**	1	25	017	28.49
GK3-020	**2**	1	25	017	39.83
GK3-025	**2-1/2**	1	25	017	53.27
GK3-030	**3**	1	25	017	119.04
GK3-040	**4**	1	25	017	137.42
GK3-050	**5**	1	25	017	160.20
GK3-060	**6**	1	25	017	181.75
GK3-160	**16**	1	25	017	810.63
GK3-180	**18**	1	25	017	912.00
GK3-080	**8**	1	25	017	258.94
GK3-100	**10**	1	25	017	344.42
GK3-120	**12**	1	25	017	485.28
GK3-140	**14**	1	25	017	711.26
GK3-240	**24**	1	25	017	1160.91

PVC Gray Saddles & Hot-Tap Saddles

PRICING

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Glue-On Saddles

Saddle

IPS O.D. x Socket Schedule 80

Non Pressure Rated

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
3963-528	6X2	1	5	400	60.22
3963-530	6X3	1	10	400	60.76
3963-532	6X4	1	5	400	61.28
3963-578	8X2	1	10	400	85.07
3963-580	8X3	1	8	400	86.11
3963-582	8X4	1	5	400	87.03
3963-585	8X6	1	5	400	89.06
3963-621	10X2	1	8	400	78.77
3963-623	10X3	1	5	400	79.88
3963-624	10X4	1	8	400	80.22
3963-626	10X6	1	5	400	93.28
3963-628	10X8	1	5	400	149.49
3963-661	12X2	1	10	400	93.06
3963-663	12X3	1	8	400	93.61
3963-664	12X4	1	5	400	94.40
3963-666	12X6	1	5	400	109.48
3963-668	12X8	1	2	400	172.28
3963-670	12X10	1	4	400	210.86
3963-693	14X3	1	8	400	115.68
3963-694	14X4	1	5	400	116.24
3963-696	14X6	1	5	400	132.32
3963-698	14X8	1	4	400	202.85
3963-700	14X10	1	3	400	259.77
3963-702	14X12	1	4	400	286.83
3963-751	16X2	1	8	400	120.69
3963-753	16X3	1	8	400	121.74
3963-754	16X4	1	10	400	122.43
3963-756	16X6	1	8	400	139.54
3963-758	16X8	1	3	400	208.08
3963-760	16X10	1	0	400	264.96
3963-762	16X12	1	0	400	294.28
3963-764	16X14	1	0	400	306.66
3963-781	18X2	1	8	400	177.31
3963-783	18X3	1	4	400	178.38
3963-784	18X4	1	5	400	179.19
3963-786	18X6	1	5	400	189.65
3963-788	18X8	1	5	400	278.65
3963-790	18X10	1	0	400	308.91
3963-792	18X12	1	0	400	440.55
3963-794	18X14	1	0	400	479.48
3963-796	18X16	1	0	400	627.41
3963-811	20X2	1	0	400	179.33
3963-813	20X3	1	4	400	179.75
3963-814	20X4	1	4	400	181.91
3963-816	20X6	1	0	400	190.82
3963-818	20X8	1	0	400	275.64
3963-820	20X10	1	5	400	305.68
3963-822	20X12	1	0	400	436.02
3963-824	20X14	1	0	400	475.54
3963-826	20X16	1	0	400	623.04
3963-828	20X18	1	0	400	707.43
3963-901	24X2	1	5	400	182.47
3963-903	24X3	1	5	400	183.44
3963-904	24X4	1	5	400	184.28
3963-906	24X6	1	5	400	192.29
3963-908	24X8	1	5	409	259.52
3963-910	24X10	1	5	400	307.00
3963-912	24X12	1	0	409	407.26
3963-914	24X14	1	0	400	473.88
3963-916	24X16	1	0	400	648.61
3963-918	24X18	1	0	400	731.41
3963-920	24X20	1	0	400	823.20

Stub Saddle

IPS O.D. x Socket Schedule 80

Non Pressure Rated

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
3965-528	6X2	1	10	400	64.76
3965-530	6X3	1	3	400	65.32
3965-532	6X4	1	10	400	65.91
3965-578	8X2	1	5	409	85.99
3965-580	8X3	1	4	400	92.59
3965-582	8X4	1	6	400	93.58
3965-585	8X6	1	4	400	95.77
3965-621	10X2	1	6	400	84.71
3965-623	10X3	1	6	409	80.75
3965-624	10X4	1	4	400	86.26
3965-626	10X6	1	4	400	100.29
3965-628	10X8	1	4	400	160.74
3965-661	12X2	1	4	400	100.06
3965-663	12X3	1	2	400	101.13
3965-664	12X4	1	2	400	101.51
3965-666	12X6	1	2	400	117.73
3965-668	12X8	1	2	400	185.25
3965-670	12X10	1	2	400	271.75
3965-691	14X2	1	4	400	123.25
3965-693	14X3	1	0	400	124.40
3965-694	14X4	1	5	400	124.98
3965-696	14X6	1	2	400	142.27
3965-700	14X10	1	0	400	279.33
3965-702	14X12	1	0	400	308.41
3965-751	16X2	1	5	400	129.77
3965-753	16X3	1	4	400	130.89
3965-754	16X4	1	3	400	131.63
3965-756	16X6	1	2	400	150.03
3965-758	16X8	1	3	400	223.75
3965-760	16X10	1	3	400	284.92
3965-762	16X12	1	0	400	316.43
3965-764	16X14	1	0	400	329.76
3965-781	18X2	1	2	400	190.64
3965-783	18X3	1	0	400	191.80
3965-784	18X4	1	0	400	192.67
3965-786	18X6	1	2	400	203.93
3965-788	18X8	1	0	400	299.62
3965-790	18X10	1	0	400	332.16
3965-792	18X12	1	0	400	473.71
3965-794	18X14	1	0	400	515.58
3965-796	18X16	1	0	400	674.63
3965-811	20X2	1	4	400	192.82
3965-813	20X3	1	2	400	193.27
3965-814	20X4	1	0	400	195.59
3965-816	20X6	1	0	400	205.17
3965-818	20X8	1	0	400	296.39
3965-820	20X10	1	0	400	328.69
3965-822	20X12	1	0	400	468.84
3965-824	20X14	1	0	400	511.33
3965-826	20X16	1	0	400	669.96
3965-828	20X18	1	0	400	760.68
3965-901	24X2	1	5	400	196.20
3965-903	24X3	1	5	400	197.24
3965-904	24X4	1	5	400	198.15
3965-906	24X6	1	3	400	206.78
3965-908	24X8	1	0	400	296.86
3965-910	24X10	1	0	400	330.12
3965-912	24X12	1	0	409	437.93
3965-914	24X14	1	0	400	509.55
3965-916	24X16	1	0	400	697.43
3965-918	24X18	1	0	400	786.46
3965-920	24X20	1	0	400	885.16

Clamp-On Saddles

Clamp-On Saddle x Soc Single Outlet PVC Gray

with FKM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
866V-247	2X1/2	3/4	1	10	086	34.00
866V-248	2X3/4	7/8	1	10	086	34.00
866V-249	2X1	1-1/8	1	10	086	34.00
866V-250	2X1-1/4	1-1/2	1	10	086	34.00
866V-251	2X1-1/2	1-1/2	1	10	086	34.00
866V-291	2-1/2X1-1/2	1-3/4	1	10	086	47.08
866V-333[1]	3X1/2	7/8	1	10	086	47.08
866V-334	3X3/4	7/8	1	10	086	47.08
866V-335	3X1	1-1/8	1	10	086	47.08
866V-336[1]	3X1-1/4	2-1/4	1	10	086	47.08
866V-337[1]	3X1-1/2	2-1/4	1	10	086	47.08
866V-338	3X2	2-1/4	1	10	086	47.08
866V-415[1]	4X1/2	1-1/8	1	10	086	56.44
866V-416[1]	4X3/4	1-1/8	1	10	086	56.44
866V-417	4X1	1-1/8	1	8	086	56.44
866V-418[1]	4X1-1/4	1-3/4	1	8	086	56.44
866V-419	4X1-1/2	1-3/4	1	8	086	56.44
866V-420	4X2	2-1/4	1	8	086	56.44
866V-421[1]	4X2-1/2	3	1	4	086	61.56
866V-422	4X3	3	1	4	086	66.99
866V-523[1]	6X1/2	1-1/8	1	4	086	94.03
866V-524[1]	6X3/4	1-1/8	1	4	086	94.03
866V-525	6X1	1-1/8	1	4	086	94.03
866V-526[1]	6X1-1/4	2-1/4	1	4	086	94.03
866V-527[1]	6X1-1/2	2-1/4	1	4	086	94.03
866V-528	6X2	2-1/4	1	4	086	94.03
866V-529[1]	6X2-1/2	3	1	4	086	118.31
866V-530	6X3	3	1	4	086	123.18
866V-532	6X4	4	1	4	086	129.73
866V-573[1]	8X1/2	4	1	0	086	201.53
866V-574[1]	8X3/4	4	1	0	086	201.53
866V-575[1]	8X1	4	1	0	086	201.53
866V-576[1]	8X1-1/4	4	1	0	086	201.53
866V-577[1]	8X1-1/2	4	1	0	086	201.53
866V-578[1]	8 X 2	4	1	0	086	201.53
866V-579[1]	8X2-1/2	4	1	0	086	211.42
866V-580[1]	8X3	4	1	0	086	222.07
866V-582	8X4	4	1	0	086	235.40
866V-585	8X6	6	1	0	086	261.28
866V-624	10X4	4	1	0	086	310.83
866V-626	10X6	6	1	0	086	357.43
866V-664	12X4	4	1	0	086	389.80
866V-666	12X6	6	1	0	086	452.06

[1]Outlet-sized with Bushing

Clamp-On Saddle x Soc Single Outlet PVC Gray

with FKM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
866SV-247	2X1/2	3/4	1	10	086	57.94
866SV-248	2X3/4	7/8	1	10	086	57.94
866SV-249	2X1	1-1/8	1	10	086	57.94
866SV-250	2X1-1/4	1-1/2	1	10	086	57.94
866SV-251	2X1-1/2	1-1/2	1	10	086	57.94
866SV-291	2-1/2X1-1/2	1-3/4	1	10	086	77.66
866SV-333[1]	3X1/2	7/8	1	10	086	77.66
866SV-334	3X3/4	7/8	1	10	086	77.66
866SV-335	3X1	1-1/8	1	10	086	77.66
866SV-336[1]	3X1-1/4	2-1/4	1	10	086	77.66
866SV-337[1]	3X1-1/2	2-1/4	1	10	086	77.66
866SV-338	3X2	2-1/4	1	10	086	77.66
866SV-415[1]	4X1/2	1-1/8	1	10	086	99.93

Clamp-On Saddle x Soc Single Outlet PVC Gray (continued)

with FKM O-ring Seal & SS Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
866SV-416[1]	4X3/4	1-1/8	1	10	086	99.93
866SV-417	4X1	1-1/8	1	8	086	99.93
866SV-418[1]	4X1-1/4	1-3/4	1	8	086	99.93
866SV-419	4X1-1/2	1-3/4	1	8	086	99.93
866SV-420	4X2	2-1/4	1	8	086	99.93
866SV-421[1]	4X2-1/2	3	1	4	086	103.89
866SV-422	4X3	3	1	4	086	109.25
866SV-523[1]	6X1/2	1-1/8	1	4	086	148.08
866SV-524[1]	6X3/4	1-1/8	1	4	086	148.08
866SV-525	6X1	1-1/8	1	4	086	148.08
866SV-526[1]	6X1-1/4	2-1/4	1	4	086	148.08
866SV-527[1]	6X1-1/2	2-1/4	1	4	086	148.08
866SV-528	6X2	2-1/4	1	4	086	148.08
866SV-529[1]	6X2-1/2	3	1	4	086	153.83
866SV-530	6X3	3	1	4	086	159.01
866SV-532	6X4	4	1	4	086	164.43
866SV-573[1]	8X1/2	4	1	0	086	270.41
866SV-574[1]	8X3/4	4	1	0	086	270.41
866SV-575[1]	8 X 1	4	1	0	086	270.41
866SV-576[1]	8X1-1/4	4	1	0	086	270.41
866SV-577[1]	8X1-1/2	4	1	0	086	270.41
866SV-578[1]	8 X 2	4	1	0	086	270.41
866SV-579[1]	8X2-1/2	4	1	0	086	297.42
866SV-580[1]	8X3	4	1	0	086	312.28
866SV-582	8X4	4	1	0	086	331.04
866SV-585	8X6	6	1	0	086	367.42
866SV-624	10X4	4	1	0	086	437.35
866SV-626	10X6	6	1	0	086	502.81
866SV-664	12X4	4	1	0	086	548.03
866SV-666	12X6	6	1	0	086	635.77

[1]Outlet-sized with Bushing

Clamp-On Saddle x Soc Single Outlet PVC Gray

with EPDM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
866-247	2X1/2	3/4	1	10	086	32.40
866-248	2X3/4	7/8	1	10	086	32.40
866-249	2X1	1-1/8	1	10	086	32.40
866-250	2X1-1/4	1-1/2	1	10	086	32.40
866-251	2X1-1/2	1-1/2	1	10	086	32.40
866-291	2-1/2X1-1/2	1-3/4	1	10	086	43.26
866-333[1]	3X1/2	7/8	1	10	086	43.26
866-334	3X3/4	7/8	1	10	086	43.26
866-335	3X1	1-1/8	1	10	086	43.26
866-336[1]	3X1-1/4	2-1/4	1	10	086	43.26
866-337[1]	3X1-1/2	2-1/4	1	10	086	43.26
866-338	3X2	2-1/4	1	10	086	43.26
866-415[1]	4X1/2	1-1/8	1	10	086	52.58
866-416[1]	4X3/4	1-1/8	1	10	086	52.58
866-417	4X1	1-1/8	1	10	086	52.58
866-418[1]	4X1-1/4	1-3/4	1	8	086	52.58
866-419	4X1-1/2	1-3/4	1	8	086	52.58
866-420	4X2	2-1/4	1	8	086	52.58
866-421[1]	4X2-1/2	3	1	4	086	57.44
866-422	4X3	3	1	4	086	62.86
866-523[1]	6X1/2	1-1/8	1	4	086	87.64
866-524[1]	6X3/4	1-1/8	1	4	086	87.64
866-525	6X1	1-1/8	1	4	086	87.64
866-526[1]	6X1-1/4	2-1/4	1	4	086	87.64
866-527[1]	6X1-1/2	2-1/4	1	4	086	87.64
866-528	6X2	2-1/4	1	4	086	87.64
866-529[1]	6X2-1/2	3	1	4	086	95.66

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Clamp-On Saddles

Clamp-On Saddle x Soc Single Outlet PVC Gray (continued) with EPDM O-ring Seal & Zinc-Plated Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
866-530	6X3	3	1	4	086	105.19
866-532	6X4	4	1	4	086	109.63
866-573[1]	8X1/2	4	1	0	086	168.58
866-574[1]	8X3/4	4	1	0	086	168.58
866-575[1]	8X1	4	1	0	086	168.58
866-576[1]	8X1-1/4	4	1	0	086	168.58
866-577[1]	8X1-1/2	4	1	0	086	168.58
866-578[1]	8 X 2	4	1	0	086	168.58
866-579[1]	8X2-1/2	4	1	0	086	185.44
866-580[1]	8X3	4	1	0	086	194.73
866-582	8X4	4	1	0	086	206.24
866-585	8X6	6	1	0	086	229.13
866-621[1]	10X2	4	1	0	086	273.17
866-624	10X4	4	1	0	086	273.17
866-626	10X6	6	1	0	086	312.57
866-664	12X4	4	1	0	086	341.62
866-666	12X6	6	1	0	086	395.12

[1]Outlet-sized with Bushing

Clamp-On Saddle x Soc Single Outlet PVC Gray with EPDM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

866S-247	2X1/2	3/4	1	10	086	51.91
866S-248	2X3/4	7/8	1	10	086	51.91
866S-249	2X1	1-1/8	1	10	086	51.91
866S-250	2X1-1/4	1-1/2	1	10	086	51.91
866S-251	2X1-1/2	1-1/2	1	10	086	51.91
866S-291	2-1/2X1-1/2	1-3/4	1	10	086	69.78
866S-333[1]	3X1/2	7/8	1	10	086	69.78
866S-334	3X3/4	7/8	1	10	086	69.78
866S-335	3X1	1-1/8	1	10	086	69.78
866S-336[1]	3X1-1/4	2-1/4	1	10	086	69.78
866S-337[1]	3X1-1/2	2-1/4	1	10	086	69.78
866S-338	3X2	2-1/4	1	10	086	69.78
866S-415[1]	4X1/2	1-1/8	1	10	086	89.83
866S-416[1]	4X3/4	1-1/8	1	10	086	89.83
866S-417	4X1	1-1/8	1	8	086	89.83
866S-418[1]	4X1-1/4	1-3/4	1	8	086	89.83
866S-419	4X1-1/2	1-3/4	1	8	086	89.83
866S-420	4X2	2-1/4	1	8	086	89.83
866S-421[1]	4X2-1/2	3	1	4	086	93.00
866S-422	4X3	3	1	4	086	98.49
866S-523[1]	6X1/2	1-1/8	1	4	086	135.19
866S-524[1]	6X3/4	1-1/8	1	4	086	135.19
866S-525	6X1	1-1/8	1	4	086	135.19
866S-526[1]	6X1-1/4	2-1/4	1	4	086	135.19
866S-527[1]	6X1-1/2	2-1/4	1	4	086	135.19
866S-528	6X2	2-1/4	1	4	086	135.19
866S-529[1]	6X2-1/2	3	1	4	086	141.61
866S-530	6X3	3	1	4	086	146.44
866S-532	6X4	4	1	4	086	151.92
866S-573[1]	8X1/2	4	1	0	086	254.06
866S-574[1]	8X3/4	4	1	0	086	254.06
866S-575	8X1	4	1	0	086	254.06
866S-576[1]	8X1-1/4	4	1	0	086	254.06
866S-577[1]	8X1-1/2	4	1	0	086	254.06
866S-578[1]	8 X 2	4	1	0	086	254.06
866S-579[1]	8X2-1/2	4	1	0	086	279.53
866S-580[1]	8X3	4	1	0	086	293.55
866S-582	8X4	4	1	0	086	309.79
866S-585	8X6	6	1	0	086	345.40
866S-624	10X4	4	1	0	086	411.13

Clamp-On Saddle x Soc Single Outlet PVC Gray (continued) with EPDM O-ring Seal & SS Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
866S-626	10X6	6	1	0	086	472.69
866S-664	12X4	4	1	0	086	515.36
866S-666	12X6	6	1	0	086	597.76

[1]Outlet-sized with Bushing

Clamp-On Saddle x SR Thread Single Outlet PVC Gray with FKM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

867V-247SR	2X1/2	3/4	1	10	086	38.02
867V-248SR	2X3/4	7/8	1	10	086	38.02
867V-249SR	2X1	1-1/8	1	10	086	38.02
867V-250SR	2X1-1/4	1-1/2	1	10	086	38.02
867V-251SR	2X1-1/2	1-1/2	1	10	086	38.02
867V-291SR	2-1/2X1-1/2	1-3/4	1	10	086	52.98
867V-333SR[1]	3X1/2	7/8	1	10	086	52.98
867V-334SR	3X3/4	7/8	1	10	086	52.98
867V-335SR	3X1	1-1/8	1	10	086	52.98
867V-336SR[1]	3X1-1/4	2-1/4	1	10	086	52.98
867V-337SR[1]	3X1-1/2	2-1/4	1	10	086	52.98
867V-338SR	3X2	2-1/4	1	10	086	52.98
867V-415SR[1]	4X1/2	1-1/8	1	10	086	66.21
867V-416SR[1]	4X3/4	1-1/8	1	10	086	66.21
867V-417SR	4X1	1-1/8	1	8	086	66.21
867V-418SR[1]	4X1-1/4	1-3/4	1	8	086	66.21
867V-419SR	4X1-1/2	1-3/4	1	8	086	66.21
867V-420SR	4X2	2-1/4	1	8	086	66.21
867V-421SR[1]	4X2-1/2	3	1	4	086	71.31
867V-422SR	4X3	3	1	4	086	75.48
867V-523SR[1]	6X1/2	1-1/8	1	4	086	110.35
867V-524SR[1]	6X3/4	1-1/8	1	4	086	110.35
867V-525SR	6X1	1-1/8	1	4	086	110.35
867V-526SR[1]	6X1-1/4	2-1/4	1	4	086	110.35
867V-527SR[1]	6X1-1/2	2-1/4	1	4	086	110.35
867V-528SR	6X2	2-1/4	1	4	086	110.35
867V-529SR[1]	6X2-1/2	3	1	4	086	141.48
867V-530SR	6X3	3	1	4	086	147.03
867V-532SR	6X4	4	1	4	086	153.39
867V-573SR[1]	8X1/2	4	1	0	086	222.42
867V-574SR[1]	8X3/4	4	1	0	086	222.42
867V-575SR[1]	8X1	4	1	0	086	222.42
867V-576SR[1]	8X1-1/4	4	1	0	086	222.42
867V-577SR[1]	8X1-1/2	4	1	0	086	222.42
867V-578SR[1]	8X2	4	1	0	086	222.42
867V-579SR[1]	8X2-1/2	4	1	0	086	244.61
867V-580SR[1]	8X3	4	1	0	086	256.88
867V-582SR	8X4	4	1	0	086	272.31
867V-585SR	8X6	4	1	0	086	303.09
867V-624SR	10X4	4	1	0	086	324.06
867V-626SR	10X6	6	1	0	086	372.60
867V-664SR	12X4	4	1	0	086	406.22
867V-666SR	12X6	6	1	0	086	471.15

[1]Outlet-sized with Bushing

Clamp-On Saddle x SR Thread Single Outlet PVC Gray with FKM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

867SV-245SR[1]	2X1/4	1-1/8	1	10	086	70.39
867SV-247SR	2X1/2	3/4	1	10	086	64.64
867SV-248SR	2X3/4	7/8	1	10	086	64.64
867SV-249SR	2X1	1-1/8	1	10	086	64.64
867SV-250SR	2X1-1/4	1-1/2	1	10	086	64.64

Clamp-On Saddles

Clamp-On Saddle x SR Thread Single Outlet PVC Gray
(continued)
with FKM O-ring Seal & SS Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
867SV-251SR	2X1-1/2	1-1/2	1	10	086	64.64
867SV-291SR	2-1/2X1-1/2	1-3/4	1	10	086	86.42
867SV-331SR[1]	3X1/4	1-1/8	1	10	086	86.42
867SV-333SR[1]	3X1/2	7/8	1	10	086	86.42
867SV-334SR	3X3/4	7/8	1	10	086	86.42
867SV-335SR	3X1	1-1/8	1	10	086	86.42
867SV-336SR[1]	3X1-1/4	2-1/4	1	10	086	86.42
867SV-337SR[1]	3X1-1/2	2-1/4	1	10	086	86.42
867SV-338SR	3X2	2-1/4	1	10	086	86.42
867SV-413SR[1]	4X1/4	1-1/8	1	8	086	110.27
867SV-415SR[1]	4X1/2	1-1/8	1	10	086	109.12
867SV-416SR[1]	4X3/4	1-1/8	1	10	086	109.12
867SV-417SR	4X1	1-1/8	1	8	086	109.12
867SV-418SR[1]	4X1-1/4	1-3/4	1	8	086	109.12
867SV-419SR	4X1-1/2	1-3/4	1	8	086	109.12
867SV-420SR	4X2	2-1/4	1	8	086	109.12
867SV-421SR[1]	4X2-1/2	3	1	4	086	112.74
867SV-422SR	4X3	3	1	4	086	118.49
867SV-521SR[1]	6X1/4	1-1/8	1	8	086	163.76
867SV-523SR[1]	6X1/2	1-1/8	1	4	086	160.27
867SV-524SR[1]	6X3/4	1-1/8	1	4	086	160.27
867SV-525SR	6X1	1-1/8	1	4	086	160.27
867SV-526SR[1]	6X1-1/4	2-1/4	1	4	086	160.27
867SV-527SR[1]	6X1-1/2	2-1/4	1	4	086	160.27
867SV-528SR	6X2	2-1/4	1	4	086	160.27
867SV-529SR[1]	6X2-1/2	3	1	4	086	173.64
867SV-530SR	6X3	3	1	4	086	181.65
867SV-532SR	6X4	4	1	4	086	188.06
867SV-571SR[1]	8X1/4	4	1	0	086	297.93
867SV-573SR[1]	8X1/2	4	1	0	086	286.42
867SV-574SR[1]	8X3/4	4	1	0	086	286.42
867SV-575SR[1]	8X1	4	1	0	086	286.42
867SV-576SR[1]	8X1-1/4	4	1	0	086	286.42
867SV-577SR[1]	8X1-1/2	4	1	0	086	286.42
867SV-578SR[1]	8X2	4	1	0	086	286.42
867SV-579SR[1]	8X2-1/2	4	1	0	086	315.05
867SV-580SR[1]	8X3	4	1	0	086	330.80
867SV-582SR	8X4	4	1	0	086	350.65
867SV-585SR	8X6	6	1	0	086	384.27
867SV-624SR	10X4	4	1	0	086	417.13
867SV-626SR	10X6	6	1	0	086	479.95
867SV-664SR	12X4	4	1	0	086	523.11
867SV-666SR	12X6	6	1	0	086	606.72

[1]Outlet-sized with Bushing

Clamp-On Saddle x SR Thread Single Outlet PVC Gray
with EPDM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

867-247SR	2X1/2	3/4	1	10	086	33.81
867-248SR	2X3/4	7/8	1	10	086	33.81
867-249SR	2X1	1-1/8	1	10	086	33.81
867-250SR	2X1-1/4	1-1/2	1	10	086	33.81
867-251SR	2X1-1/2	1-1/2	1	10	086	33.81
867-291SR	2-1/2X1-1/2	1-3/4	1	10	086	46.20
867-333SR[1]	3X1/2	7/8	1	10	086	46.20
867-334SR	3X3/4	7/8	1	10	086	46.20
867-335SR	3X1	1-1/8	1	10	086	46.20
867-336SR[1]	3X1-1/4	2-1/4	1	10	086	46.20
867-337SR[1]	3X1-1/2	2-1/4	1	10	086	46.20
867-338SR	3X2	2-1/4	1	10	086	46.20
867-415SR[1]	4X1/2	1-1/8	1	10	086	58.21
867-416SR[1]	4X3/4	1-1/8	1	10	086	58.21

Clamp-On Saddle x SR Thread Single Outlet PVC Gray
(continued)
with EPDM O-ring Seal & Zinc-Plated Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
867-417SR	4X1	1-1/8	1	8	086	58.21
867-418SR[1]	4X1-1/4	1-3/4	1	8	086	58.21
867-419SR[1]	4X1-1/2	1-3/4	1	8	086	58.21
867-420SR	4X2	2-1/4	1	8	086	58.21
867-421SR[1]	4X2-1/2	3	1	4	086	59.58
867-422SR	4X3	3	1	4	086	68.28
867-523SR[1]	6X1/2	1-1/8	1	4	086	96.99
867-524SR[1]	6X3/4	1-1/8	1	4	086	96.99
867-525SR	6X1	1-1/8	1	4	086	96.99
867-526SR[1]	6X1-1/4	2-1/4	1	4	086	96.99
867-527SR[1]	6X1-1/2	2-1/4	1	4	086	96.99
867-528SR	6X2	2-1/4	1	4	086	96.99
867-529SR[1]	6X2-1/2	3	1	4	086	120.48
867-530SR	6X3	3	1	4	086	129.71
867-532SR	6X4	4	1	4	086	135.82
867-573SR	8X1/2	4	1	0	086	205.29
867-574SR[1]	8X3/4	4	1	0	086	205.29
867-575SR	8X1	4	1	0	086	205.29
867-576SR[1]	8X1-1/4	4	1	0	086	205.29
867-577SR[1]	8X1-1/2	4	1	0	086	205.29
867-578SR[1]	8X2	4	1	0	086	205.29
867-579SR[1]	8X2-1/2	4	1	0	086	225.85
867-580SR[1]	8X3	4	1	0	086	237.04
867-582SR	8X4	4	1	0	086	251.33
867-585SR	8X6	6	1	0	086	289.45
867-624SR	10X4	4	1	0	086	298.97
867-626SR	10X6	4	1	0	086	343.85
867-664SR	12X4	4	1	0	086	374.64
867-666SR	12X6	6	1	0	086	434.85

[1]Outlet-sized with Bushing

Clamp-On Saddle x SR Thread Single Outlet PVC Gray
with EPDM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

867S-245SR[1]	2X1/4	1-1/8	1	10	086	64.64
867S-247SR	2X1/2	3/4	1	10	086	57.77
867S-248SR	2X3/4	7/8	1	10	086	57.77
867S-249SR	2X1	1-1/8	1	10	086	57.77
867S-250SR	2X1-1/4	1-1/2	1	10	086	57.77
867S-251SR	2X1-1/2	1-1/2	1	10	086	57.77
867S-291SR	2-1/2X1-1/2	1-3/4	1	10	086	77.67
867S-331SR[1]	3X1/4	1-1/8	1	10	086	85.92
867S-333SR[1]	3X1/2	7/8	1	10	086	77.67
867S-334SR	3X3/4	7/8	1	10	086	77.67
867S-335SR	3X1	1-1/8	1	10	086	77.67
867S-336SR[1]	3X1-1/4	2-1/4	1	10	086	77.67
867S-337SR[1]	3X1-1/2	2-1/4	1	10	086	77.67
867S-338SR	3X2	2-1/4	1	10	086	77.67
867S-413SR	4X1/4		1	8	086	101.09
867S-415SR[1]	4X1/2	1-1/8	1	10	086	97.79
867S-416SR[1]	4X3/4	1-1/8	1	10	086	97.79
867S-417SR	4X1	1-1/8	1	8	086	97.79
867S-418SR[1]	4X1-1/4	1-3/4	1	8	086	97.79
867S-419SR	4X1-1/2	1-3/4	1	8	086	97.79
867S-420SR	4X2	2-1/4	1	8	086	97.79
867S-421SR[1]	4X2-1/2	3	1	4	086	102.35
867S-422SR	4X3	3	1	4	086	110.32
867S-521SR[1]	6X1/4	1-1/8	1	8	086	155.12
867S-523SR[1]	6X1/2	1-1/8	1	4	086	141.37
867S-524SR[1]	6X3/4	1-1/8	1	4	086	141.37
867S-525SR	6X1	1-1/8	1	4	086	141.37
867S-526SR[1]	6X1-1/4	2-1/4	1	4	086	141.37

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Clamp-On Saddles

Clamp-On Saddle x SR Thread Single Outlet PVC Gray (continued)

with EPDM O-ring Seal & SS Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
867S-527SR[1]	6X1-1/2	2-1/4	1	4	086	141.37
867S-528SR	6X2	2-1/4	1	4	086	141.37
867S-529SR[1]	6X2-1/2	3	1	4	086	161.38
867S-530SR	6X3	3	1	4	086	166.62
867S-532SR	6X4	4	1	4	086	173.55
867S-571SR[1]	8X1/4	4	1	0	086	306.28
867S-573SR[1]	8X1/2	4	1	0	086	262.14
867S-574SR[1]	8X3/4	4	1	0	086	262.14
867S-575SR[1]	8X1	4	1	0	086	262.14
867S-576SR[1]	8X1-1/4	4	1	0	086	262.14
867S-577SR[1]	8X1-1/2	4	1	0	086	262.14
867S-578SR[1]	8X2	4	1	0	086	262.14
867S-579SR[1]	8X2-1/2	4	1	0	086	292.43
867S-580SR[1]	8X3	4	1	0	086	309.04
867S-582SR	8X4	4	1	0	086	326.49
867S-585SR	8X6	6	1	0	086	342.75
867S-624SR	10X4	4	1	0	086	402.46
867S-626SR	10X6	6	1	0	086	423.16
867S-664SR	12X4	4	1	0	086	461.35
867S-666SR	12X6	6	1	0	086	535.14

[1]Outlet-sized with Bushing

Clamp-On Saddle x Soc Double Outlet PVC Gray

with FKM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
868V-247	2X1/2	3/4	1	10	086	42.13
868V-248	2X3/4	7/8	1	10	086	42.13
868V-249	2X1	1-1/8	1	10	086	42.13
868V-250	2X1-1/4	1-1/2	1	10	086	42.13
868V-251	2X1-1/2	1-1/2	1	10	086	42.13
868V-291	2-1/2X1-1/2	1-3/4	1	10	086	53.97
868V-333[1]	3X1/2	7/8	1	10	086	53.97
868V-334	3X3/4	7/8	1	10	086	53.97
868V-335	3X1	1-1/8	1	10	086	53.97
868V-336[1]	3X1-1/4	2-1/4	1	10	086	53.97
868V-337[1]	3X1-1/2	2-1/4	1	10	086	53.97
868V-338	3X2	2-1/4	1	10	086	53.97
868V-415[1]	4X1/2	1-1/8	1	10	086	72.05
868V-416[1]	4X3/4	1-1/8	1	10	086	72.05
868V-417	4X1	1-1/8	1	8	086	72.05
868V-418[1]	4X1-1/4	1-3/4	1	8	086	72.05
868V-419	4X1-1/2	1-3/4	1	8	086	72.05
868V-420	4X2	2-1/4	1	8	086	72.05
868V-421[1]	4X2-1/2	3	1	4	086	78.32
868V-422	4X3	3	1	4	086	84.43
868V-523[1]	6X1/2	1-1/8	1	4	086	118.29
868V-524[1]	6X3/4	1-1/8	1	4	086	118.29
868V-525	6X1	1-1/8	1	4	086	118.29
868V-526[1]	6X1-1/4	2-1/4	1	4	086	118.29
868V-527[1]	6X1-1/2	2-1/4	1	4	086	118.29
868V-528	6X2	2-1/4	1	4	086	118.29
868V-529[1]	6X2-1/2	3	1	4	086	122.82
868V-530	6X3	3	1	4	086	129.54
868V-532	6X4	4	1	4	086	138.45
868V-573[1]	8X1/2	4	1	0	086	248.75
868V-574[1]	8X3/4	4	1	0	086	248.75
868V-575[1]	8X1	4	1	0	086	248.75
868V-576[1]	8X1-1/4	4	1	0	086	248.75
868V-577[1]	8X1-1/2	4	1	0	086	248.75
868V-578[1]	8X2	4	1	0	086	248.75
868V-579[1]	8X2-1/2	4	1	0	086	260.94
868V-580[1]	8X3	4	1	0	086	274.19

Clamp-On Saddle x Soc Double Outlet PVC Gray (continued)

with FKM O-ring Seal & Zinc-Plated Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
868V-582	8X4	4	1	0	086	290.55
868V-585	8X6	6	1	0	086	322.52
868V-624	10X4	4	1	0	086	383.85
868V-626	10X6	6	1	0	086	405.08
868V-664	12X4	4	1	0	086	481.15
868V-666	12X6	6	1	0	086	558.02

[1]Outlet-sized with Bushing

Clamp-On Saddle x Soc Double Outlet PVC Gray

with FKM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
868SV-247	2X1/2	3/4	1	10	086	67.76
868SV-248	2X3/4	7/8	1	10	086	67.76
868SV-249	2X1	1-1/8	1	10	086	67.76
868SV-250	2X1-1/4	1-1/2	1	10	086	67.76
868SV-251	2X1-1/2	1-1/2	1	10	086	67.76
868SV-291	2-1/2X1-1/2	1-3/4	1	10	086	90.04
868SV-333[1]	3X1/2	7/8	1	10	086	90.04
868SV-334	3X3/4	7/8	1	10	086	90.04
868SV-335	3X1	1-1/8	1	10	086	90.04
868SV-336[1]	3X1-1/4	2-1/4	1	10	086	90.04
868SV-337[1]	3X1-1/2	2-1/4	1	10	086	90.04
868SV-338	3X2	2-1/4	1	10	086	90.04
868SV-415[1]	4X1/2	1-18	1	10	086	115.29
868SV-416[1]	4X3/4	1-1/8	1	10	086	115.29
868SV-417	4X1	1-1/8	1	8	086	115.29
868SV-418[1]	4X1-1/4	1-3/4	1	8	086	115.29
868SV-419	4X1-1/2	1-3/4	1	8	086	115.29
868SV-420	4X2	2-1/4	1	16	086	115.29
868SV-421[1]	4X2-1/2	3	1	4	086	123.80
868SV-422	4X3	3	1	4	086	128.94
868SV-523[1]	6X1/2	1-1/8	1	4	086	178.60
868SV-524[1]	6X3/4	1-1/8	1	4	086	178.60
868SV-525	6X1	1-1/8	1	4	086	178.60
868SV-526[1]	6X1-1/4	2-1/4	1	4	086	178.60
868SV-527[1]	6X1-1/2	2-1/4	1	4	086	178.60
868SV-528	6X2	2-1/4	1	4	086	178.60
868SV-529[1]	6X2-1/2	3	1	4	086	189.31
868SV-530	6X3	3	1	4	086	194.56
868SV-532	6X4	4	1	4	086	200.22
868SV-573[1]	8X1/2	4	1	0	086	333.88
868SV-574[1]	8X3/4	4	1	0	086	333.88
868SV-575[1]	8X1	4	1	0	086	333.88
868SV-576[1]	8X1-1/4	4	1	0	086	333.88
868SV-577[1]	8X1-1/2	4	1	0	086	333.88
868SV-578[1]	8X2	4	1	0	086	333.88
868SV-579[1]	8X2-1/2	4	1	0	086	367.26
868SV-580[1]	8X3	4	1	0	086	385.59
868SV-582	8X4	4	1	0	086	387.46
868SV-585	8X6	6	1	0	086	453.61
868SV-624	10X4	4	1	0	086	539.79
868SV-626	10X6	6	1	0	086	620.81
868SV-664	12X4	4	1	0	086	676.63
868SV-666	12X6	6	1	0	086	784.92

[1]Outlet-sized with Bushing

Clamp-On Saddle x Soc Double Outlet PVC Gray

with EPDM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
868-247	2X1/2	3/4	1	10	086	38.56
868-248	2X3/4	7/8	1	10	086	38.56

Clamp-On Saddles

Clamp-On Saddle x Soc Double Outlet PVC Gray
(continued)
with EPDM O-ring Seal & Zinc-Plated Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
868-249	2X1	1-1/8	1	10	086	38.56
868-250	2X1-1/4	1-1/2	1	10	086	38.56
868-251	2X1-1/2	1-1/2	1	10	086	38.56
868-291	2-1/2X1-1/2	1-3/4	1	10	086	52.99
868-333[1]	3X1/2	7/8	1	10	086	52.99
868-334	3X3/4	7/8	1	10	086	52.99
868-335	3X1	1-1/8	1	10	086	52.99
868-336[1]	3X1-1/4	2-1/4	1	10	086	52.99
868-337[1]	3X1-1/2	2-1/4	1	10	086	52.99
868-338	3X2	2-1/4	1	10	086	52.99
868-415[1]	4X1/2	1-1/8	1	10	086	66.85
868-416[1]	4X3/4	1-1/8	1	10	086	66.85
868-417	4X1	1-1/8	1	8	086	66.85
868-418[1]	4X1-1/4	1-3/4	1	8	086	66.85
868-419	4X1-1/2	1-3/4	1	8	086	66.85
868-420	4X2	2-1/4	1	8	086	66.85
868-421[1]	4X2-1/2	3	1	4	086	71.79
868-422	4X3	3	1	4	086	75.97
868-523[1]	6X1/2	1-1/8	1	4	086	111.67
868-524[1]	6X3/4	1-1/8	1	4	086	111.67
868-525	6X1	1-1/8	1	4	086	111.67
868-526[1]	6X1-1/4	2-1/4	1	4	086	111.67
868-527[1]	6X1-1/2	2-1/4	1	4	086	111.67
868-528	6X2	2-1/4	1	4	086	111.67
868-529[1]	6X2-1/2	3	1	4	086	118.02
868-530	6X3	3	1	4	086	124.73
868-532	6X4	4	1	4	086	129.72
868-573[1]	8X1/2	4	1	0	086	208.83
868-574[1]	8X3/4	4	1	0	086	208.83
868-575[1]	8X1	4	1	0	086	208.83
868-576[1]	8X1-1/4	4	1	0	086	208.83
868-577[1]	8X1-1/2	4	1	0	086	208.83
868-578[1]	8X2	4	1	0	086	208.83
868-579[1]	8X2-1/2	4	1	0	086	228.96
868-580[1]	8X3	4	1	0	086	240.31
868-582	8X4	4	1	0	086	254.57
868-585	8X6	6	1	0	086	282.79
868-624	10X4	4	1	0	086	336.46
868-626	10X6	6	1	0	086	387.04
868-664	12X4	4	1	0	086	421.77
868-666	12X6	6	1	0	086	489.22

[1]Outlet-sized with Bushing

Clamp-On Saddle x Soc Double Outlet PVC Gray
with EPDM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
868S-247	2X1/2	3/4	1	10	086	58.78
868S-248	2X3/4	7/8	1	10	086	58.78
868S-249	2X1	1-1/8	1	10	086	58.78
868S-250	2X1-1/4	1-1/2	1	10	086	58.78
868S-251	2X1-1/2	1-1/2	1	10	086	58.78
868S-291	2-1/2X1-1/2	1-3/4	1	10	086	78.99
868S-333[1]	3X1/2	7/8	1	10	086	78.99
868S-334	3X3/4	7/8	1	10	086	78.99
868S-335	3X1	1-1/8	1	10	086	78.99
868S-336[1]	3X1-1/4	2-1/4	1	10	086	78.99
868S-337[1]	3X1-1/2	2-1/4	1	10	086	78.99
868S-338	3X2	2-1/4	1	10	086	78.99
868S-415[1]	4X1/2	1-1/8	1	10	086	101.72
868S-416[1]	4X3/4	1-1/8	1	10	086	101.72
868S-417	4X1	1-1/8	1	8	086	101.72
868S-418[1]	4X1-1/4	1-3/4	1	8	086	101.72

Clamp-On Saddle x Soc Double Outlet PVC Gray
(continued)
with EPDM O-ring Seal & SS Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
868S-419	4X1-1/2	1-3/4	1	8	086	101.72
868S-420	4X2	2-1/4	1	8	086	101.72
868S-421[1]	4X2-1/2	3	1	4	086	110.38
868S-422	4X3	3	1	4	086	113.34
868S-523[1]	6X1/2	1-1/8	1	4	086	169.52
868S-524[1]	6X3/4	1-1/8	1	4	086	169.52
868S-525	6X1	1-1/8	1	4	086	169.52
868S-526[1]	6X1-1/4	2-1/4	1	4	086	169.52
868S-527[1]	6X1-1/2	2-1/4	1	4	086	169.52
868S-528	6X2	2-1/4	1	4	086	169.52
868S-529[1]	6X2-1/2	3	1	4	086	175.26
868S-530	6X3	3	1	4	086	182.38
868S-532	6X4	4	1	4	086	189.64
868S-573[1]	8X1/2	4	1	0	086	313.58
868S-574[1]	8X3/4	4	1	0	086	313.58
868S-575[1]	8X1	4	1	0	086	313.58
868S-576[1]	8X1-1/4	4	1	0	086	313.58
868S-577[1]	8X1-1/2	4	1	0	086	313.58
868S-578[1]	8X2	4	1	0	086	313.58
868S-579[1]	8X2-1/2	4	1	0	086	345.07
868S-580[1]	8X3	4	1	0	086	362.43
868S-582	8X4	4	1	0	086	382.40
868S-585	8X6	6	1	0	086	456.13
868S-624	10X4	4	1	0	086	507.46
868S-626	10X6	6	1	0	086	583.57
868S-664	12X4	4	1	0	086	636.13
868S-666	12X6	6	1	0	086	737.78

[1]Outlet-sized with Bushing

Clamp-On Saddle x SR Thread Double Outlet PVC Gray
with FKM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
869V-247SR	2X1/2	3/4	1	10	086	46.88
869V-248SR	2X3/4	7/8	1	10	086	46.88
869V-249SR	2X1	1-1/8	1	10	086	46.88
869V-250SR	2X1-1/4	1-1/2	1	10	086	46.88
869V-251SR	2X1-1/2	1-1/2	1	10	086	46.88
869V-291SR	2-1/2X1-1/2	1-3/4	1	10	086	64.45
869V-333SR[1]	3X1/2	7/8	1	10	086	64.45
869V-334SR	3X3/4	7/8	1	10	086	64.45
869V-335SR	3X1	1-1/8	1	10	086	64.45
869V-336SR[1]	3X1-1/4	2-1/4	1	10	086	64.45
869V-337SR[1]	3X1-1/2	2-1/4	1	10	086	64.45
869V-338SR	3X2	2-1/4	1	10	086	64.45
869V-415SR[1]	4X1/2	1-1/8	1	10	086	80.04
869V-416SR[1]	4X3/4	1-1/8	1	10	086	80.04
869V-417SR	4X1	1-1/8	1	8	086	80.04
869V-418SR[1]	4X1-1/4	1-3/4	1	8	086	80.04
869V-419SR	4X1-1/2	1-3/4	1	8	086	80.04
869V-420SR	4X2	2-1/4	1	8	086	80.04
869V-421SR[1]	4X2-1/2	3	1	4	086	86.04
869V-422SR	4X3	3	1	4	086	90.91
869V-523SR[1]	6X1/2	1-1/8	1	4	086	135.56
869V-524SR[1]	6X3/4	1-1/8	1	4	086	135.56
869V-525SR	6X1	1-1/8	1	4	086	135.56
869V-526SR[1]	6X1-1/4	2-1/4	1	4	086	135.56
869V-527SR[1]	6X1-1/2	2-1/4	1	4	086	135.56
869V-528SR	6X2	2-1/4	1	4	086	135.56
869V-529SR[1]	6X2-1/2	3	1	4	086	163.75
869V-530SR	6X3	3	1	4	086	173.05
869V-532SR	6X4	4	1	4	086	181.78
869V-573SR[1]	8X1/2	4	1	0	086	274.53

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Clamp-On Saddles

Clamp-On Saddle x SR Thread Double Outlet PVC Gray (continued)

with FKM O-ring Seal & Zinc-Plated Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
869V-574SR[1]	8X3/4	4	1	0	086	274.53
869V-575SR[1]	8X1	4	1	0	086	274.53
869V-576SR[1]	8X1-1/4	4	1	0	086	274.53
869V-577SR[1]	8X1-1/2	4	1	0	086	274.53
869V-578SR[1]	8X2	4	1	0	086	274.53
869V-579SR[1]	8X2-1/2	4	1	0	086	302.06
869V-580SR[1]	8X3	4	1	0	086	317.20
869V-582SR	8X4	4	1	0	086	336.29
869V-585SR	8X6	6	1	0	086	391.45
869V-624SR	10X4	4	1	0	086	400.12
869V-626SR	10X6	6	1	0	086	460.13
869V-664SR	12X4	4	1	0	086	501.58
869V-666SR	12X6	6	1	0	086	583.64

[1]Outlet-sized with Bushing

Clamp-On Saddle x SR Thread Double Outlet PVC Gray

with FKM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

869SV-247SR	2X1/2	3/4	1	10	086	75.37
869SV-248SR	2X3/4	7/8	1	10	086	75.37
869SV-249SR	2X1	1-1/8	1	10	086	75.37
869SV-250SR	2X1-1/4	1-1/2	1	10	086	75.37
869SV-251SR	2X1-1/2	1-1/2	1	10	086	75.37
869SV-291SR	2-1/2X1-1/2	1-3/4	1	10	086	99.99
869SV-333SR[1]	3X1/2	7/8	1	10	086	99.99
869SV-335SR	3X1	1-1/8	1	10	086	99.99
869SV-334SR	3X3/4	7/8	1	10	086	99.99
869SV-336SR[1]	3X1-1/4	2-1/4	1	10	086	99.99
869SV-337SR[1]	3X1-1/2	2-1/4	1	10	086	99.99
869SV-338SR	3X2	2-1/4	1	10	086	99.99
869SV-415SR[1]	4X1/2	1-1/8	1	10	086	125.72
869SV-416SR[1]	4X3/4	1-1/8	1	10	086	125.72
869SV-417SR	4X1	1-1/8	1	8	086	125.72
869SV-418SR[1]	4X1-1/4	1-3/4	1	8	086	125.72
869SV-419SR	4X1-1/2	1-3/4	1	8	086	125.72
869SV-420SR	4X2	2-1/4	1	8	086	125.72
869SV-421SR[1]	4X2-1/2	3	1	4	086	132.40
869SV-422SR	4X3	3	1	4	086	139.16
869SV-523SR[1]	6X1/2	1-1/8	1	4	086	209.45
869SV-524SR[1]	6X3/4	1-1/8	1	4	086	209.45
869SV-525SR	6X1	1-1/8	1	4	086	209.45
869SV-526SR[1]	6X1-1/4	2-1/4	1	4	086	209.45
869SV-527SR[1]	6X1-1/2	2-1/4	1	4	086	209.45
869SV-528SR	6X2	2-1/4	1	4	086	209.45
869SV-529SR[1]	6X2-1/2	3	1	4	086	224.25
869SV-530SR	6X3	3	1	4	086	238.53
869SV-532SR	6X4	4	1	4	086	244.73
869SV-573SR[1]	8X1/2	4	1	0	086	353.66
869SV-574SR[1]	8X3/4	4	1	0	086	353.66
869SV-575SR[1]	8X1	4	1	0	086	353.66
869SV-576SR[1]	8X1-1/4	4	1	0	086	353.66
869SV-577SR[1]	8X1-1/2	4	1	0	086	353.66
869SV-578SR[1]	8X2	4	1	0	086	353.66
869SV-579SR[1]	8X2-1/2	4	1	0	086	388.93
869SV-580SR[1]	8X3	4	1	0	086	408.37
869SV-582SR	8X4	4	1	0	086	432.97
869SV-585SR	8X6	6	1	0	086	472.79
869SV-624SR	10X4	4	1	0	086	515.19
869SV-626SR	10X6	4	1	0	086	592.51
869SV-664SR	12X4	4	1	0	086	645.74
869SV-666SR	12X6	6	1	0	086	749.14

[1]Outlet-sized with Bushing

Clamp-On Saddle x SR Thread Double Outlet PVC Gray

with EPDM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
869-247SR	2X1/2	3/4	1	10	086	42.00
869-248SR	2X3/4	7/8	1	10	086	42.00
869-249SR	2X1	1-1/8	1	10	086	42.00
869-250SR	2X1-1/4	1-1/2	1	10	086	42.00
869-251SR	2X1-1/2	1-1/2	1	10	086	42.00
869-291SR	2-1/2X1-1/2	1-3/4	1	10	086	56.56
869-333SR[1]	3X1/2	7/8	1	10	086	56.56
869-334SR	3X3/4	7/8	1	10	086	56.56
869-335SR	3X1	1-1/8	1	10	086	56.56
869-336SR[1]	3X1-1/4	1-1/8	1	10	086	56.56
869-337SR[1]	3X1-1/2	2-1/4	1	10	086	56.56
869-338SR	3X2	2-1/4	1	10	086	56.56
869-415SR[1]	4X1/2	1-1/8	1	10	086	70.72
869-416SR[1]	4X3/4	1-1/8	1	10	086	70.72
869-417SR	4X1	1-1/8	1	8	086	70.72
869-418SR[1]	4X1-1/4	1-3/4	1	8	086	70.72
869-419SR	4X1-1/2	1-3/4	1	8	086	70.72
869-420SR	4X2	2-1/4	1	8	086	70.72
869-421SR[1]	4X2-1/2	3	1	4	086	77.34
869-422SR	4X3	3	1	4	086	82.09
869-523SR[1]	6X1/2	1-1/8	1	4	086	117.85
869-524SR[1]	6X3/4	1-1/8	1	4	086	117.85
869-525SR	6X1	1-1/8	1	4	086	117.85
869-526SR[1]	6X1-1/4	2-1/4	1	4	086	117.85
869-527SR[1]	6X1-1/2	2-1/4	1	4	086	117.85
869-528SR	6X2	2-1/4	1	4	086	117.85
869-529SR[1]	6X2-1/2	3	1	4	086	146.16
869-530SR	6X3	3	1	4	086	154.78
869-532SR	6X4	4	1	4	086	172.47
869-573SR[1]	8X1/2	4	1	0	086	253.38
869-574SR[1]	8X3/4	4	1	0	086	253.38
869-575SR[1]	8X1	4	1	0	086	253.38
869-576SR[1]	8X1-1/4	4	1	0	086	253.38
869-577SR[1]	8X1-1/2	4	1	0	086	253.38
869-578SR[1]	8X2	4	1	0	086	253.38
869-579SR[1]	8X2-1/2	4	1	0	086	278.84
869-580SR[1]	8X3	4	1	0	086	292.43
869-582SR	8X4	4	1	0	086	310.14
869-585SR	8X6	6	1	0	086	350.38
869-624SR	10X4	4	1	0	086	368.96
869-626SR	10X6	6	1	0	086	424.37
869-664SR	12X4	4	1	0	086	462.73
869-666SR	12X6	6	1	0	086	536.71

[1]Outlet-sized with Bushing

Clamp-On Saddle x SR Thread Double Outlet PVC Gray

with EPDM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

869S-247SR	2X1/2	3/4	1	10	086	67.59
869S-248SR	2X3/4	7/8	1	10	086	67.59
869S-249SR	2X1	1-1/8	1	10	086	67.59
869S-250SR	2X1-1/4	1-1/2	1	10	086	67.59
869S-251SR	2X1-1/2	1-1/2	1	10	086	67.59
869S-291SR	2-1/2X1-1/2	1-3/4	1	10	086	90.11
869S-333SR[1]	3X1/2	7/8	1	10	086	90.11
869S-334SR	3X3/4	7/8	1	10	086	90.11
869S-335SR	3X1	1-1/8	1	10	086	90.11
869S-336SR[1]	3X1-1/4	2-1/4	1	10	086	90.11
869S-337SR[1]	3X1-1/2	2-1/4	1	10	086	90.11
869S-338SR	3X2	2-1/4	1	10	086	90.11
869S-415SR[1]	4X1/2	1-1/8	1	10	086	112.88

Clamp-On Saddles & Hot-Tap Saddles

Clamp-On Saddles

Clamp-On Saddle x SR Thread Double Outlet PVC Gray (continued)
with EPDM O-ring Seal & SS Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
869S-416SR[1]	4X3/4	1-1/8	1	10	086	112.88
869S-417SR	4X1	1-1/8	1	8	086	112.88
869S-418SR[1]	4X1-1/4	1-3/4	1	8	086	112.88
869S-419SR	4X1-1/2	1-3/4	1	8	086	112.88
869S-420SR	4X2	2-1/4	1	8	086	112.88
869S-421SR[1]	4X2-1/2	3	1	4	086	120.59
869S-422SR	4X3	3	1	4	086	125.99
869S-523SR[1]	6X1/2	1-1/8	1	4	086	188.06
869S-524SR[1]	6X3/4	1-1/8	1	4	086	188.06
869S-525SR	6X1	1-1/8	1	4	086	188.06
869S-526SR[1]	6X1-1/4	2-1/4	1	4	086	188.06
869S-527SR[1]	6X1-1/2	2-1/4	1	4	086	188.06
869S-528SR	6X2	2-1/4	1	4	086	188.06
869S-529SR[1]	6X2-1/2	3	1	4	086	197.35
869S-530SR	6X3	3	1	4	086	205.45
869S-532SR	6X4	4	1	4	086	211.97

Clamp-On Saddle x SR Thread Double Outlet PVC Gray (continued)
with EPDM O-ring Seal & SS Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
869S-573SR[1]	8X1/2	4	1	0	086	323.65
869S-574SR[1]	8X3/4	4	1	0	086	323.65
869S-575SR[1]	8X1	4	1	0	086	323.65
869S-576SR[1]	8X1-1/4	4	1	0	086	323.65
869S-577SR[1]	8X1-1/2	4	1	0	086	323.65
869S-578SR[1]	8X2	4	1	0	086	323.65
869S-579SR[1]	8X2-1/2	4	1	0	086	339.73
869S-580SR[1]	8X3	4	1	0	086	360.21
869S-582SR	8X4	4	1	0	086	381.88
869S-585SR	8X6	6	1	0	086	419.20
869S-624SR	10X4	4	1	0	086	368.96
869S-626SR	10X6	6	1	0	086	522.60
869S-664SR	12X4	4	1	0	086	569.72
869S-666SR	12X6	6	1	0	086	660.80

[1]Outlet-sized with Bushing

Hot-Tap Saddles

Hot-Tap Saddle PVC Gray
EPDM Saddle x Soc (Spigot) Zinc Plated Bolts

2"- 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
HT2-248	**2X3/4 (1)**	1	5	049	51.19
HT2-251	**2X1-1/2 (2)**	1	5	049	105.76
HT2-288	**2-1/2X3/4 (1)**	1	5	049	54.71
HT2-291	**2-1/2X1-1/2 (2)**	1	5	049	109.28
HT2-334	**3X3/4 (1)**	1	5	049	62.65
HT2-337	**3X1-1/2 (2)**	1	5	049	120.45
HT2-416	**4X3/4 (1)**	1	5	049	72.36
HT2-419	**4X1-1/2 (2)**	1	0	049	127.36
HT2-524	**6X3/4 (1)**	1	5	049	81.34
HT2-527	**6X1-1/2 (2)**	1	0	049	135.60
HT2-574	**8X3/4 (1)**	1	0	049	90.01
HT2-577	**8X1-1/2 (2)**	1	0	049	144.58

Not intended to convey or dispense water for human consumption through drinking or cooking

Hot-Tap Saddle PVC Gray
FKM Saddle x Soc (Spigot) Zinc Plated Bolts

2"- 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
HT3-248	**2X3/4 (1)**	1	5	049	55.60
HT3-251	**2X1-1/2 (2)**	1	5	049	114.73
HT3-288	**2-1/2X3/4 (1)**	1	5	049	59.42
HT3-291	**2-1/2X1-1/2 (2)**	1	5	049	118.55
HT3-334	**3X3/4 (1)**	1	5	049	67.94
HT3-337	**3X1-1/2 (2)**	1	5	049	130.89
HT3-416	**4X3/4 (1)**	1	5	049	78.54
HT3-419	**4X1-1/2 (2)**	1	0	049	136.54
HT3-524	**6X3/4 (1)**	1	5	049	88.25
HT3-527	**6X1-1/2 (2)**	1	0	049	146.78
HT3-574	**8X3/4 (1)**	1	0	049	98.09
HT3-577	**8X1-1/2 (2)**	1	0	049	173.83

Not intended to convey or dispense water for human consumption through drinking or cooking

Hot-Tap Saddle PVC Gray
EPDM Saddle x Soc (Spigot) SS316 Bolts

2"- 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
HT2S-248	**2X3/4 (1)**	1	5	049	79.71
HT2S-251	**2X1-1/2 (2)**	1	5	049	164.57
HT2S-288	**2-1/2X3/4 (1)**	1	5	049	85.15
HT2S-291	**2-1/2X1-1/2 (2)**	1	5	049	170.01
HT2S-334	**3X3/4 (1)**	1	5	049	97.53
HT2S-337	**3X1-1/2 (2)**	1	5	049	187.53
HT2S-416	**4X3/4 (1)**	1	5	049	112.66
HT2S-419	**4X1-1/2 (2)**	1	0	049	198.25
HT2S-524	**6X3/4 (1)**	1	5	049	126.49
HT2S-527	**6X1-1/2 (2)**	1	0	049	210.89
HT2S-574	**8X3/4 (1)**	1	0	049	139.42
HT2S-577	**8X1-1/2 (2)**	1	0	049	224.14

Not intended to convey or dispense water for human consumption through drinking or cooking

Hot-Tap Saddle PVC Gray
FKM Saddle x Soc (Spigot) SS316 Bolts

2"- 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
HT3S-248	**2X3/4 (1)**	1	5	049	86.47
HT3S-251	**2X1-1/2 (2)**	1	5	049	178.56
HT3S-288	**2-1/2X3/4 (1)**	1	5	049	92.65
HT3S-291	**2-1/2X1-1/2 (2)**	1	5	049	184.57
HT3S-334	**3X3/4 (1)**	1	5	049	105.76
HT3S-337	**3X1-1/2 (2)**	1	5	049	203.69
HT3S-416	**4X3/4 (1)**	1	5	049	122.07
HT3S-419	**4X1-1/2 (2)**	1	0	049	215.17
HT3S-524	**6X3/4 (1)**	1	5	049	137.37
HT3S-527	**6X1-1/2 (2)**	1	0	049	228.57
HT3S-574	**8X3/4 (1)**	1	0	049	151.93
HT3S-577	**8X1-1/2 (2)**	1	0	049	242.26

Not intended to convey or dispense water for human consumption through drinking or cooking

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Hot-Tap Saddles

Hot-Tap Saddle PVC Gray

EPDM with Stainless Steel Cutter & Bolts

2"- 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
HTS2S-248	**2X3/4 (1)**	1	5	049	381.86
HTS2S-251	**2X1-1/2 (2)**	1	5	049	575.51
HTS2S-288	**2-1/2X3/4 (1)**	1	5	049	408.59
HTS2S-291	**2-1/2X1-1/2 (2)**	1	5	049	577.61
HTS2S-334	**3X3/4 (1)**	1	5	049	386.73
HTS2S-337	**3X1-1/2 (2)**	1	5	049	586.62
HTS2S-416	**4X3/4 (1)**	1	5	049	418.89
HTS2S-419	**4X1-1/2 (2)**	1	0	049	603.47
HTS2S-524	**6X3/4 (1))**	1	5	049	462.78
HTS2S-527	**6X1-1/2 (2)**	1	0	049	663.61
HTS2S-574	**8X3/4 (1)**	1	0	049	660.20
HTS2S-577	**8X1-1/2 (2)**	1	0	049	784.00

Lead Free

Hot-Tap Saddle PVC Gray

FKM with Stainless Steel Cutter & Bolts

2"- 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)

HTS3S-248	**2X3/4 (1)**	1	5	049	387.91
HTS3S-251	**2X1-1/2 (2)**	1	5	049	586.21
HTS3S-288	**2-1/2X3/4 (1)**	1	5	049	415.09
HTS3S-291	**2-1/2X1-1/2 (2)**	1	5	049	588.25
HTS3S-334	**3X3/4 (1)**	1	5	049	391.44
HTS3S-337	**3X1-1/2 (2)**	1	5	049	600.25
HTS3S-416	**4X3/4 (1)**	1	5	049	427.23
HTS3S-419	**4X1-1/2 (2)**	1	0	049	620.16
HTS3S-524	**6X3/4 (1)**	1	5	049	471.08
HTS3S-527	**6X1-1/2 (2)**	1	0	049	679.57
HTS3S-574	**8X3/4 (1)**	1	0	049	666.89
HTS3S-577	**8X1-1/2(2)**	1	0	049	798.79

Lead Free

PVC Cut-in Kit

PRICING

PVC Cut-in Kit

When planned system changes are needed, system downtime can be a major concern. Spears® Flange Cut-in Kit minimizes downtime for actual cut-in to allow new connection in just minutes. Kit provides all necessary components to create a flanged joint for connection to system alterations in just minutes. Special Flange Hub can be cemented to piping and allowed to cure before shutting down and cutting into system. This allows immediate joining to mating flange (included) that can also be pre-assembled to desired alteration piping.

Kit includes special Split Flange Socket Hub, O-ring Sealed Hub Body, Stainless Steel Clamp, Split Ring, Full-Faced EPDM or FKM Gasket, Mating Flange Hub & Ring, and complete set of Stainless Steel Bolts, Flat Washers and anti-seize Brass Nuts to make the final joint. Available for IPS Pipe Sizes 2" - 12".

Pressure Rated to 150 psi @ 73°F (22°C)
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply

Flange Cut-in Kit

Size	EPDM Gasket	FKM Gasket	Std Pk	Mstr Pk	Prod Code
2	FCKE-020 **420.53**	FCKV-020 **443.58**	1	4	017
2-1/2	FCKE-025 **471.37**	FCKV-025 **500.84**	1	0	017
3	FCKE-030 **529.09**	FCKV-030 **559.55**	1	0	017
4	FCKE-040 **877.26**	FCKV-040 **921.29**	1	0	017
6	FCKE-060 **1450.42**	FCKV-060 **1728.95**	1	0	017
8	FCKE-080 **1758.00**	FCKV-080 **2119.16**	1	0	017
10	FCKE-100 **3057.58**	FCKV-100 **3277.35**	1	0	017
12	FCKE-120 **3784.98**	FCKV-120 **3898.81**	1	0	017

PVC Compression & Repair Fittings

PRICING

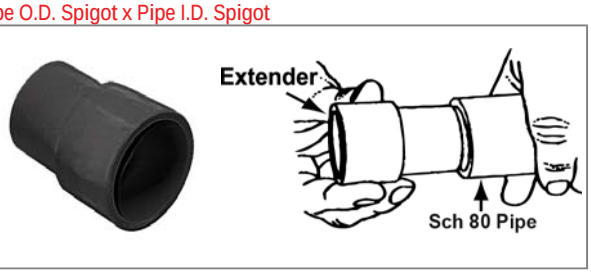
Schedule 80 Repair Fittings

Pipe Extenders

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Pipe O.D. Spigot x Pipe I.D. Spigot					
Fabricated, Non-Pressure Rated					
S0801-20F	**2**	1	10	394	77.56
S0801-25F	**2-1/2**	1	8	394	89.75
S0801-30F	**3**	1	8	394	101.57
S0801-40F	**4**	1	12	394	110.11
S0801-60F	**6**	1	10	394	147.05
S0801-80F	**8**	1	2	394	158.75
S0801-100F	**10**	1	0	394	206.61
S0801-120F	**12**	1	0	394	290.18
S0801-140F	**14**	1	0	394	823.37
S0801-160F	**16**	1	0	394	963.62
S0801-180F	**18**	1	0	394	1264.79

Pipe Extenders (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Pipe O.D. Spigot x Pipe I.D. Spigot					

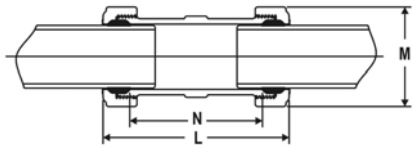


Compression Couplings

- Designed for Quick Connections, System Modifications or Repairs
- Completely Redesigned for Improved Versatility
- Easy-Thread Compression Nut
- New Spigot Conversion Capability
- Full Service 200 PSI Pressure Rating
- NSF® Certified for Potable Water Use

Basic Dimensions

Part Number	Size (in.)	L	M	N
S110-05G	1/2	5-3/16	1-3/16	3-3/8
S110-07G	3/4	5-7/16	2-1/16	3-9/16
S110-10G	1	5-11/16	2-7/16	3-3/4
S110-12G	1-1/4	6-1/4	2-15/16	4-1/8
S110-15G	1-1/2	6-1/2	3-5/16	4-5/8
S110-20G	2	7-1/8	3-3/4	5-1/16
S110-25G	2-1/2	8-11/16	4-11/16	5-7/8
S110-30G	3	9-1/2	5-1/2	6-3/16
S110-40G	4	11-5/16	6-3/4	7-3/8
S110-60G	6	11-5/8	9-5/16	7-9/16

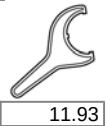


N = Maximum allowable space between pipe ends.
NOTE: Decreasing distance between pipe ends improves stability and is recommended.

Compression Coupling, PVC Gray

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
EPDM Gasket					
S110E-05G	**1/2**	28	0	024	4.60
S110E-07G	**3/4**	24	0	024	6.17
S110E-10G	**1**	15	0	024	7.96
S110E-12G	**1-1/4**	10	0	024	12.27
S110E-15G	**1-1/2**	16	0	024	12.67
S110E-20G	**2**	12	0	024	16.44
S110E-25G	**2-1/2**	6	0	024	30.96
S110E-30G	**3**	4	0	024	40.48
S110E-40G	**4**	4	0	024	66.60
S110E-60G	**6**	1	0	024	151.46

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each



Compression Coupling Nut Wrenches

CCW-005	**1/2**	1	50	299	11.93
CCW-007	**3/4**	1	50	299	12.14
CCW-010	**1**	1	50	299	12.65
CCW-012	**1-1/4**	1	50	299	14.32
CCW-015	**1-1/2**	1	50	299	15.44
CCW-020*	**2**	1	50	299	17.25
CCW-030**	**3**	1	25	299	21.22
CCW-060	**6**	8	0	299	31.92

* CCW-20 - Wrench also fits 2-1/2" Coupling Body
**CCW-30 - Wrench also fits 4" Coupling Body

Compression Coupling Nut Wrench Set

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
CCW-000	**Set**	1	25	299	99.68

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

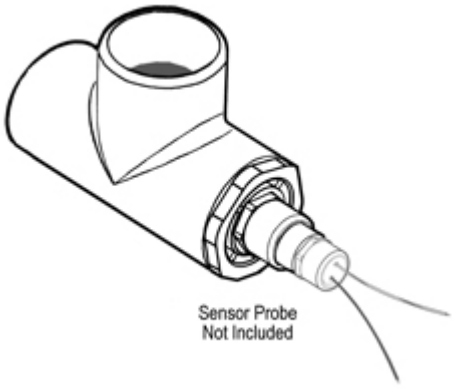
Compression Coupling Nut Wrench Set (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Complete Set of Wrenches, Sizes 1/2 - 3					

Gauge & Instrument Fittings

PRICING

Schedule 80 Specialty Fittings for Sensor Probes



Use with a wide variety of commercial sensor probes including pressure, temperature, pH, ORP (REDOX), Conductivity, Dissolved Oxygen and other specialty electrodes that are used in industrial, municipal water, wastewater treatment, solid landfills, chemical manufacturing, electroplating, boilers and cooling towers, pulp and paper, DI water skids, pool & spa and other OEM applications. Features Spears® patented Special Reinforced (SR) female plastic thread connection that eliminates splitting from inadvertent over tightening.

- Centers Probe in Fluid Stream
- Suitable for Horizontal or Vertical Installations
- Available in 1/2" Through 8" Tee Configuration with 1/2", 3/4" or 1" NPT Connection

PVC Instrument Probe Fittings

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Special Reinforced					
803-005SR	**1/2**	25	0	086	7.12
803-095SR	**3/4X1/2X3/4**	15	0	086	13.19
803-007SR	**3/4**	15	0	086	11.27
803-113SR	**1X1/4X1**	15	0	086	30.93
803-122SR	**1X1/2X1**	15	0	086	12.11
803-126SR	**1X3/4X1**	15	0	086	16.95
803-010SR	**1**	15	0	086	13.21
803-142SR	**1-1/4X1/2X1-1/4**	10	0	086	20.92
803-149SR	**1-1/4X3/4X1-1/4**	10	0	086	21.16
803-159SR	**1-1/4X1X1-1/4**	10	0	086	21.82
803-177SR	**1-1/2X1/2X1-1/2**	10	0	086	23.93
803-188SR	**1-1/2X3/4X1-1/2**	10	0	086	24.41
803-197SR	**1-1/2X1X1-1/2**	10	0	086	25.41
803-221SR	**2X1/2X2**	10	0	086	34.03
803-227SR	**2X3/4X2**	15	0	086	35.61
803-233SR	**2X1X2**	4	0	086	36.59
803-333SR	**3X1/2X3**	5	0	086	50.87
803-334SR	**3X3/4X3**	5	0	086	52.53
803-335SR	**3X1X3**	5	0	086	53.97
803-415SR	**4X1/2X4**	4	0	086	79.11
803-416SR	**4X3/4X4**	4	0	086	82.42
803-417SR	**4X1X4**	4	0	086	85.11
803-523SR	**6X1/2X6**	2	0	086	162.76
803-524SR	**6X3/4X6**	2	0	086	167.78
803-525SR	**6X1X6**	2	0	086	170.51
803-573SR	**8X1/2X8**	1	0	086	335.07
803-574SR	**8X3/4X8**	1	0	086	340.11
803-575SR	**8X1X8**	1	0	086	344.76

Gauge Guards

PVC GAUGE GUARDS

Size	1/4" Inlet Connection	1/2" Inlet Connection	Std Pk	Mstr Pk	Prod Code
PTFE Diaphragm					
No Gauge	G0004-002 **103.83**	G0004-005 **103.83**	1	18	624
0-30 in-Hg	G30V4-002 **175.28**	G30V4-005 **175.28**	1	18	624
0-15 psi	G0154-002 **165.69**	G0154-005 **165.69**	1	18	624
0-30 psi	G0304-002 **165.69**	G0304-005 **165.69**	1	18	624
0-60 psi	G0604-002 **165.69**	G0604-005 **165.69**	1	18	624
0-100 psi	G1004-002 **165.69**	G1004-005 **165.69**	1	18	624
0-160 psi	G1604-002 **165.69**	G1604-005 **165.69**	1	18	624
0-200 psi	G2004-002 **165.69**	G2004-005 **165.69**	1	18	624
0-300 psi	G3004-002 **165.69**	G3004-005 **165.69**	1	18	624
FKM Diaphragm					
No Gauge	G0003-002 **103.83**	G0003-005 **103.83**	1	18	624
0-30 in-Hg	G30V3-002 **175.28**	G30V3-005 **175.28**	1	18	624
0-15 psi	G0153-002 **165.69**	G0153-005 **165.69**	1	18	624
0-30 psi	G0303-002 **165.69**	G0303-005 **165.69**	1	18	624
0-60 psi	G0603-002 **165.69**	G0603-005 **165.69**	1	18	624
0-100 psi	G1003-002 **165.69**	G1003-005 **165.69**	1	18	624
0-160 psi	G1603-002 **165.69**	G1603-005 **165.69**	1	18	624
0-200 psi	G2003-002 **165.69**	G2003-005 **165.69**	1	18	624
0-300 psi	G3003-002 **165.69**	G3003-005 **165.69**	1	18	624
EPDM Diaphragm					
No Gauge	G0002-002 **99.63**	G0002-005 **99.63**	1	18	624
0-30 in-Hg	G30V2-002 **168.24**	G30V2-005 **168.24**	1	18	624
0-15 psi	G0152-002 **159.12**	G0152-005 **159.12**	1	18	624
0-30 psi	G0302-002 **159.12**	G0302-005 **159.12**	1	18	624
0-60 psi	G0602-002 **159.12**	G0602-005 **159.12**	1	18	624
0-100 psi	G1002-002 **159.12**	G1002-005 **159.12**	1	18	624
0-160 psi	G1602-002 **159.12**	G1602-005 **159.12**	1	18	624
0-200 psi	G2002-002 **159.12**	G2002-005 **159.12**	1	18	624
0-300 psi	G3002-002 **159.12**	G3002-005 **159.12**	1	18	624

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Schedule 80 Pipe Dimensions & Pressure Ratings

Nom. Pipe Size (in)	O.D.	Average I.D.	Min. Wall	Nominal Wt./Ft.	Maximum. W.P. PSI*
1/4	.540	.282	0.119	0.117	1130
3/8	.675	.403	0.126	0.162	920
1/2	.840	.526	0.147	0.231	850
3/4	1.050	.722	0.154	0.314	690
1	1.315	.936	0.179	0.462	630
1-1/4	1.660	1.255	0.191	0.654	520
1-1/2	1.900	1.476	0.200	0.793	470
2	2.375	1.913	0.218	1.097	400
2-1/2	2.875	2.290	0.276	1.674	420
3	3.500	2.864	0.300	2.242	370
3-1/2	4.000	3.326	0.318	2.735	350
4	4.500	3.786	0.337	3.277	320
5	5.563	4.768	0.375	4.078	290
6	6.625	5.709	0.432	6.258	280
8	8.625	7.565	0.500	9.506	250
10	10.750	9.493	0.593	14.095	230
12	12.750	11.294	0.687	19.392	230
14	14.000	12.410	0.750	23.261	220
16	16.000	14.213	0.843	29.891	220
18	18.000	16.014	0.937	35.419	220
20	20.000	17.814	1.031	45.879	220
24	24.000	21.418	1.218	64.959	210

Maximum PVC Service Temperature 140°F

Pressure De-rating at Elevated Temperatures

The pressure ratings given above are for water, non-shock, @ 73°F. The specified derating factors for PVC are suitable for pipe conveying water at elevated temperatures. To determine elevated temperature rating, multiply 73°F [23°C] pressure rating by appropriate factor shown in the table for desired operating temperature. When working near maximum specified temperature, solvent cement joints are recommended in place of threaded connections. Where disassembly is required at elevated temperatures use Spears® Special reinforced (SR) adapters, flanges, unions or grooved coupling connections. Spears® recommends that only Schedule 80 or heavier wall thickness pipe should be threaded.

PVC Pipe

Operating Temp (°F)	De-Rating Factor
73	1.00
80	0.88
90	0.75
100	0.62
110	0.51
120	0.40
130	0.31
140	0.22

EX: 2" PVC SCHEDULE 80 @ 120°F = 400 psi x 0.40 = 160 psi max. @ 120°F .

See Plastic Pipe Engineering Guide for additional information

PVC Schedule 80 Fittings, Unions, Tank Adapters, Expansion Joints & Saddles

TECHNICAL INFORMATION
WEIGHTS & DIMENSIONS

Contact Spears® for any information not found.

PVC Performance Engineered & Tested

SPEARS® Schedule 80 PVC product designs combine years of proven experience with computer generated stress analysis to yield the optimum physical structure and performance for each fitting. Material reinforcement is uniformly placed in stress concentration areas for substantially improved pressure handling capability. Resulting products are subjected to numerous verification tests to assure obtaining the very best PVC fittings available.

1/4" Through 14" Availability

Spears® comprehensive line of PVC injection molded fittings and extruded pipe offers a variety of configurations in sizes 1/4" through 14". Schedule 80 fittings are manufactured to ASTM D 2467 and pipe is produced to ASTM D 1785. Spears® exclusive CL150 Flanges are produced in sizes 1/2" - 18" with ANSI B16.5 bolt patterns, plus numerous Unions, Saddles, Transition and Specialty fittings in a variety of sizes.

Exceptional Chemical & Corrosion Resistance

Unlike metal, PVC fittings and pipe never rust, scale, or pit, and will provide many years of maintenance-free service and extended system life.

High Temperature Ratings

PVC thermoplastic can handle fluids at service temperatures up to 140°F (60°C), allowing a wide range of process applications, including corrosive fluids.

Lower Installation Costs

Substantially lower material costs than steel alloys or lined steel, combined with lighter weight and ease of installation, can reduce installation costs by as much as 60% over conventional metal systems.

Higher Flow Capacity

Smooth interior walls result in lower pressure loss and higher volume than conventional metal fittings.

Additional Fabricated Configurations through 36"

Extra large, hard-to-find, and custom configurations are fabricated from NSF® Certified pipe. Fittings are engineered and tested to provide full pressure handling capabilities according to Spears® specifications.

Advanced Design Specialty Fittings

Spears® wide range of innovative, improved products include numerous metal-to-plastic transition fittings and unions with Spears® patented special reinforced (SR) plastic threads.

PVC Valves

SPEARS® PVC Valve products are available for total system compatibility and uniformity.

PVC Sample Engineering Specifications

All PVC Schedule 80 pipe and fittings shall be produced by Spears® Manufacturing Company from PVC Type I, cell classification 12454, conforming to ASTM Standard D 1784. All PVC injection molded Schedule 80 fittings and extruded pipe shall be Certified for potable water service by NSF International. All Schedule 80 fittings shall be manufactured in strict compliance to ASTM D 2467 and Schedule 80 pipe shall be manufactured in strict compliance to ASTM D 1785. All fabricated fittings shall be produced in accordance with Spears® General Specifications for Fabricated Fittings. All PVC flanges shall be designed and manufactured to meet CL150 bolt pattern per ANSI Standard B16.5 and rated for a maximum internal pressure of 150 psi, non-shock at 73°F.

Schedule 80 Product Overview

The information contained in this publication is based on current information and Product design at the time of publication and is subject to change without notification. Our ongoing commitment to product improvement may result in some variation. No representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or results to be obtained therefrom. For verification of technical data or additional information not contained herein, please contact Spears® Technical Services Department [West Coast: (818) 364-1611 — East Coast: (678) 985-1263].

General Information

Recommendations For Installers And Users

Plastic piping systems should be **ENGINEERED, INSTALLED** and **OPERATED** in accordance with **ESTABLISHED DESIGN AND ENGINEERING STANDARDS AND PROCEDURES** for plastic piping systems. Suitability for the intended service application should be determined by the installer and/or user prior to installation of a plastic piping system. **PRIOR TO ASSEMBLY, all piping system components should be inspected for damage o r irregularities. Mating components should be checked to assure that tolerances and engagements are compatible. Do not use any components that appear irregular or do not fit properly. Contact the appropriate manufacturer of the component product in question to dete rmine usability. Consult all applicable codes and regulations for compliance prior to installation.**

Solvent Weld Connections — Use quality solvent cements and primers formulated for the intended service application, pipe size and type of joint. While the pipe and fitting materials may be compatible with the intended medium, the solvent cement may not be. Consult the manufacturers for suitability of use. Read and follow the cement and primer manufacturers' applications and cure time instructions thoroughly. Be sure to use the correct size applicator.

Threaded Connections — Use a quality grade thread sealant. **WARNING: SOME PIPE JOINT COMPOUNDS OR PTFE P ASTES MAY CONTAIN SUBSTANCES THAT COULD CAUSE STRESS CRACKING TO PLASTIC.** Spears® Manufacturing company recommends the use of Spears® **BLUE 75™** Thread Sealant which has been tested for compatibility with Spears® products. Please follow the sealant manufacturers' application/installation instructions. Choice of an appropriate thread sealant other than those listed above is at the discretion of the installer. 1 to 2 turns beyond **FINGER TIGHT** is generally all that is required to make a sound plastic threaded connection. Unnecessary **OVERTIGHTENING** will cause **DAMAGE TO BOTH PIPE AND FITTING.**

Standards and Specifications

Molded Schedule 80 PVC products are manufactured to ASTM D 2467 for use with pipe manufactured to ASTM D 1785. Certain products carry reduced pressure handling capability and have maximum internal pressure ratings at 73°F noted.

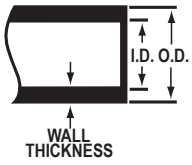
Fabricated Schedule 80 PVC pressure fittings (part numbers ending with **"F"**) are manufactured to Spears® specifications for use with pipe manufactured to ASTM D 1785. General Specifications for Standard Fabricated Fittings for additional information.

All specified Schedule 80 PVC products are manufactured from materials certified by NSF® for use in potable water service.

"Lead Free" low lead certification – unless otherwise specified, all Spears® Schedule 80 fittings specified here-in are certified by NSF International to ANSI/NSF® Standard 61, Annex G and is in compliance with California's Health & Safety Code Section 116825 (commonly known as AB1953) and Vermont Act 193. Weighted average lead content <=0.25%. Spears® PVC Pipe, Fittings and Valves have always been lead-free and Certified by NSF International for use in potable water systems. Spears® offers a wide range of lead-free specialty fittings and transition adapters for plumbing applications. However, certain brass threaded adapter fittings for applications that are not intended to convey water for human consumption through drinking or cooking are still produced and available.

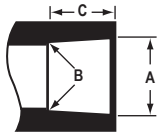
ASTM STANDARD DIMENSIONS

SCHEDULE 80 PIPE DIMENSIONS ASTM D 1785



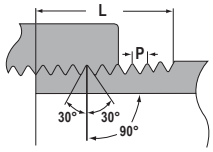
Nominal Pipe Size In.	Mean Outside Diameter In.	O. D. Tolerance In.	Minimum Wall Thickness In.
1/8	0.405	± 0.004	0.095
1/4	0.540	± 0.004	0.119
3/8	0.675	± 0.004	0.126
1/2	0.840	± 0.004	0.147
3/4	1.050	± 0.004	0.154
1	1.315	± 0.005	0.179
1-1/4	1.660	± 0.005	0.191
1-1/2	1.900	± 0.006	0.200
2	2.375	± 0.006	0.218
2-1/2	2.875	± 0.007	0.276
3	3.500	± 0.008	0.300
4	4.500	± 0.009	0.337
5	5.563	± 0.010	0.375
6	6.625	± 0.011	0.432
8	8.625	± 0.015	0.500
10	10.750	± 0.015	0.593
12	12.750	± 0.015	0.687

SCHEDULE 80 SOCKET DIMENSIONS ASTM D 2467



Nominal Size In.	Diameter			Socket Length Minimum C
	Entrance A	Bottom B	Tolerance A	
1/8	0.417	0.401	± 0.004	0.500
1/4	0.552	0.536	± 0.004	0.625
3/8	0.687	0.671	± 0.004	0.750
1/2	0.848	0.836	± 0.004	0.875
3/4	1.058	1.046	± 0.004	1.000
1	1.325	1.310	± 0.005	1.125
1-1/4	1.670	1.655	± 0.005	1.250
1-1/2	1.912	1.894	± 0.006	1.375
2	2.387	2.369	± 0.006	1.500
2-1/2	2.889	2.868	± 0.007	1.750
3	3.516	3.492	± 0.008	1.875
4	4.518	4.491	± 0.009	2.250
5	5.583	5.553	± 0.010	2.625
6	6.647	6.614	± 0.011	3.000
8	8.655	8.610	± 0.015	4.000
10	10.780	10.735	± 0.015	5.000
12	12.780	12.735	± 0.015	6.000
14	14.030	13.985	± 0.015	7.000

AMERICAN NATIONAL STANDARD TAPER PIPE THREADS (NPT) ANSI B1 .20.1 ASTM F 1498



Nominal Size In.	Threads Per Inch	Effective Thread Length L	Pitch Of Thread P
1/8	27	0.2639	0.03704
1/4	18	0.4018	0.05556
3/8	18	0.4078	0.05556
1/2	14	0.5337	0.07143
3/4	14	0.5457	0.07143
1	11-1/2	0.6828	0.08696
1-1/4	11-1/2	0.7068	0.08696
1-1/2	11-1/2	0.7235	0.08696
2	11-1/2	0.7565	0.08696
2-1/2	8	1.1375	0.12500
3	8	1.2000	0.12500
4	8	1.3000	0.12500
5	8	1.4063	0.12500
6	8	1.5125	0.12500
8	8	1.7125	0.12500

STANDARD COMPARISONS

SPEARS® IPS-to-Metric transition unions are listed by nominal size. The chart below compares nominal and actual* pipe O.D. for each size according to the designated standard.

JIS K6741 (mm)		DIN 8062 (mm)		ASTM D1785 (in.)		NPT—ANSI B1.20.1** Tapered Thread		BSP—BS21,DIN 2999,ISO 7/1 Thread	
Nominal	Actual*	O.D.	Actual*	Nominal	Actual*	Designation	Threads/in.	Designation	Threads/25.4mm
16	22	15	20	1/2	.840	1/2	14	1/2	14
20	26	20	25	3/4	1.050	3/4	14	3/4	14
25	32	25	32	1	1.315	1	11.5	1	11
30	38	38	40	1-1/4	1.660	1-1/4	11.5	1-1/4	11
40	48	40	50	1-1/2	1.900	1-1/2	11.5	1-1/2	11
50	60	50	63	2	2.375	2	11.5	2	11
75	89	80	90	3	3.500	3	8	3	11
100	114	100	110	4	4.500	4	8	4	11

*Specified dimension, certain tolerances apply **NPT and BSP have different thread angles and not compatible.

Schedule 80 Fittings

Injection Molded Dimensions Referencesces:

G = (LAYING LENGTH) intersection of center lines to bottom of socket/thread; 90° elbows, tees, crosses; ± 1/32 inch.
H = Intersection of center lines to face of fitting; 90° elbow tees, crosses; ± 1/32 inch.
J = Intersection of center lines to bottom of socket/thread; 45° elbows; ± 1/32 inch

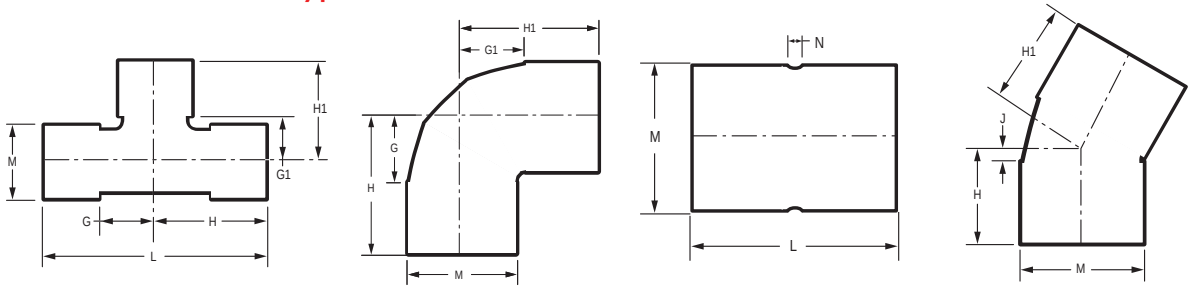
L = Overall length of fittings; ± 1/16 inch.
H = Outside diameter of socket/thread hub; ± 1/16 inch.
N = Socket bottom to socket bottom; couplings; ± 1/16 inch
W = Height of cap; ± 1/16 inch.

Fabricated Dimension References:

G = (LAYING LENGTH) intersection of center lines to bottom of socket/thread; 90° elbows, tees, crosses ± 1/4 inch; 14" & larger ± 1/2 inch.
H = Intersection of center lines to face of fitting; 90° elbows ± 1/4 inch, 14" & larger ± 3/4 inch; wyes ± 1/2 inch; tees, crosses ± 1/4 inch; 14" & larger ± 1/2 inch.
J = Intersection of center lines to bottom of socket/thread; 45° elbows; ± 1/4 inch; 14" & larger ± 1/2 inch.

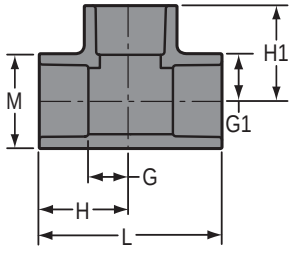
L = Overall length of fittings; ± 1/2 inch; 14" & larger ± 1 inch; wyes ± 1 inch.
M = Outside diameter of socket/thread hub; ± 1/4 inch.
N = Socket bottom to socket bottom; couplings; ± 1/2
W = Height of cap; ± 1/4 inch.

Typical Fabricated Dimension References



TEE

Socket x Socket x Socket

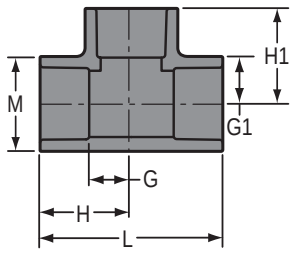


Part Number	Size	G	G1	H	H1	L	M	Approx. Wt. (Lbs.)
801-002	1/4	5/16	5/16	31/32	31/32	1-15/16	27/32	.04
801-003	3/8	15/32	15/32	1-1/4	1-1/4	2-1/2	31/32	.06
801-005	1/2	17/32	17/32	1-15/32	1-15/32	2-15/16	1-3/16	.11
801-007	3/4	21/32	21/32	1-11/16	1-11/16	3-13/32	1-13/32	.16
801-010	1	7/8	7/8	2	2	4	1-3/4	.27
801-012	1-1/4	1-1/32	1-1/32	2-9/32	2-9/32	4-19/32	2-3/32	.39
801-015	1-1/2	1-3/16	1-3/16	2-9/32	2-9/32	5-1/8	2-3/8	.52
801-020	2	1-7/16	1-7/16	2-15/16	2-15/16	5-7/8	2-7/8	.80
801-025	2-1/2	1-3/4	1-3/4	3-1/2	3-1/2	7-1/32	3-15/32	1.46
801-030	3	2-1/16	2-1/16	3-31/32	3-31/32	7-15/16	4-5/32	2.16
801-040	4	2-1/2	2-1/2	4-3/4	4-3/4	9-1/2	5-1/4	3.52

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

TEE (continued)

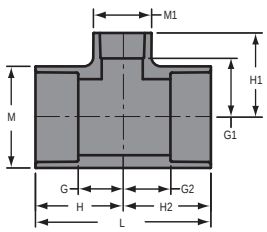
Socket x Socket x Socket



Part Number	Size	G	G1	H	H1	L	M	Approx. Wt. (Lbs.)
801-050	5	3-1/8	3-1/8	5-25/32	5-25/32	11-5/8	6-13/32	6.03
801-050F	5	5-1/2	5-1/2	8-1/2	8-1/2	17	6-5/16	13.26
801-060	6	3-25/32	3-25/32	6-13/16	6-13/16	13-5/8	7-5/8	10.78
801-080	8	4-13/16	4-13/16	8-7/8	8-7/8	17-3/4	9-23/32	21.21
801-080F	8	7-5/8	7-5/8	11-7/8	11-7/8	23-3/4	9-5/8	22.84
801-100	10	5-3/4	5-3/4	10-13/16	10-13/16	21-5/8	11-19/32	37.89
801-100F	10	9	9	14-1/4	14-1/4	28-1/2	11-15/16	39.82
801-120	12	6-15/16	6-15/16	12-15/16	12-15/16	25-7/8	14-1/4	54.45
801-120F	12	11-1/4	11-1/4	17-1/2	17-1/2	35	14-1/8	67.13
801-140	14	7-1/32	7-1/32	14-7/32	14-1/32	28-7/16	15-21/32	63.61
801-140F	14	12-1/4	12-1/4	19-1/4	19-1/4	38-1/2	15-1/2	103.37
801-160F	16	13	13	21	21	42	17-11/16	144.87
801-180F	18	13-3/4	13-3/4	22-3/4	22-3/4	45-1/2	19-7/8	182.75
801-200F	20	16-3/8	16-3/8	26-3/8	26-3/8	52-3/4	22-1/16	284.24
801-240F	24	20-1/4	20-1/4	32-1/4	32-1/4	64-1/2	26-7/16	335.00

REDUCING TEE

Socket x Socket x Socket

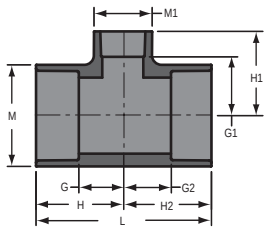


Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)
801-101	3/4x3/4x1/2	19/32	23/32	19/32	1-19/32	1-19/32	1-19/32	3-3/16	1-13/32	1-3/16	.14
801-130	1x1x1/2	19/32	7/8	19/32	1-23/32	1-3/4	1-23/32	3-7/16	1-3/4	1-3/16	.20
801-131	1x1x3/4	11/16	27/32	11/16	1-27/32	1-27/32	1-27/32	3-21/32	1-3/4	1-13/32	.23
801-157	1-1/4x1x3/4	11/16	1-1/16	5/8	1-15/16	2-1/16	1-7/8	3-13/16	2-1/8	1-7/16	.30
801-158	1-1/4x1x1	13/32	15/16	13/32	2-1/8	1-31/32	1-15/16	4	2-1/16	1-11/16	.33
801-159	1-1/4x1x1-1/4	15/16	1-1/32	7/8	2-3/16	2-5/32	2-1/8	4-5/16	2-1/16	2-1/16	.39
801-166[1]	1-1/4x1-1/4x1/2	7/8	1-13/32	7/8	2-3/32	2-3/8	2-3/32	4-7/32	2-1/8	1-3/4	.42
801-167	1-1/4x1-1/4x3/4	5/8	31/32	5/8	1-15/16	1-31/32	1-15/16	3-7/8	2-1/8	1-13/32	.28
801-168	1-1/4x1-1/4x1	27/32	1-1/32	27/32	2-3/32	2-5/32	2-3/32	4-7/32	2-3/32	1-3/4	.34

[1] Outlet sized with bushing

REDUCING TEE (continued)

Socket x Socket x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)
801-202	1-1/2x1-1/4x1	7/8	1-7/32	7/8	2-1/4	2-11/32	2-1/4	4-1/2	2-7/16	1-13/16	.40
801-209	1-1/2x1-1/2x1/2	9/16	1-1/16	9/16	1-31/32	1-15/16	1-31/32	3-15/16	2-3/8	1-3/16	.32
801-210	1-1/2x1-1/2x3/4	11/16	1-1/32	11/16	2-1/16	2-1/32	2-1/16	4-5/32	2-11/32	1-13/32	.37
801-211	1-1/2x1-1/2x1	27/32	1-5/32	27/32	2-15/32	2-5/16	2-15/32	4-15/16	2-11/32	1-3/4	.42
801-212	1-1/2x1-1/2x1-1/4	1-3/16	1-3/16	1-3/16	2-9/16	2-7/16	2-9/16	5-1/8	2-3/8	2-1/8	.54
801-247	2x2x1/2	9/16	1-13/32	9/16	2-3/32	2-9/32	2-3/32	4-3/16	2-7/8	1-5/32	.44
801-248	2x2x3/4	11/16	1-7/16	11/16	2-3/16	2-7/16	2-3/16	4-3/8	2-27/32	1-13/32	.50
801-249	2x2x1	27/32	1-7/16	27/32	2-3/8	2-9/16	2-3/8	4-3/4	2-7/8	1-3/4	.58
801-250	2x2x1-1/4	31/32	1-11/32	31/32	2-17/32	2-19/32	2-17/32	5-3/32	2-7/8	2-1/8	.60
801-251	2x2x1-1/2	1-5/32	1-13/32	1-5/32	2-11/16	2-13/16	2-11/16	5-3/8	2-15/16	2-15/32	.77
801-254[1]	2x2x4	3-11/16	2-15/32	3-11/16	5-3/16	4-23/32	5-3/16	10-11/32	5-1/4	5-1/4	5.61
801-287	2-1/2x2-1/2x1/2	19/32	1-19/32	19/32	2-3/8	2-15/32	2-3/8	4-23/32	3-1/2	1-3/16	.78
801-288	2-1/2x2-1/2x3/4	21/32	1-1/2	21/32	2-7/16	2-17/32	2-7/16	4-27/32	3-17/32	1-13/32	.83
801-289	2-1/2x2-1/2x1	27/32	1-23/32	27/32	2-5/8	2-27/32	2-5/8	5-1/4	3-17/32	1-23/32	.99
801-290	2-1/2x2-1/2x1-1/4	1-1/32	1-3/4	1-1/32	2-27/32	3	2-27/32	5-11/16	3-9/16	2-3/32	1.11
801-291	2-1/2x2-1/2x1-1/2	1-5/32	1-23/32	1-5/32	2-31/32	3-1/8	2-31/32	5-29/32	3-9/16	2-3/8	1.21
801-292	2-1/2x2-1/2x2	1-13/32	1-5/8	1-13/32	3-3/16	3-1/8	3-3/16	6-3/8	3-1/2	2-7/8	1.32
801-333[1]	3x3x1/2	1-7/16	2-7/8	1-7/16	3-5/16	3-3/4	3-5/16	6-5/8	4-3/16	2-7/8	1.94
801-334[1]	3x3x3/4	1-7/16	2-11/16	1-7/16	3-5/16	3-11/16	3-5/16	6-5/8	4-3/16	2-7/8	1.92
801-335	3x3x1	7/8	2	7/8	2-3/4	3-1/8	2-3/4	5-1/2	4-7/32	1-3/4	1.24
801-336[1]	3x3x1-1/4	1-5/8	1-15/16	1-5/8	3-5/16	3-5/8	3-5/16	6-5/8	4-3/16	2-7/8	1.89
801-337	3x3x1-1/2	1-5/32	2-1/16	1-5/32	3-1/16	3-7/16	3-1/16	6-1/8	4-3/16	2-3/8	1.44
801-338	3x3x2	1-7/16	1-13/16	1-7/16	3-5/16	3-5/16	3-5/16	6-5/8	4-7/32	2-7/8	1.65
801-339	3x3x2-1/2	1-3/4	1-31/32	1-3/4	3-5/8	3-11/16	3-5/8	7-1/4	4-3/16	3-17/32	1.88
801-415[1]	4x4x1/2	1-7/16	3-17/32	1-7/16	3-11/16	4-13/32	3-11/16	7-11/32	5-1/4	2-7/8	2.62
801-417[1]	4x4x1	1-15/32	3-9/32	1-15/32	3-11/16	4-3/8	3-11/16	7-3/8	5-7/32	2-7/8	2.55
801-418[1]	4x4x1-1/4	1-1/8	2-31/32	1-1/8	3-13/32	4-7/32	3-13/32	6-25/32	5-1/4	2-3/8	2.18
801-419	4x4x1-1/2	1-1/8	2-9/16	1-1/8	3-3/8	3-15/16	3-3/8	6-3/4	5-1/4	2-3/8	2.09
801-420	4x4x2	1-7/16	2-1/2	1-7/16	3-11/16	4	3-11/16	7-3/8	5-1/4	2-7/8	2.35
801-421[1]	4x4x2-1/2	2-1/16	2-11/16	2-1/16	4-5/16	4-3/4	4-5/16	8-5/8	5-1/4	4-1/8	3.48
801-422	4x4x3	2-1/8	2-23/32	2-1/8	4-3/8	4-19/32	4-3/8	8-25/32	5-1/4	4-3/16	3.11
801-482F	5x5x1-1/4	4	4-11/16	4	7	6-3/16	7	14	6-5/16	2-1/16	5.99
801-484[1]	5x5x1-1/2	3-5/32	5-17/32	3-5/32	5-13/16	6-29/32	5-13/16	11-5/8	6-13/32	6-13/32	8.86
801-484F	5x5x1-1/2	4-1/8	5	4-1/8	7-1/8	6-1/2	7-1/8	14-1/4	6-5/16	2-5/16	9.10
801-486[1]	5x5x2	3-5/32	5-3/32	3-5/32	5-13/16	6-19/32	5-13/16	11-19/32	6-13/32	6-13/32	8.39
801-486F	5x5x2	4-5/16	4-3/4	4-5/16	7-5/16	6-1/2	7-5/16	14-5/8	6-5/16	2-13/16	6.87
801-487[1]	5x5x2-1/2	3-5/32	4-23/32	3-5/32	5-13/16	6-15/32	5-13/16	11-5/8	6-13/32	6-13/32	8.28
801-488[1]	5x5x3	3-5/32	4-5/8	3-5/32	5-13/16	6-1/2	5-13/16	11-19/32	6-13/32	6-13/32	8.21
801-490[1]	5x5x4	3-5/32	3-29/32	3-5/32	5-13/16	6-5/32	5-13/16	11-5/8	6-13/32	6-13/32	7.40

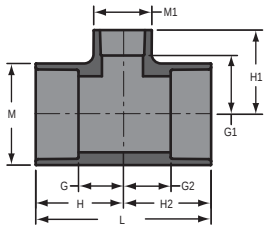
[1] Outlet sized with bushing

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

REDUCING TEE (continued)

Socket x Socket x Socket

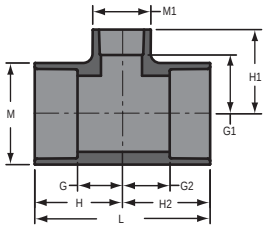


Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)
801-523[1]	6x6x1/2	1-7/16	4-13/16	1-7/16	4-7/16	5-11/16	4-7/16	8-7/8	7-19/32	2-7/8	.54
801-524[1]	6x6x3/4	1	4	1	3-7/8	5	3-7/8	7-3/4	7-9/16	1-3/4	4.39
801-525	6x6x1	27/32	3-23/32	27/32	3-7/8	4-27/32	3-7/8	7-3/4	7-9/16	1-3/4	4.34
801-526[1]	6x6x1-1/4	1-7/16	4-3/16	1-7/16	4-7/16	5-15/32	4-7/16	8-7/8	7-19/32	2-7/8	5.23
801-527[1]	6x6x1-1/2	1-7/16	4-3/32	1-7/16	4-7/16	5-1/2	4-7/16	8-7/8	7-19/32	2-7/8	5.25
801-528	6x6x2	1-7/16	3-23/32	1-7/16	4-7/16	5-1/4	4-7/16	8-7/8	7-19/32	2-7/8	5.11
801-529[1]	6x6x2-1/2	2-1/16	3-13/16	2-1/16	5-1/16	5-7/8	5-1/16	10-1/8	7-9/16	4-1/4	6.80
801-530	6x6x3	2-1/16	3-3/4	2-1/16	5-3/32	5-5/8	5-3/32	10-3/16	7-19/32	4-1/4	6.48
801-530F	6x6x3	4-3/4	5-3/4	4-3/4	8	8	8	16	7-1/2	4-1/8	12.33
801-532	6x6x4	2-11/16	3-23/32	2-11/16	5-11/16	5-31/32	5-11/16	11-13/32	7-19/32	5-1/4	7.69
801-533F	6x6x5	5-3/4	6-1/2	5-3/4	9	9-1/2	9	18	7-1/2	6-5/16	10.35
801-575[1]	8x8x1	3-25/32	7-25/32	3-25/32	7-25/32	8-13/16	7-25/32	15-9/16	9-5/8	7-1/2	17.85
801-578[1]	8x8x2	3-13/16	6-5/8	3-13/16	7-13/16	8-1/8	7-13/16	15-5/8	9-11/16	7-9/16	17.56
801-578F	8x8x2	4-11/16	6-1/8	4-11/16	8-15/16	7-7/8	8-15/16	17-7/8	9-5/8	2-13/16	12.89
801-579F	8x8x2-1/2	4-7/8	6-15/16	4-7/8	9-1/8	8-5/16	9-1/8	18-1/4	9-5/8	3-7/16	17.97
801-580[1]	8x8x3	3-23/32	6-1/2	3-23/32	7-3/4	8-3/8	7-3/4	15-1/2	9-11/16	7-1/2	17.03
801-580F	8x8x3	5-3/16	6-11/16	5-3/16	9-7/16	8-15/16	9-7/16	18-7/8	9-5/8	4-1/8	17.42
801-582	8x8x4	2-5/8	4-27/32	2-5/8	6-5/8	7-3/32	6-5/8	13-1/4	9-3/4	5-9/32	11.56
801-582F	8x8x4	5-3/4	7-11/16	5-3/4	10	9-15/16	10	20	9-5/8	5-3/16	15.77
801-585	8x8x6	3-27/32	4-13/16	3-27/32	7-29/32	7-27/32	7-29/32	15-27/32	9-23/32	7-9/16	15.52
801-621F	10x10x2	4-3/8	7-1/8	4-3/8	9-5/8	8-7/8	9-5/8	19-1/4	11-15/16	2-1316	21.56
801-622F	10x10x2-1/2	5-1/4	7-5/16	5-1/4	10-1/2	9-5/16	10-1/2	21	11-15/16	3-7/16	20.44
801-623[1]	10x10x3	3-25/32	7-17/32	3-25/32	9-3/8	9-3/8	9-3/8	18-25/32	12-1/16	7-9/16	26.67
801-623F	10x10x3	4-7/8	7-11/16	4-7/8	10-1/8	9-15/16	10-1/8	20-1/4	11-15/16	4-1/8	20.67
801-624	10x10x4	3-7/8	7-3/16	3-7/8	9-3/8	9-1/2	9-3/8	18-3/4	12-1/16	7-9/16	26.36
801-624F	10x10x4	5-3/8	8-11/16	5-3/8	10-5/8	10-15/16	10-5/8	21-1/4	11-15/16	5-3/16	23.04
801-626	10x10x6	3-7/8	5-27/32	3-7/8	9-3/8	8-27/32	9-3/8	18-3/4	12-1/16	7-9/16	23.50
801-626F	10x10x6	5-7/8	9-1/16	5-7/8	11-1/8	12-5/16	11-1/8	22-1/4	11-15/16	7-1/2	34.74
801-628[1]	10x10x8	5-15/16	7-3/4	5-15/16	11-7/16	11-3/4	11-7/16	22-7/8	12-1/16	12-1/16	43.06
801-628F	10x10x8	8-1/4	9-15/16	8-1/4	13-1/2	14-3/16	13-1/2	27	11-15/16	9-5/8	34.59
801-661F	12x12x2	4-3/4	8	4-3/4	11	9-3/4	11	22	14-1/8	2-13/16	29.04
801-662F	12x12x2-1/2	5-7/16	8-3/16	5-7/16	11-11/16	10-3/16	11-11/16	23-3/8	14-1/8	3-7/16	37.84
801-663F	12x12x3	5-1/4	8-9/16	5-1/4	11-1/2	10-13/16	11-1/2	23	14-1/8	4-1/8	32.26
801-664[1]	12x12x4	4-11/32	10-1/8	4-11/32	10-15/16	12-3/8	10-15/16	21-7/8	14-1/4	9-23/32	32.86
801-664F	12x12x4	5-3/4	9-9/16	5-3/4	12	11-13/16	12	24	14-1/8	5-3/16	32.86
801-665F	12x12x5	7-1/8	9-5/16	7-1/8	13-3/8	12-5/16	13-3/8	26-3/4	14-1/8	6-5/16	47.29
801-666F	12x12x6	7-1/4	9-15/16	7-1/4	13-1/4	13-3/16	13-1/4	26-1/2	14-1/8	7-1/2	45.37
801-668	12x12x8	4-27/32	7-1/2	4-27/32	11-13/32	11-1/8	11-13/32	22-13/16	14-1/4	9-23/32	40.00
801-668F	12x12x8	8	10-13/16	8	14-1/4	15-1/16	14-1/4	28-1/2	14-1/8	9-5/8	57.91
801-670F	12x12x10	10-1/4	10-13/16	10-1/4	16-1/2	16-1/16	16-1/2	33	14-1/8	11-15/16	67.18
801-691F	14x14x2	5-3/16	8-9/16	5-3/16	12-3/16	10-5/16	12-3/16	24-3/8	15-1/2	2-13/16	38.66

[1] Outlet sized with bushing

REDUCING TEE (continued)

Socket x Socket x Socket

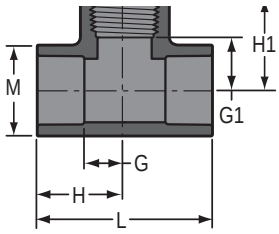


Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)
801-692F	14x14x2-1/2	5-7/16	8-3/4	5-7/16	12-7/16	10-3/4	12-7/16	24-7/8	15-1/2	3-7/16	44.34
801-693F	14x14x3	5-3/4	9-1/8	5-3/4	12-3/4	11-3/8	12-3/4	25-1/2	15-1/2	4-1/8	40.35
801-694F	14x14x4	6-1/2	10-1/8	6-1/2	13-1/2	12-3/8	13-1/2	27	15-1/2	5-3/16	41.85
801-696F	14x14x6	8-1/4	10-1/2	8-1/4	15-1/4	13-3/4	15-1/4	30-1/2	15-1/2	7-1/2	63.15
801-698F	14x14x8	9-1/4	11-3/8	9-1/4	16-1/4	15-5/8	16-1/4	32-1/2	15-1/2	9-5/8	74.74
801-700F	14x14x10	10-1/8	11-3/8	10-1/8	17-1/8	16-5/8	17-1/8	34-1/4	15-1/2	11-15/16	79.05
801-702	14x14x12	7-1/32	7-13/32	7-1/32	14-1/32	13-13/32	14-1/32	28-1/16	15-21/32	14-11/32	61.20
801-702F	14x14x12	11	11-3/8	11	18	17-5/8	18	36	15-1/2	14-1/8	93.81
801-751F	16x16x2	5-7/8	9-1/2	5-7/8	13-7/8	11-1/4	13-7/8	27-3/4	17-11/16	2-13/16	62.38
801-752F	16x16x2-1/2	6	9-11/16	6	14	11-11/16	14	28	17-11/16	3-7/16	55.65
801-753F	16x16x3	6-5/16	10-1/16	6-5/16	14-5/16	12-5/16	14-5/16	28-5/8	17-11/16	4-1/8	56.70
801-754F	16x16x4	6-1/8	11-1/16	6-1/8	14-1/8	13-5/16	14-1/8	28-1/4	17-11/16	5-3/16	60.66
801-756F	16x16x6	8-5/8	11-7/16	8-5/8	16-5/8	14-11/16	16-5/8	33-1/4	17-11/16	7-1/2	85.07
801-758F	16x16x8	9-5/8	12-5/16	9-5/8	17-5/8	16-9/16	17-5/8	35-1/4	17-11/16	9-5/8	94.91
801-760F	16x16x10	10-5/8	12-5/16	10-5/8	18-5/8	17-9/16	18-5/8	37-1/4	17-11/16	11-15/16	103.85
801-762F	16x16x12	11-5/8	12-5/16	11-5/8	19-5/8	18-9/16	19-5/8	39-1/4	17-11/16	14-1/8	116.70
801-764F	16x16x14	12-3/4	12-11/16	12-3/4	20-3/4	19-11/16	20-3/4	41-1/2	17-11/16	15-1/2	129.51
801-784F	18x18x4	6-7/8	11-15/16	6-7/8	15-7/8	14-3/16	15-7/8	31-3/4	19-7/8	5-3/16	91.52
801-786F	18x18x6	8-1/2	12-5/16	8-1/2	17-1/2	15-9/16	17-1/2	35	19-7/8	7-1/2	115.09
801-788F	18x18x8	9-1/2	13-3/16	9-1/2	18-1/2	17-7/16	18-1/2	37	19-7/8	9-5/8	118.85
801-790F	18x18x10	10-1/2	13-3/16	10-1/2	19-1/2	18-7/16	19-1/2	39	19-7/8	11-15/16	128.48
801-792F	18x18x12	11-1/2	13-3/16	11-1/2	20-1/2	19-7/16	20-1/2	41	19-7/8	14-1/8	151.17
801-794F	18x18x14	12-3/4	13-9/16	12-3/4	21-3/4	20-9/16	21-3/4	43-1/2	19-11/16	15-1/2	151.23
801-796F	18x18x16	13-1/2	14-3/16	13-1/2	22-1/2	22-3/16	22-1/2	45	19-11/16	17-11/16	140.86
801-814F	20x20x4	7-11/16	12-7/8	7-11/16	17-11/16	15-1/8	17-11/16	35-3/8	22-1/16	5-3/16	114.37
801-816F	20x20x6	8-7/8	13-1/4	8-7/8	18-7/8	16-1/2	18-7/8	37-3/4	22-1/16	7-1/2	130.08
801-818F	20x20x8	9-7/8	14-1/8	9-7/8	19-7/8	18-3/8	19-7/8	39-3/4	22-1/16	9-5/8	137.63
801-820F	20x20x10	10-7/8	14-1/8	10-7/8	20-7/8	19-3/8	20-7/8	41-3/4	22-1/16	11-15/16	123.96
801-822F	20x20x12	11-7/8	14-1/8	11-7/8	21-7/8	20-3/8	21-7/8	43-3/4	22-1/16	14-1/8	164.33
801-824F	20x20x14	12-7/8	14-1/2	12-7/8	22-7/8	21-1/2	22-7/8	45-3/4	22-1/16	15-1/2	176.28
801-826F	20x20x16	14	15-1/8	14	24	23-1/8	24	48	22-1/16	17-11/16	191.64
801-828F	20x20x18	15	15	15	25	24	25	50	22-1/16	19-7/8	215.72
801-904F	24x24x4	9	14-11/16	9	21	16-15/16	21	42	26-7/16	5-3/16	191.09
801-906F	24x24x6	9-1/4	15-1/16	9-1/4	21-1/4	18-5/16	21-1/4	42-1/2	26-7/16	7-1/2	207.79
801-908F	24x24x8	10-1/4	15-15/16	10-1/4	22-1/4	20-3/16	22-1/4	44-1/2	26-7/16	9-5/8	215.05
801-910F	24x24x10	11-1/4	15-15/16	11-1/4	23-1/4	21-3/16	23-1/4	46-1/2	26-7/16	11-15/16	248.46
801-912F	24x24x12	12-1/4	15-15/16	12-1/4	24-1/4	22-3/16	24-1/4	48-1/2	26-7/16	14-1/8	290.75
801-914F	24x24x14	13-1/4	16-5/16	13-1/4	25-1/4	23-5/16	25-1/4	50-1/2	26-1/16	15-1/2	279.60
801-916F	24x24x16	14-3/4	16-15/16	14-3/4	26-3/4	24-15/16	26-3/4	53-1/2	26-7/16	17-11/16	297.80
801-918F	24x24x18	15-3/4	16-13/16	15-3/4	27-3/4	25-13/16	27-3/4	55-1/2	26-7/16	19-7/8	303.81
801-920F	24x24x20	16-3/4	18-3/16	16-3/4	28-3/4	28-3/16	28-3/4	57-1/2	26-7/16	22-1/16	341.61

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

TEE

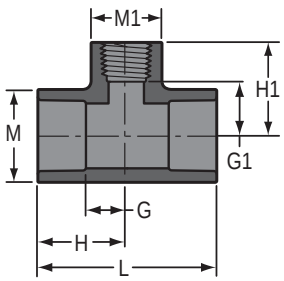
Socket x Socket x Fipt



Part Number	Size	G	G1	H	H1	L	M	Approx. Wt. (Lbs.)
802-002	1/4	5/16	3/8	15/16	15/16	1-29/32	7/8	.05
802-005	1/2	19/32	21/32	1-15/32	1-11/32	2-15/16	1-3/16	.14
802-007	3/4	5/8	5/8	1-19/32	1-13/32	3-3/16	1-13/32	.14
802-010	1	11/16	3/4	1-13/16	1-5/8	3-13/16	1-13/16	.23
802-012	1-1/4	13/16	1-1/16	2-3/32	1-15/16	4-5/32	2-3/32	.34
802-015	1-1/2	29/32	1-1/4	2-11/32	2-5/32	4-11/16	2-3/8	.49
802-020	2	1-9/32	1-15/32	2-13/16	2-13/32	5-21/32	2-7/8	.77
802-030	3	1-31/32	2-1/8	3-3/4	3-17/32	7-15/32	4-5/16	2.31
802-040	4	2-11/32	2-21/32	4-5/8	4-5/32	9-7/32	5-9/32	3.37
802-060F	6	3-13/16	8-1/4	6-13/16	9-3/4	13-5/8	7-9/16	14.19
802-080F	8	4-13/16	10-13/16	8-13/16	12-9/16	17-11/16	9-11/16	25.92

REDUCING TEE

Socket x Socket x Fipt

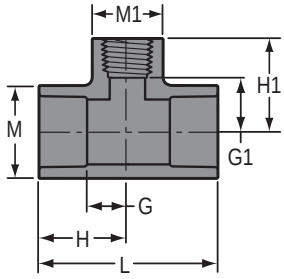


Part Number	Size	G	G1	H	H1	L	M	M1	Approx. Wt. (Lbs.)
802-101	3/4x3/4x1/2	19/32	25/32	1-19/32	1-7/16	3-7/32	1-13/32	1-3/16	.14
802-130	1x1x1/2	7/16	29/32	1-9/16	1-5/8	3-1/8	1-23/32	1-7/16	.18
802-131	1x1x3/4	21/32	13/16	1-13/16	1-17/32	3-5/8	1-23/32	1-3/8	.21
802-166	1-1/4x1-1/4x1/2	7/16	1-1/8	1-11/16	1-27/32	3-3/8	2-3/32	1-3/16	.26
802-167[1]	1-1/4x1-1/4x3/4	7/8	1-23/32	2-1/8	2-7/16	4-7/32	2-3/32	1-3/4	.40
802-168	1-1/4x1-1/4x1	27/32	1-1/32	2-3/32	1-29/32	4-7/32	2-3/32	1-11/16	.33
802-209[1]	1-1/2x1-1/2x1/2	11/16	1-9/16	2-3/32	2-9/32	4-5/32	2-11/32	1-13/32	.40
802-210[1]	1-1/2x1-1/2x3/4	7/8	1-27/32	2-1/4	2-19/32	4-1/2	2-3/8	1-11/16	.51
802-211	1-1/2x1-1/2x1	27/32	1-9/32	2-1/4	2-3/32	4-15/32	2-3/8	1-11/16	.41
802-212	1-1/2x1-1/2x1-1/4	1-1/32	1-5/32	2-7/16	2-3/32	4-27/32	2-3/8	2-1/16	.47
802-247[1]	2x2x1/2	1/2	1-1/2	2	2-7/32	4	2-7/8	1-3/16	.45
802-248	2x2x3/4	5/8	1-3/8	2-1/8	2-3/32	4-1/4	2-7/8	1-3/8	.47

[1] Outlet sized with bushing

REDUCING TEE (continued)

Socket x Socket x Fipt



Part Number	Size	G	G1	H	H1	L	M	M1	Approx. Wt. (Lbs.)
802-249	2x2x1	27/32	1-1/2	2-11/32	3-11/32	4-11/16	2-7/8	1-11/16	.54
802-250[1]	2x2x1-1/4	1-3/16	2-1/16	2-11/16	3	5-3/8	2-7/8	2-13/32	.86
802-251[1]	2x2x1-1/2	1-7/16	2-5/16	2-15/16	3-11/32	5-7/8	2-7/8	2-7/8	1.20
802-287	2-1/2x2-1/2x1/2	9/16	1-25/32	2-5/16	2-15/32	4-19/32	3-1/2	1-3/16	.76
802-288[1]	2-1/2x2-1/2x3/4	27/32	2-11/32	2-21/32	3-5/32	5-9/32	3-9/16	1-13/16	1.06
802-289[1]	2-1/2x2-1/2x1	1-3/32	2-11/32	2-27/32	3-1/4	5-11/16	3-1/2	2-1/8	1.19
802-290[1]	2-1/2x2-1/2x1-1/4	1-3/16	2-15/32	2-31/32	3-15/32	5-15/16	3-1/2	2-3/8	1.30
802-291[1]	2-1/2x2-1/2x1-1/2	1-7/16	2-1/2	3-3/16	3-1/2	6-3/8	3-1/2	2-7/8	1.51
802-292[1]	2-1/2x2-1/2x2	1-3/4	3-15/16	3-1/2	2-7/8	7	3-15/32	3-15/32	1.86
802-333[1]	3x3x1/2	7/8	2-11/16	2-3/4	3-7/16	5-1/2	4-1/8	1-23/32	1.27
802-334[1]	3x3x3/4	7/8	2-19/32	2-3/4	3-11/32	5-1/2	4-3/16	1-3/4	1.26
802-335[1]	3x3x1	1-3/16	2-31/32	3-1/16	3-7/8	6-1/8	4-1/8	2-11/32	1.53
802-337[1]	3x3x1-1/2	1-7/16	2-23/32	3-5/16	3-23/32	6-5/8	4-1/4	2-29/32	1.84
802-338[1]	3x3x2	2-3/32	3-11/32	3-31/32	4-3/8	7-15/16	4-5/32	4-5/32	3.03
802-339[1]	3x3x2-1/2	2-3/32	2-3/4	3-31/32	4-5/16	7-15/16	4-1/8	4-1/8	2.90
802-415[1]	4x4x1/2	1-7/16	3-5/8	3-11/16	4-3/8	7-3/8	5-1/4	2-7/8	2.61
802-416[1]	4x4x3/4	1-15/32	3-27/32	3-23/32	4-17/32	7-7/16	5-1/4	2-7/8	2.72
802-417[1]	4x4x1	1-7/16	3-17/32	3-23/32	4-13/32	7-13/32	5-1/4	2-7/8	2.73
802-419[1]	4x4x1-1/2	3-11/16	3-1/2	3-11/16	3-31/32	7-3/8	5-1/4	2-7/8	2.63
802-420[1]	4x4x2	2-1/8	4-1/32	4-3/8	5-1/32	8-25/32	5-1/4	4-3/16	3.77
802-421[1]	4x4x2-1/2	2-1/8	3-15/32	4-3/8	5	8-25/32	5-1/4	4-3/16	3.62
802-422[1]	4x4x3	2-5/8	3-5/8	4-7/8	5-1/4	9-3/4	5-1/4	5-1/4	5.13
802-525[1]	6x6x1	2-1/16	5-3/16	5-3/32	6-1/16	10-5/32	7-19/32	4-1/4	7.11
802-528F	6x6x2	4-5/8	5-1/8	7-7/8	6-9/16	15-3/4	7-1/2	3	11.01
802-529[1]	6x6x2-1/2	2-1/16	4-21/32	5-3/32	6-3/16	10-5/32	7-19/32	4-1/4	6.97
802-530[1]	6x6x3	2-11/16	4-3/4	5-9/16	6-3/8	11-1/8	7-1/2	5-1/4	13.79
802-532F	6x6x4	5-1/4	6-3/4	8-1/2	8-1/4	17	7-1/2	5-3/16	13.77
802-578F	8x8x2	4-11/16	6-1/16	8-15/16	7-1/2	17-7/8	9-5/8	3	15.46
802-580F	8x8x3	5-3/16	7	9-7/16	8-7/16	18-7/8	9-5/8	4-1/8	18.24
802-582F	8x8x4	5-3/4	7-11/16	10	9-1/8	20	9-5/8	5-3/16	17.71
802-621F	10x10x2	4-3/8	7-9/16	9-5/8	8-15/16	19-1/4	11-15/16	3	26.78
802-623F	10x10x3	4-7/8	8-3/16	10-1/8	9-5/8	20-1/4	11-15/16	4-1/8	31.67
802-624F	10x10x4	5-3/8	8-13/16	10-5/8	10-5/16	21-1/4	11-15/16	5-3/16	32.18
802-661F	12x12x2	4-3/4	8-7/16	11	9-13/16	22	14-1/8	3	37.80
802-663F	12x12x3	5-1/4	9-1/4	11-1/2	10-11/16	23	14-1/8	4-1/8	36.19
802-664F	12x12x4	5-3/4	9-15/16	12	11-7/16	24	14-1/8	5-3/16	47.80

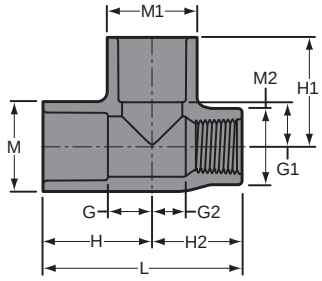
[1] Outlet sized with bushing

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

REDUCING TEE

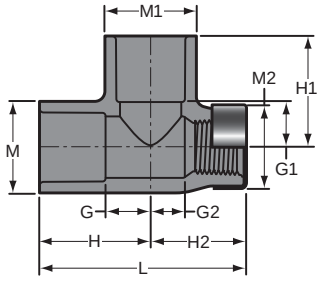
Socket x Fipt x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
803-095	3/4x1/2x3/4	11/16	11/16	11/16	1-11/16	1-11/16	1-3/8	3-3/32	1-13/32	1-13/32	1-3/16	.15

SPECIAL REINFORCED REDUCING TEE

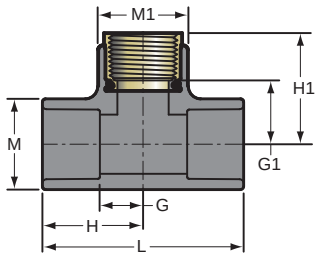
Socket x SR Fipt x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
803-095SR	3/4x1/2x3/4	11/16	11/16	11/16	1-11/16	1-11/16	1-13/32	3-1/8	1-13/32	1-13/32	1-7/32	.15

TEE

Socket x Socket x Brass Fipt

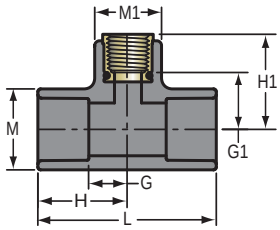


Part Number	Size	G	G1	H	H1	L	M	M1	Approx. Wt. (Lbs.)
802-005BR	1/2	7/8	31/32	1-7/16	1-17/32	2-5/8	1-5/32	1-7/32	.16
802-007BR	3/4	17/32	1-3/32	1-13/32	1-13/16	3-1/32	1-13/32	1-3/8	.25

Not intended to convey or dispense water for human consumption through drinking or cooking

REDUCING TEE

Socket x Socket x Brass Fipt

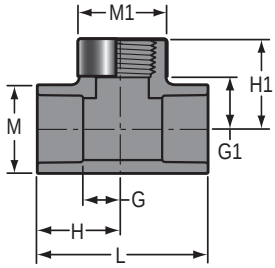


Part Number	Size	G	G1	H	H1	L	M	M1	Approx. Wt. (Lbs.)
802-072BR	1/2x1/2x1/4	7/16	7/8	1-5/16	1-17/32	2-5/8	1-3/16	1-3/16	.22
802-101BR	3/4x3/4x1/2	7/16	1-1/32	1-7/16	1-5/8	2-29/32	1-13/32	1-3/16	.19

Not intended to convey or dispense water for human consumption through drinking or cooking

SPECIAL REINFORCED TEE

Socket x Socket x SR Fipt



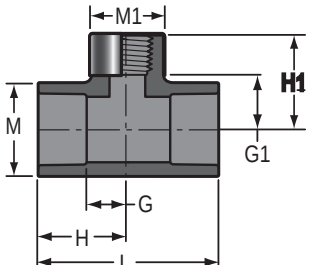
Part Number	Size	G	G1	H	H1	L	M	M1	Approx. Wt. (Lbs.)
802-005SR	1/2	5/8	5/8	1-15/32	1-3/8	2-15/16	1-7/32	1-13/32	.13
802-007SR	3/4	19/32	11/16	1-19/32	1-13/32	3-3/16	1-13/32	1-13/32	.15
802-010SR	1	21/32	11/16	1-13/16	1-5/8	3-5/8	1-23/32	1-11/16	.25
802-012SR	1-1/4	13/16	1-1/16	2-3/32	1-15/16	4-3/16	2-3/32	2-1/16	.37
802-015SR	1-1/2	15/16	1-7/32	2-11/32	2-5/32	4-11/16	2-11/32	2-7/16	.51
802-020SR	2	1-5/16	1-1/2	2-13/16	2-13/32	5-21/32	2-7/8	3-1/32	.80
802-030SR	3	1-27/32	2-3/32	3-23/32	3-17/32	7-7/16	4-9/32	4-9/32	2.33
802-040SR	4	2-11/32	2-21/32	4-5/8	4-5/32	9-7/32	5-1/4	5-1/4	3.40

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

SPECIAL REINFORCED REDUCING TEE

Socket x Socket x SR Fipt

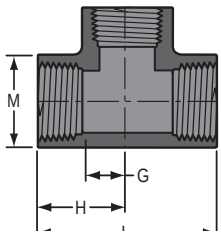


Part Number	Size	G	G1	H	H1	L	M	M1	Approx. Wt. (Lbs.)
802-072SR	1/2x1/2x1/4	7/16	11/16	1-5/16	1-7/32	2-5/8	1-5/32	27/32	.09
802-098SR	3/4x3/4x1/4	7/	13/16	1-7/16	1-5/16	2-7/8	1-3/8	27/32	.12
802-101SR	3/4x3/4x1/2	19/32	25/32	1-19/32	1-7/16	3-7/32	1-13/32	1-3/16	.15
802-128SR[1]	1x1x1/4	7/8	2-5/8	2	2-11/16	4	2-3/32	27/32	.43
802-130SR	1x1x1/2	7/16	29/32	1-9/16	1-5/8	3-1/8	1-23/32	1-3/16	.19
802-131SR	1x1x3/4	21/32	7/8	1-13/16	1-19/32	3-19/32	1-23/32	1-3/8	.22
802-164SR[1]	1-1/4x1-1/4x1/4	27/32	2-13/16	2-1/8	3-13/32	4-7/32	2-3/32	27/32	.43
802-166SR	1-1/4x1-1/4x1/2	7/16	1-1/8	1-11/16	1-27/32	3-13/32	2-3/32	1-3/16	.26
802-168SR	1-1/4x1-1/4x1	27/32	1-1/32	2-3/32	1-29/32	4-7/32	2-3/32	1-11/16	.35
802-207SR[1]	1-1/2x1-1/2x1/4	27/32	1-31/32	2-1/4	2-19/32	4-15/32	2-11/32	1-3/4	.49
802-211SR	1-1/2x1-1/2x1	27/32	1-7/32	2-1/4	2-1/8	4-15/32	2-3/8	1-11/16	.42
802-212SR	1-1/2x1-1/2x1-1/4	1-1/32	1-5/32	2-7/16	2-3/32	4-27/32	2-3/8	2-1/16	.49
802-247SR	2x2x1/2	1/2	1-1/2	2	2-1/4	4	2-7/8	1-3/16	.45
802-248SR	2x2x3/4	19/32	1-13/32	2-1/8	2-1/8	4-1/4	2-7/8	1-3/8	.48
802-287SR	2-1/2x2-1/2x1/2	9/16	1-3/4	2-5/16	2-1/2	4-19/32	3-1/2	1-7/32	.75
802-331SR[1]	3x3x1/4	1-13/32	4-1/2	3-5/16	5-1/32	6-9/16	4-3/16	27/32	1.90
802-413SR[1]	4x4x1/4	1-7/16	5-3/16	3-11/16	5-25/32	7-3/8	5-1/4	27/32	2.63

[1] Outlet sized with bushing

TEE

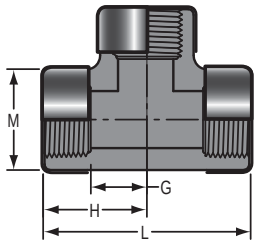
Fipt x Fipt x Fipt



Part Number	Size	G	H	L	M	Approx. Wt. (Lbs.)
805-002	1/4	1/2	1-3/32	2-3/16	27/32	.06
805-003	3/8	9/16	1-5/32	2-5/16	15/16	.07
805-005	1/2	17/32	1-1/4	2-15/32	1-3/16	.11
805-007	3/4	21/32	1-15/32	2-15/16	1-1/2	.19
805-010	1	3/4	1-23/32	3-7/16	1-27/32	.34
805-012	1-1/4	15/16	1-31/32	3-29/32	2-1/4	.47
805-015	1-1/2	1-1/8	2-3/16	4-3/8	2-13/32	.60
805-020	2	1-5/8	2-5/8	5-1/4	3	1.08
805-025	2-1/2	1-9/16	3-1/8	6-1/4	3-19/32	1.65
805-030	3	1-15/16	3-9/16	7-3/32	4-11/32	2.82
805-040	4	2-15/32	4-7/32	8-7/16	5-3/8	4.28
805-060F	6	8-1/4	9-3/4	19-1/2	7-3/16	20.11

SPECIAL REINFORCED TEE

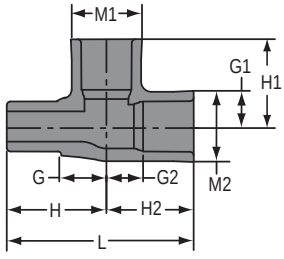
SR Fipt x SR Fipt x SR Fipt



Part Number	Size	G	H	L	M	Approx. Wt. (Lbs.)
805-002SR	1/4	17/32	1-1/8	2-1/4	27/32	.08
805-003SR	3/8	19/32	1-3/16	2-11/32	31/32	.09
805-005SR	1/2	1/2	1-1/4	2-1/2	1-3/16	.14
805-007SR	3/4	19/32	1-11/32	2-11/16	1-3/8	.16
805-010SR	1	7/8	1-25/32	3-9/16	1-11/16	.32
805-015SR	1-1/2	1-1/4	2-3/16	4-13/32	2-13/32	.66
805-020SR	2	1-5/8	2-5/8	5-1/4	3	1.17

STREET TEE

Spigot x Socket x Socket



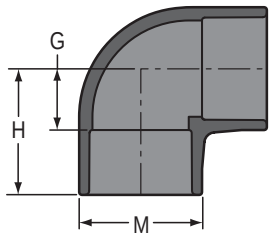
Part Number	Size	G	G1	G2	H	H1	H2	L	M1	M2	Approx. Wt. (Lbs.)
844-005	1/2	23/32	23/32	1/2	1-19/32	1-21/32	1-19/32	3-5/32	1-3/16	1-3/16	.10
844-007	3/4	13/16	27/32	7/8	1-13/16	1-7/8	1-13/16	3-5/8	1-13/32	1-13/32	.15
844-010	1	1-3/32	13/16	13/16	2-7/32	2	2	4-7/32	1-3/4	1-3/4	.26
844-012	1-1/4	1-1/4	1-5/32	1-1/8	2-7/16	2-5/16	2-7/16	4-7/8	2-3/32	2-3/32	.39
844-015	1-1/2	1-13/16	1-1/8	1-1/8	2-7/8	2-9/16	2-9/16	5-11/32	2-11/32	2-11/32	.51
844-020	2	1-23/32	1-7/16	1-13/32	3-1/4	2-15/16	2-15/16	6-5/32	2-7/8	2-7/8	.80

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

90° ELBOW

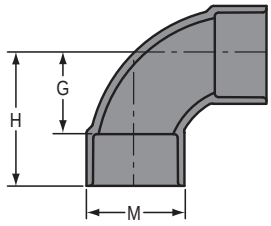
Socket x Socket



Part Number	Size	G	H	M	Approx. Wt. (Lbs.)
806-002	1/4	11/32	1	13/16	.03
806-003	3/8	15/32	1-1/4	31/32	.05
806-005	1/2	9/16	1-15/32	1-3/16	.08
806-007	3/4	5/8	1-11/16	1-7/16	.12
806-010	1	7/8	2	1-3/4	.20
806-012	1-1/4	1-1/32	2-9/32	2-1/8	.30
806-015	1-1/2	1-5/32	1-9/16	2-3/8	.39
806-020	2	1-13/32	2-15/16	2-7/8	.60
806-025	2-1/2	1-9/16	3-11/32	3-15/32	1.09
806-030	3	2-1/16	3-31/32	4-3/16	1.60
806-040	4	2-5/8	4-7/8	5-7/32	2.78
806-045F	4-1/2	6-1/2	9	5-5/8	4.58
806-050	5	3	5-3/4	6-3/8	4.42
806-050F	5	5-1/2	8-1/2	6-5/16	6.23
806-060	6	3-3/4	6-3/4	7-19/32	7.47
806-080	8	4-25/32	8-25/32	9-3/4	14.30
806-080F	8	7-7/8	12-1/8	9-5/8	17.47
806-100	10	5-25/32	10-13/16	12-5/32	26.34
806-100F	10	10	15-1/4	11-15/16	31.86
806-120	12	6-7/8	13-7/16	14-5/16	43.94
806-120F	12	11-1/2	17-3/4	14-1/8	60.28
806-140	14	7-1/2	14-1/2	15-11/16	53.05
806-140F	14	13-1/2	20-1/2	15-1/2	82.49
806-160F	16	15-9/16	23-9/16	17-11/16	101.71
806-180F	18	17-11/16	26-11/16	19-7/8	167.49
806-200F	20	19-13/16	29-13/16	22-1/16	193.41
806-240F	24	24	36	26-7/16	403.66

90° SWEEP ELBOW

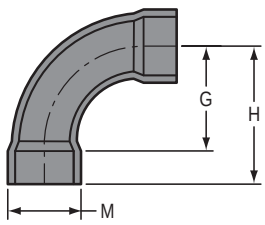
Socket x Socket



Part Number	Size	G	H	M	Approx. Wt. (Lbs.)
806-005S	1/2	27/32	1-23/32	1-3/16	.08
806-007S	3/4	1-1/32	2-1/32	1-13/32	.12
806-010S	1	1-5/16	2-7/16	1-23/32	.20
806-012S	1-1/4	1-9/16	2-13/16	2-3/32	.30
806-015S	1-1/2	1-3/4	3-1/8	2-11/32	.39
806-020S	2	2-5/16	3-13/16	2-7/8	.64

90° LONG SWEEP ELBOW

Socket x Socket

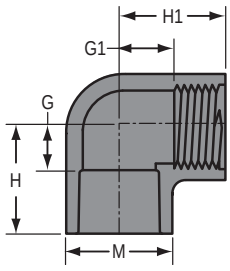


Part Number	Size	G	H	M	Approx. Wt. (Lbs.)
806-005LSF	1/2	1-7/8	2-3/4	1-1/8	.13
806-007LSF	3/4	2-7/16	3-7/16	1-7/16	.22
806-010LSF	1	2-7/8	4	1-11/16	.33
806-012LSF	1-1/4	3-5/8	4-7/8	2-1/16	.50
806-015LSF	1-1/2	4-1/8	5-1/2	2-5/16	.60
806-020LSF	2	4-3/4	6-5/16	2-13/16	.90
806-025LSF	2-1/2	5-3/4	7-3/4	3-7/16	1.65
806-030LSF	3	7	9	4-1/8	2.36
806-040LSF	4	9	11-1/4	5-3/16	4.76
806-060LSF	6	13	16-1/4	7-1/2	12.84
806-080LSF	8	23-1/2	27-3/4	9-5/8	31.58

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

90° ELBOW

Socket x Fipt

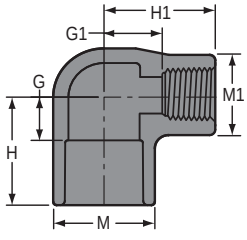


Part Number	Size	G	G1	H	H1	M	Approx. Wt. (Lbs.)
807-002	1/4	5/16	5/16	15/16	15/16	7/8	.03
807-003	3/8	1/4	3/8	1-1/32	1-1/32	1-1/32	.05
807-005	1/2	15/32	9/16	1-11/32	1-9/32	1-3/16	.08
807-007	3/4	5/8	5/8	1-9/16	1-9/16	1-3/8	.09
807-010	1	11/16	25/32	1-13/16	1-11/16	1-23/32	.19
807-012	1-1/4	23/32	1-1/32	1-31/32	1-31/32	2-1/16	.28
807-015	1-1/2	15/16	1-7/32	2-11/32	2-5/32	2-11/32	.39
807-020	2	15/16	1-1/32	2-7/16	2	3	.80
807-030	3	1-27/32	2-7/32	3-23/32	3-9/16	4-9/32	1.72
807-040	4	2-5/16	2-7/8	4-9/16	4-9/32	5-1/4	2.87
807-060[1]	6	3-3/4	7-1/8	6-3/4	8-7/8	7-9/16	11.48

[1] Outlet sized with Female Adapter

90°REDUCING ELBOW

Socket x Fipt

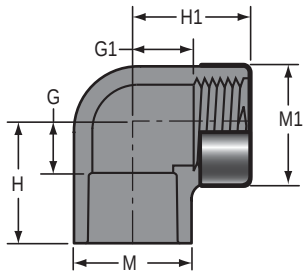


Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
807-101	3/4x1/2	1/2	25/32	1-17/32	1-17/32	1-13/32	1-3/16	.11
807-130[1]	1x1/2	27/32	1-17/32	1-31/32	2-1/4	1-23/32	1-23/32	.26
807-131[1]	1x3/4	7/8	1-17/32	2	2-1/4	1-3/4	1-3/4	.25

[1] Outlet sized with Female Adapter

SPECIAL REINFORCED 90° ELBOW

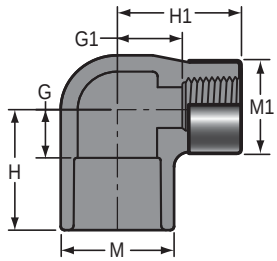
Socket x SR Fipt



Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
807-005SR	1/2	15/32	23/32	1-11/32	1-9/32	1-3/16	1-7/32	.08
807-007SR	3/4	9/16	21/32	1-9/16	1-13/32	1-3/8	1-3/8	.11
807-010SR	1	19/32	13/16	1-23/32	1-23/32	1-11/16	1-23/32	.20
807-012SR	1-1/4	23/32	1-1/32	1-31/32	1-31/32	2-1/16	2-1/16	.30
807-015SR	1-1/2	31/32	1-5/32	2-3/8	2-1/8	2-11/32	2-7/16	.41
807-020SR	2	1-7/32	1-1/2	2-15/32	2-7/16	2-31/32	2-31/32	.83
807-030SR	3	1-13/16	2-7/32	3-23/32	3-9/16	4-9/32	4-9/32	1.98
807-040SR	4	2-9/32	2-25/32	4-9/16	4-7/32	5-1/4	5-1/4	2.94

SPECIAL REINFORCED REDUCING 90° ELBOW

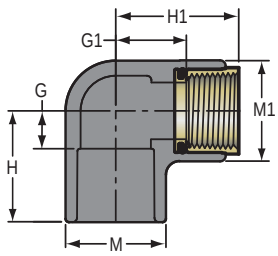
Socket x SR Fipt



Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
807-101SR	3/4x1/2	1/2	13/16	1-17/32	1-17/32	1-13/32	1-3/16	.12
807-130SR	1x1/2	9/16	1	1-23/32	1-5/8	1-23/32	1-3/16	.13

TRANSITION 90° ELBOW

Socket x Brass Fipt



Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
807-005BR	1/2	13/32	31/32	1-9/32	1-17/32	1-3/16	1-7/32	.15
807-007BR	3/4	1/2	1-5/32	1-1/2	1-25/32	1-3/8	1-13/32	.20

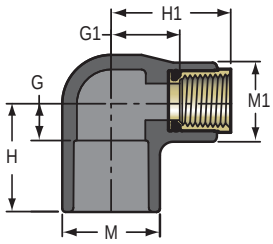
Not intended to convey or dispense water for human consumption through drinking or cooking

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

TRANSITION REDUCING 90° ELBOW

Socket x Brass Fipt

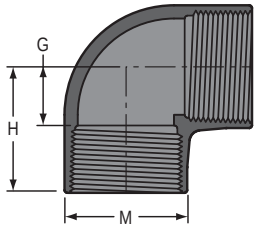


Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
807-101BR	3/4x1/2	15/32	1-3/32	1-15/32	1-21/32	1-13/32	1-3/16	.17

Not intended to convey or dispense water for human consumption through drinking or cooking

90° ELBOW

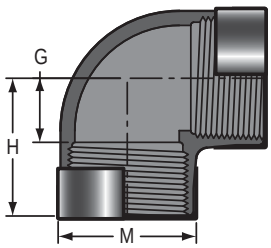
Fipt x Fipt



Part Number	Size	G	H	M	Approx. Wt. (Lbs.)
808-002	1/4	11/32	15/16	7/8	.04
808-003	3/8	9/16	1-5/32	15/16	.05
808-005	1/2	1/2	1-7/32	1-9/32	.09
808-007	3/4	5/8	1-3/8	1-3/8	.11
808-010	1	25/32	1-5/8	1-23/32	.20
808-012	1-1/4	15/16	1-7/8	2-1/16	.30
808-015	1-1/2	1-5/32	2-3/32	2-7/16	.46
808-020	2	1-9/16	2-17/32	3	.86
808-025	2-1/2	1-5/8	3-3/16	3-9/16	1.20
808-030	3	1-29/32	3-17/32	4-13/32	2.30
808-040	4	2-13/32	4-5/32	5-7/16	3.22

SPECIAL REINFORCED 90° ELBOW

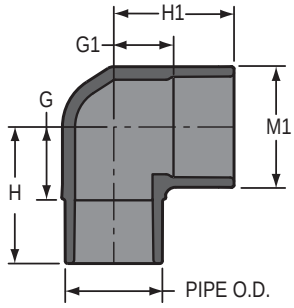
SR Fipt x SR Fipt



Part Number	Size	G	H	M	Approx. Wt. (Lbs.)
808-003SR	3/8	9/16	1-5/32	15/16	.07
808-005SR	1/2	1/2	1-7/32	1-3/16	.10
808-007SR	3/4	5/8	1-3/8	1-3/8	.13
808-010SR	1	25/32	1-11/16	1-23/32	.23
808-012SR	1-1/4	15/16	1-7/8	2-1/16	.35
808-015SR	1-1/2	1-1/32	2-1/8	2-7/16	.50
808-020SR	2	1-19/32	2-1/2	3	.92

90° STREET ELBOW

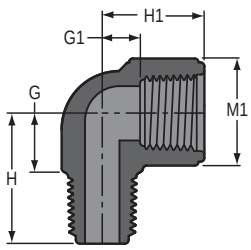
Spigot x Socket



Part Number	Size	G	G1	H	H1	M1	Approx. Wt. (Lbs.)
809-005	1/2	13/16	7/16	1-21/32	1-7/16	1-5/32	.07
809-007	3/4	29/32	11/16	1-27/32	1-11/16	1-3/8	.11
809-010	1	1-1/16	3/4	2-7/32	2	1-23/32	.19
809-012	1-1/4	1-9/32	13/16	2-19/32	2-1/4	2-3/32	.29
809-015	1-1/2	1-7/16	1-3/16	2-13/16	2-9/16	2-3/8	.40
809-020	2	1-3/4	1-7/16	3-1/4	2-31/32	2-7/8	.60
809-025	2-1/2	2-1/2	1-5/8	4-1/2	3-3/8	3-7/16	1.31
809-030	3	2-3/8	1-13/16	4-1/4	3-11/16	4-3/16	1.65
809-040	4	3-1/32	2-1/4	5-9/32	4-17/32	5-1/4	2.82
809-060	6	5-1/4	3-7/8	8-1/2	6-7/8	7-9/16	12.00
809-080	8	7-1/8	4-25/32	11-1/8	8-25/32	9-3/4	17.21
809-100	10	8-5/8	5-13/16	14-5/16	11-3/8	12-1/16	37.73
809-120	12	10-1/8	6-7/8	16-7/8	13-3/8	14-1/8	61.75
809-140	14	11-1/16	7-9/16	18-5/16	14-5/8	15-11/16	73.23
809-140F	14	13-1/2	13-1/2	20-1/2	20-1/2	15-1/2	82.49
809-160F	16	19-9/16	15-9/16	28-9/16	23-9/16	17-11/16	120.78
809-180F	18	22-3/16	17-11/16	32-3/16	26-11/16	19-7/8	140.91
809-200F	20	24-13/16	19-13/16	35-13/16	29-13/16	22-1/16	256.44
809-240F	24	30	24	43	36	26-7/16	395.00

90° STREET ELBOW

Mipt x Fipt



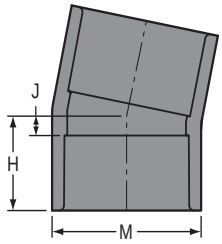
Part Number	Size	G	G1	H	H1	M1	Approx. Wt. (Lbs.)
812-002	1/4	17/32	5/16	1-1/32	29/32	13/16	.02
812-005	1/2	11/16	13/32	1-11/32	1-5/32	1-3/16	.06
812-007	3/4	7/8	17/32	1-1/2	1-9/32	1-7/16	.09
812-010	1	1-1/32	21/32	1-13/16	1-9/16	1-3/4	.15
812-012	1-1/4	2-9/16	1	3-9/32	1-31/32	2-7/32	.49
812-015[1]	1-1/2	2-11/16	1-1/4	3-7/16	2-1/8	2-13/32	.54

[1] Outlet sized with Female Adapter

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

11-1/4° ELBOW

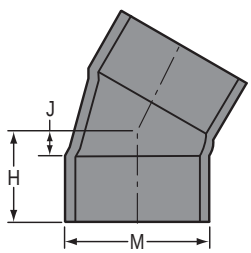
Socket x Socket



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
811-015	1-1/2	1-19/32	7/32	2-3/8	.24
811-020	2	1-23/32	7/32	2-27/32	.33
811-025F	2-1/2	2-11/16	11/16	3-7/16	.81
811-030	3	2-3/16	5/16	4-1/8	.88
811-040	4	2-21/32	13/32	5-1/4	1.53
811-045F	4-1/2	3-1/2	1	5-5/8	1.94
811-050F	5	3-13/16	13/16	6-5/16	2.88
811-060F	6	4-1/4	1	7-1/2	4.43
811-080F	8	5-3/8	1-1/8	9-5/8	8.73
811-100F	10	6-11/16	1-7/16	11-15/16	15.93
811-120F	12	7-13/16	1-9/16	14-1/8	24.66
811-140F	14	9	2	15-1/2	33.00
811-160F	16	10-3/8	2-3/8	17-11/16	48.74
811-180F	18	11-3/4	2-3/4	19-7/8	69.12
811-200F	20	13-1/8	3-1/8	22-1/16	96.58
811-240F	24	15-13/16	3-13/16	26-7/16	152.00

30° ELBOW

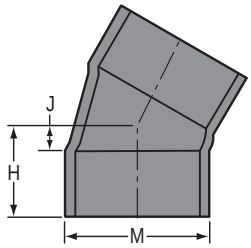
Socket x Socket



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
815-005F	1/2	1-7/16	7/16	1-1/8	.07
815-007F	3/4	1-7/16	7/16	1-3/8	.09
815-010F	1	1-3/4	1/2	1-11/16	.14
815-012F	1-1/4	2-3/16	11/16	2-1/16	.22
815-015F	1-1/2	2-3/16	11/16	2-5/16	.30
815-020F	2	2-1/2	3/4	2-13/16	.46
815-025F	2-1/2	2-1/2	3/4	3-7/16	.81
815-030F	3	3-5/16	1-1/16	4-1/8	1.21
815-040F	4	3-7/16	1-3/16	5-3/16	2.14
815-045F	4-1/2	4	1-1/2	5-5/8	2.18
815-050F	5	4-3/8	1-3/8	6-5/16	3.10
815-060	6	4-13/16	1-7/8	7-9/16	5.59

30° ELBOW (continued)

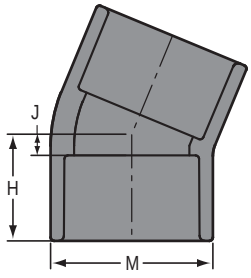
Socket x Socket



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
815-080F	8	6-3/16	1-15/16	9-5/8	10.08
815-100F	10	7-3/4	2-1/2	11-15/16	17.92
815-120F	12	9-1/16	2-13/16	14-1/8	27.40
815-140F	14	10-7/16	3-7/16	15-1/2	37.94
815-160F	16	11-15/16	3-15/16	17-11/16	55.09
815-180F	18	13-7/16	4-7/16	19-7/8	77.09
815-200F	20	15	5	22-1/16	119.89
815-240F	24	18-1/8	6-1/8	26-7/16	166.30

22-1/2° ELBOW

Socket x Socket



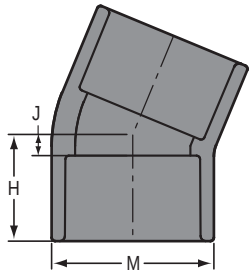
Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
816-005	1/2	1-1/16	3/16	1-5/32	.06
816-007	3/4	1-3/16	3/16	1-7/16	.09
816-010	1	1-3/8	9/32	1-23/32	.13
816-012	1-1/4	1-1/2	5/16	2-3/32	.19
816-015	1-1/2	1-21/32	1/4	2-3/8	.26
816-015F	1-1/2	2-1/8	5/8	2-5/16	.26
816-020	2	1-7/8	7/16	2-7/8	.38
816-025	2-1/2	2-7/32	15/32	3-1/2	.68
816-025F	2-1/2	2-7/8	7/8	3-7/16	.75
816-030	3	2-13/32	9/16	4-5/32	.95
816-040	4	2-7/8	5/8	5-1/4	1.64
816-045F	4-1/2	3-13/16	1-5/16	5-5/8	2.09
816-050F	5	4-1/8	1-1/8	6-5/16	3.15

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

22-1/2° ELBOW (continued)

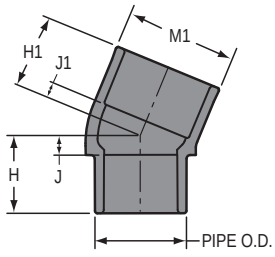
Socket x Socket



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
816-060	6	4-9/16	1-3/8	7-7/16	4.33
816-060F	6	4-5/8	1-3/8	7-1/2	5.02
816-080	8	5-1/16	1-1/32	9-3/4	8.19
816-080F	8	5-7/8	1-5/8	9-5/8	9.41
816-100F	10	7-5/16	2-1/16	11-15/16	17.25
816-120F	12	8-9/16	2-5/16	14-1/8	26.03
816-140F	14	9-13/16	2-13/16	15-1/2	34.65
816-160F	16	11-5/16	3-5/16	17-11/16	52.97
816-180F	18	12-3/4	3-3/4	19-7/8	74.44
816-200F	20	14-1/4	4-1/4	22-1/16	119.89
816-240F	24	17-3/16	5-3/16	26-7/16	189.96

22-1/2° STREET ELBOW

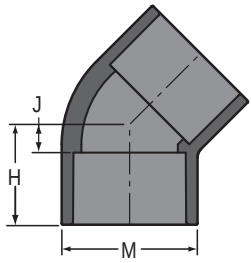
Spigot x Socket



Part Number	Size	H	H1	J	J1	M1	Approx. Wt. (Lbs.)
842-005	1/2	7/8	1	1/8	1/8	1-3/16	.05
842-007	3/4	1-1/4	1-5/32	3/16	3/16	1-3/8	.08
842-010	1	1-7/16	1-11/32	5/16	7/32	1-23/32	.13
842-012	1-1/4	1-9/16	1-9/16	5/16	3/8	2-3/32	.20
842-015	1-1/2	1-21/32	1-7/8	9/32	1/2	2-3/8	.26
842-020	2	2	1-29/32	15/32	13/32	2-7/8	.40
842-025	2-1/2	2-7/32	2-7/32	15/32	15/32	3-1/2	.66
842-030	3	2-1/2	2-5/16	21/32	7/16	4-5/32	1.44
842-040	4	2-27/32	3-1/32	9/16	25/32	5-1/4	1.67
842-060	6	5-11/16	3-15/16	2-3/8	7/8	7-5/8	9.46
842-080	8	7-3/8	5-1/8	3-1/8	1-1/8	9-3/4	5.61

45° ELBOW

Socket x Socket

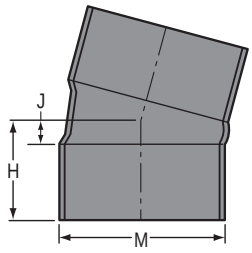


Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
817-002	1/4	13/16	5/32	27/32	.03
817-003	3/8	31/32	7/32	1	.04
817-005	1/2	1-1/8	1/4	1-3/16	.06
817-007	3/4	1-5/16	5/16	1-7/16	.09
817-010	1	1-7/16	5/16	1-23/32	.15
817-012	1-1/4	1-5/8	3/8	2-1/8	.23
817-015	1-1/2	1-13/16	7/16	2-3/8	.30
817-020	2	2-1/8	5/8	2-7/8	.46
817-025	2-1/2	2-13/32	21/32	3-1/2	.77
817-030	3	2-29/32	29/32	4-5/32	1.12
817-040	4	3-5/16	1-1/16	5-1/4	2.00
817-045F	4-1/2	4-1/2	2	5-5/8	2.32
817-050	5	4	1-11/32	6-13/32	3.23
817-050F	5	4-7/8	1-7/8	6-5/16	3.86
817-060	6	4-3/4	1-3/4	7-19/32	5.52
817-080	8	6	2	9-3/4	10.09
817-100	10	8-3/16	2-19/32	12-3/16	20.62
817-100F	10	8-11/16	3-7/16	11-15/16	19.91
817-120	12	9-11/16	3-3/32	14-13/32	34.04
817-120F	12	10-1/8	3-7/8	14-1/8	31.51
817-140	14	10-5/16	3-5/16	15-5/8	40.00
817-140F	14	11-9/16	4-9/16	15-1/2	42.89
817-160F	16	13-5/16	5-5/16	17-11/16	61.45
817-180F	18	15	6	19-7/8	87.73
817-200F	20	16-3/4	6-3/4	22-1/16	107.05
817-240F	24	20-3/16	8-3/16	26-7/16	204.20

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

15° ELBOW

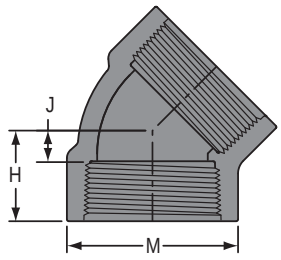
Socket x Socket



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
818-020F	2	2-5/16	9/16	2-13/16	.42
818-025F	2-1/2	2-3/4	3/4	3-7/16	.79
818-030F	3	3	3/4	4-1/8	1.10
818-040F	4	3-1/8	7/8	5-3/16	1.90
818-045F	4-1/2	3-5/8	1-1/2	5-5/8	2.00
818-050F	5	3-15/16	15/16	6-5/16	2.98
818-060F	6	4-3/8	1-1/8	7-1/2	4.43
818-080F	8	4-1/2	1-1/4	9-5/8	8.73
818-100F	10	6-15/16	1-11/16	11-15/16	15.93
818-120F	12	8-1/16	1-13/16	14-1/8	24.66
818-140F	14	9-5/16	2-5/16	15-1/2	34.65
818-160F	16	10-11/16	2-11/16	17-11/16	50.85
818-180F	18	12-1/16	3-1/16	19-7/8	71.78
818-200F	20	13-1/2	3-1/2	22-1/16	119.89
818-240F	24	16-1/4	4-1/4	26-7/16	170.96

45° ELBOW

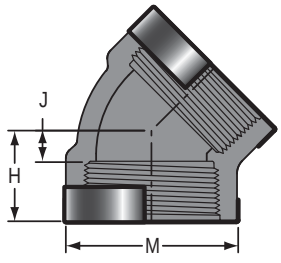
Fipt x Fipt



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
819-002	1/4	25/32	3/16	27/32	.03
819-003	3/8	13/16	3/16	1	.04
819-005	1/2	31/32	5/16	1-3/16	.07
819-007	3/4	1-3/32	13/32	1-3/8	.11
819-010	1	1-7/32	7/32	1-11/16	.14
819-012	1-1/4	1-7/16	7/16	2-3/16	.24
819-015	1-1/2	1-1/2	15/32	2-1/2	.31
819-020	2	1-23/32	21/32	3	.46
819-025	2-1/2	2-17/32	31/32	3-1/2	1.14
819-030	3	2-23/32	1	4-9/32	1.78
819-040	4	3-1/4	1-7/32	5-1/4	2.71

SPECIAL REINFORCED 45° ELBOW

SR Fipt x SR Fipt



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
819-005SR	1/2	1	5/16	1-3/16	.09
819-007SR	3/4	1-1/8	13/32	1-3/8	.10
819-010SR	1	1-1/4	13/32	1-23/32	.17

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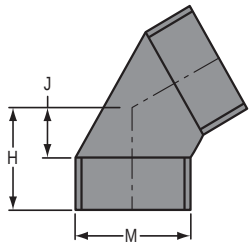
60° ELBOW

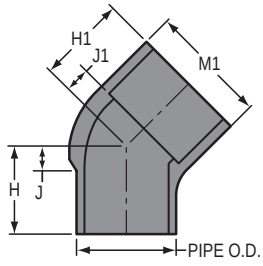
Socket x Socket



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
824-005F	1/2	1-5/8	5/8	1-1/8	.13
824-007F	3/4	1-11/16	11/16	1-3/8	.18
824-010F	1	2	3/4	1-11/16	.33
824-012F	1-1/4	2-1/2	1	2-1/16	.68
824-015F	1-1/2	2-5/8	1-1/8	1-3/8	.74
824-020F	2	3	1-1/4	2-13/16	.93
824-025F	2-1/2	3-9/16	1-9/16	3-7/16	.73
824-030F	3	4	1-3/4	4-1/8	2.53
824-040F	4	4-5/16	2-1/16	5-3/16	4.05
824-050F	5	5-3/8	2-3/8	6-5/16	7.08
824-060F	6	6-1/8	2-7/8	7-1/2	9.30
824-080F	8	7-3/4	3-1/2	9-5/8	18.81
824-100F	10	9-11/16	4-7/16	11-15/16	33.04
824-120F	12	11-5/16	5-1/16	14-1/8	31.51
824-140F	14	12-15/16	5-15/16	15-1/2	42.89
824-160F	16	14-13/16	6-13/16	17-11/16	108.07
824-180F	18	16-3/4	7-3/4	19-7/8	95.71
824-200F	20	23-11/16	13-11/16	22-1/16	239.76
824-240F	24	28-11/16	16-11/16	26-7/16	348.00

45° STREET ELBOW

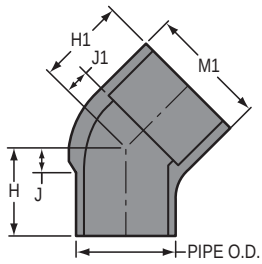
Spigot x Socket



Part Number	Size	H	H1	J	J1	M1	Approx. Wt. (Lbs.)
827-005	1/2	1-9/32	1-5/16	11/32	7/16	1-3/16	.06
827-007	3/4	1-1/2	1-1/2	7/16	1/2	1-13/32	.10
827-010	1	1-25/32	1-1/2	19/32	3/8	1-3/4	.15
827-012	1-1/4	2	1-23/32	5/8	15/32	2-3/32	.22
827-015	1-1/2	2-1/32	2-1/8	19/32	25/32	2-11/32	.30
827-020	2	2-5/16	2-11/32	11/16	3/8	2-27/32	.44
827-025	2-1/2	3-11/16	2-9/16	1-11/16	13/16	3-1/2	1.09
827-030	3	3-1/4	2-13/16	1-3/16	29/32	4-5/32	1.22
827-040	4	3-13/16	3-13/16	1-9/32	1-9/16	5-1/4	2.15
827-060	6	5-3/32	4-25/32	2-1/16	2-1/16	7-19/32	5.70
827-080	8	6-5/8	5-31/32	2-19/32	1-3/4	9-3/4	10.53

45° STREET ELBOW (continued)

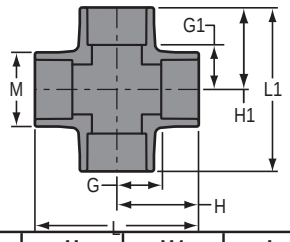
Spigot x Socket



Part Number	Size	H	H1	J	J1	M1	Approx. Wt. (Lbs.)
827-100	10	10-21/32	8-3/16	2-19/32	5-5/16	12-3/16	25.62
827-120	12	13-1/4	9-11/16	6-3/8	3-3/32	14-13/32	45.44
827-140F	14	11-9/16	11-9/16	4-9/16	4-9/16	15-1/2	61.04
827-160F	16	18-5/16	13-5/16	9-5/16	5-5/16	17-11/16	78.40
827-180F	18	20-1/2	15	10-1/2	6	19-7/8	114.32
827-200F	20	22-3/4	16-3/4	11-3/4	6-3/4	22-1/16	156.53
827-240F	24	27-3/16	20-3/16	14-3/16	8-3/16	26-7/16	261.19

CROSS

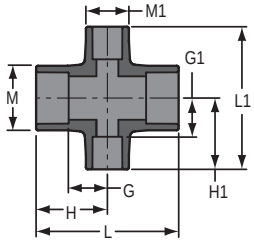
Socket x Socket x Socket x Socket



Part Number	Size	G	G1	H	H1	L	L1	M	Approx. Wt. (Lbs.)
820-002	1/4	13/32	13/32	1-1/32	1-1/32	2-1/16	2-1/16	27/32	.05
820-005	1/2	9/16	9/16	1-15/32	1-15/32	2-15/16	2-15/16	1-3/16	.13
820-007	3/4	5/8	5/8	1-5/8	1-5/8	3-9/32	3-9/32	1-13/32	.22
820-010	1	31/32	31/32	2-3/32	2-3/32	4-7/32	4-7/32	1-23/32	.39
820-012	1-1/4	1-3/32	1-3/32	2-3/8	2-3/8	4-3/4	4-3/4	2-1/8	.63
820-015	1-1/2	1-1/4	1-1/4	2-5/8	2-5/8	5-1/4	5-1/4	2-3/8	.80
820-020	2	1-1/2	1-1/2	3	3	6	6	3	1.34
820-025	2-1/2	1-11/16	1-11/16	3-15/32	3-15/32	6-29/32	6-29/32	3-17/32	2.02
820-030	3	2-3/32	2-3/32	3-31/32	3-31/32	7-15/16	7-15/16	4-11/32	3.30
820-040	4	2-5/8	2-5/8	4-7/8	4-7/8	9-3/4	9-3/4	5-11/32	5.31
820-050F	5	5-1/2	5-1/2	8-1/2	8-1/2	17	17	6-5/16	14.69
820-060F	6	6-1/4	6-1/4	9-1/2	9-1/2	19	19	7-1/2	16.19
820-080F	8	7-5/8	7-5/8	11-7/8	11-7/8	23-3/4	23-3/4	9-5/8	28.22
820-100F	10	9	9	14-1/4	14-1/4	28-1/2	28-1/2	11-15/16	49.78
820-120F	12	11-1/4	11-1/4	17-1/2	17-1/2	35	35	14-1/8	80.83
820-140F	14	12-1/4	12-1/4	19-1/4	19-1/4	38-1/2	38-1/2	15-1/2	108.89
820-160F	16	13	13	21	21	42	42	17-11/16	156.80
820-180F	18	13-3/4	13-3/4	22-3/4	22-3/4	45-1/2	45-1/2	19-7/8	215.35
820-200F	20	16-3/8	16-3/8	26-3/8	26-3/8	52-3/4	52-3/4	22-1/16	300.00
820-240F	24	20-1/4	20-1/4	32-1/4	32-1/4	64-1/2	64-1/2	26-7/16	527.13

REDUCING CROSS

Socket x Socket x Socket x Socket

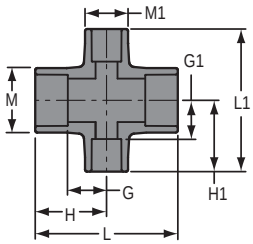


Part Number	Size	G	G1	H	H1	L	L1	M	M1	Approx. Wt. (Lbs.)
820-130[1]	1x1x1/2x1/2	1	1-7/16	2-1/8	2-3/8	4-7/32	4-3/4	1-23/32	1-23/32	.56
820-131	1x1x1/2x3/4	23/32	5/8	1-5/8	1-5/8	3-1/4	3-1/4	1-7/8	1-1/2	.30
820-166[1]	1-1/4x1-1/4x1/2x1/2	1-3/32	1-3/32	2-3/8	2-11/16	4-3/4	5-3/16	3-3/32	3-3/32	.82
820-167	1-1/4x1-1/4x3/4x3/4	1-1/16	23/32	2-1/16	1-31/32	4-3/32	3-31/32	2-1/16	1-13/32	.33
820-209[1]	1-1/2x1-1/2x1/2x1/2	1-7/32	1-7/32	2-21/32	2-31/32	5-1/4	5-15/16	2-3/8	2-3/8	1.18
820-210	1-1/2x1-1/2x3/4x3/4	11/16	1-5/32	2-3/32	2-3/16	4-3/16	4-11/32	2-3/8	1-13/32	.40
820-211[1]	1-1/2x1-1/2x1x1	1-3/4	1-3/4	2-5/8	3	5-5/16	5-7/8	1-3/8	1-3/8	1.12
820-248	2x2x3/4x3/4	11/16	1-7/16	2-7/32	2-7/16	4-13/32	4-7/8	2-29/32	1-13/32	.55
820-249[1]	2x2x1x1	1-1/2	2-9/32	3	3-7/16	6	6-27/32	3	3	1.81
820-251	2x2x1-1/2x1-1/2	1-1/2	2	3	3-3/8	6	6-3/4	2-7/8	2-7/8	1.72
820-289	2-1/2x2-1/2x1x1	7/8	1-23/32	2-11/16	2-7/8	5-11/32	5-3/4	3-1/2	1-3/4	.97
820-291[1]	2-1/2x2-1/2x1-1/2x1-1/2	1-11/16	2-15/32	3-7/16	3-27/32	6-7/8	7-23/32	3-9/16	3-9/16	2.83
820-336[1]	3x3x1-1/4x1-1/4	2-3/32	3-1/8	3-31/32	4-3/8	7-29/32	8-3/4	4-3/16	4-3/16	4.23
820-338[1]	3x3x2x2	2-3/32	2-27/32	3-31/32	4-5/16	7-29/32	8-5/8	4-13/32	4-5/16	4.23
820-420[1]	4x4x2x2	2-5/8	3-13/16	4-7/8	5-11/32	9-3/4	10-21/32	5-11/32	5-7/32	7.33
820-420F	4x4x2x2	3-7/8	4-1/4	6-1/8	6	12-1/4	12	5-3/16	2-13/16	5.26
820-422[1]	4x4x3x3	2-5/8	3-7/16	4-7/8	5-5/16	9-3/4	10-5/8	5-1/4	5-1/4	6.94
820-528F	6x6x2x2	4-5/8	5-3/16	7-7/8	6-15/16	15-3/4	13-7/8	7-1/2	2-13/16	7.19
820-530F	6x6x3x3	4-3/4	5-3/4	8	8	16	16	7-1/2	4-1/8	12.60
820-532F	6x6x4x4	5-1/4	6-3/4	8-1/2	9	17	18	7-1/2	5-3/16	14.54
820-533F	6x6x5x5	5-3/4	6-1/2	9	9-1/2	18	19	7-1/2	6-5/16	14.00
820-578F	8x8x2x2	4-11/16	6-1/8	8-15/16	7-7/8	17-7/8	15-3/4	9-5/8	2-13/16	11.30
820-580F	8x8x3x3	5-3/16	6-11/16	9-7/16	8-15/16	18-7/8	17-7/8	9-5/8	4-1/8	12.93
820-582F	8x8x4x4	5-3/4	7-11/16	10	9-15/16	20	19-7/8	9-5/8	5-3/16	21.87
820-585F	8x8x6x6	6-3/4	8-1/16	11	11-5/16	22	22-5/8	9-5/8	7-1/2	30.04
820-621F	10x10x2x2	4-3/8	7-1/8	9-5/8	8-7/8	19-1/4	17-11/16	11-15/16	2-13/16	19.45
820-622F	10x10x2-1/2x2-1/2	5-1/4	7-5/16	10-1/2	9-5/16	21	18-5/8	11-15/16	3-7/16	20.00
820-623F	10x10x3x3	4-7/8	7-11/16	10-1/8	9-15/16	20-1/4	19-13/16	11-15/16	4-1/8	21.42
820-624F	10x10x4x4	5-3/8	8-11/16	10-5/8	10-15/16	21-1/4	21-13/16	11-15/16	5-3/16	24.17
820-626F	10x10x6x6	5-7/8	9-1/16	11-1/8	12-5/16	22-1/4	24-5/8	11-15/16	7-1/2	40.79
820-628F	10x10x8x8	8-1/4	9-15/16	13-1/2	14-3/16	27	28-3/8	11-15/16	9-5/8	65.94
820-661F	12x12x2x2	4-3/4	8	11	9-3/4	22	19-1/2	14-1/8	2-13/16	29.32
820-663F	12x12x3x3	5-1/4	8-9/16	11-1/2	10-13/16	23	21-5/8	14-1/8	4-1/8	33.02
820-664F	12x12x4x4	5-3/4	9-9/16	12	11-13/16	24	23-5/8	14-1/8	5-3/16	33.78
820-666F	12x12x6x6	7-1/4	9-15/16	13-1/4	13-3/16	26-1/2	26-3/8	14-1/8	7-1/2	57.20
820-668F	12x12x8x8	8	10-13/16	14-1/4	15-1/16	28-1/2	30-1/8	14-1/8	9-5/8	66.12
820-670F	12x12x10x10	10-1/4	10-13/16	16-1/2	16-1/16	33	32-1/8	14-1/8	11-15/16	105.91
820-691F	14x14x2x2	5-3/16	8-9/16	12-3/16	10-5/16	24-3/8	20-5/8	15-1/2	2-13/16	38.49
820-693F	14x14x3x3	5-3/4	9-1/8	12-3/4	11-3/8	25-1/2	22-3/4	15-1/2	4-1/8	49.59

[1] Outlet sized with bushing

REDUCING CROSS (continued)

Socket x Socket x Socket x Socket



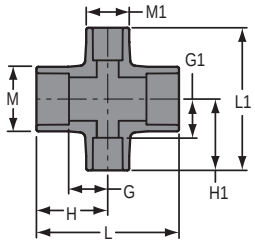
Part Number PVC	Size	G	G1	H	H1	L	L1	M	M1	Approx. Wt. (Lbs.) PVC
820-694F	14x14x4x4	6-1/2	10-1/8	13-1/2	12-3/8	27	24-3/4	15-1/2	5-3/16	43.51
820-696F	14x14x6x6	8-1/4	10-1/2	15-1/4	13-3/4	30-1/2	27-1/2	15-1/2	7-1/2	78.72
820-698F	14x14x8x8	9-1/4	11-3/8	16-1/4	15-5/8	32-1/2	31-1/4	15-1/2	9-5/8	75.53
820-700F	14x14x10x10	10-1/8	11-3/8	17-1/8	16-5/8	34-1/4	33-1/4	15-1/2	11-15/16	95.66
820-702F	14x14x12x12	11	11-3/8	18	17-5/8	36	35-1/4	15-1/2	14-1/8	98.88
820-751F	16x16x2x2	5-7/8	9-1/2	13-7/8	11-1/4	27-3/4	22-1/2	17-11/16	2-13/16	55.64
820-752F	16x16x2-1/2x2-1/2	6	9-11/16	14	11-11/16	28	23-3/8	17-11/16	3-7/16	56.18
820-753F	16x16x3x3	6-5/16	10-1/16	14-5/16	12-5/16	28-5/8	24-5/8	17-11/16	4-1/8	58.72
820-754F	16x16x4x4	6-1/8	11-1/16	14-1/8	13-5/16	28-1/4	26-5/8	17-11/16	5-3/16	61.59
820-756F	16x16x6x6	8-5/8	11-7/16	16-5/8	14-11/16	33-1/4	29-3/8	17-11/16	7-1/2	93.13
820-758F	16x16x8x8	9-5/8	12-5/16	17-5/8	16-9/16	35-1/4	33-1/8	17-11/16	9-5/8	91.88
820-760F	16x16x10x10	10-5/8	12-5/16	18-5/8	17-9/16	37-1/4	35-1/8	17-11/16	11-15/16	104.59
820-762F	16x16x12x12	11-5/8	12-5/16	19-5/8	18-9/16	39-1/4	37-1/8	17-11/16	14-1/8	141.98
820-764F	16x16x14x14	12-3/4	12-11/16	20-3/4	19-11/16	41-1/2	39-3/8	17-11/16	15-1/2	129.00
820-784F	18x18x4x4	6-7/8	11-15/16	15-7/8	14-3/16	31-3/4	28-3/8	19-7/8	5-3/16	92.66
820-786F	18x18x6x6	8-1/2	12-5/16	17-1/2	15-9/16	35	31-1/8	19-7/8	7-1/2	118.63
820-788F	18x18x8x8	9-1/2	13-3/16	18-1/2	17-7/16	37	34-7/8	19-7/8	9-5/8	128.81
820-790F	18x18x10x10	10-1/2	13-3/16	19-1/2	18-7/16	39	36-7/8	19-7/8	11-15/16	130.87
820-792F	18x18x12x12	11-1/2	13-3/16	20-1/2	19-7/16	41	38-7/8	19-7/8	14-1/8	147.26
820-794F	18x18x14x14	12-3/4	13-9/16	21-3/4	20-9/16	43-1/2	41-1/8	19-11/16	15-1/2	164.25
820-796F	18x18x16x16	13-1/2	14-3/16	22-1/2	22-3/16	45	44-3/8	19-11/16	17-11/16	189.00
820-814F	20x20x4x4	7-11/16	12-7/8	17-11/16	15-1/8	35-3/8	30-1/4	22-1/16	5-3/16	115.50
820-816F	20x20x6x6	8-7/8	13-1/4	18-7/8	16-1/2	37-3/4	33	22-1/16	7-1/2	133.63
820-818F	20x20x8x8	9-7/8	14-1/8	19-7/8	18-3/8	39-3/4	36-3/4	22-1/16	9-5/8	153.30
820-820F	20x20x10x10	10-7/8	14-1/8	20-7/8	19-3/8	41-3/4	38-3/4	22-1/16	11-15/16	168.43
820-822F	20x20x12x12	11-7/8	14-1/8	21-7/8	20-3/8	43-3/4	40-3/4	22-1/16	14-1/8	186.06
820-824F	20x20x14x14	12-7/8	14-1/2	22-7/8	21-1/2	45-3/4	43	22-1/16	15-1/2	204.39
820-826F	20x20x16x16	14	15-1/8	24	23-1/8	48	46-1/4	22-1/16	17-11/16	230.10
820-828F	20x20x18x18	15	15	25	24	50	48	22-1/16	19-7/8	258.28
820-904F	24x24x4x4	9	14-11/16	21	16-15/16	42	33-7/8	26-7/16	5-3/16	192.22
820-906F	24x24x6x6	9-1/4	15-1/16	21-1/4	18-5/16	42-1/2	36-5/8	26-7/16	7-1/2	211.33
820-908F	24x24x8x8	10-1/4	15-15/16	22-1/4	20-3/16	44-1/2	40-3/8	26-7/16	9-5/8	221.76
820-910F	24x24x10x10	11-1/4	15-15/16	23-1/4	21-3/16	46-1/2	42-3/8	26-7/16	11-15/16	249.91
820-912F	24x24x12x12	12-1/4	15-15/16	24-1/4	22-3/16	48-1/2	44-3/8	26-7/16	14-1/8	279.88

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

REDUCING CROSS (continued)

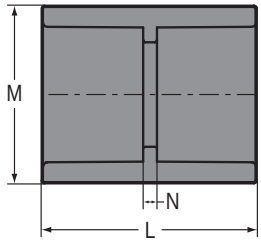
Socket x Socket x Socket x Socket



Part Number PVC	Size	G	G1	H	H1	L	L1	M	M1	Approx. Wt. (Lbs.) PVC
820-914F	24x24x14x14	13-1/4	16-5/16	25-1/4	23-5/16	50-1/2	46-5/8	26-1/16	15-1/2	301.05
820-916F	24x24x16x16	14-3/4	16-15/16	26-3/4	24-15/16	53-1/2	49-7/8	26-7/16	17-11/16	329.60
820-918F	24x24x18x18	15-3/4	16-13/16	27-3/4	25-13/16	55-1/2	51-5/8	26-7/16	19-7/8	360.62
820-920F	24x24x20x20	16-3/4	18-3/16	28-3/4	28-3/16	57-1/2	56-3/8	26-7/16	22-1/16	398.22

COUPLING

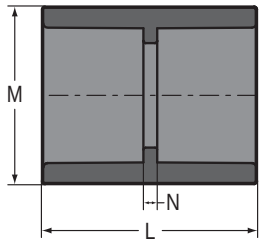
Socket x Socket



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
829-002	1/4	1-3/8	27/32	1/16	.02
829-003	3/8	1-5/8	1	3/32	.03
829-005	1/2	1-7/8	1-3/16	1/8	.05
829-007	3/4	2-1/8	1-13/32	1/8	.07
829-010	1	2-15/32	1-23/32	3/16	.13
829-012	1-1/4	2-23/32	2-7/32	7/32	.22
829-015	1-1/2	2-7/8	2-11/32	3/32	.21
829-020	2	3-1/8	2-27/32	3/32	.31
829-025	2-1/2	3-11/16	3-15/32	1/4	.55
829-030	3	3-31/32	4-5/32	3/16	.79
829-040	4	4-3/4	5-5/16	1/4	1.34
829-050	5	5-21/32	6-3/8	3/16	2.06
829-050F	5	7-3/8	6-5/16	1-3/8	2.60
829-060	6	6-3/8	7-9/16	1/4	3.39
829-080	8	8-1/4	9-23/32	9/32	6.55
829-100	10	10-9/32	12-1/16	1/4	11.76
829-100F	10	12-1/2	11-15/16	2	13.94
829-120	12	12-3/8	14-7/32	3/8	19.39
829-120F	12	14-1/4	14-1/8	1-3/4	21.92

COUPLING (continued)

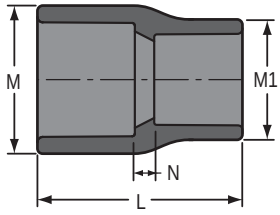
Socket x Socket



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
829-140	14	14-7/16	15-5/8	3/8	29.70
829-140F	14	16-1/4	15-1/2	2-1/4	29.70
829-160F	16	18-5/8	17-11/16	2-5/8	42.38
829-180F	18	22	19-7/8	4	63.81
829-200F	20	23-3/4	22-1/16	3-3/4	86.58
829-240F	24	29-1/4	26-7/16	5-1/4	147.22

REDUCER COUPLING

Socket x Socket



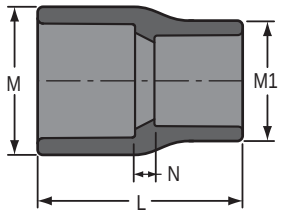
Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
829-101	3/4x1/2	2-3/32	1-13/32	1-5/32	7/32	.07
829-130	1x1/2	2-3/16	1-23/32	1-13/32	7/32	.11
829-131	1x3/4	2-13/32	1-23/32	1-13/32	1/4	.10
829-166	1-1/4x1/2	2-9/16	2-3/32	1-5/32	7/16	.13
829-167	1-1/4x3/4	2-19/32	2-3/32	1-5/8	11/32	.17
829-168	1-1/4x1	2-11/16	2-1/8	1-3/4	5/16	.17
829-209	1-1/2x1/2	2-27/32	2-11/32	1-3/16	19/32	.19
829-210	1-1/2x3/4	2-7/8	2-3/8	1-13/32	17/32	.21
829-211	1-1/2x1	2-7/8	2-11/32	1-15/16	3/8	.26
829-212	1-1/2x1-1/4	2-13/16	2-13/32	2-1/8	5/32	.22
829-247	2x1/2	3-3/32	2-7/8	1-5/32	11/16	.30
829-248	2x3/4	3-7/32	2-7/8	1-13/32	23/32	.30
829-249	2x1	3-1/8	2-7/8	1-23/32	17/32	.33
829-250	2x1-1/4	3-11/32	2-7/8	2-3/32	19/32	.31
829-251	2x1-1/2	3-7/32	2-27/32	2-11/32	1/4	.30
829-290[1]	2-1/2x1-1/4	3-29/32	3-1/2	2-3/8	15/16	.57
829-291	2-1/2x1-1/2	3-3/4	3-1/2	2-3/8	19/32	.51
829-292	2-1/2x2	3-21/32	3-15/32	2-27/32	13/32	.48
829-335	3x1	4-7/16	4-1/8	2-7/8	1-7/16	1.00
829-336[1]	3x1-1/4	4-7/32	4-5/32	2-29/32	1-1/16	.94
829-337	3x1-1/2	3-1/2	4-3/16	2-3/8	7/32	.69

[1] Outlet sized with bushing

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

REDUCER COUPLING (continued)

Socket x Socket

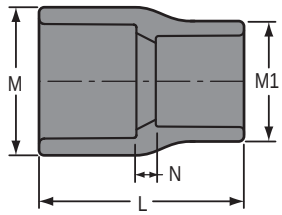


Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
829-338	3x2	4	4-5/32	2-7/8	5/8	.74
829-339	3x2-1/2	4-1/8	4-5/32	3-15/32	1/2	.77
829-339F	3x2-1/2	6	4-1/16	3-7/16	1-3/4	.90
829-416[1]	4x3/4	5-23/32	5-9/32	2-29/32	2-13/32	1.67
829-417[1]	4x1	5-15/16	5-9/32	2-29/32	2-17/32	1.71
829-419[1]	4x1-1/2	5-23/32	5-9/32	2-29/32	2-1/16	1.59
829-420	4x2	5-1/2	5-9/32	2-7/8	1-25/32	1.45
829-421	4x2-1/2	4-9/16	5-3/16	3-1/2	17/32	1.25
829-422	4x3	4-19/32	5-1/4	4-3/16	15/32	1.25
829-460F	4-1/2x4	6-15/16	5-5/8	5-3/16	2-3/16	1.97
829-487F	5x2-1/2	8-1/8	6-1/4	5-3/16	3-5/8	2.64
829-488F	5x3	7-15/16	6-1/4	5-3/16	2-15/16	3.08
829-490F	5x4	7-3/4	6-1/4	5-3/16	2-1/2	2.09
829-491F	5x4-1/2	8-3/16	6-1/4	5-5/8	2-15/16	3.22
829-528[1]	6x2	7-1/16	7-1/2	5	2-9/16	4.37
829-529[1]	6x2-1/2	6-31/32	7-19/32	5-9/32	2-3/16	4.30
829-530[1]	6x3	7-1/8	7-9/16	5-9/32	2-1/4	4.07
829-530F	6x3	9-3/16	7-5/16	5-3/16	3-15/16	3.85
829-532	6x4	6-5/8	7-5/8	5-5/16	1-7/16	3.28
829-533F	6x5	8-15/16	7-3/8	6-5/16	2-11/16	3.57
829-534F	6x4-1/2	9-5/16	7-5/16	5-5/8	3-9/16	3.22
829-579F	8x2-1/2	15	9-1/2	5-3/16	8-3/4	8.33
829-580F	8x3	14-15/16	9-1/2	5-3/16	8-11/16	7.95
829-582	8x4	8-29/32	9-23/32	5-1/4	2-15/32	6.31
829-582F	8x4	14-5/8	9-1/2	5-3/16	8-1/8	8.17
829-583F	8x5	14-11/16	9-1/2	6-5/16	7-7/16	7.78
829-585	8x6	8	9-3/4	7-1/2	1	6.16
829-621F	10x2	21-1/2	11-3/4	5-3/16	14-3/4	16.16
829-623F	10x3	21-7/16	11-3/4	5-3/16	14-3/16	15.77
829-624F	10x4	21-1/8	11-3/4	5-3/16	13-5/8	17.13
829-625F	10x5	21-3/16	11-3/4	6-5/16	12-15/16	16.38
829-626	10x6	10-19/32	12-1/32	7-19/32	2-17/32	11.08
829-626F	10x6	17-1/2	11-3/4	7-1/2	9	14.72
829-628	10x8	10-5/8	12	9-3/4	1-17/32	11.26
829-628F	10x8	13-1/4	11-3/4	9-5/8	3-3/4	11.42
829-664F	12x4	28-3/8	13-15/16	5-3/16	19-7/8	31.70
829-665F	12x5	28-7/16	13-15/16	6-5/16	19-3/16	27.25
829-666F	12x6	24-3/4	13-15/16	7-1/2	15-1/4	26.96
829-668	12x8	12-5/8	14-7/32	9-3/4	2-7/16	17.92
829-668F	12x8	20-1/2	13-15/16	9-5/8	10	24.34

[1] Outlet sized with bushing

REDUCER COUPLING (continued)

Socket x Socket



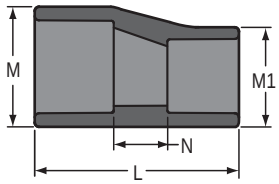
Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
829-670F	12x10	16-3/8	13-15/16	11-15/16	4-7/8	18.92
829-694F	14x4	30-1/8	15-3/16	5-3/16	20-7/8	31.56
829-696F	14x6	26-1/2	15-3/16	7-1/2	16-1/4	29.65
829-698F	14x8	22-1/4	15-3/16	9-5/8	11	29.32
829-700F	14x10	18-1/8	15-3/16	11-15/16	5-7/8	22.90
829-702F	14x12	17-3/4	15-3/8	14-1/8	4-1/2	27.40
829-754F	16x4	38	17-3/8	5-3/16	27-3/4	50.97
829-756F	16x6	34-3/8	17-3/8	7-1/2	23-1/8	61.19
829-758F	16x8	30-1/8	17-3/8	9-5/8	17-7/8	52.73
829-760F	16x10	26	17-3/8	11-15/16	12-3/4	43.70
829-762F	16x12	20-1/4	17-3/8	14-1/8	6	34.25
829-764F	16x14	21-1/4	17-1/2	15-1/2	5-1/4	42.89
829-784F	18x4	47-3/8	19-11/16	5-3/16	36-1/8	104.77
829-786F	18x6	43-3/4	19-11/16	7-1/2	31-1/2	91.02
829-788F	18x8	39-1/2	19-11/16	9-5/8	26-1/4	86.65
829-790F	18x10	35-3/8	19-11/16	11-15/16	21-1/8	91.28
829-792F	18x12	29-5/8	19-11/16	14-1/8	14-3/8	73.27
829-794F	18x14	29-5/8	19-11/16	15-1/2	13-5/8	73.72
829-796F	18x16	23	19-11/16	17-11/16	6	55.09
829-814F	20x4	58	21-7/8	5-3/16	45-3/4	152.76
829-816F	20x6	54-1/2	21-7/8	7-1/2	41-1/8	136.93
829-818F	20x8	50-1/8	21-7/8	9 -5/8	35-7/8	144.26
829-820F	20x10	46	21-7/8	11-15/16	30-3/4	139.44
829-822F	20x12	40-1/4	21-7/8	14- 1/8	24	119.04
829-824F	20x14	40-1/4	21-7/8	15-1/2	23-1/4	118.17
829-826F	20x16	33-5/8	21-7/8	17-11/16	15-5/8	100.87
829-828F	20x18	25-1/2	21-7/8	19-7/8	6-1/2	79.76
829-904F	24x4	71-1/2	26-1/16	5-3/16	57-1/4	231.96
829-906F	24x6	67-7/8	26-1/16	7-1/2	52-5/8	229.16
829-908F	24x8	63-5/8	26-1/16	9-5/8	47-3/8	223.42
829-910F	24x10	59-1/2	26-1/16	11-15/16	42-1/4	218.80
829-912F	24x12	53-3/4	26-1/16	14-1/8	35-1/2	192.82
829-914F	24x14	53-3/4	26-1/16	15-1/2	34-3/4	225.10
829-916F	24x16	47-1/8	26-1/16	17-11/16	27-1/8	171.54
829-918F	24x18	39	26-1/16	19-7/8	18	147.20
829-920F	24x20	30-5/8	26-1/16	22-1/16	8-5/8	116.56

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

ECCENTRIC REDUCER COUPLING

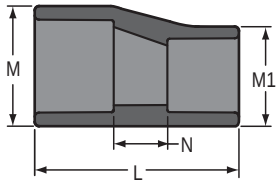
Socket x Socket



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
829-101FE	3/4x1/2	3-3/8	1-3/8	1-1/8	1-5/8	.09
829-130FE	1x1/2	3-1/2	1-5/8	1-1/8	1-1/2	.12
829-131FE	1x3/4	4	1-5/8	1-3/8	1-3/4	.13
829-168FE	1-1/4x1	5-1/8	2	1-11/16	2-3/8	.24
829-209FE	1-1/2x1/2	7-1/8	2-1/4	1-1/8	4-7/8	.30
829-210FE	1-1/2x3/4	7-5/8	2-1/4	1-3/8	5-1/8	.33
829-211FE	1-1/2x1	5-3/8	2-1/4	1-11/16	2-5/8	.33
829-212FE	1-1/2x1-1/4	4-9/16	2-5/16	2-1/16	1-9/16	.37
829-249FE	2x1	6-1/8	2-3/4	1-11/16	3-1/8	.39
829-250FE	2x1-1/4	6-1/8	2-3/4	2-1/16	2-7/8	.37
829-251FE	2x1-1/2	6	2-3/4	2-5/16	2-3/4	.46
829-289FE	2-1/2x1	10-5/8	3-5/16	1-11/16	7-3/8	.88
829-290FE	2-1/2x1-1/4	10-5/8	3-5/16	2-1/16	7-1/8	.91
829-291FE	2-1/2x1-1/2	10-1/2	3-5/16	2-5/16	7	.91
829-292FE	2-1/2x2	6-7/8	3-5/16	2-13/16	3-1/8	.68
829-335FE	3x1	11-7/8	3-15/16	1-11/16	8-3/8	1.17
829-336FE	3x1-1/4	11-7/8	3-15/16	2-1/16	8-1/8	1.10
829-337FE	3x1-1/2	11-3/4	3-15/16	2-5/16	8	1.28
829-338FE	3x2	5-7/8	4-5/32	2-7/8	2-15/32	1.01
829-339FE	3x2-1/2	7-1/4	4-1/16	3-7/16	3	1.12
829-417FE	4x1	17	5-1/8	1-11/16	13-1/2	2.75
829-418FE	4x1-1/4	17	5-1/8	2-1/16	13-1/4	2.65
829-419FE	4x1-1/2	16-7/8	5-1/8	2-5/16	13-1/8	3.10
829-420FE	4x2	13-1/4	5-1/8	2-13/16	9-1/4	2.83
829-421FE	4x2-1/2	12-3/8	5-1/8	3-7/16	8-1/8	2.42
829-422FE	4x3	8-3/4	5-1/8	4-1/8	4-1/4	1.70
829-528FE	6x2	20-7/8	7-5/16	2-13/16	15-7/8	5.86
829-529FE	6x2-1/2	20	7-5/16	3-7/16	14-3/4	5.77
829-530FE	6x3	16-3/8	7-5/16	4-1/8	10-7/8	6.24
829-532FE	6x4	11-1/8	7-5/16	5-3/16	5-5/8	3.39
829-533FE	6x5	11-1/4	7-3/8	6-5/16	5	4.32
829-578FE	8x2	30-5/8	9-1/2	2-13/16	24-5/8	11.96
829-580FE	8x3	26-1/8	9-1/2	4-1/8	19-5/8	11.13
829-582FE	8x4	20-7/8	9-1/2	5-3/16	14-3/8	11.54
829-583FE	8x5	21	9-1/2	6-5/16	13-3/4	10.77
829-585FE	8x6	15-1/4	9-1/2	7-1/2	7-3/4	8.41
829-624FE	10x4	32	11-3/4	5-3/16	24-1/2	25.43
829-625FE	10x5	32-1/8	11-3/4	6-5/16	23-7/8	22.82
829-626FE	10x6	26-3/8	11-3/4	7-1/2	17-7/8	22.31
829-628FE	10x8	18-1/16	11-3/4	9-5/8	8-9/16	14.78
829-664FE	12x4	43-1/2	13-15/16	5-3/16	35	42.54

ECCENTRIC REDUCER COUPLING (continued)

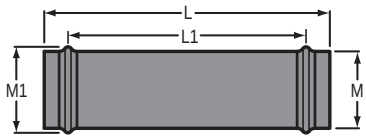
Socket x Socket



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
829-665FE	12x5	43-5/8	13-15/16	6-5/16	34-3/8	41.73
829-666FE	12x6	37-7/8	13-15/16	7-1/2	28-3/8	35.33
829-668FE	12x8	29-9/16	13-15/16	9-5/8	19-1/16	32.68
829-670FE	12x10	20-5/8	13-15/16	11-15/16	9-1/8	24.89
829-696FE	14x6	41-3/8	15-3/16	7-1/2	31-1/8	56.76
829-698FE	14x8	33-1/16	15-3/16	9-5/8	21-13/16	53.73
829-700FE	14x10	24-1/8	15-3/16	11-15/16	11-7/8	51.42
829-702FE	14x12	20-1/8	15-3/8	14-1/8	6-7/8	30.11
829-756FE	16x6	54-1/4	17-1/2	7-1/2	43	113.09
829-758FE	16x8	45-15/16	17-1/2	9-5/8	33-11/16	69.73
829-760FE	16x10	37	17-1/2	11-15/16	23-3/4	59.25
829-762FE	16x12	33	17-1/2	14-1/8	18-3/4	63.26`
829-764FE	16x14	24-5/8	17-1/2	15-1/2	9-5/8	45.99
829-786FE	18x6	69-1/4	19-11/16	7-1/2	57	145.31
829-788FE	18x8	60-15/16	19-11/16	9-5/8	47-11/16	140.24
829-790FE	18x10	52	19-11/16	11-15/16	37-3/4	109.43
829-792FE	18x12	48	19-11/16	14-1/8	32-3/4	118.07
829-794FE	18x14	39-5/8	19-11/16	15-1/2	23-5/8	97.05
829-796FE	18x16	28-5/8	19-11/16	17-11/16	11-5/8	66.94

FABRICATED REPAIR COUPLING

Gasket x Gasket



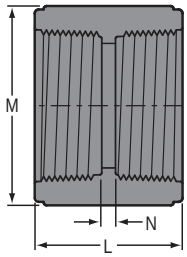
Part Number	Size	L	L1	M	M1	Approx. Wt. (Lbs.)
828-020F	2	9-1/8	11-3/4	4-1/8	4-5/8	.79
828-030F	3	15-1/2	11-3/4	4-1/8	4-5/8	3.26
828-040F	4	19-1/2	15	5-3/16	5-3/4	5.82
828-060F	6	23	16	7-1/2	8-1/8	12.61
828-080F	8	26-5/8	19-11/16	9-5/8	10-3/8	21.39
828-100F	10	28	21-1/4	10-3/4	12-1/4	32.98
828-120F	12	30	22-1/2	14-1/8	16-1/8	46.66
828-140F	14	19	11-1/2	15-1/2	16-3/8	39.40
828-160F	16	21-5/8	12-3/8	17-11/16	18-3/4	57.20

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

COUPLING

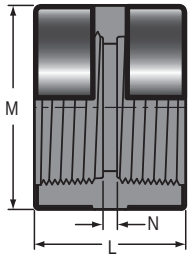
Fipt x Fipt



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
830-002	1/4	1-11/32	13/16	5/32	.03
830-003	3/8	1-15/32	1	9/32	.04
830-005	1/2	1-5/8	1-9/32	1/4	.07
830-007	3/4	1-11/16	1-5/8	3/32	.09
830-010	1	2-3/32	1-15/16	1/8	.15
830-012	1-1/4	2-3/16	2-9/32	3/16	.21
830-015	1-1/2	2-7/32	2-5/8	3/16	.28
830-020	2	2-7/32	3	7/32	.33
830-025	2-1/2	3-5/16	3-9/16	1/8	.68
830-030	3	3-15/32	4-3/8	21/32	1.12
830-040	4	3-21/32	5-9/16	3/16	1.52
830-060F	6	3-3/4	7-3/16	3/4	1.65
830-080F	8	4-1/2	9-3/8	1-1/16	2.84

SPECIAL REINFORCED COUPLING

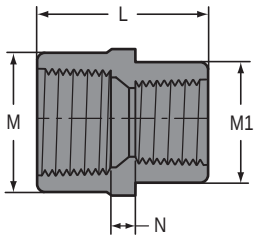
SR Fipt x SR Fipt



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
830-005SR	1/2	1-19/32	1-7/32	9/32	.06
830-007SR	3/4	1-5/8	1-3/8	1/8	.07
830-010SR	1	1-15/16	1-23/32	1/16	.13
830-012SR	1-1/4	2-1/16	2-1/16	5/16	.17
830-015SR	1-1/2	2-5/32	2-7/16	11/32	.27
830-020SR	2	2-1/4	3-1/32	1/4	.37

REDUCER COUPLING

Fipt x Fipt

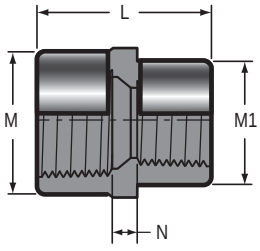


Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
830-072[1]	1/2x1/4	1-31/32	1-5/16	1-5/32	5/8	.07
830-073[1]	1/2x3/8	1-29/32	1-7/32	1-7/32	19/32	.06
830-101	3/4x1/2	1-23/32	1-3/8	1-7/32	7/32	.07
830-211[1]	1-1/2x1	2-7/8	2-11/32	2-11/32	1-1/32	.27

[1] Outlet sized with bushing

SPECIAL REINFORCED REDUCER COUPLING

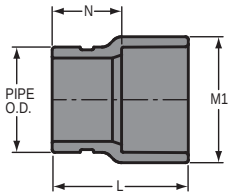
SR Fipt x SR Fipt



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
830-101SR	3/4x1/2	1-23/32	1-3/8	1-7/32	7/32	.08
830-130SR	1x1/2	2-1/4	1-23/32	1-7/32	21/32	.16
830-131SR	1x3/4	2-13/32	1-23/32	1-3/8	23/32	.14
830-210SR	1-1/2x3/4	2-7/8	2-7/16	1-3/8	1-7/32	.28
830-211SR	1-1/2x1	2-15/16	2-7/16	1-11/16	7/16	.35
830-212SR	1-1/2x1-1/4	2-7/8	2-1/2	2-3/32	15/16	.33
830-249SR	2x1	3-3/16	3	1-23/32	1-17/32	.46
830-251SR	2x1-1/2	3-1/4	3	2-7/16	1-7/16	.43

GROOVED COUPLING ADAPTER

Groove x Socket



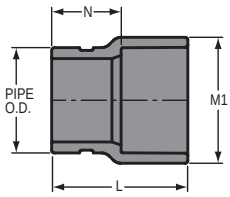
Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
833-012	1-1/4	2-13/16	2-1/16	1-9/16	.18
833-015	1-1/2	2-29/32	2-11/32	1-1/2	.19
833-020	2	3-1/16	2-7/8	1-9/16	.29
833-025	2-1/2	3-3/8	3-1/2	1-5/8	.49
833-030	3	3-9/16	4-3/16	1-11/16	.68

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

GROOVED COUPLING ADAPTER

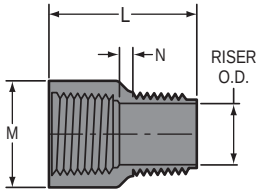
Groove x Socket **(continued)**



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
833-040	4	4-17/32	5-1/4	2-9/32	1.28
833-050F	5	7	6-5/16	4	2.14
833-060	6	5-5/16	7-9/16	2-5/16	2.78
833-080F	8	8-3/16	9-5/8	3-15/16	6.19
833-100F	10	9-7/8	11-15/16	4-5/8	10.62
833-120F	12	10-7/8	14-1/8	4-5/8	21.92

RISER EXTENSION

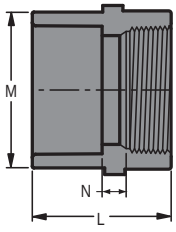
Fipt x Mipt



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
834-007	3/4	2-13/16	1-7/16	1-15/32	.11

FEMALE ADAPTER

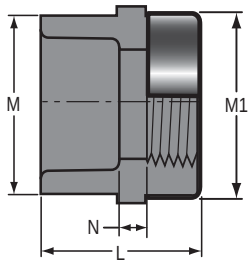
Socket x Fipt



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
835-002	1/4	1-11/32	27/32	3/32	.02
835-003	3/8	1-15/32	1	3/32	.04
835-005	1/2	1-3/4	1-5/32	3/32	.05
835-007	3/4	1-27/32	1-13/32	3/32	.07
835-010	1	2-1/8	1-23/32	3/32	.11
835-012	1-1/4	2-5/16	2-3/32	3/32	.16
835-015	1-1/2	2-1/2	2-11/32	3/32	.20
835-020	2	3	3-1/32	1/4	.41
835-025	2-1/2	3-1/4	3-9/16	7/32	.63
835-030	3	3-15/32	4-1/4	3/16	.74
835-040	4	3-31/32	5-7/32	1/4	1.19
835-060	6	4-31/32	7-21/32	5/16	3.12
835-080	8	6-5/32	9-23/32	1/4	5.19
835-080F	8	8-9/16	9-5/8	2-9/16	6.19
835-100F	10	10-1/4	11-15/16	3	10.88
835-120F	12	11-1/8	14-1/8	2-5/8	16.56

SPECIAL REINFORCED FEMALE ADAPTER

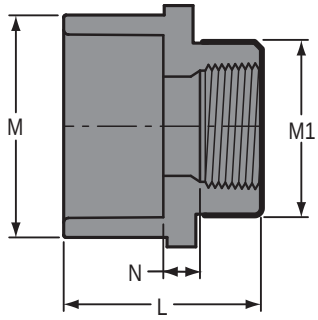
Socket x SR Fipt



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
835-002SR	1/4	1-13/32	27/32	27/32	3/32	.03
835-003SR	3/8	1-15/32	15/16	31/32	3/32	.04
835-005SR	1/2	1-3/4	1-5/32	1-3/16	3/16	.06
835-007SR	3/4	1-7/8	1-13/32	1-3/8	3/32	.08
835-010SR	1	2-1/8	1-11/16	1-23/32	3/32	.13
835-012SR	1-1/4	2-5/16	2-3/32	2-1/16	3/32	.18
835-015SR	1-1/2	2-7/16	2-13/32	2-7/16	7/32	.26
835-020SR	2	2-23/32	3	3-1/32	1/4	.44
835-025SR	2-1/2	3-1/4	3-9/16	3-9/16	11/32	.68
835-030SR	3	3-1/2	4-1/4	4-9/32	7/32	.96
835-040SR	4	3-31/32	5-7/32	5-1/4	7/32	1.29
835-060SR	6	4-31/32	7-5/8	7-21/32	1/4	3.17

REDUCING FEMALE ADAPTER

Socket x SR Fipt



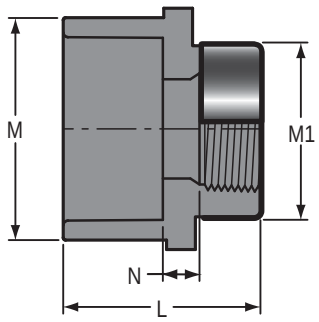
Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
835-098	3/4x1/4	1-15/16	1-13/32	27/32	---	.06

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

SPECIAL REINFORCED REDUCING FEMALE ADAPTER

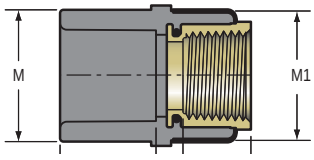
Socket x SR Fipt



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
835-074SR	1/2x3/4	1-3/4	1-3/16	1-3/8	7/32	.07
835-098SR	3/4x1/4	1-15/16	1-13/32	27/32	13/32	.06
835-101SR	3/4x1/2	1-7/8	1-3/8	1-3/16	3/16	.07
835-102SR	3/4x1	2-1/16	1-7/16	1-11/16	7/32	.12
835-130SR	1x1/2	2	1-11/16	1-3/16	7/32	.10
835-131SR	1x3/4	2-3/32	1-3/4	1-3/8	1/4	.12

TRANSITION FEMALE ADAPTER

Socket x Brass Fipt
Dimensions Also Applicable to 835-XXX**SS**

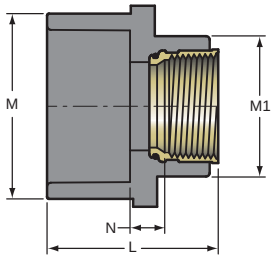


Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
835-005BR	1/2	1-25/32	1-5/32	1-7/32	5/8	.11
835-007BR	3/4	2	1-13/32	1-3/8	3/8	.23
835-010BR	1	2-7/32	1-3/4	1-11/16	13/32	.25
835-012BR	1-1/4	2-3/8	2-3/32	2-1/16	3/8	.35
835-015BR	1-1/2	2-17/32	2-13/32	2-7/16	13/32	.46
835-020BR	2	2-25/32	2-7/8	3-3/16	7/16	1.03

Not intended to convey or dispense water for human consumption through drinking or cooking

TRANSITION REDUCING FEMALE ADAPTER

Socket x Brass Fipt

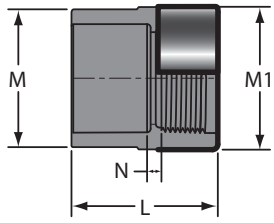


Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
835-101BR	3/4x1/2	2-1/32	1-7/16	1-3/16	15/32	.17

Not intended to convey or dispense water for human consumption through drinking or cooking

ENCAPSULATED SPECIAL REINFORCED FEMALE ADAPTER

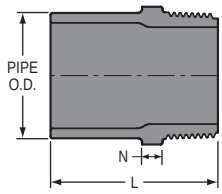
Socket x ESR Fipt



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
835-002ESR	1/4	1-1/2	27/32	29/32	3/32	.04
835-003ESR	3/8	1-17/32	15/16	1-1/32	3/16	.04
835-005ESR	1/2	1-7/8	1-3/16	1-9/32	9/32	.08
835-007ESR	3/4	2	1-13/32	1-15/32	1/8	.10
835-010ESR	1	2-1/4	1-3/4	1-13/16	1/8	.13
835-012ESR	1-1/4	2-7/16	2-1/8	2-5/32	3/16	.21
835-015ESR	1-1/2	2-9/16	2-13/32	2-1/2	1/4	.29
835-020ESR	2	2-27/32	3	3-3/32	13/32	.46

MALE ADAPTER

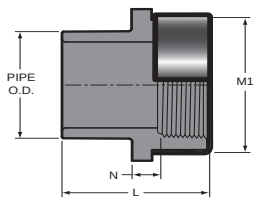
Spigot x Mipt



Part Number	Size	L	N	Approx. Wt. (Lbs.)
861-005	1/2	1-13/16	5/16	.03
861-007	3/4	1-31/32	5/16	.05
861-010	1	2-3/32	1/4	.07
861-131	1x3/4	2	1/4	.07
861-012	1-1/4	2-9/32	9/32	.11
861-015	1-1/2	2-5/8	11/32	.15
861-020	2	2-13/16	13/32	.23

SPECIAL REINFORCED SPIGOT FEMALE ADAPTER

Spigot x SR Fipt



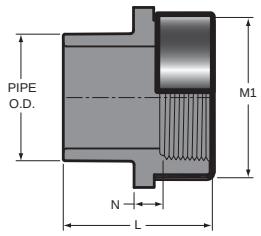
Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
878-005SR	1/2	1-3/4	1-3/16	5/32	.05
878-007SR	3/4	1-15/16	1-3/8	3/16	.07
878-010SR	1	2-1/4	1-11/16	7/32	.13
878-012SR	1-1/4	2-15/32	2-1/16	1/4	.18
878-015SR	1-1/2	2-21/32	2-7/16	13/32	.25

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

SPECIAL REINFORCED SPIGOT FEMALE ADAPTER (continued)

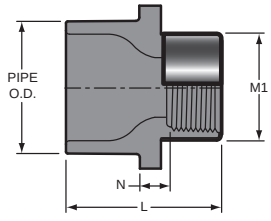
Spigot x SR Fipt



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
878-020SR	2	2-13/16	3	3/8	.39
878-030SR	3	3-27/32	4-9/32	17/32	.91
878-040SR	4	4-3/8	5-1/4	5/8	1.36

SPECIAL REINFORCED REDUCING SPIGOT FEMALE ADAPTER

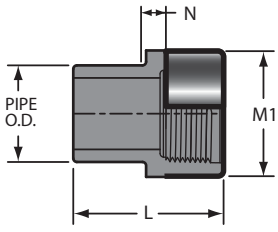
Spigot x SR Fipt



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
878-072SR	1/2x1/4	1-13/32	27/32	3/16	.03
878-098SR	3/4x1/4	1-27/32	27/32	7/32	.05
878-128SR	1x1/4	2-3/8	27/32	21/32	.08

ENCAPSULATED SPECIAL REINFORCED SPIGOT FEMALE ADAPTER

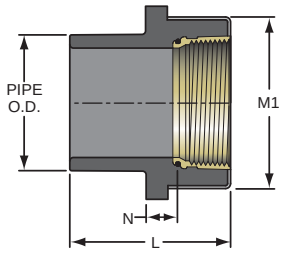
Spigot x ESR Fipt



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
878-005ESR	1/2	1-7/8	1-9/32	3/16	.06
878-007ESR	3/4	2-1/16	1-15/32	3/8	.09
878-010ESR	1	2-3/8	1-25/32	11/32	.14
878-012ESR	1-1/4	2-19/32	2-5/32	5/16	.20
878-015ESR	1-1/2	2-3/4	2-1/2	13/32	.27
878-020ESR	2	2-15/16	3-3/32	5/16	.41

TRANSITION FEMALE ADAPTER

Spigot x Brass Fipt

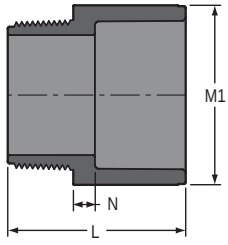


Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
878-005BR	1/2	1-15/16	1-3/16	1/2	.11
878-007BR	3/4	2-5/32	1-3/8	17/32	.14
878-010BR	1	2-9/32	1-23/32	13/32	.22

Not intended to convey or dispense water for human consumption through drinking or cooking

MALE ADAPTER

Mipt x Socket



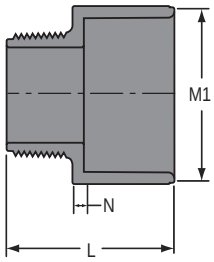
Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
836-005	1/2	1-23/32	1-5/32	3/16	.04
836-007	3/4	1-27/32	1-7/16	7/32	.06
836-010	1	2-5/32	1-23/32	7/32	.10
836-012	1-1/4	2-1/4	2-1/8	1/32	.15
836-015	1-1/2	2-9/16	2-13/32	9/32	.19
836-020	2	2-7/8	2-7/8	5/16	.28
836-025	2-1/2	3-21/32	3-17/32	11/32	.52
836-030	3	3-7/8	4-1/4	3/8	.74
836-040	4	4-13/32	5-5/16	13/32	1.15
836-050F	5	6	6-5/16	1-5/8	2.07
836-060	6	5-1/2	7-9/16	19/32	2.89
836-080F	8	8-3/16	9-5/8	2-3/16	6.00
836-100F	10	10-3/8	11-15/16	3-3/16	10.95
836-120F	12	11-1/8	14-1/8	2-3/4	16.44

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

REDUCING MALE ADAPTER

Mipt x Socket

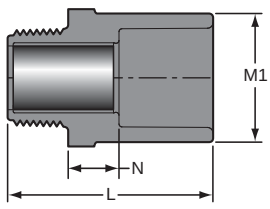


Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
836-053	3/8x1/2	1-11/16	1-3/16	1/4	.04
836-102	3/4x1	2-9/32	1-3/4	17/32	.10
836-131	1x3/4	2-1/16	1-13/32	1/4	.07
836-251[1]	2x1-1/2	3-3/32	2-29/32	19/32	.43

[1] Outlet sized with bushing

REINFORCED MALE ADAPTER

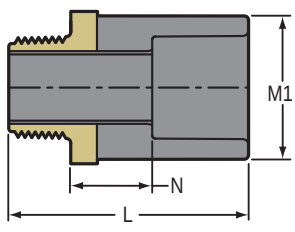
Rmipt x Socket



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
836-005R	1/2	2-3/32	1-5/32	9/16	.05
836-007R	3/4	2-1/4	1-3/8	9/16	.08
836-010R	1	2-21/32	1-23/32	11/16	.15

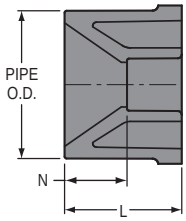
TRANSITION MALE ADAPTER

Brass Mipt x Socket



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
836-005BR	1/2	2-13/32	1-9/32	27/32	.19
836-007BR	3/4	2-17/32	1-13/32	13/16	.26
836-010BR	1	2-15/16	1-23/32	29/32	.43
836-012BR	1-1/4	3-1/8	2-3/32	31/32	.66
836-015BR	1-1/2	3-9/32	2-11/32	1	.79
836-020BR	2	3-7/16	2-27/32	31/32	.99

REDUCER BUSHING
Flush Style
Spigot x Socket



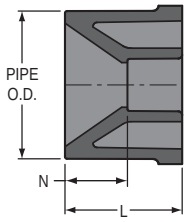
Part Number	Size	L	N	Approx. Wt. (Lbs.)
837-052	3/8x1/4	31/32	5/16	.01
837-072	1/2x1/4	1-3/32	13/32	.02
837-073	1/2x3/8	1-1/8	11/32	.01
837-101	3/4x1/2	1-7/32	11/32	.03
837-129[1]	1x3/8	1-5/8	27/32	.09
837-130	1x1/2	1-11/32	11/32	.06
837-131	1x3/4	1-11/32	5/16	.04
837-166	1-1/4x1/2	1-1/2	5/8	.12
837-167	1-1/4x3/4	1-1/2	1/2	.10
837-168	1-1/4x1	1-19/32	15/32	.06
837-209	1-1/2x1/2	1-23/32	13/16	.15
837-210	1-1/2x3/4	1-5/8	5/8	.16
837-211	1-1/2x1	1-9/16	13/32	.13
837-212	1-1/2x1-1/4	1-9/16	9/32	.07
837-247	2x1/2	1-25/32	7/8	.24
837-248	2x3/4	1-29/32	21/32	.26
837-249	2x1	1-25/32	5/8	.24
837-250	2x1-1/4	1-11/16	7/16	.20
837-251	2x1-1/2	1-3/4	11/32	.15
837-287[1]	2-1/2X1/2	2-1/2	1-1/2	.54
837-288[1]	2-1/2x3/4	2-17/32	1-15/32	.55
837-289	2-1/2x1	2-1/32	29/32	.37
837-290	2-1/2x1-1/4	2-5/32	13/32	.43
837-291	2-1/2x1-1/2	2-5/32	3/4	.37
837-292	2-1/2x2	2-1/16	17/32	.23
837-334[1]	3x3/4	2-9/16	1-17/32	.69
837-335	3x1	2-9/32	1-1/8	.69
837-336	3x1-1/4	2-1/4	1	.63
837-337	3x1-1/2	2-9/32	7/8	.59
837-338	3x2	2-7/32	23/32	.47
837-339	3x2-1/2	2-5/16	1/4	.37

[1] Outlet sized with bushing

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

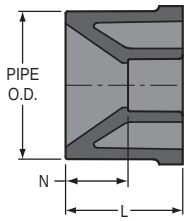
REDUCER BUSHING (continued)
Flush Style
Spigot x Socket



Part Number	Size	L	N	Approx. Wt. (Lbs.)
837-415[1]	4x1/2	3-1/16	2-5/32	1.31
837-416[1]	4x3/4	2-27/32	1-27/32	1.25
837-417[1]	4x1	3-1/16	1-1/8	1.31
837-418[1]	4x1-1/4	3-9/16	1-11/16	1.33
837-419	4x1-1/2	2-19/32	1-3/16	1.02
837-420	4x2	2-21/32	1-1/8	1.01
837-421	4x2-1/2	2-17/32	25/32	1.00
837-422	4x3	2-9/16	11/16	.84
837-490	5x4	2-31/32	23/32	1.29
837-490F	5x4	3	3/4	1.41
837-524[1]	6x3/4	4-1/2	3-1/2	3.45
837-525[1]	6x1	3-31/32	2-13/16	3.13
837-526[1]	6x1-1/4	3-25/32	2-17/32	3.07
837-527[1]	6x1-1/2	3-3/4	2-11/32	3.01
837-528	6x2	3-17/32	2-1/32	2.83
837-529[1]	6x2-1/2	3-29/32	2-5/32	3.29
837-530	6x3	3-17/32	2-1/8	2.84
837-532	6x4	3-9/16	1-1/4	2.71
837-533F	6x5	3	3/8	1.76
837-534	6x5	3-1/2	7/8	1.93
837-578[1]	8x2	4-15/16	3-3/8	8.64
837-580[1]	8x3	5-1/8	3-1/4	8.68
837-582	8x4	4-1/2	2-1/4	5.53
837-585	8x6	4-3/8	1-3/8	5.05
837-624[1]	10x4	6	3-3/4	10.56
837-626	10x6	5-5/16	2-5/16	9.32
837-628	10x8	5-11/32	1-5/16	9.04
837-666	12x6	7	4	15.51
837-666F	12x6	6-7/16	3-3/8	15.31
837-668	12x8	6-7/8	2-7/16	10.13
837-670	12x10	6-11/32	1-9/32	11.74

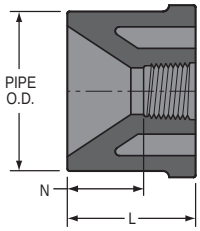
[1] Outlet sized with bushing

REDUCER BUSHING (continued)
Flush Style
Spigot x Socket



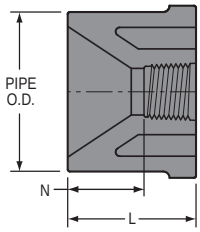
Part Number	Size	L	N	Approx. Wt. (Lbs.)
837-670F	12x10	6	1	11.04
837-696F	14x6	7-3/4	4-3/4	27.16
837-698F	14x8	7-1/2	3-7/16	32.31
837-700F	14x10	7-7/16	2-7/16	22.30
837-702F	14x12	7	1	9.36
837-756F	16x6	8-3/4	5-3/4	44.23
837-758F	16x8	8-1/2	4-7/16	46.90
837-760F	16x10	8-7/16	3-7/16	39.12
837-762F	16x12	8	2	28.08
837-764F	16x14	8	1	18.37
837-788F	18x8	9-1/2	5-7/16	70.33
837-790F	18x10	9-7/16	4-7/16	65.60
837-792F	18x12	9	3	51.82
837-794F	18x14	9	2	40.70
837-796F	18x16	9	1	32.00
837-818F	20x8	10-1/2	6-7/16	125.96
837-820F	20x10	10-7/16	5-7/16	94.18
837-822F	20x12	10	4	83.14
837-824F	20x14	10	3	73.74
837-826F	20x16	10	2	55.07
837-828F	20x18	10	1	30.35
837-910F	24x10	12-7/16	7-7/16	173.68
837-912F	24x12	12	6	159.41
837-914F	24x14	12	5	80.35
837-916F	24x16	12	4	134.57
837-918F	24x18	12	3	112.54
837-920F	24x20	12	2	79.50

REDUCER BUSHING
Flush Style
Spigot x Fipt



Part Number	Size	L	N	Approx. Wt. (Lbs.)
838-052	3/8x1/4	31/32	3/8	.01
838-071	1/2x1/8	1	9/16	.02
838-072	1/2x1/4	1	7/8	.02
838-073	1/2x3/8	1-3/32	17/32	.02
838-098	3/4x1/4	1-7/32	5/8	.04
838-099	3/4x3/8	1-1/4	21/32	.04
838-101	3/4x1/2	1-1/4	7/16	.03
838-127	1x1/8	1-13/32	29/32	.07
838-128	1x1/4	1-13/32	25/32	.07
838-129	1x3/8	1-13/32	19/32	.07
838-130	1x1/2	1-5/32	21/32	.06
838-131	1x3/4	1-3/8	21/32	.05
838-166	1-1/4x1/2	1-17/32	3/4	.12
838-167	1-1/4x3/4	1-7/16	23/32	.09
838-168	1-1/4x1	1-17/32	5/8	.07
838-206	1-1/2x1/8	1-11/16	1-1/4	.15
838-207	1-1/2x1/4	1-9/16	1-3/16	.13
838-209	1-1/2x1/2	1-11/16	31/32	.17
838-210	1-1/2x3/4	1-9/16	27/32	.13
838-211	1-1/2x1	1-23/32	13/16	.14
838-212	1-1/2x1-1/4	1-1/2	9/16	.07
838-247	2x1/2	1-29/32	1-5/32	.25
838-248	2x3/4	1-7/8	1-5/32	.26
838-249	2x1	1-29/32	1	.25

REDUCER BUSHING (continued)
Flush Style
Spigot x Fipt

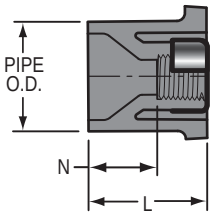


Part Number	Size	L	N	Approx. Wt. (Lbs.)
838-250	2x1-1/4	1-19/32	21/32	.18
838-251	2x1-1/2	1-9/16	5/8	.14
838-287	2-1/2x1/2	2-3/8	1-21/32	.41
838-288	2-1/2x3/4	2-7/16	1-5/8	.45
838-289	2-1/2x1	2-5/32	1-1/4	.42
838-290	2-1/2x1-1/4	2-13/32	1-3/8	.42
838-291	2-1/2x1-1/2	2-3/8	1-13/32	.47
838-292	2-1/2x2	2-1/16	1-1/16	.25
838-334	3x3/4	2-9/32	1-1/2	.57
838-335	3x1	2-9/32	1-11/32	.58
838-336	3x1-1/4	2-1/4	1-3/8	.57
838-337	3x1-1/2	2-1/4	1-5/8	.59
838-338	3x2	2-3/16	1-7/32	.63
838-339	3x2-1/2	2-3/8	3/4	.46
838-419	4x1-1/2	3-3/16	2-5/16	1.44
838-420	4x2	2-11/16	1-21/32	1.10
838-421	4x2-1/2	2-21/32	1-1/16	1.08
838-422	4x3	2-5/8	1	.86
838-528	6x2	3-17/32	2-1/2	2.92
838-530	6x3	3-17/32	2-1/8	2.98
838-532	6x4	3-17/32	2-1/32	2.54

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

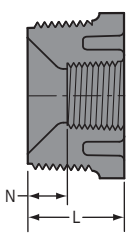
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

SPECIAL REINFORCED REDUCER BUSHING
Flush Style
Spigot x SR Fipt



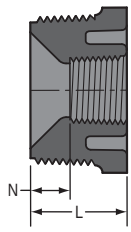
Part Number	Size	L	N	Approx. Wt. (Lbs.)
838-128SR	1x1/4	1-13/32	25/32	.08
838-166SR	1-1/4X1/2	1-7/16	3/4	.11
838-207SR	1-1/2x1/4	1-9/16	1	.13
838-209SR	1-1/2x1/2	1-23/32	31/32	.16
838-210SR	1-1/2x3/4	1-9/16	13/16	.14
838-247SR	2x1/2	1-29/32	1-5/32	.25
838-248SR	2x3/4	1-29/32	1-5/32	.26
838-249SR	2x1	1-7/8	31/32	.26
838-334SR	3x3/4	2-9/32	1-17/32	.58
838-335SR	3x1	2-9/32	1-11/32	.59
838-336SR	3x1-1/4	2-1/4	1-5/16	.57
838-337SR	3x1-1/2	2-1/4	1-3/8	.58
838-528SR	6x2	3-1/2	2-9/16	2.81
838-530SR	6x3	3-17/32	2-1/8	2.94
838-532SR	6x4	3-1/2	1-15/16	2.59

REDUCER T.T. BUSHING
Flush Style
Mipt x Fipt



Part Number	Size	L	N	Approx. Wt. (Lbs.)
839-041	1/4x1/8	23/32	11/32	.01
839-052	3/8x1/4	13/16	1/8	.01

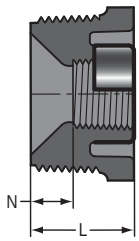
REDUCER T.T. BUSHING (continued)
Flush Style
Mipt x Fipt



Part Number	Size	L	N	Approx. Wt. (Lbs.)
839-072	1/2x1/4	29/32	9/32	.02
839-073	1/2x3/8	15/16	11/32	.01
839-098	3/4x1/4	1-1/32	7/16	.03
839-099	3/4x3/8	1-1/32	7/16	.03
839-101	3/4x1/2	15/16	3/16	.02
839-128	1x1/4	1-1/8	17/32	.05
839-129	1x3/8	1-7/32	5/8	.05
839-130	1x1/2	1-1/16	5/16	.04
839-131	1x3/4	1-1/8	13/32	.04
839-166	1-1/4x1/2	1-5/16	9/16	.10
839-167	1-1/4x3/4	1-9/32	9/16	.08
839-168	1-1/4x1	1-3/16	9/32	.06
839-209	1-1/2x1/2	1-11/32	19/32	.12
839-210	1-1/2x3/4	1-11/32	19/32	.12
839-211	1-1/2x1	1-11/32	13/32	.10
839-212	1-1/2x1-1/4	1-11/32	13/32	.06
839-247	2x1/2	1-3/8	21/32	.17
839-248	2x3/4	1-3/8	5/8	.17
839-249	2x1	1-3/8	15/32	.18
839-250	2x1-1/4	1-3/8	7/16	.16
839-251	2x1-1/2	1-3/8	13/32	.12
839-292	2-1/2x2	1-29/32	7/8	.22
839-337	3x1-1/2	1-15/16	29/32	.49
839-338	3x2	1-15/16	15/16	.45
839-339	3x2-1/2	1-15/16	5/8	.37
839-420	4x2	2-1/8	1-1/8	.83
839-422	4x3	2-1/8	1/2	.71
839-532	6x4	3-17/32	1-13/16	2.53

SPECIAL REINFORCED REDUCER T.T. BUSHING

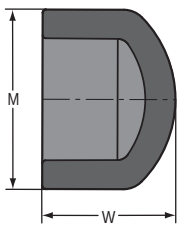
Mipt x SR Fipt



Part Number	Size	L	N	Approx. Wt. (Lbs.)
839-128SR	1x1/4	1-1/8	17/32	.05
839-209SR	1-1/2x1/2	1-11/32	19/32	.13
839-210SR	1-1/2x3/4	1-11/32	19/32	.12
839-247SR	2x1/2	1-3/8	21/32	.18
839-248SR	2x3/4	1-3/8	5/8	.18
839-249SR	2x1	1-3/8	15/32	.19
839-420SR	4x2	2-1/8	1-1/8	.88

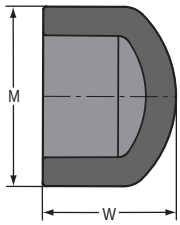
CAP

Socket



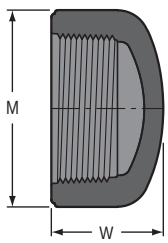
Part Number	Size	M	W	Approx. Wt. (Lbs.)
847-002	1/4	13/16	15/16	.01
847-003	3/8	31/32	1-1/8	.02
847-005	1/2	1-3/16	1-7/32	.03
847-007	3/4	1-3/8	1-13/32	.05
847-010	1	1-23/32	1-5/8	.08
847-012	1-1/4	2-3/32	1-27/32	.16
847-015	1-1/2	2-11/32	2	.16
847-020	2	2-7/8	2-1/4	.25
847-025	2-1/2	3-17/32	2-5/8	.48
847-030	3	4-5/32	3-1/32	.70
847-040	4	5-1/4	3-19/32	1.17
847-050F	5	6-1/2	4-7/16	1.83
847-060	6	7-1/2	4-7/8	3.17

CAP
Socket **(continued)**



Part Number	Size	M	W	Approx. Wt. (Lbs.)
PVC				PVC
847-080	8	9-23/32	6-3/8	6.10
847-100F	10	12-1/4	5-15/16	8.26
847-120F	12	14-1/4	7-1/8	11.30
847-140F	14	15-1/2	7-3/8	14.65
847-160F	16	17-7/8	9	23.44
847-180F	18	19-15/16	9-1/4	28.88
847-200F	20	22	14-1/4	49.05
847-240F	24	26-3/8	17-1/4	89.38

CAP
Fipt

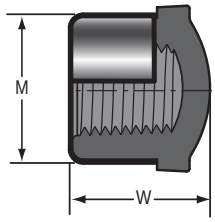


Part Number	Size	M	W	Approx. Wt. (Lbs.)
848-002	1/4	29/32	15/16	.02
848-003	3/8	31/32	29/32	.02
848-005	1/2	1-3/16	1-1/16	.04
848-007	3/4	1-3/32	1-7/32	.04
848-010	1	1-27/32	1-7/16	.10
848-012	1-1/4	2-7/32	1-17/32	.15
848-015	1-1/2	2-17/32	1-5/8	.19
848-020	2	3-5/32	1-25/32	.29
848-025	2-1/2	3-5/8	2-7/16	.54
848-030	3	4-3/8	2-7/16	.90
848-040	4	5-7/16	3-1/16	1.32
848-060F	6	7-3/16	4-3/8	2.07
848-080F	8	9-3/8	4-3/8	3.62
848-100F	10	11-5/8	5-3/4	7.44
848-120F	12	13-13/16	6-3/16	10.77

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

SPECIAL REINFORCED CAP

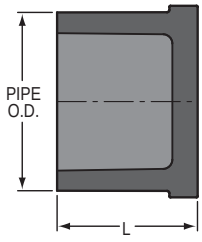
SR Fipt



Part Number	Size	M	W	Approx. Wt. (Lbs.)
848-002SR	1/4	27/32	27/32	.02
848-003SR	3/8	31/32	29/32	.03
848-005SR	1/2	1-3/16	1-1/8	.04
848-007SR	3/4	1-3/8	1-3/32	.05
848-030SR	3	4-9/32	2-7/16	.79

PLUG

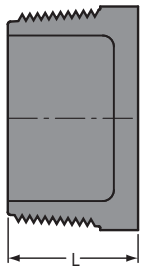
Spigot



Part Number	Size	L	Approx. Wt. (Lbs.)
849-005	1/2	1-1/8	.02
849-007	3/4	1-1/4	.03
849-010	1	1-3/8	.06
849-012	1-1/4	1-17/32	.10
849-015	1-1/2	1-11/16	.13
849-020	2	1-7/8	.21
849-025F	2-1/2	5-3/8	1.10
849-030F	3	5-5/8	1.63
849-040F	4	6-1/2	2.76
849-060F	6	9	6.71
849-080F	8	12	12.73
849-100F	10	11-15/16	17.99
849-120F	12	14-1/8	26.34

PLUG

Mipt



Part Number	Size	L	Approx. Wt. (Lbs.)
850-002	1/4	23/32	.01
850-003	3/8	13/16	.01
850-005	1/2	13/16	.02
850-007	3/4	7/8	.02
850-010	1	1-1/4	.06
850-012	1-1/4	1-9/32	.08
850-015	1-1/2	1-11/32	.10
850-020	2	1-3/8	.15
850-025	2-1/2	1-25/32	.30
850-030	3	1-7/8	.43
850-040	4	2-3/32	.77
850-060	6	2-3/32	1.73
850-080F	8	8-5/8	11.45
850-100F	10	8-7/16	12.91

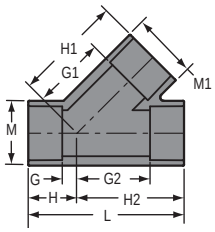
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

WYE

Socket x Socket x Socket

1/2" - 2" 235 psi @ 73°F
2-1/2" - 6" 150 psi @ 73°F
8" & Up & All Fab 100 psi @ 73°F



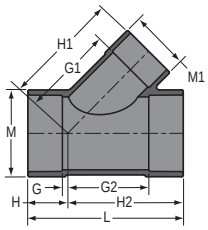
Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)
875-005	1/2	1/4	1-5/32	1-5/32	1-1/8	2-1/16	2-1/32	3-3/16	1-5/32	1-5/32	.12
875-007	3/4	5/16	1-3/8	1-3/8	1-5/16	2-3/8	2-3/8	3-23/32	1-3/8	1-3/8	.19
875-010	1	5/16	1-3/4	1-3/4	1-7/16	2-29/32	2-7/8	4-11/32	1-11/16	1-11/16	.31
875-012	1-1/4	13/32	2-5/32	2-5/32	1-21/32	3-13/32	3-13/32	5-3/32	2-1/16	2-1/16	.50
875-015	1-1/2	17/32	2-1/2	2-1/2	1-29/32	3-7/8	3-7/8	5-13/16	2-5/16	2-5/16	.70
875-020	2	5/8	3-7/32	3-7/32	2-5/32	4-7/8	4-7/8	6-7/8	2-7/8	2-7/8	1.20
875-025	2-1/2	27/32	3-31/32	3-31/32	2-19/32	5-23/32	5-23/32	8-5/16	3-1/2	3-1/2	2.00
875-030	3	31/32	4-3/4	4-25/32	2-27/32	6-5/8	6-21/32	9-1/2	4-3/16	4-3/16	3.02
875-040	4	1-1/4	6-1/32	6-1/32	3-1/2	8-9/32	8-9/32	11-25/32	5-1/4	5-1/4	5.10
875-050F	5	5-1/8	10-11/16	10-11/16	8-1/8	13-11/16	13-11/16	21-13/16	6-5/16	6-5/16	9.34
875-060	6	1-5/32	8-25/32	8-3/16	4-3/16	11-25/32	11-3/16	15-3/8	7-9/16	7-9/16	12.01
875-080	8	1-15/16	11-11/32	11-11/32	5-31/32	15-11/32	15-11/32	21-5/16	9-3/4	9-3/4	25.44
875-080F	8	5-1/16	15-7/8	13-11/16	9-5/16	20-1/8	17-15/16	27-1/4	9-5/8	9-5/8	39.76
875-100F	10	6-1/2	18-7/8	17-1/4	11-3/4	24-1/8	22-1/2	34-1/4	11-15/16	11-15/16	65.51
875-120F	12	7-1/8	21-13/16	19-7/8	13-3/8	28-1/16	26-1/8	39-1/2	14-1/8	14-1/8	109.85
875-140F	14	9-13/16	23-13/16	23-13/16	16-13/16	30-13/16	30-13/16	47-5/8	15-1/2	15-1/2	135.75
875-160F	16	10-1/8	26-1/8	26-1/8	18-1/8	34-1/8	34-1/8	52-1/4	17-11/16	17-11/16	183.59
875-180F	18	10	29-3/8	28	19	38-3/8	37	56	19-7/8	19-7/8	255.49
875-200F	20	11-5/8	31-5/8	31-5/8	21-5/8	41-5/8	41-5/8	63-1/4	22-1/16	22-1/16	399.60
875-240F	24	14-1/4	38-1/4	38-1/4	26-1/4	50-1/4	50-1/4	76-1/2	26-7/16	26-7/16	617.50

[1] Outlet sized with bushing

REDUCING WYE

Socket x Socket x Socket

1/2" - 2-1/2" 235 psi @ 73°F
3" - 6" 150 psi @ 73°F
8" & Up & All Fab 100 psi @ 73°F



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)
875-131[1]	1x1x3/4	1/4	2-7/32	1-27/32	1-3/8	2-31/32	2-31/32	4-11/32	1-11/16	1-11/16	.35
875-167[1]	1-1/4x1-1/4x3/4	3/8	2-3/4	2-1/4	1-5/8	3-3/4	3-1/2	5-1/8	2-1/16	2-1/16	.61
875-168[1]	1-1/4x1-1/4x1	3/8	2-5/8	2-1/4	1-5/8	3-3/4	3-1/2	5-1/8	2-1/16	2-1/16	.56
875-210[1]	1-1/2x1-1/2x3/4	1/2	3-1/2	2-9/16	1-7/8	4-1/2	3-15/16	5-13/16	2-11/32	2-11/32	.88
875-211[1]	1-1/2x1-1/2x1	1/2	3	2-9/16	1-7/8	4-5/32	3-15/16	5-13/16	2-11/32	2-11/32	.83
875-212[1]	1-1/2x1-1/2x1-1/4	1/2	3-1/4	2-9/16	1-7/8	4-1/2	3-15/16	5-13/16	2-11/32	2-11/32	.74
875-248[1]	2x2x3/4	5/8	4-5/32	3-7/32	2-5/32	5-5/32	4-7/8	6-7/8	2-7/8	2-7/8	1.46
875-250[1]	2x2x1-1/4	5/8	3-5/16	3-3/8	2-5/32	5	4-3/4	6-7/8	2-7/8	2-7/8	1.46
875-291[1]	2-1/2x2-1/2x1-1/2	1	6-1/4	4-9/16	3-1/16	7-5/8	6-5/8	9-11/16	4-3/16	4-3/16	4.34
875-292[1]	2-1/2x2-1/2x2	1/2	3-3/4	4-3/4	2-1/2	6-7/8	6-1/2	9-3/8	4-1/4	4-1/4	3.97
875-335[1]	3x3x1	11/16	5-7/8	4-7/32	2-9/16	6-15/16	6-1/8	8-23/32	4-3/16	4-3/16	3.27
875-336[1]	3x3x1-1/4	7/8	5-3/4	4-1/8	2-3/4	7	6	8-3/4	4-3/16	4-3/16	3.21
875-337[1]	3x3x1-1/2	2-5/8	5-1/2	4-1/4	2-5/8	6-7/8	6-1/8	8-3/4	4-3/16	4-3/16	3.14
875-338[1]	3x3x2	1	5-11/32	4-3/4	2-7/8	6-31/32	6-5/8	9-1/2	4-3/16	4-3/16	3.48
875-339[1]	3x3x2-1/2	7/8	4-1/8	4-21/32	2-3/4	6-3/4	6	8-3/4	4-3/16	4-3/16	2.97
875-419[1]	4x4x1-1/2	1	6-5/8	5-1/4	3-1/4	8-13/16	7-1/2	10-3/4	5-1/4	5-3/16	6.04
875-420	4x4x2	–7/8	5-5/32	4-11/16	1-3/8	6-11/16	6-15/16	8-5/16	5-9/32	2-29/32	2.78
875-421F	4x4x2-1/2	4-9/16	8-13/16	9-1/16	6-13/16	10-1/2	11-5/16	18-1/8	5-1/4	3-1/2	5.37
875-422	4x4x3	1/2	5-7/16	5-7/32	2-3/4	7-5/16	7-15/32	10-7/32	5-1/4	4-3/16	3.98
875-528[1]	6x6x2	1/16	8-13/16	6-9/16	3-1/16	10-5/16	9-9/16	12-5/8	7-9/16	5-7/16	9.78
875-528F	6x6x2	1-15/16	9-3/16	8-9/16	5-3/16	10-15/16	11-13/16	17	7-1/2	2-13/16	9.36
875-530[1]	6x6x3	-1/16	8-3/8	6-11/16	3	10-1/4	9-11/16	12-5/8	7-9/16	5-3/8	9.60
875-530F	6x6x3	2-15/16	10-5/16	9-9/16	6-3/16	12-9/16	12-13/16	19	7-1/2	4-1/8	13.92
875-532	6x6x4	31/32	6-9/16	5-11/16	3-15/16	8-27/32	8-23/32	12-21/32	7-9/16	5-7/16	8.61
875-578[1]	8x8x2	2	14-15/16	11-1/4	6	16-9/16	16-7/16	21-1/4	9-11/16	9-11/16	34.05
875-578F	8x8x2	7/8	10-1/2	9-1/2	5-1/8	12-1/4	13-3/4	18-7/8	9-5/8	2-13/16	17.93
875-579F	8x8x2-1/2	1-7/16	10-15/16	10-1/16	5-11/16	12-15/16	14-5/16	20	9-5/8	3-7/16	21.92
875-580F	8x8x3	1-15/16	11-5/8	10-9/16	6-3/16	13-7/8	14-13/16	21	9-5/8	4-1/8	21.92
875-582	8x8x4	11/16	9-1/8	8-1/4	3-5/16	11-3/8	12-1/4	15-9/16	9-3/4	5-1/4	14.60
875-582F	8x8x4	2-15/16	11-7/8	11-9/16	7-3/16	14-1/8	15-13/16	23	9-5/8	5-3/16	18.50
875-585[1]	8x8x6	2	12-15/16	11-1/4	6	15-15/16	15-1/4	21-1/4	9-11/16	9-11/16	30.74
875-585F	8x8x6	4-15/16	13-15/16	13-9/16	9-3/16	17-3/16	17-13/16	27	9-5/8	7-1/2	32.97
875-621[1]	10x10x2	3-3/4	6	14-1/2	9	17-1/2	19-3/4	28-3/4	11	7-1/2	30.84

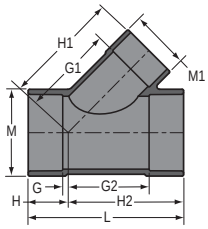
[1] Outlet sized with bushing

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

REDUCING WYE (continued)

Socket x Socket x Socket

1/2" - 2-1/2" 235 psi @ 73°F
3" - 6" 150 psi @ 73°F
8" & Up & All Fab 100 psi @ 73°F



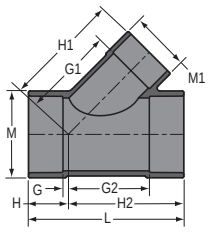
Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)
875-621F	10x10x2	1/4	11-7/8	10-1/2	5	13-5/8	15-3/4	20-3/4	11-15/16	2-13/16	41.46
875-622F	10x10x2-1/2	1/8	12-5/16	10-7/8	5-3/8	14-5/16	16-1/8	21-1/2	11-15/16	3-7/16	29.34
875-623[1]	10x10x3	7/8	12-7/8	11-5/8	6-1/8	15-1/4	16-7/8	23	12	4-1/8	30.70
875-623F	10x10x3	3/4	13	11-1/2	6	15-1/4	16-3/4	22-3/4	11-15/16	4-1/8	31.71
875-624[1]	10x10x4	1-7/8	10-5/8	12-5/8	7-1/8	12-1/4	17-7/8	25	12	5-3/8	30.56
875-624F	10x10x4	1-3/4	13-1/4	12-1/2	7	15-1/2	17-3/4	24-3/4	11-15/16	5-3/16	39.93
875-626	10x10x6	-3/16	12	11	4-13/16	15	16	20-25/32	12-1/16	7-21/32	28.21
875-626F	10x10x6	3-3/4	15-5/16	14-1/2	9	18-9/16	19-3/4	28-3/4	11-15/16	7-1/2	42.69
875-628	10x10x8	1-7/32	12-3/4	12-1/4	6-7/32	16-25/32	17-9/32	23-1/2	12-1/32	9-23/32	34.14
875-628F	10x10x8	5-1/4	17-1/4	16	10-1/2	21-1/2	21-1/4	31-3/4	11-15/16	9-5/8	55.19
875-661F	12x12x2	1-5/16	13-3/16	11-7/16	4-15/16	14-15/16	17-11/16	22-5/8	14-1/8	2-13/16	37.58
875-662F	12x12x2-1/2	15/16	13-5/8	11-13/16	5-5/16	15-5/8	18-1/16	23-3/8	14-1/8	3-7/16	43.72
875-663F	12x12x3	1/8	14-5/16	12-7/8	6-3/8	16-9/16	19-1/8	25-1/2	14-1/8	4-1/8	43.39
875-664F	12x12x4	5/8	14-9/16	13-3/8	6-7/8	16-13/16	19-5/8	26-1/2	14-1/8	5-3/16	48.41
875-666F	12x12x6	2-5/8	16-5/8	15-3/8	8-7/8	19-7/8	21-5/8	30-1/2	14-1/8	7-1/2	64.52
875-668F	12x12x8	4-1/4	18-9/16	17	10-1/2	22-13/16	23-1/4	33-3/4	14-1/8	9-5/8	71.04
875-670F	12x12x10	5-3/4	20-3/16	18-1/2	12	25-7/16	24-3/4	36-3/4	14-1/8	11-15/16	80.79
875-694F	14x14x4	1-1/4	15-5/16	15-1/4	8-1/4	17-9/16	22-1/4	30-1/2	15-1/2	5-3/16	68.80
875-696F	14x14x6	2	17-3/8	16	9	20-5/8	23	32	15-1/2	7-1/2	78.50
875-698F	14x14x8	4-1/4	19-5/16	18-1/4	11-1/4	23-9/16	25-1/4	36-1/2	15-1/2	9-5/8	90.50
875-700F	14x14x10	5-3/4	20-15/16	19-3/4	12-3/4	26-3/16	26-3/4	39-1/2	15-1/2	11-15/16	84.58
875-702F	14x14x12	7-1/4	22-9/16	21-1/4	14-1/4	28-13/16	28-1/4	42-1/2	15-1/2	14-1/8	108.22
875-754F	16x16x4	1-1/8	16-5/8	17-1/8	9-1/8	18-7/8	25-1/8	34-1/4	17-11/16	5-3/16	76.47
875-756F	16x16x6	1-5/8	18-11/16	17-5/8	9-5/8	21-15/16	25-5/8	35-1/4	17-11/16	7-1/2	105.73
875-758F	16x16x8	3-5/8	20-5/8	19-5/8	11-5/8	24-7/8	27-5/8	39-1/4	17-11/16	9-5/8	120.00
875-760F	16x16x10	5-1/8	22-1/4	21-1/8	13-1/8	27-1/2	29-1/8	42-1/4	17-11/16	11-15/16	123.77
875-762F	16x16x12	6-1/2	23-7/8	22-1/2	14-1/2	30-1/8	30-1/2	45	17-11/16	14-1/8	142.80
875-764F	16x16x14	7-7/8	25-1/8	23-7/8	15-7/8	32-1/8	31-7/8	47-3/4	17-11/16	15-1/2	161.25
875-784F	18x18x4	0	17-7/8	18	9	20-1/8	27	36	19-7/8	5-3/16	116.63
875-786F	18x18x6	3/8	20-1/8	18-9/16	9-3/8	23-3/8	27-9/16	36-15/16	19-7/8	7-1/2	114.13
875-788F	18x18x8	3	21-7/8	21	12	26-1/8	30	42	19-7/8	9-5/8	92.20
875-790F	18x18x10	4-1/2	23-1/2	22-1/2	13-1/2	28-3/4	31-1/2	45	19-7/8	11-15/16	164.27
875-792F	18x18x12	6	25-1/8	24	15	31-3/8	33	48	19-7/8	14-1/8	184.56
875-794F	18x18x14	7	26-3/8	25	16	33-3/8	34	50	19-7/8	15-1/2	225.00
875-796F	18x18x16	8-1/2	27-3/8	26-1/2	17-1/2	35-3/8	35-1/2	53	19-7/8	17-11/16	225.00
875-814F	20x20x4	1	19-3/16	19	9	21-7/16	29	38	22-1/16	5-3/16	142.64
875-816F	20x20x6	1/8	21-1/4	19-7/8	9-7/8	24-1/2	29-7/8	39-3/4	22-1/16	7-1/2	156.65

[1] Outlet sized with bushing

REDUCING WYE (continued)

Socket x Socket x Socket

1/2" - 2-1/2" 235 psi @ 73°F
3" - 6" 150 psi @ 73°F
8" & Up & All Fab 100 psi @ 73°F

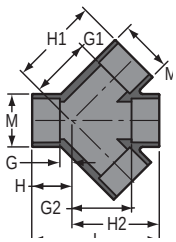


Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)
875-816F	20x20x6	1/8	21-1/4	19-7/8	9-7/8	24-1/2	29-7/8	39-3/4	22-1/16	7-1/2	156.65
875-818F	20x20x8	2-5/8	23-3/16	22-5/8	12-5/8	27-7/16	32-5/8	45-1/4	22-1/16	9-5/8	173.00
875-820F	20x20x10	4-1/8	24-13/16	24-1/8	14-1/8	30-1/16	34-1/8	48-1/4	22-1/16	11-15/16	190.74
875-822F	20x20x12	5-5/8	26-7/16	25-5/8	15-5/8	32-11/16	35-5/8	51-1/4	22-1/16	14-1/8	237.50
875-824F	20x20x14	7-1/8	27-11/16	27-1/8	17-1/8	34-11/16	37-1/8	54-1/4	22-1/16	15-1/2	243.75
875-826F	20x20x16	8-1/2	28-11/16	28-1/2	18-1/2	36-11/16	38-1/2	57	22-1/16	17-11/16	250.00
875-828F	20x20x18	10-1/8	30-11/16	30-1/8	20-1/8	39-11/16	40-1/8	60-1/4	22-1/16	19-7/8	255.62
875-904F	24x24x4	3	21-3/4	21	9	24	33	42	26-7/16	5-3/16	230.78
875-906F	24x24x6	7/8	23-13/16	23-1/8	11-1/8	27-1/16	35-1/8	46-1/4	26-7/16	7-1/2	248.89
875-908F	24x24x8	1-3/4	25-3/4	25-3/4	13-3/4	30	37-3/4	51-1/2	26-7/16	9-5/8	269.27
875-910F	24x24x10	3-1/4	27-3/8	27-1/4	15-1/4	32-5/8	39-1/4	54-1/2	26-7/16	11-15/16	291.66
875-912F	24x24x12	4-3/4	29	28-3/4	16-3/4	35-1/4	40-3/4	57-1/2	26-7/16	14-1/8	264.99
875-914F	24x24x14	6-1/4	30-1/4	30-1/4	18-1/4	37-1/4	42-1/4	60-1/2	26-7/16	15-1/2	283.70
875-916F	24x24x16	7-3/4	31-1/4	31-3/4	19-3/4	39-1/4	43-3/4	63-1/2	26-7/16	17-11/16	310.60
875-918F	24x24x18	9-1/4	33-1/4	33-1/4	21-1/4	42-1/4	45-1/4	66-1/2	26-7/16	19-7/8	255.60
875-920F	24x24x20	9-5/8	34-3/16	33-5/8	21-5/8	44-3/16	45-5/8	67-1/4	26-7/16	22-1/16	372.56

DOUBLE WYE

Socket x Socket x Socket x Socket

100 psi @ 73°F



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)
876-020F	2	3-7/8	6-1/4	6-1/4	5-7/16	7-13/16	7-13/16	13-3/16	2-7/8	2-7/8	2.97
876-030F	3	4-3/4	8-1/8	8-1/4	6-5/8	10-3/16	10-3/16	16-13/16	4-3/16	4-3/16	6.48
876-040F	4	4-11/16	9-3/16	9-3/16	6-15/16	11-7/16	11-7/16	18-3/8	5-3/16	5-3/16	9.74
876-060F	6	4-15/16	12-5/8	11-9/16	8-3/16	15-7/8	14-13/16	23	7-1/2	7-1/2	25.44
876-080F	8	5-1/16	15-7/8	13-11/16	9-5/16	20-1/8	17-15/16	27-1/4	9-5/8	9-5/8	48.35
876-100F	10	6-1/2	18-7/8	17-1/4	11-3/4	24-1/8	22-1/2	34-1/4	11-15/16	11-15/16	65.51
876-120F	12	7-1/8	21-13/16	19-7/8	13-3/8	28-1/16	26-1/8	39-1/2	14-1/8	14-1/8	101.98

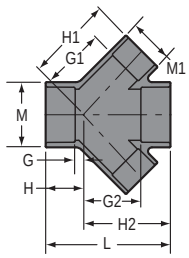
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

REDUCING DOUBLE WYE

Socket x Socket x Socket x Socket

3" - 6" 150 psi @ 73°F
All Fab 100 psi @ 73°F



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)
876-338	3x2	3/8	4-1/4	4-13/32	2-1/4	5-3/4	5-29/32	8	4-3/16	2-7/8	2.24
876-421F	4x2-1/2	4-9/16	8-13/16	9-1/16	6-13/16	10-1/2	11-5/16	18-1/8	5-1/4	3-1/2	5.37
876-422F	4x3	4-11/16	10	9-3/16	6-15/16	11-13/16	11-7/16	18-3/8	5-3/16	5-3/16	13.87
876-528F	6x2	1-15/16	9-3/16	8-9/16	5-3/16	10-15/16	11-13/16	17	7-1/2	2-13/16	10.07
876-529F	6x2-1/2	2-7/16	9-5/8	9-1/16	5-11/16	11-5/8	12-5/16	18	7-1/2	3-7/16	13.21
876-530F	6x3	2-15/16	10-15/16	9-9/16	6-3/16	12-9/16	12-13/16	19	7-1/2	4-1/8	13.21
876-532F	6x4	3-15/16	10-9/16	10-9/16	7-3/16	12-13/16	13-13/16	21	7-1/2	5-3/16	18.77
876-578F	8x2	7/8	10-1/2	9-1/2	5-1/8	12-1/4	13-3/4	18-7/8	9-5/8	2-13/16	14.55
876-579F	8x2-1/2	1-7/16	10-15/16	10-1/16	5-11/16	12-15/16	14-5/16	20	9-5/8	3-7/16	21.92
876-580F	8x3	1-15/16	11-5/8	10-9/16	6-3/16	13-7/8	14-13/16	21	9-5/8	4-1/8	18.87
876-582F	8x4	2-15/16	11-7/8	11-9/16	7-3/16	14-1/8	15-13/16	23	9-5/8	5-3/16	20.88
876-585F	8x6	4-15/16	13-15/16	13-9/16	9-3/16	17-3/16	17-13/16	27	9-5/8	7-1/2	28.76
876-621F	10x2	1/4	11-7/8	10-1/2	5	13-5/8	15-3/4	20-3/4	11-15/16	2-13/16	26.48
876-622F	10x2-1/2	1/8	12-5/16	10-7/8	5-3/8	14-5/16	16-1/8	21-1/2	11-15/16	3-7/16	29.34
876-623F	10x3	3/4	13	11-1/2	6	15-1/4	16-3/4	22-3/4	11-15/16	4-1/8	22.67
876-624F	10x4	1-3/4	13-1/4	12-1/2	7	15-1/2	17-3/4	24-3/4	11-15/16	5-3/16	30.53
876-626F	10x6	3-3/4	15-5/16	14-1/2	9	18-9/16	19-3/4	28-3/4	11-15/16	7-1/2	40.05
876-628F	10x8	5-1/4	17-1/4	16	10-1/2	21-1/2	21-1/4	31-3/4	11-15/16	9-5/8	55.99
876-661F	12x2	1-5/16	13-3/16	11-7/16	4-15/16	14-15/16	17-11/16	22-5/8	14-1/8	2-13/16	37.58
876-662F	12x2-1/2	15/16	13-5/8	11-13/16	5-5/16	15-5/8	18-1/16	23-3/8	14-1/8	3-7/16	44.74
876-663F	12x3	1/8	14-5/16	12-7/8	6-3/8	16-9/16	19-1/8	25-1/2	14-1/8	4-1/8	43.39
876-664F	12x4	5/8	14-9/16	13-3/8	6-7/8	16-13/16	19-5/8	26-1/2	14-1/8	5-3/16	40.74
876-666F	12x6	2-5/8	16-5/8	15-3/8	8-7/8	19-7/8	21-5/8	30-1/2	14-1/8	7-1/2	68.02
876-668F	12x8	4-1/4	18-9/16	17	10-1/2	22-13/16	23-1/4	33-3/4	14-1/8	9-5/8	71.03
876-670F	12x10	5-3/4	20-3/16	18-1/2	12	25-7/16	24-3/4	36-3/4	14-1/8	11-15/16	80.79

Schedule 80 Unions

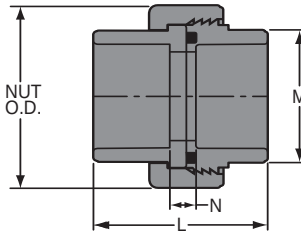
UNION (Old Style)

Socket x Socket

Dimensions Also Applicable to

897-XXX EPDM O-ring Seal Units

235 psi @ 73°F



Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
857-002	1/4	1-15/16	15/16	5/8	1-21/32	.09
857-003	3/8	2-5/32	1-1/32	19/32	1-25/32	.11
857-005	1/2	2-3/32	1-9/32	11/32	1-31/32	.15
857-007	3/4	2-3/8	1-17/32	11/32	2-1/2	.26
857-010	1	2-9/16	1-27/32	3/8	2-7/8	.37
857-012	1-1/4	2-7/8	2-7/32	3/8	3-5/16	.50
857-015	1-1/2	3-3/32	2-9/16	15/32	3-9/16	.60
857-020	2	3-5/8	3-1/32	9/16	4-3/16	.96
857-025	2-1/2	4-3/8	3-5/8	15/16	4-7/8	1.51
857-030	3	5-1/16	4-3/8	1-3/16	5-3/4	2.33
857-040	4	5-7/8	5-13/32	1-3/8	7-1/16	3.74

1) For (Socket X Socket) Unions Equipped With EPDM O-ring, Replace The 857 With An 897 Before The Dash.
e.g. Part Number **897-002** = 1/4" PVC, Union, Socket x Socket, With **EPDM** O-rings.

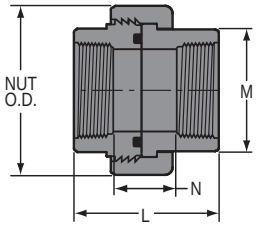
UNION (Old Style)

Fipt x Fipt

Dimensions Also Applicable to

898-XXX EPDM O-ring Seal Units

235 psi @ 73°F



Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
858-002	1/4	1-15/16	15/16	11/16	1-21/32	.10
858-003	3/8	2-5/32	1-1/32	15/16	1-25/32	.12
858-005	1/2	2-3/32	1-9/32	19/32	1-31/32	.16
858-007	3/4	2-3/8	1-17/32	3/4	2-1/2	.28

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

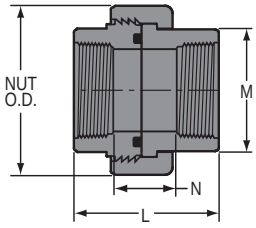
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

UNION (Old Style) (continued)

Fipt x Fipt

Dimensions Also Applicable to
898-XXX EPDM O-ring Seal Units

235 psi @ 73°F



Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
858-010	1	2-9/16	1-27/32	7/16	2-7/8	.39
858-012	1-1/4	2-7/8	2-7/32	7/8	3-5/16	.56
858-015	1-1/2	3-3/32	2-9/16	1-5/32	3-9/16	.65
858-020	2	3-5/8	3-1/32	1-11/16	4-3/16	1.05
858-025	2-1/2	4-3/8	3-5/8	1-7/8	4-7/8	1.67
858-030	3	5-1/16	4-3/8	1-13/16	5-3/4	2.51
858-040	4	5-7/8	5-7/16	2-3/8	7-1/16	4.07

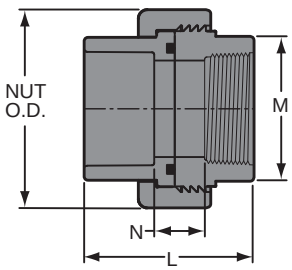
1) For (Fipt X Fipt) Unions Equipped With EPDM O-ring, Replace The 858 With An 898 Before The Dash.
e.g. Part Number **898-002** = 1/4" PVC, Union, Fipt x Fipt, With **EPDM** O-rings.

UNION (Old Style)

Socket x Fipt

Dimensions Also Applicable to
899-XXX EPDM O-ring Seal Units

235 psi @ 73°F

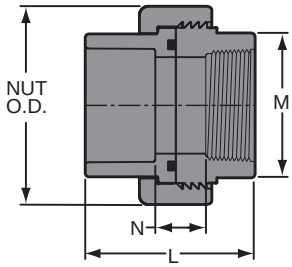


Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
859-002	1/4	1-15/16	15/16	21/32	1-21/32	.08
859-003	3/8	2-5/32	1-1/32	3/4	1-25/32	.10
859-005	1/2	2-3/32	1-9/32	15/32	1-31/32	.16
859-007	3/4	2-3/8	1-17/32	9/16	2-1/2	.27
859-010	1	2-9/16	1-27/32	13/32	2-7/8	.38
859-012	1-1/4	2-7/8	2-7/32	5/8	3-5/16	.52
859-015	1-1/2	3-1/8	2-19/32	27/32	3-9/16	.63

UNION (Old Style) (continued)

Socket x Fipt
Dimensions Also Applicable to
899-XXX EPDM O-ring Seal Units

235 psi @ 73°F



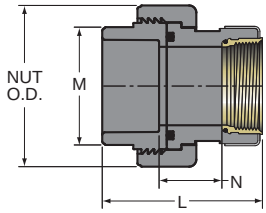
Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
859-020	2	3-5/8	3-1/32	1-1/16	4-3/16	1.00
859-025	2-1/2	4-3/8	3-5/8	1-13/32	4-7/8	1.58
859-030	3	5-1/16	4-3/8	1-1/2	5-3/4	2.42
859-040	4	5-7/8	5-7/16	1-7/8	7-1/16	3.91

1) For (Socket X Fipt) Unions Equipped With EPDM O-ring, Replace The 859 With An 899 Before The Dash.
e.g. Part Number **899-002** = 1/4" PVC, Union, Socket x Fipt, With **EPDM** O-rings.

TRANSITION UNION

Socket x Brass Fipt Threaded Insert and FKM O-ring Seal
Dimensions Also Applicable to **899**-XXXBR EPDM O-ring Seal Units

235 psi @ 73°F



Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
859-005BR	1/2	2-1/4	1-9/32	3/4	1-31/32	.21
859-007BR	3/4	2-11/16	1-17/32	15/16	2-1/2	.35
859-010BR	1	2-13/16	1-7/8	1-1/32	2-7/8	.52
859-012BR	1-1/4	3-9/32	2-7/32	1-1/16	3-5/16	.69
859-015BR	1-1/2	3-1/2	2-9/16	1-3/32	3-17/32	.89
859-020BR	2	3-5/8	2-7/8	1-1/4	4-5/16	1.60

Not intended to convey or dispense water for human consumption through drinking or cooking

1) For (Socket X Metal Fipt) Unions Equipped With EPDM O-ring, Replace The 859 With An 899 Before The Dash.
e.g. Part Number **899-010BR** = 1" PVC, Union Socket x Metal Fipt With **EPDM** O-rings.

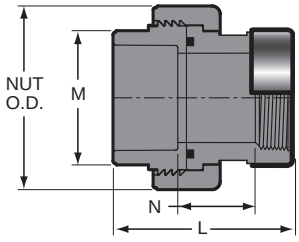
SPECIAL REINFORCED UNION (Old style)

Socket x SR Fipt

Dimensions Also Applicable to

899-XXXSR EPDM O-ring Seal Units

235 psi @ 73°F



Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
859-002SR	1/4	2-1/16	15/16	25/32	1-21/32	.09
859-003SR	3/8	2-9/32	1-1/32	29/32	1-25/32	.13
859-005SR	1/2	2-9/32	1-9/32	21/32	1-31/32	.17
859-007SR	3/4	2-19/32	1-17/32	25/32	2-1/2	.28
859-010SR	1	2-15/16	1-27/32	25/32	2-7/8	.40
859-012SR	1-1/4	3-5/32	2-7/32	29/32	3-5/16	.55
859-015SR	1-1/2	3-13/32	2-9/16	1-1/32	3-9/16	.67
859-020SR	2	4-3/32	3-1/32	1-19/32	4-3/16	1.12
859-030SR	3	5-1/4	4-3/8	1-11/16	5-3/4	2.50
859-040SR	4	5-7/8	5-13/32	2-1/8	7-3/32	3.96

1) For (Socket X SR Fipt) Unions Equipped With EPDM O-ring, Replace The 859 With An 899 Before The Dash.
e.g. Part Number **899-002SR** = 1/4" PVC, Union, Socket x SR Fipt, With **EPDM** O-rings.

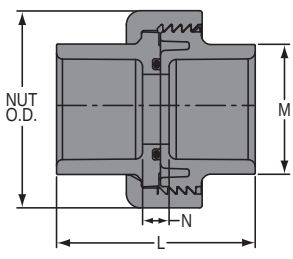
UNION 2000

Socket x Socket

Dimensions Also Applicable to

8097-XXX EPDM O-ring Seal Units

1/2" - 4" 235 psi @ 73°F
6" 150 psi @ 73°F



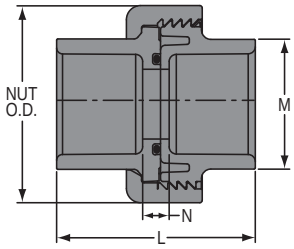
Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
8057-005	1/2	2-3/32	1-3/16	11/32	1-7/8	.12
8057-007	3/4	2-3/8	1-13/32	3/8	2-9/32	.17
8057-010	1	2-11/16	1-23/32	7/16	2-9/16	.28
8057-012	1-1/4	2-15/16	2-3/32	7/16	3-3/32	.36

UNION 2000 (continued)

Socket x Socket

Dimensions Also Applicable to
8097-XXX EPDM O-ring Seal Units

1/2" - 4" 235 psi @ 73°F
6" 150 psi @ 73°F



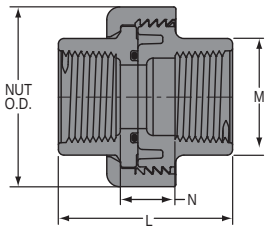
Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
8057-015	1-1/2	3-1/4	2-3/8	1/2	3-1/2	.50
8057-020	2	3-17/32	2-7/8	17/32	4-9/32	.86
8057-025	2-1/2	4-7/32	3-1/2	25/32	6-5/32	2.14
8057-030	3	4-1/4	4-3/16	1/2	6-5/32	2.16
8057-040	4	5-1/8	5-1/4	5/8	7-3/4	3.75
8057-060	6	6-27/32	7-1/2	25/32	11-5/8	10.38

UNION 2000

Fipt x Fipt

Dimensions Also Applicable to
8098-XXX EPDM O-ring Seal Units

1/2" - 4" 235 psi @ 73°F
6" 150 psi @ 73°F



Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
8058-005	1/2	1-29/32	1-3/16	17/32	1-7/8	.08
8058-007	3/4	2-1/16	1-3/8	9/16	2-9/32	.17
8058-010	1	2-17/32	1-11/16	25/32	2-9/16	.21
8058-012	1-1/4	2-21/32	2-1/32	3/4	3-1/8	.38
8058-015	1-1/2	2-25/32	2-3/8	29/32	3-1/2	.53
8058-020	2	3-1/8	3	1-3/16	4-7/32	.89
8058-025	2-1/2	4-1/32	3-9/16	1-15/32	6-5/32	1.67
8058-030	3	4-5/32	4-9/32	1-13/32	6-5/32	2.37
8058-040	4	4-21/32	5-1/4	1-21/32	7-3/4	3.59
8058-060	6	6-1/8	7-21/32	2-13/16	11-19/32	12.10

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

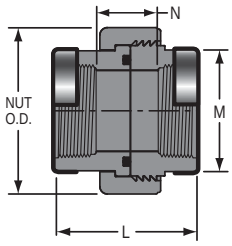
SPECIAL REINFORCED UNION 2000

SR Fipt x SR Fipt

Dimensions Also Applicable to

8098-XXXSR EPDM O-ring Seal Units

1/2" - 4" 235 psi @ 73°F
6" 150 psi @ 73°F



Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
8058-005SR	1/2	2	1-3/16	5/8	1-7/8	.14
8058-007SR	3/4	2-5/32	1-3/8	21/32	2-9/32	.15
8058-010SR	1	2-9/16	1-11/16	13/16	2-9/16	.21
8058-012SR	1-1/4	2-23/32	2-1/32	13/16	3-1/8	.39
8058-015SR	1-1/2	2-27/32	2-13/32	29/32	3-17/32	.59
8058-020SR	2	3-7/32	3-1/32	1-3/16	4-7/32	.97
8058-025SR	2-1/2	4-3/32	3-9/16	1-15/32	6-5/32	1.66
8058-030SR	3	4-3/16	4-9/32	1-3/8	6-5/32	2.44
8058-040SR	4	4-11/16	5-1/4	1-11/16	7-3/4	3.73
8058-060SR	6	6-3/16	7-11/16	2-13/16	11-5/8	10.98

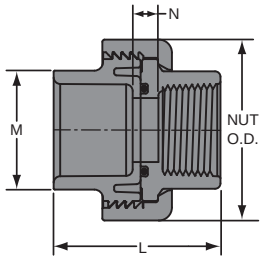
UNION 2000

Socket x Fipt

Dimensions Also Applicable to

8099-XXX EPDM O-ring Seal Units

1/2" - 4" 235 psi @ 73°F
6" 150 psi @ 73°F



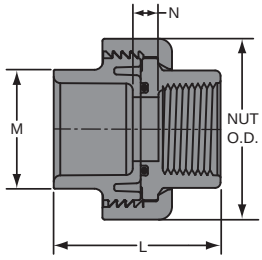
Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
8059-005	1/2	1-7/8	1-3/16	5/16	1-7/8	.11
8059-007	3/4	2-1/16	1-13/32	5/16	2-9/32	.18
8059-010	1	2-13/32	1-23/32	13/32	2-9/16	.20
8059-012	1-1/4	2-19/32	2-3/32	13/32	3-1/8	.35
8059-015	1-1/2	2-13/16	2-3/8	1/2	3-1/2	.49

UNION 2000 (continued)

Socket x Fipt

Dimensions Also Applicable to
8099-XXX EPDM O-ring Seal Units

1/2" - 4" 235 psi @ 73°F
6" 150 psi @ 73°F



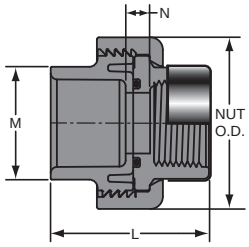
Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
8059-020	2	2-31/32	2-7/8	13/32	4-9/32	.92
8059-025	2-1/2	3-15/32	3-1/2	13/32	6-3/16	1.58
8059-030	3	3-25/32	4-3/16	17/32	6-5/32	2.17
8059-040	4	4-3/8	5-1/4	5/8	7-3/4	3.64
8059-060	6	6-27/32	7-1/2	1-1/2	11-5/8	11.69

UNION 2000

Socket x SR Fipt

Dimensions Also Applicable to
8099-XXXSR EPDM O-ring Seal Units

1/2" - 4" 235 psi @ 73°F
6" 150 psi @ 73°F



Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
8059-005SR	1/2	1-29/32	1-3/16	11/32	1-7/8	.12
8059-007SR	3/4	2-5/32	1-13/32	13/32	2-9/32	.14
8059-010SR	1	2-7/16	1-23/32	7/16	2-9/16	.20
8059-012SR	1-1/4	2-5/8	2-3/32	7/16	3-1/8	.37
8059-015SR	1-1/2	2-13/16	2-3/8	1/2	3-1/2	.56
8059-020SR	2	3	2-7/8	7/16	4-7/32	1.00
8059-025SR	2-1/2	3-27/32	3-15/32	27/32	6-3/16	2.19
8059-030SR	3	3-3/4	4-3/16	1/2	6-9/32	2.24
8059-040SR	4	4-3/8	5-1/4	5/8	7-3/4	2.81
8059-060SR	6	6-27/32	7-1/2	2-5/32	11-5/8	11.50

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

UNION 2000

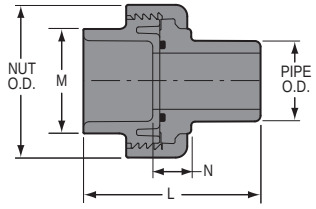
Socket x Spigot

Dimensions Also Applicable to

8096-XXX EPDM O-ring Seal Units

1/2" - 4" 235 psi @ 73°F

6" 150 psi @ 73°F



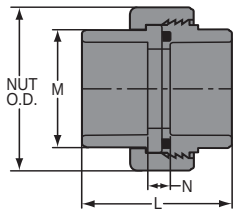
Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
8056-005	1/2	2-5/16	1-3/16	9/16	1-7/8	.12
8056-007	3/4	2-5/8	1-3/8	21/32	2-9/32	.19
8056-010	1	2-15/16	1-23/32	5/8	2-9/16	.29
8056-012	1-1/4	3-7/32	2-3/32	11/16	3-3/16	.41
8056-015	1-1/2	3-1/2	2-3/8	11/16	3-9/16	.50
8056-020	2	3-3/4	2-7/8	3/4	4-5/16	.81
8056-025	2-1/2	4-21/32	3-15/32	1-5/32	6-5/32	2.23
8056-030	3	4-25/32	4-5/32	7/32	6-5/32	2.28
8056-040	4	5-5/8	5-1/4	1-1/8	7-23/32	3.95
8056-060	6	7-3/4	7-9/16	1-1/2	11-11/16	11.84

PVC TRANSITION UNION

DIN (mm) Socket x ASTM (in) Socket

Dimensions Also Applicable to **8697**-XXX EPDM O-ring Seal Units

235 psi @ 73°F
(PN 16 @ 22°C)



Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
8657-020	20mm x 1/2	2-1/16	1-9/32	5/16	1-31/32	.16
8657-025	25mm x 3/4	2-11/32	1-17/32	11/32	2-1/2	.27
8657-032	32mm x 1	2-9/16	1-27/32	3/8	2-7/8	.37
8657-040	40mm x 1-1/4	2-7/8	2-7/32	3/8	3-5/16	.52
8657-050	50mm x 1-1/2	3-1/8	2-9/16	5/16	3-9/16	.59
8657-063	63mm x 2	3-5/8	3-1/32	9/16	4-3/16	.94
8657-090	90mm x 3	5-1/16	4-3/8	1-3/16	5-3/4	2.31
8657-110	110mm x 4	5-7/8	5-7/16	1-3/8	7-1/16	3.91

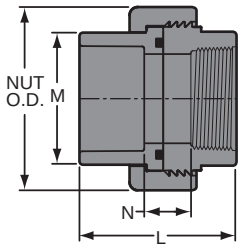
1) For DIN (mm) Socket X ASTM (in) Socket Unions Equipped with EPDM O-ring, Replace The 8657 With An 8697 Before The Dash.
e.g. Part Number **8697-020** = 20mm x 1/2" PVC, Union Socket x Socket With **EPDM** O-rings.

PVC TRANSITION UNION

DIN (mm) Socket x ASTM (in) Fipt

Dimensions Also Applicable to **8698**-XXX EPDM O-ring Seal Units

235 psi @ 73°F
(PN 16 @ 22°C)



Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
8658-020	20 mm x 1/2	2-3/32	1-9/32	19/32	1-31/32	.16
8658-025	25mm x 3/4	2-3/8	1-17/32	3/4	2-1/2	.28
8658-032	32mm x 1	2-9/16	1-27/32	7/16	2-7/8	.38
8658-040	40mm x 1-1/4	2-7/8	2-7/32	7/8	3-5/16	.56
8658-050	50mm x 1-1/2	3-3/32	2-9/16	1-5/32	3-9/16	.61
8658-063	63mm x 2	3-9/16	3-1/32	1-5/8	4-3/16	.99
8658-090	90mm x 3	5-1/16	4-3/8	1-13/16	5-3/4	2.41
8658-110	110mm x 4	5-7/8	5-7/16	2-3/8	7-1/16	4.07

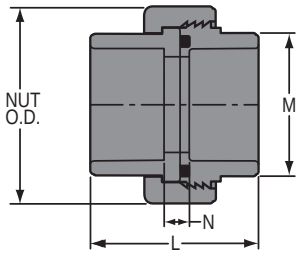
1) For DIN (mm) Socket X NPT (in) Fipt Unions Equipped with EPDM O-ring, Replace The 8658 With An 8698 Before The Dash.
e.g. Part Number **8698-020** = 20mm x 1/2" PVC, Union, DIN Socket x ASTM Fipt With **EPDM** O-rings.

PVC TRANSITION UNION

JIS (mm) Socket X ASTM (in) Socket

Dimensions Also Applicable to **8297**-XXX EPDM O-ring Seal Units

235 psi @ 73°F
(PN 16 @ 22°C)



Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
8257-016	16 DN x 1/2	2-1/16	1-9/32	5/16	1-31/32	.15
8257-020	20 DN x 3/4	2-3/8	1-17/32	5/16	2-1/2	.26
8257-025	25 DN x 1	2-9/16	1-27/32	3/8	2-7/8	.37
8257-030	30 DN x 1-1/4	2-15/16	2-3/32	7/16	3-3/16	.42
8257-040	40 DN x 1-1/2	3-1/8	2-9/16	5/16	3-9/16	.61
8257-050	50 DN x 2	3-5/8	3-1/32	9/16	4-3/16	.97
8257-075	75 DN x 3	5-1/16	4-3/8	1-3/16	5-3/4	2.34
8257-100	100 DN x 4	5-7/8	5-13/32	1-11/32	7-1/8	3.75

1) For JIS (mm) Socket X ASTM (in) Socket Unions Equipped with EPDM O-ring, Replace The 8257 With An 8297 Before The Dash.
e.g. Part Number **8297-016** = 16mm x 1/2" PVC, Union, JIS Socket x ASTM Socket With **EPDM** O-rings.

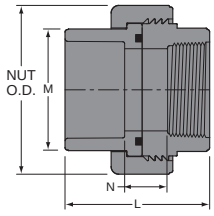
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC TRANSITION UNION

JIS (mm) Socket X ASTM (in) Fipt

Dimensions Also Applicable to **8298**-XXX EPDM O-ring Seal Units

235 psi @ 73°F
(PN 16 @ 22°C)



Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
8258-016	16 DN x 1/2	2-3/32	1-9/32	19/32	1-31/32	.16
8258-020	20 DN x 3/4	2-3/8	1-17/32	3/4	2-1/2	.27
8258-025	25 DN x 1	2-25/32	1-23/32	13/16	2-21/32	.38
8258-030	30 DN x 1-1/4	2-7/8	2-7/32	7/8	3-5/16	.57
8258-040	40 DN x 1-1/2	3-1/8	2-17/32	25/32	3-17/32	.63
8258-050	50 DN x 2	3-11/16	2-7/8	1-7/32	4-9/32	1.02
8258-075	75 DN x 3	5-1/16	4-3/8	1-13/16	5-3/4	2.43
8258-100	100 DN x 4	5-7/8	5-7/16	2-3/8	7-1/16	3.96

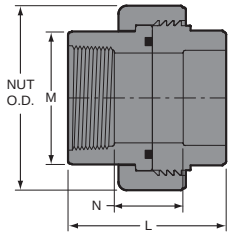
1) For JIS (mm) Socket X ASTM (in) Fipt Unions Equipped with EPDM O-ring, Replace The 8258 With An 8298 Before The Dash.
e.g. Part Number **8298-016** = 16dn x 1/2" PVC, Union, JIS Socket x ASTM Fipt With **EPDM** O-rings.

PVC TRANSITION UNION

BSP Threaded x ASTM (in) Socket

Dimensions Also Applicable to **8399**-XXX EPDM O-ring Seal Units

235 psi @ 73°F
(PN 16 @ 22°C)



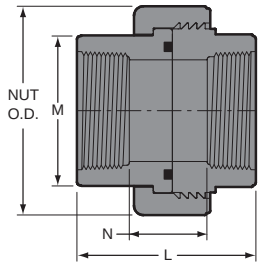
Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
8359-005	1/2	1-29/32	1-3/16	13/32	1-15/16	.12
8359-007	3/4	2-3/8	1-17/32	9/16	2-1/2	.27
8359-010	1	2-9/16	1-27/32	13/32	2-7/8	.38
8359-012	1-1/4	2-5/8	2-1/4	7/16	3-3/16	.37
8359-015	1-1/2	3-3/32	2-9/16	23/32	3-9/16	.62
8359-020	2	3-1/32	3	17/32	4-1/4	.85
8359-030	3	5	4-3/8	1-11/16	5-25/32	2.43
8359-040	4	5-7/8	5-7/16	1-7/8	7-1/16	3.84

1) For BSP Threaded X ASTM (in) Socket Unions Equipped with EPDM O-ring, Replace The 8359 With An 8399 Before The Dash.
e.g. Part Number **8399-005** = 1/2" PVC, Union, BSP Thread x ASTM Socket With **EPDM** O-rings.

PVC TRANSITION UNION

BSP Threaded x ASTM (in.) Fipt
Dimensions Also Applicable to
8398-XXX EPDM O-ring Seal Units

235 psi @ 73°F
(PN 16 @ 22°C)



Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
8358-005	1/2	2-3/32	1-9/32	19/32	1-31/32	.16
8358-007	3/4	2-3/8	1-17/32	27/32	2-1/2	.28
8358-010	1	2-9/16	1-27/32	7-16	2-7/8	.39
8358-012	1-1/4	2-23/32	2-1/32	27/32	3-3/16	.40
8358-015	1-1/2	3-3/32	2-9/16	1-5/32	3-9/16	.64
8358-020	2	3-9/16	3-1/32	1-5/8	4-3/16	1.05
8358-030	3	5-1/32	4-11/32	1-15/16	5-25/32	2.52
8358-040	4	5-7/8	5-7/16	2-3/8	7-1/16	4.00

1) For BSP Threaded X ASTM Fipt Unions Equipped with EPDM O-ring, Replace The 8358 With An 8398 Before The Dash.
e.g. Part Number **8398-005** = 1/2" PVC, Union, BSP Thread x ASTM Fipt With **EPDM** O-rings.

CLAMP-ON SADDLES
Simple Two-Piece Design Engineered for Reliability

Spears® PVC Clamp-On Saddles allow quick, easy and reliable addition of branch lines to existing piping system lines. These versatile saddle units can be used in either temporary or permanent installations on all types of pipe with IPS (Iron Pipe size) outside diameter, such as PVC, CPVC, Polyethylene, Polypropylene and Steel.

Excellent Metal-to-Plastic System Transition
Easily installs on metal pipe as a transition to plastic system.

PVC Tee or Cross Configurations
Available in PVC White, PVC Gray in 2" - 12" IPS pipe saddle with socket outlets in sizes 1/2" - 6" and Special Reinforced (SR) threaded outlets in sizes 1/2" - 6", single Tee or double Cross configurations.

Patented SR Design Female Threads
Patented Special Reinforced (SR) design on female thread outlets for superior strength.

O-ring Options
Choice of high grade Buna-N or EPDM O-rings for Schedule 40 and EPDM or FKM O-rings for Schedule 80, for application specific selection for optimum chemical resistance.

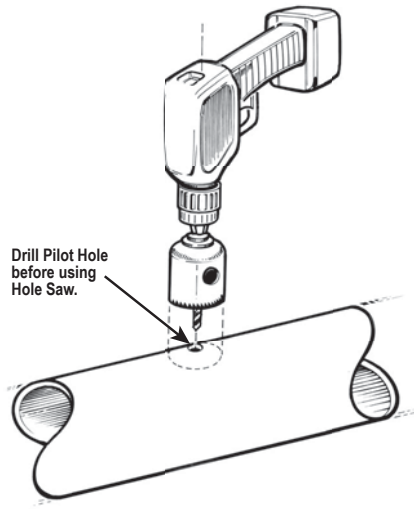
Multi-Bolt Design, Choice of Hardware
Positive attachment eliminates splitting problems associated with plastic wedge fasteners and outperforms 2-Bolt clamp saddle designs. Choose zinc plated or stainless steel nut, bolt and washer hardware.

Excellent Pressure Capabilities
Maximum internal pressure rating of 235 psi through 4", 200 psi for 6", and 150 psi for 8" - 12" at 73°F.

Sample Engineering Specification
All thermoplastic saddles shall be clamp-on type with O-ring seal constructed from PVC Type I cell classification 12454. All O-rings shall be Buna-N, EPDM or FKM. All saddles shall be piloted at O-ring area for positive positioning in pipe. All bolt clamping hardware shall be zinc plated steel or stainless steel. All threaded saddle outlets shall be Special Reinforced (SR) design. Saddles shall be pressure rated at 235 psi for use on pipe sizes through 4" nominal IPS diameters, 200 psi for use on 6" pipe, and 150 psi for use on 8" - 12" pipe, maximum internal pressure for water at 73°F, as manufactured by Spears® Manufacturing Company.

Clamp-On Saddle Installation Instructions

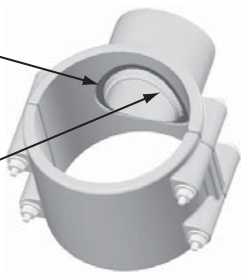
1. Using a standard industrial grade hole-saw, cut specified hole in desired position on pipe according to recommended hole saw size engraved on the saddle. **Note:** Care must be taken to deburr hole and remove all residue from hole area to assure tight fit and avoid leakage.
2. Fully seat O-ring in groove on underside of saddle outlet component. Position over hole and fully seat saddle onto pipe. Note: Certain saddle outlets are piloted. Be sure pilot lip fully engages with hole in pipe.
3. Place strap component opposite outlet and secure with bolts (4), nuts (4) and washers (8). Important: Washers MUST be placed under each bolt head (1) and under each nut (1) to avoid damage to saddle.
4. Tighten bolts to specified torque.

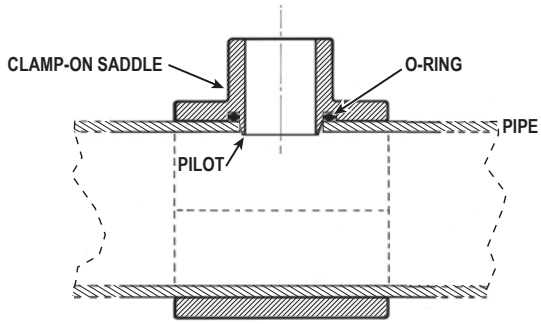


Saddle Size	2	3	4	6 & up
Recommended Bolt-Torque -ft/lb	8	8	8	10

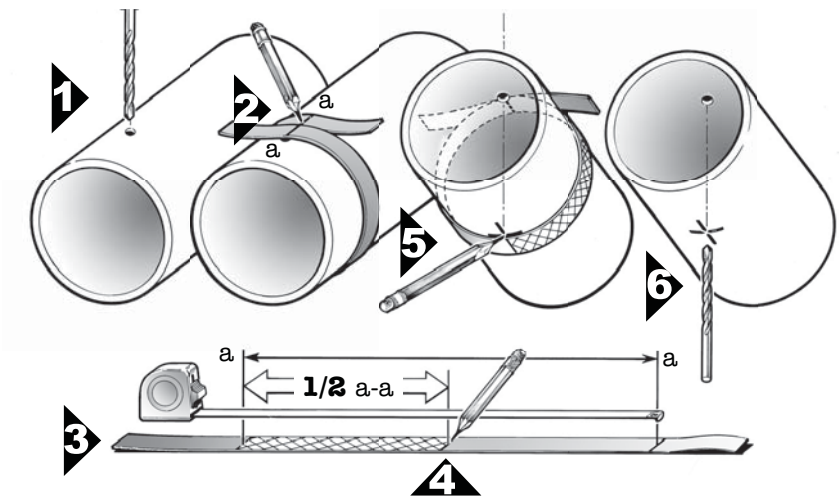
O-ring seal provides positive, trouble-free sealing to pipe.

Special pilot engages with hole in pipe to prevent saddle dislocation.





For Double Outlet Saddle Installation —Determine second outlet hole position as shown



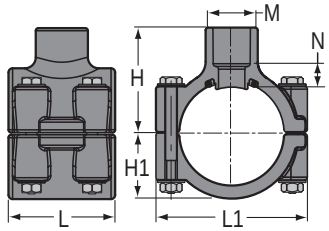
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CLAMP ON SADDLE x SOCKET
SINGLE OUTLET

Dimensions Also Applicable to
866**S**-XXX, 866**V**-XXX & 866**SV**-XXX

2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



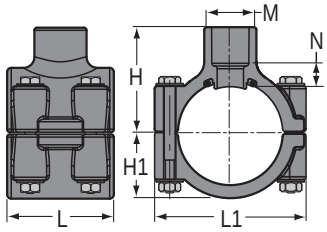
Part Number	Size	H	H1	L	L1	M	N	Hole Size	Bolt Torque ft./lbs.	Approx. Wt. (Lbs.)
866-247	2x1/2	2-3/8	1-1/2	2-7/16	3-7/16	1-3/16	5/16	3/4	8	.56
866-248	2x3/4	2-1/2	1-1/2	2-7/16	3-7/16	1-3/8	5/16	7/8	8	.57
866-249	2x1	2-5/8	1-1/2	2-7/16	3-7/16	1-11/16	5/16	1-1/8	8	.40
866-250	2x1-1/4	2-3/4	1-1/2	2-7/16	3-7/16	2-1/16	5/16	1-1/2	8	.68
866-251	2x1-1/2	2-15/16	1-1/2	2-7/16	3-7/16	2-3/8	5/16	1-1/2	8	.65
866-291	2-1/2x1-1/2	3-3/16	1-11/16	4-1/16	4	2-3/8	3/8	1-3/4	8	1.02
866-333[1]	3x1/2	3-5/16	2-1/16	3	4-5/8	1-3/8	13/16	7/8	8	.88
866-334	3x3/4	3-1/16	2-1/16	3	4-5/8	1-3/8	9/32	7/8	8	.85
866-335	3x1	3-3/16	2-1/16	3	4-5/8	1-11/16	5/16	1-1/8	8	.91
866-336[1]	3x1-1/4	4-1/32	2-1/16	4-3/32	4-5/8	3	1-1/32	2-1/4	8	1.48
866-337[1]	3x1-1/2	4-1/32	2-1/16	4-3/32	4-5/8	3	29/32	2-1/4	8	1.41
866-338	3x2	3-5/8	2-1/16	4-3/32	4-5/8	3	3/8	2-1/4	8	1.24
866-415[1]	4x1/2	4-3/32	2-5/8	3	5-9/16	2-3/8	31/32	1-1/8	8	1.31
866-416[1]	4x3/4	4-3/32	2-5/8	3	5-9/16	2-3/8	27/32	1-1/8	8	1.29
866-417	4x1	3-13/16	2-5/8	3	5-5/8	1-11/16	7/16	1-1/8	8	1.24
866-418[1]	4x1-1/4	4-13/32	2-5/8	4-3/32	5-5/8	2-3/8	29/32	1-3/4	8	1.70
866-419	4x1-1/2	4-1/8	2-5/8	4-3/32	5-9/16	2-3/8	1/2	1-3/4	8	1.63
866-420	4x2	4-3/16	2-5/8	4-1/8	5-5/8	3	7/16	2-1/4	8	1.69
866-421[1]	4x2-1/2	5	2-5/8	5-7/16	5-23/32	4-9/32	3/4	3	8	2.78
866-422	4x3	4-5/8	2-19/32	5-7/16	5-11/16	4-1/4	1/2	3	8	2.39
866-523[1]	6x1/2	5-13/32	3-7/8	3	7-3/4	1-11/16	1-7/32	1-1/8	10	2.35
866-524[1]	6x3/4	5-7/16	3-7/8	3	7-3/4	1-11/16	1-1/8	1-1/8	10	2.33
866-525	6x1	5-1/8	3-7/8	3	7-15/16	1-11/16	11/16	1-1/8	10	2.29
866-526[1]	6x1-1/4	5-15/16	3-7/8	4-1/8	7-3/4	3	1-3/8	2-1/4	10	3.28
866-527[1]	6x1-1/2	5-15/16	3-7/8	4-1/8	7-3/4	3	1-1/4	2-1/4	10	3.22
866-528	6x2	5-1/2	3-7/8	4-1/8	7-3/4	3	11/16	2-1/4	10	3.04
866-529[1]	6x2-1/2	6-7/16	3-7/8	6	7-15/16	4-1/4	1-1/8	3	10	4.73
866-530	6x3	5-15/16	3-7/8	6	7-15/16	4-1/4	25/32	3	10	4.35
866-532	6x4	6	3-29/32	6	7-15/16	5-3/16	5/8	4	10	5.09

[1] Outlet sized with bushing

CLAMP ON SADDLE x SOCKET SINGLE OUTLET (continued)

Dimensions Also Applicable to
866**S**-XXX, 866**V**-XXX & 866**SV**-XXX

2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



Part Number	Size	H	H1	L	L1	M	N	Hole Size	Bolt Torque ft./lbs.	Approx. Wt. (Lbs.)
866-573[1]	8x1/2	7-3/4	4-7/8	9-1/2	8-1/2	5-5/16	1-1/2	4	10	9.70
866-574[1]	8x3/4	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-3/4	4	10	9.65
866-575[1]	8x1	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-5/8	4	10	9.67
866-576[1]	8x1-1/4	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-1/2	4	10	9.79
866-577[1]	8x1-1/2	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-3/8	4	10	10.23
866-578[1]	8x2	7-11/16	4-7/8	8-1/2	10-1/8	5-1/4	1-7/8	4	10	10.28
866-579[1]	8x2-1/2	8-5/32	4-7/8	8-15/32	10	5-7/32	2-1/2	4	10	9.43
866-580[1]	8x3	7-11/16	4-7/8	8-1/2	10-1/8	5-1/4	1-7/16	4	10	10.21
866-582	8x4	7-5/16	4-7/8	8-1/2	10-1/8	5-1/4	11/16	4	10	12.22
866-585	8x6	8-3/32	4-7/8	8-1/2	10-1/8	7-5/8	11/16	6	10	9.80
866-621[1]	10x2	8-7/8	6-1/32	8-1/2	12-5/16	5-1/4	1-15/16	4	10	13.02
866-624	10x4	8-15/32	6-1/32	8-1/2	12-5/16	5-1/4	13/16	4	10	11.92
866-626	10x6	9-9/32	6-1/32	8-1/2	12-5/16	7-5/8	13/16	6	10	12.92
866-664	12x4	9-9/16	7-5/32	8-1/2	14-5/16	5-1/4	7/8	4	10	15.47
866-666	12x6	10-3/8	7-5/32	8-1/2	14-5/16	7-5/8	7/8	6	10	16.33

[1] Outet sized with bushing

1) Clamp On Saddle Standard Hardware: Zinc Bolts w/EPDM O-ring Seal
e.g. Part Number 866-247 = 2x1/2 PVC Clamp On Saddle, Socket, EPDM O-ring, Zinc Bolts.

2) Clamp On Saddles w/Stainless Steel (SS) Bolts,Add The Letter **"S"** Before The Dash.
e.g. Part Number 866**S**-247 = 2x1/2 PVC Clamp On Saddle, Socket, EPDM O-ring, Stainless Steel Bolts.

3) Clamp On Saddles w/FKM O-ring Seal, Add The Letter **"V"** Before The Dash.
e.g. Part Number 866**V**-247 = 2x1/2 PVC Clamp-On Saddle, Socket, FKM O-ring, Zinc Bolts.

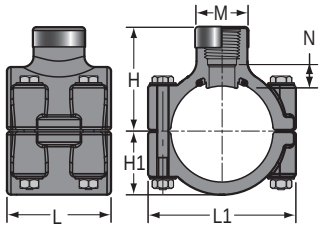
4) Clamp-On Saddles w/Stainless Steel Bolts & FKM O-ring Seal, Add The Letter **"SV"** Before The Dash.
e.g. Part Number 866**SV**-247 = 2x1/2 PVC Clamp On Saddle, Socket FKM O-ring, Stainless Steel Bolts.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CLAMP ON SADDLE x SR FIPT
SINGLE OUTLET

Dimensions Also Applicable to
867**S**-XXXSR, 867**V**-XXXSR & 867**SV**-XXXSR

2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



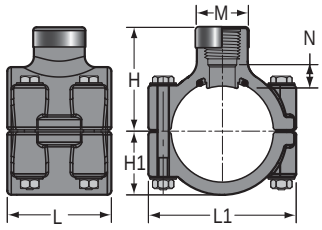
Part Number	Size	H	H1	L	L1	M	N	Hole Size	Bolt Torque ft./lbs.	Approx. Wt. (Lbs.)
867-247SR	2x1/2	2-3/8	1-1/2	2-7/16	3-7/16	1-3/16	5/16	3/4	3/4	.56
867-248SR	2x3/4	2-1/2	1-1/2	2-7/16	3-7/16	1-3/8	5/8	7/8	7/8	.57
867-249SR	2x1	2-5/8	1-1/2	2-7/16	3-7/16	1-11/16	9/16	1-1/8	1-1/8	.40
867-250SR	2x1-1/4	2-3/4	1-1/2	2-7/16	3-7/16	2-1/16	11/16	1-1/2	1-1/2	.61
867-251SR	2x1-1/2	2-15/16	1-1/2	2-7/16	3-7/16	2-3/8	3/4	1-1/2	1-1/2	.65
867-291SR	2-1/2x1-1/2	3-3/16	1-11/16	4-1/16	4	2-3/8	13/16	1-3/4	1-3/4	1.02
867-333SR[1]	3x1/2	3-5/16	2-1/16	3	4-5/8	1-3/8	15/16	7/8	7/8	.89
867-334SR	3x3/4	3-1/16	2-1/16	3	4-5/8	1-3/8	9/16	7/8	7/8	.87
867-335SR	3x1	3-3/16	2-1/16	3	4-5/8	1-11/16	9/16	1-1/8	1-1/8	.89
867-336SR[1]	3x1-1/4	4-1/32	2-1/16	4-3/32	4-5/8	3	1-5/16	2-1/4	2-1/4	1.51
867-337SR[1]	3x1-1/2	4-1/32	2-1/16	4-3/32	4-5/8	3	2-11/16	2-1/4	2-1/4	1.47
867-338SR	3x2	3-5/8	2-1/16	4-3/32	4-5/8	3	7/8	2-1/4	2-1/4	1.36
867-415SR[1]	4x1/2	4-3/32	2-5/8	3	5-9/16	2-3/8	1-1/8	1-1/8	1-1/8	1.32
867-416SR[1]	4x3/4	4-3/32	2-5/8	3	5-9/16	2-3/8	1-1/8	1-1/8	1-1/8	1.31
867-417SR	4x1	3-13/16	2-5/8	3	5-5/8	1-11/16	11/16	1-1/8	1-1/8	1.26
867-418SR[1]	4x1-1/4	4-13/32	2-5/8	4-3/32	5-5/8	2-3/8	1-7/32	1-3/4	1-3/4	1.75
867-419SR[1]	4x1-1/2	4-1/8	2-5/8	4-3/32	5-9/16	2-3/8	15/16	1-3/4	1-3/4	1.68
867-420SR	4x2	4-3/16	2-5/8	4-1/8	5-5/8	3	15/16	2-1/4	2-1/4	1.78
867-421SR[1]	4x2-1/2	5	2-5/8	5-7/16	5-23/32	4-9/32	1-7/32	3	3	2.91
867-422SR	4x3	4-5/8	2-19/32	5-7/16	5-11/16	4-1/4	31/32	3	3	2.53
867-523SR[1]	6x1/2	5-13/32	3-7/8	3	7-3/4	1-11/16	1-3/8	1-1/8	1-1/8	2.37
867-524SR[1]	6x3/4	5-7/16	3-7/8	3	7-3/4	1-11/16	1-3/8	1-1/8	1-1/8	2.35
867-525SR	6x1	5-1/8	3-7/8	3	7-15/16	1-11/16	15/16	1-1/8	1-1/8	2.31
867-526SR[1]	6x1-1/4	5-15/16	3-7/8	4-1/8	7-3/4	3	1-11/16	2-1/4	2-1/4	3.31
867-527SR[1]	6x1-1/2	5-15/16	3-7/8	4-1/8	7-3/4	3	1-3/4	2-1/4	2-1/4	3.27
867-528SR	6x2	5-1/2	3-7/8	4-1/8	7-3/4	3	1-7/32	2-1/4	2-1/4	3.13
867-529SR[1]	6x2-1/2	6-7/16	3-7/8	6	7-15/16	4-1/4	1-9/16	3	3	4.87
867-530SR	6x3	5-15/16	3-7/8	6	7-15/16	4-1/4	1-1/4	3	3	4.46
867-532SR	6x4	6	3-29/32	6	7-15/16	5-3/16	1-3/8	4	4	5.44

[1] Outlet sized with bushing

CLAMP ON SADDLE x SR FIPT SINGLE OUTLET (continued)

Dimensions Also Applicable to
867**S**-XXXSR, 867**V**-XXXSR & 867**SV**-XXXSR

2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



Part Number	Size	H	H1	L	L1	M	N	Hole Size	Bolt Torque ft./lbs.	Approx. Wt. (Lbs.)
867-573SR	8x1/2	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	3	4	10	9.69
867-574SR[1]	8x3/4	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	3	4	10	9.70
867-575SR	8x1	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-13/16	4	10	9.81
867-576SR[1]	8x1-1/4	9-5/16	4-15/16	8-9/16	9-29/32	5-7/32	1-19 /32	4	10	9.68
867-577SR[1]	8x1-1/2	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-3/4	4	10	---
867-578SR[1]	8x2	7-11/16	4-7/8	8-1/2	10-1/8	5-1/4	2-3/8	4	10	---
867-579SR[1]	8x2-1/2	8-1/8	4-7/8	8-1/2	10-1/8	5-1/4	2-1/2	4	10	---
867-580SR[1]	8x3	7-11/16	4-7/8	8-1/2	10-1/8	5-1/4	1-15/16	4	10	---
867-582SR	8x4	7-5/16	4-7/8	8-1/2	10-1/8	5-1/4	1-1/2	4	10	7.74
867-585SR	8x6	8-3/32	4-7/8	8-1/2	10-1/8	7-5/8	2-3/32	6	10	8.61
867-624SR	10x4	8-15/32	6-1/32	8-1/2	12-5/16	5-1/4	2-3/16	4	10	---
867-626SR	10x6	9-9/32	6-1/32	8-1/2	12-5/16	7-5/8	3-3/16	6	10	---
867-664SR	12x4	9-9/16	7-5/32	8-1/2	14-5/16	5-1/4	1-5/8	4	10	---
867-666SR	12x6	10-3/8	7-5/32	8-1/2	14-5/16	7-5/8	2-1/4	6	10	---

[1] Outlet sized with bushing

1) Clamp On Saddle Standard Hardware: Zinc Bolts w/EPDM O-ring Seal
e.g. Part Number 867-247SR = 2x1/2 PVC Clamp On Saddle, SR Threaded, EPDM O-ring, Zinc Bolts.

2) Clamp On Saddles w/Stainless Steel (SS) Bolts,Add The Letter **"S"** Before The Dash.
e.g. Part Number 867**S**-247SR = 2x1/2 PVC Clamp On Saddle, SR Threaded, EPDM O-ring, Stainless Steel Bolts.

3) Clamp On Saddles w/FKM O-ring Seal, Add The Letter **"V"** Before The Dash.
e.g. Part Number 867**V**-247SR = 2x1/2 PVC Clamp-On Saddle, SR Threaded, FKM O-ring, Zinc Bolts.

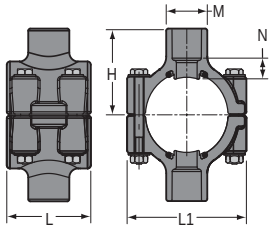
4) Clamp-On Saddles w/Stainless Steel Bolts & FKM O-ring Seal, Add The Letter **"SV"** Before The Dash.
e.g. Part Number 867**SV**-247SR = 2x1/2 PVC Clamp On Saddle, SR Threaded FKM O-ring, Stainless Steel Bolts.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CLAMP ON SADDLE x SOCKET
DOUBLE OUTLET

Dimensions Also Applicable to
868**S**-XXX, 868**V**-XXX & 868**SV**-XXX

2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



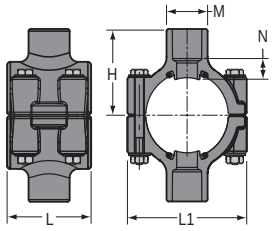
Part Number	Size	H	L	L1	M	N	Hole Size	Bolt Torque ft./lbs.	Approx. Wt. (Lbs.)
868-247	2x1/2	2-3/8	2-7/16	3-7/16	1-3/16	5/16	3/4	8	.56
868-248	2x3/4	2-1/2	2-7/16	3-7/16	1-3/8	5/16	7/8	8	.57
868-249	2x1	2-5/8	2-7/16	3-7/16	1-11/16	5/16	1-1/8	8	.40
838-250	2x1-1/4	2-3/4	2-7/16	3-7/16	2-1/16	5/16	1-1/2	8	.61
868-251	2x1-1/2	2-15/16	2-7/16	3-7/16	2-3/8	5/16	1-1/2	8	.65
868-291	2-1/2x1-1/2	3-3/16	4-1/16	4	2-3/8	3/8	1-3/4	8	1.02
868-333[1]	3x1/2	3-5/16	3	4-5/8	1-3/8	13/16	7/8	8	.93
868-334	3x3/4	3-1/16	3	4-5/8	1-3/8	9/32	7/8	8	.89
868-335	3x1	3-3/16	3	4-5/8	1-11/16	5/16	1-1/8	8	.91
868-336[1]	3x1-1/4	4-1/32	4-3/32	4-5/8	3	1-1/32	2-1/4	8	1.94
868-337[1]	3x1-1/2	4-1/32	4-3/32	4-5/8	3	29/32	2-1/4	8	1.82
868-338	3x2	3-5/8	4-3/32	4-5/8	3	3/8	2-1/4	8	1.47
868-415[1]	4x1/2	4-3/32	3	5-9/16	2-3/8	31/32	1-1/8	8	1.43
868-416[1]	4x3/4	4-3/32	3	5-9/16	2-3/8	27/32	1-1/8	8	1.39
868-417	4x1	3-13/16	3	5-5/8	1-11/16	7/16	1-1/8	8	1.30
868-418[1]	4x1-1/4	4-13/32	4-3/32	5-5/8	2-3/8	29/32	1-3/4	8	1.92
868-419	4x1-1/2	4-1/8	4-3/32	5-9/16	2-3/8	1/2	1-3/4	8	1.77
868-420	4x2	4-3/16	4-1/8	5-5/8	3	7/16	2-1/4	8	1.90
868-421[1]	4x2-1/2	5	5-7/16	5-23/32	4-9/32	3/4	3	8	3.69
868-422	4x3	4-5/8	5-7/16	5-11/16	4-1/4	1/2	3	8	2.92
868-523[1]	6x1/2	5-13/32	3	7-3/4	1-11/16	1-7/32	1-1/8	10	2.48
868-524[1]	6x3/4	5-7/16	3	7-3/4	1-11/16	1-1/8	1-1/8	10	2.44
868-525	6x1	5-1/8	3	7-15/16	1-11/16	11/16	1-1/8	10	2.35
868-526[1]	6x1-1/4	5-15/16	4-1/8	7-3/4	3	1-3/8	2-1/4	10	3.72
868-527[1]	6x1-1/2	5-15/16	4-1/8	7-3/4	3	1-1/4	2-1/4	10	3.60
868-528	6x2	5-1/2	4-1/8	7-3/4	3	11/16	2-1/4	10	3.25
868-529[1]	6x2-1/2	6-7/16	6	7-15/16	4-1/4	1-1/8	3	10	5.58
868-530	6x3	5-15/16	6	7-15/16	4-1/4	25/32	3	10	4.81
868-532	6x4	6	6	7-15/16	5-3/16	5/8	4	10	5.56
868-573[1]	8x1/2	8-3/32	8-1/2	10-1/8	5-1/4	2-3/16	4	10	11.50

[1] Outlet sized with bushing

CLAMP ON SADDLE x SOCKET DOUBLE OUTLET (continued)

Dimensions Also Applicable to
868**S**-XXX, 868**V**-XXX & 868**SV**-XXX

2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



Part Number	Size	H	L	L1	M	N	Hole Size	Bolt Torque ft./lbs.	Approx. Wt. (Lbs.)
868-574[1]	8x3/4	8-3/32	8-1/2	10-1/8	5-1/4	2-3/4	4	10	11.45
868-575[1]	8x1	8-3/32	8-1/2	10-1/8	5-1/4	2-5/8	4	10	11.52
868-576[1]	8x1-1/4	8-3/32	8-1/2	10-1/8	5-1/4	2-1/2	4	10	11.48
868-577[1]	8x1-1/2	8-3/32	8-1/2	10-1/8	5-1/4	2-3/8	4	10	11.30
868-578[1]	8x2	7-11/16	8-1/2	10-1/8	5-1/4	1-7/8	4	10	11.00
868-579[1]	8x2-1/2	8-1/8	8-1/2	10-1/8	5-1/4	1-11/16	4	10	8.90
868-580[1]	8x3	7-11/16	8-1/2	9-7/8	5-7/32	2-1/16	4	10	10.25
868-582	8x4	7-5/16	8-1/2	10-1/8	5-1/4	11/16	4	10	8.00
868-585	8x6	8-3/32	8-1/2	10-1/8	7-5/8	11/16	6	10	10.32
868-624	10x4	8-15/32	8-1/2	12-5/16	5-1/4	13/16	4	10	15.37
868-626	10x6	9-9/32	8-1/2	12-5/16	7-5/8	13/16	6	10	14.51
868-664	12x4	9-9/16	8-1/2	14-5/16	5-1/4	7/8	4	10	15.75
868-666	12x6	10-3/8	8-1/2	14-5/16	7-5/8	7/8	6	10	17.58

[1] Outlet sized with bushing

1) Clamp On Saddle Standard Hardware: Zinc Bolts w/EPDM O-ring Seal
e.g. Part Number 868-247 = 2x1/2 PVC Clamp On Saddle, Socket, EPDM O-ring, Zinc Bolts.

2) Clamp On Saddles w/Stainless Steel (SS) Bolts,Add The Letter **"S"** Before The Dash.
e.g. Part Number 868**S**-247 = 2x1/2 PVC Clamp On Saddle, Socket, EPDM O-ring, Stainless Steel Bolts.

3) Clamp On Saddles w/FKM O-ring Seal, Add The Letter **"V"** Before The Dash.
e.g. Part Number 868**V**-247 = 2x1/2 PVC Clamp-On Saddle, Socket, FKM O-ring, Zinc Bolts.

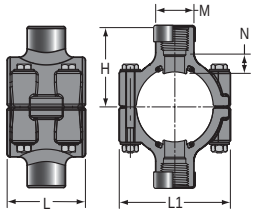
4) Clamp-On Saddles w/Stainless Steel Bolts & FKM O-ring Seal, Add The Letter **"SV"** Before The Dash.
e.g. Part Number 868**SV**-247 = 2x1/2 PVC Clamp On Saddle, Socket FKM O-ring, Stainless Steel Bolts.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CLAMP ON SADDLE x SR FIPT
DOUBLE OUTLET

Dimensions Also Applicable to
869**S**-XXXSR, 869**V**-XXXSR & 869**SV**-XXXSR

2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



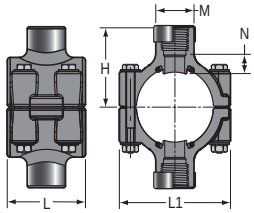
Part Number	Size	H	L	L1	M	N	Hole Size	Bolt Torque ft./lbs.	Approx. Wt. (Lbs.)
869-247SR	2x1/2	2-3/8	2-7/16	3-7/16	1-3/16	5/16	3/4	8	.56
869-248SR	2x3/4	2-1/2	2-7/16	3-7/16	1-3/8	5/8	7/8	8	.57
869-249SR	2x1	2-5/8	2-7/16	3-7/16	1-11/16	9/16	1-1/8	8	.40
869-250SR	2x1-1/4	2-3/4	2-7/16	3-7/16	2-1/16	11/16	1-1/2	8	.61
869-251SR	2x1-1/2	2-15/16	2-7/16	3-7/16	2-3/8	3/4	1-1/2	8	.65
869-291SR	2-1/2x1-1/2	3-3/16	4-1/16	4	2-3/8	13/16	1-3/4	8	1.02
869-333SR[1]	3x1/2	3-5/16	3	4-5/8	1-3/8	15/16	7/8	8	.96
869-334SR	3x3/4	3-1/16	3	4-5/8	1-3/8	9/16	7/8	8	.93
869-335SR	3x1	3-3/16	3	4-5/8	1-11/16	9/16	1-1/8	8	.95
869-336SR[1]	3x1-1/4	4-1/32	4-3/32	4-5/8	3	1-5/16	2-1/4	8	2.01
869-337SR[1]	3x1-1/2	4-1/32	4-3/32	4-5/8	3	2-11/16	2-1/4	8	1.93
869-338SR	3x2	3-5/8	4-3/32	4-5/8	3	7/8	2-1/4	8	1.71
869-415SR[1]	4x1/2	4-3/32	3	5-9/16	2-3/8	1-1/8	1-1/8	8	1.46
869-416SR[1]	4x3/4	4-3/32	3	5-9/16	2-3/8	1-1/8	1-1/8	8	1.43
869-417SR	4x1	3-13/16	3	5-5/8	1-11/16	11/16	1-1/8	8	1.34
869-418SR[1]	4x1-1/4	4-13/32	4-3/32	5-5/8	2-3/8	1-7/32	1-3/4	8	2.02
869-419SR	4x1-1/2	4-1/8	4-3/32	5-9/16	2-3/8	15/16	1-3/4	8	1.87
869-420SR	4x2	4-3/16	4-1/8	5-5/8	3	15/16	2-1/4	8	2.08
869-421SR[1]	4x2-1/2	5	5-7/16	5-23/32	4-9/32	1-7/32	3	8	3.96
869-422SR	4x3	4-5/8	5-7/16	5-11/16	4-1/4	31/32	3	8	3.19
869-523SR[1]	6x1/2	5-13/32	3	7-3/4	1-11/16	1-3/8	1-1/8	10	2.51
869-524SR[1]	6x3/4	5-7/16	3	7-3/4	1-11/16	1-3/8	1-1/8	10	2.48
869-525SR	6x1	5-1/8	3	7-15/16	1-11/16	15/16	1-1/8	10	2.39
869-526SR[1]	6x1-1/4	5-15/16	4-1/8	7-3/4	3	1-11/16	2-1/4	10	3.79
869-527SR[1]	6x1-1/2	5-15/16	4-1/8	7-3/4	3	1-3/4	2-1/4	10	3.70
869-528SR	6x2	5-1/2	4-1/8	7-3/4	3	1-7/32	2-1/4	10	3.43
869-529SR[1]	6x2-1/2	6-7/16	6	7-15/16	4-1/4	1-9/16	3	10	5.85
869-530SR	6x3	5-15/16	6	7-15/16	4-1/4	1-1/4	3	10	5.04
869-532SR	6x4	6	6	7-15/16	5-3/16	1-3/8	4	10	6.26
869-573SR[1]	8x1/2	8-3/32	8-1/2	10-1/8	5-1/4	3	4	10	11.52

[1] Outlet sized with bushing

CLAMP ON SADDLE x SR FIPT DOUBLE OUTLET (continued)

Dimensions Also Applicable to
869**S**-XXXSR, 869**V**-XXXSR & 869**SV**-XXXSR

2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



Part Number	Size	H	L	L1	M	N	Hole Size	Bolt Torque ft./lbs.	Approx. Wt. (Lbs.)
869-574SR[1]	8x3/4	8-3/32	8-1/2	10-1/8	5-1/4	3	4	10	---
869-575SR[1]	8x1	8-3/32	8-1/2	10-1/8	5-1/4	2-13/16	4	10	---
869-576SR[1]	8x1-1/4	8-3/32	8-1/2	10-1/8	5-1/4	2-3/4	4	10	---
869-577SR[1]	8x1-1/2	8-3/32	8-1/2	10-1/8	5-1/4	2-3/4	4	10	---
869-578SR[1]	8x2	7-11/16	8-1/2	10-1/8	5-1/4	2-3/8	4	10	---
869-579SR[1]	8x2-1/2	8-1/8	8-1/2	10-1/8	5-1/4	2-1/2	4	10	---
869-580SR[1]	8x3	7-11/16	8-1/2	10-1/8	5-1/4	1-15/16	4	10	---
869-582SR	8x4	7-5/16	8-1/2	10-1/8	5-1/4	1-1/2	4	10	8.59
869-585SR	8x6	8-3/32	8-1/2	10-1/8	7-5/8	2-3/32	6	10	10.32
869-624SR	10x4	8-15/32	8-1/2	12-5/16	5-1/4	2-3/16	4	10	---
869-626SR	10x6	9-9/32	8-1/2	12-5/16	7-5/8	3-3/16	6	10	---
869-664SR	12x4	9-9/16	8-1/2	14-5/16	5-1/4	1-5/8	4	10	---
869-666SR	12x6	10-3/8	8-1/2	14-5/16	7-5/8	2-1/4	6	10	---

[1] Outlet sized with bushing

1) Clamp On Saddle Standard Hardware: Zinc Bolts w/EPDM O-ring Seal
e.g. Part Number 869-247SR = 2x1/2 PVC Clamp On Saddle, SR Threaded, EPDM O-ring, Zinc Bolts.

2) Clamp On Saddles w/Stainless Steel (SS) Bolts, Add The Letter **"S"** Before The Dash.
e.g. Part Number 869**S**-247SR = 2x1/2 PVC Clamp On Saddle, SR Threaded, EPDM O-ring, Stainless Steel Bolts.

3) Clamp On Saddles w/FKM O-ring Seal, Add The Letter **"V"** Before The Dash.
e.g. Part Number 869**V**-247SR = 2x1/2 PVC Clamp-On Saddle, SR Threaded, FKM O-ring, Zinc Bolts.

4) Clamp-On Saddles w/Stainless Steel Bolts & FKM O-ring Seal, Add The Letter **"SV"** Before The Dash.
e.g. Part Number 869**SV**-247SR = 2x1/2 PVC Clamp On Saddle, SR Threaded FKM O-ring, Stainless Steel Bolts.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

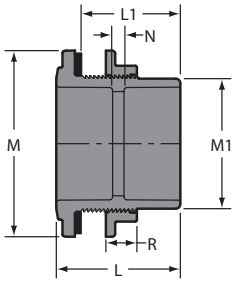
Schedule 80 Tank Adapters

NEW STYLE - TANK ADAPTER

Socket x Socket

Dimensions Also Applicable to 8170**E**-XXX & 8170**V**-XXX

150 psi @ 73°F



Part Number	Size	L	L1	M	M1	N	R	Approx. Wt. (Lbs.)
8170-002	1/4	2-1/2	1-13/16	1-1/2	1-1/16	1-3/16	1/2	.10
8170-003	3/8	2-1/2	1-27/32	1-5/8	31/32	7/8	1/2	.11
8170-005	1/2	2-15/16	2-3/16	2-1/16	1-3/16	1-1/8	5/8	.22
8170-007	3/4	2-15/16	2-3/16	2-1/4	1-5/8	15/16	5/8	.26
8170-010	1	3-5/16	2-9/16	2-5/8	2	1-1/16	5/8	.37
8170-012	1-1/4	3-7/16	2-5/8	3-1/8	2-5/16	15/16	5/8	.42
8170-015	1-1/2	3-5/8	2-13/16	3-5/8	2-11/16	13/16	5/8	.98
8170-020	2	4-1/8	3-1/4	4-7/8	3-1/4	1-1/16	3/4	1.28
8170-025	2-1/2	4-27/32	3-7/8	5-1/4	3-9/16	29/32	1	1.79
8170-030	3	5-1/2	4-1/2	6	4-9/16	1-11/16	1	2.62
8170-040	4	5	4	7-1/2	5-1/2	7/16	1-1/4	3.13
8170-080	8	8-5/8	7	12-15/16	10-1/4	1/2	1-1/2	16.02

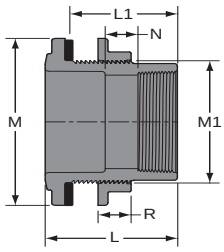
Tank Adapter Referenced Dimension Tolerance = ± 1/16"

NEW STYLE - TANK ADAPTER

Socket x Fipt

Dimensions Also Applicable to 8171**E**-XXX & 8171**V**-XXX

150 psi @ 73°F



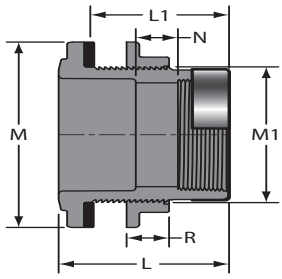
Part Number	Size	L	L1	M	M1	N	R	Approx. Wt. (Lbs.)
8171-002	1/4	2-1/2	1-13/16	1-1/2	1-1/16	1-1/4	1/2	.10
8171-003	3/8	2-1/2	1-13/16	1-5/8	1-3/16	1-3/16	1/2	.11
8171-005	1/2	2-15/16	2-3/16	2-1/16	1-3/16	1-1/4	5/8	.22
8171-007	3/4	2-15/16	2-15/32	2-1/4	1-5/8	1-3/16	5/8	.25
8171-010	1	3-5/16	2-13/16	2-5/8	1-31/32	1-1/4	5/8	.36
8171-012	1-1/4	3-13/32	2-27/32	3-3/32	2-5/16	1-17/32	5/8	.50
8171-015	1-1/2	3-5/8	2-13/16	3-5/8	2-11/16	1-1/4	5/8	.67
8171-020	2	4-1/8	3-1/4	4-7/8	3-1/4	1-5/8	3/4	1.32
8171-025	2-1/2	4-7/8	7/8	5-1/4	3-13/16	1-13/16	1	1.78
8171-030	3	5-1/2	4-1/2	6	4-9/16	2-3/16	1	2.61
8171-040	4	5	4	7-1/2	5-1/2	1-1/4	1-1/4	3.24
8171-060	6	4-31/32	4-1/16	10-1/16	7-11/16	1/16	1-1/4	5.65

NEW STYLE - TANK ADAPTER

Socket x SR Fipt

Dimensions Also Applicable to
8171**E**-XXXSR & 8171**V**-XXXSR

150 psi @ 73°F



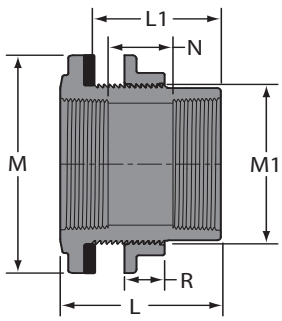
Part Number	Size	L	L1	M	M1	N	R	Approx. Wt. (Lbs.)
8171-002SR	1/4	2-1/2	1-13/16	1-1/2	1-1/16	1-1/4	1/2	.11
8171-003SR	3/8	2-1/2	1-13/16	1-5/8	1-3/16	1-3/16	1/2	.12
8171-005SR	1/2	2-15/16	2-1/4	2-1/16	1-7/32	1-9/32	5/8	.22
8171-007SR	3/4	2-15/16	2-3/16	2-1/4	1-5/8	1-1/4	5/8	.26
8171-010SR	1	3-5/16	2-13/16	2-5/8	1-31/32	1-1/4	5/8	.36
8171-012SR	1-1/4	3-13/32	2-5/8	3-3/32	2-5/16	1-17/32	5/8	.50
8171-015SR	1-1/2	3-5/8	2-13/16	3-5/8	2-11/16	1-1/4	5/8	.70
8171-020SR	2	4-1/8	3-1/4	4-7/8	3-1/4	1-5/8	3/4	1.36
8171-025SR	2-1/2	4-7/8	3-7/8	5-1/4	3-13/16	1-11/16	1	1.90
8171-030SR	3	5-1/2	4-1/2	6	4-9/16	2-3/16	1	2.78
8171-040SR	4	5	4	7-1/2	5-1/2	1-1/4	1-1/4	3.60
8171-060SR	6	4-31/32	4-1/16	10-1/16	7-11/16	1/16	1-1/4	5.74

NEW STYLE - TANK ADAPTER

Fipt x Fipt

Dimensions Also Applicable
to 8172**E**-XXX & 8172**V**-XXX

150 psi @ 73°F



Part Number	Size	L	L1	M	M1	N	R	Approx. Wt. (Lbs.)
8172-002	1/4	2-1/2	1-13/16	1-1/2	1-1/16	1-5/16	1/2	.10
8172-003	3/8	2-1/2	1-13/16	1-5/8	1-3/16	1-3/8	1/2	.13
8172-005	1/2	2-15/16	2-3/16	2-1/16	1-3/16	1-13/32	5/8	.23
8172-007	3/4	2-15/16	2-15/32	2-1/4	1-5/8	1-1/2	5/8	.25
8172-010	1	3-5/16	2-13/16	2-5/8	1-31/32	1-1/4	5/8	.36
8172-012	1-1/4	3-13/32	2-27/32	3-3/32	2-5/16	1-17/32	5/8	.50
8172-015	1-1/2	3-19/32	3-1/16	3-19/32	2-21/32	1-11/16	5/8	.68
8172-020	2	4-1/8	3-1/4	4-7/8	3-1/4	2-3/16	3/4	1.34
8172-025	2-1/2	4-7/8	3-7/8	5-1/4	3-13/16	2-1/4	1	1.91
8172-030	3	5-1/2	4-1/2	6	4-9/16	2-11/16	1	2.80
8172-040	4	5	4	7-1/2	5-1/2	2	1-1/4	3.53
8172-060	6	5	4-3/16	9-7/8	7-31/32	1-5/32	1-1/4	5.90

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

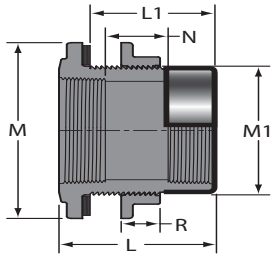
Schedule 80 Tank Adapters

NEW STYLE - TANK ADAPTER

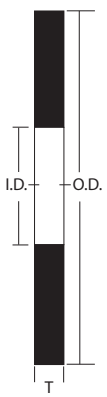
Fipt x SR Fipt

Dimensions Also Applicable to 8172**E**-XXXSR & 8172**V**-XXXSR

150 psi @ 73°F



Part Number	Size	L	L1	M	M1	N	R	Approx. Wt. (Lbs.)
8172-002SR	1/4	2-1/2	1-7/8	1-9/16	1-1/16	1-5/16	1/2	.12
8172-003SR	3/8	2-1/2	1-13/16	1-5/8	1-3/16	1-3/8	1/2	.14
8172-005SR	1/2	2-15/16	2-3/16	2-1/16	1-7/32	1-13/32	5/8	.24
8172-007SR	3/4	2-15/16	2-15/32	2-1/4	1-5/8	1-3/16	5/8	.26
8172-010SR	1	3-15/16	2-19/32	2-5/8	1-31/32	1-1/4	5/8	.38
8172-012SR	1-1/4	3-13/32	2-27/32	3-3/32	2-5/16	1-17/32	5/8	.50
8172-015SR	1-1/2	3-5/8	2-13/16	3-5/8	2-11/16	1-3/4	5/8	.73
8172-020SR	2	4-1/8	3-1/4	4-27/32	3-1/32	2-1/8	3/4	1.34
8172-025SR	2-1/2	4-7/8	3-7/8	5-1/4	3-13/16	2-1/4	1	1.97
8172-030SR	3	5-15/32	4-17/32	5-31/32	4-17/32	2-21/32	1	2.87
8172-040SR	4	5	4	7-1/2	5-1/2	2	1-1/4	3.61

TANK ADAPTER GASKET SECTION	SIZE	O.D.*	I.D.*	T
	1/4	1.49	0.99	1/4
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	1/2	1.98	1.41	1/4
	3/4	2.20	1.57	1/4
	1	2.60	1.90	1/4
	1-1/4	3.04	2.23	1/4
	1-1/2	3.54	2.57	1/4
	2	4.76	3.15	1/4
	2-1/2	5.13	3.70	1/4
	3	5.86	4.39	1/4
	4	7.34	5.31	1/4
	6	9.85	7.95	3/16
	8	12.70	9.94	3/8

New Style Tank Adapter Gasket & Hole Size Requirements			
Tank Adapter Size	Recommended Minimum Hole Size	Minimum Inside Curvature Radius (inches)	Maximum Tank Wall Thickness (inches)
1/4	1-1/16	2.50	.50
3/8	1-3/16	3.00	.50
1/2	1-1/2	4.00	.75
3/4	1-3/4	5.00	.75
1	2	7.00	.86
1-1/4	2-3/8	9.50	.86
1-1/2	2-3/4	12.00	.86
2	3-3/8	18.50	1.19
2-1/2	3-7/8	23.50	1.50
3	4-5/8	32.50	2.00
4	5-1/2	43.50	1.25
6	8	79.50	2.06
8	10-3/8	98.00	4.25

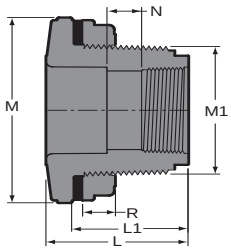
*** Both outside and inside dimensions are +/- .01 to .03 shore hardness 50-60**

OLD STYLE - TANK ADAPTER

Socket x Fipt

Dimensions Also Applicable to 871**E**-XXX

150 psi @ 73°F



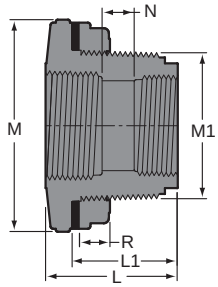
Part Number	Size	L	L1	M	M1	N	R	Approx. Wt. (Lbs.)
871-005	1/2	2-27/32	2-11/32	2-9/32	1-9/32	1-3/8	5/8	.24
871-007	3/4	2-23/32	2-7/32	2-1/2	1-5/8	29/32	5/8	.30
871-010	1	2-25/32	2-1/8	2-13/16	1-7/8	25/32	21/32	.34
871-012	1-1/4	3-1/8	2-7/16	3-29/32	2-11/32	27/32	5/8	.64
871-015	1-1/2	3-5/32	2-21/32	3-29/32	2-11/32	3/4	5/8	.55
871-020	2	3-3/16	2-17/32	4-31/32	3-15/32	13/16	3/4	1.33
871-030	3	4-19/32	3-13/16	6-7/16	4-15/32	31/32	1-3/16	2.47
871-040	4	4-7/16	3-23/32	7-7/16	5-1/2	1/2	1-1/4	3.17

OLD STYLE - TANK ADAPTER

Fipt x Fipt

Dimensions Also Applicable to 872**E**-XXX

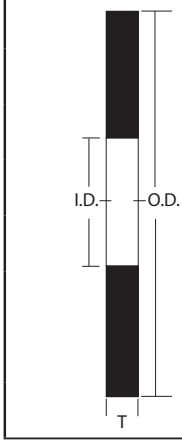
150 psi @ 73°F



Part Number	Size	L	L1	M	M1	N	R	Approx. Wt. (Lbs.)
872-005	1/2	2-27/32	2-11/32	2-9/32	1-9/32	1-13/32	5/8	.24
872-007	3/4	2-23/32	2-1/4	2-1/2	1-5/8	1-5/32	5/8	.31
872-010	1	2-25/32	2-5/16	2-13/16	1-7/8	25/32	5/8	.36
872-012	1-1/4	3-1/8	2-5/8	3-27/32	2-11/32	1-1/8	5/8	.67
872-015	1-1/2	3-1/8	2-5/8	3-29/32	2-11/32	1-1/16	5/8	.58
872-020	2	3-5/32	2-3/8	5-1/16	3-7/16	1-5/32	3/4	1.35
872-030	3	4-19/32	3-13/16	6-7/16	4-15/32	1-11/32	1-3/16	2.56
872-040	4	4-7/16	3-1/2	7-1/2	5-1/2	15/16	1-1/4	3.34

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Schedule 80 Tank Adapters

TANK ADAPTER GASKET SECTION	SIZE	O.D.*	I.D.*	T
	1/2	2.25	1.33	3/16
	3/4	2.49	1.69	3/16
	1	2.79	1.94	3/16
	1-1/4	3.81	2.39	3/16
	1-1/2	3.81	2.39	3/16
	2	4.89	3.51	3/16
	3	6.30	4.49	3/16
	4	7.33	5.50	3/16

Old Style Tank Adapter Gasket & Hole Size Requirements			
Tank Adapter Size	Recommended Minimum Hole Size	Minimum Inside Curvature Radius (inches)	Maximum Tank Wall Thickness (inches)
1/2	1-3/8	3.88	1.06
3/4	1-3/4	5.00	1.06
1	2	6.12	1.06
1-1/4	2-7/16	10.75	1.34
1-1/2	2-7/16	10.75	1.34
2	3-9/16	18.50	1.16
3	4-9/16	31.00	1.75
4	5-9/16	42.75	1.81

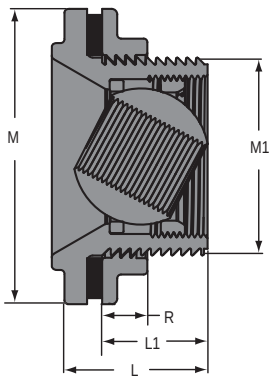
*** Both outside and inside dimensions are +/- .03 shore hardness 65-70**

SELF ALIGNING TANK ADAPTER

Fipt

Dimensions Also Applicable to 8172**ESA**-XXX & 8172**VSA**-XXX

75 psi @ 73°F



Part Number	Size	L	L1	M	M1	R	Approx. Wt. (Lbs.)
8172SA-010	1	2-9/16	1-3/4	4-7/8	3-1/4	3/4	1.11
8172SA-020	2	2-11/16	1-3/4	6	4-9/16	1	1.99
8172SA-030	3	3-1/4	2-1/4	7-1/2	5-1/2	1-1/4	2.61

Hot-Tap Saddles Dimensions & Information

Allows Connection to Existing Pipelines Under Pressure

Specially designed tapping saddle allows pipe branch connection to pressurized “Hot” lines without system shut-down. Available in PVC White, Gray or CPVC Gray configurations.

- Industrial Grade Bolt-on Saddle with EPDM or FKM O-ring Seals and Choice of Zinc Plated Steel or Type 316 Stainless Steel Hardware.
- Built-in Brass or Stainless Steel Cutter Easily Cuts Hole in PVC, CPVC, HDPE and PP Pipe. Special Design Captures and Retains Coupon from Hole.
- Pressure Rated to 235 psi @ 73°F.
- Available to fit IPS Pipe 2" through 8" with Versatile 3/4" Socket - 1" Spigot Combination Branch Outlet or 1"-1/2" Socket - 2" Spigot Combination Branch Outlet

TECHNICAL DATA

Maximum Service Temperatures

PVC	140°F
CPVC	200°F

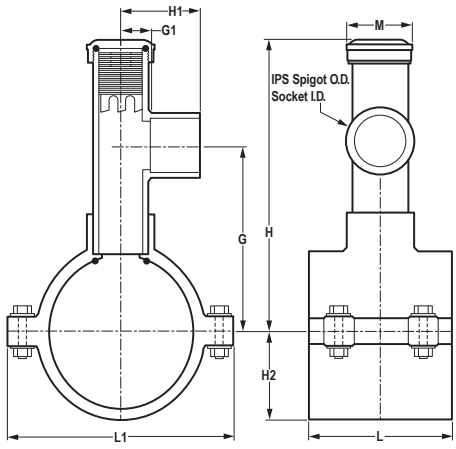
Note: Elevated service temperatures require system pressure de-rating.

Pressure Rating @ 73°F

2" – 4"	235 psi
6"	200 psi
8"	150 psi

Not for Distribution of Compressed Air or Gas

Some leakage is possible during the tapping process, therefore “hot-taps” are not recommended for corrosive or dangerous fluid medium.



Dimensions - Saddle x Socket (Spigot)

Size	G	G1	H	H 1	H2	L	L1	M
2 x 3/4 (1)	3-9/16	1	6-3/16	2	1-1/2	2-7/16	3-1/2	2
2 x 1-1/2 (2)	4-9/16	1-1/4	8-15/16	2-11/16	1-1/2	2-7/16	3-1/2	2-7/8
2-1/2 x 3/4 (1)	3-15/16	1	6-9/16	2	1-3/4	4-1/8	4-1/8	2
2-1/2 x 1-1/2 (2)	4-13/16	1-1/4	9-3/16	2-11/16	1-3/4	4-1/8	4-1/8	2-7/8
3 x 3/4 (1)	4-1/6	1	6-11/16	2	2	3	4-3/4	2
3 x 1-1/2 (2)	5-1/4	1-1/4	9-5/8	2-11/16	2	4-1/8	4-3/4	2-7/8
4 x 3/4 (1)	4-11/16	1	7-5/16	2	2-5/8	3	5-13/16	2
4 x 1-1/2 (2)	5-13/16	1-1/4	10-3/16	2-11/16	2-5/8	4-1/8	5-13/16	2-7/8
6 x 3/4 (1)	6	1	8-5/8	2	3-7/8	3	8-1/8	2
6 x 1-1/2 (2)	7-1/8	1-1/4	11-1/2	2-11/16	3-7/8	4-1/8	8-1/8	2-7/8
8 x 3/4 (1)	7-1/4	1	9-7/8	2	4-7/8	8-1/2	10-1/8	2
8 x 1-1/2 (2)	8-9/16	1-1/4	12-9/16	2-11/16	4-7/8	8-1/2	10-1/8	2-7/8

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Hot-Tap Saddle Installation

Basic Installation

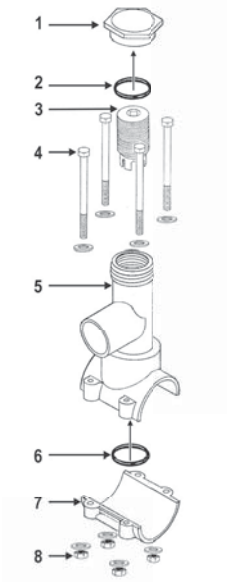
Hot-Tap Saddles are designed for adding branch connections to piping systems under live ("hot") pressure. Hot-Tap Saddle branch outlets are either 3/4" socket (with 1" Spigot O.D.) or 1-1/2" socket (with 2" Spigot O.D.) in saddle sizes 2" through 8" to fit IPS pipe using a built-in O-ring seal. Internal cutter is operated using conventional ratchet and drive extension and permanently retains coupon cut from pipe. Maximum operating pressure at 73°F is 235 psi for saddle sizes 2" - 4", 200 psi for 6" saddles & 150 psi for 8".

SEE PRODUCT INSTALLATION INSTRUCTION (HT-3A) FOR DETAILS

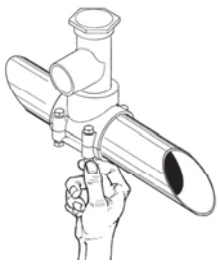
COMPONENTS

The Hot-Tap Saddle includes the following components:

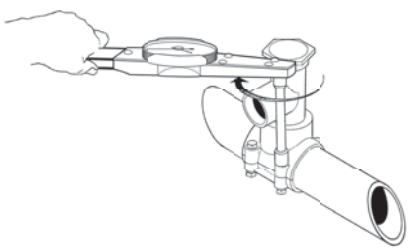
1. Cap
2. Upper O-ring
3. Hot-Tap Cutter
4. Bolt/Washer
5. Saddle Body
6. Lower O-ring
7. Saddle Bottom
8. Nut/Washer



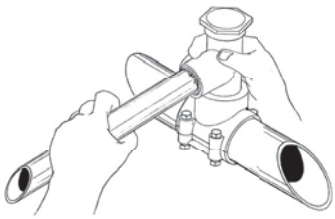
STEP 1 Assemble on Pipe



STEP 2 Torque to Specifications

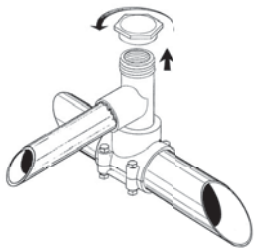


STEP 3 Cement Branch Take-off

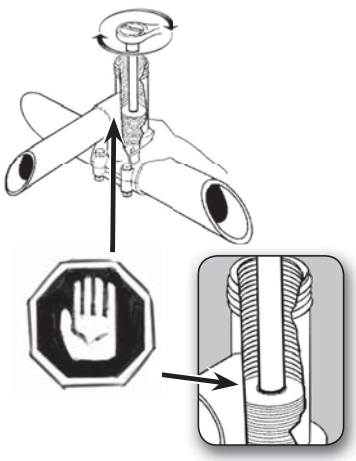


Allow joint to cure.

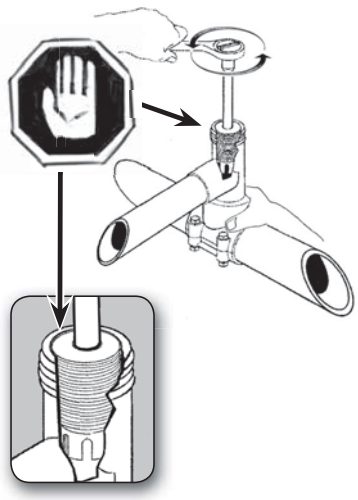
STEP 4 Remove Cap



STEP 5 Tap to Required Depth



STEP 6 Back-off Cutter to Top to Open Flow

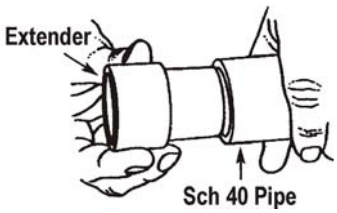


STEP 7 Reinstall Opening Sealed Cap

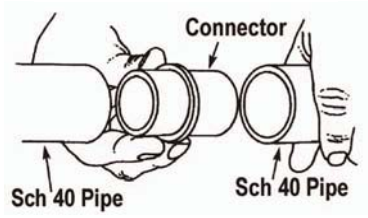
Schedule 40 Repair Fittings

Schedule 40 Pipe Repair Fittings Allow Difficult Broken Pipe Repair To Be Made Easily

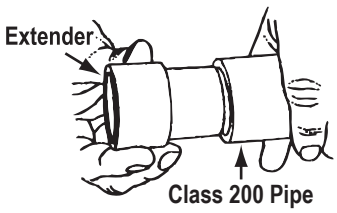
Pipe Extenders



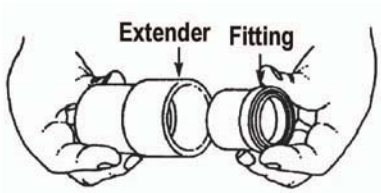
Inside Connectors



Pipe Extenders, Class 200



Extender Fittings



Repair Couplings

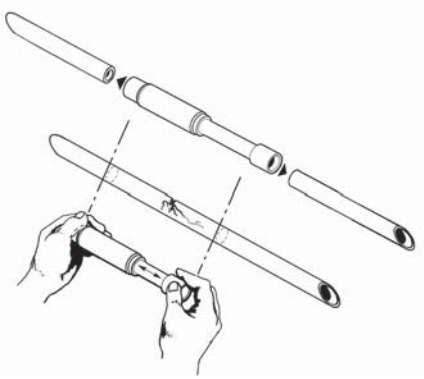
(S119) Socket x Socket

(S118) Spigot x Socket

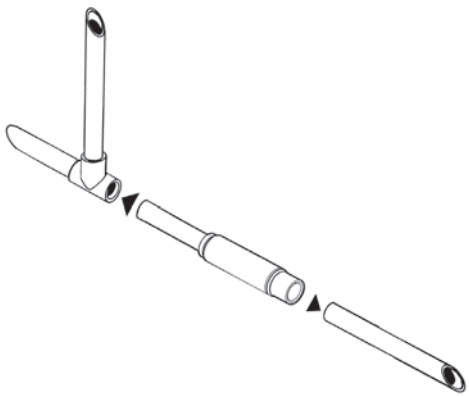
- Multi-function Telescoping Design
- Socket x Socket Configuration for Pipe Repair or Use as a Short-Stroke Expansion Joint
- Spigot x Socket Configuration for Replacing Damaged Fittings
- Both Configurations can be Easily Modified for Opposite Use
- Available in PVC White and PVC Gray
- Double O-ring Seal in EPDM or high-grade FKM
- 1/2" - 2" Pressure Rated to 235 PSI @ 73°F (23°C)
- 2-1/2" - 4" Pressure Rated to 200 PSI @ 73°F (23°C)
- 6" Pressure Rated to 150 PSI @ 73°F (23°C)
- NSF® Certified for Potable Water Use

Versatile Repair Capability

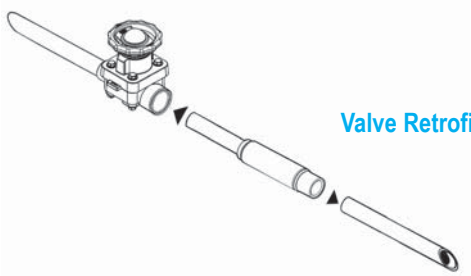
Spears® Repair Couplings provide a variety of system repair and alteration solutions. Use Socket x Socket configurations for quick pipe damage repair - can also be used as a short-stroke expansion joint to compensate for thermal expansion & contraction. Spigot x Socket configurations are excellent for lateral and riser add-ons, damaged fitting replacement, or for installing valves in existing piping systems. Order the wrong configuration? Simply cut coupling from Socket shaft end to function as a spigot or add a coupling to Spigot shaft end for Socket connections.



Pipe Damage Repair
Or Use as Expansion Joint



Lateral Add-on Or Fitting Replacement

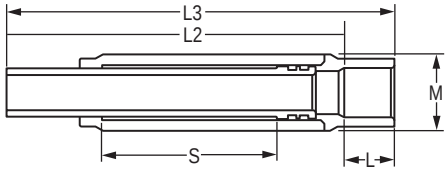


Valve Retrofit Installation

Repair Couplings

Spigot x Socket
EPDM O-ring

Pressure Rating
1/2" -2" 235 psi @ 73°F
2-1/2" -4" 200 psi @ 73°F
6" & Up 150 psi @ 73°F



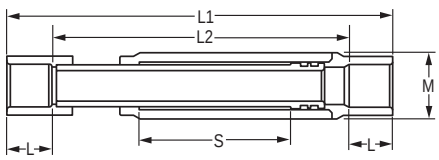
Part Number	Size	L	L2	L3	S	M	Approx. Wt. (Lbs.)
S118-05	1/2	7/8	5-7/8	6-3/4	3	1-7/16	.25
S118-07	3/4	1	7-3/8	8-1/4	4	1-3/4	.42
S118-10	1	1-1/8	7-7/8	8-7/8	4	2-1/16	.62
S118-12	1-1/4	1-1/4	8-3/8	9-5/8	4	2-7/16	.87
S118-15	1-1/2	1-3/8	8-5/8	9-7/8	4	2-11/16	1.03
S118-20	2	1-1/2	9-1/4	10-5/8	4	3-3/16	1.50
S118-25	2-1/2	1-3/4	12-3/8	13-7/8	6	3-15/16	3.48
S118-30	3	1-7/8	12-3/8	14-1/8	6	4-9/16	4.32
S118-40	4	2-1/4	13-1/4	15-1/4	6	5-11/16	6.40
S118-60	6	3	16	18-3/4	6	8-3/8	14.53

INSTALLATION NOTE: For expansion joint applications, install with unit 1/2 extended. System must be supported and blocked against thrusts and movement under pressure. May be installed with flow in either direction

Repair Couplings

Socket x Socket
EPDM O-ring

Pressure Rating
1/2" -2" 235 psi @ 73°F
2-1/2" -4" 200 psi @ 73°F
6" & Up 150 psi @ 73°F



Part Number	Size	L	L1	L2	S	M	Approx. Wt. (Lbs.)
S119-05	1/2	7/8	7-5/8	5-7/8	3	1-7/16	.28
S119-07	3/4	1	9-3/8	7-3/8	4	1-3/4	.47
S119-10	1	1-1/8	10-1/8	7-7/8	4	2-1/16	.70
S119-12	1-1/4	1-1/4	10-7/8	8-3/8	4	2-7/16	.98
S119-15	1-1/2	1-3/8	11-3/8	8-5/8	4	2-11/16	1.17
S119-20	2	1-1/2	12-1/4	9-1/4	4	3-3/16	1.72
S119-25	2-1/2	1-3/4	15-7/8	12-3/8	6	3-15/16	3.87
S119-30	3	1-7/8	16-1/8	12-3/8	6	4-9/16	4.86
S119-40	4	2-1/4	17-3/4	13-1/4	6	5-11/16	7.27
S119-60	6	3	22	16	6	8-3/8	17.17

INSTALLATION NOTE: For expansion joint applications, install with unit 1/2 extended. System must be supported and blocked against thrusts and movement under pressure. May be installed with flow in either direction

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Short Repair Couplings

Space Saving, Compact Version of Standard Repair Coupling Requires 1/3 less Space

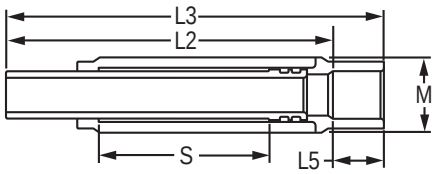
(SH119) Socket x Socket

(SH118) Spigot x Socket

- Compact Telescoping Design
- Socket x Socket Configuration for Pipe Repair or Use as a Short-Stroke Expansion Joint
- Spigot x Socket Configuration for Replacing Damaged Fittings
- Both Configurations can be Easily Modified for Opposite Use
- Available in PVC White, Sizes 1/2" - 2"
- EPDM Double O-ring Seal
- Pressure Rated to 235 PSI @ 73°F (23°C)
- NSF® Certified for Potable Water Use

Short Repair Couplings

Spigot x Socket
EPDM O-ring



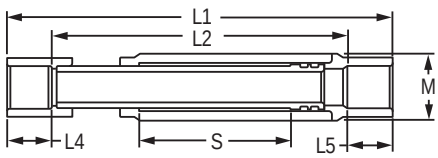
Pressure Rating
235 psi @ 73°F

Part Number	Size	L2	L3	L5	S	M	Approx. Wt. (Lbs.)
SH118-05	1/2	4-5/16	4-15/16	3/4	2	1-7/16	.19
SH118-07	3/4	4-3/4	5-7/16	13/16	2-1/4	1-3/4	.31
SH118-10	1	4-3/4	5-9/16	15/16	2-3/16	2-1/16	.39
SH118-12	1-1/4	5-11/16	6-5/8	1	2-1/2	2-7/16	.61
SH118-15	1-1/2	5-13/16	6-3/4	1-1/8	2-13/16	2-11/16	.76
SH118-20	2	7-3/8	8-5/16	1-3/16	3-1/8	3-1/4	1.17

INSTALLATION NOTE: For expansion joint applications, install with unit 1/2 extended. System must be supported and blocked against thrusts and movement under pressure. May be installed with flow in either direction.

Short Repair Couplings

Socket x Socket
EPDM O-ring



Pressure Rating
235 psi @ 73°F

Part Number	Size	L1	L2	L4	L5	S	M	Approx. Wt. (Lbs.)
SH119-05	1/2	5-7/8	4-5/16	7/8	3/4	2	1-7/16	.23
SH119-07	3/4	6-9/16	4-3/4	1	13/16	2-1/4	1-3/4	.36
SH119-10	1	6-13/16	4-3/4	1-1/8	15/16	2-3/16	2-1/16	.47
SH119-12	1-1/4	7-15/16	5-11/16	1-1/4	1	2-1/2	2-7/16	.73
SH119-15	1-1/2	8-1/4	5-13/16	1-3/8	1-1/8	2-13/16	2-11/16	.91
SH119-20	2	10-1/16	7-3/8	1-1/2	1-3/16	3-1/8	3-1/4	1.39

INSTALLATION NOTE: For expansion joint applications, install with unit 1/2 extended. System must be supported and blocked against thrusts and movement under pressure. May be installed with flow in either direction.

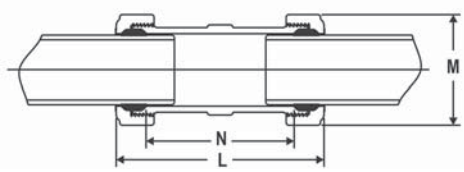
PVC Compression Couplings

Multi-Featured Design • Industrial PVC Gray • Easy-Thread Compression Nut • Converts to Spigot Coupling

Excellent for quick connections, system modifications and repairs. Spears® redesigned Compression Coupling provides improved function, broader application and increased versatility. PVC Gray Industrial unit provides broader range of Industrial and Chemical processing applications. Compression nut features strong Buttress threads engineered for easier tightening during installation. New body design has pipe-spigot dimensions allowing unit to be used to convert a socket fitting to a compression fitting. Available in IPS sizes 1/2" through 6".

- **PVC Gray Industrial Construction**
  Heavy bodied, chemical and corrosion resistant PVC Gray Industrial units provide for a broad range of applications.
- **EPDM Compression Gaskets**
  PVC Gray Industrial unit is offered with EPDM gaskets.
- **Strong, Buttress Threaded Compression Nuts**
  Revised Nut design features increased strength of Buttress thread plus greater ease of Nut installation onto Body. Superior to standard pipe or square-cut ACME type threads.
- **Full Service 150 PSI Pressure Rating**
  150 psi maximum internal pressure rating @ 73°F.
- **NSF® Certif ed for Potable Water Use**
  Compression Couplings with EPDM are certified by NSF International for use in potable water systems.
- **Spigot Conversion Capability**
  Convert socket-outlet plastic pipe fitting to compression-outlet fitting. Simply cut the Compression Coupling in half next to center holding ribs. Body now functions as a spigot for solvent weld attachment to fitting socket (for Compression Couplings through 2" only).

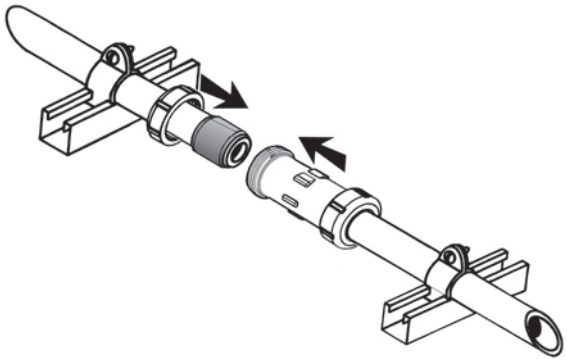
Compression Couplings



Part Number	Size (in.)	L	M	N
S110E-05G	1/2	5-3/16	1-13/16	3-3/8
S110E-07G	3/4	5-7/16	2-1/8	3-9/16
S110E-10G	1	5-11/16	2-1/2	3-3/4
S110E-12G	1-1/4	6-1/4	2-15/16	4-1/8
S110E-15G	1-1/2	6-1/2	3-5/16	4-5/8
S110E-20G	2	7-1/8	3-15/16	5-1/16
S110E-25G	2-1/2	8-11/16	4-7/8	5-7/8
S110E-30G	3	9-1/2	5-1/2	6-3/16
S110E-40G	4	11-5/16	6-3/4	7-3/8
S110E-60G	6	11-5/8	9-5/16	7-9/16

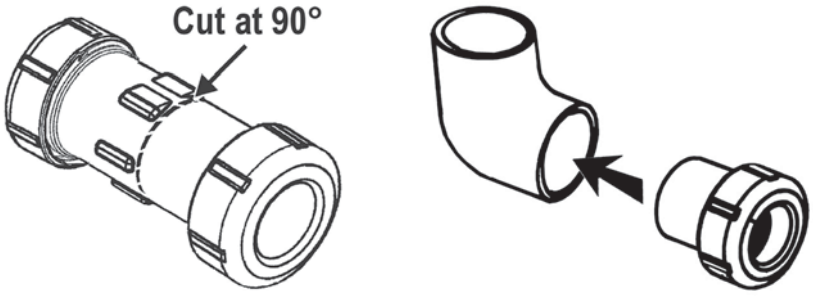
Easy Installation

Spears® Compression Couplings easily install by simply sliding nut over pipe, slip on gasket, then insert into body and tighten nuts.



Convert Fittings to Compression Outlet

Socket type fittings 3/4" through 2-1/2" can be easily converted to compression outlets sizes 1/2" through 2" by simply cutting the Compression Coupling at the center holding ribs and solvent welding the spigot body into a fitting socket.



Compression Coupling Size (in.)	Body Spigot Size (in.)
1/2	3/4
3/4	1
1	1-1/4
1-1/4	1-1/2
1-1/2	2
2	2-1/2
2-1/2	3

Important Installation Note

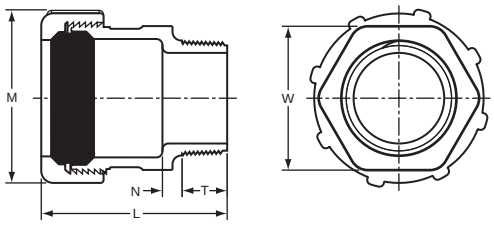
WARNING: The compression joints provide a positive seal but do not restrain pipe from thrusts and movement unde r pressure. Use of compression joint requires blocking connecting pipe to prevent any movement. Failure to do so can result in system failure or severe personal injury. Use in cold water/fluid applications only.

Compression Male Adapters

- Quickly Adapts Pipe to MIPT Thread
- Easy-Thread Compression Nut
- PVC White with Buna-N or EPDM Gasket
- 200 psi Pressure Rating
- NSF® Certified for Potable Water Use

Uses same Nut Wrench sets available for Compression Couplings

PVC Compression Male Adapters

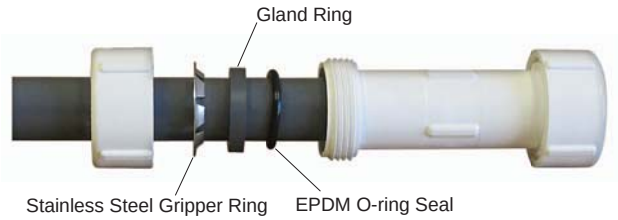


Part No.		Size	L	M	N	T	W
Buna-N	EPDM						
S130-05	S130E-05	1/2	2-11/16	1-13/16	1/4	11/16	1-1/8
S130-07	S130E-07	3/4	2-15/16	2-1/8	5/16	11/16	1-3/8
S130-10	S130E-10	1	3-3/16	2-1/2	5/16	7/8	1-11/16
S130-12	S130E-12	1-1/4	3-3/8	2-15/16	5/16	7/8	2
S130-15	S130E-15	1-1/2	3-9/16	3-5/16	3/8	29/32	2-3/8
S130-20	S130E-20	2	3-7/8	3-15/16	13/32	15/16	3

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

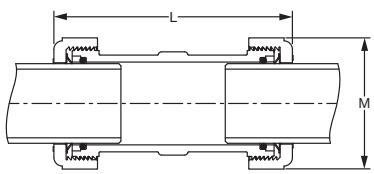
GripLoc™ Compression Couplings



GripLoc™ Compression Coupling

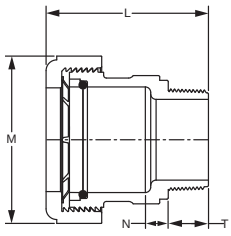
Tightening nut compresses special stainless steel Gripper Ring to firmly grip pipe and prevent potential pull-out. Compressed Gland Ring ensures positive O-ring seal against pipe.

GripLoc™ Compression Coupling



Part Number	Size (in.)	L	M
S112-05	1/2	4-3/4	1-13/16
S112-07	3/4	5-1/8	2-1/8
S112-10	1	5-7/16	2-1/2
S112-12	1-1/4	5-13/16	2-15/16
S112-15	1-1/2	6-7/16	3-5/16
S112-20	2	7-1/8	3-15/16

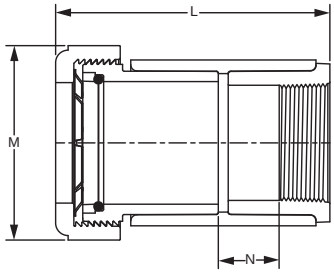
GripLoc™ Compression Male Adapters

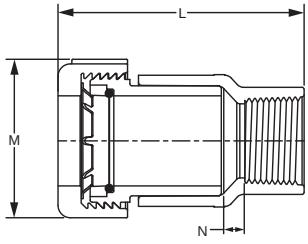


Part No.		Size	L	M	N	T
Buna-N	EPDM					
S135-05	S135E-05	1/2	2-9/16	1-13/16	1/4	11/16
S135-07	S135E-07	3/4	2-13/16	2-1/8	5/16	11/16
S135-10	S135E-10	1	3-1/8	2-1/2	5/16	7/8
S135-12	S135E-12	1-1/4	3-5/16	2-15/16	5/16	7/8
S135-15	S135E-15	1-1/2	3-1/2	3-5/16	3/8	29/32
S135-20	S135E-20	2	3-13/16	3-15/16	13/32	3

GripLoc™ Compression Female Adapters

1-1/4" - 2"





1/2" - 1"

Part No.		Size	L	M	N
Buna-N	EPDM				
S136-05	S136E-05	1/2	2-7/8	1-13/16	3/32
S136-07	S136E-07	3/4	3-5/16	2-1/8	1/4
S136-10	S136E-10	1	3-11/16	2-1/2	11/32
S136-12	S136E-12	1-1/4	4-3/16	2-15/16	9/16
S136-15	S136E-15	1-1/2	4-1/2	3-5/16	9/32
S136-20	S136E-20	2	5-1/2	3-15/16	1-1/32

GripLoc™ Compression Male Adapters

GripLoc™ Compression Female Adapters

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Flange Cut-in Repair Kit Installation Instructions

Spears® Flange Cut-In Kit Installation

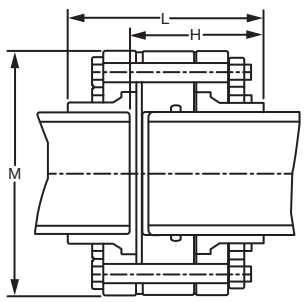
When planned system changes are needed, system downtime can be a major concern. Spears® Flange Cut-In Kit minimizes downtime for actual cut-in to allow new connection in just minutes. Kit provides all necessary components to create a flanged joint for connection to system alterations in just minutes. Special Flange Hub can be cemented to piping and allowed to cure before shutting down and cutting into system. This allows immediate joining to mating flange (included) that can also be pre-assembled to desired alteration piping.

Kit includes special Split Flange Socket Hub, O-ring Sealed Hub Body, Stainless Steel Clamp, Split Ring, Full-Faced EPDM or FKM Gasket, Mating Flange Hub & Ring, and complete set of Stainless Steel Bolts, Flat Washers and anti-seize Brass Nuts to make the final joint. Available for IPS Pipe Sizes 2" - 12".

Pressure Rated to 150 psi @ 73°F (22°C)
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply

Dimensions

Size (in.)	H	L	M
2	2-3/8	4-7/8	6
2-1/2	3-3/4	5-1/2	7
3	4	5-7/8	7-1/2
4	4-7/8	7-1/8	9
6	5-7/8	9	11
8	6-3/4	10-7/8	13-1/2
10	8-3/8	13-1/2	16
12	10	16-3/4	19



Split Flange Assembly

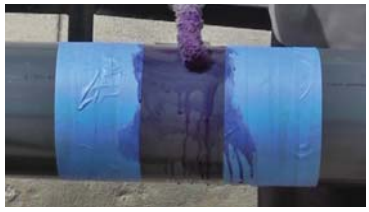
Locate and Mark Split Flange position

Sand pipe to remove gloss

Flange Cut-in Repair Kit Installation Instructions

Mask Pipe

Apply Primer



Apply Cement

Primer & Cement Split Flange

Position, Press & Hold Split Flange

Install Clamp

Torque to 15 ft-lbs

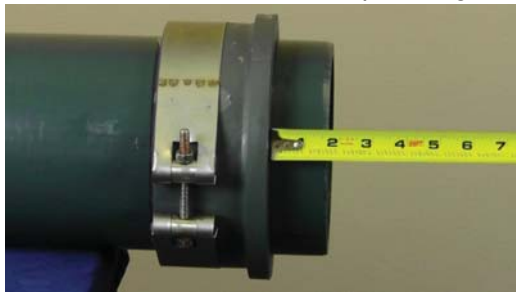
Let assembly cure (recommend over-night) prior to cutting into piping system.

Shut down and drain system; cut in as described below.

Making The Cut-In

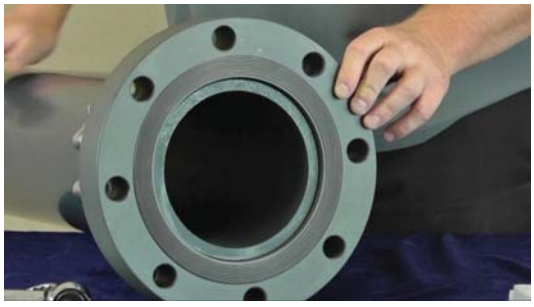
Measure from O-ring Hub Faces

Cut – In & Bevel Pipe at this Distance Minus 1/4" from Glued-on Split Flange



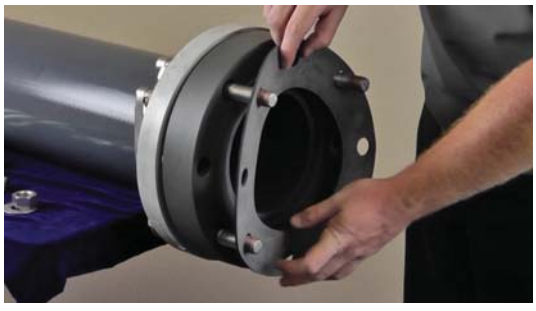
Flange Cut-in Repair Kit Installation Instructions

Install O-ring Hub; Should Be 1/4" Recess to Pipe

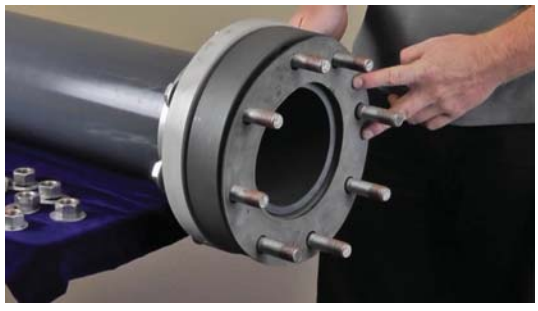


Install Split Ring, Hold in Place with 4- Lubricated Bolts & Washers

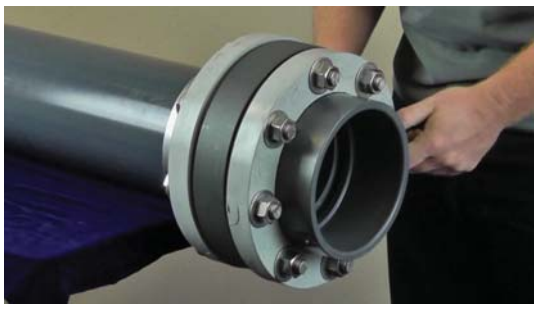
Position Elastomer Gasket



Insert Remaining Lubricated Bolts & Washers

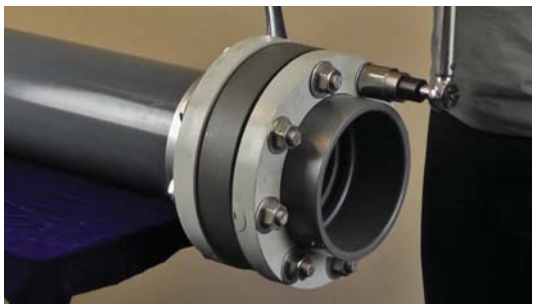


Install Mating Flange with Washers & Nuts



Mating Flange may be pre-assembled with Elbow, Tee or other configuration as desired to allow immediate system pressurization after final assembly to Flanged Cut-In.

Evenly Torque to Specification on Flange Ring using 180° Opposing Pattern



THERMOPLASTIC FLANGES
MOLDED & FABRICATED

TECHNICAL INFORMATION
WEIGHTS & DIMENSIONS

Contact Spears® for any information not found.

PVC Pipe Flange Dimensions & Information

The information contained in this publication is based on current information and Product design at the time of publication and is subject to change without notification. Our ongoing commitment to product improvement may result in some variation. No representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or results to be obtained therefrom. For verification of technical data or additional information not contained herein, please contact Spears® Technical Services Department [West Coast: (818) 364-1611 — East Coast: (678) 985-1263].

GENERAL INFORMATION

Recommendations For Installers And Users

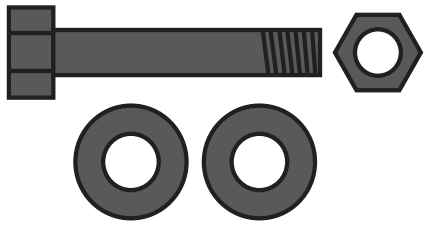
Plastic piping systems should be **ENGINEERED, INSTALLED**, and **OPERATED** in accordance with **ESTABLISHED DESIGN AND ENGINEERING STANDARDS AND PROCEDURES** for plastic piping systems. Suitability for the intended service application should be determined by the installer and /or user prior to installation of a plastic piping system. **PRIOR TO ASSEMBLY, all piping system components should be inspected for damage or irregularities. Mating components should be checked to assure that tolerances and engagements are compatible. Do not use any components that appear irregular or do not fit properly. Contact the appropriate manufacturer of the component product in question to determine usability .**

Solvent Weld Connections — Use quality solvent cements and primers formulated for the intended service application, pipe size and type of joint. While the pipe and fitting materials may be compatible with the intended medium, the solvent cement may not be. Consult the manufacturer for suitability of use. Read and follow the cement and primer manufacturers' applications and cure time instructions thoroughly. Be sure to use the correct size applicator.

Threaded Connections — Use a quality grade thread sealant. **WARNING: SOME PIPE JOINT COMPOUNDS OR PTFE PASTES MAY CONTAIN SUBSTANCES THAT COULD CAUSE STRESS CRACKING T O PLASTIC.** Spears® Manufacturing Company recommends the use of Spears® **Blue 75™** thread sealant which has been tested for compatibility with Spears® products. Please follow the sealant manufacturer's application/installation instructions. Choice of an appropriate thread sealant other than those listed above is at the discretion of the installer. 1 to 2 turns beyond **FINGER TIGHT** is generally all that is required to make a sound plastic thread connection. Unnecessary **OVERTIGHTENING** will cause **DAMAGE TO BOTH PIPE AND FITTING.**

"Lead Free" low lead certification – unless otherwise specified, all Spears® Thermoplastic Flanges specified here-in are certified by NSF International to ANSI/NSF® Standard 61, Annex G and is in compliance with California's Health & Safety Code Section 116825 (commonly known as AB1953) and Vermont Act 193. Weighted average lead content <=0.25%.

Bolt Kit Selection Guide



Bolt Hardware Kits Available
For Connection of 2-Spears® Flanges
Includes Bolts, Nuts & Flat Washers for Specified Flange Size

Order Gaskets & Bolt Kits Separately

- Pre-coated, Anti-seize Lubricated Bolts
- Available in Zinc Coated Steel, Type 316 Stainless Steel or Type 304 Stainless Steel

Flange Size	Bolts* Per Kit	Diameter (in.-TPI)	Length (in.)	Kit Part Number		
				Zinc	316 SS	304 SS
1/2 & 3/4	4	1/2 - 13	2	HK-005	HK1-005	HK2-005
1 & 1-1/4	4	1/2 - 13	2-1/4	HK-010	HK1-010	HK2-010
1-1/2	4	1/2 - 13	2-1/2	HK-015	HK1-015	HK2-015
2	4	5/8 - 11	3	HK-020	HK1-020	HK2-020
2-1/2	4	5/8 - 11	3-1/4	HK-025	HK1-025	HK2-025
3	4	5/8 - 11	3-1/2	HK-030	HK1-030	HK2-030
4	8	5/8 - 11	3-1/2	HK-040	HK1-040	HK2-040
5 & 6	8	3/4 - 10	4	HK-060	HK1-060	HK2-060
8	8	3/4 - 10	4-1/2	HK-080	HK1-080	HK2-080
10 & 12	12	7/8 - 9	5	HK-120	HK1-120	HK2-120

* Each Bolt Includes Nut & Two (2) Flat Washers

Bolt Torque

Recommended Bolt Torque is shown in **Table 1.** Threads should be clean and well lubricated. Actual field conditions may require variations in these recommendations. **CAUTION: UNNECESSARY OVER TORQUING WILL DAMAGE THE FLANGE.**

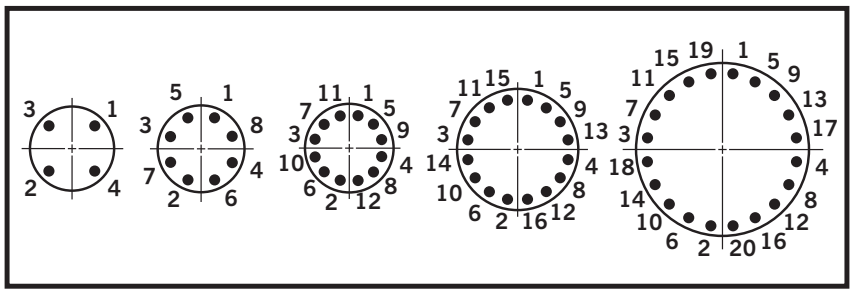
Table 1

Flange Size (in.)	Recommended Torque (ft. lbs.)
1/2 - 1-1/2	12
2 - 4	25
5	30
6 - 8	40
10	64
12	95
14 - 24	110

Torque Sequence

Bolt Torque sequence is shown Below in **Table 2.**

Table 2



Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Pipe Flange Dimensions & Information

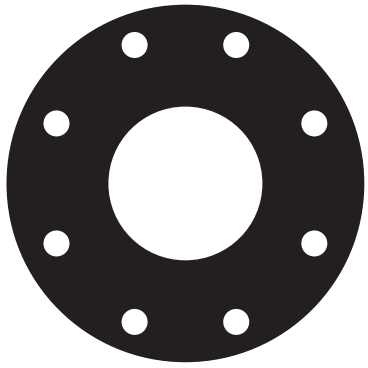
Gaskets

Full faced, 1/8" thick elastomer gaskets with a Shore "A" Durometer of approximately 70 is recommended.

Gasket Selection Guide

Following Gasket Numbers Available from Spears®

Order Gaskets & Bolt Kits Separately
- 1/8" Full-Face design with ANSI Class 150 Bolt Patterns
- Pressure rated to 150 psi @ 73°F
- Available in Buna-N, EPDM, or FKM



Flange Size	Bolts Per Kit	Gasket Part Number		
		Buna-N	EPDM	FKM
1/2	4	GK1-005	GK2-005	GK3-005
3/4	4	GK1-007	GK2-007	GK3-007
1	4	GK1-010	GK2-010	GK3-010
1-1/4	4	GK1-012	GK2-012	GK3-012
1-1/2	4	GK1-015	GK2-015	GK3-015
2	4	GK1-020	GK2-020	GK3-020
2-1/2	4	GK1-025	GK2-025	GK3-025
3	4	GK1-030	GK2-030	GK3-030
4	8	GK1-040	GK2-040	GK3-040
5	8	GK1-050	GK2-050	GK3-050
6	8	GK1-060	GK2-060	GK3-060
8	8	GK1-080	GK2-080	GK3-080
10	12	GK1-100	GK2-100	GK3-100
12	12	GK1-120	GK2-120	GK3-120

Flange Make-up

Once a flange is joined to pipe, the method for joining two flanges is as follows:

1. Piping runs joined to the flanges must be installed in a straight line position to the flange to avoid stress at the flange due to misalignment. Piping must also be secured and supported to prevent lateral movement which can create stress and damage the flange.
2. With gasket in place, align the bolt holes of the mating flanges by rotating the ring into position.
3. Insert all bolts, washers (two standard flat washers per bolt), and nuts.
4. Make sure the faces of the mating surfaces are flush against gasket prior to bolting down the flanges.
5. Tighten the nuts by hand until they are snug. Establish uniform pressure over the flange face by tightening the bolts in 5 ft.-lbs. increments according to the sequence shown in **Table 2** following a 180° opposing sequence.
6. Care must be taken to avoid "bending" the flange when joining a Spears® flange to a "raised face" flange, or a wafer-style valve. Do not use bolts to bring together improperly mated flanges.

Configuration Terminology

Multi-Bolt Pattern Ring — Bolt hole drilling accepts ANSI and Metric Flanges
Socket — Slip socket connection for solvent cement welding
Spigot — Pipe O.D. connection for solvent welding
Fipt — Female Iron Pipe Thread
SR Fipt — Spears® patented Special Reinforced (SR) plastic thread
IPS — Iron Pipe Size
PIP — Plastic Irrigation Pipe

Technical Information

Application

Molded CLASS 150 Flange fittings are coupling devices designed for joining IPS (Iron Pipe Size) plastic piping systems, where frequent disassembly may be required, and can be used as a transitional fitting for joining plastic to metal piping systems. Suitability of application is at the discretion of the user.

Pressure Rating

150 psi, water at 73°F.

Flange Types

One Piece — Available in socket configuration, sizes 1/2" through 8"; threaded and SR threaded (Special Reinforced) configuration sizes 1/2" through 4".

Van Stone Style — Two-piece design with rotating flange ring, available in socket configurations, sizes 1/2" through 16"; threaded configurations, sizes 1/2" through 4" and spigot configurations, sizes 1/2" through 12".

Blind — Closed ring design for capping off a mating flange, flanged fitting or flanged valve, available in sizes 1/2" through 12".

Materials

All injection molded flanges are produced from PVC materials approved for potable water use by the National Sanitation Foundation (NSF®).

Glass-filled PVC materials may be used in certain Van Stone Style flange rings and large diameter Blind flanges where additional reinforcement is deemed necessary.

Conformance Standards

Socket & Spigot — ASTM D 2467 (PVC).

Threads — ASTM F 1498.

Bolt Hole Pattern — ANSI B16.5; ASTM D 4024.

Material — ASTM D 1784 (PVC Cell Classification 12454-B).

Weights & Dimensions

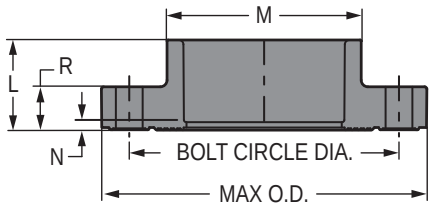
Specified minimum bolt lengths are based on the use of two Spears® Flanges, two standard flat washers, standard nut and 1/8" thick elastomer full face gasket. Mating with other brands or accessories may require variation. Bolts and gaskets are not supplied with flanges.

Dimension references:

L	=	Overall length of hub, ± 1/16 inch.
M	=	Outside diameter of socket hub, ± 1/16 inch.
N	=	(Laying Length) socket/spigot bottom to seal-ring face of flange, ± 1/16 inch.
R	=	Height (thickness) of flange ring, ± 1/16 inch.
Max O.D.	=	Outside diameter of ring, ± 1/16 inch.
Bolt Circle Diameter	=	ANSI B 16.5 Standard; ASTM D 4024, ± 1/16 inch.

Flange One Piece

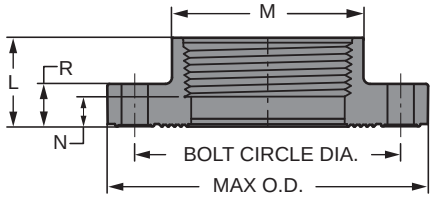
Socket



Part Number	Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)
851-005	1/2	1-1/16	1-9/32	1/8	9/16	2-3/8	4	1/2	2	3-1/2	.22
851-007	3/4	1-3/16	1-1/2	1/8	5/8	2-3/4	4	1/2	2	3-7/8	.31
851-010	1	1-5/16	1-13/16	3/16	3/4	3-1/8	4	1/2	2-1/4	4-1/4	.44
851-012	1-1/4	1-3/8	2-3/16	3/32	21/32	3-1/2	4	1/2	2-1/4	4-5/8	.42
851-015	1-1/2	1-19/32	2-1/2	3/16	23/32	3-7/8	4	1/2	2-1/2	5-1/16	.58
851-020	2	1-27/32	3	5/16	27/32	4-3/4	4	5/8	3	6	.82
851-025	2-1/2	2-1/4	3-1/2	1/2	1	5-1/2	4	5/8	3-1/4	7	1.63
851-030	3	2-5/16	4-9/32	3/8	1-1/16	6	4	5/8	3-1/4	7-1/2	1.74
851-040	4	2-7/16	5-7/32	3/16	1-5/32	7-1/2	8	5/8	3-1/2	9-1/16	2.67
851-050	5	3-1/4	6-3/8	1/4	1	8-1/2	8	3/4	3-3/4	10-1/8	3.00
851-060	6	3-1/4	7-9/16	1/4	1-3/8	9-1/2	8	3/4	4	11	4.06
851-080	8	4-17/32	9-3/4	1/2	1-7/16	11-11/16	8	3/4	4-1/2	13-5/8	7.67
851-100F	10	9-7/8	11-15/16	4-5/8	1-3/8	14-1/4	12	7/8	4	16	16.96
851-120F	12	10-11/16	14-1/8	4-7/16	1-3/8	17	12	7/8	5	19	26.37

Flange One Piece

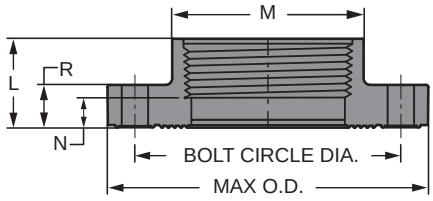
Fipt



Part Number	Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)
852-005	1/2	1-1/16	1-5/16	9/32	9/16	2-3/8	4	1/2	2	3-1/2	.21
852-007	3/4	1-3/16	1-17/32	15/32	5/8	2-3/4	4	1/2	2	3-7/8	.30
852-010	1	1-5/16	1-13/16	7/16	3/4	3-1/8	4	1/2	2-1/4	4-1/4	.41
852-012	1-1/4	1-3/8	2-7/32	17/32	23/32	3-1/2	4	1/2	2-1/4	4-5/8	.44
852-015	1-1/2	1-11/16	2-1/2	19/32	23/32	3-27/32	4	1/2	2-1/2	5-1/16	.61

Flange One Piece (continued)

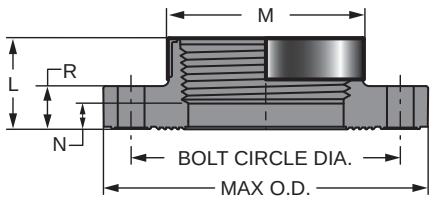
Fipt



Part Number	Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)
852-020	2	1-27/32	3	7/8	7/8	4-3/4	4	5/8	3	6	.96
852-025	2-1/2	2-1/4	3-1/2	15/16	1	5-1/2	4	5/8	3-1/4	7	1.65
852-030	3	2-5/16	4-9/32	29/32	1-1/16	6	4	5/8	3-1/4	7-1/2	1.83
852-040	4	2-1/16	5-7/16	5/16	1-1/4	7-1/2	8	5/8	3-1/2	9	2.79
852-050F	5	6-5/8	6-1/8	5-1/4	1-5/16	8-1/2	8	3/4	3-3/4	10-1/8	5.25
852-060F	6	6-15/16	7-1/4	5-1/2	1-5/16	9-1/2	8	3/4	4	11	7.16
852-080F	8	8-9/16	9-7/16	6-15/16	1-7/16	11-3/4	8	3/4	4-1/2	13-1/2	13.41
852-100F	10	7-3/8	11-3/4	5-1/2	1-3/8	14-1/4	12	7/8	5	16	20.65
852-120F	12	7	13-15/16	5	1-3/8	17	12	7/8	4	19	21.79

Special Reinforced Flange One Piece

SR Fipt

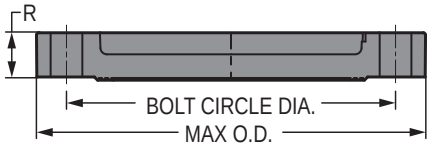


Part Number	Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)
852-005SR	1/2	1-3/32	1-7/32	11/32	9/16	2-3/8	4	1/2	2	3-1/2	.20
852-007SR	3/4	1-3/16	1-3/8	7/16	5/8	2-3/4	4	1/2	2	3-7/8	.27
852-010SR	1	1-7/16	1-23/32	17/32	21/32	3-1/8	4	1/2	2-1/4	4-1/4	.37
852-012SR	1-1/4	1-9/16	2-1/16	19/32	21/32	3-1/2	4	1/2	2-1/4	4-5/8	.49
852-015SR	1-1/2	1-3/4	2-7/16	3/4	3/4	3-7/8	4	1/2	2-1/2	5	.63
852-020SR	2	1-13/16	3-1/32	13/16	13/16	4-3/4	4	5/8	3	5-31/32	.99
852-025SR	2-1/2	2-1/8	3-19/32	3/8	1	5-1/2	4	5/8	3-1/4	7	1.58
852-030SR	3	2-5/16	4-9/32	27/32	1-1/16	6	4	5/8	3-1/4	7-1/2	1.79
852-040SR	4	2-1/2	5-1/4	1	1-5/32	7-1/2	8	5/8	3-1/2	9	2.74

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Pipe Flange Dimensions & Information

BLIND FLANGE

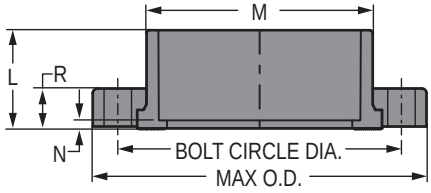


Part Number	Size	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max. O.D.	Approx. Wt. (Lbs.)
853-005	1/2	17/32	2-3/8	4	1/2	2	3-17/32	.19
853-007	3/4	5/8	2-3/4	4	1/2	2	3-7/8	.28
853-010	1	3/4	3-1/8	4	1/2	2-1/4	4-1/4	.41
853-012	1-1/4	23/32	3-1/2	4	1/2	2-1/4	4-5/8	.37
853-015	1-1/2	23/32	3-27/32	4	1/2	2-1/2	5-1/16	.50
853-020	2	27/32	4-3/4	4	5/8	3	5-31/32	.82
853-025	2-1/2	1	5-1/2	4	5/8	3-1/4	7	1.61
853-030	3	1-1/16	6	4	5/8	3-1/4	7-1/2	1.63
853-040	4	1-5/32	7-1/2	8	5/8	3-1/2	9-1/16	2.42
853-060	6	1-3/8	9-1/2	8	3/4	4	11	4.36
853-080	8	1-7/16	11-3/4	8	3/4	4-1/2	13-1/2	6.83
853-100	10	1-11/16	14-1/4	12	7/8	5	16	11.32
853-120	12	1-11/16	17	12	7/8	5	19	15.49

Flange Van Stone Style

(Two Piece)

Socket

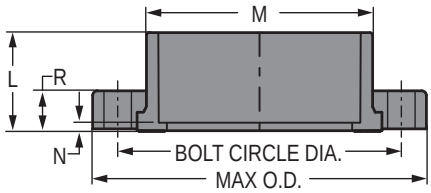


Part Number	Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)
854-005	1/2	1-1/32	1-7/32	5/32	17/32	2-3/8	4	1/2	2	3-1/2	.19
854-007	3/4	1-1/8	1-7/16	5/32	9/16	2-3/4	4	1/2	2	3-7/8	.26
854-010	1	1-9/32	1-3/4	5/32	5/8	3-1/8	4	1/2	2-1/4	4-1/4	.36
854-012	1-1/4	1-13/32	2-5/32	5/32	11/16	3-1/2	4	1/2	2-1/4	4-5/8	.46
854-015	1-1/2	1-17/32	2-7/16	3/16	3/4	3-7/8	4	1/2	2-1/2	5	.56
854-020	2	1-11/16	2-15/16	3/16	13/16	4-3/4	4	5/8	3	6	.85

Flange Van Stone Style (continued)

(Two Piece)

Socket



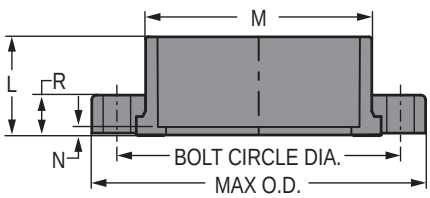
Part Number	Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)
854-025	2-1/2	2	3-1/2	3/16	31/32	5-1/2	4	5/8	3-1/4	7	1.40
854-030	3	2-1/8	4-1/4	1/4	1-1/16	6	4	5/8	3-1/4	7-1/2	1.66
854-040	4	2-1/2	5-1/4	1/4	1-1/8	7-1/2	8	5/8	3-1/2	9	2.68
854-050	5	3	6-1/4	3/8	1-1/8	8-1/2	8	3/4	3-3/4	10-1/8	3.35
854-060	6	3-3/8	7-9/16	7/16	1-9/32	9-1/2	8	3/4	4	11	4.54
854-080	8	4-3/8	9-5/16	9/32	1-3/8	11-3/4	8	3/4	4-1/2	13-1/2	6.69
854-100	10	5-11/16	11-3/4	21/32	1-5/8	14-1/4	12	7/8	5	16	11.45
854-120	12	7-1/4	13-3/4	5/8	1-1/2	17	12	7/8	5	19	16.78
854-140	14	7-1/2	15-1/2	1/2	2	18-3/4	12	1	5-1/2	21	26.84
854-160	16	8-3/4	17-3/4	3/4	2-3/8	21-1/4	16	1	6-1/2	23-1/2	37.64
854-180	18	9	20	1/4	2-3/8	22-3/4	16	1-1/8	6-1/2	25	45.33

Flange Van Stone Style

with Plastic Solid Ring

(Two Piece)

Socket



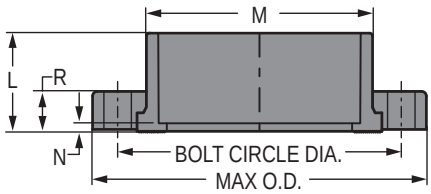
Part Number	Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)
S854-020	2	1-11/16	2-15/16	3/16	13/16	4-3/4	4	5/8	3	6	.85
S854-030	3	2-1/8	4-1/4	1/4	1-1/16	6	4	5/8	3-1/4	7-1/2	1.66
S854-040	4	2-1/2	5-1/4	1/4	1-1/8	7-1/2	8	5/8	1/2	9	3.02
S854-060	6	3-3/8	7-9/16	7/16	1-9/32	9-1/2	8	3/4	4	11	4.54

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Flange Van Stone Style (continued)

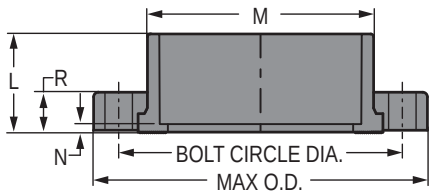
with Plastic Solid Ring
(Two Piece)
Socket



Part Number	Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)
S854-080	8	4-3/8	9-5/16	3/8	1-3/8	11-3/4	8	3/4	4-1/2	13-1/2	6.69
S854-100	10	5-11/16	11-3/4	11/16	1-5/8	14-1/4	12	7/8	5	16	11.69
S854-120	12	7-1/4	13-3/4	5/8	1-3/4	17	12	7/8	5	19	16.78

Flange Van Stone Style

with Multi-Bolt Pattern Ring
(Two Piece)
Socket



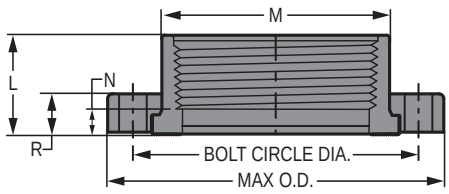
Part Number	Size	L	M	N	R	Bolt Circle Dia.		No. of Bolt Holes	Bolt Size	Max O.D.	Approx. Wt. (Lbs.)
						Min	Max				
M854-020	2	1-11/16	2-15/16	3/16	13/16	4-1/2	4-15/16	4	5/8	6	.85
M854-060	6	3-3/8	7-9/16	7/16	1-9/32	9-7/32	9-1/2	8	3/4	11	4.80
M854-080	8	4-3/8	9-5/16	3/8	1-3/8	11-1/2	11-3/4	8	3/4	13-1/2	6.69

PVC Pipe Flange Dimensions & Information

Flange Van Stone Style

(Two Piece)

Fipt

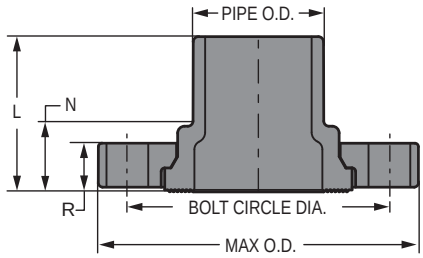


Part Number	Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max. O.D.	Approx. Wt. (Lbs.)
855-005	1/2	1-1/32	1-7/32	9/32	17/32	2-3/8	4	1/2	2	3-1/2	.19
855-007	3/4	1-5/32	1-3/8	13/32	9/16	2-3/4	4	1/2	2	3-7/8	.27
855-010	1	1-1/4	1-3/4	5/16	5/8	3-1/8	4	1/2	2-1/4	4-1/4	.36
855-012	1-1/4	1-3/8	2-1/8	13/32	11/16	3-1/2	4	1/2	2-1/4	4-5/8	.46
855-015	1-1/2	1-15/32	2-7/16	13/32	3/4	3-7/8	4	1/2	2-1/2	5	.55
855-020	2	1-9/16	2-31/32	1/2	13/16	4-3/4	4	5/8	3	6	.87
855-025	2-1/2	2	3-9/16	7/16	1	5-1/2	4	5/8	3-1/4	7	1.22
855-030	3	2-1/8	4-1/4	1/2	1-1/16	6	4	5/8	3-1/4	7-1/2	1.73
855-040	4	2-1/16	5-1/4	3/8	1-1/4	7-1/2	8	5/8	3-1/2	9	2.61
855-060F	6	6-3/8	7-3/16	4-15/16	1-1/4	9-1/2	8	3/4	4	11	7.62
855-080F	8	8-1/8	9-5/16	6-7/16	1-1/2	11-3/4	8	3/4	4-1/2	13-1/2	12.84
855-100F	10	10-3/8	11-9/16	8-9/16	1-11/16	14-1/4	12	7/8	5	16	20.65
855-120F	12	11-13/16	13-3/4	9-3/4	1-5/8	17	12	7/8	5	19	33.52

Flange Van Stone Style

(Two Piece)

Spigot



Part Number	Size	L	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max. O.D.	Approx. Wt. (Lbs.)
856-005	1/2	1-3/4	29/32	17/32	2-3/8	4	1/2	2	3-1/2	.20
856-007	3/4	1-15/16	31/32	9/16	2-3/4	4	1/2	2	3-7/8	.29
856-010	1	2-3/16	1-1/32	5/8	3-1/8	4	1/2	2-1/4	4-1/4	.39
856-012	1-1/4	2-11/32	1-3/32	11/16	3-1/2	4	1/2	2-1/4	4-5/8	.50

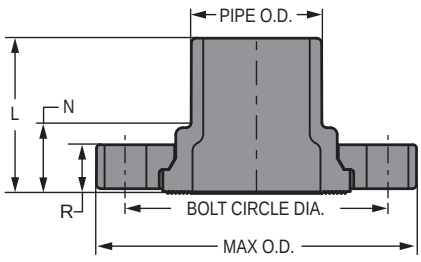
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Flange Van Stone Style (continued)

(Two Piece)

Spigot



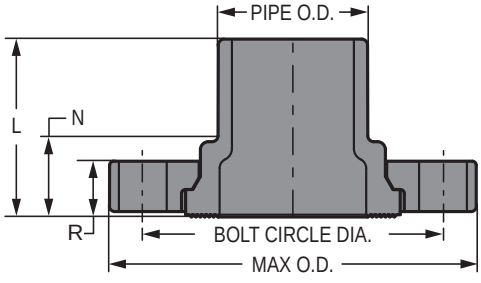
Part Number	Size	L	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max. O.D.	Approx. Wt. (Lbs.)
856-015	1-1/2	2-5/8	1-9/32	3/4	3-7/8	4	1/2	2-1/2	5	.60
856-020	2	2-7/8	1-11/32	13/16	4-3/4	4	5/8	3	6	.94
856-025	2-1/2	3-1/16	1-9/32	1	5-1/2	4	5/8	3-1/4	7	1.29
856-030	3	3-3/8	1-7/16	1-1/16	6	4	5/8	3-1/4	7-1/2	1.82
856-040	4	3-7/8	1-5/8	1-1/4	7-1/2	8	5/8	3-1/2	9	2.93
856-060	6	4-3/4	1-25/32	1-9/32	9-1/2	8	3/4	4	11	4.62
856-080	8	5-7/8	1-15/16	1-3/8	11-3/4	8	3/4	4-1/2	13-1/2	7.95
856-100	10	8	2-1/4	1-5/8	14-1/4	12	7/8	5	16	15.61
856-120	12	8-1/2	2-3/16	1-5/8	17	12	7/8	5	19	21.31

Flange Van Stone Style

with Multi-Bolt Pattern Ring

(Two Piece)

Spigot



Part Number	Size	L	N	R	Bolt Circle Dia.		No. of Bolt Holes	Bolt Size	Max. O.D.	Approx. Wt. (Lbs.)
					Min.	Max.				
M856-020	2	2-7/8	1-11/32	13/16	4-1/2	4-15/16	4	5/8	6	.94
M856-060	6	4-3/4	1-25/32	1-9/32	9-7/32	9-1/2	8	3/4	11	4.77
M856-080	8	5-7/8	1-15/16	1-3/8	11-1/2	11-3/4	8	3/4	13-1/2	7.95

PVC Pipe Flange Dimensions & Information

Technical Information

Application

Fabricated IPS and PIP Flange fittings are coupling devices designed for joining IPS (Iron Pipe Size) or PIP (Plastic Irrigation Pipe) plastic piping systems, where frequent disassembly may be required. These flanges can be used as transitional fittings for joining IPS-to-IPS, PIP-to-PIP, IPS-to-PIP, or plastic to metal piping systems. Suitability of application is at the discretion of the user.

Pressure Rating

All standard fabricated flanges are Van Stone Style (except blind flange) — two piece design with rotating flange ring.

Class 150 IPS Flanges (with steel ring): 150 psi, water at 73°F.

IPS Flanges 18" - 24" (with plastic ring): 50 psi, water at 73°F.

IPS Flanges, Class 300 Bolt Pattern (with plastic ring): 1/2" - 16" 150 psi, 18" - 24" 50 psi, water at 73°F.

Blind Flanges, 14" - 24": 50 psi, water at 73°F.

PIP Flanges, 6" - 16" (with plastic ring & molded IPS flanges w/PIP Adapters): 125 psi, water at 73°F

PIP Flanges, 18" - 24" (with steel ring): 125 psi, water at 73°F

Flange Types

Van Stone Style Class 150 IPS (with steel ring) — Fabricated PVC body with steel flange ring, available in sizes 18" through 24", slip socket and 14" through 24", spigot.

Van Stone Style IPS (with plastic ring) — Fabricated PVC body with PVC flange ring, available in sizes 18" through 24", slip socket and 14" through 24", spigot.

Van Stone Style PIP (with plastic ring) — PIP adapter fabricated to injection molded PVC Van Stone Style IPS flange, available in sizes 6" through 16", slip socket.

Van Stone Style PIP (with steel ring) — Fabricated PVC body with steel flange ring, available in sizes 14" through 24", slip socket.

Blind — Closed ring design for capping off a mating flange; fabricated PVC available in sizes 5" and 14" through 24".

Special Note On PIP Flange Sizes

In order to facilitate connections between IPS and PIP systems, all Plastic Irrigation Pipe flanges are fabricated with PIP sockets using standard IPS Flange Rings. These are indicated in dimension tables under “Size” as (nominal IPS flange size) x (actual PIP O.D.), such as: 6" x 6.140".

To better meet user needs, Spears® offers flanges for 15.300" O.D. PIP with either 14" or 16" IPS Flange Rings. In addition, both 18.360" and 18.701" O.D. PIP are offered with 18" IPS Flange Rings.

Materials

All fabricated flanges are produced from PVC materials approved for potable water use by the National Sanitation Foundation (NSF®).

Steel flange rings are carbon steel.

Conformance Standards

Materials — ASTM D 1784 (PVC Cell Classification 12454-B).

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Weights & Dimensions

Specified minimum bolt lengths are based on the use of two Spears® Flanges, two standard flat washers, standard nut and 1/8" thick elastomer full face gasket. Mating with other brands or accessories may require variations.

Note: Bolts and gaskets are not supplied with flanges.

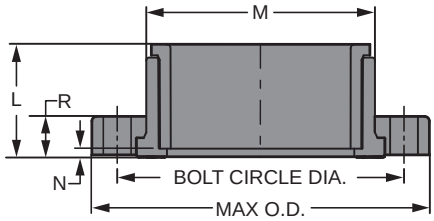
Dimension references:

L = Overall length of hub, ± 1/2 inch.
M = Outside diameter of socket hub, ± 1/4 inch.
N = (Laying Length) socket bottom to seal-ring face of flange, ± 1/2 inch.
R = Height (thickness) of flange ring, ± 1/16 inch.
Max O.D = Outside diameter of ring, ± 1/16 inch.
Bolt Circle Diameter = ANSI B16.5 Standard; ASTM D 4024, ± 1/16 inch.

Flange Van Stone Style PIP

(with Plastic Ring)

Socket

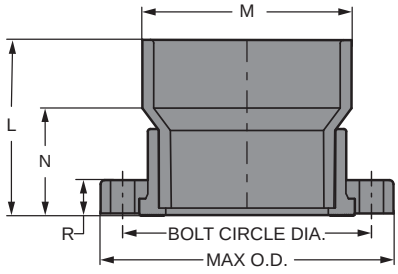


Part Number	Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)
354-060F	6x6.140	4-1/16	7-9/16	11/16	1-1/4	9-1/2	8	3/4	4	11-1/2	5.53
354-080F	8x8.160	4-15/16	9-3/8	9/16	1-1/2	11-3/4	8	3/4	4-1/2	13-5/8	8.30
354-100F	10x10.200	6-1/4	11-3/4	1	1-5/8	14-1/4	12	7/8	5	16	14.49
354-120F	12x12.240	7-5/16	13-13/16	1-1/16	1-5/8	17	12	7/8	5	19	21.59
354-151F	16x15.300	8-11/16	17-3/4	11/16	2-3/8	21-1/4	16	1	6-1/2	23-1/2	66.06

Flange Van Stone Style PIP

(with Plastic Ring)

Socket

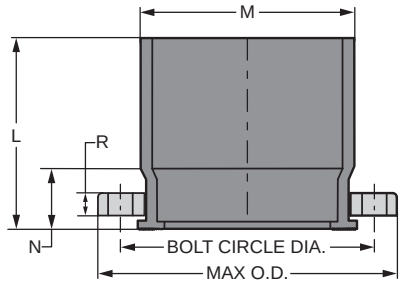


Part Number	Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)
354-150F	14x15.300	19-5/16	16-3/16	10-5/16	2	18-3/4	12	1	5-1/2	21	47.29

Flange Van Stone Style PIP

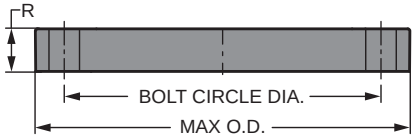
(with Steel Ring)

Socket



Part Number	Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)
354-181F	18x18.701	15-1/8	19-13/16	6-1/8	1/2	22-3/4	16	1-1/8	3	25	53.80
354-182F	18x18.360	11-5/8	19-1/2	5-5/8	1/2	22-3/4	16	1-1/8	3	25	53.80
354-200F	20x20.400	11-3/8	21-9/16	5-3/8	1/2	25	20	1-1/8	3	27-1/2	63.06
354-201F	20x22.047	16-9/16	23-1/4	6-9/16	1/2	25	20	1-1/8	3	27-1/2	64.43
354-241F	24x24.803	19-7/8	26-3/16	7-7/8	1/2	29-1/2	20	1-1/4	3	32	90.50

Blind Flange

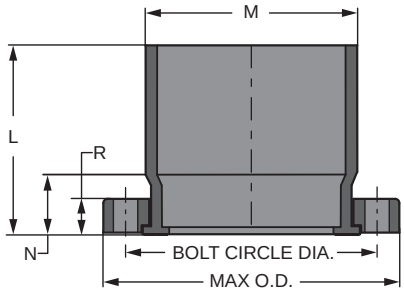


Part Number	Size	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max. O.D.	Approx. Wt. (Lbs.)
853-050F	5	1	8-1/2	8	3/4	4-1/8	10-1/16	3.63
853-140F	14	1-1/2	18-3/4	12	1	4-1/8	21	27.50
853-160F	16	1-1/2	21-1/4	16	1	4-1/8	23-1/2	33.83
853-180F	18	1-1/2	22-3/4	16	1-1/8	4-1/8	25	39.52
853-200F	20	1-1/2	25	20	1-1/8	4-1/8	27-1/2	47.67
853-240F	24	1-1/2	29-1/2	20	1-1/4	5-1/2	32	61.96

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

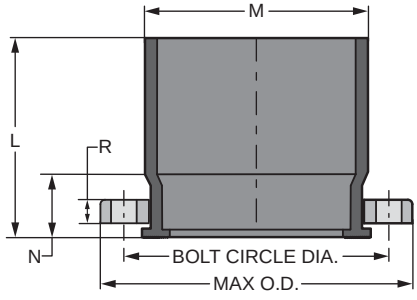
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Flange Van Stone Style IPS
(with Plastic Ring)
Socket



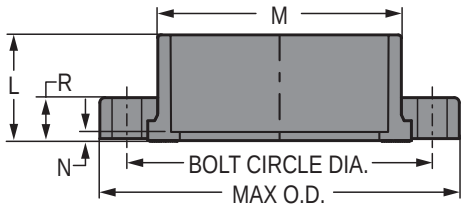
Part Number	Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)
854-180FP	18	15	19-1/8	6	1-1/2	22-3/4	16	1-1/8	4-1/8	25	36.09
854-200FP	20	16	21-3/16	6	1-1/2	25	20	1-1/8	5-1/2	27-1/2	55.09
854-240FP	24	19	25-3/8	7	1-1/2	29-1/2	20	1-1/4	5-1/2	32	80.93

Flange Van Stone Style IPS
(with Steel Ring)
Socket



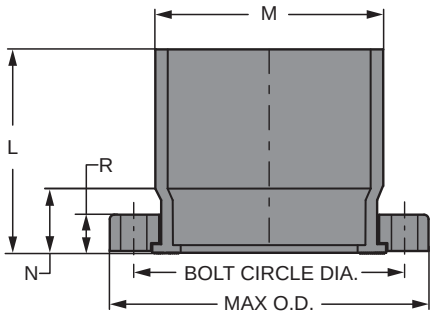
Part Number	Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)
854-120FS	12	9-5/8	13-9/16	3-3/8	1/2	17	12	7/8	3	19	---
854-140FS	14	11	14-7/8	4	1/2	18-3/4	12	1	3	21	---
854-160FS	16	13-1/2	17	5-1/2	1/2	21-1/4	16	1	3	23-1/2	---
854-180FS	18	14	19-1/8	5	1/2	22-3/4	16	1-1/8	3	25	49.30
854-200FS	20	15	21-3/16	5	1/2	25	20	1-1/8	3	27-9/16	65.00
854-240FS	24	18	25-3/8	6	1/2	29-1/2	20	1-1/4	3	32	86.15

Flange Van Stone Style Class 300
(with Plastic Ring)
Socket



Part Number	Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.
854-005CL300	1/2	1	1-3/16	3/16	1/2	2-5/8	4	1/2	2	3-3/4
854-007CL300	3/4	1-1/8	1-3/8	3/16	1	3-1/4	4	5/8	3-1/2	4-5/8
854-010CL300	1	1-1/4	1-3/4	3/16	1	3-1/2	4	5/8	3-1/2	4-7/8
854-012CL300	1-1/4	1-3/8	2-1/8	1/8	1	3-7/8	4	5/8	3-1/2	5-1/4
854-015CL300	1-1/2	1-1/2	2-7/16	3/16	1	4-1/2	4	5/8	3-1/2	6-1/8
854-020CL300	2	1-11/16	2-15/16	3/16	1	5	8	5/8	3-1/2	6-1/2
854-025CL300	2-1/2	2	3-9/16	1/4	1	5-7/8	8	3/4	3-1/2	7-1/2
854-030CL300	3	2-1/8	4-1/4	1/4	1	6-5/8	8	3/4	3-1/2	8-1/4
854-040CL300	4	2-1/2	5-1/4	1/4	1-1/2	7-7/8	8	3/4	4-1/2	10
854-060CL300	6	3-7/16	7-9/16	3/8	1-1/2	10-5/8	12	3/4	4-1/2	12-1/2
854-080CL300	8	4-3/8	9-3/8	5/16	1-1/2	13	12	7/8	4-1/2	15
854-100CL300	10	5-11/16	11-3/4	5/8	1-1/2	15-1/4	16	1	4-1/2	17-1/2
854-120CL300	12	7-5/16	13-13/16	9/16	1-1/2	17-3/4	16	1-1/8	4-1/2	20-1/2
854-140CL300	14	7-9/16	15-9/16	9/16	2	20-1/4	20	1-1/8	5-1/2	23
854-160CL300	16	8-9/16	17-3/4	9/16	2	22-1/2	20	1-1/4	6	25-1/2

Flange Van Stone Style Class 300
(with Plastic Ring)
Socket

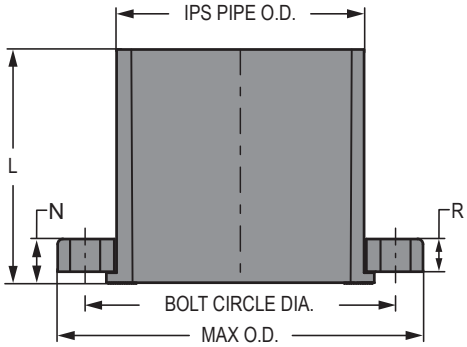


Part Number	Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)
854-180CL300	18	15	19-1/8	6	2	24-3/4	24	1-1/4	6	28	61.11
854-200CL300	20	15-1/4	21-3/16	5-1/4	2	27	24	1-1/4	6	30-1/2	68.38
854-240CL300	24	19	25-3/8	7	2	32	24	1-1/2	6	36	134.51

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

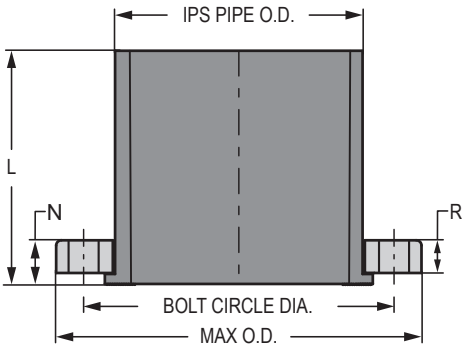
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Flange Van Stone Style IPS
(with Plastic Ring)
Spigot



Part Number	Size	L	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)
856-140FP	14	15-5/16	7-3/4	2	18-3/4	12	1	5-1/2	21	24.00
856-160FP	16	17-13/16	8-9/16	2-3/8	21-1/4	16	1	6-1/2	23-1/2	61.83
856-180FP	18	19-9/16	9-9/16	2-3/8	22-3/4	16	1-1/8	6-1/2	25	34.81
856-200FP	20	13	2-1/16	1-1/2	25	20	1-1/8	5-1/2	27-1/2	42.50
856-240FP	24	16- 3/8	2-1/8	1-1/2	29-1/2	20	1-1/4	5-1/2	32	68.00

Flange Van Stone Style IPS
(with Steel Ring)
Spigot



Part Number	Size	L	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)
856-140FS	14	10	15/16	1/2	18-3/4	12	1	3	21	36.63
856-160FS	16	11	1	1/2	21-1/4	16	1	3	23-1/2	46.50
856-180FS	18	12	1-1/16	1/2	22-3/4	16	1-1/8	3	25	47.27
856-200FS	20	13	1-1/16	1/2	25	20	1-1/8	3	27-1/2	59.00
856-240FS	24	15-3/8	1-1/8	1/2	29-1/2	20	1-1/4	3	32	84.00

CPVC Industrial Pipe

PRICING

CPVC Industrial Pipe

CPVC Schedule 40 Plain End

10' Lengths, Price Per Foot

List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PD-400-001C-10	**1/8**	10	0	745	3.60
PD-400-002C-10	**1/4**	250	0	745	4.50
PD-400-003C-10	**3/8**	730	0	745	6.35
PD-400-005C-10	**1/2**	10	0	745	1.89
PD-400-007C-10	**3/4**	10	0	745	2.52
PD-400-010C-10	**1**	10	0	745	3.68
PD-400-012C-10	**1-1/4**	10	0	745	4.98
PD-400-015C-10	**1-1/2**	10	0	745	5.97
PD-400-020C-10	**2**	10	0	745	8.00
PD-400-025C-10	**2-1/2**	10	0	745	12.64
PD-400-030C-10	**3**	10	0	745	16.51
PD-400-040C-10	**4**	10	0	745	23.52
PD-400-060C-10	**6**	10	0	745	43.40
PD-400-080C-10	**8**	10	0	745	70.68
PD-400-100C-10	**10**	10	0	745	120.87
PD-400-120C-10	**12**	10	0	745	159.67
PD-400-140C-10	**14**	10	0	945	365.21
PD-400-160C-10	**16**	10	0	945	476.76
PD-400-180C-10	**18**	10	0	945	621.98
PD-400-200C-10	**20**	10	0	945	729.90
PD-400-240C-10	**24**	10	0	945	1016.60

20' Lengths, Price Per Foot

List Price Per Foot

PD-400-001C	**1/8**	20	0	745	3.60
PD-400-002C	**1/4**	500	0	745	4.50
PD-400-003C	**3/8**	1460	0	745	6.35
PD-400-005C	**1/2**	20	0	745	1.89
PD-400-007C	**3/4**	20	0	745	2.52
PD-400-010C	**1**	20	0	745	3.68
PD-400-012C	**1-1/4**	20	0	745	4.98
PD-400-015C	**1-1/2**	20	0	745	5.97
PD-400-020C	**2**	20	0	745	8.00
PD-400-025C	**2-1/2**	20	0	745	12.64
PD-400-030C	**3**	20	0	745	16.51
PD-400-040C	**4**	20	0	745	23.52
PD-400-050C	**5**	20	0	745	35.84
PD-400-060C	**6**	20	0	745	43.40
PD-400-080C	**8**	20	0	745	70.68
PD-400-100C	**10**	20	0	745	120.87
PD-400-120C	**12**	20	0	745	159.67
PD-400-140C	**14**	20	0	945	384.44
PD-400-160C	**16**	20	0	945	501.85
PD-400-180C	**18**	20	0	945	654.71
PD-400-200C	**20**	20	0	945	768.32
PD-400-240C	**24**	20	0	945	1070.10

- Pipe sold in individual lengths or lift quantities. No cut lengths.
- No return on Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.
- See Spears® Manufacturing Company Terms and Conditions of Sale for freight requirements.

CPVC Schedule 40 Plain End (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each

20' Lengths, Price Per Foot

ASTM D-1784 ASTM F-441		Schedule 40 CPVC Plain End Pipe				
Size	Max Work Pressure	Avg OD	Min Wall	10' Length Skid Quantity FT/Pieces	20' Length Skid Quantity FT/Pieces	Weight Per FT
1/8"	910	0.405	0.068	2850/285	5700/285	.056
1/4"	790	0.540	0.088	2850/285	5700/285	.096
3/8"	620	0.675	0.091	2850/285	5700/285	.128
1/2"	600	0.840	0.109	2430/243	4860/243	.185
3/4"	480	1.050	0.113	1540/154	3080/154	.246
1"	450	1.315	0.133	2520/252	5040/252	.362
1-1/4"	370	1.660	0.140	1230/123	2460/123	.489
1-1/2"	330	1.900	0.145	1720/172	3440/172	.585
2"	280	2.375	0.154	1230/123	2460/123	.783
2-1/2"	300	2.875	0.203	540/54	1080/54	1.237
3"	260	3.500	0.216	460/46	920/46	1.619
4"	220	4.500	0.237	340/34	680/34	2.306
6"	180	6.625	0.280	170/17	340/17	4.603
8"	160	8.625	0.322	90/9	180/9	6.136
10"	140	10.750	0.365	110/11	220/11	8.886
12"	130	12.750	0.406	80/8	160/8	11.751

CPVC Schedule 80 Plain End

10' Lengths, Price Per Foot

List Price Per Foot

PD-800-001C-10	**1/8**	250	0	745	4.46
PD-800-002C-10	**1/4**	250	0	745	5.14
PD-800-003C-10	**3/8**	570	0	745	7.00
PD-800-005C-10	**1/2**	10	0	745	2.21
PD-800-007C-10	**3/4**	10	0	745	3.01
PD-800-010C-10	**1**	10	0	745	4.44
PD-800-012C-10	**1-1/4**	10	0	745	6.11
PD-800-015C-10	**1-1/2**	10	0	745	7.41
PD-800-020C-10	**2**	10	0	745	10.27
PD-800-025C-10	**2-1/2**	10	0	745	15.66
PD-800-030C-10	**3**	10	0	745	20.99
PD-800-040C-10	**4**	10	0	745	30.68
PD-800-060C-10	**6**	10	0	745	59.71
PD-800-080C-10	**8**	10	0	745	99.02
PD-800-100C-10	**10**	10	0	745	179.59
PD-800-120C-10	**12**	10	0	745	246.87
PD-800-140C-10	**14**	10	0	945	600.39
PD-800-160C-10	**16**	10	0	945	772.13
PD-800-180C-10	**18**	10	0	945	972.14
PD-800-200C-10	**20**	10	0	945	1224.48
PD-800-240C-10	**24**	10	0	945	1737.32

20' Lengths, Price Per Foot

List Price Per Foot

PD-800-001C	**1/8**	500	0	745	4.46
PD-800-002C	**1/4**	500	0	745	5.14
PD-800-003C	**3/8**	1140	0	745	7.00
PD-800-005C	**1/2**	20	0	745	2.21
PD-800-007C	**3/4**	20	0	745	3.01
PD-800-010C	**1**	20	0	745	4.44
PD-800-012C	**1-1/4**	20	0	745	6.11
PD-800-015C	**1-1/2**	20	0	745	7.41
PD-800-020C	**2**	20	0	745	10.27
PD-800-025C	**2-1/2**	20	0	745	15.66
PD-800-030C	**3**	20	0	745	20.99
PD-800-040C	**4**	20	0	745	30.68
PD-800-050C	**5**	20	0	745	42.17
PD-800-060C	**6**	20	0	745	59.71
PD-800-080C	**8**	20	0	745	99.02
PD-800-100C	**10**	20	0	745	179.59
PD-800-120C	**12**	20	0	745	246.87
PD-800-140C	**14**	20	0	945	600.39
PD-800-160C	**16**	20	0	945	772.13

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CPVC Schedule 80 Plain End (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
20' Lengths, Price Per Foot					
PD-800-180C	**18**	20	0	945	972.14
PD-800-200C	**20**	20	0	945	1224.48
PD-800-240C	**24**	20	0	945	1737.32

- Pipe sold in individual lengths or lift quantities. No cut lengths.
- No return on Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.
- See Spears® Manufacturing Company Terms and Conditions of Sale for freight requirements.

ASTM D-1784 ASTM F-441		Schedule 80 CPVC Plain End Pipe				
Size	Max Work Pressure	Avg OD	Min Wall	10' Length Skid Quantity FT/Pieces	20' Length Skid Quantity FT/Pieces	Weight Per FT
1/8"	1230	0.405	0.095	2850/285	5700/285	.069
1/4"	1130	0.540	0.119	2850/285	5700/285	.117
3/8"	920	0.675	0.126	2850/285	5700/285	.162
1/2"	850	0.840	0.147	2430/243	4860/243	.231
3/4"	690	1.050	0.154	1540/154	3080/154	.314
1"	630	1.315	0.179	2520/252	5040/252	.462
1-1/4"	520	1.660	0.191	1230/123	2460/123	.636
1-1/2"	470	1.900	0.200	1720/172	3440/172	.773
2"	400	2.375	0.218	1230/123	2460/123	1.071
2-1/2"	420	2.875	0.276	540/54	1080/54	1.631
3"	370	3.500	0.300	460/46	920/46	2.187
4"	320	4.500	0.337	340/34	680/34	3.198
6"	280	6.625	0.432	170/17	340/17	6.106
8"	250	8.625	0.500	90/9	180/9	9.322
10"	230	10.750	0.593	110/11	220/11	14.095
12"	230	12.750	0.687	80/8	160/8	19.392

CPVC Schedule 80 Fittings

PRICING

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CPVC Schedule 80 Fittings

Tee
Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
801-002C	1/4	50	300	090	14.16
801-003C	3/8	25	150	090	14.16
801-005C	1/2	25	200	090	14.16
801-007C	3/4	15	120	090	14.41
801-010C	1	15	0	090	17.66
801-012C	1-1/4	10	0	090	37.25
801-015C	1-1/2	10	0	090	42.67
801-020C	2	10	0	090	47.49
801-025C	2-1/2	10	0	090	120.91
801-030C	3	5	0	090	120.91
801-040C	4	5	0	090	160.91
801-050C	5	5	0	090	397.78
801-060C	6	2	0	090	418.74
801-080C	8	2	0	090	1199.48
801-100C	10	1	0	091	2372.94
801-100CF	10	1	0	097	1764.54
801-120C	12	1	0	091	3667.31
801-120CF	12	1	0	097	2408.22
801-140C	14	1	0	095	5452.66
801-140CF	14	1	0	097	6291.51
801-160CF	16	1	0	097	8987.85
801-180CF	18	1	0	097	10535.60
801-200CF	20	1	0	097	15941.67
801-240CF	24	1	0	097	22376.02

Tee - Reducing
Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
801-101C	3/4X1/2	15	120	090	31.59
801-130C	1X1/2	15	0	090	36.41
801-131C	1X3/4	15	0	090	36.41
801-158C	1-1/4X1X1	15	0	090	45.16
801-159C	1-1/4X1X1-1/4	15	0	090	45.16
801-166C[1]	1-1/4X1/2	10	0	090	83.49
801-167C	1-1/4X3/4	12	0	090	71.25
801-168C	1-1/4X1	15	0	090	71.25
801-202C	1-1/2X1-1/4X1	10	0	090	71.25
801-209C	1-1/2X1/2	10	0	090	74.42
801-210C	1-1/2X3/4	15	0	090	74.42
801-211C	1-1/2X1	10	0	090	74.42
801-212C	1-1/2X1-1/4	10	0	090	74.42
801-247C	2X1/2	10	0	090	88.65
801-248C	2X3/4	10	0	090	88.65
801-249C	2X1	10	0	090	88.65
801-250C[1]	2X1-1/4	10	0	090	122.83
801-251C	2X1-1/2	10	0	090	88.65
801-254C[1]	2X2X4	1	0	090	343.50
801-287C	2-1/2X1/2	10	0	090	101.80
801-288C	2-1/2X3/4	10	0	090	101.80
801-289C	2-1/2X1	10	0	090	101.80
801-290C	2-1/2X1-1/4	10	0	090	101.80
801-291C	2-1/2X1-1/2	10	0	090	101.80
801-292C	2-1/2X2	10	0	090	105.37
801-333C[1]	3X1/2	5	0	090	224.08
801-334C[1]	3X3/4	5	0	090	224.08
801-335C	3X3X1	5	0	090	180.88
801-336C[1]	3X1-1/4	5	0	090	216.95
801-337C	3X3X1-1/2	5	0	090	180.88
801-338C	3X2	5	0	090	180.88
801-339C	3X2-1/2	6	0	090	180.88
801-415C[1]	4X1/2	5	0	090	275.08
801-416C[1]	4X3/4	5	0	090	275.08
801-417C[1]	4X1	4	0	090	275.08

Tee - Reducing (continued)
Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
801-418C[1]	4X1-1/4	5	0	090	275.08
801-419C	4X1-1/2	5	0	090	275.08
801-420C	4X2	5	0	090	228.62
801-421C[1]	4X2-1/2	5	0	090	307.64
801-422C	4X3	5	0	090	228.62
801-426C[1]	4X6	4	0	090	792.52
801-488C	5X3	4	0	090	660.40
801-490C[1]	5X4	4	0	090	585.88
801-484C[1]	5X1-1/2	4	0	090	591.60
801-486C[1]	5X2	4	0	090	664.51
801-525C	6X1	4	0	090	786.36
801-525CF	6X1	1	3	097	357.62
801-526C[1]	6X1-1/4	4	0	090	786.36
801-526CF	6X1-1/4	1	3	097	435.61
801-527C[1]	6X1-1/2	4	0	090	786.36
801-527CF	6X1-1/2	1	4	097	407.57
801-528C[1]	6X2	4	0	090	730.62
801-528CF	6X2	1	4	097	427.16
801-529C[1]	6X2-1/2	4	0	090	806.60
801-529CF	6X2-1/2	1	3	097	445.66
801-530C[1]	6X3	5	0	090	730.62
801-530CF	6X3	1	3	097	467.13
801-532C	6X4	5	0	090	645.69
801-575CF	8X1	1	2	097	501.51
801-576CF	8X1-1/4	1	0	097	509.48
801-577CF	8X1-1/2	1	0	097	513.26
801-578C[1]	8X2	2	0	090	1365.04
801-578CF	8X2	1	2	097	570.99
801-579CF	8X2-1/2	1	2	097	620.56
801-580C[1]	8X3	2	0	090	1365.04
801-580CF	8X3	1	2	097	700.25
801-582C[1]	8X4	2	0	090	1365.04
801-582CF	8X4	1	2	097	753.47
801-585C	8X6	2	0	090	1185.29
801-618CF	10X1	1	0	097	781.60
801-619CF	10X1-1/4	1	0	097	792.82
801-620CF	10X1-1/2	1	0	097	829.38
801-621C[1]	10X2	1	0	091	2389.55
801-621CF	10X2	1	0	097	788.14
801-622CF	10X2-1/2	1	0	097	977.49
801-623C[1]	10X3	1	0	091	2267.66
801-623CF	10X3	1	0	097	1062.07
801-624C[1]	10X4	1	0	091	2267.66
801-624CF	10X4	1	0	097	1122.64
801-626C	10X6	1	0	091	2088.20
801-626CF	10X6	1	0	097	1230.57
801-628C[1]	10X8	1	0	091	3416.27
801-628CF	10X8	1	0	097	1427.35
801-661CF	12X2	1	0	097	1337.52
801-662CF	12X2-1/2	1	0	097	1402.63
801-663CF	12X3	1	0	097	1475.21
801-664C[1]	12X4	1	0	091	4113.36
801-664CF	12X4	1	0	097	1536.16
801-666C[1]	12X6	1	0	091	3852.78
801-666CF	12X6	1	0	097	1666.85
801-668C	12X8	1	0	091	3262.88
801-668CF	12X8	1	0	097	1866.06
801-670C[1]	12X10	1	0	091	4979.23
801-670CF	12X10	1	0	097	2153.63
801-691CF	14X2	1	0	097	2763.20
801-692CF	14X2-1/2	1	0	097	2771.35
801-693CF	14X3	1	0	097	3981.56
801-694CF	14X4	1	0	097	4126.61
801-696CF	14X6	1	0	097	4494.16
801-698C[1]	14X8	1	0	095	4004.50

CPVC Schedule 80 Fittings

Tee - Reducing (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
801-698C[1]	14X8	1	0	095	4004.50
801-698CF	14X8	1	0	097	4848.62
801-700C[1]	14X10	1	0	095	4272.50
801-700CF	14X10	1	0	097	5303.43
801-702C	14X12	1	0	095	4791.60
801-702CF	14X12	1	0	097	5830.46
801-751CF	16X2	1	0	097	3917.61
801-752CF	16X2-1/2	1	0	097	3973.69
801-753CF	16X3	1	0	097	4083.53
801-754CF	16X4	1	0	097	4235.22
801-756CF	16X6	1	0	097	5515.57
801-758CF	16X8	1	0	097	6165.58
801-760CF	16X10	1	0	097	6673.76
801-762CF	16X12	1	0	097	7464.55
801-764CF	16X14	1	0	097	8293.18
801-781CF	18X2	1	0	097	5325.66
801-783CF	18X3	1	0	097	5516.85
801-784CF	18X4	1	0	097	5320.01
801-786CF	18X6	1	0	097	7198.72
801-788CF	18X8	1	0	097	7729.63
801-790CF	18X10	1	0	097	8307.51
801-792CF	18X12	1	0	097	8883.53
801-794CF	18X14	1	0	097	9375.15
801-796CF	18X16	1	0	097	9898.45
801-814CF	20X4	1	0	097	10953.03
801-816CF	20X6	1	0	097	13033.84
801-818CF	20X8	1	0	097	13457.20
801-820CF	20X10	1	0	097	14627.86
801-822CF	20X12	1	0	097	15337.88
801-824CF	20X14	1	0	097	17087.84
801-826CF	20X16	1	0	097	18458.91
801-828CF	20X18	1	0	097	19610.53
801-904CF	24X4	1	0	097	13573.93
801-906CF	24X6	1	0	097	14639.59
801-908CF	24X8	1	0	097	14988.65
801-910CF	24X10	1	0	097	15797.55
801-912CF	24X12	1	0	097	16604.60
801-914CF	24X14	1	0	097	18044.21
801-916CF	24X16	1	0	097	21191.27
801-918CF	24X18	1	0	097	23557.84
801-920CF	24X20	1	0	097	26163.93

[1] Sized with Bushing

Tee

Soc x Fipt

802-002C	1/4	25	150	090	35.94
802-005C	1/2	20	120	090	35.94
802-007C	3/4	20	160	090	47.93
802-010C	1	15	0	090	59.91
802-012C	1-1/4	15	0	090	70.41
802-015C	1-1/2	10	0	090	70.41
802-020C	2	10	0	090	88.43
802-030C	3	5	0	090	105.39
802-040C	4	5	0	090	198.01
802-060CF	6	1	2	097	405.25
802-080CF	8	1	2	097	816.80

Tee - Reducing

Soc x Fipt

802-101C	3/4X1/2	15	60	090	22.28
802-130C	1X1/2	50	0	090	44.73

Tee - Reducing (continued)

Soc x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
802-131C	1X3/4	15	0	090	44.73
802-166C	1-1/4X1/2	25	0	090	77.08
802-167C[1]	1-1/4X3/4	15	0	090	77.08
802-168C	1-1/4X1	10	0	090	77.08
802-209C[1]	1-1/2X1/2	25	0	090	113.98
802-210C[1]	1-1/2X3/4	20	0	090	113.98
802-211C[1]	1-1/2X1	10	0	090	113.98
802-212C	1-1/2X1-1/4	10	0	090	113.98
802-247C	2X1/2	10	0	090	143.03
802-248C	2X3/4	10	0	090	143.03
802-249C	2X1	10	0	090	143.03
802-250C[1]	2X1-1/4	10	0	090	143.03
802-251C[1]	2X1-1/2	10	0	090	143.03
802-287C	2-1/2X1/2	10	0	090	187.88
802-288C[1]	2-1/2X3/4	10	0	090	187.88
802-289C[1]	2-1/2X1	10	0	090	187.88
802-290C[1]	2-1/2X1-1/4	10	0	090	187.88
802-291C[1]	2-1/2X1-1/2	10	0	090	187.88
802-292C[1]	2-1/2X2	10	0	090	207.39
802-333C[1]	3X1/2	5	0	090	317.84
802-334C[1]	3X3/4	5	0	090	317.84
802-335C[1]	3X1	5	0	090	317.84
802-336C[1]	3X1-1/4	5	0	090	317.84
802-337C[1]	3X1-1/2	5	0	090	317.84
802-338C[1]	3X2	5	0	090	317.84
802-339C[1]	3X2-1/2	5	0	090	317.84
802-415C[1]	4X1/2	5	0	090	532.29
802-416C[1]	4X3/4	5	0	090	532.29
802-417C[1]	4X1	5	0	090	532.29
802-418C[1]	4X1-1/4	5	0	090	532.29
802-419C[1]	4X1-1/2	5	0	090	532.29
802-420C[1]	4X2	5	0	090	532.29
802-421C[1]	4X2-1/2	5	0	090	532.29
802-422C[1]	4X3	5	0	090	532.29
802-525C[1]	6X1	4	0	090	1037.86
802-526C	6X1-1/4	4	0	090	1037.86
802-527C	6X1-1/2	4	0	090	1037.86
802-528C[1]	6X2	4	0	090	1037.86
802-529C[1]	6X2-1/2	4	0	090	1037.86
802-530C[1]	6X3	4	0	090	1037.86
802-532C[1]	6X4	2	0	090	1191.34
802-578C[1]	8X2	2	0	090	1973.55
802-580C[1]	8X3	2	0	090	1973.55
802-582C[1]	8X4	2	0	090	1973.55
802-621C[1]	10X2	1	0	091	2894.89
802-623C[1]	10X3	1	0	091	2894.89
802-624C[1]	10X4	1	0	091	2894.89
802-661C[1]	12X2	2	0	091	4803.17
802-663C[1]	12X3	2	0	091	4803.17
802-664C[1]	12X4	1	0	091	4803.17

[1] Sized with Bushing

Tee - Special Reinforced

Soc x SR Fipt - Stainless Steel Collar

802-005CSR	1/2	50	0	096	19.67
802-007CSR	3/4	15	120	096	28.75
802-010CSR	1	15	0	096	36.17
802-012CSR	1-1/4	15	0	096	41.96
802-015CSR	1-1/2	10	0	096	41.96
802-020CSR	2	10	0	096	68.59
802-030CSR	3	5	0	096	98.78
802-040CSR	4	5	0	096	186.09

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CPVC Schedule 80 Fittings

Tee - Special Reinforced Reducing
Soc x SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
802-072CSR	1/2X1/4	25	200	096	19.67
802-098CSR	3/4X1/4	25	100	096	26.29
802-101CSR	3/4X1/2	50	0	096	26.29
802-128CSR[1]	1X1/4	15	0	096	40.60
802-130CSR	1X1/2	50	0	096	16.06
802-131CSR	1X3/4	15	0	096	40.60
802-164CSR[1]	1-1/4X1/4	5	0	096	53.99
802-166CSR	1-1/4X1/2	15	0	096	42.77
802-168CSR	1-1/4X1	10	0	096	43.64
802-207CSR[1]	1-1/2X1/4	15	0	096	77.31
802-211CSR	1-1/2X1	10	0	096	51.24
802-212CSR	1-1/2X1-1/4	10	0	096	51.24
802-245CSR[1]	2X1/4	10	0	096	88.80
802-247CSR	2X1/2	10	0	096	79.93
802-248CSR	2X3/4	10	0	096	88.80
802-287CSR	2-1/2X1/2	10	0	096	61.07
802-331CSR[1]	3X1/4	5	0	096	169.62
802-413CSR[1]	4X1/4	5	0	096	184.06

[1] Sized with Bushing

Tee - BrassTransition
Soc x Fipt With Brass Thread Insert

802-005CBR	1/2	20	140	096	58.38
802-007CBR	3/4	25	0	096	116.75

Not intended to convey or dispense water for human consumption through drinking or cooking

Tee - BrassTransition Reducing
Soc x Fipt With Brass Thread Insert

802-101CBR	3/4X1/2	50	0	096	72.36

Not intended to convey or dispense water for human consumption through drinking or cooking

Tee - Reducing
Soc x Fipt x Soc

803-095C	3/4X1/2X3/4	50	0	090	19.94

Tee - Special Reinforced Reducing
Soc x SR Fipt - Stainless Steel Collar x Soc

(See also Gauge & Instrument Fittings for additional configurations)

803-095CSR	3/4X1/2X3/4	15	0	096	16.20

Tee
Fipt

805-002C	1/4	25	150	090	31.46
805-003C	3/8	25	150	090	31.46
805-005C	1/2	20	120	090	31.46
805-007C	3/4	15	120	090	45.32
805-010C	1	15	0	090	48.81
805-012C	1-1/4	10	0	090	49.09
805-015C	1-1/2	10	0	090	51.55
805-020C	2	10	0	090	57.26
805-025C	2-1/2	5	0	090	281.52
805-030C	3	5	0	090	326.63
805-040C	4	5	0	090	773.80

Tee - Special Reinforced
SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
805-002CSR	1/4	20	160	096	17.60
805-003CSR	3/8	25	150	096	17.60
805-005CSR	1/2	25	150	096	23.55
805-007CSR	3/4	25	100	096	26.98
805-010CSR	1	15	0	096	40.29
805-015CSR	1-1/2	10	0	096	42.78
805-020CSR	2	10	0	096	50.94

Tee - Street
Spig x Soc x Soc

844-005C	1/2	25	200	090	17.72
844-007C	3/4	15	120	090	18.02
844-010C	1	15	0	090	22.08
844-012C	1-1/4	10	0	090	46.55
844-015C	1-1/2	10	0	090	53.36
844-020C	2	10	0	090	59.40

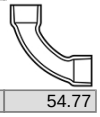
90° Ell
Soc

806-002C	1/4	50	300	090	15.41
806-003C	3/8	25	150	090	15.41
806-005C	1/2	20	240	090	6.04
806-007C	3/4	20	160	090	7.71
806-010C	1	25	0	090	12.24
806-012C	1-1/4	10	0	090	26.48
806-015C	1-1/2	10	0	090	29.54
806-020C	2	25	0	090	35.65
806-025C	2-1/2	5	0	090	82.11
806-030C	3	5	0	090	92.97
806-040C	4	5	0	090	167.44
806-050C	5	4	0	090	319.64
806-050CF	5	1	4	097	420.87
806-060C	6	4	0	090	336.46
806-080C	8	2	0	090	823.36
806-080CF	8	1	0	097	597.17
806-100C	10	1	0	091	2200.33
806-100CF	10	1	0	097	1308.26
806-120C	12	1	0	091	2977.04
806-120CF	12	1	0	097	2408.47
806-140C	14	1	0	095	4649.16
806-140CF	14	1	0	097	5991.56
806-160CF	16	1	0	097	8179.48
806-180CF	18	1	0	097	10246.01
806-200CF	20	1	0	097	11778.03
806-240CF	24	1	0	097	21320.83

90° Ell - Sweep
Soc

806-005SC	1/2	25	150	090	11.88
806-007SC	3/4	25	100	090	15.32
806-010SC	1	25	0	090	24.61
806-012SC	1-1/4	25	0	090	32.52
806-015SC	1-1/2	25	0	090	34.93
806-020SC	2	25	0	090	42.32

90° Ell - Long Sweep
Soc



806-005LSCF	1/2	25	0	097	54.77

CPVC Schedule 80 Fittings

90° Ell - Long Sweep (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
806-007LSCF	3/4	25	0	097	61.35
806-010LSCF	1	25	0	097	69.37
806-012LSCF	1-1/4	25	0	097	72.68
806-015LSCF	1-1/2	25	0	097	81.15
806-020LSCF	2	10	0	097	113.84
806-030LSCF	3	1	5	097	157.94
806-040LSCF	4	1	4	097	195.38
806-060LSCF	6	1	2	097	288.13

Not Listed for Electrical Conduit Use

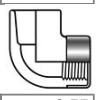
90° Ell

Soc x Fipt

807-002C	1/4	25	450	090	13.65
807-003C	3/8	25	150	090	13.65
807-005C	1/2	20	120	090	15.94
807-007C	3/4	20	160	090	18.72
807-010C	1	20	0	090	24.51
807-012C	1-1/4	10	0	090	35.94
807-015C	1-1/2	10	0	090	54.44
807-020C	2	10	0	090	69.88
807-030C	3	5	0	090	84.23
807-040C	4	5	0	090	159.28

90° Ell - Special Reinforced

Soc x SR Fipt - Stainless Steel Collar



807-005CSR	1/2	20	240	096	9.55
807-007CSR	3/4	75	0	096	11.22
807-010CSR	1	50	0	096	13.51
807-015CSR	1-1/2	10	0	096	33.53
807-020CSR	2	10	0	096	41.95
807-030CSR	3	5	0	096	61.06
807-040CSR	4	5	0	096	112.74

90° Ell - Brass Transition

Soc x Fipt With Brass Thread Insert

807-005CBR	1/2	20	240	096	51.33
807-007CBR	3/4	20	160	096	89.61

Not intended to convey or dispense water for human consumption through drinking or cooking

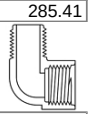
90° Ell

Fipt

808-002C	1/4	25	450	090	16.19
808-003C	3/8	25	150	090	16.19
808-005C	1/2	20	120	090	9.40
808-007C	3/4	20	120	090	14.05
808-010C	1	15	120	090	19.73
808-012C	1-1/4	10	0	090	38.00
808-015C	1-1/2	10	0	090	40.89
808-020C	2	10	0	090	54.81
808-025C	2-1/2	5	0	090	170.09
808-030C	3	5	0	090	182.39
808-040C	4	5	0	090	285.41

90° Street Ell

Mipt x Fipt



812-002C	1/4	50	300	090	23.06
812-005C	1/2	25	150	090	16.53
812-007C	3/4	25	150	090	20.11

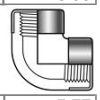
90° Street Ell (continued)

Mipt x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
812-010C	1	50	0	090	28.95

90° Ell - Special Reinforced

SR Fipt - Stainless Steel Collar



808-003CSR	3/8	25	150	096	5.77
808-005CSR	1/2	20	120	096	5.77
808-007CSR	3/4	20	160	096	8.45
808-010CSR	1	50	0	096	10.83
808-012CSR	1-1/4	25	0	096	20.84
808-015CSR	1-1/2	10	0	096	24.54
808-020CSR	2	10	0	096	32.87

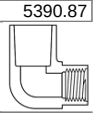
90° Street Ell

Spig x Soc

809-005C	1/2	50	200	090	7.58
809-007C	3/4	50	0	090	9.64
809-010C	1	50	0	090	15.32
809-012C	1-1/4	25	0	090	33.12
809-015C	1-1/2	10	0	090	36.96
809-020C	2	25	0	090	44.62
809-025C	2-1/2	5	0	090	90.06
809-030C	3	5	0	090	123.98
809-040C	4	4	0	090	223.26
809-060C	6	2	0	090	448.62
809-080C	8	2	0	090	1097.82
809-100C	10	1	0	091	2933.45
809-120C	12	1	0	091	3967.85
809-140C	14	1	0	095	5390.87

90° Ell - Reducing

Soc x Fipt

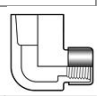


807-101C	3/4X1/2	10	60	090	15.29
807-130C[1]	1X1/2	10	80	090	21.85
807-131C[1]	1X3/4	10	80	090	21.85

[1] Sized with Bushing

90° Ell - Special Reinforced Reducing

Soc x SR Fipt - Stainless Steel Collar



807-101CSR	3/4X1/2	50	0	096	12.17
807-130CSR	1X1/2	50	0	096	13.12

90° Ell - Brass Transition Reducing

Soc x Fipt With Brass Thread Insert

807-101CBR	3/4X1/2	20	120	096	64.19

Not intended to convey or dispense water for human consumption through drinking or cooking

11-1/4° Ell

Soc

811-005CF	1/2	1	52	097	32.47
811-007CF	3/4	1	20	097	33.47
811-010CF	1	1	50	097	46.29
811-012CF	1-1/4	1	26	097	49.37
811-015C	1-1/2	25	0	090	36.92
811-020C	2	10	0	090	45.16
811-025CF	2-1/2	1	25	097	111.81
811-030C	3	10	0	090	118.57
811-040C	4	4	0	090	162.76

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CPVC Schedule 80 Fittings

11-1/4° Ell (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
811-060CF	6	1	5	097	312.57
811-080CF	8	1	3	097	593.97
811-100CF	10	1	2	097	985.97
811-120CF	12	1	2	097	1298.61
811-140CF	14	1	0	097	2757.37
811-160CF	16	1	0	097	3881.69
811-180CF	18	1	0	097	5627.37

30° Ell

Soc

815-005CF	1/2	1	25	097	32.47
815-007CF	3/4	1	25	097	33.47
815-010CF	1	1	20	097	46.29
815-012CF	1-1/4	1	15	097	49.37
815-015CF	1-1/2	1	25	097	53.23
815-020CF	2	25	0	097	100.06
815-025CF	2-1/2	1	18	097	111.81
815-030CF	3	1	10	097	124.71
815-040CF	4	1	18	097	162.85
815-060C	6	5	0	090	501.41
815-080CF	8	1	3	097	593.97
815-100CF	10	1	2	097	985.97
815-120CF	12	1	2	097	1298.61
815-140CF	14	1	0	097	2757.37
815-160CF	16	1	0	097	3881.69
815-180CF	18	1	0	097	5627.37

22-1/2° Ell

Soc

816-005C	1/2	20	240	090	8.71
816-007C	3/4	20	240	090	12.54
816-010C	1	20	160	090	19.97
816-012C	1-1/4	20	0	090	39.19
816-015C	1-1/2	20	0	090	40.27
816-020C	2	20	0	090	45.16
816-025C	2-1/2	5	0	090	113.34
816-025CF	2-1/2	1	18	097	111.81
816-030C	3	5	0	090	118.57
816-040C	4	4	0	090	162.76
816-060C	6	4	0	090	501.41
816-060CF	6	1	8	097	312.57
816-080C	8	4	0	090	1043.18
816-080CF	8	1	4	097	593.97
816-100CF	10	1	2	097	985.97
816-120CF	12	1	2	097	1298.61
816-140CF	14	1	0	097	2757.37
816-160CF	16	1	0	097	3881.69
816-180CF	18	1	0	097	5627.37

45° Ell

Soc

817-002C	1/4	25	450	090	22.92
817-003C	3/8	25	150	090	22.92
817-005C	1/2	20	120	090	7.39
817-007C	3/4	20	120	090	10.67
817-010C	1	15	120	090	16.97
817-012C	1-1/4	10	80	090	33.33
817-015C	1-1/2	10	0	090	34.22
817-020C	2	10	0	090	38.38
817-025C	2-1/2	5	0	090	78.43
817-030C	3	5	0	090	100.78

45° Ell (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
817-040C	4	5	0	090	138.35
817-050C	5	4	0	090	404.88
817-060C	6	4	0	090	426.20
817-080C	8	2	0	090	886.72
817-100C	10	1	0	091	1682.66
817-100CF	10	1	2	097	1016.13
817-120C	12	1	0	091	2960.35
817-120CF	12	1	0	097	1426.75
817-140C	14	1	0	095	3300.74
817-140CF	14	1	0	097	2984.57
817-160CF	16	1	0	097	4356.18
817-180CF	18	1	0	097	6741.28
817-200CF	20	1	0	097	8918.20
817-240CF	24	1	0	097	10755.98

15° Ell

Soc

818-005CF	1/2	1	25	097	32.47
818-007CF	3/4	1	23	097	33.47
818-010CF	1	1	20	097	46.29
818-012CF	1-1/4	1	15	097	49.37
818-015CF	1-1/2	1	25	097	53.23
818-020CF	2	1	25	097	100.06
818-025CF	2-1/2	1	18	097	111.81
818-030CF	3	1	35	097	124.71
818-040CF	4	1	18	097	162.85
818-060CF	6	1	8	097	312.57
818-080CF	8	1	3	097	593.97
818-100CF	10	1	2	097	985.97
818-120CF	12	1	0	097	1298.61
818-140CF	14	1	0	097	2757.37
818-160CF	16	1	0	097	3881.69
818-180CF	18	1	0	097	5627.37

45° Ell

Fipt

819-002C	1/4	25	450	090	21.54
819-003C	3/8	25	150	090	21.54
819-005C	1/2	25	150	090	20.40
819-007C	3/4	10	60	090	22.41
819-010C	1	10	60	090	24.66
819-012C	1-1/4	10	80	090	42.13
819-015C	1-1/2	10	0	090	42.13
819-020C	2	10	0	090	55.62
819-025C	2-1/2	5	0	090	105.44
819-030C	3	5	0	090	151.87
819-040C	4	5	0	090	238.88

45° Ell - Special Reinforced

SR Fipt - Stainless Steel Collar

819-005CSR	1/2	25	150	096	10.79
819-007CSR	3/4	10	120	096	13.19
819-010CSR	1	10	60	096	15.98

60° Ell

Soc

824-005CF	1/2	1	25	097	93.12
824-007CF	3/4	1	25	097	111.20
824-010CF	1	1	15	097	105.31
824-012CF	1-1/4	1	16	097	107.84

CPVC Schedule 80 Fittings

60° Ell (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
824-015CF	1-1/2	1	15	097	116.77
824-020CF	2	1	16	097	147.07
824-025CF	2-1/2	1	10	097	168.32
824-030CF	3	1	4	097	288.79
824-040CF	4	1	4	097	346.66
824-060CF	6	1	4	097	481.09
824-080CF	8	1	2	097	728.94
824-100CF	10	1	0	097	1467.44
824-120CF	12	1	0	097	2268.25
824-140CF	14	1	0	097	5468.05
824-160CF	16	1	0	097	7676.98
824-180CF	18	1	0	097	10650.42

45° Street Ell

Spig x Soc

827-005C	1/2	50	400	090	7.39
827-007C	3/4	50	0	090	10.67
827-010C	1	50	0	090	16.97
827-012C	1-1/4	25	0	090	33.33
827-015C	1-1/2	25	0	090	34.17
827-020C	2	10	0	090	38.38
827-025C	2-1/2	12	0	090	84.94
827-030C	3	10	0	090	100.78
827-040C	4	5	0	090	138.35
827-060C	6	4	0	090	501.41
827-080C	8	2	0	090	1043.18
827-100C	10	1	0	091	1979.60
827-120C	12	1	0	091	3482.75
827-140CF	14	1	0	097	4266.85
827-160CF	16	1	0	097	5457.93
827-180CF	18	1	0	097	7963.73

22-1/2° Street Ell

Spig x Soc

842-005C	1/2	50	400	090	9.91
842-007C	3/4	50	0	090	15.46
842-010C	1	50	0	090	24.19
842-012C	1-1/4	20	0	090	30.29
842-015C	1-1/2	25	0	090	43.55
842-020C	2	20	0	090	54.92
842-025C	2-1/2	5	0	090	100.83
842-030C	3	5	0	090	146.44
842-040C	4	4	0	090	187.79
842-060C	6	1	6	090	619.23
842-080C	8	1	2	090	1298.25
842-100CF	10	1	2	097	1001.75
842-120CF	12	1	2	097	1328.65

Cross

Soc

820-002C	1/4	25	150	090	60.36
820-005C	1/2	50	0	090	60.36
820-007C	3/4	50	0	090	63.53
820-010C	1	50	0	090	70.41
820-012C	1-1/4	25	0	090	75.34
820-015C	1-1/2	25	0	090	81.88
820-020C	2	10	0	090	106.21
820-025C	2-1/2	10	0	090	141.60
820-030C	3	5	0	090	180.33
820-040C	4	3	0	090	322.13
820-060CF	6	1	0	097	846.53

Cross (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
820-080CF	8	1	0	097	1610.20
820-100CF	10	1	0	097	2395.27
820-120CF	12	1	0	097	3403.32
820-140CF	14	1	0	097	9196.80
820-160CF	16	1	0	097	10962.05
820-180CF	18	1	0	097	14738.01

Cross - Reducing

Soc

820-101C[1]	3/4X1/2	50	0	090	78.76
820-130C[1]	1X1/2	25	0	090	93.43
820-131C	1X3/4	20	0	090	93.43
820-166C[1]	1-1/4X1/2	25	0	090	83.58
820-167C	1-1/4X3/4	25	0	090	67.80
820-168C[1]	1-1/4X1	25	0	090	134.18
820-209C[1]	1-1/2X1/2	20	0	090	148.27
820-210C	1-1/2X3/4	15	0	090	148.27
820-211C[1]	1-1/2X1	25	0	090	148.27
820-212C[1]	1-1/2X1-1/4	25	0	090	148.27
820-247C[1]	2X1/2	10	0	090	191.97
820-248C[1]	2X3/4	10	0	090	191.97
820-249C[1]	2X1	10	0	090	191.97
820-250C[1]	2X1-1/4	10	0	090	191.97
820-251C[1]	2X1-1/2	10	0	090	191.97
820-289C	2-1/2X1	15	0	090	130.53
820-290C[1]	2-1/2X1-1/4	10	0	090	246.24
820-291C[1]	2-1/2X1-1/2	8	0	090	246.24
820-292C[1]	2-1/2X2	10	0	090	246.24
820-335C[1]	3X1	4	0	090	339.07
820-336C[1]	3X1-1/4	4	0	090	339.07
820-337C[1]	3X1-1/2	4	0	090	339.07
820-338C[1]	3X2	4	0	090	339.07
820-339C[1]	3X2-1/2	4	0	090	339.07
820-420C[1]	4X2	3	0	090	500.11
820-422C[1]	4X3	3	0	090	500.11
820-420CF	4X2	1	3	097	491.43
820-528CF	6X2	1	2	097	770.93
820-530CF	6X3	1	2	097	870.96
820-532CF	6X4	1	2	097	892.04
820-578CF	8X2	1	0	097	1004.62
820-580CF	8X3	1	0	097	1054.41
820-582CF	8X4	1	0	097	987.42
820-585CF	8X6	1	0	097	1297.36
820-621CF	10X2	1	0	097	1204.62
820-623CF	10X3	1	0	097	1295.17
820-624CF	10X4	1	0	097	1354.00
820-626CF	10X6	1	0	097	1617.54
820-628CF	10X8	1	0	097	1872.68
820-661CF	12X2	1	0	097	1470.85
820-663CF	12X3	1	0	097	1616.36
820-664CF	12X4	1	0	097	1706.59
820-666CF	12X6	1	0	097	1982.00
820-668CF	12X8	1	0	097	2311.97
820-670CF	12X10	1	0	097	2751.45
820-691CF	14X2	1	0	097	2832.47
820-693CF	14X3	1	0	097	2991.55
820-694CF	14X4	1	0	097	3124.42
820-696CF	14X6	1	0	097	4297.97
820-698CF	14X8	1	0	097	4887.06
820-700CF	14X10	1	0	097	5441.75
820-702CF	14X12	1	0	097	6203.71
820-751CF	16X2	1	0	097	4022.87
820-753CF	16X3	1	0	097	4191.95
820-754CF	16X4	1	0	097	4355.78

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CPVC Schedule 80 Fittings

Cross - Reducing (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
820-756CF	16X6	1	0	097	5783.51
820-758CF	16X8	1	0	097	6392.65
820-762CF	16X12	1	0	097	7493.28
820-764CF	16X14	1	0	097	9825.52
820-781CF	18X2	1	0	097	5388.40
820-783CF	18X3	1	0	097	5593.63
820-784CF	18X4	1	0	097	6502.03
820-786CF	18X6	1	0	097	7443.87
820-788CF	18X8	1	0	097	8128.11
820-790CF	18X10	1	0	097	8913.55
820-792CF	18X12	1	0	097	9678.52
820-794CF	18X14	1	0	097	12024.76
820-796CF	18X16	1	0	097	13482.28

[1] Sized with Bushing

Coupling

Soc

829-002C	1/4	25	450	090	16.41
829-003C	3/8	25	150	090	16.41
829-005C	1/2	25	150	090	6.38
829-007C	3/4	15	90	090	8.92
829-010C	1	15	90	090	12.01
829-012C	1-1/4	10	60	090	17.99
829-015C	1-1/2	10	40	090	22.64
829-020C	2	20	0	090	26.32
829-025C	2-1/2	10	0	090	58.57
829-030C	3	5	0	090	63.64
829-040C	4	5	0	090	83.40
829-050C	5	6	0	090	186.61
829-060C	6	4	0	090	196.43
829-080C	8	4	0	090	530.87
829-100C	10	1	0	091	667.77
829-120C	12	1	0	091	782.13
829-140C	14	1	0	095	995.19
829-140CF	14	1	0	097	2195.46
829-160CF	16	1	0	097	3371.26
829-180CF	18	1	0	097	4169.98
829-200CF	20	1	0	097	5841.00
829-240CF	24	1	0	097	7299.48

Grooved Coupling Adapter

Groove x Soc

833-012C	1-1/4	10	60	090	28.71
833-015C	1-1/2	10	80	090	37.85
833-020C	2	5	40	090	49.20
833-025C	2-1/2	5	0	090	80.92
833-030C	3	5	0	090	99.77
833-040C	4	5	0	090	169.78
833-050CF	5	1	7	097	187.87
833-060C	6	5	0	090	242.87
833-080CF	8	1	4	097	306.32
833-100CF	10	1	0	097	480.74
833-120CF	12	1	0	097	678.01

Coupling

Fipt

830-002C	1/4	25	450	090	20.62
830-003C	3/8	25	150	090	20.62
830-005C	1/2	25	150	090	16.97
830-007C	3/4	25	150	090	27.41

Coupling (continued)

Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
830-010C	1	15	90	090	31.12
830-012C	1-1/4	10	60	090	33.00
830-015C	1-1/2	10	80	090	35.46
830-020C	2	10	0	090	41.80
830-025C	2-1/2	5	0	090	75.01
830-030C	3	5	0	090	87.32
830-040C	4	5	0	090	177.99
830-060CF	6	1	8	097	242.58
830-080CF	8	1	6	097	369.91

Coupling - Special Reinforced

SR Fipt - Stainless Steel Collar

830-005CSR	1/2	25	300	096	9.31
830-007CSR	3/4	25	300	096	15.04
830-010CSR	1	25	200	096	17.08
830-012CSR	1-1/4	10	120	096	18.15
830-015CSR	1-1/2	10	80	096	19.46
830-020CSR	2	10	0	096	23.00

Coupling - Reducer

Soc

829-101C	3/4X1/2	50	400	090	16.69
829-130C	1X1/2	25	200	090	23.81
829-131C	1X3/4	25	200	090	23.81
829-166C	1-1/4X1/2	25	0	090	54.52
829-167C	1-1/4X3/4	25	0	090	54.52
829-168C	1-1/4X1	25	0	090	54.52
829-209C	1-1/2X1/2	25	0	090	54.08
829-210C	1-1/2X3/4	25	0	090	54.08
829-211C	1-1/2X1	25	0	090	54.08
829-212C	1-1/2X1-1/4	25	0	090	54.08
829-247C	2X1/2	25	0	090	71.52
829-248C	2X3/4	10	80	090	71.52
829-249C	2X1	25	0	090	71.52
829-250C	2X1-1/4	10	0	090	71.52
829-251C	2X1-1/2	10	40	090	71.52
829-291C	2-1/2X1-1/2	10	0	090	81.43
829-292C	2-1/2X2	10	0	090	81.43
829-335C[1]	3X1	8	0	090	201.41
829-336C[1]	3X1-1/4	6	0	090	207.57
829-337C[1]	3X1-1/2	8	0	090	207.57
829-338C	3X2	8	0	090	164.54
829-339C	3X2-1/2	10	0	090	165.23
829-339CF	3X2-1/2	1	9	097	156.98
829-416C[1]	4X3/4	4	0	090	237.27
829-417C[1]	4X1	4	0	090	237.27
829-419C[1]	4X1-1/2	4	0	090	237.27
829-420C	4X2	6	0	090	196.28
829-421C	4X2-1/2	4	0	090	196.28
829-422C	4X3	4	0	090	196.28
829-488CF	5X3	1	6	097	193.67
829-490CF	5X4	1	6	097	122.16
829-528C[1]	6X2	6	0	090	519.26
829-529C[1]	6X2-1/2	4	0	090	611.96
829-530C[1]	6X3	12	0	090	529.88
829-532C	6X4	4	0	090	445.86
829-533CF	6X5	1	5	097	278.80
829-580CF	8X3	1	6	097	472.21
829-582C[1]	8X4	2	0	090	809.06
829-582CF	8X4	1	4	097	418.63
829-585C	8X6	2	0	090	772.53
829-621CF	10X2	1	0	097	874.77

CPVC Schedule 80 Fittings

Coupling - Reducer (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
829-623CF	10X3	1	2	097	733.64
829-624CF	10X4	1	2	097	705.16
829-625CF	10X5	1	2	097	760.05
829-626C	10X6	1	0	091	1201.39
829-626CF	10X6	1	2	097	542.96
829-628C	10X8	1	0	091	1201.39
829-628CF	10X8	1	4	097	711.46
829-664CF	12X4	1	2	097	1569.53
829-665CF	12X5	1	0	097	1568.44
829-666CF	12X6	1	0	097	1459.73
829-668C	12X8	1	0	091	1308.97
829-668CF	12X8	1	0	097	1117.05
829-670CF	12X10	1	2	097	595.68
829-694CF	14X4	1	0	097	2278.63
829-696CF	14X6	1	0	097	2151.97
829-698CF	14X8	1	0	097	1791.60
829-700CF	14X10	1	0	097	1533.43
829-702CF	14X12	1	0	097	1341.43
829-754CF	16X4	1	0	097	2807.12
829-756CF	16X6	1	0	097	2889.01
829-758CF	16X8	1	0	097	3302.15
829-760CF	16X10	1	0	097	3162.98
829-762CF	16X12	1	0	097	2997.72
829-764CF	16X14	1	0	097	2663.35
829-783CF	18X3	1	0	097	5784.52
829-784CF	18X4	1	0	097	5739.07
829-786CF	18X6	1	0	097	5696.24
829-788CF	18X8	1	0	097	5572.34
829-790CF	18X10	1	0	097	5538.84
829-792CF	18X12	1	0	097	5444.07
829-794CF	18X14	1	0	097	5358.60
829-796CF	18X16	1	0	097	3911.68
829-818CF	20X8	1	0	097	5527.60
829-826CF	20X16	1	0	097	6318.89
829-828CF	20X18	1	0	097	5855.48
829-906CF	24X6	1	0	097	9250.31
829-918CF	24X18	1	0	097	12982.88
829-920CF	24X20	1	0	097	11684.48

[1] Sized with Bushing

Coupling - Eccentric Reducer

Soc

829-101CFE	3/4X1/2	1	15	097	37.02
829-130CFE	1X1/2	1	16	097	40.16
829-131CFE	1X3/4	1	15	097	38.64
829-168CFE	1-1/4X1	1	12	097	41.98
829-209CFE	1-1/2X1/2	1	10	097	66.49
829-210CFE	1-1/2X3/4	1	10	097	79.79
829-212CFE	1-1/2X1-1/4	1	20	097	43.98
829-249CFE	2X1	1	25	097	60.15
829-250CFE	2X1-1/4	1	25	097	54.75
829-251CFE	2X1-1/2	1	10	097	53.46
829-290CFE[2]	2-1/2X1-1/4	1	10	097	91.27
829-291CFE[2]	2-1/2X1-1/2	1	20	097	91.08
829-292CFE	2-1/2X2	1	10	097	64.68
829-335CFE[2]	3X1	1	10	097	142.22
829-336CFE[2]	3X1-1/4	1	10	097	135.81
829-337CFE[2]	3X1-1/2	1	10	097	133.58
829-338CFE	3X2	1	20	097	86.60
829-339CFE	3X2-1/2	1	10	097	173.91
829-417CFE[3]	4X1	1	18	097	219.44
829-418CFE[3]	4X1-1/4	1	6	097	223.46
829-419CFE[3]	4X1-1/2	1	6	097	211.48
829-420CFE[2]	4X2	1	10	097	193.54

Coupling - Eccentric Reducer (continued)

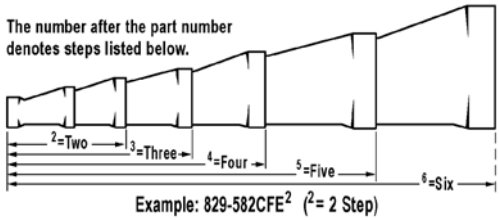
Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
829-421CFE[2]	4X2-1/2	1	6	097	178.65
829-422CFE	4X3	1	10	097	125.27
829-490CFE	5X4	1	8	097	148.45
829-528CFE[3]	6X2	1	6	097	391.13
829-529CFE[3]	6X2-1/2	1	4	097	364.35
829-530CFE[2]	6X3	1	6	097	312.38
829-532CFE	6X4	1	10	097	265.92
829-578CFE[4]	8X2	1	0	097	777.20
829-580CFE[3]	8X3	1	2	097	701.37
829-582CFE[2]	8X4	1	2	097	667.32
829-583CFE[2]	8X5	1	2	097	594.73
829-585CFE	8X6	1	4	097	578.72
829-624CFE[3]	10X4	1	0	097	1385.20
829-625CFE[3]	10X5	1	0	097	1226.56
829-626CFE[2]	10X6	1	2	097	1187.62
829-628CFE	10X8	1	2	097	853.23
829-664CFE[4]	12X4	1	0	097	2495.13
829-666CFE[3]	12X6	1	0	097	1630.43
829-668CFE[2]	12X8	1	0	097	1554.99
829-670CFE	12X10	1	0	097	1391.57
829-696CFE[3]	14X6	1	0	097	2699.17
829-698CFE[2]	14X8	1	0	097	2646.46
829-700CFE	14X10	1	0	097	1886.47
829-702CFE	14X12	1	0	097	1722.29
829-756CFE[5]	16X6	1	0	097	4930.12
829-758CFE[4]	16X8	1	0	097	4766.78
829-760CFE[3]	16X10	1	0	097	4679.29
829-762CFE[2]	16X12	1	0	097	4495.34
829-764CFE	16X14	1	0	097	4135.80
829-786CFE[6]	18X6	1	0	097	9506.57
829-788CFE[5]	18X8	1	0	097	9374.63
829-790CFE[4]	18X10	1	0	097	9011.52
829-792CFE[3]	18X12	1	0	097	8332.43
829-794CFE[2]	18X14	1	0	097	7739.49
829-796CFE	18X16	1	0	097	5932.67

Eccentric Reducer Coupling Footnotes

Multi-Step Configurations

The number after the part number denotes steps listed below.



Example: 829-582CFE[2] ([2]= 2 Step)

Coupling - Reducer

Fipt

830-072C	1/2X1/4	50	400	090	22.87
830-073C	1/2X3/8	25	0	090	22.87
830-101C	3/4X1/2	50	200	090	27.80

Coupling - Special Reinforced Reducer

SR Fipt - Stainless Steel Collar

830-101CSR	3/4X1/2	50	200	096	16.68
830-130CSR	1X1/2	50	0	096	20.14
830-131CSR	1X3/4	25	200	096	20.14
830-168CSR	1-1/4X1	25	0	096	27.39

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CPVC Schedule 80 Fittings

Coupling - Special Reinforced Reducer (continued)

SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
830-210CSR	1-1/2X3/4	25	0	096	39.17
830-211CSR	1-1/2X1	10	80	096	39.17
830-212CSR	1-1/2X1-1/4	10	80	096	39.17
830-249CSR	2X1	25	0	096	96.42
830-251CSR	2X1-1/2	15	0	096	96.42

Repair Coupling, Fabricated

Gasket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
828-020CF	2	1	5	097	129.34
828-030CF	3	1	5	097	164.76
828-040CF	4	1	4	097	205.29
828-060CF	6	1	2	097	237.88
828-080CF	8	1	2	097	639.58
828-100CF	10	1	0	097	689.98
828-120CF	12	1	0	097	907.87
828-140CF	14	1	0	097	2672.22
828-160CF	16	1	0	097	3783.44

Female Adapter

Soc x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
835-002C	1/4	25	450	090	20.82
835-003C	3/8	25	150	090	20.82
835-005C	1/2	25	150	090	10.32
835-007C	3/4	15	90	090	13.79
835-010C	1	15	90	090	25.17
835-012C	1-1/4	10	120	090	25.77
835-015C	1-1/2	10	80	090	30.02
835-020C	2	10	0	090	51.74
835-025C	2-1/2	5	0	090	99.24
835-030C	3	5	0	090	203.62
835-040C	4	5	0	090	338.92
835-060C	6	6	0	090	481.18
835-060CF	6	1	8	097	304.80
835-080C	8	3	0	090	760.28
835-080CF	8	1	6	097	383.40
835-100CF	10	1	2	097	557.13
835-120CF	12	1	0	097	721.95

Female Adapter - Special Reinforced

Soc x SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
835-002CSR	1/4	25	450	096	13.06
835-003CSR	3/8	25	300	096	13.06
835-005CSR	1/2	25	300	096	5.61
835-007CSR	3/4	25	150	096	6.06
835-010CSR	1	25	200	096	13.82
835-012CSR	1-1/4	10	60	096	14.18
835-015CSR	1-1/2	10	80	096	16.46
835-020CSR	2	10	0	096	23.39
835-025CSR	2-1/2	5	0	096	54.39
835-030CSR	3	15	0	096	111.75
835-040CSR	4	5	0	096	185.99
835-060CSR	6	6	0	096	290.55

Female Adapter - Encapsulated Special Reinforced

Soc x ESR Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
835-002CESR	1/4	25	450	096	16.57
835-003CESR	3/8	25	300	096	16.57
835-005CESR	1/2	25	300	096	8.60
835-007CESR	3/4	25	300	096	9.08

Female Adapter - Encapsulated Special Reinforced (continued)

Soc x ESR Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
835-010CESR	1	25	200	096	20.01
835-012CESR	1-1/4	10	80	096	20.48
835-015CESR	1-1/2	10	0	096	26.52
835-020CESR	2	10	0	096	41.22

Female Adapter - Brass Transition

Soc x Fipt With Brass Thread Insert

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
835-005CBR	1/2	25	150	096	31.64
835-007CBR	3/4	15	90	096	65.48
835-010CBR	1	15	90	096	114.92
835-012CBR	1-1/4	15	60	096	187.47
835-015CBR	1-1/2	10	80	096	247.18
835-020CBR	2	8	32	096	308.72

Not intended to convey or dispense water for human consumption through drinking or cooking

Female Spigot Adapter - Brass Transitions

Spig x Fipt With Brass Thread Insert

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
878-010CBR	1	15	90	096	76.44

Not intended to convey or dispense water for human consumption through drinking or cooking

Female Adapter - Brass Transition Reducing

Soc x Fipt With Brass Thread Insert

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
835-101CBR	3/4X1/2	50	0	096	45.81

Not intended to convey or dispense water for human consumption through drinking or cooking

Female Adapter - Stainless Steel Transition

Soc x Fipt With Type 316 Stainless Steel Thread Insert

NSF Certified Lead Free

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
835-005CSS	1/2	25	150	096	62.13
835-007CSS	3/4	15	90	096	86.74
835-010CSS	1	15	90	096	151.81
835-012CSS	1-1/4	20	0	096	246.72
835-015CSS	1-1/2	10	40	096	321.87
835-020CSS	2	8	32	096	376.68

Female Spigot Adapter - Strainless Steel Transition

Soc x Fipt With Type 316 Stainless Steel Thread Insert

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
878-005CSS	1/2	25	150	096	61.55
878-007CSS	3/4	25	150	096	79.16
878-010CSS	1	15	90	096	102.75

Male Adapter - CPVC Lined Brass Transition

Brass Mipt x Soc

NSF Certified Lead Free

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
836-005CBR	1/2	40	160	096	70.14
836-007CBR	3/4	40	160	096	98.75
836-010CBR	1	10	60	096	171.99
836-012CBR	1-1/4	10	60	096	279.76
836-015CBR	1-1/2	10	40	096	363.71
836-020CBR	2	8	32	096	426.20

CPVC Schedule 80 Fittings

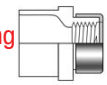
Female Spigot Adapter - Special Reinforced

Spig x SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
878-005CSR	1/2	50	600	096	5.98
878-007CSR	3/4	25	300	096	6.31
878-010CSR	1	50	0	096	14.19
878-012CSR	1-1/4	25	0	096	14.68
878-015CSR	1-1/2	25	0	096	17.04
878-020CSR	2	15	0	096	31.04
878-030CSR	3	5	0	096	113.15
878-040CSR	4	5	0	096	189.95

Female Adapter - Special Reinforced Reducing

Soc x SR Fipt - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
835-074CSR	1/2X3/4	50	400	096	6.06
835-101CSR	3/4X1/2	50	400	096	6.06
835-102CSR	3/4X1	50	0	096	13.82
835-130CSR	1X1/2	50	0	096	13.82
835-131CSR	1X3/4	25	200	096	13.82

Female Spigot Adapter - Encapsulated Special Reinforced

Spig x ESR Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
878-005CESR	1/2	50	600	096	8.85
878-007CESR	3/4	25	300	096	9.42
878-010CESR	1	50	0	096	20.20
878-012CESR	1-1/4	25	0	096	20.75
878-015CESR	1-1/2	25	0	096	27.05
878-020CESR	2	15	0	096	41.81

Female Spigot Adapter - Special Reinforced Reducing

Spig x SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
878-072CSR	1/2X1/4	25	450	096	17.14
878-098CSR	3/4X1/4	50	300	096	19.95
878-128CSR	1X1/4	50	400	096	22.33

Male Adapter

Mipt x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
836-005C	1/2	25	150	090	8.24
836-007C	3/4	25	150	090	10.05
836-102C	3/4X1	25	0	090	37.01
836-131C	1X3/4	25	0	090	35.15
836-010C	1	20	240	090	16.94
836-012C	1-1/4	10	60	090	24.97
836-015C	1-1/2	10	120	090	33.74
836-020C	2	10	80	090	45.77
836-025C	2-1/2	5	0	090	124.80
836-030C	3	5	0	090	167.71
836-040C	4	5	0	090	283.52
836-060C	6	5	0	090	406.34
836-060CF	6	1	8	097	287.99
836-080CF	8	1	2	097	367.68
836-100CF	10	1	2	097	681.27
836-120CF	12	1	0	097	792.82

Male Adapter - Internal Reinforced

R Mipt x Soc - Stainless Steel Sleeve

NSF Certified Lead Free

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
836-005CR	1/2	25	150	096	8.62
836-007CR	3/4	25	300	096	9.87
836-010CR	1	10	120	096	11.71

Male Spigot Adapter

Spig x Mipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
861-005C	1/2	50	300	090	10.04
861-007C	3/4	25	150	090	12.47
861-010C	1	50	0	090	21.16
861-131C	1X3/4	50	200	090	24.72
861-012C	1-1/4	25	200	090	24.00
861-015C	1-1/2	25	0	090	26.49
861-020C	2	25	0	090	31.00

Reducer Bushing (T.T.) Flush Style

Mipt x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
839-041C	1/4X1/8	25	500	090	19.25
839-052C	3/8X1/4	50	450	090	19.25
839-072C	1/2X1/4	50	300	090	19.25
839-073C	1/2X3/8	50	600	090	19.25
839-098C	3/4X1/4	50	300	090	21.22
839-099C	3/4X3/8	50	300	090	21.22
839-101C	3/4X1/2	50	300	090	9.13
839-128C	1X1/4	25	150	090	22.92
839-129C	1X3/8	50	300	090	22.92
839-130C	1X1/2	50	300	090	15.38
839-131C	1X3/4	50	700	090	15.38
839-166C	1-1/4X1/2	25	150	090	30.55
839-167C	1-1/4X3/4	25	150	090	30.55
839-168C	1-1/4X1	25	300	090	30.31
839-209C	1-1/2X1/2	25	300	090	36.79
839-210C	1-1/2X3/4	25	300	090	36.79
839-211C	1-1/2X1	25	300	090	36.79
839-212C	1-1/2X1-1/4	25	300	090	36.51
839-247C	2X1/2	10	60	090	40.69
839-248C	2X3/4	10	60	090	40.69
839-249C	2X1	10	60	090	40.69
839-250C	2X1-1/4	10	60	090	40.69
839-251C	2X1-1/2	10	60	090	36.51
839-292C	2-1/2X2	10	40	090	97.82
839-337C	3X1-1/2	10	0	090	131.60
839-338C	3X2	10	0	090	131.60
839-339C	3X2-1/2	10	0	090	131.60
839-420C	4X2	6	0	090	226.13
839-422C	4X3	6	0	090	226.13
839-530C	6X3	5	0	090	816.33
839-532C	6X4	5	0	090	816.33

Reducer Bushing - Special Reinforced Reducing Flush Style

Mipt x SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
839-209CSR	1-1/2X1/2	25	300	096	22.11
839-210CSR	1-1/2X3/4	25	300	096	22.11
839-247CSR	2X1/2	10	60	096	24.43
839-248CSR	2X3/4	10	60	096	24.43
839-249CSR	2X1	10	120	096	24.43
839-420CSR	4X2	6	0	096	135.66

Reducer Bushing Flush Style

Spig x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
837-052C	3/8X1/4	50	450	090	13.34
837-072C	1/2X1/4	50	300	090	13.34
837-073C	1/2X3/8	50	300	090	13.34
837-101C	3/4X1/2	50	300	090	6.80
837-129C[1]	1X3/8	50	0	090	23.18
837-130C	1X1/2	50	400	090	10.57

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Reducer Bushing Flush Style (continued)
Spig x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
837-131C	1X3/4	50	300	090	10.57
837-166C	1-1/4X1/2	25	300	090	28.06
837-167C	1-1/4X3/4	25	150	090	28.06
837-168C	1-1/4X1	25	150	090	28.06
837-209C	1-1/2X1/2	25	200	090	31.73
837-210C	1-1/2X3/4	25	200	090	31.73
837-211C	1-1/2X1	25	200	090	31.73
837-212C	1-1/2X1-1/4	25	200	090	31.73
837-247C	2X1/2	10	120	090	40.95
837-248C	2X3/4	10	60	090	40.95
837-249C	2X1	10	120	090	40.95
837-250C	2X1-1/4	10	60	090	40.95
837-251C	2X1-1/2	10	60	090	40.95
837-289C[1]	2-1/2X1	10	80	090	70.42
837-290C	2-1/2X1-1/4	10	80	090	49.87
837-291C	2-1/2X1-1/2	10	40	090	49.87
837-292C	2-1/2X2	15	0	090	49.87
837-334C[1]	3X3/4	10	0	090	86.86
837-335C	3X1	10	0	090	75.98
837-336C	3X1-1/4	10	0	090	75.98
837-337C	3X1-1/2	10	0	090	75.98
837-338C	3X2	10	0	090	75.98
837-339C	3X2-1/2	15	0	090	75.98
837-420C	4X2	6	0	090	84.01
837-421C[1]	4X2-1/2	6	0	090	84.01
837-422C	4X3	6	0	090	84.01
837-490C	5X4	4	0	090	158.80
837-528C	6X2	5	0	090	180.23
837-529C[1]	6X2-1/2	5	0	090	261.44
837-530C	6X3	5	0	090	180.23
837-532C	6X4	5	0	090	178.97
837-578C[1]	8X2	4	0	090	777.03
837-580C[1]	8X3	4	0	090	777.03
837-582C	8X4	4	0	090	777.03
837-585C	8X6	4	0	090	589.20
837-621C[1]	10X2	2	0	091	1294.45
837-623C[1]	10X3	2	0	091	1294.45
837-624C[1]	10X4	4	0	091	1294.45
837-626C	10X6	3	0	091	1042.82
837-628C	10X8	4	0	091	1042.82
837-628CF	10X8	1	6	097	902.45
837-663CF	12X3	1	2	097	1461.81
837-664C[1]	12X4	2	0	091	2125.43
837-666CF	12X6	1	2	097	1250.18
837-668C	12X8	2	0	091	1314.74
837-670CF	12X10	1	3	097	941.39
837-696CF	14X6	1	3	097	3300.05
837-698CF	14X8	1	3	097	2300.68
837-700CF	14X10	1	3	097	1868.05
837-702CF	14X12	1	3	097	1353.71
837-756CF	16X6	1	2	097	5202.65
837-758CF	16X8	1	0	097	4863.02
837-760CF	16X10	1	0	097	3888.04
837-762CF	16X12	1	2	097	1977.99
837-764CF	16X14	1	2	097	1883.56
837-788CF	18X8	1	0	097	5762.54
837-796CF	18X16	1	0	097	2102.81

[1] Sized with Bushing

Reducer Bushing Flush Style
Spig x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
838-052C	3/8X1/4	50	450	090	14.34
838-071C	1/2X1/8	50	300	090	14.34
838-072C	1/2X1/4	50	600	090	14.34

Reducer Bushing Flush Style (continued)
Spig x Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
838-073C	1/2X3/8	50	300	090	14.34
838-098C	3/4X1/4	50	600	090	15.99
838-099C	3/4X3/8	50	600	090	15.99
838-101C	3/4X1/2	50	600	090	7.42
838-129C	1X3/8	50	400	090	21.23
838-130C	1X1/2	50	400	090	9.41
838-131C	1X3/4	50	400	090	9.41
838-166C	1-1/4X1/2	25	150	090	30.39
838-167C	1-1/4X3/4	25	300	090	30.39
838-168C	1-1/4X1	25	300	090	30.39
838-207C	1-1/2X1/4	25	200	090	37.43
838-209C	1-1/2X1/2	25	200	090	37.43
838-210C	1-1/2X3/4	25	200	090	37.43
838-211C	1-1/2X1	25	200	090	37.43
838-212C	1-1/2X1-1/4	25	200	090	37.43
838-247C	2X1/2	10	120	090	51.46
838-248C	2X3/4	10	60	090	51.46
838-249C	2X1	10	120	090	51.46
838-250C	2X1-1/4	10	120	090	51.46
838-251C	2X1-1/2	10	120	090	51.46
838-287C	2-1/2X1/2	10	0	090	82.33
838-288C	2-1/2X3/4	10	40	090	82.33
838-289C	2-1/2X1	10	40	090	82.33
838-290C	2-1/2X1-1/4	10	0	090	82.33
838-291C	2-1/2X1-1/2	10	40	090	81.77
838-292C	2-1/2X2	10	40	090	81.77
838-334C	3X3/4	10	0	090	217.84
838-335C	3X1	10	0	090	217.84
838-336C	3X1-1/4	10	0	090	190.57
838-337C	3X1-1/2	10	0	090	190.57
838-338C	3X2	10	0	090	182.27
838-339C	3X2-1/2	10	0	090	183.75
838-420C	4X2	6	0	090	371.41
838-421C	4X2-1/2	6	0	090	371.41
838-422C	4X3	6	0	090	371.41
838-530C	6X3	5	0	090	748.81
838-532C	6X4	5	0	090	748.81

Reducer Bushing - Special Reinforced
Spig x SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
838-128CSR	1X1/4	25	150	096	12.74
838-207CSR	1-1/2X1/4	25	200	096	21.55
838-209CSR	1-1/2X1/2	10	120	096	22.46
838-210CSR	1-1/2X3/4	10	120	096	22.46
838-247CSR	2X1/2	10	80	096	30.86
838-248CSR	2X3/4	10	80	096	30.86
838-249CSR	2X1	10	80	096	30.86
838-334CSR	3X3/4	10	0	096	130.68
838-335CSR	3X1	10	0	096	130.68
838-336CSR	3X1-1/4	10	0	096	130.68
838-337CSR	3X1-1/2	10	0	096	130.68
838-528CSR	6X2	5	0	096	449.27
838-530CSR	6X3	5	0	096	449.27

Cap
Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
847-002C	1/4	25	450	090	10.98
847-003C	3/8	25	450	090	10.98
847-005C	1/2	25	150	090	9.94
847-007C	3/4	25	300	090	14.16
847-010C	1	15	90	090	25.05
847-012C	1-1/4	10	60	090	27.41

CPVC Schedule 80 Fittings

Cap (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
847-015C	1-1/2	10	60	090	27.41
847-020C	2	10	80	090	28.91
847-025C	2-1/2	5	40	090	97.32
847-030C	3	5	0	090	106.67
847-040C	4	5	0	090	108.43
847-060C	6	4	0	090	358.80
847-080C	8	3	0	090	1088.83
847-100CF	10	1	5	097	909.66
847-120CF	12	1	4	097	996.98
847-140CF	14	1	2	097	3058.07
847-160CF	16	1	2	097	4497.65
847-180CF	18	1	0	097	5545.27
847-200CF	20	1	0	097	7464.62
847-240CF	24	1	0	097	14245.92

Cap

Fipt

848-002C	1/4	25	450	090	12.85
848-003C	3/8	25	450	090	12.85
848-005C	1/2	25	150	090	11.04
848-007C	3/4	25	300	090	18.27
848-010C	1	15	90	090	25.58
848-012C	1-1/4	10	60	090	45.62
848-015C	1-1/2	10	120	090	46.74
848-020C	2	10	80	090	67.33
848-025C	2-1/2	5	40	090	155.79
848-030C	3	5	0	090	204.38
848-040C	4	5	0	090	296.89

Cap - Special Reinforced

SR Fipt - Stainless Steel Collar

848-002CSR	1/4	25	500	096	7.06
848-003CSR	3/8	25	450	096	7.06
848-007CSR	3/4	25	300	096	11.00
848-030CSR	3	5	0	096	122.80

Plug

Spig

849-005C	1/2	50	300	090	12.65
849-007C	3/4	50	300	090	15.61
849-010C	1	50	200	090	17.61
849-012C	1-1/4	25	100	090	22.46
849-015C	1-1/2	10	120	090	24.64
849-020C	2	10	120	090	33.01
849-025CF[4]	2-1/2	1	8	097	39.16
849-030CF[4]	3	1	4	097	90.04
849-040CF[4]	4	1	4	097	111.11
849-060CF[4]	6	1	6	097	137.95
849-080CF[4]	8	1	6	097	370.53
849-100CF[4]	10	1	2	097	737.22
849-120CF[4]	12	1	0	097	1428.84

[4] Plug fabricated using Cap and pipe spigot.

Plug

Mipt

850-002C	1/4	50	900	090	10.34
850-003C	3/8	50	450	090	10.34
850-005C	1/2	50	500	090	8.98
850-007C	3/4	25	300	090	11.37

Plug (continued)

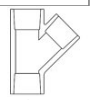
Mipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
850-010C	1	15	180	090	18.71
850-012C	1-1/4	25	150	090	28.26
850-015C	1-1/2	25	150	090	23.44
850-020C	2	10	120	090	31.91
850-025C	2-1/2	5	30	090	54.17
850-030C	3	5	40	090	58.01
850-040C	4	5	0	090	102.93
850-060C	6	6	0	090	144.54
850-060CF[4]	6	1	2	097	373.23
850-080CF[4]	8	1	2	097	716.63
850-100CF[4]	10	1	3	097	1034.35
850-120CF[4]	12	1	0	097	1577.71

[4] Plug fabricated using Cap and threaded pipe.

Wye

Soc



1/2" - 2" - 235 psi Maximum Internal Pressure Rating @ 73°F (23°C)
2-1/2" - 6" - 150 psi Maximum Internal Pressure Rating @ 73°F (23°C)
8" - Larger & All Fabricated Sizes - 100 psi Maximum Internal Pressure Rating @ 73°F (23°C)

875-005C	1/2	25	100	090	16.41
875-007C	3/4	25	0	090	16.95
875-010C	1	20	0	090	28.56
875-012C	1-1/4	20	0	090	43.25
875-015C	1-1/2	20	0	090	46.49
875-020C	2	10	0	090	113.85
875-025C[1]	2-1/2	6	0	090	802.56
875-030C	3	5	0	090	561.37
875-040C	4	4	0	090	593.51
875-060C	6	3	0	090	812.32
875-080C	8	1	0	090	1387.25
875-080CF*	8	1	0	097	1213.35
875-100CF*	10	1	0	097	2084.38
875-120CF*	12	1	0	097	2903.25
875-140CF*	14	1	0	097	10093.83
875-160CF*	16	1	0	097	12660.95
875-180CF*	18	1	0	097	18372.52

[1] Sized with Bushing

* An asterisk (*) appearing after a fabricated fitting part number indicates the item is fiberglass reinforced.

Wye - Reducing

Soc

1/2" - 2" - 235 psi Maximum Internal Pressure Rating @ 73°F (23°C)
3" - 6" - 150 psi Maximum Internal Pressure Rating @ 73°F (23°C)
8" - Larger & All Fabricated Sizes - 100 psi Maximum Internal Pressure Rating @ 73°F (23°C)

875-101C[1]	3/4X1/2	25	0	090	24.23
875-130C[1]	1X1/2	20	0	090	39.93
875-131C[1]	1X3/4	20	0	090	39.93
875-166C[1]	1-1/4X1/2	20	0	090	72.78
875-167C[1]	1-1/4X3/4	20	0	090	72.78
875-168C[1]	1-1/4X1	20	0	090	72.78
875-209C[1]	1-1/2X1/2	20	0	090	79.83
875-210C[1]	1-1/2X3/4	20	0	090	79.83
875-211C[1]	1-1/2X1	20	0	090	79.83
875-212C[1]	1-1/2X1-1/4	20	0	090	79.83
875-247C[1]	2X1/2	10	0	090	157.96
875-248C[1]	2X3/4	10	0	090	157.96
875-249C[1]	2X1	10	0	090	157.96
875-250C[1]	2X1-1/4	10	0	090	157.96

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Wye - Reducing (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
875-251C[1]	2X1-1/2	10	0	090	157.96
875-335C[1]	3X1	5	0	090	649.75
875-336C[1]	3X1-1/4	5	0	090	649.75
875-337C[1]	3X1-1/2	5	0	090	649.75
875-338C[1]	3X2	4	0	090	649.75
875-339C[1]	3X2-1/2	5	0	090	649.75
875-420C	4X2	4	0	090	657.03
875-422C[1]	4X3	4	0	090	657.03
875-528C[1]	6X2	5	0	090	832.20
875-528CF*	6X2	1	3	097	652.93
875-530C[1]	6X3	5	0	090	832.04
875-530CF*	6X3	1	2	097	725.94
875-532C	6X4	5	0	090	635.33
875-578C[1]	8X2	1	0	090	2200.71
875-578CF*	8X2	1	2	097	877.71
875-579CF*	8X2-1/2	1	2	097	919.94
875-580C[1]	8X3	1	0	090	2200.71
875-580CF*	8X3	1	2	097	899.54
875-582C	8X4	2	0	090	2200.71
875-582CF*	8X4	1	2	097	923.86
875-585C[1]	8X6	1	0	090	2016.79
875-585CF*	8X6	1	0	097	1041.03
875-621CF*	10X2	1	0	097	977.78
875-623CF*	10X3	1	0	097	1040.93
875-624CF*	10X4	1	0	097	1272.08
875-626C	10X6	1	0	091	2273.47
875-626CF*	10X6	1	0	097	1444.36
875-628C	10X8	1	0	091	2393.72
875-628CF*	10X8	1	0	097	1700.86
875-661CF*	12X2	1	0	097	1613.25
875-663CF*	12X3	1	0	097	1694.85
875-664CF*	12X4	1	0	097	1933.34
875-666CF*	12X6	1	0	097	2011.19
875-668CF*	12X8	1	0	097	2122.81
875-670CF*	12X10	1	0	097	2613.59
875-694CF*	14X4	1	0	097	4327.35
875-696CF*	14X6	1	0	097	4753.01
875-698CF*	14X8	1	0	097	5141.54
875-702CF*	14X12	1	0	097	6263.59
875-754CF*	16X4	1	0	097	5445.08
875-756CF*	16X6	1	0	097	5733.40
875-758CF*	16X8	1	0	097	6657.34
875-760CF*	16X10	1	0	097	7481.91
875-762CF*	16X12	1	0	097	8114.48
875-764CF*	16X14	1	0	097	10207.76
875-784CF*	18X4	1	0	097	7279.23
875-786CF*	18X6	1	0	097	7812.35
875-788CF*	18X8	1	0	097	8672.77
875-790CF*	18X10	1	0	097	9561.44
875-792CF*	18X12	1	0	097	10515.23
875-794CF*	18X14	1	0	097	13388.92
875-796CF*	18X16	1	0	097	14909.73

[1] Sized with Bushing

* An asterisk (*) appearing after a fabricated fitting part number indicates the item is fiberglass reinforced.

Double Wye

Soc

100 psi Maximum internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
876-020CF*	2	1	4	097	472.51
876-030CF*	3	1	4	097	602.69
876-040CF*	4	1	2	097	1033.38
876-060CF*	6	1	0	097	1801.69

Double Wye (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
876-080CF*	8	1	0	097	3231.25
876-100CF*	10	1	0	097	3506.62
876-120CF*	12	1	0	097	5253.80

* An asterisk (*) appearing after a fabricated fitting part number indicates the item is fiberglass reinforced.

For larger sizes please contact your Regional Spears® Distribution Center.

Double Wye - Reducing

Soc

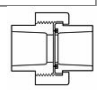
Size 3" is 150 psi, all Fabricated Sizes- 100 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
876-338C	3X2	5	0	090	699.94
876-420CF*	4X2	1	2	097	880.53
876-421CF*	4X2-1/2	1	2	097	931.82
876-422CF*	4X3	1	2	097	1003.23
876-528CF*	6X2	1	3	097	1497.52
876-529CF*	6X2-1/2	1	2	097	1516.17
876-530CF*	6X3	1	2	097	1540.84
876-532CF*	6X4	1	0	097	1711.15
876-578CF*	8X2	1	2	097	2559.19
876-579CF*	8X2-1/2	1	2	097	2597.01
876-580CF*	8X3	1	2	097	2617.57
876-582CF*	8X4	1	0	097	2817.99
876-585CF*	8X6	1	0	097	2970.78
876-621CF*	10X2	1	0	097	3085.49
876-622CF*	10X2-1/2	1	0	097	3149.83
876-623CF*	10X3	1	0	097	3205.75
876-624CF*	10X4	1	0	097	3279.87
876-626CF*	10X6	1	0	097	3511.80
876-628CF*	10X8	1	0	097	3688.53
876-661CF*	12X2	1	0	097	3321.92
876-662CF*	12X2-1/2	1	0	097	3481.19
876-663CF*	12X3	1	0	097	3542.61
876-666CF*	12X6	1	0	097	4019.55
876-668CF*	12X8	1	0	097	4560.37
876-664CF*	12X4	1	0	097	3672.34
876-670CF*	12X10	1	0	097	4965.55

* An asterisk (*) appearing after a fabricated fitting part number indicates the item is fiberglass reinforced.

For larger sizes please contact your Regional Spears® Distribution Center.

Union 2000 - Socket/FKM



Soc x Soc with FKM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
857-002C	1/4	25	150	090	41.15
857-003C	3/8	25	150	090	41.15
8057-005C	1/2	20	120	090	27.38
8057-007C	3/4	20	80	090	28.60
8057-010C	1	15	90	090	34.33
8057-012C	1-1/4	10	0	090	69.46
8057-015C	1-1/2	10	0	090	70.73
8057-020C	2	5	0	090	117.24
8057-025C	2-1/2	5	0	090	192.28
8057-030C	3	5	0	090	243.34
8057-040C	4	4	0	090	310.89
8057-060C	6	1	0	090	690.87

CPVC Schedule 80 Fittings

Union 2000 - Socket/EPDM

Soc x Soc with EPDM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
897-002C	1/4	25	150	090	40.65
897-003C	3/8	25	150	090	40.65
8097-005C	1/2	20	120	090	27.29
8097-007C	3/4	20	80	090	28.26
8097-010C	1	15	90	090	33.86
8097-012C	1-1/4	10	0	090	68.57
8097-015C	1-1/2	10	0	090	69.87
8097-020C	2	5	0	090	115.80
8097-025C	2-1/2	5	0	090	191.78
8097-030C	3	5	0	090	240.34
8097-040C	4	4	0	090	307.36
8097-060C	6	1	0	090	683.02

Union 2000 - Socket/Fipt/FKM

Soc x Fipt with FKM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8059-005C	1/2	20	120	090	31.17
8059-007C	3/4	20	80	090	54.39
8059-010C	1	15	90	090	75.07
8059-012C	1-1/4	10	0	090	142.99
8059-015C	1-1/2	10	0	090	142.99
8059-020C	2	5	0	090	161.65
8059-025C	2-1/2	5	0	090	262.44
8059-030C	3	5	0	090	310.41
8059-040C	4	4	0	090	358.95
8059-060C	6	1	0	090	797.67

Union 2000 - Socket/Fipt/EPDM

Soc x Fipt with EPDM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8099-005C	1/2	20	120	090	30.40
8099-007C	3/4	20	80	090	53.75
8099-010C	1	15	90	090	74.14
8099-012C	1-1/4	10	0	090	141.22
8099-015C	1-1/2	10	0	090	141.22
8099-020C	2	5	0	090	159.65
8099-025C	2-1/2	5	0	090	228.69
8099-030C	3	5	0	090	306.60
8099-040C	4	4	0	090	353.68
8099-060C	6	1	0	090	785.98

Union 2000 - Socket/Spigot/FKM

Soc x Spig with FKM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8056-005C	1/2	20	160	090	27.38
8056-007C	3/4	20	160	090	28.60
8056-010C	1	15	90	090	34.33
8056-012C	1-1/4	10	0	090	69.46
8056-015C	1-1/2	10	0	090	70.73
8056-020C	2	5	0	090	117.24
8056-025C	2-1/2	5	0	090	214.22
8056-030C	3	5	0	090	243.34
8056-040C	4	4	0	090	310.89
8056-060C	6	1	0	090	690.87

Union 2000 - Socket/Spigot/EPDM

Soc x Spig with EPDM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8096-005C	1/2	20	160	090	27.29
8096-007C	3/4	20	80	090	28.26
8096-010C	1	15	90	090	33.86
8096-012C	1-1/4	10	0	090	68.57
8096-015C	1-1/2	10	0	090	69.87
8096-020C	2	5	0	090	115.80
8096-025C	2-1/2	5	0	090	191.78
8096-030C	3	5	0	090	240.34
8096-040C	4	4	0	090	307.36
8096-060C	6	1	0	090	683.02

Union 2000 - Fipt/FKM

Fipt x Fipt with FKM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
858-002C	1/4	25	150	090	46.27
858-003C	3/8	25	150	090	46.27
8058-005C	1/2	20	120	090	29.33
8058-007C	3/4	20	80	090	51.83
8058-010C	1	15	90	090	71.47
8058-012C	1-1/4	10	0	090	136.18
8058-015C	1-1/2	10	0	090	136.18
8058-020C	2	5	0	090	153.93
8058-025C	2-1/2	5	0	090	247.99
8058-030C	3	5	0	090	470.55
8058-040C	4	4	0	090	505.82
8058-060C	6	1	0	090	1124.07

Union 2000 - Fipt/EPDM

Fipt x Fipt with EPDM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
898-002C	1/4	25	150	090	45.72
898-003C	3/8	25	100	090	45.72
8098-005C	1/2	20	120	090	28.96
8098-007C	3/4	20	80	090	51.19
8098-010C	1	15	90	090	70.59
8098-012C	1-1/4	10	0	090	134.60
8098-015C	1-1/2	10	0	090	134.60
8098-020C	2	5	0	090	152.06
8098-025C	2-1/2	5	0	090	214.22
8098-030C	3	5	0	090	426.21
8098-040C	4	4	0	090	496.19
8098-060C	6	1	0	090	1102.63

Union 2000 - Socket/Special Reinforced Fipt/FKM

Soc x SR Fipt with FKM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8059-005CSR	1/2	25	200	096	16.13
8059-007CSR	3/4	20	160	096	28.45
8059-010CSR	1	15	90	096	39.20
8059-012CSR	1-1/4	10	0	096	74.74
8059-015CSR	1-1/2	10	0	096	81.24
8059-020CSR	2	5	0	096	84.58
8059-025CSR	2-1/2	5	0	096	146.45
8059-030CSR	3	5	0	096	237.94
8059-040CSR	4	4	0	096	277.60
8059-060CSR	6	1	0	096	616.95

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CPVC Schedule 80 Fittings

Union 2000 - Socket/Special Reinforced Fipt/EPDM

Soc x SR Fipt with EPDM O-ring Seal - Stainless Steel Collar

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8099-005CSR	1/2	20	160	096	15.81
8099-007CSR	3/4	20	160	096	28.07
8099-010CSR	1	15	90	096	38.87
8099-012CSR	1-1/4	10	0	096	73.64
8099-015CSR	1-1/2	10	0	096	80.09
8099-020CSR	2	5	0	096	84.34
8099-025CSR	2-1/2	5	0	096	144.66
8099-030CSR	3	5	0	096	234.95
8099-040CSR	4	4	0	096	275.93
8099-060CSR	6	1	0	096	613.20

Union 2000 - Special Reinforced Fipt/FKM

SR Fipt x SR Fipt with FKM O-ring Seal - Stainless Steel Collar

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8058-005CSR	1/2	20	120	096	16.55
8058-007CSR	3/4	20	80	096	28.85
8058-010CSR	1	15	90	096	39.65
8058-012CSR	1-1/4	10	0	096	74.74
8058-015CSR	1-1/2	10	0	096	81.56
8058-020CSR	2	5	0	096	85.94
8058-030CSR	3	5	0	096	242.85
8058-040CSR	4	4	0	096	284.51
8058-060CSR	6	1	0	096	640.73

Union 2000 - Special Reinforced Fipt/EPDM

SR Fipt x SR Fipt with EPDM O-ring Seal - Stainless Steel Collar

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8098-005CSR	1/2	20	160	096	16.00
8098-007CSR	3/4	20	80	096	28.59
8098-010CSR	1	15	90	096	39.20
8098-012CSR	1-1/4	10	0	096	74.01
8098-015CSR	1-1/2	10	0	096	80.93
8098-020CSR	2	5	0	096	85.09
8098-025CSR	2-1/2	5	0	096	147.05
8098-030CSR	3	5	0	096	239.09
8098-040CSR	4	4	0	096	276.79
8098-060CSR	6	1	0	096	615.09

Union (Old Style) - Socket/FKM

Soc x Soc with FKM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
857-005C	1/2	15	90	090	27.38
857-007C	3/4	10	60	090	28.60
857-010C	1	10	40	090	34.33
857-012C	1-1/4	5	20	090	69.46
857-015C	1-1/2	5	0	090	70.73
857-020C	2	5	0	090	117.24
857-025C	2-1/2	5	0	090	192.28
857-030C	3	5	0	090	243.34
857-040C	4	4	0	090	310.89

Union (Old Style) - Socket/EPDM

Soc x Soc with EPDM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
897-005C	1/2	15	90	090	27.29
897-007C	3/4	10	60	090	28.26
897-010C	1	10	40	090	33.86
897-012C	1-1/4	5	20	090	68.57
897-015C	1-1/2	5	0	090	69.87
897-020C	2	5	0	090	115.80
897-025C	2-1/2	5	0	090	191.78
897-030C	3	5	0	090	240.34
897-040C	4	4	0	090	307.36

Union (Old Style) - Socket/Fipt/FKM

Soc x Fipt with FKM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
859-005C	1/2	15	90	090	31.17
859-007C	3/4	10	40	090	54.39
859-010C	1	10	40	090	75.07
859-012C	1-1/4	5	20	090	142.99
859-015C	1-1/2	5	0	090	142.99
859-020C	2	5	0	090	161.65
859-025C	2-1/2	5	0	090	262.44
859-030C	3	5	0	090	310.41
859-040C	4	4	0	090	358.95

Union (Old Style) - Socket/Fipt/EPDM

Soc x Fipt with EPDM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
899-005C	1/2	15	90	090	30.40
899-007C	3/4	10	60	090	53.75
899-010C	1	10	40	090	74.14
899-012C	1-1/4	5	20	090	141.22
899-015C	1-1/2	5	0	090	141.22
899-020C	2	5	0	090	159.65
899-025C	2-1/2	5	0	090	228.69
899-030C	3	5	0	090	306.60
899-040C	4	4	0	090	353.68

Union - Socket/ Brass Fipt/FKM

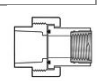
Soc x Fipt with Brass Thread Insert & FKM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
859-007CBR	3/4	10	20	096	146.17
859-010CBR	1	10	0	096	162.80
859-012CBR	1-1/4	5	0	096	272.91
859-015CBR	1-1/2	5	0	096	310.13
859-020CBR	2	5	0	096	350.51

Not intended to convey or dispense water for human consumption through drinking or cooking

Union - Socket/ Brass Fipt/EPDM



Soc x Fipt with Brass Thread Insert & EPDM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
899-007CBR	3/4	10	40	096	143.69
899-010CBR	1	10	0	096	160.80
899-012CBR	1-1/4	5	20	096	269.46
899-015CBR	1-1/2	5	0	096	306.17
899-020CBR	2	5	0	096	346.21

Not intended to convey or dispense water for human consumption through drinking or cooking

CPVC Schedule 80 Fittings

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each

Union (Old Style) - Fipt/FKM

Fipt x Fipt with FKM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

858-005C	**1/2**	15	90	090	29.33
858-007C	**3/4**	10	60	090	51.83
858-010C	**1**	10	40	090	71.47
858-012C	**1-1/4**	5	20	090	136.18
858-015C	**1-1/2**	5	0	090	136.18
858-020C	**2**	5	0	090	153.93
858-025C	**2-1/2**	5	0	090	247.99
858-030C	**3**	5	0	090	470.55
858-040C	**4**	4	0	090	505.82

Union (Old Style) - Fipt/EPDM

Fipt x Fipt with EPDM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

898-005C	**1/2**	15	90	090	28.96
898-007C	**3/4**	10	60	090	51.19
898-010C	**1**	10	40	090	70.59
898-012C	**1-1/4**	5	20	090	134.60
898-015C	**1-1/2**	5	0	090	134.60
898-020C	**2**	5	0	090	152.06
898-025C	**2-1/2**	5	0	090	214.22
898-030C	**3**	5	0	090	426.21
898-040C	**4**	4	0	090	496.19

Union (Old Style) - Socket/Special Reinforced Fipt/FKM

Soc x SR Fipt with FKM O-ring Seal - Stainless Steel Collar

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

859-002CSR	**1/4**	25	150	096	25.38
859-003CSR	**3/8**	25	100	096	25.38
859-005CSR	**1/2**	10	60	096	16.13
859-007CSR	**3/4**	10	40	096	28.45
859-010CSR	**1**	10	40	096	39.20
859-012CSR	**1-1/4**	5	20	096	74.74
859-015CSR	**1-1/2**	5	0	096	81.24
859-020CSR	**2**	5	0	096	84.58
859-030CSR	**3**	5	0	096	237.94
859-040CSR	**4**	4	0	096	277.60

Union (Old Style) - Socket/Special Reinforced Fipt/EPDM

Soc x SR Fipt with EPDM O-ring Seal - Stainless Steel Collar

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

899-002CSR	**1/4**	25	150	096	25.21
899-003CSR	**3/8**	25	100	096	25.21
899-005CSR	**1/2**	10	60	096	15.81
899-007CSR	**3/4**	10	40	096	28.07
899-010CSR	**1**	10	40	096	38.87
899-012CSR	**1-1/4**	5	20	096	73.64
899-015CSR	**1-1/2**	5	0	096	80.09
899-020CSR	**2**	5	0	096	84.34
899-030CSR	**3**	5	0	096	234.95
899-040CSR	**4**	4	0	096	275.93

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Tank Adapters

Tank Adapters, CPVC New Style Standard with Neoprene Gaskets

Soc

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8170-002C	1/4	25	150	101	48.33
8170-003C	3/8	25	150	101	48.33
8170-005C	1/2	25	0	101	48.33
8170-007C	3/4	25	0	101	57.49
8170-010C	1	25	0	101	64.53
8170-012C	1-1/4	20	0	101	82.31
8170-015C	1-1/2	20	0	101	89.62
8170-020C	2	15	0	101	126.52
8170-025C	2-1/2	4	0	101	185.95
8170-030C	3	4	0	101	221.34
8170-040C	4	2	0	101	368.87
8170-060C	6	1	0	101	1014.41
8170-080C	8	1	0	101	2254.08

Tank Adapters, CPVC New Style Standard with EPDM Gaskets

Soc

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8170E-002C	1/4	25	150	101	54.97
8170E-003C	3/8	25	150	101	54.97
8170E-005C	1/2	25	0	101	54.97
8170E-007C	3/4	25	0	101	61.69
8170E-010C	1	25	0	101	71.64
8170E-012C	1-1/4	20	0	101	90.66
8170E-015C	1-1/2	20	0	101	95.12
8170E-020C	2	15	0	101	137.14
8170E-025C	2-1/2	4	0	101	194.80
8170E-030C	3	4	0	101	231.92
8170E-040C	4	2	0	101	384.98
8170E-060C	6	1	0	101	1056.68
8170E-080C	8	1	0	101	2319.98

Tank Adapters, CPVC New Style Standard with FKM Gaskets

Soc

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8170V-002C	1/4	25	150	101	72.08
8170V-003C	3/8	25	150	101	72.08
8170V-005C	1/2	25	0	101	72.08
8170V-007C	3/4	25	0	101	82.92
8170V-010C	1	25	0	101	95.98
8170V-012C	1-1/4	20	0	101	117.93
8170V-015C	1-1/2	20	0	101	122.94
8170V-020C	2	15	0	101	186.12
8170V-025C	2-1/2	4	0	101	267.89
8170V-030C	3	4	0	101	318.92
8170V-040C	4	2	0	101	706.39
8170V-060C	6	1	0	101	1775.27
8170V-080C	8	1	0	101	4152.82

Tank Adapters, CPVC New Style Standard with Neoprene Gaskets

Soc x Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8171-002C	1/4	25	150	101	48.33
8171-003C	3/8	25	200	101	48.33
8171-005C	1/2	25	0	101	48.33
8171-007C	3/4	25	0	101	57.49
8171-010C	1	25	0	101	64.53
8171-012C	1-1/4	20	0	101	82.31
8171-015C	1-1/2	20	0	101	89.62
8171-020C	2	15	0	101	126.52
8171-025C	2-1/2	4	0	101	185.95
8171-030C	3	4	0	101	221.34
8171-040C	4	2	0	101	368.87
8171-060C	6	1	0	101	1014.41

Tank Adapters, CPVC New Style Standard with Neoprene Gaskets (continued)

Soc x Fipt

Tank Adapters, CPVC New Style Standard with EPDM Gaskets

Soc x Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8171E-002C	1/4	25	150	101	54.97
8171E-003C	3/8	25	200	101	54.97
8171E-005C	1/2	25	0	101	54.97
8171E-007C	3/4	25	0	101	61.69
8171E-010C	1	25	0	101	71.64
8171E-012C	1-1/4	20	0	101	90.66
8171E-015C	1-1/2	20	0	101	95.12
8171E-020C	2	15	0	101	137.14
8171E-025C	2-1/2	4	0	101	194.80
8171E-030C	3	4	0	101	231.92
8171E-040C	4	2	0	101	384.98
8171E-060C	6	1	0	101	1056.67

Tank Adapters, CPVC New Style Standard with FKM Gaskets

Soc x Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8171V-002C	1/4	25	150	101	72.08
8171V-003C	3/8	25	200	101	72.08
8171V-005C	1/2	25	0	101	72.08
8171V-007C	3/4	25	0	101	82.92
8171V-010C	1	25	0	101	95.98
8171V-012C	1-1/4	20	0	101	117.93
8171V-015C	1-1/2	20	0	101	122.94
8171V-020C	2	15	0	101	186.12
8171V-025C	2-1/2	4	0	101	267.93
8171V-030C	3	4	0	101	318.92
8171V-040C	4	2	0	101	706.39
8171V-060C	6	1	0	101	1775.27

Tank Adapters, CPVC New Style Special Reinforced (SR) Threaded with Neoprene Gaskets

Soc x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8171-002CSR	1/4	25	150	101	49.80
8171-003CSR	3/8	25	200	101	49.80
8171-005CSR	1/2	25	0	101	49.80
8171-007CSR	3/4	25	0	101	59.60
8171-010CSR	1	25	0	101	67.42
8171-012CSR	1-1/4	20	0	101	86.97
8171-015CSR	1-1/2	20	0	101	97.64
8171-020CSR	2	15	0	101	135.02
8171-025CSR	2-1/2	4	0	101	205.39
8171-030CSR	3	4	0	101	244.46
8171-040CSR	4	2	0	101	392.88
8171-060CSR	6	1	0	101	1037.65

Tank Adapters

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Tank Adapters, CPVC New Style Special Reinforced (SR) Threaded with EPDM Gaskets					
Soc x SR Fipt - Stainless Steel Collar					
150 psi Maximum Internal Pressure Rating @ 73°F (23°C)					
8171E-002CSR	**1/4**	25	150	101	56.44
8171E-003CSR	**3/8**	25	200	101	56.44
8171E-005CSR	**1/2**	25	0	101	56.44
8171E-007CSR	**3/4**	25	0	101	63.79
8171E-010CSR	**1**	25	0	101	76.27
8171E-012CSR	**1-1/4**	20	0	101	95.32
8171E-015CSR	**1-1/2**	20	0	101	103.13
8171E-020CSR	**2**	15	0	101	145.79
8171E-025CSR	**2-1/2**	4	0	101	214.24
8171E-030CSR	**3**	4	0	101	255.05
8171E-040CSR	**4**	2	0	101	408.93
8171E-060CSR	**6**	2	0	101	1079.93
Tank Adapters, CPVC New Style Special Reinforced (SR) Threaded with FKM Gaskets					
Soc x SR Fipt - Stainless Steel Collar					
150 psi Maximum Internal Pressure Rating @ 73°F (23°C)					
8171V-002CSR	**1/4**	25	150	101	73.54
8171V-003CSR	**3/8**	25	200	101	73.54
8171V-005CSR	**1/2**	25	0	101	73.54
8171V-007CSR	**3/4**	25	0	101	85.01
8171V-010CSR	**1**	25	0	101	98.89
8171V-012CSR	**1-1/4**	20	0	101	122.59
8171V-015CSR	**1-1/2**	20	0	101	130.91
8171V-020CSR	**2**	15	0	101	194.93
8171V-025CSR	**2-1/2**	4	0	101	287.26
8171V-030CSR	**3**	4	0	101	342.05
8171V-040CSR	**4**	2	0	101	730.36
8171V-060CSR	**6**	2	0	101	1803.22
Tank Adapters, CPVC New Style Standard with Neoprene Gaskets					
Fipt					
150 psi Maximum Internal Pressure Rating @ 73°F (23°C)					
8172-002C	**1/4**	25	150	101	64.53
8172-003C	**3/8**	25	200	101	64.53
8172-005C	**1/2**	25	0	101	64.53
8172-007C	**3/4**	25	0	101	74.51
8172-010C	**1**	25	0	101	81.51
8172-012C	**1-1/4**	20	0	101	115.07
8172-015C	**1-1/2**	20	0	101	125.78
8172-020C	**2**	15	0	101	156.77
8172-025C	**2-1/2**	4	0	101	220.62
8172-030C	**3**	4	0	101	262.63
8172-040C	**4**	2	0	101	414.96
8172-060C	**6**	1	0	101	1152.74
Tank Adapters, CPVC New Style Standard with EPDM Gaskets					
Fipt					
150 psi Maximum Internal Pressure Rating @ 73°F (23°C)					
8172E-002C	**1/4**	25	150	101	67.07
8172E-003C	**3/8**	25	200	101	67.07
8172E-005C	**1/2**	25	0	101	67.07
8172E-007C	**3/4**	25	0	101	79.08
8172E-010C	**1**	25	0	101	85.21
8172E-012C	**1-1/4**	20	0	101	119.71
8172E-015C	**1-1/2**	20	0	101	136.61
8172E-020C	**2**	15	0	101	168.84
8172E-025C	**2-1/2**	4	0	101	248.22
8172E-030C	**3**	4	0	101	295.54

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Tank Adapters, CPVC New Style Standard with EPDM Gaskets (continued)					
Fipt					
8172E-040C	**4**	2	0	101	492.03
8172E-060C	**6**	1	0	101	1170.14
Tank Adapters, CPVC New Style Standard with FKM Gaskets					
Fipt					
150 psi Maximum Internal Pressure Rating @ 73°F (23°C)					
8172V-002C	**1/4**	25	150	101	103.79
8172V-003C	**3/8**	25	200	101	103.79
8172V-005C	**1/2**	25	0	101	103.79
8172V-007C	**3/4**	25	0	101	116.99
8172V-010C	**1**	25	0	101	134.62
8172V-012C	**1-1/4**	20	0	101	165.14
8172V-015C	**1-1/2**	20	0	101	170.87
8172V-020C	**2**	15	0	101	266.18
8172V-025C	**2-1/2**	4	0	101	377.73
8172V-030C	**3**	4	0	101	449.64
8172V-040C	**4**	2	0	101	1182.45
8172V-060C	**6**	1	0	101	2167.27
Tank Adapters, CPVC New Style Special Reinforced (SR) Threaded with Neoprene Gaskets					
Fipt x SR Fipt - Stainless Steel Collar					
150 psi Maximum Internal Pressure Rating @ 73°F (23°C)					
8172-002CSR	**1/4**	25	150	101	65.97
8172-003CSR	**3/8**	25	200	101	65.97
8172-005CSR	**1/2**	25	0	101	65.97
8172-007CSR	**3/4**	25	0	101	76.61
8172-010CSR	**1**	25	0	101	84.41
8172-012CSR	**1-1/4**	20	0	101	119.75
8172-015CSR	**1-1/2**	20	0	101	133.78
8172-020CSR	**2**	15	0	101	165.40
8172-025CSR	**2-1/2**	4	0	101	240.05
8172-030CSR	**3**	4	0	101	285.78
8172-040CSR	**4**	2	0	101	438.93
8172-060CSR	**6**	2	0	101	1175.97
Tank Adapters, CPVC New Style Special Reinforced (SR) Threaded with EPDM Gaskets					
Fipt x SR Fipt - Stainless Steel Collar					
150 psi Maximum Internal Pressure Rating @ 73°F (23°C)					
8172E-002CSR	**1/4**	25	150	101	68.55
8172E-003CSR	**3/8**	25	200	101	68.55
8172E-005CSR	**1/2**	25	0	101	68.55
8172E-007CSR	**3/4**	25	0	101	81.17
8172E-010CSR	**1**	25	0	101	88.12
8172E-012CSR	**1-1/4**	20	0	101	124.38
8172E-015CSR	**1-1/2**	20	0	101	144.60
8172E-020CSR	**2**	15	0	101	177.48
8172E-025CSR	**2-1/2**	4	0	101	267.74
8172E-030CSR	**3**	4	0	101	318.73
8172E-040CSR	**4**	2	0	101	515.99
8172E-060CSR	**6**	2	0	101	1193.37
Tank Adapters, CPVC New Style Special Reinforced (SR) Threaded with FKM Gaskets					
Fipt x SR Fipt - Stainless Steel Collar					
150 psi Maximum Internal Pressure Rating @ 73°F (23°C)					
8172V-002CSR	**1/4**	25	150	101	105.26
8172V-003CSR	**3/8**	25	200	101	105.26
8172V-005CSR	**1/2**	25	0	101	105.26

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Tank Adapters

Tank Adapters, CPVC New Style Special Reinforced (SR) Threaded with FKM Gaskets (continued)

Fipt x SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8172V-007CSR	3/4	25	0	101	119.08
8172V-010CSR	1	25	0	101	137.53
8172V-012CSR	1-1/4	20	0	101	169.80
8172V-015CSR	1-1/2	20	0	101	178.83
8172V-020CSR	2	15	0	101	274.84
8172V-025CSR	2-1/2	4	0	101	397.14
8172V-030CSR	3	4	0	101	472.79
8172V-040CSR	4	2	0	101	1206.41
8172V-060CSR	6	2	0	101	2190.53

Tank Adapter, CPVC Self Aligning with Neoprene Gasket

Fipt

75 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172SA-010C	1	5	0	101	211.31
8172SA-020C	2	4	0	101	318.92
8172SA-030C	3	2	0	101	496.95

Tank Adapter, CPVC Self Aligning with EPDM Gasket

Fipt

75 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172ESA-010C	1	5	0	101	222.15
8172ESA-020C	2	4	0	101	336.43
8172ESA-030C	3	2	0	101	523.27

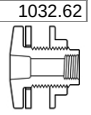
Tank Adapter, CPVC Self Aligning with FKM Gasket

Fipt

75 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8172VSA-010C	1	5	0	101	439.07
8172VSA-020C	2	4	0	101	664.61
8172VSA-030C	3	2	0	101	1032.62

Tank Adapter, CPVC Old Style with Neoprene Gasket



Soc x Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

871-005C	1/2	25	0	101	48.33
871-007C	3/4	25	0	101	57.49
871-010C	1	25	0	101	64.53
871-012C	1-1/4	20	0	101	82.31
871-015C	1-1/2	20	0	101	89.62
871-020C	2	15	0	101	126.52
871-030C	3	4	0	101	221.34
871-040C	4	2	0	101	368.87

Tank Adapter, CPVC Old Style with Neoprene Gasket

Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

872-005C	1/2	25	0	101	64.53
872-007C	3/4	25	0	101	74.51
872-010C	1	25	0	101	81.51
872-012C	1-1/4	20	0	101	115.07
872-015C	1-1/2	20	0	101	125.78
872-020C	2	15	0	101	156.77
872-030C	3	4	0	101	262.63
872-040C	4	2	0	101	414.96

Tank Adapter Gasket Only - Neoprene (New Style)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
3N-002	1/4	100	0	901	2.71
3N-003	3/8	50	0	901	2.71
3N-005	1/2	10	0	901	2.71
3N-007	3/4	10	0	901	2.91
3N-010	1	10	0	901	3.09
3N-012	1-1/4	10	0	901	4.27
3N-015	1-1/2	10	0	901	5.01
3N-020	2	10	0	901	6.56
3N-025	2-1/2	10	0	901	6.84
3N-030	3	10	0	901	7.14
3N-040	4	10	0	901	19.75
2N-060	6	10	0	901	24.67
3N-080	8	10	0	901	113.14

Tank Adapter Gasket Only - EPDM (New Style)

3E-002	1/4	10	0	901	3.15
3E-003	3/8	10	0	901	3.15
3E-005	1/2	10	0	901	3.15
3E-007	3/4	10	0	901	3.25
3E-010	1	10	0	901	5.64
3E-012	1-1/4	10	0	901	8.26
3E-015	1-1/2	10	0	901	8.48
3E-020	2	10	0	901	9.71
3E-025	2-1/2	10	0	901	13.76
3E-030	3	10	0	901	14.79
3E-040	4	10	0	901	22.28
2E-060	6	10	0	901	40.22
3E-080	8	10	0	901	145.99

Tank Adapter Gasket Only - FKM (New Style)

3V-002	1/4	10	0	901	11.53
3V-003	3/8	10	0	901	13.59
3V-005	1/2	10	0	901	20.28
3V-007	3/4	10	0	901	25.12
3V-010	1	10	0	901	34.34
3V-012	1-1/4	10	0	901	54.61
3V-015	1-1/2	10	0	901	58.99
3V-020	2	10	0	901	94.48
3V-025	2-1/2	10	0	901	104.38
3V-030	3	10	0	901	108.76
3V-040	4	10	0	901	246.09
2V-060	6	10	0	901	616.03
3V-080	8	10	0	901	1033.18

Tank Adapter Gasket Only - Neoprene (Old Style)

2N-005	1/2	10	0	901	2.71
2N-007	3/4	10	0	901	2.91
2N-010	1	10	0	901	3.09
2N-015	1-1/4 OR 1-1/2	10	0	901	5.01
2N-020	2	10	0	901	6.56
2N-030	3	10	0	901	7.14
2N-040	4	10	0	901	19.75

Tank Adapters & Pipe Flanges

Tank Adapters

Tank Adapter Gasket Only - EPDM (Old Style)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
2E-005	**1/2**	10	0	901	3.15
2E-007	**3/4**	10	0	901	3.25
2E-010	**1**	10	0	901	5.64
2E-015	**1-1/4 OR 1-1/2**	10	0	901	8.48
2E-020	**2**	10	0	901	9.71
2E-030	**3**	10	0	901	14.79
2E-040	**4**	10	0	901	22.28

Tank Adapter Wrench Sets (New Style)

Body Wrench & Nut Wrench

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
TAW-002	**1/4**	1	25	299	21.89
TAW-003	**3/8**	1	25	299	21.89
TAW-005	**1/2**	1	25	299	21.89
TAW-007	**3/4**	1	25	299	22.32
TAW-010	**1**	1	25	299	23.21
TAW-012	**1-1/4**	1	20	299	26.18
TAW-015	**1-1/2**	1	20	299	28.40
TAW-020	**2**	1	10	299	32.35
TAW-025	**2-1/2**	1	10	299	35.79
TAW-030	**3**	1	10	299	39.44
TAW-040	**4**	1	10	299	42.26

Tank Adapter Individual Body Wrench (New Style)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
TAW1-002	**1/4**	500	0	299	12.28
TAW1-003	**3/8**	400	0	299	12.28
TAW1-005	**1/2**	250	0	299	12.28
TAW1-007	**3/4**	220	0	299	12.52
TAW1-010	**1**	200	0	299	13.03
TAW1-012	**1-1/4**	300	0	299	14.76
TAW1-015	**1-1/2**	150	0	299	15.89
TAW1-020	**2**	100	0	299	17.25
TAW1-025	**2-1/2**	80	0	299	18.03
TAW1-030	**3**	74	0	299	22.61
TAW1-040	**4**	35	0	299	23.26

Tank Adapter Individual Nut Wrench (New Style)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
TAW2-002	**1/4**	300	0	299	12.28
TAW2-003	**3/8**	250	0	299	12.28
TAW2-005	**1/2**	200	0	299	12.28
TAW2-007	**3/4**	160	0	299	12.52
TAW2-010	**1**	110	0	299	13.03
TAW2-012	**1-1/4**	200	0	299	14.76
TAW2-015	**1-1/2**	120	0	299	15.89
TAW2-020	**2**	100	0	299	17.25
TAW2-025	**2-1/2**	50	0	299	18.03
TAW2-030	**3**	40	0	299	22.61
TAW2-040	**4**	35	0	299	23.26

Pipe Flanges

Flange One Piece

Soc

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
851-005C	**1/2**	25	0	090	26.87
851-007C	**3/4**	25	0	090	27.49
851-010C	**1**	15	0	090	30.02
851-012C	**1-1/4**	15	0	090	36.64
851-015C	**1-1/2**	20	0	090	40.67
851-020C	**2**	10	0	090	49.23
851-025C	**2-1/2**	10	0	090	102.01
851-030C	**3**	10	0	090	106.67
851-040C	**4**	5	0	090	144.12
851-050C	**5**	5	0	090	264.12
851-060C	**6**	5	0	090	245.51
851-080C	**8**	2	0	090	560.85
851-100C	**10**	2	0	091	519.60
851-120C	**12**	2	0	091	791.73

Flange One Piece

Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
852-005C	**1/2**	25	0	090	37.57
852-007C	**3/4**	25	0	090	45.55
852-010C	**1**	15	0	090	49.71
852-012C	**1-1/4**	15	0	090	68.99
852-015C	**1-1/2**	20	0	090	73.03

Flange One Piece (continued)

Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
852-020C	**2**	10	0	090	74.37
852-025C	**2-1/2**	10	0	090	120.72
852-030C	**3**	10	0	090	119.78
852-040C	**4**	5	0	090	186.21

Flange - Special Reinforced One Piece Threaded

SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
852-005CSR	**1/2**	25	0	096	20.65
852-007CSR	**3/4**	25	0	096	25.05
852-010CSR	**1**	15	0	096	27.41
852-012CSR	**1-1/4**	15	0	096	37.93
852-015CSR	**1-1/2**	15	0	096	40.21
852-020CSR	**2**	10	0	096	41.19
852-025CSR	**2-1/2**	10	0	096	66.27
852-030CSR	**3**	10	0	096	65.76
852-040CSR	**4**	5	0	096	123.22

Flange - Blind

1/2" - 12" Molded - 150 psi Maximum Internal Pressure Rating @ 73°F (23°C)
14" - 24" Fabricated - 50 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
853-005C	**1/2**	25	100	090	40.28
853-007C	**3/4**	25	0	090	43.67
853-010C	**1**	20	0	090	54.44
853-012C	**1-1/4**	20	0	090	61.60

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Pipe Flanges

Flange - Blind (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
853-015C	1-1/2	15	0	090	86.21
853-020C	2	10	0	090	90.57
853-025C	2-1/2	10	0	090	137.01
853-030C	3	10	0	090	170.33
853-040C	4	8	0	090	230.72
853-060C	6	5	0	090	387.01
853-080C	8	5	0	090	717.85
853-100C	10	3	0	091	1294.36
853-120C	12	2	0	091	2174.52
853-140CF	14	1	0	097	2527.08
853-160CF	16	1	0	097	3918.21
853-180CF	18	1	0	097	4830.15
853-200CF	20	1	0	097	5175.66
853-240CF	24	1	0	097	6297.71

Flange Van Stone Style with Plastic Ring

Soc

1/2" - 18" molded - 150 psi = maximum internal pressure rating @ 73°F (23°C)
18" - 24" fabricated - 50 psi = maximum internal pressure rating @ 73°F (23°C)

854-005C	1/2	25	0	090	27.05
854-007C	3/4	25	0	090	27.66
854-010C	1	15	0	090	30.21
854-012C	1-1/4	15	0	090	36.88
854-015C	1-1/2	20	0	090	40.95
854-020C	2	10	0	090	49.59
854-025C	2-1/2	10	0	090	102.73
854-030C	3	10	0	090	107.56
854-040C	4	5	0	090	145.25
854-050C	5	5	0	090	247.51
854-060C	6	5	0	090	247.51
854-080C	8	2	0	090	744.72
854-100C	10	2	0	091	1792.81
854-120C	12	2	0	091	2690.18
854-140C	14	1	0	095	3031.38
854-160C	16	1	0	095	3789.24
854-180C	18	1	0	095	6151.38
854-200CFP	20	1	0	097	6093.14
854-240CFP	24	1	0	097	10215.13

Flange Van Stone Style with Plastic Ring

Spig

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

856-005C	1/2	25	0	090	31.28
856-007C	3/4	25	0	090	33.58
856-010C	1	15	0	090	38.13
856-012C	1-1/4	15	0	090	47.18
856-015C	1-1/2	15	0	090	52.17
856-020C	2	10	0	090	73.02
856-025C	2-1/2	10	0	090	114.37
856-030C	3	10	0	090	125.24
856-040C	4	5	0	090	128.88
856-060C	6	4	0	090	281.40
856-080C	8	2	0	090	573.59
856-100C	10	2	0	091	1926.06
856-120C	12	2	0	091	2893.23
856-140CF	14	1	0	097	3078.41
856-160CF	16	1	0	097	3813.33

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each

Flange Van Stone Style with Plastic Solid Ring

Soc

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

S854-030C	3	10	0	090	153.63
S854-040C	4	5	0	090	207.55
S854-060C	6	4	0	090	353.57
S854-080C	8	2	0	090	1063.86
S854-100C	10	2	0	091	2561.17
S854-120C	12	2	0	091	3843.11

Flange Van Stone Style Class 300 Bolt Pattern Fabricated with Plastic Ring

Soc

Molded with fabricated ring - 150 psi = maximum internal pressure rating @ 73°F (23° C)

854-005CL300C	1/2	1	25	097	205.84
854-007CL300C	3/4	1	25	097	275.78
854-010CL300C	1	1	15	097	336.27
854-012CL300C	1-1/4	1	15	097	357.25
854-015CL300C	1-1/2	1	20	097	370.95
854-020CL300C	2	1	10	097	412.06
854-025CL300C	2-1/2	1	10	097	490.33
854-030CL300C	3	1	10	097	532.87
854-040CL300C	4	1	5	097	840.37
854-060CL300C	6	1	4	097	1586.91
854-080CL300C	8	1	3	097	1826.03
854-100CL300C	10	1	2	097	2064.60
854-120CL300C	12	1	0	097	2579.31
854-140CL300C	14	1	0	097	2864.68
854-160CL300C	16	1	0	097	3014.23

Flange Van Stone Style with Plastic Ring

Fipt

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

855-005C	1/2	25	0	090	37.82
855-007C	3/4	25	0	090	45.84
855-010C	1	15	0	090	50.05
855-012C	1-1/4	15	0	090	68.88
855-015C	1-1/2	20	0	090	73.55
855-020C	2	10	0	090	74.93
855-025C	2-1/2	10	0	090	120.63
855-030C	3	10	0	090	120.63
855-040C	4	5	0	090	187.54
855-060C[1]	6	1	0	090	317.48
855-080C[1]	8	1	2	090	487.97
855-080CF	8	1	2	097	433.74
855-100CF	10	1	0	097	736.06
855-120CF	12	1	0	097	931.82

1 - Flange assembled with molded Female Adapter

Flange Van Stone Style with Steel Ring

Soc

150 psi Maximum Internal Pressure Rating @73°F (23°C)

854-120CFS	12	1	0	097	2661.80
854-140CFS	14	1	0	098	1608.49
854-160CFS	16	1	0	097	2604.59
854-180CFS	18	1	0	097	3403.87
854-200CFS	20	1	0	097	4141.28
854-240CFS	24	1	0	097	6550.80

Pipe Flanges

Flange One Piece Multi-Bolt Pattern*

ASTM Socket x Multi-bolt Pattern Ring

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
M851-100C	**10**	2	0	091	518.75
M851-120C	**12**	2	0	091	799.50

Hubs fit 10" and 12" ASTM IPS pipe. Rings are manufactured to accept bolt patterns in size 10" and 12" in ANSI Class 150, B.S. 4504 PN10, B.S. 4504 PN16, B.S. 10 Table E for size 10". Consult Spears® Manufacturing Company Technical Services for additional information. Not for use with wafer valves.

Flange Van Stone Style with Plasic Ring ASTM

Soc x Multi-bolt Pattern Ring

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
M854-020C	**2**	10	0	090	48.63
M854-060C	**6**	4	0	090	247.51
M854-080C	**8**	2	0	090	744.72

Flange Van Stone Style with PN 10/16 Drilling CPVC Ring

ASTM Socket x DIN PN 10/16 Drilling

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
854-030CDIN	**3**	10	0	090	107.56
854-040CDIN	**4**	5	0	090	145.25

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

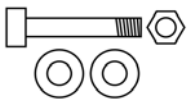
Flange Insulating Joints

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Flange Insulating Joints - Class 300 Bolt Pattern (continued)					
PP Flange Spacer with PVC Bolt Isolators					
IJ300-080-010P	**8X1**	1	0	016	1442.38
IJ300-100-010P	**10X1**	1	0	016	2392.84
IJ300-120-010P	**12X1**	1	0	016	3144.45
IJ300-140-010P	**14X1**	1	0	016	3961.23

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Flange Insulating Joints - Class 300 Bolt Pattern (continued)					
PP Flange Spacer with PVC Bolt Isolators					
IJ300-160-010P	**16X1**	1	0	016	4223.97
IJ300-180-010P	**18X1**	1	0	016	5278.95
IJ300-200-010P	**20X1**	1	0	016	6116.11
IJ300-240-010P	**24X1**	1	0	016	7509.49

Flange Bolt Kits

Bolt Kit Selection Guide



Order Gaskets & Bolt Kits Separately
- Kit Contains All Bolts, Nuts, & Flat Washers for Specified Flange Size
- For Connecting Two (2) Mating Spears® Flanges
- Pre-coated, Anti-seize Lubricated Bolts
- Available in Zinc Coated Steel, Type 304 Stainless Steel or Type 316 Stainless Steel

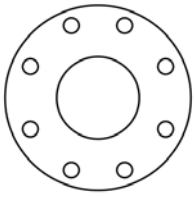
Flange Size	Bolts[1] Per Kit	Diameter (in.-TPI)	Length (in.)	Hardware Kit Part Number		
				Zinc	316 SS	304 SS
1/2 & 3/4	4	1/2-13	2	HK-005	HK1-005	HK2-005
1 & 1-1/4	4	1/2-13	2-1/4	HK-010	HK1-010	HK2-010
1-1/2	4	1/2-13	2-1/2	HK-015	HK1-015	HK2-015
2	4	5/8-11	3	HK-020	HK1-020	HK2-020
2-1/2	4	5/8-11	3-1/4	HK-025	HK1-025	HK2-025
3	4	5/8-11	3-1/2	HK-030	HK1-030	HK2-030
4	8	5/8-11	3-1/2	HK-040	HK1-040	HK2-040
5 & 6	8	3/4-10	4	HK-060	HK1-060	HK2-060
8	8	3/4-10	4-1/2	HK-080	HK1-080	HK2-080
10 & 12	12	7/8-9	5	HK-120	HK1-120	HK2-120

1 - Each Bolt includes Nut & two (2) Flat Washers

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Flange Bolt Hardware Kits - Zinc Plated Steel For Connection of 2-Spears® Flanges Includes Bolts, Nuts & Flat Washers					
HK-005	**1/2**	1	10	017	10.03
HK-010	**3/4 & 1**	1	10	017	12.54
HK-015	**1-1/4 & 1-1/2**	1	10	017	18.85
HK-020	**2**	1	10	017	25.23
HK-025	**2-1/2**	1	10	017	30.25
HK-030	**3**	1	10	017	34.81
HK-040	**4**	1	5	017	72.12
HK-060	**5 & 6**	1	5	017	80.21
HK-080	**8**	1	0	017	94.00
HK-120	**10 & 12**	1	0	017	127.18
Flange Bolt Hardware Kits - Type 316 Stainless Steel For Connection of 2-Spears® Flanges Includes Bolts, Nuts & Flat Washers					
HK1-005	**1/2**	1	10	017	30.11
HK1-010	**3/4 & 1**	1	10	017	43.37
HK1-015	**1-1/4 & 1-1/2**	1	10	017	47.78
HK1-020	**2**	1	10	017	57.46
HK1-025	**2-1/2**	1	10	017	61.59
HK1-030	**3**	1	10	017	81.26
HK1-040	**4**	1	5	017	162.96
HK1-060	**5 & 6**	1	5	017	212.54
HK1-080	**8**	1	0	017	266.69
HK1-120	**10 & 12**	1	0	017	542.58

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Flange Bolt Hardware Kits - Type 304 Stainless Steel For Connection of 2-Spears® Flanges Includes Bolts, Nuts, & Flat Washers					
HK2-005	**1/2**	1	10	017	26.34
HK2-010	**3/4 & 1**	1	10	017	37.57
HK2-015	**1-1/4 & 1-1/2**	1	10	017	44.26
HK2-020	**2**	1	10	017	52.06
HK2-025	**2-1/2**	1	10	017	55.20
HK2-030	**3**	1	10	017	68.55
HK2-040	**4**	1	5	017	137.09
HK2-060	**5 & 6**	1	5	017	144.51
HK2-080	**8**	1	0	017	190.02
HK2-120	**10 & 12**	1	0	017	336.78

Flange Gaskets - Full-Faced



Order Gaskets & Bolt Kits Separately

- 1/8" Full-Face design with ANSI Class 150 Bolt Patterns
- Pressure rated to 150 psi @ 73°F
- Available in Buna-N, EPDM, or FKM

Gasket Selection Guide

Flange Size	Bolt Holes	Gasket Part Number		
		Buna-N	EPDM	FKM
1/2	4	GK1-005	GK2-005	GK3-005
3/4	4	GK1-007	GK2-007	GK3-007
1	4	GK1-010	GK2-010	GK3-010
1-1/4	4	GK1-012	GK2-012	GK3-012
1-1/2	4	GK1-015	GK2-015	GK3-015
2	4	GK1-020	GK2-020	GK3-020
2-1/2	4	GK1-025	GK2-025	GK3-025
3	4	GK1-030	GK2-030	GK3-030
4	8	GK1-040	GK2-040	GK3-040
5	8	GK1-050	GK2-050	GK3-050
6	8	GK1-060	GK2-060	GK3-060
8	8	GK1-080	GK2-080	GK3-080
10	12	GK1-100	GK2-100	GK3-100
12	12	GK1-120	GK2-120	GK3-120

Flange Gaskets - Full-Faced Buna-N

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
GK1-005	**1/2**	1	25	017	3.22
GK1-007	**3/4**	1	25	017	3.69
GK1-010	**1**	1	25	017	3.80
GK1-012	**1-1/4**	1	25	017	3.89
GK1-015	**1-1/2**	1	25	017	4.18
GK1-020	**2**	1	25	017	4.67
GK1-025	**2-1/2**	1	25	017	5.14
GK1-030	**3**	1	25	017	7.91
GK1-040	**4**	1	25	017	8.84
GK1-050	**5**	1	25	017	10.48
GK1-060	**6**	1	25	017	10.77
GK1-080	**8**	1	25	017	14.20
GK1-100	**10**	1	25	017	18.02
GK1-120	**12**	1	25	017	24.31
GK1-140	**14**	1	25	017	47.02
GK1-160	**16**	1	25	017	226.21
GK1-180	**18**	1	25	017	257.63
GK1-240	**24**	1	25	017	311.31

Flange Gaskets - Full-Faced EPDM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
GK2-005	**1/2**	1	25	017	4.27
GK2-007	**3/4**	1	25	017	4.55
GK2-010	**1**	1	25	017	4.75
GK2-012	**1-1/4**	1	25	017	4.99
GK2-015	**1-1/2**	1	25	017	5.36
GK2-020	**2**	1	25	017	6.54
GK2-025	**2-1/2**	1	25	017	7.85
GK2-030	**3**	1	25	017	11.54
GK2-040	**4**	1	25	017	13.14
GK2-050	**5**	1	25	017	16.43
GK2-060	**6**	1	25	017	17.24
GK2-080	**8**	1	25	017	22.97
GK2-100	**10**	1	25	017	29.93
GK2-120	**12**	1	25	017	41.18
GK2-140	**14**	1	25	017	100.45
GK2-160	**16**	1	25	017	178.22
GK2-180	**18**	1	25	017	208.16
GK2-200	**20**	1	25	017	241.60
GK2-240	**24**	1	25	017	364.73

Flange Gaskets - Full-Faced FKM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
GK3-005	**1/2**	1	25	017	15.25

Flange Gaskets - Full-Faced FKM (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
GK3-007	**3/4**	1	25	017	18.11
GK3-010	**1**	1	25	017	20.01
GK3-012	**1-1/4**	1	5	017	22.59
GK3-015	**1-1/2**	1	25	017	28.49
GK3-020	**2**	1	25	017	39.83
GK3-025	**2-1/2**	1	25	017	53.27
GK3-030	**3**	1	25	017	119.04
GK3-040	**4**	1	25	017	137.42
GK3-050	**5**	1	25	017	160.20
GK3-060	**6**	1	25	017	181.75
GK3-080	**8**	1	25	017	258.94
GK3-100	**10**	1	25	017	344.42
GK3-120	**12**	1	25	017	485.28
GK3-140	**14**	1	25	017	711.26
GK3-160	**16**	1	25	017	810.63
GK3-180	**18**	1	25	017	912.00
GK3-240	**24**	1	25	017	1160.91

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CPVC Gray Saddles & Hot-Tap Saddles

PRICING

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Glue-On Saddles

Saddle

IPS O.D. x Socket Schedule 80

Non Pressure Rated

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
3963-528C	6X2	1	5	099	96.52
3963-530C	6X3	1	5	099	109.35
3963-532C	6X4	1	10	099	133.83
3963-578C	8X2	1	5	099	146.48
3963-580C	8X3	1	8	099	162.61
3963-582C	8X4	1	5	099	209.04
3963-585C	8X6	1	0	099	239.28
3963-621C	10X2	1	5	099	163.84
3963-623C	10X3	1	8	099	180.42
3963-624C	10X4	1	5	099	221.59
3963-626C	10X6	1	5	099	271.57
3963-628C	10X8	1	5	099	300.38
3963-661C	12X2	1	10	099	180.34
3963-663C	12X3	1	8	099	210.61
3963-664C	12X4	1	8	099	252.14
3963-666C	12X6	1	5	099	292.33
3963-668C	12X8	1	4	099	368.58
3963-670C	12X10	1	0	099	576.45
3963-693C	14X3	1	8	099	226.63
3963-694C	14X4	1	5	099	293.46
3963-696C	14X6	1	10	099	342.97
3963-698C	14X8	1	4	099	408.45
3963-700C	14X10	1	3	099	717.76
3963-702C	14X12	1	4	099	841.72
3963-751C	16X2	1	5	099	217.93
3963-753C	16X3	1	8	099	272.94
3963-754C	16X4	1	10	099	342.56
3963-756C	16X6	1	3	099	464.24
3963-758C	16X8	1	3	099	582.65
3963-760C	16X10	1	0	099	800.91
3963-762C	16X12	1	0	099	1122.84
3963-764C	16X14	1	0	099	1291.16
3963-781C	18X2	1	5	409	265.43
3963-783C	18X3	1	4	099	298.60
3963-784C	18X4	1	5	099	435.14
3963-786C	18X6	1	5	099	596.49
3963-788C	18X8	1	5	099	673.21
3963-790C	18X10	1	0	099	878.13
3963-792C	18X12	1	0	099	1261.44
3963-794C	18X14	1	0	099	1379.15
3963-796C	18X16	1	0	099	1592.36
3963-811C	20X2	1	0	099	279.52
3963-813C	20X3	1	4	099	323.26
3963-814C	20X4	1	4	099	485.51
3963-816C	20X6	1	0	099	644.74
3963-818C	20X8	1	0	099	794.62
3963-820C	20X10	1	5	099	971.47
3963-822C	20X12	1	0	099	1311.81
3963-824C	20X14	1	0	099	1530.77
3963-826C	20X16	1	0	099	1706.20
3963-828C	20X18	1	0	099	1860.54
3963-901C	24X2	1	5	099	306.38
3963-903C	24X3	1	5	099	511.17
3963-904C	24X4	1	5	099	593.53
3963-906C	24X6	1	5	099	844.41
3963-908C	24X8	1	5	099	992.65
3963-910C	24X10	1	5	099	1228.37
3963-912C	24X12	1	0	099	1392.32
3963-914C	24X14	1	0	099	1626.20
3963-916C	24X16	1	0	099	1799.68
3963-918C	24X18	1	0	099	1993.79
3963-920C	24X20	1	0	099	2374.32

Stub Saddle

IPS O.D. x Socket Schedule 80

Non Pressure Rated

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
3965-528C	6X2	1	10	099	121.51
3965-530C	6X3	1	3	099	130.54
3965-532C	6X4	1	5	099	162.23
3965-578C	8X2	1	5	099	151.88
3965-580C	8X3	1	4	099	99.66
3965-582C	8X4	1	5	099	225.85
3965-585C	8X6	1	4	099	284.15
3965-621C	10X2	1	6	099	173.63
3965-623C	10X3	1	5	099	194.99
3965-624C	10X4	1	4	099	237.05
3965-626C	10X6	1	4	099	183.15
3965-628C	10X8	1	4	099	305.19
3965-661C	12X2	1	2	099	196.68
3965-663C	12X3	1	2	099	232.84
3965-664C	12X4	1	2	099	271.20
3965-666C	12X6	1	2	099	316.22
3965-668C	12X8	1	2	099	405.86
3965-670C	12X10	1	2	099	717.61
3965-691C	14X2	1	10	099	211.73
3965-693C	14X3	1	0	099	259.13
3965-694C	14X4	1	5	099	307.55
3965-696C	14X6	1	2	099	395.87
3965-700C	14X10	1	0	099	799.58
3965-702C	14X12	1	0	099	982.35
3965-751C	16X2	1	5	099	244.96
3965-753C	16X3	1	4	099	279.17
3965-754C	16X4	1	3	099	367.75
3965-756C	16X6	1	2	099	492.93
3965-758C	16X8	1	0	099	621.68
3965-760C	16X10	1	0	099	835.56
3965-762C	16X12	1	0	099	1165.87
3965-764C	16X14	1	0	099	1584.51
3965-781C	18X2	1	2	099	280.42
3965-783C	18X3	1	0	099	311.89
3965-784C	18X4	1	0	099	460.82
3965-786C	18X6	1	2	099	625.34
3965-788C	18X8	1	0	099	688.75
3965-790C	18X10	1	0	099	1002.81
3965-792C	18X12	1	0	099	1953.57
3965-794C	18X14	1	0	099	2508.54
3965-796C	18X16	1	0	099	3213.57
3965-811C	20X2	1	0	099	293.99
3965-813C	20X3	1	2	099	333.03
3965-814C	20X4	1	0	099	503.89
3965-816C	20X6	1	0	099	669.20
3965-818C	20X8	1	0	099	831.65
3965-820C	20X10	1	0	099	1138.05
3965-822C	20X12	1	0	099	2092.63
3965-824C	20X14	1	0	099	2714.15
3965-826C	20X16	1	0	099	3436.73
3965-828C	20X18	1	0	099	4189.82
3965-901C	24X2	1	5	099	324.05
3965-903C	24X3	1	2	099	542.97
3965-904C	24X4	1	5	099	636.11
3965-906C	24X6	1	3	099	897.73
3965-908C	24X8	1	0	099	1051.60
3965-910C	24X10	1	0	099	1317.91
3965-912C	24X12	1	0	099	2259.86
3965-914C	24X14	1	0	099	2856.87
3965-916C	24X16	1	0	099	3504.23
3965-918C	24X18	1	0	099	4273.22
3965-920C	24X20	1	0	099	5508.66

Clamp-On Saddles

Clamp-On Saddle x Soc Single Outlet, CPVC Gray

with FKM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
866V-247C	2X1/2	3/4	1	10	096	56.69
866V-248C	2X3/4	7/8	1	10	096	56.69
866V-249C	2X1	1-1/8	1	10	096	56.69
866V-250C	2X1-1/4	1-1/2	1	10	096	56.69
866V-251C	2X1-1/2	1-1/2	1	10	096	56.69
866V-291C	2-1/2X1-1/2	1-/34	1	10	096	78.78
866V-333C[1]	3X1/2	7/8	1	10	096	78.78
866V-334C	3X3/4	7/8	1	10	096	78.78
866V-335C	3X1	1-1/8	1	10	096	78.78
866V-336C[1]	3X1-1/4	2-1/4	1	10	096	78.78
866V-337C[1]	3X1-1/2	2-1/4	1	10	096	78.78
866V-338C	3X2	2-1/4	1	10	096	78.78
866V-415C[1]	4X1/2	1-1/8	1	10	096	94.68
866V-416C[1]	4X3/4	1-1/8	1	10	096	94.68
866V-417C	4X1	1-1/8	1	8	096	94.68
866V-418C[1]	4X1-1/4	1-3/4	1	8	096	94.68
866V-419C	4X1-1/2	1-3/4	1	8	096	94.68
866V-420C	4X2	2-1/4	1	8	096	94.68
866V-421C[1]	4X2-1/2	3	1	4	096	101.65
866V-422C	4X3	3	1	4	096	110.83
866V-523C[1]	6X1/2	1-1/8	1	4	096	157.83
866V-524C[1]	6X3/4	1-1/8	1	4	096	157.83
866V-525C	6X1	1-1/8	1	4	096	157.83
866V-526C[1]	6X1-1/4	2-1/4	1	4	096	157.83
866V-527C[1]	6X1-1/2	2-1/4	1	4	096	157.83
866V-528C	6X2	2-1/4	1	4	096	157.83
866V-529C[1]	6X2-1/2	3	1	4	096	170.81
866V-530C	6X3	3	1	4	096	181.83
866V-532C	6X4	4	1	4	096	193.74
866V-573C[1]	8X1/2	4	1	0	096	336.63
866V-574C[1]	8X3/4	4	1	0	096	336.63
866V-575C[1]	8X1	4	1	0	096	336.63
866V-576C[1]	8X1-1/4	4	1	0	096	336.63
866V-577C[1]	8X1-1/2	4	1	0	096	336.63
866V-578C[1]	8X2	4	1	0	096	336.63
866V-579C[1]	8X2-1/2	4	1	0	096	370.35
866V-580C[1]	8X3	4	1	0	096	388.59
866V-582C	8X4	4	1	0	096	423.16
866V-585C	8X6	6	1	0	096	581.80
866V-624C	10X4	4	1	0	096	544.26
866V-626C	10X6	6	1	0	096	625.79
866V-664C	12X4	4	1	0	096	682.22
866V-666C	12X6	6	1	0	096	723.15

[1]Outlet-sized with Bushing

Clamp-On Saddle x Soc Single Outlet, CPVC Gray

with FKM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
866SV-247C	2X1/2	3/4	1	10	096	86.53
866SV-248C	2X3/4	7/8	1	10	096	86.53
866SV-249C	2X1	1-1/8	1	10	096	86.53
866SV-250C	2X1-1/4	1-1/2	1	10	096	86.53
866SV-251C	2X1-1/2	1-1/2	1	10	096	86.53
866SV-291C	2-1/2X1-1/2	1-3/4	1	10	096	115.91
866SV-333C[1]	3X1/2	7/8	1	10	096	115.91
866SV-334C	3X3/4	7/8	1	10	096	115.91
866SV-335C	3X1	1-1/8	1	10	096	115.91
866SV-336C[1]	3X1-1/4	2-1/4	1	10	096	115.91
866SV-337C[1]	3X1-1/2	2-1/4	1	10	096	115.91
866SV-338C	3X2	2-1/4	1	10	096	115.91
866SV-415C[1]	4X1/2	1-1/8	1	10	096	149.72

Clamp-On Saddle x Soc Single Outlet, CPVC Gray

(continued)

with FKM O-ring Seal & SS Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
866SV-416C[1]	4X3/4	1-1/8	1	10	096	149.72
866SV-417C	4X1	1-1/8	1	8	096	149.72
866SV-418C[1]	4X1-1/4	1-3/4	1	8	096	149.72
866SV-419C	4X1-1/2	1-3/4	1	8	096	149.72
866SV-420C	4X2	2-1/4	1	8	096	149.72
866SV-421C[1]	4X2-1/2	3	1	4	096	158.46
866SV-422C	4X3	3	1	4	096	166.53
866SV-523C[1]	6X1/2	1-1/8	1	4	096	238.38
866SV-524C[1]	6X3/4	1-1/8	1	4	096	238.38
866SV-525C	6X1	1-1/8	1	4	096	238.38
866SV-526C[1]	6X1-1/4	2-1/4	1	4	096	238.38
866SV-527C[1]	6X1-1/2	2-1/4	1	4	096	238.38
866SV-528C	6X2	2-1/4	1	4	096	238.38
866SV-529C[1]	6X2-1/2	3	1	4	096	247.84
866SV-530C	6X3	3	1	4	096	256.44
866SV-532C	6X4	4	1	4	096	272.57
866SV-573C[1]	8X1/2	4	1	0	096	439.84
866SV-574C[1]	8X3/4	4	1	0	096	439.84
866SV-575C[1]	8 X 1	4	1	0	096	439.84
866SV-576C[1]	8X1-1/4	4	1	0	096	439.84
866SV-577C[1]	8X1-1/2	4	1	0	096	439.84
866SV-578C[1]	8 X 2	4	1	0	096	439.84
866SV-579C[1]	8X2-1/2	4	1	0	096	465.56
866SV-580C[1]	8X3	4	1	0	096	508.13
866SV-582C	8X4	4	1	0	096	538.59
866SV-585C	8X6	6	1	0	096	597.76
866SV-624C	10X4	4	1	0	096	711.28
866SV-626C	10X6	6	1	0	096	818.09
866SV-664C	12X4	4	1	0	096	891.57
866SV-666C	12X6	6	1	0	096	1034.33

[1]Outlet-sized with Bushing

Clamp-On Saddle x Soc Single Outlet, CPVC Gray

with EPDM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
866-247C	2X1/2	3/4	1	10	096	53.87
866-248C	2X3/4	7/8	1	10	096	53.87
866-249C	2X1	1-1/8	1	10	096	53.87
866-250C	2X1-1/4	1-1/2	1	10	096	53.87
866-251C	2X1-1/2	1-1/2	1	10	096	53.87
866-291C	2-1/2X1-1/2	1-3/4	1	10	096	72.17
866-333C[1]	3X1/2	7/8	1	10	096	72.17
866-334C	3X3/4	7/8	1	10	096	72.17
866-335C	3X1	1-1/8	1	10	096	72.17
866-336C[1]	3X1-1/4	2-1/4	1	10	096	72.17
866-337C[1]	3X1-1/2	2-1/4	1	10	096	72.17
866-338C	3X2	2-1/4	1	10	096	72.17
866-415C[1]	4X1/2	1-1/8	1	10	096	87.75
866-416C[1]	4X3/4	1-1/8	1	10	096	87.75
866-417C	4X1	1-1/8	1	8	096	87.75
866-418C[1]	4X1-1/4	1-3/4	1	8	096	87.75
866-419C	4X1-1/2	1-3/4	1	8	096	87.75
866-420C	4X2	2-1/4	1	8	096	87.75
866-421C[1]	4X2-1/2	3	1	4	096	96.38
866-422C	4X3	3	1	4	096	107.43
866-523C[1]	6X1/2	1-1/8	1	4	096	146.44
866-524C[1]	6X3/4	1-1/8	1	4	096	146.44
866-525C	6X1	1-1/8	1	4	096	146.44
866-526C[1]	6X1-1/4	2-1/4	1	4	096	146.44
866-527C[1]	6X1-1/2	2-1/4	1	4	096	146.44
866-528C	6X2	2-1/4	1	4	096	146.44
866-529C[1]	6X2-1/2	3	1	4	096	159.19

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Clamp-On Saddles

Clamp-On Saddle x Soc Single Outlet, CPVC Gray (continued) with EPDM O-ring Seal & Zinc-Plated Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
866-530C	6X3	3	1	4	096	170.76
866-532C	6X4	4	1	4	096	182.49
866-573C[1]	8X1/2	4	1	0	096	322.01
866-574C[1]	8X3/4	4	1	0	096	322.01
866-575C[1]	8X1	4	1	0	096	322.01
866-576C[1]	8X1-1/4	4	1	0	096	322.01
866-577C[1]	8X1-1/2	4	1	0	096	322.01
866-578C[1]	8X2	4	1	0	096	322.01
866-579C[1]	8X2-1/2	4	1	0	096	354.19
866-580C[1]	8X3	4	1	0	096	371.99
866-582C	8X4	4	1	0	096	394.27
866-585C	8X6	6	1	0	096	437.61
866-624C	10X4	4	1	0	096	520.69
866-626C	10X6	4	1	0	096	598.87
866-664C	12X4	4	1	0	096	652.81
866-666C	12X6	6	1	0	096	757.21

[1]Outlet-sized with Bushing

Clamp-On Saddle x Soc Single Outlet, CPVC Gray

with EPDM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

866S-247C	2X1/2	3/4	1	10	096	83.87
866S-248C	2X3/4	7/8	1	10	096	83.87
866S-249C	2X1	1-1/8	1	10	096	83.87
866S-250C	2X1-1/4	1-1/2	1	10	096	83.87
866S-251C	2X1-1/2	1-1/2	1	10	096	83.87
866S-291C	2-1/2X1-1/2	1-3/4	1	10	096	111.81
866S-333C[1]	3X1/2	7/8	1	10	096	111.81
866S-334C	3X3/4	7/8	1	10	096	111.81
866S-335C	3X1	1-1/8	1	10	096	111.81
866S-336C[1]	3X1-1/4	2-1/4	1	10	096	111.81
866S-337C[1]	3X1-1/2	2-1/4	1	10	096	111.81
866S-338C	3X2	2-1/4	1	10	096	111.81
866S-415C[1]	4X1/2	1-1/8	1	10	096	143.04
866S-416C[1]	4X3/4	1-1/8	1	10	096	143.04
866S-417C	4X1	1-1/8	1	8	096	143.04
866S-418C[1]	4X1-1/4	1-3/4	1	8	096	143.04
866S-419C	4X1-1/2	1-3/4	1	8	096	143.04
866S-420C	4X2	2-1/4	1	8	096	143.04
866S-421C[1]	4X2-1/2	3	1	4	096	149.07
866S-422C	4X3	3	1	4	096	156.73
866S-523C[1]	6X1/2	1-1/8	1	4	096	225.40
866S-524C[1]	6X3/4	1-1/8	1	4	096	225.40
866S-525C	6X1	1-1/8	1	4	096	225.40
866S-526C[1]	6X1-1/4	2-1/4	1	4	096	225.40
866S-527C[1]	6X1-1/2	2-1/4	1	4	096	225.40
866S-528C	6X2	2-1/4	1	4	096	225.40
866S-529C[1]	6X2-1/2	3	1	4	096	238.58
866S-530C	6X3	3	1	4	096	253.05
866S-532C	6X4	4	1	4	096	264.72
866S-573C[1]	8X1/2	4	1	0	096	423.32
866S-574C[1]	8X3/4	4	1	0	096	423.32
866S-575C[1]	8X1	4	1	0	096	423.32
866S-576C[1]	8X1-1/4	4	1	0	096	423.32
866S-577C[1]	8X1-1/2	4	1	0	096	423.32
866S-578C[1]	8 X 2	4	1	0	096	423.32
866S-579C[1]	8X2-1/2	4	1	0	096	465.56
866S-580C[1]	8X3	4	1	0	096	488.87
866S-582C	8X4	4	1	0	096	518.21
866S-585C	8X6	6	1	0	096	575.04
866S-624C	10X4	4	1	0	096	684.27
866S-626C	10X6	6	1	0	096	786.97

Clamp-On Saddle x Soc Single Outlet, CPVC Gray (continued) with EPDM O-ring Seal & SS Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
866S-664C	12X4	4	1	0	096	857.68
866S-666C	12X6	6	1	0	096	994.95

[1]Outlet-sized with Bushing

Clamp-On Saddle x SR Thread Single Outlet, CPVC Gray

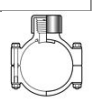
with FKM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

867V-247CSR	2X1/2	3/4	1	10	096	64.91
867V-248CSR	2X3/4	7/8	1	10	096	64.91
867V-249CSR	2X1	1-1/8	1	10	096	64.91
867V-250CSR	2X1-1/4	1-1/2	1	10	096	64.91
867V-251CSR	2X1-1/2	1-1/2	1	10	096	64.91
867V-291CSR	2-1/2X1-1/2	1-3/4	1	10	096	90.57
867V-333CSR[1]	3X1/2	7/8	1	10	096	90.57
867V-334CSR	3X3/4	7/8	1	10	096	90.57
867V-335CSR	3X1	1-1/8	1	10	096	90.57
867V-336CSR[1]	3X1-1/4	2-1/4	1	10	096	90.57
867V-337CSR[1]	3X1-1/2	2-1/4	1	10	096	90.57
867V-338CSR	3X2	2-1/4	1	10	096	90.57
867V-415CSR[1]	4X1/2	1-1/8	1	10	096	112.95
867V-416CSR[1]	4X3/4	1-1/8	1	10	096	112.95
867V-417CSR	4X1	1-1/8	1	8	096	112.95
867V-418CSR[1]	4X1-1/4	1-3/4	1	8	096	112.95
867V-419CSR	4X1-1/2	1-3/4	1	8	096	112.95
867V-420CSR	4X2	2-1/4	1	8	096	112.95
867V-421CSR[1]	4X2-1/2	3	1	4	096	121.83
867V-422CSR	4X3	3	1	4	096	134.12
867V-523CSR[1]	6X1/2	1-1/8	1	4	096	188.72
867V-524CSR[1]	6X3/4	1-1/8	1	4	096	188.72
867V-525CSR	6X1	1-1/8	1	4	096	188.72
867V-526CSR[1]	6X1-1/4	2-1/4	1	4	096	188.72
867V-527CSR[1]	6X1-1/2	2-1/4	1	4	096	188.72
867V-528CSR	6X2	2-1/4	1	4	096	188.72
867V-529CSR[1]	6X2-1/2	3	1	4	096	202.08
867V-530CSR	6X3	3	1	4	096	209.36
867V-532CSR	6X4	4	1	4	096	224.25
867V-573CSR[1]	8X1/2	4	1	0	096	376.20
867V-574CSR[1]	8X3/4	4	1	0	096	376.20
867V-575CSR[1]	8X1	4	1	0	096	376.20
867V-576CSR[1]	8X1-1/4	4	1	0	096	376.20
867V-577CSR[1]	8X1-1/2	4	1	0	096	376.20
867V-578CSR[1]	8X2	4	1	0	096	376.20
867V-579CSR[1]	8X2-1/2	4	1	0	096	413.79
867V-580CSR[1]	8X3	4	1	0	096	434.52
867V-582CSR	8X4	4	1	0	096	462.31
867V-585CSR	8X6	6	1	0	096	476.68
867V-624CSR	10X4	4	1	0	096	550.02
867V-626CSR	10X6	6	1	0	096	632.49
867V-664CSR	12X4	4	1	0	096	688.06
867V-666CSR	12X6	6	1	0	096	799.87

[1]Outlet-sized with Bushing

Clamp-On Saddle x SR Thread Single Outlet, CPVC Gray



with FKM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

867SV-245CSR[1]	2X1/4	1-1/8	1	10	096	112.88
867SV-247CSR	2X1/2	3/4	1	10	096	107.72
867SV-248CSR	2X3/4	7/8	1	10	096	107.72
867SV-249CSR	2X1	1-1/8	1	10	096	107.72
867SV-250CSR	2X1-1/4	1-1/2	1	10	096	107.72
867SV-251CSR	2X1-1/2	1-1/2	1	10	096	107.72

Clamp-On Saddles

Clamp-On Saddle x SR Thread Single Outlet, CPVC Gray (continued)

with FKM O-ring Seal & SS Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
867SV-291CSR	2-1/2X1-1/2	1-3/4	1	10	096	144.71
867SV-331CSR[1]	3X1/4	1-1/8	1	10	096	152.98
867SV-333CSR[1]	3X1/2	7/8	1	10	096	144.71
867SV-334CSR	3X3/4	7/8	1	10	096	144.71
867SV-335CSR	3X1	1-1/8	1	10	096	144.71
867SV-336CSR[1]	3X1-1/4	2-1/4	1	10	096	144.71
867SV-337CSR[1]	3X1-1/2	2-1/4	1	10	096	144.71
867SV-338CSR	3X2	2-1/4	1	10	096	144.71
867SV-413CSR[1]	4X1/4	1-1/8	1	8	096	182.83
867SV-415CSR[1]	4X1/2	1-1/8	1	10	096	182.83
867SV-416CSR[1]	4X3/4	1-1/8	1	10	096	182.83
867SV-417CSR	4X1	1-1/8	1	8	096	182.83
867SV-418CSR[1]	4X1-1/4	1-3/4	1	8	096	182.83
867SV-419CSR	4X1-1/2	1-3/4	1	8	096	182.83
867SV-420CSR	4X2	2-1/4	1	8	096	182.83
867SV-421CSR[1]	4X2-1/2	3	1	4	096	190.21
867SV-422CSR	4X3	3	1	4	096	200.52
867SV-521CSR[1]	6X1/4	1-1/8	1	4	096	316.48
867SV-523CSR[1]	6X1/2	1-1/8	1	4	096	304.72
867SV-524CSR[1]	6X3/4	1-1/8	1	4	096	304.72
867SV-525CSR	6X1	1-1/8	1	4	096	304.72
867SV-526CSR[1]	6X1-1/4	2-1/4	1	4	096	304.72
867SV-527CSR[1]	6X1-1/2	2-1/4	1	4	096	304.72
867SV-528CSR	6X2	2-1/4	1	4	096	304.72
867SV-529CSR[1]	6X2-1/2	3	1	4	096	319.23
867SV-530CSR	6X3	3	1	4	096	332.09
867SV-532CSR	6X4	4	1	4	096	355.49
867SV-571CSR[1]	8X1/4	4	1	0	096	538.42
867SV-573CSR[1]	8X1/2	4	1	0	096	524.93
867SV-574CSR[1]	8X3/4	4	1	0	096	524.93
867SV-575CSR[1]	8X1	4	1	0	096	524.93
867SV-576CSR[1]	8X1-1/4	4	1	0	096	524.93
867SV-577CSR[1]	8X1-1/2	4	1	0	096	524.93
867SV-578CSR[1]	8X2	4	1	0	096	524.93
867SV-579CSR[1]	8X2-1/2	4	1	0	096	577.46
867SV-580CSR[1]	8X3	4	1	0	096	606.36
867SV-582CSR	8X4	4	1	0	096	642.81
867SV-585CSR	8X6	6	1	0	096	676.71
867SV-624CSR	10X4	4	1	0	096	764.96
867SV-626CSR	10X6	6	1	0	096	879.68
867SV-664CSR	12X4	4	1	0	096	958.82
867SV-666CSR	12X6	6	1	0	096	1112.24

[1]Outlet-sized with Bushing

Clamp-On Saddle x SR Thread Single Outlet, CPVC Gray

with EPDM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

867-247CSR	2X1/2	3/4	1	10	096	56.35
867-248CSR	2X3/4	7/8	1	10	096	56.35
867-249CSR	2X1	1-1/8	1	10	096	56.35
867-250CSR	2X1-1/4	1-1/2	1	10	096	56.35
867-251CSR	2X1-1/2	1-1/2	1	10	096	56.35
867-291CSR	2-1/2X1-1/2	1-3/4	1	10	096	77.01
867-333CSR[1]	3X1/2	7/8	1	10	096	77.01
867-334CSR	3X3/4	7/8	1	10	096	77.01
867-335CSR	3X1	1-1/8	1	10	096	77.01
867-336CSR[1]	3X1-1/4	2-1/4	1	10	096	77.01
867-337CSR[1]	3X1-1/12	2-1/4	1	10	096	77.01
867-338CSR	3X2	2-1/4	1	10	096	77.01
867-415CSR[1]	4X1/2	1-1/8	1	10	096	96.99
867-416CSR[1]	4X3/4	1-1/8	1	10	096	96.99
867-417CSR	4X1	1-1/8	1	8	096	96.99

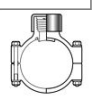
Clamp-On Saddle x SR Thread Single Outlet, CPVC Gray (continued)

with EPDM O-ring Seal & Zinc-Plated Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
867-418CSR[1]	4X1-1/4	1-3/4	1	8	096	96.99
867-419CSR	4X1-1/2	1-3/4	1	8	096	96.99
867-420CSR	4X2	2-1/4	1	8	096	96.99
867-421CSR[1]	4X2-1/2	3	1	4	096	107.62
867-422CSR	4X3	3	1	4	096	116.16
867-523CSR[1]	6X1/2	1-1/8	1	4	096	161.62
867-524CSR[1]	6X3/4	1-1/8	1	4	096	161.62
867-525CSR	6X1	1-1/8	1	4	096	161.62
867-526CSR[1]	6X1-1/4	2-1/4	1	4	096	161.62
867-527CSR[1]	6X1-1/2	2-1/4	1	4	096	161.62
867-528CSR	6X2	2-1/4	1	4	096	161.62
867-529CSR[1]	6X2-1/2	3	1	4	096	171.02
867-530CSR	6X3	3	1	4	096	180.84
867-532CSR	6X4	4	1	4	096	196.66
867-573CSR[1]	8X1/2	4	1	0	096	341.54
867-574CSR	8X3/4	4	1	0	096	341.54
867-575CSR[1]	8X1	4	1	0	096	341.54
867-576CSR[1]	8X1-1/4	4	1	0	096	341.54
867-577CSR[1]	8X1-1/2	4	1	0	096	341.54
867-578CSR[1]	8X2	4	1	0	096	341.54
867-579CSR[1]	8X2-1/2	4	1	0	096	375.68
867-580CSR[1]	8X3	4	1	0	096	398.22
867-582CSR	8X4	4	1	0	096	422.21
867-585CSR	8X6	6	1	0	096	438.98
867-624CSR	10X4	4	1	0	096	502.46
867-626CSR	10X6	6	1	0	096	577.79
867-664CSR	12X4	4	1	0	096	629.83
867-666CSR	12X6	6	1	0	096	730.55

[1]Outlet-sized with Bushing

Clamp-On Saddle x SR Thread Single Outlet, CPVC Gray



with EPDM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

867S-245CSR[1]	2X1/4	1-1/8	1	10	096	99.36
867S-247CSR	2X1/2	3/4	1	10	096	96.75
867S-248CSR	2X3/4	7/8	1	10	096	96.75
867S-249CSR	2X1	1-1/8	1	10	096	96.75
867S-250CSR	2X1-1/4	1-1/2	1	10	096	96.75
867S-251CSR	2X1-1/2	1-1/2	1	10	096	96.75
867S-291CSR	2-1/2X1-1/2	1-3/4	1	10	096	129.51
867S-331CSR[1]	3X1/4	1-1/8	1	10	096	133.62
867S-333CSR[1]	3X1/2	7/8	1	10	096	129.51
867S-334CSR	3X3/4	7/8	1	10	096	129.51
867S-335CSR	3X1	1-1/8	1	10	096	129.51
867S-336CSR[1]	3X1-1/4	2-1/4	1	10	096	129.51
867S-337CSR[1]	3X1-1/2	2-1/4	1	10	096	129.51
867S-338CSR	3X2	2-1/4	1	10	096	129.51
867S-413CSR[1]	4X1/4	1-1/8	1	8	096	167.96
867S-415CSR[1]	4X1/2	1-1/8	1	10	096	162.99
867S-416CSR[1]	4X3/4	1-1/8	1	10	096	162.99
867S-417CSR	4X1	1-1/8	1	8	096	162.99
867S-418CSR[1]	4X1-1/4	1-3/4	1	8	096	162.99
867S-419CSR	4X1-1/2	1-3/4	1	8	096	162.99
867S-420CSR	4X2	2-1/4	1	8	096	162.99
867S-421CSR[1]	4X2-1/2	3	1	4	096	172.83
867S-422CSR	4X3	3	1	4	096	180.95
867S-521CSR[1]	6X1/4	1-1/8	1	8	096	281.78
867S-523CSR[1]	6X1/2	1-1/8	1	4	096	271.65
867S-524CSR[1]	6X3/4	1-1/8	1	4	096	271.65
867S-525CSR	6X1	1-1/8	1	4	096	271.65
867S-526CSR[1]	6X1-1/4	2-1/4	1	4	096	271.65
867S-527CSR[1]	6X1-1/2	2-1/4	1	4	096	271.65

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Clamp-On Saddles

Clamp-On Saddle x SR Thread Single Outlet, CPVC Gray (continued)

with EPDM O-ring Seal & SS Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
867S-528CSR	6X2	2-1/4	1	4	096	271.65
867S-529CSR[1]	6X2-1/2	3	1	4	096	282.51
867S-530CSR	6X3	3	1	4	096	291.98
867S-532CSR	6X4	4	1	4	096	304.85
867S-571CSR[1]	8X1/4	4	1	0	096	500.37
867S-573CSR	8X1/2	4	1	0	096	482.60
867S-574CSR[1]	8X3/4	4	1	0	096	482.60
867S-575CSR[1]	8X1	4	1	0	096	482.60
867S-576CSR[1]	8X1-1/4	4	1	0	096	482.60
867S-577CSR[1]	8X1-1/2	4	1	0	096	482.60
867S-578CSR[1]	8X2	4	1	0	096	482.60
867S-579CSR[1]	8X2-1/2	4	1	0	096	530.84
867S-580CSR[1]	8X3	4	1	0	096	557.34
867S-582CSR	8X4	4	1	0	096	590.77
867S-585CSR	8X6	6	1	0	096	619.69
867S-624CSR	10X4	4	1	0	096	703.02
867S-626CSR	10X6	6	1	0	096	808.48
867S-664CSR	12X4	4	1	0	096	881.24
867S-666CSR	12X6	6	1	0	096	1022.27

[1]Outlet-sized with Bushing

Clamp-On Saddle x Soc Double Outlet, CPVC Gray

with FKM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

868V-247C	2X1/2	3/4	1	10	096	77.12
868V-248C	2X3/4	7/8	1	10	096	77.12
868V-249C	2X1	1-1/8	1	10	096	77.12
868V-250C	2X1-1/4	1-1/2	1	10	096	77.12
868V-251C	2X1-1/2	1-1/2	1	10	096	77.12
868V-291C	2-1/2X1-1/2	1-3/4	1	10	096	94.31
868V-333C[1]	3X1/2	7/8	1	10	096	94.31
868V-334C	3X3/4	7/8	1	10	096	94.31
868V-335C	3X1	1-1/8	1	10	096	94.31
868V-336C[1]	3X1-1/4	2-1/4	1	10	096	94.31
868V-337C[1]	3X1-1/2	2-1/4	1	10	096	94.31
868V-338C[1]	3X2	2-1/4	1	10	096	94.31
868V-415C[1]	4X1/2	1-1/8	1	10	096	126.97
868V-416C[1]	4X3/4	1-1/8	1	10	096	126.97
868V-417C	4X1	1-1/8	1	8	096	126.97
868V-418C[1]	4X1-1/4	1-3/4	1	8	096	126.97
868V-419C	4X1-1/2	1-3/4	1	8	096	126.97
868V-420C	4X2	2-1/4	1	8	096	126.97
868V-421C[1]	4X2-1/2	3	1	4	096	132.66
868V-422C	4X3	3	4	0	096	144.78
868V-523C[1]	6X1/2	1-1/8	1	4	096	205.42
868V-524C[1]	6X3/4	1-1/8	1	4	096	205.42
868V-525C	6X1	1-1/8	1	4	096	205.42
868V-526C[1]	6X1-1/4	2-1/4	1	4	096	205.42
868V-527C[1]	6X1-1/2	2-1/4	1	4	096	205.42
868V-528C	6X2	2-1/4	1	4	096	205.42
868V-529C	6X2-1/2	3	1	4	096	237.92
868V-530C	6X3	3	1	4	096	250.85
868V-532C	6X4	4	1	4	096	261.71
868V-573C[1]	8X1/2	4	1	0	096	397.71
868V-574C[1]	8X3/4	4	1	0	096	397.71
868V-575C[1]	8X1	4	1	0	096	397.71
868V-576C[1]	8X1-1/4	4	1	0	096	397.71
868V-577C[1]	8X1-1/2	4	1	0	096	397.71
868V-578C[1]	8X2	4	1	0	096	397.71
868V-579C[1]	8X2-1/2	4	1	0	096	437.44
868V-580C[1]	8X3	4	1	0	096	459.28
868V-582C	8X4	4	1	0	096	486.80

Clamp-On Saddle x Soc Double Outlet, CPVC Gray (continued)

with FKM O-ring Seal & Zinc-Plated Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
868V-585C	8X6	6	1	0	096	540.39
868V-624C	10X4	4	1	0	096	642.99
868V-626C	10X6	6	1	0	096	739.67
868V-664C	12X4	4	1	0	096	806.07
868V-666C	12X6	6	1	0	096	934.91

[1]Outlet-sized with Bushing

Clamp-On Saddle x Soc Double Outlet, CPVC Gray

with FKM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

868SV-247C	2X1/2	3/4	1	10	096	117.68
868SV-248C	2X3/4	7/8	1	10	096	117.68
868SV-249C	2X1	1-1/8	1	10	096	117.68
868SV-250C	2X1-1/4	1-1/2	1	10	096	117.68
868SV-251C	2X1-1/2	1-1/2	1	10	096	117.68
868SV-291C	2-1/2X1-1/2	1-3/4	1	10	096	156.56
868SV-333C[1]	3X1/2	7/8	1	10	096	156.56
868SV-334C	3X3/4	7/8	1	10	096	156.56
868SV-335C	3X1	1-1/8	1	10	096	156.56
868SV-336C[1]	3X1-1/4	2-1/4	1	10	096	156.56
868SV-337C[1]	3X1-1/2	2-1/4	1	10	096	156.56
868SV-338C	3X2	2-1/4	1	10	096	156.56
868SV-415C[1]	4X1/2	1-1/8	1	10	096	198.96
868SV-416C[1]	4X3/4	1-1/8	1	10	096	198.96
868SV-417C	4X1	1-1/8	1	8	096	198.96
868SV-418C[1]	4X1-1/4	1-3/4	1	8	096	198.96
868SV-419C	4X1-1/2	1-3/4	1	8	096	198.96
868SV-420C	4X2	2-1/4	1	8	096	198.96
868SV-421C[1]	4X2-1/2	3	1	4	096	207.01
868SV-422C	4X3	3	4	0	096	220.53
868SV-523C[1]	6X1/2	1-1/8	1	4	096	330.94
868SV-524C[1]	6X3/4	1-1/8	1	4	096	330.94
868SV-525C	6X1	1-1/8	1	4	096	330.94
868SV-526C[1]	6X1-1/4	2-1/4	1	4	096	330.94
868SV-527C[1]	6X1-1/2	2-1/4	1	4	096	330.94
868SV-528C	6X2	2-1/4	1	4	096	330.94
868SV-529C[1]	6X2-1/2	3	1	4	096	341.12
868SV-530C	6X3	3	1	4	096	356.87
868SV-532C	6X4	4	1	4	096	365.36
868SV-573C[1]	8X1/2	4	1	0	096	558.61
868SV-574C[1]	8X3/4	4	1	0	096	558.61
868SV-575C[1]	8X1	4	1	0	096	558.61
868SV-576C[1]	8X1-1/4	4	1	0	096	558.61
868SV-577C[1]	8X1-1/2	4	1	0	096	558.61
868SV-578C[1]	8X2	4	1	0	096	558.61
868SV-579C[1]	8X2-1/2	4	1	0	096	614.26
868SV-580C[1]	8X3	4	1	0	096	645.14
868SV-582C	8X4	4	1	0	096	683.79
868SV-585C	8X6	6	1	0	096	759.11
868SV-624C	10X4	4	1	0	096	903.35
868SV-626C	10X6	6	1	0	096	1038.97
868SV-664C	12X4	4	1	0	096	1132.21
868SV-666C	12X6	6	1	0	096	1313.51

[1]Outlet-sized with Bushing

Clamp-On Saddle x Soc Double Outlet, CPVC Gray

with EPDM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

868-247C	2X1/2	3/4	1	10	096	64.69
868-248C	2X3/4	7/8	1	10	096	64.69
868-249C	2X1	1-1/8	1	10	096	64.69

Clamp-On Saddles

Clamp-On Saddle x Soc Double Outlet, CPVC Gray
(continued)
with EPDM O-ring Seal & Zinc-Plated Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
868-250C	2X1-1/4	1-1/2	1	10	096	64.69
868-251C	2X1-1/2	1-1/2	1	10	096	64.69
868-291C	2-1/2X1-1/2	1-3/4	1	10	096	88.82
868-333C[1]	3X1/2	7/8	1	10	096	88.82
868-334C	3X3/4	7/8	1	10	096	88.82
868-335C	3X1	1-1/8	1	10	096	88.82
868-336C[1]	3X1-1/4	2-1/4	1	10	096	88.82
868-337C[1]	3X1-1/2	2-1/4	1	10	096	88.82
868-338C	3X2	2-1/4	1	10	096	88.82
868-415C[1]	4X1/2	1-1/8	1	10	096	111.47
868-416C[1]	4X3/4	1-1/8	1	10	096	111.47
868-417C	4X1	1-1/8	1	8	096	111.47
868-418C[1]	4X1-1/4	1-3/4	1	8	096	111.47
868-419C	4X1-1/2	1-3/4	1	8	096	111.47
868-420C	4X2	2-1/4	1	8	096	111.47
868-421C[1]	4X2-1/2	3	1	4	096	117.38
868-422C	4X3	3	1	4	096	127.59
868-523C[1]	6X1/2	1-1/8	1	4	096	186.11
868-524C[1]	6X3/4	1-1/8	1	4	096	186.11
868-525C	6X1	1-1/8	1	4	096	186.11
868-526C[1]	6X1-1/4	2-1/4	1	4	096	186.11
868-527C[1]	6X1-1/2	2-1/4	1	4	096	186.11
868-528C	6X2	2-1/4	1	4	096	186.11
868-529C[1]	6X2-1/2	3	1	4	096	197.85
868-530C	6X3	3	1	4	096	209.16
868-532C	6X4	4	1	4	096	215.91
868-573C[1]	8X1/2	4	1	0	096	372.93
868-574C[1]	8X3/4	4	1	0	096	372.93
868-575C[1]	8X1	4	1	0	096	372.93
868-576C[1]	8X1-1/4	4	1	0	096	372.93
868-577C[1]	8X1-1/2	4	1	0	096	372.93
868-578C[1]	8X2	4	1	0	096	372.93
868-579C[1]	8X2-1/2	4	1	0	096	410.17
868-580C[1]	8X3	4	1	0	096	430.73
868-582C	8X4	4	1	0	096	456.53
868-585C	8X6	6	1	0	096	506.75
868-624C	10X4	4	1	0	096	603.08
868-626C	10X6	6	1	0	096	693.48
868-664C	12X4	4	1	0	096	755.84
868-666C	12X6	6	1	0	096	876.94

[1]Outlet-sized with Bushing

Clamp-On Saddle x Soc Double Outlet, CPVC Gray
with EPDM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

868S-247C	2X1/2	3/4	1	10	096	102.31
868S-248C	2X3/4	7/8	1	10	096	102.31
868S-249C	2X1	1-1/8	1	10	096	102.31
868S-250C	2X1-1/4	1-1/2	1	10	096	102.31
868S-251C	2X1-1/2	1-1/2	1	10	096	102.31
868S-291C	2-1/2X1-1/2	1-3/4	1	10	096	136.07
868S-333C[1]	3X1/2	7/8	1	10	096	136.07
868S-334C	3X3/4	7/8	1	10	096	136.07
868S-335C	3X1	1-1/8	1	10	096	136.07
868S-336C[1]	3X1-1/4	2-1/4	1	10	096	136.07
868S-337C[1]	3X1-1/2	2-1/4	1	10	096	136.07
868S-338C	3X2	2-1/4	1	10	096	136.07
868S-415C[1]	4X1/2	1-1/8	1	10	096	174.37
868S-416C[1]	4X3/4	1-1/8	1	10	096	174.37
868S-417C	4X1	1-1/8	1	8	096	174.37
868S-418C[1]	4X1-1/4	1-3/4	1	8	096	174.37
868S-419C	4X1-1/2	1-3/4	1	8	096	174.37

Clamp-On Saddle x Soc Double Outlet, CPVC Gray
(continued)
with EPDM O-ring Seal & SS Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
868S-420C	4X2	2-1/4	1	8	096	174.37
868S-421C[1]	4X2-1/2	3	1	4	096	182.49
868S-422C	4X3	3	4	0	096	190.85
868S-523C[1]	6X1/2	1-1/8	1	4	096	291.20
868S-524C[1]	6X3/4	1-1/8	1	4	096	291.20
868S-525C	6X1	1-1/8	1	4	096	291.20
868S-526C[1]	6X1-1/4	2-1/4	1	4	096	291.20
868S-527C[1]	6X1-1/2	2-1/4	1	4	096	291.20
868S-528C	6X2	2-1/4	1	4	096	291.20
868S-529C[1]	6X2-1/2	3	1	4	096	305.64
868S-530C	6X3	3	1	4	096	313.02
868S-532C	6X4	4	1	4	096	324.42
868S-573C[1]	8X1/2	4	1	0	096	507.62
868S-574C[1]	8X3/4	4	1	0	096	507.62
868S-575C[1]	8X1	4	1	0	096	507.62
868S-576C[1]	8X1-1/4	4	1	0	096	507.62
868S-577C[1]	8X1-1/2	4	1	0	096	507.62
868S-578C[1]	8X2	4	1	0	096	507.62
868S-579C[1]	8X2-1/2	4	1	0	096	558.37
868S-580C[1]	8X3	4	1	0	096	586.31
868S-582C	8X4	4	1	0	096	621.48
868S-585C	8X6	6	1	0	096	689.98
868S-624C	10X4	4	1	0	096	821.03
868S-626C	10X6	6	1	0	096	944.20
868S-664C	12X4	4	1	0	096	1029.17
868S-666C	12X6	6	1	0	096	1193.79

[1]Outlet-sized with Bushing

Clamp-On Saddle x SR Thread Double Outlet, CPVC Gray
with FKM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

869V-247CSR	2X1/2	3/4	1	10	096	86.27
869V-248CSR	2X3/4	7/8	1	10	096	86.27
869V-249CSR	2X1	1-1/8	1	10	096	86.27
869V-250CSR	2X1-1/4	1-1/2	1	10	096	86.27
869V-251CSR	2X1-1/2	1-1/2	1	10	096	86.27
869V-291CSR	2-1/2X1-1/2	1-3/4	1	10	096	118.29
869V-333CSR[1]	3X1/2	7/8	1	10	096	118.29
869V-334CSR	3X3/4	7/8	1	10	096	118.29
869V-335CSR	3X1	1-1/8	1	10	096	118.29
869V-336CSR[1]	3X1-1/4	2-1/4	1	10	096	118.29
869V-337CSR[1]	3X1-1/2	2-1/4	1	10	096	118.29
869V-338CSR	3X2	2-1/4	1	10	096	118.29
869V-415CSR[1]	4X1/2	4-1/2	1	10	096	144.77
869V-416CSR[1]	4X3/4	1-1/8	1	10	096	144.77
869V-417CSR	4X1	1-1/8	1	8	096	144.77
869V-418CSR[1]	4X1-1/4	1-3/4	1	8	096	144.77
869V-419CSR	4X1-1/2	1-3/4	1	8	096	144.77
869V-420CSR	4X2	2-1/4	1	8	096	144.77
869V-421CSR[1]	4X2-1/2	3	1	4	096	155.48
869V-422CSR	4X3	3	4	0	096	163.75
869V-523CSR[1]	6X1/2	1-1/8	1	4	096	240.05
869V-524CSR[1]	6X3/4	1-1/8	1	4	096	240.05
869V-525CSR	6X1	1-1/8	1	4	096	240.05
869V-526CSR[1]	6X1-1/4	2-1/4	1	4	096	240.05
869V-527CSR[1]	6X1-1/2	2-1/4	1	4	096	240.05
869V-528CSR	6X2	2-1/4	1	4	096	240.05
869V-529CSR[1]	6X2-1/2	3	1	4	096	252.13
869V-530CSR	6X3	3	1	4	096	262.54
869V-532CSR	6X4	4	1	4	096	278.09
869V-573CSR[1]	8X1/2	4	1	0	096	442.09
869V-574CSR[1]	8X3/4	4	1	0	096	442.09

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Clamp-On Saddles

Clamp-On Saddle x SR Thread Double Outlet, CPVC Gray (continued)

with FKM O-ring Seal & Zinc-Plated Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
869V-575CSR[1]	8X1	4	1	0	096	442.09
869V-576CSR[1]	8X1-1/4	4	1	0	096	442.09
869V-577CSR[1]	8X1-1/2	4	1	0	096	442.09
869V-578CSR[1]	8X2	4	1	0	096	442.09
869V-579CSR[1]	8X2-1/2	4	1	0	096	486.29
869V-580CSR[1]	8X3	4	1	0	096	510.56
869V-582CSR	8X4	4	1	0	096	541.18
869V-585CSR	8X6	6	1	0	096	598.60
869V-624CSR	10X4	4	1	0	096	643.86
869V-626CSR	10X6	6	1	0	096	740.54
869V-664CSR	12X4	4	1	0	096	807.25
869V-666CSR	12X6	6	1	0	096	936.28

[1]Outlet-sized with Bushing

Clamp-On Saddle x SR Thread Double Outlet, CPVC Gray

with FKM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
869SV-247CSR	2X1/2	3/4	1	10	096	126.97
869SV-248CSR	2X3/4	7/8	1	10	096	126.97
869SV-249CSR	2X1	1-1/8	1	10	096	126.97
869SV-250CSR	2X1-1/4	1-1/2	1	10	096	126.97
869SV-251CSR	2X1-1/2	1-1/2	1	10	096	126.97
869SV-291CSR	2-1/2X1-1/2	1-1/2	1	10	096	160.91
869SV-333CSR[1]	3X1/2	7/8	1	10	096	160.91
869SV-334CSR	3X3/4	7/8	1	10	096	160.91
869SV-335CSR	3X1	1-1/8	1	10	096	160.91
869SV-336CSR[1]	3X1-1/4	2-1/4	1	10	096	160.91
869SV-337CSR[1]	3X1-1/2	2-1/4	1	10	096	160.91
869SV-338CSR	3X2	2-1/4	1	10	096	160.91
869SV-415CSR[1]	4X1/2	1-1/8	1	10	096	211.29
869SV-416CSR[1]	4X3/4	1-1/8	1	10	096	211.29
869SV-417CSR	4X1	1-1/8	1	8	096	211.29
869SV-418CSR[1]	4X1-1/4	1-3/4	1	8	096	211.29
869SV-419CSR	4X1-1/2	1-3/4	1	8	096	211.29
869SV-420CSR	4X2	2-1/4	1	8	096	211.29
869SV-421CSR[1]	4X2-1/2	3	1	4	096	221.83
869SV-422CSR	4X3	3	4	0	096	237.65
869SV-523CSR[1]	6X1/2	1-1/8	1	4	096	377.55
869SV-524CSR[1]	6X3/4	1-1/8	1	4	096	377.55
869SV-525CSR	6X1	1-1/8	1	4	096	377.55
869SV-526CSR[1]	6X1-1/4	2-1/4	1	4	096	377.55
869SV-527CSR[1]	6X1-1/2	2-1/4	1	4	096	377.55
869SV-528CSR	6X2	2-1/4	1	4	096	377.55
869SV-529CSR[1]	6X2-1/2	3	1	4	096	392.06
869SV-530CSR	6X3	3	1	4	096	404.49
869SV-532CSR	6X4	4	1	4	096	413.76
869SV-573CSR[1]	8X1/2	4	1	0	096	618.39
869SV-574CSR[1]	8X3/4	4	1	0	096	618.39
869SV-575CSR[1]	8X1	4	1	0	096	618.39
869SV-576CSR[1]	8X1-1/4	4	1	0	096	618.39
869SV-577CSR[1]	8X1-1/2	4	1	0	096	618.39
869SV-578CSR[1]	8X2	4	1	0	096	618.39
869SV-579CSR[1]	8X2-1/2	4	1	0	096	680.14
869SV-580CSR[1]	8X3	4	1	0	096	701.67
869SV-582CSR	8X4	4	1	0	096	757.04
869SV-585CSR	8X6	6	1	0	096	808.81
869SV-624CSR	10X4	4	1	0	096	900.86
869SV-626CSR	10X6	6	1	0	096	1036.04
869SV-664CSR	12X4	4	1	0	096	1129.27
869SV-666CSR	12X6	6	1	0	096	1310.06

[1]Outlet-sized with Bushing

Clamp-On Saddle x SR Thread Double Outlet, CPVC Gray

with EPDM O-ring Seal & Zinc-Plated Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
869-247CSR	2X1/2	3/4	1	10	096	74.96
869-248CSR	2X3/4	7/8	1	10	096	74.96
869-249CSR	2X1	1-1/8	1	10	096	74.96
869-250CSR	2X1-1/4	1-1/2	1	10	096	74.96
869-251CSR	2X1-1/2	1-1/2	1	10	096	74.96
869-291CSR	2-1/2X1-1/2	1-3/4	1	10	096	101.22
869-333CSR[1]	3X1/2	7/8	1	10	096	101.22
869-334CSR	3X3/4	7/8	1	10	096	101.22
869-335CSR	3X1	1-1/8	1	10	096	101.22
869-336CSR[1]	3X1-1/4	1-1/8	1	10	096	101.22
869-337CSR[1]	3X1-1/2	2-1/4	1	10	096	101.22
869-338CSR	3X2	2-1/4	1	10	096	101.22
869-415CSR[1]	4X1/2	1-1/8	1	10	096	125.65
869-416CSR[1]	4X3/4	1-1/8	1	10	096	125.65
869-417CSR	4X1	1-1/8	1	8	096	125.65
869-418CSR[1]	4X1-1/4	1-3/4	1	8	096	125.65
869-419CSR	4X1-1/2	1-3/4	1	8	096	125.65
869-420CSR	4X2	2-1/4	1	8	096	125.65
869-421CSR[1]	4X2-1/2	3	1	4	096	138.96
869-422CSR	4X3	3	1	4	096	150.38
869-523CSR[1]	6X1/2	1-1/8	1	4	096	205.25
869-524CSR[1]	6X3/4	1-1/8	1	4	096	205.25
869-525CSR	6X1	1-1/8	1	4	096	205.25
869-526CSR[1]	6X1-1/4	2-1/4	1	4	096	205.25
869-527CSR[1]	6X1-1/2	2-1/4	1	4	096	205.25
869-528CSR	6X2	2-1/4	1	4	096	205.25
869-529CSR[1]	6X2-1/2	3	1	4	096	219.69
869-530CSR	6X3	3	1	4	096	237.69
869-532CSR	6X4	4	1	4	096	252.07
869-573CSR[1]	8X1/2	4	1	0	096	397.37
869-574CSR[1]	8X3/4	4	1	0	096	397.37
869-575CSR[1]	8X1	4	1	0	096	397.37
869-576CSR[1]	8X1-1/4	4	1	0	096	397.37
869-577CSR[1]	8X1-1/2	4	1	0	096	397.37
869-578CSR[1]	8X2	4	1	0	096	397.37
869-579CSR[1]	8X2-1/2	4	1	0	096	437.18
869-580CSR[1]	8X3	4	1	0	096	459.13
869-582CSR	8X4	4	1	0	096	486.62
869-585CSR	8X6	6	1	0	096	525.81
869-624CSR	10X4	4	1	0	096	578.99
869-626CSR	10X6	6	1	0	096	665.96
869-664CSR	12X4	4	1	0	096	725.91
869-666CSR	12X6	6	1	0	096	842.03

[1]Outlet-sized with Bushing

Clamp-On Saddle x SR Thread Double Outlet, CPVC Gray

with EPDM O-ring Seal & SS Hardware

2"- 4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
869S-247CSR	2X1/2	3/4	1	10	096	120.48
869S-248CSR	2X3/4	7/8	1	10	096	120.48
869S-249CSR	2X1	1-1/8	1	10	096	120.48
869S-250CSR	2X1-1/4	1-1/2	1	10	096	120.48
869S-251CSR	2X1-1/2	1-1/2	1	10	096	120.48
869S-291CSR	2-1/2X1-1/2	1-/34	1	10	096	158.89
869S-333CSR[1]	3X1/2	7/8	1	10	096	158.89
869S-334CSR	3X3/4	7/8	1	10	096	158.89
869S-335CSR	3X1	1-1/8	1	10	096	158.89
869S-336CSR[1]	3X1-1/4	2-1/4	1	10	096	158.89
869S-337CSR[1]	3X1-1/2	2-1/4	1	10	096	158.89
869S-338CSR	3X2	2-1/4	1	10	096	158.89
869S-415CSR[1]	4X1/2	1-1/8	1	10	096	198.95

Clamp-On Saddles & Hot-Tap Saddles

Clamp-On Saddles

Clamp-On Saddle x SR Thread Double Outlet, CPVC Gray (continued)

with EPDM O-ring Seal & SS Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
869S-416CSR[1]	4X3/4	1-1/8	1	10	096	198.95
869S-417CSR	4X1	1-1/8	1	8	096	198.95
869S-418CSR[1]	4X1-1/4	1-3/4	1	8	096	198.95
869S-419CSR	4X1-1/2	1-3/4	1	8	096	198.95
869S-420CSR	4X2	2-1/4	1	8	096	198.95
869S-421CSR[1]	4X2-1/2	3	1	4	096	213.72
869S-422CSR	4X3	3	4	0	096	229.08
869S-523CSR[1]	6X1/2	1-1/8	1	4	096	335.07
869S-524CSR[1]	6X3/4	1-1/8	1	4	096	335.07
869S-525CSR	6X1	1-1/8	1	4	096	335.07
869S-526CSR[1]	6X1-1/4	2-1/4	1	4	096	335.07
869S-527CSR[1]	6X1-1/2	2-1/4	1	4	096	335.07
869S-528CSR	6X2	2-1/4	1	4	096	335.07
869S-529CSR[1]	6X2-1/2	3	1	4	096	342.60
869S-530CSR	6X3	3	1	4	096	357.74
869S-532CSR	6X4	4	1	4	096	367.73

Clamp-On Saddle x SR Thread Double Outlet, CPVC Gray (continued)

with EPDM O-ring Seal & SS Hardware

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
869S-573CSR[1]	8X1/2	4	1	0	096	563.97
869S-574CSR[1]	8X3/4	4	1	0	096	563.97
869S-575CSR[1]	8X1	4	1	0	096	563.97
869S-576CSR[1]	8X1-1/4	4	1	0	096	563.97
869S-577CSR[1]	8X1-1/2	4	1	0	096	563.97
869S-578CSR[1]	8X2	4	1	0	096	563.97
869S-579CSR[1]	8X2-1/2	4	1	0	096	620.31
869S-580CSR[1]	8X3	4	1	0	096	651.25
869S-582CSR	8X4	4	1	0	096	690.38
869S-585CSR	8X6	6	1	0	096	725.01
869S-624CSR	10X4	4	1	0	096	821.56
869S-626CSR	10X6	6	1	0	096	944.72
869S-664CSR	12X4	4	1	0	096	1029.85
869S-666CSR	12X6	6	1	0	096	1194.49

[1]Outlet-sized with Bushing

Hot-Tap Saddles

Hot-Tap Saddle CPVC Gray

EPDM Saddle x Soc (Spigot) Zinc Plated Bolts

2"- 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
HT2-248C	**2X3/4 (1)**	1	5	050	85.15
HT2-251C	**2X1-1/2 (2)**	1	5	050	175.76
HT2-288C	**2-1/2X3/4 (1)**	1	5	050	90.89
HT2-291C	**2-1/2X1-1/2 (2)**	1	5	050	181.63
HT2-334C	**3X3/4 (1)**	1	5	050	104.14
HT2-337C	**3X1-1/2 (2)**	1	5	050	200.31
HT2-416C	**4X3/4 (1)**	1	5	050	120.32
HT2-419C	**4X1-1/2 (2)**	1	0	050	211.79
HT2-524C	**6X3/4 (1)**	1	5	050	135.31
HT2-527C	**6X1-1/2 (2)**	1	0	050	225.46
HT2-574C	**8X3/4 (1)**	1	5	050	124.62
HT2-577C	**8X1-1/2 (2)**	1	0	050	232.81

Not intended to convey or dispense water for human consumption through drinking or cooking

Hot-Tap Saddle CPVC Gray

FKM Saddle x Soc (Spigot) Zinc Plated Bolts

2"- 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
HT3-248C	**2X3/4 (1)**	1	5	050	92.52
HT3-251C	**2X1-1/2 (2)**	1	5	050	190.75
HT3-288C	**2-1/2X3/4 (1)**	1	5	050	98.84
HT3-291C	**2-1/2X1-1/2 (2)**	1	5	050	197.07
HT3-334C	**3X3/4 (1)**	1	5	050	112.95
HT3-337C	**3X1-1/2 (2)**	1	5	050	217.66
HT3-416C	**4X3/4 (1)**	1	5	050	203.26
HT3-419C	**4X1-1/2 (2)**	1	0	050	230.02
HT3-524C	**6X3/4 (1)**	1	5	050	146.92
HT3-527C	**6X1-1/2 (2)**	1	0	050	244.14
HT3-574C	**8X3/4 (1)**	1	0	050	158.83
HT3-577C	**8X1-1/2 (2)**	1	0	050	295.93

Not intended to convey or dispense water for human consumption through drinking or cooking

Hot-Tap Saddle CPVC Gray

EPDM Saddle x Soc (Spigot) SS316 Bolts

2"- 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
HT2S-248C	**2X3/4 (1)**	1	5	050	132.36
HT2S-251C	**2X1-1/2 (2)**	1	5	050	273.56
HT2S-288C	**2-1/2X3/4 (1)**	1	5	050	141.48
HT2S-291C	**2-1/2X1-1/2 (2)**	1	5	050	282.82
HT2S-334C	**3X3/4 (1)**	1	5	050	162.23
HT2S-337C	**3X-1/2 (2)**	1	5	050	311.80
HT2S-416C	**4X3/4 (1)**	1	5	050	187.38
HT2S-419C	**4X1-1/2 (2)**	1	0	050	329.75
HT2S-524C	**6X3/4 (1)**	1	5	050	210.32
HT2S-527C	**6X1-1/2 (2)**	1	0	050	350.92
HT2S-574C	**8X3/4 (1)**	1	0	050	227.38
HT2S-577C	**8X1-1/2 (2)**	1	0	050	379.45

Not intended to convey or dispense water for human consumption through drinking or cooking

Hot-Tap Saddle CPVC Gray

FKM Saddle x Soc (Spigot) SS316 Bolts

2"- 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
HT3S-248C	**2X3/4 (1)**	1	5	050	144.14
HT3S-251C	**2X-1-1/2 (2)**	1	5	050	297.08
HT3S-288C	**2-1/2X3/4 (1)**	1	5	050	153.83
HT3S-291C	**2-1/2X1-1/2 (2)**	1	5	050	306.65
HT3S-334C	**3X3/4 (1)**	1	5	050	175.61
HT3S-337C	**3X1-1/2 (2)**	1	5	050	345.04
HT3S-416C	**4X3/4 (1)**	1	5	050	203.26
HT3S-419C	**4X1-1/2 (2)**	1	0	050	358.13
HT3S-524C	**6X3/4 (1)**	1	5	050	228.71
HT3S-527C	**6X1-1/2 (2)**	1	0	050	380.03
HT3S-574C	**8X3/4 (1)**	1	0	050	247.23
HT3S-577C	**8X1-1/2 (2)**	1	5	050	410.85

Not intended to convey or dispense water for human consumption through drinking or cooking

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Hot-Tap Saddles

Hot-Tap Saddle CPVC Gray

EPDM with Stainless Steel Cutter & Bolts

2"- 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
HTS2S-248C	**2X3/4 (1)**	1	5	050	407.25
HTS2S-251C	**2X1-1/2 (2)**	1	5	050	603.55
HTS2S-288C	**2-1/2X3/4 (1)**	1	5	050	435.76
HTS2S-291C	**2-1/2X1-1/2 (2)**	1	5	050	604.52
HTS2S-334C	**3X3/4 (1)**	1	5	050	415.62
HTS2S-337C	**3X1-1/2 (2)**	1	5	050	621.38
HTS2S-416C	**4X3/4 (1)**	1	5	050	442.54
HTS2S-419C	**4X1-1/2 (2)**	1	0	050	636.83
HTS2S-524C	**6X3/4 (1)**	1	5	050	515.85
HTS2S-527C	**6X1-1/2 (2)**	1	0	050	719.88
HTS2S-574C	**8X3/4 (1)**	1	0	050	715.60
HTS2S-577C	**8X1-1/2 (2)**	1	0	050	852.33
Lead Free					

Hot-Tap Saddle CPVC Gray

FKM with Stainless Steel Cutter & Bolts

2"- 4" 235, 6" 200, 8" 150 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
HTS3S-248C	**2X3/4 (1)**	1	5	050	413.63
HTS3S-251C	**2X1-1/2 (2)**	1	5	050	612.74
HTS3S-288C	**2-1/2X3/4 (1)**	1	5	050	442.68
HTS3S-291C	**2-1/2X1-1/2 (2)**	1	5	050	615.15
HTS3S-334C	**3X3/4 (1)**	1	5	050	380.64
HTS3S-337C	**3X1-1/2 (2)**	1	5	050	632.17
HTS3S-416C	**4X3/4 (1)**	1	5	050	450.88
HTS3S-419C	**4X1-1/2 (2)**	1	0	050	652.81
HTS3S-524C	**6X3/4 (1)**	1	5	050	523.92
HTS3S-527C	**6X1-1/2 (2)**	1	0	050	735.84
HTS3S-574C	**8X3/4 (1)**	1	0	050	731.43
HTS3S-577C	**8X1-1/2 (2)**	1	0	050	859.96
Lead Free					

CPVC Cut-in Kit

PRICING

CPVC Cut-in Kit

When planned system changes are needed, system downtime can be a major concern. Spears® Flange Cut-in Kit minimizes downtime for actual cut-in to allow new connection in just minutes. Kit provides all necessary components to create a flanged joint for connection to system alterations in just minutes. Special Flange Hub can be cemented to piping and allowed to cure before shutting down and cutting into system. This allows immediate joining to mating flange (included) that can also be pre-assembled to desired alteration piping.

Kit includes special Split Flange Socket Hub, O-ring Sealed Hub Body, Stainless Steel Clamp, Split Ring, Full-Faced EPDM or FKM Gasket, Mating Flange Hub & Ring, and complete set of Stainless Steel Bolts, Flat Washers and anti-seize Brass Nuts to make the final joint. Available for IPS Pipe Sizes 2" - 12".

Pressure Rated to 150 psi @ 73°F (22°C)
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply

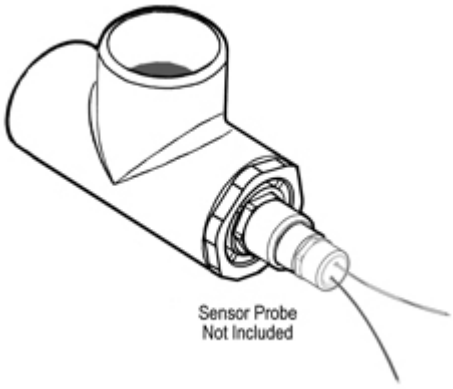
Flange Cut-in Kit

Size	EPDM Gasket	FKM Gasket	Std Pk	Mstr Pk	Prod Code
2	FCKE-020C **693.79**	FCKV-020C **732.07**	1	4	017
2-1/2	FCKE-025C **739.29**	FCKV-025C **800.29**	1	0	017
3	FCKE-030C **805.37**	FCKV-030C **836.33**	1	0	017
4	FCKE-040C **1232.08**	FCKV-040C **1279.94**	1	0	017
6	FCKE-060C **1995.37**	FCKV-060C **2273.05**	1	0	017
8	FCKE-080C **2532.21**	FCKV-080C **2884.84**	1	0	017
10	FCKE-100C **4101.17**	FCKV-100C **4237.68**	1	0	017
12	FCKE-120C **4880.05**	FCKV-120C **5094.11**	1	0	017

Gauge & Instrument Fittings

PRICING

Schedule 80 Specialty Fittings for Sensor Probes



Use with a wide variety of commercial sensor probes including pressure, temperature, pH, ORP (REDOX), Conductivity, Dissolved Oxygen and other specialty electrodes that are used in industrial, municipal water, wastewater treatment, solid landfills, chemical manufacturing, electroplating, boilers and cooling towers, pulp and paper, DI water skids, pool & spa and other OEM applications. Features Spears® patented Special Reinforced (SR) female plastic thread connection that eliminates splitting from inadvertent over tightening.

- Centers Probe in Fluid Stream
- Suitable for Horizontal or Vertical Installations
- Available in 1/2" Through 8" Tee Configuration with 1/2", 3/4" or 1" NPT Connection

CPVC Instrument Probe Fittings

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Special Reinforced					
803-005CSR	**1/2**	25	0	096	10.94
803-095CSR	**3/4X1/2X3/4**	15	0	096	16.20
803-007CSR	**3/4**	15	0	096	17.36
803-113CSR	**1X1/4X1**	15	0	096	49.11
803-122CSR	**1X1/2X1**	15	0	096	18.62
803-126CSR	**1X3/4X1**	15	0	096	26.07
803-010CSR	**1**	15	0	096	20.34
803-142CSR	**1-1/4X1/2X1-1/4**	10	0	096	32.17
803-149CSR	**1-1/4X3/4X1-1/4**	10	0	096	32.53
803-159CSR	**1-1/4X1X1-1/4**	10	0	096	35.69
803-177CSR	**1-1/2X1/2X1-1/2**	10	0	096	36.68
803-188CSR	**1-1/2X3/4X1-1/2**	10	0	096	39.29
803-197CSR	**1-1/2X1X1-1/2**	10	0	096	38.99
803-221CSR	**2X1/2X2**	10	0	096	48.76
803-227CSR	**2X3/4X2**	10	0	096	54.79
803-233CSR	**2X1X2**	10	0	096	55.39
803-333CSR	**3X1/2X3**	5	0	096	78.24
803-334CSR	**3X3/4X3**	5	0	096	81.71
803-335CSR	**3X1X3**	5	0	096	82.87
803-415CSR	**4X1/2X4**	4	0	096	119.04
803-416CSR	**4X3/4X4**	4	0	096	126.79
803-417CSR	**4X1X4**	4	0	096	129.11
803-523CSR	**6X1/2X6**	2	0	096	250.40
803-524CSR	**6X3/4X6**	2	0	096	258.13
803-525CSR	**6X1X6**	2	0	096	265.63
803-573CSR	**8X1/2X8**	1	0	096	527.58
803-574CSR	**8X3/4X8**	1	0	096	534.08
803-575CSR	**8X1X8**	1	0	096	548.47

Gauge Guards

CPVC GAUGE GUARDS

Size	1/4" Inlet Connection	1/2" Inlet Connection	Std Pk	Mstr Pk	Prod Code
PTFE Diaphragm					
No Gauge	G0004-002C **134.98**	G0004-005C **134.98**	1	18	625
0-30 in-Hg	G30V4-002C **227.88**	G30V4-005C **227.88**	1	18	625
0-15 psi	G0154-002C **215.43**	G0154-005C **215.43**	1	18	625
0-30 psi	G0304-002C **215.43**	G0304-005C **215.43**	1	18	625
0-60 psi	G0604-002C **215.43**	G0604-005C **215.43**	1	18	625
0-100 psi	G1004-002C **215.43**	G1004-005C **215.43**	1	18	625
0-160 psi	G1604-002C **215.43**	G1604-005C **215.43**	1	18	625
0-200 psi	G2004-002C **215.43**	G2004-005C **215.43**	1	18	625
0-300 psi	G3004-002C **215.43**	G3004-005C **215.43**	1	18	625
FKM Diaphragm					
No Gauge	G0003-002C **134.98**	G0003-005C **134.98**	1	18	625
0-30 in-Hg	G30V3-002C **227.88**	G30V3-005C **227.88**	1	18	625
0-15 psi	G0153-002C **215.43**	G0153-005C **215.43**	1	18	625
0-30 psi	G0303-002C **215.43**	G0303-005C **215.43**	1	18	625
0-60 psi	G0603-002C **215.43**	G0603-005C **215.43**	1	18	625
0-100 psi	G1003-002C **215.43**	G1003-005C **215.43**	1	18	625
0-160 psi	G1603-002C **215.43**	G1603-005C **215.43**	1	18	625
0-200 psi	G2003-002C **215.43**	G2003-005C **215.43**	1	18	625
0-300 psi	G3003-002C **215.43**	G3003-005C **215.43**	1	18	625
EPDM Diaphragm					
No Gauge	G0002-002C **129.60**	G0002-005C **129.60**	1	18	625
0-30 in-Hg	G30V2-002C **218.74**	G30V2-005C **218.74**	1	18	625
0-15 psi	G0152-002C **206.91**	G0152-005C **206.91**	1	18	625
0-30 psi	G0302-002C **206.91**	G0302-005C **206.91**	1	18	625
0-60 psi	G0602-002C **206.91**	G0602-005C **206.91**	1	18	625
0-100 psi	G1002-002C **206.91**	G1002-005C **206.91**	1	18	625
0-160 psi	G1602-002C **206.91**	G1602-005C **206.91**	1	18	625
0-200 psi	G2002-002C **206.91**	G2002-005C **206.91**	1	18	625
0-300 psi	G3002-002C **206.91**	G3002-005C **206.91**	1	18	625

Schedule 80 CPVC Pipe

Nominal Pipe Size (in)	O.D.	Average I.D.	Min. Wall	Nominal Wt./ft.	Maximum W.P. PSI*
1/8	0.405	0.195	0.095	0.068	1230
1/4	0.540	0.282	0.119	0.115	1130
3/8	0.675	0.403	0.126	0.158	920
1/2	0.840	0.526	0.147	0.232	850
3/4	1.050	0.722	0.154	0.314	690
1	1.315	0.936	0.179	0.461	630
1-1/4	1.660	1.255	0.191	0.638	520
1-1/2	1.900	1.476	0.200	0.773	470
2	2.375	1.913	0.218	1.070	400
2-1/2	2.875	2.29	0.276	1.632	420
3	3.500	2.864	0.300	2.186	370
4	4.500	3.786	0.337	3.196	320
6	6.625	5.709	0.432	6.102	280
8	8.625	7.565	0.500	9.269	250
10	10.750	9.493	0.593	13.744	230
12	12.750	11.294	0.687	18.909	230
14	14.000	12.41	0.750	22.681	220
16	16.000	14.213	0.843	29.162	220
18	18.000	16.014	0.937	36.487	220
20	20.000	17.814	1.031	44.648	220
24	24.000	21.418	1.218	63.341	210

Maximum CPVC Service Temperature 200°F

Pressure De-rating at Elevated Temperatures

The pressure ratings given above are for water, non-shock, @ 73°F. The specified derating factors for CPVC are suitable for pipe conveying water at elevated temperatures. To determine elevated temperature rating, multiply 73°F [23°C] pressure rating by appropriate factor shown in the table for desired operating temperature. When working near maximum specified temperature, solvent cement joints are recommended in place of threaded connections. Where disassembly is required at elevated temperatures use Spears® Special reinforced (SR) adapters, flanges, unions or grooved coupling connections. Spears® recommends that only Schedule 80 or heavier wall thickness pipe should be threaded.

CPVC Pipe

Operating Temp (°F)	De-Rating Factor
73-80	1.00
90	0.91
100	0.82
110	0.72
120	0.65
130	0.57
140	0.50
150	0.42
160	0.40
170	0.29
180	0.25
200	0.20

EX: 2" CPVC SCHEDULE 80 @ 120°F = 400 psi x 0.65 = 260 psi max. @ 120°F

See Plastic Pipe Engineering Guide for additional information

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CPVC Schedule 80 Fittings, Unions, Tank Adapters, Expansion Joints & Saddles

TECHNICAL INFORMATION WEIGHTS & DIMENSIONS

Contact Spears® for any information not found.

CPVC Performance Engineered and Tested

SPEARS® Schedule 80 CPVC pipe and fitting designs combine years of proven experience with computer generated stress analysis to yield the optimum physical structure and performance for each fitting. Material reinforcement is uniformly placed in stress concentration areas for substantially improved pressure handling capability. Resulting products are subjected to numerous verification tests to assure the very best CPVC piping products available.

1/4" Through 24" Availability

Spears® comprehensive line of CPVC fittings offers a variety of configurations in Schedule 80 sizes 1/4" through 24".

Exceptional Chemical & Corrosion Resistance

Unlike metal, CPVC fittings never rust, scale or pit, and will provide many years of maintenance-free service and extended system life.

Higher Temperature Ratings

High Temperature CPVC Thermoplastics can handle fluids at service temperatures up to 200°F, allowing a wide range of process applications, including hot corrosive liquids.

Higher Flow Capacity

Smooth interior walls result in lower pressure loss and higher volume than conventional metal fittings.

Lower Installation Costs

Substantially lower material costs than steel alloys or lined steel, combined with lighter weight and ease of installation, can reduce installation costs by as much as 60% over conventional metal systems.

SPEARS® Schedule 80 14" Through 24" Fittings & Flanges

Schedule 80 CPVC 14" through 24" fittings are a special engineered product by Spears® Manufacturing Company, where no applicable ASTM specifications exist. Available in a variety of injection molded and fabricated configurations including Flanges, Couplings, Elbows, Bushings and Tees, plus custom fabrication to virtually any configuration.

1/8" Through 24" Industrial Pipe Availability

Spears® premium quality Industrial CPVC pipe is offered in Schedule 80 sizes 1/8" through 24". Schedule 40 CPVC pipe is also available.

American Bureau of Shipping (ABS) Type Approval

Spears® Schedule 40 and Schedule 80 CPVC pipe and fittings are ABS Type Approved for marine and offshore applications in nominal pipe sizes through 12". Type Approval details and restrictions are specified in ABS Certificate # 10-HS539421-1-PDA available on the ABS website at www.eagle.org.

CPVC Sample Engineering Specifications

All CPVC Schedule 80 fittings shall be produced by Spears® Manufacturing Company from CPVC materials, cell classification 23447 conforming to ASTM Standard D 1784. All injection molded fittings through 12" shall be manufactured in compliance to ASTM F 439 and all pipe through 16" shall be manufactured in compliance to ASTM F 441. Pipe and fittings shall be Certified by NSF International for use with potable water service. All 14" through 24" and fabricated fittings shall be produced in accordance with Spears® Specifications. All CPVC flanges shall be designed and manufactured to meet CL150 bolt pattern per ANSI Standard B16.5.

The information contained in this publication is based on current information and Product design at the time of publication and is subject to change without notification. Our ongoing commitment to product improvement may result in some variation. No representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or results to be obtained therefrom. For verification of technical data or additional information not contained herein, please contact Spears® Technical Services Department [West Coast: (818) 364-1611 — East Coast: (678) 985-1263].

General Information

Recommendations For Installers And Users

Plastic piping systems should be **ENGINEERED, INSTALLED** and **OPERATED** in accordance with **ESTABLISHED DESIGN AND ENGINEERING STANDARDS AND PROCEDURES** for plastic piping systems. Suitability for the intended service application should be determined by the installer and/or user prior to installation of a plastic piping system. **PRIOR TO ASSEMBLY, all piping system components should be inspected for damage o r irregularities. Mating components should be checked to assure that tolerances and engagements are compatible. Do not use any components that appear irregular or do not fit properly. Contact the appropriate manufacturer of the component product in question to dete rmine usability. Consult all applicable codes and regulations for compliance prior to installation.**

Solvent Weld Connections — Use quality solvent cements and primers formulated for the intended service application, pipe size and type of joint. While the pipe and fitting materials may be compatible with the intended medium, the solvent cement may not be. Consult the manufacturers for suitability of use. Read and follow the cement and primer manufacturers' applications and cure time instructions thoroughly. Be sure to use the correct size applicator.

Threaded Connections — Use a quality grade thread sealant. **WARNING: SOME PIPE JOINT COMPOUNDS OR PTFE P ASTES MAY CONTAIN SUBSTANCES THAT COULD CAUSE STRESS CRACKING TO PLASTIC.** Spears® Manufacturing company recommends the use of Spears® **BLUE 75™** Thread Sealant which has been tested for compatibility with Spears® products. Please follow the sealant manufacturers' application/installation instructions. Choice of an appropriate thread sealant other than those listed above is at the discretion of the installer. 1 to 2 turns beyond **FINGER TIGHT** is generally all that is required to make a sound plastic threaded connection. Unnecessary **OVERTIGHTENING** will cause **DAMAGE TO BOTH PIPE AND FITTING.**

Standards and Specifications

Molded Schedule 80 CPVC products are manufactured to ASTM F 439 for use with pipe manufactured to ASTM F 441. Certain products carry reduced pressure handling capability and have maximum internal pressure ratings at 73°F noted.

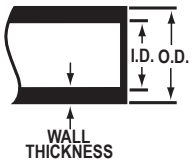
Schedule 80 CPVC fabricated fittings for use with pipe manufactured to ASTM F 441. See publication FAB-7, General Specifications for Standard Fabricated Fittings for additional information.

All specified Schedule 80 CPVC products are manufactured from materials certified by NSF® for use in potable water service.

"Lead Free" low lead certification – unless otherwise specified, all Spears® Schedule 80 fittings specified here-in are certified by NSF International to ANSI/NSF® Standard 61, Annex G and is in compliance with California's Health & Safety Code Section 116825 (commonly known as AB1953) and Vermont Act 193. Weighted average lead content <=0.25%. Spears® PVC and CPVC Pipe, Fittings and Valves have always been lead-free and Certified by NSF International for use in potable water systems. Spears® offers a wide range of lead-free specialty fittings and transition adapters for plumbing applications. However, certain brass threaded adapter fittings for applications that are not intended to convey water for human consumption through drinking or cooking are still produced and available.

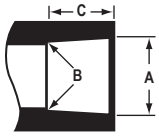
ASTM STANDARD DIMENSIONS

SCHEDULE 80 PIPE DIMENSIONS ASTM D 1785



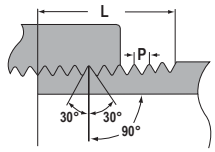
Nominal Pipe Size In.	Mean Outside Diameter In.	O. D. Tolerance In.	Minimum Wall Thickness In.
1/8	0.405	± 0.004	0.095
1/4	0.540	± 0.004	0.119
3/8	0.675	± 0.004	0.126
1/2	0.840	± 0.004	0.147
3/4	1.050	± 0.004	0.154
1	1.315	± 0.005	0.179
1-1/4	1.660	± 0.005	0.191
1-1/2	1.900	± 0.006	0.200
2	2.375	± 0.006	0.218
2-1/2	2.875	± 0.007	0.276
3	3.500	± 0.008	0.300
4	4.500	± 0.009	0.337
5	5.563	± 0.010	0.375
6	6.625	± 0.011	0.432
8	8.625	± 0.015	0.500
10	10.750	± 0.015	0.593
12	12.750	± 0.015	0.687

SCHEDULE 80 SOCKET DIMENSIONS ASTM D 2467



Nominal Size In.	Diameter			Socket Length Minimum C
	Entrance A	Bottom B	Tolerance A	
1/8	0.417	0.401	± 0.004	0.500
1/4	0.552	0.536	± 0.004	0.625
3/8	0.687	0.671	± 0.004	0.750
1/2	0.848	0.836	± 0.004	0.875
3/4	1.058	1.046	± 0.004	1.000
1	1.325	1.310	± 0.005	1.125
1-1/4	1.670	1.655	± 0.005	1.250
1-1/2	1.912	1.894	± 0.006	1.375
2	2.387	2.369	± 0.006	1.500
2-1/2	2.889	2.868	± 0.007	1.750
3	3.516	3.492	± 0.008	1.875
4	4.518	4.491	± 0.009	2.250
5	5.583	5.553	± 0.010	2.625
6	6.647	6.614	± 0.011	3.000
8	8.655	8.610	± 0.015	4.000
10	10.780	10.735	± 0.015	5.000
12	12.780	12.735	± 0.015	6.000
14	14.030	13.985	± 0.015	7.000

AMERICAN NATIONAL STANDARD TAPER PIPE THREADS (NPT) ANSI B1 .20.1 ASTM F 1498



Nominal Size In.	Threads Per Inch	Effective Thread Length L	Pitch Of Thread P
1/8	27	0.2639	0.03704
1/4	18	0.4018	0.05556
3/8	18	0.4078	0.05556
1/2	14	0.5337	0.07143
3/4	14	0.5457	0.07143
1	11-1/2	0.6828	0.08696
1-1/4	11-1/2	0.7068	0.08696
1-1/2	11-1/2	0.7235	0.08696
2	11-1/2	0.7565	0.08696
2-1/2	8	1.1375	0.12500
3	8	1.2000	0.12500
4	8	1.3000	0.12500
5	8	1.4063	0.12500
6	8	1.5125	0.12500
8	8	1.7125	0.12500

STANDARD COMPARISONS

SPEARS® IPS-to-Metric transition unions are listed by nominal size. The chart below compares nominal and actual* pipe O.D. for each size according to the designated standard.

JIS K6741 (mm)		DIN 8062 (mm)		ASTM D1785 (in.)		NPT—ANSI B1.20.1** Tapered Thread		BSP—BS21,DIN 2999,ISO 7/1 Thread	
Nominal	Actual*	O.D.	Actual*	Nominal	Actual*	Designation	Threads/in.	Designation	Threads/25.4mm
16	22	15	20	1/2	.840	1/2	14	1/2	14
20	26	20	25	3/4	1.050	3/4	14	3/4	14
25	32	25	32	1	1.315	1	11.5	1	11
30	38	38	40	1-1/4	1.660	1-1/4	11.5	1-1/4	11
40	48	40	50	1-1/2	1.900	1-1/2	11.5	1-1/2	11
50	60	50	63	2	2.375	2	11.5	2	11
75	89	80	90	3	3.500	3	8	3	11
100	114	100	110	4	4.500	4	8	4	11

*Specified dimension, certain tolerances apply **NPT and BSP have different thread angles and not compatible.

Schedule 80 CPVC Fittings

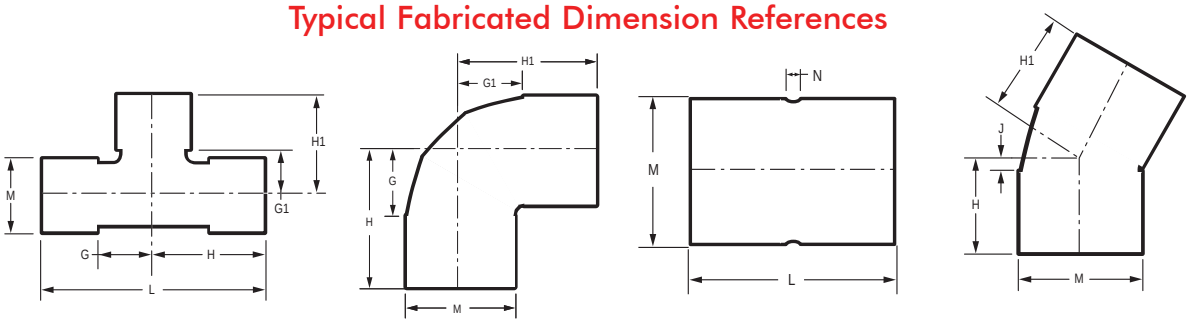
Injection Molded Dimensions Referencesces:

G = (LAYING LENGTH) intersection of center lines to bottom of socket/thread; 90° elbows, tees, crosses; ± 1/32 inch.
H = Intersection of center lines to face of fitting; 90° elbow tees, crosses; ± 1/32 inch.
J = Intersection of center lines to bottom of socket/thread; 45° elbows; ± 1/32 inch
L = Overall length of fittings; ± 1/16 inch.
H = Outside diameter of socket/thread hub; ± 1/16 inch.
N = Socket bottom to socket bottom; couplings; ± 1/16 inch
W = Height of cap; ± 1/16 inch.

Fabricated Dimension References:

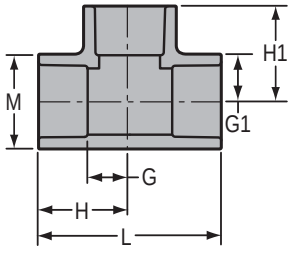
G = (LAYING LENGTH) intersection of center lines to bottom of socket/thread; 90° elbows, tees, crosses ± 1/4 inch; 14" & larger ± 1/2 inch.
H = Intersection of center lines to face of fitting; 90° elbows ± 1/4 inch, 14" & larger ± 3/4 inch; wyes ± 1/2 inch; tees, crosses ± 1/4 inch; 14" & larger ± 1/2 inch.
J = Intersection of center lines to bottom of socket/thread; 45° elbows; ± 1/4 inch; 14" & larger ± 1/2 inch.
L = Overall length of fittings; ± 1/2 inch; 14" & larger ± 1 inch; wyes ± 1 inch.
M = Outside diameter of socket/thread hub; ± 1/4 inch.
N = Socket bottom to socket bottom; couplings; ± 1/2
W = Height of cap; ± 1/4 inch.

Typical Fabricated Dimension References



TEE

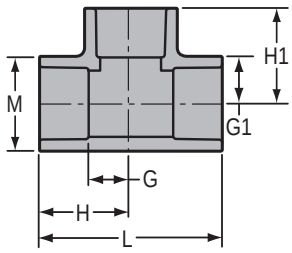
Socket x Socket x Socket



Part Number	Size	G	G1	H	H1	L	M	Approx. Wt. (Lbs.)
801-002C	1/4	5/16	5/16	31/32	31/32	1-15/16	27/32	.04
801-003C	3/8	15/32	15/32	1-1/4	1-1/4	2-1/2	31/32	.06
801-005C	1/2	17/32	17/32	1-15/32	1-15/32	2-15/16	1-3/16	.11
801-007C	3/4	21/32	21/32	1-11/16	1-11/16	3-13/32	1-13/32	.18
801-010C	1	27/32	27/32	2	2	3-31/32	1-23/32	.29
801-012C	1-1/4	1-1/32	1-1/32	2-9/32	2-9/32	4-19/32	2-3/32	.40
801-015C	1-1/2	1-3/16	1-3/16	2-9/32	2-9/32	5-1/8	2-3/8	.57
801-020C	2	1-7/16	1-7/16	2-15/16	2-15/16	5-7/8	2-7/8	.85
801-025C	2-1/2	1-23/32	1-23/32	3-1/2	3-1/2	7	3-15/32	1.62
801-030C	3	2-1/16	2-1/16	3-31/32	3-31/32	7-15/16	4-5/32	2.53
801-040C	4	2-1/2	2-1/2	4-3/4	4-3/4	9-1/2	5-1/4	3.72

TEE (continued)

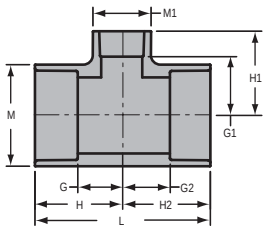
Socket x Socket x Socket



Part Number	Size	G	G1	H	H1	L	M	Approx. Wt. (Lbs.)
801-050C	5	3-1/8	3-1/8	5-25/32	5-25/32	11-5/8	6-13/32	6.47
801-050CF	5	5-1/2	5-1/2	8-1/2	8-1/2	17	6-5/16	18.38
801-060C	6	4-1/32	4-1/32	7-3/32	7-3/32	14-5/32	7-19/32	12.19
801-080C	8	4-13/16	4-13/16	8-7/8	8-7/8	17-3/4	9-23/32	21.53
801-080CF	8	7-5/8	7-5/8	11-7/8	11-7/8	23-3/4	9-5/8	30.91
801-100C	10	5-3/4	5-3/4	10-13/16	10-13/16	21-5/8	11-19/32	40.50
801-100CF	10	9	9	14-1/4	14-1/4	28-1/2	11-15/16	51.41
801-120C	12	6-15/16	6-15/16	12-15/16	12-15/16	25-7/8	14-1/4	62.00
801-120CF	12	11-1/4	11-1/4	17-1/2	17-1/2	35	14-1/8	83.37
801-140C	14	7-1/32	7-1/32	14-7/32	14-1/32	28-7/16	15-21/32	70.48
801-140CF	14	12-1/4	12-1/4	19-1/4	19-1/4	38-1/2	15-1/2	108.34
801-160CF	16	13	13	21	21	42	17-11/16	144.86
801-180CF	18	13-3/4	13-3/4	22-3/4	22-3/4	45-1/2	19-7/8	198.00
801-200CF	20	16-3/8	16-3/8	26-3/8	26-3/8	52-3/4	22-1/16	249.75
801-240CF	24	20-1/4	20-1/4	32-1/4	32-1/4	64-1/2	26-7/16	460.00

REDUCING TEE

Socket x Socket x Socket



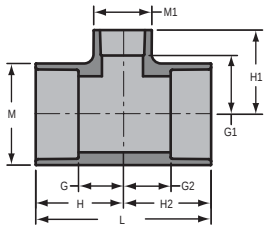
Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)
801-101C	3/4x3/4x1/2	19/32	23/32	19/32	1-19/32	1-19/32	1-19/32	3-3/16	1-13/32	1-3/16	.15
801-130C	1x1x1/2	19/32	7/8	19/32	1-23/32	1-3/4	1-23/32	3-7/16	1-3/4	1-3/16	.21
801-131C	1x1x3/4	11/16	27/32	11/16	1-27/32	1-27/32	1-27/32	3-21/32	1-3/4	1-13/32	.24
801-158C	1-1/4x1x1	13/32	15/16	13/32	2-1/8	1-31/32	1-15/16	4	2-1/16	1-11/16	.34
801-159C	1-1/4x1x1-1/4	15/16	1-1/32	7/8	2-3/16	2-5/32	2-1/8	4-5/16	2-1/16	2-1/16	.41
801-166C[1]	1-1/4x1-1/4x1/2	7/8	1-13/32	7/8	2-3/32	2-3/8	2-3/32	4-7/32	2-1/8	1-3/4	.43
801-167C	1-1/4x1-1/4x3/4	5/8	31/32	5/8	1-15/16	1-31/32	1-15/16	3-7/8	2-1/8	1-13/32	.30
801-168C	1-1/4x1-1/4x1	27/32	1-1/32	27/32	2-3/32	2-5/32	2-3/32	4-7/32	2-3/32	1-3/4	.36

[1] Outlet sized with bushing

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

REDUCING TEE (continued)

Socket x Socket x Socket

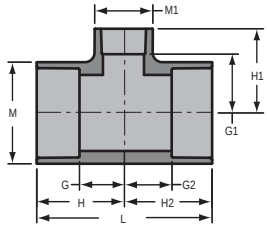


Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)
801-202C	1-1/2x1-1/4x1	7/8	1-7/32	7/8	2-1/4	2-11/32	2-1/4	4-1/2	2-7/16	1-13/16	.42
801-209C	1-1/2x1-1/2x1/2	9/16	1-1/16	9/16	1-31/32	1-15/16	1-31/32	3-15/16	2-3/8	1-3/16	.36
801-210C	1-1/2x1-1/2x3/4	11/16	1-1/32	11/16	2-1/16	2-1/32	2-1/16	4-5/32	2-11/32	1-13/32	.39
801-211C	1-1/2x1-1/2x1	27/32	1-5/32	27/32	2-15/32	2-5/16	2-15/32	4-15/16	2-11/32	1-3/4	.43
801-212C	1-1/2x1-1/2x1-1/4	1-3/16	1-3/16	1-3/16	2-9/16	2-7/16	2-9/16	5-1/8	2-3/8	2-1/8	.57
801-247C	2x2x1/2	9/16	1-13/32	9/16	2-3/32	2-9/32	2-3/32	4-3/16	2-7/8	1-5/32	.46
801-248C	2x2x3/4	11/16	1-7/16	11/16	2-3/16	2-7/16	2-3/16	4-3/8	2-27/32	1-13/32	.52
801-249C	2x2x1	27/32	1-7/16	27/32	2-3/8	2-9/16	2-3/8	4-3/4	2-7/8	1-3/4	.59
801-250C	2x2x1-1/4	31/32	1-11/32	31/32	2-17/32	2-19/32	2-17/32	5-3/32	2-7/8	2-1/8	.64
801-251C	2x2x1-1/2	1-5/32	1-7/16	1-5/32	2-11/16	2-13/32	2-11/16	5-3/8	2-7/8	2-13/32	.80
801-254C[1]	2x2x4	3-11/16	2-15/32	3-11/16	5-3/16	4-23/32	5-3/16	10-11/32	5-1/4	5-1/4	5.54
801-287C	2-1/2x2-1/2x1/2	19/32	1-19/32	19/32	2-3/8	2-15/32	2-3/8	4-23/32	3-1/2	1-3/16	.78
801-288C	2-1/2x2-1/2x3/4	21/32	1-1/2	21/32	2-7/16	2-17/32	2-7/16	4-27/32	3-17/32	1-13/32	.83
801-289C	2-1/2x2-1/2x1	27/32	1-23/32	27/32	2-5/8	2-27/32	2-5/8	5-1/4	3-17/32	1-23/32	1.02
801-290C	2-1/2x2-1/2x1-1/4	1-1/16	1-23/32	1-1/16	2-27/32	2-31/32	2-27/32	5-11/16	3-9/16	2-3/32	1.16
801-291C	2-1/2x2-1/2x1-1/2	1-5/32	1-23/32	1-5/32	2-31/32	3-1/8	2-31/32	5-29/32	3-9/16	2-3/8	1.28
801-292C	2-1/2x2-1/2x2	1-13/32	1-5/8	1-13/32	3-3/16	3-1/8	3-3/16	6-3/8	3-1/2	2-7/8	1.37
801-333C[1]	3x3x1/2	1-7/16	2-7/8	1-7/16	3-5/16	3-3/4	3-5/16	6-5/8	4-3/16	2-7/8	2.07
801-334C[1]	3x3x3/4	1-7/16	2-11/16	1-7/16	3-5/16	3-11/16	3-5/16	6-5/8	4-3/16	2-7/8	2.05
801-335C	3x3x1	27/32	1-31/32	27/32	2-3/4	3-3/32	2-3/4	5-15/32	4-7/32	1-23/32	1.29
801-336C[1]	3x3x1-1/4	1-5/8	1-15/16	1-5/8	3-5/16	3-5/8	3-5/16	6-5/8	4-3/16	2-7/8	1.97
801-337C	3x3x1-1/2	1-5/32	2-1/16	1-5/32	3-1/16	3-7/16	3-1/16	6-1/8	4-3/16	2-3/8	1.49
801-338C	3x3x2	1-7/16	1-13/16	1-7/16	3-5/16	3-5/16	3-5/16	6-5/8	4-7/32	2-7/8	1.69
801-339C	3x3x2-1/2	1-3/4	1-31/32	1-3/4	3-5/8	3-11/16	3-5/8	7-1/4	4-3/16	3-17/32	2.11
801-415C[1]	4x4x1/2	1-7/16	3-17/32	1-7/16	3-11/16	4-13/32	3-11/16	7-11/32	5-1/4	2-7/8	2.72
801-417C[1]	4x4x1	1-15/32	3-9/32	1-15/32	3-11/16	4-3/8	3-11/16	7-3/8	5-7/32	2-7/8	2.87
801-418C[1]	4x4x1-1/4	1-1/8	2-31/32	1-1/8	3-13/32	4-7/32	3-13/32	6-25/32	5-1/4	2-3/8	2.63
801-419C	4x4x1-1/2	1-1/8	2-9/16	1-1/8	3-3/8	3-15/16	3-3/8	6-3/4	5-1/4	2-3/8	2.17
801-420C	4x4x2	1-7/16	2-1/2	1-7/16	3-11/16	4	3-11/16	7-3/8	5-1/4	2-7/8	2.42
801-421C[1]	4x4x2-1/2	2-1/16	2-11/16	2-1/16	4-5/16	4-3/4	4-5/16	8-5/8	5-1/4	4-1/8	3.68
801-422C	4x4x3	2-1/8	2-23/32	2-1/8	4-3/8	4-19/32	4-3/8	8-25/32	5-1/4	4-3/16	3.17
801-486C[1]	5x5x2	3-5/32	5-3/32	3-5/32	5-13/16	6-19/32	5-13/16	11-19/32	6-13/32	6-13/32	8.85
801-486CF	5x5x2	4-5/16	4-3/4	4-5/16	7-5/16	6-1/2	7-5/16	14-5/8	6-5/16	2-13/16	10.83
801-488C[1]	5x5x3	3-5/32	4-5/8	3-5/32	5-13/16	6-1/2	5-13/16	11-19/32	6-13/32	6-13/32	8.61
801-490C[1]	5x5x4	3-5/32	3-29/32	3-5/32	5-13/16	6-5/32	5-13/16	11-5/8	6-13/32	6-13/32	7.75

[1] Outlet sized with bushing

REDUCING TEE (continued)

Socket x Socket x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)
801-524C[1]	6x6x3/4	1	4	1	3-7/8	5	3-7/8	7-3/4	7-9/16	1-3/4	4.48
801-525C	6x6x1	27/32	3-23/32	27/32	3-7/8	4-27/32	3-7/8	7-3/4	7-9/16	1-3/4	4.43
801-526C[1]	6x6x1-1/4	1-7/16	4-3/16	1-7/16	4-7/16	5-15/32	4-7/16	8-7/8	7-19/32	2-7/8	5.46
801-527C	6x6x1-1/2	1-7/16	4-3/32	1-7/16	4-7/16	5-1/2	4-7/16	8-7/8	7-19/32	2-7/8	7.16
801-528C	6x6x2	1-7/16	3-23/32	1-7/16	4-7/16	5-1/4	4-7/16	8-7/8	7-19/32	2-7/8	5.29
801-529C[1]	6x6x2-1/2	2-1/16	3-13/16	2-1/16	5-1/16	5-7/8	5-1/16	10-1/8	7-9/16	4-1/4	8.99
801-530C	6x6x3	2-1/16	3-3/4	2-1/16	5-3/32	5-5/8	5-3/32	10-3/16	7-19/32	4-1/4	---
801-530CF	6x6x3	4-3/4	5-3/4	4-3/4	8	8	8	16	7-1/2	4-1/8	11.74
801-532C	6x6x4	2-11/16	3-13/16	2-11/16	5-11/16	6-3/32	5-11/16	11-3/8	7-19/32	5-1/4	8.21
801-533CF	6x6x5	5-3/4	6-1/2	5-3/4	9	9-1/2	9	18	7-1/2	6-5/16	11.90
801-575C[1]	8x8x1	3-25/32	7-25/32	3-25/32	7-25/32	8-13/16	7-25/32	15-9/16	9-5/8	7-1/2	18.76
801-578C[1]	8x8x2	3-13/16	6-5/8	3-13/16	7-13/16	8-1/8	7-13/16	15-5/8	9-11/16	7-9/16	18.19
801-578CF	8x8x2	4-11/16	6-1/8	4-11/16	8-15/16	7-7/8	8-15/16	17-7/8	9-5/8	2-13/16	14.76
801-579CF	8x8x2-1/2	4-7/8	6-15/16	4-7/8	9-1/8	8-5/16	9-1/8	18-1/4	9-5/8	3-7/16	14.85
801-580C[1]	8x8x3	3-23/32	6-1/2	3-23/32	7-3/4	8-3/8	7-3/4	15-1/2	9-11/16	7-1/2	18.44
801-580CF	8x8x3	5-3/16	6-11/16	5-3/16	9-7/16	8-15/16	9-7/16	18-7/8	9-5/8	4-1/8	20.04
801-582C	8x8x4	2-5/8	4-27/32	2-5/8	6-5/8	7-3/32	6-5/8	13-1/4	9-3/4	5-1/4	11.60
801-582CF	8x8x4	2-5/8	4-27/32	2-5/8	6-5/8	7-3/32	6-5/8	13-1/4	9-3/4	5-1/4	11.60
801-585C	8x8x6	3-7/8	4-15/16	3-7/8	7-29/32	7-31/32	7-29/32	15-25/32	9-11/16	7-17/32	16.17
801-621CF	10x10x2	4-3/8	7-1/8	4-3/8	9-5/8	8-7/8	9-5/8	19-1/4	11-15/16	2-1316	27.33
801-622CF	10x10x2-1/2	5-1/4	7-5/16	5-1/4	10-1/2	9-5/16	10-1/2	21	11-15/16	3-7/16	22.50
801-623C[1]	10x10x3	3-25/32	7-17/32	3-25/32	9-3/8	9-3/8	9-3/8	18-25/32	12-1/16	7-9/16	28.69
801-623CF	10x10x3	4-7/8	7-11/16	4-7/8	10-1/8	9-15/16	10-1/8	20-1/4	11-15/16	4-1/8	24.27
801-624C	10x10x4	3-7/8	7-3/16	3-7/8	9-3/8	9-1/2	9-3/8	18-3/4	12-1/16	7-9/16	28.54
801-624CF	10x10x4	5-3/8	8-11/16	5-3/8	10-5/8	10-15/16	10-5/8	21-1/4	11-15/16	5-3/16	26.65
801-626C	10x10x6	3-7/8	5-27/32	3-7/8	9-3/8	8-27/32	9-3/8	18-3/4	12-1/16	7-9/16	25.50
801-626CF	10x10x6	5-7/8	9-1/16	5-7/8	11-1/8	12-5/16	11-1/8	22-1/4	11-15/16	7-1/2	29.89
801-628C[1]	10x10x8	5-15/16	7-3/4	5-15/16	11-7/16	11-3/4	11-7/16	22-7/8	12-1/16	12-1/16	48.52
801-628CF	10x10x8	8-1/4	9-15/16	8-1/4	13-1/2	14-3/16	13-1/2	27	11-15/16	9-5/8	38.11
801-661CF	12x12x2	4-3/4	8	4-3/4	11	9-3/4	11	22	14-1/8	2-13/16	36.76
801-663CF	12x12x3	5-1/4	8-9/16	5-1/4	11-1/2	10-13/16	11-1/2	23	14-1/8	4-1/8	34.63
801-664C[1]	12x12x4	4-11/32	10-1/8	4-11/32	10-15/16	12-3/8	10-15/16	21-7/8	14-1/4	9-23/32	38.17
801-664CF	12x12x4	5-3/4	9-9/16	5-3/4	12	11-13/16	12	24	14-1/8	5-3/16	38.17
801-666CF	12x12x6	7-1/4	9-15/16	7-1/4	13-1/4	13-3/16	13-1/4	26-1/2	14-1/8	7-1/2	55.70
801-668C	12x12x8	4-27/32	7-1/2	4-27/32	11-13/32	11-1/8	11-13/32	22-13/16	14-1/4	9-23/32	42.00
801-668CF	12x12x8	8	10-13/16	8	14-1/4	15-1/16	14-1/4	28-1/2	14-1/8	9-5/8	66.12
801-670CF	12x12x10	10-1/4	10-13/16	10-1/4	16-1/2	16-1/16	16-1/2	33	14-1/8	11-15/16	70.97
801-691CF	14x14x2	5-3/16	8-9/16	5-3/16	12-3/16	10-5/16	12-3/16	24-3/8	15-1/2	2-13/16	44.73
801-692CF	14x14x2-1/2	5-7/16	8-3/4	5-7/16	12-7/16	10-3/4	12-7/16	24-7/8	15-1/2	3-7/16	45.01
801-693CF	14x14x3	5-3/4	9-1/8	5-3/4	12-3/4	11-3/8	12-3/4	25-1/2	15-1/2	4-1/8	56.80

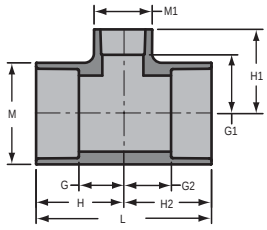
[1] Outlet sized with bushing

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

REDUCING TEE (continued)

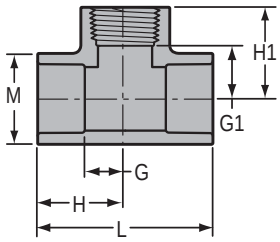
Socket x Socket x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)
801-694CF	14x14x4	6-1/2	10-1/8	6-1/2	13-1/2	12-3/8	13-1/2	27	15-1/2	5-3/16	50.00
801-696CF	14x14x6	8-1/4	10-1/2	8-1/4	15-1/4	13-3/4	15-1/4	30-1/2	15-1/2	7-1/2	63.15
801-698CF	14x14x8	9-1/4	11-3/8	9-1/4	16-1/4	15-5/8	16-1/4	32-1/2	15-1/2	9-5/8	68.17
801-700CF	14x14x10	10-1/8	11-3/8	10-1/8	17-1/8	16-5/8	17-1/8	34-1/4	15-1/2	11-15/16	89.80
801-702C	14x14x12	7-1/32	7-13/32	7-1/32	14-1/32	13-13/32	14-1/32	28-1/16	15-21/32	14-11/32	65.49
801-702CF	14x14x12	11	11-3/8	11	18	17-5/8	18	36	15-1/2	14-1/8	93.81
801-751CF	16x16x2	5-7/8	9-1/2	5-7/8	13-7/8	11-1/4	13-7/8	27-3/4	17-11/16	2-13/16	71.71
801-752CF	16x16x2-1/2	6	9-11/16	6	14	11-11/16	14	28	17-11/16	3-7/16	64.80
801-753CF	16x16x3	6-5/16	10-1/16	6-5/16	14-5/16	12-5/16	14-5/16	28-5/8	17-11/16	4-1/8	67.39
801-754CF	16x16x4	6-1/8	11-1/16	6-1/8	14-1/8	13-5/16	14-1/8	28-1/4	17-11/16	5-3/16	70.21
801-756CF	16x16x6	8-5/8	11-7/16	8-5/8	16-5/8	14-11/16	16-5/8	33-1/4	17-11/16	7-1/2	90.09
801-758CF	16x16x8	9-5/8	12-5/16	9-5/8	17-5/8	16-9/16	17-5/8	35-1/4	17-11/16	9-5/8	98.00
801-760CF	16x16x10	10-5/8	12-5/16	10-5/8	18-5/8	17-9/16	18-5/8	37-1/4	17-11/16	11-15/16	119.71
801-762CF	16x16x12	11-5/8	12-5/16	11-5/8	19-5/8	18-9/16	19-5/8	39-1/4	17-11/16	14-1/8	116.70
801-764CF	16x16x14	12-3/4	12-11/16	12-3/4	20-3/4	19-11/16	20-3/4	41-1/2	17-11/16	15-1/2	129.51
801-784CF	18x18x4	6-7/8	11-15/16	6-7/8	15-7/8	14-3/16	15-7/8	31-3/4	19-7/8	5-3/16	99.22
801-786CF	18x18x6	8-1/2	12-5/16	8-1/2	17-1/2	15-9/16	17-1/2	35	19-7/8	7-1/2	117.69
801-788CF	18x18x8	9-1/2	13-3/16	9-1/2	18-1/2	17-7/16	18-1/2	37	19-7/8	9-5/8	127.49
801-790CF	18x18x10	10-1/2	13-3/16	10-1/2	19-1/2	18-7/16	19-1/2	39	19-7/8	11-15/16	138.59
801-792CF	18x18x12	11-1/2	13-3/16	11-1/2	20-1/2	19-7/16	20-1/2	41	19-7/8	14-1/8	150.34
801-794CF	18x18x14	12-3/4	13-9/16	12-3/4	21-3/4	20-9/16	21-3/4	43-1/2	19-11/16	15-1/2	165.78
801-796CF	18x18x16	13-1/2	14-3/16	13-1/2	22-1/2	22-3/16	22-1/2	45	19-11/16	17-11/16	172.46
801-814CF	20x20x4	7-11/16	12-7/8	7-11/16	17-11/16	15-1/8	17-11/16	35-3/8	22-1/16	5-3/16	116.55
801-816CF	20x20x6	8-7/8	13-1/4	8-7/8	18-7/8	16-1/2	18-7/8	37-3/4	22-1/16	7-1/2	147.44
801-818CF	20x20x8	9-7/8	14-1/8	9-7/8	19-7/8	18-3/8	19-7/8	39-3/4	22-1/16	9-5/8	151.48
801-820CF	20x20x10	10-7/8	14-1/8	10-7/8	20-7/8	19-3/8	20-7/8	41-3/4	22-1/16	11-15/16	163.28
801-822CF	20x20x12	11-7/8	14-1/8	11-7/8	21-7/8	20-3/8	21-7/8	43-3/4	22-1/16	14-1/8	176.50
801-824CF	20x20x14	12-7/8	14-1/2	12-7/8	22-7/8	21-1/2	22-7/8	45-3/4	22-1/16	15-1/2	190.95
801-826CF	20x20x16	14	15-1/8	14	24	23-1/8	24	48	22-1/16	17-11/16	210.27
801-828CF	20x20x18	15	15	15	25	24	25	50	22-1/16	19-7/8	226.80
801-904CF	24x24x4	9	14-11/16	9	21	16-15/16	21	42	26-7/16	5-3/16	195.97
801-906CF	24x24x6	9-1/4	15-1/16	9-1/4	21-1/4	18-5/16	21-1/4	42-1/2	26-7/16	7-1/2	202.94
801-908CF	24x24x8	10-1/4	15-15/16	10-1/4	22-1/4	20-3/16	22-1/4	44-1/2	26-7/16	9-5/8	236.29
801-910CF	24x24x10	11-1/4	15-15/16	11-1/4	23-1/4	21-3/16	23-1/4	46-1/2	26-7/16	11-15/16	255.95
801-912CF	24x24x12	12-1/4	15-15/16	12-1/4	24-1/4	22-3/16	24-1/4	48-1/2	26-7/16	14-1/8	295.00
801-914CF	24x24x14	13-1/4	16-5/16	13-1/4	25-1/4	23-5/16	25-1/4	50-1/2	26-1/16	15-1/2	282.42
801-916CF	24x24x16	14-3/4	16-15/16	14-3/4	26-3/4	24-15/16	26-3/4	53-1/2	26-7/16	17-11/16	306.44
801-918CF	24x24x18	15-3/4	16-13/16	15-3/4	27-3/4	25-13/16	27-3/4	55-1/2	26-7/16	19-7/8	246.78
801-920CF	24x24x20	16-3/4	18-3/16	16-3/4	28-3/4	28-3/16	28-3/4	57-1/2	26-7/16	22-1/16	351.60

TEE

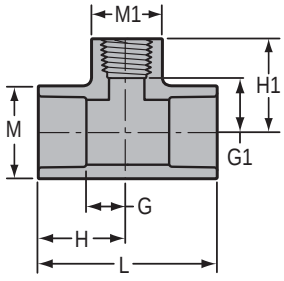
Socket x Socket x Fipt



Part Number	Size	G	G1	H	H1	L	M	Approx. Wt. (Lbs.)
802-002C	1/4	5/16	3/8	15/16	15/16	1-29/32	7/8	.05
802-005C	1/2	19/32	21/32	1-15/32	1-11/32	2-15/16	1-3/16	.12
802-007C	3/4	5/8	5/8	1-19/32	1-13/32	3-3/16	1-13/32	.15
802-010C	1	11/16	3/4	1-13/16	1-5/8	3-13/16	1-13/16	.24
802-012C	1-1/4	13/16	1-1/16	2-3/32	1-15/16	4-5/32	2-3/32	.37
802-015C	1-1/2	29/32	1-1/4	2-11/32	2-5/32	4-11/16	2-3/8	.51
802-020C	2	1-9/32	1-15/32	2-13/16	2-13/32	5-21/32	2-7/8	.80
802-030C	3	1-31/32	2-1/8	3-3/4	3-17/32	7-15/32	4-5/16	2.38
802-040C	4	2-11/32	2-21/32	4-5/8	4-5/32	9-7/32	5-9/32	3.44
802-060CF	6	4	8-9/16	7-1/16	10	14-1/8	7-9/16	15.09
802-080CF	8	4-13/16	10-13/16	8-13/16	12-9/16	17-11/16	9-11/16	27.08

REDUCING TEE

Socket x Socket x Fipt



Part Number	Size	G	G1	H	H1	L	M	M1	Approx. Wt. (Lbs.)
802-101C	3/4x3/4x1/2	19/32	25/32	1-19/32	1-7/16	3-7/32	1-13/32	1-3/16	.15
802-130C	1x1x1/2	7/16	29/32	1-9/16	1-5/8	3-1/8	1-23/32	1-7/16	.19
802-131C	1x1x3/4	21/32	13/16	1-13/16	1-17/32	3-5/8	1-23/32	1-3/8	.22
802-166C	1-1/4x1-1/4x1/2	7/16	1-1/8	1-11/16	1-27/32	3-3/8	2-3/32	1-3/16	.26
802-167C[1]	1-1/4x1-1/4x3/4	7/8	1-23/32	2-1/8	2-7/16	4-7/32	2-3/32	1-3/4	.42
802-168C	1-1/4x1-1/4x1	27/32	1-1/32	2-3/32	1-29/32	4-7/32	2-3/32	1-11/16	.35
802-209C[1]	1-1/2x1-1/2x1/2	11/16	1-9/16	2-3/32	2-9/32	4-5/32	2-11/32	1-13/32	.42
802-210C[1]	1-1/2x1-1/2x3/4	7/8	1-27/32	2-1/4	2-19/32	4-1/2	2-3/8	1-11/16	.54

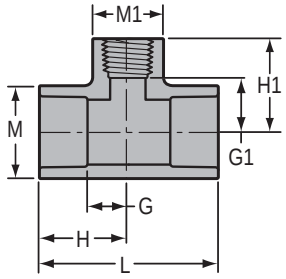
[1] Outlet sized with bushing

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

REDUCING TEE (continued)

Socket x Socket x Fipt

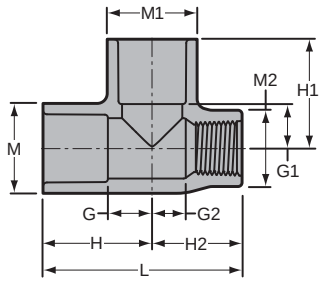


Part Number	Size	G	G1	H	H1	L	M	M1	Approx. Wt. (Lbs.)
802-211C	1-1/2x1-1/2x1	27/32	1-9/32	2-1/4	2-3/32	4-15/32	2-3/8	1-11/16	.43
802-212C	1-1/2x1-1/2x1-1/4	1-1/32	1-5/32	2-7/16	2-3/32	4-27/32	2-3/8	2-1/16	.49
802-247C[1]	2x2x1/2	1/2	1-1/2	2	2-7/32	4	2-7/8	1-3/16	.46
802-248C	2x2x3/4	5/8	1-3/8	2-1/8	2-3/32	4-1/4	2-7/8	1-3/8	.49
802-249C	2x2x1	27/32	1-1/2	2-11/32	2-11/32	4-11/16	2-7/8	1-11/16	.57
802-250C[1]	2x2x1-1/4	1-3/16	2-1/16	2-11/16	3	5-3/8	2-7/8	2-13/32	.90
802-251C[1]	2x2x1-1/2	1-7/16	2-5/16	2-15/16	3-11/32	5-7/8	2-7/8	2-7/8	1.21
802-287C	2-1/2x2-1/2x1/2	9/16	1-25/32	2-5/16	2-15/32	4-19/32	3-1/2	1-3/16	.81
802-288C[1]	2-1/2x2-1/2x3/4	27/32	2-11/32	2-21/32	3-5/32	5-9/32	3-9/16	1-13/16	1.12
802-289C[1]	2-1/2x2-1/2x1	1-3/32	2-11/32	2-27/32	3-1/4	5-11/16	3-1/2	2-1/8	1.21
802-290C[1]	2-1/2x2-1/2x1-1/4	1-3/16	2-15/32	2-31/32	3-15/32	5-15/16	3-1/2	2-3/8	1.34
802-291C[1]	2-1/2x2-1/2x1-1/2	1-7/16	2-1/2	3-3/16	3-1/2	6-3/8	3-1/2	2-7/8	1.55
802-292C[1]	2-1/2x2-1/2x2	1-3/4	3-15/16	3-1/2	2-7/8	7	3-15/32	3-15/32	2.15
802-333C[1]	3x3x1/2	7/8	2-11/16	2-3/4	3-7/16	5-1/2	4-1/8	1-23/32	1.30
802-334C[1]	3x3x3/4	7/8	2-19/32	2-3/4	3-11/32	5-1/2	4-3/16	1-3/4	1.33
802-335C[1]	3x3x1	1-3/16	2-31/32	3-1/16	3-7/8	6-1/8	4-1/8	2-11/32	1.61
802-337C[1]	3x3x1-1/2	1-7/16	2-23/32	3-5/16	3-23/32	6-5/8	4-1/4	2-29/32	1.98
802-338C[1]	3x3x2	2-3/32	3-11/32	3-31/32	4-3/8	7-15/16	4-5/32	4-5/32	3.51
802-339C[1]	3x3x2-1/2	2-3/32	2-3/4	3-31/32	4-5/16	7-15/16	4-1/8	4-1/8	3.34
802-415C[1]	4x4x1/2	1-7/16	3-5/8	3-11/16	4-3/8	7-3/8	5-1/4	2-7/8	2.71
802-416C[1]	4x4x3/4	1-15/32	3-27/32	3-23/32	4-17/32	7-7/16	5-1/4	2-7/8	2.86
802-417C[1]	4x4x1	1-7/16	3-17/32	3-23/32	4-13/32	7-13/32	5-1/4	2-7/8	2.87
802-419C[1]	4x4x1-1/2	3-11/16	3-1/2	3-11/16	3-31/32	7-3/8	5-1/4	2-7/8	2.80
802-420C[1]	4x4x2	2-1/8	4-1/32	4-3/8	5-1/32	8-25/32	5-1/4	4-3/16	3.84
802-421C[1]	4x4x2-1/2	2-1/8	3-15/32	4-3/8	5	8-25/32	5-1/4	4-3/16	3.71
802-422C[1]	4x4x3	2-5/8	3-5/8	4-7/8	5-1/4	9-3/4	5-1/4	5-1/4	5.30
802-525C[1]	6x6x1	2-1/16	5-3/16	5-3/32	6-1/16	10-5/32	7-19/32	4-1/4	9.23
802-529C[1]	6x6x2-1/2	2-1/16	4-21/32	5-3/32	6-3/16	10-5/32	7-19/32	4-1/4	9.12
802-530C[1]	6x6x3	2-11/16	4-3/4	5-9/16	6-3/8	11-1/8	7-1/2	5-1/4	8.33

[1] Outlet sized with bushing

REDUCING TEE

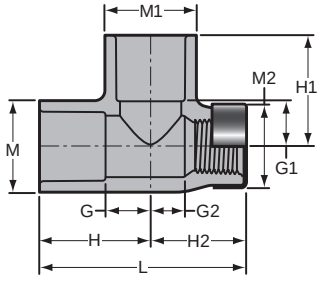
Socket x Fipt x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
803-095C	3/4x1/2x3/4	11/16	11/16	11/16	1-11/16	1-11/16	1-3/8	3-3/32	1-13/32	1-13/32	1-3/16	.15

SPECIAL REINFORCED REDUCING TEE

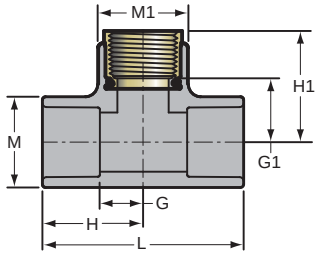
Socket x SR Fipt x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
803-095CSR	3/4x1/2x3/4	11/16	11/16	11/16	1-11/16	1-11/16	1-13/32	3-1/8	1-13/32	1-13/32	1-7/32	.16

TEE

Socket x Socket x Brass Fipt



Part Number	Size	G	G1	H	H1	L	M	M1	Approx. Wt. (Lbs.)
802-005CBR	1/2	7/8	31/32	1-7/16	1-17/32	2-5/8	1-5/32	1-7/32	.16
802-007CBR	3/4	17/32	1-3/32	1-13/32	1-13/16	3-1/32	1-13/32	1-3/8	.38

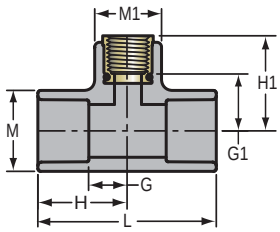
Not intended to convey or dispense water for human consumption through drinking or cooking

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

REDUCING TEE

Socket x Socket x Brass Fipt

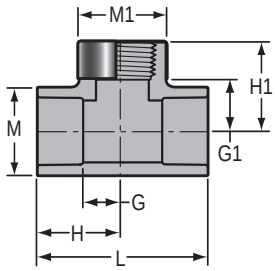


Part Number	Size	G	G1	H	H1	L	M	M1	Approx. Wt. (Lbs.)
802-101CBR	3/4x3/4x1/2	7/16	1-1/32	1-7/16	1-5/8	2-29/32	1-13/32	1-3/16	.20

Not intended to convey or dispense water for human consumption through drinking or cooking

SPECIAL REINFORCED TEE

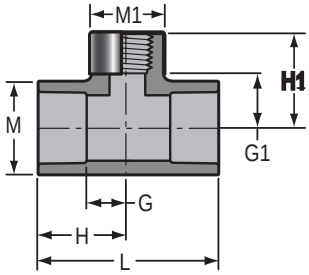
Socket x Socket x SR Fipt



Part Number	Size	G	G1	H	H1	L	M	M1	Approx. Wt. (Lbs.)
802-005CSR	1/2	5/8	5/8	1-15/32	1-3/8	2-15/16	1-7/32	1-13/32	.15
802-007CSR	3/4	19/32	11/16	1-19/32	1-13/32	3-3/16	1-13/32	1-13/32	.15
802-010CSR	1	21/32	11/16	1-13/16	1-5/8	3-5/8	1-23/32	1-11/16	.28
802-012CSR	1-1/4	13/16	1-1/16	2-3/32	1-15/16	4-3/16	2-3/32	2-1/16	.38
802-015CSR	1-1/2	15/16	1-7/32	2-11/32	2-5/32	4-11/16	2-11/32	2-7/16	.53
802-020CSR	2	1-5/16	1-1/2	2-13/16	2-13/32	5-21/32	2-7/8	3-1/32	.83
802-030CSR	3	1-27/32	2-3/32	3-23/32	3-17/32	7-7/16	4-9/32	4-9/32	2.44
802-040CSR	4	2-11/32	2-21/32	4-5/8	4-5/32	9-7/32	5-1/4	5-1/4	3.52

SPECIAL REINFORCED REDUCING TEE

Socket x Socket x SR Fipt

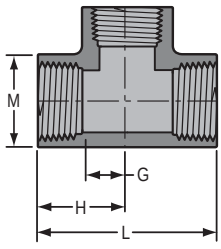


Part Number	Size	G	G1	H	H1	L	M	M1	Approx. Wt. (Lbs.)
802-072CSR	1/2x1/2x1/4	7/16	11/16	1-5/16	1-7/32	2-5/8	1-5/32	27/32	.09
802-098CSR	3/4x3/4x1/4	7/	13/16	1-7/16	1-5/16	2-7/8	1-3/8	27/32	.12
802-101CSR	3/4x3/4x1/2	19/32	25/32	1-19/32	1-7/16	3-7/32	1-13/32	1-3/16	.15
802-128CSR[1]	1x1x1/4	7/8	2-5/8	2	2-11/16	4	2-3/32	27/32	.38
802-130CSR	1x1x1/2	7/16	29/32	1-9/16	1-5/8	3-1/8	1-23/32	1-3/16	.20
802-131CSR	1x1x3/4	21/32	7/8	1-13/16	1-19/32	3-19/32	1-23/32	1-3/8	.23
802-164CSR[1]	1-1/4x1-1/4x1/4	27/32	2-13/16	2-1/8	3-13/32	4-7/32	2-3/32	27/32	.45
802-166CSR	1-1/4x1-1/4x1/2	7/16	1-1/8	1-11/16	1-27/32	3-13/32	2-3/32	1-3/16	.27
802-168CSR	1-1/4x1-1/4x1	27/32	1-1/32	2-3/32	1-29/32	4-7/32	2-3/32	1-11/16	.36
802-207CSR[1]	1-1/2x1-1/2x1/4	27/32	1-31/32	2-1/4	2-19/32	4-15/32	2-11/32	1-3/4	.57
802-211CSR	1-1/2x1-1/2x1	27/32	1-7/32	2-1/4	2-1/8	4-15/32	2-3/8	1-11/16	.44
802-212CSR	1-1/2x1-1/2x1-1/4	1-1/32	1-5/32	2-7/16	2-3/32	4-27/32	2-3/8	2-1/16	.51
802-247CSR	2x2x1/2	1/2	1-1/2	2	2-1/4	4	2-7/8	1-3/16	.48
802-248CSR	2x2x3/4	19/32	1-13/32	2-1/8	2-1/8	4-1/4	2-7/8	1-3/8	.50
802-287CSR	2-1/2x2-1/2x1/2	9/16	1-3/4	2-5/16	2-1/2	4-19/32	3-1/2	1-7/32	.79
802-331CSR[1]	3x3x1/4	1-13/32	4-1/2	3-5/16	5-1/32	6-9/16	4-3/16	27/32	3.62
802-413CSR[1]	4x4x1/4	1-7/16	5-3/16	3-11/16	5-25/32	7-3/8	5-1/4	27/32	2.75

[1] Outlet sized with bushing

TEE

Fipt x Fipt x Fipt



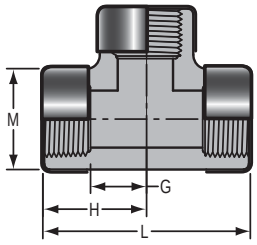
Part Number	Size	G	H	L	M	Approx. Wt. (Lbs.)
805-002C	1/4	1/2	1-3/32	2-3/16	27/32	.06
805-003C	3/8	9/16	1-5/32	2-5/16	15/16	.07
805-005C	1/2	17/32	1-1/4	2-15/32	1-3/16	.12
805-007C	3/4	21/32	1-15/32	2-15/16	1-1/2	.20
805-010C	1	23/32	1-3/4	3-1/2	1-11/16	.29
805-012C	1-1/4	15/16	1-31/32	3-29/32	2-1/4	.50
805-015C	1-1/2	1-1/8	2-3/16	4-3/8	2-13/32	.62
805-020C	2	1-5/8	2-5/8	5-1/4	3	1.15
805-025C	2-1/2	1-9/16	3-1/8	6-1/4	3-19/32	1.76
805-030C	3	1-15/16	3-9/16	7-3/32	4-11/32	3.01
805-040C	4	2-15/32	4-7/32	8-7/16	5-3/8	4.33
805-060CF	6	8-1/4	9-3/4	19-1/2	7-3/16	24.79

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

SPECIAL REINFORCED TEE

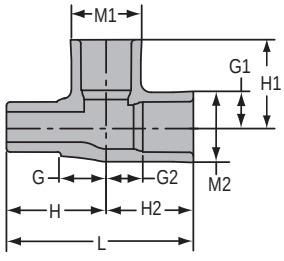
SR Fipt x SR Fipt x SR Fipt



Part Number	Size	G	H	L	M	Approx. Wt. (Lbs.)
805-002CSR	1/4	1/2	1-3/32	2-3/16	27/32	.07
805-003CSR	3/8	19/32	1-3/16	2-11/32	31/32	.09
805-005CSR	1/2	1/2	1-1/4	2-1/2	1-3/16	.14
805-007CSR	3/4	19/32	1-11/32	2-11/16	1-3/8	.17
805-010CSR	1	7/8	1-25/32	3-9/16	1-11/16	.33
805-015CSR	1-1/2	1-1/4	2-3/16	4-13/32	2-13/32	.70
805-020CSR	2	1-5/8	2-5/8	5-1/4	3	1.27

STREET TEE

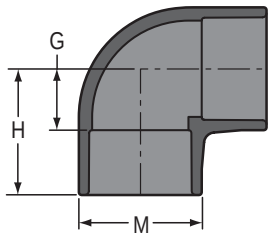
Spigot x Socket x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M1	M2	Approx. Wt. (Lbs.)
844-005C	1/2	23/32	23/32	1/2	1-19/32	1-21/32	1-19/32	3-5/32	1-3/16	1-3/16	.11
844-007C	3/4	13/16	27/32	7/8	1-13/16	1-7/8	1-13/16	3-5/8	1-13/32	1-13/32	.16
844-010C	1	1-3/32	13/16	13/16	2-7/32	2	2	4-7/32	1-3/4	1-3/4	.27
844-012C	1-1/4	1-1/4	1-5/32	1-1/8	2-7/16	2-5/16	2-7/16	4-7/8	2-3/32	2-3/32	.41
844-015C	1-1/2	1-13/16	1-1/8	1-1/8	2-7/8	2-9/16	2-9/16	5-11/32	2-11/32	2-11/32	.54
844-020C	2	1-23/32	1-7/16	1-13/32	3-1/4	2-15/16	2-15/16	6-5/32	2-7/8	2-7/8	.84

90° ELBOW

Socket x Socket

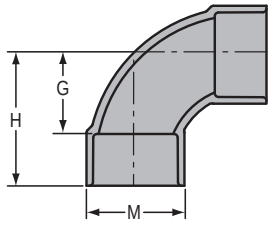


Part Number	Size	G	H	M	Approx. Wt. (Lbs.)
806-002C	1/4	11/32	1	13/16	.03
806-003C	3/8	15/32	1-1/4	31/32	.05
806-005C	1/2	9/16	1-15/32	1-3/16	.09
806-007C	3/4	5/8	1-11/16	1-7/16	.12
806-010C	1	7/8	2	1-3/4	.21
806-012C	1-1/4	1-1/32	2-9/32	2-3/32	.31
806-015C	1-1/2	1-5/32	1-9/16	2-3/8	.39
806-020C	2	1-13/32	2-15/16	2-7/8	.62
806-025C	2-1/2	1-9/16	3-11/32	3-15/32	1.15
806-030C	3	2-1/16	3-31/32	4-3/16	1.70
806-040C	4	2-5/8	4-7/8	5-7/32	2.93
806-050C	5	3	5-3/4	6-3/8	4.69
806-050CF	5	6-9/16	9-9/16	6-5/16	7.40
806-060C	6	3-3/4	6-3/4	7-19/32	7.43
806-080C	8	4-25/32	8-25/32	9-3/4	15.83
806-080CF	8	9-1/4	13-1/2	9-5/8	22.53
806-100C	10	5-25/32	10-13/16	12-5/32	27.41
806-100CF	10	11-13/16	17-1/16	11-15/16	40.28
806-120C	12	6-7/8	13-7/16	14-5/16	47.93
806-120CF	12	13-5/8	19-7/8	14-1/8	63.96
806-140C	14	7-1/2	14-1/2	15-11/16	55.89
806-140CF	14	16	23	15-1/2	86.72
806-160CF	16	18-7/16	26-7/16	17-11/16	133.22
806-180CF	18	20-7/8	29-7/8	19-7/8	175.62
806-200CF	20	23-5/16	33-5/16	22-1/16	250.00
806-240CF	24	28-1/4	40-1/4	26-7/16	---

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

90° SWEEP ELBOW

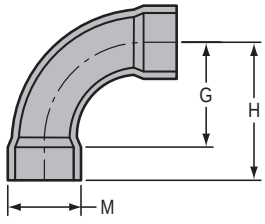
Socket x Socket



Part Number	Size	G	H	M	Approx. Wt. (Lbs.)
806-005SC	1/2	27/32	1-23/32	1-3/16	.08
806-007SC	3/4	1-1/32	2-1/32	1-13/32	.12
806-010SC	1	1-5/16	2-7/16	1-23/32	.20
806-012SC	1-1/4	1-9/16	2-13/16	2-3/32	.31
806-015SC	1-1/2	1-3/4	3-1/8	2-11/32	.40
806-020SC	2	2-5/16	3-13/16	2-7/8	.68

90° LONG SWEEP ELBOW

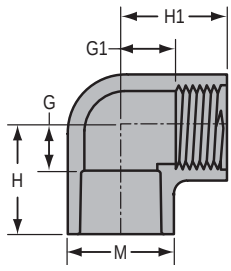
Socket x Socket



Part Number	Size	G	H	M	Approx. Wt. (Lbs.)
806-005LSCF	1/2	1-7/8	2-3/4	1-1/8	.13
806-007LSCF	3/4	2-7/16	3-7/16	1-7/16	.24
806-010LSCF	1	2-7/8	4	1-11/16	.37
806-012LSCF	1-1/4	3-5/8	4-7/8	2-1/16	.56
806-015LSCF	1-1/2	4-1/8	5-1/2	2-5/16	.68
806-020LSCF	2	4-3/4	6-5/16	2-13/16	1.07
806-025LSCF	2-1/2	5-3/4	7-3/4	3-7/16	1.70
806-030LSCF	3	7	9	4-1/8	2.69
806-040LSCF	4	9	11-1/4	5-3/16	4.85
806-060LSCF	6	13	16-1/4	7-1/2	12.84
806-080LSCF	8	23-1/2	27-3/4	9-5/8	33.18

90° ELBOW

Socket x Fipt

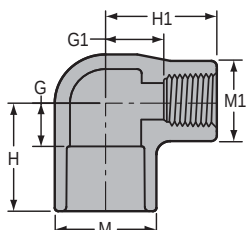


Part Number	Size	G	G1	H	H1	M	Approx. Wt. (Lbs.)
807-002C	1/4	5/16	5/16	15/16	15/16	7/8	.03
807-003C	3/8	1/4	3/8	1-1/32	1-1/32	1-1/32	.05
807-005C	1/2	15/32	9/16	1-11/32	1-9/32	1-3/16	.11
807-007C	3/4	5/8	5/8	1-9/16	1-9/16	1-3/8	.11
807-010C	1	11/16	25/32	1-13/16	1-11/16	1-23/32	.19
807-012C	1-1/4	23/32	1-1/32	1-31/32	1-31/32	2-1/16	.30
807-015C	1-1/2	15/16	1-7/32	2-11/32	2-5/32	2-11/32	.46
807-020C	2	15/16	1-1/32	2-7/16	2	3	.84
807-030C	3	1-27/32	2-7/32	3-23/32	3-9/16	4-9/32	2.02
807-040C	4	2-5/16	2-7/8	4-9/16	4-9/32	5-1/4	2.95

[1] Outlet sized with Female Adapter

90°REDUCING ELBOW

Socket x Fipt



Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
807-101C	3/4x1/2	1/2	25/32	1-17/32	1-17/32	1-13/32	1-3/16	.12
807-130C[1]	1x1/2	27/32	1-17/32	1-31/32	2-1/4	1-23/32	1-23/32	.27
807-131C[1]	1x3/4	7/8	1-17/32	2	2-1/4	1-3/4	1-3/4	.26

[1] Outlet sized with Female Adapter

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

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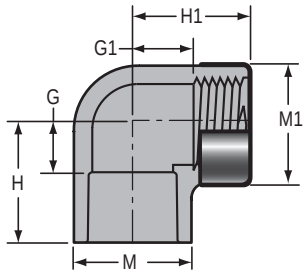
SPECIAL REINFORCED 90° ELBOW

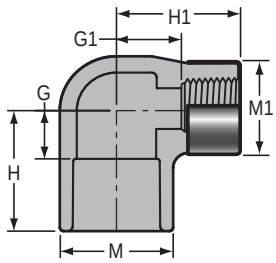
Socket x SR Fipt



Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
807-005CSR	1/2	15/32	23/32	1-11/32	1-9/32	1-3/16	1-7/32	.09
807-007CSR	3/4	9/16	21/32	1-9/16	1-13/32	1-3/8	1-3/8	.12
807-010CSR	1	19/32	13/16	1-23/32	1-23/32	1-11/16	1-23/32	.21
807-012CSR	1-1/4	23/32	1-1/32	1-31/32	1-31/32	2-1/16	2-1/16	.31
807-015CSR	1-1/2	31/32	1-5/32	2-3/8	2-1/8	2-11/32	2-7/16	.44
807-020CSR	2	1-7/32	1-1/2	2-15/32	2-7/16	2-31/32	2-31/32	.91
807-030CSR	3	1-13/16	2-7/32	3-23/32	3-9/16	4-9/32	4-9/32	2.08
807-040CSR	4	2-9/32	2-25/32	4-9/16	4-7/32	5-1/4	5-1/4	3.02

SPECIAL REINFORCED REDUCING 90° ELBOW

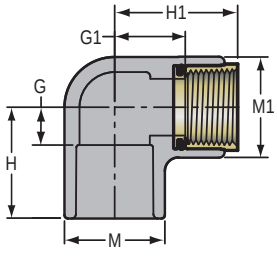
Socket x SR Fipt



Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
807-101CSR	3/4x1/2	1/2	13/16	1-17/32	1-17/32	1-13/32	1-3/16	.12
807-130CSR	1x1/2	9/16	1	1-23/32	1-5/8	1-23/32	1-3/16	.14

TRANSITION 90° ELBOW

Socket x Brass Fipt

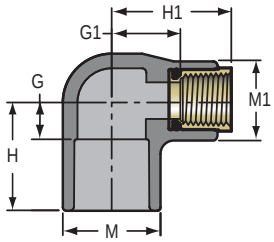


Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
807-005CBR	1/2	13/32	31/32	1-9/32	1-17/32	1-5/32	1-3/16	.15
807-007CBR	3/4	1/2	1-5/32	1-1/2	1-25/32	1-3/8	1-13/32	.21

Not intended to convey or dispense water for human consumption through drinking or cooking

TRANSITION REDUCING 90° ELBOW

Socket x Brass Fipt

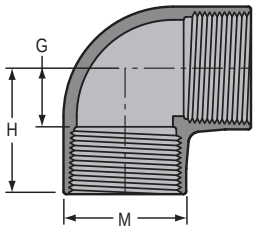


Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
807-101CBR	3/4x1/2	15/32	1-3/32	1-15/32	1-21/32	1-13/32	1-3/16	.21

Not intended to convey or dispense water for human consumption through drinking or cooking

90° ELBOW

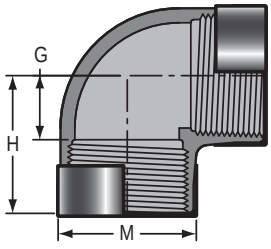
Fipt x Fipt



Part Number	Size	G	H	M	Approx. Wt. (Lbs.)
808-002C	1/4	11/32	15/16	7/8	.04
808-003C	3/8	9/16	1-5/32	15/16	.06
808-005C	1/2	1/2	1-7/32	1-9/32	.08
808-007C	3/4	5/8	1-3/8	1-3/8	.12
808-010C	1	25/32	1-5/8	1-23/32	.21
808-012C	1-1/4	15/16	1-7/8	2-1/16	.32
808-015C	1-1/2	1-5/32	2-3/32	2-7/16	.48
808-020C	2	1-9/16	2-17/32	3	.90
808-025C	2-1/2	1-5/8	3-3/16	3-9/16	1.26
808-030C	3	1-29/32	3-17/32	4-13/32	2.37
808-040C	4	2-13/32	4-5/32	5-7/16	3.44

SPECIAL REINFORCED 90° ELBOW

SR Fipt x SR Fipt



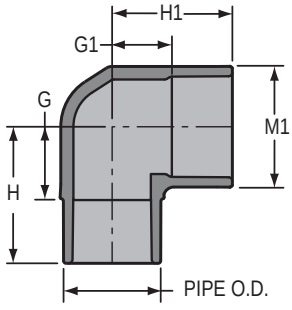
Part Number	Size	G	H	M	Approx. Wt. (Lbs.)
808-003CSR	3/8	9/16	1-5/32	15/16	.07
808-005CSR	1/2	1/2	1-7/32	1-3/16	.11
808-007CSR	3/4	5/8	1-3/8	1-3/8	.14
808-010CSR	1	25/32	1-11/16	1-23/32	.24
808-012CSR	1-1/4	15/16	1-7/8	2-1/16	.36
808-015CSR	1-1/2	1-1/32	2-1/8	2-7/16	.52
808-020CSR	2	1-19/32	2-1/2	3	1.04

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

90° STREET ELBOW

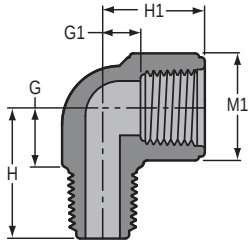
Spigot x Socket



Part Number	Size	G	G1	H	H1	M1	Approx. Wt. (Lbs.)
809-005C	1/2	13/16	7/16	1-21/32	1-7/16	1-5/32	.08
809-007C	3/4	29/32	11/16	1-27/32	1-11/16	1-3/8	.12
809-010C	1	1-1/16	3/4	2-7/32	2	1-23/32	.20
809-012C	1-1/4	1-9/32	13/16	2-19/32	2-1/4	2-3/32	.31
809-015C	1-1/2	1-7/16	1-3/16	2-13/16	2-9/16	2-3/8	.43
809-020C	2	1-3/4	1-7/16	3-1/4	2-31/32	2-7/8	.64
809-025C	2-1/2	2-1/2	1-5/8	4-1/2	3-3/8	3-7/16	1.54
809-030C	3	2-3/8	1-13/16	4-1/4	3-11/16	4-3/16	1.70
809-040C	4	3-1/32	2-1/4	5-9/32	4-17/32	5-1/4	2.92
809-060C	6	5-1/4	3-11/16	8-7/16	6-3/4	7-9/16	10.01
809-080C	8	7-1/8	4-25/32	11-1/8	8-25/32	9-3/4	18.18
809-100C	10	8-5/8	5-13/16	14-5/16	11-3/8	12-1/16	41.05
809-120C	12	10-1/8	6-7/8	16-7/8	13-3/8	14-1/8	67.93
809-140C	14	11-1/16	7-9/16	18-5/16	14-5/8	15-11/16	77.21
809-140CF	14	19-1/2	16	27-1/2	23	15-1/2	101.86
809-160CF	16	22-7/16	18-7/16	31-7/16	26-7/16	17-11/16	135.72
809-180CF	18	25-3/8	20-7/8	35-3/8	29-7/8	19-7/8	217.54
809-200CF	20	28-5/16	23-5/16	39-5/16	33-5/16	22-1/16	266.40
809-240CF	24	34-1/4	28-1/4	47-1/4	40-1/4	26-7/16	435.00

90° STREET ELBOW

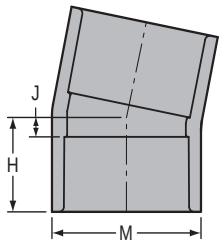
Mipt x Fipt



Part Number	Size	G	G1	H	H1	M1	Approx. Wt. (Lbs.)
812-002C	1/4	17/32	5/16	1-1/32	29/32	13/16	.03
812-005C	1/2	11/16	13/32	1-11/32	1-5/32	1-3/16	.06
812-007C	3/4	7/8	17/32	1-1/2	1-9/32	1-7/16	.09

11-1/4° ELBOW

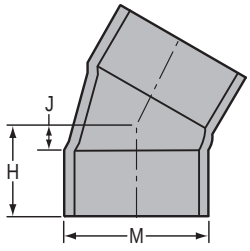
Socket x Socket



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
811-015C	1-1/2	1-19/32	7/32	2-3/8	.25
811-020C	2	1-23/32	7/32	2-27/32	.35
811-025CF	2-1/2	2-11/16	11/16	3-7/16	.88
811-030C	3	2-3/16	5/16	4-1/8	.92
811-040C	4	2-21/32	13/32	5-1/4	1.58
811-050CF	5	3-13/16	13/16	6-5/16	3.22
811-060CF	6	4-1/4	1	7-1/2	4.69
811-080CF	8	5-3/8	1-1/8	9-5/8	10.52
811-100CF	10	6-11/16	1-7/16	11-15/16	19.02
811-120CF	12	7-13/16	1-9/16	14-1/8	29.25
811-140CF	14	9	2	15-1/2	41.37
811-160CF	16	10-3/8	2-3/8	17-11/16	---
811-180CF	18	11-3/4	2-3/4	19-7/8	83.44
811-200CF	20	13-1/8	3-1/8	22-1/16	99.90
811-240CF	24	15-13/16	3-13/16	26-7/16	196.96

30° ELBOW

Socket x Socket

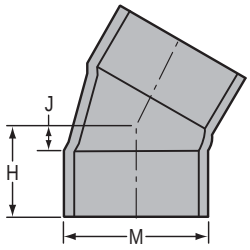


Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
815-005CF	1/2	1-7/16	7/16	1-1/8	.07
815-007CF	3/4	1-7/16	7/16	1-3/8	.11
815-010CF	1	1-3/4	1/2	1-11/16	.16
815-012CF	1-1/4	2-3/16	11/16	2-1/16	.24
815-015CF	1-1/2	2-3/16	11/16	2-5/16	.32
815-020CF	2	2-1/2	3/4	2-13/16	.54
815-025CF	2-1/2	2-1/2	3/4	3-7/16	.93
815-030CF	3	3-5/16	1-1/16	4-1/8	1.44
815-040CF	4	3-7/16	1-3/16	5-3/16	2.27
815-050CF	5	4-3/8	1-3/8	6-5/16	3.22
815-060C	6	4-13/16	1-7/8	7-9/16	5.89

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

30° ELBOW (continued)

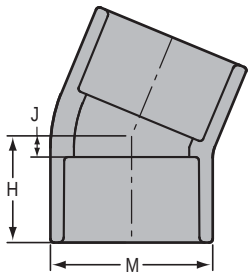
Socket x Socket



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
815-080CF	8	6-3/16	1-15/16	9-5/8	11.08
815-100CF	10	7-3/4	2-1/2	11-15/16	21.26
815-120CF	12	9-1/16	2-13/16	14-1/8	32.33
815-140CF	14	10-7/16	3-7/16	15-1/2	37.18
815-160CF	16	11-15/16	3-15/16	17-11/16	64.23
815-180CF	18	13-7/16	4-7/16	19-7/8	92.38
815-200CF	20	15	5	22-1/16	109.89
815-240CF	24	18-1/8	6-1/8	26-7/16	185.25

22-1/2° ELBOW

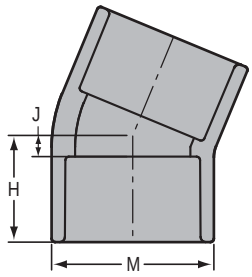
Socket x Socket



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
816-005C	1/2	1-1/16	3/16	1-5/32	.06
816-007C	3/4	1-3/16	3/16	1-7/16	.09
816-010C	1	1-3/8	9/32	1-23/32	.14
816-012C	1-1/4	1-1/2	5/16	2-3/32	.20
816-015C	1-1/2	1-21/32	1/4	2-3/8	.26
816-015CF	1-1/2	2-1/8	5/8	2-5/16	.28
816-020C	2	1-7/8	7/16	2-7/8	.44
816-025C	2-1/2	2-7/32	15/32	3-1/2	.72
816-025CF	2-1/2	2-7/8	7/8	3-7/16	.84
816-030C	3	2-13/32	9/16	4-5/32	1.01
816-040C	4	2-7/8	5/8	5-1/4	1.71
816-050CF	5	4-1/8	1-1/8	6-5/16	3.22

22-1/2° ELBOW (continued)

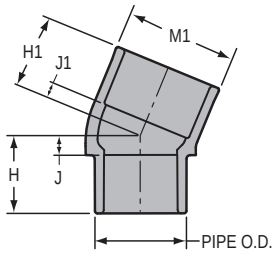
Socket x Socket



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
816-060C	6	4-9/16	1-3/8	7-7/16	4.59
816-060CF	6	4-5/8	1-3/8	7-1/2	5.29
816-080C	8	5-1/16	1-1/32	9-3/4	8.95
816-080CF	8	5-7/8	1-5/8	9-5/8	9.60
816-100CF	10	7-5/16	2-1/16	11-15/16	18.77
816-120CF	12	8-9/16	2-5/16	14-1/8	30.79
816-140CF	14	9-13/16	2-13/16	15-1/2	40.74
816-160CF	16	11-5/16	3-5/16	17-11/16	57.95
816-180CF	18	12-3/4	3-3/4	19-7/8	86.42
816-200CF	20	14-1/4	4-1/4	22-1/16	103.23
816-240CF	24	17-3/16	5-3/16	26-7/16	---

22-1/2° STREET ELBOW

Spigot x Socket



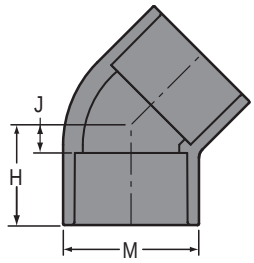
Part Number	Size	H	H1	J	J1	M1	Approx. Wt. (Lbs.)
842-005C	1/2	7/8	1	1/8	1/8	1-3/16	.05
842-007C	3/4	1-1/4	1-5/32	3/16	3/16	1-3/8	.09
842-010C	1	1-7/16	1-11/32	5/16	7/32	1-23/32	.14
842-012C	1-1/4	1-9/16	1-9/16	5/16	3/8	2-3/32	.22
842-015C	1-1/2	1-21/32	1-7/8	9/32	1/2	2-3/8	.29
842-020C	2	2	1-29/32	15/32	13/32	2-7/8	.43
842-025C	2-1/2	2-7/32	2-7/32	15/32	15/32	3-1/2	.76
842-030C	3	2-1/2	2-5/16	21/32	7/16	4-5/32	1.00
842-040C	4	2-27/32	3-1/32	9/16	25/32	5-1/4	2.59
842-060C	6	5-11/16	3-15/16	2-3/8	7/8	7-5/8	6.87
842-080C	8	7-3/8	5-1/8	3-1/8	1-1/8	9-3/4	12.71

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

45° ELBOW

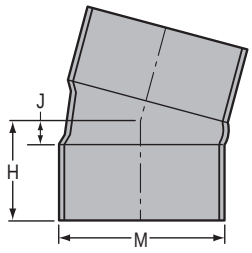
Socket x Socket



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
817-002C	1/4	13/16	5/32	27/32	.03
817-003C	3/8	31/32	7/32	1	.04
817-005C	1/2	1-1/8	1/4	1-3/16	.07
817-007C	3/4	1-5/16	5/16	1-7/16	.10
817-010C	1	1-7/16	5/16	1-23/32	.16
817-012C	1-1/4	1-5/8	3/8	2-1/8	.24
817-015C	1-1/2	1-13/16	7/16	2-3/8	.32
817-020C	2	2-1/8	5/8	2-7/8	.47
817-025C	2-1/2	2-13/32	21/32	3-1/2	.82
817-030C	3	2-29/32	29/32	4-5/32	1.16
817-040C	4	3-5/16	1-1/16	5-1/4	2.05
817-050C	5	4	1-11/32	6-13/32	3.31
817-050CF	5	4-7/8	1-7/8	6-5/16	4.25
817-060C	6	4-3/4	1-3/4	7-19/32	5.49
817-080C	8	6	2	9-3/4	10.43
817-100C	10	8-3/16	2-19/32	12-3/16	21.29
817-100CF	10	8-11/16	3-7/16	11-15/16	23.50
817-120C	12	9-11/16	3-3/32	14-13/32	35.49
817-120CF	12	10-1/8	3-7/8	14-1/8	32.40
817-140C	14	10-5/16	3-5/16	15-5/8	40.60
817-140CF	14	11-9/16	4-9/16	15-1/2	41.37
817-160CF	16	13-5/16	5-5/16	17-11/16	57.91
817-180CF	18	15	6	19-7/8	88.48
817-200CF	20	16-3/4	6-3/4	22-1/16	123.21
817-240CF	24	20-3/16	8-3/16	26-7/16	---

15° ELBOW

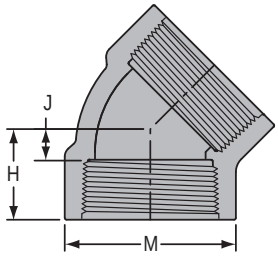
Socket x Socket



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
818-020CF	2	2-5/16	9/16	2-13/16	.54
818-025CF	2-1/2	2-3/4	3/4	3-7/16	.69
818-030CF	3	3	3/4	4-1/8	1.44
818-040CF	4	3-1/8	7/8	5-3/16	1.96
818-050CF	5	3-15/16	15/16	6-5/16	3.22
818-060CF	6	4-3/8	1-1/8	7-1/2	5.38
818-080CF	8	4-1/2	1-1/4	9-5/8	10.52
818-100CF	10	6-15/16	1-11/16	11-15/16	19.02
818-120CF	12	8-1/16	1-13/16	14-1/8	29.25
818-140CF	14	9-5/16	2-5/16	15-1/2	40.75
818-160CF	16	10-11/16	2-11/16	17-11/16	59.47
818-180CF	18	12-1/16	3-1/16	19-7/8	83.44
818-200CF	20	13-1/2	3-1/2	22-1/16	99.90
818-240CF	24	16-1/4	4-1/4	26-7/16	202.28

45° ELBOW

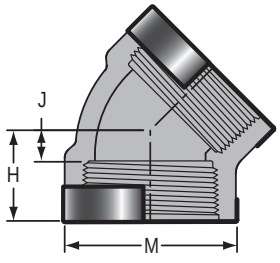
Fipt x Fipt



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
819-002C	1/4	25/32	3/16	27/32	.03
819-003C	3/8	13/16	3/16	1	.04
819-005C	1/2	31/32	5/16	1-3/16	.08
819-007C	3/4	1-3/32	13/32	1-3/8	.07
819-010C	1	1-7/32	7/32	1-11/16	.15
819-012C	1-1/4	1-7/16	7/16	2-3/16	.25
819-015C	1-1/2	1-1/2	15/32	2-1/2	.33
819-020C	2	1-23/32	21/32	3	.48
819-025C	2-1/2	2-17/32	31/32	3-1/2	1.24
819-030C	3	2-23/32	1	4-9/32	1.92
819-040C	4	3-1/4	1-7/32	5-1/4	2.79

SPECIAL REINFORCED 45° ELBOW

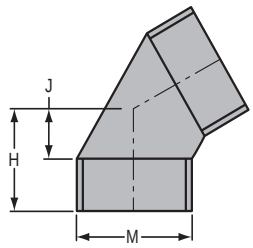
SR Fipt x SR Fipt



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
819-005CSR	1/2	1	5/16	1-3/16	.09
819-007CSR	3/4	1-1/8	13/32	1-3/8	.11
819-010CSR	1	1-1/4	13/32	1-23/32	.18

60° ELBOW

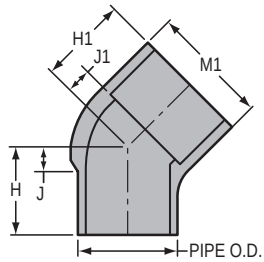
Socket x Socket



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
824-005CF	1/2	1-5/8	5/8	1-1/8	.14
824-007CF	3/4	1-11/16	11/16	1-3/8	.09
824-010CF	1	2	3/4	1-11/16	.34
824-012CF	1-1/4	2-1/2	1	2-1/16	.69
824-015CF	1-1/2	2-5/8	1-1/8	1-3/8	.37
824-020CF	2	3	1-1/4	2-13/16	.59
824-025CF	2-1/2	3-9/16	1-9/16	3-7/16	.95
824-030CF	3	4	1-3/4	4-1/8	1.34
824-040CF	4	4-5/16	2-1/16	5-3/16	5.10
824-050CF	5	5-3/8	2-3/8	6-5/16	7.39
824-060CF	6	6-1/8	2-7/8	7-1/2	10.87
824-080CF	8	7-3/4	3-1/2	9-5/8	19.49
824-100CF	10	9-11/16	4-7/16	11-15/16	36.34
824-120CF	12	11-5/16	5-1/16	14-1/8	63.05
824-140CF	14	12-15/16	5-15/16	15-1/2	88.90
824-160CF	16	14-13/16	6-13/16	17-11/16	126.09
824-180CF	18	16-3/4	7-3/4	19-7/8	175.82
824-200CF	20	26-5/8	16-5/8	22-1/16	247.63
824-240CF	24	32-1/8	20-1/8	26-7/16	362.00

45° STREET ELBOW

Spigot x Socket



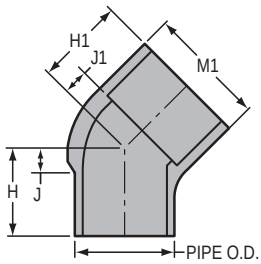
Part Number	Size	H	H1	J	J1	M1	Approx. Wt. (Lbs.)
827-005C	1/2	1-9/32	1-5/16	11/32	7/16	1-3/16	.06
827-007C	3/4	1-1/2	1-1/2	7/16	1/2	1-13/32	.10
827-010C	1	1-25/32	1-1/2	19/32	3/8	1-3/4	.16
827-012C	1-1/4	2	1-23/32	5/8	15/32	2-3/32	.24
827-015C	1-1/2	2-1/32	2-1/8	19/32	25/32	2-11/32	.32
827-020C	2	2-5/16	2-11/32	11/16	3/8	2-27/32	.47
827-025C	2-1/2	3-11/16	2-9/16	1-11/16	13/16	3-1/2	1.29
827-030C	3	3-1/4	2-13/16	1-3/16	29/32	4-5/32	1.25
827-040C	4	3-13/16	3-13/16	1-9/32	1-9/16	5-1/4	2.20
827-060C	6	5-3/32	4-25/32	2-1/16	2-1/16	7-19/32	5.91
827-080C	8	6-5/8	5-31/32	2-19/32	1-3/4	9-3/4	10.51

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

45° STREET ELBOW (continued)

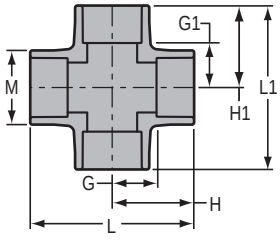
Spigot x Socket



Part Number	Size	H	H1	J	J1	M1	Approx. Wt. (Lbs.)
827-100C	10	10-21/32	8-3/16	2-19/32	5-5/16	12-3/16	26.59
827-120C	12	13-1/4	9-11/16	6-3/8	3-3/32	14-13/32	46.00
827-140CF	14	11-9/16	11-9/16	4-9/16	4-9/16	15-1/2	70.37
827-160CF	16	18-5/16	13-5/16	9-5/16	5-5/16	17-11/16	90.40
827-180CF	18	20-1/2	15	10-1/2	6	19-7/8	131.12
827-200CF	20	22-3/4	16-3/4	11-3/4	6-3/4	22-1/16	153.18
827-240CF	24	27-3/16	20-3/16	14-3/16	8-3/16	26-7/16	---

CROSS

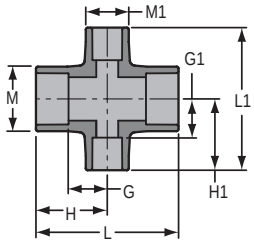
Socket x Socket x Socket x Socket



Part Number	Size	G	G1	H	H1	L	L1	M	Approx. Wt. (Lbs.)
820-002C	1/4	13/32	13/32	1-1/32	1-1/32	2-1/16	2-1/16	27/32	.05
820-005C	1/2	9/16	9/16	1-15/32	1-15/32	2-15/16	2-15/16	1-3/16	.13
820-007C	3/4	5/8	5/8	1-5/8	1-5/8	3-9/32	3-9/32	1-13/32	.21
820-010C	1	31/32	31/32	2-3/32	2-3/32	4-7/32	4-7/32	1-23/32	.46
820-012C	1-1/4	1-3/32	1-3/32	2-3/8	2-3/8	4-3/4	4-3/4	2-1/8	.65
820-015C	1-1/2	1-1/4	1-1/4	2-5/8	2-5/8	5-1/4	5-1/4	2-3/8	.81
820-020C	2	1-1/2	1-1/2	3	3	6	6	3	1.38
820-025C	2-1/2	1-11/16	1-11/16	3-15/32	3-15/32	6-29/32	6-29/32	3-17/32	2.11
820-030C	3	2-3/32	2-3/32	3-31/32	3-31/32	7-15/16	7-15/16	4-11/32	3.39
820-040C	4	2-5/8	2-5/8	4-7/8	4-7/8	9-3/4	9-3/4	5-11/32	5.30
820-050CF	5	5-1/2	5-1/2	8-1/2	8-1/2	17	17	6-5/16	15.06
820-060CF	6	6-1/4	6-1/4	9-1/2	9-1/2	19	19	7-1/2	16.94
820-080CF	8	7-5/8	7-5/8	11-7/8	11-7/8	23-3/4	23-3/4	9-5/8	40.50
820-100CF	10	9	9	14-1/4	14-1/4	28-1/2	28-1/2	11-15/16	67.20
820-120CF	12	11-1/4	11-1/4	17-1/2	17-1/2	35	35	14-1/8	107.80
820-140CF	14	12-1/4	12-1/4	19-1/4	19-1/4	38-1/2	38-1/2	15-1/2	148.16
820-160CF	16	13	13	21	21	42	42	17-11/16	180.80
820-180CF	18	13-3/4	13-3/4	22-3/4	22-3/4	45-1/2	45-1/2	19-7/8	198.00
820-200CF	20	16-3/8	16-3/8	26-3/8	26-3/8	52-3/4	52-3/4	22-1/16	249.75
820-240CF	24	20-1/4	20-1/4	32-1/4	32-1/4	64-1/2	64-1/2	26-7/16	355.98

REDUCING CROSS

Socket x Socket x Socket x Socket



Part Number	Size	G	G1	H	H1	L	L1	M	M1	Approx. Wt. (Lbs.)
820-130C[1]	1x1x1/2x1/2	1	1-7/16	2-1/8	2-3/8	4-7/32	4-3/4	1-23/32	1-23/32	.59
820-131C	1x1x1/2x3/4	23/32	5/8	1-5/8	1-5/8	3-1/4	3-1/4	1-7/8	1-1/2	.31
820-166C[1]	1-1/4x1-1/4x1/2x1/2	1-3/32	1-3/32	2-3/8	2-11/16	4-3/4	5-3/16	3-3/32	3-3/32	.84
820-167C	1-1/4x1-1/4x3/4x3/4	1-1/16	23/32	2-1/16	1-31/32	4-3/32	3-31/32	2-1/16	1-13/32	.35
820-209C[1]	1-1/2x1-1/2x1/2x1/2	1-7/32	1-7/32	2-21/32	2-31/32	5-1/4	5-15/16	2-3/8	2-3/8	1.21
820-210C	1-1/2x1-1/2x3/4x3/4	11/16	1-5/32	2-3/32	2-3/16	4-3/16	4-11/32	2-3/8	1-13/32	.42
820-211C[1]	1-1/2x1-1/2x1x1	1-3/4	1-3/4	2-5/8	3	5-5/16	5-7/8	1-3/8	1-3/8	1.16
820-248C	2x2x3/4x3/4	11/16	1-7/16	2-7/32	2-7/16	4-13/32	4-7/8	2-29/32	1-13/32	.56
820-249C[1]	2x2x1x1	1-1/2	2-9/32	3	3-7/16	6	6-27/32	3	3	1.99
820-289C	2-1/2x2-1/2x1x1	7/8	1-23/32	2-11/16	2-7/8	5-11/32	5-3/4	3-1/2	1-3/4	1.00
820-291C[1]	2-1/2x2-1/2x1-1/2x1-1/2	1-11/16	2-15/32	3-7/16	3-27/32	6-7/8	7-23/32	3-9/16	3-9/16	2.97
820-336C[1]	3x3x1-1/4x1-1/4	2-3/32	3-1/8	3-31/32	4-3/8	7-29/32	8-3/4	4-3/16	4-3/16	4.46
820-338C[1]	3x3x2x2	2-3/32	2-27/32	3-31/32	4-5/16	7-29/32	8-5/8	4-13/32	4-5/16	4.46
820-420C[1]	4x4x2x2	2-5/8	3-13/16	4-7/8	5-11/32	9-3/4	10-21/32	5-11/32	5-7/32	7.83
820-420CF	4x4x2x2	3-7/8	4-1/4	6-1/8	6	12-1/4	12	5-3/16	2-13/16	5.79
820-422C[1]	4x4x3x3	2-5/8	3-7/16	4-7/8	5-5/16	9-3/4	10-5/8	5-1/4	5-1/4	7.21
820-528CF	6x6x2x2	4-5/8	5-3/16	7-7/8	6-15/16	15-3/4	13-7/8	7-1/2	2-13/16	8.70
820-530CF	6x6x3x3	4-3/4	5-3/4	8	8	16	16	7-1/2	4-1/8	10.24
820-532CF	6x6x4x4	5-1/4	6-3/4	8-1/2	9	17	18	7-1/2	5-3/16	15.93
820-533CF	6x6x5x5	5-3/4	6-1/2	9	9-1/2	18	19	7-1/2	6-5/16	14.41
820-578CF	8x8x2x2	4-11/16	6-1/8	8-15/16	7-7/8	17-7/8	15-3/4	9-5/8	2-13/16	15.90
820-580CF	8x8x3x3	5-3/16	6-11/16	9-7/16	8-15/16	18-7/8	17-7/8	9-5/8	4-1/8	13.77
820-582CF	8x8x4x4	5-3/4	7-11/16	10	9-15/16	20	19-7/8	9-5/8	5-3/16	24.71
820-585CF	8x8x6x6	6-3/4	8-1/16	11	11-5/16	22	22-5/8	9-5/8	7-1/2	30.75
820-621CF	10x10x2x2	4-3/8	7-1/8	9-5/8	8-7/8	19-1/4	17-11/16	11-15/16	2-13/16	27.78
820-623CF	10x10x3x3	4-7/8	7-11/16	10-1/8	9-15/16	20-1/4	19-13/16	11-15/16	4-1/8	30.16
820-624CF	10x10x4x4	5-3/8	8-11/16	10-5/8	10-15/16	21-1/4	21-13/16	11-15/16	5-3/16	28.17
820-626CF	10x10x6x6	5-7/8	9-1/16	11-1/8	12-5/16	22-1/4	24-5/8	11-15/16	7-1/2	38.61
820-628CF	10x10x8x8	8-1/4	9-15/16	13-1/2	14-3/16	27	28-3/8	11-15/16	9-5/8	59.10
820-661CF	12x12x2x2	4-3/4	8	11	9-3/4	22	19-1/2	14-1/8	2-13/16	44.02
820-663CF	12x12x3x3	5-1/4	8-9/16	11-1/2	10-13/16	23	21-5/8	14-1/8	4-1/8	45.28
820-664CF	12x12x4x4	5-3/4	9-9/16	12	11-13/16	24	23-5/8	14-1/8	5-3/16	42.60
820-666CF	12x12x6x6	7-1/4	9-15/16	13-1/4	13-3/16	26-1/2	26-3/8	14-1/8	7-1/2	61.56
820-668CF	12x12x8x8	8	10-13/16	14-1/4	15-1/16	28-1/2	30-1/8	14-1/8	9-5/8	73.35
820-670CF	12x12x10x10	10-1/4	10-13/16	16-1/2	16-1/16	33	32-1/8	14-1/8	11-15/16	78.03
820-691CF	14x14x2x2	5-3/16	8-9/16	12-3/16	10-5/16	24-3/8	20-5/8	15-1/2	2-13/16	45.02

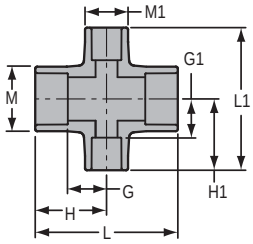
[1] Outlet sized with bushing

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

REDUCING CROSS (continued)

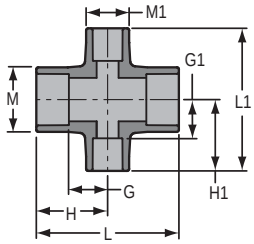
Socket x Socket x Socket x Socket



Part Number	Size	G	G1	H	H1	L	L1	M	M1	Approx. Wt. (Lbs.)
820-693CF	14x14x3x3	5-3/4	9-1/8	12-3/4	11-3/8	25-1/2	22-3/4	15-1/2	4-1/8	57.57
820-694CF	14x14x4x4	6-1/2	10-1/8	13-1/2	12-3/8	27	24-3/4	15-1/2	5-3/16	69.17
820-696CF	14x14x6x6	8-1/4	10-1/2	15-1/4	13-3/4	30-1/2	27-1/2	15-1/2	7-1/2	63.15
820-698CF	14x14x8x8	9-1/4	11-3/8	16-1/4	15-5/8	32-1/2	31-1/4	15-1/2	9-5/8	68.17
820-700CF	14x14x10x10	10-1/8	11-3/8	17-1/8	16-5/8	34-1/4	33-1/4	15-1/2	11-15/16	89.80
820-702CF	14x14x12x12	11	11-3/8	18	17-5/8	36	35-1/4	15-1/2	14-1/8	93.81
820-751CF	16x16x2x2	5-7/8	9-1/2	13-7/8	11-1/4	27-3/4	22-1/2	17-11/16	2-13/16	71.71
820-752CF	16x16x2-1/2x2-1/2	6	9-11/16	14	11-11/16	28	23-3/8	17-11/16	3-7/16	65.37
820-753CF	16x16x3x3	6-5/16	10-1/16	14-5/16	12-5/16	28-5/8	24-5/8	17-11/16	4-1/8	67.39
820-754CF	16x16x4x4	6-1/8	11-1/16	14-1/8	13-5/16	28-1/4	26-5/8	17-11/16	5-3/16	70.21
820-756CF	16x16x6x6	8-5/8	11-7/16	16-5/8	14-11/16	33-1/4	29-3/8	17-11/16	7-1/2	90.09
820-758CF	16x16x8x8	9-5/8	12-5/16	17-5/8	16-9/16	35-1/4	33-1/8	17-11/16	9-5/8	98.69
820-760CF	16x16x10x10	10-5/8	12-5/16	18-5/8	17-9/16	37-1/4	35-1/8	17-11/16	11-15/16	103.85
820-762CF	16x16x12x12	11-5/8	12-5/16	19-5/8	18-9/16	39-1/4	37-1/8	17-11/16	14-1/8	116.70
820-764CF	16x16x14x14	12-3/4	12-11/16	20-3/4	19-11/16	41-1/2	39-3/8	17-11/16	15-1/2	135.00
820-784CF	18x18x4x4	6-7/8	11-15/16	15-7/8	14-3/16	31-3/4	28-3/8	19-7/8	5-3/16	99.22
820-786CF	18x18x6x6	8-1/2	12-5/16	17-1/2	15-9/16	35	31-1/8	19-7/8	7-1/2	122.13
820-788CF	18x18x8x8	9-1/2	13-3/16	18-1/2	17-7/16	37	34-7/8	19-7/8	9-5/8	135.00
820-790CF	18x18x10x10	10-1/2	13-3/16	19-1/2	18-7/16	39	36-7/8	19-7/8	11-15/16	150.90
820-792CF	18x18x12x12	11-1/2	13-3/16	20-1/2	19-7/16	41	38-7/8	19-7/8	14-1/8	169.57
820-794CF	18x18x14x14	12-3/4	13-9/16	21-3/4	20-9/16	43-1/2	41-1/8	19-11/16	15-1/2	165.78
820-796CF	18x18x16x16	13-1/2	14-3/16	22-1/2	22-3/16	45	44-3/8	19-11/16	17-11/16	172.46
820-814CF	20x20x4x4	7-11/16	12-7/8	17-11/16	15-1/8	35-3/8	30-1/4	22-1/16	5-3/16	116.55
820-816CF	20x20x6x6	8-7/8	13-1/4	18-7/8	16-1/2	37-3/4	33	22-1/16	7-1/2	140.98
820-818CF	20x20x8x8	9-7/8	14-1/8	19-7/8	18-3/8	39-3/4	36-3/4	22-1/16	9-5/8	151.48
820-820CF	20x20x10x10	10-7/8	14-1/8	20-7/8	19-3/8	41-3/4	38-3/4	22-1/16	11-15/16	163.28
820-822CF	20x20x12x12	11-7/8	14-1/8	21-7/8	20-3/8	43-3/4	40-3/4	22-1/16	14-1/8	176.50
820-824CF	20x20x14x14	12-7/8	14-1/2	22-7/8	21-1/2	45-3/4	43	22-1/16	15-1/2	190.95
820-826CF	20x20x16x16	14	15-1/8	24	23-1/8	48	46-1/4	22-1/16	17-11/16	210.27
820-828CF	20x20x18x18	15	15	25	24	50	48	22-1/16	19-7/8	226.80
820-904CF	24x24x4x4	9	14-11/16	21	16-15/16	42	33-7/8	26-7/16	5-3/16	195.97
820-906CF	24x24x6x6	9-1/4	15-1/16	21-1/4	18-5/16	42-1/2	36-5/8	26-7/16	7-1/2	202.94
820-908CF	24x24x8x8	10-1/4	15-15/16	22-1/4	20-3/16	44-1/2	40-3/8	26-7/16	9-5/8	236.29
820-910CF	24x24x10x10	11-1/4	15-15/16	23-1/4	21-3/16	46-1/2	42-3/8	26-7/16	11-15/16	255.96

REDUCING CROSS (continued)

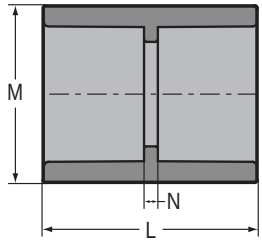
Socket x Socket x Socket x Socket



Part Number	Size	G	G1	H	H1	L	L1	M	M1	Approx. Wt. (Lbs.)
820-912CF	24x24x12x12	12-1/4	15-15/16	24-1/4	22-3/16	48-1/2	44-3/8	26-7/16	14-1/8	280.93
820-914CF	24x24x14x14	13-1/4	16-5/16	25-1/4	23-5/16	50-1/2	46-5/8	26-1/16	15-1/2	282.43
820-916CF	24x24x16x16	14-3/4	16-15/16	26-3/4	24-15/16	53-1/2	49-7/8	26-7/16	17-11/16	306.44
820-918CF	24x24x18x18	15-3/4	16-13/16	27-3/4	25-13/16	55-1/2	51-5/8	26-7/16	19-7/8	246.78
820-920CF	24x24x20x20	16-3/4	18-3/16	28-3/4	28-3/16	57-1/2	56-3/8	26-7/16	22-1/16	351.60

COUPLING

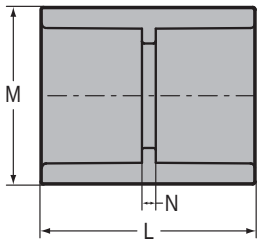
Socket x Socket



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
829-002C	1/4	1-3/8	27/32	1/16	.02
829-003C	3/8	1-5/8	1	3/32	.04
829-005C	1/2	1-7/8	1-3/16	1/8	.07
829-007C	3/4	2-1/8	1-13/32	1/8	.10
829-010C	1	2-15/32	1-23/32	3/16	.13
829-012C	1-1/4	2-23/32	2-7/32	7/32	.23
829-015C	1-1/2	2-7/8	2-11/32	3/32	.22
829-020C	2	3-1/8	2-27/32	3/32	.32
829-025C	2-1/2	3-11/16	3-15/32	1/4	.58
829-030C	3	3-31/32	4-5/32	3/16	.82
829-040C	4	4-3/4	5-5/16	1/4	1.36
829-050C	5	5-15/32	6-3/8	7/32	2.18
829-050CF	5	8	6-5/16	2	2.32
829-060C	6	6-3/8	7-9/16	1/4	3.93
829-080C	8	8-1/4	9-23/32	9/32	6.95
829-100C	10	10-9/32	12-1/16	1/4	12.31
829-100CF	10	12-1/2	11-15/16	2	16.78
829-120C	12	12-3/8	14-7/32	3/8	20.05

COUPLING (continued)

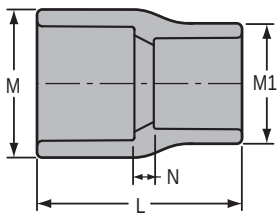
Socket x Socket



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
829-120CF	12	15-1/4	14-1/8	2-3/4	27.71
829-140C	14	14-7/16	15-5/8	3/8	28.11
829-140CF	14	16	15-1/2	2	33.33
829-160CF	16	18-5/8	17-11/16	2-5/8	42.93
829-180CF	18	22	19-7/8	4	72.89
829-200CF	20	23-3/4	22-1/16	3-3/4	99.56
829-240CF	24	29-1/4	26-7/16	5-1/4	---

REDUCER COUPLING

Socket x Socket

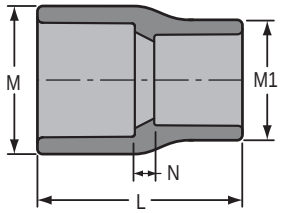


Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
829-101C	3/4x1/2	2-3/32	1-13/32	1-5/32	7/32	.07
829-130C	1x1/2	2-3/16	1-23/32	1-13/32	7/32	.12
829-131C	1x3/4	2-13/32	1-23/32	1-13/32	1/4	.10
829-166C	1-1/4x1/2	2-9/16	2-3/32	1-5/32	7/16	.15
829-167C	1-1/4x3/4	2-19/32	2-3/32	1-5/8	11/32	.18
829-168C	1-1/4x1	2-11/16	2-1/8	1-3/4	5/16	.15
829-209C	1-1/2x1/2	2-27/32	2-11/32	1-3/16	19/32	.20
829-210C	1-1/2x3/4	2-7/8	2-3/8	1-13/32	17/32	.19
829-211C	1-1/2x1	2-7/8	2-11/32	1-15/16	3/8	.25
829-212C	1-1/2x1-1/4	2-13/16	2-13/32	2-1/8	5/32	.23
829-247C	2x1/2	3-3/32	2-7/8	1-5/32	11/16	.31
829-248C	2x3/4	3-7/32	2-7/8	1-13/32	23/32	.32
829-249C	2x1	3-1/8	2-7/8	1-23/32	17/32	.35
829-250C	2x1-1/4	3-11/32	2-7/8	2-3/32	19/32	.33
829-251C	2x1-1/2	3-7/32	2-27/32	2-11/32	1/4	.31
829-290C[1]	2-1/2x1-1/4	3-29/32	3-1/2	2-3/8	15/16	.59
829-291C	2-1/2x1-1/2	3-3/4	3-1/2	2-3/8	19/32	.51

[1] Outlet sized with bushing

REDUCER COUPLING (continued)

Socket x Socket



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
829-292C	2-1/2x2	3-21/32	3-15/32	2-27/32	13/32	.51
829-335C	3x1	4-7/16	4-1/8	2-7/8	1-7/16	1.04
829-336C[1]	3x1-1/4	4-7/32	4-5/32	2-29/32	1-1/16	.97
829-337C	3x1-1/2	3-1/2	4-3/16	2-3/8	7/32	.69
829-338C	3x2	4	4-5/32	2-27/32	11/16	.76
829-339C	3x2-1/2	4-1/8	4-5/32	3-15/32	1/2	.79
829-339CF	3x2-1/2	6	4-1/16	3-7/16	1-3/4	1.01
829-416C[1]	4x3/4	5-23/32	5-9/32	2-29/32	2-13/32	1.78
829-417C[1]	4x1	5-15/16	5-9/32	2-29/32	2-17/32	1.54
829-419C[1]	4x1-1/2	5-23/32	5-9/32	2-29/32	2-1/16	1.68
829-420C	4x2	5-1/2	5-9/32	2-7/8	1-25/32	1.50
829-421C	4x2-1/2	4-9/16	5-3/16	3-1/2	17/32	1.35
829-422C	4x3	4-19/32	5-1/4	4-3/16	15/32	1.33
829-488CF	5x3	7-15/16	6-1/4	5-3/16	2-15/16	3.13
829-490CF	5x4	7-3/4	6-1/4	5-3/16	2-1/2	2.53
829-528C[1]	6x2	7-1/16	7-1/2	5	2-9/16	4.42
829-529C	6x2-1/2	6-31/32	7-19/32	5-9/32	2-3/16	4.72
829-530C[1]	6x3	7-1/8	7-9/16	5-9/32	2-1/4	4.25
829-530CF	6x3	9-1/4	7-5/16	5-3/16	4-3/16	4.22
829-532C	6x4	6-5/8	7-5/8	5-5/16	1-7/16	3.45
829-533CF	6x5	8-15/16	7-3/8	6-5/16	2-11/16	3.93
829-580CF	8x3	15	9-1/2	5-3/16	8-7/8	8.74
829-582C	8x4	8-29/32	9-23/32	5-1/4	2-15/32	6.47
829-582CF	8x4	14-5/8	9-1/2	5-3/16	8-1/8	9.36
829-583CF	8x5	14-11/16	9-1/2	6-5/16	7-7/16	8.30
829-585C	8x6	8	9-3/4	7-1/2	1	6.48
829-621CF	10x2	21-1/2	11-3/4	5-3/16	14-3/4	17.05
829-623CF	10x3	21-7/16	11-3/4	5-3/16	14-3/16	17.18
829-623CF	10x3	21-1/2	11-3/4	5-3/16	14-7/16	20.10
829-624CF	10x4	21-1/8	11-3/4	5-3/16	13-5/8	16.54
829-625CF	10x5	21-3/16	11-3/4	6-5/16	12-15/16	16.94
829-626C	10x6	10-19/32	12-1/32	7-19/32	2-17/32	11.43
829-626CF	10x6	17-5/8	11-3/4	7-1/2	9-1/8	15.00
829-628C	10x8	10-5/8	12	9-3/4	1-17/32	11.44
829-628CF	10x8	13-3/8	11-3/4	9-5/8	3-7/8	12.00
829-664CF	12x4	28-3/8	13-15/16	5-3/16	19-7/8	32.77
829-665CF	12x5	28-7/16	13-15/16	6-5/16	19-3/16	33.24
829-666CF	12x6	24-7/8	13-15/16	7-1/2	15-3/8	25.86
829-668C	12x8	12-5/8	14-7/32	9-3/4	2-7/16	19.26

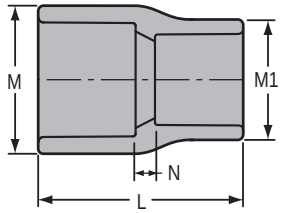
[1] Outlet sized with bushing

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

REDUCER COUPLING (continued)

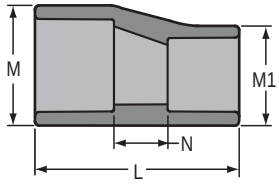
Socket x Socket



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
829-668CF	12x8	20-5/8	13-15/16	9-5/8	10-1/8	24.34
829-670CF	12x10	16-3/8	13-15/16	11-15/16	4-7/8	20.77
829-694CF	14x4	30-1/8	15-3/16	5-3/16	20-7/8	32.89
829-696CF	14x6	26-5/8	15-3/16	7-1/2	16-3/8	47.58
829-698CF	14x8	22-3/8	15-3/16	9-5/8	11-1/8	27.69
829-700CF	14x10	18-1/8	15-3/16	11-15/16	5-7/8	26.86
829-702CF	14x12	17-3/4	15-3/8	14-1/8	4-1/2	29.14
829-754CF	16x4	38	17-3/8	5-3/16	27-3/4	50.97
829-756CF	16x6	34-1/2	17-3/8	7-1/2	23-1/4	61.20
829-758CF	16x8	30-1/4	17-3/8	9-5/8	18	54.00
829-760CF	16x10	26	17-3/8	11-15/16	12-3/4	51.35
829-762CF	16x12	20-1/4	17-3/8	14-1/8	6	65.63
829-764CF	16x14	21-1/4	17-1/2	15-1/2	5-1/4	50.00
829-784CF	18x4	47-3/8	19-11/16	5-3/16	36-1/8	107.14
829-786CF	18x6	43-7/8	19-11/16	7-1/2	31-5/8	105.76
829-788CF	18x8	39-5/8	19-11/16	9-5/8	26-3/8	101.60
829-790CF	18x10	35-3/8	19-11/16	11-15/16	21-1/8	89.54
829-792CF	18x12	29-5/8	19-11/16	14-1/8	14-3/8	76.67
829-794CF	18x14	29-5/8	19-11/16	15-1/2	13-5/8	87.00
829-796CF	18x16	23	19-11/16	17-11/16	6	63.70
829-814CF	20x4	58	21-7/8	5-3/16	45-3/4	159.76
829-816CF	20X6	54-1/2	21-7/8	7-1/2	41-14	158.17
829-818CF	20x8	50-1/4	21-7/8	9 -5/8	36	154.50
829-820CF	20x10	46	21-7/8	11-15/16	30-3/4	146.56
829-822CF	20x12	40-1/4	21-7/8	14- 1/8	24	137.46
829-824CF	20x14	40-1/4	21-7/8	15-1/2	23-1/4	---
829-826CF	20x16	33-5/8	21-7/8	17-11/16	15-5/8	115.51
829-828CF	20x18	25-1/2	21-7/8	19-7/8	6-1/2	---
829-904CF	24x4	71-1/2	26-1/16	5-3/16	57-1/4	241.69
829-906CF	24x6	68	26-1/16	7-1/2	52-3/4	240.34
829-908CF	24x8	63-3/4	26-1/16	9-5/8	47-1/2	236.18
829-910CF	24x10	59-1/2	26-1/16	11-15/16	42-1/4	270.28
829-912CF	24x12	53-3/4	26-1/16	14-1/8	35-1/2	219.13
829-914CF	24x14	53-3/4	26-1/16	15-1/2	34-3/4	---
829-916CF	24x16	47-1/8	26-1/16	17-11/16	27-1/8	179.54
829-918CF	24x18	39	26-1/16	19-7/8	18	167.74
829-920CF	24x20	30-5/8	26-1/16	22-1/16	8-5/8	139.32

ECCENTRIC REDUCER COUPLING

Socket x Socket



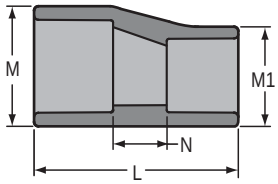
Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
829-101CFE	3/4x1/2	3-3/8	1-3/8	1-1/8	1-5/8	.09
829-130CFE	1x1/2	3-1/2	1-5/8	1-1/8	1-1/2	.11
829-131CFE	1x3/4	4	1-5/8	1-3/8	1-3/4	.15
829-168CFE	1-1/4x1	5-1/8	2	1-11/16	2-3/8	.30
829-209CFE	1-1/2x1/2	7-1/8	2-1/4	1-1/8	4-7/8	.33
829-210CFE	1-1/2x3/4	7-5/8	2-1/4	1-3/8	5-1/8	.34
829-211CFE	1-1/2x1	5-3/8	2-1/4	1-11/16	2-5/8	.35
829-212CFE	1-1/2x1-1/4	4-9/16	2-5/16	2-1/16	1-9/16	.33
829-249CFE	2x1	6-1/8	2-3/4	1-11/16	3-1/8	.37
829-250CFE	2x1-1/4	6-1/8	2-3/4	2-1/16	2-7/8	.46
829-251CFE	2x1-1/2	6	2-3/4	2-5/16	2-3/4	.47
829-289CFE	2-1/2x1	10-5/8	3-5/16	1-11/16	7-3/8	.90
829-290CFE	2-1/2x1-1/4	10-5/8	3-5/16	2-1/16	7-1/8	1.15
829-291CFE	2-1/2x1-1/2	10-1/2	3-5/16	2-5/16	7	1.24
829-292CFE	2-1/2x2	6-7/8	3-5/16	2-13/16	3-1/8	.86
829-335CFE	3x1	11-7/8	3-15/16	1-11/16	8-3/8	1.58
829-336CFE	3x1-1/4	11-7/8	3-15/16	2-1/16	8-1/8	1.27
829-337CFE	3x1-1/2	11-3/4	3-15/16	2-5/16	8	1.41
829-338CFE	3x2	5-7/8	4-5/32	2-7/8	2-15/32	1.07
829-339CFE	3x2-1/2	7-1/4	4-1/16	3-7/16	3	1.26
829-417CFE	4x1	17	5-1/8	1-11/16	13-1/2	3.48
829-418CFE	4x1-1/4	17	5-1/8	2-1/16	13-1/4	3.00
829-419CFE	4x1-1/2	16-7/8	5-1/8	2-5/16	13-1/8	2.60
829-420CFE	4x2	13-1/4	5-1/8	2-13/16	9-1/4	2.47
829-421CFE	4x2-1/2	12-3/8	5-1/8	3-7/16	8-1/8	2.58
829-422CFE	4x3	8-3/4	5-1/8	4-1/8	4-1/4	2.04
829-528CFE	6x2	20-7/8	7-5/16	2-13/16	15-7/8	7.02
829-529CFE	6x2-1/2	20	7-5/16	3-7/16	14-3/4	7.48
829-530CFE	6x3	16-3/8	7-5/16	4-1/8	10-7/8	6.16
829-532CFE	6x4	11-1/8	7-5/16	5-3/16	5-5/8	4.43
829-533CFE	6x5	11-1/4	7-3/8	6-5/16	5	6.44
829-578CFE	8x2	30-5/8	9-1/2	2-13/16	24-5/8	17.32
829-580CFE	8x3	26-1/8	9-1/2	4-1/8	19-5/8	16.42
829-582CFE	8x4	20-7/8	9-1/2	5-3/16	14-3/8	13.59
829-583CFE	8x5	21	9-1/2	6-5/16	13-3/4	11.81
829-585CFE	8x6	15-1/4	9-1/2	7-1/2	7-3/4	9.78
829-624CFE	10x4	32	11-3/4	5-3/16	24-1/2	29.89
829-625CFE	10x5	32-1/8	11-3/4	6-5/16	23-7/8	27.68
829-626CFE	10x6	26-3/8	11-3/4	7-1/2	17-7/8	25.59
829-628CFE	10x8	18-1/16	11-3/4	9-5/8	8-9/16	17.28
829-664CFE	12x4	43-1/2	13-15/16	5-3/16	35	56.73

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

ECCENTRIC REDUCER COUPLING (continued)

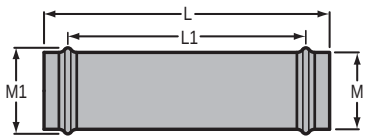
Socket x Socket



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
829-665CFE	12x5	43-5/8	13-15/16	6-5/16	34-3/8	42.50
829-666CFE	12x6	37-7/8	13-15/16	7-1/2	28-3/8	52.43
829-668CFE	12x8	29-9/16	13-15/16	9-5/8	19-1/16	34.80
829-670CFE	12x10	20-5/8	13-15/16	11-15/16	9-1/8	26.06
829-696CFE	14x6	41-3/8	15-3/16	7-1/2	31-1/8	67.95
829-698CFE	14x8	33-1/16	15-3/16	9-5/8	21-13/16	39.32
829-700CFE	14x10	24-1/8	15-3/16	11-15/16	11-7/8	60.41
829-702CFE	14x12	20-1/8	15-3/8	14-1/8	6-7/8	41.52
829-756CFE	16x6	54-1/4	17-1/2	7-1/2	43	96.99
829-758CFE	16x8	45-15/16	17-1/2	9-5/8	33-11/16	91.61
829-760CFE	16x10	37	17-1/2	11-15/16	23-3/4	85.11
829-762CFE	16x12	33	17-1/2	14-1/8	18-3/4	71.78
829-764CFE	16x14	24-5/8	17-1/2	15-1/2	9-5/8	59.26
829-786CFE	18x6	69-1/4	19-11/16	7-1/2	57	164.92
829-788CFE	18x8	60-15/16	19-11/16	9-5/8	47-11/16	152.22
829-790CFE	18x10	52	19-11/16	11-15/16	37-3/4	148.37
829-792CFE	18x12	48	19-11/16	14-1/8	32-3/4	132.56
829-794CFE	18x14	39-5/8	19-11/16	15-1/2	23-5/8	111.06
829-796CFE	18x16	28-5/8	19-11/16	17-11/16	11-5/8	85.64

FABRICATED REPAIR COUPLING

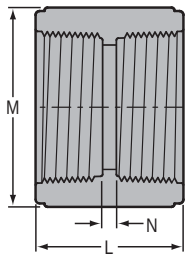
Gasket x Gasket



Part Number	Size	L	L1	M	M1	Approx. Wt. (Lbs.)
828-020CF	2	9-1/8	11-3/4	4-1/8	4-5/8	.97
828-030CF	3	15-1/2	11-3/4	4-1/8	4-5/8	3.39
828-040CF	4	19-1/2	15	5-3/16	5-3/4	6.54
828-060CF	6	23	16	7-1/2	8-1/8	13.41
828-080CF	8	26-5/8	19-11/16	9-5/8	10-3/8	21.45
828-100CF	10	28	21-1/4	10-3/4	12-1/4	---
828-120CF	12	30	22-1/2	14-1/8	16-1/8	---
828-140CF	14	19	11-1/2	15-1/2	16-3/8	45.50
828-160CF	16	21-5/8	12-3/8	17-11/16	18-3/4	60.00

COUPLING

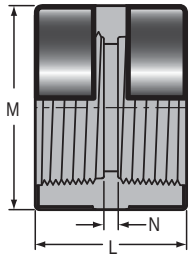
Fipt x Fipt



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
830-002C	1/4	1-11/32	13/16	5/32	.02
830-003C	3/8	1-15/32	1	9/32	.04
830-005C	1/2	1-5/8	1-9/32	1/4	.07
830-007C	3/4	1-11/16	1-5/8	3/32	.09
830-010C	1	2-3/32	1-15/16	1/8	.15
830-012C	1-1/4	2-3/16	2-9/32	3/16	.22
830-015C	1-1/2	2-7/32	2-5/8	3/16	.30
830-020C	2	2-7/32	3	7/32	.35
830-025C	2-1/2	3-5/16	3-9/16	1/8	.71
830-030C	3	3-15/32	4-3/8	21/32	1.13
830-040C	4	3-21/32	5-9/16	3/16	1.61
830-060CF	6	3-3/4	7-3/16	3/4	1.76
830-080CF	8	4-1/2	9-3/8	1-1/16	3.33

SPECIAL REINFORCED COUPLING

SR Fipt x SR Fipt



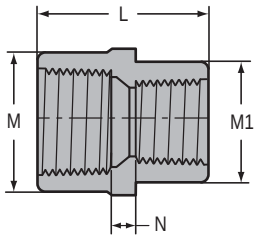
Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
830-005CSR	1/2	1-19/32	1-7/32	9/32	.06
830-007CSR	3/4	1-5/8	1-3/8	1/8	.07
830-010CSR	1	1-15/16	1-23/32	1/16	.13
830-012CSR	1-1/4	2-1/16	2-1/16	5/16	.17
830-015CSR	1-1/2	2-5/32	2-7/16	11/32	.25
830-020CSR	2	2-1/4	3-1/32	1/4	.39

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

REDUCER COUPLING

Fipt x Fipt

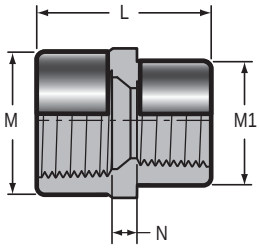


Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
830-072C[1]	1/2x1/4	1-31/32	1-5/16	1-5/32	5/8	.08
830-073C[1]	1/2x3/8	1-29/32	1-7/32	1-7/32	19/32	.08
830-101C	3/4x1/2	1-23/32	1-3/8	1-7/32	7/32	.08

[1] Outlet sized with bushing

SPECIAL REINFORCED REDUCER COUPLING

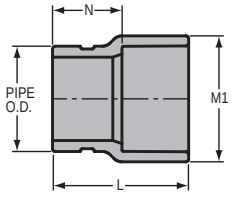
SR Fipt x SR Fipt



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
830-101CSR	3/4x1/2	1-23/32	1-3/8	1-7/32	7/32	.09
830-130CSR	1x1/2	2-1/4	1-23/32	1-7/32	21/32	.17
830-131CSR	1x3/4	2-13/32	1-23/32	1-3/8	23/32	.17
830-210CSR	1-1/2x3/4	2-7/8	2-7/16	1-3/8	1-7/32	.29
830-211CSR	1-1/2x1	2-15/16	2-7/16	1-11/16	7/16	.36
830-212CSR	1-1/2x1-1/4	2-7/8	2-1/2	2-3/32	15/16	.34
830-249CSR	2x1	3-3/16	3	1-23/32	1-17/32	.48
830-251CSR	2x1-1/2	3-1/4	3	2-7/16	1-7/16	.52

GROOVED COUPLING ADAPTER

Groove x Socket

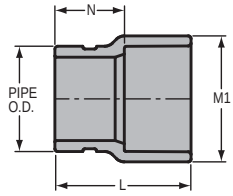


Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
833-012C	1-1/4	2-13/16	2-1/16	1-9/16	.17
833-015C	1-1/2	2-29/32	2-11/32	1-1/2	.20
833-020C	2	3-1/16	2-7/8	1-9/16	.30
833-025C	2-1/2	3-3/8	3-1/2	1-5/8	.52
833-030C	3	3-9/16	4-3/16	1-11/16	.72

GROOVED COUPLING ADAPTER

Groove x Socket

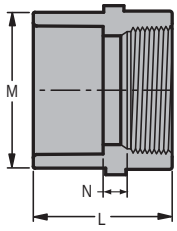
(continued)



Part Number PVC	Size	L	M1	N	Approx. Wt. (Lbs.) PVC
833-040C	4	4-17/32	5-1/4	2-9/32	1.38
833-050CF	5	7	6-5/16	4	2.35
833-060C	6	5-5/16	7-9/16	2-5/16	3.00
833-080CF	8	8-3/16	9-5/8	3-15/16	7.16
833-100CF	10	9-7/8	11-15/16	4-5/8	10.72
833-120CF	12	10-7/8	14-1/8	4-5/8	24.11

FEMALE ADAPTER

Socket x Fipt



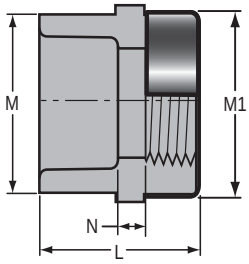
Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
835-002C	1/4	1-11/32	27/32	3/32	.02
835-003C	3/8	1-15/32	1	3/32	.04
835-005C	1/2	1-3/4	1-5/32	3/32	.06
835-007C	3/4	1-27/32	1-13/32	3/32	.08
835-010C	1	2-1/8	1-23/32	3/32	.14
835-012C	1-1/4	2-5/16	2-3/32	3/32	.22
835-015C	1-1/2	2-1/2	2-11/32	3/32	.21
835-020C	2	3	3-1/32	1/4	.42
835-025C	2-1/2	3-1/4	3-9/16	7/32	.67
835-030C	3	3-15/32	4-1/4	3/16	.76
835-040C	4	3-31/32	5-7/32	1/4	1.71
835-060C	6	4-31/32	7-21/32	5/16	3.22
835-080C	8	6-5/32	9-23/32	1/4	5.39
835-080CF	8	8-9/16	9-5/8	2-9/16	6.56
835-100CF	10	10-1/4	11-15/16	3	11.59
835-120CF	12	11-1/8	14-1/8	2-5/8	20.00

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

SPECIAL REINFORCED FEMALE ADAPTER

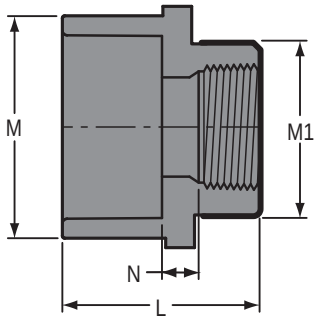
Socket x SR Fipt



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
835-002CSR	1/4	1-13/32	27/32	27/32	3/32	.03
835-003CSR	3/8	1-15/32	15/16	31/32	3/32	.04
835-005CSR	1/2	1-3/4	1-5/32	1-3/16	3/16	.07
835-007CSR	3/4	1-7/8	1-13/32	1-3/8	3/32	.09
835-010CSR	1	2-1/8	1-11/16	1-23/32	3/32	.14
835-012CSR	1-1/4	2-5/16	2-3/32	2-1/16	3/32	.20
835-015CSR	1-1/2	2-7/16	2-13/32	2-7/16	7/32	.28
835-020CSR	2	2-23/32	3	3-1/32	1/4	.45
835-025CSR	2-1/2	3-1/4	3-9/16	3-9/16	11/32	.70
835-030CSR	3	3-1/2	4-1/4	4-9/32	7/32	1.01
835-040CSR	4	3-31/32	5-7/32	5-1/4	7/32	1.35
835-060CSR	6	4-31/32	7-5/8	7-21/32	1/4	3.25

REDUCING FEMALE ADAPTER

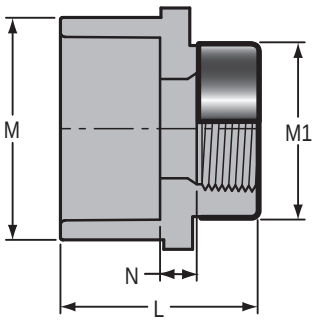
Socket x SR Fipt



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
835-098C	3/4x1/4	1-15/16	1-13/32	27/32	---	.06

SPECIAL REINFORCED REDUCING FEMALE ADAPTER

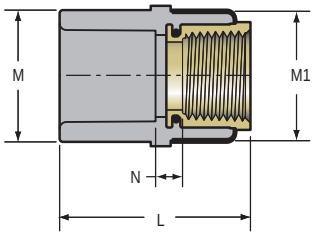
Socket x SR Fipt



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
835-074CSR	1/2x3/4	1-3/4	1-3/16	1-3/8	7/32	.08
835-098CSR	3/4x1/4	1-15/16	1-13/32	27/32	13/32	.07
835-101CSR	3/4x1/2	1-7/8	1-3/8	1-3/16	3/16	.08
835-102CSR	3/4x1	2-1/16	1-7/16	1-11/16	7/32	.13
835-130CSR	1x1/2	2	1-11/16	1-3/16	7/32	.11
835-131CSR	1x3/4	2-3/32	1-3/4	1-3/8	1/4	.13

TRANSITION FEMALE ADAPTER

Socket x Brass Fipt
Dimensions Also Applicable to 835-XXX**SS**

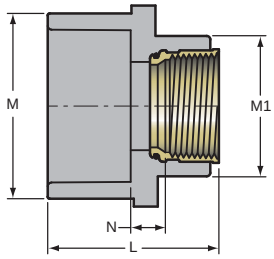


Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
835-005CBR	1/2	1-25/32	1-5/32	1-7/32	5/8	.12
835-007CBR	3/4	2	1-13/32	1-3/8	3/8	.24
835-010CBR	1	2-7/32	1-3/4	1-11/16	13/32	.31
835-012CBR	1-1/4	2-3/8	2-3/32	2-1/16	3/8	.36
835-015CBR	1-1/2	2-17/32	2-13/32	2-7/16	13/32	.48
835-020CBR	2	2-25/32	2-7/8	3-3/16	7/16	1.05

Not intended to convey or dispense water for human consumption through drinking or cooking

TRANSITION REDUCING FEMALE ADAPTER

Socket x Brass Fipt



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
835-101CBR	3/4x1/2	2-1/32	1-7/16	1-3/16	15/32	.18

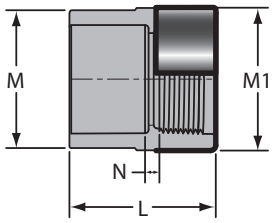
Not intended to convey or dispense water for human consumption through drinking or cooking

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

ENCAPSULATED SPECIAL REINFORCED FEMALE ADAPTER

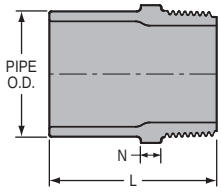
Socket x ESR Fipt



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
835-002CESR	1/4	1-1/2	27/32	29/32	3/32	.05
835-003CESR	3/8	1-17/32	15/16	1-1/32	3/16	.04
835-005CESR	1/2	1-7/8	1-3/16	1-9/32	9/32	.07
835-007CESR	3/4	2	1-13/32	1-15/32	1/8	.11
835-010CESR	1	2-1/4	1-3/4	1-13/16	1/8	.15
835-012CESR	1-1/4	2-7/16	2-1/8	2-5/32	3/16	.22
835-015CESR	1-1/2	2-9/16	2-13/32	2-1/2	1/4	.31
835-020CESR	2	2-27/32	3	3-3/32	13/32	.49

MALE ADAPTER

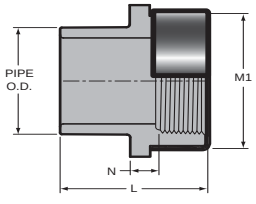
Spigot x Mipt



Part Number	Size	L	N	Approx. Wt. (Lbs.)
861-005C	1/2	1-13/16	5/16	.03
861-007C	3/4	1-31/32	5/16	.05
861-010C	1	2-3/32	1/4	.08
861-131C	1x3/4	2	1/4	.07
861-012C	1-1/4	2-9/32	9/32	.13
861-015C	1-1/2	2-5/8	11/32	.15
861-020C	2	2-13/16	13/32	.24

SPECIAL REINFORCED SPIGOT FEMALE ADAPTER

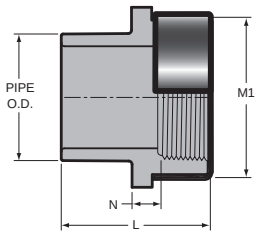
Spigot x SR Fipt



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
878-005CSR	1/2	1-3/4	1-3/16	5/32	.06
878-007CSR	3/4	1-15/16	1-3/8	3/16	.08
878-010CSR	1	2-1/4	1-11/16	7/32	.13
878-012CSR	1-1/4	2-15/32	2-1/16	1/4	.19
878-015CSR	1-1/2	2-21/32	2-7/16	13/32	.26

SPECIAL REINFORCED SPIGOT FEMALE ADAPTER (continued)

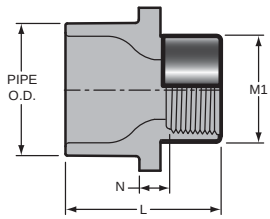
Spigot x SR Fipt



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
878-020CSR	2	2-13/16	3	3/8	.40
878-030CSR	3	3-27/32	4-9/32	17/32	.97
878-040CSR	4	4-3/8	5-1/4	5/8	1.42

SPECIAL REINFORCED REDUCING SPIGOT FEMALE ADAPTER

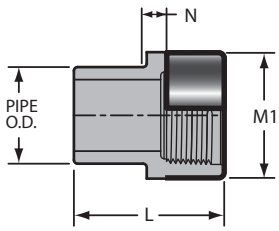
Spigot x SR Fipt



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
878-072CSR	1/2x1/4	1-13/32	27/32	3/16	.03
878-098CSR	3/4x1/4	1-27/32	27/32	7/32	.06
878-128CSR	1x1/4	2-3/8	27/32	21/32	.09

ENCAPSULATED SPECIAL REINFORCED SPIGOT FEMALE ADAPTER

Spigot x ESR Fipt



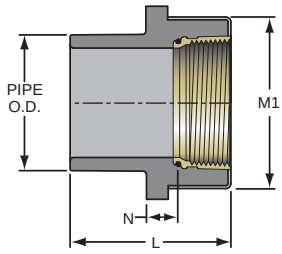
Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
878-005CESR	1/2	1-7/8	1-9/32	3/16	.07
878-007CESR	3/4	2-1/16	1-15/32	3/8	.09
878-010CESR	1	2-3/8	1-25/32	11/32	.15
878-012CESR	1-1/4	2-19/32	2-5/32	5/16	.20
878-015CESR	1-1/2	2-3/4	2-1/2	13/32	.29
878-020CESR	2	2-15/16	3-3/32	5/16	.44

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

TRANSITION FEMALE ADAPTER

Spigot x Brass Fipt

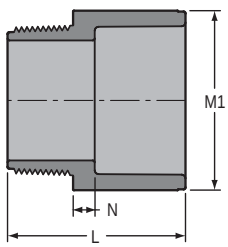


Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
878-010CBR	1	2-9/32	1-23/32	13/32	.23

Not intended to convey or dispense water for human consumption through drinking or cooking

MALE ADAPTER

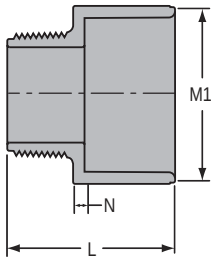
Mipt x Socket



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
836-005C	1/2	1-23/32	1-5/32	3/16	.05
836-007C	3/4	1-27/32	1-7/16	7/32	.06
836-010C	1	2-5/32	1-23/32	7/32	.10
836-012C	1-1/4	2-1/4	2-1/8	1/32	.16
836-015C	1-1/2	2-9/16	2-13/32	9/32	.19
836-020C	2	2-7/8	2-7/8	5/16	.31
836-025C	2-1/2	3-21/32	3-17/32	11/32	.54
836-030C	3	3-7/8	4-1/4	3/8	.78
836-040C	4	4-13/32	5-5/16	13/32	1.18
836-050CF	5	6	6-5/16	1-5/8	2.22
836-060C	6	5-1/2	7-9/16	19/32	3.04
836-080CF	8	8-3/16	9-5/8	2-3/16	5.95
836-100CF	10	10-3/8	11-15/16	3-3/16	10.95
836-120CF	12	11-1/8	14-1/8	2-3/4	19.99

REDUCING MALE ADAPTER

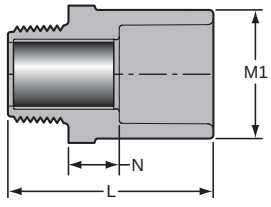
Mipt x Socket



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
836-102C	3/4x1	2-9/32	1-3/4	17/32	.10
836-131C	1x3/4	2-1/16	1-13/32	1/4	.07

REINFORCED MALE ADAPTER

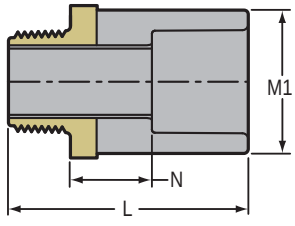
Rmipt x Socket



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
836-005CR	1/2	2-3/32	1-5/32	9/16	.06
836-007CR	3/4	2-1/4	1-3/8	9/16	.09
836-010CR	1	2-21/32	1-23/32	11/16	.15

TRANSITION MALE ADAPTER

Brass Mipt x Socket

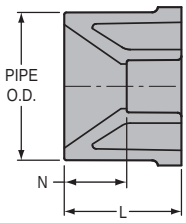


Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
836-005CBR	1/2	2-13/32	1-9/32	27/32	.20
836-007CBR	3/4	2-17/32	1-13/32	13/16	.26
836-010CBR	1	2-15/16	1-23/32	29/32	.43
836-012CBR	1-1/4	3-1/8	2-3/32	31/32	.66
836-015CBR	1-1/2	3-9/32	2-11/32	1	.80
836-020CBR	2	3-7/16	2-27/32	31/32	1.01

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

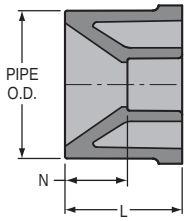
REDUCER BUSHING
Flush Style
Spigot x Socket



Part Number	Size	L	N	Approx. Wt. (Lbs.)
837-052C	3/8x1/4	31/32	5/16	.01
837-072C	1/2x1/4	1-3/32	13/32	.02
837-073C	1/2x3/8	1-1/8	11/32	.02
837-101C	3/4x1/2	1-7/32	11/32	.03
837-129C[1]	1x3/8	1-5/8	27/32	.10
837-130C	1x1/2	1-11/32	11/32	.07
837-131C	1x3/4	1-11/32	5/16	.04
837-166C	1-1/4x1/2	1-1/2	5/8	.12
837-167C	1-1/4x3/4	1-1/2	1/2	.10
837-168C	1-1/4x1	1-19/32	15/32	.09
837-209C	1-1/2x1/2	1-23/32	13/16	.15
837-210C	1-1/2x3/4	1-5/8	5/8	.16
837-211C	1-1/2x1	1-9/16	13/32	.13
837-212C	1-1/2x1-1/4	1-9/16	9/32	.07
837-247C	2x1/2	1-29/32	1	.30
837-248C	2x3/4	1-29/32	21/32	.23
837-249C	2x1	1-25/32	5/8	.25
837-250C	2x1-1/4	1-11/16	7/16	.23
837-251C	2x1-1/2	1-3/4	11/32	.16
837-289C	2-1/2x1	2-1/32	29/32	.39
837-290C	2-1/2x1-1/4	2-5/32	13/32	.41
837-291C	2-1/2x1-1/2	2-5/32	3/4	.40
837-292C	2-1/2x2	2-1/16	17/32	.30
837-334C[1]	3x3/4	2-9/16	1-17/32	.74
837-335C	3x1	2-9/32	1-1/8	.70
837-336C	3x1-1/4	2-1/4	1	.70
837-337C	3x1-1/2	2-9/32	7/8	.67
837-338C	3x2	2-7/32	23/32	.64
837-339C	3x2-1/2	2-5/16	1/4	.43
837-416C[1]	4x3/4	2-27/32	1-27/32	1.37
837-418C[1]	4x1-1/4	3-9/16	1-11/16	1.38
837-420C	4x2	2-21/32	1-1/8	1.13

[1] Outlet sized with bushing

REDUCER BUSHING (continued)
Flush Style
Spigot x Socket



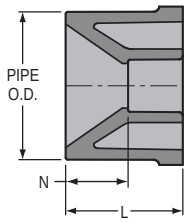
Part Number	Size	L	N	Approx. Wt. (Lbs.)
837-422C	4x3	2-9/16	11/16	.86
837-490C	5x4	2-31/32	23/32	---
837-490CF	5x4	3	3/4	1.50
837-525C[1]	6x1	3-31/32	2-13/16	3.28
837-527C[1]	6x1-1/2	3-3/4	2-11/32	3.02
837-528C	6x2	3-17/32	2-1/32	3.00
837-529C[1]	6x2-1/2	3-29/32	2-5/32	3.45
837-530C	6x3	3-17/32	2-1/8	3.05
837-532C	6x4	3-9/16	1-1/4	2.95
837-533CF	6x5	3	3/8	1.94
837-578C[1]	8x2	4-15/16	3-3/8	8.99
837-580C[1]	8x3	5-1/8	3-1/4	8.81
837-582C	8x4	4-1/2	2-1/4	9.01
837-585C	8x6	4-3/8	1-3/8	5.15
837-624C[1]	10x4	6	3-3/4	11.36
837-626C	10x6	5-5/16	2-5/16	9.92
837-628C	10x8	5-11/32	1-5/16	9.04
837-666CF	12x6	6-7/16	3-3/8	19.45
837-668C	12x8	6-7/8	2-7/16	10.82
837-670CF	12x10	6-11/32	19/32	11.78
837-696CF	14x6	7-3/4	4-3/4	37.74
837-698CF	14x8	7-1/2	3-7/16	32.02
837-700CF	14x10	7	2	22.64
837-702CF	14x12	7	1	9.40
837-756CF	16x6	8-3/4	5-3/4	67.03
837-758CF	16x8	8-1/2	4-7/16	61.33
837-760CF	16x10	8	3	44.88
837-762CF	16x12	8	2	27.95
837-764CF	16x14	8	1	20.00
837-788CF	18x8	9-1/2	5-7/16	---
837-790CF	18x10	9	4	97.24

[1] Outlet sized with bushing

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

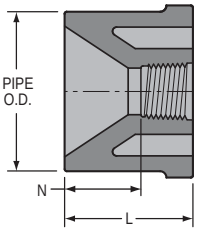
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

REDUCER BUSHING (continued)
Flush Style
Spigot x Socket



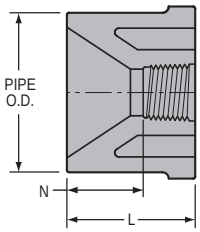
Part Number	Size	L	N	Approx. Wt. (Lbs.)
837-792CF	18x12	9	3	84.92
837-794CF	18x14	9	2	56.27
837-796CF	18x16	9	1	34.00

REDUCER BUSHING
Flush Style
Spigot x Fipt



Part Number	Size	L	N	Approx. Wt. (Lbs.)
838-052C	3/8x1/4	31/32	3/8	.01
838-071C	1/2x1/8	1	9/16	.02
838-072C	1/2x1/4	1	7/8	.02
838-073C	1/2x3/8	1-3/32	17/32	.02
838-098C	3/4x1/4	1-7/32	5/8	.04
838-099C	3/4x3/8	1-1/4	21/32	.04
838-101C	3/4x1/2	1-7/32	15/32	.03
838-129C	1x3/8	1-13/32	19/32	.07
838-130C	1x1/2	1-5/32	21/32	.06
838-131C	1x3/4	1-3/8	21/32	.06
838-166C	1-1/4x1/2	1-17/32	3/4	12
838-167C	1-1/4x3/4	1-7/16	23/32	.10
838-168C	1-1/4x1	1-17/32	5/8	.09

REDUCER BUSHING (continued)
Flush Style
Spigot x Fipt



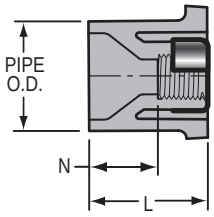
Part Number	Size	L	N	Approx. Wt. (Lbs.)
838-207C	1-1/2x1/4	1-9/16	1-3/16	.14
838-209C	1-1/2x1/2	1-11/16	31/32	.17
838-210C	1-1/2x3/4	1-9/16	27/32	.18
838-211C	1-1/2x1	1-23/32	13/16	.16
838-212C	1-1/2x1-1/4	1-1/2	9/16	.10
838-247C	2x1/2	1-29/32	1-5/32	.27
838-248C	2x3/4	1-7/8	1-5/32	.27
838-249C	2x1	1-29/32	1	.27
838-250C	2x1-1/4	1-19/32	21/32	.25
838-251C	2x1-1/2	1-9/16	5/8	.20
838-287C	2-1/2x1/2	2-3/8	1-21/32	.46
838-288C	2-1/2x3/4	2-7/16	1-5/8	.48
838-289C	2-1/2x1	2-5/32	1-1/4	.48
838-290C	2-1/2x1-1/4	2-13/32	1-3/8	.45
838-291C	2-1/2x1-1/2	2-3/8	1-13/32	.50
838-292C	2-1/2x2	2-1/16	1-1/16	.33
838-334C	3x3/4	2-9/32	1-1/2	.63
838-335C	3x1	2-9/32	1-11/32	.63
838-336C	3x1-1/4	2-1/4	1-3/8	.61
838-337C	3x1-1/2	2-1/4	1-5/8	.62
838-338C	3x2	2-3/16	1-7/32	.58
838-339C	3x2-1/2	2-3/8	3/4	.50
838-420C	4x2	2-11/16	1-21/32	1.20
838-421C	4x2-1/2	2-21/32	1-1/16	1.15
838-422C	4x3	2-5/8	1	.85
838-528C	6x2	3-17/32	2-1/2	3.04
838-530C	6x3	3-17/32	2-1/8	3.14
838-532C	6x4	3-17/32	2-1/32	2.68

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

SPECIAL REINFORCED REDUCER BUSHING
Flush Style

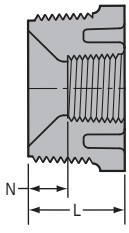
Spigot x SR Fipt



Part Number	Size	L	N	Approx. Wt. (Lbs.)
838-128CSR	1x1/4	1-13/32	25/32	.08
838-207CSR	1-1/2x1/4	1-9/16	1	.14
838-209CSR	1-1/2x1/2	1-23/32	31/32	.18
838-210CSR	1-1/2x3/4	1-9/16	13/16	.15
838-247CSR	2x1/2	1-29/32	1-5/32	.25
838-248CSR	2x3/4	1-29/32	1-5/32	.28
838-249CSR	2x1	1-7/8	31/32	.27
838-334CSR	3x3/4	2-9/32	1-17/32	.63
838-335CSR	3x1	2-9/32	1-11/32	.63
838-336CSR	3x1-1/4	2-1/4	1-5/16	.63
838-337CSR	3x1-1/2	2-1/4	1-3/8	.64
838-528CSR	6x2	3-1/2	2-9/16	2.96
838-530CSR	6x3	3-17/32	2-1/8	3.07
838-532CSR	6x4	3-1/2	1-15/16	2.62

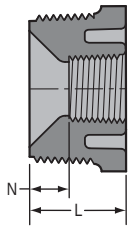
REDUCER T.T. BUSHING
Flush Style

Mipt x Fipt



Part Number	Size	L	N	Approx. Wt. (Lbs.)
839-041C	1/4x1/8	23/32	11/32	.01
839-052C	3/8x1/4	13/16	1/8	.01

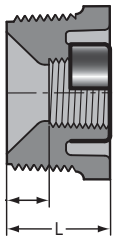
REDUCER T.T. BUSHING (continued)
Flush Style
Mipt x Fipt



Part Number	Size	L	N	Approx. Wt. (Lbs.)
839-072C	1/2x1/4	29/32	9/32	.02
839-073C	1/2x3/8	15/16	11/32	.01
839-098C	3/4x1/4	1-1/32	7/16	.04
839-099C	3/4x3/8	1-1/32	7/16	.03
839-101C	3/4x1/2	15/16	3/16	.02
839-128C	1x1/4	1-1/8	17/32	.06
839-129C	1x3/8	1-7/32	5/8	.06
839-130C	1x1/2	1-1/16	5/16	.06
839-131C	1x3/4	1-1/8	13/32	.04
839-166C	1-1/4x1/2	1-5/16	9/16	.11
839-167C	1-1/4x3/4	1-9/32	9/16	.09
839-168C	1-1/4x1	1-9/32	1-1/32	.06
839-209C	1-1/2x1/2	1-11/32	19/32	.13
839-210C	1-1/2x3/4	1-11/32	19/32	.13
839-211C	1-1/2x1	1-11/32	13/32	.11
839-212C	1-1/2x1-1/4	1-11/32	13/32	.07
839-247C	2x1/2	1-3/8	21/32	.18
839-248C	2x3/4	1-3/8	5/8	.18
839-249C	2x1	1-3/8	15/32	.19
839-250C	2x1-1/4	1-3/8	7/16	.17
839-251C	2x1-1/2	1-3/8	13/32	.13
839-292C	2-1/2x2	1-29/32	7/8	.23
839-337C	3x1-1/2	1-15/16	29/32	.52
839-338C	3x2	1-15/16	15/16	.47
839-339C	3x2-1/2	1-15/16	5/8	.39
839-420C	4x2	2-1/8	1-1/8	.87
839-422C	4x3	2-1/8	1/2	.74
839-532C	6x4	3-17/32	1-13/16	2.78

SPECIAL REINFORCED REDUCER T.T. BUSHING

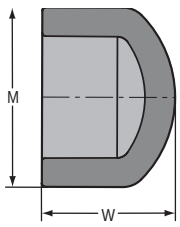
Mipt x SR Fipt



Part Number	Size	L	N	Approx. Wt. (Lbs.)
839-209CSR	1-1/2x1/2	1-11/32	19/32	.13
839-210CSR	1-1/2x3/4	1-11/32	19/32	.13
839-247CSR	2x1/2	1-3/8	21/32	.19
839-248CSR	2x3/4	1-3/8	5/8	.19
839-249CSR	2x1	1-3/8	15/32	.20
839-420CSR	4x2	2-1/8	1-1/8	.91

CAP

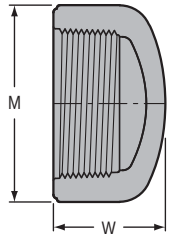
Socket



Part Number	Size	M	W	Approx. Wt. (Lbs.)
847-002C	1/4	13/16	15/16	.01
847-003C	3/8	31/32	1-1/8	.02
847-005C	1/2	1-3/16	1-7/32	.03
847-007C	3/4	1-3/8	1-13/32	.05
847-010C	1	1-23/32	1-5/8	.08
847-012C	1-1/4	2-3/32	1-27/32	.13
847-015C	1-1/2	2-11/32	2	.17
847-020C	2	2-7/8	2-1/4	.37
847-025C	2-1/2	3-17/32	2-5/8	.50
847-030C	3	4-5/32	3-1/32	.93
847-040C	4	5-1/4	3-19/32	1.17
847-050CF	5	6-1/2	4-7/16	5.28
847-060C	6	7-1/2	4-7/8	3.30
847-080C	8	9-23/32	6-3/8	6.36
847-100CF	10	12-1/4	5-15/16	7.49
847-120CF	12	14-1/4	7-1/8	11.72
847-140CF	14	15-1/2	7-3/8	16.54
847-160CF	16	17-7/8	9	24.52
847-180CF	18	19-15/16	9-1/4	28.88
847-200CF	20	22	14-1/4	52.00
847-240CF	24	26-3/8	17-1/4	89.74

CAP

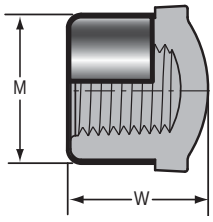
Fipt



Part Number	Size	M	W	Approx. Wt. (Lbs.)
848-002C	1/4	29/32	15/16	.02
848-003C	3/8	31/32	29/32	.02
848-005C	1/2	1-3/16	1-1/16	.05
848-007C	3/4	1-3/32	1-7/32	.05
848-010C	1	1-27/32	1-7/16	.11
848-012C	1-1/4	2-7/32	1-17/32	.15
848-015C	1-1/2	2-17/32	1-5/8	.20
848-020C	2	3-5/32	1-25/32	.30
848-025C	2-1/2	3-5/8	2-7/16	.58
848-030C	3	4-3/8	2-7/16	.78
848-040C	4	5-7/16	3-1/16	1.45
848-060CF	6	7-3/16	4-3/8	6.18
848-080CF	8	9-3/8	4-3/8	10.07
848-100CF	10	11-5/8	5-3/4	7.69

SPECIAL REINFORCED CAP

SR Fipt



Part Number	Size	M	W	Approx. Wt. (Lbs.)
848-002CSR	1/4	27/32	27/32	.02
848-003CSR	3/8	31/32	29/32	.03
848-005CSR	1/2	1-3/16	1-1/8	.05
848-007CSR	3/4	1-3/8	1-3/32	.06
848-030CSR	3	4-9/32	2-7/16	.84

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

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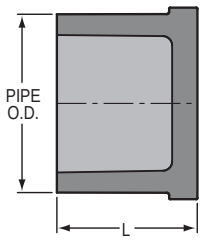
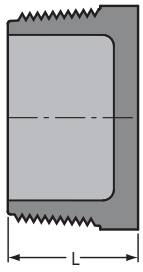
PLUG
Spigot



Part Number	Size	L	Approx. Wt. (Lbs.)
849-005C	1/2	1-1/8	.03
849-007C	3/4	1-1/4	.04
849-010C	1	1-3/8	.07
849-020C	2	1-7/8	.22
849-025CF	2-1/2	5-3/8	1.17
849-030CF	3	5-5/8	1.42
849-040CF	4	6-1/2	3.00
849-060CF	6	9	8.59
849-080CF	8	12	12
849-100CF	10	11-15/16	19.14
849-120CF	12	14-1/8	31.17

PLUG
Mipt

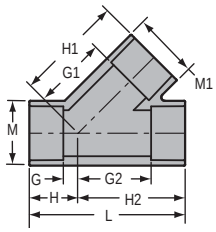


Part Number	Size	L	Approx. Wt. (Lbs.)
850-002C	1/4	23/32	.01
850-003C	3/8	13/16	.01
850-005C	1/2	13/16	.02
850-007C	3/4	7/8	.03
850-010C	1	1-1/4	.06
850-012C	1-1/4	1-9/32	.08
850-015C	1-1/2	1-11/32	.11
850-020C	2	1-3/8	.20
850-025C	2-1/2	1-25/32	.33
850-030C	3	1-7/8	.45
850-040C	4	2-3/32	.79
850-060C	6	2-3/32	1.80
850-080CF	8	8-5/8	12.39
850-100CF	10	8-7/16	13.76

WYE

Socket x Socket x Socket

1/2" - 2" 235 psi @ 73°F
2-1/2" - 6" 150 psi @ 73°F
8" & Up & All Fab 100 psi @ 73°F

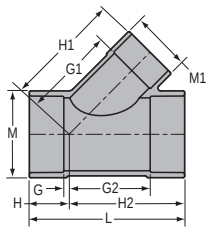


Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)
875-005C	1/2	1/4	1-5/32	1-5/32	1-1/8	2-1/16	2-1/32	3-3/16	1-5/32	1-5/32	.13
875-007C	3/4	5/16	1-3/8	1-3/8	1-5/16	2-3/8	2-3/8	3-23/32	1-3/8	1-3/8	.20
875-010C	1	5/16	1-3/4	1-3/4	1-7/16	2-29/32	2-7/8	4-11/32	1-11/16	1-11/16	.33
875-012C	1-1/4	13/32	2-5/32	2-5/32	1-21/32	3-13/32	3-13/32	5-3/32	2-1/16	2-1/16	.53
875-015C	1-1/2	17/32	2-1/2	2-1/2	1-29/32	3-7/8	3-7/8	5-13/16	2-5/16	2-5/16	.74
875-020C	2	5/8	3-7/32	3-7/32	2-5/32	4-7/8	4-7/8	6-7/8	2-7/8	2-7/8	1.28
875-025C	2-1/2	27/32	3-31/32	3-31/32	2-19/32	5-23/32	5-23/32	8-5/16	3-1/2	3-1/2	2.08
875-030C	3	31/32	4-3/4	4-25/32	2-27/32	6-5/8	6-21/32	9-1/2	4-3/16	4-3/16	3.12
875-040C	4	1-1/4	6-1/32	6-1/32	3-1/2	8-9/32	8-9/32	11-25/32	5-1/4	5-1/4	5.31
875-060C	6	1-5/32	8-25/32	8-3/16	4-3/16	11-25/32	11-3/16	15-3/8	7-9/16	7-9/16	12.67
875-080C	8	1-15/16	11-11/32	11-11/32	5-31/32	15-11/32	15-11/32	21-5/16	9-3/4	9-3/4	26.97
875-080CF	8	5-1/16	15-7/8	13-11/16	9-5/16	20-1/8	17-15/16	27-1/4	9-5/8	9-5/8	44.67
875-100CF	10	6-1/2	18-7/8	17-1/4	11-3/4	24-1/8	22-1/2	34-1/4	11-15/16	11-15/16	75.04
875-120CF	12	7-1/8	21-13/16	19-7/8	13-3/8	28-1/16	26-1/8	39-1/2	14-1/8	14-1/8	123.20
875-140CF	14	9-13/16	23-13/16	23-13/16	16-13/16	30-13/16	30-13/16	47-5/8	15-1/2	15-1/2	149.48
875-160CF	16	10-1/8	26-1/8	26-1/8	18-1/8	34-1/8	34-1/8	52-1/4	17-11/16	17-11/16	211.73
875-180CF	18	10	29-3/8	28	19	38-3/8	37	56	19-7/8	19-7/8	292.04

REDUCING WYE

Socket x Socket x Socket

1/2" - 2-1/2" 235 psi @ 73°F
3" - 6" 150 psi @ 73°F
8" & Up & All Fab 100 psi @ 73°F



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)
875-167C[1]	1-1/4x1-1/4x3/4	3/8	2-3/4	2-1/4	1-5/8	3-3/4	3-1/2	5-1/8	2-1/16	2-1/16	.65
875-168C[1]	1-1/4x1-1/4x1	3/8	2-5/8	2-1/4	1-5/8	3-3/4	3-1/2	5-1/8	2-1/16	2-1/16	.62
875-210C[1]	1-1/2x1-1/2x3/4	1/2	3-1/2	2-9/16	1-7/8	4-1/2	3-15/16	5-13/16	2-11/32	2-11/32	.94
875-211C[1]	1-1/2x1-1/2x1	1/2	3	2-9/16	1-7/8	4-5/32	3-15/16	5-13/16	2-11/32	2-11/32	.89
875-212C[1]	1-1/2x1-1/2x1-1/4	1/2	3-1/4	2-9/16	1-7/8	4-1/2	3-15/16	5-13/16	2-11/32	2-11/32	.82
875-248C[1]	2x2x3/4	5/8	4-5/32	3-7/32	2-5/32	5-5/32	4-7/8	6-7/8	2-7/8	2-7/8	1.56

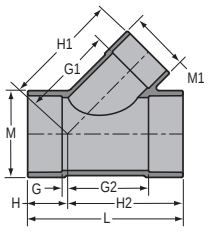
[1] Outlet sized with bushing

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

REDUCING WYE (continued)

Socket x Socket x Socket

1/2" - 2-1/2" 235 psi @ 73°F
3" - 6" 150 psi @ 73°F
8" & Up & All Fab 100 psi @ 73°F

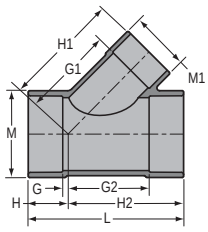


Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)
875-250C[1]	2x2x1-1/4	5/8	3-5/16	3-3/8	2-5/32	5	4-3/4	6-7/8	2-7/8	2-7/8	1.52
875-251C[1]	2x2x1-1/2	1/2	3-23/32	3-11/32	2-1/32	5-3/32	4-7/8	6-7/8	2-7/8	2-7/8	1.44
875-335C[1]	3x3x1	11/16	5-7/8	4-7/32	2-9/16	6-15/16	6-1/8	8-23/32	4-3/16	4-3/16	3.57
875-336C[1]	3x3x1-1/4	7/8	5-3/4	4-1/8	2-3/4	7	6	8-3/4	4-3/16	4-3/16	3.34
875-337C[1]	3x3x1-1/2	2-5/8	5-1/2	4-1/4	2-5/8	6-7/8	6-1/8	8-3/4	4-3/16	4-3/16	3.21
875-338C[1]	3x3x2	1	5-11/32	4-3/4	2-7/8	6-31/32	6-5/8	9-1/2	4-3/16	4-3/16	3.21
875-339C[1]	3x3x2-1/2	7/8	4-1/8	4-21/32	2-3/4	6-3/4	6	8-3/4	4-3/16	4-3/16	3.11
875-420C	4x4x2	–7/8	5-5/32	4-11/16	1-3/8	6-11/16	6-15/16	8-5/16	5-9/32	2-29/32	2.92
875-422C	4x4x3	1/2	5-7/16	5-7/32	2-3/4	7-5/16	7-15/32	10-7/32	5-1/4	4-3/16	4.18
875-528C[1]	6x6x2	1/16	8-13/16	6-9/16	3-1/16	10-5/16	9-9/16	12-5/8	7-9/16	5-7/16	10.10
875-528CF	6x6x2	1-15/16	9-3/16	8-9/16	5-3/16	10-15/16	11-13/16	17	7-1/2	2-13/16	10.07
875-530C[1]	6x6x3	-1/16	8-3/8	6-11/16	3	10-1/4	9-11/16	12-5/8	7-9/16	5-3/8	9.82
875-530CF	6x6x3	2-15/16	10-5/16	9-9/16	6-3/16	12-9/16	12-13/16	19	7-1/2	4-1/8	12.14
875-532C	6x6x4	31/32	6-9/16	5-11/16	3-15/16	8-27/32	8-23/32	12-21/32	7-9/16	5-7/16	9.22
875-578C[1]	8x8x2	2	14-15/16	11-1/4	6	16-9/16	16-7/16	21-1/4	9-11/16	9-11/16	35.44
875-578CF	8x8x2	7/8	10-1/2	9-1/2	5-1/8	12-1/4	13-3/4	18-7/8	9-5/8	2-13/16	19.12
875-579CF	8x8x2-1/2	1-7/16	10-15/16	10-1/16	5-11/16	12-15/16	14-5/16	20	9-5/8	3-7/16	22.00
875-580CF	8x8x3	1-15/16	11-5/8	10-9/16	6-3/16	13-7/8	14-13/16	21	9-5/8	4-1/8	18.87
875-582C	8x8x4	11/16	9-1/8	8-1/4	3-5/16	11-3/8	12-1/4	15-9/16	9-3/4	5-1/4	15.32
875-582CF	8x8x4	2-15/16	11-7/8	11-9/16	7-3/16	14-1/8	15-13/16	23	9-5/8	5-3/16	27.78
875-585C[1]	8x8x6	2	12-15/16	11-1/4	6	15-15/16	15-1/4	21-1/4	9-11/16	9-11/16	32.29
875-585CF	8x8x6	4-15/16	13-15/16	13-9/16	9-3/16	17-3/16	17-13/16	27	9-5/8	7-1/2	34.75
875-621CF	10x10x2	1/4	11-7/8	10-1/2	5	13-5/8	15-3/4	20-3/4	11-15/16	2-13/16	26.48
875-623CF	10x10x3	3/4	13	11-1/2	6	15-1/4	16-3/4	22-3/4	11-15/16	4-1/8	29.62
875-624CF	10x10x4	1-3/4	13-1/4	12-1/2	7	15-1/2	17-3/4	24-3/4	11-15/16	5-3/16	39.21
875-626C	10x10x6	-3/16	12	11	4-13/16	15	16	20-25/32	12-1/16	7-21/32	29.85
875-626CF	10x10x6	3-3/4	15-5/16	14-1/2	9	18-9/16	19-3/4	28-3/4	11-15/16	7-1/2	29.74
875-628C	10x10x8	1-7/32	12-3/4	12-1/4	6-7/32	16-25/32	17-9/32	23-1/2	12-1/32	9-23/32	38.99
875-628CF	10x10x8	5-1/4	17-1/4	16	10-1/2	21-1/2	21-1/4	31-3/4	11-15/16	9-5/8	56.37
875-661CF	12x12x2	1-5/16	13-3/16	11-7/16	4-15/16	14-15/16	17-11/16	22-5/8	14-1/8	2-13/16	40.76
875-663CF	12x12x3	1/8	14-5/16	12-7/8	6-3/8	16-9/16	19-1/8	25-1/2	14-1/8	4-1/8	44.74
875-664CF	12x12x4	5/8	14-9/16	13-3/8	6-7/8	16-13/16	19-5/8	26-1/2	14-1/8	5-3/16	49.06
875-666CF	12x12x6	2-5/8	16-5/8	15-3/8	8-7/8	19-7/8	21-5/8	30-1/2	14-1/8	7-1/2	58.24
875-668CF	12x12x8	4-1/4	18-9/16	17	10-1/2	22-13/16	23-1/4	33-3/4	14-1/8	9-5/8	68.98
875-670CF	12x12x10	5-3/4	20-3/16	18-1/2	12	25-7/16	24-3/4	36-3/4	14-1/8	11-15/16	81.76
875-694CF	14x14x4	1-1/4	15-5/16	15-1/4	8-1/4	17-9/16	22-1/4	30-1/2	15-1/2	5-3/16	63.95
875-696CF	14x14x6	2	17-3/8	16	9	20-5/8	23	32	15-1/2	7-1/2	83.85

[1] Outlet sized with bushing

REDUCING WYE (continued)

Socket x Socket x Socket



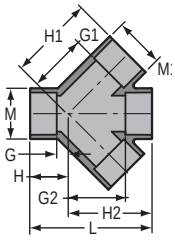
1/2" - 2-1/2" 235 psi @ 73°F
3" - 6" 150 psi @ 73°F
8" & Up & All Fab 100 psi @ 73°F

Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)
875-698CF	14x14x8	4-1/4	19-5/16	18-1/4	11-1/4	23-9/16	25-1/4	36-1/2	15-1/2	9-5/8	82.78
875-700CF	14x14x10	5-3/4	20-15/16	19-3/4	12-3/4	26-3/16	26-3/4	39-1/2	15-1/2	11-15/16	107.47
875-702CF	14x14x12	7-1/4	22-9/16	21-1/4	14-1/4	28-13/16	28-1/4	42-1/2	15-1/2	14-1/8	115.64
875-754CF	16x16x4	1-1/8	16-5/8	17-1/8	9-1/8	18-7/8	25-1/8	34-1/4	17-11/16	5-3/16	88.48
875-756CF	16x16x6	1-5/8	18-11/16	17-5/8	9-5/8	21-15/16	25-5/8	35-1/4	17-11/16	7-1/2	94.93
875-758CF	16x16x8	3-5/8	20-5/8	19-5/8	11-5/8	24-7/8	27-5/8	39-1/4	17-11/16	9-5/8	108.85
875-760CF	16x16x10	5-1/8	22-1/4	21-1/8	13-1/8	27-1/2	29-1/8	42-1/4	17-11/16	11-15/16	137.97
875-762CF	16x16x12	6-1/2	23-7/8	22-1/2	14-1/2	30-1/8	30-1/2	45	17-11/16	14-1/8	146.49
875-764CF	16x16x14	7-7/8	25-1/8	23-7/8	15-7/8	32-1/8	31-7/8	47-3/4	17-11/16	15-1/2	167.10
875-784CF	18x18x4	0	17-7/8	18	9	20-1/8	27	36	19-7/8	5-3/16	119.05
875-786CF	18x18x6	3/8	20-1/8	18-9/16	9-3/8	23-3/8	27-9/16	36-15/16	19-7/8	7-1/2	131.59
875-788CF	18x18x8	3	21-7/8	21	12	26-1/8	30	42	19-7/8	9-5/8	146.16
875-790CF	18x18x10	4-1/2	23-1/2	22-1/2	13-1/2	28-3/4	31-1/2	45	19-7/8	11-15/16	163.18
875-792CF	18x18x12	6	25-1/8	24	15	31-3/8	33	48	19-7/8	14-1/8	184.28
875-794CF	18x18x14	7	26-3/8	25	16	33-3/8	34	50	19-7/8	15-1/2	211.65
875-796CF	18x18x16	8-1/2	27-3/8	26-1/2	17-1/2	35-3/8	35-1/2	53	19-7/8	17-11/16	243.00
875-822CF	20x20x12	5-5/8	26-7/16	25-5/8	15-5/8	32-11/16	35-5/8	51-1/4	22-1/16	14-1/8	213.90
875-824CF	20x20x14	7-1/8	27-11/16	27-1/8	17-1/8	34-11/16	37-1/8	54-1/4	22-1/16	15-1/2	239.07
875-826CF	20x20x16	8-1/2	28-11/16	28-1/2	18-1/2	36-11/16	38-1/2	57	22-1/16	17-11/16	321.08
875-904CF	24x24x4	3	21-3/4	21	9	24	33	42	26-7/16	5-3/16	251.85

[1] Outlet sized with bushing

DOUBLE WYE

Socket x Socket x Socket x Socket



100 psi @ 73°F

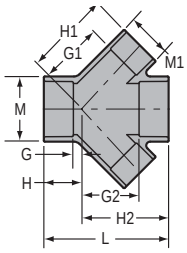
Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)
876-020CF	2	3-7/8	6-1/4	6-1/4	5-7/16	7-13/16	7-13/16	13-3/16	2-7/8	2-7/8	3.01
876-030CF	3	4-3/4	8-1/8	8-1/4	6-5/8	10-3/16	10-3/16	16-13/16	4-3/16	4-3/16	5.84
876-040CF	4	4-11/16	9-3/16	9-3/16	6-15/16	11-7/16	11-7/16	18-3/8	5-3/16	5-3/16	13.33
876-060CF	6	4-15/16	12-5/8	11-9/16	8-3/16	15-7/8	14-13/16	23	7-1/2	7-1/2	28.16
876-080CF	8	5-1/16	15-7/8	13-11/16	9-5/16	20-1/8	17-15/16	27-1/4	9-5/8	9-5/8	55.13
876-100CF	10	6-1/2	18-7/8	17-1/4	11-3/4	24-1/8	22-1/2	34-1/4	11-15/16	11-15/16	94.00
876-120CF	12	7-1/8	21-13/16	19-7/8	13-3/8	28-1/16	26-1/8	39-1/2	14-1/8	14-1/8	149.15

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

REDUCING DOUBLE WYE

Socket x Socket x Socket x Socket



3" - 6" 150 psi @ 73°F
All Fab 100 psi @ 73°F

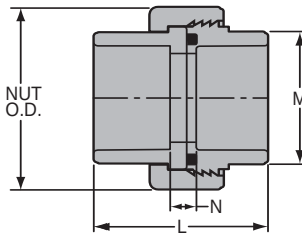
Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	Approx. Wt. (Lbs.)
876-338C	3x2	3/8	4-1/4	4-13/32	2-1/4	5-3/4	5-29/32	8	4-3/16	2-7/8	2.24
876-421CF	4x2-1/2	4-9/16	8-13/16	9-1/16	6-13/16	10-1/2	11-5/16	18-1/8	5-1/4	3-1/2	6.00
876-422CF	4x3	4-11/16	10	9-3/16	6-15/16	11-13/16	11-7/16	18-3/8	5-3/16	5-3/16	14.00
876-528CF	6x2	1-15/16	9-3/16	8-9/16	5-3/16	10-15/16	11-13/16	17	7-1/2	2-13/16	11.45
876-529CF	6x2-1/2	2-7/16	9-5/8	9-1/16	5-11/16	11-5/8	12-5/16	18	7-1/2	3-7/16	14.00
876-530CF	6x3	2-15/16	10-15/16	9-9/16	6-3/16	12-9/16	12-13/16	19	7-1/2	4-1/8	12.14
876-532CF	6x4	3-15/16	10-9/16	10-9/16	7-3/16	12-13/16	13-13/16	21	7-1/2	5-3/16	19.78
876-578CF	8x2	7/8	10-1/2	9-1/2	5-1/8	12-1/4	13-3/4	18-7/8	9-5/8	2-13/16	19.56
876-579CF	8x2-1/2	1-7/16	10-15/16	10-1/16	5-11/16	12-15/16	14-5/16	20	9-5/8	3-7/16	22.00
876-580CF	8x3	1-15/16	11-5/8	10-9/16	6-3/16	13-7/8	14-13/16	21	9-5/8	4-1/8	21.92
876-582CF	8x4	2-15/16	11-7/8	11-9/16	7-3/16	14-1/8	15-13/16	23	9-5/8	5-3/16	24.78
876-585CF	8x6	4-15/16	13-15/16	13-9/16	9-3/16	17-3/16	17-13/16	27	9-5/8	7-1/2	41.48
876-621CF	10x2	1/4	11-7/8	10-1/2	5	13-5/8	15-3/4	20-3/4	11-15/16	2-13/16	26.98
876-622CF	10x2-1/2	1/8	12-5/16	10-7/8	5-3/8	14-5/16	16-1/8	21-1/2	11-15/16	3-7/16	32.27
876-623CF	10x3	3/4	13	11-1/2	6	15-1/4	16-3/4	22-3/4	11-15/16	4-1/8	29.62
876-624CF	10x4	1-3/4	13-1/4	12-1/2	7	15-1/2	17-3/4	24-3/4	11-15/16	5-3/16	34.22
876-626CF	10x6	3-3/4	15-5/16	14-1/2	9	18-9/16	19-3/4	28-3/4	11-15/16	7-1/2	46.55
876-628CF	10x8	5-1/4	17-1/4	16	10-1/2	21-1/2	21-1/4	31-3/4	11-15/16	9-5/8	60.66
876-661CF	12x2	1-5/16	13-3/16	11-7/16	4-15/16	14-15/16	17-11/16	22-5/8	14-1/8	2-13/16	40.76
876-662CF	12x2-1/2	15/16	13-5/8	11-13/16	5-5/16	15-5/8	18-1/16	23-3/8	14-1/8	3-7/16	55.95
876-663CF	12x3	1/8	14-5/16	12-7/8	6-3/8	16-9/16	19-1/8	25-1/2	14-1/8	4-1/8	44.74
876-664CF	12x4	5/8	14-9/16	13-3/8	6-7/8	16-13/16	19-5/8	26-1/2	14-1/8	5-3/16	49.06
876-666CF	12x6	2-5/8	16-5/8	15-3/8	8-7/8	19-7/8	21-5/8	30-1/2	14-1/8	7-1/2	58.24
876-668CF	12x8	4-1/4	18-9/16	17	10-1/2	22-13/16	23-1/4	33-3/4	14-1/8	9-5/8	86.23
876-670CF	12x10	5-3/4	20-3/16	18-1/2	12	25-7/16	24-3/4	36-3/4	14-1/8	11-15/16	100.26

UNION (Old Style)

Socket x Socket

Dimensions Also Applicable to
897-XXX EPDM O-ring Seal Units

235 psi @ 73°F



Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
857-002C	1/4	1-15/16	15/16	5/8	1-21/32	.10
857-003C	3/8	2-5/32	1-1/32	19/32	1-25/32	.11
857-005C	1/2	2-3/32	1-9/32	11/32	1-31/32	.16
857-007C	3/4	2-3/8	1-17/32	11/32	2-1/2	.28
857-010C	1	2-9/16	1-27/32	3/8	2-7/8	.39
857-012C	1-1/4	2-7/8	2-7/32	3/8	3-5/16	.52
857-015C	1-1/2	3-3/32	2-9/16	15/32	3-9/16	.63
857-020C	2	3-5/8	3-1/32	9/16	4-3/16	1.05
857-025C	2-1/2	4-3/8	3-5/8	15/16	4-7/8	1.66
857-030C	3	5-1/16	4-3/8	1-3/16	5-3/4	2.51
857-040C	4	5-7/8	5-13/32	1-3/8	7-1/16	3.98

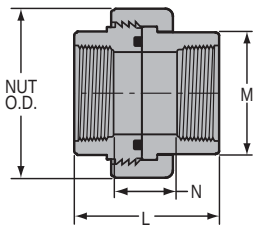
1) For (Socket X Socket) Unions Equipped With EPDM O-ring, Replace The 857 With An 897 Before The Dash.
e.g. Part Number **897-002** = 1/4" PVC, Union, Socket x Socket, With **EPDM** O-rings.

UNION (Old Style)

Fipt x Fipt

Dimensions Also Applicable to
898-XXX EPDM O-ring Seal Units

235 psi @ 73°F



Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
858-002C	1/4	1-15/16	15/16	11/16	1-21/32	.10
858-003C	3/8	2-5/32	1-1/32	15/16	1-25/32	.13
858-005C	1/2	2-3/32	1-9/32	19/32	1-31/32	.17
858-007C	3/4	2-3/8	1-17/32	3/4	2-1/2	.30
858-010C	1	2-9/16	1-27/32	7/16	2-7/8	.41
858-012C	1-1/4	2-7/8	2-7/32	7/8	3-5/16	.61
858-015C	1-1/2	3-3/32	2-9/16	1-5/32	3-9/16	.69
858-020C	2	3-5/8	3-1/32	1-11/16	4-3/16	1.13
858-025C	2-1/2	4-3/8	3-5/8	1-7/8	4-7/8	1.74
858-030C	3	5-1/16	4-3/8	1-13/16	5-3/4	2.70
858-040C	4	5-7/8	5-7/16	2-3/8	7-1/16	4.30

1) For (Fipt X Fipt) Unions Equipped With EPDM O-ring, Replace The 858 With An 898 Before The Dash.
e.g. Part Number **898-002** = 1/4" PVC, Union, Fipt x Fipt, With **EPDM** O-rings.

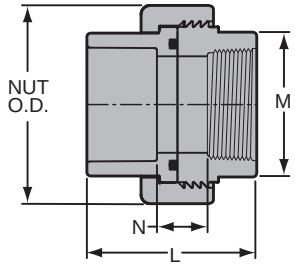
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

UNION (Old Style)

Socket x Fipt

Dimensions Also Applicable to
899-XXX EPDM O-ring Seal Units

235 psi @ 73°F



Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
859-005C	1/2	2-3/32	1-9/32	15/32	1-31/32	.17
859-007C	3/4	2-3/8	1-17/32	9/16	2-1/2	.29
859-010C	1	2-9/16	1-27/32	13/32	2-7/8	.40
859-012C	1-1/4	2-7/8	2-7/32	5/8	3-5/16	.54
859-015C	1-1/2	3-1/8	2-19/32	27/32	3-9/16	.66
859-020C	2	3-5/8	3-1/32	1-1/16	4-3/16	1.10
859-025C	2-1/2	4-3/8	3-5/8	1-13/32	4-7/8	1.66
859-030C	3	5-1/16	4-3/8	1-1/2	5-3/4	2.61
859-040C	4	5-7/8	5-7/16	1-7/8	7-1/16	4.13

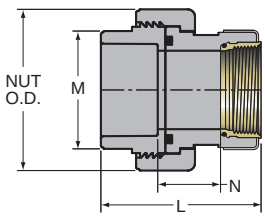
1) For (Socket X Fipt) Unions Equipped With EPDM O-ring, Replace The 859 With An 899 Before The Dash.
e.g. Part Number **899-002** = 1/4" PVC, Union, Socket x Fipt, With **EPDM** O-rings.

TRANSITION UNION

Socket x Brass Fipt Threaded Insert and FKM O-ring Seal

Dimensions Also Applicable to **899**-XXXBR EPDM O-ring Seal Units

235 psi @ 73°F



Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
859-005CBR	1/2	2-1/4	1-9/32	3/4	1-31/32	. 22
859-007CBR	3/4	2-11/16	1-17/32	15/16	2-1/2	.36
859-010CBR	1	2-13/16	1-7/8	1-1/32	2-7/8	.55
859-012CBR	1-1/4	3-9/32	2-7/32	1-1/16	3-5/16	.71
859-015CBR	1-1/2	3-1/2	2-9/16	1-3/32	3-17/32	.92
859-020CBR	2	3-5/8	2-7/8	1-1/4	4-5/16	1.64

Not intended to convey or dispense water for human consumption through drinking or cooking

1) For (Socket X Metal Fipt) Unions Equipped With EPDM O-ring, Replace The 859 With An 899 Before The Dash.
e.g. Part Number **899-010BR** = 1" PVC, Union Socket x Metal Fipt With **EPDM** O-rings.

Schedule 80 CPVC Unions

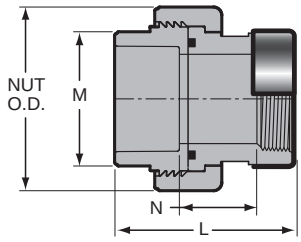
SPECIAL REINFORCED UNION (Old style)

Socket x SR Fipt

Dimensions Also Applicable to

899-XXXSR EPDM O-ring Seal Units

235 psi @ 73°F



Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
859-002CSR	1/4	2-1/16	15/16	25/32	1-21/32	.10
859-003CSR	3/8	2-9/32	1-1/32	29/32	1-25/32	.15
859-005CSR	1/2	2-9/32	1-9/32	21/32	1-31/32	.19
859-007CSR	3/4	2-19/32	1-17/32	25/32	2-1/2	.27
859-010CSR	1	2-15/16	1-27/32	25/32	2-7/8	.42
859-012CSR	1-1/4	3-5/32	2-7/32	29/32	3-5/16	.59
859-015CSR	1-1/2	3-13/32	2-9/16	1-1/32	3-9/16	.71
859-020CSR	2	4-3/32	3-1/32	1-19/32	4-3/16	1.21
859-030CSR	3	5-1/4	4-3/8	1-11/16	5-3/4	2.60
859-040CSR	4	5-7/8	5-13/32	2-1/8	7-3/32	4.21

1) For (Socket X SR Fipt) Unions Equipped With EPDM O-ring, Replace The 859 With An 899 Before The Dash.
e.g. Part Number **899-002SR** = 1/4" PVC, Union, Socket x SR Fipt, With **EPDM** O-rings.

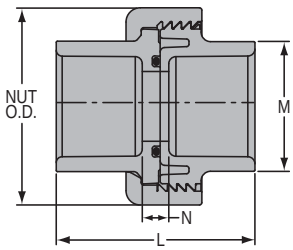
UNION 2000

Socket x Socket

Dimensions Also Applicable to

8097-XXX EPDM O-ring Seal Units

1/2" - 4" 235 psi @ 73°F
6" 150 psi @ 73°F



Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
8057-005C	1/2	2-3/32	1-3/16	11/32	1-7/8	.08
8057-007C	3/4	2-3/8	1-13/32	3/8	2-9/32	.19
8057-010C	1	2-11/16	1-23/32	7/16	2-9/16	.17
8057-012C	1-1/4	2-15/16	2-3/32	7/16	3-3/32	.40
8057-015C	1-1/2	3-1/4	2-3/8	1/2	3-1/2	.51
8057-020C	2	3-17/32	2-7/8	17/32	4-9/32	.89
8057-025C	2-1/2	4-7/32	3-1/2	25/32	6-5/32	2.25
8057-030C	3	4-1/4	4-3/16	1/2	6-5/32	2.50
8057-040C	4	5-1/8	5-1/4	5/8	7-3/4	3.97
8057-060C	6	6-27/32	7-1/2	25/32	11-5/8	10.88

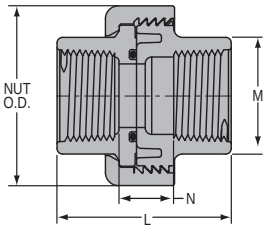
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

UNION 2000

Fipt x Fipt

Dimensions Also Applicable to
8098-XXX EPDM O-ring Seal Units

1/2" - 4" 235 psi @ 73°F
6" 150 psi @ 73°F



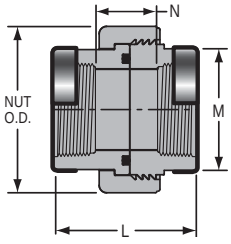
Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
8058-005C	1/2	1-29/32	1-3/16	17/32	1-7/8	.08
8058-007C	3/4	2-1/16	1-3/8	9/16	2-9/32	.18
8058-010C	1	2-17/32	1-11/16	25/32	2-9/16	.11
8058-012C	1-1/4	2-21/32	2-1/32	3/4	3-1/8	.40
8058-015C	1-1/2	2-25/32	2-3/8	29/32	3-1/2	.50
8058-020C	2	3-1/8	3	1-3/16	4-7/32	.94
8058-025C	2-1/2	4-1/32	3-9/16	1-15/32	6-5/32	1.74
8058-030C	3	4-5/32	4-9/32	1-13/32	6-5/32	2.50
8058-040C	4	4-21/32	5-1/4	1-21/32	7-3/4	4.03
8058-060C	6	6-1/8	7-21/32	2-13/16	11-19/32	11.96

SPECIAL REINFORCED UNION 2000

SR Fipt x SR Fipt

Dimensions Also Applicable to
8098-XXXSR EPDM O-ring Seal Units

1/2" - 4" 235 psi @ 73°F
6" 150 psi @ 73°F



Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
8058-005CSR	1/2	2	1-3/16	5/8	1-7/8	.14
8058-007CSR	3/4	2-5/32	1-3/8	21/32	2-9/32	.20
8058-010CSR	1	2-9/16	1-11/16	13/16	2-9/16	.24
8058-012CSR	1-1/4	2-23/32	2-1/32	13/16	3-1/8	.41
8058-015CSR	1-1/2	2-27/32	2-13/32	29/32	3-17/32	.56
8058-020CSR	2	3-7/32	3-1/32	1-3/16	4-7/32	1.02
8058-025CSR	2-1/2	4-3/32	3-9/16	1-15/32	6-5/32	1.73
8058-030CSR	3	4-3/16	4-9/32	1-3/8	6-5/32	2.50
8058-040CSR	4	4-11/16	5-1/4	1-11/16	7-3/4	4.17
8058-060CSR	6	6-3/16	7-11/16	2-13/16	11-5/8	11.54

Schedule 80 CPVC Unions

UNION 2000

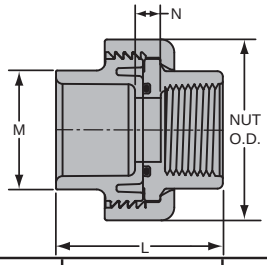
Socket x Fipt

Dimensions Also Applicable to

8099-XXX EPDM O-ring Seal Units

1/2" - 4" 235 psi @ 73°F

6" 150 psi @ 73°F



Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
8059-005C	1/2	1-7/8	1-3/16	5/16	1-7/8	.08
8059-007C	3/4	2-1/16	1-13/32	5/16	2-9/32	.19
8059-010C	1	2-13/32	1-23/32	13/32	2-9/16	.09
8059-012C	1-1/4	2-19/32	2-3/32	13/32	3-1/8	.37
8059-015C	1-1/2	2-13/16	2-3/8	1/2	3-1/2	.50
8059-020C	2	2-31/32	2-7/8	13/32	4-9/32	.96
8059-025C	2-1/2	3-15/32	3-1/2	13/32	6-3/16	1.66
8059-030C	3	3-25/32	4-3/16	17/32	6-5/32	2.32
8059-040C	4	4-3/8	5-1/4	5/8	7-3/4	3.83
8059-060C	6	6-27/32	7-1/2	1-1/2	11-5/8	11.80

UNION 2000

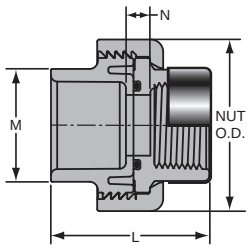
Socket x SR Fipt

Dimensions Also Applicable to

8099-XXXSR EPDM O-ring Seal Units

1/2" - 4" 235 psi @ 73°F

6" 150 psi @ 73°F



Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
8059-005CSR	1/2	1-29/32	1-3/16	11/32	1-7/8	.09
8059-007CSR	3/4	2-5/32	1-13/32	13/32	2-9/32	.20
8059-010CSR	1	2-7/16	1-23/32	7/16	2-9/16	.20
8059-012CSR	1-1/4	2-5/8	2-3/32	7/16	3-1/8	.39
8059-015CSR	1-1/2	2-13/16	2-3/8	1/2	3-1/2	.56
8059-020CSR	2	3	2-7/8	7/16	4-7/32	1.04
8059-025CSR	2-1/2	3-27/32	3-15/32	27/32	6-3/16	2.29
8059-030CSR	3	3-3/4	4-3/16	1/2	6-9/32	2.38
8059-040CSR	4	4-3/8	5-1/4	5/8	7-3/4	2.95
8059-060CSR	6	6-27/32	7-1/2	2-5/32	11-5/8	11.95

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

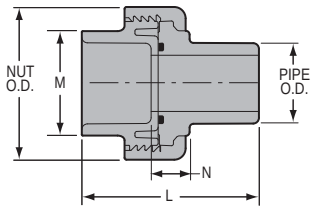
Schedule 80 CPVC Unions

UNION 2000

Socket x Spigot

Dimensions Also Applicable to

8096-XXX EPDM O-ring Seal Units



1/2" - 4" 235 psi @ 73°F

6" 150 psi @ 73°F

Part Number w/FKM O-ring Seal	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
8056-005C	1/2	2-5/16	1-3/16	9/16	1-7/8	.13
8056-007C	3/4	2-5/8	1-3/8	21/32	2-9/32	.21
8056-010C	1	2-15/16	1-23/32	5/8	2-9/16	.30
8056-012C	1-1/4	3-7/32	2-3/32	11/16	3-3/16	.41
8056-015C	1-1/2	3-1/2	2-3/8	11/16	3-9/16	.54
8056-020C	2	3-3/4	2-7/8	3/4	4-5/16	.85
8056-025C	2-1/2	4-21/32	3-15/32	1-5/32	6-5/32	2.30
8056-030C	3	4-25/32	4-5/32	7/32	6-5/32	2.40
8056-040C	4	5-5/8	5-1/4	1-1/8	7-23/32	4.04
8056-060C	6	7-3/4	7-9/16	1-1/2	11-11/16	12.68

CLAMP-ON SADDLES
Simple Two-Piece Design Engineered for Reliability

Spears® CPVC Clamp-On Saddles allow quick, easy and reliable addition of branch lines to existing piping system lines. These versatile saddle units can be used in either temporary or permanent installations on all types of pipe with IPS (Iron Pipe size) outside diameter, such as PVC, CPVC, Polyethylene, Polypropylene and Steel.

Excellent Metal-to-Plastic System Transition
Easily installs on metal pipe as a transition to plastic system.

Tee or Cross Configurations
Available in 2" - 12" IPS pipe saddle with socket outlets in sizes 1/2" - 6" and Special Reinforced (SR) threaded outlets in sizes 1/2" - 6", single Tee or double Cross configurations.

Patented SR Design Female Threads
Patented Special Reinforced (SR) design on female thread outlets for superior strength.

O-ring Options
Choice of high grade Buna-N or EPDM O-rings for Schedule 40 and EPDM or FKM O-rings for Schedule 80, for application specific selection for optimum chemical resistance.

Multi-Bolt Design, Choice of Hardware
Positive attachment eliminates splitting problems associated with plastic wedge fasteners and outperforms 2-Bolt clamp saddle designs. Choose zinc plated or stainless steel nut, bolt and washer hardware.

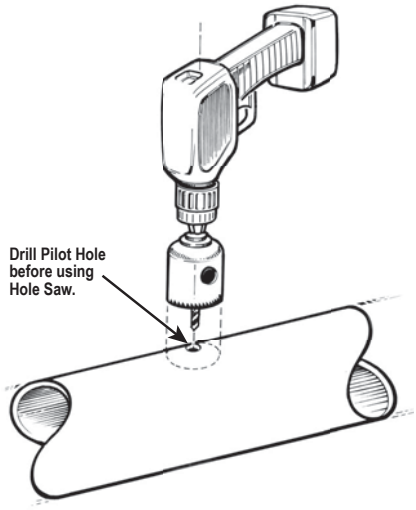
Excellent Pressure Capabilities
Maximum internal pressure rating of 235 psi through 4", 200 psi for 6", and 150 psi for 8" - 12" at 73°F.

Sample Engineering Specification
All thermoplastic saddles shall be clamp-on type with O-ring seal constructed from CPVC Type IV cell classification 23447. All O-rings shall be Buna-N, EPDM or FKM. All saddles shall be piloted at O-ring area for positive positioning in pipe. All bolt clamping hardware shall be zinc plated steel or stainless steel. All threaded saddle outlets shall be Special Reinforced (SR) design. Saddles shall be pressure rated at 235 psi for use on pipe sizes through 4" nominal IPS diameters, 200 psi for use on 6" pipe, and 150 psi for use on 8" - 12" pipe, maximum internal pressure for water at 73°F, as manufactured by Spears® Manufacturing Company.

Schedule 80 CPVC Saddles

Clamp-On Saddle Installation Instructions

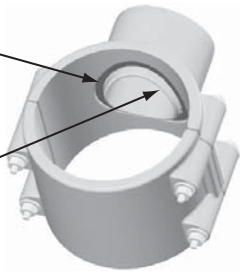
1. Using a standard industrial grade hole-saw, cut specified hole in desired position on pipe according to recommended hole saw size engraved on the saddle. **Note:** Care must be taken to deburr hole and remove all residue from hole area to assure tight fit and avoid leakage.
2. Fully seat O-ring in groove on underside of saddle outlet component. Position over hole and fully seat saddle onto pipe. Note: Certain saddle outlets are piloted. Be sure pilot lip fully engages with hole in pipe.
3. Place strap component opposite outlet and secure with bolts (4), nuts (4) and washers (8). Important: Washers MUST be placed under each bolt head (1) and under each nut (1) to avoid damage to saddle.
4. Tighten bolts to specified torque.

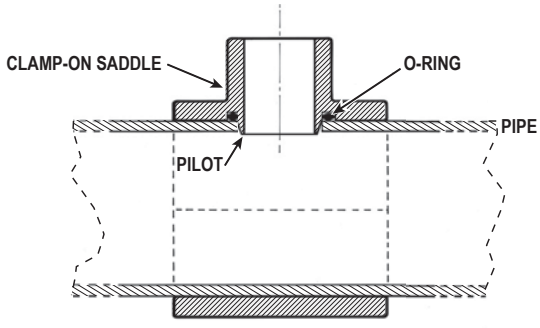


Saddle Size	2	3	4	6 & up
Recommended Bolt-Torque -ft/lb	8	8	8	10

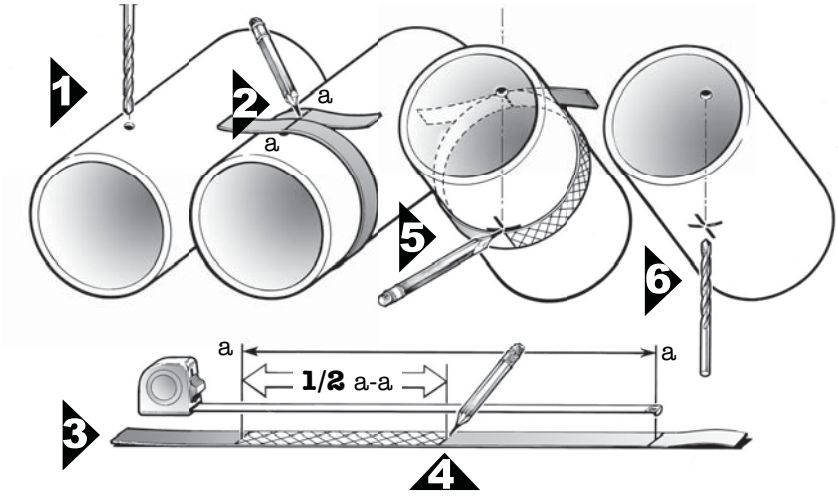
O-ring seal provides positive, trouble-free sealing to pipe.

Special pilot engages with hole in pipe to prevent saddle dislocation.





For Double Outlet Saddle Installation —Determine second outlet hole position as shown

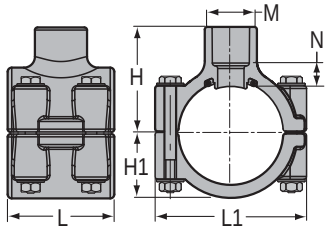


Schedule 80 CPVC Saddles

CLAMP ON SADDLE x SOCKET
SINGLE OUTLET

Dimensions Also Applicable to
866**S**-XXX, 866**V**-XXX & 866**SV**-XXX

2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



Part Number	Size	H	H1	L	L1	M	N	Hole Size	Bolt Torque ft./lbs.	Approx. Wt. (Lbs.)
866-247C	2x1/2	2-3/8	1-1/2	2-7/16	3-7/16	1-3/16	5/16	3/4	8	.59
866-248C	2x3/4	2-1/2	1-1/2	2-7/16	3-7/16	1-3/8	5/16	7/8	8	.60
866-249C	2x1	2-5/8	1-1/2	2-7/16	3-7/16	1-11/16	5/16	1-1/8	8	.62
866-250C	2x1-1/4	2-3/4	1-1/2	2-7/16	3-7/16	2-1/16	5/16	1-1/2	8	.64
866-251C	2x1-1/2	2-15/16	1-1/2	2-7/16	3-7/16	2-3/8	5/16	1-1/2	8	.70
866-291C	2-1/2x1-1/2	3-3/16	1-11/16	4-1/16	4	2-3/8	3/8	1-3/4	8	1.09
866-333C[1]	3x1/2	3-5/16	2-1/16	3	4-5/8	1-3/8	13/16	7/8	8	.92
866-334C	3x3/4	3-1/16	2-1/16	3	4-5/8	1-3/8	9/32	7/8	8	.89
866-335C	3x1	3-3/16	2-1/16	3	4-5/8	1-11/16	5/16	1-1/8	8	.91
866-336C[1]	3x1-1/4	4-1/32	2-1/16	4-3/32	4-5/8	3	1-1/32	2-1/4	8	1.56
866-337C[1]	3x1-1/2	4-1/32	2-1/16	4-3/32	4-5/8	3	29/32	2-1/4	8	1.52
866-338C	3x2	3-5/8	2-1/16	4-3/32	4-5/8	3	3/8	2-1/4	8	1.31
866-415C[1]	4x1/2	4-3/32	2-5/8	3	5-9/16	2-3/8	31/32	1-1/8	8	1.38
866-416C[1]	4x3/4	4-3/32	2-5/8	3	5-9/16	2-3/8	27/32	1-1/8	8	1.35
866-417C	4x1	3-13/16	2-5/8	3	5-5/8	1-11/16	7/16	1-1/8	8	1.31
866-418C[1]	4x1-1/4	4-13/32	2-5/8	4-3/32	5-5/8	2-3/8	29/32	1-3/4	8	1.80
866-419C	4x1-1/2	4-1/8	2-5/8	4-3/32	5-9/16	2-3/8	1/2	1-3/4	8	1.72
866-420C	4x2	4-3/16	2-5/8	4-1/8	5-5/8	3	7/16	2-1/4	8	1.79
866-421C[1]	4x2-1/2	5	2-5/8	5-7/16	5-23/32	4-9/32	3/4	3	8	2.95
866-422C	4x3	4-5/8	2-19/32	5-7/16	5-11/16	4-1/4	1/2	3	8	2.57
866-523C[1]	6x1/2	5-13/32	3-7/8	3	7-3/4	1-11/16	1-7/32	1-1/8	10	2.50
866-524C[1]	6x3/4	5-7/16	3-7/8	3	7-3/4	1-11/16	1-1/8	1-1/8	10	2.47
866-525C	6x1	5-1/8	3-7/8	3	7-15/16	1-11/16	11/16	1-1/8	10	2.43
866-526C[1]	6x1-1/4	5-15/16	3-7/8	4-1/8	7-3/4	3	1-3/8	2-1/4	10	3.48
866-527C[1]	6x1-1/2	5-15/16	3-7/8	4-1/8	7-3/4	3	1-1/4	2-1/4	10	3.43
866-528C	6x2	5-1/2	3-7/8	4-1/8	7-3/4	3	11/16	2-1/4	10	3.23
866-529C[1]	6x2-1/2	6-7/16	3-7/8	6	7-15/16	4-1/4	1-1/8	3	10	5.02
866-530C	6x3	5-15/16	3-7/8	6	7-15/16	4-1/4	25/32	3	10	4.61
866-532C	6x4	6	3-29/32	6	7-15/16	5-3/16	5/8	4	10	5.49

[1] Outlet sized with bushing

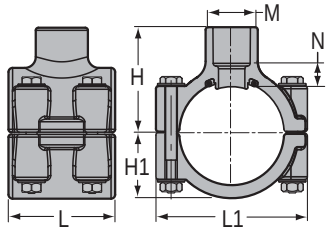
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CLAMP ON SADDLE x SOCKET SINGLE OUTLET (continued)

Dimensions Also Applicable to
866**S**-XXX, 866**V**-XXX & 866**SV**-XXX

2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



Part Number	Size	H	H1	L	L1	M	N	Hole Size	Bolt Torque ft./lbs.	Approx. Wt. (Lbs.)
866-573C[1]	8x1/2	7-3/4	4-7/8	9-1/2	8-1/2	5-5/16	1-1/2	4	10	10.09
866-574C[1]	8x3/4	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-3/4	4	10	10.07
866-575C[1]	8x1	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-5/8	4	10	10.07
866-576C[1]	8x1-1/4	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-1/2	4	10	10.23
866-577C[1]	8x1-1/2	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-3/8	4	10	10.44
866-578C[1]	8x2	7-11/16	4-7/8	8-1/2	10-1/8	5-1/4	1-7/8	4	10	10.50
866-579C[1]	8x2-1/2	8-5/32	4-7/8	8-15/32	10	5-7/32	2-1/2	4	10	10.02
866-580C[1]	8x3	7-11/16	4-7/8	8-1/2	10-1/8	5-1/4	1-7/16	4	10	10.61
866-582C	8x4	7-5/16	4-7/8	8-1/2	10-1/8	5-1/4	11/16	4	10	12.89
866-585C	8x6	8-3/32	4-7/8	8-1/2	10-1/8	7-5/8	11/16	6	10	9.30
866-621C[1]	10x2	8-7/8	6-1/32	8-1/2	12-5/16	5-1/4	1-15/16	4	10	13.56
866-624C	10x4	8-15/32	6-1/32	8-1/2	12-5/16	5-1/4	13/16	4	10	12.46
866-626C	10x6	9-9/32	6-1/32	8-1/2	12-5/16	7-5/8	13/16	6	10	13.50
866-664C	12x4	9-9/16	7-5/32	8-1/2	14-5/16	5-1/4	7/8	4	10	16.42
866-666C	12x6	10-3/8	7-5/32	8-1/2	14-5/16	7-5/8	7/8	6	10	17.20

[1] Outet sized with bushing

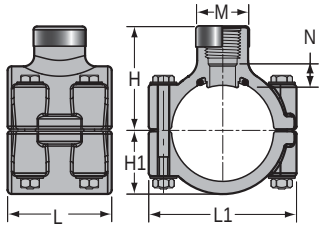
1) Clamp On Saddle Standard Hardware: Zinc Bolts w/EPDM O-ring Seal
   e.g. Part Number 866-247 = 2x1/2 PVC Clamp On Saddle, Socket, EPDM O-ring, Zinc Bolts.
2) Clamp On Saddles w/Stainless Steel (SS) Bolts,Add The Letter **"S"** Before The Dash.
   e.g. Part Number 866**S**-247 = 2x1/2 PVC Clamp On Saddle, Socket, EPDM O-ring, Stainless Steel Bolts.
3) Clamp On Saddles w/FKM O-ring Seal, Add The Letter **"V"** Before The Dash.
   e.g. Part Number 866**V**-247 = 2x1/2 PVC Clamp-On Saddle, Socket, FKM O-ring, Zinc Bolts.
4) Clamp-On Saddles w/Stainless Steel Bolts & FKM O-ring Seal, Add The Letter **"SV"** Before The Dash.
   e.g. Part Number 866**SV**-247 = 2x1/2 PVC Clamp On Saddle, Socket FKM O-ring, Stainless Steel Bolts.

Schedule 80 CPVC Saddles

CLAMP ON SADDLE x SR FIPT
SINGLE OUTLET

Dimensions Also Applicable to
867**S**-XXXSR, 867**V**-XXXSR & 867**SV**-XXXSR

2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



Part Number	Size	H	H1	L	L1	M	N	Hole Size	Bolt Torque ft./lbs.	Approx. Wt. (Lbs.)
867-247CSR	2x1/2	2-3/8	1-1/2	2-7/16	3-7/16	1-3/16	5/16	3/4	3/4	.59
867-248CSR	2x3/4	2-1/2	1-1/2	2-7/16	3-7/16	1-3/8	5/8	7/8	7/8	.60
867-249CSR	2x1	2-5/8	1-1/2	2-7/16	3-7/16	1-11/16	9/16	1-1/8	1-1/8	.62
867-250CSR	2x1-1/4	2-3/4	1-1/2	2-7/16	3-7/16	2-1/16	11/16	1-1/2	1-1/2	.64
867-251CSR	2x1-1/2	2-15/16	1-1/2	2-7/16	3-7/16	2-3/8	3/4	1-1/2	1-1/2	.70
867-291CSR	2-1/2x1-1/2	3-3/16	1-11/16	4-1/16	4	2-3/8	13/16	1-3/4	1-3/4	1.09
867-333CSR[1]	3x1/2	3-5/16	2-1/16	3	4-5/8	1-3/8	15/16	7/8	7/8	.93
867-334CSR	3x3/4	3-1/16	2-1/16	3	4-5/8	1-3/8	9/16	7/8	7/8	.91
867-335CSR	3x1	3-3/16	2-1/16	3	4-5/8	1-11/16	9/16	1-1/8	1-1/8	.93
867-336CSR[1]	3x1-1/4	4-1/32	2-1/16	4-3/32	4-5/8	3	1-5/16	2-1/4	2-1/4	1.61
867-337CSR[1]	3x1-1/2	4-1/32	2-1/16	4-3/32	4-5/8	3	2-11/16	2-1/4	2-1/4	1.56
867-338CSR	3x2	3-5/8	2-1/16	4-3/32	4-5/8	3	7/8	2-1/4	2-1/4	1.40
867-415CSR[1]	4x1/2	4-3/32	2-5/8	3	5-9/16	2-3/8	1-1/8	1-1/8	1-1/8	1.39
867-416CSR[1]	4x3/4	4-3/32	2-5/8	3	5-9/16	2-3/8	1-1/8	1-1/8	1-1/8	1.38
867-417CSR	4x1	3-13/16	2-5/8	3	5-5/8	1-11/16	11/16	1-1/8	1-1/8	1.33
867-418CSR[1]	4x1-1/4	4-13/32	2-5/8	4-3/32	5-5/8	2-3/8	1-7/32	1-3/4	1-3/4	1.85
867-419CSR[1]	4x1-1/2	4-1/8	2-5/8	4-3/32	5-9/16	2-3/8	15/16	1-3/4	1-3/4	1.78
867-420CSR	4x2	4-3/16	2-5/8	4-1/8	5-5/8	3	15/16	2-1/4	2-1/4	1.87
867-421CSR[1]	4x2-1/2	5	2-5/8	5-7/16	5-23/32	4-9/32	1-7/32	3	3	3.13
867-422CSR	4x3	4-5/8	2-19/32	5-7/16	5-11/16	4-1/4	31/32	3	3	2.69
867-523CSR[1]	6x1/2	5-13/32	3-7/8	3	7-3/4	1-11/16	1-3/8	1-1/8	1-1/8	2.50
867-524CSR[1]	6x3/4	5-7/16	3-7/8	3	7-3/4	1-11/16	1-3/8	1-1/8	1-1/8	2.50
867-525CSR	6x1	5-1/8	3-7/8	3	7-15/16	1-11/16	15/16	1-1/8	1-1/8	2.45
867-526CSR[1]	6x1-1/4	5-15/16	3-7/8	4-1/8	7-3/4	3	1-11/16	2-1/4	2-1/4	3.52
867-527CSR[1]	6x1-1/2	5-15/16	3-7/8	4-1/8	7-3/4	3	1-3/4	2-1/4	2-1/4	3.48
867-528CSR	6x2	5-1/2	3-7/8	4-1/8	7-3/4	3	1-7/32	2-1/4	2-1/4	3.32
867-529CSR[1]	6x2-1/2	6-7/16	3-7/8	6	7-15/16	4-1/4	1-9/16	3	3	5.17
867-530CSR	6x3	5-15/16	3-7/8	6	7-15/16	4-1/4	1-1/4	3	3	4.78
867-532CSR	6x4	6	3-29/32	6	7-15/16	5-3/16	1-3/8	4	4	5.78

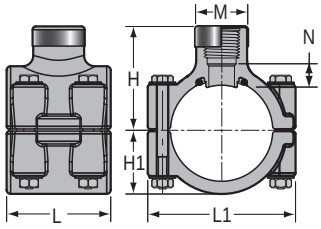
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CLAMP ON SADDLE x SR FIPT SINGLE OUTLET (continued)

Dimensions Also Applicable to
867**S**-XXXSR, 867**V**-XXXSR & 867**SV**-XXXSR

2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



[1] Outlet sized with bushing

Part Number	Size	H	H1	L	L1	M	N	Hole Size	Bolt Torque ft./lbs.	Approx. Wt. (Lbs.)
867-573CSR	8x1/2	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	3	4	10	10.07
867-574CSR[1]	8x3/4	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	3	4	10	10.25
867-575CSR	8x1	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-13/16	4	10	10.08
867-576CSR[1]	8x1-1/4	9-5/16	4-15/16	8-9/16	9-29/32	5-7/32	1-19 /32	4	10	9.85
867-577CSR[1]	8x1-1/2	8-3/32	4-7/8	8-1/2	10-1/8	5-1/4	2-3/4	4	10	---
867-578CSR[1]	8x2	7-11/16	4-7/8	8-1/2	10-1/8	5-1/4	2-3/8	4	10	---
867-579CSR[1]	8x2-1/2	8-1/8	4-7/8	8-1/2	10-1/8	5-1/4	2-1/2	4	10	---
867-580CSR[1]	8x3	7-11/16	4-7/8	8-1/2	10-1/8	5-1/4	1-15/16	4	10	---
867-582CSR	8x4	7-5/16	4-7/8	8-1/2	10-1/8	5-1/4	1-1/2	4	10	8.09
867-585CSR	8x6	8-3/32	4-7/8	8-1/2	10-1/8	7-5/8	2-3/32	6	10	9.08
867-624CSR	10x4	8-15/32	6-1/32	8-1/2	12-5/16	5-1/4	2-3/16	4	10	---
867-626CSR	10x6	9-9/32	6-1/32	8-1/2	12-5/16	7-5/8	3-3/16	6	10	---
867-664CSR	12x4	9-9/16	7-5/32	8-1/2	14-5/16	5-1/4	1-5/8	4	10	---
867-666CSR	12x6	10-3/8	7-5/32	8-1/2	14-5/16	7-5/8	2-1/4	6	10	---

[1] Outlet sized with bushing

1) Clamp On Saddle Standard Hardware: Zinc Bolts w/EPDM O-ring Seal
e.g. Part Number 867-247SR = 2x1/2 PVC Clamp On Saddle, SR Threaded, EPDM O-ring, Zinc Bolts.

2) Clamp On Saddles w/Stainless Steel (SS) Bolts,Add The Letter **"S"** Before The Dash.
e.g. Part Number 867**S**-247SR = 2x1/2 PVC Clamp On Saddle, SR Threaded, EPDM O-ring, Stainless Steel Bolts.

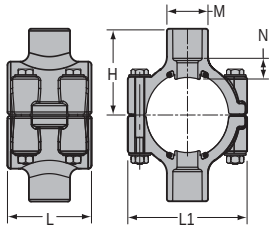
3) Clamp On Saddles w/FKM O-ring Seal, Add The Letter **"V"** Before The Dash.
e.g. Part Number 867**V**-247SR = 2x1/2 PVC Clamp-On Saddle, SR Threaded, FKM O-ring, Zinc Bolts.

4) Clamp-On Saddles w/Stainless Steel Bolts & FKM O-ring Seal, Add The Letter **"SV"** Before The Dash.
e.g. Part Number 867**SV**-247SR = 2x1/2 PVC Clamp On Saddle, SR Threaded FKM O-ring, Stainless Steel Bolts.

CLAMP ON SADDLE x SOCKET DOUBLE OUTLET

Dimensions Also Applicable to
868**S**-XXX, 868**V**-XXX & 868**SV**-XXX

2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



Part Number	Size	H	L	L1	M	N	Hole Size	Bolt Torque ft./lbs.	Approx. Wt. (Lbs.)
868-247C	2x1/2	2-3/8	2-7/16	3-7/16	1-3/16	5/16	3/4	8	.59
868-248C	2x3/4	2-1/2	2-7/16	3-7/16	1-3/8	5/16	7/8	8	.60
868-249C	2x1	2-5/8	2-7/16	3-7/16	1-11/16	5/16	1-1/8	8	.62
838-250C	2x1-1/4	2-3/4	2-7/16	3-7/16	2-1/16	5/16	1-1/2	8	.64
868-251C	2x1-1/2	2-15/16	2-7/16	3-7/16	2-3/8	5/16	1-1/2	8	.70
868-291C	2-1/2x1-1/2	3-3/16	4-1/16	4	2-3/8	3/8	1-3/4	8	1.09
868-333C[1]	3x1/2	3-5/16	3	4-5/8	1-3/8	13/16	7/8	8	.97
868-334C	3x3/4	3-1/16	3	4-5/8	1-3/8	9/32	7/8	8	.92
868-335C	3x1	3-3/16	3	4-5/8	1-11/16	5/16	1-1/8	8	.96
868-336C[1]	3x1-1/4	4-1/32	4-3/32	4-5/8	3	1-1/32	2-1/4	8	2.06
868-337C[1]	3x1-1/2	4-1/32	4-3/32	4-5/8	3	29/32	2-1/4	8	1.97
868-338C	3x2	3-5/8	4-3/32	4-5/8	3	3/8	2-1/4	8	1.57
868-415C[1]	4x1/2	4-3/32	3	5-9/16	2-3/8	31/32	1-1/8	8	1.51
868-416C[1]	4x3/4	4-3/32	3	5-9/16	2-3/8	27/32	1-1/8	8	1.46
868-417C	4x1	3-13/16	3	5-5/8	1-11/16	7/16	1-1/8	8	1.37
868-418C[1]	4x1-1/4	4-13/32	4-3/32	5-5/8	2-3/8	29/32	1-3/4	8	2.04
868-419C	4x1-1/2	4-1/8	4-3/32	5-9/16	2-3/8	1/2	1-3/4	8	1.87
868-420C	4x2	4-3/16	4-1/8	5-5/8	3	7/16	2-1/4	8	2.01
868-421C[1]	4x2-1/2	5	5-7/16	5-23/32	4-9/32	3/4	3	8	3.98
868-422C	4x3	4-5/8	5-7/16	5-11/16	4-1/4	1/2	3	8	3.16
868-523C[1]	6x1/2	5-13/32	3	7-3/4	1-11/16	1-7/32	1-1/8	10	2.63
868-524C[1]	6x3/4	5-7/16	3	7-3/4	1-11/16	1-1/8	1-1/8	10	2.58
868-525C	6x1	5-1/8	3	7-15/16	1-11/16	11/16	1-1/8	10	2.49
868-526C[1]	6x1-1/4	5-15/16	4-1/8	7-3/4	3	1-3/8	2-1/4	10	3.93
868-527C[1]	6x1-1/2	5-15/16	4-1/8	7-3/4	3	1-1/4	2-1/4	10	3.84
868-528C	6x2	5-1/2	4-1/8	7-3/4	3	11/16	2-1/4	10	3.44
868-529C[1]	6x2-1/2	6-7/16	6	7-15/16	4-1/4	1-1/8	3	10	5.93
868-530C	6x3	5-15/16	6	7-15/16	4-1/4	25/32	3	10	5.11
868-532C	6x4	6	6	7-15/16	5-3/16	5/8	4	10	6.10
868-573C[1]	8x1/2	8-3/32	8-1/2	10-1/8	5-1/4	2-3/16	4	10	12.06

[1] Outlet sized with bushing

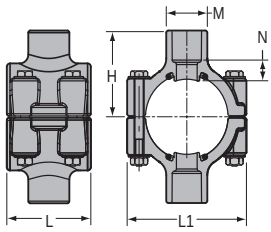
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CLAMP ON SADDLE x SOCKET DOUBLE OUTLET (continued)

Dimensions Also Applicable to
868**S**-XXX, 868**V**-XXX & 868**SV**-XXX

2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



Part Number	Size	H	L	L1	M	N	Hole Size	Bolt Torque ft./lbs.	Approx. Wt. (Lbs.)
868-574C[1]	8x3/4	8-3/32	8-1/2	10-1/8	5-1/4	2-3/4	4	10	12.01
868-575C[1]	8x1	8-3/32	8-1/2	10-1/8	5-1/4	2-5/8	4	10	12.02
868-576C[1]	8x1-1/4	8-3/32	8-1/2	10-1/8	5-1/4	2-1/2	4	10	11.88
868-577C[1]	8x1-1/2	8-3/32	8-1/2	10-1/8	5-1/4	2-3/8	4	10	11.78
868-578C[1]	8x2	7-11/16	8-1/2	10-1/8	5-1/4	1-7/8	4	10	11.47
868-579C[1]	8x2-1/2	8-1/8	8-1/2	10-1/8	5-1/4	1-11/16	4	10	9.21
868-580C[1]	8x3	7-11/16	8-1/2	9-7/8	5-7/32	2-1/16	4	10	10.92
868-582C	8x4	7-5/16	8-1/2	10-1/8	5-1/4	11/16	4	10	8.62
868-585C	8x6	8-3/32	8-1/2	10-1/8	7-5/8	11/16	6	10	10.81
868-624C	10x4	8-15/32	8-1/2	12-5/16	5-1/4	13/16	4	10	12.99
868-626C	10x6	9-9/32	8-1/2	12-5/16	7-5/8	13/16	6	10	15.15
868-664C	12x4	9-9/16	8-1/2	14-5/16	5-1/4	7/8	4	10	17.06
868-666C	12x6	10-3/8	8-1/2	14-5/16	7-5/8	7/8	6	10	18.64

[1] Outlet sized with bushing

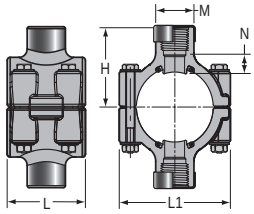
1) Clamp On Saddle Standard Hardware: Zinc Bolts w/EPDM O-ring Seal
   e.g. Part Number 868-247 = 2x1/2 PVC Clamp On Saddle, Socket, EPDM O-ring, Zinc Bolts.
2) Clamp On Saddles w/Stainless Steel (SS) Bolts,Add The Letter **"S"** Before The Dash.
   e.g. Part Number 868**S**-247 = 2x1/2 PVC Clamp On Saddle, Socket, EPDM O-ring, Stainless Steel Bolts.
3) Clamp On Saddles w/FKM O-ring Seal, Add The Letter **"V"** Before The Dash.
   e.g. Part Number 868**V**-247 = 2x1/2 PVC Clamp-On Saddle, Socket, FKM O-ring, Zinc Bolts.
4) Clamp-On Saddles w/Stainless Steel Bolts & FKM O-ring Seal, Add The Letter **"SV"** Before The Dash.
   e.g. Part Number 868**SV**-247 = 2x1/2 PVC Clamp On Saddle, Socket FKM O-ring, Stainless Steel Bolts.

Schedule 80 CPVC Saddles

CLAMP ON SADDLE x SR FIPT
DOUBLE OUTLET

Dimensions Also Applicable to
869**S**-XXXSR, 869**V**-XXXSR & 869**SV**-XXXSR

2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



Part Number	Size	H	L	L1	M	N	Hole Size	Bolt Torque ft./lbs.	Approx. Wt. (Lbs.)
869-247CSR	2x1/2	2-3/8	2-7/16	3-7/16	1-3/16	5/16	3/4	8	.59
869-248CSR	2x3/4	2-1/2	2-7/16	3-7/16	1-3/8	5/8	7/8	8	.60
869-249CSR	2x1	2-5/8	2-7/16	3-7/16	1-11/16	9/16	1-1/8	8	.62
869-250CSR	2x1-1/4	2-3/4	2-7/16	3-7/16	2-1/16	11/16	1-1/2	8	.64
869-251CSR	2x1-1/2	2-15/16	2-7/16	3-7/16	2-3/8	3/4	1-1/2	8	.70
869-291CSR	2-1/2x1-1/2	3-3/16	4-1/16	4	2-3/8	13/16	1-3/4	8	1.09
869-333CSR[1]	3x1/2	3-5/16	3	4-5/8	1-3/8	15/16	7/8	8	1.00
869-334CSR	3x3/4	3-1/16	3	4-5/8	1-3/8	9/16	7/8	8	.96
869-335CSR	3x1	3-3/16	3	4-5/8	1-11/16	9/16	1-1/8	8	1.00
869-336CSR[1]	3x1-1/4	4-1/32	4-3/32	4-5/8	3	1-5/16	2-1/4	8	2.15
869-337CSR[1]	3x1-1/2	4-1/32	4-3/32	4-5/8	3	2-11/16	2-1/4	8	2.06
869-338CSR	3x2	3-5/8	4-3/32	4-5/8	3	7/8	2-1/4	8	1.74
869-415CSR[1]	4x1/2	4-3/32	3	5-9/16	2-3/8	1-1/8	1-1/8	8	1.53
869-416CSR[1]	4x3/4	4-3/32	3	5-9/16	2-3/8	1-1/8	1-1/8	8	1.52
869-417CSR	4x1	3-13/16	3	5-5/8	1-11/16	11/16	1-1/8	8	1.41
869-418CSR[1]	4x1-1/4	4-13/32	4-3/32	5-5/8	2-3/8	1-7/32	1-3/4	8	2.13
869-419CSR	4x1-1/2	4-1/8	4-3/32	5-9/16	2-3/8	15/16	1-3/4	8	1.99
869-420CSR	4x2	4-3/16	4-1/8	5-5/8	3	15/16	2-1/4	8	2.18
869-421CSR[1]	4x2-1/2	5	5-7/16	5-23/32	4-9/32	1-7/32	3	8	4.29
869-422CSR	4x3	4-5/8	5-7/16	5-11/16	4-1/4	31/32	3	8	3.39
869-523CSR[1]	6x1/2	5-13/32	3	7-3/4	1-11/16	1-3/8	1-1/8	10	2.64
869-524CSR[1]	6x3/4	5-7/16	3	7-3/4	1-11/16	1-3/8	1-1/8	10	2.63
869-525CSR	6x1	5-1/8	3	7-15/16	1-11/16	15/16	1-1/8	10	2.53
869-526CSR[1]	6x1-1/4	5-15/16	4-1/8	7-3/4	3	1-11/16	2-1/4	10	4.03
869-527CSR[1]	6x1-1/2	5-15/16	4-1/8	7-3/4	3	1-3/4	2-1/4	10	3.93
869-528CSR	6x2	5-1/2	4-1/8	7-3/4	3	1-7/32	2-1/4	10	3.62
869-529CSR[1]	6x2-1/2	6-7/16	6	7-15/16	4-1/4	1-9/16	3	10	6.23
869-530CSR	6x3	5-15/16	6	7-15/16	4-1/4	1-1/4	3	10	5.45
869-532CSR	6x4	6	6	7-15/16	5-3/16	1-3/8	4	10	6.67
869-573CSR[1]	8x1/2	8-3/32	8-1/2	10-1/8	5-1/4	3	4	10	12.02

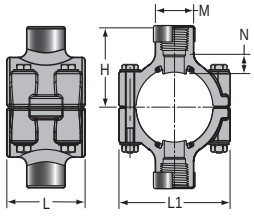
[1] Outlet sized with bushing

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CLAMP ON SADDLE x SR FIPT DOUBLE OUTLET (continued)

Dimensions Also Applicable to
869**S**-XXXSR, 869**V**-XXXSR & 869**SV**-XXXSR

2" - 4" 235 psi @ 73°F
6" 200 psi @ 73°F
8" - 12" 150 psi @ 73°F



Part Number	Size	H	L	L1	M	N	Hole Size	Bolt Torque ft./lbs.	Approx. Wt. (Lbs.)
869-574CSR[1]	8x3/4	8-3/32	8-1/2	10-1/8	5-1/4	3	4	10	---
869-575CSR[1]	8x1	8-3/32	8-1/2	10-1/8	5-1/4	2-13/16	4	10	---
869-576CSR[1]	8x1-1/4	8-3/32	8-1/2	10-1/8	5-1/4	2-3/4	4	10	---
869-577CSR[1]	8x1-1/2	8-3/32	8-1/2	10-1/8	5-1/4	2-3/4	4	10	---
869-578CSR[1]	8x2	7-11/16	8-1/2	10-1/8	5-1/4	2-3/8	4	10	---
869-579CSR[1]	8x2-1/2	8-1/8	8-1/2	10-1/8	5-1/4	2-1/2	4	10	---
869-580CSR[1]	8x3	7-11/16	8-1/2	10-1/8	5-1/4	1-15/16	4	10	---
869-582CSR	8x4	7-5/16	8-1/2	10-1/8	5-1/4	1-1/2	4	10	9.29
869-585CSR	8x6	8-3/32	8-1/2	10-1/8	7-5/8	2-3/32	6	10	10.81
869-624CSR	10x4	8-15/32	8-1/2	12-5/16	5-1/4	2-3/16	4	10	---
869-626CSR	10x6	9-9/32	8-1/2	12-5/16	7-5/8	3-3/16	6	10	---
869-664CSR	12x4	9-9/16	8-1/2	14-5/16	5-1/4	1-5/8	4	10	---
869-666CSR	12x6	10-3/8	8-1/2	14-5/16	7-5/8	2-1/4	6	10	---

[1] Outlet sized with bushing

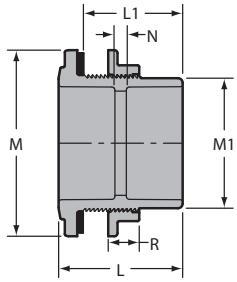
1) Clamp On Saddle Standard Hardware: Zinc Bolts w/EPDM O-ring Seal
   e.g. Part Number 869-247SR = 2x1/2 PVC Clamp On Saddle, SR Threaded, EPDM O-ring, Zinc Bolts.
2) Clamp On Saddles w/Stainless Steel (SS) Bolts, Add The Letter **"S"** Before The Dash.
   e.g. Part Number 869**S**-247SR = 2x1/2 PVC Clamp On Saddle, SR Threaded, EPDM O-ring, Stainless Steel Bolts.
3) Clamp On Saddles w/FKM O-ring Seal, Add The Letter **"V"** Before The Dash.
   e.g. Part Number 869**V**-247SR = 2x1/2 PVC Clamp-On Saddle, SR Threaded, FKM O-ring, Zinc Bolts.
4) Clamp-On Saddles w/Stainless Steel Bolts & FKM O-ring Seal, Add The Letter **"SV"** Before The Dash.
   e.g. Part Number 869**SV**-247SR = 2x1/2 PVC Clamp On Saddle, SR Threaded FKM O-ring, Stainless Steel Bolts.

NEW STYLE - TANK ADAPTER

Socket x Socket

Dimensions Also Applicable to 8170**E**-XXX & 8170**V**-XXX

150 psi @ 73°F



Part Number	Size	L	L1	M	M1	N	R	Approx. Wt. (Lbs.)
8170-002C	1/4	2-1/2	1-13/16	1-1/2	1-1/16	1-3/16	1/2	.11
8170-003C	3/8	2-1/2	1-27/32	1-5/8	31/32	7/8	1/2	.12
8170-005C	1/2	2-15/16	2-3/16	2-1/16	1-3/16	1-1/8	5/8	.23
8170-007C	3/4	2-15/16	2-3/16	2-1/4	1-5/8	15/16	5/8	.27
8170-010C	1	3-5/16	2-9/16	2-5/8	2	1-1/16	5/8	.41
8170-012C	1-1/4	3-7/16	2-5/8	3-1/8	2-5/16	15/16	5/8	.45
8170-015C	1-1/2	3-5/8	2-13/16	3-5/8	2-11/16	13/16	5/8	1.04
8170-020C	2	4-1/8	3-1/4	4-7/8	3-1/4	1-1/16	3/4	1.33
8170-025C	2-1/2	4-27/32	3-7/8	5-1/4	3-9/16	29/32	1	2.60
8170-030C	3	5-1/2	4-1/2	6	4-9/16	1-11/16	1	2.69
8170-040C	4	5	4	7-1/2	5-1/2	7/16	1-1/4	3.40
8170-080C	8	8-5/8	7	12-15/16	10-1/4	1/2	1-1/2	17.30

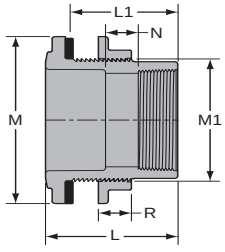
Tank Adapter Referenced Dimension Tolerance = ± 1/16"

NEW STYLE - TANK ADAPTER

Socket x Fipt

Dimensions Also Applicable to 8171**E**-XXX & 8171**V**-XXX

150 psi @ 73°F



Part Number	Size	L	L1	M	M1	N	R	Approx. Wt. (Lbs.)
8171-002C	1/4	2-1/2	1-13/16	1-1/2	1-1/16	1-1/4	1/2	.11
8171-003C	3/8	2-1/2	1-13/16	1-5/8	1-3/16	1-3/16	1/2	.12
8171-005C	1/2	2-15/16	2-3/16	2-1/16	1-3/16	1-1/4	5/8	.23
8171-007C	3/4	2-15/16	2-15/32	2-1/4	1-5/8	1-3/16	5/8	.26
8171-010C	1	3-5/16	2-13/16	2-5/8	1-31/32	1-1/4	5/8	.38
8171-012C	1-1/4	3-13/32	2-27/32	3-3/32	2-5/16	1-17/32	5/8	.53
8171-015C	1-1/2	3-5/8	2-13/16	3-5/8	2-11/16	1-1/4	5/8	.71
8171-020C	2	4-1/8	3-1/4	4-7/8	3-1/4	1-5/8	3/4	1.34

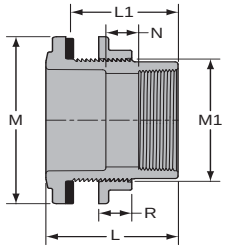
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

NEW STYLE - TANK ADAPTER (continued)

Socket x Fipt

Dimensions Also Applicable to 8171**E**-XXX & 8171**V**-XXX

150 psi @ 73°F



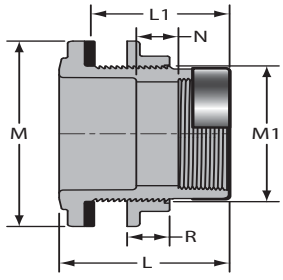
Part Number	Size	L	L1	M	M1	N	R	Approx. Wt. (Lbs.)
8171-025C	2-1/2	4-7/8	7/8	5-1/4	3-13/16	1-13/16	1	1.92
8171-030C	3	5-1/2	4-1/2	6	4-9/16	2-3/16	1	2.80
8171-040C	4	5	4	7-1/2	5-1/2	1-1/4	1-1/4	3.36
8171-060C	6	4-31/32	4-1/16	10-1/16	7-11/16	1/16	1-1/4	5.92

NEW STYLE - TANK ADAPTER

Socket x SR Fipt

Dimensions Also Applicable to 8171**E**-XXXSR & 8171**V**-XXXSR

150 psi @ 73°F



Part Number	Size	L	L1	M	M1	N	R	Approx. Wt. (Lbs.)
8171-002CSR	1/4	2-1/2	1-13/16	1-1/2	1-1/16	1-1/4	1/2	.11
8171-003CSR	3/8	2-1/2	1-13/16	1-5/8	1-3/16	1-3/16	1/2	.13
8171-005CSR	1/2	2-15/16	2-1/4	2-1/16	1-7/32	1-9/32	5/8	.24
8171-007CSR	3/4	2-15/16	2-3/16	2-1/4	1-5/8	1-1/4	5/8	.28
8171-010CSR	1	3-5/16	2-13/16	2-5/8	1-31/32	1-1/4	5/8	.38
8171-012CSR	1-1/4	3-13/32	2-5/8	3-3/32	2-5/16	1-17/32	5/8	.53
8171-015CSR	1-1/2	3-5/8	2-13/16	3-5/8	2-11/16	1-1/4	5/8	.74
8171-020CSR	2	4-1/8	3-1/4	4-7/8	3-1/4	1-5/8	3/4	1.70
8171-025CSR	2-1/2	4-7/8	3-7/8	5-1/4	3-13/16	1-11/16	1	1.99
8171-030CSR	3	5-1/2	4-1/2	6	4-9/16	2-3/16	1	2.82
8171-040CSR	4	5	4	7-1/2	5-1/2	1-1/4	1-1/4	4.45
8171-060CSR	6	4-31/32	4-1/16	10-1/16	7-11/16	1/16	1-1/4	6.02

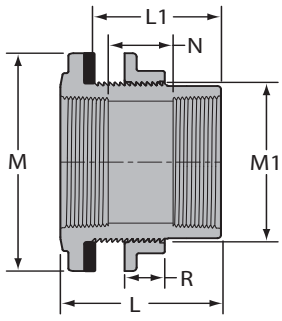
Schedule 80 CPVC Tank Adapters

NEW STYLE - TANK ADAPTER

Fipt x Fipt

Dimensions Also Applicable to 8172**E**-XXX & 8172**V**-XXX

150 psi @ 73°F



Part Number	Size	L	L1	M	M1	N	R	Approx. Wt. (Lbs.)
8172-002C	1/4	2-1/2	1-13/16	1-1/2	1-1/16	1-5/16	1/2	.11
8172-003C	3/8	2-1/2	1-13/16	1-5/8	1-3/16	1-3/8	1/2	.14
8172-005C	1/2	2-15/16	2-3/16	2-1/16	1-3/16	1-13/32	5/8	.24
8172-007C	3/4	2-15/16	2-15/32	2-1/4	1-5/8	1-1/2	5/8	.26
8172-010C	1	3-5/16	2-13/16	2-5/8	1-31/32	1-1/4	5/8	.38
8172-012C	1-1/4	3-13/32	2-27/32	3-3/32	2-5/16	1-17/32	5/8	.53
8172-015C	1-1/2	3-19/32	3-1/16	3-19/32	2-21/32	1-11/16	5/8	.72
8172-020C	2	4-1/8	3-1/4	4-7/8	3-1/4	2-3/16	3/4	1.42
8172-025C	2-1/2	4-7/8	3-7/8	5-1/4	3-13/16	2-1/4	1	2.06
8172-030C	3	5-1/2	4-1/2	6	4-9/16	2-11/16	1	2.95
8172-040C	4	5	4	7-1/2	5-1/2	2	1-1/4	3.70
8172-060C	6	5	4-3/16	9-7/8	7-31/32	1-5/32	1-1/4	6.21

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

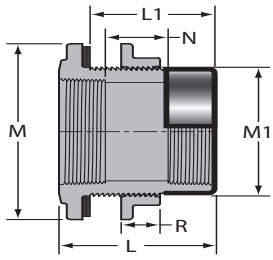
Schedule 80 CPVC Tank Adapters

NEW STYLE - TANK ADAPTER

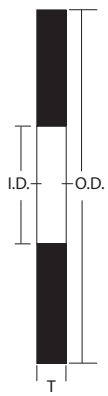
Fipt x SR Fipt

Dimensions Also Applicable to 8172**E**-XXXSR & 8172**V**-XXXSR

150 psi @ 73°F



Part Number	Size	L	L1	M	M1	N	R	Approx. Wt. (Lbs.)
8172-002CSR	1/4	2-1/2	1-7/8	1-9/16	1-1/16	1-5/16	1/2	.13
8172-003CSR	3/8	2-1/2	1-13/16	1-5/8	1-3/16	1-3/8	1/2	.15
8172-005CSR	1/2	2-15/16	2-3/16	2-1/16	1-7/32	1-13/32	5/8	.25
8172-007CSR	3/4	2-15/16	2-15/32	2-1/4	1-5/8	1-3/16	5/8	.25
8172-010CSR	1	3-15/16	2-19/32	2-5/8	1-31/32	1-1/4	5/8	.36
8172-012CSR	1-1/4	3-13/32	2-27/32	3-3/32	2-5/16	1-17/32	5/8	.53
8172-015CSR	1-1/2	3-5/8	2-13/16	3-5/8	2-11/16	1-3/4	5/8	.77
8172-020CSR	2	4-1/8	3-1/4	4-27/32	3-1/32	2-1/8	3/4	1.41
8172-025CSR	2-1/2	4-7/8	3-7/8	5-1/4	3-13/16	2-1/4	1	2.11
8172-030CSR	3	5-15/32	4-17/32	5-31/32	4-17/32	2-21/32	1	3.02
8172-040CSR	4	5	4	7-1/2	5-1/2	2	1-1/4	3.80

TANK ADAPTER GASKET SECTION	SIZE	O.D.*	I.D.*	T
	1/4	1.49	0.99	1/4
	3/8	1.62	1.12	1/4
	1/2	1.98	1.41	1/4
	3/4	2.20	1.57	1/4
	1	2.60	1.90	1/4
	1-1/4	3.04	2.23	1/4
	1-1/2	3.54	2.57	1/4
	2	4.76	3.15	1/4
	2-1/2	5.13	3.70	1/4
	3	5.86	4.39	1/4
	4	7.34	5.31	1/4
	6	9.85	7.95	3/16
	8	12.70	9.94	3/8

New Style Tank Adapter Gasket & Hole Size Requirements			
Tank Adapter Size	Recommended Minimum Hole Size	Minimum Inside Curvature Radius (inches)	Maximum Tank Wall Thickness (inches)
1/4	1-1/16	2.50	.50
3/8	1-3/16	3.00	.50
1/2	1-1/2	4.00	.75
3/4	1-3/4	5.00	.75
1	2	7.00	.86
1-1/4	2-3/8	9.50	.86
1-1/2	2-3/4	12.00	.86
2	3-3/8	18.50	1.19
2-1/2	3-7/8	23.50	1.50
3	4-5/8	32.50	2.00
4	5-1/2	43.50	1.25
6	8	79.50	2.06
8	10-3/8	98.00	4.25

*** Both outside and inside dimensions are +/- .01 to .03 shore hardness 50-60**

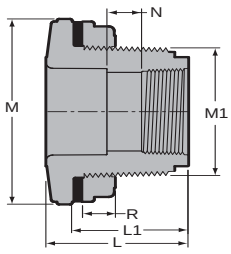
Schedule 80 CPVC Tank Adapters

OLD STYLE - TANK ADAPTER

Socket x Fipt

Dimensions Also Applicable to 871**E**-XXX

150 psi @ 73°F



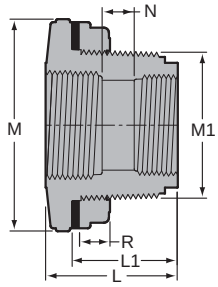
Part Number	Size	L	L1	M	M1	N	R	Approx. Wt.(Lbs.)
871-005C	1/2	2-27/32	2-11/32	2-9/32	1-9/32	1-3/8	5/8	.26
871-007C	3/4	2-23/32	2-7/32	2-1/2	1-5/8	29/32	5/8	.32
871-010C	1	2-25/32	2-1/8	2-13/16	1-7/8	25/32	21/32	.34
871-012C	1-1/4	3-1/8	2-7/16	3-29/32	2-11/32	27/32	5/8	.63
871-015C	1-1/2	3-5/32	2-21/32	3-29/32	2-11/32	3/4	5/8	.59
871-020C	2	3-3/16	2-17/32	4-31/32	3-15/32	13/16	3/4	1.43
871-030C	3	4-19/32	3-13/16	6-7/16	4-15/32	31/32	1-3/16	2.63
871-040C	4	4-7/16	3-23/32	7-7/16	5-1/2	1/2	1-1/4	3.37

OLD STYLE - TANK ADAPTER

Fipt x Fipt

Dimensions Also Applicable to 872**E**-XXX

150 psi @ 73°F

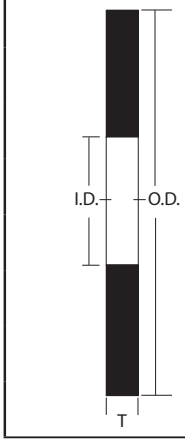


Part Number	Size	L	L1	M	M1	N	R	Approx. Wt. (Lbs.)
872-005C	1/2	2-27/32	2-11/32	2-9/32	1-9/32	1-13/32	5/8	.26
872-007C	3/4	2-23/32	2-1/4	2-1/2	1-5/8	1-5/32	5/8	.32
872-010C	1	2-25/32	2-5/16	2-13/16	1-7/8	25/32	5/8	.38
872-012C	1-1/4	3-1/8	2-5/8	3-27/32	2-11/32	1-1/8	5/8	.65
872-015C	1-1/2	3-1/8	2-5/8	3-29/32	2-11/32	1-1/16	5/8	.61
872-020C	2	3-5/32	2-3/8	5-1/16	3-7/16	1-5/32	3/4	1.42
872-030C	3	4-19/32	3-13/16	6-7/16	4-15/32	1-11/32	1-3/16	2.61
872-040C	4	4-7/16	3-1/2	7-1/2	5-1/2	15/16	1-1/4	3.47

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Schedule 80 CPVC Tank Adapters

TANK ADAPTER GASKET SECTION	SIZE	O.D.*	I.D.*	T
	1/2	2.25	1.33	3/16
	3/4	2.49	1.69	3/16
	1	2.79	1.94	3/16
	1-1/4	3.81	2.39	3/16
	1-1/2	3.81	2.39	3/16
	2	4.89	3.51	3/16
	3	6.30	4.49	3/16
	4	7.33	5.50	3/16

Old Style Tank Adapter Gasket & Hole Size Requirements

Tank Adapter Size	Recommended Minimum Hole Size	Minimum Inside Curvature Radius (inches)	Maximum Tank Wall Thickness (inches)
1/2	1-3/8	3.88	1.06
3/4	1-3/4	5.00	1.06
1	2	6.12	1.06
1-1/4	2-7/16	10.75	1.34
1-1/2	2-7/16	10.75	1.34
2	3-9/16	18.50	1.16
3	4-9/16	31.00	1.75
4	5-9/16	42.75	1.81

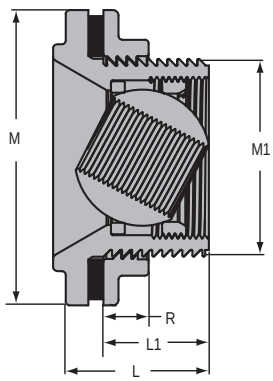
* Both outside and inside dimensions are +/- .03 shore hardness 65-70

SELF ALIGNING TANK ADAPTER

Fipt

Dimensions Also Applicable to 8172**ESA**-XXX & 8172**VSA**-XXX

75 psi @ 73°F



Part Number	Size	L	L1	M	M1	R	Approx. Wt. (Lbs.)
8172SA-010C	1	2-9/16	1-3/4	4-7/8	3-1/4	3/4	1.23
8172SA-020C	2	2-11/16	1-3/4	6	4-9/16	1	2.09
8172SA-030C	3	3-1/4	2-1/4	7-1/2	5-1/2	1-1/4	2.97

Allows Connection to Existing Pipelines Under Pressure

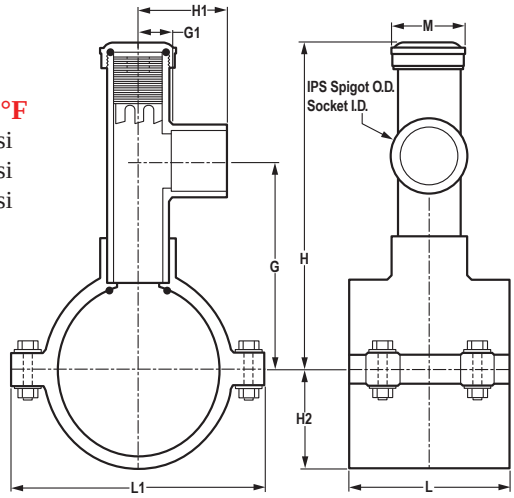
Specially designed tapping saddle allows pipe branch connection to pressurized "Hot" lines without system shut-down. .

- Industrial Grade Bolt-on Saddle with EPDM or FKM O-ring Seals and Choice of Zinc Plated Steel or Type 316 Stainless Steel Hardware.
- Built-in Brass or Stainless Steel Cutter Easily Cuts Hole in PVC, CPVC, HDPE and PP Pipe. Special Design Captures and Retains Coupon from Hole.
- Pressure Rated up to 235 psi @ 73°F.
- Available to fit IPS Pipe 2" through 8" with Versatile 3/4" Socket - 1" Spigot Combination Branch Outlet or 1"-1/2" Socket - 2" Spigot Combination Branch Outlet

TECHNICAL DATA

Maximum Service Temperatures		Pressure Rating @ 73°F	
PVC	140°F	2" – 4"	235 psi
CPVC	200°F	6"	200 psi
Note: Elevated service temperatures require system pressure de-rating.		8"	150 psi

Note: Some leakage is possible during the tapping process, therefore "hot-taps" are not recommended for corrosive or dangerous fluid medium.



Dimensions - EPDM Saddle x Socket (Spigot) Zinc Plated Bolds

Part Number	Size	G	G1	H	H 1	H2	L	L1	M
HT2-248C	2 x 3/4 (1)	3-9/16	1	6-3/16	2	1-1/2	2-7/16	3-1/2	2
HT2-251C	2 x 1-1/2 (2)	4-9/16	1-1/4	8-15/16	2-11/16	1-1/2	2-7/16	3-1/2	2-7/8
HT2-288C	2-1/2 x 3/4 (1)	3-15/16	1	6-9/16	2	1-3/4	4-1/8	4-1/8	2
HT2-291C	2-1/2 x 1-1/2 (2)	4-13/16	1-1/4	9-3/16	2-11/16	1-3/4	4-1/8	4-1/8	2-7/8
HT2-334C	3 x 3/4 (1)	4-1/6	1	6-11/16	2	2	3	4-3/4	2
HT2-337C	3 x 1-1/2 (2)	5-1/4	1-1/4	9-5/8	2-11/16	2	4-1/8	4-3/4	2-7/8
HT2-416C	4 x 3/4 (1)	4-11/16	1	7-5/16	2	2-5/8	3	5-13/16	2
HT2-419C	4 x 1-1/2 (2)	5-13/16	1-1/4	10-3/16	2-11/16	2-5/8	4-1/8	5-13/16	2-7/8
HT2-524C	6 x 3/4 (1)	6	1	8-5/8	2	3-7/8	3	8-1/8	2
HT2-527C	6 x 1-1/2 (2)	7-1/8	1-1/4	11-1/2	2-11/16	3-7/8	4-1/8	8-1/8	2-7/8
HT2-574C	8 x 3/4 (1)	7-1/4	1	9-7/8	2	4-7/8	8-1/2	10-1/8	2
HT2-577C	8 x 1-1/2 (2)	8-9/16	1-1/4	12-9/16	2-11/16	4-7/8	8-1/2	10-1/8	2-7/8

EPDM Saddle x Socket (Spigot) SS316 Bolts, Add The Letter **"S"** Before The Dash. e.g. Part Number HT2**S**-248 = 2x3/4 PVC Bolt On Saddle, EPDM O-ring, Stainless Steel Hardware.
FKM Saddle x Socket (Spigot) Zinc Plated Bolts, Add The Number **"3"** Before The Dash. e.g. Part Number HT**3**-248 = 2x3/4 PVC Bolt On Saddle, FKM O-ring, Zink Plated Hardware.
FKM Saddle x Socket (Spigot) SS316 Bolts, Add **"3S"** Before The Dash. e.g. Part Number HT**3S**-248 = 2x3/4 PVC Bolt On Saddle, FKM O-ring, Stainless Steel Hardware.
EPDM with Stainless Steel Cutter & Bolts, Add **"S2S"** Before The Dash. e.g. Part Number HT**S2S**-248 = 2x3/4 PVC Bolt On Saddle, EPDM O-ring, Stainless Steel Cutter & Hardware.
FKM with Stainless Steel Cutter & Bolts, Add **"S3S"** Before The Dash. e.g. Part Number HT**S3S**-248 = 2x3/4 PVC Bolt On Saddle, FKM O-ring, Stainless Steel Cutter & Hardware.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Hot-Tap Saddle Installation

Basic Installation

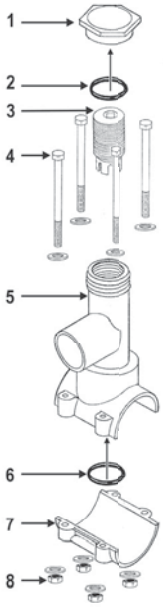
Hot-Tap Saddles are designed for adding branch connections to piping systems under live ("hot") pressure. Hot-Tap Saddle branch outlets are either 3/4" socket (with 1" Spigot O.D.) or 1-1/2" socket (with 2" Spigot O.D.) in saddle sizes 2" through 8" to fit IPS pipe using a built-in O-ring seal. Internal cutter is operated using conventional ratchet and drive extension and permanently retains coupon cut from pipe. Maximum operating pressure at 73°F is 235 psi for saddle sizes 2" - 4", 200 psi for 6" saddles & 150 psi for 8".

SEE PRODUCT INSTALLATION INSTRUCTION FOR DETAILS

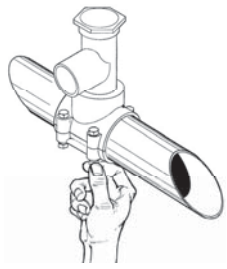
COMPONENTS

The Hot-Tap Saddle includes the following components:

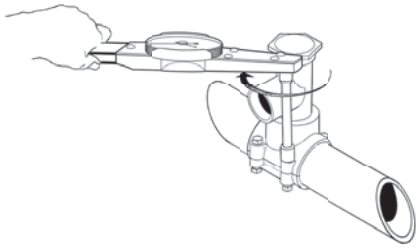
1. Cap
2. Upper O-ring
3. Hot-Tap Cutter
4. Bolt/Washer
5. Saddle Body
6. Lower O-ring
7. Saddle Bottom
8. Nut/Washer



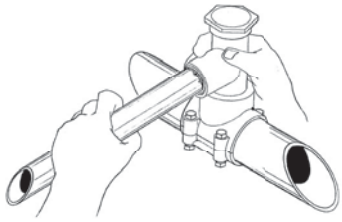
STEP 1 Assemble on Pipe



STEP 2 Torque to Specifications

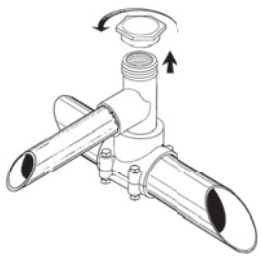


STEP 3 Cement Branch Take-off

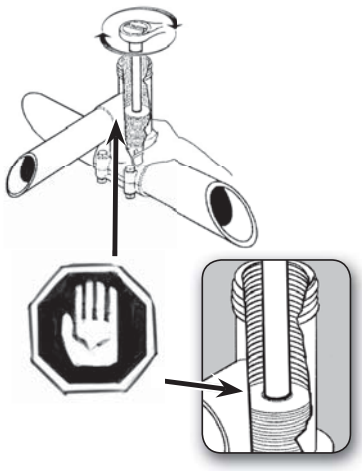


Allow joint to cure.

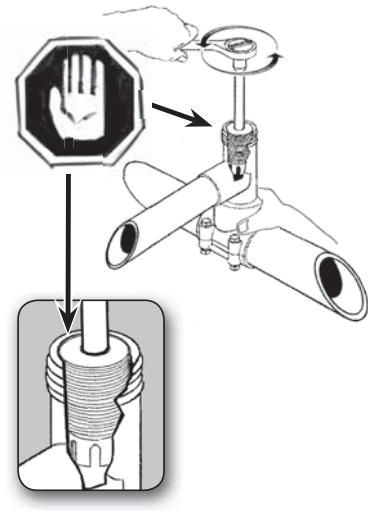
STEP 4 Remove Cap



STEP 5 Tap to Required Depth



STEP 6 Back-off Cutter to Top to Open Flow



STEP 7 Reinstall Opening Sealed Cap

CPVC Flange Cut-in Repair Kit Installation Instructions

Spears® Flange Cut-In Kit Installation

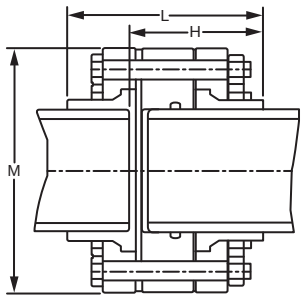
When planned system changes are needed, system downtime can be a major concern. Spears® Flange Cut-In Kit minimizes downtime for actual cut-in to allow new connection in just minutes. Kit provides all necessary components to create a flanged joint for connection to system alterations in just minutes. Special Flange Hub can be cemented to piping and allowed to cure before shutting down and cutting into system. This allows immediate joining to mating flange (included) that can also be pre-assembled to desired alteration piping.

Kit includes special Split Flange Socket Hub, O-ring Sealed Hub Body, Stainless Steel Clamp, Split Ring, Full-Faced EPDM or FKM Gasket, Mating Flange Hub & Ring, and complete set of Stainless Steel Bolts, Flat Washers and anti-seize Brass Nuts to make the final joint. Available for IPS Pipe Sizes 2" - 12".

Pressure Rated to 150 psi @ 73°F (22°C)
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply

Dimensions

Size (in.)	H	L	M
2	2-3/8	4-7/8	6
2-1/2	3-3/4	5-1/2	7
3	4	5-7/8	7-1/2
4	4-7/8	7-1/8	9
6	5-7/8	9	11
8	6-3/4	10-7/8	13-1/2
10	8-3/8	13-1/2	16
12	10	16-3/4	19



Split Flange Assembly

Locate and Mark Split Flange position

Sand pipe to remove gloss

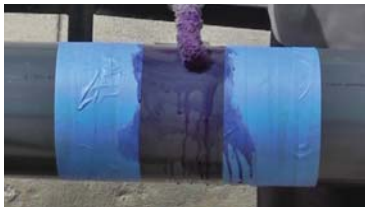
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CPVC Flange Cut-in Repair Kit Installation Instructions

Mask Pipe

Apply Primer



Apply Cement

Primer & Cement Split Flange

Position, Press & Hold Split Flange

Install Clamp

Torque to 15 ft-lbs

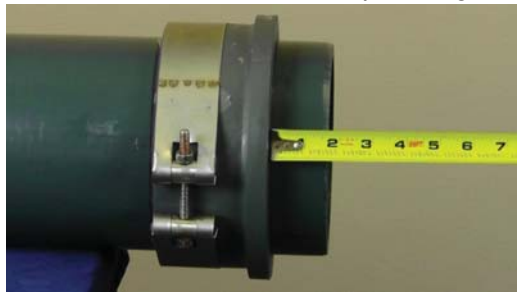
Let assembly cure (recommend over-night) prior to cutting into piping system.

Shut down and drain system; cut in as described below.

Making The Cut-In

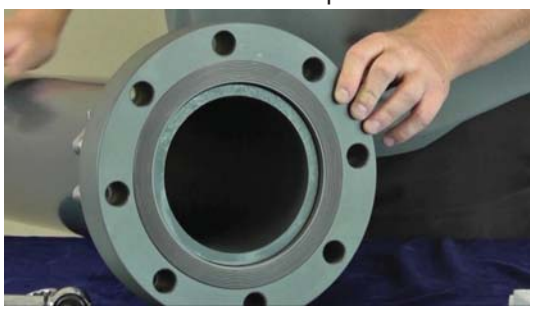
Measure from O-ring Hub Faces

Cut – In & Bevel Pipe at this Distance Minus 1/4" from Glued-on Split Flange



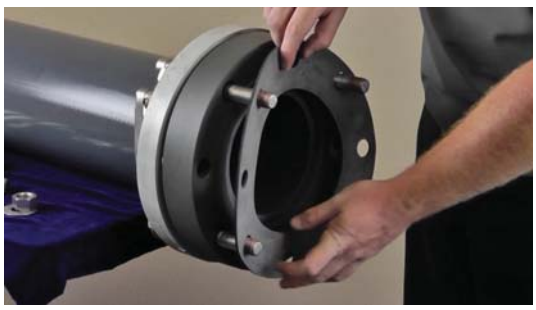
CPVC Flange Cut-in Repair Kit Installation Instructions

Install O-ring Hub; Should Be 1/4" Recess to Pipe

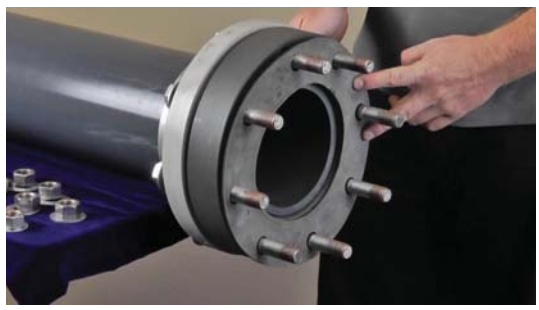


Install Split Ring, Hold in Place with 4- Lubricated Bolts & Washers

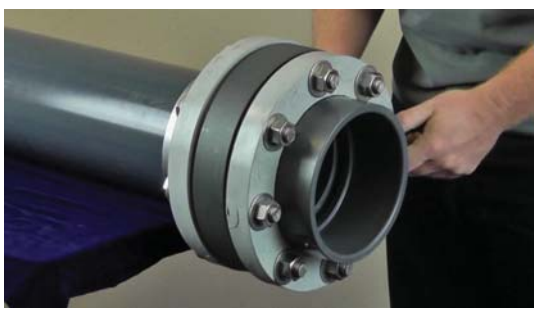
Position Elastomer Gasket



Insert Remaining Lubricated Bolts & Washers

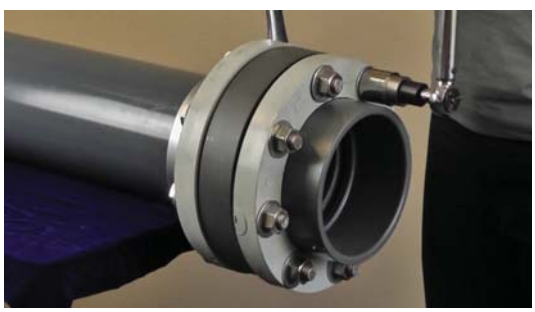


Install Mating Flange with Washers & Nuts



Mating Flange may be pre assembled with Elbow, Tee or other configuration as desired to allow immediate system pressurization after final assembly to Flanged Cut-in

Evenly Torque to Specification on Flange Ring using 180° Opposing Pattern



THERMOPLASTIC FLANGES
MOLDED & FABRICATED

TECHNICAL INFORMATION
WEIGHTS & DIMENSIONS

Contact Spears® for any information not found.

The information contained in this publication is based on current information and Product design at the time of publication and is subject to change without notification. Our ongoing commitment to product improvement may result in some variation. No representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or results to be obtained therefrom. For verification of technical data or additional information not contained herein, please contact Spears® Technical Services Department [West Coast: (818) 364-1611 — East Coast: (678) 985-1263].

GENERAL INFORMATION

Recommendations For Installers And Users

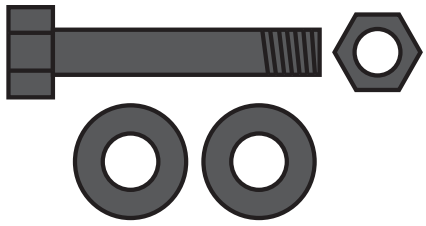
Plastic piping systems should be **ENGINEERED, INSTALLED**, and **OPERATED** in accordance with **ESTABLISHED DESIGN AND ENGINEERING STANDARDS AND PROCEDURES** for plastic piping systems. Suitability for the intended service application should be determined by the installer and /or user prior to installation of a plastic piping system. **PRIOR TO ASSEMBLY, all piping system components should be inspected for damage or irregularities. Mating components should be checked to assure that tolerances and engagements are compatible. Do not use any components that appear irregular or do not fit properly. Contact the appropriate manufacturer of the component product in question to determine usability .**

Solvent Weld Connections — Use quality solvent cements and primers formulated for the intended service application, pipe size and type of joint. While the pipe and fitting materials may be compatible with the intended medium, the solvent cement may not be. Consult the manufacturer for suitability of use. Read and follow the cement and primer manufacturers' applications and cure time instructions thoroughly. Be sure to use the correct size applicator.

Threaded Connections — Use a quality grade thread sealant. **WARNING: SOME PIPE JOINT COMPOUNDS OR PTFE PASTES MAY CONTAIN SUBSTANCES THAT COULD CAUSE STRESS CRACKING T O PLASTIC.** Spears® Manufacturing Company recommends the use of Spears® **Blue 75™** thread sealant which has been tested for compatibility with Spears® products. Please follow the sealant manufacturer's application/installation instructions. Choice of an appropriate thread sealant other than those listed above is at the discretion of the installer. 1 to 2 turns beyond **FINGER TIGHT** is generally all that is required to make a sound plastic thread connection. Unnecessary **OVERTIGHTENING** will cause **DAMAGE TO BOTH PIPE AND FITTING.**

"Lead Free" low lead certification – unless otherwise specified, all Spears® Thermoplastic Flanges specified here-in are certified by NSF International to ANSI/NSF® Standard 61, Annex G and is in compliance with California's Health & Safety Code Section 116825 (commonly known as AB1953) and Vermont Act 193. Weighted average lead content <=0.25%.

Bolt Kit Selection Guide



Bolt Hardware Kits Available
For Connection of 2-Spears® Flanges
Includes Bolts, Nuts & Flat Washers for Specified Flange Size

Order Gaskets & Bolt Kits Separately

- Pre-coated, Anti-seize Lubricated Bolts
- Available in Zinc Coated Steel, Type 316 Stainless Steel or Type 304 Stainless Steel

Flange Size	Bolts* Per Kit	Diameter (in.-TPI)	Length (in.)	Kit Part Number		
				Zinc	316 SS	304 SS
1/2 & 3/4	4	1/2 - 13	2	HK-005	HK1-005	HK2-005
1 & 1-1/4	4	1/2 - 13	2-1/4	HK-010	HK1-010	HK2-010
1-1/2	4	1/2 - 13	2-1/2	HK-015	HK1-015	HK2-015
2	4	5/8 - 11	3	HK-020	HK1-020	HK2-020
2-1/2	4	5/8 - 11	3-1/4	HK-025	HK1-025	HK2-025
3	4	5/8 - 11	3-1/2	HK-030	HK1-030	HK2-030
4	8	5/8 - 11	3-1/2	HK-040	HK1-040	HK2-040
5 & 6	8	3/4 - 10	4	HK-060	HK1-060	HK2-060
8	8	3/4 - 10	4-1/2	HK-080	HK1-080	HK2-080
10 & 12	12	7/8 - 9	5	HK-120	HK1-120	HK2-120

* Each Bolt Includes Nut & Two (2) Flat Washers

Bolt Torque

Recommended Bolt Torque is shown in **Table 1.** Threads should be clean and well lubricated. Actual field conditions may require variations in these recommendations. **CAUTION: UNNECESSARY OVER TORQUING WILL DAMAGE THE FLANGE.**

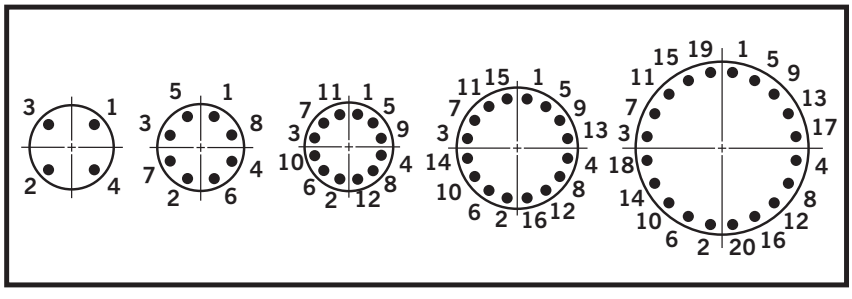
Table 1

Flange Size (in.)	Recommended Torque (ft. lbs.)
1/2 - 1-1/2	12
2 - 4	25
5	30
6 - 8	40
10	64
12	95
14 - 24	110

Torque Sequence

Bolt Torque sequence is shown Below in **Table 2.**

Table 2

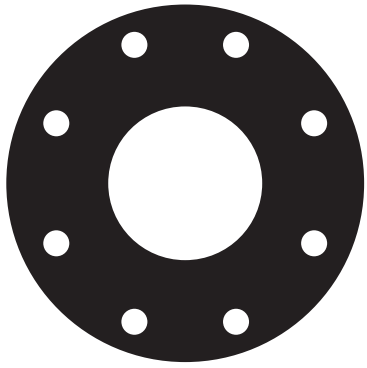


Gaskets

Full faced, 1/8" thick elastomer gaskets with a Shore "A" Durometer of approximately 70 is recommended.

Gasket Selection Guide

Following Gasket Numbers Available from Spears®



Order Gaskets & Bolt Kits Separately
- 1/8" Full-Face design with ANSI Class 150 Bolt Patterns
- Pressure rated to 150 psi @ 73°F
- Available in Buna-N, EPDM, or FKM

Flange Size	Bolts Per Kit	Gasket Part Number		
		Buna-N	EPDM	FKM
1/2	4	GK1-005	GK2-005	GK3-005
3/4	4	GK1-007	GK2-007	GK3-007
1	4	GK1-010	GK2-010	GK3-010
1-1/4	4	GK1-012	GK2-012	GK3-012
1-1/2	4	GK1-015	GK2-015	GK3-015
2	4	GK1-020	GK2-020	GK3-020
2-1/2	4	GK1-025	GK2-025	GK3-025
3	4	GK1-030	GK2-030	GK3-030
4	8	GK1-040	GK2-040	GK3-040
5	8	GK1-050	GK2-050	GK3-050
6	8	GK1-060	GK2-060	GK3-060
8	8	GK1-080	GK2-080	GK3-080
10	12	GK1-100	GK2-100	GK3-100
12	12	GK1-120	GK2-120	GK3-120

Flange Make-up

Once a flange is joined to pipe, the method for joining two flanges is as follows:

1. Piping runs joined to the flanges must be installed in a straight line position to the flange to avoid stress at the flange due to misalignment. Piping must also be secured and supported to prevent lateral movement which can create stress and damage the flange.
2. With gasket in place, align the bolt holes of the mating flanges by rotating the ring into position.
3. Insert all bolts, washers (two standard flat washers per bolt), and nuts.
4. Make sure the faces of the mating surfaces are flush against gasket prior to bolting down the flanges.
5. Tighten the nuts by hand until they are snug. Establish uniform pressure over the flange face by tightening the bolts in 5 ft.-lbs. increments according to the sequence shown in **Table 2** following a 180° opposing sequence.
6. Care must be taken to avoid "bending" the flange when joining a Spears® flange to a "raised face" flange, or a wafer-style valve. Do not use bolts to bring together improperly mated flanges.

Configuration Terminology

Multi-Bolt Pattern Ring — Bolt hole drilling accepts ANSI and Metric Flanges
Socket — Slip socket connection for solvent cement welding
Spigot — Pipe O.D. connection for solvent welding
Fipt — Female Iron Pipe Thread
SR Fipt — Spears® patented Special Reinforced (SR) plastic thread
IPS — Iron Pipe Size
PIP — Plastic Irrigation Pipe

Technical Information

Application

Molded CLASS 150 Flange fittings are coupling devices designed for joining IPS (Iron Pipe Size) plastic piping systems, where frequent disassembly may be required, and can be used as a transitional fitting for joining plastic to metal piping systems. Suitability of application is at the discretion of the user.

Pressure Rating

150 psi, water at 73°F.

Flange Types

One Piece — Available in socket configuration, sizes 1/2" through 8"; threaded and SR threaded (Special Reinforced) configuration sizes 1/2" through 4".

Van Stone Style — Two-piece design with rotating flange ring, available in socket configurations, sizes 1/2" through 16"; threaded configurations, sizes 1/2" through 4" and spigot configurations, sizes 1/2" through 12".

Blind — Closed ring design for capping off a mating flange, flanged fitting or flanged valve, available in sizes 1/2" through 12".

Materials

All injection molded flanges are produced from CPVC materials approved for potable water use by the National Sanitation Foundation (NSF®).

Glass-filled CPVC materials may be used in certain Van Stone Style flange rings and large diameter Blind flanges where additional reinforcement is deemed necessary.

Conformance Standards

Socket & Spigot — ASTM F 439 (CPVC).

Threads — ASTM F 1498.

Bolt Hole Pattern — ANSI B16.5; ASTM D 4024.

Material — ASTM D 1784 (CPVC Cell Classification 23447-B).

Weights & Dimensions

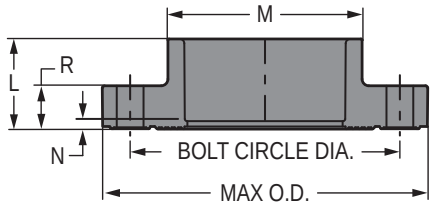
Specified minimum bolt lengths are based on the use of two Spears® Flanges, two standard flat washers, standard nut and 1/8" thick elastomer full face gasket. Mating with other brands or accessories may require variation. Bolts and gaskets are not supplied with flanges.

Dimension references:

L	=	Overall length of hub, ± 1/16 inch.
M	=	Outside diameter of socket hub, ± 1/16 inch.
N	=	(Laying Length) socket/spigot bottom to seal-ring face of flange, ± 1/16 inch.
R	=	Height (thickness) of flange ring, ± 1/16 inch.
Max O.D.	=	Outside diameter of ring, ± 1/16 inch.
Bolt Circle Diameter	=	ANSI B 16.5 Standard; ASTM D 4024, ± 1/16 inch.

Flange One Piece

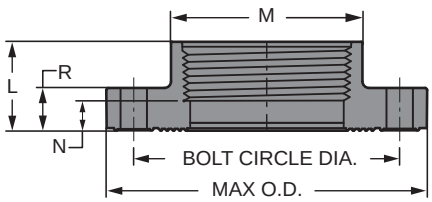
Socket



Part Number	Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)
851-005C	1/2	1-1/16	1-9/32	1/8	9/16	2-3/8	4	1/2	2	3-1/2	.24
851-007C	3/4	1-3/16	1-1/2	1/8	5/8	2-3/4	4	1/2	2	3-7/8	.31
851-010C	1	1-5/16	1-13/16	3/16	3/4	3-1/8	4	1/2	2-1/4	4-1/4	.47
851-012C	1-1/4	1-3/8	2-3/16	3/32	21/32	3-1/2	4	1/2	2-1/4	4-5/8	.45
851-015C	1-1/2	1-19/32	2-1/2	3/16	23/32	3-7/8	4	1/2	2-1/2	5-1/16	.61
851-020C	2	1-27/32	3	5/16	27/32	4-3/4	4	5/8	3	6	.95
851-025C	2-1/2	2-1/4	3-1/2	1/2	1	5-1/2	4	5/8	3-1/4	7	1.67
851-030C	3	2-5/16	4-9/32	3/8	1-1/16	6	4	5/8	3-1/4	7-1/2	1.81
851-040C	4	2-7/16	5-7/32	3/16	1-5/32	7-1/2	8	5/8	3-1/2	9-1/16	2.78
851-050C	5	3-1/4	6-3/8	1/4	1	8-1/2	8	3/4	3-3/4	10-1/8	3.17
851-060C	6	3-1/4	7-9/16	1/4	1-3/8	9-1/2	8	3/4	4	11	4.34
851-080C	8	4-17/32	9-3/4	1/2	1-7/16	11-11/16	8	3/4	4-1/2	13-5/8	8.02
851-100CF	10	9-7/8	11-15/16	4-5/8	1-3/8	14-1/4	12	7/8	4	16	19.27
851-120CF	12	10-11/16	14-1/8	4-7/16	1-3/8	17	12	7/8	5	19	30.67

Flange One Piece

Fipt



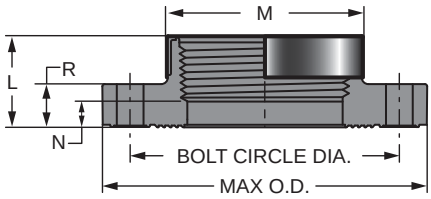
Part Number	Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)
852-005C	1/2	1-1/16	1-5/16	9/32	9/16	2-3/8	4	1/2	2	3-1/2	.22
852-007C	3/4	1-3/16	1-17/32	15/32	5/8	2-3/4	4	1/2	2	3-7/8	.32
852-010C	1	1-5/16	1-13/16	7/16	3/4	3-1/8	4	1/2	2-1/4	4-1/4	.48
852-012C	1-1/4	1-3/8	2-7/32	17/32	23/32	3-1/2	4	1/2	2-1/4	4-5/8	.46
852-015C	1-1/2	1-11/16	2-1/2	19/32	23/32	3-27/32	4	1/2	2-1/2	5-1/16	.64
852-020C	2	1-27/32	3	7/8	7/8	4-3/4	4	5/8	3	6	1.00
852-025C	2-1/2	2-1/4	3-1/2	15/16	1	5-1/2	4	5/8	3-1/4	7	1.41
852-030C	3	2-5/16	4-9/32	29/32	1-1/16	6	4	5/8	3-1/4	7-1/2	1.91
852-040C	4	2-1/16	5-7/16	5/16	1-1/4	7-1/2	8	5/8	3-1/2	9	2.86
852-050CF	5	6-5/8	6-1/8	5-1/4	1-5/16	8-1/2	8	3/4	3-3/4	10-1/8	5.51
852-060CF	6	6-15/16	7-1/4	5-1/2	1-5/16	9-1/2	8	3/4	4	11	7.69
852-080CF	8	8-9/16	9-7/16	6-15/16	1-7/16	11-3/4	8	3/4	4-1/2	13-1/2	13.92
852-100CF	10	7-3/8	11-3/4	5-1/2	1-3/8	14-1/4	12	7/8	5	16	20.72
852-120CF	12	7	13-15/16	5	1-3/8	17	12	7/8	4	19	22.59

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

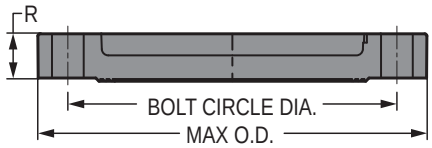
Special Reinforced Flange One Piece

SR Fipt



Part Number	Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)
852-005CSR	1/2	1-3/32	1-7/32	11/32	9/16	2-3/8	4	1/2	2	3-1/2	.22
852-007CSR	3/4	1-3/16	1-3/8	7/16	5/8	2-3/4	4	1/2	2	3-7/8	.30
852-010CSR	1	1-7/16	1-23/32	17/32	21/32	3-1/8	4	1/2	2-1/4	4-1/4	.39
852-012CSR	1-1/4	1-9/16	2-1/16	19/32	21/32	3-1/2	4	1/2	2-1/4	4-5/8	.52
852-015CSR	1-1/2	1-3/4	2-7/16	3/4	3/4	3-7/8	4	1/2	2-1/2	5	.67
852-020CSR	2	1-13/16	3-1/32	13/16	13/16	4-3/4	4	5/8	3	5-31/32	1.04
852-025CSR	2-1/2	2-1/8	3-19/32	3/8	1	5-1/2	4	5/8	3-1/4	7	1.69
852-030CSR	3	2-5/16	4-9/32	27/32	1-1/16	6	4	5/8	3-1/4	7-1/2	1.97
852-040CSR	4	2-1/2	5-1/4	1	1-5/32	7-1/2	8	5/8	3-1/2	9	2.89

BLIND FLANGE

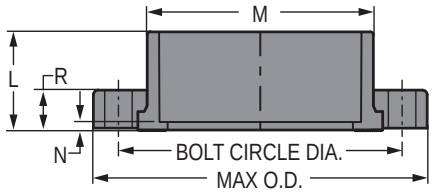


Part Number	Size	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max. O.D.	Approx. Wt. (Lbs.)
853-005C	1/2	17/32	2-3/8	4	1/2	2	3-17/32	.21
853-007C	3/4	5/8	2-3/4	4	1/2	2	3-7/8	.27
853-010C	1	3/4	3-1/8	4	1/2	2-1/4	4-1/4	.47
853-012C	1-1/4	23/32	3-1/2	4	1/2	2-1/4	4-5/8	.40
853-015C	1-1/2	23/32	3-27/32	4	1/2	2-1/2	5-1/16	.52
853-020C	2	27/32	4-3/4	4	5/8	3	5-31/32	.88
853-025C	2-1/2	1	5-1/2	4	5/8	3-1/4	7	1.63
853-030C	3	1-1/16	6	4	5/8	3-1/4	7-1/2	1.69
853-040C	4	1-5/32	7-1/2	8	5/8	3-1/2	9-1/16	2.98
853-060C	6	1-3/8	9-1/2	8	3/4	4	11	4.45
853-080C	8	1-7/16	11-3/4	8	3/4	4-1/2	13-1/2	7.20
853-100C	10	1-11/16	14-1/4	12	7/8	5	16	11.80
853-120C	12	1-11/16	17	12	7/8	5	19	17.20

CPVC Pipe Flange Dimensions & Information

Flange Van Stone Style

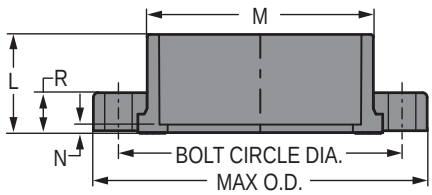
(Two Piece)
Socket



Part Number	Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)
854-005C	1/2	1-1/32	1-7/32	5/32	17/32	2-3/8	4	1/2	2	3-1/2	.20
854-007C	3/4	1-1/8	1-7/16	5/32	9/16	2-3/4	4	1/2	2	3-7/8	.27
854-010C	1	1-9/32	1-3/4	5/32	5/8	3-1/8	4	1/2	2-1/4	4-1/4	.37
854-012C	1-1/4	1-13/32	2-5/32	5/32	11/16	3-1/2	4	1/2	2-1/4	4-5/8	.45
854-015C	1-1/2	1-17/32	2-7/16	3/16	3/4	3-7/8	4	1/2	2-1/2	5	.60
854-020C	2	1-11/16	2-15/16	3/16	13/16	4-3/4	4	5/8	3	6	.91
854-025C	2-1/2	2	3-1/2	3/16	31/32	5-1/2	4	5/8	3-1/4	7	1.40
854-030C	3	2-1/8	4-1/4	1/4	1-1/16	6	4	5/8	3-1/4	7-1/2	1.70
854-040C	4	2-1/2	5-1/4	1/4	1-1/8	7-1/2	8	5/8	3-1/2	9	2.84
854-050C	5	3	6-1/4	3/8	1-1/8	8-1/2	8	3/4	3-3/4	10-1/8	3.60
854-060C	6	3-3/8	7-9/16	7/16	1-9/32	9-1/2	8	3/4	4	11	4.67
854-080C	8	4-3/8	9-5/16	9/32	1-3/8	11-3/4	8	3/4	4-1/2	13-1/2	7.06
854-100C	10	5-11/16	11-3/4	21/32	1-5/8	14-1/4	12	7/8	5	16	11.76
854-120C	12	7-1/4	13-3/4	5/8	1-1/2	17	12	7/8	5	19	18.50
854-140C	14	7-1/2	15-1/2	1/2	2	18-3/4	12	1	5-1/2	21	28.42
854-160C	16	8-3/4	17-3/4	3/4	2-3/8	21-1/4	16	1	6-1/2	23-1/2	24.81
854-180C	18	9	20	1/4	2-3/8	22-3/4	16	1-1/8	6-1/2	25	46.48

Flange Van Stone Style

with Plastic Solid Ring
(Two Piece)
Socket

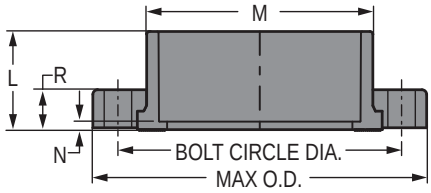


Part Number	Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)
S854-030C	3	2-1/8	4-1/4	1/4	1-1/16	6	4	5/8	3-1/4	7-1/2	1.70
S854-040C	4	2-1/2	5-1/4	1/4	1-1/8	7-1/2	8	5/8	1/2	9	2.84
S854-060C	6	3-3/8	7-9/16	7/16	1-9/32	9-1/2	8	3/4	4	11	4.67
S854-080C	8	4-3/8	9-5/16	3/8	1-3/8	11-3/4	8	3/4	4-1/2	13-1/2	7.06
S854-100C	10	5-11/16	11-3/4	11/16	1-5/8	14-1/4	12	7/8	5	16	11.76
S854-120C	12	7-1/4	13-3/4	5/8	1-3/4	17	12	7/8	5	19	19.13

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Flange Van Stone Style

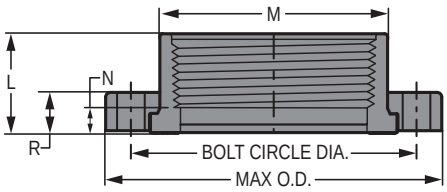
with Multi-Bolt Pattern Ring
(Two Piece)
Socket



Part Number	Size	L	M	N	R	Bolt Circle Dia.		No. of Bolt Holes	Bolt Size	Max O.D.	Approx. Wt. (Lbs.)
						Min	Max				
M854-020C	2	1-11/16	2-15/16	3/16	13/16	4-1/2	4-15/16	4	5/8	6	.93
M854-060C	6	3-3/8	7-9/16	7/16	1-9/32	9-7/32	9-1/2	8	3/4	11	5.09
M854-080C	8	4-3/8	9-5/16	3/8	1-3/8	11-1/2	11-3/4	8	3/4	13-1/2	7.21

Flange Van Stone Style

(Two Piece)
Fipt

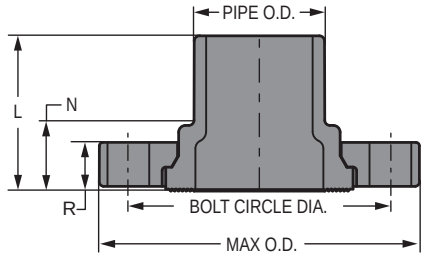


Part Number	Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max. O.D.	Approx. Wt. (Lbs.)
855-005C	1/2	1-1/32	1-7/32	9/32	17/32	2-3/8	4	1/2	2	3-1/2	.20
855-007C	3/4	1-5/32	1-3/8	13/32	9/16	2-3/4	4	1/2	2	3-7/8	.28
855-010C	1	1-1/4	1-3/4	5/16	5/8	3-1/8	4	1/2	2-1/4	4-1/4	.39
855-012C	1-1/4	1-3/8	2-1/8	13/32	11/16	3-1/2	4	1/2	2-1/4	4-5/8	.47
855-015C	1-1/2	1-15/32	2-7/16	13/32	3/4	3-7/8	4	1/2	2-1/2	5	.61
855-020C	2	1-9/16	2-31/32	1/2	13/16	4-3/4	4	5/8	3	6	.94
855-025C	2-1/2	2	3-9/16	7/16	1	5-1/2	4	5/8	3-1/4	7	1.50
855-030C	3	2-1/8	4-1/4	1/2	1-1/16	6	4	5/8	3-1/4	7-1/2	1.79
855-040C	4	2-1/16	5-1/4	3/8	1-1/4	7-1/2	8	5/8	3-1/2	9	2.78
855-060CF	6	6-3/8	7-3/16	4-15/16	1-1/4	9-1/2	8	3/4	4	11	7.69
855-080CF	8	8-1/8	9-5/16	6-7/16	1-1/2	11-3/4	8	3/4	4-1/2	13-1/2	13.92
855-100CF	10	10-3/8	11-9/16	8-9/16	1-11/16	14-1/4	12	7/8	5	16	20.72
855-120CF	12	11-13/16	13-3/4	9-3/4	1-5/8	17	12	7/8	5	19	34.00

Flange Van Stone Style

(Two Piece)

Spigot



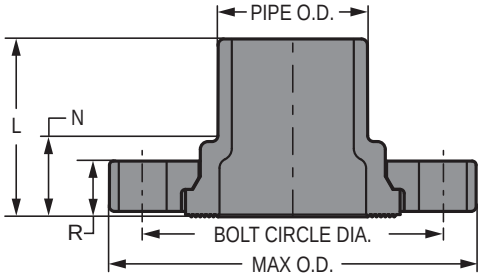
Part Number	Size	L	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max. O.D.	Approx. Wt. (Lbs.)
856-005C	1/2	1-3/4	29/32	17/32	2-3/8	4	1/2	2	3-1/2	.21
856-007C	3/4	1-15/16	31/32	9/16	2-3/4	4	1/2	2	3-7/8	.30
856-010C	1	2-3/16	1-1/32	5/8	3-1/8	4	1/2	2-1/4	4-1/4	.41
856-012C	1-1/4	2-11/32	1-3/32	11/16	3-1/2	4	1/2	2-1/4	4-5/8	.50
856-015C	1-1/2	2-5/8	1-9/32	3/4	3-7/8	4	1/2	2-1/2	5	.65
856-020C	2	2-7/8	1-11/32	13/16	4-3/4	4	5/8	3	6	1.00
856-025C	2-1/2	3-1/16	1-9/32	1	5-1/2	4	5/8	3-1/4	7	1.54
856-030C	3	3-3/8	1-7/16	1-1/16	6	4	5/8	3-1/4	7-1/2	1.88
856-040C	4	3-7/8	1-5/8	1-1/4	7-1/2	8	5/8	3-1/2	9	3.12
856-060C	6	4-3/4	1-25/32	1-9/32	9-1/2	8	3/4	4	11	4.79
856-080C	8	5-7/8	1-15/16	1-3/8	11-3/4	8	3/4	4-1/2	13-1/2	8.17
856-100C	10	8	2-1/4	1-5/8	14-1/4	12	7/8	5	16	16.09
856-120C	12	8-1/2	2-3/16	1-5/8	17	12	7/8	5	19	22.70

Flange Van Stone Style

with Multi-Bolt Pattern Ring

(Two Piece)

Spigot



Part Number	Size	L	N	R	Bolt Circle Dia.		No. of Bolt Holes	Bolt Size	Max. O.D.	Approx. Wt. (Lbs.)
					Min.	Max.				
M856-020C	2	2-7/8	1-11/32	13/16	4-1/2	4-15/16	4	5/8	6	1.00
M856-060C	6	4-3/4	1-25/32	1-9/32	9-7/32	9-1/2	8	3/4	11	5.21
M856-080C	8	5-7/8	1-15/16	1-3/8	11-1/2	11-3/4	8	3/4	13-1/2	8.32

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Technical Information

Application

Fabricated IPS and PIP Flange fittings are coupling devices designed for joining IPS (Iron Pipe Size) or PIP (Plastic Irrigation Pipe) plastic piping systems, where frequent disassembly may be required. These flanges can be used as transitional fittings for joining IPS-to-IPS, PIP-to-PIP, IPS-to-PIP, or plastic to metal piping systems. Suitability of application is at the discretion of the user.

Pressure Rating

All standard fabricated flanges are Van Stone Style (except blind flange) — two piece design with rotating flange ring.

Class 150 IPS Flanges (with steel ring): 150 psi, water at 73°F.

IPS Flanges 18" - 24" (with plastic ring): 50 psi, water at 73°F.

IPS Flanges, Class 300 Bolt Pattern (with plastic ring): 1/2" - 16" 150 psi, 18" - 24" 50 psi, water at 73°F.

Blind Flanges, 14" - 24": 50 psi, water at 73°F.

PIP Flanges, 6" - 16" (with plastic ring & molded IPS flanges w/PIP Adapters): 125 psi, water at 73°F

PIP Flanges, 18" - 24" (with steel ring): 125 psi, water at 73°F

Flange Types

Van Stone Style Class 150 IPS (with steel ring) — Fabricated PVC body with steel flange ring, available in sizes 18" through 24", slip socket and 14" through 24", spigot.

Van Stone Style IPS (with plastic ring) — Fabricated PVC body with PVC flange ring, available in sizes 18" through 24", slip socket and 14" through 24", spigot.

Van Stone Style PIP (with plastic ring) — PIP adapter fabricated to injection molded PVC Van Stone Style IPS flange, available in sizes 6" through 16", slip socket.

Van Stone Style PIP (with steel ring) — Fabricated PVC body with steel flange ring, available in sizes 14" through 24", slip socket.

Blind — Closed ring design for capping off a mating flange; fabricated PVC available in sizes 5" and 14" through 24".

Special Note On PIP Flange Sizes

In order to facilitate connections between IPS and PIP systems, all Plastic Irrigation Pipe flanges are fabricated with PIP sockets using standard IPS Flange Rings. These are indicated in dimension tables under "Size" as (nominal IPS flange size) x (actual PIP O.D.), such as: 6" x 6.140".

To better meet user needs, Spears® offers flanges for 15.300" O.D. PIP with either 14" or 16" IPS Flange Rings. In addition, both 18.360" and 18.701" O.D. PIP are offered with 18" IPS Flange Rings.

Materials

All fabricated flanges are produced from CPVC materials approved for potable water use by the National Sanitation Foundation (NSF®). Steel flange rings are carbon steel.

Conformance Standards

Materials — ASTM D 1784 (CPVC Cell Classification 23447-B).

Weights & Dimensions

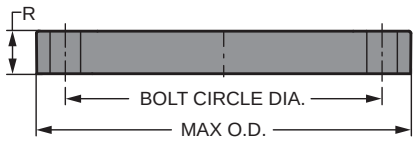
Specified minimum bolt lengths are based on the use of two Spears® Flanges, two standard flat washers, standard nut and 1/8" thick elastomer full face gasket. Mating with other brands or accessories may require variations.

Note: Bolts and gaskets are not supplied with flanges.

Dimension references:

L = Overall length of hub, ± 1/2 inch.
M = Outside diameter of socket hub, ± 1/4 inch.
N = (Laying Length) socket bottom to seal-ring face of flange, ± 1/2 inch.
R = Height (thickness) of flange ring, ± 1/16 inch.
Max O.D = Outside diameter of ring, ± 1/16 inch.
Bolt Circle Diameter = ANSI B16.5 Standard; ASTM D 4024, ± 1/16 inch.

Blind Flange

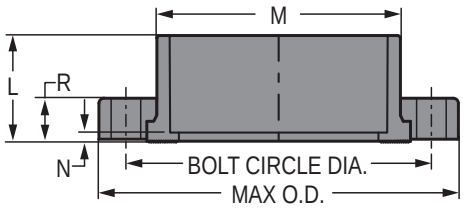


Part Number	Size	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max. O.D.	Approx. Wt. (Lbs.)
853-050CF	5	1	8-1/2	8	3/4	4-1/8	10-1/16	3.90
853-140CF	14	1-1/2	18-3/4	12	1	4-1/8	21	28.39
853-160CF	16	1-1/2	21-1/4	16	1	4-1/8	23-1/2	37.21
853-180CF	18	1-1/2	22-3/4	16	1-1/8	4-1/8	25	43.47
853-200CF	20	1-1/2	25	20	1-1/8	4-1/8	27-1/2	52.43
853-240CF	24	1-1/2	29-1/2	20	1-1/4	5-1/2	32	68.15

Flange Van Stone Style Class 300

(with Plastic Ring)

Socket

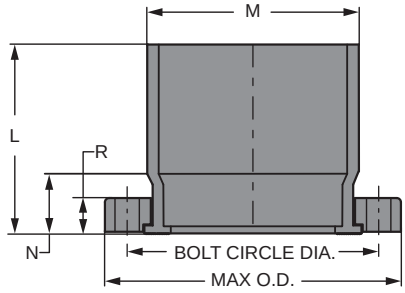


Part Number	Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.
854-005CL300C	1/2	1	1-3/16	3/16	1/2	2-5/8	4	1/2	2	3-3/4
854-007CL300C	3/4	1-1/8	1-3/8	3/16	1	3-1/4	4	5/8	3-1/2	4-5/8
854-010CL300C	1	1-1/4	1-3/4	3/16	1	3-1/2	4	5/8	3-1/2	4-7/8
854-012CL300C	1-1/4	1-3/8	2-1/8	1/8	1	3-7/8	4	5/8	3-1/2	5-1/4
854-015CL300C	1-1/2	1-1/2	2-7/16	3/16	1	4-1/2	4	5/8	3-1/2	6-1/8
854-020CL300C	2	1-11/16	2-15/16	3/16	1	5	8	5/8	3-1/2	6-1/2
854-025CL300C	2-1/2	2	3-9/16	1/4	1	5-7/8	8	3/4	3-1/2	7-1/2
854-030CL300C	3	2-1/8	4-1/4	1/4	1	6-5/8	8	3/4	3-1/2	8-1/4
854-040CL300C	4	2-1/2	5-1/4	1/4	1-1/2	7-7/8	8	3/4	4-1/2	10
854-060CL300C	6	3-7/16	7-9/16	3/8	1-1/2	10-5/8	12	3/4	4-1/2	12-1/2
854-080CL300C	8	4-3/8	9-3/8	5/16	1-1/2	13	12	7/8	4-1/2	15
854-100CL300C	10	5-11/16	11-3/4	5/8	1-1/2	15-1/4	16	1	4-1/2	17-1/2
854-120CL300C	12	7-5/16	13-13/16	9/16	1-1/2	17-3/4	16	1-1/8	4-1/2	20-1/2
854-140CL300C	14	7-9/16	15-9/16	9/16	2	20-1/4	20	1-1/8	5-1/2	23
854-160CL300C	16	8-9/16	17-3/4	9/16	2	22-1/2	20	1-1/4	6	25-1/2

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

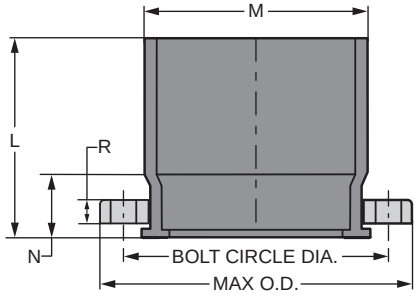
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg

Flange Van Stone Style IPS
(with Plastic Ring)
Socket



Part Number	Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)
854-180CFP	18	15	19-1/8	6	1-1/2	22-3/4	16	1-1/8	4-1/8	25	39.00
854-200CFP	20	16	21-3/16	6	1-1/2	25	20	1-1/8	5-1/2	27-1/2	60.20
854-240CFP	24	19	25-3/8	7	1-1/2	29-1/2	20	1-1/4	5-1/2	32	91.30

Flange Van Stone Style IPS
(with Steel Ring)
Socket



Part Number	Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max O.D.	Approx. Wt. (Lbs.)
854-180CFS	18	14	19-1/8	5	1/2	22-3/4	16	1-1/8	3	25	58.88
854-200CFS	20	15	21-3/16	5	1/2	25	20	1-1/8	3	27-9/16	69.46
854-240CFS	24	18	25-3/8	6	1/2	29-1/2	20	1-1/4	3	32	96.59

Special Reinforced (SR) & Metal Threaded Transition Fittings & Adapters

PRICING

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

TRANSITION FITTINGS OVERVIEW

Spears® Transition fittings are designed primarily for adapting plastic-to-metal systems. These fittings, especially the Special Reinforced (SR) Female Plastic Thread style, can also be used for superior strength in make-up of plastic threaded joints. Spears® offers a variety of transition adapter fittings specified below. All have standard ASTM socket sizes for IPS pipe and NPT threads, except for the Gasket Sealed style that uses a straight thread with elastomer seal. All other threads should be assembled with a quality grade thread sealant that is compatible with plastics.

Warning: Some pipe joint compounds or PTFE pastes may contain substances that could cause stress cracking in thermoplastic materials. Spears® recommends the use of Spears® **BLUE 75**™ thread sealant that has been tested for compatibility with Spears® products. Choice of any other appropriate thread sealant is at the discretion of the installer.

Special Reinforced (SR) Thread Fittings: This patented fitting features all-plastic female thread construction that reduces problems associated with over-tightening of female plastic pipe threads. The external reinforcing collar is not just an added reinforcement ring, this unique precompression design compensates for expansion forces generated from tapered pipe thread joint make-up. Radial stress is reduced in normal installations and contained in severe over-tightening situations. The all-plastic internal construction provides for the maximum in chemical and corrosion benefits. Its solid construction and reliability make the SR our best transition design for all applications.

Brass Thread Fitting: This patented fitting features a molded-in-place brass thread with external reinforcing collar as an integral part of each fitting for superior strength. An internal form-compressed O-ring seal compensates for expansion and contraction variations between materials. Excellent as a metal-to-plastic transition adapter fitting.

Male Brass Thread Fitting: Developed for Copper Tube Size (CTS) hot-and-cold water distribution systems, this male brass thread alternative is the only metal thread design of its type that has the metal component lined with plastic for improved fitting construction and minimal exposure. Excellent for transition to female metal threads in a CTS system.

Gasket Sealed Thread Fittings: Also developed for Copper Tube Size (CTS) hot-and-cold water distribution systems, this female threaded fitting features all plastic internal construction for maximum corrosion resistance. The fitting incorporates straight-threads for mechanical connection, while sealing is accomplished through an internal elastomer gasket or O-ring against the pipe face. No sealants are used.

APPROVALS

Except where otherwise specified, Spears® Transition Fittings/Materials are approved for use in potable water systems by NSF® International under ANSI/NSF® Standard 61, Drinking Water System Components - Health Effects.

CPVC Orange Fittings in this price schedule (4200 series part numbers) are approved by Underwriters Laboratories, FM Global, or LPCB for use in CPVC Fire Sprinkler Systems. When installed in these systems, installation must be made in accordance with Spears® publication FG-3, *FlameGuard® CPVC Fire Sprinkler Products Installation Manual*, and local codes. However, these fittings can also be used in many other types of installations. CPVC fittings may also be used on PVC pipe when installed using a quality CPVC solvent cement meeting the requirements of ASTM F 493, Standard Specification for Solvent Cements for Chlorinated Poly (Vinyl Chloride)(CPVC) Plastic Pipe and Fittings.

TECHNICAL INFORMATION

See Technical Information Sections for specific product (i.e., Schedule 80 PVC Technical Information, Copper Tube Size (CTS) Technical Information, FlameGuard® CPVC Fire Sprinkler Products Technical Information, etc.).

PVC White Special Reinforced (SR) Fittings

Female Adapter - Special Reinforced

Soc x SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
435-002SR	1/4	25	450	046	5.59
435-003SR	3/8	25	300	046	5.59
435-005SR	1/2	25	300	046	3.11
435-007SR	3/4	25	300	046	4.52
435-010SR	1	25	200	046	6.72
435-012SR	1-1/4	10	60	046	10.86
435-015SR	1-1/2	10	80	046	13.37
435-020SR	2	10	0	046	23.32
435-025SR	2-1/2	5	0	046	36.79
435-030SR	3	10	0	046	41.45
435-040SR	4	5	0	046	71.24

Tee - Special Reinforced

Soc x SR Fipt - Stainless Steel Collar

402-005SR	1/2	25	200	046	8.06
402-012SR	1-1/4	25	0	046	15.85

Tee - Special Reinforced Reducing

Soc x SR Fipt - Stainless Steel Collar

402-072SR	1/2X1/4	25	150	046	8.06
402-098SR	3/4X1/4	25	100	046	10.47
402-101SR	3/4X1/2	50	0	046	10.47
402-166SR	1-1/4X1/2	15	0	046	17.52
402-168SR	1-1/4X1	10	0	046	17.87
402-212SR	1-1/2X1-1/4	10	0	046	19.35
402-287SR	2-1/2X1/2	10	0	046	23.55
402-288SR	2-1/2X3/4	10	0	046	24.88
402-289SR	2-1/2X1	10	0	046	25.13
402-290SR	2-1/2X1-1/4	10	0	046	24.74
402-291SR	2-1/2X1-1/2	10	0	046	25.72
402-292SR	2-1/2X2	10	0	046	25.93
402-333SR	3X1/2	10	0	046	31.40
402-334SR	3X3/4	10	0	046	31.40
402-335SR	3X1	10	0	046	32.03
402-336SR	3X1-1/4	10	0	046	32.78
402-337SR	3X1-1/2	10	0	046	32.49
402-338SR	3X2	6	0	046	34.42
402-417SR	4X1	6	0	046	41.59
402-419SR	4X1-1/2	10	0	046	45.68
402-420SR	4X2	10	0	046	47.17
402-422SR	4X3	6	0	046	74.11

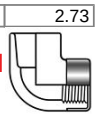
Tee - Special Reinforced Reducing

Soc x SR Fipt-Stainless Steel Collar x Soc

403-095SR	3/4X1/2X3/4	50	0	046	2.73

90° Ell - Special Reinforced & Reducing 90° Ell

Soc x SR Fipt - Stainless Steel Collar



407-005SR	1/2	50	400	046	7.15
407-007SR	3/4	75	0	046	9.18
407-010SR	1	50	0	046	9.28
407-012SR	1-1/4	25	0	046	11.22
407-131SR	1X3/4	50	0	046	3.94
407-168SR[1]	1-1/4X1	25	0	046	15.55
407-249SR	2X1	10	0	046	17.68
407-251SR	2X1-1/2	10	0	046	18.65

Sized with SR Adapter

Coupling - Special Reinforced

SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
430-005SR	1/2	25	300	046	3.69
430-007SR	3/4	25	300	046	5.25
430-010SR	1	25	200	046	5.61
430-012SR	1-1/4	10	120	046	6.99
430-015SR	1-1/2	10	60	046	15.47
430-020SR	2	10	0	046	16.22

Coupling - Special Reinforced Reducer

SR Fipt - Stainless Steel Collar

430-101SR	3/4X1/2	50	200	046	7.96

Female Spigot Adapter - Special Reinforced

Spig x SR Fipt - Stainless Steel Collar

478-005SR	1/2	50	600	046	4.08
478-007SR	3/4	25	300	046	4.81
478-010SR	1	50	0	046	7.41
478-012SR	1-1/4	25	0	046	11.80
478-015SR	1-1/2	25	0	046	14.15
478-020SR	2	15	0	046	23.55
478-030SR	3	5	0	046	43.28
478-040SR	4	5	0	046	66.85

Female Spigot Adapter - Special Reinforced Reducing

Spig x SR Fipt - Stainless Steel Collar

478-072SR	1/2X1/4	25	450	046	11.35
478-098SR	3/4X1/4	50	300	046	16.53
478-128SR	1X1/4	50	400	046	17.04

Spears® SR Series reinforced spigot adapters can be user-installed in a variety of socket type tees, elbows and reducer bushings for superior thread reinforcement demanding applications.

Female Adapter - Special Reinforced Reducing

Soc x SR Fipt - Stainless Steel Collar

435-072SR	1/2X1/4	50	600	046	4.06
435-074SR	1/2X3/4	50	400	046	4.52
435-101SR	3/4X1/2	50	400	046	4.52
435-102SR	3/4X1	50	0	046	6.72
435-130SR	1X1/2	50	0	046	6.72
435-131SR	1X3/4	25	200	046	6.72

Reducer Bushing - Special Reinforced Flush Style

Spig x SR Fipt - Stainless Steel Collar

438-128SR	1X1/4	25	150	046	3.31
438-166SR	1-1/4X1/2	25	100	046	6.04
438-207SR	1-1/2X1/4	25	100	046	8.43
438-209SR	1-1/2X1/2	25	100	046	8.43
438-210SR	1-1/2X3/4	25	100	046	8.43
438-247SR	2X1/2	10	80	046	10.32
438-248SR	2X3/4	10	80	046	10.32
438-249SR	2X1	10	80	046	10.32
438-334SR	3X3/4	10	0	046	40.38
438-335SR	3X1	10	0	046	40.38
438-336SR	3X1-1/4	10	0	046	40.38
438-337SR	3X1-1/2	10	0	046	40.38
438-420SR	4X2	6	0	046	62.07
438-421SR	4X2-1/2	6	0	046	69.86
438-528SR	6X2	5	0	046	71.48

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC White Special Reinforced (SR) Fittings

Reducer Bushing - Special Reinforced Flush Style (continued)
Spig x SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
438-530SR	6X3	5	0	046	64.35
438-532SR	6X4	5	0	046	71.48

Reducer Bushing - Special Reinforced Flush Style
Mipt X SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
439-209SR	1-1/2X1/2	25	300	046	8.74
439-248SR	2X3/4	10	60	046	7.91
439-249SR	2X1	10	120	046	12.83

Cap - Special Reinforced
SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
448-012SR	1-1/4	25	100	046	6.74

Union - Special Reinforced
Soc x SR Fipt with Buna O-ring Seal - Stainless Steel Collar

235 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
459-002SR	1/4	25	150	046	15.32
459-003SR	3/8	25	100	046	15.32
459-005SR	1/2	10	60	046	8.32
459-007SR	3/4	10	60	046	11.45

Union - Special Reinforced (continued)
Soc x SR Fipt with Buna O-ring Seal - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
459-010SR	1	10	40	046	15.24
459-012SR	1-1/4	5	20	046	29.09
459-015SR	1-1/2	5	0	046	36.01
459-020SR	2	5	0	046	55.46
459-030SR	3	5	0	046	130.95
459-040SR	4	4	0	046	150.35
459-060SR	6	1	0	046	334.11

Union - Special Reinforced
Soc x SR Fipt with EPDM O-ring Seal - Stainless Steel Collar

235 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
499-002SR	1/4	25	150	046	16.82
499-003SR	3/8	25	100	046	16.82
499-005SR	1/2	10	60	046	9.14
499-007SR	3/4	10	40	046	12.59
499-010SR	1	10	40	046	16.73
499-012SR	1-1/4	5	20	046	31.97
499-015SR	1-1/2	5	0	046	39.58
499-020SR	2	5	0	046	60.95
499-030SR	3	5	0	046	143.91
499-040SR	4	4	0	046	165.21
499-060SR	6	1	0	046	367.16

PVC White Brass Thread Fittings

Union - Brass Transition
Soc x Fipt with Brass Thread Insert & Buna-N O-ring Seal

235 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
459-010BR	1	10	0	046	64.74
459-012BR	1-1/4	5	20	046	108.76
459-015BR	1-1/2	5	0	046	143.89
459-020BR	2	5	0	046	191.94

Not intended to convey or dispense water for human consumption through drinking or cooking

Union - Brass Transition
Soc x Fipt with Brass Thread Insert & EPDM O-ring Seal

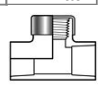
235 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
499-010BR	1	10	0	046	64.74
499-012BR	1-1/4	5	20	046	108.76
499-015BR	1-1/2	5	0	046	143.89
499-020BR	2	5	0	046	191.94

Not intended to convey or dispense water for human consumption through drinking or cooking

PVC Gray Special Reinforced (SR) Fittings

Tee - Special Reinforced
Soc x SR Fipt - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
802-005SR	1/2	25	200	086	8.06
802-007SR	3/4	15	120	086	11.40
802-010SR	1	15	0	086	13.39
802-012SR	1-1/4	25	0	086	15.93
802-015SR	1-1/2	10	0	086	16.83
802-020SR	2	10	0	086	32.93
802-030SR	3	5	0	086	71.16
802-040SR	4	5	0	086	133.45

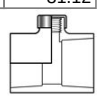
Tee - Special Reinforced
SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
805-002SR	1/4	25	150	086	9.38

Tee - Special Reinforced (continued)
SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
805-003SR	3/8	25	150	086	9.38
805-005SR	1/2	25	150	086	9.68
805-007SR	3/4	25	100	086	10.64
805-010SR	1	15	0	086	25.29
805-015SR	1-1/2	10	0	086	29.60
805-020SR	2	10	0	086	31.12

Tee - Special Reinforced Reducing
Soc x SR Fipt - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
802-072SR	1/2X1/4	25	150	086	8.06
802-098SR	3/4X1/4	25	100	086	10.47
802-101SR	3/4X1/2	50	0	086	10.47
802-128SR[1]	1X1/4	10	80	086	24.79

Made in the U.S.A.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Gray Special Reinforced (SR) Fittings

Tee - Special Reinforced Reducing (continued)

Soc x SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
802-130SR	1X1/2	50	0	086	12.92
802-131SR	1X3/4	15	0	086	24.79
802-164SR[1]	1-1/4X1/4	5	0	086	26.43
802-166SR	1-1/4X1/2	25	0	086	17.52
802-168SR	1-1/4X1	10	0	086	17.87
802-207SR[1]	1-1/2X1/4	10	0	086	30.84
802-211SR	1-1/2X1	10	0	086	19.35
802-212SR	1-1/2X1-1/4	10	0	086	19.35
802-245SR[1]	2X1/4	10	0	086	35.62
802-247SR	2X1/2	10	0	086	35.62
802-248SR	2X3/4	10	0	086	35.62
802-287SR	2-1/2X1/2	10	0	086	26.25
802-331SR[1]	3X1/4	5	0	086	68.00
802-333SR[1]	3X1/2	5	0	086	69.97
802-413SR[1]	4X1/4	5	0	086	93.64
802-415SR[1]	4X1/2	5	0	086	101.77

[1] Sized with Bushing

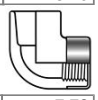
Tee - Special Reinforced Reducing

Soc x SR Fipt - Stainless Steel Collar x Soc

(See also Gauge & Instrument Fittings for additional configurations)

803-095SR	3/4X1/2X3/4	15	0	086	13.19

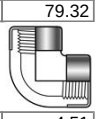
90° Ell - Special Reinforced



Soc x SR Fipt - Stainless Steel Collar

807-005SR	1/2	20	240	086	7.72
807-007SR	3/4	75	0	086	9.18
807-010SR	1	50	0	086	9.28
807-012SR	1-1/4	25	0	086	12.47
807-015SR	1-1/2	10	0	086	15.41
807-020SR	2	10	0	086	17.68
807-030SR	3	5	0	086	44.89
807-040SR	4	5	0	086	79.32

90° Ell - Special Reinforced



SR Fipt - Stainless Steel Collar

808-003SR	3/8	25	150	086	4.51
808-005SR	1/2	20	120	086	4.51
808-007SR	3/4	20	120	086	5.67
808-010SR	1	50	0	086	6.60
808-012SR	1-1/4	25	0	086	7.05
808-015SR	1-1/2	10	0	086	11.00
808-020SR	2	10	0	086	12.39

90° Ell - Special Reinforced Reducing

Soc x SR Fipt - Stainless Steel Collar

807-101SR	3/4X1/2	50	0	086	9.16
807-130SR	1X1/2	50	0	086	10.28

45° Ell - Special Reinforced

SR Fipt - Stainless Steel Collar

819-007SR	3/4	10	120	086	7.76

Coupling - Special Reinforced

SR Fipt - Stainless Steel Collar

830-005SR	1/2	25	150	086	3.69
830-007SR	3/4	25	150	086	5.25
830-010SR	1	25	200	086	5.61

Coupling - Special Reinforced (continued)

SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
830-012SR	1-1/4	10	120	086	6.99
830-015SR	1-1/2	10	80	086	15.47
830-020SR	2	10	0	086	16.22

Coupling - Special Reinforced Reducer

SR Fipt - Stainless Steel Collar

830-101SR	3/4X1/2	50	200	086	4.78
830-130SR	1X1/2	50	0	086	7.09
830-131SR	1X3/4	25	200	086	7.09
830-168SR	1-1/4X1	25	0	086	15.22
830-210SR	1-1/2X3/4	25	0	086	22.59
830-211SR	1-1/2X1	10	80	086	22.59
830-212SR	1-1/2X1-1/4	10	80	086	22.59
830-249SR	2X1	25	0	086	29.94
830-251SR	2X1-1/2	10	0	086	29.94

Female Adapter - Special Reinforced

Soc x SR Fipt - Stainless Steel Collar

835-002SR	1/4	25	450	086	5.59
835-003SR	3/8	25	300	086	5.59
835-005SR	1/2	25	300	086	3.11
835-007SR	3/4	25	300	086	4.52
835-010SR	1	25	200	086	6.72
835-012SR	1-1/4	10	60	086	10.86
835-015SR	1-1/2	10	80	086	13.37
835-020SR	2	10	0	086	23.32
835-025SR	2-1/2	5	0	086	36.79
835-030SR	3	15	0	086	41.45
835-040SR	4	5	0	086	71.24
835-060SR	6	6	0	086	92.56

Female Adapter - Encapsulated Special Reinforced

Soc x ESR Fipt

835-002ESR	1/4	25	450	086	8.09
835-003ESR	3/8	25	300	086	8.09
835-005ESR	1/2	25	300	086	5.02
835-007ESR	3/4	25	300	086	7.41
835-010ESR	1	25	200	086	9.81
835-012ESR	1-1/4	10	80	086	15.83
835-015ESR	1-1/2	10	80	086	22.87
835-020ESR	2	10	0	086	34.00

Female Spigot Adapter - Special Reinforced, Spigot

Spig x SR Fipt - Stainless Steel Collar

878-005SR	1/2	50	600	086	4.08
878-007SR	3/4	25	300	086	4.81
878-010SR	1	50	0	086	7.41
878-012SR	1-1/4	25	0	086	11.80
878-015SR	1-1/2	25	0	086	14.15
878-020SR	2	15	0	086	23.55
878-030SR	3	5	0	086	43.28
878-040SR	4	5	0	086	73.48

Female Spigot Adapter - Encapsulated Special Reinforced, Spigot

Spig x ESR Fipt

878-005ESR	1/2	50	600	086	5.57
878-007ESR	3/4	25	300	086	7.67
878-010ESR	1	50	0	086	10.53
878-012ESR	1-1/4	25	0	086	16.20

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

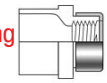
PVC Gray Special Reinforced (SR) Fittings

Female Spigot Adapter - Encapsulated Special Reinforced, Spigot (continued)

Spig x ESR Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
878-015ESR	1-1/2	25	0	086	23.00
878-020ESR	2	15	0	086	34.66

Female Adapter - Special Reinforced Reducing



Soc x SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
835-074SR	1/2X3/4	50	400	086	4.52
835-101SR	3/4X1/2	50	400	086	4.52
835-102SR	3/4X1	50	0	086	6.72
835-130SR	1X1/2	50	0	086	6.72
835-131SR	1X3/4	25	200	086	6.72

Female Spigot Adapter - Special Reinforced Reducing

Spig x SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
878-072SR	1/2X1/4	25	450	086	11.35
878-098SR	3/4X1/4	50	400	086	15.64
878-128SR	1X1/4	50	400	086	16.13

Male Adapter - Internal Reinforced

R Mipt x Soc - Stainless Steel Sleeve

NSF Certified Lead Free

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
836-005R	1/2	25	150	086	3.84
836-007R	3/4	25	300	086	4.21
836-010R	1	10	60	086	7.38

Reducer Bushing - Special Reinforced

Mipt x SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
839-128SR	1X1/4	25	150	086	5.98
839-209SR	1-1/2X1/2	25	300	086	8.74
839-210SR	1-1/2X3/4	25	300	086	8.74
839-247SR	2X1/2	10	60	086	12.83
839-248SR	2X3/4	10	60	086	12.83
839-249SR	2X1	10	120	086	12.83
839-420SR	4X2	6	0	086	48.59

Special Reinforced Reducer Bushing Flush Style

Spig x SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
838-128SR	1X1/4	25	150	086	3.31
838-166SR	1-1/4X1/2	25	100	086	6.04
838-207SR	1-1/2X1/4	25	200	086	8.43
838-209SR	1-1/2X1/2	10	60	086	8.43
838-210SR	1-1/2X3/4	25	200	086	8.43
838-247SR	2X1/2	10	80	086	10.32
838-248SR	2X3/4	10	80	086	10.32
838-249SR	2X1	10	80	086	10.32
838-334SR	3X3/4	10	0	086	40.38
838-335SR	3X1	10	0	086	40.38
838-336SR	3X1-1/4	10	0	086	40.38
838-337SR	3X1-1/2	10	0	086	40.38
838-528SR	6X2	5	0	086	71.48
838-530SR	6X3	5	0	086	64.35
838-532SR	6X4	5	0	086	71.48

Cap - Special Reinforced

SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
848-002SR	1/4	25	500	086	4.03
848-003SR	3/8	25	450	086	4.03

Cap - Special Reinforced (continued)

SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
848-005SR	1/2	50	300	086	4.41
848-007SR	3/4	25	300	086	5.65
848-030SR	3	5	0	086	34.84

Union 2000 - Special Reinforced

Soc x SR Fipt with EPDM O-ring Seal - Stainless Steel Collar

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8099-005SR	1/2	20	160	086	8.00
8099-007SR	3/4	20	80	086	11.40
8099-010SR	1	15	90	086	14.71
8099-012SR	1-1/4	10	0	086	25.58
8099-015SR	1-1/2	10	0	086	33.15
8099-020SR	2	5	0	086	53.35
8099-025SR	2-1/2	5	0	086	114.12
8099-030SR	3	5	0	086	127.04
8099-040SR	4	4	0	086	144.99
8099-060SR	6	1	0	086	322.21

Union 2000 - Special Reinforced

Soc x SR Fipt with FKM O-ring Seal - Stainless Steel Collar

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8059-005SR	1/2	20	120	086	8.32
8059-007SR	3/4	20	80	086	11.45
8059-010SR	1	15	90	086	14.88
8059-012SR	1-1/4	10	0	086	28.44
8059-015SR	1-1/2	10	0	086	35.09
8059-020SR	2	5	0	086	53.59
8059-025SR	2-1/2	5	0	086	115.19
8059-030SR	3	5	0	086	130.95
8059-040SR	4	4	0	086	150.35
8059-060SR	6	1	0	086	334.11

Union 2000 - Special Reinforced

SR Fipt with EPDM O-ring Seal - Stainless Steel Collar

235 psi Maximum Internal Pressure rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8098-005SR	1/2	20	120	086	8.43
8098-007SR	3/4	20	80	086	11.48
8098-010SR	1	15	90	086	15.20
8098-012SR	1-1/4	10	0	086	28.26
8098-015SR	1-1/2	10	0	086	35.55
8098-020SR	2	5	0	086	55.86
8098-025SR	2-1/2	5	0	086	112.75
8098-030SR	3	5	0	086	132.97
8098-040SR	4	4	0	086	152.65
8098-060SR	6	1	0	086	339.26

Union 2000 - Special Reinforced

SR Fipt with FKM O-ring Seal - Stainless Steel Collar

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8058-005SR	1/2	20	120	086	8.56
8058-007SR	3/4	20	80	086	11.59
8058-010SR	1	15	90	086	15.51
8058-012SR	1-1/4	10	0	086	29.54
8058-015SR	1-1/2	10	0	086	36.35
8058-020SR	2	5	0	086	56.44
8058-025SR	2-1/2	5	0	086	118.02
8058-030SR	3	5	0	086	134.25
8058-040SR	4	4	0	086	158.04
8058-060SR	6	1	0	086	351.19

PVC Gray Special Reinforced (SR) Fittings

Union (Old Style) - Special Reinforced

Soc x SR Fipt with EPDM O-ring Seal - Stainless Steel Collar

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
899-002SR	1/4	25	150	086	15.11
899-003SR	3/8	25	100	086	15.11
899-005SR	1/2	10	60	086	8.00
899-007SR	3/4	10	40	086	11.40
899-010SR	1	10	40	086	14.71
899-012SR	1-1/4	5	20	086	25.58
899-015SR	1-1/2	5	0	086	33.15
899-020SR	2	5	0	086	53.35
899-030SR	3	5	0	086	127.04
899-040SR	4	4	0	086	144.99

Union (Old Style) - Special Reinforced

Soc x SR Fipt with FKM O-ring Seal - Stainless Steel Collar

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
859-005SR	1/2	10	60	086	8.32
859-007SR	3/4	10	40	086	11.45
859-010SR	1	10	40	086	14.88
859-012SR	1-1/4	5	20	086	28.44
859-015SR	1-1/2	5	0	086	35.09
859-020SR	2	5	0	086	53.59
859-030SR	3	5	0	086	130.95
859-040SR	4	4	0	086	150.35

Flange - Special Reinforced One Piece

SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
852-005SR	1/2	25	0	086	11.91
852-007SR	3/4	25	0	086	13.99
852-010SR	1	15	0	086	15.29
852-012SR	1-1/4	15	0	086	21.07
852-015SR	1-1/2	15	0	086	23.06
852-020SR	2	10	0	086	23.62
852-025SR	2-1/2	10	0	086	54.09
852-030SR	3	10	0	086	55.69
852-040SR	4	5	0	086	104.69

Tank Adapters, PVC New Style Special Reinforced (SR) Threaded with Neoprene Gaskets

Soc x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8171-002SR	1/4	25	150	100	35.58
8171-003SR	3/8	25	200	100	35.58
8171-005SR	1/2	25	0	100	35.58
8171-007SR	3/4	25	0	100	41.22
8171-010SR	1	25	0	100	46.42
8171-012SR	1-1/4	20	0	100	57.06
8171-015SR	1-1/2	20	0	100	65.49
8171-020SR	2	15	0	100	93.86
8171-025SR	2-1/2	4	0	100	151.13
8171-030SR	3	4	0	100	179.89
8171-040SR	4	2	0	100	332.76
8171-060SR	6	1	0	100	622.77

Tank Adapters, PVC New Style Special Reinforced (SR) Threaded with EPDM Gaskets

Soc x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8171E-002SR	1/4	25	150	100	36.83

Tank Adapters, PVC New Style Special Reinforced (SR) Threaded with EPDM Gaskets (continued)

Soc x SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8171E-003SR	3/8	25	200	100	36.83
8171E-005SR	1/2	25	0	100	36.83
8171E-007SR	3/4	25	0	100	42.00
8171E-010SR	1	25	0	100	51.06
8171E-012SR	1-1/4	20	0	100	61.86
8171E-015SR	1-1/2	20	0	100	70.31
8171E-020SR	2	15	0	100	100.36
8171E-025SR	2-1/2	4	0	100	156.03
8171E-030SR	3	4	0	100	185.76
8171E-040SR	4	2	0	100	340.58
8171E-060SR	6	1	0	100	644.19

Tank Adapters, PVC New Style Special Reinforced (SR) Threaded with FKM Gaskets

Soc x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8171V-002SR	1/4	25	150	100	59.79
8171V-003SR	3/8	25	200	100	59.79
8171V-005SR	1/2	25	0	100	59.79
8171V-007SR	3/4	25	0	100	65.61
8171V-010SR	1	25	0	100	80.87
8171V-012SR	1-1/4	20	0	100	90.56
8171V-015SR	1-1/2	20	0	100	102.08
8171V-020SR	2	15	0	100	156.33
8171V-025SR	2-1/2	4	0	100	238.00
8171V-030SR	3	4	0	100	283.32
8171V-040SR	4	2	0	100	680.71
8171V-060SR	6	2	0	100	1206.42

Tank Adapters, PVC New Style Special Reinforced (SR) Threaded with Neoprene Gaskets

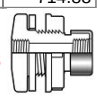
Fipt x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8172-002SR	1/4	25	150	100	47.57
8172-003SR	3/8	25	200	100	47.57
8172-005SR	1/2	25	0	100	47.57
8172-007SR	3/4	25	0	100	52.66
8172-010SR	1	25	0	100	58.24
8172-012SR	1-1/4	20	0	100	78.43
8172-015SR	1-1/2	20	0	100	88.39
8172-020SR	2	15	0	100	114.53
8172-025SR	2-1/2	4	0	100	174.37
8172-030SR	3	4	0	100	207.59
8172-040SR	4	2	0	100	369.57
8172-060SR	6	1	0	100	714.88

Tank Adapters, PVC New Style Special Reinforced (SR) Threaded with EPDM Gaskets

Fipt x SR Fipt - Stainless Steel Collar



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8172E-002SR	1/4	25	150	100	48.94
8172E-003SR	3/8	25	200	100	48.94
8172E-005SR	1/2	25	0	100	48.94
8172E-007SR	3/4	25	0	100	53.65
8172E-010SR	1	25	0	100	64.19
8172E-012SR	1-1/4	20	0	100	85.21
8172E-015SR	1-1/2	20	0	100	95.06
8172E-020SR	2	15	0	100	122.60
8172E-025SR	2-1/2	4	0	100	180.17
8172E-030SR	3	4	0	100	214.46
8172E-040SR	4	2	0	100	378.38
8172E-060SR	6	1	0	100	739.66

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Gray Special Reinforced (SR) Fittings & PVC Gray Brass Thread Fittings

PVC Gray Special Reinforced (SR) Fittings

Tank Adapters, PVC New Style Special Reinforced (SR) Threaded with FKM Gaskets

Fipt x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8172V-002SR	1/4	25	150	100	72.79
8172V-003SR	3/8	25	200	100	72.79
8172V-005SR	1/2	25	0	100	72.79
8172V-007SR	3/4	25	0	100	78.15
8172V-010SR	1	25	0	100	89.78
8172V-012SR	1-1/4	20	0	100	103.21
8172V-015SR	1-1/2	20	0	100	120.48
8172V-020SR	2	15	0	100	175.36
8172V-025SR	2-1/2	4	0	100	257.49
8172V-030SR	3	4	0	100	306.62
8172V-040SR	4	2	0	100	714.88
8172V-060SR	6	2	0	100	1349.89

PVC Elastomer Expansion Joint

with Neoprene Bellows SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
EJ01-007SR	3/4	10	0	085	200.62

PVC Elastomer Expansion Joint (continued)

with Neoprene Bellows SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
EJ01-010SR	1	10	0	085	228.47
EJ01-012SR	1-1/4	15	0	085	248.49
EJ01-015SR	1-1/2	10	0	085	317.23
EJ01-020SR	2	8	0	085	381.13
EJ01-025SR	2-1/2	4	0	085	555.41
EJ01-030SR	3	2	0	085	746.94

PVC Elastomer Expansion Joint

with EPDM Bellows SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
EJ21-007SR	3/4	10	0	085	204.69
EJ21-010SR	1	10	0	085	233.14
EJ21-012SR	1-1/4	15	0	085	253.59
EJ21-015SR	1-1/2	10	0	085	323.68
EJ21-020SR	2	8	0	085	388.92
EJ21-025SR	2-1/2	4	0	085	563.59
EJ21-030SR	3	2	0	085	762.18

PVC Gray Brass Thread Fittings

Tee - Brass Transition

Soc x Fipt With Brass Thread Insert

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
802-005BR	1/2	20	120	086	32.92
802-007BR	3/4	20	80	086	65.97

Not intended to convey or dispense water for human consumption through drinking or cooking

Tee - Brass Transition Reducing

Soc x Fipt With Brass Thread Insert

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
802-072BR	1/2X1/4	20	120	086	35.48
802-101BR	3/4X1/2	50	0	086	41.08

Not intended to convey or dispense water for human consumption through drinking or cooking

90° Ell - Brass Transition

Soc x Fipt With Brass Thread Insert

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
807-005BR	1/2	20	240	086	28.92
807-007BR	3/4	20	160	086	51.19

Not intended to convey or dispense water for human consumption through drinking or cooking

90° Ell - Brass Transition Reducing

Soc x Fipt With Brass Thread Insert

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
807-101BR	3/4X1/2	20	120	086	36.09

Not intended to convey or dispense water for human consumption through drinking or cooking

Female Adapter - Brass Transition

Soc x Fipt With Brass Thread Insert

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
835-005BR	1/2	25	150	086	24.97
835-007BR	3/4	15	90	086	35.86
835-010BR	1	15	90	086	61.80

Female Adapter - Brass Transition (continued)

Soc x Fipt With Brass Thread Insert

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
835-012BR	1-1/4	15	60	086	101.77
835-015BR	1-1/2	10	40	086	133.69
835-020BR	2	8	32	086	165.59

Not intended to convey or dispense water for human consumption through drinking or cooking

Female Spigot Adapter, - Brass Transition

Spig x Fipt With Brass Thread Insert

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
878-005BR	1/2	25	150	086	21.00
878-010BR	1	15	90	086	66.81

Not intended to convey or dispense water for human consumption through drinking or cooking

Female Adapter - Brass Transition Reducing

Soc x Fipt With Brass Thread Insert

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
835-101BR	3/4X1/2	50	0	086	37.07

Not intended to convey or dispense water for human consumption through drinking or cooking

Female Adapter - Stainless Steel Transition

Soc x Fipt With 316 Stainless Steel Thread Insert

NSF Certified Lead Free

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
835-005SS	1/2	25	150	086	48.93
835-007SS	3/4	15	90	086	70.32
835-010SS	1	15	90	086	119.65
835-012SS	1-1/4	15	60	086	199.83
835-015SS	1-1/2	10	40	086	261.04
835-020SS	2	8	32	086	334.87

Made in the U.S.A.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Gray Brass Thread Fittings & CPVC Gray Special Reinforced (SR) Fittings

PVC Gray Brass Thread Fittings

Male Adapter - PVC Lined Brass Transiton

Brass Mipt x Socket

NSF Certified Lead Free

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
836-005BR	1/2	40	160	086	27.48
836-007BR	3/4	40	160	086	41.44
836-010BR	1	10	60	086	67.39
836-012BR	1-1/4	10	60	086	113.52
836-015BR	1-1/2	10	40	086	150.63
836-020BR	2	8	32	086	187.13

Union - Brass Transition

Soc x Fipt with Brass Thread Insert & FKM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
859-007BR	3/4	10	40	086	53.19
859-010BR	1	10	0	086	65.64
859-012BR	1-1/4	5	20	086	113.29

Union - Brass Transition (continued)

Soc x Fipt with Brass Thread Insert & FKM O-ring Seal

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
859-015BR	1-1/2	5	0	086	149.94
859-020BR	2	5	0	086	199.26

Not intended to convey or dispense water for human consumption through drinking or cooking

Union - Brass Transition

Soc x Fipt with Brass Thread Insert & EPDM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
899-007BR	3/4	10	60	086	47.96
899-010BR	1	10	0	086	64.68
899-012BR	1-1/4	5	20	086	108.77
899-015BR	1-1/2	5	0	086	143.96
899-020BR	2	5	0	086	191.89

Not intended to convey or dispense water for human consumption through drinking or cooking

CPVC Gray Special Reinforced (SR) Fittings

Tee - Special Reinforced

Soc x SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
802-005CSR	1/2	50	0	096	19.67
802-007CSR	3/4	15	120	096	28.75
802-010CSR	1	15	0	096	36.17
802-012CSR	1-1/4	15	0	096	41.96
802-015CSR	1-1/2	10	0	096	41.96
802-020CSR	2	10	0	096	68.59
802-030CSR	3	5	0	096	98.78
802-040CSR	4	5	0	096	186.09

Tee - Special Reinforced

SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
805-002CSR	1/4	20	160	096	17.60
805-003CSR	3/8	25	150	096	17.60
805-005CSR	1/2	25	150	096	23.55
805-007CSR	3/4	25	100	096	26.98
805-010CSR	1	15	0	096	40.29
805-015CSR	1-1/2	10	0	096	42.78
805-020CSR	2	10	0	096	50.94

Tee - Special Reinforced Reducing

Soc x SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
802-072CSR	1/2X1/4	25	200	096	19.67
802-098CSR	3/4X1/4	25	100	096	26.29
802-101CSR	3/4X1/2	50	0	096	26.29
802-128CSR[1]	1X1/4	15	0	096	40.60
802-130CSR	1X1/2	50	0	096	16.06
802-131CSR	1X3/4	15	0	096	40.60
802-164CSR[1]	1-1/4X1/4	5	0	096	53.99
802-166CSR	1-1/4X1/2	15	0	096	42.77
802-168CSR	1-1/4X1	10	0	096	43.64
802-207CSR[1]	1-1/2X1/4	15	0	096	77.31
802-211CSR	1-1/2X1	10	0	096	51.24
802-212CSR	1-1/2X1-1/4	10	0	096	51.24
802-245CSR[1]	2X1/4	10	0	096	88.80

Tee - Special Reinforced Reducing (continued)

Soc x SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
802-247CSR	2X1/2	10	0	096	79.93
802-248CSR	2X3/4	10	0	096	88.80
802-287CSR	2-1/2X1/2	10	0	096	61.07
802-331CSR[1]	3X1/4	5	0	096	169.62
802-413CSR[1]	4X1/4	5	0	096	184.06

[1] Sized with Bushing

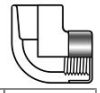
Tee - Special Reinforced Reducing

Soc x SR Fipt - Stainless Steel Collar x Soc

(See also Gauge & Instrument Fittings for additional configurations)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
803-095CSR	3/4X1/2X3/4	15	0	096	16.20

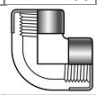
90° Ell - Special Reinforced



Soc x SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
807-005CSR	1/2	20	240	096	9.55
807-007CSR	3/4	75	0	096	11.22
807-010CSR	1	50	0	096	13.51
807-012CSR	1-1/4	25	0	096	27.89
807-015CSR	1-1/2	10	0	096	33.53
807-020CSR	2	10	0	096	41.95

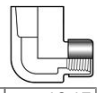
90° Ell - Special Reinforced



SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
808-003CSR	3/8	25	150	096	5.77
808-005CSR	1/2	20	120	096	5.77
808-007CSR	3/4	20	160	096	8.45
808-010CSR	1	50	0	096	10.83
808-012CSR	1-1/4	25	0	096	20.84
808-015CSR	1-1/2	10	0	096	24.54
808-020CSR	2	10	0	096	32.87

90° Ell - Special Reinforced Reducing



Soc x SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
807-101CSR	3/4X1/2	50	0	096	12.17
807-130CSR	1X1/2	50	0	096	13.12

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CPVC Gray Special Reinforced (SR) Fittings

45° Ell - Special Reinforced
SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
819-007CSR	3/4	10	120	096	13.19

Coupling - Special Reinforced
SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
830-005CSR	1/2	25	300	096	9.31
830-007CSR	3/4	25	300	096	15.04
830-010CSR	1	25	200	096	17.08
830-012CSR	1-1/4	10	120	096	18.15
830-015CSR	1-1/2	10	80	096	19.46
830-020CSR	2	10	0	096	23.00

Coupling - Special Reinforced Reducer
SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
830-101CSR	3/4X1/2	50	200	096	16.68
830-130CSR	1X1/2	50	0	096	20.14
830-131CSR	1X3/4	25	200	096	20.14
830-168CSR	1-1/4X1	25	0	096	27.39
830-210CSR	1-1/2X3/4	25	0	096	39.17
830-211CSR	1-1/2X1	10	80	096	39.17
830-212CSR	1-1/2X1-1/4	10	80	096	39.17
830-249CSR	2X1	25	0	096	96.42
830-251CSR	2X1-1/2	15	0	096	96.42

Female Adapter - Special Reinforced
Soc x SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
835-002CSR	1/4	25	450	096	13.06
835-003CSR	3/8	25	300	096	13.06
835-005CSR	1/2	25	300	096	5.61
835-007CSR	3/4	25	150	096	6.06
835-010CSR	1	25	200	096	13.82
835-012CSR	1-1/4	10	60	096	14.18
835-015CSR	1-1/2	10	80	096	16.46
835-020CSR	2	10	0	096	23.39
835-025CSR	2-1/2	5	0	096	54.39
835-030CSR	3	15	0	096	111.75
835-040CSR	4	5	0	096	185.99
835-060CSR	6	6	0	096	290.55

Female Adapter - Encapsulated Special Reinforced
Soc x ESR Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
835-002CESR	1/4	25	450	096	16.57
835-003CESR	3/8	25	300	096	16.57
835-005CESR	1/2	25	300	096	8.60
835-007CESR	3/4	25	300	096	9.08
835-010CESR	1	25	200	096	20.01
835-012CESR	1-1/4	10	80	096	20.48
835-015CESR	1-1/2	10	0	096	26.52
835-020CESR	2	10	0	096	41.22

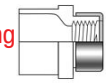
Female Spigot Adapter - Special Reinforced
Spig x SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
878-005CSR	1/2	50	600	096	5.98
878-007CSR	3/4	25	300	096	6.31
878-010CSR	1	50	0	096	14.19
878-012CSR	1-1/4	25	0	096	14.68
878-015CSR	1-1/2	25	0	096	17.04
878-020CSR	2	15	0	096	31.04

Female Spigot Adapter - Special Reinforced (continued)
Spig x SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
878-030CSR	3	5	0	096	113.15
878-040CSR	4	5	0	096	189.95

Female Adapter - Special Reinforced Reducing
Soc x SR Fipt - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
835-074CSR	1/2X3/4	50	400	096	6.06
835-101CSR	3/4X1/2	50	400	096	6.06
835-102CSR	3/4X1	50	0	096	13.82
835-130CSR	1X1/2	50	0	096	13.82
835-131CSR	1X3/4	25	200	096	13.82

Female Spigot Adapter - Encapsulated Special Reinforced
Spig x ESR Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
878-005CESR	1/2	50	600	096	8.85
878-007CESR	3/4	25	300	096	9.42
878-010CESR	1	50	0	096	20.20
878-012CESR	1-1/4	25	0	096	20.75
878-015CESR	1-1/2	25	0	096	27.05
878-020CESR	2	15	0	096	41.81

Female Spigot Adapter - Special Reinforced Reducing
Spig x SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
878-072CSR	1/2X1/4	25	450	096	17.14
878-098CSR	3/4X1/4	50	300	096	19.95
878-128CSR	1X1/4	50	400	096	22.33

Male Adapter - Internal Reinforced
R Mipt x Soc - Stainless Steel Sleeve

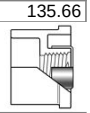
NSF Certified Lead Free

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
836-005CR	1/2	25	150	096	8.62
836-007CR	3/4	25	300	096	9.87
836-010CR	1	10	120	096	11.71

Reducer Bushing - Special Reinforced Reducing Flush Style
Mipt x SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
839-209CSR	1-1/2X1/2	25	300	096	22.11
839-210CSR	1-1/2X3/4	25	300	096	22.11
839-247CSR	2X1/2	10	60	096	24.43
839-248CSR	2X3/4	10	60	096	24.43
839-249CSR	2X1	10	120	096	24.43
839-420CSR	4X2	6	0	096	135.66

Reducer Bushing - Special Reinforced
Spig x SR Fipt - Stainless Steel Collar



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
838-128CSR	1X1/4	25	150	096	12.74
838-207CSR	1-1/2X1/4	25	200	096	21.55
838-209CSR	1-1/2X1/2	10	120	096	22.46
838-210CSR	1-1/2X3/4	10	120	096	22.46
838-247CSR	2X1/2	10	80	096	30.86
838-248CSR	2X3/4	10	80	096	30.86
838-249CSR	2X1	10	80	096	30.86
838-334CSR	3X3/4	10	0	096	130.68
838-335CSR	3X1	10	0	096	130.68
838-336CSR	3X1-1/4	10	0	096	130.68
838-337CSR	3X1-1/2	10	0	096	130.68
838-528CSR	6X2	5	0	096	449.27

CPVC Gray Special Reinforced (SR) Fittings

Reducer Bushing - Special Reinforced (continued)

Spig x SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
838-530CSR	6X3	5	0	096	449.27

Cap - Special Reinforced

SR Fipt - Stainless Steel Collar

848-002CSR	1/4	25	500	096	7.06
848-003CSR	3/8	25	450	096	7.06
848-007CSR	3/4	25	300	096	11.00
848-030CSR	3	5	0	096	122.80

Union 2000 - Special Reinforced

Soc x SR Fipt with EPDM O-ring Seal - Stainless Steel Collar

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8099-005CSR	1/2	20	160	096	15.81
8099-007CSR	3/4	20	160	096	28.07
8099-010CSR	1	15	90	096	38.87
8099-012CSR	1-1/4	10	0	096	73.64
8099-015CSR	1-1/2	10	0	096	80.09
8099-020CSR	2	5	0	096	84.34
8099-025CSR	2-1/2	5	0	096	144.66
8099-030CSR	3	5	0	096	234.95
8099-040CSR	4	4	0	096	275.93
8099-060CSR	6	1	0	096	613.20

Union 2000 - Special Reinforced

Soc x SR Fipt with FKM O-ring Seal - Stainless Steel Collar

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8059-005CSR	1/2	25	200	096	16.13
8059-007CSR	3/4	20	160	096	28.45
8059-010CSR	1	15	90	096	39.20
8059-012CSR	1-1/4	10	0	096	74.74
8059-015CSR	1-1/2	10	0	096	81.24
8059-020CSR	2	5	0	096	84.58
8059-030CSR	3	5	0	096	237.94
8059-040CSR	4	4	0	096	277.60

Union 2000 - Special Reinforced

SR Fipt with FKM O-ring Seal - Stainless Steel Collar

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8058-005CSR	1/2	20	120	096	16.55
8058-007CSR	3/4	20	80	096	28.85
8058-010CSR	1	15	90	096	39.65
8058-012CSR	1-1/4	10	0	096	74.74
8058-015CSR	1-1/2	10	0	096	81.56
8058-020CSR	2	5	0	096	85.94
8058-030CSR	3	5	0	096	242.85
8058-040CSR	4	4	0	096	284.51
8058-060CSR	6	1	0	096	640.73

Union 2000 - Special Reinforced

SR Fipt with EPDM O-ring Seal - Stainless Steel Collar

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8098-005CSR	1/2	20	160	096	16.00
8098-007CSR	3/4	20	80	096	28.59
8098-010CSR	1	15	90	096	39.20
8098-012CSR	1-1/4	10	0	096	74.01
8098-015CSR	1-1/2	10	0	096	80.93
8098-020CSR	2	5	0	096	85.09
8098-025CSR	2-1/2	5	0	096	147.05

Union 2000 - Special Reinforced (continued)

SR Fipt with EPDM O-ring Seal - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8098-030CSR	3	5	0	096	239.09
8098-040CSR	4	4	0	096	276.79
8098-060CSR	6	1	0	096	615.09

Union (Old Style) - Special Reinforced

Soc x SR Fipt with EPDM O-ring Seal - Stainless Steel Collar

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

899-002CSR	1/4	25	150	096	25.21
899-003CSR	3/8	25	100	096	25.21
899-005CSR	1/2	10	60	096	15.81
899-007CSR	3/4	10	40	096	28.07
899-010CSR	1	10	40	096	38.87
899-012CSR	1-1/4	5	20	096	73.64
899-015CSR	1-1/2	5	0	096	80.09
899-020CSR	2	5	0	096	84.34
899-030CSR	3	5	0	096	234.95
899-040CSR	4	4	0	096	275.93

Union (Old Style) - Special Reinforced

Soc x SR Fipt with FKM O-ring Seal - Stainless Steel Collar

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

859-002CSR	1/4	25	150	096	25.38
859-003CSR	3/8	25	100	096	25.38
859-005CSR	1/2	10	60	096	16.13
859-007CSR	3/4	10	40	096	28.45
859-010CSR	1	10	40	096	39.20
859-012CSR	1-1/4	5	20	096	74.74
859-015CSR	1-1/2	5	0	096	81.24
859-020CSR	2	5	0	096	84.58
859-030CSR	3	5	0	096	237.94
859-040CSR	4	4	0	096	277.60

Flange - Special Reinforced One Piece Threaded

SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

852-005CSR	1/2	25	0	096	20.65
852-007CSR	3/4	25	0	096	25.05
852-010CSR	1	15	0	096	27.41
852-012CSR	1-1/4	15	0	096	37.93
852-015CSR	1-1/2	15	0	096	40.21
852-020CSR	2	10	0	096	41.19
852-025CSR	2-1/2	10	0	096	66.27
852-030CSR	3	10	0	096	65.76
852-040CSR	4	5	0	096	123.22

Tank Adapters, CPVC New Style Special Reinforced (SR) Threaded with Neoprene Gaskets

Soc x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8171-002CSR	1/4	25	150	101	49.80
8171-003CSR	3/8	25	200	101	49.80
8171-005CSR	1/2	25	0	101	49.80
8171-007CSR	3/4	25	0	101	59.60
8171-010CSR	1	25	0	101	67.42
8171-012CSR	1-1/4	20	0	101	86.97
8171-015CSR	1-1/2	20	0	101	97.64
8171-020CSR	2	15	0	101	135.02
8171-025CSR	2-1/2	4	0	101	205.39
8171-030CSR	3	4	0	101	244.46
8171-040CSR	4	2	0	101	392.88

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Tank Adapters, CPVC New Style Special Reinforced (SR) Threaded with Neoprene Gaskets (continued)

Soc x SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8171-060CSR	6	1	0	101	1037.65

Tank Adapters, CPVC New Style Special Reinforced (SR) Threaded with EPDM Gaskets

Soc x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8171E-002CSR	1/4	25	150	101	56.44
8171E-003CSR	3/8	25	200	101	56.44
8171E-005CSR	1/2	25	0	101	56.44
8171E-007CSR	3/4	25	0	101	63.79
8171E-010CSR	1	25	0	101	76.27
8171E-012CSR	1-1/4	20	0	101	95.32
8171E-015CSR	1-1/2	20	0	101	103.13
8171E-020CSR	2	15	0	101	145.79
8171E-025CSR	2-1/2	4	0	101	214.24
8171E-030CSR	3	4	0	101	255.05
8171E-040CSR	4	2	0	101	408.93
8171E-060CSR	6	2	0	101	1079.93

Tank Adapters, CPVC New Style Special Reinforced (SR) Threaded with FKM Gaskets

Soc x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8171V-002CSR	1/4	25	150	101	73.54
8171V-003CSR	3/8	25	200	101	73.54
8171V-005CSR	1/2	25	0	101	73.54
8171V-007CSR	3/4	25	0	101	85.01
8171V-010CSR	1	25	0	101	98.89
8171V-012CSR	1-1/4	20	0	101	122.59
8171V-015CSR	1-1/2	20	0	101	130.91
8171V-020CSR	2	15	0	101	194.93
8171V-025CSR	2-1/2	4	0	101	287.26
8171V-030CSR	3	4	0	101	342.05
8171V-040CSR	4	2	0	101	730.36
8171V-060CSR	6	2	0	101	1803.22

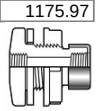
Tank Adapters, CPVC New Style Special Reinforced (SR) Threaded with Neoprene Gaskets

Fipt x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8172-002CSR	1/4	25	150	101	65.97
8172-003CSR	3/8	25	200	101	65.97
8172-005CSR	1/2	25	0	101	65.97
8172-007CSR	3/4	25	0	101	76.61
8172-010CSR	1	25	0	101	84.41
8172-012CSR	1-1/4	20	0	101	119.75
8172-015CSR	1-1/2	20	0	101	133.78
8172-020CSR	2	15	0	101	165.40
8172-025CSR	2-1/2	4	0	101	240.05
8172-030CSR	3	4	0	101	285.78
8172-040CSR	4	2	0	101	438.93
8172-060CSR	6	2	0	101	1175.97

Tank Adapters, CPVC New Style Special Reinforced (SR) Threaded with EPDM Gaskets



Fipt x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8172E-002CSR	1/4	25	150	101	68.55
8172E-003CSR	3/8	25	200	101	68.55

Tank Adapters, CPVC New Style Special Reinforced (SR) Threaded with EPDM Gaskets (continued)

Fipt x SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8172E-005CSR	1/2	25	0	101	68.55
8172E-007CSR	3/4	25	0	101	81.17
8172E-010CSR	1	25	0	101	88.12
8172E-012CSR	1-1/4	20	0	101	124.38
8172E-015CSR	1-1/2	20	0	101	144.60
8172E-020CSR	2	15	0	101	177.48
8172E-025CSR	2-1/2	4	0	101	267.74
8172E-030CSR	3	4	0	101	318.73
8172E-040CSR	4	2	0	101	515.99
8172E-060CSR	6	2	0	101	1193.37

Tank Adapters, CPVC New Style Special Reinforced (SR) Threaded with FKM Gaskets

Fipt x SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8172V-002CSR	1/4	25	150	101	105.26
8172V-003CSR	3/8	25	200	101	105.26
8172V-005CSR	1/2	25	0	101	105.26
8172V-007CSR	3/4	25	0	101	119.08
8172V-010CSR	1	25	0	101	137.53
8172V-012CSR	1-1/4	20	0	101	169.80
8172V-015CSR	1-1/2	20	0	101	178.83
8172V-020CSR	2	15	0	101	274.84
8172V-025CSR	2-1/2	4	0	101	397.14
8172V-030CSR	3	4	0	101	472.79
8172V-040CSR	4	2	0	101	1206.41
8172V-060CSR	6	2	0	101	2190.53

CPVC Elastomer Expansion Joint

with EPDM Bellows SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
EJ21-007CSR	3/4	10	0	085	208.22
EJ21-010CSR	1	10	0	085	239.45
EJ21-012CSR	1-1/4	15	0	085	264.60
EJ21-015CSR	1-1/2	10	0	085	337.27
EJ21-020CSR	2	8	0	085	445.81
EJ21-025CSR	2-1/2	4	0	085	619.13
EJ21-030CSR	3	2	0	085	824.60

CPVC Gray Brass Thread Fittings

Tee - BrassTransition
Soc x Fipt With Brass Thread Insert

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
802-005CBR	**1/2**	20	140	096	58.38
802-007CBR	**3/4**	25	0	096	116.75

Not intended to convey or dispense water for human consumption through drinking or cooking

Tee - BrassTransition Reducing
Soc x Fipt With Brass Thread Insert

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
802-101CBR	**3/4X1/2**	50	0	096	72.36

Not intended to convey or dispense water for human consumption through drinking or cooking

90° Ell - Brass Transition
Soc x Fipt With Brass Thread Insert

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
807-005CBR	**1/2**	20	240	096	51.33
807-007CBR	**3/4**	20	160	096	89.61

Not intended to convey or dispense water for human consumption through drinking or cooking

90° Ell - Brass Transition Reducing
Soc x Fipt With Brass Thread Insert

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
807-101CBR	**3/4X1/2**	20	120	096	64.19

Not intended to convey or dispense water for human consumption through drinking or cooking

Female Adapter - Brass Transition
Soc x Fipt With Brass Thread Insert

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
835-005CBR	**1/2**	25	150	096	31.64
835-007CBR	**3/4**	15	90	096	65.48
835-010CBR	**1**	15	90	096	114.92
835-012CBR	**1-1/4**	15	60	096	187.47
835-015CBR	**1-1/2**	10	80	096	247.18
835-020CBR	**2**	8	32	096	308.72

Not intended to convey or dispense water for human consumption through drinking or cooking

Female Adapter - Stainless Steel Transition
Soc x Fipt With Type 316 Stainless Steel Thread Insert

NSF Certified Lead Free

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
835-005CSS	**1/2**	25	150	096	62.13

Female Adapter - Stainless Steel Transition (continued)
Soc x Fipt With Type 316 Stainless Steel Thread Insert

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
835-007CSS	**3/4**	15	90	096	86.74
835-010CSS	**1**	15	90	096	151.81
835-012CSS	**1-1/4**	20	0	096	246.72
835-015CSS	**1-1/2**	10	40	096	321.87
835-020CSS	**2**	8	32	096	376.68

Male Adapter - CPVC Lined Brass Transition
Brass Mipt x Soc

NSF Certified Lead Free

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
836-005CBR	**1/2**	40	160	096	70.14
836-007CBR	**3/4**	40	160	096	98.75
836-010CBR	**1**	10	60	096	171.99
836-012CBR	**1-1/4**	10	60	096	279.76
836-015CBR	**1-1/2**	10	40	096	363.71
836-020CBR	**2**	8	32	096	426.20

Union - Brass Transition
Soc x Fipt with Brass Thread Insert & FKM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
859-007CBR	**3/4**	10	20	096	146.17
859-010CBR	**1**	10	0	096	162.80
859-012CBR	**1-1/4**	5	0	096	272.91
859-015CBR	**1-1/2**	5	0	096	310.13
859-020CBR	**2**	5	0	096	350.51

Not intended to convey or dispense water for human consumption through drinking or cooking

Union - Brass Transition
Soc x Fipt with Brass Thread Insert & EPDM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
899-007CBR	**3/4**	10	40	096	143.69
899-010CBR	**1**	10	0	096	160.80
899-012CBR	**1-1/4**	5	20	096	269.46
899-015CBR	**1-1/2**	5	0	096	306.17
899-020CBR	**2**	5	0	096	346.21

Not intended to convey or dispense water for human consumption through drinking or cooking

CPVC Orange Special Reinforced (SR) Fittings

The CPVC Orange fittings in this section (4200 series part numbers) are approved by Underwriters Laboratories, FM Global, and LPCB for use in CPVC Fire Sprinkler Systems. When installed in these systems, installation must be made in accordance with Spears® publication FG-3, *FlameGuard® CPVC Fire Sprinkler Products Installation Instructions*, and local codes. However, these fittings can also be used in many other types of installations, such as hot water distribution. CPVC fittings may also be used on PVC pipe when installed with a quality CPVC solvent cement meeting the requirements of ASTM F 493, Standard Specification for Solvent Cements for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe and Fittings.

Sprinkler Head Tee - Special Reinforced Plastic Thread Style with Wrench Flats
Socket x Socket x SR FIPT - Zinc Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4202-010SR	**1**	15	0	076	21.70
4202-130SR	**1X1/2**	50	0	076	8.46

Sprinkler Head Tee - Special Reinforced Plastic Thread Style
Socket x Socket x SR FIPT - Stainless Steel Collar

NSF Certified Lead-Free

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4202-101SR	**3/4X1/2**	50	0	076	7.83
4202-124SR	**1X3/4X1/2**	50	0	076	8.46
4202-156SR	**1-1/4X1X1/2**	15	0	076	14.10

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CPVC Orange Special Reinforced (SR) Fittings

Sprinkler Head Tee - Special Reinforced Plastic Thread Style (continued)

Socket x Socket x SR FIPT - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4202-166SR	1-1/4X1/2	15	0	076	14.10
4202-168SR	1-1/4X1	15	0	076	30.30
4202-199SR	1-1/2X1-1/4X1/2	10	0	076	18.55
4202-209SR	1-1/2X1/2	25	0	076	18.55
4202-211SR	1-1/2X1-1/2X1	10	0	076	18.55
4202-237SR	2X1-1/2X1/2	10	0	076	26.18
4202-247SR	2X1/2	10	0	076	26.18
4202-287SR	2-1/2X1/2	10	0	076	35.88

Sprinkler Head Tee - Special Reinforced Plastic Thread Style

Socket x SR FIPT x Socket - Stainless Steel Collar

NSF Certified Lead-Free

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4203-122SR	1X1/2X1	50	0	076	9.09

Sprinkler Head 90° Ell - Special Reinforced Plastic Thread Style

Socket x SR FIPT - Stainless Steel Collar

NSF Certified Lead-Free

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4207-101SR	3/4X1/2	20	180	076	5.16
4207-130SR	1X1/2	10	150	076	7.28
4207-131SR	1X3/4	50	0	076	8.80
4207-166SR	1-1/4X1/2	25	0	076	9.24

Female Adapter - Special Reinforced Plastic Thread Style

Socket x SR FIPT - Stainless Steel Collar

NSF Certified Lead-Free

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4235-007SR	3/4	25	300	076	9.20
4235-010SR	1	25	200	076	16.18
4235-012SR	1-1/4	10	60	076	26.34

SofTorque™ SR Female Sprinkler Head Adapter - Gasket Sealed Special Reinforced Plastic Thread Style

Soc x SR FIPT - Stainless Steel Collar With Elastomer Seal - Use NO Thread Sealant

NSF Certified Lead-Free

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4235-130GSR	1X1/2	50	0	076	11.02

Female Sprinkler Head Adapter - Special Reinforced Plastic Thread Style

Socket x SR FIPT - Stainless Steel Collar

NSF Certified Lead-Free

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4235-101SR	3/4X1/2	50	200	076	5.62
4235-130SR	1X1/2	50	0	076	6.01
4235-131SR	1X3/4	50	0	076	9.52

Female Sprinkler Head Adapter - Special Reinforced Plastic Thread Style with Socket Body Wrench Flats

Socket x SR FIPT - Stainless Steel Collar

NSF Certified Lead-Free

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
W4235-101SR	3/4X1/2	50	0	076	6.41
W4235-130SR	1X1/2	50	0	076	6.86

Female Sprinkler Head Adapter - Special Reinforced Plastic Thread with Metal Thread Start

Socket x SR FIPT - Zinc Collar

NSF Certified Lead-Free

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Z4235-101SR	3/4X1/2	50	200	076	5.62

Female Sprinkler Head Adapter - Special Reinforced Plastic Thread Style with Positioning Ring

Socket x SR FIPT - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
R4235-101SR	3/4X1/2	25	300	076	6.35

Spigot Female Sprinkler Head Adapters - Special Reinforced Plastic Threaded Style

Spigot x SR FIPT - Stainless Steel Collar

NSF Certified Lead-Free

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4238-101SR	3/4X1/2	50	400	076	5.62
4238-130SR	1X1/2	50	0	076	6.09

Adjustable Sprinkler Head Adapters - Special Reinforced Plastic Thread Style

Socket x SR FIPT - Stainless Steel Collar

NSF Certified Lead-Free

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
42001SR	3/4X1/2	12	0	076	14.35
42011SR	1X1/2	12	0	076	14.35

Adjustable Sprinkler Head Adapters - Special Reinforced Plastic Thread Style

Spigot x SR FIPT - Stainless Steel Collar

NSF Certified Lead-Free

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
42004SR	3/4X1/2	12	0	076	14.35
42014SR	1X1/2	12	0	076	14.35

Spigot Female Adapter - Special Reinforced Plastic Thread Style

Spigot x SR FIPT - Stainless Steel Collar

NSF Certified Lead-Free

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4278-007SR	3/4	25	300	076	9.66
4278-010SR	1	50	0	076	17.20

CPVC Orange Brass Thread Fittings

The CPVC Orange fittings in this section (4200 series part numbers) are approved by Underwriters Laboratories, FM Global, and LPCB for use in CPVC Fire Sprinkler Systems. When installed in these systems, installation must be made in accordance with Spears® publication FG-3, *FlameGuard® CPVC Fire Sprinkler Products Installation Instructions*, and local codes. However, these fittings can also be used in many other types of installations, such as hot water distribution. CPVC fittings may also be used on PVC pipe when installed with a quality CPVC solvent cement meeting the requirements of ASTM F 493, Standard Specification for Solvent Cements for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe and Fittings.

Sprinkler Head Tee - Brass Thread Insert Style

Socket x Socket x FIPT

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4202-101	**3/4X1/2**	50	0	076	14.71
4202-124	**1X3/4X1/2**	50	0	076	15.88
4202-130	**1X1/2**	50	0	076	15.88
4202-010	**1**	10	40	076	40.84
4202-156	**1-1/4X1X1/2**	15	0	076	26.48
4202-166	**1-1/4X1/2**	15	0	076	26.48
4202-199	**1-1/2X1-1/4X1/2**	10	0	076	34.88
4202-209	**1-1/2X1/2**	10	0	076	34.88
4202-237	**2X1-1/2X1/2**	10	0	076	49.19
4202-247	**2X1/2**	10	0	076	49.19

Not intended to convey or dispense water for human consumption through drinking or cooking

Sprinkler Head Tee - Brass Thread Insert Style

Socket x FIPT x Socket

4203-122	**1X1/2X1**	50	0	076	26.09

Not intended to convey or dispense water for human consumption through drinking or cooking

TorqueSafe™ Sprinkler Head Tee - Gasket Sealed Brass Thread Insert Style

Socket x Socket x Gasket FIPT With Elastomer Seal - Use NO Thread Sealant

4202-101 G	**3/4X1/2**	50	0	076	14.71
4202-124 G	**1X3/4X1/2**	50	0	076	15.88
4202-130 G	**1X1/2**	50	0	076	15.88
4202-166 G	**1-1/4X1/2**	15	0	076	26.48
4202-209 G	**1-1/2X1/2**	10	0	076	34.88
4202-247 G	**2X1/2**	10	0	076	49.19

FIPT With Elastomer Seal - Use NO Thread Sealant. Not intended to convey or dispense water for human consumption through drinking or cooking

TorqueSafe™ Sprinkler Head Tee - Gasket Sealed Brass Thread Insert Style

Socket x Gasket FIPT x Socket With Elastomer Seal - Use NO Thread Sealant

4203-122 G	**1X1/2X1**	50	0	076	26.09

FIPT With Elastomer Seal - Use NO Thread Sealant

Not intended to convey or dispense water for human consumption through drinking or cooking

Sprinkler Head 90° Ell - Brass Thread Insert Style

Socket x FIPT

4207-101	**3/4X1/2**	20	120	076	9.72
4207-130	**1X1/2**	15	90	076	13.66
4207-131	**1X3/4**	25	0	076	16.53
4207-166	**1-1/4X1/2**	10	60	076	19.02

Not intended to convey or dispense water for human consumption through drinking or cooking

TorqueSafe™ 90° Sprinkler Head Elbow - Gasket Sealed Brass Thread Insert Style

Socket x Gasket FIPT With Elastomer Seal - Use NO Thread Sealant

4207-101 G	**3/4X1/2**	20	120	076	9.72
4207-130 G	**1X1/2**	15	90	076	13.66
4207-166 G	**1-1/4X1/2**	10	60	076	19.02

FIPT With Elastomer Seal - Use NO Thread Sealant. Not intended to convey or dispense water for human consumption through drinking or cooking

Female Adapter - Brass Thread Insert Style

Socket x FIPT

4235-007	**3/4**	15	90	076	19.39
4235-010	**1**	15	90	076	34.03
4235-012	**1-1/4**	15	60	076	55.48
4235-015	**1-1/2**	10	40	076	74.01
4235-020	**2**	8	32	076	92.76

Not intended to convey or dispense water for human consumption through drinking or cooking

Spigot Female Adapter - Brass Thread Insert Style

Spigot x FIPT

4278-007	**3/4**	25	150	076	18.14
4278-010	**1**	15	90	076	32.31

Not intended to convey or dispense water for human consumption through drinking or cooking

TorqueSafe™ Female Sprinkler Head Adapter - Gasket Sealed Brass Thread Insert Style

Socket x Gasket FIPT

4235-130GS	**1X1/2**	50	0	076	11.31

FIPT With Elastomer Seal - Use NO Thread Sealant. Not intended to convey or dispense water for human consumption through drinking or cooking

Female Sprinkler Head Adapter - Brass Thread Insert Style

Socket x FIPT

4235-101	**3/4X1/2**	50	0	076	10.60
4235-130	**1X1/2**	50	0	076	11.31
4235-131	**1X3/4**	50	0	076	17.87

Not intended to convey or dispense water for human consumption through drinking or cooking

Female Sprinkler Head Adapter - Brass Thread Insert Style with Long Body

Socket x FIPT

L4235-130	**1X1/2**	50	0	076	16.03

Not intended to convey or dispense water for human consumption through drinking or cooking

Female Sprinkler Head Adapter - Brass Thread Insert Style with Positioning Ring

Socket x FIPT

R4235-101	**3/4X1/2**	50	0	076	10.60

Not intended to convey or dispense water for human consumption through drinking or cooking

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CPVC Orange Brass Thread Fittings

Spigot Female Sprinkler Head Adapters - Brass Thread Insert Style

Spigot x FIPT

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4238-101	3/4X1/2	50	200	076	10.60
4238-130	1X1/2	50	0	076	11.31

Not intended to convey or dispense water for human consumption through drinking or cooking

TorqueSafe™ Female Spigot Sprinkler Head Adapters - Gasket Sealed Brass Thread Insert Style

Spigot x Gasket FIPT With Elastomer Seal - Use NO Thread Sealant

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4238-101 G	3/4X1/2	50	200	076	10.60
4238-130 G	1X1/2	50	0	076	11.31

FIPT With Elastomer Seal - Use NO Thread Sealant. Not intended to convey or dispense water for human consumption through drinking or cooking

Bushing - with Brass Thread Insert

Spigot x FIPT

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4238-130BR	1X1/2	50	300	076	14.64

Not intended to convey or dispense water for human consumption through drinking or cooking

Male Adapter

MIPT x Socket

NSF Certified Lead-Free

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4236-007	3/4	40	160	076	43.64
4236-010	1	10	60	076	66.72
4236-012	1-1/4	10	60	076	79.79
4236-015	1-1/2	10	40	076	144.81
4236-020	2	8	32	076	192.70

CPVC Orange Brass Grooved Coupling Adapter

Grooved Coupling Adapter

Brass Groove End x Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4233-012	1-1/4	10	40	076	109.72
4233-015	1-1/2	10	40	076	116.29
4233-020	2	8	32	076	134.68

Grooved Coupling Adapter (continued)

Brass Groove End x Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4233-025	2-1/2	5	0	076	172.76
4233-030	3	5	0	076	192.05

Not intended to convey or dispense water for human consumption through drinking or cooking

CTS CPVC Tan Special Reinforced (SR) Fittings

90° Ell - CTS Special Reinforced

Socket x SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4107-005SR	1/2	50	300	035	9.01

Drop Ear 90° Ell - CTS Zinc Reinforced(One Piece Unit)

Socket x SR Fipt - Zinc Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DEZ4107-005SR	1/2	10	150	035	20.26

Drop Ear 90° Ell - CTS Special Reinforced (Fitting Plus Bracket)

Socket x SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DE4107-005SR	1/2	10	200	035	13.93

Female Adapter - CTS Special Reinforced

Socket x SR Fipt - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4135-005SR	1/2	25	200	035	6.96
4135-007SR	3/4	25	300	035	7.65
4135-010SR	1	5	100	035	9.71

Female Adapter - CTS Reducing Special Reinforced

Socket x SR Fipt - Stainless Steel Collar

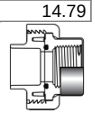
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4135-131SR	1X3/4	25	150	035	15.28

Male Adapter - CTS Reinforce (Internal Stainless Steel Reinforced)

R Mipt x Socket - Stainless Steel Sleeve

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4136-005R	1/2	25	300	035	8.93
4136-007R	3/4	25	300	035	9.93
4136-010R	1	10	120	035	14.79

Union - CTS Special Reinforced



Socket x SR Fipt - Stainless Steel Collar

100 psi Maximum Internal Pressure @ 180°F (82°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4199-005SR	1/2	20	120	035	21.25
4199-007SR	3/4	10	60	035	36.49
4199-010SR	1	10	40	035	43.76

CTS CPVC Tan Gasket Sealed Brass Thread Fittings

Female Adapter - Gasket Sealed Brass Threaad Transition

Socket x Gasket FPT - Use NO Thread Sealant

NSF Certified Lead Free

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4135-005BRG	**1/2**	25	150	035	40.21
4135-007BRG	**3/4**	25	150	035	44.28
4135-010BRG	**1**	15	90	035	132.09
4135-012BRG	**1-1/4**	15	60	035	250.97
4135-015BRG	**1-1/2**	10	40	035	327.12
4135-020BRG	**2**	8	32	035	480.95

Female Adapter - Reducing Gasket Sealed Brass Threaad Transition

Socket x Gasket FPT - Use NO Thread Sealant

NSF Certified Lead Free

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4135-101BRG	**3/4X1/2**	25	150	035	43.77
4135-130BRG	**1X1/2**	50	0	035	69.15

TRANSITION MALE ADAPTER w/BRASS THREAD

Brass Mipt x Socket

NSF Certified Lead Free

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4136-005BR	**1/2**	60	360	035	40.21
4136-007BR	**3/4**	40	160	035	44.28
4136-010BR	**1**	10	60	035	132.09
4136-012BR	**1-1/4**	10	60	035	162.92
4136-015BR	**1-1/2**	10	40	035	215.06
4136-020BR	**2**	8	32	035	357.49

Union - Gasket Sealed Brass Threaad Transition

Socket x Gasket FPT
- Use No Thread Sealant

100 psi Maximum Internal Pressure @ 180°F (82°C)

NSF Certified Lead Free

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4199-005BRG	**1/2**	20	120	035	45.31
4199-007BRG	**3/4**	10	0	035	52.70
4199-010BRG	**1**	10	40	035	68.13

CTS CPVC Tan Gasket Sealed PlasticThread Fittings

FEMALE ADAPTER with Gasket

Socket x NPSC

For Cold Water Service Only

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4135-005OR	**1/2**	25	200	035	4.71

FEMALE ADAPTER with Gasket (continued)

Socket x NPSC

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4135-007OR	**3/4**	25	300	035	6.68
4135-010OR	**1**	5	100	035	7.62

Blue 75™ Thread Sealant

Blue 75™ Thread Sealant

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
SB75-005	**1/4 Pint**	24	0	895	10.46
SB75-010	**1/2 Pint**	24	0	895	16.66
SB75-020	**Pint**	12	0	895	26.94
SB75-030	**Quart**	12	0	895	48.41

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Polypropylene Schedule 80 Natural & Black SR Threaded Fittings

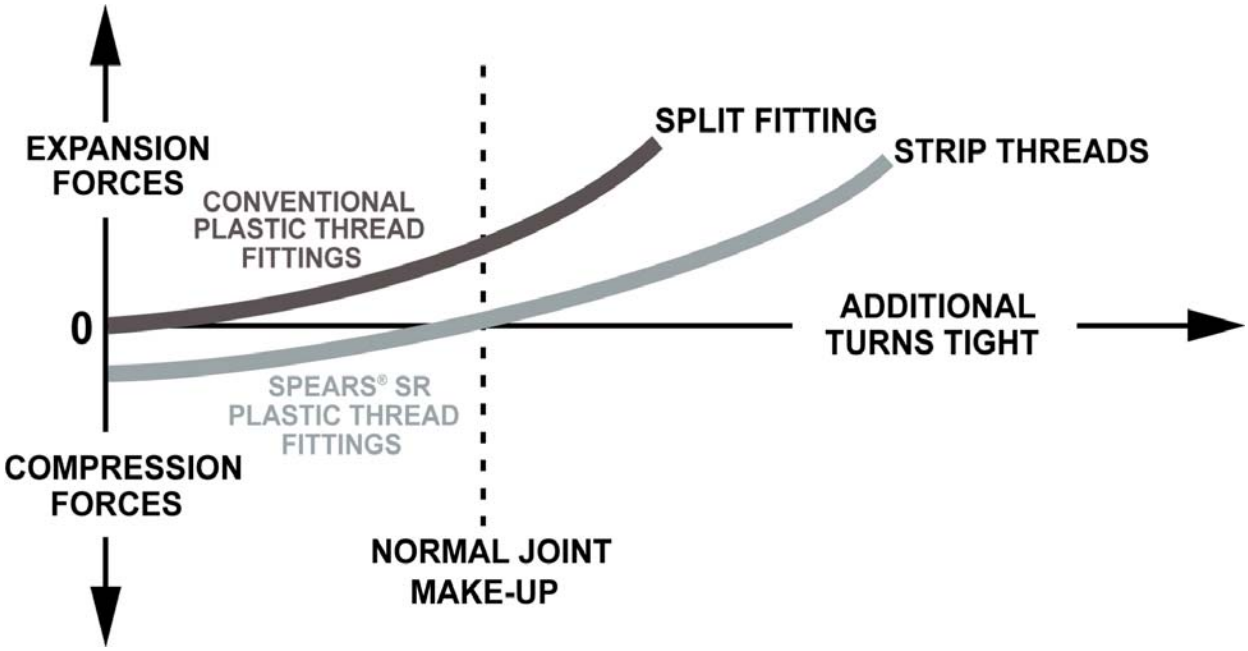
PRICING

Polypropylene Schedule 80 Natural & Black SR Threaded Fittings

- Featuring Patented Special Reinforced (SR) Thread
- Full 150 psi Pressure Rating at 73°F (23°C)
- High Grade Homopolymer Compound
- Excellent Chemical Resistance
- IPS Sizes 1/2" through 2"

Spears® Patented SR Fitting Design is One of the Most Significant Improvements in Threaded Thermoplastic Fittings . . .

Radial stress generated by tightening of tapered pipe threads exerts tremendous expansion forces on female plastic thread fittings. When subjected to over-tightening — even accidentally — these forces can literally split the fitting. Spears® patented SR Fitting design not only alleviates this problem by containing expansion forces with its stainless steel collar, but additionally compensates for expansion stress through thermoplastic material compression. Stresses are equalized at normal joint make-up. The following graph illustrates this effect in a comparison of conventional plastic female thread fittings with Spears® SR plastic thread fittings when taken to failure.

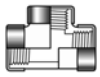


Another Quality Spears® Product Designed for Performance, Customer Satisfaction and Service

Polypropylene Schedule 80 Natural SR Threaded Fittings & Polypropylene Schedule 80 Black SR Threaded Fittings

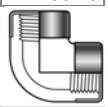
Polypropylene Schedule 80 Natural SR Threaded Fittings

Tee - Natural
SR Fipt



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4805-005SR	**1/2**	25	200	060	13.98
4805-007SR	**3/4**	15	120	060	15.52
4805-010SR	**1**	15	0	060	18.47
4805-015SR	**1-1/2**	10	0	060	27.38
4805-020SR	**2**	10	0	060	36.19

90° Ell - Natural
SR Fipt

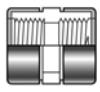


Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4808-005SR	**1/2**	20	240	060	11.36
4808-007SR	**3/4**	20	240	060	13.81
4808-010SR	**1**	50	0	060	17.06
4808-015SR	**1-1/2**	10	0	060	23.13
4808-020SR	**2**	25	0	060	31.46

45° Ell - Natural
SR Fipt

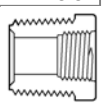
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4819-005SR	**1/2**	50	400	060	14.31
4819-007SR	**3/4**	50	300	060	16.09
4819-010SR	**1**	50	0	060	17.00
4819-015SR	**1-1/2**	25	0	060	23.13
4819-020SR	**2**	25	0	060	31.46

Coupling - Natural
SR Fipt



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4830-005SR	**1/2**	25	300	060	10.77
4830-007SR	**3/4**	25	300	060	13.48
4830-010SR	**1**	25	200	060	14.87
4830-015SR	**1-1/2**	10	80	060	19.44
4830-020SR	**2**	10	0	060	23.37

T.T. Bushing - Natural
Mipt x Fipt

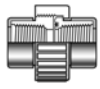


Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4839-101	**3/4X1/2**	10	300	060	16.66
4839-130	**1X1/2**	10	100	060	20.35
4839-131	**1X3/4**	10	50	060	20.35
4839-211	**1-1/2X1**	10	120	060	35.96
4839-249	**2X1**	10	50	060	52.13
4839-251	**2X1-1/2**	10	120	060	52.13

Cap - Natural
SR Fipt

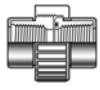
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4848-005SR	**1/2**	50	300	060	10.21
4848-007SR	**3/4**	50	300	060	13.39
4848-010SR	**1**	15	180	060	14.87
4848-015SR	**1-1/2**	10	120	060	20.75
4848-020SR	**2**	10	80	060	23.37

Union - Natural
SR Fipt with FKM O-ring



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4858-005SR	**1/2**	20	120	060	50.18
4858-007SR	**3/4**	20	80	060	54.68
4858-010SR	**1**	15	90	060	67.69
4858-015SR	**1-1/2**	10	0	060	102.54
4858-020SR	**2**	5	0	060	149.75

Union - Natural
SR Fipt with EPDM O-ring



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4898-005SR	**1/2**	20	120	060	49.19
4898-007SR	**3/4**	20	80	060	53.59
4898-010SR	**1**	15	90	060	66.34
4898-015SR	**1-1/2**	10	0	060	100.49
4898-020SR	**2**	5	0	060	146.75

Flange - Natural
SR Fipt

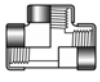
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4852-005SR	**1/2**	25	0	060	31.35
4852-007SR	**3/4**	25	0	060	33.97
4852-010SR	**1**	15	0	060	38.08
4852-015SR	**1-1/2**	15	0	060	53.39
4852-020SR	**2**	10	0	060	63.00

Blind Flange - Natural

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4853-005	**1/2**	25	0	060	52.45
4853-007	**3/4**	25	0	060	54.18
4853-010	**1**	15	0	060	57.49
4853-015	**1-1/2**	15	0	060	94.95
4853-020	**2**	10	0	060	103.51

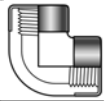
Polypropylene Schedule 80 Black SR Threaded Fittings

Tee - Black
SR Fipt



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4805-005BSR	**1/2**	25	200	061	12.94
4805-007BSR	**3/4**	15	120	061	14.42
4805-010BSR	**1**	15	0	061	17.05
4805-015BSR	**1-1/2**	10	0	061	25.29
4805-020BSR	**2**	10	0	061	33.55

90° Ell - Black
SR Fipt



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4808-005BSR	**1/2**	20	240	061	10.56
4808-007BSR	**3/4**	20	240	061	12.83
4808-010BSR	**1**	50	0	061	15.81
4808-015BSR	**1-1/2**	25	0	061	21.34
4808-020BSR	**2**	10	0	061	29.05

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

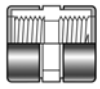
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Polypropylene Schedule 80 Black SR Threaded Fittings

45° Ell - Black
SR Fipt

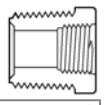
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4819-005BSR	**1/2**	50	400	061	13.21
4819-007BSR	**3/4**	50	300	061	14.93
4819-010BSR	**1**	50	0	061	15.74
4819-015BSR	**1-1/2**	25	0	061	21.34
4819-020BSR	**2**	25	0	061	29.05

Coupling - Black
SR Fipt



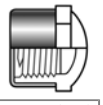
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4830-005BSR	**1/2**	25	300	061	10.02
4830-007BSR	**3/4**	25	300	061	12.49
4830-010BSR	**1**	25	200	061	13.74
4830-015BSR	**1-1/2**	10	80	061	17.99
4830-020BSR	**2**	10	0	061	21.61

T.T. Bushing - Black
Mipt x Fipt



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4839-101B	**3/4X1/2**	10	300	061	15.48
4839-130B	**1X1/2**	50	300	061	18.87
4839-131B	**1X3/4**	10	50	061	18.87
4839-211B	**1-1/2X1**	25	100	061	33.22
4839-249B	**2X1**	10	120	061	48.14
4839-251B	**2X1-1/2**	10	120	061	48.14

Cap - Black
SR Fipt



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4848-005BSR	**1/2**	50	300	061	9.49
4848-007BSR	**3/4**	50	300	061	12.49
4848-010BSR	**1**	15	180	061	13.75
4848-015BSR	**1-1/2**	10	120	061	19.19
4848-020BSR	**2**	10	80	061	21.61

Union - Black
SR Fipt with FKM O-ring

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4858-005BSR	**1/2**	20	120	061	47.52
4858-007BSR	**3/4**	20	80	061	51.51
4858-010BSR	**1**	15	90	061	63.53
4858-015BSR	**1-1/2**	10	0	061	92.23
4858-020BSR	**2**	5	0	061	143.93

Union - Black
SR Fipt with EPDM O-ring

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4898-005BSR	**1/2**	20	120	061	45.59
4898-007BSR	**3/4**	20	80	061	49.96
4898-010BSR	**1**	15	90	061	61.44
4898-015BSR	**1-1/2**	10	0	061	93.06
4898-020BSR	**2**	5	0	061	137.40

Flange - Black
SR Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4852-005BSR	**1/2**	25	0	061	29.01
4852-007BSR	**3/4**	25	0	061	31.36
4852-010BSR	**1**	15	0	061	35.17
4852-015BSR	**1-1/2**	15	0	061	49.40
4852-020BSR	**2**	10	0	061	58.24

Blind Flange - Black

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4853-005B	**1/2**	25	0	061	48.47
4853-007B	**3/4**	25	0	061	49.57
4853-010B	**1**	15	0	061	53.13
4853-015B	**1-1/2**	15	0	061	87.88
4853-020B	**2**	10	0	061	96.98

Polypropylene Valves & Accessories

PRICING

Gauge Guards & Needle Valves

Gauge Guards

Connections use Spears® Patented Special Reinforced (SR)
Female Threads on Pressure Inlet (1/4" or 1/2")

Pressure Rating
235 psi @ 73°F
16 BAR @ 22°C
Maximum Service Temperature
PP = 180°F (82°C)
Temperature/Pressure De-ratings Apply
Rated for Full Vacuum Service

Gauge Guards are pre-filled with glycerin-water
on units with Factory Installed Gauges.
"No Gauge" units are to be filled by end user.

GAUGE GUARDS, PP

Size	1/4" Inlet Connection	1/2" Inlet Connection	Std Pk	Mstr Pk	Prod Code
PTFE Diaphragm					
No Gauge	G0004-002P **121.51**	G0004-005P **121.51**	1	18	626
0-30 in-Hg	G30V4-002P **186.67**	G30V4-005P **186.67**	1	18	626
0-15 psi	G0154-002P **177.54**	G0154-005P **177.54**	1	18	626
0-30 psi	G0304-002P **177.54**	G0304-005P **177.54**	1	18	626
0-60 psi	G0604-002P **177.54**	G0604-005P **177.54**	1	18	626
0-100 psi	G1004-002P **177.54**	G1004-005P **177.54**	1	18	626
0-160 psi	G1604-002P **177.54**	G1604-005P **177.54**	1	18	626
0-200 psi	G2004-002P **177.54**	G2004-005P **177.54**	1	18	626
0-300 psi	G3004-002P **177.54**	G3004-005P **177.54**	1	18	626
FKM Diaphragm					
No Gauge	G0003-002P **121.51**	G0003-005P **121.51**	1	18	626
0-30 in-Hg	G30V3-002P **186.67**	G30V3-005P **186.67**	1	18	626
0-15 psi	G0153-002P **177.54**	G0153-005P **177.54**	1	18	626
0-30 psi	G0303-002P **177.54**	G0303-005P **177.54**	1	18	626
0-60 psi	G0603-002P **177.54**	G0603-005P **177.54**	1	18	626

GAUGE GUARDS, PP (continued)

Size	1/4" Inlet Connection	1/2" Inlet Connection	Std Pk	Mstr Pk	Prod Code
FKM Diaphragm					
0-100 psi	G1003-002P **177.54**	G1003-005P **177.54**	1	18	626
0-160 psi	G1603-002P **177.54**	G1603-005P **177.54**	1	18	626
0-200 psi	G2003-002P **177.54**	G2003-005P **177.54**	1	18	626
0-300 psi	G3003-002P **177.54**	G3003-005P **177.54**	1	18	626
EPDM Diaphragm					
No Gauge	G0002-002P **116.71**	G0002-005P **116.71**	1	18	626
0-30 in-Hg	G30V2-002P **179.18**	G30V2-005P **179.18**	1	18	626
0-15 psi	G0152-002P **170.51**	G0152-005P **170.51**	1	18	626
0-30 psi	G0302-002P **170.51**	G0302-005P **170.51**	1	18	626
0-60 psi	G0602-002P **170.51**	G0602-005P **170.51**	1	18	626
0-100 psi	G1002-002P **170.51**	G1002-005P **170.51**	1	18	626
0-160 psi	G1602-002P **170.51**	G1602-005P **170.51**	1	18	626
0-200 psi	G2002-002P **170.51**	G2002-005P **170.51**	1	18	626
0-300 psi	G3002-002P **170.51**	G3002-005P **170.51**	1	18	626

Needle Valves

Pressure Rating @ 73°F (23°C), Water
150 psi
Maximum Service Temperature
PP = 180°F (82°C)
Solid PTFE Stem Seals
No Elastomer or Lubricants used
Valves include Panel Mounting Nut

PP Needle Valve

Size	Threaded		SR Threaded	Std Pk	Mstr Pk	Prod Code
Globe Pattern						
1/4	5591-002P 78.54	---	---	1	18	219

PP Needle Valve (continued)

Size	Threaded		SR Threaded	Std Pk	Mstr Pk	Prod Code
Globe Pattern						
3/8	5591-003P 78.54	---	---	1	18	219

Needle Valves

PP Needle Valve (continued)

Size	Threaded		SR Threaded	Std Pk	Mstr Pk	Prod Code
Globe Pattern						
1/2	---	---	5591-005PSR 86.85	1	18	219
Angle Pattern						
1/4	5691-002P 78.54	---	---	1	18	219

PP Needle Valve (continued)

Size	Threaded		SR Threaded	Std Pk	Mstr Pk	Prod Code
Angle Pattern						
3/8	5691-003P 78.54	---	---	1	18	219
1/2	---	---	5691-005PSR 86.85	1	18	219

Industrial Swing Check Valves

Threaded Bonnet on Sizes 3/4", 1" & 1-1/4"

Pressure Rating @ 73°F (23°C), Water

3/4" - 4"	150 psi
6"	100 psi
8"	70 psi

Maximum Service Temperature
PP = 180°F (82°C)
Temperature/Pressure De-ratings Apply
All Valves Assembled with Silicone-Free Lubricants

Bolted Bonnet on Sizes 1-1/2" & Up

General Installation Information: Swing check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of the flow. Do not install valve upside down. Flow velocity should not exceed 5 ft./sec.

Industrial Swing Check Valves

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
PP					
3/4	4423-007P **563.29**	4433-007P **625.86**	1	12	113
1	4423-010P **673.87**	4433-010P **734.44**	1	4	113
1-1/4	4423-012P **807.65**	4433-012P **897.31**	1	0	113
1-1/2	4423-015P **1002.77**	4433-015P **1091.16**	1	0	113
2	4423-020P **1072.15**	4433-020P **1204.66**	1	0	113
2-1/2	4423-025P **1785.13**	4433-025P **1985.68**	1	0	112
3	4423-030P **1876.73**	4433-030P **2244.16**	1	0	112
4	4423-040P **2552.76**	4433-040P **2833.55**	1	0	112
6	4423-060P **4835.67**	4433-060P **5377.21**	1	0	112
8	4423-080P **9256.18**	4433-080P **10171.67**	1	0	112

Industrial Swing Check Valve With Arrow Indicator

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
PP					
3/4	4423I-007P **571.34**	4433I-007P **633.92**	1	12	113
1	4423I-010P **685.14**	4433I-010P **790.82**	1	4	113
1-1/4	4423I-012P **880.14**	4433I-012P **976.99**	1	0	113
1-1/2	4423I-015P **1131.42**	4433I-015P **976.99**	1	0	113
2	4423I-020P **1101.74**	4433I-020P **1249.35**	1	0	113
2-1/2	4423I-025P **1795.51**	4433I-025P **2012.18**	1	0	112

Industrial Swing Check Valve With Arrow Indicator (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
PP					
3	4423I-030P **2237.73**	4433I-030P **2335.62**	1	0	112
4	4423I-040P **2563.15**	4433I-040P **2843.98**	1	0	112
6	4423I-060P **4940.04**	4433I-060P **5422.53**	1	0	112
8	4423I-080P **9325.12**	4433I-080P **10274.48**	1	0	112

Industrial Swing Check Valve With Counter Balance

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
PP					
3/4	4423CB-007P **721.01**	4433CB-007P **801.11**	1	12	113
1	4423CB-010P **862.53**	4433CB-010P **940.06**	1	4	113
1-1/4	4423CB-012P **880.14**	4433CB-012P **1354.36**	1	0	113
1-1/2	4423CB-015P **1244.07**	4433CB-015P **1670.49**	1	0	113
2	4423CB-020P **1340.19**	4433CB-020P **1505.82**	1	0	113
2-1/2	4423CB-025P **2069.04**	4433CB-025P **2541.67**	1	0	112
3	4423CB-030P **2517.42**	4433CB-030P **3149.68**	1	0	112
4	4423CB-040P **2882.82**	4433CB-040P **3167.00**	1	0	112
6	4423CB-060P **5363.56**	4433CB-060P **6882.82**	1	0	112
8	4423CB-080P **9791.67**	4433CB-080P **10707.18**	1	0	112

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Polypropylene Butterfly Valves

Lever Handle Style

Pressure Rating @ 73°F (23°C), Water
1-1/2" - 12" 150 psi
Maximum Service Temperature
PP = 180°F (82°C)
Temperature/Pressure De-ratings Apply
See Butterfly Valve Accessories & Repair Kits Section for Additional Options and Features

PP Butterfly Valve w/Lever Handle

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1-1/2	721311-015P 504.43	722311-015P 504.43	723311-015P 1047.92	1	0	256
2	721311-020P 509.53	722311-020P 509.53	723311-020P 1069.31	1	0	256
2-1/2	721311-025P 532.53	722311-025P 532.53	723311-025P 1087.55	1	0	256
3	721311-030P 543.79	722311-030P 543.79	723311-030P 1108.84	1	0	256
4	721311-040P 606.41	722311-040P 606.41	723311-040P 1384.55	1	0	256
6	721311-060P 947.55	722311-060P 947.55	723311-060P 2189.28	1	0	256
8	721311-080P 1611.42	722311-080P 1611.42	723311-080P 3717.36	1	0	256

PP Butterfly Valve w/Gear Operator

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
2	721321-020P 1450.40	722321-020P 1450.40	723321-020P 1843.71	1	0	256
2-1/2	721321-025P 1469.71	722321-025P 1469.71	723321-025P 1940.52	1	0	256
3	721321-030P 1498.03	722321-030P 1498.03	723321-030P 2038.75	1	0	256
4	721321-040P 1596.08	722321-040P 1596.08	723321-040P 2319.01	1	0	256
6	721321-060P 1864.45	722321-060P 1864.45	723321-060P 3138.24	1	0	256
8	721321-080P 2547.86	722321-080P 2547.86	723321-080P 4685.58	1	0	256

PP Butterfly Valve w/Gear Operator (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
10	721321-100P 3425.92	722321-100P 3425.92	723321-100P 7623.22	1	0	256
12	721321-120P 4744.19	722321-120P 4744.19	723321-120P 11141.25	1	0	256

PP Butterfly Valve - Valve Only

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1-1/2	721301-015P 466.19	722301-015P 466.19	723301-015P 924.76	1	0	256
2	721301-020P 475.69	722301-020P 475.69	723301-020P 941.56	1	0	256
2-1/2	721301-025P 493.96	722301-025P 493.96	723301-025P 976.32	1	0	256
3	721301-030P 509.32	722301-030P 509.32	723301-030P 1001.89	1	0	256
4	721301-040P 582.67	722301-040P 582.67	723301-040P 1242.76	1	0	256
6	721301-060P 891.04	722301-060P 891.04	723301-060P 2010.09	1	0	256
8	721301-080P 1531.21	722301-080P 1531.21	723301-080P 3404.53	1	0	256
10	721301-100P 3058.38	722301-100P 3058.38	723301-100P 6822.46	1	0	256
12	721301-120P 3957.38	722301-120P 3957.38	723301-120P 9744.93	1	0	256

Large Diameter Butterfly Valves

Maximum Service Temperature
PP = 180°F (82°C)
Temperature/Pressure De-ratings Apply
Contact Spears® for Custom Produced Valve Sizes 30" to 60"

Pressure Rating @ 73°F (23°C), Water

Size	Psi
14	100
16	85
18	70
20	50
24	50

Large Diameter Polypropylene Butterfly Valve - Gear Operator

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
14	722321-140P **6381.79**	723321-140P **15508.33**	1	0	257
16	722321-160P **24883.37**	723321-160P **26953.13**	1	0	257

Large Diameter Polypropylene Butterfly Valve - Gear Operator (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
18	722321-180P **27410.01**	723321-180P **31405.12**	1	0	257
20	722321-200P **30753.47**	723321-200P **37381.61**	1	0	257

Large Diameter Butterfly Valves

Large Diameter Polypropylene Butterfly Valve - Gear Operator (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
24	722321-240P **34834.44**	723321-240P **50252.52**	1	0	257

Diaphragm Valves

PP Thread Style

Pressure Rating @ 73°F (23°C), Water

1/2" - 2"	235 psi
1/2" - 4" Flanged & Valves w/PTFE Diaphragms	150 psi
6"	100 psi
8"	75 psi

Maximum Service Temperature
PP = 180°F (82°C)
Temperature/Pressure De-ratings Apply
No Lubricants in Media Contact Area
See Diaphragm Valve Repair Kits Section for Additional Options and Features

Contact Spears® for Pricing on Additional Specialty Diaphragms

- Hypalon®
- Hypalon® backed PTFE
- PTFE Encapsulated O-rings (for True Union Style Valves)

PP Diaphragm Valve - SR Threaded Ends (True Union Style Uses End Connector O-ring Seals)

Size	EPDM Seals & Diaphragm	FKM Seals & Diaphragm	EPDM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Prod Code
1/2	2721-005PSR **141.92**	2731-005PSR **157.88**	2721T-005PSR **226.87**	2731T-005PSR **238.82**	2731VT-005PSR **270.09**	1	12	280
3/4	2721-007PSR **161.63**	2731-007PSR **179.32**	2721T-007PSR **237.53**	2731T-007PSR **252.03**	2731VT-007PSR **295.88**	1	8	280
1	2721-010PSR **199.94**	2731-010PSR **220.29**	2721T-010PSR **346.26**	2731T-010PSR **364.27**	2731VT-010PSR **384.35**	1	8	280
1-1/4	2721-012PSR **303.65**	2731-012PSR **338.13**	2721T-012PSR **474.08**	2731T-012PSR **497.04**	2731VT-012PSR **551.59**	1	4	280
1-1/2	2721-015PSR **317.62**	2731-015PSR **352.59**	2721T-015PSR **505.57**	2731T-015PSR **530.11**	2731VT-015PSR **570.94**	1	4	280
2	2721-020PSR **369.41**	2731-020PSR **410.53**	2721T-020PSR **576.81**	2731T-020PSR **605.21**	2731VT-020PSR **657.75**	1	0	280

PP Diaphragm Valve - Flanged Ends

Size	EPDM Diaphragm	FKM Diaphragm	EPDM Backed PTFE Diaphragm	FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Prod Code
2-1/2	2723-025P **680.55**	2733-025P **752.06**	2793T-025P **1070.76**	2793VT-025P **1195.80**	1	0	281
3	2723-030P **973.09**	2733-030P **1075.14**	2793T-030P **1480.80**	2793VT-030P **1651.21**	1	0	281
4	2723-040P **1400.18**	2733-040P **1541.54**	2793T-040P **1973.94**	2793VT-040P **2189.40**	1	0	281
6	2723-060P **3465.21**	2733-060P **3850.23**	2793T-060P **4947.32**	2793VT-060P **5592.09**	1	0	281
8	2723-080P **8626.77**	2733-080P **7766.52**	2793T-080P **8980.86**	2793VT-080P **15133.51**	1	0	281

Polypropylene SR Product Overview

Wide Selection of Configurations

High Grade Natural or Black

Featuring Spears® Special Reinforced (SR) Thread

Full 150 psi Pressure Rating at 73°F

180°F Maximum Service Temperature

• Patented Special Reinforced (SR) Thread Design

Spears® patented Special Reinforced (SR) thread design is one of the most significant advancements in the use of plastic threaded fittings. More than just an added metal ring, this unique precompression design compensates for expansion forces generated from tapered pipe thread joint make-up. Radial stress is reduced in normal installations and contained in severe over tightening situations. SR style fittings use type 316 Stainless Steel reinforcement.

• Full 150 psi Pressure Rating For Threaded Systems Using SR Threaded Fittings

Spears® SR threaded Schedule 80 Polypropylene fittings provide the reinforcement necessary to provide threaded systems with full 150 psi pressure rating for water @ 73°F, typically found only in fusion welded systems.

• High Grade Homopolymer Compound - Excellent Chemical Resistance

Spears® selection of a premium polypropylene homopolymer provides improved purity with excellent chemical resistance to many solvents, caustic solutions and mixed chemicals for a wide variety of applications. Available in natural or black materials.

• Wide Range of Threaded Configurations – IPS Sizes 1/2" Through 2"

Spears® offers a wide assortment of Schedule 80 SR threaded Polypropylene fittings, including:

90° Elbows	**Couplings**	**Flanges**
45° Elbows	**Caps**	**Blind Flanges**
Tees	**Bushings**	**Unions w/EPDM or FKM Seals**

• Supplemental Line of Polypropylene Valves Available

Spears® also offers a broad line of Polypropylene True Union Ball Valves, Diaphragm Valves and Butterfly Valves.

Spears® Patented SR Technology Boosts Threaded Polypropylene Fitting Performance

Improved Pressure Handling Performance

Due to the highly ductile nature of Polypropylene, most threaded PP fittings are rated for system pressures of 25 psi @ 73°F. Pressure applications of up to 150 psi generally require more costly fusion weld jointing methods or use of a glass-filled material which limits chemical resistance for some applications. Spears® Special Reinforced (SR) thread design boosts threaded PP fitting performance by containment of expansion forces generated both during threaded joint make-up and higher system pressure operation. Laboratory test assemblies of Spears® Schedule 80 SR Polypropylene threaded fittings have been subjected to ASTM D 1598 sustained pressure test for 1000 hours at 320 psi without failure or loss of joint integrity.

Sound PP Threaded Connections

Spears® recommends use of Spears® **BLUE 75™** Thread Sealant for all SR threaded PP system connections to insure chemical compatibility and joint integrity. Tape type thread sealant can cause unwanted wedging action between threads. Choice of an appropriate thread sealant is at the discretion and responsibility of the installer. Spears® Schedule 80 SR Polypropylene fittings are assembled with an adhesive to position the reinforcing ring. If ring is loose, simply check that it is seated against the face of the fitting when assembling joint. A loose or spinning ring does not reduce its function upon installation. 1 to 2 turns beyond finger tight are generally sufficient to make a sound joint. Unnecessary over tightening can result in stripping of threads or other pipe and fitting damage.

Polypropylene Valve & Gauge Guard Selection Ratings

Connections use Spears® Patented Special Reinforced (SR) Female Threads on Pressure Inlet (1/4" or 1/2")

Pressure Rating
235 psi @ 73°F
16 BAR @ 22°C
Maximum Service Temperature
PP = 180°F (82°C)
Temperature/Pressure De-ratings Apply
Rated for Full Vacuum Service

Gauge Guards are pre-filled with glycerin-water on units with Factory Installed Gauges.
"No Gauge" units are to be filled by end user.

PP GAUGE GUARDS

Pressure Rating @ 73°F (23°C), Water
150 psi
Maximum Service Temperature
PP = 180°F (82°C)
Solid PTFE Stem Seals
No Elastomer or Lubricants used
Valves include Panel Mounting Nut

PP Needle Valve

Large Diameter Butterfly Valves

Maximum Service Temperature
PP = 180°F (82°C)
Temperature/Pressure De-ratings Apply
Contact Spears® for Custom Produced Valve Sizes 30" to 60"

Pressure Rating @ 73°F (23°C), Water

Size	Psi
14	100
16	85
18	70
20	50
24	50

Diaphragm Valves

PP Thread Style

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 235 psi
1/2" - 4" Flanged & Valves w/PTFE Diaphragms 150 psi
6" 100 psi
8" 75 psi
Maximum Service Temperature
PP = 180°F (82°C)
Temperature/Pressure De-ratings Apply
No Lubricants in Media Contact Area
See Diaphragm Valve Repair Kits Section for Additional Options and Features

Contact Spears® for Pricing on Additional Specialty Diaphragms

- Hypalon®
- Hypalon® backed PTFE
- PTFE Encapsulated O-rings (for True Union Style Valves)

Lever Handle Style

Butterfly Valves

Pressure Rating @ 73°F (23°C), Water
1-1/2" - 12" 150 psi
Maximum Service Temperature
PP = 180°F (82°C)
Temperature/Pressure De-ratings Apply
See Butterfly Valve Accessories & Repair Kits Section for Additional Options and Features

Industrial Swing Check Valves

Threaded Bonnet on Sizes 3/4", 1" & 1-1/4"

Pressure Rating @ 73°F (23°C), Water
3/4" - 4" 150 psi
6" 100 psi
8" 70 psi
Maximum Service Temperature
PP = 180°F (82°C)
Temperature/Pressure De-ratings Apply
All Valves Assembled with Silicone-Free Lubricants

Bolted Bonnet on Sizes 1-1/2" & Up

General Installation Information: Swing check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of the flow. Do not install valve upside down. Flow velocity should not exceed 5 ft./sec.

Ball Valves

PRICING

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

True Union 2000 Industrial Ball Valves

Socket Style

SR Threaded Style

6" Lever Handle Style

All Valves Assembled with Silicone-Free, Water Soluble Lubricant
Contact Spears® for Pricing on Custom Elastomer Seals

See Ball Valve Accessories & Repair Kits Section for Additional Options and Features

Pressure Rating @ 73°F (23°C), Water

1/2" - 4"	235 psi
6" - 8"	150 psi
All Flanged	150 psi

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
Rated for Vacuum Service

Note: Standard 6" Valve uses lockout type Lever-Style Handle for proper leverage. Non-locking T-Handle is more compact, but will increase difficulty of operation.
True Union 2000 Industrial Ball Valves have Built-in Handle Lockouts (except 6" T-Handle Option)

PVC Industrial

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Threaded & Socket Ends					
1/2	1829-005 **49.69**	1839-005 **55.27**	1	18	600
3/4	1829-007 **58.80**	1839-007 **65.41**	1	18	600
1	1829-010 **70.02**	1839-010 **77.99**	1	12	600
1-1/4	1829-012 **96.86**	1839-012 **123.64**	1	8	600
1-1/2	1829-015 **116.67**	1839-015 **129.52**	1	8	600
2	1829-020 **153.96**	1839-020 **169.54**	1	4	600
Socket Ends					
2-1/2	1822-025 **295.95**	1832-025 **401.01**	1	0	601
3	1822-030 **390.18**	1832-030 **433.54**	1	0	601
4	1822-040 **659.24**	1832-040 **732.49**	1	0	601
6	1822-060 **1424.09**	1832-060 **1580.38**	1	0	612
8	1822-080 **1894.05**	1832-080 **2101.91**	1	0	612
8" Venturied valves are 6" ball valves fitted with 6x8 end connector adapters.					
Threaded Ends					
2-1/2	1821-025 **295.95**	1831-025 **401.01**	1	0	601
3	1821-030 **390.18**	1831-030 **433.54**	1	0	601
4	1821-040 **659.24**	1831-040 **732.49**	1	0	601
6	1821-060 **1424.09**	1831-060 **1580.38**	1	0	612
SR Threaded Ends					
1/2	1821-005SR **50.75**	1831-005SR **56.36**	1	18	600
3/4	1821-007SR **61.36**	1831-007SR **68.00**	1	18	600
1	1821-010SR **72.59**	1831-010SR **80.56**	1	12	600
1-1/4	1821-012SR **104.58**	1831-012SR **131.37**	1	8	600
1-1/2	1821-015SR **124.98**	1831-015SR **137.82**	1	8	600
2	1821-020SR **162.95**	1831-020SR **178.36**	1	4	600

PVC Industrial (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
SR Threaded Ends					
2-1/2	1821-025SR **320.13**	1831-025SR **425.16**	1	0	601
3	1821-030SR **414.37**	1831-030SR **457.72**	1	0	601
4	1821-040SR **687.47**	1831-040SR **760.73**	1	0	601
6	1821-060SR **1464.37**	1831-060SR **1620.63**	1	0	612
Spigot Ends					
1/2	1827-005 **49.69**	1837-005 **55.27**	1	18	600
3/4	1827-007 **58.80**	1837-007 **65.41**	1	18	600
1	1827-010 **70.02**	1837-010 **77.99**	1	12	600
1-1/4	1827-012 **96.86**	1837-012 **123.64**	1	8	600
1-1/2	1827-015 **116.67**	1837-015 **129.52**	1	8	600
2	1827-020 **153.96**	1837-020 **169.54**	1	4	600
2-1/2	1827-025 **295.95**	1837-025 **401.01**	1	0	601
3	1827-030 **390.18**	1837-030 **433.54**	1	0	601
4	1827-040 **659.24**	1837-040 **732.49**	1	0	601
6	1827-060 **1424.09**	1837-060 **1580.38**	1	0	612
Flanged Ends					
1/2	1823-005 **71.08**	1833-005 **75.81**	1	8	600
3/4	1823-007 **90.04**	1833-007 **97.95**	1	8	600
1	1823-010 **108.98**	1833-010 **117.21**	1	8	600
1-1/4	1823-012 **127.97**	1833-012 **142.17**	1	8	600
1-1/2	1823-015 **161.16**	1833-015 **175.36**	1	4	600
2	1823-020 **256.61**	1833-020 **272.17**	1	0	600
2-1/2	1823-025 **473.91**	1833-025 **481.75**	1	0	601
3	1823-030 **523.81**	1833-030 **650.35**	1	0	601

True Union 2000 Industrial Ball Valves

PVC Industrial (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Flanged Ends					
4	1823-040 **1053.20**	1833-040 **1220.83**	1	0	601
6	1823-060 **2242.47**	1833-060 **2600.11**	1	0	612
8	1823-080 **2982.48**	1833-080 **3458.14**	1	0	612

8" Venturied valves are 6" ball valves fitted with 6x8 end connector adapters.

PVC 6" Industrial T-Handle Valve Option (Non–Locking)

NOTICE: T-Handle is more compact, but will greatly increase difficulty of operation.

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Socket Ends					
6	18226-060 **1424.09**	18326-060 **1580.38**	1	0	612
Threaded Ends					
6	18216-060 **1424.09**	18316-060 **1580.38**	1	0	612
SR Threaded Ends					
6	18216-060SR **1464.37**	18316-060SR **1620.63**	1	0	612
Flanged Ends					
6	18236-060 **2242.47**	18336-060 **2600.11**	1	0	612

CPVC Industrial

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Threaded & Socket Ends					
1/2	1829-005C **65.63**	1839-005C **72.93**	1	18	602
3/4	1829-007C **82.65**	1839-007C **91.86**	1	18	602
1	1829-010C **98.40**	1839-010C **109.33**	1	12	602
1-1/4	1829-012C **156.43**	1839-012C **173.86**	1	8	602
1-1/2	1829-015C **165.21**	1839-015C **183.57**	1	8	602
2	1829-020C **220.95**	1839-020C **254.00**	1	4	602
Socket Ends					
2-1/2	1822-025C **495.39**	1832-025C **550.40**	1	0	603
3	1822-030C **579.22**	1832-030C **643.63**	1	0	603
4	1822-040C **1049.59**	1832-040C **1166.19**	1	0	603
6	1822-060C **2234.41**	1832-060C **2482.51**	1	0	613
8	1822-080C **2971.79**	1832-080C **3301.76**	1	0	613

8" Venturied valves are 6" ball valves fitted with 6x8 end connector adapters.

Threaded Ends					
2-1/2	1821-025C **495.39**	1831-025C **550.40**	1	0	603
3	1821-030C **579.22**	1831-030C **643.63**	1	0	603
4	1821-040C **1049.59**	1831-040C **1166.19**	1	0	603
6	1821-060C **2234.41**	1831-060C **2482.51**	1	0	613
SR Threaded Ends					
1/2	1821-005CSR **66.68**	1831-005CSR **73.99**	1	18	602
3/4	1821-007CSR **85.23**	1831-007CSR **94.43**	1	18	602
1	1821-010CSR **100.98**	1831-010CSR **111.88**	1	12	602

CPVC Industrial (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
SR Threaded Ends					
1-1/4	1821-012CSR **164.17**	1831-012CSR **181.60**	1	8	602
1-1/2	1821-015CSR **173.53**	1831-015CSR **191.85**	1	8	602
2	1821-020CSR **229.95**	1831-020CSR **263.00**	1	4	602
2-1/2	1821-025CSR **519.58**	1831-025CSR **574.58**	1	0	603
3	1821-030CSR **603.40**	1831-030CSR **667.80**	1	0	603
4	1821-040CSR **1077.80**	1831-040CSR **1194.44**	1	0	603
6	1821-060CSR **2295.64**	1831-060CSR **2543.73**	1	0	613
Spigot Ends					
1/2	1827-005C **65.63**	1837-005C **72.93**	1	18	602
3/4	1827-007C **82.65**	1837-007C **91.86**	1	18	602
1	1827-010C **98.40**	1837-010C **109.33**	1	12	602
1-1/4	1827-012C **156.43**	1837-012C **173.86**	1	8	602
1-1/2	1827-015C **165.21**	1837-015C **183.57**	1	8	602
2	1827-020C **220.95**	1837-020C **254.00**	1	4	602
2-1/2	1827-025C **495.39**	1837-025C **550.40**	1	0	603
3	1827-030C **579.22**	1837-030C **643.63**	1	0	603
4	1827-040C **1049.59**	1837-040C **1166.19**	1	0	603
6	1827-060C **2234.41**	1837-060C **2482.51**	1	0	613
Flanged Ends					
1/2	1823-005C **111.36**	1833-005C **113.76**	1	8	602
3/4	1823-007C **136.51**	1833-007C **142.17**	1	8	602
1	1823-010C **156.26**	1833-010C **165.88**	1	8	602
1-1/4	1823-012C **233.48**	1833-012C **241.68**	1	8	602
1-1/2	1823-015C **256.82**	1833-015C **265.38**	1	4	602
2	1823-020C **357.38**	1833-020C **425.63**	1	0	602
2-1/2	1823-025C **667.02**	1833-025C **800.64**	1	0	603
3	1823-030C **975.47**	1833-030C **997.72**	1	0	603
4	1823-040C **1710.82**	1833-040C **1779.24**	1	0	603
6	1823-060C **3644.03**	1833-060C **3789.02**	1	0	613
8	1823-080C **4846.55**	1833-080C **5039.38**	1	0	613

8" Venturied valves are 6" ball valves fitted with 6x8 end connector adapters.

CPVC 6" Industrial T-Handle Valve Option (Non-Locking) NOTICE: T-Handle is more compact, but will greatly increase difficulty of operation.

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Socket Ends					
6	18226-060C **2234.41**	18326-060C **2482.51**	1	0	613
Threaded Ends					
6	18216-060C **2234.41**	18316-060C **2482.51**	1	0	613

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

True Union 2000 Industrial Ball Valves

CPVC 6" Industrial T-Handle Valve Option (Non-Locking) NOTICE: T-Handle is more compact, but will greatly increase difficulty of operation.

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
SR Threaded Ends					
6	18216-060CSR **2295.64**	18316-060CSR **2543.73**	1	0	613
Flanged Ends					
6	18236-060C **3644.03**	18336-060C **3789.02**	1	0	613

True Union 2000 Industrial Vented/Bleach Ball Valves

Pressure Rating @ 73°F (23°C), Water

1/2" - 4"	235 psi
6"	150 psi
Flanged	150 psi

Same True Union 2000 Industrial Ball Valve with Special Ball Vent Design for Sodium Hypochlorite (Bleach) and other Chemical Applications where entrapped fluids may form caustic crystalline residues and pressure build up from gases developed. Valve has a 1/8" vent hole in ball to equalize internal fluid pressures. Install valve with ball vent on the pressure (upstream) side when in closed position.

All Valves assembled with Silicone-Free, Water Soluble Lubricant

Contact Spears® for Pricing & Availability on Custom Elastomer Seals. See Ball Valve Accessories & Repair Kits Section for Additional Options and Features

PVC True Union 2000 Industrial Vented/Bleach Ball Valves

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Threaded & Socket Ends					
1/2	1829V-005 **58.45**	1839V-005 **65.06**	1	18	600
3/4	1829V-007 **69.17**	1839V-007 **76.94**	1	18	600
1	1829V-010 **82.39**	1839V-010 **91.75**	1	12	600
1-1/4	1829V-012 **113.97**	1839V-012 **145.45**	1	8	600
1-1/2	1829V-015 **137.25**	1839V-015 **152.38**	1	8	600
2	1829V-020 **181.12**	1839V-020 **199.46**	1	4	600
Socket Ends					
2-1/2	1822V-025 **348.17**	1832V-025 **471.76**	1	0	601
3	1822V-030 **390.18**	1832V-030 **510.03**	1	0	601
4	1822V-040 **659.24**	1832V-040 **861.75**	1	0	601
6	1822V-060 **1675.42**	1832V-060 **1975.46**	1	0	612
SR Threaded Ends					
1/2	1821V-005SR **59.72**	1831V-005SR **66.32**	1	18	600
3/4	1821V-007SR **72.18**	1831V-007SR **79.99**	1	18	600
1	1821V-010SR **85.41**	1831V-010SR **94.79**	1	12	600
1-1/4	1821V-012SR **123.04**	1831V-012SR **154.54**	1	8	600
1-1/2	1821V-015SR **147.04**	1831V-015SR **162.16**	1	8	600
2	1821V-020SR **191.71**	1831V-020SR **209.82**	1	4	600

PVC True Union 2000 Industrial Vented/Bleach Ball Valves (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
SR Threaded Ends					
2-1/2	1821V-025SR **376.62**	1831V-025SR **500.19**	1	0	601
3	1821V-030SR **487.51**	1831V-030SR **538.48**	1	0	601
4	1821V-040SR **808.78**	1831V-040SR **894.98**	1	0	601
Flanged Ends					
1/2	1823V-005 **83.76**	1833V-005 **89.47**	1	8	600
3/4	1823V-007 **105.95**	1833V-007 **115.22**	1	8	600
1	1823V-010 **128.21**	1833V-010 **137.87**	1	8	600
1-1/4	1823V-012 **150.56**	1833V-012 **206.28**	1	8	600
1-1/2	1823V-015 **189.60**	1833V-015 **206.28**	1	4	600
2	1823V-020 **301.89**	1833V-020 **320.20**	1	0	600
2-1/2	1823V-025 **557.54**	1833V-025 **566.75**	1	0	601
3	1823V-030 **616.24**	1833V-030 **765.09**	1	0	601
4	1823V-040 **1239.06**	1833V-040 **1436.28**	1	0	601
6	1823V-060 **2638.22**	1833V-060 **3058.95**	1	0	612

CPVC True Union 2000 Industrial Vented/Bleach Ball Valves

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Threaded & Socket Ends					
1/2	1829V-005C **77.20**	1839V-005C **85.79**	1	18	602

CPVC True Union 2000 Industrial Vented/Bleach Ball Valves (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Threaded & Socket Ends					
3/4	1829V-007C **97.23**	1839V-007C **108.07**	1	18	602
1	1829V-010C **115.77**	1839V-010C **128.62**	1	12	602
1-1/4	1829V-012C **184.04**	1839V-012C **204.57**	1	8	602
1-1/2	1829V-015C **194.37**	1839V-015C **215.96**	1	8	602
2	1829V-020C **259.96**	1839V-020C **298.81**	1	4	602
Socket Ends					
2-1/2	1822V-025C **582.81**	1832V-025C **647.51**	1	0	603
3	1822V-030C **681.44**	1832V-030C **757.19**	1	0	603
4	1822V-040C **1234.79**	1832V-040C **1372.00**	1	0	603
6	1822V-060C **2628.74**	1832V-060C **2920.60**	1	0	613
SR Threaded Ends					
1/2	1821V-005CSR **78.43**	1831V-005CSR **87.05**	1	18	602
3/4	1821V-007CSR **100.28**	1831V-007CSR **111.07**	1	18	602
1	1821V-010CSR **118.77**	1831V-010CSR **131.62**	1	12	602
1-1/4	1821V-012CSR **193.12**	1831V-012CSR **213.65**	1	8	602
1-1/2	1821V-015CSR **204.15**	1831V-015CSR **225.73**	1	8	602
2	1821V-020CSR **270.54**	1831V-020CSR **309.41**	1	4	602
2-1/2	1821V-025CSR **611.26**	1831V-025CSR **675.97**	1	0	603
3	1821V-030CSR **709.89**	1831V-030CSR **785.65**	1	0	603
4	1821V-040CSR **1268.01**	1831V-040CSR **1405.23**	1	0	603
Flanged Ends					
1/2	1823V-005C **131.00**	1833V-005C **133.82**	1	8	602
3/4	1823V-007C **160.59**	1833V-007C **167.29**	1	8	602
1	1823V-010C **183.84**	1833V-010C **195.16**	1	8	602
1-1/4	1823V-012C **274.69**	1833V-012C **284.33**	1	8	602
1-1/2	1823V-015C **302.14**	1833V-015C **312.22**	1	4	602
2	1823V-020C **420.45**	1833V-020C **500.73**	1	0	602
2-1/2	1823V-025C **784.74**	1833V-025C **941.93**	1	0	603
3	1823V-030C **1147.61**	1833V-030C **1173.76**	1	0	603
4	1823V-040C **2093.21**	1833V-040C **2093.23**	1	0	603
6	1823V-060C **4457.67**	1833V-060C **4457.67**	1	0	613

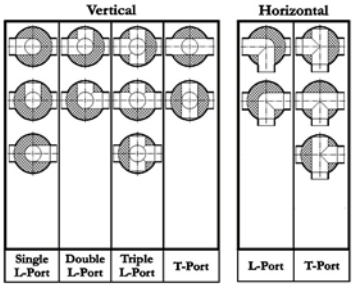
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

True Union 2000 Industrial 3-Way Ball Valves

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 235 psi
2-1/2" - 4" 150 psi
Flanged 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
Vertical 3-Way or Horizontal Diverter Design
(No Branch Shut-off)
All Standard Carton Quantities are one
All Valves assembled with Silicone-Free,
Water Soluble Lubricant
See Ball Valve Accessories & Repair Kits Section
for Additional Options and Features

Ball Port Options



Ball port options viewed from top of valve

Horizontal Diverter Valve

Vertical 3-Way Valve

PVC Horizontal Diverter Ball Valves

Material		EPDM				FKM				Prod Code
Joint		Socket	SR Thread	Spigot	Flanged	Socket	SR Thread	Spigot	Flanged	
Size	Ball Port	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	L-Port	5022L1-005 102.54	5021L1-005SR 105.85	5027L1-005 102.54	5023L1-005 209.43	5032L1-005 111.22	5031L1-005SR 116.24	5037L1-005 111.22	5033L1-005 218.79	615
	T-Port	5022T1-005 102.54	5021T1-005SR 105.85	5027T1-005 102.54	5023T1-005 209.43	5032T1-005 111.22	5031T1-005SR 116.24	5037T1-005 111.22	5033T1-005 218.79	615
3/4	L-Port	5022L1-007 122.29	5021L1-007SR 126.36	5027L1-007 122.29	5023L1-007 219.13	5032L1-007 131.63	5031L1-007SR 135.73	5037L1-007 131.63	5033L1-007 231.24	615
	T-Port	5022T1-007 122.29	5021T1-007SR 126.36	5027T1-007 122.29	5023T1-007 219.13	5032T1-007 131.63	5031T1-007SR 135.73	5037T1-007 131.63	5033T1-007 231.24	615
1	L-Port	5022L1-010 148.27	5021L1-010SR 152.26	5027L1-010 148.27	5023L1-010 312.32	5032L1-010 163.35	5031L1-010SR 167.40	5037L1-010 163.35	5033L1-010 341.42	615
	T-Port	5022T1-010 148.27	5021T1-010SR 152.26	5027T1-010 148.27	5023T1-010 312.32	5032T1-010 163.35	5031T1-010SR 167.40	5037T1-010 163.35	5033T1-010 341.42	615
1-1/4	L-Port	5022L1-012 171.86	5021L1-012SR 179.63	5027L1-012 171.86	5023L1-012 590.69	5032L1-012 193.32	5031L1-012SR 201.44	5037L1-012 193.32	5033L1-012 625.67	615
	T-Port	5022T1-012 171.86	5021T1-012SR 179.63	5027T1-012 171.86	5023T1-012 590.69	5032T1-012 193.32	5031T1-012SR 201.44	5037T1-012 193.32	5033T1-012 625.67	615
1-1/2	L-Port	5022L1-015 200.95	5021L1-015SR 213.94	5027L1-015 200.95	5023L1-015 608.53	5032L1-015 220.00	5031L1-015SR 232.98	5037L1-015 220.00	5033L1-015 636.42	615
	T-Port	5022T1-015 200.95	5021T1-015SR 213.94	5027T1-015 200.95	5023T1-015 608.53	5032T1-015 220.00	5031T1-015SR 232.98	5037T1-015 220.00	5033T1-015 636.42	615
2	L-Port	5022L1-020 246.51	5021L1-020SR 259.48	5027L1-020 246.51	5023L1-020 790.23	5032L1-020 287.39	5031L1-020SR 301.48	5037L1-020 287.39	5033L1-020 829.91	615
	T-Port	5022T1-020 246.51	5021T1-020SR 259.48	5027T1-020 246.51	5023T1-020 790.23	5032T1-020 287.39	5031T1-020SR 301.48	5037T1-020 287.39	5033T1-020 829.91	615
2-1/2	L-Port	5022L1-025 831.12	5021L1-025SR 867.49	5027L1-025 831.12	5023L1-025 1387.52	5032L1-025 883.79	5031L1-025SR 920.15	5037L1-025 883.79	5033L1-025 1626.02	615
	T-Port	5022T1-025 831.12	5021T1-025SR 867.49	5027T1-025 831.12	5023T1-025 1387.52	5032T1-025 883.79	5031T1-025SR 920.15	5037T1-025 883.79	5033T1-025 1626.02	615
3	L-Port	5022L1-030 848.09	5021L1-030SR 886.21	5027L1-030 848.09	5023L1-030 1405.72	5032L1-030 897.64	5031L1-030SR 934.00	5037L1-030 897.64	5033L1-030 1633.48	615
	T-Port	5022T1-030 848.09	5021T1-030SR 886.21	5027T1-030 848.09	5023T1-030 1405.72	5032T1-030 897.64	5031T1-030SR 934.00	5037T1-030 897.64	5033T1-030 1633.48	615
4	L-Port	5022L1-040 1535.97	5021L1-040SR 1577.56	5027L1-040 1535.97	5023L1-040 2042.29	5032L1-040 1553.29	5031L1-040SR 1594.87	5037L1-040 1553.29	5033L1-040 2232.33	615
	T-Port	5022T1-040 1535.97	5021T1-040SR 1577.56	5027T1-040 1535.97	5023T1-040 2042.29	5032T1-040 1553.29	5031T1-040SR 1594.87	5037T1-040 1553.29	5033T1-040 2232.33	615

True Union 2000 Industrial 3-Way Ball Valves

CPVC Horizontal Diverter Ball Valves

Material		EPDM				FKM				Prod Code
Joint		Socket	SR Thread	Spigot	Flanged	Socket	SR Thread	Spigot	Flanged	
Size	Ball Port	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	L-Port	5022L1-005C 157.82	5021L1-005CSR 162.83	5027L1-005C 157.82	5023L1-005C 322.20	5032L1-005C 170.98	5031L1-005CSR 178.77	5037L1-005C 170.98	5033L1-005C 336.56	617
	T-Port	5022T1-005C 157.82	5021T1-005CSR 162.83	5027T1-005C 157.82	5023T1-005C 322.20	5032T1-005C 170.98	5031T1-005CSR 178.77	5037T1-005C 170.98	5033T1-005C 336.56	617
3/4	L-Port	5022L1-007C 188.12	5021L1-007CSR 194.37	5027L1-007C 188.12	5023L1-007C 337.09	5032L1-007C 202.49	5031L1-007CSR 208.73	5037L1-007C 202.49	5033L1-007C 355.80	617
	T-Port	5022T1-007C 188.12	5021T1-007CSR 194.37	5027T1-007C 188.12	5023T1-007C 337.09	5032T1-007C 202.49	5031T1-007CSR 208.73	5037T1-007C 202.49	5033T1-007C 355.80	617
1	L-Port	5022L1-010C 228.12	5021L1-010CSR 234.21	5027L1-010C 228.12	5023L1-010C 480.34	5032L1-010C 251.35	5031L1-010CSR 257.40	5037L1-010C 251.35	5033L1-010C 525.21	617
	T-Port	5022T1-010C 228.12	5021T1-010CSR 234.21	5027T1-010C 228.12	5023T1-010C 480.34	5032T1-010C 251.35	5031T1-010CSR 257.40	5037T1-010C 251.35	5033T1-010C 525.21	617
1-1/4	L-Port	5022L1-012C 264.35	5021L1-012CSR 276.29	5027L1-012C 264.35	5023L1-012C 908.74	5032L1-012C 296.38	5031L1-012CSR 309.89	5037L1-012C 296.38	5033L1-012C 962.62	617
	T-Port	5022T1-012C 264.35	5021T1-012CSR 276.29	5027T1-012C 264.35	5023T1-012C 908.74	5032T1-012C 296.38	5031T1-012CSR 309.89	5037T1-012C 296.38	5033T1-012C 962.62	617
1-1/2	L-Port	5022L1-015C 309.22	5021L1-015CSR 329.13	5027L1-015C 309.22	5023L1-015C 936.25	5032L1-015C 338.44	5031L1-015CSR 358.39	5037L1-015C 338.44	5033L1-015C 979.05	617
	T-Port	5022T1-015C 309.22	5021T1-015CSR 329.13	5027T1-015C 309.22	5023T1-015C 936.25	5032T1-015C 338.44	5031T1-015CSR 358.39	5037T1-015C 338.44	5033T1-015C 979.05	617
2	L-Port	5022L1-020C 379.35	5021L1-020CSR 399.20	5027L1-020C 379.35	5023L1-020C 1215.68	5032L1-020C 442.12	5031L1-020CSR 463.73	5037L1-020C 442.12	5033L1-020C 1276.82	617
	T-Port	5022T1-020C 379.35	5021T1-020CSR 399.20	5027T1-020C 379.35	5023T1-020C 1215.68	5032T1-020C 442.12	5031T1-020CSR 463.73	5037T1-020C 442.12	5033T1-020C 1276.82	617
2-1/2	L-Port	5022L1-025C 1278.73	5021L1-025CSR 1334.51	5027L1-025C 1278.73	5023L1-025C 2134.61	5032L1-025C 1359.63	5031L1-025CSR 1415.62	5037L1-025C 1359.63	5033L1-025C 2501.60	617
	T-Port	5022T1-025C 1278.73	5021T1-025CSR 1334.51	5027T1-025C 1278.73	5023T1-025C 2134.61	5032T1-025C 1359.63	5031T1-025CSR 1415.62	5037T1-025C 1359.63	5033T1-025C 2501.60	617
3	L-Port	5022L1-030C 1304.72	5021L1-030CSR 1363.43	5027L1-030C 1304.72	5023L1-030C 2163.38	5032L1-030C 1380.93	5031L1-030CSR 1436.91	5037L1-030C 1380.93	5033L1-030C 2513.13	617
	T-Port	5022T1-030C 1304.72	5021T1-030CSR 1363.43	5027T1-030C 1304.72	5023T1-030C 2163.38	5032T1-030C 1380.93	5031T1-030CSR 1436.91	5037T1-030C 1380.93	5033T1-030C 2513.13	617
4	L-Port	5022L1-040C 2362.94	5021L1-040CSR 2426.84	5027L1-040C 2362.94	5023L1-040C 3142.08	5032L1-040C 2389.62	5031L1-040CSR 2453.65	5037L1-040C 2389.62	5033L1-040C 3434.33	617
	T-Port	5022T1-040C 2362.94	5021T1-040CSR 2426.84	5027T1-040C 2362.94	5023T1-040C 3142.08	5032T1-040C 2389.62	5031T1-040CSR 2453.65	5037T1-040C 2389.62	5033T1-040C 3434.33	617

PVC Vertical 3-Way Ball Valves

Material		EPDM				FKM				Prod Code
Joint		Socket	SR Thread	Spigot	Flanged	Socket	SR Thread	Spigot	Flanged	
Size	Ball Port	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	L-Port	4722L1-005 102.03	4721L1-005SR 103.65	4727L1-005 102.03	4723L1-005 210.83	4732L1-005 110.51	4731L1-005SR 112.15	4737L1-005 110.51	4733L1-005 218.43	615
	Double L-Port	4722L2-005 203.20	4721L2-005SR 204.83	4727L2-005 203.20	4723L2-005 311.99	4732L2-005 211.68	4731L2-005SR 213.33	4737L2-005 211.68	4733L2-005 319.60	615
	Triple L-Port	4722L3-005 203.20	4721L3-005SR 204.83	4727L3-005 203.20	4723L3-005 311.99	4732L3-005 211.68	4731L3-005SR 213.33	4737L3-005 211.68	4733L3-005 319.60	615
	T-Port	4722T1-005 102.03	4721T1-005SR 103.65	4727T1-005 102.03	4723T1-005 210.83	4732T1-005 110.51	4731T1-005SR 112.15	4737T1-005 110.51	4733T1-005 218.43	615
3/4	L-Port	4722L1-007 119.68	4721L1-007SR 123.78	4727L1-007 119.68	4723L1-007 221.38	4732L1-007 130.43	4731L1-007SR 134.49	4737L1-007 130.43	4733L1-007 230.74	615
	Double L-Port	4722L2-007 220.86	4721L2-007SR 224.92	4727L2-007 220.86	4723L2-007 322.56	4732L2-007 231.60	4731L2-007SR 235.66	4737L2-007 231.60	4733L2-007 331.89	615
	Triple L-Port	4722L3-007 220.86	4721L3-007SR 224.92	4727L3-007 220.86	4723L3-007 322.56	4732L3-007 231.60	4731L3-007SR 235.66	4737L3-007 231.60	4733L3-007 331.89	615
	T-Port	4722T1-007 119.68	4721T1-007SR 123.78	4727T1-007 119.68	4723T1-007 221.38	4732T1-007 130.43	4731T1-007SR 134.49	4737T1-007 130.43	4733T1-007 230.74	615
1	L-Port	4722L1-010 145.49	4721L1-010SR 149.58	4727L1-010 145.49	4723L1-010 315.78	4732L1-010 161.98	4731L1-010SR 166.03	4737L1-010 161.98	4733L1-010 341.77	615
	Double L-Port	4722L2-010 246.69	4721L2-010SR 250.76	4727L2-010 246.69	4723L2-010 416.96	4732L2-010 263.12	4731L2-010SR 267.20	4737L2-010 263.12	4733L2-010 442.94	615
	Triple L-Port	4722L3-010 246.69	4721L3-010SR 250.76	4727L3-010 246.69	4723L3-010 416.96	4732L3-010 263.12	4731L3-010SR 267.20	4737L3-010 263.12	4733L3-010 442.94	615
	T-Port	4722T1-010 145.49	4721T1-010SR 149.58	4727T1-010 145.49	4723T1-010 315.78	4732T1-010 161.98	4731T1-010SR 166.03	4737T1-010 161.98	4733T1-010 341.77	615

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Vertical 3-Way Ball Valves (continued)

Material		EPDM				FKM				Prod Code
Joint		Socket	SR Thread	Spigot	Flanged	Socket	SR Thread	Spigot	Flanged	
Size	Ball Port	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1-1/4	L-Port	4722L1-012 175.99	4721L1-012SR 184.15	4727L1-012 175.99	4723L1-012 595.20	4732L1-012 207.36	4731L1-012SR 215.49	4737L1-012 207.36	4733L1-012 629.48	615
	Double L-Port	4722L2-012 277.17	4721L2-012SR 285.31	4727L2-012 277.17	4723L2-012 696.36	4732L2-012 308.53	4731L2-012SR 316.65	4737L2-012 308.53	4733L2-012 730.66	615
	Triple L-Port	4722L3-012 277.17	4721L3-012SR 285.31	4727L3-012 277.17	4723L3-012 696.36	4732L3-012 308.53	4731L3-012SR 316.65	4737L3-012 308.53	4733L3-012 730.66	615
	T-Port	4722T1-012 175.99	4721T1-012SR 184.15	4727T1-012 175.99	4723T1-012 595.20	4732T1-012 207.36	4731T1-012SR 215.49	4737T1-012 207.36	4733T1-012 629.48	615
1-1/2	L-Port	4722L1-015 203.52	4721L1-015SR 216.54	4727L1-015 203.52	4723L1-015 617.38	4732L1-015 223.11	4731L1-015SR 236.11	4737L1-015 223.11	4733L1-015 636.42	615
	Double L-Port	4722L2-015 304.71	4721L2-015SR 317.68	4727L2-015 304.71	4723L2-015 718.53	4732L2-015 324.26	4731L2-015SR 337.26	4737L2-015 324.26	4733L2-015 737.58	615
	Triple L-Port	4722L3-015 304.71	4721L3-015SR 317.68	4727L3-015 304.71	4723L3-015 718.53	4732L3-015 324.26	4731L3-015SR 337.26	4737L3-015 324.26	4733L3-015 737.58	615
	T-Port	4722T1-015 203.52	4721T1-015SR 216.54	4727T1-015 203.52	4723T1-015 617.38	4732T1-015 223.11	4731T1-015SR 236.11	4737T1-015 223.11	4733T1-015 636.42	615
2	L-Port	4722L1-020 249.61	4721L1-020SR 263.73	4727L1-020 249.61	4723L1-020 795.60	4732L1-020 289.81	4731L1-020SR 303.92	4737L1-020 289.81	4733L1-020 830.80	615
	Double L-Port	4722L2-020 350.76	4721L2-020SR 364.91	4727L2-020 350.76	4723L2-020 896.78	4732L2-020 390.98	4731L2-020SR 405.07	4737L2-020 390.98	4733L2-020 931.93	615
	Triple L-Port	4722L3-020 350.76	4721L3-020SR 364.91	4727L3-020 350.76	4723L3-020 896.78	4732L3-020 390.98	4731L3-020SR 405.07	4737L3-020 390.98	4733L3-020 931.93	615
	T-Port	4722T1-020 249.61	4721T1-020SR 263.73	4727T1-020 249.61	4723T1-020 795.60	4732T1-020 289.81	4731T1-020SR 303.92	4737T1-020 289.81	4733T1-020 830.80	615
2-1/2	L-Port	4722L1-025 877.91	4721L1-025SR 914.28	4727L1-025 877.91	4723L1-025 1393.58	4732L1-025 887.78	4731L1-025SR 924.17	4737L1-025 887.78	4733L1-025 1624.14	615
	Double L-Port	4722L2-025 979.05	4721L2-025SR 1015.43	4727L2-025 979.05	4723L2-025 1494.75	4732L2-025 988.94	4731L2-025SR 1025.31	4737L2-025 988.94	4733L2-025 1725.31	615
	Triple L-Port	4722L3-025 979.05	4721L3-025SR 1015.43	4727L3-025 979.05	4723L3-025 1494.75	4732L3-025 988.94	4731L3-025SR 1025.31	4737L3-025 988.94	4733L3-025 1725.31	615
	T-Port	4722T1-025 877.91	4721T1-025SR 914.28	4727T1-025 877.91	4723T1-025 1393.58	4732T1-025 887.78	4731T1-025SR 924.17	4737T1-025 887.78	4733T1-025 1624.14	615
3	L-Port	4722L1-030 895.91	4721L1-030SR 932.28	4727L1-030 895.91	4723L1-030 1412.80	4732L1-030 903.87	4731L1-030SR 940.25	4737L1-030 903.87	4733L1-030 1634.89	615
	Double L-Port	4722L2-030 997.07	4721L2-030SR 1033.46	4727L2-030 997.07	4723L2-030 1513.98	4732L2-030 1005.05	4731L2-030SR 1041.41	4737L2-030 1005.05	4733L2-030 1736.04	615
	Triple L-Port	4722L3-030 997.07	4721L3-030SR 1033.46	4727L3-030 997.07	4723L3-030 1513.98	4732L3-030 1005.05	4731L3-030SR 1041.41	4737L3-030 1005.05	4733L3-030 1736.04	615
	T-Port	4722T1-030 895.91	4721T1-030SR 932.28	4727T1-030 895.91	4723T1-030 1412.80	4732T1-030 903.87	4731T1-030SR 940.25	4737T1-030 903.87	4733T1-030 1634.89	615
4	L-Port	4722L1-040 1548.61	4721L1-040SR 1590.18	4727L1-040 1548.61	4723L1-040 2053.91	4732L1-040 1563.68	4731L1-040SR 1605.25	4737L1-040 1563.68	4733L1-040 2151.25	615
	Double L-Port	4722L2-040 1649.80	4721L2-040SR 1691.34	4727L2-040 1649.80	4723L2-040 2155.07	4732L2-040 1664.85	4731L2-040SR 1706.43	4737L2-040 1664.85	4733L2-040 2252.42	615
	Triple L-Port	4722L3-040 1649.80	4721L3-040SR 1691.34	4727L3-040 1649.80	4723L3-040 2155.07	4732L3-040 1664.85	4731L3-040SR 1706.43	4737L3-040 1664.85	4733L3-040 2252.42	615
	T-Port	4722T1-040 1548.61	4721T1-040SR 1590.18	4727T1-040 1548.61	4723T1-040 2053.91	4732T1-040 1563.68	4731T1-040SR 1605.25	4737T1-040 1563.68	4733T1-040 2151.25	615

CPVC Vertical 3-Way Ball Valves

Material		EPDM				FKM				Prod Code
Joint		Socket	SR Thread	Spigot	Flanged	Socket	SR Thread	Spigot	Flanged	
Size	Ball Port	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	L-Port	4722L1-005C 156.94	4721L1-005CSR 159.53	4727L1-005C 156.94	4723L1-005C 324.26	4732L1-005C 169.93	4731L1-005CSR 172.52	4737L1-005C 169.93	4733L1-005C 336.06	617
	Double L-Port	4722L2-005C 312.67	4721L2-005CSR 315.08	4727L2-005C 312.67	4723L2-005C 480.00	4732L2-005C 325.66	4731L2-005CSR 328.09	4737L2-005C 325.66	4733L2-005C 491.61	617
	Triple L-Port	4722L3-005C 312.67	4721L3-005CSR 315.08	4727L3-005C 312.67	4723L3-005C 480.00	4732L3-005C 325.66	4731L3-005CSR 328.09	4737L3-005C 325.66	4733L3-005C 491.61	617
	T-Port	4722T1-005C 156.94	4721T1-005CSR 159.53	4727T1-005C 156.94	4723T1-005C 324.26	4732T1-005C 169.93	4731T1-005CSR 172.52	4737T1-005C 169.93	4733T1-005C 336.06	617
3/4	L-Port	4722L1-007C 184.15	4721L1-007CSR 190.54	4727L1-007C 184.15	4723L1-007C 340.56	4732L1-007C 200.60	4731L1-007CSR 207.00	4737L1-007C 200.60	4733L1-007C 354.93	617
	Double L-Port	4722L2-007C 339.86	4721L2-007CSR 345.92	4727L2-007C 339.86	4723L2-007C 496.13	4732L2-007C 356.32	4731L2-007CSR 362.56	4737L2-007C 356.32	4733L2-007C 510.48	617
	Triple L-Port	4722L3-007C 339.86	4721L3-007CSR 345.92	4727L3-007C 339.86	4723L3-007C 496.13	4732L3-007C 356.32	4731L3-007CSR 362.56	4737L3-007C 356.32	4733L3-007C 510.48	617
	T-Port	4722T1-007C 184.15	4721T1-007CSR 190.54	4727T1-007C 183.68	4723T1-007C 340.56	4732T1-007C 200.60	4731T1-007CSR 207.00	4737T1-007C 200.60	4733T1-007C 354.93	617

CPVC Vertical 3-Way Ball Valves (continued)

Material		EPDM				FKM				Prod Code
Joint		Socket	SR Thread	Spigot	Flanged	Socket	SR Thread	Spigot	Flanged	
Size	Ball Port	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1	L-Port	4722L1-010C 223.81	4721L1-010CSR 230.05	4727L1-010C 223.81	4723L1-010C 485.72	4732L1-010C 249.27	4731L1-010CSR 255.51	4737L1-010C 249.27	4733L1-010C 525.73	617
	Double L-Port	4722L2-010C 379.52	4721L2-010CSR 385.76	4727L2-010C 379.52	4723L2-010C 641.43	4732L2-010C 404.81	4731L2-010CSR 411.07	4737L2-010C 404.81	4733L2-010C 681.45	617
	Triple L-Port	4722L3-010C 379.52	4721L3-010CSR 385.76	4727L3-010C 379.52	4723L3-010C 641.43	4732L3-010C 404.81	4731L3-010CSR 411.07	4737L3-010C 404.81	4733L3-010C 681.45	617
	T-Port	4722T1-010C 223.81	4721T1-010CSR 230.05	4727T1-010C 223.81	4723T1-010C 485.72	4732T1-010C 249.27	4731T1-010CSR 255.51	4737T1-010C 249.27	4733T1-010C 525.73	617
1-1/4	L-Port	4722L1-012C 270.75	4721L1-012CSR 283.21	4727L1-012C 270.75	4723L1-012C 915.65	4732L1-012C 319.07	4731L1-012CSR 331.55	4737L1-012C 319.07	4733L1-012C 968.48	617
	Double L-Port	4722L2-012C 426.29	4721L2-012CSR 438.77	4727L2-012C 426.29	4723L2-012C 1071.22	4732L2-012C 474.62	4731L2-012CSR 487.97	4737L2-012C 474.62	4733L2-012C 730.66	617
	Triple L-Port	4722L3-012C 426.29	4721L3-012CSR 438.77	4727L3-012C 426.29	4723L3-012C 1071.22	4732L3-012C 474.62	4731L3-012CSR 487.97	4737L3-012C 474.62	4733L3-012C 1124.04	617
	T-Port	4722T1-012C 270.75	4721T1-012CSR 283.21	4727T1-012C 270.75	4723T1-012C 915.65	4732T1-012C 319.07	4731T1-012CSR 331.55	4737T1-012C 319.07	4733T1-012C 968.48	617
1-1/2	L-Port	4722L1-015C 313.00	4721L1-015CSR 333.11	4727L1-015C 313.00	4723L1-015C 949.80	4732L1-015C 343.15	4731L1-015CSR 363.23	4737L1-015C 343.15	4733L1-015C 979.05	617
	Double L-Port	4722L2-015C 468.76	4721L2-015CSR 488.65	4727L2-015C 468.76	4723L2-015C 1105.32	4732L2-015C 498.89	4731L2-015CSR 558.62	4737L2-015C 498.89	4733L2-015C 1134.78	617
	Triple L-Port	4722L3-015C 468.76	4721L3-015CSR 488.65	4727L3-015C 468.76	4723L3-015C 1105.32	4732L3-015C 498.89	4731L3-015CSR 558.62	4737L3-015C 498.89	4733L3-015C 1134.78	617
	T-Port	4722T1-015C 313.00	4721T1-015CSR 333.11	4727T1-015C 313.00	4723T1-015C 949.80	4732T1-015C 343.15	4731T1-015CSR 363.23	4737T1-015C 343.15	4733T1-015C 979.05	617
2	L-Port	4722L1-020C 384.04	4721L1-020CSR 405.67	4727L1-020C 384.04	4723L1-020C 1223.99	4732L1-020C 445.86	4731L1-020CSR 467.52	4737L1-020C 445.86	4733L1-020C 1278.04	617
	Double L-Port	4722L2-020C 539.61	4721L2-020CSR 561.41	4727L2-020C 539.61	4723L2-020C 1332.96	4732L2-020C 601.44	4731L2-020CSR 623.06	4737L2-020C 601.44	4733L2-020C 1433.76	617
	Triple L-Port	4722L3-020C 539.61	4721L3-020CSR 561.41	4727L3-020C 539.61	4723L3-020C 1332.96	4732L3-020C 601.44	4731L3-020CSR 623.06	4737L3-020C 601.44	4733L3-020C 1433.76	617
	T-Port	4722T1-020C 384.04	4721T1-020CSR 405.67	4727T1-020C 384.04	4723T1-020C 1223.99	4732T1-020C 445.86	4731T1-020CSR 467.52	4737T1-020C 445.86	4733T1-020C 1278.04	617
2-1/2	L-Port	4722L1-025C 1350.63	4721L1-025CSR 1406.56	4727L1-025C 1350.63	4723L1-025C 2143.79	4732L1-025C 1365.85	4731L1-025CSR 1421.81	4737L1-025C 1365.85	4733L1-025C 2498.75	617
	Double L-Port	4722L2-025C 1506.17	4721L2-025CSR 1544.08	4727L2-025C 1506.17	4723L2-025C 2299.54	4732L2-025C 1521.42	4731L2-025CSR 1577.38	4737L2-025C 1521.42	4733L2-025C 2654.31	617
	Triple L-Port	4722L3-025C 1506.17	4721L3-025CSR 1544.08	4727L3-025C 1506.17	4723L3-025C 2299.54	4732L3-025C 1521.42	4731L3-025CSR 1577.38	4737L3-025C 1521.42	4733L3-025C 2654.31	617
	T-Port	4722T1-025C 1350.63	4721T1-025CSR 1406.56	4727T1-025C 1350.63	4723T1-025C 2143.79	4732T1-025C 1365.85	4731T1-025CSR 1421.81	4737T1-025C 1365.85	4733T1-025C 2498.75	617
3	L-Port	4722L1-030C 1378.33	4721L1-030CSR 1434.28	4727L1-030C 1378.33	4723L1-030C 2173.62	4732L1-030C 1390.47	4731L1-030CSR 1446.60	4737L1-030C 1390.47	4733L1-030C 2515.20	617
	Double L-Port	4722L2-030C 1533.91	4721L2-030CSR 1571.82	4727L2-030C 1533.91	4723L2-030C 2329.15	4732L2-030C 1546.18	4731L2-030CSR 1602.15	4737L2-030C 1546.18	4733L2-030C 2670.75	617
	Triple L-Port	4722L3-030C 1533.91	4721L3-030CSR 1571.82	4727L3-030C 1533.91	4723L3-030C 2329.15	4732L3-030C 1546.18	4731L3-030CSR 1602.15	4737L3-030C 1546.18	4733L3-030C 2670.75	617
	T-Port	4722T1-030C 1378.33	4721T1-030CSR 1434.28	4727T1-030C 1378.33	4723T1-030C 2173.62	4732T1-030C 1390.47	4731T1-030CSR 1446.60	4737T1-030C 1390.47	4733T1-030C 2515.20	617
4	L-Port	4722L1-040C 2382.52	4721L1-040CSR 2446.43	4727L1-040C 2382.52	4723L1-040C 3191.12	4732L1-040C 2405.72	4731L1-040CSR 2469.64	4737L1-040C 2405.72	4733L1-040C 3309.60	617
	Double L-Port	4722L2-040C 2538.05	4721L2-040CSR 2601.98	4727L2-040C 2538.05	4723L2-040C 3315.47	4732L2-040C 2561.27	4731L2-040CSR 2625.20	4737L2-040C 2561.27	4733L2-040C 3465.15	617
	Triple L-Port	4722L3-040C 2538.05	4721L3-040CSR 2601.98	4727L3-040C 2538.05	4723L3-040C 3315.47	4732L3-040C 2561.27	4731L3-040CSR 2625.20	4737L3-040C 2561.27	4733L3-040C 3465.15	617
	T-Port	4722T1-040C 2382.52	4721T1-040CSR 2446.43	4727T1-040C 2382.52	4723T1-040C 3191.12	4732T1-040C 2405.72	4731T1-040CSR 2469.64	4737T1-040C 2405.72	4733T1-040C 3309.60	617

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Tee-Style "Zero Dead-Leg" Ball Valves

Valves are produced to order in Ball Valve sizes 1/2" – 2".
Tee Valves can be custom produced in any standard Tee and Valve size combination.

The Tee Valve is assembled with socket end connector.
Tee Valves are a non-stock configuration.
All orders are non-cancelable, non-returnable.

Pressure Rating @ 73°F (23°C), Water
Valve Sizes 1/2" - 2" (20mm - 63mm) = 235 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply

PVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Mainline Socket Tee x Valve Socket/Fipt					
1/2	182901-005 **163.19**	183901-005 **175.80**	1	12	263
3/4	182901-007 **178.35**	183901-007 **192.79**	1	8	263
1	182901-010 **181.71**	183901-010 **203.39**	1	8	263
2	182901-020 **301.16**	183901-020 **351.61**	1	0	263
3/4X1/2	182901-101 **165.91**	183901-101 **178.48**	1	12	263
1X1/2	182901-130 **171.36**	183901-130 **183.99**	1	8	263
1X3/4	182901-131 **181.71**	183901-131 **203.39**	1	8	263
1-1/4X1/2	182901-166 **180.55**	183901-166 **193.15**	1	8	263
1-1/4X3/4	182901-167 **185.06**	183901-167 **199.53**	1	8	263
1-1/4X1	182901-168 **197.72**	183901-168 **219.42**	1	8	263
1-1/2X1/2	182901-209 **180.55**	183901-209 **193.17**	1	8	263
1-1/2X3/4	182901-210 **185.06**	183901-210 **199.53**	1	12	263
1-1/2X1	182901-211 **197.72**	183901-211 **219.42**	1	8	263
2X1/2	182901-247 **233.48**	183901-247 **246.17**	1	8	263
2X3/4	182901-248 **240.39**	183901-248 **254.80**	1	8	263
2X1	182901-249 **250.64**	183901-249 **272.35**	1	8	263
2X1-1/2	182901-251 **309.25**	183901-251 **336.34**	1	8	263
3X1/2	182901-333 **238.23**	183901-333 **250.85**	1	0	263
3X1	182901-335 **255.26**	183901-335 **276.96**	1	4	263
3X1-1/2	182901-337 **292.86**	183901-337 **319.97**	1	0	263
3X2	182901-338 **318.44**	183901-338 **368.92**	1	0	263
4X1	182901-417 **295.06**	183901-417 **316.75**	1	0	263
4X1-1/2	182901-419 **332.68**	183901-419 **359.77**	1	0	263
4X2	182901-420 **392.35**	183901-420 **442.83**	1	0	263
6X2	182901-528 **461.26**	183901-528 **511.75**	1	0	263
8X2	182901-578 **703.81**	183901-578 **754.31**	1	0	263

CPVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Mainline Socket Tee x Valve Socket/Fipt					
1/2	182901-005C **251.47**	183901-005C **263.35**	1	12	264
3/4	182901-007C **274.80**	183901-007C **288.40**	1	8	264

CPVC (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Mainline Socket Tee x Valve Socket/Fipt					
1	182901-010C **279.99**	183901-010C **300.41**	1	8	264
2	182901-020C **305.92**	183901-020C **353.36**	1	0	264
3/4X1/2	182901-101C **255.63**	183901-101C **267.48**	1	12	264
1X1/2	182901-130C **231.83**	183901-130C **277.07**	1	8	264
1X3/4	182901-131C **279.99**	183901-131C **293.61**	1	8	264
1-1/4X1/2	182901-166C **283.69**	183901-166C **295.58**	1	8	264
1-1/4X3/4	182901-167C **285.19**	183901-167C **298.78**	1	8	264
1-1/4X1	182901-168C **326.88**	183901-168C **347.29**	1	8	264
1-1/2X1/2	182901-209C **318.65**	183901-209C **329.88**	1	8	264
1-1/2X3/4	182901-210C **327.88**	183901-210C **335.95**	1	8	264
1-1/2X1	182901-211C **339.20**	183901-211C **347.29**	1	8	264
2X1/2	182901-247C **363.89**	183901-247C **375.75**	1	8	264
2X3/4	182901-248C **392.64**	183901-248C **406.24**	1	8	264
2X1	182901-249C **413.22**	183901-249C **433.63**	1	8	264
2X1-1/2	182901-251C **485.20**	183901-251C **510.64**	1	0	264
3X1/2	182901-333C **479.02**	183901-333C **490.88**	1	8	264
3X1	182901-335C **501.63**	183901-335C **522.04**	1	0	264
3X1-1/2	182901-337C **571.54**	183901-337C **596.99**	1	0	264
3X2	182901-338C **627.05**	183901-338C **674.49**	1	0	264
4X1	182901-417C **616.77**	183901-417C **637.18**	1	0	264
4X1-1/2	182901-419C **686.65**	183901-419C **712.13**	1	0	264
4X2	182901-420C **818.23**	183901-420C **865.67**	1	0	264
6X2	182901-528C **1068.74**	183901-528C **1116.17**	1	0	264
8X2	182901-578C **1576.85**	183901-578C **1624.31**	1	0	264

PVC Metric

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Mainline Socket Tee x Valve Socket/Fipt					
20	182901M-020 **163.19**	183901M-020 **175.80**	1	8	263
25	182901M-025 **178.35**	183901M-025 **192.79**	1	8	263
32	182901M-032 **181.71**	183901M-032 **203.39**	1	8	263
40	182901M-040 **252.48**	183901M-040 **270.74**	1	8	263

Tee-Style "Zero Dead-Leg" Ball Valves

PVC Metric (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Mainline Socket Tee x Valve Socket/Fipt					
50	182901M-050 **264.35**	183901M-050 **342.67**	1	8	263
63	182901M-063 **301.16**	183901M-063 **351.61**	1	8	263

CPVC Metric

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Mainline Socket Tee x Valve Socket/Fipt					
20	182901M-020C **251.47**	183901M-020C **263.35**	1	8	264

CPVC Metric (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Mainline Socket Tee x Valve Socket/Fipt					
25	182901M-025C **292.34**	183901M-025C **288.40**	1	8	263
32	182901M-032C **279.99**	183901M-032C **300.41**	1	8	264
40	182901M-040C **283.87**	183901M-040C **302.98**	1	8	264
50	182901M-050C **288.93**	183901M-050C **340.43**	1	8	264
63	182901M-063C **305.92**	183901M-063C **353.36**	1	8	264

True Union 2000 Standard Ball Valves

Socket Style

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" = 235 psi
2-1/2" - 4" = 150 psi
Flanged = 150 psi

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Temperature/Pressure De-ratings Apply
All Valves Assembled with Silicone-Free, Water Soluble Lubricant
See Ball Valve Accessories & Repair Kits Section for Additional Options and Features

PVC Standard

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Socket & Threaded Ends					
1/2	3629-005 **39.77**	3639-005 **44.23**	1	18	608
3/4	3629-007 **47.03**	3639-007 **52.32**	1	18	608
1	3629-010 **56.02**	3639-010 **62.40**	1	12	608
1-1/4	3629-012 **77.48**	3639-012 **98.91**	1	8	608
1-1/2	3629-015 **93.35**	3639-015 **103.62**	1	8	608
2	3629-020 **123.18**	3639-020 **135.62**	1	4	608
Socket Ends					
2-1/2	3622-025 **235.95**	3632-025 **320.80**	1	0	609
3	3622-030 **312.14**	3632-030 **346.81**	1	0	609
4	3622-040 **527.23**	3632-040 **586.01**	1	0	609
Threaded Ends					
2-1/2	3621-025 **235.95**	3631-025 **320.80**	1	0	609
3	3621-030 **312.14**	3631-030 **346.81**	1	0	609
4	3621-040 **527.23**	3631-040 **586.01**	1	0	609
SR Threaded Ends					
1/2	3621-005SR **40.63**	3631-005SR **45.08**	1	18	608
3/4	3621-007SR **49.06**	3631-007SR **54.39**	1	18	608
1	3621-010SR **58.06**	3631-010SR **64.44**	1	18	608
1-1/4	3621-012SR **83.67**	3631-012SR **105.08**	1	12	608

PVC Standard (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
SR Threaded Ends					
1-1/2	3621-015SR **99.98**	3631-015SR **110.24**	1	8	608
2	3621-020SR **130.35**	3631-020SR **142.81**	1	8	608
2-1/2	3621-025SR **256.11**	3631-025SR **340.14**	1	0	609
3	3621-030SR **331.52**	3631-030SR **366.17**	1	0	609
4	3621-040SR **550.00**	3631-040SR **608.60**	1	0	609
Spigot Ends					
1/2	3627-005 **39.77**	3637-005 **44.23**	1	18	608
3/4	3627-007 **47.03**	3637-007 **52.32**	1	18	608
1	3627-010 **56.02**	3637-010 **62.40**	1	12	608
1-1/4	3627-012 **77.48**	3637-012 **98.91**	1	12	608
1-1/2	3627-015 **93.35**	3637-015 **103.62**	1	8	608
2	3627-020 **123.18**	3637-020 **135.62**	1	8	608
2-1/2	3627-025 **236.74**	3637-025 **320.80**	1	0	609
3	3627-030 **312.14**	3637-030 **346.81**	1	0	609
4	3627-040 **527.23**	3637-040 **586.01**	1	0	609
Flanged Ends					
1/2	3623-005 **56.87**	3633-005 **60.65**	1	8	608
3/4	3623-007 **72.05**	3633-007 **78.36**	1	8	608
1	3623-010 **87.18**	3633-010 **93.75**	1	8	608
1-1/4	3623-012 **102.35**	3633-012 **113.76**	1	4	608

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

True Union 2000 Standard Ball Valves

PVC Standard (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Flanged Ends					
1-1/2	3623-015 **128.93**	3633-015 **140.29**	1	4	608
2	3623-020 **205.28**	3633-020 **217.74**	1	0	608
2-1/2	3623-025 **379.14**	3633-025 **385.41**	1	0	609
3	3623-030 **392.87**	3633-030 **520.28**	1	0	609
4	3623-040 **842.57**	3633-040 **976.66**	1	0	609

PVC White Standard

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Socket EPDM					
3622-015W	**1-1/2**	1	8	608	93.35
3622-020W	**2**	1	8	608	123.18

PVC White Standard

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
SR Threaded Ends EPDM					
3621-015WSR	**1-1/2**	1	8	608	99.98
3621-020WSR	**2**	1	8	608	130.35

CPVC Standard

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Socket & Threaded Ends					
1/2	3629-005C **52.48**	3639-005C **58.36**	1	18	610
3/4	3629-007C **66.13**	3639-007C **73.49**	1	18	610
1	3629-010C **78.73**	3639-010C **87.47**	1	12	610
1-1/4	3629-012C **125.16**	3639-012C **139.11**	1	8	610
1-1/2	3629-015C **132.16**	3639-015C **146.85**	1	8	610
2	3629-020C **176.78**	3639-020C **203.21**	1	4	610
Socket Ends					
2-1/2	3622-025C **396.31**	3632-025C **440.32**	1	0	611
3	3622-030C **463.39**	3632-030C **514.91**	1	0	611
4	3622-040C **839.66**	3632-040C **932.96**	1	0	611
Threaded Ends					
2-1/2	3621-025C **396.31**	3631-025C **440.32**	1	0	611
3	3621-030C **463.39**	3631-030C **514.91**	1	0	611
4	3621-040C **839.66**	3631-040C **932.96**	1	0	611
SR Threaded Ends					
1/2	3621-005CSR **53.34**	3631-005CSR **59.19**	1	18	610
3/4	3621-007CSR **68.21**	3631-007CSR **75.56**	1	18	610
1	3621-010CSR **80.77**	3631-010CSR **89.48**	1	18	610
1-1/4	3621-012CSR **131.34**	3631-012CSR **145.26**	1	12	610
1-1/2	3621-015CSR **138.17**	3631-015CSR **153.47**	1	8	610
2	3621-020CSR **183.94**	3631-020CSR **210.39**	1	8	610
2-1/2	3621-025CSR **415.65**	3631-025CSR **459.67**	1	0	611
3	3621-030CSR **482.73**	3631-030CSR **534.25**	1	0	611

CPVC Standard (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
SR Threaded Ends					
4	3621-040CSR **862.26**	3631-040CSR **956.28**	1	0	611
Spigot Ends					
1/2	3627-005C **52.48**	3637-005C **58.36**	1	18	610
3/4	3627-007C **66.13**	3637-007C **73.49**	1	18	610
1	3627-010C **78.73**	3637-010C **87.47**	1	12	610
1-1/4	3627-012C **125.16**	3637-012C **139.11**	1	12	610
1-1/2	3627-015C **132.16**	3637-015C **146.85**	1	8	610
2	3627-020C **176.78**	3637-020C **203.21**	1	8	610
2-1/2	3627-025C **396.31**	3637-025C **440.32**	1	0	611
3	3627-030C **463.39**	3637-030C **514.91**	1	0	611
4	3627-040C **839.66**	3637-040C **932.96**	1	0	611
Flanged Ends					
1/2	3623-005C **89.08**	3633-005C **91.01**	1	8	610
3/4	3623-007C **109.19**	3633-007C **113.80**	1	8	610
1	3623-010C **125.01**	3633-010C **132.71**	1	8	610
1-1/4	3623-012C **186.79**	3633-012C **193.34**	1	4	610
1-1/2	3623-015C **205.47**	3633-015C **212.31**	1	4	610
2	3623-020C **285.91**	3633-020C **340.49**	1	0	610
2-1/2	3623-025C **533.62**	3633-025C **640.52**	1	0	611
3	3623-030C **731.60**	3633-030C **798.18**	1	0	611
4	3623-040C **1368.66**	3633-040C **1423.40**	1	0	611

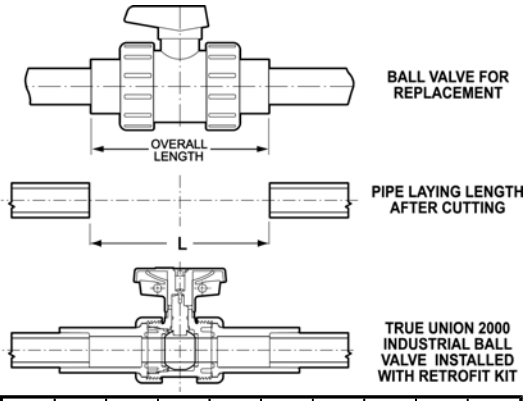
True Union 2000 Industrial Retrofit Ball Valves - Replaces Other Brand Valves

Industrial Valve

Complete universal replacement valve for domestic and import PVC or CPVC valve. See separate catalog listing for retrofit replacement of older Spears® valves.

Retrofit valve consists of Spears® Industrial True Union 2000 Ball Valve supplied with factory installed extended-socket end connectors. Simply cut out old valve to specified dimensions and install Retrofit Valve end connectors.

Pressure Rating @ 73°F (23°C), Water
1/2" - 4" = 235 psi
All Valves Assembled with Silicone-Free, Water Soluble Lubricant
Suitable for Vacuum Service
Retrofit End Connector Sets without valve are also available - See Ball Valve Accessories & Repair Kits



Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
L	4-29/32	5-7/16	6-3/32	7-1/4	7-1/2	8-17/32	10-3/4	11-7/16	14-15/16

PVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	1822R-005 **49.69**	1832R-005 **55.27**	1	18	600
3/4	1822R-007 **58.80**	1832R-007 **65.41**	1	18	600
1	1822R-010 **70.02**	1832R-010 **77.99**	1	12	600
1-1/4	1822R-012 **96.86**	1832R-012 **123.64**	1	8	600
1-1/2	1822R-015 **116.67**	1832R-015 **129.52**	1	8	600
2	1822R-020 **153.96**	1832R-020 **169.54**	1	4	600
2-1/2	1822R-025 **295.95**	1832R-025 **401.01**	1	0	601
3	1822R-030 **390.18**	1832R-030 **433.54**	1	0	601
4	1822R-040 **659.24**	1832R-040 **732.49**	1	0	601

CPVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	1822R-005C **65.63**	1832R-005C **72.93**	1	18	602
3/4	1822R-007C **82.65**	1832R-007C **91.86**	1	18	602
1	1822R-010C **98.40**	1832R-010C **109.33**	1	12	602
1-1/4	1822R-012C **156.43**	1832R-012C **173.86**	1	8	602
1-1/2	1822R-015C **165.21**	1832R-015C **183.57**	1	8	602
2	1822R-020C **220.95**	1832R-020C **254.00**	1	4	602
2-1/2	1822R-025C **495.39**	1832R-025C **550.40**	1	0	603
3	1822R-030C **579.22**	1832R-030C **643.63**	1	0	603
4	1822R-040C **1049.59**	1832R-040C **1166.19**	1	0	603

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

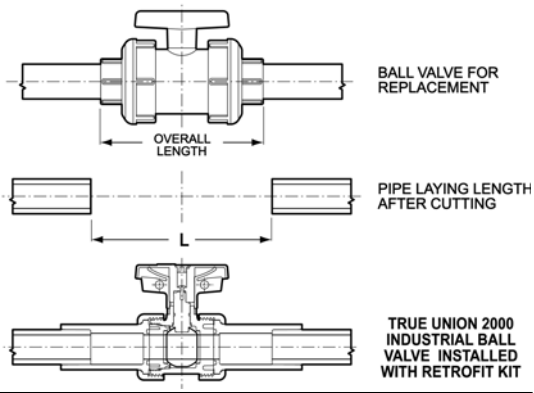
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

True Union 2000 Industrial Retrofit Ball Valves - Replaces Spears® "Regular Style" Valves

Industrial Valve

Complete replacement valve for older Spears® 2300 Series Regular True Union Ball Valves. See separate catalog listing for replacement of other brand valves.
Retrofit valve consists of Spears® Industrial True Union 2000 Ball Valve supplied with factory installed extended-socket end connectors. Simply cut out old valve to specified dimensions and install Retrofit Valve end connectors.

Pressure Rating @ 73°F (23°C), Water
1/2" - 4" 235 psi
All Valves Assembled with Silicone-Free, Water Soluble Lubricant
Suitable for Vacuum Service
Retrofit End Connector Sets without valve are also available - See Ball Valve Accessories & Repair Kits



Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
L	5-5/16	6-1/4	6-11/16	7-1/8	8-3/16	8-15/16	12	12-1/16	13-3/16

PVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	1822RS-005 **49.69**	1832RS-005 **55.27**	1	18	600
3/4	1822RS-007 **58.80**	1832RS-007 **65.41**	1	18	600
1	1822RS-010 **70.02**	1832RS-010 **77.99**	1	12	600
1-1/4	1822RS-012 **96.86**	1832RS-012 **123.64**	1	8	600
1-1/2	1822RS-015 **116.67**	1832RS-015 **129.52**	1	8	600
2	1822RS-020 **153.96**	1832RS-020 **169.54**	1	4	600
2-1/2	1822RS-025 **295.95**	1832RS-025 **401.01**	1	0	601
3	1822RS-030 **390.18**	1832RS-030 **433.54**	1	0	601
4	1822RS-040 **659.24**	1832RS-040 **732.49**	1	0	601

CPVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	1822RS-005C **65.63**	1832RS-005C **72.93**	1	18	602
3/4	1822RS-007C **82.65**	1832RS-007C **91.86**	1	18	602
1	1822RS-010C **98.40**	1832RS-010C **109.33**	1	12	602
1-1/4	1822RS-012C **156.43**	1832RS-012C **173.86**	1	8	602
1-1/2	1822RS-015C **165.21**	1832RS-015C **183.57**	1	8	602
2	1822RS-020C **220.95**	1832RS-020C **254.00**	1	4	602
2-1/2	1822RS-025C **495.39**	1832RS-025C **550.40**	1	0	603
3	1822RS-030C **579.22**	1832RS-030C **643.63**	1	0	603
4	1822RS-040C **1049.59**	1832RS-040C **1166.19**	1	0	603

True Union 2000 Standard Retrofit Ball Valves - Replaces Other Brand Valves

Standard Valve

Complete universal replacement valve for domestic and import PVC or CPVC valve. See separate catalog listing for retrofit replacement of older Spears® valves.

Retrofit valve consists of Spears® Standard True Union 2000 Ball Valve supplied with factory installed extended-socket end connectors. Simply cut out old valve to specified dimensions and install Retrofit Valve end connectors.

Pressure Rating @ 73°F (23°C), Water

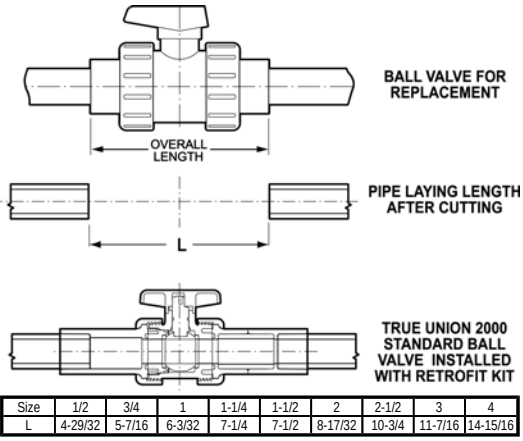
1/2" - 2" 235 psi

2-1/2" - 4" 150 psi

All Valves Assembled with Silicone-Free, Water Soluble Lubricant.

Suitable for Vacuum Service.

Retrofit End Connector Sets without valve are also available - See Ball Valve Accessories & Repair Kits



Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
L	4-29/32	5-7/16	6-3/32	7-1/4	7-1/2	8-17/32	10-3/4	11-7/16	14-15/16

PVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	3622R-005 **39.77**	3632R-005 **44.23**	1	18	608
3/4	3622R-007 **47.03**	3632R-007 **52.32**	1	12	608
1	3622R-010 **56.02**	3632R-010 **62.40**	1	8	608
1-1/4	3622R-012 **77.48**	3632R-012 **98.91**	1	8	608
1-1/2	3622R-015 **93.35**	3632R-015 **103.62**	1	8	608
2	3622R-020 **123.18**	3632R-020 **135.62**	1	4	608
2-1/2	3622R-025 **235.95**	3632R-025 **320.80**	1	0	609
3	3622R-030 **312.14**	3632R-030 **346.81**	1	0	609
4	3622R-040 **527.23**	3632R-040 **586.01**	1	0	609

CPVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	3622R-005C **52.48**	3632R-005C **58.36**	1	18	610
3/4	3622R-007C **66.13**	3632R-007C **73.49**	1	12	610
1	3622R-010C **78.73**	3632R-010C **87.47**	1	8	610
1-1/4	3622R-012C **125.16**	3632R-012C **139.11**	1	8	610
1-1/2	3622R-015C **132.16**	3632R-015C **146.85**	1	8	610
2	3622R-020C **176.78**	3632R-020C **203.21**	1	4	610
2-1/2	3622R-025C **396.31**	3632R-025C **440.32**	1	0	611
3	3622R-030C **463.39**	3632R-030C **514.91**	1	0	611
4	3622R-040C **839.66**	3632R-040C **932.96**	1	0	611

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

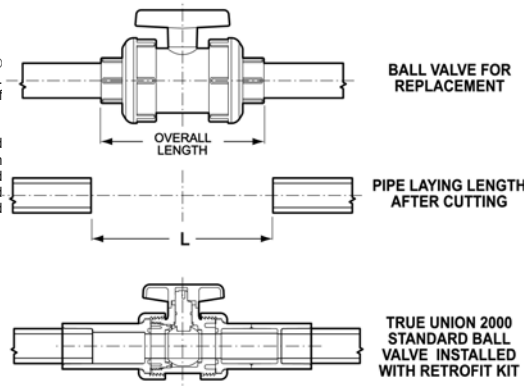
True Union 2000 Standard Retrofit Ball Valves - Replaces Spears® "Regular Style" Valves

Standard Valve

Complete replacement valve for older Spears® 2300 Series Regular True Union Ball Valves. See separate catalog listing for replacement of other brand valves.

Retrofit valve consists of Spears® Standard True Union 2000 Ball Valve supplied with factory installed extended-socket end connectors. Simply cut out old valve to specified dimensions and install Retrofit Valve end connectors.

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 235 psi
2-1/2" - 4" 150 psi
All Valves Assembled with Silicone-Free, Water Soluble Lubricant
Suitable for Vacuum Service
Retrofit End Connector Sets without valve are also available - See Ball Valve Accessories & Repair Kits



Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
L	5-5/16	6-1/4	6-11/16	7-1/8	8-3/16	8-15/16	12	12-1/16	13-3/16

PVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	3622RS-005 **39.77**	3632RS-005 **44.23**	1	18	608
3/4	3622RS-007 **47.03**	3632RS-007 **52.32**	1	18	608
1	3622RS-010 **56.02**	3632RS-010 **62.40**	1	12	608
1-1/4	3622RS-012 **77.48**	3632RS-012 **98.91**	1	8	608
1-1/2	3622RS-015 **93.35**	3632RS-015 **103.62**	1	8	608
2	3622RS-020 **123.18**	3632RS-020 **135.62**	1	4	608
2-1/2	3622RS-025 **235.95**	3632RS-025 **320.80**	1	0	609
3	3622RS-030 **312.14**	3632RS-030 **346.81**	1	0	609
4	3622RS-040 **527.23**	3632RS-040 **586.01**	1	0	609

CPVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	3622RS-005C **52.48**	3632RS-005C **58.36**	1	18	610
3/4	3622RS-007C **66.13**	3632RS-007C **73.49**	1	18	610
1	3622RS-010C **78.73**	3632RS-010C **87.47**	1	12	610
1-1/4	3622RS-012C **125.16**	3632RS-012C **139.11**	1	8	610
1-1/2	3622RS-015C **132.16**	3632RS-015C **146.85**	1	8	610
2	3622RS-020C **176.78**	3632RS-020C **203.21**	1	4	610
2-1/2	3622RS-025C **396.31**	3632RS-025C **440.32**	1	0	611
3	3622RS-030C **463.39**	3632RS-030C **514.91**	1	0	611
4	3622RS-040C **839.66**	3632RS-040C **932.96**	1	0	611

True Union Ball Valves (Regular Style)

Socket/Threaded Style

Flanged Style

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 235 psi
2-1/2" - 6" 150 psi
Flanged 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
Rated for Vacuum Service
All Valves assembled with Silicone-Free, Water Soluble Lubricant.

6" Venturied Valves are 4" Ball Valves equipped with 4x6 End Connectors.

PVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Socket & Threaded Ends					
1/2	2329-005 **57.23**	2339-005 **63.68**	1	18	230
3/4	2329-007 **67.69**	2339-007 **75.34**	1	12	230
1	2329-010 **80.64**	2339-010 **89.82**	1	8	230

PVC (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Socket & Threaded Ends					
1-1/4	2329-012 **111.55**	2339-012 **142.38**	1	8	230
1-1/2	2329-015 **134.40**	2339-015 **149.16**	1	8	230
2	2329-020 **177.31**	2339-020 **195.25**	1	4	230

True Union Ball Valves (Regular Style)

PVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Socket Ends					
2-1/2	2322-025 **323.80**	2332-025 **438.75**	1	0	230
3	2322-030 **426.91**	2332-030 **474.35**	1	0	230
4	2322-040 **721.29**	2332-040 **801.42**	1	0	230
Socket Venturied Ends					
6 VENTURIED	2322-060 **962.36**	2332-060 **1048.55**	1	0	231
Threaded Ends					
2-1/2	2321-025 **323.80**	2331-025 **438.75**	1	0	230
3	2321-030 **426.91**	2331-030 **474.35**	1	0	230
4	2321-040 **721.29**	2331-040 **801.42**	1	0	230
Flanged Ends					
1/2	2323-005 **81.87**	2333-005 **87.34**	6	0	230
3/4	2323-007 **103.72**	2333-007 **112.80**	5	0	230
1	2323-010 **125.55**	2333-010 **134.96**	5	0	230
1-1/4	2323-012 **147.37**	2333-012 **163.75**	2	0	230
1-1/2	2323-015 **185.60**	2333-015 **201.94**	3	0	230
2	2323-020 **295.56**	2333-020 **313.45**	2	0	230
2-1/2	2323-025 **518.53**	2333-025 **527.07**	1	0	230
3	2323-030 **573.11**	2333-030 **711.55**	1	0	230
4	2323-040 **1152.32**	2333-040 **1335.74**	1	0	230
Flanged Venturied Ends					
6 VENTURIED	2323-060 **1680.55**	2333-060 **1723.61**	1	0	231

CPVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Socket & Threaded Ends					
Threaded End Connectors available on request					
1/2	2329-005C **75.57**	2339-005C **84.00**	1	18	232
3/4	2329-007C **95.21**	2339-007C **105.80**	1	12	232
1	2329-010C **113.32**	2339-010C **125.92**	1	8	232
1-1/4	2329-012C **180.16**	2339-012C **200.24**	1	8	232
1-1/2	2329-015C **190.27**	2339-015C **211.42**	1	8	232
2	2329-020C **254.49**	2339-020C **292.53**	1	4	232
Socket Ends					
2-1/2	2322-025C **542.01**	2332-025C **602.21**	1	0	232
3	2322-030C **633.75**	2332-030C **704.19**	1	0	232
4	2322-040C **1148.37**	2332-040C **1275.97**	1	0	232
Socket Venturied Ends					
6 VENTURIED	2322-060C **1910.38**	2332-060C **1982.16**	1	0	233
Threaded Ends					
2-1/2	2321-025C **542.01**	2331-025C **602.21**	1	0	232
3	2321-030C **633.75**	2331-030C **704.19**	1	0	232

CPVC (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Threaded Ends					
4	2321-040C **1148.37**	2331-040C **1275.97**	1	0	232
Flanged Ends					
1/2	2323-005C **128.23**	2333-005C **131.00**	6	0	232
3/4	2323-007C **157.20**	2333-007C **163.75**	5	0	232
1	2323-010C **179.99**	2333-010C **191.05**	5	0	232
1-1/4	2323-012C **268.89**	2333-012C **278.33**	2	0	232
1-1/2	2323-015C **295.79**	2333-015C **305.61**	3	0	232
2	2323-020C **411.60**	2333-020C **490.19**	2	0	232
2-1/2	2323-025C **729.80**	2333-025C **875.99**	1	0	232
3	2323-030C **1067.29**	2333-030C **1091.61**	1	0	232
4	2323-040C **1871.83**	2333-040C **1946.69**	1	0	232
Flanged Venturied Ends					
6 VENTURIED	2323-060C **2901.42**	2333-060C **3001.97**	1	0	233

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Single Entry Ball Valves

PVC White – Socket/Threaded Style

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 235 psi
3" - 4" 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply
Rated for Vacuum Service
All Valves Assembled with Silicone-Free, Water Soluble Lubricant. See Ball Valve Accessories & Repair Kits Section for Additional Options and Features

PVC Gray – Socket/Threaded Style

PVC White

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Threaded Ends						
1/2	2411-005W 19.02	2421-005W 21.09	2431-005W 23.46	10	120	240
3/4	2411-007W 25.75	2421-007W 26.55	2431-007W 29.51	10	80	240
1	2411-010W 28.11	2421-010W 31.22	2431-010W 34.72	10	0	240
1-1/4	2411-012W 39.08	2421-012W 43.46	2431-012W 48.28	6	0	240
1-1/2	2411-015W 50.66	2421-015W 58.82	2431-015W 63.78	5	0	240
2	2411-020W 57.03	2421-020W 63.31	2431-020W 70.37	5	0	240
3	2411-030W 207.42	2421-030W 257.32	2431-030W 296.68	1	0	240
4	2411-040W 438.47	2421-040W 483.08	2431-040W 525.14	1	0	240
Socket Ends						
1/2	2412-005W 19.02	2422-005W 21.09	2432-005W 23.46	10	120	240
3/4	2412-007W 25.75	2422-007W 26.55	2432-007W 29.51	10	80	240
1	2412-010W 28.11	2422-010W 31.22	2432-010W 34.72	10	0	240
1-1/4	2412-012W 39.08	2422-012W 43.46	2432-012W 48.28	6	0	240
1-1/2	2412-015W 50.66	2422-015W 58.82	2432-015W 63.79	5	0	240
2	2412-020W 57.03	2422-020W 63.31	2432-020W 70.37	5	0	240
3	2412-030W 207.42	2422-030W 257.32	2432-030W 296.68	1	0	240
4	2412-040W 438.47	2422-040W 483.08	2432-040W 525.14	1	0	240

PVC Gray

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Threaded Ends						
1/2	2411-005G 20.88	2421-005G 23.15	2431-005G 25.75	10	120	240
3/4	2411-007G 26.31	2421-007G 29.26	2431-007G 32.49	10	80	240
1	2411-010G 30.95	2421-010G 34.35	2431-010G 38.18	10	0	240
1-1/4	2411-012G 42.98	2421-012G 47.78	2431-012G 53.02	6	0	240
1-1/2	2411-015G 54.11	2421-015G 63.38	2431-015G 70.48	5	0	240
2	2411-020G 62.65	2421-020G 69.62	2431-020G 77.32	5	0	240
3	2411-030G 218.37	2421-030G 270.83	2431-030G 312.31	1	0	240
4	2411-040G 461.53	2421-040G 508.53	2431-040G 552.76	1	0	240

PVC Gray

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Socket Ends						
1/2	2412-005G 20.88	2422-005G 23.15	2432-005G 25.75	10	120	240
3/4	2412-007G 26.31	2422-007G 29.26	2432-007G 32.49	10	80	240
1	2412-010G 30.95	2422-010G 34.35	2432-010G 38.18	10	0	240
1-1/4	2412-012G 42.98	2422-012G 47.78	2432-012G 53.02	5	0	240
1-1/2	2412-015G 54.17	2422-015G 63.38	2432-015G 70.48	5	0	240
2	2412-020G 62.65	2422-020G 69.62	2432-020G 77.32	5	0	240
3	2412-030G 218.37	2422-030G 270.83	2432-030G 312.31	1	0	240
4	2412-040G 461.53	2422-040G 508.53	2432-040G 552.76	1	0	240

Compact 2000 Ball Valves

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 235 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
All Valves Assembled with Silicone-Free, Water Soluble Lubricants.
Rated for Vacuum Service
Compact 2000 Ball Valves are a Maintenance-Free, Sealed Unit (non-repairable).
See Ball Valve Accessories & Repair Kits Section for Additional Options and Features.

PVC 2000 Compact Ball Valve

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Socket Ends					
1/2	6622-005 **21.17**	6632-005 **23.83**	10	120	210
3/4	6622-007 **28.88**	6632-007 **29.57**	10	80	210
1	6622-010 **31.53**	6632-010 **35.36**	10	0	210
1-1/4	6622-012 **47.43**	6632-012 **54.81**	6	0	210
1-1/2	6622-015 **56.49**	6632-015 **62.83**	5	0	210
2	6622-020 **75.42**	6632-020 **84.74**	8	0	210
Threaded Ends					
1/2	6621-005 **21.17**	6631-005 **23.83**	10	120	210
3/4	6621-007 **28.88**	6631-007 **29.57**	10	80	210
1	6621-010 **31.53**	6631-010 **35.36**	10	0	210
1-1/4	6621-012 **51.92**	6631-012 **54.81**	6	0	210
1-1/2	6621-015 **56.49**	6631-015 **62.83**	5	0	210
2	6621-020 **75.42**	6631-020 **84.74**	8	0	210
Flanged Ends					
1/2	6623-005 **44.58**	6633-005 **46.84**	10	120	210
3/4	6623-007 **50.35**	6633-007 **52.11**	10	120	210
1	6623-010 **65.61**	6633-010 **69.13**	10	120	210
1-1/4	6623-012 **81.93**	6633-012 **87.89**	10	120	210
1-1/2	6623-015 **99.12**	6633-015 **107.74**	10	120	210
2	6623-020 **132.27**	6633-020 **138.07**	1	0	210

CPVC 2000 Compact Ball Valve

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Socket Ends					
1/2	6622-005C **24.93**	6632-005C **27.74**	10	120	212
3/4	6622-007C **32.88**	6632-007C **36.95**	10	80	212
1	6622-010C **41.09**	6632-010C **46.21**	10	0	212
1-1/4	6622-012C **67.25**	6632-012C **83.12**	6	0	212
1-1/2	6622-015C **83.18**	6632-015C **92.42**	5	0	212
2	6622-020C **108.97**	6632-020C **122.43**	8	0	212

CPVC 2000 Compact Ball Valve

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Threaded Ends					
1/2	6621-005C **24.93**	6631-005C **27.74**	10	120	212
3/4	6621-007C **32.88**	6631-007C **36.95**	10	80	212
1	6621-010C **41.09**	6631-010C **46.21**	10	0	212
1-1/4	6621-012C **67.25**	6631-012C **83.12**	6	0	212
1-1/2	6621-015C **83.18**	6631-015C **92.42**	5	0	212
2	6621-020C **108.97**	6631-020C **122.43**	8	0	212
Flanged Ends					
1/2	6623-005C **68.21**	6633-005C **70.32**	1	0	212
3/4	6623-007C **80.63**	6633-007C **84.19**	1	0	212
1	6623-010C **106.11**	6633-010C **112.37**	1	0	212
1-1/4	6623-012C **133.47**	6633-012C **140.63**	1	0	212
1-1/2	6623-015C **168.63**	6633-015C **178.73**	1	4	212
2	6623-020C **234.95**	6633-020C **241.89**	1	0	212

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Compact Ball Valves (Regular Style)

Socket/Threaded Style

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 235 psi
3" - 6" 150 psi
Flanged 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
Rated for Vacuum Service

All Valves Assembled with Silicone-Free, Water Soluble Lubricants.

See Ball Valve Accessories & Repair Kits Section for Additional Options and Features

Note: Standard 6" Valve uses Lever-Style Handle for proper leverage.

T-Handle option is more compact but will increase difficulty of operation.

PVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Socket Ends					
1/2	2122-005 **22.27**	2132-005 **25.08**	10	80	210
3/4	2122-007 **30.40**	2132-007 **31.13**	10	0	210
1	2122-010 **33.17**	2132-010 **37.24**	10	0	210
1-1/4	2122-012 **59.48**	2132-012 **66.13**	6	0	210
1-1/2	2122-015 **73.65**	2132-015 **76.96**	5	0	210
2	2122-020 **79.38**	2132-020 **89.20**	6	0	210
3	2122-030 **258.01**	2132-030 **289.86**	1	4	211
4	2122-040 **396.95**	2132-040 **571.38**	1	0	211
6 (Lever Handle)	2122-060 **515.51**	2132-060 **742.05**	1	0	211
6 (Tee Handle)	21226-060 **515.51**	21326-060 **742.05**	1	0	211
Threaded Ends					
1/2	2121-005 **22.27**	2131-005 **25.08**	10	80	210
3/4	2121-007 **30.40**	2131-007 **31.13**	10	0	210
1	2121-010 **33.17**	2131-010 **37.24**	10	0	210
1-1/4	2121-012 **59.48**	2131-012 **66.13**	6	0	210
1-1/2	2121-015 **73.65**	2131-015 **76.96**	5	0	210
2	2121-020 **79.38**	2131-020 **89.20**	6	0	210
3	2121-030 **258.01**	2131-030 **289.86**	1	4	211
4	2121-040 **396.95**	2131-040 **571.38**	1	0	211
Flanged Ends					
1/2	2123-005 **49.24**	2133-005 **52.45**	1	8	210
3/4	2123-007 **59.58**	2133-007 **61.95**	1	8	210
1	2123-010 **65.73**	2133-010 **69.78**	1	8	210
1-1/4	2123-012 **93.05**	2133-012 **99.69**	1	8	210
1-1/2	2123-015 **107.66**	2133-015 **112.73**	1	4	210
2	2123-020 **124.97**	2133-020 **134.69**	1	0	210
3	2123-030 **335.73**	2133-030 **367.59**	1	0	211
4	2123-040 **495.22**	2133-040 **669.64**	1	0	211
6 (Lever Handle)	2123-060 **953.51**	2133-060 **1049.57**	1	0	211

PVC (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Flanged Ends					
6 (Tee Handle)	21236-060 **953.51**	21336-060 **1049.57**	1	0	211

CPVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Socket Ends					
1/2	2122-005C **26.24**	2132-005C **29.18**	10	80	212
3/4	2122-007C **34.61**	2132-007C **38.91**	10	0	212
1	2122-010C **43.27**	2132-010C **48.64**	10	0	212
1-1/4	2122-012C **87.56**	2132-012C **97.25**	6	0	212
1-1/2	2122-015C **108.18**	2132-015C **113.73**	5	0	212
2	2122-020C **114.72**	2132-020C **128.89**	6	0	212
3	2122-030C **349.04**	2132-030C **389.31**	1	4	213
4	2122-040C **645.24**	2132-040C **724.94**	1	0	213
6 (Lever Handle)	2122-060C **1054.51**	2132-060C **1123.62**	1	0	213
6 (Tee Handle)	21226-060C **1054.51**	21326-060C **1123.62**	1	0	213
Threaded Ends					
1/2	2121-005C **26.24**	2131-005C **29.18**	10	80	212
3/4	2121-007C **34.61**	2131-007C **38.91**	10	0	212
1	2121-010C **43.27**	2131-010C **48.64**	10	0	212
1-1/4	2121-012C **87.56**	2131-012C **97.25**	6	0	212
1-1/2	2121-015C **108.18**	2131-015C **113.73**	5	0	212
2	2121-020C **114.72**	2131-020C **128.89**	6	0	212
3	2121-030C **349.04**	2131-030C **389.31**	1	4	213
4	2121-040C **645.24**	2131-040C **724.94**	1	0	213
Flanged Ends					
1/2	2123-005C **73.15**	2133-005C **76.11**	1	8	212
3/4	2123-007C **84.93**	2133-007C **89.22**	1	8	212
1	2123-010C **100.42**	2133-010C **105.81**	1	8	212
1-1/4	2123-012C **158.24**	2133-012C **167.96**	1	8	212
1-1/2	2123-015C **197.89**	2133-015C **204.01**	1	4	212

Compact Ball Valves (Regular Style)

CPVC (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Flanged Ends					
2	2123-020C **224.11**	2133-020C **238.28**	1	0	212
3	2123-030C **536.68**	---	1	0	213
4	2123-040C **838.37**	2133-040C **918.05**	1	0	213

CPVC (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Flanged Ends					
6 (Lever Handle)	2123-060C **1592.42**	2133-060C **1708.33**	1	0	213
6 (Tee Handle)	21236-060C **1592.42**	21336-060C **1708.33**	1	0	213

Lab Ball Valves

Socket/Threaded Valve Only

Pressure Rating @ 73°F (23°C), Water
1/4" - 3/8" 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
Rated for Vacuum Service

Valve & Adapters includes:
1 - Threaded 1/4" Valve
2 - O-ring Sealed 1/4" MPT x Mipt Adapters
2 - EPDM or FKM O-rings (AS568-013 size)
1 - End Connector Wrench
2 - O-ring Sealed 1/4" MPT x 3/8" I.D. Tubing Barb Adapters
- OR -
2 - O-ring Sealed 1/4" MPT x 1/4" I.D. Tubing Barb Adapters

Valve & Adapters

All Valves Assembled with Silicone-Free, Water Soluble Lubricant

PVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Valve & Adapters Threaded Ends					
1/4X1/4T	1529-002A **25.75**	1539-002A **26.92**	1	25	218
1/4X3/8T	1529-002 **25.75**	1539-002 **26.92**	1	25	218
Valve only Threaded Ends					
1/4	1521-002 **20.58**	1531-002 **22.91**	50	200	218
3/8	1521-003 **28.93**	1531-003 **32.07**	50	200	218
Valve only Socket Ends					
1/4	1522-002 **20.58**	1532-002 **23.28**	50	200	218
3/8	1522-003 **28.93**	1532-003 **32.07**	50	200	218

CPVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Valve & Adapters Threaded Ends					
1/4X1/4T	1529-002CA **30.91**	1539-002CA **31.51**	1	25	219
1/4X3/8T	1529-002C **30.91**	1539-002C **31.51**	1	25	219
Valve only Threaded Ends					
1/4	1521-002C **24.75**	1531-002C **27.21**	50	200	219
3/8	1521-003C **34.71**	1531-003C **32.53**	50	200	219
Valve only Socket Ends					
1/4	1522-002C **24.75**	1532-002C **29.45**	50	200	219
3/8	1522-003C **34.71**	1532-003C **38.53**	50	200	219

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Utility Ball Valves

Pressure Rating @ 73°F (23°C), Water
1/2" - 6" Maximum Service Temperature 150 psi
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply

All Valves Assembled with Silicone-Free, Water Soluble Lubricant

Note: Standard 6" Valve uses Lever-Style Handle for proper leverage.

PVC w/EPDM O-ring Seal

Size	Threaded Ends	Socket Ends	Std Pk	Mstr Pk	Prod Code
PVC White					
1/2	2621-005 **9.37**	2622-005 **9.37**	50	0	215
3/4	2621-007 **11.12**	2622-007 **11.12**	25	0	215
1	2621-010 **15.12**	2622-010 **15.12**	25	0	215
1-1/4	2621-012 **20.03**	2622-012 **20.03**	20	0	215
1-1/2	2621-015 **30.57**	2622-015 **30.57**	20	0	215
2	2621-020 **38.64**	2622-020 **38.64**	8	0	215
2-1/2	2621-025 **66.14**	2622-025 **66.14**	6	0	214
3	2621-030 **118.62**	2622-030 **118.62**	1	4	214
4	2621-040 **217.41**	2622-040 **217.41**	1	0	214
6 (Lever Handle)	---	2622-060 **350.76**	1	0	214
PVC Gray					
1/2	2621-005G **9.37**	2622-005G **9.37**	50	0	215
3/4	2621-007G **11.12**	2622-007G **11.12**	25	0	215
1	2621-010G **15.12**	2622-010G **15.12**	25	0	215
1-1/4	2621-012G **20.03**	2622-012G **20.03**	20	0	215
1-1/2	2621-015G **30.57**	2622-015G **30.57**	20	0	215
2	2621-020G **38.64**	2622-020G **38.64**	8	0	215
2-1/2	2621-025G **66.14**	2622-025G **66.14**	6	0	214
3	2621-030G **118.62**	2622-030G **118.62**	1	4	214
4	2621-040G **217.41**	2622-040G **217.41**	1	0	214

CPVC w/EPDM O-ring Seal

Size	Threaded Ends	Socket Ends	Std Pk	Mstr Pk	Prod Code
CPVC					
1/2	2621-005C **12.35**	2622-005C **12.35**	50	0	216
3/4	2621-007C **15.69**	2622-007C **15.69**	25	0	216
1	2621-010C **17.05**	2622-010C **17.05**	25	0	216
1-1/4	2621-012C **24.03**	2622-012C **24.03**	20	0	216
1-1/2	2621-015C **37.26**	2622-015C **37.26**	20	0	216
2	2621-020C **46.35**	2622-020C **46.35**	8	0	216

CWV Ball Valves

A Combination of Economy & Quality - Made in the U.S.A.
For Greater Value in a General Purpose Cold Water Valve

Pressure Rating @ 73°F (23°C), Water = 125 psi

You don't have to go overseas to find an economical general purpose ball valve! Spears® CWV BALL VALVES are produced in the U.S.A. with Spears® high quality construction and NSF® Certified for potable water service. Designed for use with cold water, these PVC valves may be suitable for some applications previously handled by Spears® Utility Valves. Available in IPS sizes 1/2" through 2" with a Full 1-Year Warranty.

CWV PVC Ball Valve

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Socket Ends					
8722-005	**1/2**	50	0	204	8.43
8722-007	**3/4**	25	0	204	10.00
8722-010	**1**	25	0	204	13.60
8722-012	**1-1/4**	20	0	204	18.03
8722-015	**1-1/2**	20	0	204	27.52
8722-020	**2**	10	0	204	34.78

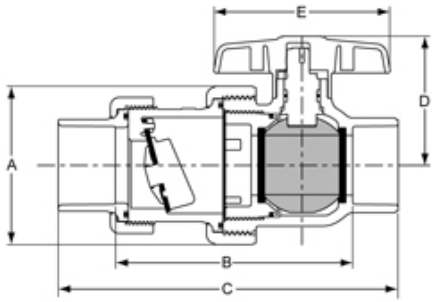
CWV PVC Ball Valve

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Threaded Ends					
8721-005	**1/2**	50	0	204	10.41
8721-007	**3/4**	25	0	204	12.35
8721-010	**1**	25	0	204	16.80
8721-012	**1-1/4**	20	0	204	22.25
8721-015	**1-1/2**	20	0	204	33.97
8721-020	**2**	10	0	204	42.94

Swing Check Ball Valves

- One-piece Combination for Applications Requiring In-line Ball Valve and Check Valves
- Compact, Space-Saving Design
- True Union Design Allows Easy Service and Cleaning
- High Grade EPDM Seals
- Replaceable PTFE HDPE Ball Valve Seats
- Safety-Blocked™ Seal Carrier on Ball Valve
- Replaceable Sealed Check Valve Cartridge
- Suitable for Horizontal or Vertical Up-flow Installations
- Socket End Connections

Pressure Rating @ 73°F (23°C), Water
Full Flow (open) 150 psi
Back Pressure (closed) 75 psi
Maximum Service Temperature
140°F (60°C)
Temperature/Pressure De-ratings Apply



Dimensions

Size	A	B	C	D	E
1-1/2	3-7/8	5-3/4	8-1/4	3-3/16	4-1/4
2	4-7/16	6-11/16	9-3/8	3-7/8	5-1/16

General Installation Information: Swing Check Ball Valves are designed for horizontal installations, but may be installed in up-flow only vertical position. The Check Valve portion MUST be installed with the valve's FLOW arrow pointing in the direction of flow and with the designated side up in horizontal installations. Do Not install Check Valve upside down. The Ball Valve portion may be rotated and installed in any position. Flow velocity should not exceed 5 ft./sec. Minimum opening pressure is less than 0.5 psi.

PVC Swing Check Ball Valve

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Soc x Soc					
7622-015	**1-1/2**	10	0	026	42.57
7622-020	**2**	6	0	026	61.09

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each

CPVC CTS Ball Valves

Socket with EPDM O-ring Seal

100 psi Maximum Internal Pressure @ 180°F (82°C)

1922-005	**1/2**	50	200	217	33.39
1922-007	**3/4**	25	0	217	39.47
1922-010	**1**	25	0	217	45.53
1922-012	**1-1/4**	20	0	217	70.68
1922-015	**1-1/2**	20	0	217	101.94
1922-020	**2**	8	0	217	130.59

1/4-Turn Angle Supply Stop

Socket x NPT

100 psi @ 180°F (82°C)
1/2" & 3/8" Male Thread for Connection to Female Flexible Supply Line

7722-005	**1/2**	50	400	217	4.00
7722-073	**1/2X3/8**	50	400	217	4.00

1/4-Turn Angle Supply Stop

SR FPT x NPT

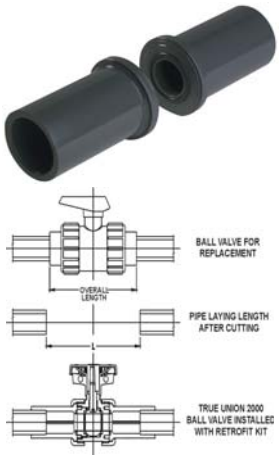
100 psi @ 180°F (82°C)
1/2" & 3/8" Male Thread for Connection to Female Flexible Supply Line

7721-005SR	**1/2**	50	400	217	4.97
7721-073SR	**1/2X3/8**	50	400	217	4.97

Retrofit End Connector Sets (Socket Style Only)

Special extended Socket end connectors allow in-line replacement of other brand valves with Spears®
True Union 2000 Ball Valves, 3-Way Ball Valves, and True Union 2000 Ball Check Valves.
Kit includes 2 Extended End Connectors with O-rings

Retrofit Kit For Other Brand Valves



Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
L	4-29/32	5-7/16	6-3/32	7-1/4	7-1/2	8-17/32	10-3/4	11-7/16	14-15/16

True Union Retrofit Kits - Other Brand Valves (Socket Style Only) PVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	RFK2-005 **10.16**	RFK3-005 **13.23**	1	25	299
3/4	RFK2-007 **13.22**	RFK3-007 **15.11**	1	25	299
1	RFK2-010 **14.97**	RFK3-010 **17.48**	1	25	299
1-1/4	RFK2-012 **17.59**	RFK3-012 **24.98**	1	10	299
1-1/2	RFK2-015 **22.06**	RFK3-015 **28.80**	1	10	299
2	RFK2-020 **31.78**	RFK3-020 **39.72**	1	10	299
2-1/2	RFK2-025 **58.47**	RFK3-025 **79.58**	1	5	299
3	RFK2-030 **77.78**	RFK3-030 **97.20**	1	5	299
4	RFK2-040 **114.79**	RFK3-040 **164.27**	1	4	299

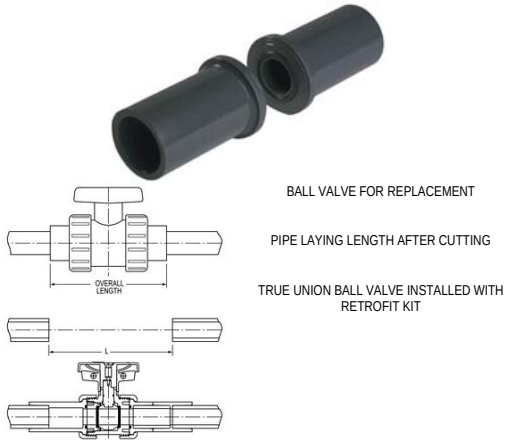
True Union Retrofit Kits - Other Brand Valves (Socket Style Only) CPVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	RFK2-005C **14.75**	RFK3-005C **15.98**	1	25	299
3/4	RFK2-007C **16.60**	RFK3-007C **20.15**	1	25	299
1	RFK2-010C **18.97**	RFK3-010C **23.13**	1	25	299
1-1/4	RFK2-012C **24.71**	RFK3-012C **32.09**	1	10	299
1-1/2	RFK2-015C **30.16**	RFK3-015C **38.57**	1	10	299
2	RFK2-020C **40.95**	RFK3-020C **48.89**	1	10	299
2-1/2	RFK2-025C **86.49**	RFK3-025C **103.29**	1	5	299

True Union Retrofit Kits - Other Brand Valves (Socket Style Only) CPVC (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
3	RFK2-030C **115.92**	RFK3-030C **140.49**	1	5	299
4	RFK2-040C **165.75**	RFK3-040C **218.97**	1	4	299

Retrofit Kit For Older "Regular Style" Spears® Valves



Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
L	5-5/16	6-1/4	6-11/16	7-1/8	8-3/16	8-15/16	12	12-1/16	13-3/16

True Union Retrofit Kits - Older "Regular Style" Spears® Valves (Socket Style Only) PVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	RFKS2-005 **10.16**	RFKS3-005 **13.23**	1	10	299
3/4	RFKS2-007 **13.22**	RFKS3-007 **15.11**	1	10	299
1	RFKS2-010 **14.97**	RFKS3-010 **17.48**	1	10	299
1-1/4	RFKS2-012 **17.59**	RFKS3-012 **24.98**	1	10	299
1-1/2	RFKS2-015 **22.06**	RFKS3-015 **28.80**	1	10	299
2	RFKS2-020 **31.78**	RFKS3-020 **39.72**	1	5	299
2-1/2	RFKS2-025 **58.47**	RFKS3-025 **79.58**	1	5	299
3	RFKS2-030 **77.78**	RFKS3-030 **97.20**	1	5	299
4	RFKS2-040 **114.79**	RFKS3-040 **164.27**	1	2	299

True Union Retrofit Kits - Older "Regular Style" Spears® Valves (Socket Style Only) CPVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	RFKS2-005C **14.75**	RFKS3-005C **15.98**	1	10	299
3/4	RFKS2-007C **16.60**	RFKS3-007C **20.15**	1	10	299
1	RFKS2-010C **18.97**	RFKS3-010C **23.13**	1	10	299
1-1/4	RFKS2-012C **24.71**	RFKS3-012C **32.09**	1	10	299
1-1/2	RFKS2-015C **30.16**	RFKS3-015C **38.57**	1	10	299

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com
Spears® Manufacturing Company

True Union Retrofit Kits - Older "Regular Style" Spears® Valves (Socket Style Only) CPVC (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
2	RFKS2-020C **40.95**	RFKS3-020C **48.89**	1	5	299
2-1/2	RFKS2-025C **86.49**	RFKS3-025C **103.29**	1	5	299
3	RFKS2-030C **115.92**	RFKS3-030C **140.49**	1	5	299
4	RFKS2-040C **165.75**	RFKS3-040C **218.97**	1	2	299

Supplemental End Connector Sets

Set of 2 End Connectors with O-rings for all True Union 2000 Ball Valves, Sch 80 Union 2000 fittings and True Union Style Diaphragm Valves.

PVC - Supplemental End Connector Sets

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
SR Threaded Ends					
1/2	ECSRT2-005 **8.21**	ECSRT3-005 **10.35**	1	25	299
3/4	ECSRT2-007 **11.87**	ECSRT3-007 **13.20**	1	25	299
1	ECSRT2-010 **13.22**	ECSRT3-010 **14.81**	1	25	299
1-1/4	ECSRT2-012 **17.52**	ECSRT3-012 **22.65**	1	10	299
1-1/2	ECSRT2-015 **23.84**	ECSRT3-015 **28.56**	1	10	299
2	ECSRT2-020 **31.34**	ECSRT3-020 **36.89**	1	10	299
2-1/2	ECSRT2-025 **64.18**	ECSRT3-025 **78.95**	1	5	299
3	ECSRT2-030 **77.66**	ECSRT3-030 **91.27**	1	5	299
4	ECSRT2-040 **107.48**	ECSRT3-040 **142.14**	1	4	299
6	ECSRT2-060 **232.18**	ECSRT3-060 **307.00**	1	4	299
Socket Ends					
1/2	ECS2-005 **7.13**	ECS3-005 **9.28**	1	25	299
3/4	ECS2-007 **9.26**	ECS3-007 **10.59**	1	25	299
1	ECS2-010 **10.47**	ECS3-010 **12.24**	1	25	299
1-1/4	ECS2-012 **12.32**	ECS3-012 **17.51**	1	10	299
1-1/2	ECS2-015 **15.45**	ECS3-015 **20.16**	1	10	299
2	ECS2-020 **22.25**	ECS3-020 **27.80**	1	10	299
2-1/2	ECS2-025 **40.94**	ECS3-025 **55.69**	1	5	299
3	ECS2-030 **54.44**	ECS3-030 **68.04**	1	5	299

PVC - Supplemental End Connector Sets (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Socket Ends					
4	ECS2-040 **80.37**	ECS3-040 **114.98**	1	4	299
6	ECS2-060 **173.58**	ECS3-060 **248.40**	1	0	299
Spigot Ends					
1/2	ECSP2-005 **7.13**	ECSP3-005 **9.28**	1	25	299
3/4	ECSP2-007 **9.26**	ECSP3-007 **10.59**	1	25	299
1	ECSP2-010 **10.47**	ECSP3-010 **12.24**	1	25	299
1-1/4	ECSP2-012 **12.32**	ECSP3-012 **17.51**	1	10	299
1-1/2	ECSP2-015 **15.45**	ECSP3-015 **20.16**	1	10	299
2	ECSP2-020 **22.25**	ECSP3-020 **27.80**	1	10	299
2-1/2	ECSP2-025 **40.94**	ECSP3-025 **55.69**	1	5	299
3	ECSP2-030 **54.44**	ECSP3-030 **68.04**	1	5	299
4	ECSP2-040 **80.37**	ECSP3-040 **114.98**	1	4	299

CPVC - Supplemental End Connector Sets

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
SR Threaded Ends					
1/2	ECSRT2-005C **11.41**	ECSRT3-005C **12.26**	1	25	299
3/4	ECSRT2-007C **14.21**	ECSRT3-007C **16.68**	1	25	299
1	ECSRT2-010C **15.86**	ECSRT3-010C **18.79**	1	25	299
1-1/4	ECSRT2-012C **23.25**	ECSRT3-012C **30.87**	1	10	299
1-1/2	ECSRT2-015C **29.49**	ECSRT3-015C **35.39**	1	10	299
2	ECSRT2-020C **37.76**	ECSRT3-020C **43.33**	1	10	299
2-1/2	ECSRT2-025C **83.74**	ECSRT3-025C **95.56**	1	5	299
3	ECSRT2-030C **104.37**	ECSRT3-030C **121.60**	1	5	299
4	ECSRT2-040C **143.16**	ECSRT3-040C **180.43**	1	4	299
6	ECSRT2-060C **309.23**	ECSRT3-060C **389.69**	1	4	299
Socket Ends					
1/2	ECS2-005C **10.33**	ECS3-005C **11.19**	1	25	299
3/4	ECS2-007C **11.62**	ECS3-007C **14.09**	1	25	299
1	ECS2-010C **13.26**	ECS3-010C **16.18**	1	25	299
1-1/4	ECS2-012C **18.06**	ECS3-012C **22.47**	1	10	299
1-1/2	ECS2-015C **21.09**	ECS3-015C **27.00**	1	10	299
2	ECS2-020C **28.67**	ECS3-020C **34.22**	1	10	299
2-1/2	ECS2-025C **60.55**	ECS3-025C **72.31**	1	5	299
3	ECS2-030C **81.13**	ECS3-030C **98.37**	1	5	299
4	ECS2-040C **116.03**	ECS3-040C **153.28**	1	4	299
6	ECS2-060C **250.64**	ECS3-060C **331.09**	1	0	299
Spigot Ends					
1/2	ECSP2-005C **10.33**	ECSP3-005C **11.19**	1	25	299

CPVC - Supplemental End Connector Sets (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Spigot Ends					
3/4	ECSP2-007C **11.62**	ECSP3-007C **14.09**	1	25	299
1	ECSP2-010C **13.26**	ECSP3-010C **16.18**	1	25	299
1-1/4	ECSP2-012C **18.06**	ECSP3-012C **22.47**	1	10	299
1-1/2	ECSP2-015C **21.09**	ECSP3-015C **27.00**	1	10	299
2	ECSP2-020C **28.67**	ECSP3-020C **34.22**	1	10	299
2-1/2	ECSP2-025C **60.55**	ECSP3-025C **72.31**	1	5	299
3	ECSP2-030C **81.13**	ECSP3-030C **98.37**	1	5	299
4	ECSP2-040C **116.03**	ECSP3-040C **153.28**	1	4	299

Split Nut Repair Kits

Split Nut Repair Kit

Designed to replace broken union nuts on all True Union 2000 Ball Valves and Sch 80 Union 2000 fittings

Kit includes:
2-Split Nut Halves
1-SS316 Gear Clamp
Full valve pressure rating maintained

Split Nut Repair Kits

Size	PVC	CPVC	Std Pk	Mstr Pk	Prod Code
1/2	SNK-005 **8.42**	SNK-005C **12.96**	25	200	299
3/4	SNK-007 **10.41**	SNK-007C **16.35**	1	25	299
1	SNK-010 **13.03**	SNK-010C **20.01**	1	25	299
1-1/4	SNK-012 **16.31**	SNK-012C **26.69**	1	25	299
1-1/2	SNK-015 **21.79**	SNK-015C **38.28**	1	25	299
2	SNK-020 **33.19**	SNK-020C **57.43**	1	25	299
3	SNK-030 **90.06**	SNK-030C **207.36**	1	6	299
4	SNK-040 **150.12**	SNK-040C **290.39**	1	6	299

True Union 2000 Valve Seal Carrier Tools

True Union 2000 Valve Seal Carrier Tools

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
True Union 2000 Check Valve Seal Carrier Tool					
TSK-00503	**1/2**	1000	0	299	.83
TSK-00703	**3/4**	1800	0	299	.83
TSK-01003	**1**	1800	0	299	.83
TSK-01203	**1-1/4**	1500	0	299	1.67

True Union 2000 Valve Seal Carrier Tools (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
True Union 2000 Check Valve Seal Carrier Tool					
TSK-01503	**1-1/2**	800	0	299	1.67
TSK-02003	**2**	550	0	299	1.67
TSK-03003	**3**	200	0	299	5.01
TSK-04003	**4**	150	0	299	5.01
TSK-06003	**6**	40	0	299	10.37
True Union 2000 Ball Valve Seal Carrier Tool					
TSK1-00503	**1/2**	2200	0	299	.83
TSK1-00703	**3/4**	1700	0	299	.83
TSK1-01003	**1**	1600	0	299	.83
TSK1-01203	**1-1/4**	1200	0	299	1.67
TSK1-01503	**1-1/2**	700	0	299	1.67
TSK1-02003	**2**	550	0	299	1.67
TSK-03003	**3**	200	0	299	5.01
TSK-04003	**4**	150	0	299	5.01
TSK-06003	**6**	40	0	299	10.37

Seal Carrier Adjustment Tool for Regular True Union Valves (not shown)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
VT-025-040	**2-1/2 - 4**	20	0	299	44.08

Designed for use on Spears® 2-1/2", 3", & 4" Regular True Union Ball Valves for quick, easy adjustment of valve seal carriers using a standard 1", 6-point socket.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Ball Valve Accessories

Stem Extension Kits

Desired Handle Height for Factory Assembled One-Piece Units

Desired Handle Height	Code	Desired Handle Height	Code	Desired Handle Height	Code	Desired Handle Height	Code
5"	050	16"	160	27"	270	38"	380
6"	060	17"	170	28"	280	39"	390
7"	070	18"	180	29"	290	40"	400
8"	080	19"	190	30"	300	41"	410
9"	090	20"	200	31"	310	42"	420
10"	100	21"	210	32"	320	43"	430
11"	110	22"	220	33"	330	44"	440
12"	120	23"	230	34"	340	45"	450
13"	130	24"	240	35"	350	46"	460
14"	140	25"	250	36"	360	47"	470
15"	150	26"	260	37"	370	48"	480

If desired handle height is in increments of less than a full inch, substitute the last "0" of the three-digit code with a "2" for 1/4", a "5" for 1/2", or a "7" for 3/4". EXAMPLE: If ordering a Stem Extension Kit for a 1/2" valve with a desired handle height of 14-3/4", the part number would read: BVSE-005-147.

*Desired length of PVC Schedule 80 Pipe purchased separately and assembled by others.

**Factory assembled with solvent cemented PVC Schedule 80 pipe. To order, fill in the last three digits of the part number with the three-digit code representing the desired handle height from the chart above. FACTORY SOLVENT CEMENTED STEM EXTENSION KITS, ONCE PRODUCED ARE NON-CANCELLABLE AND NON-RETURNABLE.

IMPORTANT NOTE The following minimum handle heights apply to use of all Stem Extension Kits.										
Valve Size (in.)	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	6
True Union 2000 Industrial Ball Valves										
Minimum Height (in.)	4-9/16	5-3/16	5-1/2	6-3/4	7-3/8	8	9-13/16	9-13/16	11-5/8	12-3/4
True Union 2000 Standard, Compact 2000 & Single Entry Ball Valves										
Minimum Height (in.)	3-5/8	4-1/4	4-3/4	6	6-3/8	7-7/16	9-1/2	9-1/2	11	N/A
Regular True Union & Compact Ball Valves										
Minimum Height (in.)	4-1/2	5-1/4	5-1/2	7	7-1/2	8	9	9	10-1/2	N/A

Stem Extension Kits (Two Piece)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Fits Spears Regular True Union and Compact Ball Valves, 1/2"-2" = 3-Slot Stem, 2-1/2"-4" = Double Flats Stem					
BVSE-005-000*	**1/2**	1	25	299	10.80
BVSE-007-000*	**3/4**	1	25	299	11.98
BVSE-010-000*	**1**	1	25	299	11.98
BVSE-012-000*	**1-1/4**	1	25	299	19.41
BVSE-015-000*	**1-1/2**	1	25	299	22.05
BVSE-020-000*	**2**	1	25	299	23.97
BVSE-030-000*	**2-1/2, 3**	1	25	299	24.45
BVSE-040-000*	**4**	1	25	299	33.58

Optional Factory Assembled (One-Piece)

Part Number	Prod Code	5"-12" Handle Height	13"-18" Handle Height	19"-24" Handle Height	25"-36" Handle Height	37"-48" Handle Height
BVSE-005-__**	299	17.75	19.22	20.80	27.57	32.06
BVSE-007-__**	299	19.05	20.48	22.06	28.84	33.35
BVSE-010-__**	299	19.05	20.48	22.06	28.84	33.35
BVSE-012-__**	299	29.71	30.68	33.97	42.97	48.37
BVSE-015-__**	299	32.48	35.06	36.73	45.76	51.15
BVSE-020-__**	299	34.53	37.07	38.75	47.80	53.17
BVSE-030-__**	299	35.28	37.61	39.24	48.28	53.65
BVSE-040-__**	299	48.61	52.67	56.33	63.68	73.94

Stem Extension Kits (Two Piece)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Fits All True Union 2000, Compact 2000 & Single Entry Ball Valves (Except 3-Way) 1/2" - 3" = 3-Slot Stem, sizes 4"-6" = Double Flats Stem					
BVSE2-005-000*	**1/2**	1	25	299	10.80
BVSE2-007-000*	**3/4**	1	25	299	11.98
BVSE2-010-000*	**1**	1	25	299	11.98
BVSE2-012-000*	**1-1/4**	1	25	299	19.41
BVSE2-015-000*	**1-1/2**	1	25	299	22.05
BVSE2-020-000*	**2**	1	25	299	23.97
BVSE2-030-000*	**2-1/2, 3**	1	25	299	24.45
BVSE2-040-000*	**4**	1	25	299	33.58
BVSE2-060-000*	**6**	1	25	299	62.12

Optional Factory Assembled (One-Piece)

Part Number	Prod Code	5"-12" Handle Height	13"-18" Handle Height	19"-24" Handle Height	25"-36" Handle Height	37"-48" Handle Height
BVSE2-005-__**	299	17.75	19.22	20.80	27.57	32.06
BVSE2-007-__**	299	19.05	20.48	22.06	28.84	33.35
BVSE2-010-__**	299	19.05	20.48	22.06	28.84	33.35
BVSE2-012-__**	299	29.71	30.68	33.97	42.97	48.37
BVSE2-015-__**	299	32.48	35.06	36.73	45.76	51.15
BVSE2-020-__**	299	34.53	37.07	38.75	47.80	53.17
BVSE2-030-__**	299	35.28	37.61	39.24	48.28	53.65
BVSE2-040-__**	299	48.61	52.67	56.33	63.68	73.94
BVSE2-060-__**	299	90.01	97.57	104.32	117.91	136.91

Round Safety Handle Kits

Regular fits Spears® Regular True Union and Compact Ball Valves in sizes 1/2" - 2" with 3-Slot Stem and in sizes 2-1/2" - 4" with 1-Slot Stem.

Industrial fits All True Union 2000, Compact 2000, and Single Entry Ball Valves in sizes 1/2" - 2" with 3-Slot Stem and in sizes 2-1/2" - 4" with 1-Slot Stem. The 6" size has a Double-Flat Stem pattern.

Round Safety Handle Kits

Size	Regular	Industrial	Std Pk	Mstr Pk	Prod Code
1/2	RSH-005 13.92	RSH2-005 13.92	500	0	299
3/4	RSH-007 16.78	RSH2-007 16.78	300	0	299
1	RSH-010 17.73	RSH2-010 17.73	210	0	299
1-1/4	RSH-012 21.07	RSH2-012 21.07	200	0	299

Round Safety Handle Kits (continued)

2" Operator Nuts

Size	Regular	Industrial	Std Pk	Mstr Pk	Prod Code
1-1/2	RSH-015 21.07	RSH2-015 21.07	100	0	299
2	RSH-020 27.33	RSH2-020 27.33	60	0	299
2-1/2 & 3	RSH-030 58.48	RSH2-030 58.48	25	0	299
4	RSH-040 78.61	RSH2-040 78.61	16	0	299
6	---	RSH2-060 95.17	16	0	299

Industrial & Regular (VTN2 Series) Operator Nuts fit Regular True Union, True Union 2000, Compact, Compact 2000 and Single Entry Ball Valves in sizes 1/2" - 2" with current 3-Slot Stems and in sizes 2-1/2", 3", and 4" with current 1-Slot Stems. The VTN-040 fits the 6" size with a Double-Flat Stem pattern.

2" Operator Nuts

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Regular					
VTN-030	2-1/2 & 3	10	40	299	107.86
VTN-040	4	5	0	299	107.86
Industrial					
VTN2-005	1/2	10	60	299	12.96
VTN2-007	3/4	10	60	299	17.24
VTN2-010	1	10	60	299	21.59
VTN2-012	1-1/4	10	60	299	25.89
VTN2-015	1-1/2	10	60	299	38.85
VTN2-020	2	10	60	299	64.71
VTN2-030	2-1/2 & 3	10	40	299	70.79
VTN2-040	4	5	0	299	75.05

Handle Lockout Ring

Spears® Handle Lockout Ring is for use with Spears® True Union 2000 Industrial Ball Valves with built-in handle lockout mechanism. Normal handle lockout operation allows lockout in both open and closed positions. The Lockout Ring limits lockout operation to either a lock-open only or a lock-closed only position, according to the position in which the Lockout Ring is installed.

Handle Lockout Ring

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
TU2LR-005	1/2	250	3000	299	19.97
TU2LR-007	3/4	250	3000	299	19.97
TU2LR-010	1	1	250	299	19.97
TU2LR-012	1-1/4	1	25	299	19.97
TU2LR-015	1-1/2	1	25	299	22.47
TU2LR-020	2	1	25	299	22.47
TU2LR-030	2-1/2 & 3	1	25	299	24.97
TU2LR-040	4	1	25	299	24.97

Multi-Mount Mounting Bracket

TUMB2 fits all True Union 2000 Ball Valves (except 3-Way). TUMB fits Regular True Union Ball Valves.

Multi-Mount Mounting Bracket

Size	TU 2000	Regular True Union	Std Pk	Mstr Pk	Prod Code
1/2	TUMB2-005 90.25	TUMB-005 90.25	1	10	298
3/4	TUMB2-007 90.25	TUMB-007 90.25	1	10	298
1	TUMB2-010 90.25	TUMB-010 90.25	1	10	298
1-1/4	TUMB2-012 126.50	TUMB-012 126.50	1	10	298
1-1/2	TUMB2-015 126.50	TUMB-015 126.50	1	10	298
2	TUMB2-020 126.50	TUMB-020 126.50	1	10	298
2-1/2, 3	TUMB2-030 285.60	TUMB-030 285.60	1	4	298
4	TUMB2-040 285.60	TUMB-040 285.60	1	4	299

Multi-Mount Actuator Mounting Platform

Add-on actuator adapter. Use MMP1 with True Union 2000 Multi-Mount Bracket. Use MMP with Regular True Union.

Multi-Mount Actuator Mounting Platform

Size	TU 2000	Regular True Union	Std Pk	Mstr Pk	Prod Code
1/2	MMP1-005 19.97	MMP-005 19.97	1	10	299
3/4	MMP1-007 20.65	MMP-007 20.65	1	10	299
1	MMP1-010 24.11	MMP-010 24.11	1	10	299
1-1/4	MMP1-012 26.33	MMP-012 26.33	1	10	299
1-1/2	MMP1-015 35.99	MMP-015 35.99	1	10	299
2	MMP1-020 40.71	MMP-020 40.71	1	10	299
2-1/2, 3	MMP1-030 91.86	MMP-030 91.86	1	5	299

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Multi-Mount Actuator Mounting Platform (continued)

Size	TU 2000	Regular True Union	Std Pk	Mstr Pk	Prod Code
4	MMP1-040 105.85	MMP-040 105.85	1	5	299

True Union Multi-Mount Mounting Kit

Complete Multi-Mount Actuation Mounting Kit fits all True Union 2000 (except 3-Way) and Regular True Union Ball Valves.

True Union Multi-Mount Mounting Kit

Size	TU 2000	Regular True Union	Std Pk	Mstr Pk	Prod Code
1/2	TUAK1-005 63.84	TUAK-005 63.84	1	5	299
3/4	TUAK1-007 67.17	TUAK-007 67.17	1	5	299
1	TUAK1-010 74.07	TUAK-010 74.07	1	5	299
1-1/4	TUAK1-012 78.54	TUAK-012 78.54	1	5	299
1-1/2	TUAK1-015 91.85	TUAK-015 91.85	1	5	299
2	TUAK1-020 102.97	TUAK-020 102.97	1	5	299
2-1/2 & 3	TUAK1-030 209.42	TUAK-030 209.42	1	5	299
4	TUAK1-040 249.94	TUAK-040 249.94	1	2	299

True Union 2000 Low Profile Actuator Mounting Kit

Industrial Unit - Top-mount actuator mounting system for True Union 2000 Industrial (1800 series) & 3-Way Ball Valves
Standard Unit - Top-mount actuator mounting system for True Union 2000 Standard Ball Valves (3600 series) and Compact 2000 Ball Valves (6600 series)
Note: Low Profile Mounting Kit will not work with Multi-Mount Valve Mounting Bracket - See Mini-Mount actuation Mounting Kit or Mini-Mount Combo Actuation Mounting Kit

True Union 2000 Low Profile Actuator Mounting Kit
Mini-Mount Actuator Mounting Kit

Size	TU 2000 Industrial	TU 2000 Standard & Compact	Std Pk	Mstr Pk	Prod Code
1/2	AMB5-005 71.50	AMB6-005 71.50	1	10	298
3/4	AMB5-007 71.50	AMB6-007 71.50	1	10	298
1	AMB5-010 71.50	AMB6-010 71.50	1	10	298
1-1/4	AMB5-012 118.10	AMB6-012 118.10	1	10	298
1-1/2	AMB5-015 118.10	AMB6-015 118.10	1	10	298
2	AMB5-020 118.10	AMB6-020 118.10	1	10	298
3	AMB5-030 267.40	AMB6-030 267.40	1	10	298
4	AMB5-040 267.40	AMB6-040 267.40	1	5	298
6	AMB5-060 267.40	---	1	5	298

Industrial Unit – Top-mount actuator mounting system for True Union 2000 Industrial (1800 series) & 3-Way Ball Valves
Standard Unit – Top-mount actuator mounting system for True Union 2000 Standard Ball Valves (3600 series) and Compact 2000 Ball Valves (6600 series)
Compact Unit – Top-mount actuator mounting system for Regular Style Compact Ball Valves (2100 series)

Mini-Mount Actuator Mounting Kit

Size	TU 2000 Industrial	TU 2000 Standard/Compact	Compact (Regular)	Std Pk	Mstr Pk	Prod Code
1/2	AMB2-005 71.50	AMB3-005 71.50	AMB4-005 71.50	1	10	298
3/4	AMB2-007 71.50	AMB3-007 71.50	AMB4-007 71.50	1	10	298
1	AMB2-010 71.50	AMB3-010 71.50	AMB4-010 71.50	1	10	298

Mini-Mount Actuator Mounting Kit (continued)

True Union 2000 Mini-Mount Combo

Size	TU 2000 Industrial	TU 2000 Standard/Compact	Compact (Regular)	Std Pk	Mstr Pk	Prod Code
1-1/4	AMB2-012 118.10	AMB3-012 118.10	AMB4-012 118.10	1	10	298
1-1/2	AMB2-015 118.10	AMB3-015 118.10	AMB4-015 118.10	1	10	298
2	AMB2-020 118.10	AMB3-020 118.10	AMB4-020 118.10	1	10	298
3	AMB2-030 267.40	AMB3-030 267.40	AMB4-030 267.40	1	10	298
4	AMB2-040 267.40	AMB3-040 267.40	AMB4-040 267.40	1	5	298
6	AMB2-060 267.40	---	---	1	5	298

Industrial Unit – Top-mount actuator mounting system with valve support mounting bracket for True Union 2000 Industrial (1800 series) Ball Valve (will not fit 3-Way)
Standard Unit – Top-mount actuator mounting system with valve support mounting bracket for True Union 2000 (3600 series) Standard Ball Valve

True Union 2000 Mini-Mount Combo

Size	Industrial	Standard	Std Pk	Mstr Pk	Prod Code
1/2	TUAK2-005 63.84	TUAK3-005 63.84	1	5	299
3/4	TUAK2-007 67.17	TUAK3-007 67.17	1	10	299
1	TUAK2-010 74.07	TUAK3-010 74.07	1	5	299
1-1/4	TUAK2-012 78.54	TUAK3-012 78.54	1	5	299
1-1/2	TUAK2-015 91.85	TUAK3-015 91.85	1	5	299
2	TUAK2-020 102.97	TUAK3-020 102.97	1	5	299
3	TUAK2-030 209.42	TUAK3-030 209.42	1	5	299
4	TUAK2-040 249.94	TUAK3-040 249.94	1	2	299

True Union 2000 Valve Repair Kits — Industrial Ball Valve

Industrial Kit includes:
2-PTFE Seats
2-End Connector O-rings
2-Stem O-rings
1-Seal Carrier O-ring
1-PTFE Stem Bearing
2-Seat O-rings (where applicable)

True Union 2000 Valve Repair Kits

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Industrial Ball Valve					
1/2	TU2-ERK-005 19.67	TU2-VRK-005 22.28	1	10	299
3/4	TU2-ERK-007 22.28	TU2-VRK-007 23.03	1	10	299
1	TU2-ERK-010 23.03	TU2-VRK-010 29.37	1	10	299
1-1/4	TU2-ERK-012 28.00	TU2-VRK-012 47.06	1	10	299

True Union 2000 Valve Repair Kits (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Industrial Ball Valve					
1-1/2	TU2-ERK-015 40.18	TU2-VRK-015 61.62	1	10	299
2	TU2-ERK-020 46.25	TU2-VRK-020 86.26	1	10	299
2-1/2 & 3	TU2-ERK-030 106.74	TU2-VRK-030 139.96	1	10	299
4	TU2-ERK-040 151.80	TU2-VRK-040 181.40	1	10	299
6	TU2-ERK-060 276.55	TU2-VRK-060 352.47	1	10	299

True Union 2000 Valve Repair Kits — Standard Ball Valve

Standard Kit includes:
2-HDPE/PTFE Seats
2-End Connector O-rings
2-Stem O-rings
1-Seal Carrier O-ring
2-Seat O-rings (where applicable)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Standard Ball Valve					
1/2	TU1-ERK-005 18.72	TU1-VRK-005 21.18	1	10	299
3/4	TU1-ERK-007 21.18	TU1-VRK-007 21.91	1	10	299
1	TU1-ERK-010 21.91	TU1-VRK-010 27.88	1	10	299
1-1/4	TU1-ERK-012 26.57	TU1-VRK-012 44.72	1	10	299
1-1/2	TU1-ERK-015 38.18	TU1-VRK-015 58.55	1	10	299
2	TU1-ERK-020 43.93	TU1-VRK-020 90.81	1	10	299
2-1/2 & 3	TU1-ERK-030 101.39	TU1-VRK-030 132.95	1	10	299
4	TU1-ERK-040 144.23	TU1-VRK-040 172.33	1	10	299

True Union 2000 Valve Repair Kits — 3-Way Ball Valve

3-Way Kit includes:
2-PTFE Seats (no branch seal)
3-End Connector O-rings
2-Stem O-rings
1-Seal Carrier O-ring
1-Stem Bushing
2-Seat O-rings (where applicable)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
3-Way Ball Valve					
1/2	TU3-ERK-005 28.13	TU3-VRK-005 31.85	1	10	299
3/4	TU3-ERK-007 31.85	TU3-VRK-007 32.93	1	10	299
1	TU3-ERK-010 32.93	TU3-VRK-010 41.95	1	10	299
1-1/4	TU3-ERK-012 39.98	TU3-VRK-012 67.23	1	10	299
1-1/2	TU3-ERK-015 57.42	TU3-VRK-015 88.05	1	10	299
2	TU3-ERK-020 66.08	TU3-VRK-020 123.21	1	10	299
2-1/2 & 3	TU3-ERK-030 152.47	TU3-VRK-030 199.93	1	10	299
4	TU3-ERK-040 204.95	TU3-VRK-040 259.14	1	10	299

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com
Spears® Manufacturing Company

True Union 2000 Valve Repair Kits — Ball Check Valve

Ball Check Kit includes:
2-End Connector O-rings
1-Seal Carrier O-ring
1-Seal Plate O-ring

True Union 2000 Valve Repair Kits
Single Entry Ball Valve Repair Kit

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Ball Check Valve					
1/2	CK2-ERK-005 3.36	CK2-VRK-005 6.24	1	10	299
3/4	CK2-ERK-007 4.05	CK2-VRK-007 10.32	1	10	299
1	CK2-ERK-010 5.27	CK2-VRK-010 16.78	1	10	299
1-1/4	CK2-ERK-012 7.91	CK2-VRK-012 26.83	1	10	299
1-1/2	CK2-ERK-015 7.91	CK2-VRK-015 26.83	1	10	299
2	CK2-ERK-020 11.73	CK2-VRK-020 28.97	1	10	299
3	CK2-ERK-030 17.12	CK2-VRK-030 80.77	1	10	299
4	CK2-ERK-040 22.14	CK2-VRK-040 87.23	1	10	299
6	CK2-ERK-060 40.39	CK2-VRK-060 209.31	1	10	299

Single Entry Kit includes:
2-End Connector O-rings
1-Seal Carrier O-ring
1-Seal Plate O-ring
1-Stem Bearing (1-1/4" & up)

Single Entry Ball Valve Repair Kits
True Union Valve Repair Kits (Regular Style)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	SE-BRK-005 16.06	SE-ERK-005 17.02	SE-VRK-005 19.91	1	10	299
3/4	SE-BRK-007 16.54	SE-ERK-007 17.52	SE-VRK-007 20.13	1	10	299
1	SE-BRK-010 17.73	SE-ERK-010 18.44	SE-VRK-010 21.07	1	10	299
1-1/4, 1-1/2	SE-BRK-015 22.54	SE-ERK-015 24.94	SE-VRK-015 29.95	1	10	299
2	SE-BRK-020 25.64	SE-ERK-020 26.35	SE-VRK-020 31.41	1	10	299
3	SE-BRK-030 58.96	SE-ERK-030 59.24	SE-VRK-030 64.66	1	10	299
4	SE-BRK-040 108.80	SE-ERK-040 108.85	SE-VRK-040 112.13	1	10	299

Ball Valve Kit includes:
2-PTFE Seats
2-Seat O-rings (2-1/2")
2-End Connector O-rings
1-Stem Bearing (1-1/4" & up)

True Union Valve Repair Kits (Regular Style)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Ball Valve					
1/2	TU-ERK-005 19.67	TU-VRK-005 22.28	1	10	299
3/4	TU-ERK-007 22.28	TU-VRK-007 23.03	1	10	299
1	TU-ERK-010 23.03	TU-VRK-010 29.37	1	10	299

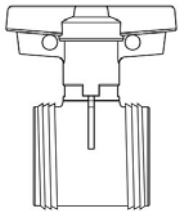
True Union Valve Repair Kits (Regular Style) (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Ball Valve					
1-1/4	TU-ERK-012 28.00	TU-VRK-012 47.06	1	10	299
1-1/2	TU-ERK-015 40.18	TU-VRK-015 61.62	1	10	299
2	TU-ERK-020 46.25	TU-VRK-020 86.26	1	10	299
2-1/2, 3	TU-ERK-030 106.74	TU-VRK-030 139.96	1	10	299
4, 6 VENTURIED	TU-ERK-040 151.80	TU-VRK-040 181.40	1	10	299

True Union Ball Check Valve Repair Kits (Regular Style)

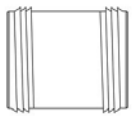
Ball Check (Regular Style) Kit includes:
1-Body O-ring
2-Seat-plate O-rings
2-End Connector O-rings

Ball Check Valve					
1/2	CK-ERK-005 3.36	CK-VRK-005 6.24	1	10	299
3/4	CK-ERK-007 4.05	CK-VRK-007 10.32	1	10	299
1	CK-ERK-010 5.27	CK-VRK-010 16.78	1	10	299
1-1/4	CK-ERK-012 7.91	CK-VRK-012 26.83	1	10	299
1-1/2	CK-ERK-015 7.91	CK-VRK-015 26.83	1	10	299
2	CK-ERK-020 11.73	CK-VRK-020 28.97	1	10	299
2-1/2 OR 3	CK-ERK-030 17.12	CK-VRK-030 80.77	1	10	299
4	CK-ERK-040 22.14	CK-VRK-040 87.23	1	10	299



True Union 2000 Industrial
Ball Valve Cartridge

True Union 2000 Standard
Ball Valve Cartridge



True Union 2000 Industrial
Ball Check Valve Cartridge

True Union Ball Valve Cartridge Kits include valve assembly, less union nuts and end connectors.

Note: 6" Valve uses Lever-Style Handle for proper leverage. T–Style Handle is more compact, but will increase difficulty of operation.

PVC True Union 2000 Industrial Ball Valve Cartridges

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	1820-005 **34.53**	1830-005 **39.24**	1	18	299
3/4	1820-007 **40.94**	1830-007 **43.84**	1	18	299
1	1820-010 **48.92**	1830-010 **55.55**	1	18	299
1-1/4	1820-012 **63.16**	1830-012 **74.26**	1	8	299
1-1/2	1820-015 **82.29**	1830-015 **92.97**	1	8	299
2	1820-020 **105.45**	1830-020 **112.25**	1	8	299
2-1/2	1820-025 **231.35**	1830-025 **290.07**	1	0	299
3	1820-030 **282.33**	1830-030 **313.63**	1	0	299
4	1820-040 **477.03**	1830-040 **529.85**	1	0	299
6 (T-Style Handle)	18206-060 **882.27**	18306-060 **978.82**	1	0	299
6 (Lever Handle)	1820-060 **882.27**	1830-060 **978.82**	1	0	299

CPVC True Union 2000 Industrial Ball Valve Cartridges

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	1820-005C **48.69**	1830-005C **53.13**	1	18	299
3/4	1820-007C **59.54**	1830-007C **64.94**	1	18	299
1	1820-010C **74.12**	1830-010C **75.69**	1	18	299
1-1/4	1820-012C **99.91**	1830-012C **103.89**	1	8	299
1-1/2	1820-015C **125.72**	1830-015C **131.99**	1	8	299
2	1820-020C **170.22**	1830-020C **173.43**	1	8	299
2-1/2	1820-025C **358.33**	1830-025C **398.11**	1	0	299

CPVC True Union 2000 Industrial Ball Valve Cartridges (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
3	1820-030C **419.00**	1830-030C **464.43**	1	0	299
4	1820-040C **759.08**	1830-040C **843.55**	1	0	299
6 (T-Style Handle)	18206-060C **1385.01**	18306-060C **1538.15**	1	0	299
6 (Lever Handle)	1820-060C **1385.01**	1830-060C **1538.15**	1	0	299

PVC True Union 2000 Industrial Ball Check Valve Cartridges

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	4520-005 **40.77**	4530-005 **45.97**	1	10	299
3/4	4520-007 **48.63**	4530-007 **51.33**	1	10	299
1	4520-010 **57.80**	4530-010 **64.44**	1	6	299
1-1/4	4520-012 **89.13**	4530-012 **94.75**	1	4	299
1-1/2	4520-015 **96.99**	4530-015 **107.62**	1	4	299
2	4520-020 **132.39**	4530-020 **147.23**	1	4	299
2-1/2	4520-025 **320.96**	4530-025 **341.83**	1	4	299
3	4520-030 **384.33**	4530-030 **487.96**	1	4	299
4	4520-040 **602.05**	4530-040 **634.31**	1	0	299
6	4520-060 **1013.79**	4530-060 **1125.31**	1	0	299

CPVC True Union 2000 Industrial Ball Check Valve Cartridges

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	4520-005C **60.25**	4530-005C **67.06**	1	18	299
3/4	4520-007C **72.12**	4530-007C **80.15**	1	18	299
1	4520-010C **85.13**	4530-010C **94.57**	1	18	299
1-1/4	4520-012C **146.56**	4530-012C **162.74**	1	12	299
1-1/2	4520-015C **146.56**	4530-015C **162.74**	1	8	299
2	4520-020C **195.76**	4530-020C **218.14**	1	8	299
2-1/2	4520-025C **410.23**	4530-025C **455.80**	1	4	299
3	4520-030C **484.04**	4530-030C **577.18**	1	4	299
4	4520-040C **900.21**	4530-040C **1000.89**	1	0	299
6	4520-060C **1596.43**	4530-060C **1769.54**	1	0	299

PVC True Union 2000 Standard Ball Valve Cartridges

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	3620-005 **26.71**	3630-005 **29.69**	1	18	299
3/4	3620-007 **31.58**	3630-007 **35.14**	1	18	299
1	3620-010 **37.64**	3630-010 **41.89**	1	18	299
1-1/4	3620-012 **52.06**	3630-012 **66.44**	1	12	299
1-1/2	3620-015 **62.68**	3630-015 **69.61**	1	12	299

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC True Union 2000 Standard Ball Valve Cartridges (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
2	3620-020 **82.75**	3630-020 **91.09**	1	8	299
2-1/2 & 3	3620-030 **209.65**	3630-030 **232.93**	1	0	299
4	3620-040 **354.14**	3630-040 **393.61**	1	0	299

CPVC True Union 2000 Standard Ball Valve Cartridges

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	3620-005C **35.25**	3630-005C **39.18**	1	18	299
3/4	3620-007C **44.42**	3630-007C **49.34**	1	18	299
1	3620-010C **52.66**	3630-010C **58.76**	1	18	299
1-1/4	3620-012C **84.03**	3630-012C **93.40**	1	12	299
1-1/2	3620-015C **88.77**	3630-015C **98.64**	1	12	299
2	3620-020C **118.73**	3630-020C **136.49**	1	8	299
2-1/2 & 3	3620-030C **311.25**	3630-030C **345.83**	1	0	299
4	3620-040C **647.21**	3630-040C **626.62**	1	0	299

PVC True Union Ball Valve Cartridges (Regular Style)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	2320-005 34.53	2330-005 39.24	1	10	299
3/4	2320-007 40.94	2330-007 43.84	1	10	299
1	2320-010 48.92	2330-010 55.55	1	10	299
1-1/4	2320-012 63.16	2330-012 74.26	1	4	299
1-1/2	2320-015 82.29	2330-015 92.97	1	4	299
2	2320-020 105.45	2330-020 112.25	1	4	299
2-1/2, 3	2320-030 231.35	2330-030 270.02	1	0	299
4	2320-040 424.18	2330-040 446.51	1	0	299

CPVC True Union Ball Valve Cartridges (Regular Style)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	2320-005C 48.69	2330-005C 53.13	1	10	299
3/4	2320-007C 59.54	2330-007C 64.94	1	10	299
1	2320-010C 74.12	2330-010C 75.69	1	10	299
1-1/4	2320-012C 99.91	2330-012C 103.89	1	4	299
1-1/2	2320-015C 125.72	2330-015C 131.99	1	4	299
2	2320-020C 170.22	2330-020C 173.43	1	4	299
2-1/2, 3	2320-030C 323.52	2330-030C 329.37	1	0	299
4	2320-040C 534.94	2330-040C 638.18	1	0	299

PVC True Union Ball Check Valve Cartridges (Regular Style)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	2220-005 37.91	2230-005 42.74	1	10	299
3/4	2220-007 45.19	2230-007 47.74	1	10	299
1	2220-010 53.78	2230-010 59.93	1	6	299
1-1/4	2220-012 78.55	2230-012 72.96	1	4	299
1-1/2	2220-015 90.19	2230-015 100.09	1	4	299
2	2220-020 123.14	2230-020 136.92	1	4	299
2-1/2	2220-025 298.49	2230-025 317.91	1	0	299
3	2220-030 298.49	2230-030 317.91	1	0	299
4	2220-040 559.89	2230-040 589.93	1	0	299

CPVC True Union Ball Check Valve Cartridges (Regular Style)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	2220-005C 56.03	2230-005C 62.39	1	10	299
3/4	2220-007C 67.05	2230-007C 74.54	1	10	299
1	2220-010C 79.15	2230-010C 87.94	1	6	299
1-1/4	2220-012C 136.29	2230-012C 151.35	1	4	299
1-1/2	2220-015C 146.56	2230-015C 162.83	1	4	299
2	2220-020C 182.52	2230-020C 202.86	1	4	299
2-1/2	2220-025C 381.51	2230-025C 423.88	1	0	299
3	2220-030C 381.51	2230-030C 423.88	1	0	299
4	2220-040C 837.20	2230-040C 930.83	1	0	299

Check Valves

PRICING

True Union 2000 Industrial Ball Check Valves

Socket Style

Pressure Rating @ 73°F (23°C), Water
1/2" - 4" 235 psi
6" - 8" 150 psi
All Flanged 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
Rated for Vacuum Service

All Valves assembled with Silicone-Free, Water Soluble Lubricant
Contact Spears® for Pricing & Availability on Custom Elastomer Seals
See Ball Valve Accessories & Repair Kits Section for Additional Options and Features

General Installation Information: Ball check valves may be installed in either horizontal or vertical position. A minimum of ten (10) pipe diameters' distance maintained from any pump or other source of turbulence. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of flow.

PVC Industrial

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Socket & Threaded Ends					
1/2	4529-005 **56.36**	4539-005 **63.52**	1	18	604
3/4	4529-007 **67.20**	4539-007 **70.93**	1	18	604
1	4529-010 **79.93**	4539-010 **89.09**	1	18	604
1-1/4	4529-012 **116.72**	4539-012 **131.00**	1	12	604
1-1/2	4529-015 **134.05**	4539-015 **148.78**	1	8	604
2	4529-020 **183.02**	4539-020 **203.51**	1	8	604
Socket Ends					
2-1/2	4522-025 **443.72**	4532-025 **472.58**	1	0	605
3	4522-030 **564.68**	4532-030 **632.98**	1	0	605
4	4522-040 **832.33**	4532-040 **876.92**	1	0	605
6	4522-060 **1636.75**	4532-060 **1813.96**	1	0	558
8	4522-080 **2181.25**	4532-080 **2417.89**	1	0	559
8" Venturied valves are 6" ball check valves fitted with 6x8 end connector adapters.					
Threaded Ends					
2-1/2	4521-025 **443.72**	4531-025 **472.58**	1	0	605
3	4521-030 **568.31**	4531-030 **637.46**	1	0	605
4	4521-040 **832.33**	4531-040 **876.92**	1	0	605
6	4521-060 **1636.75**	4531-060 **1813.96**	1	0	558
SR Threaded Ends					
1/2	4521-005SR **57.51**	4531-005SR **64.64**	1	18	604
3/4	4521-007SR **69.94**	4531-007SR **73.66**	1	18	604
1	4521-010SR **82.63**	4531-010SR **91.82**	1	18	604
1-1/4	4521-012SR **122.14**	4531-012SR **136.39**	1	12	604
1-1/2	4521-015SR **142.79**	4531-015SR **157.51**	1	8	604
2	4521-020SR **192.47**	4531-020SR **212.97**	1	8	604
2-1/2	4521-025SR **467.89**	4531-025SR **496.78**	1	0	605
3	4521-030SR **580.14**	4531-030SR **496.78**	1	0	605
4	4521-040SR **860.55**	4531-040SR **905.16**	1	0	605
6	4521-060SR **1683.47**	4531-060SR **1862.27**	1	0	558

PVC Industrial

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Spigot Ends					
1/2	4527-005 **56.36**	4537-005 **63.52**	1	18	604
3/4	4527-007 **67.20**	4537-007 **70.93**	1	18	604
1	4527-010 **79.93**	4537-010 **89.09**	1	12	604
1-1/4	4527-012 **116.72**	4537-012 **131.00**	1	12	604
1-1/2	4527-015 **134.05**	4537-015 **148.78**	1	8	604
2	4527-020 **183.02**	4537-020 **203.51**	1	8	604
2-1/2	4527-025 **443.72**	4537-025 **472.58**	1	0	605
3	4527-030 **502.43**	4537-030 **634.38**	1	0	605
4	4527-040 **832.33**	4537-040 **876.92**	1	0	605
6	4527-060 **1636.75**	4537-060 **1813.96**	1	0	558
Flanged Ends					
1/2	4523-005 **79.46**	4533-005 **99.73**	1	8	604
3/4	4523-007 **96.11**	4533-007 **119.60**	5	0	604
1	4523-010 **113.91**	4533-010 **139.17**	5	0	604
1-1/4	4523-012 **140.88**	4533-012 **182.12**	2	0	604
1-1/2	4523-015 **194.40**	4533-015 **211.28**	3	0	604
2	4523-020 **274.37**	4533-020 **280.87**	2	0	604
2-1/2	4523-025 **568.38**	4533-025 **661.89**	1	0	605
3	4523-030 **795.06**	4533-030 **924.53**	1	0	605
4	4523-040 **1076.19**	4533-040 **1249.16**	1	0	605
6	4523-060 **2577.57**	4533-060 **2989.97**	1	0	558
8	4523-080 **3347.48**	4533-080 **3891.12**	1	0	559
8" Venturied valves are 6" ball check valves fitted with 6x8 end connector adapters.					

CPVC Industrial

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Socket & Threaded Ends					
1/2	4529-005C **83.31**	4539-005C **92.74**	1	18	606
3/4	4529-007C **99.71**	4539-007C **110.81**	1	18	606
1	4529-010C **117.65**	4539-010C **130.71**	1	18	606

True Union 2000 Industrial Ball Check Valves

CPVC Industrial (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Socket & Threaded Ends					
1-1/4	4529-012C **202.63**	4539-012C **224.94**	1	12	606
1-1/2	4529-015C **202.63**	4539-015C **224.94**	1	8	606
2	4529-020C **270.65**	4539-020C **301.56**	1	8	606
Socket Ends					
2-1/2	4522-025C **567.14**	4532-025C **630.13**	1	0	607
3	4522-030C **753.47**	4532-030C **820.66**	1	0	607
4	4522-040C **1244.54**	4532-040C **1383.69**	1	0	607
6	4522-060C **2569.49**	4532-060C **2854.63**	1	0	559
8	4522-080C **3022.95**	4532-080C **3805.11**	1	0	559
8" Venturied valves are 6" ball check valves fitted with 6x8 end connector adapters.					
Threaded Ends					
2-1/2	4521-025C **567.14**	4531-025C **630.13**	1	0	607
3	4521-030C **751.23**	4531-030C **841.78**	1	0	607
4	4521-040C **1244.54**	4531-040C **1383.69**	1	0	607
6	4521-060C **2569.49**	4531-060C **2854.63**	1	0	559
SR Threaded Ends					
1/2	4521-005CSR **84.42**	4531-005CSR **93.87**	1	18	606
3/4	4521-007CSR **102.44**	4531-007CSR **113.51**	1	18	606
1	4521-010CSR **120.35**	4531-010CSR **133.43**	1	18	606
1-1/4	4521-012CSR **208.03**	4531-012CSR **233.68**	1	12	606
1-1/2	4521-015CSR **208.03**	4531-015CSR **233.68**	1	8	606
2	4521-020CSR **280.11**	4531-020CSR **311.02**	1	8	606
2-1/2	4521-025CSR **591.64**	4531-025CSR **654.32**	1	0	607
3	4521-030CSR **591.64**	4531-030CSR **881.74**	1	0	607
4	4521-040CSR **1272.76**	4531-040CSR **1411.94**	1	0	607
6	4521-060CSR **2638.78**	4531-060CSR **2923.92**	1	0	559
Spigot Ends					
1/2	4527-005C **83.31**	4537-005C **92.74**	1	18	606
3/4	4527-007C **99.71**	4537-007C **110.81**	1	18	606
1	4527-010C **117.65**	4537-010C **130.71**	1	12	606
1-1/4	4527-012C **202.63**	4537-012C **224.94**	1	12	606
1-1/2	4527-015C **230.09**	4537-015C **224.94**	1	8	606
2	4527-020C **270.65**	4537-020C **301.56**	1	8	606
2-1/2	4527-025C **567.14**	4537-025C **630.13**	1	0	607
3	4527-030C **737.00**	4537-030C **815.96**	1	0	607
4	4527-040C **1244.54**	4537-040C **1383.69**	1	0	607
6	4527-060C **2569.49**	4537-060C **2854.63**	1	0	559
Flanged Ends					
1/2	4523-005C **103.44**	4533-005C **129.26**	1	8	606

CPVC Industrial (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Flanged Ends					
3/4	4523-007C **123.41**	4533-007C **156.22**	1	8	606
1	4523-010C **147.36**	4533-010C **181.67**	1	8	606
1-1/4	4523-012C **248.55**	4533-012C **308.19**	1	8	606
1-1/2	4523-015C **265.54**	4533-015C **331.81**	1	4	606
2	4523-020C **469.52**	4533-020C **503.37**	1	0	606
2-1/2	4523-025C **850.66**	4533-025C **920.31**	1	0	607
3	4523-030C **949.84**	4533-030C **1042.04**	1	0	607
4	4523-040C **1571.47**	4533-040C **1687.47**	1	0	607
6	4523-060C **4190.15**	4533-060C **4356.08**	1	0	559
8	4523-080C **4823.25**	4533-080C **5248.27**	1	0	559
8" Venturied valves are 6" ball check valves fitted with 6x8 end connector adapters.					

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

True Union Ball Check Valves (Regular Style)

Socket/Threaded Style

Pressure Rating @ 73°F (23°C),Water
1/2" - 2" 235 psi
2-1/2" - 6" 150 psi
Flanged 150 psi

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
Rated for Vacuum Service
All Valves assembled with Silicone-Free, Water Soluble Lubricant

6" Venturied Valves are 4" Ball Check Valves equipped with 4x6 End Connectors.

General Installation Information: Ball check valves may be installed in either horizontal or vertical position. A minimum of ten (10) pipe diameters' distance maintained from any pump or other source of turbulence. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of flow.

PVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Socket & Threaded Ends					
1/2	2229-005 **61.67**	2239-005 **69.49**	1	18	220
3/4	2229-007 **73.53**	2239-007 **77.62**	1	12	220
1	2229-010 **87.44**	2239-010 **97.48**	1	8	220
1-1/4	2229-012 **127.71**	2239-012 **143.32**	1	8	220
1-1/2	2229-015 **146.67**	2239-015 **162.78**	1	8	220
2	2229-020 **200.24**	2239-020 **222.66**	1	4	220
Socket Ends					
2-1/2	2222-025 **485.46**	2232-025 **517.04**	1	0	220
3	2222-030 **586.46**	2232-030 **681.48**	1	0	220
4	2222-040 **910.65**	2232-040 **959.46**	1	0	220
Socket Venturied Ends					
6 VENTURIED	2222-060 **1230.28**	2232-060 **1393.56**	1	0	221
Threaded Ends					
2-1/2	2221-025 **485.46**	2231-025 **517.04**	1	0	220
3	2221-030 **586.46**	2231-030 **681.48**	1	0	220
4	2221-040 **910.65**	2231-040 **959.46**	1	0	220
Flanged Ends					
1/2	2223-005 **86.95**	2233-005 **109.14**	6	0	220
3/4	2223-007 **105.15**	2233-007 **130.85**	5	0	220
1	2223-010 **124.63**	2233-010 **152.27**	5	0	220
1-1/4	2223-012 **154.15**	2233-012 **199.26**	2	0	220
1-1/2	2223-015 **212.68**	2233-015 **231.19**	3	0	220
2	2223-020 **300.19**	2233-020 **307.32**	2	0	220
2-1/2	2223-025 **621.87**	2233-025 **724.20**	1	0	220
3	2223-030 **869.88**	2233-030 **1011.54**	1	0	220
4	2223-040 **1177.48**	2233-040 **1366.73**	1	0	220
Flanged Venturied Ends					
6 VENTURIED	2223-060 **1473.61**	2233-060 **1644.16**	1	0	221

CPVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Socket & Threaded Ends					
1/2	2229-005C **91.15**	2239-005C **101.47**	1	18	222
3/4	2229-007C **109.11**	2239-007C **121.24**	1	12	222
1	2229-010C **128.74**	2239-010C **143.02**	1	8	222

CPVC (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Socket & Threaded Ends					
1-1/4	2229-012C **221.69**	2239-012C **246.12**	1	8	222
1-1/2	2229-015C **268.08**	2239-015C **283.37**	1	8	222
2	2229-020C **296.87**	2239-020C **329.95**	1	4	222
Socket Ends					
2-1/2	2222-025C **620.52**	2232-025C **689.44**	1	0	222
3	2222-030C **1010.72**	2232-030C **1106.06**	1	0	222
4	2222-040C **1361.67**	2232-040C **1513.93**	1	0	222
Socket Venturied Ends					
6 VENTURIED	2222-060C **1756.56**	2232-060C **1968.07**	1	0	223
Threaded Ends					
2-1/2	2221-025C **620.52**	2231-025C **689.44**	1	0	222
3	2221-030C **1010.72**	2231-030C **1106.06**	1	0	222
4	2221-040C **1361.67**	2231-040C **1513.93**	1	0	222
Flanged Ends					
1/2	2223-005C **113.18**	2233-005C **141.42**	6	0	222
3/4	2223-007C **135.02**	2233-007C **170.94**	5	0	222
1	2223-010C **161.22**	2233-010C **198.76**	5	0	222
1-1/4	2223-012C **271.95**	2233-012C **337.19**	2	0	222
1-1/2	2223-015C **290.53**	2233-015C **363.03**	3	0	222
2	2223-020C **513.69**	2233-020C **550.75**	2	0	222
2-1/2	2223-025C **817.39**	2233-025C **930.72**	1	0	222
3	2223-030C **1039.25**	2233-030C **1140.12**	1	0	222
4	2223-040C **1719.37**	2233-040C **1846.29**	1	0	222
Flanged Venturied Ends					
6 VENTURIED	2223-060C **2072.75**	2233-060C **2243.62**	1	0	223

Foot Valve Screens

Convert Check Valve to Foot Valve using adapter - Fits all Socket Ball Check Valves or any IPS fitting socket or thread

Standard Foot Valve Screen

PVC/CPVC Spigot

Compact Foot Valve Screens

PVC Gray Spigot or Threaded

PE Black Threaded Only

Foot Valve Screens - PVC

Size	PVC	CPVC	Std Pk	Mstr Pk	Prod Code
Spigot					
1/2	FVS-005 **45.51**	FVS-005C **62.85**	10	60	299
3/4	FVS-007 **54.04**	FVS-007C **67.80**	10	60	299
1	FVS-010 **65.73**	FVS-010C **76.97**	10	40	299
1-1/4	FVS-012 **95.67**	FVS-012C **118.87**	5	30	299
1-1/2	FVS-015 **100.78**	FVS-015C **123.43**	5	0	299
2	FVS-020 **113.74**	FVS-020C **136.26**	5	0	299
2-1/2	FVS-025 **156.45**	FVS-025C **198.53**	5	0	299
3	FVS-030 **160.93**	FVS-030C **221.08**	5	0	299
4	FVS-040 **190.41**	FVS-040C **315.98**	5	0	299
6	FVS-060 **257.85**	FVS-060C **451.53**	5	0	299

PVC Compact Foot Valve Screen

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Spigot					
CFVS7-005	**1/2**	50	300	299	2.80
CFVS7-007	**3/4**	25	150	299	3.19
CFVS7-010	**1**	25	150	299	3.78
CFVS7-012	**1-1/4**	50	0	299	4.81
CFVS7-015	**1-1/2**	25	0	299	8.06

PVC Compact Foot Valve Screen (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Spigot					
CFVS7-020	**2**	25	0	299	9.17

PVC Compact Foot Valve Screen

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Threaded					
CFVS1-005	**1/2**	50	300	299	2.80
CFVS1-007	**3/4**	25	150	299	3.19
CFVS1-010	**1**	20	120	299	3.78
CFVS1-012	**1-1/4**	50	0	299	4.81
CFVS1-015	**1-1/2**	25	0	299	8.06
CFVS1-020	**2**	25	0	299	9.17

HDPE Black Compact Foot Valve Screen

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Threaded					
CFVS1-005P	**1/2**	50	300	299	3.35
CFVS1-007P	**3/4**	25	150	299	4.03
CFVS1-010P	**1**	20	120	299	4.62
CFVS1-012P	**1-1/4**	50	0	299	5.31
CFVS1-015P	**1-1/2**	25	0	299	9.04
CFVS1-020P	**2**	25	0	299	10.14

Y-Check Valves

PVC Clear — Socket Style

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 150 psi
3" - 4" 90 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply

True Union Style

PVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	1622-005 **88.61**	1632-005 **98.27**	1	18	627
3/4	1622-007 **95.05**	1632-007 **106.34**	1	18	627

PVC - Socket Ends (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1	1622-010 **104.72**	1632-010 **115.98**	1	12	627
1-1/4	1622-012 **164.32**	1632-012 **182.05**	1	8	627
1-1/2	1622-015 **178.81**	1632-015 **198.15**	1	8	627

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC - Socket Ends (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
2	1622-020 **222.32**	1632-020 **246.49**	1	4	627
3	1622-030 **439.80**	1632-030 **488.12**	1	0	627
4	1622-040 **766.83**	1632-040 **852.22**	1	0	627

PVC - SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	1621-005SR **91.83**	1631-005SR **101.51**	1	18	627
3/4	1621-007SR **99.87**	1631-007SR **111.16**	1	12	627
1	1621-010SR **111.16**	1631-010SR **122.43**	1	8	627
1-1/4	1621-012SR **173.98**	1631-012SR **191.71**	1	8	627
1-1/2	1621-015SR **193.32**	1631-015SR **212.65**	1	4	627
2	1621-020SR **238.42**	1631-020SR **262.59**	1	0	627
3	1621-030SR **483.31**	1631-030SR **531.62**	1	0	627
4	1621-040SR **811.94**	1631-040SR **897.31**	1	0	627

PVC - Flanged Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	1623-005 **115.98**	1633-005 **128.89**	1	8	627
3/4	1623-007 **127.26**	1633-007 **141.77**	1	4	627
1	1623-010 **148.98**	1633-010 **170.76**	1	8	627
1-1/4	1623-012 **236.81**	1633-012 **262.59**	1	4	627
1-1/2	1623-015 **251.33**	1633-015 **278.69**	1	4	627
2	1623-020 **336.69**	1633-020 **373.73**	1	0	627
3	1623-030 **658.88**	1633-030 **731.38**	1	0	627
4	1623-040 **1051.96**	1633-040 **1167.96**	1	0	627

PVC Clear - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	1622-005CL **88.61**	1632-005CL **98.27**	1	18	628
3/4	1622-007CL **95.05**	1632-007CL **106.34**	1	18	628
1	1622-010CL **104.72**	1632-010CL **115.98**	1	12	628
1-1/4	1622-012CL **164.32**	1632-012CL **182.05**	1	8	628
1-1/2	1622-015CL **178.81**	1632-015CL **198.15**	1	8	628
2	1622-020CL **222.32**	1632-020CL **246.49**	1	4	628
3	1622-030CL **439.80**	1632-030CL **488.12**	1	0	628
4	1622-040CL **766.83**	1632-040CL **852.22**	1	0	628

PVC Clear - SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	1621-005CLSR **91.83**	1631-005CLSR **101.51**	1	18	628
3/4	1621-007CLSR **99.87**	1631-007CLSR **111.16**	1	12	628
1	1621-010CLSR **111.16**	1631-010CLSR **122.43**	1	8	628

PVC Clear - SR Threaded Ends (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1-1/4	1621-012CLSR **173.98**	1631-012CLSR **191.71**	1	8	628
1-1/2	1621-015CLSR **193.32**	1631-015CLSR **212.65**	1	4	628
2	1621-020CLSR **238.42**	1631-020CLSR **262.59**	1	0	628
3	1621-030CLSR **483.31**	1631-030CLSR **531.62**	1	0	628
4	1621-040CLSR **811.94**	1631-040CLSR **897.31**	1	0	628

PVC Clear - Flanged Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	1623-005CL **115.98**	1633-005CL **128.89**	1	8	628
3/4	1623-007CL **127.26**	1633-007CL **141.77**	1	8	628
1	1623-010CL **153.04**	1633-010CL **170.76**	1	8	628
1-1/4	1623-012CL **236.81**	1633-012CL **262.59**	1	4	628
1-1/2	1623-015CL **251.33**	1633-015CL **278.69**	1	4	628
2	1623-020CL **336.69**	1633-020CL **373.73**	1	0	628
3	1623-030CL **658.88**	1633-030CL **731.38**	1	0	628
4	1623-040CL **1051.96**	1633-040CL **1167.96**	1	0	628

CPVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	1622-005C **127.26**	1632-005C **140.15**	1	18	629
3/4	1622-007C **136.94**	1632-007C **151.43**	1	18	629
1	1622-010C **149.82**	1632-010C **165.93**	1	12	629
1-1/4	1622-012C **235.20**	1632-012C **260.98**	1	8	629
1-1/2	1622-015C **256.15**	1632-015C **283.53**	1	8	629
2	1622-020C **317.36**	1632-020C **352.79**	1	4	629
3	1622-030C **908.25**	1632-030C **1016.27**	1	0	629
4	1622-040C **1095.44**	1632-040C **1217.88**	1	0	629

CPVC - SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	1621-005CSR **130.48**	1631-005CSR **144.98**	1	18	629
3/4	1621-007CSR **141.77**	1631-007CSR **157.88**	1	12	629
1	1621-010CSR **157.88**	1631-010CSR **173.98**	1	8	629
1-1/4	1621-012CSR **248.09**	1631-012CSR **272.25**	1	8	629
1-1/2	1621-015CSR **277.08**	1631-015CSR **304.48**	1	4	629
2	1621-020CSR **339.91**	1631-020CSR **375.37**	1	0	629
3	1621-030CSR **691.11**	1631-030CSR **760.38**	1	0	629
4	1621-040CSR **1158.28**	1631-040CSR **1280.73**	1	0	629

CPVC - Flanged Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	1623-005C **165.93**	1633-005C **170.80**	1	8	629

CPVC - Flanged Ends (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
3/4	1623-007C **182.05**	1633-007C **202.98**	1	8	629
1	1623-010C **219.11**	1633-010C **243.91**	1	8	629
1-1/4	1623-012C **338.31**	1633-012C **375.37**	1	4	629
1-1/2	1623-015C **357.62**	1633-015C **397.91**	1	4	629
2	1623-020C **480.06**	1633-020C **533.22**	1	0	629
3	1623-030C **940.81**	1633-030C **1045.52**	1	0	629
4	1623-040C **1501.42**	1633-040C **1668.97**	1	0	629

PVC - True Union Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	162A-005 **96.66**	163A-005 **106.34**	1	12	627
3/4	162A-007 **103.09**	163A-007 **115.98**	1	8	627
1	162A-010 **114.38**	163A-010 **125.64**	1	8	627
1-1/4	162A-012 **178.81**	163A-012 **198.15**	1	4	627
1-1/2	162A-015 **194.93**	163A-015 **215.88**	1	0	627
2	162A-020 **241.64**	163A-020 **267.41**	2	0	627
3	162A-030 **478.45**	163A-030 **521.96**	1	0	627
4	162A-040 **834.49**	163A-040 **926.32**	1	0	627

PVC - True Union Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	162B-005 **96.66**	163B-005 **106.34**	1	12	627
3/4	162B-007 **103.09**	163B-007 **115.98**	1	8	627
1	162B-010 **114.38**	163B-010 **125.64**	1	8	627
1-1/4	162B-012 **177.22**	163B-012 **198.15**	1	4	627
1-1/2	162B-015 **194.93**	163B-015 **215.88**	1	0	627
2	162B-020 **241.64**	163B-020 **267.41**	2	0	627
3	162B-030 **478.45**	163B-030 **521.96**	1	0	627
4	162B-040 **834.49**	163B-040 **926.32**	1	0	627

PVC - True Union SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	162B-005SR **99.87**	163B-005SR **109.55**	1	12	627
3/4	162B-007SR **107.93**	163B-007SR **119.22**	1	8	627
1	162B-010SR **119.22**	163B-010SR **132.11**	1	8	627
1-1/4	162B-012SR **188.48**	163B-012SR **207.80**	1	4	627
1-1/2	162B-015SR **211.03**	163B-015SR **231.98**	1	0	627
2	162B-020SR **259.37**	163B-020SR **286.74**	1	0	627
3	162B-030SR **525.17**	163B-030SR **578.35**	1	0	627
4	162B-040SR **881.20**	163B-040SR **974.63**	1	0	627

PVC Clear - True Union Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	162A-005CL **96.66**	163A-005CL **106.34**	1	12	628
3/4	162A-007CL **103.09**	163A-007CL **115.98**	1	8	628
1	162A-010CL **114.38**	163A-010CL **125.64**	1	8	628
1-1/4	162A-012CL **178.81**	163A-012CL **198.15**	1	4	628
1-1/2	162A-015CL **194.93**	163A-015CL **215.88**	1	0	628
2	162A-020CL **241.64**	163A-020CL **267.41**	2	0	628
3	162A-030CL **478.45**	163A-030CL **521.96**	1	0	628
4	162A-040CL **834.49**	163A-040CL **926.32**	1	0	628

PVC Clear - True Union Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	162B-005CL **96.66**	163B-005CL **106.34**	1	12	628
3/4	162B-007CL **103.09**	163B-007CL **115.98**	1	8	628
1	162B-010CL **114.38**	163B-010CL **125.64**	1	8	628
1-1/4	162B-012CL **178.81**	163B-012CL **198.15**	1	4	628
1-1/2	162B-015CL **194.93**	163B-015CL **215.88**	1	0	628
2	162B-020CL **241.64**	163B-020CL **267.41**	2	0	628
3	162B-030CL **478.45**	163B-030CL **521.96**	1	0	628
4	162B-040CL **834.49**	163B-040CL **926.32**	1	0	628

PVC Clear - True Union SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	162B-005CLSR **99.87**	163B-005CLSR **109.55**	1	12	628
3/4	162B-007CLSR **107.93**	163B-007CLSR **119.22**	1	8	628
1	162B-010CLSR **119.22**	163B-010CLSR **132.11**	1	8	628
1-1/4	162B-012CLSR **188.48**	163B-012CLSR **207.80**	1	4	628
1-1/2	162B-015CLSR **211.03**	163B-015CLSR **231.98**	1	0	628
2	162B-020CLSR **259.37**	163B-020CLSR **286.74**	1	0	628
3	162B-030CLSR **525.17**	163B-030CLSR **578.35**	1	0	628
4	162B-040CLSR **881.20**	163B-040CLSR **974.63**	1	0	628

CPVC - True Union Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	162A-005C **138.55**	163A-005C **153.04**	1	12	629
3/4	162A-007C **148.21**	163A-007C **165.93**	1	8	629
1	162A-010C **162.71**	163A-010C **180.43**	1	8	629
1-1/4	162A-012C **254.54**	163A-012C **283.53**	1	4	629
1-1/2	162A-015C **277.08**	163A-015C **307.71**	1	0	629
2	162A-020C **344.75**	163A-020C **383.40**	2	0	629
3	162A-030C **683.05**	163A-030C **745.86**	1	0	629
4	162A-040C **1190.51**	163A-040C **1322.61**	1	0	629

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Y-Check Valves & Y-Check Valve Repair Kits

Y-Check Valves

CPVC - True Union Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	162B-005C **138.55**	163B-005C **153.04**	1	12	629
3/4	162B-007C **148.21**	163B-007C **165.93**	1	8	629
1	162B-010C **162.71**	163B-010C **180.43**	1	8	629
1-1/4	162B-012C **254.54**	163B-012C **283.53**	1	4	629
1-1/2	162B-015C **277.08**	163B-015C **307.71**	1	0	629
2	162B-020C **344.75**	163B-020C **383.40**	2	0	629
3	162B-030C **683.05**	163B-030C **745.86**	1	0	629
4	162B-040C **1190.51**	163B-040C **1322.61**	1	0	629

CPVC - True Union SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	162B-005CSR **141.77**	163B-005CSR **156.26**	1	12	629
3/4	162B-007CSR **154.66**	163B-007CSR **170.76**	1	8	629
1	162B-010CSR **170.76**	163B-010CSR **188.48**	1	8	629
1-1/4	162B-012CSR **269.02**	163B-012CSR **296.42**	1	4	629
1-1/2	162B-015CSR **301.25**	163B-015CSR **330.23**	1	0	629
2	162B-020CSR **370.52**	163B-020CSR **407.57**	1	0	629
3	162B-030CSR **750.72**	163B-030CSR **824.83**	1	0	629
4	162B-040CSR **1259.79**	163B-040CSR **1391.89**	1	0	629

Y-Check Valve Repair Kits

All Kits include:
- 1-Seat
- 1-Bonnet O-ring
- 1-Plug O-ring

All Union Kits include:
- 1-Seat
- 1-Bonnet O-ring
- 1-Plug O-ring
- 2-End Connector O-rings

Y-Check Valve - Seat & O-ring Repair Kits

Size	Standard EPDM O-ring	Standard FKM O-ring	True Union EPDM O-ring	True Union FKM O-ring	Std Pk	Mstr Pk	Prod Code
1/2	YC-ERK-005 **3.49**	YC-VRK-005 **10.32**	YC-UERK-005 **4.08**	YC-UVRK-005 **12.38**	1	10	299
3/4	YC-ERK-007 **4.00**	YC-VRK-007 **11.13**	YC-UERK-007 **4.73**	YC-UVRK-007 **13.84**	1	10	299
1	YC-ERK-010 **4.08**	YC-VRK-010 **15.11**	YC-UERK-010 **4.97**	YC-UVRK-010 **20.03**	1	10	299
1-1/4	YC-ERK-012 **4.27**	YC-VRK-012 **28.11**	YC-UERK-012 **6.20**	YC-UVRK-012 **35.15**	1	10	299
1-1/2	YC-ERK-015 **7.42**	YC-VRK-015 **30.69**	YC-UERK-015 **10.41**	YC-UVRK-015 **43.69**	1	10	299
2	YC-ERK-020 **9.98**	YC-VRK-020 **36.74**	YC-UERK-020 **13.78**	YC-UVRK-020 **52.99**	1	10	299
3	YC-ERK-030 **17.22**	YC-VRK-030 **96.37**	YC-UERK-030 **29.93**	YC-UVRK-030 **122.27**	1	10	299
4	YC-ERK-040 **22.29**	YC-VRK-040 **138.74**	YC-UERK-040 **33.16**	YC-UVRK-040 **171.17**	1	10	299

Butterfly Check Valves

Wafer

Flanged

Spigot

Threaded

Grooved

Pressure Rating @ 73°F (23°C), Water

2" - 8"	150 psi
10" - 14"	100 psi
16"	70 psi
18" - 24"	50 psi

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply

General Installation Information: Butterfly Check Valve seating may be affected by normal system turbulence. Flow velocities should be limited to approximately 5 feet per second. Valves should be installed at least 5 pipe diameters away from any fitting, pump or other source of turbulence. If used as a foot valve, do not place near bottom of a tank. Butterfly type check valves should not be used in continuous cycling applications, such as with reciprocating pumps. This can result in premature failure of sealing membrane. In horizontal installations, always orient the Hinge Post Bolts visible on the external body in a vertical (top and bottom) position, perpendicular to flow. In vertical installations downstream from an elbow, flow velocities can be higher on the outer radius of the elbow. To avoid uneven butterfly plate loading, the Hinge Post Bolts should align with crotch and outer radius of elbow and NOT from side to side of the elbow.

PVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Wafer					
2	5420-020 **405.36**	5430-020 **446.66**	1	18	289
2-1/2	5420-025 **558.62**	5430-025 **615.63**	1	0	289
3	5420-030 **714.56**	5430-030 **787.42**	1	8	289
4	5420-040 **971.78**	5430-040 **1070.91**	1	4	289
6	5420-060 **1473.27**	5430-060 **1623.54**	1	0	289
8	5420-080 **2499.61**	5430-080 **2754.56**	1	0	289
10	5420-100 **4596.12**	5430-100 **5101.67**	1	0	289
12	5420-120 **6480.46**	5430-120 **7193.33**	1	0	289
14	5420-140 **9256.78**	**---**	1	0	289
16	5420-160 **12855.58**	**---**	1	0	289
18	5420-180 **16068.26**	**---**	1	0	289
20	5420-200 **20085.32**	**---**	1	0	289
24	5420-240 **28691.31**	**---**	1	0	289
Flanged Ends					
2	5423-020 **517.05**	5433-020 **556.04**	1	8	289
2-1/2	5423-025 **672.97**	5433-025 **732.75**	1	0	289
3	5423-030 **966.60**	5433-030 **1062.73**	1	0	289
4	5423-040 **1255.01**	5433-040 **1400.49**	1	0	289
6	5423-060 **2034.51**	5433-060 **2328.13**	1	0	289
8	5423-080 **2915.34**	5433-080 **3440.21**	1	0	289
10	5423-100 **5368.20**	5433-100 **6121.71**	1	0	289
12	5423-120 **7605.37**	5433-120 **8090.37**	1	0	289
14	5423-140 **10723.57**	5433-140 **11407.36**	4	0	289

PVC (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Flanged Ends					
16	5423-160 **15093.44**	5433-160 **16296.21**	1	0	289
18	5423-180 **19283.61**	5433-180 **20626.99**	1	0	289
20	5423-200 **25345.15**	5433-200 **27140.77**	1	0	289
24	5423-240 **33197.34**	5433-240 **35709.75**	1	0	289
Spigot (Plain End)					
2	5427-020 **220.86**	5437-020 **259.83**	1	12	289
2-1/2	5427-025 **304.01**	5437-025 **363.79**	1	12	289
3	5427-030 **407.94**	5437-030 **504.07**	1	8	289
4	5427-040 **535.26**	5437-040 **680.78**	1	4	289
6	5427-060 **1138.06**	5437-060 **1431.68**	1	0	289
8	5427-080 **1696.74**	5437-080 **2221.57**	1	0	289
10	5427-100 **4149.55**	5437-100 **4903.06**	1	0	289
12	5427-120 **5620.22**	5437-120 **6588.52**	1	0	289
14	5427-140 **7500.69**	5437-140 **8618.72**	1	0	289
16	5427-160 **11284.86**	5437-160 **13230.73**	1	0	289
18	5427-180 **14106.08**	5437-180 **16536.92**	1	0	289
20	5427-200 **17632.13**	5437-200 **20669.82**	1	0	289
24	5427-240 **25188.72**	5437-240 **29527.29**	1	0	289
Threaded Ends					
2	5421A-020 **215.67**	5431A-020 **254.64**	1	4	289
2-1/2	5421A-025 **293.62**	5431A-025 **353.36**	1	8	289
3	5421A-030 **400.16**	5431A-030 **496.27**	1	8	289
4	5421A-040 **524.87**	5431A-040 **670.37**	1	4	289

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Threaded Ends					
6	5421A-060 **1117.29**	5431A-060 **1410.89**	1	0	289
8	5421A-080 **1678.56**	5431A-080 **2203.39**	1	0	289
10	5421A-100 **4141.06**	5431A-100 **4895.80**	1	0	289
12	5421A-120 **5613.29**	5431A-120 **6581.60**	1	0	289
Grooved Ends					
2	542G-020 **244.24**	543G-020 **283.21**	1	12	289
2-1/2	542G-025 **319.60**	543G-025 **379.35**	1	8	289
3	542G-030 **420.93**	543G-030 **517.05**	1	8	289
4	542G-040 **566.45**	543G-040 **711.95**	1	4	289
6	542G-060 **1184.84**	543G-060 **1478.47**	1	0	289
8	542G-080 **1748.67**	543G-080 **2273.56**	1	0	289
10	542G-100 **4232.69**	543G-100 **4986.21**	1	0	289
12	542G-120 **5731.94**	543G-120 **6701.15**	1	0	289

CPVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Wafer					
2	5420-020C **628.27**	5430-020C **697.39**	1	18	290
2-1/2	5420-025C **865.88**	5430-025C **917.65**	1	0	290
3	5420-030C **1107.55**	5430-030C **1229.38**	1	0	290
4	5420-040C **1506.29**	5430-040C **1671.97**	1	0	290
6	5420-060C **2283.56**	5430-060C **2534.76**	1	0	290
8	5420-080C **3874.39**	5430-080C **4300.57**	1	0	290
10	5420-100C **8332.34**	5430-100C **9165.58**	1	0	290
12	5420-120C **14674.37**	5430-120C **16141.81**	1	0	290
Flanged Ends					
2	5423-020C **800.28**	5433-020C **839.26**	1	8	290
2-1/2	5423-025C **1280.98**	5433-025C **1340.74**	1	0	290
3	5423-030C **1369.32**	5433-030C **1465.46**	1	0	290
4	5423-040C **1603.17**	5433-040C **1748.67**	1	0	290
6	5423-060C **2826.99**	5433-060C **3120.62**	1	0	290
8	5423-080C **4528.92**	5433-080C **5053.80**	1	0	290
10	5423-100C **8558.96**	5433-100C **9312.47**	1	0	290
12	5423-120C **15415.98**	5433-120C **16385.20**	1	0	290
14	5423-140C **22022.45**	5433-140C **23407.12**	1	0	290
16	5423-160C **30585.05**	5433-160C **32509.86**	1	0	290
18	5423-180C **38231.29**	5433-180C **40637.35**	1	0	290
20	5423-200C **54615.94**	5433-200C **58052.18**	1	0	290
24	5423-240C **68268.40**	5433-240C **72564.97**	1	0	290

CPVC

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Spigot (Plain End)					
2	5427-020C **420.93**	5437-020C **459.91**	1	12	290
2-1/2	5427-025C **569.05**	5437-025C **628.79**	1	12	290
3	5427-030C **579.44**	5437-030C **674.71**	1	8	290
4	5427-040C **727.53**	5437-040C **873.05**	1	4	290
6	5427-060C **1556.42**	5437-060C **1850.04**	1	0	290
8	5427-080C **2335.92**	5437-080C **2860.78**	1	0	290
10	5427-100C **5838.47**	5437-100C **6592.03**	1	0	290
12	5427-120C **9580.11**	5437-120C **10548.42**	1	0	290
14	5427-140C **10020.27**	5437-140C **20928.65**	1	0	290
16	5427-160C **13250.63**	5437-160C **13755.01**	1	0	290
18	5427-180C **20149.82**	5437-180C **23126.81**	1	0	290
20	5427-200C **25188.27**	5437-200C **28905.66**	1	0	290
24	5427-240C **26089.01**	5437-240C **72564.97**	1	0	290
Threaded Ends					
2	5421A-020C **418.36**	5431A-020C **483.31**	1	12	290
2-1/2	5421A-025C **566.79**	5431A-025C **627.07**	1	8	290
3	5421A-030C **575.97**	5431A-030C **672.09**	1	8	290
4	5421A-040C **724.07**	5431A-040C **869.58**	1	4	290
6	5421A-060C **1544.27**	5431A-060C **1837.02**	1	0	290
8	5421A-080C **2325.16**	5431A-080C **2850.04**	1	0	290
10	5421A-100C **5829.28**	5431A-100C **6582.83**	1	0	290
12	5421A-120C **9564.84**	5431A-120C **10534.04**	1	0	290
Grooved Ends					
2	542G-020C **444.34**	543G-020C **514.68**	1	12	290
2-1/2	542G-025C **589.82**	543G-025C **649.60**	1	8	290
3	542G-030C **599.33**	543G-030C **695.48**	1	8	290
4	542G-040C **769.11**	543G-040C **915.29**	1	4	290
6	542G-060C **1610.98**	543G-060C **1904.60**	1	0	290
8	542G-080C **2388.06**	543G-080C **2912.93**	1	0	290
10	542G-100C **5926.83**	543G-100C **6680.34**	1	0	290
12	542G-120C **9878.92**	543G-120C **10848.08**	1	0	290

Butterfly Check Valve Repair Kits

PVC & CPVC Butterfly Check Valve Repair Kit is an internal assembly including:

- 1-Flex Seal Gasket Seat
- 1-Hinge Post
- 2-Flapper Plates
- 2-Flapper Covers
- 1-Post Strip
- 2-Seat Post O-rings
- Plastic Assembly Screws
- Use Existing Hinge Post Bolts

PVC Butterfly Check Valve Repair Kits

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
2	BFC-ERK-020 **155.97**	BFC-VRK-020 **184.27**	1	10	299
2-1/2	BFC-ERK-025 **212.40**	BFC-VRK-025 **255.68**	1	0	299
3	BFC-ERK-030 **289.32**	BFC-VRK-030 **358.56**	1	10	299
4	BFC-ERK-040 **379.69**	BFC-VRK-040 **484.75**	1	10	299
6	BFC-ERK-060 **808.19**	BFC-VRK-060 **1020.60**	1	10	299
8	BFC-ERK-080 **1214.39**	BFC-VRK-080 **1593.74**	1	10	299
10	BFC-ERK-100 **2995.41**	BFC-VRK-100 **3541.26**	1	0	299
12	BFC-ERK-120 **4060.31**	BFC-VRK-120 **4760.63**	1	0	299

CPVC Butterfly Check Valve Repair Kits

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
2	BFC-ERK-020C **302.62**	BFC-VRK-020C **330.77**	1	10	299
2-1/2	BFC-ERK-025C **410.02**	BFC-VRK-025C **453.64**	1	10	299
3	BFC-ERK-030C **416.84**	BFC-VRK-030C **486.08**	1	10	299
4	BFC-ERK-040C **523.71**	BFC-VRK-040C **629.08**	1	10	299
6	BFC-ERK-060C **1117.00**	BFC-VRK-060C **1328.74**	1	10	299
8	BFC-ERK-080C **1681.80**	BFC-VRK-080C **2061.54**	1	10	299
10	BFC-ERK-100C **4216.46**	BFC-VRK-100C **4761.63**	1	0	299
12	BFC-ERK-120C **6918.72**	BFC-VRK-120C **7619.71**	1	0	299

Industrial Swing Check Valves

Threaded Bonnet on Sizes 3/4", 1" & 1-1/4"

Pressure Rating @ 73°F (23°C), Water
3/4" - 4" 150 psi
6" 100 psi
8" 70 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
PP = 180°F (82°C)
Temperature/Pressure De-ratings Apply
All Valves Assembled with Silicone-Free Lubricants

Bolted Bonnet on Sizes 1-1/2" & Up
(Valve Shown with Arrow Indicator Option)

General Installation Information: Swing check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of the flow. Do not install valve upside down. Flow velocity should not exceed 5 ft./sec.

Industrial Swing Check Valves

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
PVC					
3/4	4423-007 **489.87**	4433-007 **518.17**	1	12	108
1	4423-010 **564.53**	4433-010 **615.23**	1	4	108
1-1/4	4423-012 **706.16**	4433-012 **747.16**	1	0	108
1-1/2	4423-015 **774.14**	4433-015 **864.87**	1	0	108
2	4423-020 **891.23**	4433-020 **990.28**	1	0	108
2-1/2	4423-025 **1491.55**	4433-025 **1759.58**	1	0	110
3	4423-030 **1668.08**	4433-030 **2185.93**	1	0	110
4	4423-040 **2126.11**	4433-040 **2496.24**	1	0	110
6	4423-060 **4040.65**	4433-060 **4742.66**	1	0	110
8	4423-080 **7742.14**	4433-080 **9049.54**	1	0	110
CPVC					
3/4	4423-007C **774.01**	4433-007C **860.13**	1	12	109

Industrial Swing Check Valves (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
CPVC					
1	4423-010C **892.53**	4433-010C **992.43**	1	4	109
1-1/4	4423-012C **1116.48**	4433-012C **1239.96**	1	0	109
1-1/2	4423-015C **1151.88**	4433-015C **1565.51**	1	0	109
2	4423-020C **1485.39**	4433-020C **1650.42**	1	0	109
2-1/2	4423-025C **2461.58**	4433-025C **2921.09**	1	0	111
3	4423-030C **3074.86**	4433-030C **3308.52**	1	0	111
4	4423-040C **3528.28**	4433-040C **4161.00**	1	0	111
6	4423-060C **7220.66**	4433-060C **7908.09**	1	0	111
8	4423-080C **12884.15**	4433-080C **15066.75**	1	0	111
PP					
3/4	4423-007P **563.29**	4433-007P **625.86**	1	12	113
1	4423-010P **673.87**	4433-010P **734.44**	1	4	113

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Industrial Swing Check Valves

Industrial Swing Check Valves (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
PP					
1-1/4	4423-012P **807.65**	4433-012P **897.31**	1	0	113
1-1/2	4423-015P **1002.77**	4433-015P **1091.16**	1	0	113
2	4423-020P **1072.15**	4433-020P **1204.66**	1	0	113
2-1/2	4423-025P **1785.13**	4433-025P **1985.68**	1	0	112
3	4423-030P **1876.73**	4433-030P **2244.16**	1	0	112
4	4423-040P **2552.76**	4433-040P **2833.55**	1	0	112
6	4423-060P **4835.67**	4433-060P **5377.21**	1	0	112
8	4423-080P **9256.18**	4433-080P **10171.67**	1	0	112

Swing Check Valve With Arrow Indicator

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
PVC					
3/4	4423I-007 **497.92**	4433I-007 **526.24**	1	12	108
1	4423I-010 **572.57**	4433I-010 **641.02**	1	4	108
1-1/4	4423I-012 **731.22**	4433I-012 **803.54**	1	0	108
1-1/2	4423I-015 **848.02**	4433I-015 **803.54**	1	0	108
2	4423I-020 **918.19**	4433I-020 **1002.26**	1	0	108
2-1/2	4423I-025 **1500.05**	4433I-025 **1668.77**	1	0	110
3	4423I-030 **1746.95**	4433I-030 **1668.77**	1	0	110
4	4423I-040 **2134.74**	4433I-040 **2536.97**	1	0	110
6	4423I-060 **4049.09**	4433I-060 **4781.72**	1	0	110
8	4423I-080 **7865.20**	4433I-080 **9095.78**	1	0	110
CPVC					
3/4	4423I-007C **782.56**	4433I-007C **868.15**	1	12	109
1	4423I-010C **900.59**	4433I-010C **1002.09**	1	4	109
1-1/4	4423I-012C **1111.08**	4433I-012C **1251.24**	1	0	109
1-1/2	4423I-015C **1277.94**	4433I-015C **1584.71**	1	0	109
2	4423I-020C **1497.00**	4433I-020C **1693.56**	1	0	109
2-1/2	4423I-025C **2469.95**	4433I-025C **2962.41**	1	0	111
3	4423I-030C **2650.77**	4433I-030C **3446.74**	1	0	111
4	4423I-040C **3551.77**	4433I-040C **4185.59**	1	0	111
6	4423I-060C **7327.88**	4433I-060C **7916.65**	1	0	111
8	4423I-080C **12897.99**	4433I-080C **15114.39**	1	0	111
PP					
3/4	4423I-007P **571.34**	4433I-007P **633.92**	1	12	113
1	4423I-010P **685.14**	4433I-010P **790.82**	1	4	113
1-1/4	4423I-012P **880.14**	4433I-012P **976.99**	1	0	113
1-1/2	4423I-015P **1131.42**	4433I-015P **976.99**	1	0	113
2	4423I-020P **1101.74**	4433I-020P **1249.35**	1	0	113

Swing Check Valve With Arrow Indicator (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
PP					
2-1/2	4423I-025P **1795.51**	4433I-025P **2012.18**	1	0	112
3	4423I-030P **2237.73**	4433I-030P **2335.62**	1	0	112
4	4423I-040P **2563.15**	4433I-040P **2843.98**	1	0	112
6	4423I-060P **4940.04**	4433I-060P **5422.53**	1	0	112
8	4423I-080P **9325.12**	4433I-080P **10274.48**	1	0	112

Contact Spears® for Pricing on Additional Specialty Valve Accessories Available:

- Arrow Indicator Kits for Field Installation
- Counter Balance Kits for Field Installation

Swing Check Valve With Counter Balance

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
PVC					
3/4	4423CB-007 **774.86**	4433CB-007 **829.28**	1	8	108
1	4423CB-010 **866.79**	4433CB-010 **928.46**	1	4	108
1-1/4	4423CB-012 **1046.99**	4433CB-012 **1088.37**	1	0	108
1-1/2	4423CB-015 **1123.33**	4433CB-015 **1311.98**	1	0	108
2	4423CB-020 **1239.38**	4433CB-020 **1500.17**	1	0	108
2-1/2	4423CB-025 **1864.98**	4433CB-025 **2132.38**	1	0	110
3	4423CB-030 **2100.28**	4433CB-030 **2423.29**	1	0	110
4	4423CB-040 **2516.60**	4433CB-040 **2886.71**	1	0	110
6	4423CB-060 **4487.07**	4433CB-060 **4487.07**	1	0	110
8	4423CB-080 **8996.31**	4433CB-080 **9487.41**	1	0	110
CPVC					
3/4	4423CB-007C **1201.33**	4433CB-007C **1309.60**	1	12	109
1	4423CB-010C **1303.47**	4433CB-010C **1416.69**	1	4	109
1-1/4	4423CB-012C **1111.08**	4433CB-012C **1526.17**	1	0	109
1-1/2	4423CB-015C **1526.17**	4433CB-015C **1764.87**	1	0	109
2	4423CB-020C **1983.65**	4433CB-020C **2148.72**	1	0	109
2-1/2	4423CB-025C **2994.18**	4433CB-025C **3453.78**	1	0	111
3	4423CB-030C **3241.42**	4433CB-030C **4294.28**	1	0	111
4	4423CB-040C **4010.76**	4433CB-040C **4718.82**	1	0	111
6	4423CB-060C **7858.41**	4433CB-060C **8545.80**	1	0	111
8	4423CB-080C **13533.00**	4433CB-080C **15715.46**	1	0	111
PP					
3/4	4423CB-007P **721.01**	4433CB-007P **801.11**	1	12	113
1	4423CB-010P **862.53**	4433CB-010P **940.06**	1	4	113
1-1/4	4423CB-012P **880.14**	4433CB-012P **1354.36**	1	0	113
1-1/2	4423CB-015P **1244.07**	4433CB-015P **1670.49**	1	0	113
2	4423CB-020P **1340.19**	4433CB-020P **1505.82**	1	0	113
2-1/2	4423CB-025P **2069.04**	4433CB-025P **2541.67**	1	0	112

Industrial Swing Check Valves

Swing Check Valve With Counter Balance (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
PP					
3	4423CB-030P **2517.42**	4433CB-030P **3149.68**	1	0	112
4	4423CB-040P **2882.82**	4433CB-040P **3167.00**	1	0	112

Swing Check Valve With Counter Balance (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
PP					
6	4423CB-060P **5363.56**	4433CB-060P **6882.82**	1	0	112
8	4423CB-080P **9791.67**	4433CB-080P **10707.18**	1	0	112

Industrial Swing Check Valve Accessory and Repair Kits

Repair Kits include:
1-Bonnet O-ring
1-Disc O-ring
1-Seat O-ring
1-Plug O-ring
1-Arm Plug O-ring

Industrial Swing Check Valve Repair Kits

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
3/4	SK-ERK-007 **26.29**	SK-VRK-007 **32.05**	1	10	299
1	SK-ERK-010 **34.34**	SK-VRK-010 **41.88**	1	10	299
1-1/2 & 1-1/4	SK-ERK-015 **82.11**	SK-VRK-015 **103.84**	1	10	299
2	SK-ERK-020 **88.15**	SK-VRK-020 **107.48**	1	10	299
2-1/2	SK-ERK-025 **93.22**	SK-VRK-025 **119.31**	1	10	299

Industrial Swing Check Valve Repair Kits (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
3	SK-ERK-030 **105.69**	SK-VRK-030 **128.97**	1	10	299
4	SK-ERK-040 **115.32**	SK-VRK-040 **140.62**	1	10	299
6	SK-ERK-060 **229.20**	SK-VRK-060 **270.57**	1	10	299
8	SK-ERK-080 **288.39**	SK-VRK-080 **349.87**	1	10	299

Utility Swing Check Valves

Pressure Rating @ 73°F (23°C), Water

1/2" - 4" Full Flow (open) 150 psi
Back Pressure (closed) 75 psi

6" - 8" Full Flow (open) 100 psi
Back Pressure (closed) 50 psi

Maximum Service Temperature
140°F (60°C)

Temperature/Pressure De-ratings Apply

EPDM Seat

General Installation Information: Swing check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of the flow. Do not install valve upside down. Flow velocity should not exceed 5 ft./sec. Minimum opening pressure less than 0.5 psi.

PVC White Swing Check

Size	Socket	Thread	SR Threaded	Std Pk	Mstr Pk	Prod Code
1/2	S1520-05 16.68	S1520-05F 16.68	S1520-05FSR 19.46	35	0	026
3/4	S1520-07 17.22	S1520-07F 17.22	S1520-07FSR 21.18	35	0	026
1	S1520-10 17.94	S1520-10F 17.94	S1520-10FSR 23.45	20	0	026
1-1/4	S1520-12 18.63	S1520-12F 18.63	S1520-12FSR 27.48	12	0	026
1-1/2	S1520-15 19.75	S1520-15F 19.75	S1520-15FSR 34.86	12	0	026
2	S1520-20 30.65	S1520-20F 30.65	S1520-20FSR 47.05	15	0	026
2-1/2	S1520-25 50.99	S1520-25F 50.99	S1520-25FSR 67.39	5	0	026
3	S1520-30 56.66	S1520-30F 56.66	S1520-30FSR 100.49	4	0	026
4	S1520-40 80.22	S1520-40F 80.22	S1520-40FSR 125.64	2	0	026

PVC White Swing Check (continued)

Size	Socket	Thread	SR Threaded	Std Pk	Mstr Pk	Prod Code
6	S1520-60 168.56	S1520-60F 168.56	S1520-60FSR 222.33	1	0	026
8	S1520-80 313.13	---	---	1	0	026

PVC Clear Swing Check

Size	Socket	Thread	SR Threaded	Std Pk	Mstr Pk	Prod Code
1/2	S1520C05 22.68	S1520C05F 22.68	S1520C05FSR 25.45	35	0	026
3/4	S1520C07 23.13	S1520C07F 23.13	S1520C07FSR 27.12	35	0	026
1	S1520C10 23.57	S1520C10F 23.57	S1520C10FSR 29.09	20	0	026
1-1/4	S1520C12 24.75	S1520C12F 24.75	S1520C12FSR 33.57	12	0	026
1-1/2	S1520C15 26.89	S1520C15F 26.89	S1520C15FSR 42.03	12	0	026

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Utility Swing Check Valves

PVC Clear Swing Check (continued)

Size	Socket	Thread	SR Threaded	Std Pk	Mstr Pk	Prod Code
2	S1520C20 38.72	S1520C20F 38.72	S1520C20FSR 55.12	15	0	026
2-1/2	S1520C25 64.54	S1520C25F 64.54	S1520C25FSR 89.97	5	0	026
3	S1520C30 71.72	S1520C30F 71.72	S1520C30FSR 115.54	4	0	026
4	S1520C40 96.54	S1520C40F 96.54	S1520C40FSR 141.93	2	0	026

PVC Clear Swing Check (continued)

Size	Socket	Thread	SR Threaded	Std Pk	Mstr Pk	Prod Code
6	S1520C60 199.53	S1520C60F 199.53	S1520C60FSR 253.31	1	0	026
8	S1520C80 333.29	---	---	1	0	026

True Union Utility Swing Check Valves

Pressure Rating @ 73°F (23°C), Water
Full Flow (open) 150 psi
Back Pressure (closed) 75 psi
Maximum Service Temperature
140°F (60°C)
Temperature/Pressure De-ratings Apply
EPDM Seat

General Installation Information: Swing check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of the flow. Do not install valve upside down. Flow velocity should not exceed 5 ft./sec. Minimum opening pressure less than 0.5 psi.

PVC White True Union Swing Check

Size	Socket	Threaded	SR Thread	Std Pk	Mstr Pk	Prod Code
1/2	S1720-05 18.97	S1720-05F 18.97	S1720-05FSR 21.73	35	0	026
3/4	S1720-07 19.55	S1720-07F 19.55	S1720-07FSR 23.54	30	0	026
1	S1720-10 20.37	S1720-10F 20.37	S1720-10FSR 25.89	18	0	026
1-1/4	S1720-12 21.44	S1720-12F 21.44	S1720-12FSR 30.27	12	0	026
1-1/2	S1720-15 23.57	S1720-15F 23.57	S1720-15FSR 38.71	10	0	026
2	S1720-20 35.41	S1720-20F 35.41	S1720-20FSR 51.74	10	0	026
2-1/2	S1720-25 59.04	S1720-25F 59.04	S1720-25FSR 84.44	2	0	026
3	S1720-30 75.38	S1720-30F 75.38	S1720-30FSR 119.23	2	0	026
4	S1720-40 101.75	S1720-40F 101.75	S1720-40FSR 146.72	1	0	026

PVC Clear True Union Swing Check

Size	Socket	Threaded	SR Thread	Std Pk	Mstr Pk	Prod Code
1/2	S1720C05 24.57	S1720C05F 24.57	S1720C05FSR 27.33	35	0	026
3/4	S1720C07 24.98	S1720C07F 24.98	S1720C07FSR 28.96	30	0	026
1	S1720C10 27.29	S1720C10F 27.29	S1720C10FSR 32.80	18	0	026
1-1/4	S1720C12 28.75	S1720C12F 28.75	S1720C12FSR 37.57	12	0	026
1-1/2	S1720C15 30.83	S1720C15F 30.83	S1720C15FSR 45.96	10	0	026
2	S1720C20 43.37	S1720C20F 43.37	S1720C20FSR 59.78	10	0	026
2-1/2	S1720C25 71.22	S1720C25F 71.22	S1720C25FSR 96.64	2	0	026
3	S1720C30 81.97	S1720C30F 81.97	S1720C30FSR 125.80	2	0	026
4	S1720C40 109.29	S1720C40F 109.29	S1720C40FSR 154.64	1	0	026

Compression Utility Swing Check Valves

Pressure Rating @ 73°F (23°C), Water
Full Flow (open) 150 psi
Back Pressure (closed) 75 psi
Maximum Service Temperature
140°F (60°C)
Temperature/Pressure De-ratings Apply

- Standard Swing Check Assembly Maintains a Positive Seal
- Convenient Compression Ends for Quick Connections
- Engineered for Maximum Flow, Quick Response & Positive Shutoff
- Excellent for Pool & Spa, OEM and General Purpose Applications
- Compact, Space-Saving Design
- Replaceable PVC White or Clear Sealed Unit
- High Grade EPDM Seat
- Suitable for Horizontal or Vertical Up-flow Installations
- Pressure Rated to 150 psi @ 73°F Full Flow (open), 75 psi Back Pressure (closed)
- Maximum Service Temperature 140°F (temperature/pressure de-ratings apply)

General Installation Information: Swing check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of the flow. Do not install valve upside down. Flow velocity should not exceed 5 ft./sec. Minimum opening pressure less than 0.5 psi.

PVC White Compression End Swing Check

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Compression End					
S1500-05	**1/2**	20	0	026	22.17
S1500-07	**3/4**	35	0	026	23.33
S1500-10	**1**	20	0	026	24.31
S1500-12	**1-1/4**	12	0	026	28.55
S1500-15	**1-1/2**	12	0	026	31.85
S1500-20	**2**	10	0	026	50.24
S1500-25	**2-1/2**	5	0	026	83.91
S1500-30	**3**	4	0	026	108.93
S1500-40	**4**	2	0	026	167.34

PVC Clear Compression End Swing Check

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Compression End					
S1500C05	**1/2**	35	0	026	24.38
S1500C07	**3/4**	20	0	026	26.24
S1500C10	**1**	20	0	026	26.78
S1500C12	**1-1/4**	12	0	026	30.06
S1500C15	**1-1/2**	12	0	026	33.88
S1500C20	**2**	10	0	026	50.58
S1500C25	**2-1/2**	5	0	026	84.84
S1500C30	**3**	4	0	026	123.92
S1500C40	**4**	2	0	026	170.74

Compression Coupling Nut Wrenches

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
CCW-005	**1/2**	1	50	299	11.93
CCW-007	**3/4**	1	50	299	12.14
CCW-010	**1**	1	50	299	12.65
CCW-012	**1-1/4**	1	50	299	14.32
CCW-015	**1-1/2**	1	50	299	15.44
CCW-020*	**2**	1	50	299	17.25
CCW-030**	**3**	1	25	299	21.22

* CCW-20 - Wrench also fits 2-1/2" Coupling Body
**CCW-30 - Wrench also fits 4" Coupling Body

Compression Coupling Nut Wrench Sets

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
CCW-000	**Set**	1	25	299	99.68
Complete Set of Wrenches, Sizes 1/2" - 3"					

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Utility Spring Check Valves

(Spring Assisted Swing Check)

Pressure Rating @ 73°F (23°C), Water
Full Flow (open) 150 psi
Back Pressure (closed) 75 psi
Maximum Service Temperature
140°F (60°C)
Temperature/Pressure De-ratings Apply
EPDM Seat
Stainless Steel Spring Assisted (non-adjustable)

General Installation Information: Spring check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of the flow. Do not install valve upside down. Flow velocity should not exceed 5 ft./sec. Minimum opening pressure less than 0.5 psi.

PVC White Spring Check (Spring Assisted Swing Check)

Size	Socket	Thread	SR Thread	Std Pk	Mstr Pk	Prod Code
1/2	S1580-05 32.84	S1580-05F 32.84	S1580-05FSR 35.62	20	0	026
3/4	S1580-07 37.17	S1580-07F 37.17	S1580-07FSR 41.13	20	0	026
1	S1580-10 38.72	S1580-10F 38.72	S1580-10FSR 44.22	20	0	026
1-1/4	S1580-12 40.32	S1580-12F 40.32	S1580-12FSR 49.17	12	0	026
1-1/2	S1580-15 42.92	S1580-15F 42.92	S1580-15FSR 58.02	12	0	026
2	S1580-20 44.99	S1580-20F 44.99	S1580-20FSR 61.39	15	0	026
2-1/2	S1580-25 79.85	S1580-25F 79.85	S1580-25FSR 105.28	4	0	026
3	S1580-30 83.28	S1580-30F 83.28	S1580-30FSR 127.12	4	0	026
4	S1580-40 118.19	S1580-40F 118.19	S1580-40FSR 163.61	2	0	026

PVC Clear Spring Check (Spring Assisted Swing Check)

Size	Socket	Thread	SR Thread	Std Pk	Mstr Pk	Prod Code
1/2	S1580C05 33.84	S1580C05F 33.84	S1580C05FSR 36.65	20	0	026
3/4	S1580C07 38.31	S1580C07F 38.31	S1580C07FSR 42.31	20	0	026
1	S1580C10 39.94	S1580C10F 39.94	S1580C10FSR 45.43	20	0	026
1-1/4	S1580C12 41.58	S1580C12F 41.58	S1580C12FSR 50.41	12	0	026
1-1/2	S1580C15 44.05	S1580C15F 44.05	S1580C15FSR 59.19	12	0	026
2	S1580C20 45.72	S1580C20F 45.72	S1580C20FSR 62.11	15	0	026
2-1/2	S1580C25 82.33	S1580C25F 82.33	S1580C25FSR 107.72	5	0	026
3	S1580C30 85.73	S1580C30F 85.73	S1580C30FSR 170.57	4	0	026
4	S1580C40 121.80	S1580C40F 121.80	S1580C40FSR 167.21	2	0	026

True Union Utility Spring Check Valves

(Spring Assisted Swing Check)

Pressure Rating @ 73°F (23°C), Water
Full Flow (open) 150 psi
Back Pressure (closed) 75 psi
Maximum Service Temperature
140°F (60°C)
Temperature/Pressure De-ratings Apply
EPDM Seat
Stainless Steel Spring Assisted (non-adjustable)

General Installation Information: Spring check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of the flow. Do not install valve upside down. Flow velocity should not exceed 5 ft./sec. Minimum opening pressure less than 0.5 psi.

PVC White True Union Spring Check (Spring Assisted Swing Check)

Size	Socket	Thread	SR Thread	Std Pk	Mstr Pk	Prod Code
1/2	S1780-05 43.67	S1780-05F 43.67	S1780-05FSR 46.44	20	0	026
3/4	S1780-07 49.54	S1780-07F 49.54	S1780-07FSR 53.52	30	0	026
1	S1780-10 51.63	S1780-10F 51.63	S1780-10FSR 57.12	18	0	026
1-1/4	S1780-12 53.78	S1780-12F 53.78	S1780-12FSR 62.57	12	0	026
1-1/2	S1780-15 57.29	S1780-15F 57.29	S1780-15FSR 72.44	10	0	026
2	S1780-20 59.65	S1780-20F 59.65	S1780-20FSR 76.03	10	0	026
2-1/2	S1780-25 106.46	S1780-25F 106.46	S1780-25FSR 131.83	2	0	026
3	S1780-30 111.06	S1780-30F 111.06	S1780-30FSR 154.89	2	0	026
4	S1780-40 157.59	S1780-40F 157.59	S1780-40FSR 203.04	1	0	026

PVC Clear True Union Spring Check (Spring Assisted Swing Check)

Size	Socket	Thread	SR Thread	Std Pk	Mstr Pk	Prod Code
1/2	S1780C05 45.05	S1780C05F 45.05	S1780C05FSR 47.82	20	0	026
3/4	S1780C07 51.09	S1780C07F 51.09	S1780C07FSR 55.07	30	0	026
1	S1780C10 53.22	S1780C10F 53.22	S1780C10FSR 58.76	18	0	026
1-1/4	S1780C12 55.41	S1780C12F 55.41	S1780C12FSR 64.21	12	0	026
1-1/2	S1780C15 58.76	S1780C15F 58.76	S1780C15FSR 74.21	10	0	026
2	S1780C20 60.47	S1780C20F 60.47	S1780C20FSR 77.83	10	0	026
2-1/2	S1780C25 109.76	S1780C25F 109.76	S1780C25FSR 135.19	2	0	026
3	S1780C30 114.48	S1780C30F 114.48	S1780C30FSR 158.31	2	0	026
4	S1780C40 162.48	S1780C40F 162.48	S1780C40FSR 207.93	1	0	026

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Diaphragm Check Valves

Pressure Rating @ 73°F (23°C), Water
Full Flow (open) = 150 psi
Back Pressure (closed) = 100 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
Santoprene™ TPE Seat

PVC Diaphragm Check Valves - Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
6562-007	**3/4**	15	0	004	89.09

PVC Diaphragm Check Valves - Thread

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
6561-007	**3/4**	15	0	004	89.09

CPVC Diaphragm Check Valves - Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
6562-007C	**3/4**	15	0	004	117.00

CPVC Diaphragm Check Valves - Thread

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
6561-007C	**3/4**	15	0	004	117.00

General Installation Information: Diaphragm Check Valves have "normally closed" operation with 1 - 1-1/2 psi opening pressure and can be mounted in any position. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of the flow. Flow velocity should not exceed 5 ft./sec.

PVC In-line Adjustable Spring Check Valves

Fipt x Mipt

Mipt x Fipt

Fipt x Fipt

Pressure Rating @ 73°F (23°C), Water
200 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply

2 - 14 lbs. Adjustable Spring Tension
(5 to 32 feet of head)
Factory Preset to Approx. 5 psi
(12 feet of head)
Each full turn of adjustment nut = 1 psi
(2.3 feet of head)
Stainless Steel Adjustment Hardware
EPDM Seat

Standard Unit - Female Inlet x Male Outlet

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Fipt x Mipt (Inlet x Outlet)					
S1102-05	**1/2**	30	180	026	10.95
S1102-07	**3/4**	25	150	026	11.20
S1102-10	**1**	25	150	026	18.59
S1102-05-07	**1/2X3/4**	25	150	026	15.98

Male Inlet x Female Outlet Option

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Mipt x Fipt (Inlet x Outlet)					
S1101-05	**1/2**	30	180	026	10.95

Female Inlet x Female Outlet Option

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Fipt x Fipt (Inlet x Outlet)					
S1100-07	**3/4**	25	150	026	11.57

Industrial PVC Backwater Valves

Backwater Valves are designed to prevent backflow in numerous applications where easy service access for maintenance and cleaning is needed. Excellent for use in sanitary or storm sewer drainage systems to prevent waste back up due to inadequate drainage, for balancing multi-level ponds, aquaculture features or storage tank systems, and many other applications. Spears® Backwater Valve has been engineered for improved function and easier service, especially in buried service with use of optional Service-Access Extension available either preassembled with valve or as an add-on kit.

- Replaceable internal flapper assembly with EPDM Seat.
- Service-Access Extension available either preassembled with valve, as an add-on kit, or as valve & extension kit components with user supplied pipe.
- Direct Connection to ASTM D 2665 PVC DWV or other IPS size pipe. Spears® fabricated IPS x Sewer Adapters or DWV x Sewer & Drain Adapter Bushings are available for connection to ASTM D 3034 & ASTM D 2729 Sewer pipe.
- Pressure Rated to 43 psi (100 feet of head) @ 73°F (23°C).
- All extension kits can be cut shorter for custom application.
- Conforms to ASME/ANSI A112.14.1 for Backwater Valves.

PVC Backwater Valves

PVC Backwater Valves
Soc x Soc - Valve Only

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
S275P	**2**	1	12	055	59.05
S375P	**3**	2	0	055	59.17
S475P	**4**	1	0	055	65.55
S675P	**6**	1	0	055	279.26

PVC Backwater Valves with Extension Kit to Premade Length

PVC Backwater Valves with Extension Kit to Premade Length
Soc x Soc - Assembled with Extension

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
S275P-120[1]	**2X12HT**	1	0	055	178.12
S275P-160[1]	**2X16HT**	1	0	055	191.59
S275P-200[1]	**2X20HT**	1	0	055	205.05
S275P-240[1]	**2X24HT**	1	0	055	218.53
S275P-360[1]	**2X36HT**	1	0	055	229.52
S275P-480[1]	**2X48HT**	1	0	055	252.25
S375P-120[1]	**3X12HT**	1	0	055	178.12
S375P-160[1]	**3X16HT**	1	0	055	191.59
S375P-200[1]	**3X20HT**	1	0	055	205.05
S375P-240[1]	**3X24HT**	1	0	055	218.53
S375P-360[1]	**3X36HT**	1	0	055	229.52
S375P-480[1]	**3X48HT**	1	0	055	252.25
S475P-120[1]	**4X12HT**	1	0	055	231.36
S475P-160[1]	**4X16HT**	1	0	055	249.59

PVC Backwater Valves with Extension Kit to Premade Length
Soc x Soc - Assembled with Extension (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
S475P-200[1]	**4X20HT**	1	0	055	266.20
S475P-240[1]	**4X24HT**	1	0	055	283.85
S475P-360[1]	**4X36HT**	1	0	055	298.11
S475P-480[1]	**4X48HT**	1	0	055	327.60
S675P-120[1]	**6X12HT**	1	0	055	485.82
S675P-160[1]	**6X16HT**	1	0	055	524.14
S675P-200[1]	**6X20HT**	1	0	055	559.02
S675P-240[1]	**6X24HT**	1	0	055	596.16
S675P-360[1]	**6X36HT**	1	0	055	626.04
S675P-480[1]	**6X48HT**	1	0	055	687.95

[1] - Size designates nominal valve size x extension height (HT-top of valve to top of extension, inches)

PVC Service-Access Extension Kit Only to Premade Length

PVC Service-Access Extension Kit: includes factory assembled internal flap assembly, assembly extension pipe, and external extension housing with top access adapter. Requires solvent cement assembly to existing valve and uses existing threaded Access Plug. Standard Extensions are available in convenient increments of 12", 16", 20", 24", 36", and 48" (measured from top of valve to top of extension). Contact Spears® for pricing on custom cut lengths. All extension kits can be cut shorter in the field for custom fits prior to cementing access adapter in place.

PVC Service-Access Extension Kit Only to Premade Length

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
SAEK-020-120[1]	**2X12HT**	1	0	055	55.55
SAEK-020-160[1]	**2X16HT**	1	0	055	57.14
SAEK-020-200[1]	**2X20HT**	1	0	055	58.65
SAEK-020-240[1]	**2X24HT**	1	0	055	61.46
SAEK-020-360[1]	**2X36HT**	1	0	055	64.37
SAEK-020-480[1]	**2X48HT**	1	0	055	67.52
SAEK-030-120[1]	**3X12HT**	1	0	055	60.24
SAEK-030-160[1]	**3X16HT**	1	0	055	68.00
SAEK-030-200[1]	**3X20HT**	1	0	055	72.04
SAEK-030-240[1]	**3X24HT**	1	0	055	81.19
SAEK-030-360[1]	**3X36HT**	1	0	055	96.04
SAEK-030-480[1]	**3X48HT**	1	0	055	113.59
SAEK-040-120[1]	**4X12HT**	1	0	055	89.83

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Service-Access Extension Kit Only to Premade Length (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
SAEK-040-160[1]	**4X16HT**	1	0	055	101.27
SAEK-040-200[1]	**4X20HT**	1	0	055	124.92
SAEK-040-240[1]	**4X24HT**	1	0	055	136.79
SAEK-040-360[1]	**4X36HT**	1	0	055	172.06
SAEK-040-480[1]	**4X48HT**	1	0	055	198.64
SAEK-060-120[1]	**6X12HT**	1	0	055	160.94
SAEK-060-160[1]	**6X16HT**	1	0	055	182.92
SAEK-060-200[1]	**6X20HT**	1	0	055	207.41
SAEK-060-240[1]	**6X24HT**	1	0	055	237.97
SAEK-060-360[1]	**6X36HT**	1	0	055	295.39
SAEK-060-480[1]	**6X48HT**	1	0	055	366.67

[1] - Size designates nominal valve size x extension height (HT-top of valve to top of extension, inches)

PVC Backwater Valve with Extension Components

PVC Backwater Valve with Extension Components Soc x Soc - Components Must be assembled with user supplied pipe (see Table 1)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
S275P-AK	**2**	1	8	055	87.00
S375P-AK	**3**	1	0	055	87.00
S475P-AK	**4**	1	0	055	101.77
S675P-AK	**6**	1	0	055	360.38

PVC Backwater Valve Extension Components Only

PVC Backwater Valve Extension Components Only Must be assembled with user supplied pipe (see Table 1)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
S275P-ECK	**2**	1	8	055	46.33
S375P-ECK	**3**	1	0	055	46.33
S475P-ECK	**4**	1	0	055	60.37
S675P-ECK	**6**	1	0	055	126.83

PVC Backwater Valve Extension Components Only Must be assembled with user supplied pipe (see Table 1) (continued)

Table 1: User Supplied Pipe Requirements For Use With Extension Components

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each

Valve Size	Acceptable RISER Pipe Types for User-Supplied Pipe	Acceptable HANDLE Pipe
2"	4" Class 125 PVC PIPE 4" Sch 40 PVC PIPE	Use any 3/4" IPS plastic pipe[1]
3"	5" Class 125 PVC PIPE 5" Sch 40 PVC PIPE[3] 6" D3034 (SDR 35) PVC SEWER PIPE[2]	
4"	8" Class 125 PVC PIPE 8" Sch 40 PVC PIPE	
6"	10" Class 125 PVC PIPE 10" Sch 40 PVC PIPE	

Note 1: Riser and Handle pipe are *not* the same length. Sch 40 and/or Sch 80 pipe as well as ABS may be used. Special cement must be used to join PVC to ABS.
Note 2: When 6" SDR35 pipe is used, adapter fits pipe inside diameter.
Note 3: DO NOT use Sch 80 for 3" Riser pipe.

Industrial Backwater Valve Flapper Repair Kit

Industrial Backwater Valve Flapper Repair Kit

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Complete Flapper Assembly replacement					
S275P-FRK	**2**	1	10	055	34.48
S375P-FRK	**3**	1	10	055	43.48
S475P-FRK	**4**	1	10	055	50.64
S675P-FRK	**6**	1	5	055	90.18

PVC Backwater Valve Metric Adapters

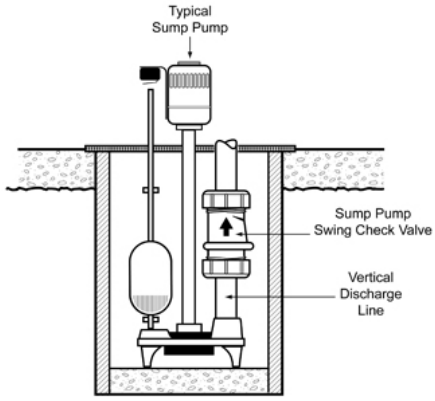
PVC Backwater Valve Metric Adapters

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Metric Socket x ASTM Spigot					
S275MA-063	**63mm X 2**	50	0	055	15.28
S375MA-090	**90mm X 3**	25	0	055	16.42
S475MA-110	**110mm X 4**	10	0	055	19.45
S675MA-160	**160mm X 6**	4	0	055	44.89

Sump Pump Swing Check Valves

- Specifically Designed for Use on Sump Pump Discharge Lines (See Illustration)
- Includes Compression End Connectors with Buna-N Gaskets for Use on Either 1-1/4" or 1-1/2" Pipe
- All Plastic Construction with Elastomer Seals - No Metal Parts
- Angled Seat and Weighted Flapper for Low-Pressure Seal
- Suitable for Vertical Up-flow or Horizontal Installations

Pressure Rating @ 73°F (23°C), Water
Full Flow (open) 150 psi
Back Pressure (closed) 75 psi
Maximum Service Temperature
140°F (60°C)
Temperature/Pressure De-ratings Apply



General Installation Information: Sump Pump Swing Check Valves may be installed in either vertical up-flow (see illustration) or horizontal positions on pump discharge line. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of the flow. In horizontal installations, the designated side must be positioned "up." Do Not install Check Valve upside down.

PVC Sump Pump Swing Check Valve

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Compression Ends					
Buna-N Gaskets included for both 1-1/4" & 1-1/2" pipe					
S1400-15	**1-1/2 & 1-1/4**	16	0	026	18.80

Swing Check Ball Valves

- One-piece Combination for Applications Requiring In-line Ball Valve and Check Valves
- Compact, Space-Saving Design
- True Union Design Allows Easy Service and Cleaning
- High Grade EPDM Seals
- Replaceable PTFE HDPE Ball Valve Seats
- Safety-Blocked™ Seal Carrier on Ball Valve
- Replaceable Sealed Check Valve Cartridge
- Suitable for Horizontal or Vertical Up-flow Installations
- Socket End Connections

Pressure Rating @ 73°F (23°C), Water
Full Flow (open) 150 psi
Back Pressure (closed) 75 psi
Maximum Service Temperature
140°F (60°C)
Temperature/Pressure De-ratings Apply

General Installation Information: Swing Check Ball Valves are designed for horizontal installations, but may be installed in up-flow only vertical position. The Check Valve portion MUST be installed with the valve's FLOW arrow pointing in the direction of flow and with the designated side up in horizontal installations. Do Not install Check Valve upside down. The Ball Valve portion may be rotated and installed in any position. Flow velocity should not exceed 5 ft./sec. Minimum opening pressure is less than 0.5 psi.

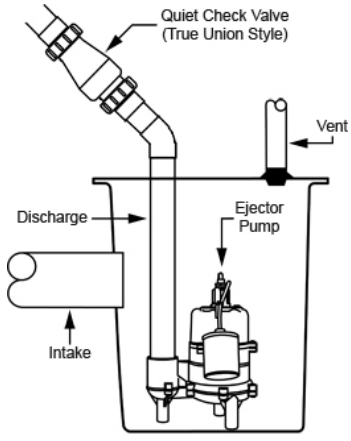
PVC Swing Check Ball Valve

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Soc x Soc					
7622-015	**1-1/2**	10	0	026	42.57
7622-020	**2**	6	0	026	61.09

Quiet Check Valves

- Designed to Provide Quiet Operation in Sump Pump or Sewage Ejector Pump Systems.
- Spring Controlled Rate of Closing Prevents Slamming and Eliminates Noise.
- Includes Both True Union Sockets for Easy Servicing and Direct Socket Connection for Installation in Confined Space.
- 2" Size for Sewage Ejector Systems, 1-1/2" Size for Sump Pump Effluent Systems.

Pressure Rating @ 73°F (23°C), Water
Full Flow (open) 150 psi
Back Pressure (closed) 75 psi
Maximum Service Temperature 140°F (60°C)
Temperature/Pressure De-ratings Apply



Typical Application

General Installation Information: Install check valve 12"-18" above pump discharge, or as recommended by pump system manufacturer. Be sure check valve installation complies with local codes. Valve may be installed in either vertical up-flow or horizontal positions on pump discharge line. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of the flow. In horizontal installations, the designated side must be positioned "up."

PVC Quiet Check Valve

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Soc x Soc					
True Union or Direct Socket End Connection					
8622-015	**1-1/2**	12	0	026	42.11
8622-020	**2**	10	0	026	60.19

Gate Valves

PRICING

Gate Valves

1/2" - 2" Socket/Threaded Style

2-1/2" - 3" Socket Style

4" Socket Style

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 200 psi
2-1/2" - 3" 150 psi
4" 235 psi
Flanged 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply

PP Gate-Wedge on PVC Valves
CPVC Gate-Wedge on CPVC Valve
All Valves Assembled with Silicone-Free, Water Soluble Lubricant

See Gate Valve Accessories & Repair Kits Section for Additional Options and Features

PVC

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Threaded Ends						
1/2	2011-005 24.19	2021-005 26.55	2031-005 29.24	12	0	200
3/4	2011-007 29.58	2021-007 32.56	2031-007 34.27	12	0	200
1	2011-010 35.06	2021-010 38.61	2031-010 42.51	12	0	200
1-1/4	2011-012 48.48	2021-012 53.35	2031-012 58.65	6	0	200
1-1/2	2011-015 61.86	2021-015 68.73	2031-015 74.84	6	0	200
2	2011-020 79.45	2021-020 87.47	2031-020 96.16	6	0	200
2-1/2	2011-025 439.27	2021-025 483.19	2031-025 531.53	1	0	201
SR Threaded Ends						
3	2011-030SR 439.27	2021-030SR 483.19	2031-030SR 531.53	1	0	201
4	2011-040SR 862.04	2021-040SR 957.83	2031-040SR 1053.58	1	0	201
Socket Ends						
1/2	2012-005 24.19	2022-005 26.55	2032-005 29.24	12	0	200
3/4	2012-007 29.58	2022-007 32.56	2032-007 34.27	12	0	200
1	2012-010 35.06	2022-010 38.61	2032-010 42.51	12	0	200
1-1/4	2012-012 48.48	2022-012 53.35	2032-012 58.65	6	0	200
1-1/2	2012-015 61.86	2022-015 68.73	2032-015 74.84	6	0	200
2	2012-020 79.45	2022-020 87.47	2032-020 96.16	6	0	200
2-1/2	2012-025 439.27	2022-025 483.19	2032-025 531.53	1	0	201
3	2012-030 439.27	2022-030 483.19	2032-030 531.53	1	0	201
4	2012-040 862.04	2022-040 957.83	2032-040 1053.58	1	0	201
Flanged Ends						
1/2	2013-005 117.13	2023-005 132.82	2033-005 152.23	4	0	200
3/4	2013-007 131.79	2023-007 149.14	2033-007 170.16	4	0	200
1	2013-010 144.72	2023-010 163.48	2033-010 187.76	4	0	200
1-1/4	2013-012 163.01	2023-012 187.15	2033-012 222.11	3	0	200
1-1/2	2013-015 190.27	2023-015 217.19	2033-015 255.16	3	0	200

PVC (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Flanged Ends						
2	2013-020 244.91	2023-020 257.32	2033-020 275.47	2	0	200
2-1/2	2013-025 549.07	2023-025 735.17	2033-025 808.67	1	0	201
3	2013-030 549.07	2023-030 735.17	2033-030 808.67	1	0	201
4	2013-040 1080.78	2023-040 1200.93	2033-040 1321.02	1	0	201

CPVC

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Threaded Ends						
1/2	2011-005C 70.80	2021-005C 78.63	2031-005C 86.54	12	0	202
3/4	2011-007C 76.56	2021-007C 85.04	2031-007C 93.56	12	0	202
1	2011-010C 83.92	2021-010C 93.25	2031-010C 102.54	12	0	202
1-1/4	2011-012C 147.39	2021-012C 163.79	2031-012C 180.17	6	0	202
1-1/2	2011-015C 161.11	2021-015C 179.51	2031-015C 197.47	6	0	202
2	2011-020C 186.39	2021-020C 207.06	2031-020C 227.77	6	0	202
2-1/2	2011-025C 694.04	2021-025C 748.94	2031-025C 813.25	1	0	203
SR Threaded Ends						
3	2011-030CSR 931.87	2021-030CSR 1035.13	2031-030CSR 1150.16	1	0	203
4	2011-040CSR 1677.34	2021-040CSR 1863.68	2031-040CSR 2070.76	1	0	203
Socket Ends						
1/2	2012-005C 70.80	2022-005C 78.63	2032-005C 86.54	12	0	202
3/4	2012-007C 76.56	2022-007C 85.04	2032-007C 93.56	12	0	202
1	2012-010C 83.92	2022-010C 93.25	2032-010C 102.54	12	0	202
1-1/4	2012-012C 147.39	2022-012C 163.79	2032-012C 180.17	6	0	202
1-1/2	2012-015C 161.11	2022-015C 179.51	2032-015C 197.47	6	0	202
2	2012-020C 186.39	2022-020C 207.06	2032-020C 227.77	6	0	202
2-1/2	2012-025C 694.04	2022-025C 748.94	2032-025C 813.25	1	0	203
3	2012-030C 931.87	2022-030C 1035.13	2032-030C 1150.16	1	0	203
4	2012-040C 1677.34	2022-040C 1863.68	2032-040C 2070.76	1	0	203

Gate Valves

CPVC

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Flanged Ends						
1/2	2013-005C 317.23	2023-005C 352.43	2033-005C 387.64	4	0	202
3/4	2013-007C 342.97	2023-007C 381.03	2033-007C 419.15	4	0	202
1	2013-010C 375.86	2023-010C 417.71	2033-010C 459.46	4	0	202
1-1/4	2013-012C 508.35	2023-012C 565.07	2033-012C 621.58	3	0	202
1-1/2	2013-015C 555.24	2023-015C 619.34	2033-015C 681.19	3	0	202

CPVC (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Flanged Ends						
2	2013-020C 642.97	2023-020C 714.39	2033-020C 785.85	2	0	202
2-1/2	2013-025C 840.07	2023-025C 1110.14	2033-025C 1245.37	1	0	203
3	2013-030C 1164.81	2023-030C 1294.24	2033-030C 1438.06	1	0	203
4	2013-040C 2096.67	2023-040C 2329.63	2033-040C 2588.49	1	0	203

Plug Gate Valves

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 235 psi
Flanged 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
Plug-Style PE Wedge on All Valves
Rated for Vacuum Service
All Valves Assembled with Silicone-Free, Water Soluble Lubricants

PVC Socket Ends

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	5212-005 24.19	5222-005 26.55	5232-005 29.24	12	0	200
3/4	5212-007 29.58	5222-007 32.56	5232-007 34.27	12	0	200
1	5212-010 35.06	5222-010 38.61	5232-010 42.51	12	0	200
1-1/4	5212-012 48.48	5222-012 53.35	5232-012 58.65	6	0	200
1-1/2	5212-015 61.86	5222-015 68.73	5232-015 74.84	6	0	200
2	5212-020 79.45	5222-020 87.47	5232-020 96.16	6	0	200

PVC SR Threaded Ends

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	5211-005SR 26.92	5221-005SR 29.31	5231-005SR 31.95	12	0	200
3/4	5211-007SR 33.53	5221-007SR 36.51	5231-007SR 38.22	12	0	200
1	5211-010SR 40.51	5221-010SR 44.06	5231-010SR 47.94	12	0	200
1-1/4	5211-012SR 57.22	5221-012SR 62.08	5231-012SR 67.40	6	0	200
1-1/2	5211-015SR 76.83	5221-015SR 83.69	5231-015SR 89.78	6	0	200
2	5211-020SR 95.66	5221-020SR 103.65	5231-020SR 112.39	6	0	200

PVC Flanged Ends

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	5213-005 117.13	5223-005 132.82	5233-005 152.23	4	0	200

PVC Flanged Ends (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
3/4	5213-007 131.79	5223-007 149.14	5233-007 170.16	4	0	200
1	5213-010 144.72	5223-010 163.48	5233-010 187.76	4	0	200
1-1/4	5213-012 163.01	5223-012 187.15	5233-012 222.11	3	0	200
1-1/2	5213-015 190.27	5223-015 217.19	5233-015 255.16	3	0	200
2	5213-020 244.91	5223-020 257.32	5233-020 275.47	2	0	200
6	---	5223-060 2298.84	5233-060 2995.21	1	0	201
8	---	5223-080 2729.45	5233-080 3199.78	1	0	201

CPVC Socket Ends

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	5212-005C 70.80	5222-005C 78.63	5232-005C 86.54	12	0	202
3/4	5212-007C 76.56	5222-007C 85.04	5232-007C 93.56	12	0	202
1	5212-010C 83.92	5222-010C 93.25	5232-010C 102.54	12	0	202
1-1/4	5212-012C 147.39	5222-012C 163.79	5232-012C 180.17	6	0	202
1-1/2	5212-015C 161.11	5222-015C 179.51	5232-015C 197.47	6	0	202
2	5212-020C 186.39	5222-020C 207.06	5232-020C 227.77	6	0	202

CPVC SR Threaded Ends

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	5211-005CSR 73.54	5221-005CSR 81.38	5231-005CSR 89.27	12	0	202

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Plug Gate Valves

CPVC SR Threaded Ends (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
3/4	5211-007CSR 80.49	5221-007CSR 88.98	5231-007CSR 97.53	12	0	202
1	5211-010CSR 89.37	5221-010CSR 98.67	5231-010CSR 108.01	12	0	202
1-1/4	5211-012CSR 156.11	5221-012CSR 172.51	5231-012CSR 188.92	6	0	202
1-1/2	5211-015CSR 169.85	5221-015CSR 188.21	5231-015CSR 206.18	6	0	202
2	5211-020CSR 202.63	5221-020CSR 223.29	5231-020CSR 244.00	6	0	202

CPVC Flanged Ends

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	5213-005C 317.23	5223-005C 352.43	5233-005C 387.64	4	0	202

CPVC Flanged Ends (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
3/4	5213-007C 342.97	5223-007C 381.03	5233-007C 419.15	4	0	202
1	5213-010C 375.86	5223-010C 417.71	5233-010C 459.46	4	0	202
1-1/4	5213-012C 508.35	5223-012C 565.07	5233-012C 620.94	3	0	202
1-1/2	5213-015C 555.24	5223-015C 619.34	5233-015C 681.19	3	0	202
2	5213-020C 642.97	5223-020C 714.39	5233-020C 785.85	2	0	202
6	---	5223-060C 2988.46	5233-060C 3893.84	1	0	203
8	---	5223-080C 3173.98	5233-080C 4102.27	1	0	203

Gate Valve Accessories & Repair Kits

2" Operator Nuts

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
GTN-005[1]	**1/2, 3/4 & 1**	10	60	299	43.15
GTN-012[2]	**1-1/4, 1-1/2 & 2**	10	60	299	64.71
PGTN-012[3]	**1-1/4, 1-1/2 & 2**	10	60	299	64.71
GTN-030	**3**	10	80	299	107.86
GTN-040	**4**	10	60	299	107.86

1 - GTN-005 fits Standard & Plug Style Gate Valves
2 - GTN-012 fits Standard Gate Valves Only
3 - PGTN-012 fits Plug Style Gate Valves Only

Regular Gate Valve O-ring Repair Kits

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	GT-BRK-005 6.68	GT-ERK-005 7.76	GT-VRK-005 13.27	1	10	299
3/4	GT-BRK-007 6.68	GT-ERK-007 7.76	GT-VRK-007 13.27	1	10	299
1	GT-BRK-010 6.95	GT-ERK-010 9.01	GT-VRK-010 14.63	1	10	299
1-1/4 & 1-1/2	GT-BRK-015 8.25	GT-ERK-015 12.96	GT-VRK-015 24.45	1	10	299
2	GT-BRK-020 8.91	GT-ERK-020 13.55	GT-VRK-020 25.19	1	10	299
2-1/2 & 3	GT-BRK-030 10.23	GT-ERK-030 14.67	GT-VRK-030 27.51	1	10	299
4	GT-BRK-040 10.80	GT-ERK-040 15.63	GT-VRK-040 32.35	1	10	299

Regular Gate Valve O-ring Repair Kits (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code

1/2" - 2" Kit includes:
1-Stem O-ring
1-Bonnet O-Ring
1-Stem Bushing
1-Stem Washer

2-1/2" - 3" Kit includes:
1-Stem O-ring
1-Seal Carrier O-ring
1-Stem Bushing
1-Stem Washer

4" Kit includes:
1-Stem O-ring
1-Bonnet O-ring
1-Stem Bushing

Plug Gate Valve O-ring Repair Kits

1/2" - 2" Kit includes:
1-Stem O-ring
1-Bonnet O-Ring

Plug Gate Valve O-ring Repair Kits

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2, 3/4 & 1	PGT-BRK-010 3.35	PGT-ERK-010 3.61	PGT-VRK-010 6.84	1	10	299
1-1/4, 1-1/2 & 2	PGT-BRK-020 4.08	PGT-ERK-020 4.77	PGT-VRK-020 8.05	1	10	299

PVC Plug Gate Valve Internal Replacement Cartridge

Internal Replacement Cartridge includes complete, fully assembled Handle/Nut, Stem/O−ring, Bonnet/O-ring, and Gate for direct insertion into existing valve Body.

PVC Plug Gate Valve Internal Replacement Cartridge

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2, 3/4 & 1	5210-010 21.23	5220-010 23.35	5230-010 25.65	1	10	299
1-1/4, 1-1/2 & 2	5210-020 42.61	5220-020 46.85	5230-020 51.55	1	4	299
6	---	5220-060 1463.19	5230-060 1905.89	1	0	299

CPVC Plug Gate Valve Internal Replacement Cartridge

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2, 3/4 & 1	5210-010C 62.18	5220-010C 69.08	5230-010C 76.01	1	10	299
1-1/4, 1-1/2 & 2	5210-020C 129.46	5220-020C 143.84	5230-020C 158.25	1	4	299
6	---	5220-060C 1901.60	5230-060C 2477.71	1	0	299

Butterfly Valves

PRICING

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Pool Butterfly Valves

Pressure Rating @ 73°F (23°C), Water
1-1/2" - 12" 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
Temperature/Pressure De-ratings Apply

See Butterfly Valve Accessories & Repair Kits Section for Additional Options and Features

PVC White Butterfly Valve Lever Handle EPDM Seats

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
682311-015	**1-1/2**	1	0	260	163.68
682311-020	**2**	1	0	260	169.38
682311-025	**2-1/2**	1	0	260	175.07
682311-030	**3**	1	0	260	185.02
682311-040	**4**	1	0	260	206.37
682311-060	**6**	1	0	260	306.01
682311-080	**8**	1	0	260	540.85

PVC White Butterfly Valve Gear Operated EPDM Seats

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
682321-015	**1-1/2**	1	0	261	546.54
682321-020	**2**	1	0	261	596.36
682321-025	**2-1/2**	1	0	261	639.06
682321-030	**3**	1	0	261	644.76
682321-040	**4**	1	0	261	676.06
682321-060	**6**	1	0	261	724.45
682321-080	**8**	1	0	261	1000.82
682321-100	**10**	1	0	261	1201.26
682321-120	**12**	1	0	261	1458.88

Butterfly Valves

Lever Handle Style

Pressure Rating @ 73°F (23°C), Water
1-1/2" - 12" 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
See Butterfly Valve Accessories & Repair Kits Section for Additional Options and Features

Gear Operator Style

PVC

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Lever Handle						
1-1/2	721311-015 **280.63**	722311-015 **280.63**	723311-015 **585.92**	1	0	250
2	721311-020 **291.79**	722311-020 **291.79**	723311-020 **603.85**	1	0	250
2-1/2	721311-025 **309.78**	722311-025 **309.78**	723311-025 **612.84**	1	0	250
3	721311-030 **314.28**	722311-030 **314.28**	723311-030 **624.07**	1	0	250
4	721311-040 **363.69**	722311-040 **363.69**	723311-040 **781.22**	1	0	250
6	721311-060 **538.78**	722311-060 **538.78**	723311-060 **1248.15**	1	0	250

PVC (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Lever Handle						
8	721311-080 **915.91**	722311-080 **915.91**	723311-080 **2114.67**	1	0	250
Gear Operator						
1-1/2	721321-015 **814.87**	722321-015 **814.87**	723321-015 **1034.89**	1	0	250
2	721321-020 **826.14**	722321-020 **826.14**	723321-020 **1055.11**	1	0	250
2-1/2	721321-025 **837.32**	722321-025 **837.32**	723321-025 **1095.48**	1	0	250
3	721321-030 **850.82**	722321-030 **850.82**	723321-030 **1158.38**	1	0	250
4	721321-040 **893.46**	722321-040 **893.46**	723321-040 **1311.01**	1	0	250

PVC (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Gear Operator						
6	721321-060 **1073.08**	722321-060 **1073.08**	723321-060 **1782.43**	1	0	250
8	721321-080 **1450.18**	722321-080 **1450.18**	723321-080 **2648.97**	1	0	250
10	721321-100 **1961.99**	722321-100 **1961.99**	723321-100 **4328.08**	1	0	250
12	721321-120 **2702.82**	722321-120 **2702.82**	723321-120 **6218.33**	1	0	250
Valve Only						
1-1/2	721301-015 **244.71**	722301-015 **244.71**	723301-015 **511.81**	1	0	250
2	721301-020 **271.61**	722301-020 **271.61**	723301-020 **536.53**	1	0	250
2-1/2	721301-025 **280.63**	722301-025 **280.63**	723301-025 **554.46**	1	0	250
3	721301-030 **287.36**	722301-030 **287.36**	723301-030 **565.69**	1	0	250
4	721301-040 **332.24**	722301-040 **332.24**	723301-040 **709.37**	1	0	250
6	721301-060 **502.83**	722301-060 **502.83**	723301-060 **1149.38**	1	0	250
8	721301-080 **871.03**	722301-080 **871.03**	723301-080 **1939.57**	1	0	250
10	721301-100 **1746.49**	722301-100 **1746.49**	723301-100 **3883.62**	1	0	250
12	721301-120 **2253.85**	722301-120 **2253.85**	723301-120 **5544.83**	1	0	250

CPVC

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Lever Handle						
1-1/2	721311-015C **374.91**	722311-015C **374.91**	723311-015C **758.78**	1	0	252
2	721311-020C **399.58**	722311-020C **399.58**	723311-020C **783.47**	1	0	252
2-1/2	721311-025C **424.31**	722311-025C **424.31**	723311-025C **850.82**	1	0	252
3	721311-030C **462.45**	722311-030C **462.45**	723311-030C **911.41**	1	0	252
4	721311-040C **534.31**	722311-040C **534.31**	723311-040C **1140.39**	1	0	252
6	721311-060C **790.21**	722311-060C **790.21**	723311-060C **1822.87**	1	0	252
8	721311-080C **1342.43**	722311-080C **1342.43**	723311-080C **3084.48**	1	0	252
Gear Operator						
1-1/2	721321-015C **932.24**	722321-015C **932.24**	723321-015C **1273.06**	1	0	252
2	721321-020C **963.64**	722321-020C **963.64**	723321-020C **1312.45**	1	0	252
2-1/2	721321-025C **978.80**	722321-025C **978.80**	723321-025C **1379.19**	1	0	252
3	721321-030C **992.23**	722321-030C **992.23**	723321-030C **1441.22**	1	0	252
4	721321-040C **1064.07**	722321-040C **1064.07**	723321-040C **1670.20**	1	0	252
6	721321-060C **1324.48**	722321-060C **1324.48**	723321-060C **2352.64**	1	0	252
8	721321-080C **1872.21**	722321-080C **1872.21**	723321-080C **3614.27**	1	0	252
10	721321-100C **2622.01**	722321-100C **2622.01**	723321-100C **6698.69**	1	0	252
12	721321-120C **3704.03**	722321-120C **3704.03**	723321-120C **8707.85**	1	0	252
Valve Only						
1-1/2	721301-015C **350.20**	722301-015C **350.20**	723301-015C **704.92**	1	0	252
2	721301-020C **374.91**	722301-020C **374.91**	723301-020C **720.59**	1	0	252
2-1/2	721301-025C **390.60**	722301-025C **390.60**	723301-025C **752.04**	1	0	252
3	721301-030C **422.05**	722301-030C **422.05**	723301-030C **821.62**	1	0	252

CPVC (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Valve Only						
4	721301-040C **489.38**	722301-040C **489.38**	723301-040C **1037.17**	1	0	252
6	721301-060C **736.31**	722301-060C **736.31**	723301-060C **1674.66**	1	0	252
8	721301-080C **1275.06**	722301-080C **1275.06**	723301-080C **2828.60**	1	0	252
10	721301-100C **2550.19**	722301-100C **2550.19**	723301-100C **5670.57**	1	0	252
12	721301-120C **3313.43**	722301-120C **3313.43**	723301-120C **7369.94**	1	0	252

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Lug Insert Butterfly Valves

PVC - Zinc-Plated Lug Inserts

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Lever Handle						
1-1/2	721311K-015 **446.91**	722311K-015 **446.91**	723311K-015 **639.06**	1	0	250
2	721311K-020 **456.87**	722311K-020 **456.87**	723311K-020 **663.27**	1	0	250
2-1/2	721311K-025 **483.92**	722311K-025 **483.92**	723311K-025 **684.60**	1	0	250
3	721311K-030 **491.04**	722311K-030 **491.04**	723311K-030 **723.88**	1	0	250
4	721311K-040 **862.51**	722311K-040 **862.51**	723311K-040 **1118.72**	1	0	250
6	721311K-060 **1128.66**	722311K-060 **1128.66**	723311K-060 **1599.79**	1	0	250
8	721311K-080 **1401.95**	722311K-080 **1401.95**	723311K-080 **2284.40**	1	0	250
Gear Operator						
1-1/2	721321K-015 **930.84**	722321K-015 **930.84**	723321K-015 **1117.29**	1	0	250
2	721321K-020 **950.76**	722321K-020 **950.76**	723321K-020 **1137.21**	1	0	250
2-1/2	721321K-025 **996.31**	722321K-025 **996.31**	723321K-025 **1178.47**	1	0	250
3	721321K-030 **1010.54**	722321K-030 **1010.54**	723321K-030 **1211.22**	1	0	250
4	721321K-040 **1391.98**	722321K-040 **1391.98**	723321K-040 **1733.58**	1	0	250
6	721321K-060 **1717.93**	722321K-060 **1717.93**	723321K-060 **2295.78**	1	0	250
8	721321K-080 **2018.23**	722321K-080 **2018.23**	723321K-080 **3011.71**	1	0	250
10	721321K-100 **3568.20**	722321K-100 **3568.20**	723321K-100 **5713.12**	1	0	250
12	721321K-120 **4111.91**	722321K-120 **4111.91**	723321K-120 **6867.40**	1	0	250
Valve Only						
1-1/2	721301K-015 **401.38**	722301K-015 **401.38**	723301K-015 **614.86**	1	0	250
2	721301K-020 **441.22**	722301K-020 **441.22**	723301K-020 **631.95**	1	0	250
2-1/2	721301K-025 **462.57**	722301K-025 **462.57**	723301K-025 **667.53**	1	0	250
3	721301K-030 **471.11**	722301K-030 **471.11**	723301K-030 **674.64**	1	0	250
4	721301K-040 **844.01**	722301K-040 **844.01**	723301K-040 **1094.52**	1	0	250
6	721301K-060 **1120.15**	722301K-060 **1120.15**	723301K-060 **1571.33**	1	0	250
8	721301K-080 **1376.32**	722301K-080 **1376.32**	723301K-080 **2253.08**	1	0	250
10	721301K-100 **2811.01**	722301K-100 **2811.01**	723301K-100 **4533.20**	1	0	250
12	721301K-120 **3240.84**	722301K-120 **3240.84**	723301K-120 **6488.80**	1	0	250

CPVC - Zinc-Plated Lug Inserts

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Lever Handle						
1-1/2	721311K-015C **582.12**	722311K-015C **582.12**	723311K-015C **811.27**	1	0	252
2	721311K-020C **599.22**	722311K-020C **599.22**	723311K-020C **829.78**	1	0	252
2-1/2	721311K-025C **607.75**	722311K-025C **607.75**	723311K-025C **849.72**	1	0	252
3	721311K-030C **617.72**	722311K-030C **617.72**	723311K-030C **872.48**	1	0	252
4	721311K-040C **1064.62**	722311K-040C **1064.62**	723311K-040C **1410.48**	1	0	252
6	721311K-060C **1424.72**	722311K-060C **1424.72**	723311K-060C **1988.36**	1	0	252
8	721311K-080C **1757.77**	722311K-080C **1757.77**	723311K-080C **2900.68**	1	0	252
Gear Operator						
1-1/2	721321K-015C **1147.19**	722321K-015C **1147.19**	723321K-015C **1421.86**	1	0	252

CPVC - Zinc-Plated Lug Inserts (continued)

Size	Buna-N			Std Pk	Mstr Pk	Prod Code
Gear Operator						
2	721321K-020C **1168.54**	722321K-020C **1168.54**	723321K-020C **1453.18**	1	0	252
2-1/2	721321K-025C **1184.18**	722321K-025C **1184.18**	723321K-025C **1475.95**	1	0	252
3	721321K-030C **1192.74**	722321K-030C **1192.74**	723321K-030C **1512.96**	1	0	252
4	721321K-040C **1773.41**	722321K-040C **1773.41**	723321K-040C **2183.33**	1	0	252
6	721321K-060C **2163.41**	722321K-060C **2163.41**	723321K-060C **2904.95**	1	0	252
8	721321K-080C **2542.00**	722321K-080C **2542.00**	723321K-080C **3988.07**	1	0	252
10	721321K-100C **4467.73**	722321K-100C **4467.73**	723321K-100C **7164.86**	1	0	252
12	721321K-120C **5139.53**	722321K-120C **5139.53**	723321K-120C **9014.82**	1	0	252
Valve Only						
1-1/2	721301K-015C **556.51**	722301K-015C **556.51**	723301K-015C **799.88**	1	0	252
2	721301K-020C **576.44**	722301K-020C **576.44**	723301K-020C **818.40**	1	0	252
2-1/2	721301K-025C **583.55**	722301K-025C **583.55**	723301K-025C **836.89**	1	0	252
3	721301K-030C **592.08**	722301K-030C **592.08**	723301K-030C **846.85**	1	0	252
4	721301K-040C **1014.81**	722301K-040C **1014.81**	723301K-040C **1377.75**	1	0	252
6	721301K-060C **1407.64**	722301K-060C **1407.64**	723301K-060C **1974.11**	1	0	252
8	721301K-080C **1722.18**	722301K-080C **1722.18**	723301K-080C **3099.96**	1	0	252
10	721301K-100C **3512.68**	722301K-100C **3512.68**	723301K-100C **5899.57**	1	0	252
12	721301K-120C **4052.12**	722301K-120C **4052.12**	723301K-120C **7687.22**	1	0	252

PVC - SS Lug Inserts

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Lever Handle						
1-1/2	721311G-015 **509.54**	722311G-015 **509.54**	723311G-015 **768.59**	1	0	250
2	721311G-020 **515.24**	722311G-020 **515.24**	723311G-020 **775.68**	1	0	250
2-1/2	721311G-025 **566.47**	722311G-025 **566.47**	723311G-025 **807.01**	1	0	250
3	721311G-030 **572.17**	722311G-030 **572.17**	723311G-030 **815.56**	1	0	250
4	721311G-040 **1014.81**	722311G-040 **1014.81**	723311G-040 **1315.12**	1	0	250
6	721311G-060 **1329.36**	722311G-060 **1329.36**	723311G-060 **1881.61**	1	0	250
8	721311G-080 **1642.47**	722311G-080 **1642.47**	723311G-080 **2687.19**	1	0	250
Gear Operator						
1-1/2	721321G-015 **1039.01**	722321G-015 **1039.01**	723321G-015 **1305.16**	1	0	250
2	721321G-020 **1051.81**	722321G-020 **1051.81**	723321G-020 **1326.51**	1	0	250
2-1/2	721321G-025 **1107.33**	722321G-025 **1107.33**	723321G-025 **1386.29**	1	0	250
3	721321G-030 **1121.56**	722321G-030 **1121.56**	723321G-030 **1419.02**	1	0	250
4	721321G-040 **1635.37**	722321G-040 **1635.37**	723321G-040 **2036.74**	1	0	250
6	721321G-060 **2021.07**	722321G-060 **2021.07**	723321G-060 **2701.41**	1	0	250
8	721321G-080 **2374.05**	722321G-080 **2374.05**	723321G-080 **3450.06**	1	0	250
10	721321G-100 **4194.45**	722321G-100 **4194.45**	723321G-100 **6725.08**	1	0	250
12	721321G-120 **4834.94**	722321G-120 **4834.94**	723321G-120 **8360.43**	1	0	250

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Lug Insert Butterfly Valves & True Lug Butterfly Valves - Zinc Plated Lugs

Lug Insert Butterfly Valves

PVC - SS Lug Inserts

Size	Buna-N			Std Pk	Mstr Pk	Prod Code
Valve Only						
1-1/2	721301G-015 **491.04**	722301G-015 **491.04**	723301G-015 **728.74**	1	0	250
2	721301G-020 **500.99**	722301G-020 **500.99**	723301G-020 **750.07**	1	0	250
2-1/2	721301G-025 **546.54**	722301G-025 **546.54**	723301G-025 **765.74**	1	0	250
3	721301G-030 **555.07**	722301G-030 **555.07**	723301G-030 **792.78**	1	0	250
4	721301G-040 **994.88**	722301G-040 **994.88**	723301G-040 **1286.65**	1	0	250
6	721301G-060 **1317.97**	722301G-060 **1317.97**	723301G-060 **1846.01**	1	0	250
8	721301G-080 **1622.57**	722301G-080 **1622.57**	723301G-080 **2651.60**	1	0	250
10	721301G-100 **3304.89**	722301G-100 **3304.89**	723301G-100 **5330.23**	1	0	250
12	721301G-120 **3811.58**	722301G-120 **3811.58**	723301G-120 **6649.64**	1	0	250

CPVC - SS Lug Inserts

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Lever Handle						
1-1/2	721311G-015C **694.56**	722311G-015C **694.56**	723311G-015C **979.23**	1	0	252
2	721311G-020C **703.11**	722311G-020C **703.11**	723311G-020C **992.03**	1	0	252
2-1/2	721311G-025C **713.08**	722311G-025C **713.08**	723311G-025C **1017.66**	1	0	252
3	721311G-030C **727.31**	722311G-030C **727.31**	723311G-030C **1027.61**	1	0	252
4	721311G-040C **1299.47**	722311G-040C **1299.47**	723311G-040C **1665.24**	1	0	252
6	721311G-060C **1696.56**	722311G-060C **1696.56**	723311G-060C **2401.09**	1	0	252
8	721311G-080C **2102.21**	722311G-080C **2102.21**	723311G-080C **3440.11**	1	0	252
Gear Operator						
1-1/2	721321G-015C **1379.18**	722321G-015C **1379.18**	723321G-015C **1709.38**	1	0	252
2	721321G-020C **1389.14**	722321G-020C **1389.14**	723321G-020C **1729.31**	1	0	252

CPVC - SS Lug Inserts (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Gear Operator						
2-1/2	721321G-025C **1394.81**	722321G-025C **1394.81**	723321G-025C **1747.80**	1	0	252
3	721321G-030C **1419.02**	722321G-030C **1419.02**	723321G-030C **1841.75**	1	0	252
4	721321G-040C **2043.86**	722321G-040C **2043.86**	723321G-040C **2564.77**	1	0	252
6	721321G-060C **1670.95**	722321G-060C **2524.94**	723321G-060C **3423.03**	1	0	252
8	721321G-080C **2919.18**	722321G-080C **2919.18**	723321G-080C **4615.76**	1	0	252
10	721321G-100C **5269.05**	722321G-100C **5269.05**	723321G-100C **8531.23**	1	0	252
12	721321G-120C **6088.85**	722321G-120C **6088.85**	723321G-120C **10501.07**	1	0	252
Valve Only						
1-1/2	721301G-015C **657.56**	722301G-015C **657.56**	723301G-015C **956.46**	1	0	252
2	721301G-020C **676.06**	722301G-020C **676.06**	723301G-020C **964.98**	1	0	252
2-1/2	721301G-025C **683.19**	722301G-025C **683.19**	723301G-025C **994.88**	1	0	252
3	721301G-030C **697.41**	722301G-030C **697.41**	723301G-030C **1004.85**	1	0	252
4	721301G-040C **1262.45**	722301G-040C **1262.45**	723301G-040C **1619.71**	1	0	252
6	721301G-060C **1646.75**	722301G-060C **1646.75**	723301G-060C **2315.68**	1	0	252
8	721301G-080C **2048.12**	722301G-080C **2048.12**	723301G-080C **3408.79**	1	0	252
10	721301G-100C **4154.60**	722301G-100C **4154.60**	723301G-100C **6561.40**	1	0	252
12	721301G-120C **4776.59**	722301G-120C **4776.59**	723301G-120C **8077.21**	1	0	252

True Lug Butterfly Valves - Zinc Plated Lugs

Pressure Rating @ 73°F (23°C), Water

1-1/2" - 12" 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
See Butterfly Valve Accessories & Repair Kits Section for Additional Options and Features

PVC - Zinc-Plated Lugs

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Lever Handle						
1-1/2	721311Z-015 **637.80**	722311Z-015 **637.80**	723311Z-015 **914.57**	1	0	250
2	721311Z-020 **652.32**	722311Z-020 **652.32**	723311Z-020 **950.06**	1	0	250
2-1/2	721311Z-025 **690.91**	722311Z-025 **690.91**	723311Z-025 **980.57**	1	0	250

PVC - Zinc-Plated Lugs (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Lever Handle						
3	721311Z-030 **701.45**	722311Z-030 **701.45**	723311Z-030 **993.40**	1	0	250
4	721311Z-040 **1233.73**	722311Z-040 **1233.73**	723311Z-040 **1599.16**	1	0	250
6	721311Z-060 **1614.42**	722311Z-060 **1614.42**	723311Z-060 **2286.72**	1	0	250
8	721311Z-080 **2003.91**	722311Z-080 **2003.91**	723311Z-080 **3264.42**	1	0	250

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

True Lug Butterfly Valves - Zinc Plated Lugs

PVC - Zinc-Plated Lugs

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Gear Operator						
1-1/2	721321Z-015 **1035.86**	722321Z-015 **1035.86**	723321Z-015 **1316.49**	1	0	250
2	721321Z-020 **1057.96**	722321Z-020 **1057.96**	723321Z-020 **1339.41**	1	0	250
2-1/2	721321Z-025 **1108.71**	722321Z-025 **1108.71**	723321Z-025 **1388.58**	1	0	250
3	721321Z-030 **1121.72**	722321Z-030 **1121.72**	723321Z-030 **1423.33**	1	0	250
4	721321Z-040 **1638.38**	722321Z-040 **1638.38**	723321Z-040 **2039.96**	1	0	250
6	721321Z-060 **2021.85**	722321Z-060 **2021.85**	723321Z-060 **2702.67**	1	0	250
8	721321Z-080 **2375.36**	722321Z-080 **2375.36**	723321Z-080 **3544.83**	1	0	250
10	721321Z-100 **4197.85**	722321Z-100 **4197.85**	723321Z-100 **6723.55**	1	0	250
12	721321Z-120 **4838.20**	722321Z-120 **4838.20**	723321Z-120 **8080.51**	1	0	250
Valve Only						
1-1/2	721301Z-015 **573.36**	722301Z-015 **573.36**	723301Z-015 **879.98**	1	0	250
2	721301Z-020 **631.09**	722301Z-020 **631.09**	723301Z-020 **902.61**	1	0	250
2-1/2	721301Z-025 **664.28**	722301Z-025 **664.28**	723301Z-025 **954.40**	1	0	250
3	721301Z-030 **673.01**	722301Z-030 **673.01**	723301Z-030 **963.38**	1	0	250
4	721301Z-040 **1208.07**	722301Z-040 **1208.07**	723301Z-040 **1565.17**	1	0	250
6	721301Z-060 **1602.52**	722301Z-060 **1602.51**	723301Z-060 **2246.29**	1	0	250
8	721301Z-080 **1968.05**	722301Z-080 **1968.05**	723301Z-080 **3219.98**	1	0	250
10	721301Z-100 **4016.72**	722301Z-100 **4016.72**	723301Z-100 **6476.74**	1	0	250
12	721301Z-120 **4631.53**	722301Z-120 **4631.53**	723301Z-120 **7380.32**	1	0	250

CPVC - Zinc-Plated Lugs

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Lever Handle						
1-1/2	721311Z-015C **831.47**	722311Z-015C **831.47**	723311Z-015C **1160.59**	1	0	252
2	721311Z-020C **855.23**	722311Z-020C **855.23**	723311Z-020C **1186.13**	1	0	252
2-1/2	721311Z-025C **865.63**	722311Z-025C **865.63**	723311Z-025C **1215.89**	1	0	252
3	721311Z-030C **883.83**	722311Z-030C **883.83**	723311Z-030C **1246.73**	1	0	252

CPVC - Zinc-Plated Lugs (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Lever Handle						
4	721311Z-040C **1521.24**	722311Z-040C **1521.24**	723311Z-040C **2014.87**	1	0	252
6	721311Z-060C **2035.80**	722311Z-060C **2035.80**	723311Z-060C **2842.44**	1	0	252
8	721311Z-080C **2512.91**	722311Z-080C **2512.91**	723311Z-080C **4145.80**	1	0	252
Gear Operator						
1-1/2	721321Z-015C **1351.15**	722321Z-015C **1351.15**	723321Z-015C **1675.05**	1	0	252
2	721321Z-020C **1375.75**	722321Z-020C **1375.75**	723321Z-020C **1708.88**	1	0	252
2-1/2	721321Z-025C **1392.52**	722321Z-025C **1392.52**	723321Z-025C **1737.09**	1	0	252
3	721321Z-030C **1402.01**	722321Z-030C **1402.01**	723321Z-030C **1780.64**	1	0	252
4	721321Z-040C **2087.35**	722321Z-040C **2087.35**	723321Z-040C **2570.33**	1	0	252
6	721321Z-060C **2547.52**	722321Z-060C **2547.52**	723321Z-060C **3418.87**	1	0	252
8	721321Z-080C **2992.95**	722321Z-080C **2992.95**	723321Z-080C **4693.09**	1	0	252
10	721321Z-100C **5180.15**	722321Z-100C **5180.15**	723321Z-100C **8431.21**	1	0	252
12	721321Z-120C **6047.79**	722321Z-120C **6047.79**	723321Z-120C **9250.78**	1	0	252
Valve Only						
1-1/2	721301Z-015C **796.82**	722301Z-015C **796.82**	723301Z-015C **1143.28**	1	0	252
2	721301Z-020C **824.25**	722301Z-020C **824.25**	723301Z-020C **1170.71**	1	0	252
2-1/2	721301Z-025C **833.03**	722301Z-025C **833.03**	723301Z-025C **1197.72**	1	0	252
3	721301Z-030C **844.17**	722301Z-030C **844.17**	723301Z-030C **1211.07**	1	0	252
4	721301Z-040C **1448.64**	722301Z-040C **1448.64**	723301Z-040C **1970.57**	1	0	252
6	721301Z-060C **2012.74**	722301Z-060C **2012.74**	723301Z-060C **2821.35**	1	0	252
8	721301Z-080C **2462.00**	722301Z-080C **2462.00**	723301Z-080C **4050.73**	1	0	252
10	721301Z-100C **5020.88**	722301Z-100C **5020.88**	723301Z-100C **8050.56**	1	0	252
12	721301Z-120C **5789.41**	722301Z-120C **5789.41**	723301Z-120C **8714.75**	1	0	252

True Lug Butterfly Valves - SS Lugs

PVC - Stainless Steel Lugs

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Lever Handle						
1-1/2	721311L-015 **727.88**	722311L-015 **727.88**	723311L-015 **1099.09**	1	0	250
2	721311L-020 **736.22**	722311L-020 **736.22**	723311L-020 **1109.53**	1	0	250
2-1/2	721311L-025 **809.62**	722311L-025 **809.62**	723311L-025 **1153.64**	1	0	250
3	721311L-030 **818.03**	722311L-030 **818.03**	723311L-030 **1166.02**	1	0	250
4	721311L-040 **1451.39**	722311L-040 **1451.39**	723311L-040 **1878.96**	1	0	250
6	721311L-060 **1899.12**	722311L-060 **1899.12**	723311L-060 **2688.66**	1	0	250

PVC - Stainless Steel Lugs (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Lever Handle						
8	721311L-080 **2348.03**	722311L-080 **2348.03**	723311L-080 **3840.49**	1	0	250
Gear Operator						
1-1/2	721321L-015 **1222.96**	722321L-015 **1222.96**	723321L-015 **1536.49**	1	0	250
2	721321L-020 **1239.15**	722321L-020 **1239.15**	723321L-020 **1562.08**	1	0	250
2-1/2	721321L-025 **1304.36**	722321L-025 **1304.36**	723321L-025 **1633.62**	1	0	250
3	721321L-030 **1319.63**	722321L-030 **1319.63**	723321L-030 **1672.00**	1	0	250
4	721321L-040 **1925.15**	722321L-040 **1925.15**	723321L-040 **2397.57**	1	0	250

True Lug Butterfly Valves - SS Lugs

PVC - Stainless Steel Lugs (continued)

Gear Operator

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
6	721321L-060 **2378.57**	722321L-060 **2378.57**	723321L-060 **3179.59**	1	0	250
8	721321L-080 **2793.99**	722321L-080 **2793.99**	723321L-080 **4060.64**	1	0	250
10	721321L-100 **4936.32**	722321L-100 **4936.32**	723321L-100 **7912.26**	1	0	250
12	721321L-120 **5689.55**	722321L-120 **5689.55**	723321L-120 **9837.38**	1	0	250

Valve Only

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1-1/2	721301L-015 **701.03**	722301L-015 **701.03**	723301L-015 **1041.07**	1	0	250
2	721301L-020 **715.78**	722301L-020 **715.78**	723301L-020 **1072.65**	1	0	250
2-1/2	721301L-025 **781.48**	722301L-025 **781.48**	723301L-025 **1093.31**	1	0	250
3	721301L-030 **791.71**	722301L-030 **791.71**	723301L-030 **1133.39**	1	0	250
4	721301L-040 **1421.01**	722301L-040 **1421.01**	723301L-040 **1838.22**	1	0	250
6	721301L-060 **1882.91**	722301L-060 **1882.91**	723301L-060 **2637.41**	1	0	250
8	721301L-080 **2317.64**	722301L-080 **2317.64**	723301L-080 **3788.13**	1	0	250
10	721301L-100 **4720.77**	722301L-100 **4720.77**	723301L-100 **7614.92**	1	0	250
12	721301L-120 **5445.81**	722301L-120 **5445.81**	723301L-120 **9501.73**	1	0	250

CPVC - Stainless Steel Lugs

Lever Handle

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1-1/2	721311L-015C **993.58**	722311L-015C **993.58**	723311L-015C **1400.85**	1	0	252
2	721311L-020C **1005.03**	722311L-020C **1005.03**	723311L-020C **1418.92**	1	0	252
2-1/2	721311L-025C **1020.14**	722311L-025C **1020.14**	723311L-025C **1453.58**	1	0	252
3	721311L-030C **1038.93**	722311L-030C **1038.93**	723311L-030C **1469.16**	1	0	252
4	721311L-040C **1857.78**	722311L-040C **1857.78**	723311L-040C **2380.64**	1	0	252
6	721311L-060C **2426.68**	722311L-060C **2426.68**	723311L-060C **3430.73**	1	0	252
8	721311L-080C **3005.44**	722311L-080C **3005.44**	723311L-080C **4915.85**	1	0	252

CPVC - Stainless Steel Lugs

Gear Operator

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1-1/2	721321L-015C **1624.49**	722321L-015C **1624.49**	723321L-015C **2012.85**	1	0	252
2	721321L-020C **1636.25**	722321L-020C **1636.25**	723321L-020C **2036.41**	1	0	252
2-1/2	721321L-025C **1643.51**	722321L-025C **1643.51**	723321L-025C **2056.75**	1	0	252
3	721321L-030C **1670.87**	722321L-030C **1670.87**	723321L-030C **2168.79**	1	0	252
4	721321L-040C **2406.42**	722321L-040C **2406.42**	723321L-040C **3018.28**	1	0	252
6	721321L-060C **2973.22**	722321L-060C **2973.22**	723321L-060C **4028.49**	1	0	252
8	721321L-080C **3436.65**	722321L-080C **3436.65**	723321L-080C **5432.64**	1	0	252
10	721321L-100C **6200.03**	722321L-100C **6200.03**	723321L-100C **10038.27**	1	0	252
12	721321L-120C **7167.71**	722321L-120C **7167.71**	723321L-120C **12355.75**	1	0	252

Valve Only

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1-1/2	721301L-015C **939.91**	722301L-015C **939.91**	723301L-015C **1368.45**	1	0	252
2	721301L-020C **966.72**	722301L-020C **966.72**	723301L-020C **1378.93**	1	0	252
2-1/2	721301L-025C **976.86**	722301L-025C **976.86**	723301L-025C **1422.62**	1	0	252
3	721301L-030C **996.75**	722301L-030C **996.75**	723301L-030C **1436.00**	1	0	252
4	721301L-040C **1804.15**	722301L-040C **1804.15**	723301L-040C **2316.16**	1	0	252
6	721301L-060C **2353.64**	722301L-060C **2353.64**	723301L-060C **3309.96**	1	0	252
8	721301L-080C **2927.17**	722301L-080C **2927.17**	723301L-080C **4682.14**	1	0	252
10	721301L-100C **5937.24**	722301L-100C **5937.24**	723301L-100C **9373.96**	1	0	252
12	721301L-120C **6825.32**	722301L-120C **6825.32**	723301L-120C **11540.83**	1	0	252

Polypropylene Butterfly Valves

Lever Handle

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1-1/2	721311-015P **504.43**	722311-015P **504.43**	723311-015P **1047.92**	1	0	256
2	721311-020P **509.53**	722311-020P **509.53**	723311-020P **1069.31**	1	0	256
2-1/2	721311-025P **532.53**	722311-025P **532.53**	723311-025P **1087.55**	1	0	256
3	721311-030P **543.79**	722311-030P **543.79**	723311-030P **1108.84**	1	0	256
4	721311-040P **606.41**	722311-040P **606.41**	723311-040P **1384.55**	1	0	256
6	721311-060P **947.55**	722311-060P **947.55**	723311-060P **2189.28**	1	0	256
8	721311-080P **1611.42**	722311-080P **1611.42**	723311-080P **3717.36**	1	0	256

Gear Operator

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
2	721321-020P **1450.40**	722321-020P **1450.40**	723321-020P **1843.71**	1	0	256
2-1/2	721321-025P **1469.71**	722321-025P **1469.71**	723321-025P **1940.52**	1	0	256
3	721321-030P **1498.03**	722321-030P **1498.03**	723321-030P **2038.75**	1	0	256
4	721321-040P **1596.08**	722321-040P **1596.08**	723321-040P **2319.01**	1	0	256
6	721321-060P **1864.45**	722321-060P **1864.45**	723321-060P **3138.24**	1	0	256
8	721321-080P **2547.86**	722321-080P **2547.86**	723321-080P **4685.58**	1	0	256
10	721321-100P **3425.92**	722321-100P **3425.92**	723321-100P **7623.22**	1	0	256
12	721321-120P **4744.19**	722321-120P **4744.19**	723321-120P **11141.25**	1	0	256

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Polypropylene Butterfly Valves

Valve Only

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1-1/2	721301-015P **466.19**	722301-015P **466.19**	723301-015P **924.76**	1	0	256
2	721301-020P **475.69**	722301-020P **475.69**	723301-020P **941.56**	1	0	256
2-1/2	721301-025P **493.96**	722301-025P **493.96**	723301-025P **976.32**	1	0	256
3	721301-030P **509.32**	722301-030P **509.32**	723301-030P **1001.89**	1	0	256
4	721301-040P **582.67**	722301-040P **582.67**	723301-040P **1242.76**	1	0	256

Valve Only (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
6	721301-060P **891.04**	722301-060P **891.04**	723301-060P **2010.09**	1	0	256
8	721301-080P **1531.21**	722301-080P **1531.21**	723301-080P **3404.53**	1	0	256
10	721301-100P **3058.38**	722301-100P **3058.38**	723301-100P **6822.46**	1	0	256
12	721301-120P **3957.38**	722301-120P **3957.38**	723301-120P **9744.93**	1	0	256

Large Diameter Butterfly Valves

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
PP = 180°F (82°C)
Temperature/Pressure De-ratings Apply
Contact Spears® for Custom Produced Valve Sizes 30" to 60"

Pressure Rating @ 73°F (23°C), Water

Size	Psi
14	100
16	85
18	70
20	50
24	50

PVC - Gear Operator

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
14	722321-140 **6062.52**	723321-140 **14732.79**	1	0	251
16	722321-160 **7784.33**	723321-160 **16223.22**	1	0	251

CPVC - Gear Operator

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
14	722321-140C **8296.33**	723321-140C **20160.83**	1	0	253
16	722321-160C **9951.70**	723321-160C **21680.00**	1	0	253

Polypropylene - Gear Operator

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
14	722321-140P **6381.79**	723321-140P **15508.33**	1	0	257
16	722321-160P **24883.37**	723321-160P **26953.13**	1	0	257
18	722321-180P **27410.01**	723321-180P **31405.12**	1	0	257
20	722321-200P **30753.47**	723321-200P **37381.61**	1	0	257
24	722321-240P **34834.44**	723321-240P **50252.52**	1	0	257

Wafer Butterfly Valves

Lever Handle

Gear Operator

Wafer Butterfly Valve laying lengths will directly replace common Cast Iron valves (matches Keystone Model 228 and Bray Series 30 Butterfly Valves).

IMPORTANT NOTE

All PVC and CPVC valves have built-in Santoprene™ Thermoplastic Elastomer (TPE) Flange Gaskets for use with choice of Buna-N, EPDM, or FKM Seats on PVC valves and choice of EPDM or FKM Seats on CPVC valves.

Pressure Rating @ 73°F (23°C), Water
150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply

PVC

Size	Buna-N Seat	EPDM Seat	FKM Seat	Std Pk	Mstr Pk	Prod Code
Lever Handle						
2	751311-020 **291.79**	752311-020 **291.79**	753311-020 **603.85**	1	0	250
2-1/2	751311-025 **309.78**	752311-025 **309.78**	753311-025 **612.84**	1	0	250
3	751311-030 **314.28**	752311-030 **314.28**	753311-030 **624.07**	1	0	250
4	751311-040 **363.69**	752311-040 **363.69**	753311-040 **781.22**	1	0	250
6	751311-060 **538.78**	752311-060 **538.78**	753311-060 **1248.15**	1	0	250
8	751311-080 **915.91**	752311-080 **915.91**	753311-080 **2114.67**	1	0	250
Gear Operator						
2	751321-020 **826.14**	752321-020 **826.14**	753321-020 **1055.11**	1	0	250
2-1/2	751321-025 **837.32**	752321-025 **837.32**	753321-025 **1095.48**	1	0	250
3	751321-030 **850.82**	752321-030 **850.82**	753321-030 **1158.38**	1	0	250
4	751321-040 **893.46**	752321-040 **893.46**	753321-040 **1311.01**	1	0	250
6	751321-060 **1073.08**	752321-060 **1073.08**	753321-060 **1782.43**	1	0	250
8	751321-080 **1450.18**	752321-080 **1450.18**	753321-080 **2648.97**	1	0	250
10	751321-100 **1954.23**	752321-100 **1954.23**	753321-100 **6120.40**	1	0	250
12	751321-120 **2370.75**	752321-120 **2370.75**	753321-120 **6807.60**	1	0	250
Valve Only						
2	751301-020 **271.61**	752301-020 **271.61**	753301-020 **536.53**	1	0	250
2-1/2	751301-025 **280.63**	752301-025 **280.63**	753301-025 **554.46**	1	0	250
3	751301-030 **287.36**	752301-030 **287.36**	753301-030 **565.69**	1	0	250
4	751301-040 **332.24**	752301-040 **332.24**	753301-040 **709.37**	1	0	250
6	751301-060 **502.83**	752301-060 **502.83**	753301-060 **1149.38**	1	0	250
8	751301-080 **871.03**	752301-080 **871.03**	753301-080 **1939.57**	1	0	250
10	751301-100 **1746.49**	752301-100 **1746.49**	753301-100 **3883.58**	1	0	250
12	751301-120 **2253.85**	752301-120 **2253.85**	753301-120 **5544.83**	1	0	250

CPVC

Size	EPDM Seat	FKM Seat	Std Pk	Mstr Pk	Prod Code
Lever Handle					
2	752311-020C **399.58**	753311-020C **783.47**	1	0	252
2-1/2	752311-025C **424.31**	753311-025C **850.82**	1	0	252
3	752311-030C **462.45**	753311-030C **911.41**	1	0	252
4	752311-040C **534.31**	753311-040C **1140.39**	1	0	252
6	752311-060C **790.21**	753311-060C **1822.87**	1	0	252
8	752311-080C **1342.43**	753311-080C **3084.48**	1	0	252
Gear Operator					
2	752321-020C **963.64**	753321-020C **1312.45**	1	0	252
2-1/2	752321-025C **978.11**	753321-025C **1379.19**	1	0	252
3	752321-030C **992.23**	753321-030C **1441.22**	1	0	252
4	752321-040C **1064.07**	753321-040C **1670.20**	1	0	252
6	752321-060C **1324.48**	753321-060C **2352.64**	1	0	252
8	752321-080C **1872.21**	753321-080C **3614.27**	1	0	252
10	752321-100C **2622.01**	753321-100C **6698.69**	1	0	252
12	752321-120C **3704.03**	753321-120C **8707.85**	1	0	252
Valve Only					
2	752301-020C **374.91**	753301-020C **720.59**	1	0	252
2-1/2	752301-025C **390.60**	753301-025C **752.04**	1	0	252
3	752301-030C **422.05**	753301-030C **821.62**	1	0	252
4	752301-040C **489.38**	753301-040C **1037.17**	1	0	252
6	752301-060C **736.31**	753301-060C **1674.66**	1	0	252
8	752301-080C **1275.06**	753301-080C **2828.60**	1	0	252
10	752301-100C **2550.19**	753301-100C **5670.57**	1	0	252
12	752301-120C **3313.43**	753301-120C **7369.94**	1	0	252

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

High Purity TFM-Lined Butterfly Valves

Pressure Rating @ 73°F (23°C), Water
2" - 6" 150 psi
Maximum Service Temperature
200°F (93°C)

TFM-Lined

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
FKM O-ring Seal					
TFM PTFE Lined with backing O-rings, no fluid contact with elastomers or body					
253322-020	**2**	1	0	254	2880.75
253322-030	**3**	1	0	254	3148.89

TFM-Lined (continued)

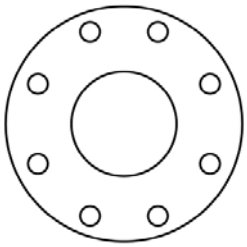
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
FKM O-ring Seal					
253322-040	**4**	1	0	254	4033.28
253322-060	**6**	1	0	254	5398.89

Butterfly Valve Accessories & Repair Kits

Flange Gaskets Selection Guide

Order Gaskets & Bolts Kits Separately

- 1/8" Full-Faced design with ANSI Class 150 Bolt Patterns
- Pressure Rated to 150 psi @ 73°F
- Available in Buna-N (Nitrile), EPDM, or FKM



Note: Do not order for Wafer Butterfly Valves. Gasket is Built-in.

Flange Size (in.)	Number of Bolt Holes	Gasket Part Number		
		Buna-N (Nitrile)	EPDM	FKM
1/2	4	GK1-005	GK2-005	GK3-005
3/4	4	GK1-007	GK2-007	GK3-007
1	4	GK1-010	GK2-010	GK3-010
1-1/4	4	GK1-012	GK2-012	GK3-012
1-1/2	4	GK1-015	GK2-015	GK3-015
2	4	GK1-020	GK2-020	GK3-020
2-1/2	4	GK1-025	GK2-025	GK3-025
3	4	GK1-030	GK2-030	GK3-030
4	8	GK1-040	GK2-040	GK3-040
5	8	GK1-050	GK2-050	GK3-050
6	8	GK1-060	GK2-060	GK3-060
8	8	GK1-080	GK2-080	GK3-080
10	12	GK1-100	GK2-100	GK3-100
12	12	GK1-120	GK2-120	GK3-120

EPDM Full-Faced Flange Gaskets

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
GK2-005	**1/2**	1	25	017	4.27
GK2-007	**3/4**	1	25	017	4.55
GK2-010	**1**	1	25	017	4.75
GK2-012	**1-1/4**	1	25	017	4.99
GK2-015	**1-1/2**	1	25	017	5.36
GK2-020	**2**	1	25	017	6.54
GK2-025	**2-1/2**	1	25	017	7.85
GK2-030	**3**	1	25	017	11.54
GK2-040	**4**	1	25	017	13.14
GK2-050	**5**	1	25	017	16.43
GK2-060	**6**	1	25	017	17.24

EPDM Full-Faced Flange Gaskets (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
GK2-080	**8**	1	25	017	22.97
GK2-100	**10**	1	25	017	29.93
GK2-120	**12**	1	25	017	41.18

FKM Full-Faced Flange Gaskets

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
GK3-005	**1/2**	1	25	017	15.25
GK3-007	**3/4**	1	25	017	18.11
GK3-010	**1**	1	25	017	20.01
GK3-012	**1-1/4**	1	5	017	22.59
GK3-015	**1-1/2**	1	25	017	28.49
GK3-020	**2**	1	25	017	39.83
GK3-025	**2-1/2**	1	25	017	53.27
GK3-030	**3**	1	25	017	119.04
GK3-040	**4**	1	25	017	137.42
GK3-050	**5**	1	25	017	160.20
GK3-060	**6**	1	25	017	181.75
GK3-080	**8**	1	25	017	258.94
GK3-100	**10**	1	25	017	344.42
GK3-120	**12**	1	25	017	485.28

Buna-N Full-Faced Flange Gaskets

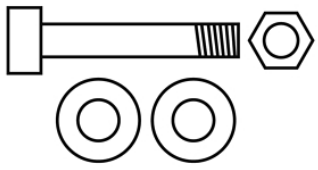
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
GK1-005	**1/2**	1	25	017	3.22
GK1-007	**3/4**	1	25	017	3.69
GK1-010	**1**	1	25	017	3.80
GK1-012	**1-1/4**	1	25	017	3.89
GK1-015	**1-1/2**	1	25	017	4.18
GK1-020	**2**	1	25	017	4.67
GK1-025	**2-1/2**	1	25	017	5.14
GK1-030	**3**	1	25	017	7.91
GK1-040	**4**	1	25	017	8.84
GK1-050	**5**	1	25	017	10.48
GK1-060	**6**	1	25	017	10.77
GK1-080	**8**	1	25	017	14.20
GK1-100	**10**	1	25	017	18.02
GK1-120	**12**	1	25	017	24.31

Butterfly Valve Accessories & Repair Kits

Bolt Kit Selection Guide

Kit Contains All Bolts, Nuts, & Flat Washers for Specified Valve Size

- For Connecting Valve Between Two (2) Mating Spears® Flanges
- Pre-coated, Anti-seize Lubricated Bolts
- Available in Zinc Coated Steel, Type 304 Stainless Steel or Type 316



Order Gaskets separately for Standard valves; gaskets are already included with Wafer Butterfly Valves.

Standard Butterfly Valve Hardware Kit

Valve Size (in.)	Bolts Per Kit	Bolt Diameter (in.-TPI)	Bolt Length (in.)	Hardware Kit Part Number		
				Zinc Plate Steel	Type 316 Stainless	Type 304 Stainless
1-1/2	4	1/2-13	4-1/2	BFHK-015	BFHK1-015	BFHK2-015
2	4	5/8-11	5	BFHK-020	BFHK1-020	BFHK2-020
2-1/2 & 3	4	5/8-11	5-1/2	BFHK-030	BFHK1-030	BFHK2-030
4	8	5/8-11	6	BFHK-040	BFHK1-040	BFHK2-040
6	8	3/4-10	7	BFHK-060	BFHK1-060	BFHK2-060
8	8	3/4-10	7-1/2	BFHK-080	BFHK1-080	BFHK2-080
10 & 12	12	7/8-9	8-1/2	BFHK-120	BFHK1-120	BFHK2-120

Wafer Butterfly Valve Hardware Kit

Valve Size (in.)	Bolts Per Kit	Bolt Diameter (in.-TPI)	Bolt Length (in.)	Hardware Kit Part Number		
				Zinc Plate Steel	Type 316 Stainless	Type 304 Stainless
2	4	5/8-11	4-1/2	WBHK-020	WBHK1-020	WBHK2-020
2-1/2 & 3	4	5/8-11	5	WBHK-030	WBHK1-030	WBHK2-030
4	8	5/8-11	5-1/2	WBHK-040	WBHK1-040	WBHK2-040
6	8	3/4-10	6	WBHK-060	WBHK1-060	WBHK2-060
8	8	3/4-10	7	WBHK-080	WBHK1-080	WBHK2-080
10	12	7/8-9	7-1/2	WBHK-100	WBHK1-100	WBHK2-100
12	12	7/8-9	8	WBHK-120	WBHK1-120	WBHK2-120

Standard Butterfly Valve Bolt Kit - Zinc Plated

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
For Connection of Valve Between 2-Spears® Flanges					
Includes Bolts, Nuts & Flat Washers					
BFHK-015	**1-1/2**	1	10	017	11.34
BFHK-020	**2**	1	10	017	27.16
BFHK-030	**2-1/2 & 3**	1	5	017	48.74
BFHK-040	**4**	1	5	017	75.96
BFHK-060	**6**	1	3	017	97.47
BFHK-080	**8**	1	3	017	107.55
BFHK-120	**10 & 12**	1	0	017	153.13

Standard Butterfly Valve Bolt Kit - Type 316 Stainless Steel

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
For Connection of Valve Between 2-Spears® Flanges					
Includes Bolts, Nuts & Flat Washers					
BFHK1-015	**1-1/2**	1	10	017	39.79
BFHK1-020	**2**	1	10	017	55.65
BFHK1-030	**2-1/2 & 3**	1	10	017	66.24
BFHK1-040	**4**	1	5	017	303.62
BFHK1-060	**6**	1	3	017	355.28

Standard Butterfly Valve Bolt Kit - Type 316 Stainless Steel (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
For Connection of Valve Between 2-Spears® Flanges					
Includes Bolts, Nuts & Flat Washers					
BFHK1-080	**8**	1	3	017	415.89
BFHK1-120	**10 & 12**	1	0	017	681.98

Standard Butterfly Valve Bolt Kit - Type 304 Stainless Steel

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
For Connection of Valve Between 2-Spears® Flanges					
Inlcudes Bolts, Nuts & Flat Washers					
BFHK2-015	**1-1/2**	1	10	017	36.14
BFHK2-020	**2**	1	10	017	50.27
BFHK2-030	**2-1/2 & 3**	1	10	017	60.37
BFHK2-040	**4**	1	5	017	118.22
BFHK2-060	**6**	1	3	017	150.41
BFHK2-080	**8**	1	3	017	165.05
BFHK2-120	**10 & 12**	1	0	017	401.00

True-Lug Butterfly Valve Bolt Kit - Zinc Plated

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Connects 1-Side of of True-Lug Valve to 1-Spears® Flange					
Includes Bolt & Washers					
Use 2-Kits For Dual Spears® Flanges					
BFHKL-015	**1-1/2**	1	10	017	30.32
BFHKL-020	**2**	1	10	017	39.64
BFHKL-025	**2-1/2**	1	5	017	45.43
BFHKL-030	**3**	1	5	017	55.58
BFHKL-040	**4**	1	5	017	101.58
BFHKL-080	**6&8**	1	3	017	201.61
BFHKL-120	**10&12**	1	0	017	272.11

True-Lug Buterfly Valve Bolt Kit - Type 316 Stainless Steel

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Connects 1-Side of True-Lug Valve to 1-Spears® Flange					
Inlcudes Bolts & Flat Washers					
Use 2-Kits For Dual Spears® Flanges					
BFHKL1-015	**1-1/2**	1	10	017	62.06
BFHKL1-020	**2**	1	10	017	62.91
BFHKL1-025	**2-1/2**	1	10	017	68.63
BFHKL1-030	**3**	1	10	017	78.53
BFHKL1-040	**4**	1	5	017	164.72
BFHKL1-080	**6&8**	1	3	017	238.11
BFHKL1-120	**10&12**	1	0	017	578.32

True-Lug Butterfly Valve Bolt Kit - Type 304 Stainless Steel

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Connects 1-Side of True-Lug Valve to 1-Spears® Flange					
Inlcudes Bolts & Flat Washers					
Use 2-Kits For Dual Spears® Flanges					
BFHKL2-015	**1-1/2**	1	10	017	37.05
BFHKL2-020	**2**	1	10	017	45.05
BFHKL2-025	**2-1/2**	1	10	017	56.95
BFHKL2-030	**3**	1	10	017	70.21
BFHKL2-040	**4**	1	5	017	128.95
BFHKL2-080	**6&8**	1	3	017	218.21
BFHKL2-120	**10&12**	1	0	017	402.42

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Wafer Butterfly Valve Bolt Kit - Zinc Plated

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
For Connection of Valve Between 2-Spears® Flanges					
Includes Bolts, Nuts & Flat Washers					
Note: Do not order Gaskets, these are included with Wafer Butterfly Valves					
WBHK-020	**2**	1	10	017	10.62
WBHK-030	**2-1/2 & 3**	1	10	017	12.28
WBHK-040	**4**	1	5	017	25.93
WBHK-060	**6**	1	3	017	39.94
WBHK-080	**8**	1	0	017	53.86
WBHK-100	**10**	1	0	017	93.37
WBHK-120	**12**	1	0	017	109.20

Wafer Butterfly Valve Bolt Kit - Type 316 Stainless Steel

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
For Connection of Valve Between 2-Spears® Flanges					
Includes Bolts, Nuts & Flat Washers					
Note: Do not order Gaskets, these are included with Wafer Butterfly Valves					
WBHK1-020	**2**	1	10	017	51.31
WBHK1-030	**2-1/2 & 3**	1	10	017	66.26
WBHK1-040	**4**	1	5	017	132.51
WBHK1-060	**6**	1	3	017	214.74
WBHK1-080	**8**	1	0	017	272.81
WBHK1-100	**10**	1	0	017	726.86
WBHK1-120	**12**	1	0	017	915.76

Wafer Butterfly Valve Bolt Kit - Type 304 Stainless Steel

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
For Connection of Valve Between 2-Spears® Flanges					
Includes Bolts, Nuts & Flat Washers					
Note: Do not order Gaskets, these are included with Wafer Butterfly Valves					
WBHK2-020	**2**	1	10	017	33.14
WBHK2-030	**2-1/2 & 3**	1	10	017	44.68
WBHK2-040	**4**	1	5	017	84.64
WBHK2-060	**6**	1	3	017	113.59
WBHK2-080	**8**	1	0	017	150.96
WBHK2-100	**10**	1	0	017	357.54
WBHK2-120	**12**	1	0	017	475.41

Gear Operator Kits

For Wafer Style Butterfly Valves, replace the "GO" prefix with "GOW" in the part number (e.g., GOW-020). Pricing is as indicated.

Contact Spears® for Kit Pricing and Availability on 14" & Larger Valves

Gear Operator Kits

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
GO-015	**1-1/2**	1	2	299	683.19
GO-020	**2**	1	2	299	683.19

Gear Operator Kits (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
GO-030	**3**	1	2	299	683.19
GO-040	**4**	1	2	299	683.19
GO-060	**6**	1	2	299	712.27
GO-080	**8**	1	2	299	712.27
GO-100	**10**	1	2	299	1277.39
GO-120	**12**	1	0	299	1277.39
GO-140	**14-24**	1	0	299	1537.27
Powder Coated					
GOP-015	**1-1/2**	1	2	299	1099.35
GOP-020	**2**	1	2	299	1099.35
GOP-030	**3**	1	2	299	1099.35
GOP-040	**4**	1	2	299	1099.35
GOP-060	**6**	1	2	299	1128.43
GOP-080	**8**	1	2	299	1128.43
GOP-100	**10**	1	0	299	1693.55
GOP-120	**12**	1	0	299	1693.55

Lever Handle

Lever Handle Kits

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BFH-015	**1-1/2**	1	10	299	54.80
BFH-020	**2 OR 2-1/2**	1	10	299	54.80
BFH-030	**3**	1	10	299	58.24
BFH-040	**4**	1	10	299	69.01
BFH-060	**6**	1	10	299	129.45
BFH-080	**8**	1	10	299	168.28

T-Handle

T-Handle Kits

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BFTH-020	**2**	1	10	299	50.42
BFTH-030	**3**	1	10	299	58.24
BFTH-040	**4**	1	10	299	82.17

Speed Handle

Speed Handle For Gear Operator

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
SH-120	**1-1/2 - 12**	10	0	299	100.62

Butterfly Valve Accessories & Repair Kits

Operator Nut

2" Operator Nuts

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
GTN-040	**4**	10	60	299	107.86

Note: Operator Nut is used with Valve Gear Operator. Size 4 fits all Butterfly valve sizes 1-1/2" through 24".

Stem Stop

Gear Operator Positive Stem Stop

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PSS-120	**1-1/2 - 12**	50	0	299	29.87

Lug Insert Sets

Lug Insert Sets (For PVC/CPVC Standard Valves Only)

Size	Stainless Steel	Zinc Plated	Std Pk	Mstr Pk	Prod Code
1-1/2	LUG1-015 **453.01**	LUG2-015 **103.55**	1	10	299
2 OR 2-1/2	LUG1-020 **453.01**	LUG2-020 **103.55**	1	10	299
3	LUG1-030 **453.01**	LUG2-030 **103.55**	1	10	299
4	LUG1-040 **901.77**	LUG2-040 **207.08**	1	5	299
6 OR 8	LUG1-080 **1139.05**	LUG2-080 **422.84**	1	5	299
10 OR 12	LUG1-120 **2882.21**	LUG2-120 **862.95**	1	5	299

Chainwheel Operators

For Wafer Style Butterfly Valves, replace the "CO" prefix with "COW" in the part number (e.g., COW-020). Pricing is as indicated.

Contact Spears® for larger sizes

Valve not included

Order "valve only" (without operator) for use with Chainwheel Operator.

How to Order Chain Required chain length is based on chain drop at 3 ft. from floor									
Floor-to-Chainwheel Height	7'	8'	9'	10'	11'	12'	13	14'	15'
Required Chain Length	10'	12'	14'	16'	18'	20'	22'	24'	26'

Chainwheel Operators

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
CO-020	**2**	1	2	299	1168.20
CO-025	**2-1/2**	1	0	299	1168.20
CO-030	**3**	1	2	299	1246.07
CO-040	**4**	1	2	299	1246.07
CO-060	**6**	1	2	299	1246.07
CO-080	**8**	1	2	299	1246.07
CO-100	**10**	1	0	299	1791.22
CO-120	**12**	1	0	299	1791.22

Lock-Link Chain for Chainwheel Operators (price per foot)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BC-1	**BRASS**	1	0	901	20.65
GC-1	**HOT-DIP GALVANIZED**	1	100	901	6.27
SC-1	**STAINLESS STEEL**	1	0	901	44.09

Stem Extensions

Valve not included

Basic Stem Extension height is 24" and is manufactured in standard 6" increments (heights less than 24" are at the same price). Intermediate Stem Extension heights are available and are priced to the next full 6" increment. Stem Extensions over 120" in height are manufactured and shipped in 2–piece sections. Please contact your servicing Spears® Regional Distribution Center.

For Wafer Style Butterfly Valves, replace the "BFSE" prefix with "BFSEW" in the part number (e.g., BFSEW-020-240). Pricing is as indicated.

Contact Spears® for pricing and availability on Stem Extensions for 14" & Larger Butterfly Valves.

Stem Extensions

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BFSE-015-240	**1-1/2X24**	1	0	299	1022.58
BFSE-015-300	**1-1/2X30**	1	0	299	1085.84

Stem Extensions (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BFSE-015-360	1-1/2X36	1	0	299	1149.12
BFSE-015-420	1-1/2X42	1	0	299	1212.40
BFSE-015-480	1-1/2X48	1	0	299	1275.67
BFSE-015-540	1-1/2X54	1	0	299	1338.95
BFSE-015-600	1-1/2X60	1	0	299	1402.23
BFSE-015-660	1-1/2X66	1	0	299	1465.49
BFSE-015-720	1-1/2X72	1	0	299	1528.77
BFSE-015-780	1-1/2X78	1	0	299	1592.06
BFSE-015-840	1-1/2X84	1	0	299	1655.33
BFSE-015-900	1-1/2X90	1	0	299	1718.61
BFSE-015-960	1-1/2X96	1	0	299	1781.89
BFSE-015-1020	1-1/2X102	1	0	299	1845.16
BFSE-015-1080	1-1/2X108	1	0	299	1908.43
BFSE-015-1140	1-1/2X114	1	0	299	1971.71
BFSE-015-1200	1-1/2X120	1	0	299	2034.97
BFSE-020-240	2X24	1	0	299	1022.58
BFSE-020-300	2X30	1	0	299	1085.84
BFSE-020-360	2X36	1	0	299	1149.12
BFSE-020-420	2X42	1	0	299	1212.40
BFSE-020-480	2X48	1	0	299	1275.67
BFSE-020-540	2X54	1	0	299	1338.95
BFSE-020-600	2X60	1	0	299	1402.23
BFSE-020-660	2X66	1	0	299	1465.49
BFSE-020-720	2X72	1	0	299	1528.77
BFSE-020-780	2X78	1	0	299	1592.03
BFSE-020-840	2X84	1	0	299	1655.33
BFSE-020-900	2X90	1	0	299	1718.61
BFSE-020-960	2X96	1	0	299	1781.89
BFSE-020-1020	2X102	1	0	299	1845.16
BFSE-020-1080	2X108	1	0	299	1908.43
BFSE-020-1140	2X114	1	0	299	1971.71
BFSE-020-1200	2X120	1	0	299	2034.97
BFSE-030-240	3X24	1	0	299	1022.58
BFSE-030-300	3X30	1	0	299	1085.84
BFSE-030-360	3X36	1	0	299	1149.12
BFSE-030-420	3X42	1	0	299	1212.40
BFSE-030-480	3X48	1	0	299	1275.67
BFSE-030-540	3X54	1	0	299	1338.95
BFSE-030-600	3X60	1	0	299	1402.23
BFSE-030-660	3X66	1	0	299	1465.49
BFSE-030-720	3X72	1	0	299	1573.63
BFSE-030-780	3X78	1	0	299	1592.06
BFSE-030-840	3X84	1	0	299	1655.33
BFSE-030-900	3X90	1	0	299	1718.61
BFSE-030-960	3X96	1	0	299	1781.89
BFSE-030-1020	3X102	1	0	299	1845.16
BFSE-030-1080	3X108	1	0	299	1908.43
BFSE-030-1140	3X114	1	0	299	1971.71
BFSE-030-1200	3X120	1	0	299	2034.97
BFSE-040-240	4X24	1	0	299	1022.58
BFSE-040-300	4X30	1	0	299	1108.24
BFSE-040-360	4X36	1	0	299	1149.12
BFSE-040-420	4X42	1	0	299	1071.27
BFSE-040-480	4X48	1	0	299	1275.67
BFSE-040-540	4X54	1	0	299	1338.95
BFSE-040-600	4X60	1	0	299	1402.23
BFSE-040-660	4X66	1	0	299	1465.49
BFSE-040-720	4X72	1	0	299	1528.77
BFSE-040-780	4X78	1	0	299	1592.06
BFSE-040-840	4X84	1	0	299	1655.33
BFSE-040-900	4X90	1	0	299	1718.61
BFSE-040-960	4X96	1	0	299	1781.89
BFSE-040-1020	4X102	1	0	299	2310.90
BFSE-040-1080	4X108	1	0	299	2321.86
BFSE-040-1140	4X114	1	0	299	2422.92
BFSE-040-1200	4X120	1	0	299	2523.80

Stem Extensions (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BFSE-060-240	6X24	1	0	299	1140.17
BFSE-060-300	6X30	1	0	299	1140.17
BFSE-060-360	6X36	1	0	299	1149.12
BFSE-060-420	6X42	1	0	299	1212.40
BFSE-060-480	6X48	1	0	299	1275.67
BFSE-060-540	6X54	1	0	299	1338.95
BFSE-060-600	6X60	1	0	299	1402.23
BFSE-060-660	6X66	1	0	299	1465.49
BFSE-060-720	6X72	1	0	299	1528.77
BFSE-060-780	6X78	1	0	299	1592.06
BFSE-060-840	6X84	1	0	299	1655.33
BFSE-060-900	6X90	1	0	299	1718.61
BFSE-060-960	6X96	1	0	299	1781.89
BFSE-060-1020	6X102	1	0	299	2359.90
BFSE-060-1080	6X108	1	0	299	2451.85
BFSE-060-1140	6X114	1	0	299	2584.21
BFSE-060-1200	6X120	1	0	299	2656.47
BFSE-080-240	8X24	1	0	299	1022.58
BFSE-080-300	8X30	1	0	299	1085.84
BFSE-080-360	8X36	1	0	299	1149.12
BFSE-080-420	8X42	1	0	299	1212.40
BFSE-080-480	8X48	1	0	299	1275.67
BFSE-080-540	8X54	1	0	299	1338.95
BFSE-080-600	8X60	1	0	299	1402.23
BFSE-080-660	8X66	1	0	299	1465.49
BFSE-080-720	8X72	1	0	299	1528.77
BFSE-080-780	8X78	1	0	299	1592.06
BFSE-080-840	8X84	1	0	299	1655.33
BFSE-080-900	8X90	1	0	299	1718.61
BFSE-080-960	8X96	1	0	299	1781.89
BFSE-080-1020	8X102	1	0	299	2115.69
BFSE-080-1080	8X108	1	0	299	2205.46
BFSE-080-1140	8X114	1	0	299	2245.25
BFSE-080-1200	8X120	1	0	299	2401.89
BFSE-100-240	10X24	1	0	299	1430.88
BFSE-100-300	10X30	1	0	299	1524.92
BFSE-100-360	10X36	1	0	299	1642.63
BFSE-100-420	10X42	1	0	299	1698.35
BFSE-100-480	10X48	1	0	299	1873.01
BFSE-100-540	10X54	1	0	299	2047.65
BFSE-100-600	10X60	1	0	299	2222.27
BFSE-100-660	10X66	1	0	299	2396.94
BFSE-100-720	10X72	1	0	299	2571.59
BFSE-100-780	10X78	1	0	299	2746.22
BFSE-100-840	10X84	1	0	299	2920.86
BFSE-100-900	10X90	1	0	299	3095.55
BFSE-100-960	10X96	1	0	299	3270.15
BFSE-100-1020	10X102	1	0	299	3444.80
BFSE-100-1080	10X108	1	0	299	3619.44
BFSE-100-1140	10X114	1	0	299	3794.08
BFSE-100-1200	10X120	1	0	299	3968.73
BFSE-120-240	12X24	1	0	299	2474.80
BFSE-120-300	12X30	1	0	299	2538.37
BFSE-120-360	12X36	1	0	299	2613.85
BFSE-120-420	12X42	1	0	299	2702.82
BFSE-120-480	12X48	1	0	299	2852.17
BFSE-120-540	12X54	1	0	299	2852.07
BFSE-120-600	12X60	1	0	299	2941.40
BFSE-120-720	12X72	1	0	299	3120.94
BFSE-120-780	12X78	1	0	299	3201.04
BFSE-120-840	12X84	1	0	299	3269.94
BFSE-120-900	12X90	1	0	299	3270.15
BFSE-120-960	12X96	1	0	299	3466.15
BFSE-120-1020	12X102	1	0	299	3444.80
BFSE-120-1080	12X108	1	0	299	3619.44
BFSE-120-1140	12X114	1	0	299	3794.08

Stem Extensions (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BFSE-120-1200	12X120	1	0	299	3968.73

Butterfly Valve Seat Repair Kits

Important Repair & Overhaul Kit Ordering Note

Ongoing Butterfly Valve design improvements have resulted in variations to repair kits. Standard cataloged kits are for current 72 part number series, dry-stem type valve revision. Kits for previous revisions are available and can be determined by valve serial number. When ordering kits, please specify valve size, material (PVC, CPVC, PP), Standard, Lug or True Lug type valve, Buna–N, EPDM or FKM elastomer material, and valve serial number stamped on the bottom of the valve body to insure proper kit selection. Stainless Steel Stems are normally not replaced, but can be ordered separately on request.

Seat Repair Kits for Standard Valve include:
- 1-Seat
- 1-Seal Carrier

Repair Kits for Wafer Valve include:
- 1-Seat
- 2-Flange Gaskets

Seat Repair Kits for 14" & Larger Valves include:
- 1-Seat

PVC Standard Valve Seat Repair Kits

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1-1/2	BF-BRK-015 **19.40**	BF-ERK-015 **19.44**	BF-VRK-015 **114.97**	1	10	299
2	BF-BRK-020 **20.27**	BF-ERK-020 **20.83**	BF-VRK-020 **121.42**	1	10	299
2-1/2	BF-BRK-025 **21.41**	BF-ERK-025 **21.44**	BF-VRK-025 **131.23**	1	10	299
3	BF-BRK-030 **22.28**	BF-ERK-030 **24.78**	BF-VRK-030 **141.34**	1	10	299
4	BF-BRK-040 **34.57**	BF-ERK-040 **38.43**	BF-VRK-040 **171.38**	1	10	299
6	BF-BRK-060 **73.69**	BF-ERK-060 **81.87**	BF-VRK-060 **439.42**	1	10	299
8	BF-BRK-080 **92.14**	BF-ERK-080 **102.35**	BF-VRK-080 **503.54**	1	5	299
10	BF-BRK-100 **120.96**	BF-ERK-100 **134.41**	BF-VRK-100 **603.26**	1	10	299
12	BF-BRK-120 **164.88**	BF-ERK-120 **183.22**	BF-VRK-120 **708.55**	1	10	299

CPVC Standard Valve Seat Repair Kits

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1-1/2	BF-BRK-015C **19.95**	BF-ERK-015C **22.42**	BF-VRK-015C **125.34**	1	10	299
2	BF-BRK-020C **20.58**	BF-ERK-020C **23.46**	BF-VRK-020C **133.15**	1	10	299
2-1/2	BF-BRK-025C **22.39**	BF-ERK-025C **25.26**	BF-VRK-025C **143.64**	1	10	299
3	BF-BRK-030C **24.56**	BF-ERK-030C **27.27**	BF-VRK-030C **155.45**	1	10	299
4	BF-BRK-040C **38.04**	BF-ERK-040C **42.26**	BF-VRK-040C **188.52**	1	10	299
6	BF-BRK-060C **81.04**	BF-ERK-060C **90.03**	BF-VRK-060C **483.33**	1	10	299
8	BF-BRK-080C **100.58**	BF-ERK-080C **111.77**	BF-VRK-080C **553.87**	1	5	299
10	BF-BRK-100C **133.08**	BF-ERK-100C **147.86**	BF-VRK-100C **663.54**	1	10	299
12	BF-BRK-120C **181.40**	BF-ERK-120C **201.54**	BF-VRK-120C **779.37**	1	10	299

PP Standard Valve Seat Repair Kits

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1-1/2	BF-BRK-015P **20.49**	BF-ERK-015P **23.59**	BF-VRK-015P **132.26**	1	10	299
2	BF-BRK-020P **21.69**	BF-ERK-020P **25.19**	BF-VRK-020P **138.64**	1	10	299
2-1/2	BF-BRK-025P **24.94**	BF-ERK-025P **27.19**	BF-VRK-025P **147.15**	1	10	299

PP Standard Valve Seat Repair Kits (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
3	BF-BRK-030P **26.73**	BF-ERK-030P **28.97**	BF-VRK-030P **165.04**	1	10	299
4	BF-BRK-040P **39.63**	BF-ERK-040P **45.34**	BF-VRK-040P **196.59**	1	10	299
6	BF-BRK-060P **84.02**	BF-ERK-060P **97.61**	BF-VRK-060P **494.66**	1	10	299
8	BF-BRK-080P **123.87**	BF-ERK-080P **137.96**	BF-VRK-080P **582.18**	1	10	299
10	BF-BRK-100P **144.06**	BF-ERK-100P **164.73**	BF-VRK-100P **674.07**	1	10	299
12	BF-BRK-120P **223.23**	BF-ERK-120P **248.42**	BF-VRK-120P **804.23**	1	10	299
14	---	BF-ERK-140P **1461.38**	BF-VRK-140P **5944.25**	1	15	299
16	---	BF-ERK-160P **2435.63**	BF-VRK-160P **6753.28**	1	15	299
18	---	BF-ERK-180P **3291.39**	BF-VRK-180P **7943.39**	1	15	299
20	---	BF-ERK-200P **3698.06**	BF-VRK-200P **9454.96**	1	15	299
24	---	BF-ERK-240P **5281.67**	BF-VRK-240P **12604.92**	1	15	299

PVC & CPVC Wafer Butterfly Valve Repair Kits

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
2	BFW-BRK-020 **14.19**	BFW-ERK-020 **14.58**	BFW-VRK-020 **85.00**	1	10	299
2-1/2	BFW-BRK-025 **14.99**	BFW-ERK-025 **15.01**	BFW-VRK-025 **91.86**	1	10	299
3	BFW-BRK-030 **15.60**	BFW-ERK-030 **17.35**	BFW-VRK-030 **98.94**	1	10	299
4	BFW-BRK-040 **24.20**	BFW-ERK-040 **26.91**	BFW-VRK-040 **119.97**	1	10	299
6	BFW-BRK-060 **51.59**	BFW-ERK-060 **57.32**	BFW-VRK-060 **307.60**	1	10	299
8	BFW-BRK-080 **64.49**	BFW-ERK-080 **71.64**	BFW-VRK-080 **352.47**	1	10	299

Standard Valve Overhaul Kits

Standard Valve Overhaul Kits include:

- 1-Seat
- 1-Disc Timing Stop
- 1-Stem Bushing
- 1-Lower Stem Bearing
- 2-Stem O-rings
- 1-Upper Disc O-ring
- 1-Seal Carrier
- 1-Stem Nut
- 1-Hex Washer
- 1-Round Washer
- 2-Bushing O-rings
- 1-Lower Disc O-ring

Kits with Disc option include additional replacement Disc

PVC Standard Valve Overhaul Kits

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1-1/2	BF-BOK-015 **33.55**	BF-EOK-015 **38.02**	BF-VOK-015 **125.84**	1	10	299
2	BF-BOK-020 **43.48**	BF-EOK-020 **52.85**	BF-VOK-020 **142.80**	1	10	299
2-1/2	BF-BOK-025 **48.37**	BF-EOK-025 **64.14**	BF-VOK-025 **152.65**	1	10	299
3	BF-BOK-030 **56.91**	BF-EOK-030 **69.38**	BF-VOK-030 **167.36**	1	10	299
4	BF-BOK-040 **64.15**	BF-EOK-040 **80.51**	BF-VOK-040 **194.51**	1	10	299
6	BF-BOK-060 **89.13**	BF-EOK-060 **98.05**	BF-VOK-060 **476.02**	1	10	299
8	BF-BOK-080 **112.31**	BF-EOK-080 **140.72**	BF-VOK-080 **542.29**	1	10	299
10	BF-BOK-100 **161.31**	BF-EOK-100 **189.52**	BF-VOK-100 **624.83**	1	10	299
12	BF-BOK-120 **189.05**	BF-EOK-120 **218.29**	BF-VOK-120 **817.58**	1	10	299

CPVC Standard Valve Overhaul Kits

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1-1/2	BF-BOK-015C **40.63**	BF-EOK-015C **44.27**	BF-VOK-015C **145.69**	1	10	299
2	BF-BOK-020C **51.08**	BF-EOK-020C **64.38**	BF-VOK-020C **161.41**	1	10	299
2-1/2	BF-BOK-025C **63.52**	BF-EOK-025C **69.69**	BF-VOK-025C **172.59**	1	10	299
3	BF-BOK-030C **72.26**	BF-EOK-030C **80.81**	BF-VOK-030C **186.88**	1	10	299
4	BF-BOK-040C **79.69**	BF-EOK-040C **99.52**	BF-VOK-040C **220.18**	1	10	299
6	BF-BOK-060C **113.84**	BF-EOK-060C **126.27**	BF-VOK-060C **569.18**	1	10	299
8	BF-BOK-080C **127.16**	BF-EOK-080C **154.67**	BF-VOK-080C **632.57**	1	10	299
10	BF-BOK-100C **181.94**	BF-EOK-100C **213.28**	BF-VOK-100C **710.11**	1	10	299
12	BF-BOK-120C **236.18**	BF-EOK-120C **274.33**	BF-VOK-120C **905.06**	1	10	299

PP Standard Valve Overhaul Kits

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1-1/2	BF-BOK-015P **42.31**	BF-EOK-015P **46.26**	BF-VOK-015P **150.57**	1	10	299
2	BF-BOK-020P **54.19**	BF-EOK-020P **57.51**	BF-VOK-020P **166.11**	1	10	299
2-1/2	BF-BOK-025P **68.00**	BF-EOK-025P **81.34**	BF-VOK-025P **183.62**	1	10	299
3	BF-BOK-030P **89.47**	BF-EOK-030P **101.12**	BF-VOK-030P **206.64**	1	10	299
4	BF-BOK-040P **96.26**	BF-EOK-040P **107.91**	BF-VOK-040P **243.87**	1	10	299
6	BF-BOK-060P **119.15**	BF-EOK-060P **143.64**	BF-VOK-060P **599.29**	1	10	299
8	BF-BOK-080P **143.74**	BF-EOK-080P **177.01**	BF-VOK-080P **647.38**	1	10	299
10	BF-BOK-100P **194.46**	BF-EOK-100P **230.64**	BF-VOK-100P **768.81**	1	10	299
12	BF-BOK-120P **267.33**	BF-EOK-120P **292.29**	BF-VOK-120P **942.63**	1	10	299
14	---	BF-EOK-140P **1719.32**	BF-VOK-140P **6459.93**	1	15	299
16	---	BF-EOK-160P **2818.55**	BF-VOK-160P **7267.72**	1	15	299
18	---	BF-EOK-180P **3757.99**	BF-VOK-180P **9688.39**	1	15	299
20	---	BF-EOK-200P **4221.43**	BF-VOK-200P **11533.69**	1	15	299
24	---	BF-EOK-240P **6028.61**	BF-VOK-240P **15377.07**	1	15	299

PVC Standard Valve Overhaul Kits with Disc

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1-1/2	BF-BOKD-015 **43.08**	BF-EOKD-015 **47.55**	BF-VOKD-015 **134.31**	1	10	299
2	BF-BOKD-020 **59.88**	BF-EOKD-020 **70.63**	BF-VOKD-020 **165.80**	1	10	299
2-1/2	BF-BOKD-025 **63.00**	BF-EOKD-025 **77.24**	BF-VOKD-025 **178.96**	1	10	299
3	BF-BOKD-030 **68.29**	BF-EOKD-030 **97.91**	BF-VOKD-030 **202.54**	1	10	299
4	BF-BOKD-040 **74.98**	BF-EOKD-040 **108.01**	BF-VOKD-040 **242.80**	1	10	299
6	BF-BOKD-060 **113.93**	BF-EOKD-060 **128.07**	BF-VOKD-060 **535.32**	1	10	299
8	BF-BOKD-080 **150.69**	BF-EOKD-080 **205.88**	BF-VOKD-080 **600.48**	1	10	299
10	BF-BOKD-100 **257.58**	BF-EOKD-100 **291.91**	BF-VOKD-100 **664.01**	1	10	299
12	BF-BOKD-120 **315.91**	BF-EOKD-120 **336.32**	BF-VOKD-120 **873.46**	1	10	299

CPVC Standard Valve Overhaul Kits with Disc

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1-1/2	BF-BOKD-015C **46.54**	BF-EOKD-015C **49.71**	BF-VOKD-015C **151.62**	1	10	299
2	BF-BOKD-020C **71.16**	BF-EOKD-020C **81.13**	BF-VOKD-020C **171.46**	1	10	299
2-1/2	BF-BOKD-025C **78.02**	BF-EOKD-025C **109.17**	BF-VOKD-025C **197.04**	1	10	299
3	BF-BOKD-030C **86.26**	BF-EOKD-030C **113.05**	BF-VOKD-030C **233.71**	1	10	299
4	BF-BOKD-040C **91.86**	BF-EOKD-040C **118.02**	BF-VOKD-040C **300.31**	1	10	299
6	BF-BOKD-060C **119.64**	BF-EOKD-060C **148.91**	BF-VOKD-060C **634.94**	1	10	299
8	BF-BOKD-080C **181.67**	BF-EOKD-080C **215.92**	BF-VOKD-080C **682.36**	1	10	299
10	BF-BOKD-100C **289.86**	BF-EOKD-100C **321.26**	BF-VOKD-100C **768.27**	1	10	299
12	BF-BOKD-120C **335.04**	BF-EOKD-120C **355.74**	BF-VOKD-120C **987.32**	1	10	299

PP Standard Valve Overhaul Kits with Disc

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1-1/2	BF-BOKD-015P **46.86**	BF-EOKD-015P **54.49**	BF-VOKD-015P **172.06**	1	10	299
2	BF-BOKD-020P **75.57**	BF-EOKD-020P **84.60**	BF-VOKD-020P **194.42**	1	10	299
2-1/2	BF-BOKD-025P **81.52**	BF-EOKD-025P **123.58**	BF-VOKD-025P **221.65**	1	10	299
3	BF-BOKD-030P **88.24**	BF-EOKD-030P **128.59**	BF-VOKD-030P **259.35**	1	10	299
4	BF-BOKD-040P **95.15**	BF-EOKD-040P **134.41**	BF-VOKD-040P **318.98**	1	10	299
6	BF-BOKD-060P **124.61**	BF-EOKD-060P **162.78**	BF-VOKD-060P **678.69**	1	10	299
8	BF-BOKD-080P **202.12**	BF-EOKD-080P **236.33**	BF-VOKD-080P **729.79**	1	10	299
10	BF-BOKD-100P **309.13**	BF-EOKD-100P **344.66**	BF-VOKD-100P **829.29**	1	10	299
12	BF-BOKD-120P **347.02**	BF-EOKD-120P **364.94**	BF-VOKD-120P **1063.20**	1	10	299
14	---	BF-EOKD-140P **2146.75**	BF-VOKD-140P **6746.77**	1	0	299
16	---	BF-EOKD-160P **3517.61**	BF-VOKD-160P **7616.88**	1	0	299
18	---	BF-EOKD-180P **4690.04**	BF-VOKD-180P **10154.52**	1	0	299
20	---	BF-EOKD-200P **5269.01**	BF-VOKD-200P **12088.69**	1	0	299
24	---	BF-EOKD-240P **7526.69**	BF-VOKD-240P **16118.20**	1	0	299

Wafer Butterfly Valve Overhaul Kits

Wafer Valve Overhaul Kits include:

1-Seat
2-Flange Gaskets
2-Stem Bushing O-rings
2-Stem Bushing Washers
2-Stem Bushings

Kits with Disc option include additional replacement Disc

PVC & CPVC Wafer Butterfly Valve Overhaul Kits

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
2	BFW-BOK-020 **30.44**	BFW-EOK-020 **37.00**	BFW-VOK-020 **99.96**	1	10	299
2-1/2	BFW-BOK-025 **33.86**	BFW-EOK-025 **44.89**	BFW-VOK-025 **106.85**	1	10	299
3	BFW-BOK-030 **39.83**	BFW-EOK-030 **48.57**	BFW-VOK-030 **117.15**	1	10	299
4	BFW-BOK-040 **44.91**	BFW-EOK-040 **56.36**	BFW-VOK-040 **136.16**	1	10	299

Butterfly Valve Accessories & Repair Kits

PVC & CPVC Wafer Butterfly Valve Overhaul Kits (continued)

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
6	BFW-BOK-060 **62.39**	BFW-EOK-060 **68.64**	BFW-VOK-060 **333.21**	1	10	299
8	BFW-BOK-080 **78.61**	BFW-EOK-080 **98.51**	BFW-VOK-080 **379.61**	1	10	299

PVC Wafer Butterfly Valve Overhaul Kits with Disc

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
2	BFW-BOKD-020 **41.92**	BFW-EOKD-020 **49.44**	BFW-VOKD-020 **116.06**	1	10	299
2-1/2	BFW-BOKD-025 **44.11**	BFW-EOKD-025 **54.07**	BFW-VOKD-025 **125.27**	1	10	299
3	BFW-BOKD-030 **47.81**	BFW-EOKD-030 **68.54**	BFW-VOKD-030 **141.78**	1	10	299
4	BFW-BOKD-040 **52.48**	BFW-EOKD-040 **75.61**	BFW-VOKD-040 **169.96**	1	10	299
6	BFW-BOKD-060 **79.75**	BFW-EOKD-060 **89.65**	BFW-VOKD-060 **374.73**	1	10	299
8	BFW-BOKD-080 **105.48**	BFW-EOKD-080 **144.12**	BFW-VOKD-080 **420.34**	1	10	299

CPVC Wafer Butterfly Valve Overhaul Kits with Disc

PVC True Lug Valve Overhaul Kits

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
2	BFW-EOKD-020C **56.79**	BFW-VOKD-020C **120.02**	1	10	299
2-1/2	BFW-EOKD-025C **76.42**	BFW-VOKD-025C **137.93**	1	10	299
3	BFW-EOKD-030C **79.14**	BFW-VOKD-030C **163.59**	1	10	299
4	BFW-EOKD-040C **82.61**	BFW-VOKD-040C **210.21**	1	10	299
6	BFW-EOKD-060C **104.23**	BFW-VOKD-060C **444.45**	1	10	299
8	BFW-EOKD-080C **151.14**	BFW-VOKD-080C **477.65**	1	10	299

True Lug Valve Overhaul Kits include:

- 1-Seat
- 1-Disc Timing Stop
- 1-Stem Bushing
- 1-Lower Stem Bearing
- 2-Stem O-rings
- 1-Upper Disc O-ring
- 1-Seal Carrier Flange O-ring
- 1-Seal Carrier
- 1-Stem Nut
- 1-Hex Washer
- 1-Round Washer
- 2-Bushing O-rings
- 1-Lower Disc O-ring

Kits with Disc option include additional replacement Disc

PVC True Lug Valve Overhaul Kits

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1-1/2	BFT-BOK-015 **34.56**	BFT-EOK-015 **39.19**	BFT-VOK-015 **129.76**	1	10	299
2	BFT-BOK-020 **44.77**	BFT-EOK-020 **54.44**	BFT-VOK-020 **147.22**	1	10	299
2-1/2	BFT-BOK-025 **49.95**	BFT-EOK-025 **66.13**	BFT-VOK-025 **157.39**	1	10	299
3	BFT-BOK-030 **58.67**	BFT-EOK-030 **71.52**	BFT-VOK-030 **172.52**	1	10	299
4	BFT-BOK-040 **66.14**	BFT-EOK-040 **83.01**	BFT-VOK-040 **200.51**	1	10	299
6	BFT-BOK-060 **91.87**	BFT-EOK-060 **100.76**	BFT-VOK-060 **490.74**	1	10	299
8	BFT-BOK-080 **115.77**	BFT-EOK-080 **145.07**	BFT-VOK-080 **559.09**	1	10	299
10	BFT-BOK-100 **166.32**	BFT-EOK-100 **195.38**	BFT-VOK-100 **659.61**	1	10	299
12	BFT-BOK-120 **194.78**	BFT-EOK-120 **225.05**	BFT-VOK-120 **842.85**	1	15	299

CPVC True Lug Valve Overhaul Kits

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1-1/2	BFT-BOK-015C **41.85**	BFT-EOK-015C **45.64**	BFT-VOK-015C **150.20**	1	10	299
2	BFT-BOK-020C **52.65**	BFT-EOK-020C **66.38**	BFT-VOK-020C **166.41**	1	10	299
2-1/2	BFT-BOK-025C **65.48**	BFT-EOK-025C **71.88**	BFT-VOK-025C **177.91**	1	10	299
3	BFT-BOK-030C **74.49**	BFT-EOK-030C **83.32**	BFT-VOK-030C **192.66**	1	10	299
4	BFT-BOK-040C **82.17**	BFT-EOK-040C **102.61**	BFT-VOK-040C **226.97**	1	10	299
6	BFT-BOK-060C **117.32**	BFT-EOK-060C **130.19**	BFT-VOK-060C **586.75**	1	10	299
8	BFT-BOK-080C **131.08**	BFT-EOK-080C **159.44**	BFT-VOK-080C **652.13**	1	10	299
10	BFT-BOK-100C **187.59**	BFT-EOK-100C **218.15**	BFT-VOK-100C **732.05**	1	10	299
12	BFT-BOK-120C **243.52**	BFT-EOK-120C **297.91**	BFT-VOK-120C **933.05**	1	15	299

PVC True Lug Valve Overhaul Kits with Disc

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1-1/2	BFT-BOKD-015 **44.41**	BFT-EOKD-015 **49.01**	BFT-VOKD-015 **138.40**	1	10	299
2	BFT-BOKD-020 **61.73**	BFT-EOKD-020 **72.81**	BFT-VOKD-020 **170.94**	1	10	299
2-1/2	BFT-BOKD-025 **64.93**	BFT-EOKD-025 **79.66**	BFT-VOKD-025 **184.52**	1	10	299
3	BFT-BOKD-030 **70.40**	BFT-EOKD-030 **100.88**	BFT-VOKD-030 **208.81**	1	10	299
4	BFT-BOKD-040 **77.29**	BFT-EOKD-040 **111.36**	BFT-VOKD-040 **250.29**	1	10	299
6	BFT-BOKD-060 **117.47**	BFT-EOKD-060 **131.89**	BFT-VOKD-060 **551.89**	1	10	299
8	BFT-BOKD-080 **155.36**	BFT-EOKD-080 **179.32**	BFT-VOKD-080 **619.05**	1	10	299
10	BFT-BOKD-100 **265.56**	BFT-EOKD-100 **300.93**	BFT-VOKD-100 **684.55**	1	10	299
12	BFT-BOKD-120 **325.67**	BFT-EOKD-120 **346.72**	BFT-VOKD-120 **900.51**	1	10	299

CPVC True Lug Valve Overhaul Kits with Disc

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1-1/2	BFT-BOKD-015C **47.94**	BFT-EOKD-015C **51.27**	BFT-VOKD-015C **156.27**	1	10	299
2	BFT-BOKD-020C **73.34**	BFT-EOKD-020C **83.64**	BFT-VOKD-020C **176.79**	1	10	299
2-1/2	BFT-BOKD-025C **80.42**	BFT-EOKD-025C **112.56**	BFT-VOKD-025C **203.93**	1	10	299
3	BFT-BOKD-030C **88.92**	BFT-EOKD-030C **116.61**	BFT-VOKD-030C **240.92**	1	10	299
4	BFT-BOKD-040C **94.73**	BFT-EOKD-040C **121.65**	BFT-VOKD-040C **309.60**	1	10	299
6	BFT-BOKD-060C **123.34**	BFT-EOKD-060C **153.56**	BFT-VOKD-060C **654.59**	1	10	299
8	BFT-BOKD-080C **187.32**	BFT-EOKD-080C **222.58**	BFT-VOKD-080C **703.47**	1	10	299
10	BFT-BOKD-100C **298.84**	BFT-EOKD-100C **331.18**	BFT-VOKD-100C **792.69**	1	10	299
12	BFT-BOKD-120C **345.40**	BFT-EOKD-120C **366.73**	BFT-VOKD-120C **1017.85**	1	10	299

Contact Spears® for pricing on the following additional accessories:

- **PTFE Seat Sleeves**
- **PTFE Coated Valve Stems**

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Globe Valves

PRICING

Globe Valves

Pressure Rating @ 73°F (23°C), Water
2-1/2" - 6" 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
All Valves Assembled with Silicone-Free, Water Soluble Lubricant
Suitable for Vacuum Service

Internal Repair Kit includes 1-Bonnet O−ring along with a factory assembled (required) internal component replacement unit consisting of Bonnet assembled with Stem/O-rings, Seat & Seal Carrier components. Install in valve using existing valve Bolts/Nuts/Washers, and Handle/Nut.

PVC Flanged Ends

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
2-1/2	6013-025 **608.27**	6023-025 **643.73**	6033-025 **693.48**	1	0	620
3	6013-030 **697.26**	6023-030 **728.15**	6033-030 **810.33**	1	0	620
4	6013-040 **791.04**	6023-040 **945.64**	6033-040 **1039.07**	1	0	620
6	6013-060 **1216.55**	6023-060 **1454.71**	6033-060 **1483.69**	1	0	620

CPVC Flanged Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
2-1/2	6023-025C **976.00**	6033-025C **1025.04**	1	0	622
3	6023-030C **1024.57**	6033-030C **1138.97**	1	0	622
4	6023-040C **1330.67**	6033-040C **1462.78**	1	0	622
6	6023-060C **2071.91**	6033-060C **2089.43**	1	0	622

PVC Internal Repair Kit

Size	Buna-N	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
2-1/2	GL-BRK-025 **202.35**	GL-ERK-025 **489.42**	GL-VRK-025 **544.35**	1	0	299
3	GL-BRK-030 **225.51**	GL-ERK-030 **542.27**	GL-VRK-030 **604.42**	1	0	299
4	GL-BRK-040 **264.58**	GL-ERK-040 **635.91**	GL-VRK-040 **699.16**	1	0	299
6	GL-BRK-060 **576.49**	GL-ERK-060 **977.16**	GL-VRK-060 **997.16**	1	0	299

CPVC Internal Repair Kits

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
2-1/2	GL-ERK-025C **689.17**	GL-VRK-025C **765.76**	1	0	299
3	GL-ERK-030C **788.38**	GL-VRK-030C **865.75**	1	0	299
4	GL-ERK-040C **893.94**	GL-VRK-040C **983.81**	1	0	299
6	GL-ERK-060C **1276.81**	GL-VRK-060C **1404.99**	1	0	299

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Needle Valves

PRICING

Needle Valves

Pressure Rating @ 73°F (23°C), Water
PVC or CPVC 235 psi
PP 150 psi

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
PP = 180°F (82°C)

Solid PTFE Stem Seals
No Elastomer or Lubricants used
Valves include Panel Mounting Nut

PVC Needle Valve

Size	Threaded	Socket	SR Threaded	Std Pk	Mstr Pk	Prod Code
Globe Pattern						
1/4	5591-002 **71.27**	5592-002 **71.27**	---	1	18	218
3/8	5591-003 **71.27**	5592-003 **71.27**	5591-003SR **65.01**	1	18	218
1/2	5591-005 **79.11**	5592-005 **79.11**	5591-005SR **81.23**	1	18	218
Angle Pattern						
1/4	5691-002 **71.27**	5692-002 **71.27**	---	1	18	218
3/8	5691-003 **71.27**	5692-003 **71.27**	---	1	18	218
1/2	5691-005 **79.11**	5692-005 **79.11**	5691-005SR **81.23**	1	18	218

CPVC Needle Valve

Size	Threaded	Socket	SR Threaded	Std Pk	Mstr Pk	Prod Code
Globe Pattern						
1/4	5591-002C **83.94**	5592-002C **83.94**	---	1	18	219
3/8	5591-003C **83.94**	5592-003C **83.94**	5591-003CSR **83.75**	1	18	219
1/2	5591-005C **88.77**	5592-005C **88.77**	5591-005CSR **91.04**	1	18	219
Angle Pattern						
1/4	5691-002C **83.94**	5692-002C **83.94**	---	1	18	219
3/8	5691-003C **83.94**	5692-003C **83.94**	---	1	18	219
1/2	5691-005C **88.77**	5692-005C **88.77**	5691-005CSR **91.04**	1	18	219

PP Needle Valve

Size	Threaded		SR Threaded	Std Pk	Mstr Pk	Prod Code
Globe Pattern						
1/4	5591-002P **78.54**	---	---	1	18	219
3/8	5591-003P **78.54**	---	---	1	18	219
1/2	---	---	5591-005PSR **86.85**	1	18	219
Angle Pattern						
1/4	5691-002P **78.54**	---	---	1	18	219
3/8	5691-003P **78.54**	---	---	1	18	219
1/2	---	---	5691-005PSR **86.85**	1	18	219

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Diaphragm Valves

PRICING

True Union, Spigot, Flanged Diaphragm Valves

Socket/Threaded Style

Flanged Style

Pressure Rating @ 73°F (23°C), Water

1/2" - 2"	235 psi
1/2" - 4" Flanged & Valves w/PTFE Diaphragms	150 psi
6"	100 psi
8"	75 psi

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
PP = 180°F (82°C)

Temperature/Pressure De-ratings Apply
No Lubricants in Media Contact Area
See Diaphragm Valve Repair Kits Section for Additional Options and Features

Contact Spears® for Pricing on Additional Specialty Diaphragms

- Hypalon®
- Hypalon® backed PTFE
- PTFE Encapsulated O-rings (for True Union Style Valves)

Spigot Style

PP Thread Style

PVC - Socket Ends (True Union Style Uses End Connector O-ring Seals)

Size	EPDM Seals & Diaphragm	FKM Seals & Diaphragm	EPDM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Prod Code
1/2	2729-005 **138.17**	2739-005 **153.52**	2729T-005 **220.23**	2739T-005 **244.36**	2739VT-005 **301.41**	1	12	270
3/4	2729-007 **156.82**	2739-007 **174.26**	2729T-007 **235.19**	2739T-007 **263.92**	2739VT-007 **325.84**	1	8	270
1	2729-010 **193.27**	2739-010 **212.38**	2729T-010 **339.29**	2739T-010 **351.71**	2739VT-010 **415.07**	1	8	270
1-1/4	2729-012 **289.32**	2739-012 **344.00**	2729T-012 **466.44**	2739T-012 **494.42**	2739VT-012 **559.41**	1	4	270
1-1/2	2729-015 **304.11**	2739-015 **351.93**	2729T-015 **497.96**	2739T-015 **522.87**	2739VT-015 **579.77**	1	4	270
2	2729-020 **359.78**	2739-020 **426.36**	2729T-020 **567.82**	2739T-020 **596.35**	2739VT-020 **727.21**	1	0	270

PVC - SR Threaded Ends (True Union Style Uses End Connector O-ring Seals)

Size	EPDM Seals & Diaphragm	FKM Seals & Diaphragm	EPDM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Prod Code
1/2	2721-005SR **138.17**	2731-005SR **153.52**	2721T-005SR **220.23**	2731T-005SR **244.36**	2731VT-005SR **301.41**	1	12	270
3/4	2721-007SR **156.82**	2731-007SR **174.26**	2721T-007SR **235.19**	2731T-007SR **263.92**	2731VT-007SR **325.84**	1	8	270
1	2721-010SR **193.27**	2731-010SR **212.38**	2721T-010SR **339.29**	2731T-010SR **351.71**	2731VT-010SR **415.07**	1	8	270
1-1/4	2721-012SR **289.32**	2731-012SR **344.00**	2721T-012SR **466.44**	2731T-012SR **494.42**	2731VT-012SR **559.41**	1	4	270
1-1/2	2721-015SR **304.11**	2731-015SR **351.93**	2721T-015SR **497.96**	2731T-015SR **522.87**	2731VT-015SR **579.77**	1	4	270
2	2721-020SR **359.78**	2731-020SR **426.36**	2721T-020SR **567.82**	2731T-020SR **596.35**	2731VT-020SR **727.21**	1	0	270

PVC - Spigot Ends

Size	EPDM Diaphragm	FKM Diaphragm	EPDM Backed PTFE Diaphragm	FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Prod Code
1/2	2727-005 **134.69**	2737-005 **149.64**	2797T-005 **212.65**	2797VT-005 **246.13**	1	12	270
3/4	2727-007 **151.76**	2737-007 **167.95**	2797T-007 **226.91**	2797VT-007 **270.23**	1	8	270
1	2727-010 **188.36**	2737-010 **205.13**	2797T-010 **331.25**	2797VT-010 **385.63**	1	8	270
1-1/4	2727-012 **280.05**	2737-012 **337.34**	2797T-012 **455.60**	2797VT-012 **506.20**	1	4	270
1-1/2	2727-015 **296.52**	2737-015 **343.13**	2797T-015 **485.58**	2797VT-015 **554.63**	1	4	270
2	2727-020 **348.61**	2737-020 **411.64**	2797T-020 **550.78**	2797VT-020 **677.99**	1	0	270

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

True Union, Spigot, Flanged Diaphragm Valves

PVC - Flanged Ends

Size	EPDM Diaphragm	FKM Diaphragm	EPDM Backed PTFE Diaphragm	FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Prod Code
1/2	2723-005 **220.62**	2733-005 **238.83**	2793T-005 **301.41**	2793VT-005 **330.85**	4	0	270
3/4	2723-007 **247.91**	2733-007 **254.18**	2793T-007 **325.84**	2793VT-007 **367.59**	4	0	270
1	2723-010 **278.91**	2733-010 **311.92**	2793T-010 **415.07**	2793VT-010 **465.51**	4	0	270
1-1/4	2723-012 **378.85**	2733-012 **419.41**	2793T-012 **559.41**	2793VT-012 **617.51**	1	4	270
1-1/2	2723-015 **383.39**	2733-015 **428.03**	2793T-015 **579.77**	2793VT-015 **644.24**	1	4	270
2	2723-020 **455.72**	2733-020 **487.52**	2793T-020 **650.22**	2793VT-020 **743.36**	1	0	270
2-1/2	2723-025 **636.56**	2733-025 **727.61**	2793T-025 **1005.45**	2793VT-025 **1151.62**	1	0	271
3	2723-030 **851.09**	2733-030 **945.73**	2793T-030 **1318.47**	2793VT-030 **1458.88**	1	0	271
4	2723-040 **1178.95**	2733-040 **1285.62**	2793T-040 **1827.12**	2793VT-040 **2030.06**	1	0	271
6	2723-060 **2848.21**	2733-060 **3334.72**	2793T-060 **4731.41**	2793VT-060 **5199.41**	1	0	271
8	2723-080 **5694.80**	2733-080 **6000.89**	2793T-080 **7022.07**	2793VT-080 **7888.94**	1	0	271

CPVC - Socket Ends (True Union Style Uses End Connector O-ring Seals)

Size	EPDM Seals & Diaphragm	FKM Seals & Diaphragm	EPDM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Prod Code
1/2	2729-005C **244.62**	2739-005C **313.51**	2729T-005C **351.63**	2739T-005C **378.55**	2739VT-005C **418.69**	1	12	272
3/4	2729-007C **272.25**	2739-007C **334.25**	2729T-007C **388.35**	2739T-007C **405.93**	2739VT-007C **448.98**	1	8	272
1	2729-010C **314.22**	2739-010C **406.44**	2729T-010C **472.16**	2739T-010C **492.53**	2739VT-010C **540.93**	1	8	272
1-1/4	2729-012C **471.96**	2739-012C **561.55**	2729T-012C **651.60**	2739T-012C **674.64**	2739VT-012C **733.86**	1	4	272
1-1/2	2729-015C **485.93**	2739-015C **568.46**	2729T-015C **661.72**	2739T-015C **699.96**	2739VT-015C **756.38**	1	4	272
2	2729-020C **517.58**	2739-020C **648.78**	2729T-020C **727.66**	2739T-020C **806.34**	2739VT-020C **891.86**	1	0	272

CPVC - SR Threaded Ends (True Union Style Uses End Connector O-ring Seals)

Size	EPDM Seals & Diaphragm	FKM Seals & Diaphragm	EPDM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Prod Code
1/2	2721-005CSR **244.62**	2731-005CSR **313.51**	2721T-005CSR **351.63**	2731T-005CSR **378.55**	2731VT-005CSR **418.69**	1	12	272
3/4	2721-007CSR **272.25**	2731-007CSR **334.25**	2721T-007CSR **388.35**	2731T-007CSR **405.93**	2731VT-007CSR **448.98**	1	8	272
1	2721-010CSR **314.22**	2731-010CSR **406.44**	2721T-010CSR **472.16**	2731T-010CSR **492.53**	2731VT-010CSR **540.93**	1	8	272
1-1/4	2721-012CSR **471.96**	2731-012CSR **561.55**	2721T-012CSR **651.60**	2731T-012CSR **674.64**	2731VT-012CSR **733.86**	1	4	272
1-1/2	2721-015CSR **485.93**	2731-015CSR **568.46**	2721T-015CSR **661.72**	2731T-015CSR **699.96**	2731VT-015CSR **756.38**	1	4	272
2	2721-020CSR **517.58**	2731-020CSR **648.78**	2721T-020CSR **727.66**	2731T-020CSR **806.34**	2731VT-020CSR **891.86**	1	0	272

CPVC - Spigot Ends

Size	EPDM Diaphragm	FKM Diaphragm	EPDM Backed PTFE Diaphragm	FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Prod Code
1/2	2727-005C **238.46**	2737-005C **303.65**	2797T-005C **341.72**	2797VT-005C **381.72**	1	12	272
3/4	2727-007C **264.71**	2737-007C **323.88**	2797T-007C **376.61**	2797VT-007C **416.62**	1	8	272
1	2727-010C **307.49**	2737-010C **395.07**	2797T-010C **460.20**	2797VT-010C **507.17**	1	8	272
1-1/4	2727-012C **460.04**	2737-012C **546.16**	2797T-012C **634.12**	2797VT-012C **702.56**	1	4	272
1-1/2	2727-015C **470.28**	2737-015C **551.86**	2797T-015C **645.07**	2797VT-015C **713.87**	1	4	272
2	2727-020C **504.53**	2737-020C **632.13**	2797T-020C **709.15**	2797VT-020C **783.86**	1	0	272

True Union, Spigot, Flanged Diaphragm Valves

CPVC - Flanged Ends

Size	EPDM Diaphragm	FKM Diaphragm	EPDM Backed PTFE Diaphragm	FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Prod Code
1/2	2723-005C **295.77**	2733-005C **326.63**	2793T-005C **426.35**	2793VT-005C **472.87**	4	0	272
3/4	2723-007C **330.71**	2733-007C **365.27**	2793T-007C **455.83**	2793VT-007C **504.24**	4	0	272
1	2723-010C **407.22**	2733-010C **455.39**	2793T-010C **560.14**	2793VT-010C **621.29**	4	0	272
1-1/4	2723-012C **520.28**	2733-012C **596.04**	2793T-012C **707.06**	2793VT-012C **781.59**	1	4	272
1-1/2	2723-015C **527.19**	2733-015C **610.71**	2793T-015C **844.60**	2793VT-015C **930.33**	1	4	272
2	2723-020C **590.43**	2733-020C **662.17**	2793T-020C **938.46**	2793VT-020C **1042.25**	1	0	272
2-1/2	2723-025C **1072.56**	2733-025C **1197.84**	2793T-025C **1852.20**	2793VT-025C **2190.55**	1	0	273
3	2723-030C **1618.78**	2733-030C **1798.63**	2793T-030C **2436.57**	2793VT-030C **2694.60**	1	0	273
4	2723-040C **2223.06**	2733-040C **2469.55**	2793T-040C **3238.77**	2793VT-040C **3455.46**	1	0	273
6	2723-060C **4069.32**	2733-060C **5834.95**	2793T-060C **7122.09**	2793VT-060C **9280.51**	1	0	273
8	2723-080C **8133.81**	2733-080C **10503.55**	2793T-080C **10621.16**	2793VT-080C **11800.37**	1	0	273

PP - SR Threaded Ends (True Union Style Uses End Connector O-ring Seals)

Size	EPDM Seals & Diaphragm	FKM Seals & Diaphragm	EPDM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & EPDM Backed PTFE Diaphragm	FKM Seals & FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Prod Code
1/2	2721-005PSR **141.92**	2731-005PSR **157.88**	2721T-005PSR **226.87**	2731T-005PSR **238.82**	2731VT-005PSR **270.09**	1	12	280
3/4	2721-007PSR **161.63**	2731-007PSR **179.32**	2721T-007PSR **237.53**	2731T-007PSR **252.03**	2731VT-007PSR **295.88**	1	8	280
1	2721-010PSR **199.94**	2731-010PSR **220.29**	2721T-010PSR **346.26**	2731T-010PSR **364.27**	2731VT-010PSR **384.35**	1	8	280
1-1/4	2721-012PSR **303.65**	2731-012PSR **338.13**	2721T-012PSR **474.08**	2731T-012PSR **497.04**	2731VT-012PSR **551.59**	1	4	280
1-1/2	2721-015PSR **317.62**	2731-015PSR **352.59**	2721T-015PSR **505.57**	2731T-015PSR **530.11**	2731VT-015PSR **570.94**	1	4	280
2	2721-020PSR **369.41**	2731-020PSR **410.53**	2721T-020PSR **576.81**	2731T-020PSR **605.21**	2731VT-020PSR **657.75**	1	0	280

PP - Flanged Ends

Size	EPDM Diaphragm	FKM Diaphragm	EPDM Backed PTFE Diaphragm	FKM Backed PTFE Diaphragm	Std Pk	Mstr Pk	Prod Code
2-1/2	2723-025P **680.55**	2733-025P **752.06**	2793T-025P **1070.76**	2793VT-025P **1195.80**	1	0	281
3	2723-030P **973.09**	2733-030P **1075.14**	2793T-030P **1480.80**	2793VT-030P **1651.21**	1	0	281
4	2723-040P **1400.18**	2733-040P **1541.54**	2793T-040P **1973.94**	2793VT-040P **2189.40**	1	0	281
6	2723-060P **3465.21**	2733-060P **3850.23**	2793T-060P **4947.32**	2793VT-060P **5592.09**	1	0	281
8	2723-080P **8626.77**	2733-080P **7766.52**	2793T-080P **8980.86**	2793VT-080P **15133.51**	1	0	281

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Tee-Style "Zero Dead-Leg" Diaphragm Valves

Valves are produced to order in Diaphragm Valve sizes 1/2" - 2" and virtually any user specified Mainline Socket Tee size available.
Tee-Style Valve material options include PVC, CPVC, or Low Extractable PVC.
Valve End Connection options include Spigot, Socket & Thread, or patented Special Reinforced (SR) Female Plastic Thread.
Diaphragm Options include EPDM, FKM, PTFE with bonded EPDM backing, or PTFE with bonded FKM backing.

Pressure Rating @ 73°F (23°C), Water
Valve Sizes 1/2" - 2" (20mm - 63mm)
235 psi with Elastomer Diaphragms
150 psi with PTFE Diaphragms

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply

CONTACT SPEARS® FOR SELECTION ASSISTANCE & PRICING

Quick View Selection Chart

The following Base Part Numbers must be completed according to desired configuration size. Contact Spears® for the appropriate Tee size x Valve size code designations to replace the "xxx" in each.

Diaphragm Material	PVC Base Part Number			Pressure Rating @ 73°F (23°C)
	Spigot	Socket & Threaded	SR Threaded	
EPDM	2727ZD-xxx	2729ZD-xxx	2721ZD-xxxSR	1/2" – 2" 235 psi
FKM	2737ZD-xxx	2739ZD-xxx	2731ZD-xxxSR	
PTFE, EPDM Backing	2797TZD-xxx	2729TZD-xxx	2721TZD-xxxSR	1/2" – 2" 150 psi
PTFE FKM Backing	2797VTZD-xxx	2739VTZD-xxx	2731VTZD-xxxSR	

Diaphragm Material	CPVC Base Part Number			Pressure Rating @ 73°F (23°C)
	Spigot	Socket & Threaded	SR Threaded	
EPDM	2727ZD-xxxC	2729ZD-xxxC	2721ZD-xxxCSR	1/2" – 2" 235 psi
FKM	2737ZD-xxxC	2739ZD-xxxC	2731ZD-xxxCSR	
PTFE, EPDM Backing	2797TZD-xxxC	2729TZD-xxxC	2721TZD-xxxCSR	1/2" – 2" 150 psi
PTFE FKM Backing	2797VTZD-xxxC	2739VTZD-xxxC	2731VTZD-xxxCSR	

Diaphragm Material	Low Extractable PVC Base Part Number			Pressure Rating @ 73°F (23°C)
	Spigot	Socket & Threaded	SR Threaded	
EPDM	2727ZD-xxxBL	2729ZD-xxxBL	2721ZD-xxxSRBL	1/2" – 2" 235 psi
FKM	2737ZD-xxxBL	2739ZD-xxxBL	2731ZD-xxxSRBL	
PTFE, EPDM Backing	2797TZD-xxxBL	2729TZD-xxxBL	2721TZD-xxxSRBL	1/2" – 2" 150 psi
PTFE FKM Backing	2797VTZD-xxxBL	2739VTZD-xxxBL	2731VTZD-xxxSRBL	

Note: Low Extractable PVC Valves are typically used with elastomer backed PTFE Diaphragms to maintain purity in most applications. Tee-Style Zero Dead-Leg Diaphragm Valves are a non-stock configuration. All orders are non-cancelable, non-returnable.

Diaphragm Valve Repair Kits

True Union Style Diaphragm Valve Repair Kits

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
O-rings & Elastomer Diaphragm					
1/2	DV-ERK-005 **48.20**	DV-VRK-005 **105.40**	1	10	299
3/4	DV-ERK-007 **54.73**	DV-VRK-007 **114.24**	1	10	299
1	DV-ERK-010 **68.46**	DV-VRK-010 **126.84**	1	10	299
1-1/4 OR 1-1/2	DV-ERK-015 **94.45**	DV-VRK-015 **214.43**	1	10	299
2	DV-ERK-020 **112.41**	DV-VRK-020 **255.15**	1	10	299
O-rings & EPDM Backed PTFE Diaphragm					
1/2	DV-TERK-005 **128.29**	DV-TVRK-005 **133.76**	1	10	299
3/4	DV-TERK-007 **143.19**	DV-TVRK-007 **148.60**	1	10	299
1	DV-TERK-010 **172.77**	DV-TVRK-010 **174.85**	1	10	299
1-1/4 OR 1-1/2	DV-TERK-015 **236.68**	DV-TVRK-015 **239.53**	1	10	299
2	DV-TERK-020 **276.03**	DV-TVRK-020 **283.85**	1	10	299
O-rings & FKM Backed PTFE Diaphragm					
1/2	DV-VTERK-005 **147.72**	DV-VTVRK-005 **164.99**	1	10	299
3/4	DV-VTERK-007 **154.84**	DV-VTVRK-007 **174.87**	1	10	299
1	DV-VTERK-010 **190.40**	DV-VTVRK-010 **211.69**	1	10	299
1-1/4 OR 1-1/2	DV-VTERK-015 **332.40**	DV-VTVRK-015 **344.31**	1	5	299
2	DV-VTERK-020 **337.97**	DV-VTVRK-020 **488.32**	1	5	299

True Union Diaphragm Repair Kits include:
1-Diaphragm
2-End Connector O-rings
Contact Spears® for Pricing on Additional Specialty Diaphragms

- **Hypalon®**
- **Hypalon® backed PTFE**
- **PTFE Encapsulated O-rings (for True Union Style Valves)**

Diaphragm Only - Elastomer

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	27-39-00541A **38.47**	27-39-00542A **82.61**	1	0	901
3/4	27-39-00741A **62.71**	27-39-00742A **102.11**	1	0	901
1	27-39-01041A **55.51**	27-39-01042A **129.20**	1	0	901
1-1/4 OR 1-1/2	27-39-01541 **62.41**	27-39-01542 **168.26**	1	0	901
2	27-39-02041 **90.07**	27-39-02042 **207.06**	1	0	901
3	27-39-03041 **185.43**	27-39-03042 **528.11**	1	0	901
4	27-39-04041 **211.92**	27-39-04042 **900.20**	1	0	901
6	27-39-06041 **457.25**	27-39-06042 **2842.76**	1	0	901
8	27-39-08041 **744.68**	27-39-08042 **5141.15**	1	0	901

Diaphragm Only - PTFE with Elastomer Backing

Size	PTFE/EPDM	PTFE/FKM	Std Pk	Mstr Pk	Prod Code
1/2	27-39-00565A **111.42**	27-39-00566A **128.42**	100	0	299
3/4	27-39-00765A **124.64**	27-39-00766A **133.83**	25	0	299
1	27-39-01065A **139.02**	27-39-01066A **165.27**	25	0	299

Diaphragm Only - PTFE with Elastomer Backing (continued)

Size	PTFE/EPDM	PTFE/FKM	Std Pk	Mstr Pk	Prod Code
1-1/4 OR 1-1/2	27-39-01565 **206.74**	27-39-01566 **336.64**	100	0	299
2	27-39-02065 **240.78**	27-39-02066 **379.28**	100	0	299
3	27-39-03065 **660.63**	27-39-03066 **819.35**	15	0	299
4	27-39-04065 **1283.15**	27-39-04066 **1409.06**	10	0	299
6	27-39-06065 **2835.58**	27-39-06066 **3152.88**	1	5	299
8	27-39-08065 **5140.74**	27-39-08066 **5662.62**	1	0	299

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Y-Pattern Valves

PRICING

Y-Pattern Valves

Socket Style

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 150 psi
3" - 4" 90 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply

True Union Style

PVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	1722-005 **83.76**	1732-005 **88.61**	1	12	620
3/4	1722-007 **98.27**	1732-007 **104.72**	1	8	620
1	1722-010 **117.59**	1732-010 **125.64**	1	8	620
1-1/4	1722-012 **143.38**	1732-012 **157.88**	1	4	620
1-1/2	1722-015 **191.71**	1732-015 **202.98**	1	0	620
2	1722-020 **272.25**	1732-020 **289.99**	2	0	620
3	1722-030 **586.39**	1732-030 **637.95**	1	0	620
4	1722-040 **995.58**	1732-040 **1084.20**	1	0	620

PVC Clear - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	1722-005CL **83.76**	1732-005CL **88.61**	1	12	621
3/4	1722-007CL **98.27**	1732-007CL **104.72**	1	8	621
1	1722-010CL **117.59**	1732-010CL **125.64**	1	8	621
1-1/4	1722-012CL **143.38**	1732-012CL **157.88**	1	4	621
1-1/2	1722-015CL **191.71**	1732-015CL **202.98**	1	0	621
2	1722-020CL **272.25**	1732-020CL **289.99**	2	0	621
3	1722-030CL **586.39**	1732-030CL **637.95**	1	0	621
4	1722-040CL **995.58**	1732-040CL **1084.20**	1	0	621

PVC - SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	1721-005SR **86.99**	1731-005SR **91.83**	1	8	620
3/4	1721-007SR **103.09**	1731-007SR **109.55**	1	8	620
1	1721-010SR **124.05**	1731-010SR **132.11**	1	8	620
1-1/4	1721-012SR **169.14**	1731-012SR **178.81**	1	0	620
1-1/2	1721-015SR **207.80**	1731-015SR **217.48**	1	0	620
2	1721-020SR **293.20**	1731-020SR **307.71**	1	0	620
3	1721-030SR **629.88**	1731-030SR **681.44**	1	0	620
4	1721-040SR **1040.69**	1731-040SR **1129.28**	1	0	620

PVC Clear - SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	1721-005CLSR **86.99**	1731-005CLSR **91.83**	1	8	621
3/4	1721-007CLSR **103.09**	1731-007CLSR **109.55**	1	8	621
1	1721-010CLSR **124.05**	1731-010CLSR **132.11**	1	8	621
1-1/4	1721-012CLSR **169.14**	1731-012CLSR **178.81**	1	0	621
1-1/2	1721-015CLSR **207.80**	1731-015CLSR **217.48**	1	0	621
2	1721-020CLSR **293.20**	1731-020CLSR **307.71**	1	0	621
3	1721-030CLSR **629.88**	1731-030CLSR **681.44**	1	0	621
4	1721-040CLSR **1040.69**	1731-040CLSR **1129.28**	1	0	621

PVC - Flanged Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	1723-005 **117.59**	1733-005 **122.43**	1	8	620
3/4	1723-007 **135.32**	1733-007 **141.77**	1	4	620
1	1723-010 **159.47**	1733-010 **165.93**	1	4	620
1-1/4	1723-012 **186.86**	1733-012 **199.76**	1	0	620
1-1/2	1723-015 **235.20**	1733-015 **246.49**	1	0	620
2	1723-020 **330.23**	1733-020 **346.36**	1	0	620
3	1723-030 **644.40**	1733-030 **695.95**	1	0	620
4	1723-040 **1279.09**	1733-040 **1356.44**	1	0	620

PVC Clear - Flanged Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	1723-005CL **117.59**	1733-005CL **122.43**	1	8	621
3/4	1723-007CL **135.32**	1733-007CL **141.77**	1	8	621
1	1723-010CL **159.47**	1733-010CL **165.93**	1	4	621
1-1/4	1723-012CL **186.86**	1733-012CL **199.76**	1	0	621
1-1/2	1723-015CL **235.20**	1733-015CL **246.49**	1	0	621
2	1723-020CL **330.23**	1733-020CL **346.36**	1	0	621
3	1723-030CL **644.40**	1733-030CL **695.95**	1	0	621
4	1723-040CL **1279.09**	1733-040CL **1356.44**	1	0	621

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CPVC - Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	1722-005C **117.59**	1732-005C **124.05**	1	12	622
3/4	1722-007C **138.55**	1732-007C **148.21**	1	8	622
1	1722-010C **165.93**	1732-010C **177.22**	1	8	622
1-1/4	1722-012C **204.59**	1732-012C **217.48**	1	4	622
1-1/2	1722-015C **270.65**	1732-015C **286.74**	1	0	622
2	1722-020C **383.40**	1732-020C **409.18**	2	0	622
3	1722-030C **821.60**	1732-030C **892.48**	1	0	622
4	1722-040C **1393.48**	1732-040C **1517.53**	1	0	622

CPVC - SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	1721-005CSR **120.82**	1731-005CSR **128.89**	1	8	622
3/4	1721-007CSR **143.38**	1731-007CSR **153.04**	1	8	622
1	1721-010CSR **173.98**	1731-010CSR **177.22**	1	8	622
1-1/4	1721-012CSR **212.65**	1731-012CSR **228.77**	1	0	622
1-1/2	1721-015CSR **291.58**	1731-015CSR **307.71**	1	0	622
2	1721-020CSR **407.57**	1731-020CSR **430.15**	1	0	622
3	1721-030CSR **881.20**	1731-030CSR **953.68**	1	0	622
4	1721-040CSR **1388.65**	1731-040CSR **1580.38**	1	0	622

CPVC - Flanged Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	1723-005C **193.32**	1733-005C **199.76**	1	8	622
3/4	1723-007C **220.71**	1733-007C **230.36**	1	8	622
1	1723-010C **267.41**	1733-010C **278.69**	1	4	622
1-1/4	1723-012C **320.58**	1733-012C **331.87**	1	0	622
1-1/2	1723-015C **433.36**	1733-015C **449.46**	1	0	622
2	1723-020C **552.57**	1733-020C **578.35**	1	0	622
3	1723-030C **1063.25**	1733-030C **1135.74**	1	0	622
4	1723-040C **1725.34**	1733-040C **1834.91**	1	0	622

PVC - True Union Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	172A-005 **99.87**	173A-005 **104.72**	1	8	620
3/4	172A-007 **115.98**	173A-007 **122.43**	1	8	620
1	172A-010 **138.55**	173A-010 **148.21**	1	4	620
1-1/4	172A-012 **169.14**	173A-012 **185.27**	2	0	620
1-1/2	172A-015 **225.54**	173A-015 **238.42**	2	0	620
2	172A-020 **318.98**	173A-020 **341.54**	1	0	620
3	172A-030 **689.49**	173A-030 **749.12**	1	0	620
4	172A-040 **1171.18**	173A-040 **1274.31**	1	0	620

PVC - True Union Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	172B-005 **99.87**	173B-005 **104.72**	1	8	620
3/4	172B-007 **115.98**	173B-007 **122.43**	1	8	620
1	172B-010 **138.55**	173B-010 **148.21**	1	4	620
1-1/4	172B-012 **169.14**	173B-012 **185.27**	2	0	620
1-1/2	172B-015 **225.54**	173B-015 **238.42**	1	0	620
2	172B-020 **318.98**	173B-020 **341.54**	1	0	620
3	172B-030 **689.49**	173B-030 **749.12**	1	0	620
4	172B-040 **1171.18**	173B-040 **1274.31**	1	0	620

PVC - True Union SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	172B-005SR **103.09**	173B-005SR **107.93**	1	8	620
3/4	172B-007SR **120.82**	173B-007SR **128.89**	1	8	620
1	172B-010SR **146.60**	173B-010SR **154.66**	1	4	620
1-1/4	172B-012SR **199.76**	173B-012SR **211.03**	1	0	620
1-1/2	172B-015SR **244.86**	173B-015SR **256.15**	1	0	620
2	172B-020SR **344.75**	173B-020SR **362.47**	1	0	620
3	172B-030SR **741.03**	173B-030SR **802.25**	1	0	620
4	172B-040SR **1224.34**	173B-040SR **1329.06**	1	0	620

PVC Clear - True Union Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	172A-005CL **99.87**	173A-005CL **104.72**	1	8	621
3/4	172A-007CL **115.98**	173A-007CL **122.43**	1	8	621
1	172A-010CL **138.55**	173A-010CL **148.21**	1	4	621
1-1/4	172A-012CL **169.14**	173A-012CL **185.27**	2	0	621
1-1/2	172A-015CL **225.54**	173A-015CL **238.42**	2	0	621
2	172A-020CL **318.98**	173A-020CL **341.54**	1	0	621
3	172A-030CL **689.49**	173A-030CL **749.12**	1	0	621
4	172A-040CL **1171.18**	173A-040CL **1274.31**	1	0	621

PVC Clear - True Union Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	172B-005CL **99.87**	173B-005CL **104.72**	1	8	621
3/4	172B-007CL **115.98**	173B-007CL **122.43**	1	8	621
1	172B-010CL **138.55**	173B-010CL **148.21**	1	4	621
1-1/4	172B-012CL **169.14**	173B-012CL **185.27**	2	0	621
1-1/2	172B-015CL **225.54**	173B-015CL **238.42**	1	0	621
2	172B-020CL **318.98**	173B-020CL **341.54**	1	0	621
3	172B-030CL **689.49**	173B-030CL **749.12**	1	0	621
4	172B-040CL **1171.18**	173B-040CL **1274.31**	1	0	621

Y-Pattern Valves

PVC Clear - True Union SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	172B-005CLSR **103.09**	173B-005CLSR **107.93**	1	8	621
3/4	172B-007CLSR **120.82**	173B-007CLSR **128.89**	1	8	621
1	172B-010CLSR **146.60**	173B-010CLSR **154.66**	1	4	621
1-1/4	172B-012CLSR **199.76**	173B-012CLSR **211.03**	2	0	621
1-1/2	172B-015CLSR **244.86**	173B-015CLSR **256.15**	1	0	621
2	172B-020CLSR **344.75**	173B-020CLSR **362.47**	1	0	621
3	172B-030CLSR **741.03**	173B-030CLSR **802.25**	1	0	621
4	172B-040CLSR **1224.34**	173B-040CLSR **1329.06**	1	0	621

CPVC - True Union Socket Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	172A-005C **138.55**	173A-005C **146.60**	1	8	622
3/4	172A-007C **162.71**	173A-007C **173.98**	1	8	622
1	172A-010C **194.93**	173A-010C **207.80**	1	4	622
1-1/4	172A-012C **240.03**	173A-012C **256.15**	2	0	622
1-1/2	172A-015C **318.98**	173A-015C **336.69**	2	0	622
2	172A-020C **451.07**	173A-020C **481.68**	1	0	622
3	172A-030C **966.60**	173A-030C **1050.37**	1	0	622
4	172A-040C **1638.37**	173A-040C **1784.97**	1	0	622

CPVC - True Union Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	172B-005C **138.55**	173B-005C **146.60**	1	8	622

CPVC - True Union Threaded Ends (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
3/4	172B-007C **162.71**	173B-007C **173.98**	1	8	622
1	172B-010C **194.93**	173B-010C **207.80**	1	4	622
1-1/4	172B-012C **240.03**	173B-012C **256.15**	2	0	622
1-1/2	172B-015C **318.98**	173B-015C **336.69**	2	0	622
2	172B-020C **451.07**	173B-020C **481.68**	1	0	622
3	172B-030C **966.60**	173B-030C **1050.37**	1	0	622
4	172B-040C **1638.37**	173B-040C **1784.97**	1	0	622

CPVC - True Union SR Threaded Ends

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2	172B-005CSR **141.77**	173B-005CSR **151.43**	1	8	622
3/4	172B-007CSR **169.14**	173B-007CSR **180.43**	1	8	622
1	172B-010CSR **204.59**	173B-010CSR **207.80**	1	4	622
1-1/4	172B-012CSR **249.71**	173B-012CSR **269.02**	1	0	622
1-1/2	172B-015CSR **343.13**	173B-015CSR **362.47**	1	0	622
2	172B-020CSR **480.06**	173B-020CSR **505.83**	1	0	622
3	172B-030CSR **1035.85**	173B-030CSR **1121.25**	1	0	622
4	172B-040CSR **1633.53**	173B-040CSR **1859.06**	1	0	622

Y-Pattern Valve Repair Kits

Internal Repair Kit includes 1-Stem O-ring, 1-Seal Carrier O-ring, along with a factory assembled (required) internal component replacement unit consisting of Stem assembled with Seat & Seal Carrier components. Install in valve using existing valve Bonnet, Bonnet Nut, and Handle/Nut. True Union style valve kits include an additional 2-End Connector O-rings.

PVC Y-Pattern Valve Internal Repair Kits

Size	Standard EPDM	Standard FKM	True Union EPDM	True Union FKM	Std Pk	Mstr Pk	Prod Code
1/2	YV-ERK-005 **26.00**	YV-VRK-005 **27.60**	YV-UERK-005 **27.37**	YV-UVRK-005 **29.05**	1	10	299
3/4	YV-ERK-007 **35.06**	YV-VRK-007 **37.52**	YV-UERK-007 **36.91**	YV-UVRK-007 **39.48**	1	10	299
1	YV-ERK-010 **45.99**	YV-VRK-010 **48.35**	YV-UERK-010 **48.40**	YV-UVRK-010 **50.87**	1	10	299
1-1/4	YV-ERK-012 **69.95**	YV-VRK-012 **75.02**	YV-UERK-012 **73.62**	YV-UVRK-012 **78.97**	1	10	299
1-1/2	YV-ERK-015 **132.56**	YV-VRK-015 **139.71**	YV-UERK-015 **147.86**	YV-UVRK-015 **147.87**	1	10	299
2	YV-ERK-020 **162.05**	YV-VRK-020 **170.22**	YV-UERK-020 **170.57**	YV-UVRK-020 **179.17**	1	4	299
3	YV-ERK-030 **226.75**	YV-VRK-030 **238.82**	YV-UERK-030 **238.71**	YV-UVRK-030 **251.39**	1	10	299
4	YV-ERK-040 **388.17**	YV-VRK-040 **409.80**	YV-UERK-040 **408.58**	YV-UVRK-040 **431.36**	1	10	299

CPVC Y-Pattern Valve Internal Repair Kits

Size	Standard EPDM	Standard FKM	True Union EPDM	True Union FKM	Std Pk	Mstr Pk	Prod Code
1/2	YV-ERK-005C **33.27**	YV-VRK-005C **35.33**	YV-UERK-005C **35.03**	YV-UVRK-005C **37.18**	1	10	299
3/4	YV-ERK-007C **44.89**	YV-VRK-007C **48.01**	YV-UERK-007C **47.24**	YV-UVRK-007C **50.55**	1	10	299

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CPVC Y-Pattern Valve Internal Repair Kits (continued)

Size	Standard EPDM	Standard FKM	True Union EPDM	True Union FKM	Std Pk	Mstr Pk	Prod Code
1	YV-ERK-010C **58.87**	YV-VRK-010C **61.86**	YV-UERK-010C **61.97**	YV-UVRK-010C **65.09**	1	10	299
1-1/4	YV-ERK-012C **89.55**	YV-VRK-012C **96.03**	YV-UERK-012C **92.60**	YV-UVRK-012C **101.11**	1	10	299
1-1/2	YV-ERK-015C **169.67**	YV-VRK-015C **178.78**	YV-UERK-015C **178.61**	YV-UVRK-015C **188.21**	1	10	299
2	YV-ERK-020C **207.43**	YV-VRK-020C **217.87**	YV-UERK-020C **218.36**	YV-UVRK-020C **229.34**	1	4	299
3	YV-ERK-030C **290.23**	YV-VRK-030C **305.68**	YV-UERK-030C **305.54**	YV-UVRK-030C **321.76**	1	10	299
4	YV-ERK-040C **496.86**	YV-VRK-040C **524.54**	YV-UERK-040C **523.01**	YV-UVRK-040C **552.15**	1	10	299

Backwater, Sewage & Sump Pump Specialty Valves

PRICING

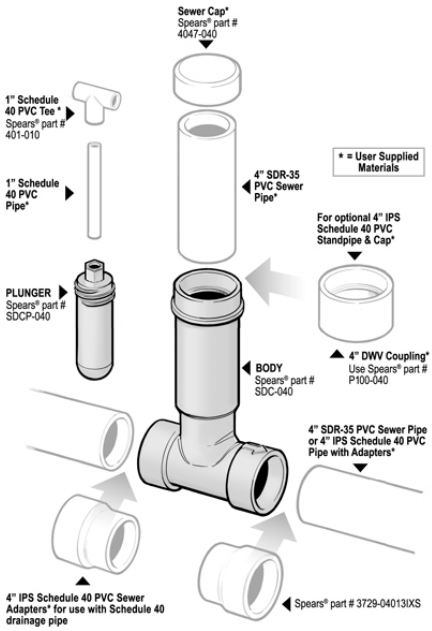
Sewer Disconnect

Spears® Sewer Disconnect functions as both cleanout and disconnect device, plus helps prevent sewage backup during hurricanes and floods. Complete unit consists of body and plunger (sold separately - both parts are required for proper use). The plunger can be screwed into the body to block solids waste flow. The plunger should be removed from the body and stored when not in use to prevent accidental closing (i.e., from ground vibration, etc.).

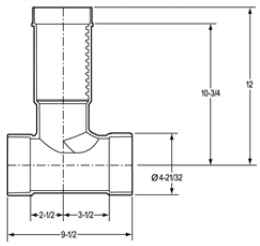
- Connects directly to 4" SDR-35 (or any ASTM D3034/D2729) PVC Sewer Pipe.
- Easily adapted to 4" Schedule 40 PVC Drainage Pipe with addition of IPS x Sewer Adapters, Socket x Spigot, Spears® part no. 3729-04013IXS.
- User-supplied standpipe can be installed to grade using PVC Sewer Pipe connected to the body branch socket and a Sewer Cap to close off (Spears® part no. 4047-040). Optionally, user-supplied Schedule 40 Pipe can be used for standpipe with addition of a Schedule 40 DWV Socket Coupling (Spears® part no. P100-040) and Cap (Spears® part no. P116-040).
- T-handle for Plunger operation can be easily fabricated from user-supplied 1" Schedule 40 Pipe and Tee fitting (Spears® part no. 401-010).

Note - the unit restricts flow by approximately 85%. As a result, the unit must be located in the sewer line where solids are present. Full disconnect is not achieved without solids in the flow.

Auxiliary Components
(Purchased Separately)



Basic Dimensions



Sewer Disconnect Body

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each

Sewer Socket X Sewer Socket.

Requires Separate Purchase of SDCP-040 Plunger

Requires Purchase of SDCP-040 Plunger

SDC-040	**4**	6	0	055	72.66

Sewer Disconnect Plunger

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each

For Use With Sewer Disconnect Body. Requires Separate Purchase of SDC-040 Body

Requires Purchase of SDC-040 Body

SDCP-040	**4**	12	0	055	25.02

Optional IPS x SEWER Adapter

IPS Socket x Sewer Spigot for adapting Sewer Disconnect Body to Schedule 40 drainage pipe

3729-04013IXS	**4**	1	90	399	17.51

Industrial PVC Backwater Valves

Backwater Valves are designed to prevent backflow in numerous applications where easy service access for maintenance and cleaning is needed. Excellent for use in sanitary or storm sewer drainage systems to prevent waste back up due to inadequate drainage, for balancing multi-level ponds, aquaculture features or storage tank systems, and many other applications. Spears® Backwater Valve has been engineered for improved function and easier service, especially in buried service with use of optional Service-Access Extension available either preassembled with valve or as an add-on kit.

- Replaceable internal flapper assembly with EPDM Seat.
- Service-Access Extension available either preassembled with valve, as an add-on kit, or as valve & extension kit components with user supplied pipe.
- Direct Connection to ASTM D 2665 PVC DWV or other IPS size pipe. Spears® fabricated IPS x Sewer Adapters or DWV x Sewer & Drain Adapter Bushings are available for connection to ASTM D 3034 & ASTM D 2729 Sewer pipe.
- Pressure Rated to 43 psi (100 feet of head) @ 73°F (23°C).
- All extension kits can be cut shorter for custom application.
- Conforms to ASME/ANSI A112.14.1 for Backwater Valves.

PVC Backwater Valves

PVC Backwater Valves
Soc x Soc - Valve Only

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
S275P	**2**	1	12	055	59.05
S375P	**3**	2	0	055	59.17
S475P	**4**	1	0	055	65.55
S675P	**6**	1	0	055	279.26

PVC Backwater Valves with Extension Kit to Premade Length

PVC Backwater Valves with Extension Kit to Premade Length
Soc x Soc - Assembled with Extension

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
S275P-120[1]	**2X12HT**	1	0	055	178.12
S275P-160[1]	**2X16HT**	1	0	055	191.59
S275P-200[1]	**2X20HT**	1	0	055	205.05
S275P-240[1]	**2X24HT**	1	0	055	218.53
S275P-360[1]	**2X36HT**	1	0	055	229.52
S275P-480[1]	**2X48HT**	1	0	055	252.25
S375P-120[1]	**3X12HT**	1	0	055	178.12
S375P-160[1]	**3X16HT**	1	0	055	191.59
S375P-200[1]	**3X20HT**	1	0	055	205.05
S375P-240[1]	**3X24HT**	1	0	055	218.53
S375P-360[1]	**3X36HT**	1	0	055	229.52
S375P-480[1]	**3X48HT**	1	0	055	252.25
S475P-120[1]	**4X12HT**	1	0	055	231.36
S475P-160[1]	**4X16HT**	1	0	055	249.59

PVC Backwater Valves with Extension Kit to Premade Length
Soc x Soc - Assembled with Extension (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
S475P-200[1]	**4X20HT**	1	0	055	266.20
S475P-240[1]	**4X24HT**	1	0	055	283.85
S475P-360[1]	**4X36HT**	1	0	055	298.11
S475P-480[1]	**4X48HT**	1	0	055	327.60
S675P-120[1]	**6X12HT**	1	0	055	485.82
S675P-160[1]	**6X16HT**	1	0	055	524.14
S675P-200[1]	**6X20HT**	1	0	055	559.02
S675P-240[1]	**6X24HT**	1	0	055	596.16
S675P-360[1]	**6X36HT**	1	0	055	626.04
S675P-480[1]	**6X48HT**	1	0	055	687.95

[1] - Size designates nominal valve size x extension height (HT-top of valve to top of extension, inches)

PVC Service-Access Extension Kit Only to Premade Length

PVC Service-Access Extension Kit: includes factory assembled internal flap assembly, assembly extension pipe, and external extension housing with top access adapter. Requires solvent cement assembly to existing valve and uses existing threaded Access Plug. Standard Extensions are available in convenient increments of 12", 16", 20", 24", 36", and 48" (measured from top of valve to top of extension). Contact Spears® for pricing on custom cut lengths. All extension kits can be cut shorter in the field for custom fits prior to cementing access adapter in place.

PVC Service-Access Extension Kit Only to Premade Length

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
SAEK-020-120[1]	**2X12HT**	1	0	055	55.55
SAEK-020-160[1]	**2X16HT**	1	0	055	57.14
SAEK-020-200[1]	**2X20HT**	1	0	055	58.65
SAEK-020-240[1]	**2X24HT**	1	0	055	61.46
SAEK-020-360[1]	**2X36HT**	1	0	055	64.37
SAEK-020-480[1]	**2X48HT**	1	0	055	67.52
SAEK-030-120[1]	**3X12HT**	1	0	055	60.24
SAEK-030-160[1]	**3X16HT**	1	0	055	68.00
SAEK-030-200[1]	**3X20HT**	1	0	055	72.04
SAEK-030-240[1]	**3X24HT**	1	0	055	81.19
SAEK-030-360[1]	**3X36HT**	1	0	055	96.04
SAEK-030-480[1]	**3X48HT**	1	0	055	113.59
SAEK-040-120[1]	**4X12HT**	1	0	055	89.83

PVC Service-Access Extension Kit Only to Premade Length (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
SAEK-040-160[1]	**4X16HT**	1	0	055	101.27
SAEK-040-200[1]	**4X20HT**	1	0	055	124.92
SAEK-040-240[1]	**4X24HT**	1	0	055	136.79
SAEK-040-360[1]	**4X36HT**	1	0	055	172.06
SAEK-040-480[1]	**4X48HT**	1	0	055	198.64
SAEK-060-120[1]	**6X12HT**	1	0	055	160.94
SAEK-060-160[1]	**6X16HT**	1	0	055	182.92
SAEK-060-200[1]	**6X20HT**	1	0	055	207.41
SAEK-060-240[1]	**6X24HT**	1	0	055	237.97
SAEK-060-360[1]	**6X36HT**	1	0	055	295.39
SAEK-060-480[1]	**6X48HT**	1	0	055	366.67

[1] - Size designates nominal valve size x extension height (HT-top of valve to top of extension, inches)

PVC Backwater Valve with Extension Components

PVC Backwater Valve with Extension Components Soc x Soc - Components Must be assembled with user supplied pipe (see Table 1)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
S275P-AK	**2**	1	8	055	87.00
S375P-AK	**3**	1	0	055	87.00
S475P-AK	**4**	1	0	055	101.77
S675P-AK	**6**	1	0	055	360.38

PVC Backwater Valve Extension Components Only

PVC Backwater Valve Extension Components Only Must be assembled with user supplied pipe (see Table 1)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
S275P-ECK	**2**	1	8	055	46.33
S375P-ECK	**3**	1	0	055	46.33
S475P-ECK	**4**	1	0	055	60.37
S675P-ECK	**6**	1	0	055	126.83

PVC Backwater Valve Extension Components Only Must be assembled with user supplied pipe (see Table 1) (continued)

Table 1: User Supplied Pipe Requirements For Use With Extension Components

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each

Valve Size	Acceptable RISER Pipe Types for User-Supplied Pipe	Acceptable HANDLE Pipe
2"	4" Class 125 PVC PIPE 4" Sch 40 PVC PIPE	Use any 3/4" IPS plastic pipe[1]
3"	5" Class 125 PVC PIPE 5" Sch 40 PVC PIPE[3] 6" D3034 (SDR 35) PVC SEWER PIPE[2]	
4"	8" Class 125 PVC PIPE 8" Sch 40 PVC PIPE	
6"	10" Class 125 PVC PIPE 10" Sch 40 PVC PIPE	

Note 1: Riser and Handle pipe are *not* the same length. Sch 40 and/or Sch 80 pipe as well as ABS may be used. Special cement must be used to join PVC to ABS.
Note 2: When 6" SDR35 pipe is used, adapter fits pipe inside diameter.
Note 3: DO NOT use Sch 80 for 3" Riser pipe.

Industrial Backwater Valve Flapper Repair Kit

Industrial Backwater Valve Flapper Repair Kit

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Complete Flapper Assembly replacement					
S275P-FRK	**2**	1	10	055	34.48
S375P-FRK	**3**	1	10	055	43.48
S475P-FRK	**4**	1	10	055	50.64
S675P-FRK	**6**	1	5	055	90.18

PVC Backwater Valve Metric Adapters

PVC Backwater Valve Metric Adapters

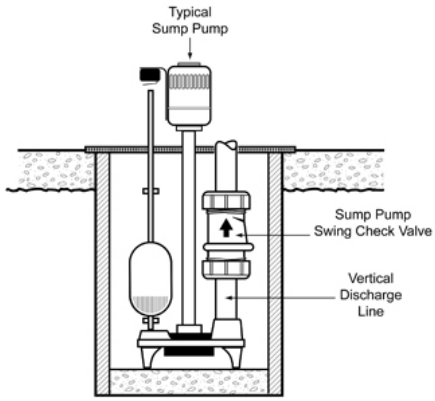
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Metric Socket x ASTM Spigot					
S275MA-063	**63mm X 2**	50	0	055	15.28
S375MA-090	**90mm X 3**	25	0	055	16.42
S475MA-110	**110mm X 4**	10	0	055	19.45
S675MA-160	**160mm X 6**	4	0	055	44.89

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Sump Pump Swing Check Valves

- Specifically Designed for Use on Sump Pump Discharge Lines (See Illustration)
- Includes Compression End Connectors with Buna-N Gaskets for Use on Either 1-1/4" or 1-1/2" Pipe
- All Plastic Construction with Elastomer Seals - No Metal Parts
- Angled Seat and Weighted Flapper for Low-Pressure Seal
- Suitable for Vertical Up-flow or Horizontal Installations

Pressure Rating @ 73°F (23°C), Water
Full Flow (open) 150 psi
Back Pressure (closed) 75 psi
Maximum Service Temperature
140°F (60°C)
Temperature/Pressure De-ratings Apply



General Installation Information: Sump Pump Swing Check Valves may be installed in either vertical up-flow (see illustration) or horizontal positions on pump discharge line. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of the flow. In horizontal installations, the designated side must be positioned "up." Do Not install Check Valve upside down.

PVC Sump Pump Swing Check Valve

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Compression Ends					
Buna-N Gaskets included for both 1-1/4" & 1-1/2" pipe					
S1400-15	**1-1/2 & 1-1/4**	16	0	026	18.80

Swing Check Ball Valves

- One-piece Combination for Applications Requiring In-line Ball Valve and Check Valves
- Compact, Space-Saving Design
- True Union Design Allows Easy Service and Cleaning
- High Grade EPDM Seals
- Replaceable PTFE HDPE Ball Valve Seats
- Safety-Blocked™ Seal Carrier on Ball Valve
- Replaceable Sealed Check Valve Cartridge
- Suitable for Horizontal or Vertical Up-flow Installations
- Socket End Connections

Pressure Rating @ 73°F (23°C), Water
Full Flow (open) 150 psi
Back Pressure (closed) 75 psi
Maximum Service Temperature
140°F (60°C)
Temperature/Pressure De-ratings Apply

General Installation Information: Swing Check Ball Valves are designed for horizontal installations, but may be installed in up-flow only vertical position. The Check Valve portion MUST be installed with the valve's FLOW arrow pointing in the direction of flow and with the designated side up in horizontal installations. Do Not install Check Valve upside down. The Ball Valve portion may be rotated and installed in any position. Flow velocity should not exceed 5 ft./sec. Minimum opening pressure is less than 0.5 psi.

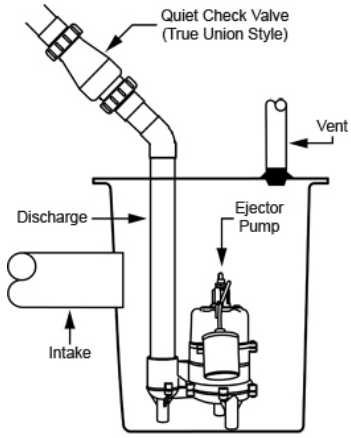
PVC Swing Check Ball Valve

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Soc x Soc					
7622-015	**1-1/2**	10	0	026	42.57
7622-020	**2**	6	0	026	61.09

Quiet Check Valves

- Designed to Provide Quiet Operation in Sump Pump or Sewage Ejector Pump Systems.
- Spring Controlled Rate of Closing Prevents Slamming and Eliminates Noise.
- Includes Both True Union Sockets for Easy Servicing and Direct Socket Connection for Installation in Confined Space.
- 2" Size for Sewage Ejector Systems, 1-1/2" Size for Sump Pump Effluent Systems.

Pressure Rating @ 73°F (23°C), Water
Full Flow (open) 150 psi
Back Pressure (closed) 75 psi
Maximum Service Temperature 140°F (60°C)
Temperature/Pressure De-ratings Apply



Typical Application

General Installation Information: Install check valve 12"-18" above pump discharge, or as recommended by pump system manufacturer. Be sure check valve installation complies with local codes. Valve may be installed in either vertical up-flow or horizontal positions on pump discharge line. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of the flow. In horizontal installations, the designated side must be positioned "up."

PVC Quiet Check Valve

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Soc x Soc					
True Union or Direct Socket End Connection					
8622-015	**1-1/2**	12	0	026	42.11
8622-020	**2**	10	0	026	60.19

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Thermoplastic Valves & Accessories

PRODUCT GUIDE & ENGINEERING SPECIFICATIONS

Contact Spears® for any information not found.

The information contained in this publication is based on current information and Product design at the time of publication and is subject to change without notification. Our ongoing commitment to product improvement may result in some variation. No representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or results to be obtained therefrom. For verification of technical data or additional information not contained herein, please contact Spears® Technical Services Department [West Coast: (818) 364-1611 — East Coast: (678) 985-1263].

Since 1969, Spears® Manufacturing Company has developed high quality thermoplastic piping system components to better meet industry needs. Spears® thermoplastic valves have been developed through years of product improvement testing, combined with the latest in computer aided engineering and manufacturing technology. Today, Spears® valves are recognized for their quality, reliability and long service life. Backed by the best in customer service and product availability, Spears® valves are the first choice for use in a wide variety of applications, including Industrial & Chemical Processing, Turf & Irrigation, Pool & Spa, and numerous Original Equipment Manufacture products.

Valve Function Basics

Ball Valves

Ball valves derive their name from the on/off function accomplished by means of a flow-controlling ball located in the center of the valve body. A hole through the center of the ball (valve bore) connects the inlet and outlet sides of the valve for fluid stream transfer. The ball rotates 90° on an axis perpendicular to the fluid stream in order to block flow in the “off” position. The ball is held in place between two valve seats, which serve as a “bubble tight” seal off, while providing lubrication during valve operation. Elastomer O-rings are used in the stem and seal carrier to prevent fluid leakage. Pressure drop is virtually eliminated in the full-open position, since the valve bore is the same size as Schedule 80 system piping. The T-Style ball valve is a special configuration incorporating a Tee fitting at one end of the valve. This design maintains close proximity of the valve to the fluid mainline to minimize “dead leg” of potential fluid accumulation, where required by specific application.

3-Way Ball Valves

3-Way ball valves are “diverter” style ball valves that provide an additional port to redirect the fluid stream. Valve configurations are either vertical (bottom branch port) or horizontal (side branch port). Multiple ball-port options are available in which different hole patterns in the valve ball provide alternative paths to divert flow. These diverter style 3-Way ball valves have no shutoff on the branch ports.

Check Valves

Check valves are automatic valves that open with forward flow and close with reverse flow. Exact operation will vary depending on the type of check valve mechanism. These include a ball (Ball Check), a swinging disc (Swing Check), a “double disc” (Butterfly Check), a weighted plug (Y-Check), and spring assisted types of check devices. These include a spring assisted swinging disc (Spring Check) and a spring mounted linear disc (In-Line Spring Check). Regardless of type, a check valve has a closure device positioned in the valve body between inlet and outlet so that the fluid stream is easily transmitted in the direction of flow, but is allowed to move against the check device in the event of flow in the reverse direction. Reversed flow is stopped or held in “check” by fluid backflow pressure which seats the closure device against the valve body. Standard elastomer O-ring seals are used in all Spears® Ball Check Valves and Industrial Swing Check Valves. Utility Swing and Spring Check Valves, and Butterfly Check Valves use an elastomer membrane seal; In-Line Spring Check Valves and Y-Check valves use an elastomer seat. Spears® Check Valves have been carefully engineered to minimize pressure drop and can be installed in either horizontal or vertical positions, within the limitations of the specific type of closure device. Ball Check Valves are well suited for general applications of fluids free from debris and entrained solids. Butterfly Check Valves have minimum space requirements and, along with Swing Check Valves, are better for use with fluids containing solids or debris. Swing Check Valves additionally allow higher volume of fluid transmission. Industrial Swing Check models can be fitted with an optional counter balance device to further control closing speed. The Utility Spring Check Valve (spring assisted Swing Check) aids in valve closing, while the In-Line Spring Check can be adjusted for resistance to opening pressure.

Swing Check Ball Valves

Swing check ball valves are a special design that combines the basic function of a ball valve and a swing check valve for use in general purpose applications where an in-line ball and check valve configuration is required.

Gate Valves

Gate valves perform an on/off function accomplished by means of a flow-controlling gate centered in the valve body between the inlet and outlet sides of the valve. The gate moves along a vertical stem axis, perpendicular to the fluid stream, thereby blocking the flow in the closed position and variably increasing the flow as the gate is moved to the full open position. Spears® gate valves use either a cylindrical plug (Plug Gate Valves) or a wedge-shaped gate and sealing surface design (regular Gate Valves). Both provide positive shut off when engaged with the valve body in the closed position and feature non-rising type stem. This provides vertical movement of the gate without extension of the stem above the valve body.

Butterfly Valves

Butterfly valves are rotary valves in which a disc is rotated 90° to open or close the flow passage. In the full closed position, the disc seals against an elastomer seat. Flow control can be accomplished by varying the degree to which the disc is opened. Spears® Standard and True Lug type Butterfly Valves utilize a special offset disc and low contact seat designed. Spears® Wafer style Butterfly Valve incorporates a special low contact, disc-mounted seat and centered disc. These designs minimize operation torque and improve sealing capabilities over conventional rubber seated valves.

Diaphragm Valves

Diaphragm valves utilize a moveable elastomeric membrane, or “diaphragm”, to constrict the flow passage through the valve, thereby controlling or throttling fluid flow. The diaphragm additionally isolates system fluids from internal moving parts of the valve. In the Weir-Type design, a raised area in the center of the waterway serves as a seal-off point for the elastomeric diaphragm. When installed in a horizontal position, this additionally facilitates drainage of fluid from the valve. From the full-open position, operation of the valve is accomplished by rotating the handle to vertically move a compressor unit on a threaded shaft. This compresses the attached elastomeric diaphragm to constrict the waterway and finally seal-off flow. Spears® diaphragm valves provide an indicator in the center of the handle for 360° visibility of valve position, and a special stop on the compressor to prevent damage from over-tightening. The T-Style “Zero Dead-Leg” Diaphragm Valve is a special configuration incorporating a Tee fitting at one end of the valve. This design maintains close proximity of the valve to the fluid mainline to minimize “dead leg” of potential fluid accumulation, where required by specific application.

Globe Valves & Y-Pattern Valves

Globe valves are characterized by a partition separating the two halves of the body with a center passage that is opened and closed by a screw-down/screw-up seat mounted at right angle to the body. The “Globe” name was derived from the original spherical body design for these valves. Globe valves offer excellent flow regulating characteristics, but have a high resistance due to the turning flow path. The Y-Pattern Valve (aka, “oblique valves”) is a hybrid globe valve incorporating an angled stem. This less restrictive flow path design improves flow while maintaining the same excellent throttling characteristics as a globe valve.

Needle Valves

Needle valves are small sizes of globe valves fitted with a tapered plug. The tapered plug or “needle” is screwed in or out of a mating orifice in the body and thus controls the effective orifice size. Needle valves are excellent for metering and other fine adjustment flow control applications. Spears® Needle Valves use PTFE stem seals and no elastomers for optimum chemical resistance. These are produced in both a conventional “globe” pattern and convenient right-angle pattern design for application versatility.

ISO 9001 Certified Design & Manufacturing Quality Program

Spears® Quality Management System is certified to the strict requirements of ISO 9001 for optimum control of product design, development, and production. Quality improvement and customer satisfaction are central to each stage of producing Spears® valves from conception through final delivery.

Development & Testing

The foundation of Spears® products is development, testing, and more testing. Spears® valve development combines proven experience with structural testing at the design level. Materials and design are correlated in computer engineering stress analysis to yield the optimum structure and function of each valve component. Resulting products are then subjected to numerous tests for performance validation of dimensional stability, sealing capability, hydrostatic burst pressure, operational torque, flow capacity, vacuum application suitability and cyclic pressure analysis. Once approved, production valves and components are routinely subjected to dimensional, functional and burst pressure verification tests.

100% Sealing Capability Verification

All Spears® ball valves are air-tested for 100% verification of positive sealing during the manufacturing process.

Hydrostatic Burst Pressure Verification

Representative valve samples are routinely subjected to an internal hydrostatic pressure of 3.2 times their designated pressure rating in a 60-70 second test per ASTM D 1599 during each production run.

Vacuum Service

Validation of Spears® valves rated for vacuum service is determined from 1-hour tests at 26 in. Hg vacuum with less than 1 in. Hg loss. A vacuum lubricant should be applied to elastomer-seated valve seats, such as Spears® Butterfly Valve or True Union Ball Check Valve, to prevent the seat from drying out in vacuum service applications.

Spears® Valve Innovations

Not all plastic valves are the same. Spears® valves incorporate several unique features not found in competitive products. The following are a few examples of Spears® innovative improvements to conventional valve designs.

Spears® Safe-T-Shear® Stem

This important SAFETY FEATURE was developed to help prevent line fluids from leaking out in the event of ball valve stem damage. Engineered for high strength, the stem incorporates a special shear point to control accidental breakage. Over-torquing breaks occur above the stem O-ring leaving the seal intact until repair or replacement can be made.

Spears® Heavy Buttress Thread Components

When it comes to handling the hydraulic force of high internal pressures, the brute strength of the buttress thread is clearly the best. Its broad bearing surface with an angular backing provides greater thrust support than conventional square-cut, ACME-type threads commonly used in similar ball valve components. All Spears® Ball Valve union nuts and seal carriers are designed with buttress threads for greater strength and pressure handling capabilities — one of the strongest in the plastic valve industry!

Low Torque, Low Wear Butterfly Valve Seats

Spears® Butterfly Valves provide the lowest operating torque available. Sealing contact between disc and seat takes place only at the close of the valve, allowing free travel through the full range of opening. This unique design eliminates seat creep, extrusion and wear typical with conventional liner-type seats. Exclusive design interlocks seat and body to prevent washout or blowout.

Flow Balanced Ball Check Valves

Improper ball check valve design can significantly restrict flow, create ball-chatter and even result in reverse ball travel and open flow shutoff! As a result of extensive design testing, Spears® has engineered the internal flow characteristics of the True Union Ball Check Valve to optimize fluid transmission and virtually eliminate ball-chatter.

Special Reinforced (SR) Female Plastic Threads

This patented Special Reinforced (SR) design is one of the most significant improvements in female plastic thread reliability. Not just an added reinforcing ring, this unique pre-compression design compensates for expansion forces generated from normal tapered pipe thread joint make-up. Radial stress is neutralized in normal installations and contained in severe over tightening situations. Spears® SR Threads are available on a variety of Spears® industrial valves using SS316 reinforcement for optimum chemical and corrosion resistance. Spears® SR Female Spigot Adapters are also available for quick conversion of any slip-socket style valve end connector.

Spears® Thermoplastic Piping System Materials

Benefits of Spears® Thermoplastic System Materials

Unlike metal, plastics never rust, scale, or pit — they virtually last forever. Thermoplastics are abrasion resistant, chemical and corrosion resistant, nonconductive, lightweight, and operate at lower friction-loss levels than metals. Moreover, plastics are nontoxic and environmentally safe. Adding these benefits with ease of installation at substantially lower costs, thermoplastic piping system components are the proven choice for years of maintenance free system operations.

Joining Methods for Spears® Thermoplastic Systems

Spears® thermoplastic piping system products are designed around primary components manufactured from PVC, CPVC or PP materials and their glass filled varieties. PVC and CPVC materials can be easily joined by solvent cement welding plus threaded, flanged or mechanical coupled connections. Spears® PP products are joined by using flanged or threaded connections featuring Spears® patented Special Reinforced (SR) female plastic threads.

Material Considerations in Application and System Design

PVC, CPVC and PP thermoplastic piping system components will give years of trouble free service with proper attention to application and system design. To avoid problems, the following key points must be considered when selecting materials for an application and in designing a system for their use.

1. **Fluid incompatibility** of certain chemicals, especially petroleum distillates and derivatives, can cause environmental stress cracking in different thermoplastic compounds. Chemical compatibility of all valve or system components, including solvent cements, must be verified before installation. Verification of fluid compatibility is at the discretion of the user.

2. **Temperature-pressure relationships** must be considered. Product pressure ratings are based on use of water mediums at 73°F. In general, product pressure ratings must be de-rated as temperature increases (see Temperature Pressure Table for individual valves).

3. **Expansion and contraction** is greater in thermoplastic systems than in metal systems. As a result, system design must be flexible to allow for movement. Use of Spears® Thermoplastic Expansion Joints is recommended.

4. **Extreme heat or cold** where internal fluids may freeze or where temperatures may exceed thermoplastic design limits must be avoided, including consideration of storage locations.

5. **Direct sun exposure** results in high thermal heat absorption, especially in darker color thermoplastic materials. A white water-based exterior latex paint can be applied to reduce heat buildup.

6. **Lower impact resistance** of thermoplastic system components than that of metal systems requires avoidance of sharp, pointed objects in both above and below ground installations, including mounting devices and backfilling operations.

7. **Proper installation** is essential. Special attention must be given to technique and instructions for making solvent cemented connections, threaded connections, flanged connections, and for installation of valves and other individual system components. System design must also take into account support, thrust blocking, transition to different materials and other installation related factors.

8. **Threaded joints** require several considerations. First, pressure capacities of threaded system components should be de-rated to 50% of the rating for corresponding type and size of thermoplastic pipe. ***NOTE:*** *Valves have individual pressure ratings and do not require de-rating for threaded connections.* Second, as with internal fluids, certain paste sealants may cause environmental stress cracking in thermoplastic materials, and compatibility should be verified before use. Finally, the leading cause of thread joint failures is from over tightening female thermoplastic threads. Use of Spears® Special Reinforced (SR) Threads is recommended.

9. **Hydraulic Shock** (water hammer; surge pressure) in thermoplastic piping systems can burst pipe, fittings, and valves. Anticipated surge pressures should be calculated and included in maximum internal pressure ratings of system components (specified "Non-Shock" pressure rating for valves). Safeguards should be incorporated in system design to vent pressures and eliminate entrapped air. Fluid velocities should not exceed a maximum of 5 feet per second in thermoplastic systems.

10. **Non-liquid transport** — ***WARNING:*** *Spears® Manufacturing Company* ***DOES NOT RECOMMEND*** *the use of thermoplastic piping products for systems to distribute or store compressed air or gases. The use of Spears® products in compressed air or gas systems automatically voids Spears® warranty for such products, and their use against our recommendation is entirely the responsibility and liability of the installer. Spears® Manufacturing Company will not accept responsibility for damage or impairment from its products, or other consequential or incidental damages caused by misapplication, incorrect assembly, and/or exposure to harmful substances or conditions.*

Individual Materials Overview

Thermoplastics

PVC — Poly Vinyl Chloride

PVC is one of the most specified thermoplastics for piping system components, including, valves, fittings, flanges, and many specialty products. PVC has excellent chemical and corrosion resistance to a broad range of fluids including water, deionized water, most mineral acids, bases, salts and paraffinic hydrocarbon solutions. PVC is not recommended for use with chlorinated or aromatic hydrocarbons, esters, or polar solvents such as ketones. Spears® PVC materials conform to ASTM Cell Classification 12454 (formerly designated as Type I, Grade 1). The maximum recommended service temperature of PVC products is 140°F (60°C).

Glass Reinforced PVC — Fiberloc®

Fiberloc® is a registered trademark of PolyOne Corporation Fiberloc® is a glass fiber reinforced PVC composite material. While maintaining the traditional properties of PVC, Fiberloc® increases its strength, stiffness, and dimensional stability from glass fiber reinforcement. The maximum recommended service temperature of Fiberloc® products is 140°F (60°C).

CPVC — Chlorinated Poly Vinyl Chloride

Chlorinated PVC is used for higher temperature applications than PVC, especially for handling hot corrosive liquids. With similar chemical and corrosion resistance to PVC, increased chlorine content gives CPVC superior thermal resistance. CPVC is not recommended for use with chlorinated or aromatic hydrocarbons, esters, or polar solvents such as ketones. Spears® CPVC materials conform to ASTM Cell Classification 23447 (formerly designated as Type IV, Grade 1). The maximum recommended service temperature of CPVC products is 200°F (93°C).

Glass Reinforced CPVC

This special composite compound has the basic properties of CPVC with additional strength, stiffness, and dimensional stability from glass fiber reinforcement. The maximum recommended service temperature of glass reinforced CPVC products is 200°F (93°C).

PP — Polypropylene

Polypropylene is used in a variety of Spears® valves where different chemical resistance and lower temperature impact resistance is required as compared to PVC or CPVC. The excellent impact resistance characteristics of polypropylene make this polymer the choice for Spears® valve handles. Spears® PP products carry a maximum recommended service temperature of 180°F (82°C).

Glass Reinforced PP

Glass reinforced polypropylene is used in numerous valves and valve accessories where additional strength or stiffness is required over standard PP materials while maintaining basically the same range of chemical resistance.

PTFE/PFA — Polytetrafluoroethylene/ Perfluoroalkoxy Resin

PTFE is a ram extrusion process while PFA is a melt processed fluoroplastic. These fluoroplastics are virtually inert to most chemicals, acids bases and solvents. Due to their low coefficient of friction, these materials are considered “self-lubricating” making them an excellent choice for valve seats, bearings and thrust washers. Spears® proprietary processing of PTFE with other materials allows low friction characteristics to be built into a variety of thermoplastic components used in Spears® valves. Fluoroplastics are serviceable to 500°F (260°C).

PTFE/HDPE

Spears® proprietary composition of PTFE and High Density Polyethylene is used in a variety of valve seats, bearing washers, and other valve components requiring durability and improved lubricity. The chemical resistance of HDPE is somewhat higher than that of LDPE and generally exceeds that of PVC and CPVC. HDPE has excellent resistance to acids, alcohols and bases. In comparison to PVC and CPVC, HDPE is somewhat less resistant to aliphatic hydrocarbons and has more limited resistance to oxidizing agents. HDPE is serviceable to 230°F (110°C).

Low Extractable PVC

Low Extractable PVC material developed for use in UPW (Ultra Pure Water) and other high purity applications. Independently tested, Low Extractable PVC provides superior resistance to regular PVC for leaching of anion, cation, and numerous trace metals when subjected to 18.2 megohm deionized water while maintaining ease of installation. Low Extractable PVC has the same basic chemical resistance as regular PVC.

Elastomers

EPR (EPDM) — Ethylene propylene rubber

Used in O-ring seals, EPR is recommended for water, chlorinated water, dilute acids and alkalines, alcohols, and has excellent resistance to ozone. EPR is not recommended for petroleum oils, di-ester lubricants, strong acids, or strong alkalines. The maximum recommended service temperature of EPR is 300°F (149°C).

FKM — Fluoroelastomer

Fluoroelastomers are a special purpose fluorocarbon-based synthetic rubber categorized under the ASTM designation of "FKM". The FKM O-ring is commonly referred to as a "Viton® O-ring". However, "Viton®" is only one of many FKM brand names and is a registered trademark of DuPont. Performance Elastomers L.L.C. Spears® uses general purpose Type 1 FKM O-rings with a minimum of 66% fluorine content for the best balance of overall properties. FKM exhibits a very broad range of chemical resistance, including petroleum oils, di-ester based lubricants, silicate fluids and greases, halogenated hydrocarbons, and mineral acids. FKM is not recommended for ketones, amines, anhydrous ammonia, hot hydrofluoric or chlorosulfonic acids, or automotive brake fluids. The maximum recommended service temperature of FKM is 400°F (204°C).

Nitrile (Buna-N) — Nitrile elastomer

Used in O-ring seals, nitrile elastomers are recommended for petroleum oils and fluids, silicone oils and greases, di-ester based lubricants, ethylene glycol based fluids, and cold water. Nitrile is not recommended for phosphate ester hydraulic fluids, halogenated hydrocarbons, strong acids, ketones, ozone or automotive brake fluids. The maximum recommended service temperature of nitrile is 275°F (135°C).

FFKM (Aegis™, Kalrez®) — Perfluoroelastomer

Aegis™ is a trademark of ISC Freudenberg-NOK, Kalrez® is a registered trademark of DuPont-Dow Elastomers. These specialty materials are virtually inert and provide the greatest range of chemical resistance found in an elastomer. However, be aware that perfluoroelastomers are substantially more expensive than other elastomer compounds. Perfluoroelastomers are serviceable to 600°F (360°C) and performance is limited at very low temperatures.

CSM (Hypalon®) — Chlorosulfonated Polyethylene

Hypalon® is a registered trademark of DuPont-Dow Elastomers. CSM is a close match to neoprene, but it has improved chemical resistance. This specialty compound offers good abrasion resistance with superior resistance to weather, ozone, sunlight and oxidation. CSM has excellent resistance to alcohols, alkalis and acids, very good color stability with moderate resistance to oils and gasoline. CSM is not recommended for use with aromatic solvents. CSM has limited flexibility at low temperatures and relatively poor compression set. As a result, CSM is not generally manufactured as O-rings. CSM is serviceable to 300°F (149°C). Hypalon® is offered as an alternative diaphragm elastomer in Spears® Diaphragm Valves.

PFA/FEP Encapsulated O-rings

O-ring encapsulation places a PFA or FEP material around a FKM elastomer core to provide very high chemical resistance. However, this is not without a trade-off. The PFA/FEP encapsulation is far less resilient than an elastomer and may not perform as well in certain O-ring applications. PFA/FEP encapsulated O-rings should be used only where an elastomer O-ring cannot meet requirements.

Elastomer Backed PTFE

Used in Spears® PTFE Diaphragm Valves, this chemically bonded laminate provides the chemical resistance of PTFE with improved resilience from a thick elastomer backing for greater sealing capability than solid PTFE Diaphragms. Use of heavier, high grade EPDM or FKM backing materials eliminates the need for "gas barrier" PTFE Diaphragm designs.

Metals

Zinc Plated Steel

Zinc plated carbon steel is the standard for general purpose bolts, nuts and fasteners. Zinc plated steel provides good corrosion resistance for most dry environment applications and normal operating conditions.

Stainless Steel

Stainless Steel provides superior corrosion resistance than natural or plated carbon steels. Common grade is 18-8, which is excellent for general purpose use in nuts, bolts and fasteners. SS302 and SS304 are commonly used in a variety of sheet stock or deep drawn metal components. SS316 is the preferred choice for harsh chemical and corrosion environments and is used in the majority of Spears® industrial valves and accessories where stainless steel is required.

PTFE Coated Stainless Steel

Where very high chemical resistance is needed, Spears® offers a special PTFE coated, stainless steel Butterfly Valve stem. This tough, chemically bonded coating makes the stem virtually inert to most chemicals without loss of function or reliability.

Special Alloys (Titanium, Hastelloy®, Alloy 20, etc.)

A variety of specialty metals can be obtained on a custom order basis for use in Spears® products where specific chemical or corrosion resistance is required and specified by user. Please note that custom components generally require extended lead-time and may have significant costs.

Temperature Pressure De-rating for PVC, CPVC & PP Thermoplastic Materials

Elevated temperature fluid mediums require a de-rating of thermoplastic pipe maximum internal pressure ratings at 73°F. To determine the maximum internal pressure rating at an elevated temperature, simply multiply the pipe pressure rating at 73°F by the percentage specified for the desired temperature.

PLEASE NOTE — Valves have different elevated temperature ratings than pipe & fittings. See individual valve recommendations.

System Operating Temperature °F (°C)	73 (23)	80 (27)	90 (32)	100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
PVC	100%	90%	75%	62%	50%	40%	30%	22%	-0-	-0-	-0-	-0-	-0-	-0-	-0-
CPVC	100%	100%	91%	82%	73%	65%	57%	50%	45%	40%	32%	25%	22%	20%	-0-
PP	100%	90%	75%	70%	65%	50%	42%	36%	30%	25%	20%	15%	-0-	-0-	-0-

Typical Physical Properties of PVC, CPVC & PP Thermoplastic Materials

The following table lists typical physical properties of PVC, CPVC and PP thermoplastic materials. Variations may exist depending on specific compound and product.

Properties	ASTM Test Method	PVC	CPVC	PP Natural*
Mechanical Properties, 73°F				
Specific Gravity	D 792	1.41	1.55	.907
Tensile Strength, psi	D 638	7,200	8,000	5,240
Modulus of Elasticity, psi	D 638	440,000	360,000	231,000
Compressive Strength, psi	D 695	9,000	10,100	---
Flexural Strength, psi	D 790	13,200	15,100	---
Izod Impact, notched, ft-lb/in	D 256	.65	1.50	3.02
Thermal Properties				
Heat Deflection Temperature, °F at 66 psi	D 648	165	217	201
Thermal Conductivity, BTU/hr/sq ft/°F/in	C 177	1.02	.95	
Coefficient of Linear Expansion, in/in/°F	D 696	3.1×10^{-5}	3.4×10^{-5}	5.42×10^{-5}
Flammability				
Limiting Oxygen Index, %	D 2863	43	60	
UL 94 Rating		94V-0	V-0, 5VB, 5VA	HB
Other Properties				
Water Absorption, % 24 hr.	D 570	.05	.03	.02
Industry Standard Color		Dark Gray / White	Medium Gray	Natural/Beige
Minimum ASTM Cell Classification	D 1784/D 4101	12454	23447	PP0112 B65242
NSF® Potable Water Approved		Yes	Yes	Yes

* Glass filled PP will have slightly different values with higher tensile strength.

Spears® Valve Standards

Standards provide greater assurance of product performance and consistency, and are available to assist design engineers in system specification. The most frequently referenced industry standards for plastic piping systems are ASTM Standard Specifications and Practices. Along with ASTM Standards, additional product specifications and certifications form the basis of product conformance to which Spears® valves are manufactured.

Individual Standards Overview

ASTM — American Society for Testing and Materials

ASTM D 1784

Specifies compound physical requirements for PVC and CPVC materials used in the manufacture of thermoplastic valves, pipe, and fittings. The standard classifies compounds on the basis of several physical and chemical properties. Conformance to a particular material classification requires meeting the minimum requirements specified.

ASTM D 1785 and F 441

Specifies physical dimensions, test requirements, and maximum operating pressures, for Schedule 40, 80 and 120 PVC (D 1785) and CPVC (F 441) pressure pipe.

ASTM D 2466 and F 438

Specifies physical dimensions, test requirements, and workmanship for Schedule 40 PVC (D 2466) and CPVC (F 438) pressure fittings.

ASTM D 2464 and F 437

These standards have been incorporated into ASTM D 2467 and F 439, respectively.

ASTM D 2467 and F 439

Specifies physical dimensions, test requirements, and workmanship for Schedule 80 PVC (D 2467) and CPVC (F 439) pressure fittings.

ASTM D 2564, F 493, and F 656

Specifies requirements for PVC (D 2564) and CPVC (F 493) solvent cement, including component compounds, minimum resin content, viscosity, and physical performance. Standard F 656 specifies requirements for primers to be used with PVC solvent cements.

ASTM D 2846

Specifies physical dimensions, test requirements, and workmanship for CPVC Hot-and-Cold Water Distribution Systems, commonly referred to as CTS (Copper Tube Size).

ASTM D 2855

Specifies standard practice and procedures for making PVC pipe and fitting joints with solvent cement.

ASTM D 4101

Specifies classification of injection molding and extrusion grades of Polypropylene (PP) materials according to physical characteristics. Conformance to a particular material classification requires meeting the minimum requirements specified.

ASTM F 1498

Specifies dimensions and gauging of tapered pipe threads on plastic pipe and fittings.

ASTM F 1970

Specifies performance criteria testing, and end connection dimensions for products such as ball valves and check valves.

ANSI — American National Standards Institute

ANSI B1.20.1

Specifies basic thread form, taper, and tolerances of general purpose tapered pipe threads (metal).

ANSI B16.5

Specifies standard bolt hole patterns and basic dimensions for Class 150 steel pipe flanges.

NSF® International

NSF® is a third party product approval agency which tests manufacturer's product against a variety of health and product performance standards. They are one of the most recognized agencies for issuing approval of plastic piping system products for potable water use.

NSF® Standard 14

Certifies product suitability for potable water use, product conformance to applicable ASTM standards, and establishes minimum requirements for manufacturer's quality control programs through routine testing and facilities inspections.

NSF® Standard 14 Special Engineering Appurtenance Program (S.E.)

In addition to Standard 14 general requirements, the S.E. program establishes product performance requirements where no directly applicable ASTM specifications exist. NSF® S.E. specifications are developed from a combination of applicable portions of ASTM specifications and manufacturer's design specifications as a standard for conformance verification.

NSF® Standard 61

Developed to establish minimum requirements for the control of potential adverse health effects from products in contact with drinking water. Certifies product suitability for use in potable water systems through toxicological testing for contaminates or impurities. NSF® Standard 61 compliance is a prerequisite to NSF® Standard 14 certification.

True Union 2000 Valve Overview

One of the Most Versatile, Compact Valve Designs Available

Spears® True Union 2000 Ball Valves, 3-Way Ball Valves and Ball Check Valves provide maximum versatility with fully interchangeable valve cartridges. Provides for easier system design modifications and upgrades in multiphase projects, or anywhere changes in valve types are desired. Simply exchange any True Union 2000 valve in-line using existing union nuts. Also mates with Spears® new 2000 Pipe Unions. All True Union 2000 valves feature a low profile, compact design for minimal space requirements. Additionally, Spears® offers valve Retrofit Kits for easy in-line replacement of other valves and factory installed Actuation Packages.

True Union 2000
Industrial Ball Valve

True Union 2000
Industrial Ball Check Valve

True Union 2000
Standard Ball Valve

True Union 2000
Industrial 3-Way Horizontal
Diverter Ball Valve

True Union 2000
Industrial 3-Way Vertical
Ball Valve

True Union 2000
Industrial Tee-Style
Ball Valve

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

True Union 2000 Industrial Ball Valves

Features – PVC, CPVC

This multi-featured, space saving quarter-turn shutoff valve is designed to meet the demands of today's industrial and chemical processing applications. PVC and CPVC valves are available in IPS sizes 1/2" through 6" with socket/regular thread, SR (Special Reinforced) thread, flanged or spigot end connectors and 8" Venturied valve with socket or flanged ends. Also available in metric socket and BSP thread sizes 1/2" through 2".

- Chemical & Corrosion Resistant PVC or CPVC Construction
- Also Available in Spears® High Purity, Low Extractable PVC Material
- Interchangeable with all True Union 2000 Valves Mates with Union 2000 Pipe Unions
- High Impact Polypropylene Handle
- Built-in Handle Lockout
- Schedule 80 Full-Bore Design
- Strong, Buttress Thread Union Nuts
- Spears® Double O-ring Safe-T-Shear® Stem Design
- EPDM or FKM O-rings
- Spears® Safe-T-Blocked® Seal Carrier
- Self Adjusting PTFE Floating Seat Design
- Fully Serviceable, Replaceable Components
- Sizes 1/2" - 4" pressure rated to 235 psi @ 73°F. Sizes 6" and 8" Venturied and all Flanged to 150 psi @ 73°F.
- EPDM Valves NSF® Certified for Potable Water use
- Suitable for Vacuum Service
- Assembled with Silicone-Free, Water Soluble Lubricants
- Manufactured to ASTM F 1970

Sample Engineering Specification

All thermoplastic ball valves shall be True Union 2000 Industrial type manufactured to ASTM F 1970 and constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447. All O-rings shall be EPDM or FKM. All valves shall have Safe-T-Shear® stem with double O-ring stem seals. All valve handles shall be polypropylene with built-in lockout mechanism. All valve union nuts shall have Buttress threads. All seal carriers shall be Safe-T-Blocked®. All valve components shall be replaceable. All EPDM valves shall be certified by NSF International for use in potable water service. All 1/2" through 4" valves shall be pressure rated to 235 psi, all 6" and 8" Venturied and all flanged valves shall be pressure rated to 150 psi for water at 73°F.

Quick-View Valve Selection Chart

Valve Size	O-ring Material	PVC Part Number[1,2]					Pressure Rating
		Socket	Threaded	SR Threaded	Flanged	Spigot	
1/2	EPDM	1829-005	included	1821-005SR	1823-005	1827-005	235 psi Non-Shock Water @ 73°F (Flanged 150 psi Non-Shock) Water @ 73°F
	FKM	1839-005	included	1831-005SR	1833-005	1837-005	
3/4	EPDM	1829-007	included	1821-007SR	1823-007	1827-007	
	FKM	1839-007	included	1831-007SR	1833-007	1837-007	
1	EPDM	1829-010	included	1821-010SR	1823-010	1827-010	
	FKM	1839-010	included	1831-010SR	1833-010	1837-010	
1-1/4	EPDM	1829-012	included	1821-012SR	1823-012	1827-012	
	FKM	1839-012	included	1831-012SR	1833-012	1837-012	
1-1/2	EPDM	1829-015	included	1821-015SR	1823-015	1827-015	
	FKM	1839-015	included	1831-015SR	1833-015	1837-015	
2	EPDM	1829-020	included	1821-020SR	1823-020	1827-020	
	FKM	1839-020	included	1831-020SR	1833-020	1837-020	
2-1/2	EPDM	1822-025	1821-025	1821-025SR	1823-025	1827-025	
	FKM	1832-025	1831-025	1831-025SR	1833-025	1837-025	
3	EPDM	1822-030	1821-030	1821-030SR	1823-030	1827-030	
	FKM	1832-030	1831-030	1831-030SR	1833-030	1837-030	
4	EPDM	1822-040	1821-040	1821-040SR	1823-040	1827-040	
	FKM	1832-040	1831-040	1831-040SR	1833-040	1837-040	
6	EPDM	1822-060	1821-060	1821-060SR	1823-060	1827-060	150 psi Non-Shock Water @ 73°F
	FKM	1832-060	1831-060	1831-060SR	1833-060	1837-060	
8[3]	EPDM	1822-080	—	—	1823-080	—	
	FKM	1832-080	—	—	1833-080	—	

1) For CPVC, add the letter "C" following the size code of part number listed (e.g.,1829-005**C**, 1821-005**C**SR)
2) For Special Ball Vent Design, add the letter "V" before the dash separator (e.g.,1829**V**-005, 1821**V**-005CSR)
3) 8" Venturied Valves are 6" ball valves fitted with 6x8 end connector adapters.

Optional Vented Ball Valves

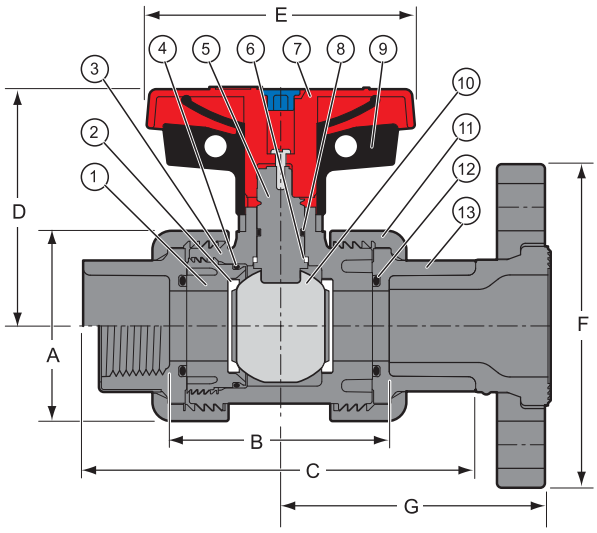
Same valve with special ball vent design for sodium hypochlorite (bleach) and other chemical applications where entrapped fluids may form caustic crystalline residues and pressure build up from gases developed. Valve has a 1/8" vent hole in ball to equalize internal fluid pressures. Install valve with ball vent on the pressure (upstream) side when in closed position.

Optional Accessories*

- Retro-Fit End Connector Sets for Valve Replacement
- Split-Nut Repair Kits for Union Nut Replacement
- Supplemental End Connectors
- Round Safety Handles
- Handle Lockout Ring
- Stem Extension Kits
- Square Operator Nuts
- Multi Mount Valve/Actuation Mounting Kits
- Mini-Mount Actuation Mounting Kits

* See ***"BALL VALVE ACCESSORIES"*** section for details of individual products.

True Union 2000 Industrial Ball Valves



Replacement Parts

No.	Component	Qty.	Material
1	Seal Carrier	1	PVC/CPVC
2	Seat	2	PTFE
3	Body	1	PVC/CPVC
4	Carrier O-ring	1	EPDM/FKM
5	Stem	1	PVC/CPVC
6	Stem Bearing	1	PP
7	Handle	1	PP
8	Stem O-ring	2	EPDM/FKM
9	Handle Lock	1	PP
10	Ball	1	PVC/CPVC
11	Union Nut	2	PVC/CPVC
12	End Connector O-ring	2	EPDM/FKM
13	End Connector	2	PVC/CPVC

Dimensions, Weights, Operating Torque & C_V Values

Nominal Size	Dimensions Reference (inches, ± 1/16)										Approx. Wt. (Lbs.)		Oper.[2] Torque (in. lbs.)	Cv^3 Values		
	A	B[1]		C			D	E	F	G	PVC	CPVC		Soc/Thd	Flanged	Spigot
		Soc/Thd	Spigot	Socket	Thread	Spigot										
1/2	1-7/8	2-3/8	2-7/8	4-3/16	3-3/16	4-5/8	2-9/16	2-13/16	3-1/2	2-31/32	.36	.38	16	29	18	27
3/4	2-1/4	2-3/4	3-1/4	4-3/4	4-1/4	5-1/4	2-7/8	3-3/8	3-7/8	3-5/16	.56	.58	17	63	39	57
1	2-1/2	2-7/8	3-1/2	5-1/8	4-11/16	5-3/4	3-1/8	3-7/16	4-1/2	3-5/8	.74	.77	22	120	73	108
1-1/4	3-1/16	3-1/4	3-13/16	5-3/4	5-3/16	6-5/16	3-5/8	3-7/8	4-5/8	3-31/32	1.13	1.19	28	243	151	223
1-1/2	3-1/2	3-1/2	4	6-1/4	5-7/16	6-3/4	4	4-3/16	5	4-3/8	1.54	1.60	61	357	223	333
2	4-5/16	4-25/32	5-3/16	7-3/4	7-13/16	8-1/4	4-1/2	5-3/32	6	5-1/4	2.72	2.85	77	599	395	571
2-1/2	5-3/8	6-7/8	7-13/16	10-7/16	9-11/16	11-3/8	5-1/8	6-1/4	7-1/2	6	7.42	7.70	132	856	579	734
3	6-3/16	7	7-13/16	10-11/16	9-7/8	11-9/16	5-7/8	7-5/8	7-1/2	6-13/16	7.46	7.81	132	1416	974	1322
4	7-3/4	7-5/16	8-1/4	11-7/8	10-1/4	12-3/4	6-3/4	9	9	7-1/2	12.35	12.48	396	2865	1952	2672
6	11-5/8	11-1/16	13	17-1/16	15-3/4	18-1/2	8-1/8	14-5/16	11-1/4	10-3/16	37.53	40.55	732	6638	4824	6149
8[4]	11-5/8	23-3/16	---	31-7/8	---	---	8-1/8	14-5/16	13-1/2	17-13/16	50.84	55.92	732	N/A	N/A	N/A

1: Valve Lay Length
2: Torque required at valve maximum internal pressure rating, 5ft/sec. Flow velocity; due to adjustment differences during installation, actual values may vary.
3: Gallons per minute at 1 psi pressure drop. Valves calculated from laying length, based on derivative of Hazen-Williams equation with surface roughness factor of C=150.
4: 8" Venturied Valves are 6" ball valves fitted with 6x8 end connector adapters.

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 4"	PVC	235 (1.62)	211 (1.45)	150 (1.03)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	235 (1.62)	219 (1.51)	170 (1.17)	145 (1.00)	130 (.90)	110 (.76)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)
	6" and 8"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)

NOTE: Flanged Valves have a base pressure rating of 150 psi.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Quick-View Valve Selection Chart
3-Way Vertical Ball Valve

Valve Size	O-ring Material	PVC Part Number[1, 2, 3, 4]				Pressure Rating
		Socket	SR Threaded	Flanged	Spigot	
1/2	EPDM	4722L1-005	4721L1-005SR	4723L1-005	4727L1-005	235 psi Non-Shock Water @ 73°F (Flanged 150 psi Non-Shock) Water @ 73°F
	FKM	4732L1-005	4731L1-005SR	4733L1-005	4737L1-005	
3/4	EPDM	4722L1-007	4721L1-007SR	4723L1-007	4727L1-007	
	FKM	4732L1-007	4731L1-007SR	4733L1-007	4737L1-007	
1	EPDM	4722L1-010	4721L1-010SR	4723L1-010	4727L1-010	
	FKM	4732L1-010	4731L1-010SR	4733L1-010	4737L1-010	
1-1/4	EPDM	4722L1-012	4721L1-012SR	4723L1-012	4727L1-012	
	FKM	4732L1-012	4731L1-012SR	4733L1-012	4737L1-012	
1-1/2	EPDM	4722L1-015	4721L1-015SR	4723L1-015	4727L1-015	
	FKM	4732L1-015	4731L1-015SR	4733L1-015	4737L1-015	
2	EPDM	4722L1-020	4721L1-020SR	4723L1-020	4727L1-020	
	FKM	4732L1-020	4731L1-020SR	4733L1-020	4737L1-020	
2-1/2	EPDM	4722L1-025	4721L1-025SR	4723L1-025	4727L1-025	150 psi Non-Shock Water @ 73°F
	FKM	4732L1-025	4731L1-025SR	4733L1-025	4737L1-025	
3	EPDM	4722L1-030	4721L1-030SR	4723L1-030	4727L1-030	
	FKM	4732L1-030	4731L1-030SR	4733L1-030	4737L1-030	
4	EPDM	4722L1-040	4721L1-040SR	4723L1-040	4727L1-040	
	FKM	4732L1-040	4731L1-040SR	4733L1-040	4737L1-040	

1: For CPVC valve, add the letter "C" to the part number (e.g. 4722L1-005**C**)
2: For Double L-Port, add the number "2" to the part number (e.g. 4722L**2**-005)
3: For Triple L-Port, add the number "3" to the part number (e.g. 4722L**3**-005)
4: For T-Port, add the letter "T1" to the part number (e.g. 4722**T1**-005)

Quick-View Valve Selection Chart
3-Way Horizontal Diverter Valve (no branch shutoff)

Valve Size	O-ring Material	PVC Part Number[1, 2]				Pressure Rating
		Socket	SR Threaded	Flanged	Spigot	
1/2	EPDM	5022L1-005	5021L1-005SR	5023L1-005	5027L1-005	235 psi Non-Shock Water @ 73°F (Flanged 150 psi Non-Shock) Water @ 73°F
	FKM	5032L1-005	5031L1-005SR	5033L1-005	5037L1-005	
3/4	EPDM	5022L1-007	5021L1-007SR	5023L1-007	5027L1-007	
	FKM	5032L1-007	5031L1-007SR	5033L1-007	5037L1-007	
1	EPDM	5022L1-010	5021L1-010SR	5023L1-010	5027L1-010	
	FKM	5032L1-010	5031L1-010SR	5033L1-010	5037L1-010	
1-1/4	EPDM	5022L1-012	5021L1-012SR	5023L1-012	5027L1-012	
	FKM	5032L1-012	5031L1-012SR	5033L1-012	5037L1-012	
1-1/2	EPDM	5022L1-015	5021L1-015SR	5023L1-015	5027L1-015	
	FKM	5032L1-015	5031L1-015SR	5033L1-015	5037L1-015	
2	EPDM	5022L1-020	5021L1-020SR	5023L1-020	5027L1-020	
	FKM	5032L1-020	5031L1-020SR	5033L1-020	5037L1-020	
2-1/2	EPDM	5022L1-025	5021L1-025SR	5023L1-025	5027L1-025	150 psi Non-Shock Water @ 73°F
	FKM	5032L1-025	5031L1-025SR	5033L1-025	5037L1-025	
3	EPDM	5022L1-030	5021L1-030SR	5023L1-030	5027L1-030	
	FKM	5032L1-030	5031L1-030SR	5033L1-030	5037L1-030	
4	EPDM	5022L1-040	5021L1-040SR	5023L1-040	5027L1-040	
	FKM	5032L1-040	5031L1-040SR	5033L1-040	5037L1-040	

1: For CPVC valve, add the letter "C" to the part number (e.g. 5022L1-005**C**)
2: For T-Port, add the letter "T1" to the part number (e.g. 5022**T1**-005)

True Union 2000 Industrial 3-Way Ball Valves

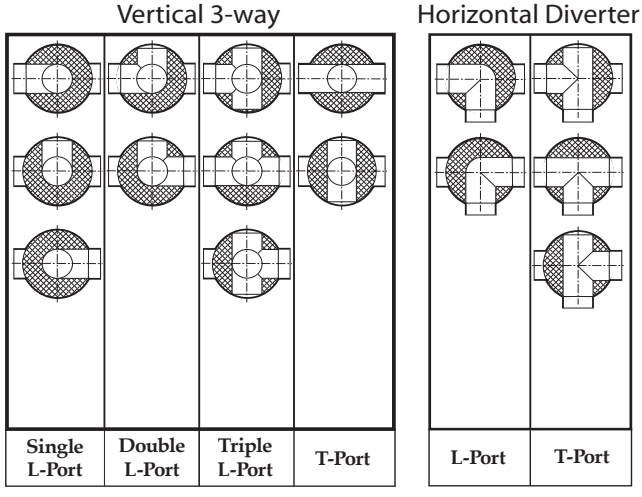
Features – PVC, CPVC

Versatile design provides multiple port and configuration options for controlling flow distribution in industrial and chemical processing applications. Choose Vertical 3-Way (L-Port Diverter, T-Port Off) or Horizontal Diverter configurations with open branch (no shutoff) design. Valves are available in IPS sizes 1/2" through 4" with socket, SR threaded (Special Reinforced), flanged or spigot end connectors. Venturied 6" (4" valves with 4 x 6 reducers) are also available with socket or flanged valve end connections.

- Chemical & Corrosion Resistant PVC or CPVC Construction
- Vertical 3-Way or Horizontal Diverter Design (no branch shutoff)
- L-Port, Multi L-Port & T-Port Ball Configuration Options
- Interchangeable with all True Union 2000 Valves, Mates with Union 2000 Pipe Unions
- High Impact Polypropylene Handle
- Built-in Handle Lockout
- Strong, Buttress Thread Union Nuts
- Spears® Double O-ring Safe-T-Shear® Stem Design
- EPDM or FKM O-rings
- Spears® Safe-T-Blocked® Seal Carrier
- Self Adjusting PTFE Floating Seat Design
- Fully Serviceable, Replaceable Components
- Sizes 1/2" - 2" pressure rated to 235 psi @ 73°F
  Sizes 2-1/2" - 4" and all Flanged to 150 psi @ 73°F
- EPDM Valves NSF® Certified for Potable Water use
- Suitable for Vacuum Service
- Assembled with Silicone-Free, Water Soluble Lubricants
- Manufactured to ASTM F 1970
- Metric Socket and BSP Thread Available

3-Way Port Options

Diverter Valves have no shut-off on branch.



Ball Port Options viewed from top of valve.

Optional Accessories*

- Retro-Fit End Connector Sets for Valve Replacement
- Split-Nut Repair Kits for Union Nut Replacement
- Supplemental End Connectors
- Stem Extension Kits
- Square Operator Nuts
- Multi Mount Valve/Actuation Mounting Kits

* See ***"BALL VALVE ACCESSORIES"*** section for details of individual products.

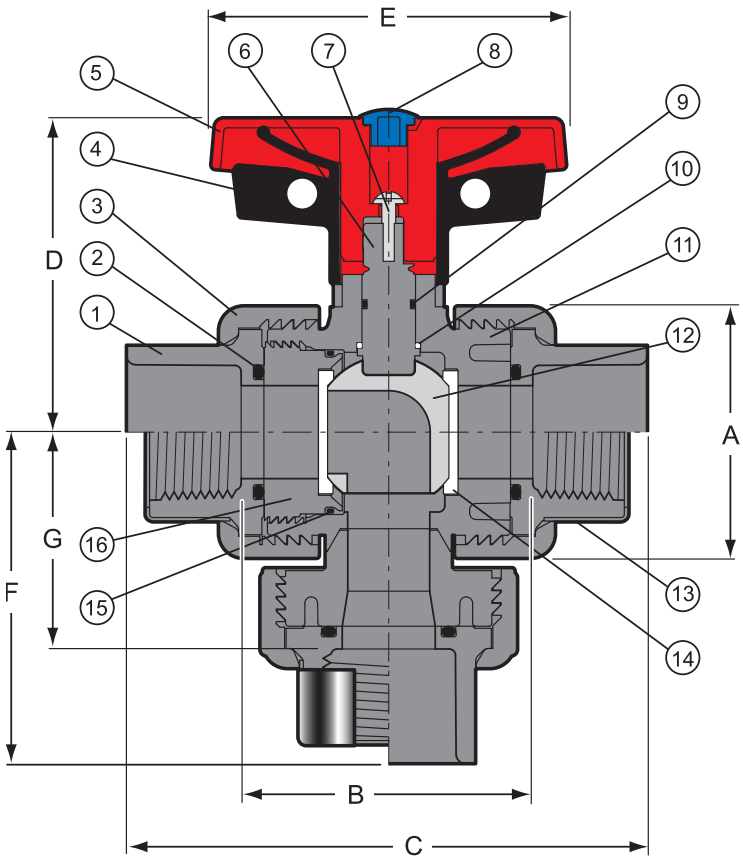
Sample Engineering Specification

All thermoplastic ball valves shall be True Union 2000 3-Way [specify horizontal or vertical] type with [specify port option] manufactured to ASTM F 1970 and constructed from PVC Type I, ASTM D 1784 Cell Classification 12454, or CPVC Type IV, ASTM D 1784 Cell Classification 23447. All O-rings shall be EPDM or FKM. All valves shall have Safe-T-Shear® stem with double O-ring stem seals. All valve handles shall be polypropylene with built-in lockout mechanism. All valve union nuts shall have Buttress threads. All seal carriers shall be Safe-T-Blocked®. All valve components shall be replaceable. All EPDM valves shall be certified by NSF International for use in potable water service. All PVC and CPVC 1/2" through 2" valves shall be pressure rated to 235 psi, all 2-1/2" through 4" and all flanged valves shall be pressure rated to 150 psi for water at 73°F as manufactured by Spears® Manufacturing Company.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

True Union 2000 Industrial 3-Way Ball Valves



Replacement Parts

No.	Component	Qty.	Material
1	End Connector	3	PVC/CPVC
2	End Connector O-ring	3	EPDM/FKM
3	Union Nut	3	PVC/CPVC
4	Handle Lock	1	PP
5	Handle	1	PP
6	Stem	1	PVC/CPVC
7	Screw	1	Stainless Steel
8	Handle Cover	1	PP
9	Stem O-ring	2	EPDM/FKM
10	Stem Bearing*	1	PTFE
11	Body	1	PVC/CPVC
12	Ball	1	PVC/CPVC
13	End Connector Collar	3	Stainless Steel
14	Seat	2	PTFE
15	Carrier O-ring	1	EPDM/FKM
16	Seal Carrier	1	PVC/CPVC

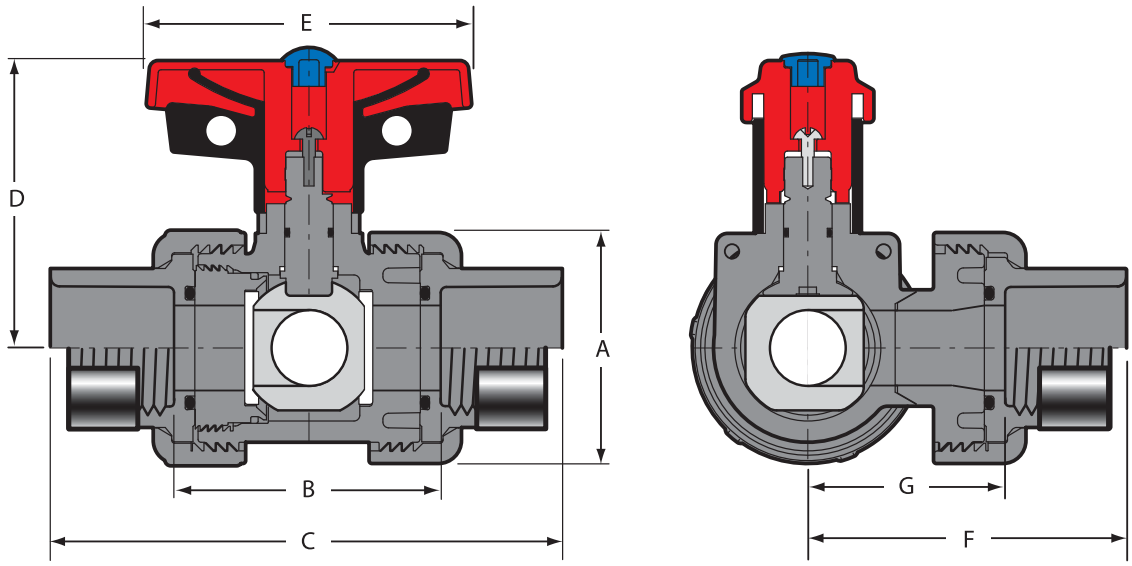
Note: Applies to both Vertical and Horizontal configurations.
* For sizes 2-1/2, 3 & 4 only.

NOTE: Diverter style valve has no shutoff on branch.

Vertical 3-Way Ball Valves — Dimensions & Operating Torque

Vertical 3-Way Ball Valve														Oper.[2] Torque (in. lbs.)
Nominal Size	A	B[1]		C			D	E	F			G		
		Soc/SR Thd	Spigot	Socket	SR Thd	Spigot			Socket	SR Thread	Spigot	Soc/SR Thd	Spigot	
1/2	1-7/8	2-7/16	2-15/16	4-1/4	3-27/32	4-3/4	2-9/16	2-13/16	2-3/4	2-9/16	2-13/16	1-11/16	2	12
3/4	2-1/4	2-3/4	3-5/16	4-3/4	4-1/4	5-3/8	2-7/8	3-5/16	3	2-3/4	3-5/16	2	2-5/16	12
1	2-1/2	2-7/8	3-1/2	5-1/8	4-11/16	5-3/4	3-1/8	3-7/16	3-1/4	3	3-9/16	2-1/8	2-7/16	20
1-1/4	3-1/16	3-1/4	3-13/16	5-3/4	5-3/16	6-5/16	3-5/8	3-13/16	3-3/4	3-3/8	4-1/16	2-3/8	2-13/16	25
1-1/2	3-1/2	3-1/2	4	6-1/4	5-7/16	6-3/4	4	4-3/16	4-3/16	3-13/16	4-1/2	2-3/16	3-1/8	40
2	4-1/4	4-3/4	5-3/16	7-3/4	6-3/4	8-1/4	4-1/2	5-1/8	5	4-1/2	5-5/16	3-1/2	3-3/4	67
2-1/2	5-3/8	5-7/8	7-13/16	9-5/16	8-1/2	11-3/8	5-1/8	6-1/4	5-7/8	5-1/2	6-7/16	4-1/8	5-5/16	120
3	6-3/16	6-7/8	7-13/16	10-11/16	9-3/4	11-9/16	5-7/8	7-5/8	6-11/16	6-3/16	7-3/16	4-3/4	5-5/16	120
4	7-1/2	7-1/4	8-1/4	11-13/16	10-1/4	12-13/16	6-3/4	9-3/16	7-1/8	6-3/4	8-3/4	5-7/8	6-1/2	336

1: Valve Lay Length
2: Torque required at valve maximum internal pressure rating, 5ft/sec. Flow velocity; due to adjustment differences during installation, actual values may vary.



NOTE: Diverter style valve has no shutoff on branch

Horizontal Diverter 3-Way Ball Valves Dimensions & Operating Torque

Nominal Size	A	B[1]		C			D	E	F			G		Oper.[2] Torque (in. lbs.)
		Soc/SR Thread	Spigot	Socket	SR Thread	Spigot			Socket	SR Thread	Spigot	Soc/SR Thread	Spigot	
1/2	1-3/16	2-7/16	2-15/16	4-3/16	3-13/16	4-3/4	2-9/16	2-13/16	2-9/16	2-3/8	2-13/16	1-11/16	2	12
3/4	2-1/4	2-3/4	3-15/16	4-3/4	4-1/4	5-3/8	2-7/8	3-5/16	3	2-3/4	3-5/16	2	2-5/16	12
1	2-1/2	2-7/8	3-1/2	5-1/8	4-11/16	5-3/4	3-1/8	3-7/16	3-1/4	3	3-9/16	2-1/8	2-7/16	20
1-1/4	3-1/16	3-1/4	3-13/16	5-3/4	5-3/16	6-5/16	3-5/8	3-13/16	3-3/4	3-3/8	4-1/16	2-3/8	2-13/16	25
1-1/2	3-1/2	3-1/2	4	6-1/4	5-7/16	6-3/4	4	4-3/16	4-3/16	3-13/16	4-1/2	2-3/16	3-1/8	40
2	4-1/4	4-3/4	5-3/16	7-3/4	6-3/4	8-1/4	4-1/2	5-1/8	5	4-1/2	5-5/16	3-1/2	3-3/4	67
2-1/2	5-3/8	5-7/8	7-13/16	9-5/16	8-1/2	11-3/8	5-1/8	6-1/4	5-7/8	5-1/2	6-7/16	4-1/8	5-5/16	120
3	6-3/16	6-7/8	7-13/16	10-11/16	9-3/4	11-9/16	5-7/8	7-5/8	6-11/16	6-3/16	7-3/16	4-3/4	5-5/16	120
4	7-1/2	7-1/4	8-1/4	11-13/16	10-1/4	12-13/16	6-3/4	9-3/16	7-1/8	6-3/4	8-3/4	5-7/8	6-1/2	336

1: Valve Lay Length
2: Torque required at valve maximum internal pressure rating, 5ft/sec. Flow velocity; due to adjustment differences during installation, actual values may vary.

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 2"	PVC	235 (1.62)	211 (1.45)	150 (1.03)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	235 (1.62)	219 (1.51)	170 (1.17)	145 (1.00)	130 (.90)	110 (.76)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)
	2-1/2" - 4"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)

NOTE: Flanged Valves have a base pressure rating of 150 psi.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

True Union 2000 Industrial Tee Style Ball Valves

Tee x Socket

Features – PVC, CPVC

Spears® True Union 2000 Industrial Tee-Style Ball Valve design integrates valve and Tee-fitting for direct branch take-off laterals. The "Tee-Valve" provides a stronger, more compact connection by eliminating the need for a reducer, additional length of pipe, and one of the end connections on the ball valve. Close proximity of valve to mainline emulates a "zero dead-leg" design to minimize any areas of fluid stagnation. Custom produced to specified Tee and Valve connection sizes. Also available in metric sizes.

- Chemical & Corrosion Resistant PVC, CPVC or Low Extractable PVC materials
- Multi-featured Industrial Grade
- Built-in Handle Lockout
- Fully Serviceable, Replaceable Components
- Seal Carrier Adjustment Tool included
- ISO Pattern Actuation Mounting Option
- Spears® Dual O-ring Safe-T-Shear® Stem
- Self Adjusting PTFE Floating Seat
- Sizes 1/2" - 2" Pressure Rated to 235 psi @ 73°F
- EPDM Valves NSF® Certified for Potable Water Use

Sample Engineering Specification

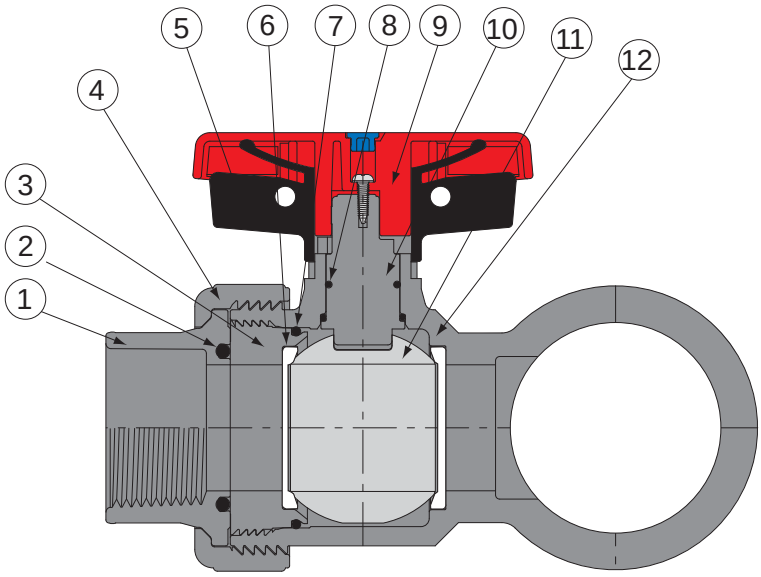
All lateral branch valve connections shall be made using integrated Tee-style ball valve and Tee fitting. Tee-style ball valves shall be True Union 2000 Industrial type manufactured to ASTM F 1970 and constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447; or Low Extractable PVC, ASTM D 1784 Cell Classification 12343. All O-rings shall be EPDM or FKM. All valves shall have Safe-T-Shear® stem with double O-ring stem seals. All valve handles shall be polypropylene with built-in lockout. All valve union nuts shall have Buttress threads. All seal carriers shall be Safe-T-Blocked®. All valve components shall be replaceable. Mainline Tee fittings shall be Schedule 80 manufactured in accordance with ASTM D 2467 for PVC or F 439 for CPVC. All EPDM valves shall be certified by NSF International for use in potable water service. All 1/2" through 2" valves shall be pressure rated to 235 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Quick-View Valve Selection Chart

T-Valves can be custom produced in any standard Tee and Valve size combination

Size (Tee x Valve Outlet)	PVC		CPVC	
	EPDM	FKM	EPDM	FKM
1/2	182901-005	183901-005	182901-005C	183901-005C
3/4	182901-007	183901-007	182901-007C	183901-007C
1	182901-010	183901-010	182901-010C	183901-010C
1-1/4	182901-012	183901-012	182901-012C	182901-012C
1-1/2	182901-015	183901-015	182901-015C	183901-015C
2	182901-020	183901-020	182901-020C	183901-020C
3/4x1/2	182901-101	183901-101	182901-101C	183901-101C
1x1/2	182901-130	183901-130	182901-130C	183901-130C
1x3/4	182901-131	183901-131	182901-131C	183901-131C
1-1/4x1/2	182901-166	183901-166	182901-166C	182901-166C
1-1/4x3/4	182901-167	183901-167	182901-167C	183901-167C
1-1/4x1	182901-168	183901-168	182901-168C	183901-168C
1-1/2x1/2	182901-209	183901-209	182901-209C	183901-209C
1-1/2x3/4	182901-210	183901-210	182901-210C	183901-210C
1-1/2x1	182901-211	183901-211	182901-211C	183901-211C
2x1/2	182901-247	183901-247	182901-247C	183901-247C
2x3/4	182901-248	183901-248	182901-248C	183901-248C
2x1	182901-249	183901-249	182901-249C	183901-249C
2x1-1/2	182901-251	183901-251	182901-251C	183901-251C
3x1/2	182901-333	183901-333	182901-333C	183901-333C
3x1	182901-335	183901-335	182901-335C	183901-335C
3x1-1/2	182901-337	183901-337	182901-337C	183901-337C
3x2	182901-338	183901-338	182901-338C	183901-338C
4x1	182901-417	183901-417	182901-417C	183901-417C
4x1-1/2	182901-419	183901-419	182901-419C	183901-419C
4x2	182901-420	183901-420	182901-420C	183901-420C
6x2	182901-528	183901-528	182901-528C	183901-528C
8x2	182901-578	183901-578	182901-578C	183901-578C

Additional Notes: For Low Extractable PVC valves, add the letters BL to the part number (e.g. 182901-005**BL**)
Valve assembly includes debris plug in valve socket end (to be removed on installation) and cable-tie affixed spare end connector.



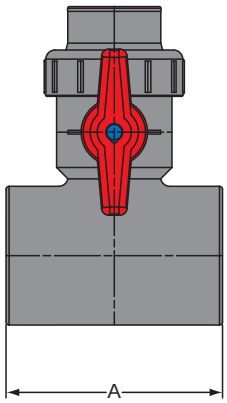
Replacement Parts

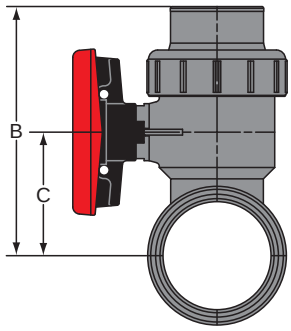
No.	Component	Qty.	Material
1	End Connector	1	PVC/CPVC
2	End Connector O-ring	1	EPDM/FKM
3	Seal Carrier	1	PVC/CPVC
4	Union Nut	3	PVC/CPVC
5	Handle Lock	1	PP
6	Seat	2	PTFE
7	Carrier O-ring	1	EPDM/FKM
8	Stem O-ring	2	EPDM/FKM
9	Handle	1	PP
10	Stem	1	PVC/CPVC
11	Ball	1	PVC/CPVC
12	Body	1	PVC/CPVC

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 2"	PVC	235 (1.62)	211 (1.45)	150 (1.03)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	235 (1.62)	219 (1.51)	170 (1.17)	145 (1.00)	130 (.90)	110 (.76)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)

True Union 2000 Industrial Tee Style Ball Valves





Dimensions, Operating Torque & Cv Values

Nominal Size	Dimensions Reference (inches, ± 1/16)				Approx. Wt. (Lbs.)		Oper.[1] Torque (in. lbs.)	Cv[2] (Value only)
	A	B		C	PVC	CPVC		
		Socket	Threaded					
1/2	2-5/16	3-3/4	3-9/16	1-5/8	.48	.52	16	29
3/4	3-7/16	4-1/4	4	1-7/8	.70	.77	17	63
1	4	4-11/16	4-7/16	2-1/16	1.10	1.15	22	120
1-1/4	4-1/4	5-5/16	5	2-7/16	1.64	1.73	28	243
1-1/2	5-1/8	6-1/8	5-11/16	3	2.26	2.37	61	357
2	5-7/8	7-5/16	6-13/16	3-7/16	3.72	3.82	77	599
3/4x1/2	4	3-7/8	3-11/16	1-3/4	.51	.54	16	29
1x1/2	3-7/16	4	3-13/16	1-7/8	.58	.61	16	29
1x3/4	3-11/16	4-3/8	4-1/2	2	.78	.80	17	63
1-1/4x1/2	4-1/4	4	3-13/16	1-7/8	.77	.80	16	29
1-1/4x3/4	4-1/4	4-1/4	4	1-7/8	.90	.94	17	63
1-1/4x1	4-1/4	4-13/16	4-5/8	2-3/16	1.78	1.96	22	120
1-1/2x1/2	4-3/8	4-1/4	4-1/16	2-1/8	.86	.89	16	29
1-1/2x3/4	4-1/8	4-5/8	4-3/8	2-3/16	.91	.94	16	63
1-1/2x1	4-1/2	5	4-13/16	2-3/8	1.37	1.51	16	120
2x1/2	4-3/16	4-9/16	4-3/8	2-7/16	1.06	1.17	16	29
2x3/4	4-3/8	4-15/16	4-11/16	2-9/16	1.23	1.28	17	63
2x1	4-3/4	5-1/4	5-1/16	2-5/8	1.38	1.45	22	120
2x1-1/2	5-7/8	6-1/16	5-7/8	2-15/16	2.33	2.63	61	29
3x1/2	5-1/2	5-1/8	4-15/16	3	1.60	1.66	16	29
3x1	5-1/2	5-7/8	5-11/16	3-1/4	2.19	2.25	22	120
3x1-1/2	7-1/4	6-9/16	6-3/8	3-7/16	3.66	3.87	61	357
3x2	6-11/16	7-11/16	7-3/16	3-13/16	4.61	4.86	77	599
4x1	7-7/16	6-5/16	6-1/8	3-11/16	3.25	3.52	22	120
4x1-1/2	7-3/8	7-5/16	7-1/8	4-3/16	4.01	4.37	61	357
4x2	7-3/4	8-5/16	7-3/4	4-7/16	5.20	5.68	77	599
6x2	10-3/16	9-5/8	9-1/8	5-3/4	9.26	11.68	77	599
8x2	15-5/8	12-5/8	12-1/8	8-3/4	17.42	18.70	77	599

1: Torque required at valve maximum internal pressure rating, 5ft/sec. Flow velocity; due to adjustment differences during installation, actual valves may vary.
2: Gallons per minute at 1 psi pressure drop. Valves calculated from laying length, based on derivative of Hazen-Williams equation with surface roughness factor of C=150. Cv values are for basic Ball Valve only, excluding Tee end connection.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

True Union 2000 Industrial Ball Check Valves

Features – PVC, CPVC

Flow tested design provides quick response with positive seal for prevention of system back flow in industrial and chemical processing applications. Valves are available in IPS sizes 1/2" through 6" with socket/regular thread, SR threaded (Special Reinforced), flanged or spigot end connectors and 8" venturied valve with socket or flanged ends. Also available in metric socket and BSP thread sizes 1/2" through 2".

Sample Engineering Specification

All thermoplastic check valves shall be True Union 2000 Industrial Ball Check type manufactured to ASTM F 1970 and constructed from PVC Type I, ASTM D 1784, Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447. All O-rings shall be EPDM or FKM. All valve union nuts shall have Buttress threads. All valve seats shall be a standard O-ring type. All seal carriers shall be Safe-T-Blocked®. All valve components shall be replaceable. All EPDM valves shall be listed by NSF® for use in potable water service. All PVC and CPVC 1/2" through 4" valves shall be pressure rated to 235 psi, all 6" and 8" Venturied and all flanged valves shall be pressure rated to 150 psi for water at 73°F as manufactured by Spears® Manufacturing Company.

- Chemical & Corrosion Resistant PVC or CPVC Construction
- Also Available in Spears® High Purity, Low Extractable PVC Material
- Strong, Buttress Thread Union Nuts
- Spears® Safe-T-Blocked® Seal Carrier
- Uses Standard O-ring Seat
- EPDM or FKM O-rings
- Fully Serviceable, Replaceable Components
- Sizes 1/2" - 4" Pressure Rated to 235 psi @ 73°F, Sizes 6" and 8" Venturied and all Flanged Pressure Rated to 150 psi @ 73°F
- Suitable for Either Horizontal or Vertical Installations
- EPDM valves NSF® Certified for Potable Water use
- Suitable for Vacuum Service
- Assembled with Silicone-Free, Water Soluble Lubricants
- Manufactured to ASTM F 1970

Quick-View Valve Selection Chart

Valve Size	O-ring Material	PVC Part Number[1]					Pressure Rating
		Socket	Threaded	SR Threaded	Flanged	Spigot	
1/2	EPDM	4529-005	included	4521-005SR	4523-005	4527-005	235 psi Non-Shock Water @ 73°F (Flanged 150 psi Non-Shock) Water @ 73°F
	FKM	4539-005	included	4531-005SR	4533-005	4537-005	
3/4	EPDM	4529-007	included	4521-007SR	4523-007	4527-007	
	FKM	4539-007	included	4531-007SR	4533-007	4537-007	
1	EPDM	4529-010	included	4521-010SR	4523-010	4527-010	
	FKM	4539-010	included	4531-010SR	4533-010	4537-010	
1-1/4	EPDM	4529-012	included	4521-012SR	4523-012	4527-012	
	FKM	4539-012	included	4531-012SR	4533-012	4537-012	
1-1/2	EPDM	4529-015	included	4521-015SR	4523-015	4527-015	
	FKM	4539-015	included	4531-015SR	4533-015	4537-015	
2	EPDM	4529-020	included	4521-020SR	4523-020	4527-020	
	FKM	4539-020	included	4531-020SR	4533-020	4537-020	
2-1/2	EPDM	4522-025	4521-025	4521-025SR	4523-025	4527-025	
	FKM	4532-025	4531-025	4531-025SR	4533-025	4537-025	
3	EPDM	4522-030	4521-030	4521-030SR	4523-030	4527-030	
	FKM	4532-030	4531-030	4531-030SR	4533-030	4537-030	
4	EPDM	4522-040	4521-040	4521-040SR	4523-040	4527-040	
	FKM	4532-040	4531-040	4531-040SR	4533-040	4537-040	
6	EPDM	4522-060	4521-060	4521-060SR	4523-060	4527-060	150 psi Non-Shock Water @ 73°F
	FKM	4532-060	4531-060	4531-060SR	4533-060	4537-060	
8[2]	EPDM	4522-080	—	—	4523-080	—	
	FKM	4532-080	—	—	4533-080	—	

1: For CPVC valve, add the letter "C" to the part number (e.g., 4529-005**C**, 4521-005**C**SR)
2: 8" Venturied Valves are 6" ball valves fitted with 6x8 end connector adapters

Optional Accessories*

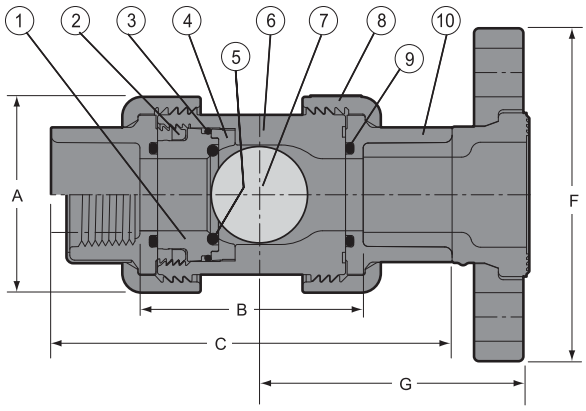
- Retro-Fit End Connector Sets for Valve Replacement
- Split-Nut Repair Kits for Union Nut Replacement
- Supplemental End Connectors

* See ***"BALL VALVE ACCESSORIES"*** section for details of individual products.

Ball Check Foot Valves

Spears® Ball Check Valves easily convert to foot valves utilizing optional Foot Valve Screen adapters found in Ball Valve Accessories section.

True Union 2000 Industrial Ball Check Valves



Replacement Parts

No.	Component	Qty.	Material
1	Seal Carrier	1	PVC/CPVC
2	Seal Carrier Nut	1	PVC/CPVC
3	Carrier O-ring	1	EPDM/FKM
4	Seat Plate	1	PVC/CPVC
5	Seat O-ring	1	EPDM/FKM
6	Body	1	PVC/CPVC
7	Ball	1	PVC/CPVC
8	Union Nut	2	PVC/CPVC
9	End Connector O-ring	2	EPDM/FKM
10	End Connector	2	PVC/CPVC

Dimensions, Weights, & Cv Values

Nominal Size	Dimensions Reference (inches, ± 1/16)								Approx. Wt. (Lbs.)		Cv Values			Horizontal Closing	
	A	B[1]		C			F	G	PVC	CPVC	Soc/Thd	Flange	Spigot	Feet of Head (water)	GPM (minimum)
		Soc/Thd	Spigot	Socket	Thread	Spigot									
1/2	1-7/8	2-7/16	2-7/8	4-3/16	3-13/16	4-5/8	3-1/2	2-31/32	.30	.33	6.3	6	6.3	1.6	.10
3/4	2-1/4	2-3/4	3-1/4	4-3/4	4-1/4	5-1/4	3-7/8	3-5/16	.46	.50	17	16	17	1.6	.10
1	2-1/2	2-7/8	3-1/2	5-1/8	4-11/16	5-3/4	4-1/4	3-5/8	.70	.74	25	24	25	1.6	.25
1-1/4	3-1/16	3-1/4	3-3/16	5-3/4	5-3/16	6-5/16	4-5/8	3-31/32	1.04	1.09	65	61	65	1.6	.40
1-1/2	3-1/2	3-1/2	4	6-1/4	5-7/16	6-3/4	5	4-3/8	1.37	1.45	86	82	86	1.6	.75
2	4-5/16	4-25/32	5-3/16	7-3/4	7-27/32	8-1/4	6	5-1/4	2.47	2.62	130	125	130	1.6	.75
2-1/2	6-3/16	5-7/8	7-13/16	9-5/16	8-1/2	11-3/8	7-1/2	6	6.80	7.25	200	193	200	1.0	1.50
3	6-3/16	6-7/8	7-13/16	10-11/16	9-3/4	11-9/16	7-1/2	6-13/16	6.98	7.35	275	268	275	1.0	4.00
4	7-3/4	7-5/16	8-1/4	11-13/16	10-1/4	12-3/4	9	7-1/2	12.13	12 .96	500	489	500	1.0	5.50
6	11-5/8	11-1/6	13	17-1/16	15-3/4	18-1/2	11-1/4	10-3/16	37.07	39.98	800	794	800	N/A	N/A
8[3]	11-5/8	23-3/16	---	31-7/8	---	---	13-1/2	17-13/16	50.84	55.92	N/A	N/A	N/A	N/A	N/A

1: Valve Lay Length
2: Gallons per minute at 1 psi pressure drop. Valves calculated from laying length, based on derivative of Hazen-Williams equation with surface roughness factor of C=150.
3: 8" Venturied Valves are 6" ball valves fitted with 6x8 end connector adapters

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 4"	PVC	235 (1.62)	211 (1.45)	150 (1.03)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	235 (1.62)	219 (1.51)	170 (1.17)	145 (1.00)	130 (.90)	110 (.76)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)
	6" and 8"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)

NOTE: Flanged valves have a base pressure rating of 150 psi

General Installation Information: Ball check valves may be installed in either horizontal or vertical position. A minimum of ten (10) pipe diameters distance maintained from any pump or other source of turbulence. Check valves **MUST** be installed with the valves **FLOW** arrow pointing in the direction of flow.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

True Union 2000 Standard Ball Valves

Sample Engineering Specification

All thermoplastic ball valves shall be True Union 2000 Standard type manufactured to ASTM F 1970 and constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447. All O-rings shall be EPDM or FKM. All valves shall have Safe-T-Shear® stem with O-ring stem seal. All handles shall be polypropylene. All union nuts shall have Buttress threads. All seal carriers shall be Safe-T-Blocked®. All EPDM valves shall be certified by NSF International for use with potable water. All 1/2" - 2" valves shall be pressure rated to 235 psi, all 2-1/2" - 4" and all flanged valves to 150 psi for water @ 73°F, as manufactured by Spears® Manufacturing Company.

Features – PVC, CPVC

Economical, low profile quarter-turn shutoff valve is excellent for general purpose and many O.E.M applications. PVC and CPVC valves are available in IPS sizes 1/2" through 4" with socket, regular thread, SR threaded (Special Reinforced), flanged or spigot end connectors.

- Chemical & Corrosion Resistant PVC or CPVC Construction
- Interchangeable with all True Union 2000 Valves, Mates with Union 2000 Pipe Unions
- High Impact Polypropylene Handle
- Schedule 80 Full-Bore Design
- Strong, Buttress Thread Union Nuts
- Spears® Single O-ring Safe-T-Shear® Stem Design
- Spears® Safe-T-Blocked® Seal Carrier
- Replaceable PTFE/HDPE Floating Seat Design
- EPDM or FKM O-rings
- Sizes 1/2" - 2" pressure rated to 235 psi @ 73°F
- Sizes 2-1/2" - 4" and all flanged pressure rated to 150 psi @ 73°F
- EPDM valves NSF® Certified for Potable Water use
- Suitable for Vacuum Service
- Assembled with Silicone-Free, Water Soluble Lubricants
- Manufactured to ASTM F 1970

Quick-View Valve Selection Chart

Valve Size	O-ring Material	PVC Part Number[1]					Pressure Rating
		Socket	Threaded	SR Threaded	Flanged	Spigot	
1/2	EPDM	3629-005	included	3621-005SR	3623-005	3627-005	235 psi Non-Shock Water @ 73°F (Flanged 150 psi Non-Shock) Water @ 73°F
	FKM	3639-005	included	3631-005SR	3633-005	3637-005	
3/4	EPDM	3629-007	included	3621-007SR	3623-007	3627-007	
	FKM	3639-007	included	3631-007SR	3633-007	3637-007	
1	EPDM	3629-010	included	3621-010SR	3623-010	3627-010	
	FKM	3639-010	included	3631-010SR	3633-010	3637-010	
1-1/4	EPDM	3629-012	included	3621-012SR	3623-012	3627-012	
	FKM	3639-012	included	3631-012SR	3633-012	3637-012	
1-1/2	EPDM	3629-015	included	3621-015SR	3623-015	3627-015	
	FKM	3639-015	included	3631-015SR	3633-015	3637-015	
2	EPDM	3629-020	included	3621-020SR	3623-020	3627-020	
	FKM	3639-020	included	3631-020SR	3633-020	3637-020	
2-1/2	EPDM	3622-025	3621-025	3621-025SR	3623-025	3627-025	150 psi Non-Shock Water @ 73°F
	FKM	3632-025	3631-025	3631-025SR	3633-025	3637-025	
3	EPDM	3622-030	3621-030	3621-030SR	3623-030	3627-030	
	FKM	3632-030	3631-030	3631-030SR	3633-030	3637-030	
4	EPDM	3622-040	3621-040	3621-040SR	3623-040	3627-040	
	FKM	3632-040	3631-040	3631-040SR	3633-040	3637-040	

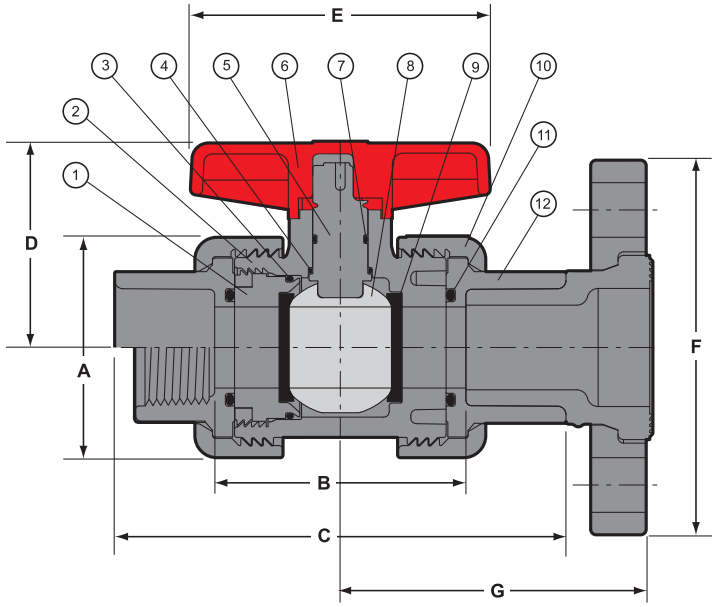
1: For CPVC valve, add the letter "C" to the part number (e.g., 3629-005**C**, 3621-005**C**SR)

Optional Accessories*

- Retro-Fit End Connector Sets for Valve Replacement
- Split-Nut Repair Kits for Union Nut Replacement
- Supplemental End Connectors
- Round Safety Handles
- Stem Extension Kits
- Square Operator Nuts
- Multi Mount Valve/ Actuation Mounting Kits
- Mini-Mount Actuation Mounting Kits

* See ***"BALL VALVE ACCESSORIES"*** section for details of individual products.

True Union 2000 Standard Ball Valves



Replacement Parts

No.	Component	Qty.	Material
1	Seal Carrier	1	PVC/CPVC
2	Body	1	PVC/CPVC
3	Carrier O-ring	1	EPDM/FKM
4	Stem Bearing [1,2]	1	PP
5	Stem	1	PVC/CPVC
6	Handle	1	PP
7	Stem O-ring	1	EPDM/FKM
8	Ball	1	PVC/CPVC
9	Seat	2	PTFE/HDPE
10	Union Nut	2	PVC/CPVC
11	End Connector O-ring	2	EPDM/FKM
12	End Connector	2	PVC/CPVC

1: O-Ring up to 2"
2: PTFE Thrust Bearing: 2-1/2", 3" & 4"

Dimensions, Weights, Operating Torque & Cv Values

Nominal Size	A	B[1]		C			D	E	F	G	Approx. Wt. (Lbs.)		Oper.[2] Torque (in. lbs.)	Cv Values[3]	
		Soc/Thd	Spigot	Socket	Thread	Spigot					PVC	CPVC		Soc/Thd/Spig	Flanged
1/2	1-7/8	2-7/16	2-7/8	4-3/16	3-13/16	4-5/8	1-5/8	2-1/2	3-1/2	2-31/32	.33	.35	12	29	18
3/4	2-1/4	2-3/4	3-1/4	4-3/4	4-1/4	5-1/4	2	3	3-7/8	3-5/16	.51	.54	20	63	39
1	2-1/2	2-7/8	3-1/2	5-1/8	4-11/16	5-3/4	2-5/16	3-7/16	4-1/4	3-5/8	.71	.75	25	120	73
1-1/4	3-1/16	3-1/4	3-13/16	5-3/4	5-3/16	6-5/16	2-13/16	3-9/16	4-5/8	3-31/32	1.12	1.17	35	243	151
1-1/2	3-1/2	3-1/2	4	6-1/4	5-7/16	6-3/4	3-1/16	3-7/8	5	4-3/8	1.47	1.53	45	357	223
2	4-1/4	4-3/4	5-13/16	7-3/4	6-3/4	8-1/4	3-3/4	5	6	5-1/4	2.62	2.75	94	599	395
2-1/2	6-3/16	7	7-13/16	10-1/2	8-1/2	11-3/8	5-7/8	7-5/8	7	6	7.42	7.70	120	856	579
3	6-3/16	7	7-13/16	10-11/16	9-3/4	11-9/16	5-7/8	7-5/8	7-1/2	6-13/16	7.46	7.81	120	1416	974
4	7-5/8	7-1/2	8-1/4	12-1/16	10-1/4	12-3/4	6-3/4	6-3/4	9-1/16	7-1/2	12.35	12.48	336	2865	1952

1: Valve Lay Length
2: Torque required at valve maximum internal pressure rating, 5ft/sec. Flow velocity; due to adjustment differences during installation, actual valves may vary.
3: Gallons per minute at 1 psi pressure drop. Valves calculated from laying length, based on derivative of Hazen-Williams equation with surface roughness factor of C=150.

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 2"	PVC	235 (1.62)	211 (1.45)	150 (1.03)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	235 (1.62)	219 (1.51)	170 (1.17)	145 (1.00)	130 (.90)	110 (.76)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)
	2-1/2" - 4"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

True Union Ball Valve (Regular Style)

Features – PVC, CPVC

This versatile, quarter-turn shutoff valve is well suited for industrial and chemical processing applications. Available in IPS Sizes 1/2"- 4" with socket, threaded or flanged end connectors. 6" Venturied valve (4" valve with 4 x 6 adapter) available with either socket or flanged end connection. Also available with metric 20mm - 110mm or 1/2" - 4" BSP threaded end connectors.

- Chemical & Corrosion Resistant PVC or CPVC Construction
- Schedule 80 Full-Bore Design
- Strong, Buttress Thread Union Nuts
- Fully Serviceable, Replaceable Components
- Spears® Safe-T-Blocked® Seal Carrier
- Self Adjusting PTFE Floating Seat Design
- EPDM or FKM O-rings
- High Impact Polypropylene Handle
- Spears® Safe-T-Shear® Stem Design
- Sizes 1/2" - 2" Pressure Rated to 235 psi @ 73°F, Sizes 2-1/2" - 6" and all flanged Pressure Rated to 150 psi @ 73°F
- EPDM valves NSF® Certified for Potable Water use
- Suitable for Vacuum Service
- Assembled with Silicone-Free, Water Soluble Lubricants
- Manufactured to ASTM F 1970

Sample Engineering Specification

All thermoplastic ball valves shall be True Union type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447. All O-rings shall be EPDM or FKM. All valves shall have Safe-T-Shear® stem and double stop Polypropylene handle. All valve union nuts shall have Buttress threads. All seal carriers shall be Safe-T-Blocked®. All valve components shall be replaceable. All EPDM valves shall be certified by NSF International for use in potable water service. All 1/2" - 2" valves shall be pressure rated at 235 psi and all 2-1/2" - 6" and all flanged valves shall be pressure rated at 150 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Quick-View Valve Selection Chart

Valve Size	O-ring Material	PVC Part Number[1]			Pressure Rating
		Threaded	Socket	Flanged	
1/2	EPDM	2329-005	included	2323-005	235 psi Non-Shock Water @ 73°F (Flanged 150 psi Non-Shock) Water @ 73°F
	FKM	2339-005	included	2333-005	
3/4	EPDM	2329-007	included	2323-007	
	FKM	2339-007	included	2333-007	
1	EPDM	2329-010	included	2323-010	
	FKM	2339-010	included	2333-010	
1-1/4	EPDM	2329-012	included	2323-012	
	FKM	2339-012	included	2333-012	
1-1/2	EPDM	2329-015	included	2323-015	
	FKM	2339-015	included	2333-015	
2	EPDM	2329-020	included	2323-020	
	FKM	2339-020	included	2333-020	
2-1/2	EPDM	2321-025	2322-025	2323-025	150 psi Non-Shock Water @ 73°F
	FKM	2331-025	2332-025	2333-025	
3	EPDM	2321-030	2322-030	2323-030	
	FKM	2331-030	2332-030	2333-030	
4	EPDM	2321-040	2322-040	2323-040	
	FKM	2331-040	2332-040	2333-040	
6[2] venturied	EPDM	---	2322-060	2323-060	
	FKM	---	2332-060	2333-060	

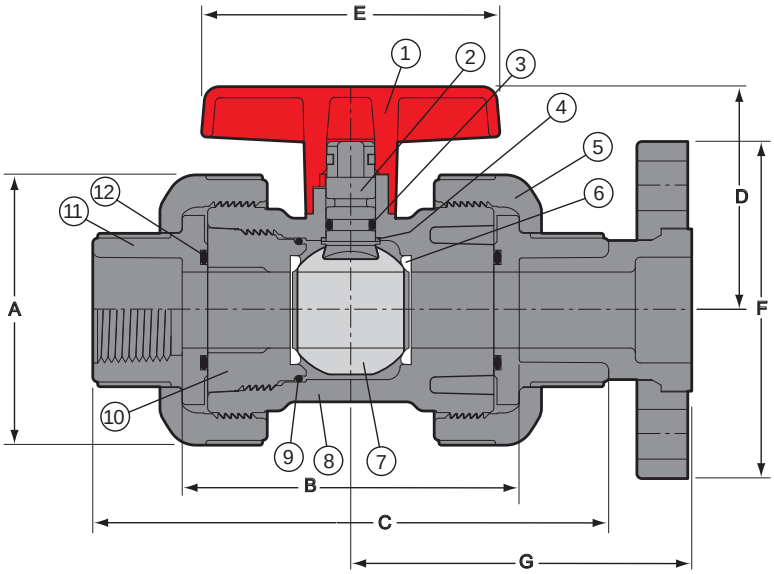
1: For CPVC valves, add the letter "C" to part numbers listed (e.g., 2339-005**C**).
2: Consists of 4" True Union Ball Valve with two 4" x 6" Adapters.

Optional Accessories*

- Round Safety Handle
- Stem Extension Kit
- 2" Square / T-Style Operator Nut

* See ***"BALL VALVE ACCESSORIES"*** section for details of individual products.

True Union Ball Valve (Regular Style)



Replacement Parts

No.	Component	Qty.	Material
1	Handle	1	PP
2	Stem	1	PVC/CPVC
3	Stem O-ring	1	EPDM/FKM
4	Stem Bearing*	1	PP
5	Union Nut	2	PVC/CPVC
6	Seat**	2	PTFE
7	Ball	1	PVC/CPVC
8	Body	1	PVC/CPVC
9	Carrier O-ring	1	EPDM/FKM
10	Seal Carrier	1	PVC/CPVC
11	End Connector	2	PVC/CPVC
12	End Connector O-ring	2	EPDM/FKM

* Sizes 1-1/4" and larger.

** Seat O-ring (not shown) on sizes 2-1/2" and larger.

Dimensions, Weights, Operating Torque & C_V Values

Nominal Size	Dimension Reference (inches, ± 1/16)							Approx. Wt. (Lbs.)				Oper.[2] Torque (in.-lb.)	C_V[4] Values	
								PVC		CPVC				
	A	B[1]	C	D	E	F	G	Soc/Thd	Flanged	Soc/Thd	Flanged		Soc/Thd	Flanged
1/2	2-9/16	3-7/16	5-3/16	2-13/32	2-23/32	3-1/2	3-15/32	1.05	1.23	.95	1.14	20	25	18
3/4	3-1/32	4-1/16	6-3/16	2-5/8	3-3/16	3-7/8	4	1.44	1.64	1.50	1.73	30	51	36
1	3-13/32	4-5/16	6-9/16	2-13/16	3-23/32	4-1/4	4-5/16	1.91	2.22	2.08	2.43	40	97	67
1-1/4	3-11/16	4-1/2	7-1/16	2-31/32	4-1/8	4-5/8	4-19/32	2.38	2.78	2.52	2.91	60	204	142
1-1/2	4-3/8	5-5/16	8-1/32	3-9/32	4-15/32	5	5-9/32	3.63	4.00	3.82	4.26	80	285	201
2	5-3/16	5-13/16	8-13/16	4-13/32	5-1/4	6	5-23/32	5.40	6.14	5.70	6.54	90	540	381
2-1/2	7-7/16	8-3/8	11-7/8	4-29/32	9-7/8	7	7-3/16	12.87	14.26	13.44	15.85	300	712	512
3	7-7/16	8-3/16	11-15/16	4-29/32	9-7/8	7-1/2	7-11/32	13.24	15.67	13.85	16.96	300	1294	925
4	8-15/16	8-11/16	13-3/16	5-19/32	10-13/16	9-1/16	8-5/32	19.58	24.32	20.49	25.83	400	2629	1868
6 Socket[3]	8-15/16	19-5/8	26-1/16	6-3/4	10-13/16	11-1/4	14-11/16	22.66	30.98	26.11	34.78	400	N/A	N/A
6 Flanged[3]	11-3/16	29-3/8	N/A	6-3/4	10-13/16	11-1/4	14-11/16	N/A	N/A	N/A	N/A	400	N/A	N/A

1: Valve Lay Lengths.
2: Torque required at valve maximum internal pressure rating, 5 ft./sec. flow velocity.
3: Consists of 4" True Union Ball Valve with two 4" x 6" Adapters.
4: Gallons per minute at 1 psi pressure drop. Values calculated from valve laying length, based on derivative of Hazen-Williams equation with surface roughness factor of C=150. C_V Valves for 6" venturied flange and socket valves are not available.

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 2"	PVC	235 (1.62)	211 (1.45)	150 (1.03)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	235 (1.62)	219 (1.51)	170 (1.17)	145 (1.00)	130 (.90)	110 (.76)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)
	2-1/2" - 6"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)

NOTE: Flanged Valves have a base pressure rating of 150 psi.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

True Union Ball Check Valve (Regular Style)

Sample Engineering Specification

All thermoplastic check valves shall be True Union Ball type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447. All O-rings shall be EPDM or FKM. All valve union nuts shall have Buttress threads. All valve components shall be replaceable. All EPDM valves shall be certified by NSF International for use in potable water service. All 1/2" - 2" valves shall be pressure rated at 235 psi and all 2-1/2" - 6" and all flanged valves shall be pressure rated at 150 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Features – PVC, CPVC

Flow tested design provides quick response with positive seal for prevention of system back flow in industrial and chemical processing applications. Available in IPS Sizes 1/2"- 4" with socket, threaded or flanged end connectors. 6" Venturied valve (4" valve with 4 x 6 adapters) available with either socket or flanged end connection. Also available with metric 20mm - 110mm or 1/2" - 4" BSP thread end connectors. **Note:** Seal carrier is **NOT** blocked (for Safe-T-Blocked® seal carrier design, see True Union 2000 Industrial Ball Check Valve).

- Chemical & Corrosion Resistant PVC or CPVC Construction
- Strong, Buttress Thread Union Nuts
- Fully Serviceable, Replaceable Components
- Uses Standard O-ring Seat
- EPDM or FKM O-rings
- Sizes 1/2" - 2" Pressure Rated to 235 psi @ 73°F, Sizes 2-1/2" - 6" and all Flanged Pressure Rated to 150 psi @ 73°F
- Suitable for Either Horizontal or Vertical Installations
- EPDM valves NSF® Certified for Potable Water use
- Suitable for Vacuum Service
- Assembled with Silicone-Free, Water Soluble Lubricants
- Manufactured to ASTM F 1970

Quick-View Valve Selection Chart

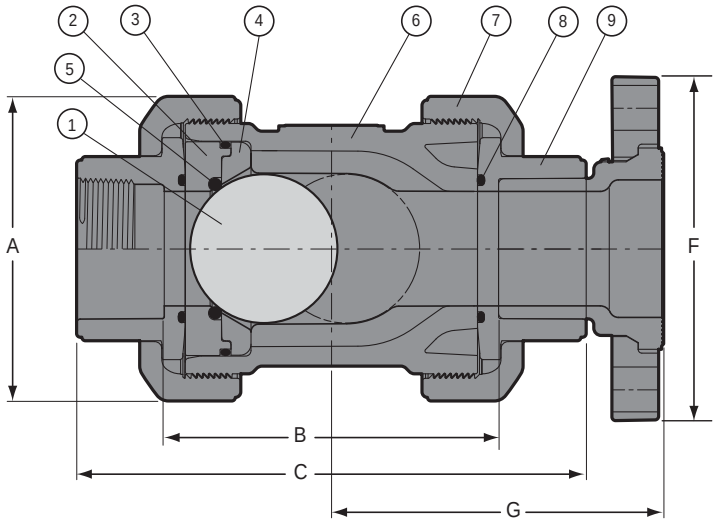
Valve Size	O-ring Material	PVC Part Number[1]			Pressure Rating
		Threaded	Socket	Flanged	
1/2	EPDM	2229-005	included	2223-005	235 psi Non-Shock Water @ 73°F (Flanged 150 psi Non-Shock) Water @ 73°F
	FKM	2239-005	included	2233-005	
3/4	EPDM	2229-007	included	2223-007	
	FKM	2239-007	included	2233-007	
1	EPDM	2229-010	included	2223-010	
	FKM	2239-010	included	2233-010	
1-1/4	EPDM	2229-012	included	2223-012	
	FKM	2239-012	included	2233-012	
1-1/2	EPDM	2229-015	included	2223-015	
	FKM	2239-015	included	2233-015	
2	EPDM	2229-020	included	2223-020	
	FKM	2239-020	included	2233-020	
2-1/2	EPDM	2221-025	2222-025	2223-025	150 psi Non-Shock Water @ 73°F
	FKM	2231-025	2232-025	2233-025	
3	EPDM	2221-030	2222-030	2223-030	
	FKM	2231-030	2232-030	2233-030	
4	EPDM	2221-040	2222-040	2223-040	
	FKM	2231-040	2232-040	2233-040	
6[2] venturied	EPDM	---	2222-060	2223-060	
	FKM	---	2232-060	2333-060	

1: For CPVC valves, add the letter "C" to part numbers listed (e.g., 2239-005**C**).
2: Consists of 4" True Union Ball Valve with two 4" x 6" Adapters.

Ball Check Foot Valves

Spears® Ball Check Valves easily convert to foot valves utilizing optional Foot Valve Screen adapters found in Ball Valve Accessories section.

True Union Ball Check Valve (Regular Style)



Replacement Parts

No.	Component	Qty.	Material
1	Ball	1	PVC/CPVC
2	Seal Carrier	1	PVC/CPVC
3	Carrier O-ring	1	EPDM/FKM
4	Seat Plate	1	PVC/CPVC
5	Seat O-ring	1	EPDM/FKM
6	Body	1	PVC/CPVC
7	Union Nut	2	PVC/CPVC
8	End Connector O-ring	2	EPDM/FKM
9	End Connector	2	PVC/CPVC

Dimensions, Weights, C_V Values & Horizontal Closing Requirements

Nominal Size	Dimension Reference (inches, ± 1/16)					Approx. Wt. (Lbs.)		Cv[3] Values		Horizontal Closing	
	A	B[1]	C	F	G	PVC	CPVC	Threaded/ Socket	Flanged	Feet of Head (water)	GPM (mini-mum)
1/2	2-9/16	3-5/16	5-1/8	3-1/2	3-7/16	.56	.61	11	10	1.6	.10
3/4	3	4	6-1/8	3-7/8	3-15/16	.91	.99	18	17	1.6	.10
1	3-7/16	4-1/4	6-1/2	4-1/4	4-3/8	1.20	1.30	32	30	1.6	.25
1-1/4	3-11/16	4-1/2	7	4-5/8	4-9/16	1.50	1.60	58	55	1.6	.40
1-1/2	4-3/8	5-5/16	8-1/16	5	5-1/4	2.50	2.70	94	89	1.6	.75
2	5-1/8	5-3/4	8-3/4	6	5-5/8	3.70	4.00	153	146	1.6	.75
2-1/2	7-3/8	8-5/16	11-7/8	7	7-1/4	11.10	12.21	159	155	1.0	1.50
3	7-3/8	8-1/8	11-7/8	7-1/2	7-1/2	10.84	11.91	378	361	1.0	4.00
4	8-15/16	8-1/4	12-15/16	9-1/16	8-1/8	17.60	19.36	551	537	1.0	5.50
6 Socket[2]	8-15/16	19-5/8	26-1/16	N/A	N/A	22.45	27.61	N/A	N/A	N/A	N/A
6 Flanged[2]	11-3/16	29-3/8	N/A	11-1/4	14-3/4	31.21	37.07	N/A	N/A	N/A	N/A

1: Valve Lay Length
2: Consists of 4" True Union Ball Check Valve with two 4" x 6" Adapters.
3: Gallons per minute at 1 psi pressure drop.
C_V Values for 6" venturied flange and socket valves are not available.

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 2"	PVC	235 (1.62)	211 (1.45)	150 (1.03)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	235 (1.62)	219 (1.51)	170 (1.17)	145 (1.00)	130 (.90)	110 (.76)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)
	2-1/2" - 6"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)

NOTE: Flanged Valves have a base pressure rating of 150 psi.

General Installation Information: Ball check valves may be installed in either horizontal or vertical position. A minimum of ten (10) pipe diameters distance maintained from any pump or other source of turbulence. Ball Check valves **MUST** be installed with the valves **FLOW** arrow pointing in the direction of flow.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Compact 2000 Ball Valves

Sample Engineering Specification

All thermoplastic ball valves shall be 2000 Compact sealed unit type manufactured to ASTM F 1970 and constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447. All O-rings shall be EPDM or FKM. All valves shall have Safe-T-Shear® stem with O-ring stem seal. All handles shall be polypropylene. All EPDM valves shall be certified by NSF International for use with potable water. All 1/2" - 2" valves shall be pressure rated to 235 psi, for water @ 73°F, as manufactured by Spears® Manufacturing Company.

Features – PVC, CPVC

Economical, low profile quarter-turn shutoff valve is excellent for general purpose and many O.E.M applications. PVC and CPVC valves are available in IPS sizes 1/2" through 2" with socket and regular thread.

- Industrial Grade, Maintenance-Free Sealed Unit
- New Actuator-Ready Body – Accepts Spears® Improved Mini-Mount Actuator Mounting Kits
- New Double O-ring Stem Seal
- Spears® Safe-T-Shear Stem
- PTFE Self Adjusting Floating Seats
- EPDM or FKM O-ring Seals
- Full 235 psi Pressure Rating @ 73°F
- EPDM valves NSF® Certified for Use with Potable Water
- Suitable for Vacuum Service
- Produced in ASTM IPS sizes 1/2" - 2" with Socket or Threaded End Connectors.

Optional Accessories*

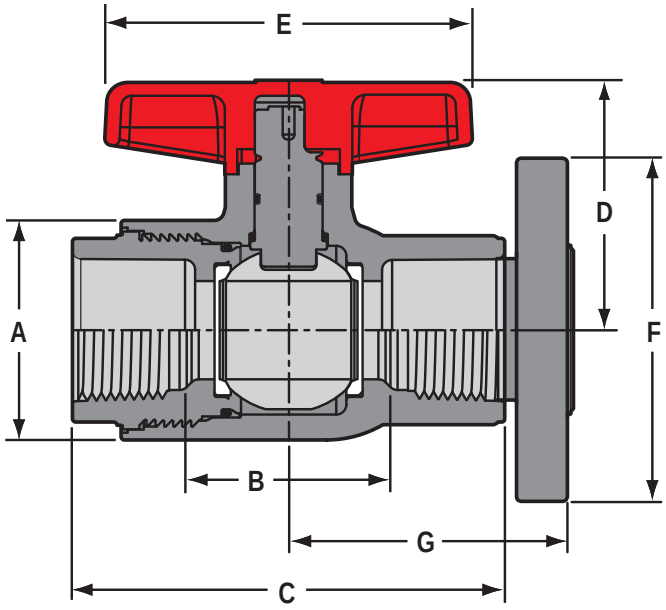
- Round Safety Handles
- Stem Extension Kits
- Square Operator Nuts
- Multi Mount Valve/Actuation Mounting Kits
- Mini-Mount Actuation Mounting Kits

* See ***"BALL VALVE ACCESSORIES"*** section for details of individual products.

Quick-View Valve Selection Chart

Valve Size	O-ring Material	PVC Part Number[1]			Pressure Rating
		Socket	Threaded	Flanged	
1/2	EPDM	6622-005	6621-005	6623-005	235 psi Non-Shock Water @73°F
	FKM	6632-005	6631-005	6633-005	
3/4	EPDM	6622-007	6621-007	6623-007	
	FKM	6632-007	6631-007	6633-007	
1	EPDM	6622-010	6621-010	6623-010	
	FKM	6632-010	6631-010	6633-010	
1-1/4	EPDM	6622-012	6621-012	6623-012	
	FKM	6632-012	6631-012	6633-012	
1-1/2	EPDM	6622-015	6621-015	6623-015	
	FKM	6632-015	6631-015	6633-015	
2	EPDM	6622-020	6621-020	6623-020	
	FKM	6632-020	6631-020	6633-020	

1: For CPVC Valves, add the letter "C" to part numbers listed. (e.g., 6622-005**C**)



Dimensions, Weights, Operating Torque & Cv Values

Nominal Size	Dimension Reference (inches, ± 1/16)								Approx. Wt. (Lbs.)		Oper.[2] Torque (in.-lb.)	Cv[3] Values
	A	B[1]		C	D	E	F	G	PVC	CPVC		
		Socket	Threaded									
1/2	1-7/16	1-1/4	1-5/8	3-1/16	1-5/8	1-5/8	3-1/2	2-11/32	.18	.20	10	42
3/4	1-13/16	1-1/2	2-1/16	3-9/16	2	2	3-7/8	2-5/8	.29	.31	20	87
1	2-1/16	1-3/4	2-3/16	4	2-5/16	2-5/16	4-1/4	2-29/32	.44	.46	25	157
1-1/4	2-5/8	2-1/6	2-3/4	4-5/8	2-13/16	2-13/16	4-5/8	3-9/32	.68	.70	30	311
1-1/2	3	2-1/2	3-3/8	5-5/16	3-1/16	3-1/16	5	3-27/32	.99	1.03	50	429
2	3-5/8	3	4	6	3-3/4	3-3/4	5-7/8	4-1/4	1.64	1.70	90	768

1: Valve Lay Length
2: Torque required at valve maximum internal pressure rating, 5ft/sec. Flow velocity.
3: Gallons per minute at 1 psi pressure drop. Valves calculated from laying length, based on derivative of Hazen-Williams equation with surface roughness factor of C=150.

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 2"	PVC	235 (1.62)	211 (1.45)	150 (1.03)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	235 (1.62)	219 (1.51)	170 (1.17)	145 (1.00)	130 (.90)	110 (.76)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)
	Flanged	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Compact Ball Valves

Features – PVC, CPVC

This industrial grade, quarter turn shutoff valve is popular where maintenance-free installations are desired for a variety of chemical processing, industrial and OEM applications. IPS Sizes 1/2" - 4" available with socket, threaded or flanged end connectors, 6" size available with socket or flanged end connectors. 6" valve uses high-efficiency lever style handle for easier operation.

- Chemical & Corrosion Resistant PVC or CPVC Construction
- Maintenance-Free Sealed Unit
- Schedule 80 Full-Bore Design
- High Impact Polypropylene Handle
- Spears® Single O-ring Safe-T-Shear® Stem Design
- EPDM or FKM O-rings
- Self Adjusting PTFE Floating Seat Design
- Sizes 1/2" - 2" Pressure Rated to 235 psi @ 73°F, Sizes 3" - 6" and all Flanged Pressure Rated to 150 psi @ 73°F
- EPDM valves NSF® Certified for Potable Water use
- Suitable for Vacuum Service
- Assembled with Silicone-Free, Water Soluble Lubricant
- Manufactured to ASTM F 1970

Note: Valve size 6" uses Lever Handle (not shown)

Sample Engineering Specification

All thermoplastic ball valves shall be Compact sealed unit type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, Cell Classification 23447. All O-rings shall be EPDM or FKM. All valves shall have Safe-T-Shear® stem and Polypropylene handle. All EPDM valves shall be certified by NSF International for use in potable water service. All 1/2" - 2" valves shall be pressure rated at 235 psi, all 3" - 6" and all flanged valves shall be pressure rated at 150 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Quick-View Valve Selection Chart

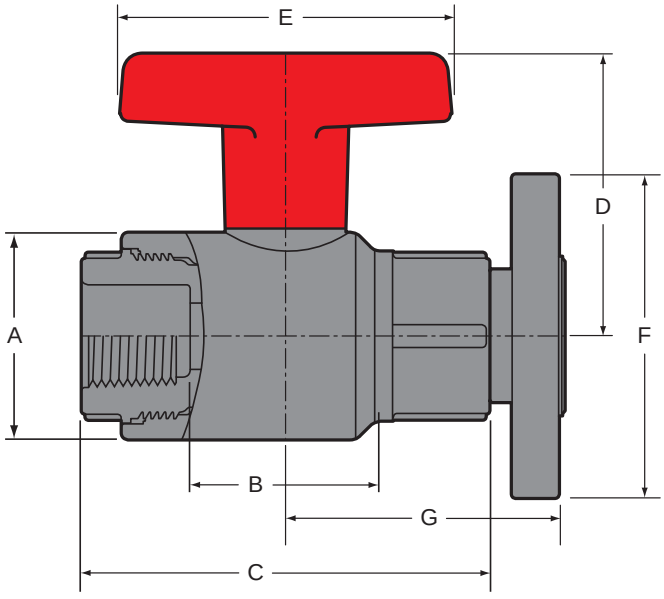
Valve Size	O-ring Material	PVC Part Numbers[1]			Pressure Rating
		Socket	Threaded	Flanged	
1/2	EPDM	2122-005	2121-005	2123-005	235 psi Non-Shock Water @ 73°F (Flanged 150 psi Non-Shock) Water @ 73°F
	FKM	2132-005	2131-005	2133-005	
3/4	EPDM	2122-007	2121-007	2123-007	
	FKM	2132-007	2131-007	2133-007	
1	EPDM	2122-010	2121-010	2123-010	
	FKM	2132-010	2131-010	2133-010	
1-1/4	EPDM	2122-012	2121-012	2123-012	
	FKM	2132-012	2131-012	2133-012	
1-1/2	EPDM	2122-015	2121-015	2123-015	
	FKM	2132-015	2131-015	2133-015	
2	EPDM	2122-020	2121-020	2123-020	
	FKM	2132-020	2131-020	2133-020	
3	EPDM	2122-030	2121-030	2123-030	150 psi Non-Shock Water @ 73°F
	FKM	2132-030	2131-030	2133-030	
4	EPDM	2122-040	2121-040	2123-040	
	FKM	2132-040	2131-040	2133-040	
6	EPDM	2122-060	---	2123-060	
	FKM	2132-060	---	2133-060	

1: For CPVC valves, add the letter "C" to the part numbers listed (e.g., 2131-005**C**).

Optional Accessories*

- Round Safety Handle
- Stem Extension Kit
- Mini-Mount Actuation Mounting Kit
- 2" Square/T-Style Operator Nut

*See ***"BALL VALVE ACCESSORIES"*** section for details of individual products.



Dimensions, Weights, Operating Torque & C_V Values

Nominal Size	Dimension Reference (inches, ± 1/16)								Approx. Wt. (Lbs.)		Oper.[2] Torque (in.-lb.)	Cv[3] Values	
	A	B[1]		C	D	E[4]	F	G	PVC	CPVC		Soc/Thd	Flanged
		Socket	Threaded										
1/2	1-11/16	1-5/8	1-7/8	3-3/8	2-5/16	2-3/4	3-1/2	2-17/32	.31	.32	20	36	20
3/4	2-1/8	1-15/16	2-7/16	4-1/16	2-11/16	3-1/4	3-7/8	2-27/32	.49	.52	30	74	42
1	2-7/16	2-1/16	2-3/8	4-7/16	2-7/8	3-3/4	4-1/4	3-1/16	.64	.69	40	141	80
1-1/4	2-13/16	2-3/8	3	4-15/16	3-5/16	4-1/8	4-5/8	3-13/32	.93	.98	60	284	163
1-1/2	3-1/4	2-13/16	3-1/2	5-5/8	3-11/16	4-1/2	5	4	1.39	1.45	80	402	229
2	4-1/16	3-3/8	4-7/16	6-1/2	4-3/8	5-1/4	5-7/8	4-13/32	2.33	2.45	90	706	429
3	5-5/16	4-9/16	5-1/2	8-5/16	5-1/2	7-21/32	7-1/2	5-7/16	4.49	5.02	300	1660	1079
4	7-3/8	6-3/16	7-3/16	10-5/32	6-5/8	10-27/32	9-1/16	6-7/8	9.50	10.24	400	3104	2028
6[4]	10-3/16	8	10-3/4	14-1/8	8-1/16	14-5/16	11-1/4	8-21/32	21.48	23.41	900	7942	5268

1: Valve Lay Length
2: Torque required at valve maximum internal pressure rating, 5 ft./sec. flow velocity.
3: Gallons per minute at 1 psi pressure loss. Values calculated from valve laying length, based on derivative of Hazen-Williams equation with surface roughness factor of C =150.
4: 6" valve has lever handle, dimension is from valve centerline (not illustrated)

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 2"	PVC	235 (1.62)	211 (1.45)	150 (1.03)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	235 (1.62)	219 (1.51)	170 (1.17)	145 (1.00)	130 (.90)	110 (.76)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)
	3" - 6"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Utility Ball Valves

PVC

CPVC

Features - PVC White, PVC Gray & CPVC

A high quality, economical quarter-turn shutoff valve designed for irrigation, pool and spa, and general purpose applications. IPS sizes 1/2" - 2" available in PVC White, PVC Gray or CPVC with socket or threaded end connectors. Sizes 3" - 4" available in PVC White with socket or threaded end connectors. 6" size available in PVC White with socket end connectors and high-efficiency lever style handle for easier operation.

- Chemical & Corrosion Resistant PVC or CPVC Construction
- Economical Sealed Unit
- Schedule 80 Full-Bore Design
- High Impact Polypropylene Handle
- Spears® Single O-ring Safe-T-Shear® Stem Design
- EPDM O-rings
- PTFE/HDPE Floating Seat Design
- Sizes 1/2" - 6" Pressure Rated to 150 psi @ 73°F
- NSF® Certified for Potable Water use
- Assembled with Silicone-Free, Water Soluble lubricant

Note: Valve sizes 2-1/2", 3", 4" and 6" are not available in CPVC.
Refer to Compact Ball Valve
Valve size 6" uses Lever Handle (not shown)

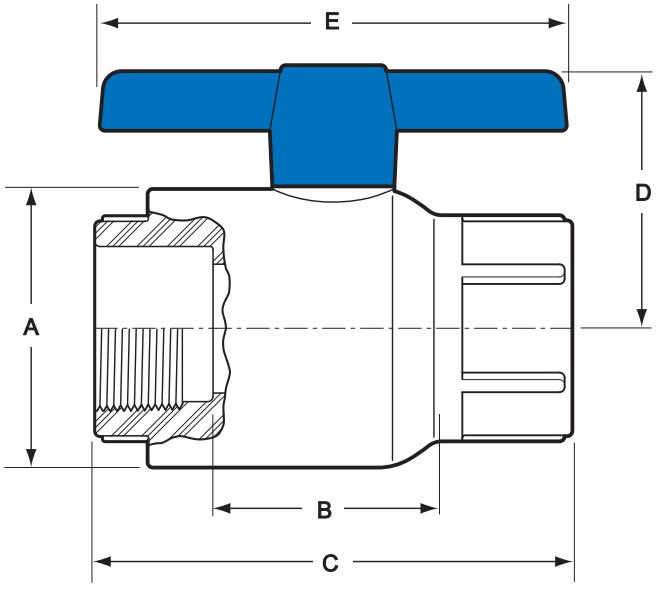
Sample Engineering Specification

All thermoplastic ball valves shall be Utility sealed unit type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447. All O-rings shall be EPDM. All valves shall have Safe-T-Shear® stem and Polypropylene handle. All valves shall be certified by NSF International for use in potable water service. All valves shall be pressure rated at 150 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Quick-View Valve Selection Chart

Valve Size	O-ring Material	PVC Part Number[1, 2]		Pressure Rating
		Socket	Threaded	
1/2	EPDM	2622-005	2621-005	150 psi Non-Shock Water @ 73°F
3/4	EPDM	2622-007	2621-007	
1	EPDM	2622-010	2621-010	
1-1/4	EPDM	2622-012	2621-012	
1-1/2	EPDM	2622-015	2621-015	
2	EPDM	2622-020	2621-020	
2-1/2	EPDM	2622-025	2621-025	
3	EPDM	2622-030	2621-030	
4	EPDM	2622-040	2621-040	
6	EPDM	2622-060	---	

1: For CPVC valves, add the letter "C" to part numbers listed (e.g., 2621-005**C**).
2: For PVC Gray, add the letter "G" to part numbers listed (e.g. 2621-005**G**).



Dimensions, Weights & C_V Values

Nominal Size	Dimension Reference (inches, ± 1/16)						Approx. Wt. (Lbs.)		C_V[2] Values
	A	B[1]		C	D	E[3]	PVC	CPVC	
		Socket	Threaded						
1/2	1-7/16	1-7/32	1-7/32	2-21/32	1-11/16	2-3/4	.16	.17	46
3/4	1-25/32	1-7/16	1-7/16	2-29/32	2-1/32	3-1/4	.25	.27	91
1	2-1/16	1-19/32	1-19/32	3-3/8	2-13/32	3-17/32	.34	.36	160
1-1/4	2-9/16	1-31/32	1-31/32	3-7/8	2-27/32	3-25/32	.57	.60	306
1-1/2	2-31/32	2-15/32	2-25/32	4-11/16	3-5/32	3-5/32	.88	.90	429
2	3-9/16	2-13/16	3-3/16	5-5/32	3-7/8	4-9/32	1.34	1.34	755
2-1/2	4-5/16	3-17/32	4-7/16	7-1/16	4-3/16	5-1/32	2.31	N/A	1126
3	5-11/32	4-5/32	5-1/8	7-15/16	5-9/16	7-3/4	4.78	N/A	1660
4	6-11/16	5-1/8	6-7/32	9-3/16	6-5/32	9-5/32	8.00	N/A	3129
6[3]	10-3/16	8-3/32	---	14-3/16	8-5/32	14-3/32	23.24	N/A	7942

1: Valve Lay Length
2: Gallons per minute at 1 psi pressure drop. Values calculated from valve laying length, based on derivative of Hazen-Williams equation with surface roughness factor of C=150.
3: 6" valve has lever handle, dimension is from valve stem centerline (not illustrated)

Temperature Pressure Rating

System Operating Temperature °F (°C)		73 (23)	100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)
Valve Pressure Rating psi (MPa)	PVC	150 (1.03)	93 (.64)	75 (.52)	60 (.41)	45 (.31)	33 (.23)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
	CPVC	150 (1.03)	123 (.85)	110 (.76)	98 (.68)	86 (.58)	75 (.52)	68 (.47)	60 (.41)	48 (.33)	38 (.26)	-0- (-0-)

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CWV Ball Valves

Features - PVC White

A high quality, economical quarter-turn shutoff valve designed for irrigation, pool and spa, and general purpose applications. IPS sizes 1/2" - 2" available in PVC White.

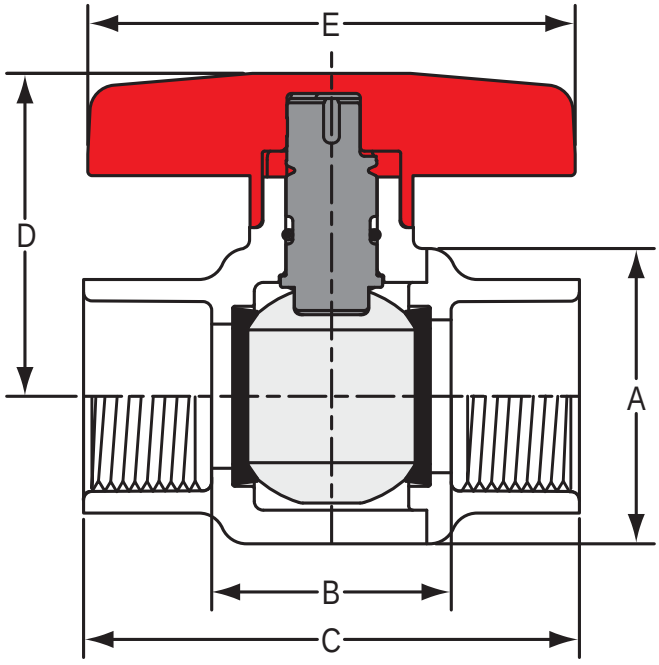
- Chemical & Corrosion Resistant PVC Construction
- Economical Sealed Unit
- High Impact, U.V. Resistant Polypropylene Handle
- Spears® Single O-ring Safe-T-Shear® Stem Design
- EPDM O-rings
- Sizes 1/2" - 2" Pressure Rated to 125 psi @ 73°F
- NSF® Certified for Potable Water use
- Assembled with Silicone-Free, Water Soluble lubricant

Sample Engineering Specification

All thermoplastic ball valves shall be CWV sealed unit type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454. All O-rings shall be EPDM. All valves shall have Safe-T-Shear® stem and Polypropylene handle. All valves shall be certified by NSF International for use in potable water service. All valves shall be pressure rated at 125 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Quick-View Valve Selection Chart

Valve Size	O-ring Material	PVC Part Number		Pressure Rating
		Socket	Threaded	
1/2	EPDM	8722-005	8721-005	125 psi Non-Shock Water @ 73°F
3/4	EPDM	8722-007	8721-007	
1	EPDM	8722-010	8721-010	
1-1/4	EPDM	8722-012	8721-012	
1-1/2	EPDM	8722-015	8721-015	
2	EPDM	8722-020	8721-020	



Dimensions

Size	A	B		C	D	E
		Socket	Threaded			
1/2	1-5/16	1-7/32	1-7/32	2-5/8	1-9/16	2-5/8
3/4	1-5/8	1-15/32	1-7/16	2-15/16	1-15/16	2-7/8
1	1-7/8	1-5/8	1-5/8	3-7/16	2-1/4	3-3/8
1-1/4	2-3/8	2	2	3-7/8	2-3/4	3-7/8
1-1/2	2-3/4	2-7/16	2-3/4	4-5/8	3-1/8	4-1/2
2	3-11/32	2-25/32	2-25/32	5-1/8	3-23/32	4-31/32

Temperature Pressure Rating

System Operating Temperature °F (°C)		73 (23)	100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)
Valve Pressure Rating psi (MPa)	PVC	125 (.86)	78 (.54)	63 (.45)	50 (.35)	38 (.26)	28 (.19)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Single Entry Ball Valves

Sample Engineering Specification

All thermoplastic ball valves shall be Single Entry type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454. All O-rings shall be Buna-N, EPDM or FKM. All valves shall have Safe-T-Shear® stem and double stop Polypropylene handle. All valve union nuts shall have Buttress threads. All valve components shall be replaceable. All EPDM valves shall be certified by NSF International for use in potable water service. All 1/2" - 2" valves shall be pressure rated at 235 psi and all 3" - 4" valves shall be pressure rated at 150 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Features – PVC Gray & PVC White

This quarter-turn shutoff valve is widely chosen for industrial and chemical processing, turf and irrigation, plus pool and spa applications. Available in PVC Gray or PVC White, IPS Sizes 1/2"- 4" with socket or threaded end connectors. **Note:** Seal carrier is NOT blocked (see True Union 2000 Valves).

- Chemical & Corrosion Resistant PVC Gray or PVC White Construction
- Schedule 80 Full-Bore Design
- Strong, Buttress Thread Union Nut
- High Impact Polypropylene Handle
- Spears® Single O-ring Safe-T-Shear® Stem Design
- Buna-N, EPDM or FKM O-rings
- Self Adjusting PTFE Floating Seat Design
- Fully Serviceable, Replaceable Components
- Sizes 1/2" - 2" Pressure Rated to 235 psi @ 73°F, Sizes 3" - 4" Pressure Rated to 150 psi @ 73°F
- Valves with EPDM O-rings NSF® Certified for Potable Water use
- Suitable for Vacuum Service
- Assembled with Silicone-Free, Water Soluble Lubricant
- Manufactured to ASTM F 1970

Quick-View Valve Selection Chart

Valve Size	O-ring Material	PVC Gray Part Numbers[1]		Pressure Rating
		Socket	Threaded	
1/2	Buna-N	2412-005G	2411-005G	235 psi Non-Shock Water @ 73°F
	EPDM	2422-005G	2421-005G	
	FKM	2432-005G	2431-005G	
3/4	Buna-N	2412-007G	2411-007G	
	EPDM	2422-007G	2421-007G	
	FKM	2432-007G	2431-007G	
1	Buna-N	2412-010G	2411-010G	
	EPDM	2422-010G	2421-010G	
	FKM	2432-010G	2431-010G	
1-1/4	Buna-N	2412-012G	2411-012G	
	EPDM	2422-012G	2421-012G	
	FKM	2432-012G	2431-012G	
1-1/2	Buna-N	2412-015G	2411-015G	
	EPDM	2422-015G	2421-015G	
	FKM	2432-015G	2431-015G	
2	Buna-N	2412-020G	2411-020G	
	EPDM	2422-020G	2421-020G	
	FKM	2432-020G	2431-020G	
3	Buna-N	2412-030G	2411-030G	150 psi Non-Shock Water @ 73°F
	EPDM	2422-030G	2421-030G	
	FKM	2432-030G	2431-030G	
4	Buna-N	2412-040G	2411-040G	
	EPDM	2422-040G	2421-040G	
	FKM	2432-040G	2431-040G	

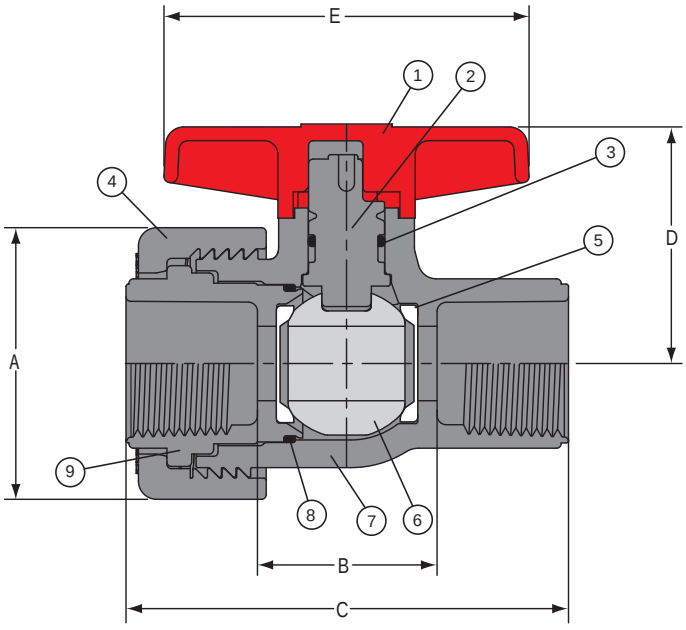
1: For PVC White valves, replace the letter "G" with the letter "W" at the end of the part number listed (e.g., 2421-005**W**).

Optional Accessories*

- Round Safety Handle
- Stem Extension Kit
- 2" Square / T-Style Operator Nut

*See ***"BALL VALVE ACCESSORIES"*** section for details of individual products.

Single Entry Ball Valves



Replacement Parts

No.	Component	Qty.	Material
1	Handle	1	PP
2	Stem	1	PVC
3	Stem O-ring	1	Buna-N/EPDM/FKM
4	Union Nut	1	PVC
5	Seat	2	PTFE
6	Ball	1	PVC
7	Body	1	PVC
8	Carrier O-ring	1	Buna-N/EPDM/FKM
9	End Connector	1	PVC

Seat O-rings (not shown) on sizes 3" and larger.

Dimensions, Weights, Operating Torque & C_V Values

Nominal Size	Dimension Reference (inches, ± 1/16)						Approx. Wt. (Lbs.)	Oper.[2] Torque (in.-lb.)	C_V[3] Values
	A	B[1]		C	D	E			
		Socket	Threaded						
1/2	1-15/16	1-1/4	1-5/8	3-1/16	1-5/8	2-1/2	.22	20	38
3/4	2-3/8	1-7/16	2-1/8	3-9/16	2	3	.36	30	76
1	2-5/8	1-5/8	2-1/8	3-7/8	2-5/16	3-15/16	.50	40	146
1-1/4	3-1/8	1-15/16	2-1/4	4-1/8	2-13/16	3-1/2	.75	60	292
1-1/2	3-9/16	2-3/8	2-3/4	4-5/8	3-1/16	3-7/8	1.00	80	412
2	4-5/16	3-1/16	3-5/8	5-1/2	3-3/4	5	2.00	90	720
3	6-3/16	4-3/8	5-3/8	8-1/8	5-1/2	7-5/8	7.00	300	1660
4	7-3/4	5-11/16	6-7/8	9-3/4	6-1/8	9-1/16	12.00	400	3104

1: Valve Lay Length
2: Torque required at valve maximum internal pressure rating, 5 ft./sec. flow velocity; due to adjustment differences during installation, actual values may vary.
3: Gallons per minute at 1 psi pressure drop. Values calculated from valve laying length, based on derivative of Hazen-Williams equation with surface roughness factor of C=150.

Temperature Pressure Rating

System Operating Temperature °F (°C)			73 (23)	100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)
Valve Pressure Rating psi (MPa)	1/2" - 2"	PVC	235 (1.62)	146 (1.01)	118 (.81)	94 (.65)	71 (.49)	52 (.36)	-0- (-0-)
	3" - 4"	PVC	150 (1.03)	93 (.64)	75 (.52)	60 (.41)	45 (.31)	33 (.23)	-0- (-0-)

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CTS Quarter-Turn Angle Supply Stop

Features – CPVC

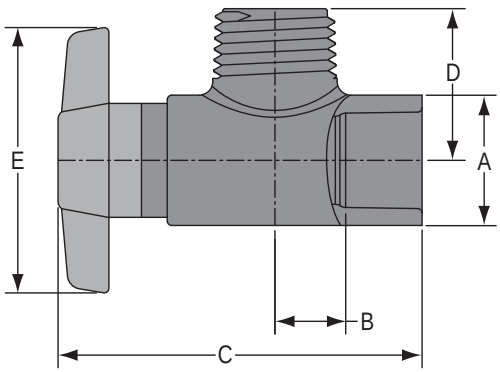
Used at plumbing fixtures to terminate and control hot and cold water, this all-plastic quarter-turn shutoff valve is specially designed for use with CTS (Copper Tube Size) CPVC Hot & Cold Water Distribution Systems. Available in 1/2" CTS Socket or Spears® patented Special Reinforced (SR) 1/2" FIPT female thread inlet x 1/2" straight male thread outlet for connection to conventional 1/2" FPT faucet or toilet supply lines with captive seals.

- Easy 1/4-Turn Shutoff
- All Plastic Corrosion Proof Construction
- CTS CPVC Stainless Steel Colored Body with Matching High Impact Polypropylene Handle
- High Quality EPDM Seals
- NSF® Certified to ASTM F 1970 for use in ASTM D 2846 Hot & Cold Water Distribution Systems rated to 100 psi @ 180°F

Sample Engineering Specification

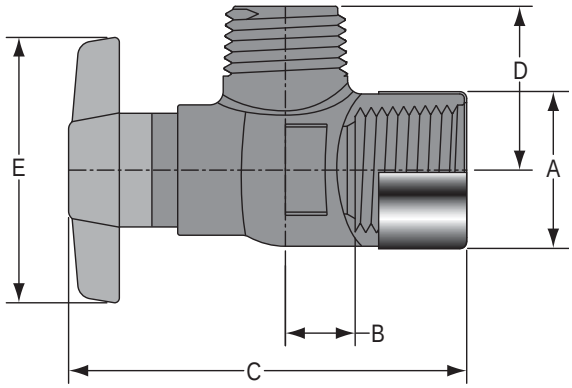
All thermoplastic Angle Supply Stops shall be Copper Tube Size (CTS) sealed unit type constructed from CPVC Type IV, ASTM D 1784 Cell Classification 23447. All O-rings shall be EPDM. All valves shall have Polypropylene handle. All Angle Supply Stops shall be pressure rated at 100 psi for water at 180°F, as manufactured by Spears® Manufacturing Company.

Dimensions



1/4-Turn Angle Supply Stop
Socket x NPT

Nominal Size	A	B	C	D	E
1/2	27/32	7/16	2-13/32	1	1-3/4
1/2 x 3/8	7/8	7/16	2-3/8	7/8	1-3/4



1/4-Turn Angle Supply Stop
SR Fipt x NPT

Nominal Size	A	B	C	D	E
1/2	1	15/32	2-21/32	1	1-3/4
1/2 x 3/8	1-1/32	15/32	2-5/8	31/32	1-3/4

Quick-View Valve Selection Chart

Valve Size	O-ring Material	Part Number		Pressure Rating
		Socket	SR Threaded	
1/2	EPDM	7722-005	7721-005SR	100 psi Non-Shock Water @ 180°F
1/2 x 3/8	EPDM	7722-073	7721-073SR	100 psi Non-Shock Water @ 180°F

CTS Ball Valves

Features – CPVC

A high quality, quarter-turn shutoff valve designed for line-stop use in Copper Tube Size (CTS) CPVC hot and cold water distribution systems as specified in ASTM D 2846. Approved by national, state and most municipal building codes for use in residential and commercial structures, as well as recreational vehicles, modular homes and mobile home applications. Check local codes for acceptability and restrictions. Available in CTS sizes 1/2" - 2" with socket end connectors.

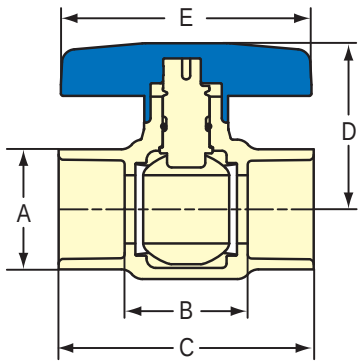
- Chemical & Corrosion Resistant CPVC Construction
- Maintenance-Free Sealed Unit
- High Impact Polypropylene Handle
- Spears® Single O-ring Safe-T-Shear® Stem Design
- EPDM O-rings
- PTFE/HDPE Floating Seat Design
- Suitable for Commercial Hot Water Systems
- Sizes 1/2" - 2" Pressure Rated to 100 psi @ 180°F
- NSF® Certified for Potable Water use
- Assembled with Silicone-Free, Water Soluble Lubricant
- Manufactured to ASTM F 1970

Sample Engineering Specification

All thermoplastic ball valves shall be Copper Tube Size (CTS) sealed unit type constructed from CPVC Type IV, ASTM D 1784 Cell Classification 23447. All O-rings shall be EPDM. All valves shall have double stop Polypropylene handle. All valves shall be certified by NSF International for use in potable water service. All valves shall be pressure rated at 100 psi for water at 180°F, as manufactured by Spears® Manufacturing Company.

Quick-View Valve Selection Chart

Valve Size	O-ring Material	Part Number Socket	Pressure Rating
1/2	EPDM	1922-005	100 psi Non-Shock Water @ 180°F
3/4	EPDM	1922-007	
1	EPDM	1922-010	
1-1/4	EPDM	1922-012	
1-1/2	EPDM	1922-015	
2	EPDM	1922-020	



Dimensions, Weights & C_V Values

Nominal Size	Dimension Reference (inches, ± 1/16)					Approx. Wt. (Lbs.)	C_V[2] Values
	A	B[1]	C	D	E		
1/2	1-7/32	1-1/16	2-3/32	1-11/32	2	.09	37
3/4	1-9/16	1-11/32	2-25/32	1-3/4	2-23/32	.16	84
1	1-7/8	1-9/16	3-3/8	2-3/8	3-1/2	.27	151
1-1/4	2-13/32	1-15/16	4-3/16	2-25/32	3-3/4	.47	229
1-1/2	2-27/32	2-3/8	5-1/32	3-5/32	4-9/32	1.05	330
2	3-17/32	2-3/4	6-3/16	3-27/32	5	1.38	598

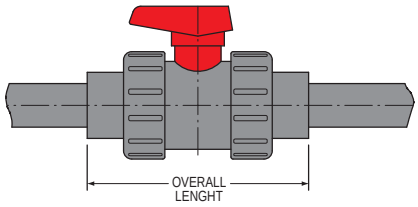
1: Valve Lay Length
2: Gallons per minute at 1 psi pressure drop. Values calculated from valve laying length, based on derivative of Hazen-Williams equation with roughness factor of C=150.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

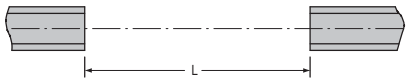
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

True Union 2000 Retrofit Kits

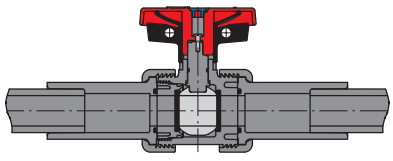
Easily converts any system over to all True Union 2000 style valves for consistent valve type and uniform maintenance. Special extended socket style End Connectors (2) allow retrofit replacement of older Spears® and other brand valves in existing piping systems with a new True Union 2000 valve. Simply cut out old valve according to specified dimension and install retrofit end connectors. End connectors are provided with either EPDM or FKM O-rings.



Ball Valve for Replacement



Pipe Laying Length After Cutting



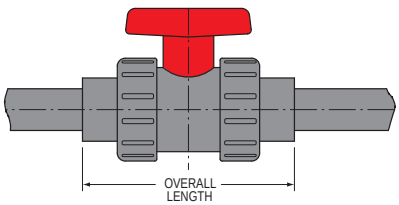
True Union 2000 Ball Valve Installed with Retrofit Kit

True Union Retrofit Kits - Other Brand Valves (Socket Style Only)

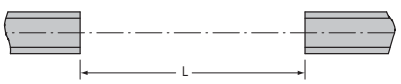
Kit Size	EPDM		FKM	
	PVC	CPVC	PVC	CPVC
1/2	RFK2-005	RFK2-005C	RFK3-005	RFK3-005C
3/4	RFK2-007	RFK2-007C	RFK3-007	RFK3-007C
1	RFK2-010	RFK2-010C	RFK3-010	RFK3-010C
1-1/4	RFK2-012	RFK2-012C	RFK3-012	RFK3-012C
1-1/2	RFK2-015	RFK2-015C	RFK3-015	RFK3-015C
2	RFK2-020	RFK2-020C	RFK3-020	RFK3-020C
2-1/2	RFK2-025	RFK2-025C	RFK3-025	RFK3-025C
3	RFK2-030	RFK2-030C	RFK3-030	RFK3-030C
4	RFK2-040	RFK2-040C	RFK3-040	RFK3-040C

Cut-Out Dimensions

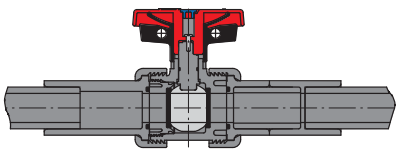
Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
L	4-29/32	5-7/16	6-3/32	7-1/4	7-1/2	8-17/32	10-3/4	11-7/16	14-15/16



Ball Valve for Replacement



Pipe Laying Length After Cutting



True Union Ball Valve Installed with Retrofit Kit

True Union Retrofit Kits - Older (Regular Style) Spears® Valves

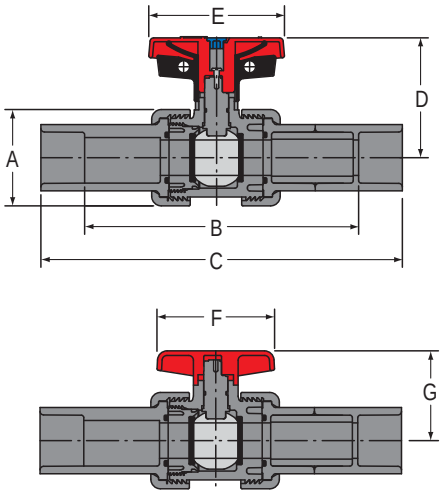
(Socket Style Only)

Kit Size	EPDM		FKM	
	PVC	CPVC	PVC	CPVC
1/2	RFKS2-005	RFKS2-005C	RFKS3-005	RFKS3-005C
3/4	RFKS2-007	RFKS2-007C	RFKS3-007	RFKS3-007C
1	RFKS2-010	RFKS2-010C	RFKS3-010	RFKS3-010C
1-1/4	RFKS2-012	RFKS2-012C	RFKS3-012	RFKS3-012C
1-1/2	RFKS2-015	RFKS2-015C	RFKS3-015	RFKS3-015C
2	RFKS2-020	RFKS2-020C	RFKS3-020	RFKS3-020C
2-1/2	RFKS2-025	RFKS2-025C	RFKS3-025	RFKS3-025C
3	RFKS2-030	RFKS2-030C	RFKS3-030	RFKS3-030C
4	RFKS2-040	RFKS2-040C	RFKS3-040	RFKS3-040C

Cut-Out Dimensions

Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
L	5-5/16	6-1/4	6-11/16	7-1/8	8-3/16	8-15/16	12	12-1/16	13-3/16

Ball Valve Accessories



True Union 2000 Retrofit Ball Valve Complete replacement valve for older Spears® 2300 series Regular True Union Ball Valves.

Retrofit valve consists of either Spears® Standard or Industrial True Union 2000 Ball Valve supplied with factory installed extended socket end connectors. Simply cut out old valve to specified dimensions **(see cut-out dimensions, page 40)** and install Retrofit Valve end connectors.

Dimensions

Size	A ± 1/16	B ± 1/16	C ± 1/16	D ± 1/16	E ± 1/16	F ± 1/16	G ± 1/16
1/2	1-7/8	5-5/16	7-1/16	2-9/16	2-13/16	2-1/2	1-5/8
3/4	2-1/4	6-1/4	8-1/4	2-7/8	3-5/16	3	2
1	2-1/2	6-11/16	8-15/16	3-1/8	3-7/16	3-7/16	2-5/16
1-1/4	3-1/16	7-1/8	9-3/4	3-5/8	3-13/16	3-9/16	2-13/16
1-1/2	3-1/2	8-3/16	10-15/16	4	4-3/16	3-7/8	3-1/16
2	4-1/4	8-15/16	11-15/16	4-1/2	5-1/8	5	3-3/4
2-1/2	6-3/16	12	15-1/2	5-1/8	6-1/4	7-5/16	5-7/8
3	6-3/16	12-1/16	15-7/8	5-7/8	7-5/8	7-5/16	5-7/8
4	7-5/8	13-3/16	19	6-3/4	9-3/16	8-3/8	6-3/4

True Union 2000 Retrofit Ball Valve - Replaces Older (Regular Style) Spears® Valves

Size	TU 2000 Industrial Retrofit Ball Valves				TU 2000 Standard Retrofit Ball Valves			
	EPDM		FKM		EPDM		FKM	
	PVC	CPVC	PVC	CPVC	PVC	CPVC	PVC	CPVC
1/2	1822RS-005	1822RS-005C	1832RS-005	1832RS-005C	3622RS-005	3622RS-005C	3632RS-005	3632RS-005C
3/4	1822RS-007	1822RS-007C	1832RS-007	1832RS-007C	3622RS-007	3622RS-007C	3632RS-007	3632RS-007C
1	1822RS-010	1822RS-010C	1832RS-010	1832RS-010C	3622RS-010	3622RS-010C	3632RS-010	3632RS-010C
1-1/4	1822RS-012	1822RS-012C	1832RS-012	1832RS-012C	3622RS-012	3622RS-012C	3632RS-012	3632RS-012C
1-1/2	1822RS-015	1822RS-015C	1832RS-015	1832RS-015C	3622RS-015	3622RS-015C	3632RS-015	3632RS-015C
2	1822RS-020	1822RS-020C	1832RS-020	1832RS-020C	3622RS-020	3622RS-020C	3632RS-020	3632RS-020C
2-1/2	1822RS-025	1822RS-025C	1832RS-025	1832RS-025C	3622RS-025	3622RS-025C	3632RS-025	3632RS-025C
3	1822RS-030	1822RS-030C	1832RS-030	1832RS-030C	3622RS-030	3622RS-030C	3632RS-030	3632RS-030C
4	1822RS-040	1822RS-040C	1832RS-040	1832RS-040C	3622RS-040	3622RS-040C	3632RS-040	3632RS-040C

True Union 2000 Check Valve Seal Carrier Tool

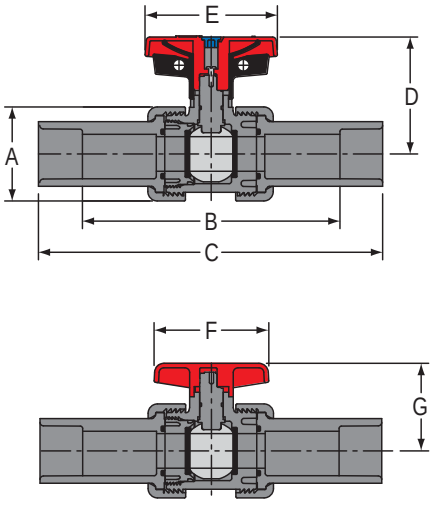
Size	Part Number
1/2	TSK-00503
3/4	TSK-00703
1	TSK-01003
1-1/4	TSK-01203
1-1/2	TSK-01503
2	TSK-02003
3	TSK-03003
4	TSK-04003
6	TSK-06003

True Union 2000 Ball Valve Seal Carrier Tool

Size	Part Number
1/2	TSK1-00503
3/4	TSK1-00703
1	TSK1-01003
1-1/4	TSK1-01203
1-1/2	TSK1-01503
2	TSK1-02003
3	TSK-03003
4	TSK-04003
6	TSK-06003

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com



True Union 2000 Retrofit Ball Valve Complete universal replacement valve for domestic and import PVC or CPVC valve.

Retrofit consists of either Spears® Standard or Industrial True Union 2000 Ball Valve supplied with factory installed extended socket end connectors. Simply cut out old valve to specified dimensions **(see cut-out dimensions, page 40)** and install Retrofit Valve end connectors.

Dimensions

Size	A ± 1/16	B ± 1/16	C ± 1/16	D ± 1/16	E ± 1/16	F ± 1/16	G ± 1/16
1/2	1-7/8	4-15/16	6-11/16	2-9/16	2-13/16	2-1/2	1-5/8
3/4	2-1/4	5-7/16	7-1/2	2-7/8	3-3/8	3	2
1	2-1/2	6-1/16	8-5/16	3-1/8	3-7/16	3-7/16	2-5/16
1-1/4	3-1/16	7-5/16	9-7/8	3-5/8	3-7/8	3-9/16	2-13/16
1-1/2	3-1/2	7-1/2	10-5/16	4	4-3/16	3-7/8	3-1/16
2	4-1/4	8-1/2	11-1/2	4-1/2	5-1/8	5	3-3/4
2-1/2	6-3/16	10-7/8	14-3/8	5-7/8	7-5/8	7-5/16	5-7/8
3	6-3/16	11-1/2	15-3/16	5-7/8	7-5/8	7-5/16	5-7/8
4	7-5/8	14-3/8	18-15/16	6-3/4	9	8-3/8	6-3/4

True Union 2000 Retrofit Ball Valve - Replaces Other Brand Valves

Size	TU 2000 Industrial Retrofit Ball Valves				TU 2000 Standard Retrofit Ball Valves			
	EPDM		FKM		EPDM		FKM	
	PVC	CPVC	PVC	CPVC	PVC	CPVC	PVC	CPVC
1/2	1822R-005	1822R-005C	1832R-005	1832R-005C	3622R-005	3622R-005C	3632R-005	3632R-005C
3/4	1822R-007	1822R-007C	1832R-007	1832R-007C	3622R-007	3622R-007C	3632R-007	3632R-007C
1	1822R-010	1822R-010C	1832R-010	1832R-010C	3622R-010	3622R-010C	3632R-010	3632R-010C
1-1/4	1822R-012	1822R-012C	1832R-012	1832R-012C	3622R-012	3622R-012C	3632R-012	3632R-012C
1-1/2	1822R-015	1822R-015C	1832R-015	1832R-015C	3622R-015	3622R-015C	3632R-015	3632R-015C
2	1822R-020	1822R-020C	1832R-020	1832R-020C	3622R-020	3622R-020C	3632R-020	3632R-020C
2-1/2	1822R-025	1822R-025C	1832R-025	1832R-025C	3622R-025	3622R-025C	3632R-025	3632R-025C
3	1822R-030	1822R-030C	1832R-030	1832R-030C	3622R-030	3622R-030C	3632R-030	3632R-030C
4	1822R-040	1822R-040C	1832R-040	1832R-040C	3622R-040	3622R-040C	3632R-040	3632R-040C

Split-Nut Repair Kits for All True Union 2000 Valves, Union 2000 Pipe Unions and True Union Diaphragm Valves

- Allows replacement of broken Union Nuts
- No Reduction in Valve Operating Pressure
- Kit includes 2-piece Split Nut and SS 316 Gear Clamp
- Simply cut or remove broken nut, align Split-Nut halves around end connector and secure with Gear Clamp. Thread nut onto valve to complete repair.

Note: Split-Nut Repair Kit does **NOT** fit Regular Style True Union Valves

Valve Size	PVC Kit	CPVC Kit
1/2	SNK-005	SNK-005C
3/4	SNK-007	SNK-007C
1	SNK-010	SNK-010C
1-1/4	SNK-012	SNK-012C
1-1/2	SNK-015	SNK-015C
2	SNK-020	SNK-020C
2-1/2	SNK-025	SNK-025C
3	SNK-030	SNK-030C
4	SNK-040	SNK-040C

Supplemental End Connector Sets for All True Union 2000 Valves, Union 2000 Pipe Unions and True Union Diaphragm Valves

- Allows easy conversion of valve end connections due to system change, modification, or inadvertent misorder of product.
- Each set includes 2 each of either Socket, SR Threaded or Spigot End connectors with either EPDM or FKM O-rings installed.

Socket End Connector Set (2)

Valve Size	PVC Part Number		CPVC Part Number	
	EPDM O-ring	FKM O-ring	EPDM O-ring	FKM O-ring
1/2	ECS2-005	ECS3-005	ECS2-005C	ECS3-005C
3/4	ECS2-007	ECS3-007	ECS2-007C	ECS3-007C
1	ECS2-010	ECS3-010	ECS2-010C	ECS3-010C
1-1/4	ECS2-012	ECS3-012	ECS2-012C	ECS3-012C
1-1/2	ECS2-015	ECS3-015	ECS2-015C	ECS3-015C
2	ECS2-020	ECS3-020	ECS2-020C	ECS3-020C
2-1/2	ECS2-025	ECS3-025	ECS2-025C	ECS3-025C
3	ECS2-030	ECS3-030	ECS2-030C	ECS3-030C
4	ECS2-040	ECS3-040	ECS2-040C	ECS3-040C
6	ECS2-060	ECS3-060	ECS2-060C	ECS3-060C

SR Threaded End Connector Set (2)

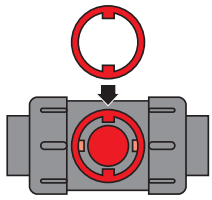
Valve Size	PVC Part Number		CPVC Part Number	
	EPDM O-ring	FKM O-ring	EPDM O-ring	FKM O-ring
1/2	ECSRT2-005	ECSRT3-005	ECSRT2-005C	ECSRT3-005C
3/4	ECSRT2-007	ECSRT3-007	ECSRT2-007C	ECSRT3-007C
1	ECSRT2-010	ECSRT3-010	ECSRT2-010C	ECSRT3-010C
1-1/4	ECSRT2-012	ECSRT3-012	ECSRT2-012C	ECSRT3-012C
1-1/2	ECSRT2-015	ECSRT3-015	ECSRT2-015C	ECSRT3-015C
2	ECSRT2-020	ECSRT3-020	ECSRT2-020C	ECSRT3-020C
2-1/2	ECSRT2-025	ECSRT3-025	ECSRT2-025C	ECSRT3-025C
3	ECSRT2-030	ECSRT3-030	ECSRT2-030C	ECSRT3-030C
4	ECSRT2-040	ECSRT3-040	ECSRT2-040C	ECSRT3-040C
6	ECSRT2-060	ECSRT3-060	ECSRT2-060C	ECSRT3-060C

Spigot End Connector Set (2)

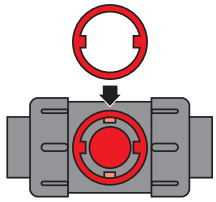
Valve Size	PVC Part Number		CPVC Part Number	
	EPDM O-ring	FKM O-ring	EPDM O-ring	FKM O-ring
1/2	ECSP2-005	ECSP3-005	ECSP2-005C	ECSP3-005C
3/4	ECSP2-007	ECSP3-007	ECSP2-007C	ECSP3-007C
1	ECSP2-010	ECSP3-010	ECSP2-010C	ECSP3-010C
1-1/4	ECSP2-012	ECSP3-012	ECSP2-012C	ECSP3-012C
1-1/2	ECSP2-015	ECSP3-015	ECSP2-015C	ECSP3-015C
2	ECSP2-020	ECSP3-020	ECSP2-020C	ECSP3-020C
2-1/2	ECSP2-025	ECSP3-025	ECSP2-025C	ECSP3-025C
3	ECSP2-030	ECSP3-030	ECSP2-030C	ECSP3-030C
4	ECSP2-040	ECSP3-040	ECSP2-040C	ECSP3-040C
6	ECSP2-060	ECSP3-060	ECSP2-060C	ECSP3-060C

Handle Lockout Ring for True Union 2000 Industrial Ball Valves

- Use with Built-in Handle Lockout Device
- Allows selective lockout position of Lock-Open Only or Lock-Closed Only
- Simply remove valve handle and install ring below handle lockout mechanism



Lock-Closed Only Position



Lock-Open Only Position

Valve Size	Part Number
1/2	TU2LR-005
3/4	TU2LR-007
1	TU2LR-010
1-1/4	TU2LR-012
1-1/2	TU2LR-015
2	TU2LR-020
2-1/2 & 3	TU2LR-030
4	TU2LR-040

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Typical Application (VALVE AND RISER NOT INCLUDED)

Stem Extension Kits

- Kits for True Union 2000 Valves and for Regular True Union, Single Entry or Compact Ball Valves
- Simple 2-Piece Kit for use with existing Valve Handle and Schedule 80 pipe, or can be ordered factory assembled to desired length as 1-piece unit.
- Kit includes 1 - Stem Adapter and 1 - Handle Adapter
- Corrosion resistant PVC construction

2-Piece Stem Extension Kit

Valve Size	Part Numbers[1]	
	For True Union 2000, Compact 2000 & Single Entry Ball Valves[2]	For Regular True Union & Compact Ball Valves
1/2	BVSE2-005-000	BVSE-005-000
3/4	BVSE2-007-000	BVSE-007-000
1	BVSE2-010-000	BVSE-010-000
1-1/4	BVSE2-012-000	BVSE-012-000
1-1/2	BVSE2-015-000	BVSE-015-000
2	BVSE2-020-000	BVSE-020-000
2-1/2 & 3	BVSE2-030-000	BVSE-030-000
4	BVSE2-040-000	BVSE-040-000
6	BVSE2-060-000	N/A

1: For factory assembled units replace last 3 zeros with length code. See **SSB-1 Part 1 List Price Catalog** – *Thermoplastic Valves, Ball Valve Accessories & Repair Kits* for length codes.
2: Not for use on True Union 2000 Industrial 3-Way Ball Valves

1. Cut pipe square to desired length *(See Table Below)*.

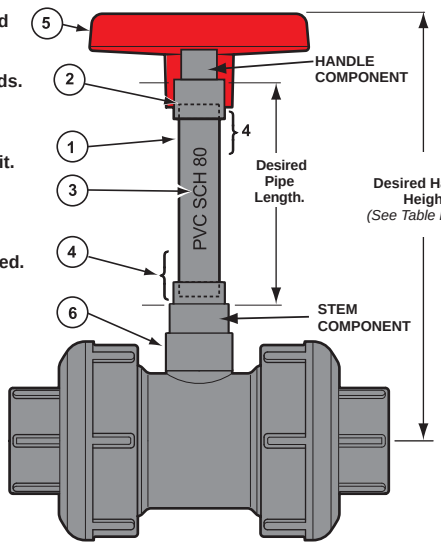
2. Bevel and deburr pipe ends.

3. Align edge of print string or mark each end of pipe for alignment; check dry fit.

4. Solvent cement components to pipe making sure alignment marks are properly matched.

5. Push valve handle onto extension assembly.

6. Position assembly over valve stem and rotate into place.



Required for Assembly:

- Two-Piece Stem Extension Kit
- Desired Length of PVC Schedule 80 Pipe*
- Saw & Miter Box or Wheel-Type Cutter
- PVC Solvent Cement & Primer
- Black Marker
- Ruler

*** NOT INCLUDED**

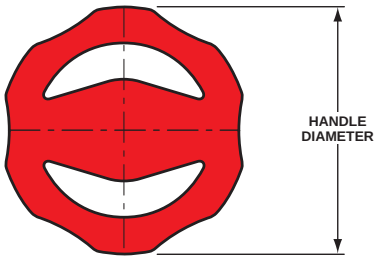
Use the Schedule 80 pipe size listed for the appropriate valve size										
Valve Size (in.)	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	6
Required Sch 80 Pipe Size	**3/4**			**1**					**1-1/2**	
To calculate the length of Schedule 80 pipe needed, ***subtract*** the appropriate figure shown below from the desired handle height										
For True Union 2000 Industrial Ball Valves[1]										
Valve Size (in.)	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	6
Subtract (in.)	**3-7/8**	**4**	**4-5/16**	**5**	**5-5/8**	**6-1/4**	**8-1/16**	**8-1/16**	**9-5/8**	**10-11/16**
Minimum Height (in.)	4-9/16	5-3/16	5-1/2	6-3/4	7-3/8	8	9-13/16	9-13/16	11-5/8	12-3/4
For True Union 2000 Standard, Compact 2000 & Single Entry Ball Valves										
Valve Size (in.)	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	N/A
Subtract (in.)	**2-1/2**	**3-1/16**	**3-9/16**	**4-1/4**	**4-5/8**	**5-11/16**	**7-11/16**	**7-11/16**	**9**	N/A
Minimum Height (in.)	3-5/8	4-1/4	4-3/4	6	6-3/8	7-7/16	9-1/2	9-1/2	11	N/A
For Regular True Union & Compact Ball Valves										
Valve Size (in.)	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	N/A
Subtract (in.)	**3-5/16**	**4**	**4-5/16**	**5-1/8**	**5-5/8**	**6-1/16**	**7-1/8**	**7-1/8**	**8-3/8**	N/A
Minimum Height (in.)	4-1/2	5-1/4	5-1/2	7	7-1/2	8	9	9	10-1/2	N/A

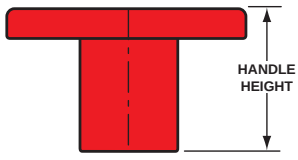
1: Stem Extension does not permit use of Handle Lockout on True Union 2000 Industrial Ball Valves.

Round Safety Handles

- Handles for True Union 2000 Valves and for Regular True Union, Single Entry or Compact Ball Valves
- Helps prevent accidental operation of valve
- Special design provides positive hand grip
- Impact and corrosion resistant Polypropylene construction

Note: Round Handle does not allow use of Handle Lockout on True Union 2000 Industrial Ball Valve. Not for use on True Union 2000 Industrial 3-Way Ball Valve.





Typical Application
(VALVE NOT INCLUDED)

Valve Size	Part Numbers					Handle Height	Handle Diameter
	For TU 2000, Compact 2000, & Single Entry, & Utility Ball Valves		For Regular True Union & Compact Ball Valves				
	3-Slot Stem	1-Slot Stem	3-Slot Stem	1-Slot Stem	Flat/2-D Stem		
1/2	RSH2-005	RSH5-005	RSH-005	RSH6-005	RSH4-005	1-13/32	2-1/2
3/4	RSH2-007	RSH5-007	RSH-007	RSH6-007	RSH4-007	1-9/16	2-7/8
1	RSH2-010	RSH5-010	RSH-010	RSH6-010	RSH4-010	1-9/16	3-1/4
1-1/4	RSH2-012	RSH5-012	RSH-012	RSH6-012	RSH4-012	1-13/16	3-9/16
1-1/2	RSH2-015	RSH5-015	RSH-015	RSH6-015	RSH4-015	1-15/16	4-3/16
2	RSH2-020	RSH5-020	RSH-020	RSH6-020	RSH4-020	2-1/4	5-1/16
2-1/2 & 3	RSH2-030	RSH5-030	NA	NA	RSH-030	2-3/4	6-11/16
4	RSH2-040	RSH5-040	NA	NA	RSH-040	3	8-1/8

2" Square / T-Style Operator Nuts

- Operator Nuts for True Union 2000 Valves and for Regular True Union, Single Entry or Compact Ball Valves
- Designed for use with standard 2" square drive or conventional “T” drive operators

Note: Not for use on True Union 2000 Industrial 3-Way Ball Valves

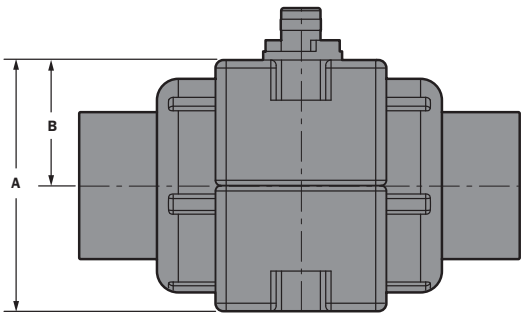
Valve Size	Part Numbers		
	All True Union (Reg./2000) Compact, Compact 2000 & Single Entry Ball Valves	For True Union 2000 Industrial, Standard & Single Entry Ball Valves	For Regular True Union & Compact Ball Valves
1/2	VTN2-005	N/A	N/A
3/4	VTN2-007		
1	VTN2-007		
1-1/4	VTN2-012		
1-1/2	VTN2-015		
2	VTN2-020		
2-1/2 & 3	N/A	VTN2-030	VTN-030
4		VTN2-040	VTN-040

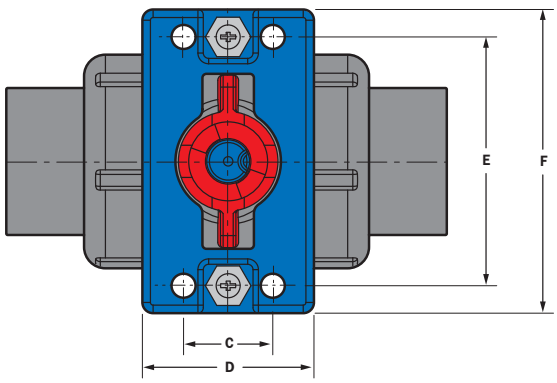
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Multi-Mount Valve Mounting Brackets

- Separate Brackets for True Union 2000 Industrial & Standard Ball Valves and for Regular True Union Ball Valves.
- Provides solid, versatile valve mounting to machinery supports, panels, etc.
- Simple 2-piece clamp-on unit allows quick removal of valve for maintenance or servicing without altering position.
- Includes mounting hardware.
- Impact and corrosion resistant Polypropylene construction.
- Easily adapts to actuator mount using optional Multi-Mount Actuator Mounting Platform.

Notes:
1) Bracket does not fit True Union 2000 Industrial 3-Way Ball Valves.
2) True Union 2000 Valve brackets come with Stainless Steel hardware, Regular True Union brackets come with zinc-plated steel hardware.
3) Will not fit with Low Profile Actuation Mounting Kit.





Multi-Mount Valve Mounting Brackets

True Union 2000 Industrial Ball Valve

Valve Size	Part Number	Dimensions					
		A	B	C	D	E	F
1/2	TUMB2-005	2.38	1.19	1.04	1.72	2.46	3.54
3/4	TUMB2-007	2.82	1.41	1.10	1.81	2.75	3.54
1	TUMB2-010	2.98	1.49	1.04	2.00	2.90	3.54
1-1/4	TUMB2-012	3.60	1.80	1.25	2.00	3.50	4.13
1-1/2	TUMB2-015	4.00	2.00	1.38	2.15	3.90	4.53
2	TUMB2-020	5.00	2.50	1.50	2.50	4.50	5.10
2-1/2 & 3	TUMB2-030	6.30	3.15	2.00	3.25	6.25	7.00
4	TUMB2-040	8.25	4.12	2.00	4.10	7.72	8.50

Regular True Union Ball Valve

Valve Size	Part Number	Dimensions					
		A	B	C	D	E	F
1/2	TUMB-005	2.92	1.46	0.68	1.55	2.25	4.44
3/4	TUMB-007	3.54	1.77	0.94	1.87	2.55	4.87
1	TUMB-010	3.56	1.78	1.05	2.00	2.87	5.12
1-1/4	TUMB-012	3.98	1.99	1.19	2.09	3.25	5.31
1-1/2	TUMB-015	4.54	2.27	1.47	2.47	3.84	5.90
2	TUMB-020	5.56	2.78	1.81	2.75	4.75	7.00
2-1/2 & 3	TUMB-030	7.54	3.77	2.47	3.75	6.87	9.47
4	TUMB-040	9.16	4.58	2.72	4.19	8.28	11.41

Ball Valve Accessories

Multi-Mount Actuator Mounting Platforms

- Separate Platforms for True Union 2000 Valves and for Regular True Union Ball Valves.
- Add-on actuator adapter for use with Multi-Mount Valve Mounting Bracket (may also be purchased with bracket as complete kit).
- Universal actuator mounting accepts ISO, MSS or comparable square bolt-pattern actuators.
- Impact and corrosion resistant Polypropylene construction.
- Includes hardware for mounting Platform to Bracket

Notes:

1) True Union 2000 Valve platforms come with Stainless Steel hardware, Regular True Union platform come with zinc-plated steel hardware.

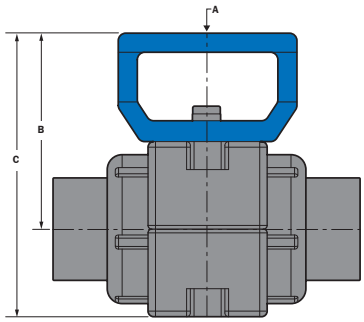
2) See Complete Multi-Mount Actuation Mounting Kit for applicable dimensions.

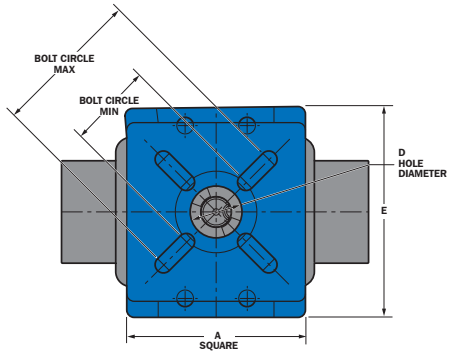
Valve Size	Part Numbers	
	For True Union 2000 Ball Valves	For Regular True Union Ball Valves
1/2	MMP1-005	MMP-005
3/4	MMP1-007	MMP-007
1	MMP1-010	MMP-010
1-1/4	MMP1-012	MMP-012
1-1/2	MMP1-015	MMP-015
2	MMP1-020	MMP-020
2-1/2 & 3	MMP1-030	MMP-030
4	MMP1-040	MMP-040

Complete Multi-Mount Actuation Mounting Kits

- Separate Platforms for True Union 2000 Industrial Ball Valves & for True Union 2000 Standard Ball Valves and for Regular True Union Ball Valves.
- Combines Multi-Mount Valve Mounting Bracket and Multi-Mount Actuator Mounting Platform into one complete kit.
- Provides solid, fully supported valve and actuator mounting.
- Impact and corrosion resistant Polypropylene construction.
- Bracket and platform hardware included

Notes: 1) True Union 2000 Valve kits come with Stainless Steel hardware, Regular True Union kits come with zinc-plated steel hardware.
2) Does not fit True Union 2000 Industrial 3-way Ball Valves
3) Actuator coupling not included (see Valve Stem Output Detail for design of user supplied drive coupling).





Valve Size	True Union 2000 Ball Valves	Regular True Union Ball Valves	Dimensions									
			A	TU 2000 B	Reg. TU B	TU 2000 C	Reg. TU C	D	TU 2000 E	Reg. TU E	Bolt Circle Max	Bolt Circle Min.
1/2	TUAK1-005	TUAK-005	3.00	3.00	3.24	4.19	4.67	.87	3.54	4.44	2.50	1.41
3/4	TUAK1-007	TUAK-007	3.00	3.13	3.46	4.54	5.20	.87	3.54	4.87	2.50	1.41
1	TUAK1-010	TUAK-010	3.00	3.31	3.60	4.88	5.38	.87	3.54	5.12	2.50	1.41
1-1/4	TUAK1-012	TUAK-012	3.75	4.64	4.80	6.44	6.76	.90	4.13	5.31	3.00	1.41
1-1/2	TUAK1-015	TUAK-015	3.75	5.02	5.27	7.02	7.52	.90	4.53	5.90	3.00	1.41
2	TUAK1-020	TUAK-020	3.75	5.52	5.77	8.02	8.52	1.12	5.10	7.00	3.12	1.75
2-1/2 & 3	TUAK1-030	TUAK-030	5.25	6.34	6.91	9.49	10.63	1.37	7.00	9.47	5.00	2.20
4	TUAK1-040	TUAK-040	5.25	7.99	8.36	12.11	12.86	1.37	8.50	11.41	5.00	2.20

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

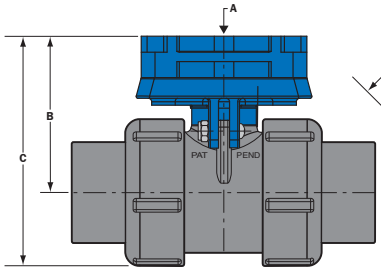
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Low Profile Actuation Mounting Kits

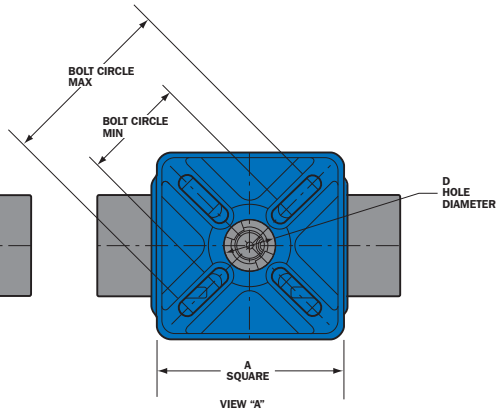
- Separate kits for True Union 2000 Industrial & Industrial 3-Way Ball Valves and for True Union 2000 Standard Ball Valves.
- Compact bolt-on mount provides positive actuator support and alignment.
- Universal actuator mounting plate accepts ISO, MSS or comparable square bolt-pattern actuators.
- Impact and corrosion resistant Polypropylene construction.
- Includes Stainless Steel hardware for mounting to valve.

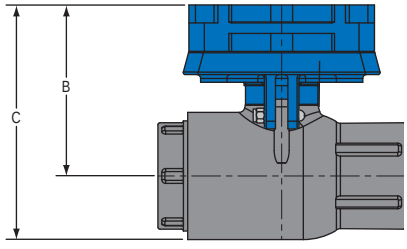
Notes: 1) Actuator coupling not included (see Valve Stem Output Detail for design of user supplied drive coupling).

2) Will not assemble with Multi-Mount Valve mounting bracket – See Mini-Mount Actuation Mounting Kit or Mini-Mount Combo Actuation Mounting Kit.



Industrial Ball Valve





Compact Ball Valve

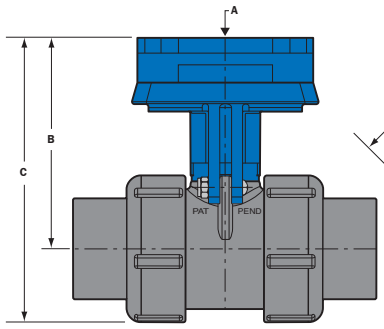
Dimensions

Valve Size	True Union 2000 Ind Ball Valves	True Union 2000 Std Ball Valves	Compact 66-Series	Dimensions							
				A	TU 2000 B	66 Series B	TU 2000 C	66 Series C	D	Bolt Circle Max.	Bolt Circle Min.
1/2	AMB5-005	AMB6-005		3.18	2.45	2.45	3.38	3.16	0.87	3.00	1.62
3/4	AMB5-007	AMB6-007		3.18	2.61	2.61	3.78	3.50	0.87	3.00	1.75
1	AMB5-010	AMB6-010		3.18	2.77	2.77	4.10	3.79	0.87	3.00	1.75
1-1/4	AMB5-012	AMB6-012		3.68	3.40	3.40	4.97	4.68	0.87	3.75	2.00
1-1/2	AMB5-015	AMB6-015		3.68	3.64	3.64	5.42	5.12	0.87	3.75	2.00
2	AMB5-020	AMB6-020		3.68	4.31	4.31	6.45	6.10	1.12	3.75	2.50
2-1/2 & 3	AMB5-030	AMB6-030	N/A	5.25	5.56	N/A	8.64	N/A	1.96	5.62	4.50
4	AMB5-040	AMB6-040	N/A	5.75	6.11	N/A	9.97	N/A	2.68	5.88	4.80
6	AMB5-060	N/A	N/A	5.75	7.92	N/A	13.73	N/A	2.88	5.88	4.80

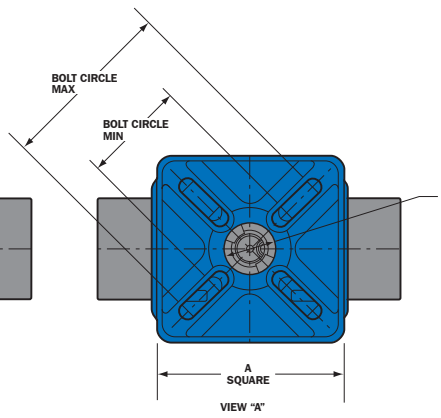
Mini-Mount Actuation Mounting Kits

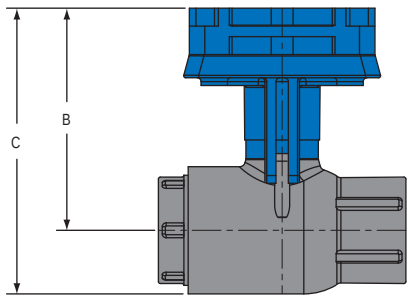
- Separate kits for True Union 2000 Industrial & Industrial 3-Way Ball Valves and for True Union 2000 Standard Ball Valves.
- Simple bolt-on mount provides positive actuator support and alignment.
- Universal actuator mounting plate accepts ISO, MSS or comparable square bolt-pattern actuators.
- Impact and corrosion resistant Polypropylene construction.
- Includes Stainless Steel hardware for mounting to valve.

Note: 1) Actuator coupling not included (see Valve Stem Output Detail for design of user supplied drive coupling).



Industrial Ball Valve





Compact Ball Valve

Dimensions

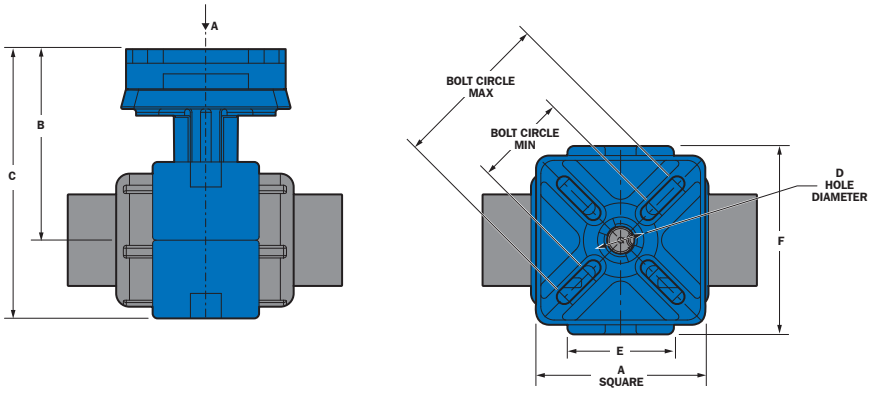
Valve Size	TU 2000 Ind Ball Valves	TU 2000 Std Ball Valves	Compact 66-Series	Compact 21-Series	Dimensions									
					A	TU 2000 B	66 Series B	21 Series B	TU 2000 C	66 Series C	21 Series C	D	Bolt Circle Max.	Bolt Circle Min.
1/2	AMB2-005	AMB3-005		AMB4-005	3.18	2.95	2.95	2.90	3.88	3.66	3.75	0.87	3.00	1.62
3/4	AMB2-007	AMB3-007		AMB4-007	3.18	3.36	3.36	3.47	4.53	4.25	4.51	0.87	3.00	1.75
1	AMB2-010	AMB3-010		AMB4-010	3.18	3.60	3.60	3.61	4.93	4.62	4.80	0.87	3.00	1.75
1-1/4	AMB2-012	AMB3-012		AMB4-012	3.68	4.37	4.37	4.30	5.94	5.65	5.71	0.87	3.75	2.00
1-1/2	AMB2-015	AMB3-015		AMB4-015	3.68	4.64	4.64	4.60	6.42	6.12	6.22	0.87	3.75	2.00
2	AMB2-020	AMB3-020		AMB4-020	3.68	5.47	5.47	5.32	7.61	7.26	7.38	1.12	3.75	2.50
2-1/2 & 3	AMB2-030	AMB3-030	N/A	AMB4-030	5.25	6.15	N/A	5.87	9.23	N/A	8.87	1.96	5.62	4.50
4	AMB2-040	AMB3-040	N/A	AMB4-040	5.75	6.92	N/A	6.91	10.78	N/A	10.59	2.68	5.88	4.80
6	AMB2-060	N/A	N/A	AMB2-060	5.75	8.31	N/A	8.31	14.12	N/A	13.39	2.88	5.88	4.85

Mini-Mount Combo Actuation Mounting Kits

- Separate, complete actuation mounting kit specially designed for True Union 2000 Industrial Ball Valve and for True Union 2000 Standard Ball Valve.
- Combines Multi-Mount Bracket with Mini-Mount Actuation Mounting Kit for additional mounting support.
- Universal actuator mounting plate accepts ISO, MSS or comparable square bolt-pattern actuators.
- Impact and corrosion resistant Polypropylene construction.
- Includes Stainless Steel hardware for mounting to valve.

Notes: 1) Does not fit True Union 2000 Industrial 3-way Ball Valves

2) Actuator coupling not included (see Valve Stem Output Detail for design of user supplied drive coupling).



Dimensions

Valve Size	True Union 2000 Industrial Ball Valves	True Union 2000 Standard Ball Valves	Dimensions							
			A	B	C	D	E	F	Bolt Circle Max.	Bolt Circle Min.
1/2	TUAK2-005	TUAK3-005	3.18	2.95	4.14	.87	1.72	3.54	3.00	1.62
3/4	TUAK2-007	TUAK3-007	3.18	3.36	4.77	.87	1.81	3.54	3.00	1.75
1	TUAK2-010	TUAK3-010	3.18	3.60	5.09	.87	2.00	3.54	3.00	1.75
1-1/4	TUAK2-012	TUAK3-012	3.68	4.37	6.17	.87	2.00	4.13	3.75	2.00
1-1/2	TUAK2-015	TUAK3-015	3.68	4.64	6.64	.87	2.15	4.53	3.75	2.00
2	TUAK2-020	TUAK3-020	3.68	5.47	7.97	1.12	2.50	5.10	3.75	2.50
2-1/2 & 3	TUAK2-030	TUAK3-030	5.75	6.15	9.30	1.96	3.25	7.00	5.62	4.50
4	TUAK2-040	TUAK3-040	5.75	6.92	11.05	2.68	4.10	8.50	5.88	4.80

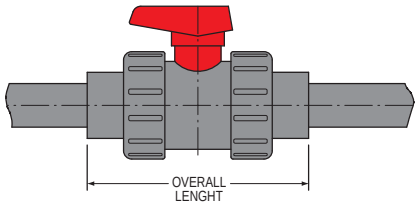
Standard and Compact Foot Valve Screens

- Easily converts Ball Check Valve to a Foot Valve.
- Standard IPS spigot connection fits slip-socket valve end connector.
- Enlarged screen provides open area equivalent to valve for optimum flow characteristics.
- Chemical and corrosion resistant PVC, CPVC or Compact HDPE threaded construction.
- Compact fits any IPS socket or threaded Ball Check Valve

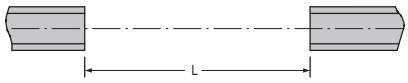
Typical Application
(VALVE NOT INCLUDED)

True Union 2000 Retrofit Kits

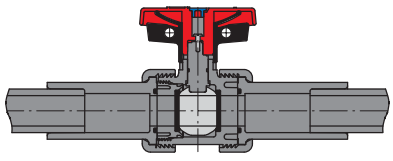
Easily converts any system over to all True Union 2000 style valves for consistent valve type and uniform maintenance. Special extended socket style End Connectors (2) allow retrofit replacement of older Spears® and other brand valves in existing piping systems with a new True Union 2000 valve. Simply cut out old valve according to specified dimension and install retrofit end connectors. End connectors are provided with either EPDM or FKM O-rings.



Ball Valve for Replacement



Pipe Laying Length After Cutting



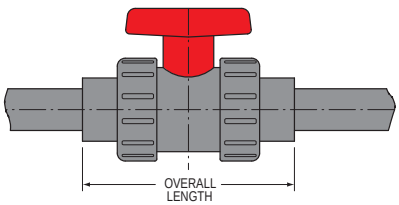
True Union 2000 Ball Valve Installed with Retrofit Kit

True Union Retrofit Kits - Other Brand Valves (Socket Style Only)

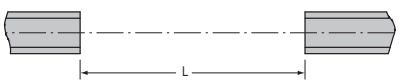
Kit Size	EPDM		FKM	
	PVC	CPVC	PVC	CPVC
1/2	RFK2-005	RFK2-005C	RFK3-005	RFK3-005C
3/4	RFK2-007	RFK2-007C	RFK3-007	RFK3-007C
1	RFK2-010	RFK2-010C	RFK3-010	RFK3-010C
1-1/4	RFK2-012	RFK2-012C	RFK3-012	RFK3-012C
1-1/2	RFK2-015	RFK2-015C	RFK3-015	RFK3-015C
2	RFK2-020	RFK2-020C	RFK3-020	RFK3-020C
2-1/2	RFK2-025	RFK2-025C	RFK3-025	RFK3-025C
3	RFK2-030	RFK2-030C	RFK3-030	RFK3-030C
4	RFK2-040	RFK2-040C	RFK3-040	RFK3-040C

Cut-Out Dimensions

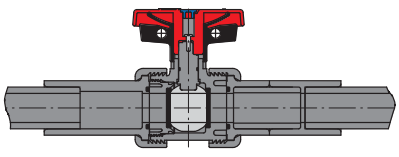
Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
L	4-29/32	5-7/16	6-3/32	7-1/4	7-1/2	8-17/32	10-3/4	11-7/16	14-15/16



Ball Valve for Replacement



Pipe Laying Length After Cutting



True Union Ball Valve Installed with Retrofit Kit

True Union Retrofit Kits - Older (Regular Style) Spears® Valves

(Socket Style Only)

Kit Size	EPDM		FKM	
	PVC	CPVC	PVC	CPVC
1/2	RFKS2-005	RFKS2-005C	RFKS3-005	RFKS3-005C
3/4	RFKS2-007	RFKS2-007C	RFKS3-007	RFKS3-007C
1	RFKS2-010	RFKS2-010C	RFKS3-010	RFKS3-010C
1-1/4	RFKS2-012	RFKS2-012C	RFKS3-012	RFKS3-012C
1-1/2	RFKS2-015	RFKS2-015C	RFKS3-015	RFKS3-015C
2	RFKS2-020	RFKS2-020C	RFKS3-020	RFKS3-020C
2-1/2	RFKS2-025	RFKS2-025C	RFKS3-025	RFKS3-025C
3	RFKS2-030	RFKS2-030C	RFKS3-030	RFKS3-030C
4	RFKS2-040	RFKS2-040C	RFKS3-040	RFKS3-040C

Cut-Out Dimensions

Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
L	5-5/16	6-1/4	6-11/16	7-1/8	8-3/16	8-15/16	12	12-1/16	13-3/16

Ball Valve Troubleshooting Guide

Spears® True Union, Single Entry and Compact Ball Valves are designed and produced for trouble-free operation and use. However, certain aspects of installation and application can result in valve malfunctions.

This guide identifies some of the more common problems encountered and their necessary corrective actions. Such problems have been categorized as External Leaks, Internal Leaks, Frozen Movements and Structural Breakage.

External Leaks

Location	Possible Cause	Corrective Action
At Thread/Socket Connections	Improper solvent cementing.	Replace end connector(s) according to installation instructions.
	Improper threads.	Check threads for proper size; replace or reinstall.
	Insufficient or improperly applied thread sealant; incompatible sealant (paste).	Reinstall thread connection according to proper procedures; check paste compatibility.
	Over-tightened thread joint splitting connector.	Replace cracked end connector(s).
	Insufficient valve support splitting connector.	Replace cracked end connector(s). Add support on each side of valve.
At Union Nuts	End connector misaligned.	Check system alignment - end connector(s) must be parallel. Check for adequate valve support.
	Displaced or damaged O-ring; particles in O-ring groove.	Remove valve and inspect O-ring for physical or chemical damage. Check O-ring compatibility, replace accordingly. Clean and re-seat O-ring.
	System contraction pulling end connectors; improper end connector spacing.	Check thermal variations; anchor pipe each side of valve; install expansion loop. Correct spacing.
	Loose Union Nut.	Re-tighten nut.
	Displaced or pinched seal carrier O-ring.	Remove and disassemble seal carrier; re-seat or replace O-ring.
At Stem	Damaged stem O-ring.	Remove and disassemble valve stem; inspect for physical or chemical damage. Check O-ring compatibility, clean and replace accordingly.

Ball Valve Troubleshooting Guide

Internal Leaks — In-line Leakage Past Valve

Possible Cause	Corrective Action
Ball obstruction	Check that the valve is in its "full-closed" position. If not, remove valve and check for solids blocking the ball port. Clean and reinstall valve.
Broken Stem	Remove end connector and check for ball rotation while operating valve. Replace as necessary.
Seal Carrier Loose	True Union Valves - remove valve; CAREFULLY tighten seal carrier (located on inlet end of body). Single Entry Valves - CAREFULLY tighten single Union Nut. IMPORTANT: Generally only a slight adjustment is required (either valve). A properly adjusted valve should have significant resistance to operation without binding - AVOID OVER-TIGHTENING!
PTFE Seat Damage or Debris Laden	Remove and disassemble valve seats. Check for excessive debris and physical damage (nicks, cuts, scoring, etc.). Clean and replace as necessary.
Seat O-ring Displaced, Damaged or Debris Laden	Remove and disassemble valve seat O-rings; check for physical or chemical damage. Check O-ring chemical compatibility; clean and replace accordingly. Check for excessive system flow rate.
Ball Damaged	Remove and disassemble valve ball. Check for physical damage (excessive nicks, scoring, etc.) at seat sealing surface (perpendicular to ball port). Clean surface; replace ball if necessary. Check for chemical damage and valve material (PVC, CPVC) compatibility.
Solvent-Cement (glue) Contamination from Installation Spillage	Remove valve and check for glue deposits on ball or seat areas. Clean, if possible; excessive damage may require component replacement.
Thermal Damage (component distortion)	Check system operating temperatures, external heat sources (including direct sun), and heat generated from system design or valve placement.

Frozen Movements — unable, or very difficult, to open/close; sometimes accompanied by stem break (shear)

Possible Cause	Corrective Action
Internal Obstructions; Sediment or Particle Buildup; Solvent Cement on Ball	Remove valve and check for solids, debris or solvent cement deposits blocking the ball or valve interior. Check for sediment particles lodged around ball-to-seat contact areas. Remove stem and check for the same. Clean and reinstall.
Over-tight Seal Carrier	True-Union Valves - remove valve; slightly loosen seal carrier (located on inlet end of body). Single Entry Valves - slightly loosen single Union Nut. IMPORTANT: Generally only a slight adjustment is required (either valve). A properly adjusted valve should have significant resistance to operation without binding.
Chemical Attack (generally appears as distortion, peeling, etching or bleaching of ball sealing surfaces or other internal components)	Check valve material (PVC, CPVC) chemical compatibility with system fluids. Be sure to consider operating temperatures with this determination.

Ball Valve Troubleshooting Guide

Structural Breakage

Location	Possible Cause	Corrective Action
Handle broken	Frozen movements.	See “Frozen Movements” section. Replace.
	External impact.	Identify and correct source.
Handle Stripped	Overextending open/close range.	Replace handle.
	Excessive exposure to direct-sunlight has softened handle material.	Shield or screen valve from direct-sun exposure.
Stem Sheared / Broken	Frozen movements; external impact.	See “Frozen Movements” section.
Broken Union Nut	Nut has been over tightened to draw-up or align end-connectors; external impact.	Adjust spacing between end-connectors for proper valve lay-lengths. Check system alignment - end connector(s) must be parallel.
	Inadequate valve supports.	Provide system support on each side of valve.
	Excessive internal pressure / Hydraulic Shock	Check system pressures and surge pressures; check for entrapped air.
End Connector Break	System misalignment; external impact.	Check system alignment - end connector(s) must be parallel.
	Over-tighten thread-joint connection.	Install new end connector according to installation instructions.
	Inadequate valve support.	Provide system support on each side of valve.
Body Break	External impact.	Identify and correct source.
	Excessive internal pressure.	Check system pressures and surge pressures; check for entrapped air.
	System misalignment.	Check system alignment - end connector(s) must be parallel.
	Inadequate valve support.	Provide system support on each side of valve.
	Chemical attack.	Check chemical compatibility of system fluids.

NOTES: Certain corrective actions of this guide may not be feasible with the Compact Ball Valve (sealed unit).

Improper system operating temperatures and chemical incompatibility can cause a variety of functional and structural failures. Be sure to use proper valve material-types for both temperature and chemical resistance.

Most valve problems are traceable to improper system design or installation. Be sure to have all design performed by a qualified Engineer and installation made by properly trained personnel.

Spears® valve Installation Instructions and Maintenance/Service Procedures should be followed in conjunction with all corrective actions.

Lab Ball Valves

Sample Engineering Specification

All thermoplastic valves shall be sealed unit Lab type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447. All O-rings shall be EPDM or FKM. All valves shall have double stop Polypropylene handle. All 1/4" valves shall have optional field installable male thread and tubing end connector adapters. All EPDM valves shall be certified by NSF International for use in potable water service. All EPDM valves shall be pressure rated at 150 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Features – PVC, CPVC

This versatile quarter-turn shutoff valve is ideally suited for a variety of laboratory, system monitoring and OEM applications. Available in IPS sizes 1/4" - 3/8" with socket or threaded end connectors, plus 1/4" threaded Valve & Adapter Kit to provide multiple connection options.

- Chemical & Corrosion Resistant PVC or CPVC Construction
- Maintenance-Free Sealed Unit
- Individual Valve or Multi-functional Valve & Adapter Kit
- Schedule 80 Full-Bore Design
- High Impact Polypropylene Handle
- EPDM or FKM O-rings
- PTFE Floating Seat Design
- Sizes 1/4" - 3/8" Pressure Rated to 150 psi @ 73°F
- EPDM Valves NSF® Certified for Potable Water use
- Assembled with Silicone-Free, Water Soluble Lubricant

Quick-View Valve Selection Chart

Valve Size	O-ring Material	PVC Part Number[1,2]			Pressure Rating
		Socket	Threaded	Threaded with Kit	
1/4	EPDM	1522-002	1521-002	1529-002	150 psi Non-Shock Water @ 73°F
	FKM	1532-002	1531-002	1539-002	
3/8	EPDM	1522-003	1521-003	N/A	
	FKM	1532-003	1531-003	N/A	

1: For CPVC Valves, add the letter "C" to part number listed (e.g., 1521-002**C**)
2: For valves with 1/4" I.D. tubing adapters, add the letter "A" to the part number listed (e.g., 1529-002**A**)

LAB BALL VALVE WITH ADAPTER KIT

Valve & Adapter Kit

Kit allows multiple connection options. Adapters use O-ring seals for easy connection to threaded valve. Complete Kit includes:

1 – Threaded 1/4" Valve
2 – O-ring Sealed 1/4" MPT x Mipt Adapters
2 – EPDM or FKM O-rings (AS568-013 size)
1 – End Connector Wrench

2 – O-ring Sealed 1/4" MPT x 3/8" I.D. Tubing Barb Adapters
- OR -
2 – O-ring Sealed 1/4" MPT x 1/4" I.D. Tubing Barb Adapters
(Must Add "**A**" to Valve/Kit Part No.)

Lab Ball Valve Adapter Kit Only

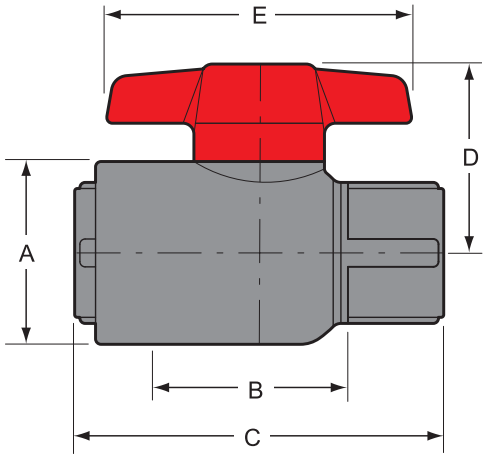
Valve Size	O-ring Material	Part Number	
		PVC	CPVC
1/4	EPDM	LVKE-002	LVKE-002C
	FKM	LVKV-002	LVKV-002C

Kit Includes:
2 – O-rings
1 – End Connector Wrench
2 – 1/4" MPT x Mipt Adapters
2 – 1/4" MPT x 3/8" I.D. Tubing Barb Adapters

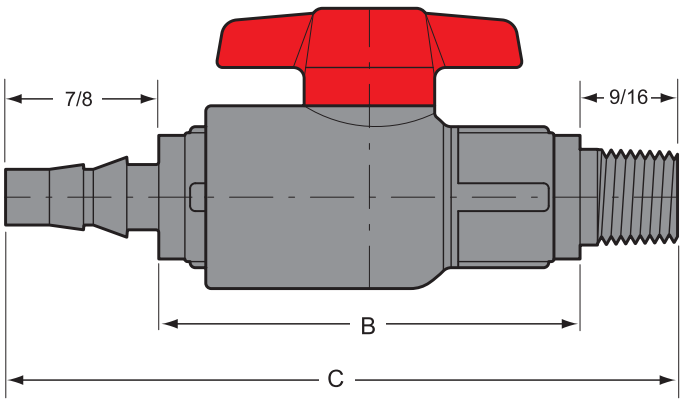
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Lab Ball Valves



Basic Valve



Valve with Adapter Kit

Dimensions, Weights & C_V Values

Nominal Size	Dimension Reference (inches, ± 1/16)					Approx. Wt. (Lbs.)		C_V[2] Values
	A	B[1]	C	D	E	PVC	CPVC	
1/4	1-1/16	15/16	2-1/8	1-1/16	1-3/4	.10	.11	10
1/4 w/Kit	1-1/16	2-7/16	3-7/8	1-1/16	1-3/4	.14	.15	6
3/8	1-5/16	1	2-3/16	1-1/4	2	.12	.13	24

1: Valve Lay Length
2: Gallons per minute at 1 psi pressure drop. Values calculated from valve laying length, based on derivative of Hazen-Williams equation with roughness factor of C=150.

Temperature Pressure Rating

System Operating Temperature °F (°C)		73 (23)	100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)
Valve Pressure Rating psi (MPa)	PVC	150 (1.03)	124 (.85)	100 (.69)	75 (.52)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
	CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.69)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	-0- (-0-)

Needle Valves

Features – PVC, CPVC & PP

Needle Valves provide proportional opening to needle travel for more accurate metering applications and other fine adjustment flow control applications. Special design PTFE seal eliminates elastomer type seals or O-rings that can contribute to chemical compatibility problems. PVC, CPVC and Polypropylene valves are available with 1/4", 3/8" and 1/2" NPT female threaded ends in either standard Globe Pattern or special Angle Pattern configuration that eliminates need for additional elbow in various system setups.

- Chemical & Corrosion Resistant PVC, CPVC or PP Construction
- Precision Metering Chamber
- Globe & Angle Body Configurations
- Removable Bonnet For Easy Disassembly & Cleaning
- Solid PTFE Stem Seal - No Elastomer Seal or Lubricants Used
- Built-in Panel or Bracket Mounting Nut
- Easy-Grip Polypropylene Handle
- PVC & CPVC Pressure Rated to 235 psi @ 73°F
  Polypropylene Pressure Rated to 150 psi @ 73°F

Sample Engineering Specification

All thermoplastic Needle Valves shall be constructed from PVC, ASTM D 1784 Cell Classification 12454, CPVC, ASTM D 1784 Cell Classification 23447, or Polypropylene, ASTM D 4101. All valves shall be globe pattern or angle pattern body configuration with 1/4", 3/8" or 1/2" female NPT end connections. All valves shall have removable bonnet cap with replaceable PTFE seal. No elastomer seals shall be used. All valves shall have built-in panel mounting nut and high impact polypropylene handles. All PVC and CPVC valves shall be pressure rated to 235 psi and all Polypropylene valves to 150 psi for water @ 73°F, as manufactured by Spears® Manufacturing Company.

Cv Values

Size	Globe Pattern	Angle Pattern
1/4" - 3/8"	.310	.426
1/2"	.62	.78

Gallons per minute at 1 psi pressure drop.

Quick-View Needle Valve Selection Chart

Valve Size	PVC Part Numbers[1,2]						Pressure Rating
	Globe Pattern			Angle Pattern			
	Socket	SR Threaded	Threaded	Socket	SR Threaded	Threaded	
1/4"	5592-002	N/A	5591-002	5692-002	N/A	5691-002	PVC & CPVC 235 psi, PP 150 psi Non-Shock Water @ 73°F
3/8"	5592-003	5591-003SR	5591-003	5692-003	N/A	5691-003	
1/2"	5592-005	5591-005SR	5591-005	5692-005	5691-005SR	5691-005	

1: For CPVC Valve, add the letter "C" to the part number (e.g. 5591-002**C**)
2: For threaded Polypropylene Valve, add the letter "P" to the part number (e.g. 5591-002**P**, 5591-005**P**SR)

Temperature Pressure Rating

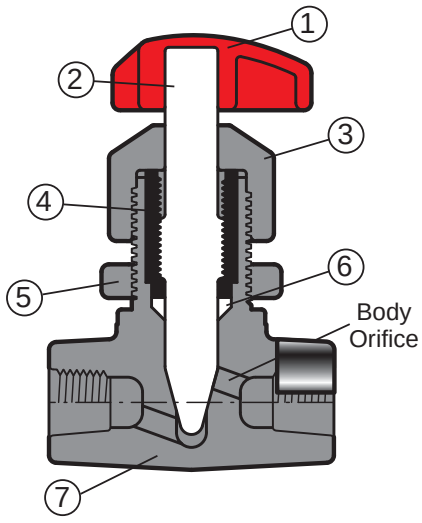
System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/4"-1/2"	PVC	235 (1.62)	211 (1.45)	150 (1.03)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	235 (1.62)	219 (1.51)	170 (1.17)	145 (1.00)	130 (.90)	110 (.76)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)
		PP	150	105	90	80	65	50	45	30	20	-0-	-0-	-0-

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Panel Mounting Instructions

Spears® Needle Valves may be easily mounted to panel or bracket ranging from 3/16" to 1/2" in thickness using the accompanying template. Prepare mounting hole to panel opening dimensions. Slots may be cut in various positions to allow more versatile orientation. Open valve partially. Remove Bonnet Cap with needle assembly (do not fully disassemble) and Panel Nut from valve body. Insert valve body through mounting hole and seat lugs. Reinstall Panel Nut and tighten snug. Carefully reinstall Bonnet Cap and needle assembly, tighten snug. ***Caution:*** *Failure to partially open the valve or back the needle off prior to re-assembly may damage needle when tightening Bonnet Cap.*



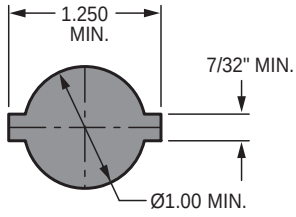
Replacement Parts

No.	Component	Qty.	Material
1	Handle	1	PP
2	Needle Stem	1	PVC/CPVC/PP
3	Bonnet Cap	1	PVC/CPVC/PP
4	Stem Nut	1	GFPP
5	Panel Nut	1	PVC/CPVC/PP
6	Seal	1	PTFE
7	Body	1	PVC/CPVC/PP

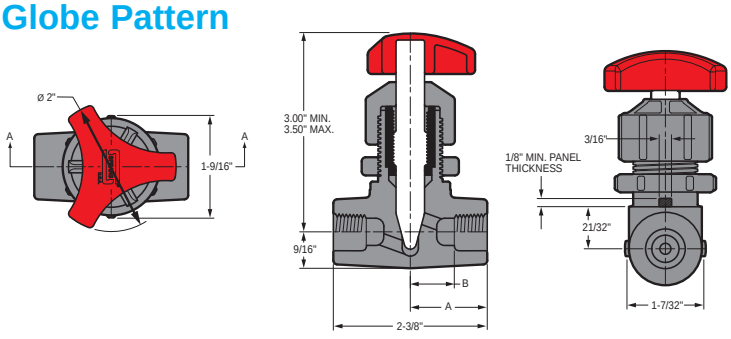
Body Orifice Dimensions

Valve Size	Body Orifice Ø
1/4	3/16"
3/8	3/16"
1/2	1/4"

Panel Opening



Globe Pattern

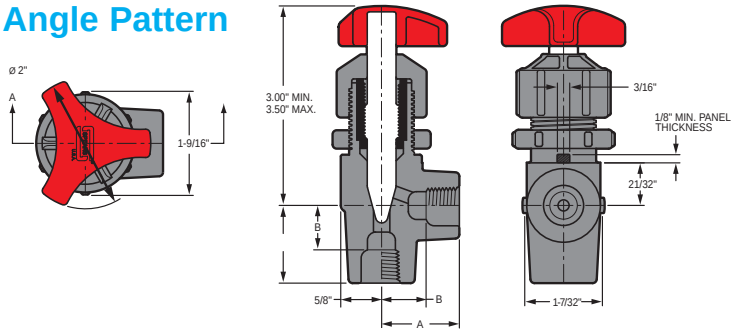


Dimensions

Valve Size	End Connection	A	B
1/4	Threaded	1-3/16	21/32
	Socket		9/16
3/8	Threaded		9/16
	Socket		7/16
1/2	Threaded	1-3/8	21/32
	Socket		1/2

Threaded Valve Dimensions apply to both Standard and SR Threads.

Angle Pattern



Needle Valve Adapter Kit

Valve Size	O-ring Material	Part Number	
		PVC	CPVC
1/4	EPDM	LVKE-002	LVKE-002C
	FKM	LVKV-002	LVKV-002C

Kit Includes:
2 – O-rings
1 – End Connector Wrench
2 – 1/4" MPT x Mipt Adapters
2 – 1/4" MPT x 3/8" I.D. Tubing Barb Adapters

Plug Gate Valves

Sample Engineering Specification

All thermoplastic valves shall be Plug Gate style constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447, with Polypropylene bonnets and high impact Polypropylene hand wheel. All valves shall have non-rising stem and Plug-style Polyethylene gate with Strain-Equalizing thread. All valve components shall be replaceable. All 1/2" - 2" valves shall be pressure rated to 235 psi and all flanged valves 1/2" - 8" to 150 psi for water @ 73°F, as manufactured by Spears® Manufacturing Company.

Quick-View Valve Selection Chart

Valve Size	O-ring Material	PVC Part Numbers[1]			Pressure Rating
		Socket	SR Threaded	Flanged	
1/2	Buna-N	5212-005	5211-005SR	5213-005	235 psi Non-Shock Water @ 73°F (Flanged 150 psi Non-Shock Water @ 73°F)
	EPDM	5222-005	5221-005SR	5223-005	
	FKM	5232-005	5231-005SR	5233-005	
3/4	Buna-N	5212-007	5211-007SR	5213-007	
	EPDM	5222-007	5221-007SR	5223-007	
	FKM	5232-007	5231-007SR	5233-007	
1	Buna-N	5212-010	5211-010SR	5213-010	
	EPDM	5222-010	5221-010SR	5223-010	
	FKM	5232-010	5231-010SR	5233-010	
1-1/4	Buna-N	5212-012	5211-012SR	5213-012	
	EPDM	5222-012	5221-012SR	5223-012	
	FKM	5232-012	5231-012SR	5233-012	
1-1/2	Buna-N	5212-015	5211-015SR	5213-015	
	EPDM	5222-015	5221-015SR	5223-015	
	FKM	5232-015	5231-015SR	5233-015	
2	Buna-N	5212-020	5211-020SR	5213-020	
	EPDM	5222-020	5221-020SR	5223-020	
	FKM	5232-020	5231-020SR	5233-020	
6	EPDM	---	---	5223-060	
	FKM	---	---	5233-060	
8	EPDM	---	---	5223-080	
	FKM	---	---	5233-080	

1: For CPVC valves, add the letter "C" to the part number (e.g; 5222-005**C**, 5211-005**C**SR)

Features – PVC, CPVC

Spears® Plug Gate Valve utilizes a cylindrical "plug-style" gate for more uniform sealing and positive shutoff. Low-profile, compact design and non-rising stem saves space for the most demanding applications. Spears® Strain-Equalizing stem/wedge design combined with improved Polypropylene bonnet makes this one of the most reliable thermoplastic gate valves available. Valves are produced from PVC or CPVC bodies in IPS sizes of 1/2" - 2" with Socket & SR Threaded or 1/2" - 8" Flanged end connections.

- Chemical & Corrosion Resistant PVC or CPVC Construction with Polypropylene Bonnet
- Polyethylene Plug-Style Gate Provides Cylindrical Internal Seal
- Non-Rising Stem with Patented Strain-Equalizing Threads
- 6" and 8" Valves Features Built-in Position Indicator
- High-Impact Polypropylene Hand Wheel
- Fully Serviceable In-line with Repair Kits or Full Internal Replacement Cartridges
- Buna-N, EPDM or FKM O-ring Seals
- Sizes 1/2" – 2" Pressure Rated to 235 psi @ 73°F Flanged through 8" to 150 psi @ 73°F
- Suitable for Vacuum Service
- Assembled with Silicone-Free, Water Soluble Lubricants
- Optional 2" Square/T-Style Operator Nut available.

Plug Gate Valve O-ring Repair Kit

All kits include Stem O-ring (2), Bonnet O-ring (1).

Valve Size	Part Number		
	Buna-N O-ring	EPDM O-ring	FKM O-ring
1/2, 3/4 & 1	PGT-BRK-010	PGT-ERK-010	PGT-VRK-010
1-1/4, 1-1/2 & 2	PGT-BRK-020	PGT-ERK-020	PGT-VRK-020
6	---	PGT-ERK-060	PGT-VRK-060
8	---	PGT-ERK-080	PGT-VRK-080

Plug Gate Valve Internal Replacement Cartridge

Internal Replacement Cartridge includes complete, fully assembled Handle Nut, Stem O-ring, Bonnet O-ring, and Gate for direct insertion into existing valve body.

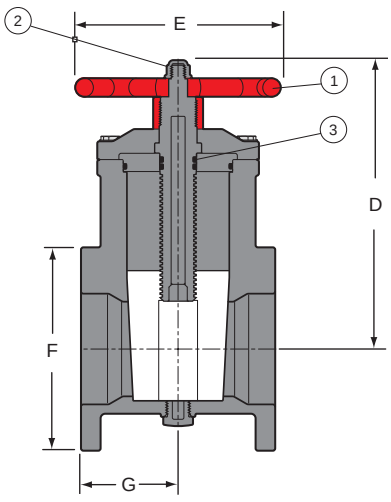
Valve Size	Part Number					
	Buna-N O-rings	CPVC w/ Buna-N O-rings	EPDM O-rings	CPVC w/ EPDM O-rings	FKM O-rings	CPVC w/ FKM O-rings
1/2, 3/4 & 1	5210-010	5210-010C	5220-010	5220-010C	5230-010	5230-010C
1-1/4, 1-1/2 & 2	5210-020	5210-020C	5220-020	5220-020C	5230-020	5230-020C
6	---	---	5220-060	5220-060C	5230-060	5230-060C
8	---	---	5220-080	5220-080C	5230-080	5230-080C

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

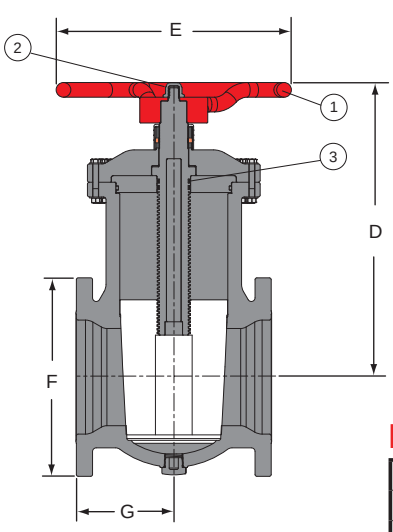
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Plug Gate Valves

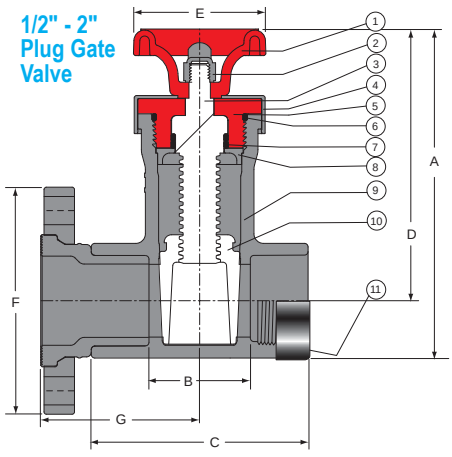
6" Plug Gate Valve



8" Plug Gate Valve



1/2" - 2" Plug Gate Valve



Replacement Parts

No	Component	Qty.	Material
1	Handwheel	1	PP
2	Nut	1	PVC
3	Stem O-Ring	2	EPDM, FKM

Replacement Parts

No	Component	Qty.	Material
1	Handwheel	1	PP
2	Nut	1	PVC
3	Stem	1	PP
4	Bonnet Retainer	1	PVC
5	Bonnet	1	PP
6	Bonnet O-ring	1	Buna-N, EPDM, FKM
7	Stem O-ring	2	Buna-N, EPDM, FKM
8	Stem Support	1	PVC/CPVC
9	Body	1	PVC/CPVC
10	Gate	1	PE
11	SS Collar	2	SS 316

Dimensions & Weights

Nominal Size	Dimension Reference (inches)								Approx. Wt. (Lbs.)			
	A	B		C	D	E	F	G	PVC		CPVC	
		Socket	SR Thread						Soc/Thd	Flanged	Soc/Thd	Flanged
1/2	5	1-1/4	1-11/16	3-1/16	4-1/8	2-5/8	3-1/2	2-11/32	.38	.77	.39	.80
3/4	5	1-1/4	1-15/16	3-5/16	4-1/8	2-5/8	3-7/8	2-1/2	.40	.95	.41	.99
1	5	1-1/4	1-3/4	3-1/2	4-1/8	2-5/8	4-1/4	2-21/32	.43	1.21	.44	1.27
1-1/4	8-5/8	2-21/32	3-7/16	5-1/4	7-1/8	3-7/16	4-5/8	3-5/8	1.84	2.83	1.85	2.89
1-1/2	8-5/8	2-21/32	3-5/8	5-15/32	7-1/8	3-7/16	5	3-15/16	1.94	3.15	1.98	3.27
2	8-5/8	2-21/32	3-27/32	5-23/32	7-1/8	3-7/16	5-15/16	4-5/32	2.11	3.99	2.17	4.18
6	---	---	---	---	15-5/8	10-7/8	11	5-1/4	---	35.53	---	43.56
8	---	---	---	---	20-1/16	16	13-1/2	6-5/8	---	54.59	---	74.55

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 2"	PVC	235 (1.62)	140 (.97)	130 (.90)	90 (.62)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	235 (1.62)	219 (1.51)	170 (1.17)	145 (1.00)	130 (.90)	110 (.76)	95 (.66)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)
	6" - 8"	PVC	150 (1.03)	130 (.90)	110 (.76)	60 (.41)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.69)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)

Features – PVC, CPVC

This solid, proven design is well suited for a variety of chemical, industrial and irrigation applications. Spears® Gate Valves are feature-packed with a variety of end connector options. Individual special features are found in each size range 1/2" through 2", 2-1/2" & 3", and in the full featured Heavy Industrial 4" valve. See Spears® Plug Gate Valves for 6" size.

- Heavy Bodied PVC & CPVC Construction
- Tapered Wedge with Specially Designed Sealing Surface
- Non-Rising Stem Design
- Patented Strain-Equalizing Stem/Wedge Thread
- O-ring Stem Seals Instead of Packing - No Retightening Required
- Buna-N, EPDM, or FKM O-ring Seals
- Positive Grip, High Impact Polypropylene Handwheel Operator
- Fully Serviceable, Replaceable Components - Accessible Without Valve Removal
- EPDM Gate Valves NSF® Certified for Potable Water use
- Suitable for Vacuum Service
- Assembled with Silicone-Free, Water Soluble Lubricants
- Metric Socket and BSP Thread Available, 1/2" - 2"

1/2" - 2" PVC & CPVC Heavy Duty Gate Valves

- Available with socket, threaded or flanged end connectors.
- Pressure rated to 200 psi @ 73°F. Flanged Valve Pressure Rated to 150 psi @ 73°F

2-1/2" & 3" PVC & CPVC Heavy Duty Gate Valves

- Available with socket, SR Threaded (Special Reinforced) threaded or flanged end connectors.
- Pressure rated to 150 psi @ 73°F.
- Optional 2" Square/T-Style Operator Nut available.

Note: 2-1/2" size is a bushed down 3" valve.

4" PVC & CPVC Heavy Industrial Gate Valves

- Available with socket, SR Threaded (Special Reinforced) threaded or flanged end connectors.
- Pressure rated to 235 psi @ 73°F. Flanged Valve Pressure Rated to 150 psi @ 73°F
- SS 316 Exterior Bonnet & Hardware
- Built-in Quick-View Position Indicator
- Optional 2" Square/T-Style Operator Nut available.

Sample Engineering Specification

All thermoplastic Gate Valves shall be constructed from PVC Type I Cell Classification 12454 or CPVC Type IV Cell Classification 23447. All O-rings shall be Buna-N, EPDM or FKM. All EPDM valves shall be NSF® certified for potable water use. All valves shall have non-rising stem and Polypropylene handwheel. All valve gate wedges shall have Strain-Equalizing threads. PVC valves shall have Polypropylene wedge and CPVC valves shall have CPVC wedge. All valve components shall be replaceable. All 1/2" through 2" valves shall be pressure rated at 200 psi, all 2-1/2" through 3" and all flanged valves shall be pressure rated at 150 psi, and all 4" valves shall be pressure rated at 235 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Quick-View Valve Selection Chart

Valve Size	O-ring Material	PVC Part Numbers[1]			Pressure Rating
		Socket	Threaded	Flanged	
1/2	Buna-N	2012-005	2011-005	2013-005	200 psi Non-Shock Water @ 73°F (Flanged 150 psi Non-Shock Water @ 73°F)
	EPDM	2022-005	2021-005	2023-005	
	FKM	2032-007	2031-005	2033-005	
3/4	Buna-N	2012-007	2011-007	2013-007	
	EPDM	2022-007	2021-007	2023-007	
	FKM	2032-007	2031-007	2033-007	
1	Buna-N	2012-010	2011-010	2013-010	
	EPDM	2022-010	2021-010	2023-010	
	FKM	2032-010	2031-010	2033-010	
1-1/4	Buna-N	2012-012	2011-012	2013-012	
	EPDM	2022-012	2021-012	2023-012	
	FKM	2032-012	2031-012	2033-012	
1-1/2	Buna-N	2012-015	2011-015	2013-015	
	EPDM	2022-015	2021-015	2023-015	
	FKM	2032-015	2031-015	2033-015	
2	Buna-N	2012-020	2011-020	2013-020	
	EPDM	2022-020	2021-020	2023-020	
	FKM	2032-020	2031-020	2033-020	
2-1/2	Buna-N	2012-025[3]	2011-025[3]	2013-025[3]	150 psi Non-Shock Water @ 73°F
	EPDM	2022-025[3]	2021-025[3]	2023-025[3]	
	FKM	2032-025[3]	2031-025[3]	2033-025[3]	
3	Buna-N	2012-030	2011-030SR	2013-030	
	EPDM	2022-030	2021-030SR	2023-030	
	FKM	2032-030	2031-030SR	2033-030	
4	Buna-N	2012-040	2011-040SR	2013-040	235[2] psi Non-Shock Water @ 73°F
	EPDM	2022-040	2021-040SR	2023-040	
	FKM	2032-040	2031-040SR	2033-040	

1: For CPVC valves, add the letter "C" to the part numbers (e.g., 2031-005**C**).
2: Flanged end connectors have a Maximum Internal Pressure Rating of 150 psi @ 73°F.
3: Outlet sized with bushing.

C_V Values

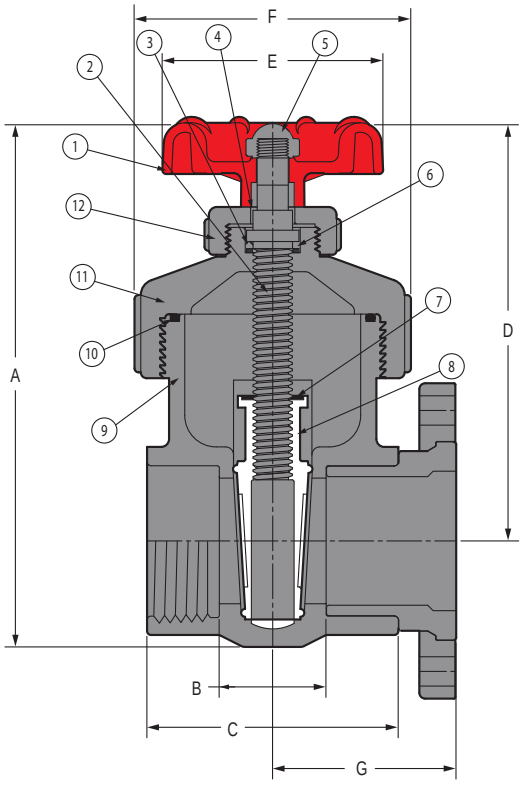
Nominal Size	Cv[1] Gallons/Minute	
	Socket/Threaded	Flanged
1/2	19	15
3/4	37	29
1	44	39
1-1/4	128	105
1-1/2	144	127
2	333	279
2-1/2	See Note 2	
3	335	323
4	583	566

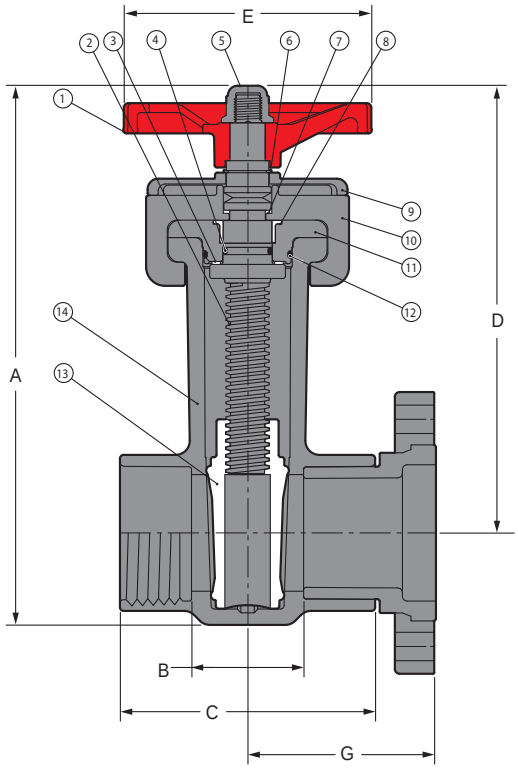
Flanged valves calculated for additional laying length of flanged valve.
1: Gallons per minute at 1 psi pressure drop.
2: Size 2-1/2" is a reducer bushed down 3" valve, C_V not available.

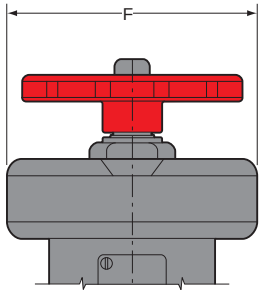
Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2"-2"	PVC	200 (1.38)	135 (.93)	120 (.83)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	200 (1.38)	155 (1.07)	140 (.97)	125 (.86)	110 (.76)	100 (.69)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)
	2-1/2"-3"	PVC	150 (1.03)	130 (.90)	110 (.76)	60 (.41)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.69)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)
	4"	PVC	235 (1.62)	140 (.97)	130 (.90)	90 (.62)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	235 (1.62)	219 (1.51)	170 (1.17)	145 (1.00)	130 (.90)	110 (.76)	95 (.66)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)

Gate Valves







1/2" - 2" Replacement Parts

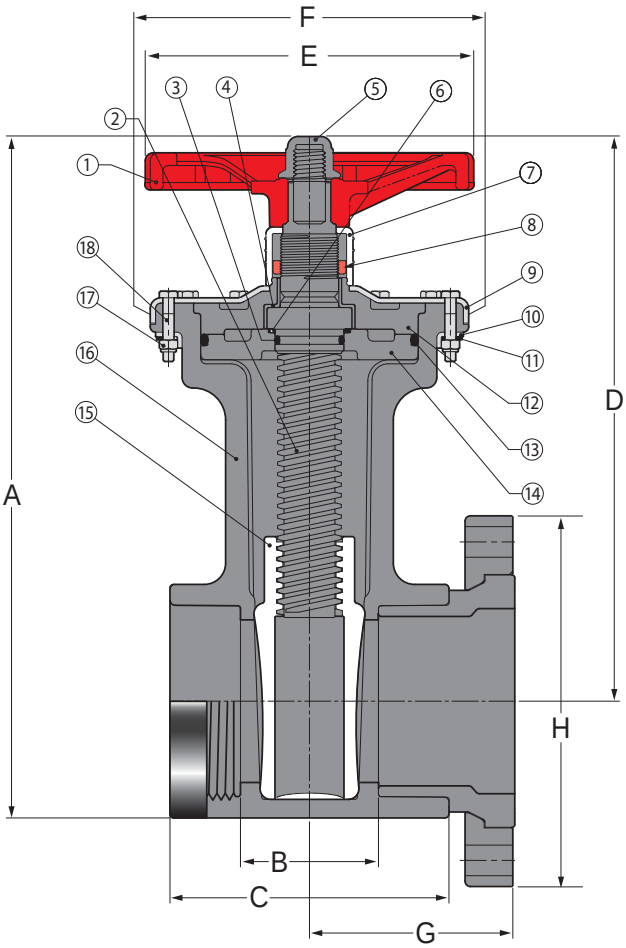
No.	Component	Qty.	Material
1	Handle	1	PP
2	Stem	1	PVC/CPVC
3	Stem O-ring	1	Buna-N/EPDM/FKM
4	Stem Bushing	1	PP
5	Stem Nut	1	PVC/CPVC
6	Stem Washer	1	PP
7	Wedge Washer/O-ring	1	Buna-N/EPDM/FKM
8	Wedge	1	PP/CPVC
9	Body (Socket/Threaded)	1	PVC/CPVC
10	Bonnet O-ring	1	Buna-N/EPDM/FKM
11	Bonnet	1	PVC/CPVC
12	Bonnet Nut	1	PVC/CPVC

2-1/2" & 3" Replacement Parts

No.	Component	Qty.	Material
1	Handle	1	PP
2	Stem	1	PVC/CPVC
3	Stem Bearing	1	PP
4	Stem O-ring	1	Buna-N/EPDM/FKM
5	Stem Nut	1	PVC
6	Stem Retaining Ring	1	SS 316
7	Split Washer	1	PP
8	Stem Bushing	1	PP
9	Bonnet Retainer	1	PVC/CPVC
10	Bonnet Half	2	PVC/CPVC
11	Seal Carrier	1	PVC/CPVC
12	Carrier O-ring	1	Buna-N/EPDM/FKM
13	Wedge	1	PP/CPVC
14	Body	1	PVC/CPVC

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com



4" Replacement Parts

No.	Component	Qty.	Material
1	Handle	1	PP
2	Stem	1	PVC/CPVC
3	Stem O-ring	1	Buna-N/EPDM/FKM
4	Stem Bushing	1	PTFE/HDPE
5	Stem Nut	1	PVC/CPVC
6	Stem Washer	1	PP
7	Indicator Cover	1	PVC Clear
8	Indicator Nut	1	PP Yellow
9	Bonnet Retainer	1	SS 316
10	Retainer Bracket	2	SS 316
11	Bracket Lock	1	SS 316
12	Bonnet	1	PVC/CPVC
13	Seal Carrier O-ring	1	Buna-N/EPDM/FKM
14	Seal Carrier	1	PVC/CPVC
15	Wedge	1	PP/CPVC
16	Body	1	PVC/CPVC
17	Locknut	12	SS 316
18	Hex Bolt	12	SS 316

Dimensions & Weights

Nominal Size	Dimension Reference (inches, ± 1/16)								Approx. Wt. (Lbs.)			
	A	B[1]	C	D	E	F	G	H	PVC		CPVC	
									Soc/Thd	Flanged	Soc/Thd	Flanged
1/2	5-1/8	1-1/4	2-13/16	4-1/8	2-5/8	2-11/16	2-3/8	3-1/2	.51	.92	.56	.98
3/4	5-1/8	1-1/4	2-13/16	4-1/8	2-5/8	2-11/16	2-1/2	3-7/8	.52	1.09	.57	1.16
1	5-13/32	1-1/4	3-5/16	4-5/16	2-5/8	2-15/16	2-3/4	4-1/4	.67	1.46	.73	1.54
1-1/4	8-1/16	1-9/16	3-9/16	6-9/16	3-7/16	3-15/16	3-1/16	4-5/8	1.61	2.58	1.73	2.74
1-1/2	8-1/16	1-9/16	3-3/4	6-9/16	3-7/16	3-15/16	3-7/16	5	1.63	2.81	1.75	3.03
2	8-9/16	1-11/16	3-15/16	6-7/8	3-7/16	4-7/16	3-5/8	6	1.95	3.81	2.15	4.09
2-1/2	14-5/16	3-3/8	7-3/8	11-7/8	6-11/16	7-1/4	5-1/8	7	9.48	11.91	9.60	12.89
3	14-5/16	2-15/16	6-11/16	11-7/8	6-11/16	7-1/4	4-15/16	7-1/2	9.03	12.21	9.43	13.40
4	16	3-3/8	7-15/16	13-1/4	8	7-9/16	4-7/8	9	13.67	18.39	14.66	19.75

1: Valve Lay Length

2" Square / T-Style Operator Nuts

- Fits Spears® Gate Valves.
- Combination design for use with either standard 2" square drive or conventional “T” drive operators.

Size	Part Number
1/2, 3/4, 1	GTN-005
1-1/4, 1-1/2, 2	GTN-012
2-1/2 & 3	GTN-030
4	GTN-040

Globe Valves

Features - PVC, CPVC

Spears® Globe Valves provide close throttling control throughout the entire range of operation through positive shutoff. This makes the Globe Valve an excellent choice for throttling applications where pressure drop is not critical. Valves are available in PVC and CPVC materials in larger IPS sizes of 2-1/2" through 6" with Flanged end connections.

- Excellent Throttling Characteristics
- Chemical & Corrosion Resistant PVC or CPVC Construction – No Wetted Metal Parts
- Fully Serviceable In-line with Factory Assembled Internal Repair Kit
- Buna-N, EPDM or FKM Seat & Seals
- Sizes 2-1/2" – 6" Pressure Rated to 150 psi @ 73°F
- Suitable for Vacuum Service
- Assembled with Silicone-Free, Water Soluble Lubricants

Sample Engineering Specification

All thermoplastic Globe valves shall be constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447. All seals shall be Buna-N, EPDM or FKM. All valves shall have a high impact polypropylene handwheel. All PVC and CPVC 2-1/2" through 6" valves shall be pressure rated to 150 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Quick-View Valve Selection Chart

Valve Size	Seals	PVC Part Numbers[1]	Pressure Rating
		Flanged	
2-1/2	Buna-N[2]	6013-025	150 psi Non-Shock Water @ 73°F
	EPDM	6023-025	
	FKM	6033-025	
3	Buna-N[2]	6013-030	
	EPDM	6023-030	
	FKM	6033-030	
4	Buna-N[2]	6013-040	
	EPDM	6023-040	
	FKM	6033-040	
6	Buna-N[2]	6013-060	
	EPDM	6023-060	
	FKM	6033-060	

1: For CPVC Globe Valves, add the letter "C" to the part number listed (e.g; 6023-025**C**).
2: Valves with Buna-N seals available in PVC only.

Globe Valve Internal Repair Kit

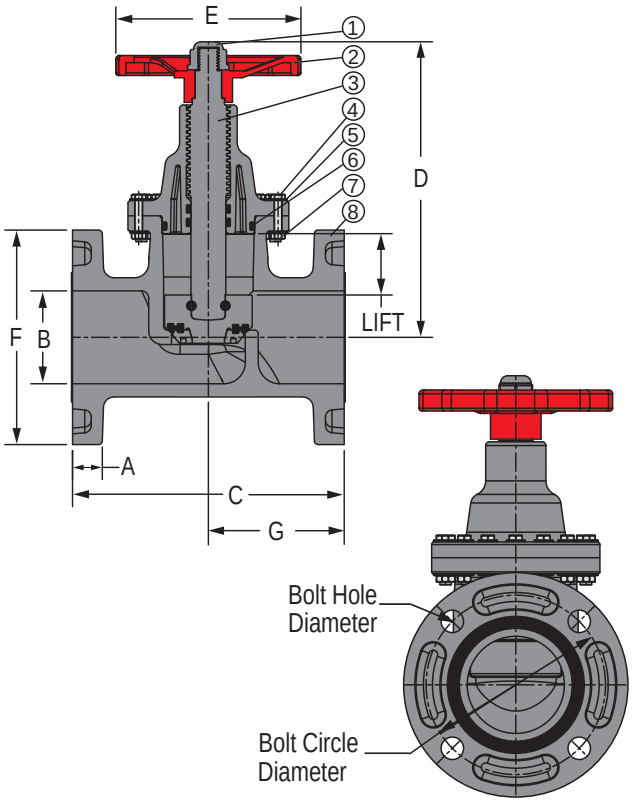
Internal Repair Kit includes: Bonnet O-ring (1) along with a factory assembled (required) internal component replacement unit consisting of Bonnet assembled with Stem O-rings, Seat and Seal Carrier components. Install in valve using existing valve Bolts, Nuts, Washers and Handle Nut.

Valve Size	Part Number				
	Buna-N O-ring	EPDM O-ring	CPVC w/EPDM O-ring	FKM O-ring	CPVC w/FKM O-ring
2-1/2	GL-BRK-025	GL-ERK-025	GL-ERK-025C	GL-VRK-025	GL-VRK-025C
3	GL-BRK-030	GL-ERK-030	GL-ERK-030C	GL-VRK-030	GL-VRK-030C
4	GL-BRK-040	GL-ERK-040	GL-ERK-040C	GL-VRK-040	GL-VRK-040C
6	GL-BRK-060	GL-ERK-060	GL-ERK-060C	GL-VRK-060	GL-VRK-060C

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Globe Valves



Replacement Parts

NO.	COMPONENT	QTY.	MATERIAL
1	Handle Nut	1	PVC
2	Handle	1	PP
3	Stem Assembly[1]	1	PVC/CPVC; BUNA-N/EPDM/FKM
4	Hex Bolt	1	SS 316
5	Flat Washer	1	SS 316
6	Bonnet O-ring	1	BUNA-N/EPDM/FKM
7	Hex Nut	1	SS 316
8	Body	1	PVC/CPVC

1 - Stem Assembly Includes: Stem (1), Bonnet (1), Stem O-rings (2), Dowel Pins (2), Dowel Pin Plugs (2), Seal Carrier (1), Seat (1), Seat Retainer (1)

C_V Values

Nominal Size	C_V[1]
2-1/2	62
3	85
4	125
6	221

1: Gallons per minute at 1 psi pressure drop.

Dimensions

Nominal Size	A	B	C	D (Open)	E	F	G	LIFT	Bolt Circle Diameter	Bolt Hole Diameter	Number of Bolt Holes
2-1/2	1-1/16	3-1/4	9-1/2	12-1/2	6-9/16	7-1/2	4-3/4	2-1/8	5-1/2	3/4	4
3	1-1/16	3-1/4	9-1/2	12-1/2	6-9/16	7-1/2	4-3/4	2-1/8	6	3/4	4
4	1-1/8	4-1/4	11-1/2	13-1/4	11	9	5-3/4	2-3/16	7-1/2	3/4	8
6	1-1/4	6-5/16	16-1/4	17-7/8	11	11	8-1/8	3-1/4	9-1/2	7/8	8

Temperature Pressure Rating

System Operating Temperature °F (°C)		73 (23)	100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66	160 (71)	170 (77)	180 (82)	190 (88)
Valve Pressure Rating psi (MPa)	PVC	150 (1.03)	124 (.85)	100 (.69)	75 (.52)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
	CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.69)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	-0- (-0-)

Y-Pattern Valves

Features - PVC Gray, PVC Clear & CPVC

The Y-Pattern valve is a closing-down, globe type valve design that provides proportional opening to seating disc travel. As such, Y-Pattern valves are ideally suited for flow regulating applications. The Y-pattern configuration reduces pressure loss over that of standard globe valves. Available in IPS Sizes 1/2"- 4" with socket, SR threaded, flanged, socket union or SR threaded union end connectors.

- Chemical & Corrosion Resistant PVC Gray, PVC Clear or CPVC Construction
- Buttress Thread Bonnet
- Fully Serviceable, Replaceable Components
- Standard O-ring Seal Seating Disc & Seals
- EPDM or FKM O-rings
- High Impact Polypropylene Handle
- Assembled with Silicone-Free, Water Soluble Lubricants
- Sizes 1/2" - 2" Pressure Rated to 150 psi @ 73°F, Sizes 3" - 4" Pressure Rated to 90 psi @ 73°F

Sample Engineering Specification

All thermoplastic valves shall be Y-Pattern configuration constructed from PVC, ASTM D 1784 Cell Classification 12454, or CPVC, ASTM D 1784 Cell Classification 23447. All valves shall have Buttress thread bonnet and standard O-ring type seating disc. All O-rings shall be EPDM or FKM. All valves shall have high impact polypropylene handles. All 1/2" - 2" valves shall be pressure rated at 150 psi and all 3" - 4" valves shall be pressure rated at 90 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Quick-View Valve Selection Chart

Valve Size	O-ring Material	PVC Material[1,2,3]					Pressure Rating
		Socket	SR Threaded	Flanged	Socket Union	SR Threaded Union	
1/2	EPDM	1722-005	1721-005SR	1723-005	172A-005	172B-005SR	150 psi Non-Shock Water @73°F
	FKM	1732-005	1731-005SR	1733-005	173A-005	173B-005SR	
3/4	EPDM	1722-007	1721-007SR	1723-007	172A-007	172B-007SR	
	FKM	1732-007	1731-007SR	1733-007	173A-007	173B-007SR	
1	EPDM	1722-010	1721-010SR	1723-010	172A-010	172B-010SR	
	FKM	1732-010	1731-010SR	1733-010	173A-010	173B-010SR	
1-1/4	EPDM	1722-012	1721-012SR	1723-012	172A-012	172B-012SR	
	FKM	1732-012	1731-012SR	1733-012	173A-012	173B-012SR	
1-1/2	EPDM	1722-015	1721-015SR	1723-015	172A-015	172B-015SR	
	FKM	1732-015	1731-015SR	1733-015	173A-015	173B-015SR	
2	EPDM	1722-020	1721-020SR	1723-020	172A-020	172B-020SR	
	FKM	1732-020	1731-020SR	1733-020	173A-020	173B-020SR	
3	EPDM	1722-030	1721-030SR	1723-030	172A-030	172B-030SR	90 psi Non-Shock Water @73°F
	FKM	1732-030	1731-030SR	1733-030	173A-030	173B-030SR	
4	EPDM	1722-040	1721-040SR	1723-040	172A-040	172B-040SR	
	FKM	1732-040	1731-040SR	1733-040	173A-040	173B-040SR	

1: For CPVC Y-Pattern, add the letter "C" to the part number (e.g. 1722-005**C**)
2: For PVC Clear Y-Pattern, add the letters "CL" to the part number (e.g. 1722-005**CL**) or (e.g. 172A-005**CL**)
3: For CPVC or Clear Special Reinforced Y-Pattern, (e.g. 1721-005**CSR**) or (e.g.1721-005**CLSR**)

Replacement Parts

NO.	COMPONENT	QTY.	MATERIAL
1	Body[1] (SOC/SR/FLG/UNION)	1	PVC/CLEAR/CPVC
2	Stem Assembly	1	PVC/CPVC;EPDM/FKM
3	Seal Carrier O-ring	1	EPDM/FKM
4	Bonnet Nut	1	PVC/CPVC
5	Bonnet	1	PVC/CPVC
6	Handwheel	1	PP
7	Stem Nut	1	PVC
8	Union O-ring	2	EPDM/FKM
9	Union Socket End	2	PVC/CPVC
10	Union SR Thread End	2	PVC/CPVC

1 - SR-Fipt Body Includes: Body (1), Spigot Adapters (2), SS Collars (2)
- Flange Body Includes: Body (1), Spigot Hubs (2), Flange Rings (2)
- Union Body Includes: Body (1), Spigot Ends (2), Nuts (2)

2 - Stem Assembly Includes: Stem (1), Seat Retainer (1), Seat Plate (1), Seat (1), Seal Carrier (1), Retainer Plate (1) (Except 4"), Stem O-ring (1)

Temperature Pressure Rating

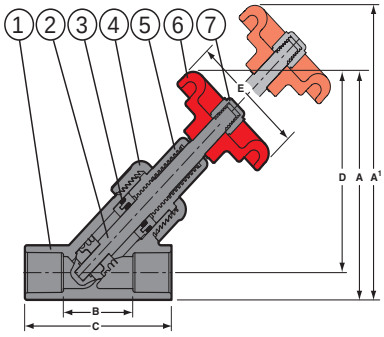
System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 2"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0-
	3" - 4"	PVC	90 (.70)	85 (.62)	75 (.52)	60 (.41)	40 (.30)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	90 (.70)	85 (.62)	80 (.55)	75 (.52)	70 (.48)	60 (.41)	50 (.34)	45 (.31)	40 (.30)	35 (.24)	30 (.21)	-0-

C_V Values

Size	Values
1/2	6.7
3/4	12.6
1	22.9
1-1/4	33.8
1-1/2	50.7
2	79.2
3	235
4	387

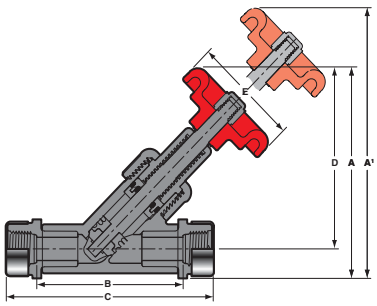
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com



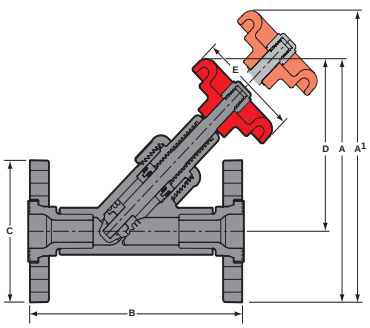
Socket Y-Pattern Dimensions & Weights

Nominal Size	Dimension Reference (inches, ± 1/16)						Approx. Wt. (Lbs.)	
	A[1]	A	B	C	D	E	Socket	
							PVC	CPVC
1/2	6-3/8	4-9/16	1-5/8	3-3/8	4	2-3/8	.31	.33
3/4	7-1/2	5-1/4	2	4	4-9/16	2-3/8	.50	.53
1	6-15/16	5-7/8	2-1/2	4-3/4	5-1/8	2-3/8	.78	.90
1-1/4	10-15/16	7-5/8	3-1/16	5-9/16	6-1/2	3-1/2	1.21	1.28
1-1/2	12	8-5/8	3-9/16	6-5/16	7-1/2	3-1/2	1.66	1.76
2	13-13/16	9-15/16	4-1/2	7-1/2	8-1/2	3-1/2	2.96	3.10
3	20	14-1/2	6-9/16	10-5/16	12-7/16	6-5/8	5.34	5.64
4	25-1/2	18-1/4	8-5/8	13-1/8	15-5/8	7-15/16	9.97	10.45



SR Threaded Y-Pattern Dimensions & Weights

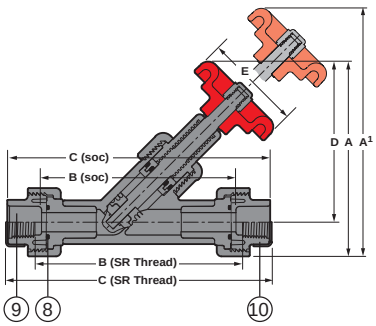
Nominal Size	Dimension Reference (inches, ± 1/16)						Approx. Wt. (Lbs.)	
	A[1]	A	B	C	D	E	SR Threaded	
							PVC	CPVC
1/2	6-1/2	4-11/16	3-5/8	5-1/16	4	2-3/8	.31	.33
3/4	7-5/8	5-7/16	4-3/8	5-13/16	4-9/16	2-3/8	.50	.53
1	8-5/8	6-1/8	5-3/16	7	5-1/8	2-3/8	.85	.90
1-1/4	11-1/8	7-3/4	6	7-15/16	6-1/2	3-1/2	1.21	1.28
1-1/2	12-1/4	8-7/8	6-15/16	8-13/16	7-1/2	3-1/2	1.66	1.76
2	14-1/16	10-3/16	8-1/8	10-1/8	8-1/2	3-1/2	2.96	3.10
3	20	14-13/16	11	14-1/4	12-7/16	6-5/8	5.34	5.64
4	25-13/16	18-1/2	14	14-3/4	15-5/8	7-15/16	9.97	10.45



Flanged Y-Pattern Dimensions & Weights

Nominal Size	Dimension Reference (inches, ± 1/16)						Approx. Wt. (Lbs.)	
	A[1]	A	B	C	D	E	Flanged	
							PVC	CPVC
1/2	7-9/16	5-3/4	5-11/16	3-1/2	4	2-3/8	.82	.85
3/4	8-3/4	6-1/2	6-7/16	3-7/8	4-9/16	2-3/8	1.23	1.28
1	9-3/4	7-1/4	7-1/4	4-1/4	5-1/8	2-3/8	1.70	1.81
1-1/4	12-1/4	8-7/8	8-1/8	4-5/8	6-1/2	3-1/2	2.40	2.52
1-1/2	13-3/8	10	9-3/16	5	7-1/2	3-1/2	3.07	3.25
2	15-3/8	11-1/2	10-3/8	6	8-1/2	3-1/2	5.20	5.42
3	21-11/16	16-3/16	12-1/16	7-1/2	12-7/16	6-5/8	9.44	10.07
4	27-7/16	20-3/16	14-9/16	9-1/16	15-5/8	7-15/16	14.87	16.15

Note: 4" flanged Y-Pattern use split flange ring



True Union Y-Pattern Dimensions & Weights

Nominal Size	Dimension Reference (inches, ± 1/16)								Approx. Wt. (Lbs.)	
	A[1]	A	B		C		D	E	Union	
			Socket	SR Thread	Socket	SR Thread			PVC	CPVC
1/2	7	5-3/16	5-1/8	5-1/2	6-7/8	7	4-1/4	2-5/8	.59	.62
3/4	8-3/16	6	5-7/8	6-7/16	7-7/8	7-7/8	4-7/8	2-5/8	.97	1.02
1	9-1/8	6-5/8	6-1/2	7-3/8	8-3/4	9	5-3/8	2-5/8	1.33	1.41
1-1/4	11-1/2	8-3/16	7-7/16	6-3/16	9-15/16	10-1/8	6-5/8	3-1/2	1.53	1.63
1-1/2	12-13/16	9-3/8	8-3/16	9	10-15/16	10-15/16	7-9/16	3-1/2	3.06	3.25
2	14-9/16	10-11/16	9-7/16	10-13/16	12-7/16	12-13/16	8-5/8	3-1/2	4.90	5.16
3	21-1/8	15-5/8	13-5/8	15-3/8	17-3/8	18-3/16	12-1/2	6-5/8	14.06	14.37
4	25	19-7/16	17-1/16	19-1/4	21-5/8	22-5/16	7-15/16	7-15/16	17.39	19.23

Innovation, Versatility & High Performance Technology

Spears® innovative design departs from traditional liner-seat type valves to eliminate seat creep, reduce operating torque and provide positive seal off. Ideally suited for flow control or throttling, this high performance valve is offered with a full variety of options for greater application versatility. Standard valves are produced from PVC or high temperature CPVC in IPS sizes 1-1/2" through 14". PVC and CPVC True Lug valves are produced in sizes 1-1/2" through 12".

Special Offset Disc
Lifts quickly from single contact sealing surface to reduce seat wear and lower operating torque, with bubble-tight seal off. Suitable for vacuum service.

Limited Contact Interference Seat Design
Sealing contact between disc and seat takes place only at close of valve, allowing free travel through full range of valve opening. Eliminates seat creep, extrusion and wear typical with conventional liner-type seats. Exclusive design interlocks seat and body to prevent wash-out or blow-out.

Field Replaceable Seat — Choice of Buna-N, FKM, or NSF® Certified EPDM
Replace seat without full valve disassembly using convenient Seat & Seal Carrier Replacement Kit or Full Valve Overhaul Kit. Choice of Buna-N, EPDM or FKM seats and seals. EPDM valves are NSF® Certified for use with potable water.

Solid, Chemical & Corrosion Resistant 316 Stainless Steel Stem — Fully Isolated

Heavy blow-out proof 316 stainless steel stem is standard on all valves. Fully isolated (dry stem) eliminates contact with process fluid.

Rugged PVC or CPVC Body & Disc
Computer engineered design places strength where needed most. PVC or high temperature handling CPVC materials provide exceptional chemical and corrosion resistance. Integrally molded actuation mounting pad and lug receptacles for field installable lug sets.

Full 150 psi Pressure Rating
Pressure rated to a maximum internal pressure of 150 psi at 73°F — including Dead-End Service.

Low Profile Cast Aluminum Gear Operator
Standard on 10" and larger sizes, utilizes high efficiency worm gear drive, with high impact polypropylene handwheel and built-in position indicator. Available as an option on smaller valves. Special order gear operators available for a variety of submersible and other environmental applications.

Field Installable Lug Inserts or Factory Installed True Lug Valves (Sizes 1-1/2" - 12")
Standard valve body accepts optional field installable lug insert sets for easy single-sided installation and system add-on. True Lug valve comes with factory installed lugs for total versatility, including disconnection from either side while under pressure. Both styles suitable for full pressure dead-end service. Choice of stainless or zinc plated steel lugs.

Exclusive Factory Reconditioning Program
Spears® will factory recondition originally purchased Butterfly Valve to full working order — regardless of condition. Contact Spears® Technical Services Department for details and pricing.

High Impact Polypropylene Lever Handle
Standard on 1-1/2" through 8" sizes, provides quick selection from any one of seven stop positions, with built-in lockout capability. Reversible 180° for either right or left side operation.

Polypropylene & PTFE Lined Valves
High performance Butterfly Valves are available in Polypropylene 1-1/2" through 60". See publication PPBFV-2 for additional details. Plus, unique PTFE lined valve design custom manufactured for high purity systems. Contact Spears® Technical Services for additional information.

Sample Engineering Specification
All thermoplastic valves shall be Butterfly type constructed from PVC Type I Cell Classification 12454 or CPVC Type IV Cell Classification 23447. All valve seats and O-rings shall be Buna-N, EPDM or FKM. Seat shall be a non-liner type interlocked to valve body. Bolt hole patterns shall conform to ANSI/ASME B-16.5 CL 150. Disc shall be offset design with Type 316 stainless steel stem. Lever operated valves shall be equipped with high impact polypropylene handle having built-in lockout capability. Gear operated valves shall be equipped with position indicator and high impact polypropylene handwheel. Valves through size 12" shall accept field installable lug inserts or shall be factory installed True Lug type. Lugs shall be stainless steel or zinc plated steel. Valves shall be pressure rated at 150 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Butterfly Valves Overview

Basic Valve Options

Butterfly Valves can be purchased with any combination of the following options:

- Lever Handle Valve (through 8" only)
- Gear Operated Valve
- Valve Only (no handle/operator)
- True Lug Valves
  - — Stainless Steel
  - — Zinc Plated Steel
- Buna-N Seats
- EPDM Seats
- FKM Seats
- PTFE Sleeved Seats

Valve Repair & Accessory Kits

- Lever Handle Kits
- Gear Operator Kits
- Chainwheel Operator Kits
- Lug Insert Sets (for standard valve)
  - — Stainless Steel
  - — Zinc Plated Steel
- 2" Square / T-Style Gear Operator Nuts
- Seat & Seal Carrier Replacement Kits
- Valve Overhaul Kits
- Stem Extension Kits

Cv Values & Operating Torque

Valve Size	Cv Degrees Open						Operating Torque (in.-lbs.)
	15°	30°	45°	60°	75°	90°	
1-1/2	2	8	20	36	61	81	100
2	3	11	27	49	82	109	110
2-1/2	5	19	48	86	144	192	206
3	9	35	86	155	259	345	360
4	10	41	103	185	308	411	420
6	28	113	281	506	844	1125	720
8	56	225	562	1012	1687	2249	1200
10	111	444	1110	1998	3330	4440	1320
12	158	631	1577	2839	4732	6309	1920
14	176	705	1762	3172	5286	7048	See Note

NOTE: Operating torque for large diameter valves varies significantly with system operating pressure, flow direction and velocity. Contact Spears® for torque requirement based on application.

SPEARS® Butterfly Valves are designed for installation with user supplied full-face, 1/8" thick Neoprene (or desired elastomer) gaskets, hex bolts, nuts, and washers. True Lug Valves may be installed for flow in either direction. Standard Valves may be installed for flow in either direction in a dual flange (flange each side) installation, but require attention to direction of flow when installed in a single-side (flange one-side only) application for dead-end service. Consult installation instructions for details of single-side installation and special instructions for use of lug-insert option.

General Conformance Specifications

Material — ASTM D 1784 (PVC Cell Classification 12454, CPVC Cell Classification 23447); Certified by NSF International for potable water service.

Bolt Hole Pattern — ANSI/ASME B-16.5; ASTM D 4024

Laying Length (Standard valve ONLY) — AWWA C504 (wafer valve); MSS SP-67

Pressure Class — 150B, AWWA C504

Hydrostatic Pressure Test — AWWA C504, ASTM D 1599

SUITABILITY OF VALVE AND VALVE COMPONENTS FOR APPLICATION AND OPERATING ENVIRONMENT IS AT USER'S DISCRETION AND RESPONSIBILITY.

Wafer Butterfly Valves

Sample Engineering Specification

All thermoplastic valves shall be Wafer Butterfly type constructed from PVC Type I Cell Classification 12454 or CPVC Type IV Cell Classification 23447. All valve seats and O-rings shall be Buna-N, EPDM or FKM. Seat shall be a non-liner type mounted to the valve disc. All valves shall have built-in Santoprene™ Thermoplastic Elastomer (TFE) flange gaskets. Wafer style valves shall be for mounting between two flanges having bolt hole pattern that conform to ANSI/ASME B16.5 CL 150. Disc shall be centered with Type 316L Stainless Steel Stem. Stem shall be isolated from the process medium for dry operation. Lever operated valves shall be equipped with high impact polypropylene handle having 7-position stops and built-in lockout capability. Gear operated valves shall be equipped with position indicator and high impact polypropylene handwheel. Valves shall be pressure rated at 150 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Features - PVC, CPVC

Spears® Wafer Butterfly Valve is a multi-featured design incorporating laying lengths that allow direct replacement of common Cast Iron valves such as Keystone Model 228 and Bray Series 30 Butterfly Valves. Wafer Valves feature built–in Santoprene™ Thermoplastic Elastomer (TPE) flange gaskets, easy operating disc-mounted seat, and fully isolated stem design. Available in sizes 2" through 12", with choice of Buna-N, EPDM or FKM Seats on PVC Valves, EPDM or FKM on CPVC Valves.

- Chemical & Corrosion Resistant PVC or CPVC Construction
- Special Designed Laying Lengths for Direct Replacement of Common Cast Iron Butterfly Valves
- Built-in Santoprene™ Thermoplastic Elastomer (TPE) Gaskets on Valve Flange Faces
- Easy Operating Disc Mounted Seat in Choice of Buna-N, EPDM, or FKM
- Fully Isolated (Dry) Solid Type 316L Stainless Steel Stem
- Reversible High Impact Polypropylene Lever Handle with 7-Position Stops and Built-in Lockout Capability
- Optional High Efficiency Gear Operator with Cast Aluminum Housing, Polypropylene Handwheel and Built-in Position Indicator
- Compatible with ANSI/ASME B16.5 Class 150 Bolt Pattern Flanges
- Pressure Rated to 150 psi for water @ 73°F (23°C)

PVC Quick-View Valve Selection Chart

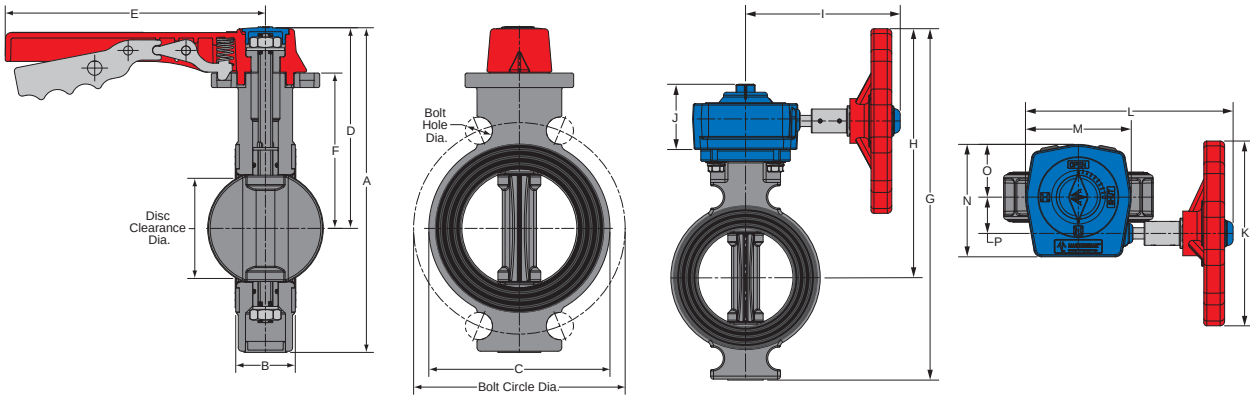
Valve Size	O-ring Material	STANDARD VALVE DESIGN PVC Part Number[1] w/Lever Handle	w/Gear Operator	Valve Only	Pressure Rating
2	Buna-N	751311-020	751321-020	751301-020	150 psi Non-Shock Water @ 73°F
	EPDM	752311-020	752321-020	752301-020	
	FKM	753311-020	753321-020	753301-020	
2-1/2	Buna-N	751311-025	751321-025	751301-020	
	EPDM	752311-025	752321-025	752301-025	
	FKM	753311-025	753321-025	753301-025	
3	Buna-N	751311-030	751321-030	751301-030	
	EPDM	752311-030	752321-030	752301-030	
	FKM	753311-030	753321-030	753301-030	
4	Buna-N	751311-040	751321-040	751301-040	
	EPDM	752311-040	752321-040	752301-040	
	FKM	753311-040	753321-040	753301-040	
6	Buna-N	751311-060	751321-060	751301-060	
	EPDM	752311-060	752321-060	752301-060	
	FKM	753311-060	753321-060	753301-060	
8	Buna-N	751311-080	751321-080	751301-080	
	EPDM	752311-080	752321-080	752301-080	
	FKM	753311-080	753321-080	753301-080	
10	Buna-N	751311-100	751321-100	751301-100	
	EPDM	752311-100	752321-100	752301-100	
	FKM	753311-100	753321-100	753301-100	
12	Buna-N	751311-120	751321-120	751301-120	
	EPDM	752311-120	752321-120	752301-120	
	FKM	753311-120	753321-120	753301-120	

1: For CPVC EPDM & FKM valves, add the letter "C" to part numbers listed (e.g., 752311-030**C**).

General Installation Information

Spears® Wafer Butterfly Valves are designed for system connections between two flanges having ANSI B16.5 Class 150 bolt hole patterns. The valve handle (or gear operator) is reversible 180°for either left or right side operation. Wafer Butterfly Valves have built-in flange gaskets and are designed for installation with user supplied hex bolts, nuts and flat washers. The valve must be positioned with gasket areas evenly located between mating flange sealing surfaces. Valve Bolt Specification bolt lengths in table below are minimums based on use of two (2) Spears® flanges, Valve with built-in gaskets, standard S.A.E. hex bolts and Standard Plate "W" Series flat washers.

Caution: Spears® Wafer Butterfly Valves are designed for use with flanges or flanged equipment having minimum waterway inside diameter no less than that of Schedule 80 PVC pipe (ASTM D 1785). ***Use of smaller inside diameter flange connections may result in obstruction and damage to the valve disc and seat.***



PVC & CPVC Wafer Butterfly Valve Bolt Specifications & Dimensions

Valve Size	Bolt Diameter (in.)	Bolt Length (in.)	No. of Bolt Holes
2	5/8	4-1/2	4
2-1/2	5/8	5	4
3	5/8	5	4
4	5/8	5-1/2	8
6	3/4	6	8
8	3/4	6-1/2	8
10	7/8	7	12
12	7/8	7-1/2	12

Size	A	B	C	D	E	F	Bolt Circle Diameter[2]			No. of Bolts[3]	Bolt Hole Dia.	Disc Clearance Dia.
							ANSI	PN16 (mm)	PN10 ISO DIN (mm)			
2	8-5/8	1-11/16	3-3/4	5-9/16	9	4	4-3/4	125	125	4	13/16	1-1/2
2-1/2	9-5/8	1-13/16	4-1/2	6-1/16	9	4-1/2	5-1/2	145	145	4	13/16	1-15/16
3	10-1/8	1-13/16	5	6-7/16	9	4-7/8	6	NA	NA	4	7/8	2-3/4
4	11-13/16	2-1/16	6-1/4	6-15/16	9	5-3/8	7-1/2	180	180	4 (8)	15/16	3-7/16
6	14-7/8	2-3/16	8-9/16	9-3/8	11-7/8	7-1/8	9-1/2	240	240	4 (8)	7/8	5-7/16
8	17-7/16	2-9/16	10-3/4	10-5/8	13-13/16	8-7/16	11-3/4	NA	295	4 (8)	15/16	7-3/16
10[1]	NA	2-9/16	12-7/8	NA	NA	10-11/16	14-1/4	355	350	4 (12)	1-1/8	9-3/16
12[1]	NA	3-1/16	15-9/16	NA	NA	11-11/16	17	410	400	4 (12)	1-1/2	11-1/8

1: 10" and 12" valves are only available with gear operator.
2: Holes are oversized to accommodate different bolt patterns — ASME/ANSI B16.1 – Cast Iron Pipe Flanges and Flanged Fittings - Class 150 Bolt Patterns; PN10 & PN16 = B54504 – Circular Flanges for Pipes, Valves and Fittings (PN - Designated); DIN = DIN8063 Part 4 – Pipe Joint Assemblies and Fittings for Unplasticized Polyvinyl Chloride (PVC-U) Pressure Pipe.
3: Valve is positioned with 4 of 8 required Flange Bolts in sizes 4 to 8 inches and 4 of 12 in sizes 10 and 12 inches.

Size	G	H	I	J	K	L	M	N	O	P
2	12-1/4	9-1/8	6-1/2	2-3/4	8	8-3/4	4-1/2	4-3/4	2-1/4	1-1/2
2-1/2	13-1/8	9-1/2	6-1/2	2-3/4	8	8-3/4	4-1/2	4-3/4	2-1/4	1-1/2
3	13-5/8	10	6-1/2	2-3/4	8	8-3/4	4-1/2	4-3/4	2-1/4	1-1/2
4	14-3/4	10-1/2	6-1/2	2-3/4	8	8-3/4	4-1/2	4-3/4	2-1/4	1-1/2
6	17-3/4	12-1/4	6-1/2	2-3/4	8	8-3/4	4-1/2	4-3/4	2-1/4	1-1/2
8	20-3/8	13-1/2	6-1/2	2-3/4	8	8-3/4	4-1/2	4-3/4	2-1/4	1-1/2
10	24	15-7/8	6-3/4	3	8	9-1/4	5-1/8	5-7/8	2-1/2	2-1/8
12	26-3/8	16-7/8	6-3/4	3	8	9-1/4	5-1/8	5-7/8	2-1/2	2-1/8

Temperature Pressure Rating

System Operating Temperature °F (°C)		100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
	CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)

Standard & True Lug Design

Lever Handle

True Lug

Gear Operating

Lug Insert Style

14" Standard PVC & CPVC Butterfly Valves

Sample Engineering Specification

All thermoplastic valves shall be Butterfly type constructed from PVC Type I Cell Classification 12454 or CPVC Type IV Cell Classification 23447. All valve seats and O-rings shall be Buna-N, EPDM or FKM. Seat shall be a non-liner type interlocked to valve body. Bolt hole patterns shall conform to ANSI/ASME B16.5 Class 150. Disc shall be offset design with fully isolated Type 316L stainless steel stem and Type 316 stainless steel hardware. Lever operated valves shall be equipped with high impact polypropylene handle having built-in lockout capability. Gear operated valves shall be equipped with position indicator and high impact polypropylene handwheel. Valve bodies shall accept field installable lug inserts or shall be factory installed lug inserts, or be True Lug type. Lugs shall be stainless steel or zinc plated steel. Valves shall be pressure rated at 150 psi for water at 73°F through 12", as manufactured by Spears® Manufacturing Company.

Features - PVC, CPVC

Spears® patented Butterfly Valve design departs from traditional liner-seat type valve to eliminate seat creep, reduce operating torque and provide positive seal-off. Ideally suited for flow control or throttling, this high-performance valve is offered with a full variety of options for greater application versatility in industrial and chemical processing applications. Available in IPS sizes 1-1/2" - 14" in Standard or 1-1/2" - 12" True Lug (factory installed lugs) style.

- Special off-set Disc lifts quickly from seat to reduce wear and reduce operating torque.
- Patented Limited Contact Seat design provides free travel - eliminates seat creep, extrusion and wear. Field replaceable without full valve disassembly.
- Interlocking Body & Seat prevents wash-out or blow-out.
- Buna-N, EPDM or FKM Seat & Seals
- Fully Isolated Solid Type 316L Stainless Steel Stem
- Reversible High Impact Polypropylene Lever Handle with 7-Position stops & Built-in Lockout (standard handle on 1-1/2" - 8" valves; not available on 10" & larger valves)
- High Efficiency Gear Operator with Cast Aluminum Housing, Polypropylene Handwheel, and Built-in Position Indicator (available for all sizes; standard on 10" & larger valves)
- Lug Insert Style valve has factory installed SS316 or zinc plated steel lug inserts.
- Standard valve accepts field-installable Lug Inserts Set option
- True Lug design has factory installed zinc plated or SS 316 lugs and is specially designed for connection to either side of valve.
- Pressure Rated to 150 psi @ 73°F including Dead-End Service.
- ANSI/ASME B16.5 Class 150 Bolt Pattern
- Valves with EPDM Seals & Seats are NSF® Certified for Potable water use.

Optional Accessories

- PTFE Coated Stem
- Stem Extension Kit
- PTFE Seat Sleeve
- Lever Handle Kit (standard on 1-1/2" - 8" valves)
- Gear Operator Kit (standard on 10" & larger valves)
- T-Handle Kit
- Field Installable Lug Insert Sets (for Standard valve)
- Speed Handle (for gear operated valves)
- 2" Square/T-Style Operator Nut (for gear operated valves)
- Chainwheel Operator Kit (for gear operated valves)
- Positive Stem Stop (for gear operated valves)
- Submersible Gear Operators

* See ***"BUTTERFLY VALVE ACCESSORIES"*** section for details of individual products.

Standard & Lug Insert Style Quick-View Valve Selection Chart

Valve Size	O-ring Material	STANDARD VALVE DESIGN PVC Part Number[1]			LUG INSERT VALVE DESIGN PVC Part Number[1] Installed with 316 Stainless Steel Lug Inserts[2,3,4]			Pressure Rating
		w/Lever Handle	w/Gear Operator	Valve Only	w/Lever Handle	w/Gear Operator	Valve Only	
1-1/2	Buna-N	721311-015	721321-015	721301-015	721311G-015	721321G-015	721301G-015	150 psi Non-Shock Water @ 73°F
	EPDM	722311-015	722321-015	722301-015	722311G-015	722321G-015	722301G-015	
	FKM	723311-015	723321-015	723301-015	723311G-015	723321G-015	723301G-015	
2	Buna-N	721311-020	721321-020	721301-020	721311G-020	721321G-020	721301G-020	
	EPDM	722311-020	722321-020	722301-020	722311G-020	722321G-020	722301G-020	
	FKM	723311-020	723321-020	723301-020	723311G-020	723321G-020	723301G-020	
2-1/2	Buna-N	721311-025	721321-025	721301-025	721311G-025	721321G-025	721301G-025	
	EPDM	722311-025	722321-025	722301-025	722311G-025	722321G-025	722301G-025	
	FKM	723311-025	723321-025	723301-025	723311G-025	723321G-025	723301G-025	
3	Buna-N	721311-030	721321-030	721301-030	721311G-030	721321G-030	721301G-030	
	EPDM	722311-030	722321-030	722301-030	722311G-030	722321G-030	722301G-030	
	FKM	723311-030	723321-030	723301-030	723311G-030	723321G-030	723301G-030	
4	Buna-N	721311-040	721321-040	721301-040	721311G-040	721321G-040	721301G-040	
	EPDM	722311-040	722321-040	722301-040	722311G-040	722321G-040	722301G-040	
	FKM	723311-040	723321-040	723301-040	723311G-040	723321G-040	723301G-040	
6	Buna-N	721311-060	721321-060	721301-060	721311G-060	721321G-060	721301G-060	
	EPDM	722311-060	722321-060	722301-060	722311G-060	722321G-060	722301G-060	
	FKM	723311-060	723321-060	723301-060	723311G-060	723321G-060	723301G-060	
8	Buna-N	721311-080	721321-080	721301-080	721311G-080	721321G-080	721301G-080	
	EPDM	722311-080	722321-080	722301-080	722311G-080	722321G-080	722301G-080	
	FKM	723311-080	723321-080	723301-080	723311G-080	723321G-080	723301G-080	
10	Buna-N	10" AND LARGER NOT AVAILABLE WITH LEVER HANDLE	721321-100	721301-100	10" AND LARGER NOT AVAILABLE WITH LEVER HANDLE	721321G-100	721301G-100	
	EPDM		722321-100	722301-100		722321G-100	722301G-100	
	FKM		723321-100	723301-100		723321G-100	723301G-100	
12	Buna-N		721321-120	721301-120		721321G-120	721301G-120	
	EPDM		722321-120	722301-120		722321G-120	722301G-120	
	FKM		723321-120	723301-120		723321G-120	723301G-120	
14	EPDM		722321-140	722301-140		--	--	100 psi @ 73°F
	FKM		723321-140	723301-140		--	--	

1: For CPVC valves, add the letter "C" to part numbers listed (e.g., 722311-030**C**).
2: For factory installed Lug Insert Valve with Zinc Plated Lugs, substitute the letter "G" with the the letter "K" (e.g. 721311**K**-030)
3: For True Lug Design Valve with Stainless Steel Lugs, substitute the letter "G" with the letter "L" (e.g. 721311**L**-030).
4: For True Lug Design Valve with Zinc Plated Steel Lugs, substitute the letter "G" with the letter "Z" (e.g. 721311**Z**-030).
Note: Optional BFV with submersible gear operators available, inquire with Spears®.

Temperature Pressure Rating

System Operating Temperature °F (°C)		100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
	CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)

See dimensions and additional Technical Information on following pages

Polypropylene Butterfly Valves

Polypropylene

Sample Engineering Specification

All thermoplastic valves shall be Butterfly type constructed from Polypropylene, ASTM D 4101. All valve seats and O-rings shall be Buna-N, EPDM or FKM. Seat shall be a non-liner type interlocked to valve body. Bolt hole pattern shall conform to ANSI/ASME B16.5 Class 150. Disc shall be offset design with fully isolated, Type 316L stainless steel stem and Type 316 stainless steel hardware. Lever operated valves shall be equipped with high impact polypropylene handle having built-in lockout capability. Gear operated valves shall be equipped with position indicator and high impact polypropylene handwheel. Valves shall be pressure rated at [see table] for water at 73°F, as manufactured by Spears® Manufacturing Company.

Material Note: UV Stabilized Polypropylene with beige pigment sizes 1-1/2" - 12" are glass reinforced, sizes 14" - 24" are not.

Features

Spears® patented Butterfly Valve design departs from traditional liner-seat type valve to eliminate seat creep, reduce operating torque and provide positive seal-off. Broad range of chemical resistance makes Polypropylene well suited for industrial and chemical processing applications. Designed for flow control or throttling, this high-performance valve is offered with a full variety of options for greater application versatility. Available in IPS sizes 1-1/2" - 24" with custom produced 30" to 60" valves available.

- UV Stabilized Polypropylene Construction
- Special off-set Disc lifts quickly from seat to reduce wear and reduce operating torque.
- Patented Limited Contact Seat design provides free travel - eliminates seat creep, extrusion and wear. Field replaceable without full valve disassembly.
- Interlocking Body & Seat prevents wash-out or blow-out.
- Buna-N, EPDM or FKM Seat & Seals
- Solid Type 316L Stainless Steel Stem, fully isolated from process fluids
- Reversible High Impact Polypropylene Lever Handle with 7-Position stops & Built-in Lockout (standard handle on 1-1/2" - 8" valves; not available on 10" & larger valves)
- High Efficiency Gear Operator with Cast Aluminum Housing, Polypropylene Handwheel, and Built-in Position Indicator (available for all sizes; standard on 10" & larger valves)
- Pressure ratings include Dead-End Service (See Chart).
- ANSI/ASME B16.5 Class 150 Bolt Pattern

Optional Accessories

- PTFE Coated Stem
- Stem Extension Kit
- PTFE Seat Sleeve (through 12" size)
- Lever Handle Kit (standard on 1-1/2" - 8" valves)
- Gear Operator Kit (standard on 10" & larger valves)
- T-Handle Kit
- Speed Handle (for gear operated valves)
- 2" Square/T-Style Operator Nut (for gear operated valves)
- Chainwheel Operator Kit (for gear operated valves)
- Positive Stem Stop (for gear operated valves)
- Submersible Gear Operators

* See ***"BUTTERFLY VALVE ACCESSORIES"*** section for details of individual products.

Polypropylene Butterfly Valves

Polypropylene Quick-View Valve Selection Chart

Valve Size	O-ring Material	w/Lever Handle	w/Gear Operator	Valve Only	Pressure Rating
1-1/2	Buna-N	721311-015P	**Special Order**	721301-015P	150 psi Non-Shock Water @ 73°F
	EPDM	722311-015P	**Special Order**	722301-015P	
	FKM	723311-015P	**Special Order**	723301-015P	
2	Buna-N	721311-020P	721321-020P	721301-020P	
	EPDM	722311-020P	722321-020P	722301-020P	
	FKM	723311-020P	723321-020P	723301-020P	
2-1/2	Buna-N	721311-025P	721321-025P	721301-025P	
	EPDM	722311-025P	722321-025P	722301-025P	
	FKM	723311-025P	723321-025P	723301-025P	
3	Buna-N	721311-030P	721321-030P	721301-030P	
	EPDM	722311-030P	722321-030P	722301-030P	
	FKM	723311-030P	723321-030P	723301-030P	
4	Buna-N	721311-040P	721321-040P	721301-040P	
	EPDM	722311-040P	722321-040P	722301-040P	
	FKM	723311-040P	723321-040P	723301-040P	
6	Buna-N	721311-060P	721321-060P	721301-060P	
	EPDM	722311-060P	722321-060P	722301-060P	
	FKM	723311-060P	723321-060P	723301-060P	
8	Buna-N	721311-080P	721321-080P	721301-080P	
	EPDM	722311-080P	722321-080P	722301-080P	
	FKM	723311-080P	723321-080P	723301-080P	
10	Buna-N	10" and Larger not available with Lever Handle	721321-100P	721301-100P	
	EPDM		722321-100P	722301-100P	
	FKM		723321-100P	723301-100P	
12	Buna-N		721321-120P	721301-120P	
	EPDM		722321-120P	722301-120P	
	FKM		723321-120P	723301-120P	
14	Buna-N		——	——	100 psi Non-Shock Water @ 73°F
	EPDM		722321-140P	722301-140P	
	FKM		723321-140P	723301-140P	
16	Buna-N		——	——	85 psi Non-Shock Water @ 73°F
	EPDM		722321-160P	722301-160P	
	FKM		723321-160P	723301-160P	
18	Buna-N		——	——	70 psi Non-Shock Water @ 73°F
	EPDM		722321-180P	722301-180P	
	FKM		723321-180P	723301-180P	
20	Buna-N		——	——	50 psi Non-Shock Water @ 73°F
	EPDM		722321-200P	722301-200P	
	FKM		723321-200P	723301-200P	
24	Buna-N		——	——	
	EPDM		722321-240P	722301-240P	
	FKM		723321-240P	723301-240P	

Note: 30" - 60" Polypropylene Butterfly Valves produced to order

Temperature Pressure Rating

System Operating Temperature °F (°C)		100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)
Valve Pressure Rating psi (MPa)	1-1/2"-12"	150 (1.03)	105 (.72)	90 (.62)	80 (.55)	65 (.45)	50 (.34)	45 (.31)	30 (.21)	20 (.14)	-0-
	14"	100 (.69)	70 (.48)	60 (.41)	53 (.37)	43 (.26)	33 (.23)	30 (.21)	20 (.14)	13 (.09)	-0-
	16"	85 (.59)	60 (.41)	51 (.35)	45 (.31)	37 (.26)	28 (.19)	26 (.18)	17 (.12)	11 (.08)	-0-
	18"	70 (.48)	49 (.34)	42 (.29)	37 (.26)	30 (.21)	23 (.16)	21 (.14)	14 (.10)	9 (.06)	-0-
	20"-24"	50 (34)	35 (.24)	30 (.21)	27 (.19)	22 (.15)	17 (.12)	15 (.10)	10 (.07)	7 (.05)	-0-

High Purity TFM Lined

Features - CPVC

This advanced technology TFM Lined valve is specially designed and produced for applications requiring high purity and maximum chemical resistance. Spears® exclusive component-interface seal fully isolates process media to disc and liner contact only. Custom produced in sizes 2" through 6".

- Direct disc-to-liner seal between ECTFE fluoropolymer disc and TFM liner for positive shut-off. Specially designed offset disc lifts quickly from sealing surface to minimize wear and reduce operating torque.
- Special disc-to-liner interface isolates valve components from process media. Eliminates stem and elastomer backing seal contact with process fluids. In the unlikely event of seal failure, leakage is expelled externally to protect process integrity. TFM skirt is integrally formed as part of the liner to isolate the CPVC body.
- Solid, fully isolated type 316 stainless steel stem is additionally PTFE coated as a safeguard.
- Lug style, chemical and corrosion resistant CPVC body features integrally molded actuation mounting pad and provides increased temperature handling capability to 200°F.
- 316 stainless steel Lug Inserts provide quick single-side valve installation and easy system add-on.
- Low Profile Gear Operator features high efficiency worm gear drive with built-in position indicator and high impact polypropylene handwheel. Operator housing is powder coated for improved cleanliness. Reversible for either right or left side operation.
- 150 psi Maximum Internal Pressure rating at 73°F.

Sample Engineering Specification

All thermoplastic Butterfly Valves shall be constructed from CPVC Type IV Cell Classification 23447 with TFM liner and ECTFE disc. Disc and liner interface shall isolate valve components and elastomeric seals from process media. Valve Stem shall be PTFE coated type 316 stainless steel. Body shall be lug style with 18-8 stainless steel or type 316 stainless steel lugs. Bolt hole patterns shall conform to ANSI/ASME B16.5 Class 150. Valve shall be gear operated with powder coated operator housing, position indicator, and high impact polypropylene handwheel. Valve shall be pressure rated at 150 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Factory Reconditioning

In the event of damage, this maintenance-free valve can be factory reconditioned in order to maintain optimum serviceability and assure proper component isolation function. Valve reconditioning is made on an exchange basis with original limited warranty. Contact Spears® Technical Services for additional information.

Material Specifications

Media Contact Components:

Liner/seat	TFM (Hostaflon® — modified - PTFE)
Disc	ECTFE (HALAR® — ethylene chlorotrifluoroethylene)

No Media-Contact Components:

Body	CPVC (chlorinated polyvinylchloride)
Stem	Type 316 Stainless Steel, PTFE coated
O-ring Backing	FKM (fluorocarbon)
Bushings	Glass Reinforced Polypropylene blend / Polyurethane
Gear Operator	Die Cast Aluminum
Handwheel	Polypropylene

Quick-View Valve Selection Chart

Valve Size	Part Number	Pressure Rating
2	253322-020	150 psi Non-Shock Water @ 73°F
3	253322-030	
4	253322-040	
6	253322-060	

NOTE: High Purity TFM Lined Butterfly Valve has the same basic dimensions as Spears® Standard Butterfly Valve.

HALAR® is a registered trademark of Ausimont, Inc.
Hostaflon® is a registered trademark of Hoechst Celanese Corporation.

PVC Pool Butterfly Valves

Sample Engineering Specification

All Pool Butterfly Valves shall be constructed from PVC with EPDM seals suitable for chlorinated water applications. Valve body shall be white (gray disc) with blue handle for application identification. All handles shall be high impact polypropylene. Lever handles shall have built-in lockout capability. Stem shall be Type 316L stainless steel and non-wetted. Valve bodies shall have ANSI/ASME B16.5 bolt patterns and accept optional field installable lug inserts. Valves shall be pressure rated at 150 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Quick-View Valve Selection Chart

PVC Lever Handle with EPDM Seat		
Size	**Part Number**	**Pressure Rating**
1-1/2	682311-015	150 psi Non-Shock Water @ 73°F
2	682311-020	
2-1/2	682311-025	
3	682311-030	
4	682311-040	
6	682311-060	
8	682311-080	
PVC Gear Operated with EPDM Seat		
Size	**Part Number**	**Pressure Rating**
1-1/2	682321-015	150 psi Non-Shock Water @ 73°F
2	682321-020	
2-1/2	682321-025	
3	682321-030	
4	682321-040	
6	682321-060	
8	682321-080	
10	682321-100	
12	682321-120	

Features - PVC White

Distinct White Body with Blue Handle readily identifies this high quality PVC Butterfly Valve specifically designed for chlorinated water applications such as swimming pools. Fully isolated, non-wetted stainless steel stem with limited-contact EPDM seat provides maximum resistance to chlorinated water with superior ease of operation. Available in IPS sizes 1-1/2" through 12".

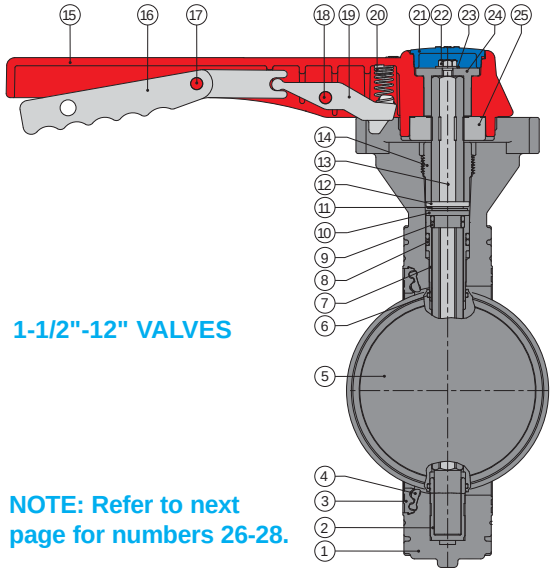
- White PVC Valve with Blue PP Handle provides easy application identification for chlorinated water
- Type 316L non-wetted stainless steel stem is fully isolated from system fluid, but still compatible with chlorinated water
- Patented limited-contact seat is field replaceable
- High-grade EPDM seat & seals
- Blue polypropylene lever handle with built-in lockout (10" & 12" valves are gear operated only)
- Optional gear operated valve with powder coated cast aluminum housing and Blue polypropylene handwheel
- ANSI/ASME B16.5 Class 150 bolt pattern flange connection
- All sizes pressure rated to 150 psi @ 73°F
- Optional SS 316 field-installable Lug Inserts sets
- Pneumatic or electric actuation available

CAUTION: THE POOL BUTTERFLY VALVE IS NEITHER INTENDED NOR WARRANTED FOR INDUSTRIAL OR CHEMICAL PROCESSING APPLICATIONS

Replacement Parts for 1-1/2" - 12" PVC & CPVC Standard, True Lug and Polypropylene Valves

No	Component	Qty.	Material
1	Body	1	PVC/CPVC
2	Stem Bearing	1	PTFE/GFPP
3	Seal Carrier	1	PVC/CPVC/PP
4	Seat	1	Buna-N, EPDM, FKM
5	Disc	1	PVC/CPVC/PP
6	Disc O-ring	2	Buna-N, EPDM, FKM
7	Stem Bushing	1	PTFE/GFPP
8	Stem Bushing O-ring	2	Buna-N, EPDM, FKM
9	Stem O-ring	2	Buna-N, EPDM, FKM
10	Stem Washer - Hex	1	PTFE
11	Stem Washer - Slot*	1-2	SS 316
12	Stem Washer - Round	1	PTFE/GFPP
13	Stem	1	SS 316
14	Stem Nut	1	PVC/CPVC
15	Handle Body	1	PP
16	Handle Grip	1	GFPVC
17	Grip Pin	1	PP
18	Lock Pin	1	PP
19	Handle Lock	1	GFPVC
20	Handle Spring	1	SS 316
21	Handle Cover	1	PP
22	Hex Bolt	1	SS 316
23	Flat Washer	1	SS 316
24	Handle Bushing	1	GFPVC
25	Disc Timing Stop	1	CPVC
26	Lug Insert	4-12	SS/Zinc Plated Steel
27	Gear Operator Assembly	1	Cast Aluminum
28	Hand Wheel	1	PP
True Lug Only (not shown):			
Seal Carrier Flange Plate		1	PVC/CPVC
Lug & Nut		4-12	SS/Zinc Plated Steel
Plate O-ring		1	Buna-N, EPDM, FKM

Notes: *2-Slotted washers used on 6" & larger
1: See 14"-24" PP valve illustration for Gear Operator Components, No. 8 - 16



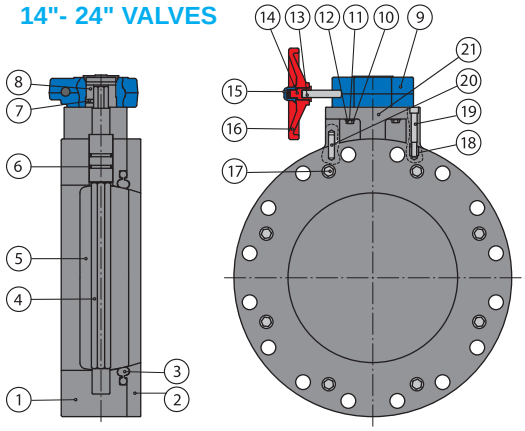
1-1/2"-12" VALVES

NOTE: Refer to next page for numbers 26-28.

Replacement Parts for 14" - 24" Polypropylene Valves

No.	Component	Qty	Material
1	Body	1	PP
2	Seal Carrier	1	PP
3	Seat	1	EPDM/FKM
4	Stem	1	SS 316L
5	Disc	1	PP
6	Stem O-ring	2	EPDM/FKM
7	Set Screw	1	Steel
8	Drive Bushing	1	Steel
9	Gear Operator	1	Epoxy Coated Aluminum
10	Flat Washer	4	SS 316
11	Lock Washer	4	SS 316
12	Hex Head Cap Screw	4	SS 316
13	Handwheel Pin	1	SS 316
14	Handwheel Adapter	1	GFPVC
15	Handwheel Nut	1	PP
16	Handwheel	1	PP
17	Hex Bolts	6-12	Nylon
18	Thread Insert	2	Steel
19	Hex Head Cap Screws	2	SS 316
20	Dowel Pin	1	Steel
21	Tower	1	PP

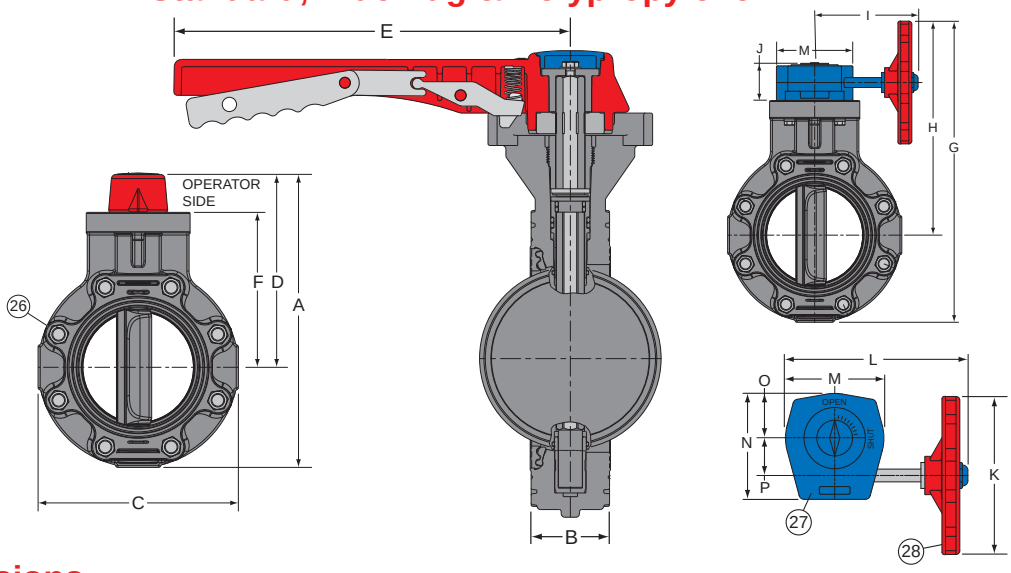
14"- 24" VALVES



Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Standard, True Lug & Polypropylene



Dimensions

Nominal Size	Pressure Rating[1] (psi)	A	B		C	D	E	F	G
			Standard, Lug Insert, & Polypropylene	True Lug					
1-1/2	150	8-5/32	1-9/16	2-1/4	5	5-19/32	9-3/32	4-3/32	11-5/32
2	150	9-11/32	1-15/16	2-9/16	6	6-13/32	9	4-3/4	13-1/8
2-1/2	150	10-9/32	2	2-3/4	7	6-25/32	9-1/4	5-1/4	13-1/8
3	150	11-1/2	2-3/32	2-13/16	7-1/2	7-27/32	12	5-5/8	14-5/32
4	150	13	2-9/32	3	9	8-1/2	12	6-1/4	15-5/8
6	150	16-19/32	2-3/4	3-13/32	10-31/32	11-3/32	13-7/8	8-19/32	19-7/32
8	150	18-5/8	2-15/16	3-23/32	13-1/2	12	13-15/16	9-1/2	21-7/16
10	150	N/A	3-1/4	4-1/4	16	N/A	N/A	11	26-5/8
12	150	N/A	3-1/2	4-1/2	19	N/A	N/A	12	29-1/8
14	100[2]	N/A	6-1/4	N/A	21	N/A	N/A	13-3/16	29
16	85[2]	N/A	6-3/4	N/A	23-1/2	N/A	N/A	14-7/16	31-1/2
18	70[2]	N/A	7-1/8	N/A	25	N/A	N/A	15-3/16	33
20	50[2]	N/A	7-3/4	N/A	27-1/2	N/A	N/A	16-7/16	35-1/2
24	50[2]	N/A	8-7/16	N/A	32	N/A	N/A	18-11/16	40
30-60	Contact Spears® for 30" to 60" Valve Dimensions								

Nominal Size	H	I	J	K	L	M	N	O	P
1-1/2	8-21/32	6-7/16	2-3/8	8	8-13/16	4-13/16	5-3/16	2-13/16	1-27/32
2	10-1/8	6-7/16	2-3/8	8	8-13/16	4-13/16	5-3/16	2-13/16	1-27/32
2-1/2	9-5/8	6-7/16	2-3/8	8	8-13/16	4-13/16	5-3/16	2-13/16	1-27/32
3	10-17/32	6-7/16	2-3/8	8	8-13/16	4-13/16	5-3/16	2-13/16	1-27/32
4	11-1/8	6-7/16	2-3/8	8	8-13/16	4-13/16	5-3/16	2-13/16	1-27/32
6	13-23/32	6-7/16	2-13/32	7-15/16	8-7/8	4-27/32	5-5/32	2-7/32	1-27/32
8	14-11/16	6-7/16	2-13/32	7-15/16	8-7/8	4-27/32	5-3/16	2-7/32	1-27/32
10	18-5/8	7-1/8	2-3/8	8	9-13/16	5-3/8	5-15/16	2-7/16	2-11/32
12	19-5/8	7-1/8	2-3/8	8	9-13/16	5-3/8	5-15/16	2-7/16	2-11/32
14	18-1/2	7-3/8	2-9/16	8	10-13/16	6-7/8	7-7/16	3-1/8	3
16	19-3/4	7-3/8	2-9/16	8	10-13/16	6-7/8	7-7/16	3-1/8	3
18	20-1/2	7-3/8	2-9/16	8	10-13/16	6-7/8	7-7/16	3-1/8	3
20	21-3/4	7-3/8	2-9/16	8	10-13/16	6-7/8	7-7/16	3-1/8	3
24	24	7-3/8	2-9/16	8	10-13/16	6-7/8	7-7/16	3-1/8	3
30-60	Contact Spears® for 30" to 60" Valve Dimensions								

1: Maximum Internal Pressure Rating @ 73°F
2: Additional pressure rating is possible with attention to flow direction.

C_V Values & Operating Torque

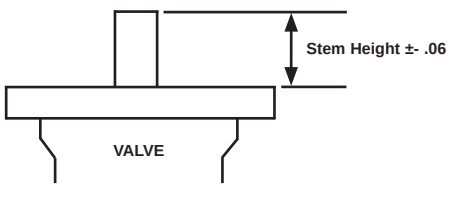
Valve Size	C_V[1] Degrees Open						Operating[2] Torque (in.-lbs.)
	15°	30°	45°	60°	75°	90°	
1-1/2	2	8	20	36	61	81	100
2	3	11	27	49	82	109	110
2-1/2	5	19	48	86	144	192	206
3	9	35	86	155	259	345	360
4	10	41	103	185	308	411	420
6	28	113	281	506	844	1125	720
8	56	225	562	1012	1687	2249	1200
10	111	444	1110	1998	3330	4440	1320
12	158	631	1577	2839	4732	6309	1920
14	176	705	1762	3172	5286	7048	See Notes
16	211	846	2114	3805	6341	8455	
18	273	1092	2730	4914	8190	10920	
20	355	1418	3545	6381	10635	14180	
24	467	1866	4665	8397	13995	18660	

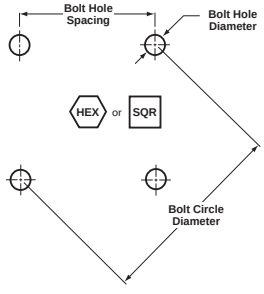
1: Gallons per minute at 1 psi pressure drop.
2: Operating torque for large diameter valves varies significantly with system operating pressure, flow direction and velocity. Contact Spears® for torque requirement based on application.

Actuator Mounting Dimensions For Custom Actuation

Size	Bolt Hole Spacing		Bolt Hole Diameter		Bolt Circle Diameter		Hex	Square	Stem Height	
							+.000 -.006	+.000 -.002		
	Standard	Wafer	Standard	Wafer	Standard	Wafer	Standard	Wafer	Standard	Wafer
1-1/2	1.95	N/A	.34	N/A	2.75	N/A	.375	N/A	.75	N/A
2	1.95	2.47	.34	.40	2.75	3.50	.500	.375	.75	1.30
2-1/2	1.95	2.47	.34	.40	2.75	3.50	.500	.375	.75	1.34
3	2.65	2.47	.41	.40	3.75	3.50	.563	.500	1.00	1.34
4	2.65	2.47	.41	.40	3.75	3.50	.625	.500	1.04	1.37
6	3.17	2.83	.41	.40	4.48	4.00	.875	.750	1.27	1.80
8	3.17	3.17	.41	.40	4.48	4.48	1.000	.875	1.29	1.96
10	3.54	N/A	.41	N/A	5.00	N/A	1.125	N/A	1.38	N/A
12	3.54	N/A	.41	N/A	5.00	N/A	1.250	N/A	1.38	N/A
14	3.54	N/A	.41	N/A	5.00	N/A	1.250	N/A	1.62	N/A
16	3.54	N/A	.41	N/A	5.00	N/A	1.250	N/A	1.75	N/A
18	3.54	N/A	.41	N/A	5.00	N/A	1.250	N/A	1.75	N/A
20	3.93	N/A	.41	N/A	5.56	N/A	1.250	N/A	1.75	N/A
24	4.33	N/A	.41	N/A	6.12	N/A	1.250	N/A	1.75	N/A

Note: Standard = Standard, Lug & True Lug Style Valves
Wafer = Wafer Style Valves





General Installation Information

Spears® Butterfly Valves are designed for system connections either between two flanges, or with single-side (flange one-side only) connection for dead-end service using lug style valves. Lug Insert Valves require attention to flow direction, True Lug valves may be installed either direction. The valve handle (or gear operator) is reversible 180° for either left or right side operation. Spears® Butterfly Valves are designed for installation with user supplied 1/8" full-faced gaskets, hex bolts, nuts and flat washers.

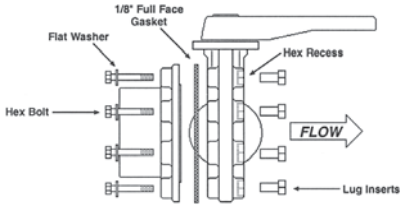
Caution: Spears® Butterfly Valves are designed for use with flanges or flanged equipment having minimum waterway inside diameter no less than that of Schedule 80 PVC pipe (ASTM D 1785). ***Use of smaller inside diameter flange connections may result in obstruction and damage to the valve disc.***

PVC & CPVC Butterfly Valve Torque and Hardware Requirements

Valve Size (in.)	No. of Bolt Holes	Bolt Torque (ft.- lb.)	Standard Valve					Valve with Lug Inserts					True Lug Valve			
			Bolt Lengths[1] (in.)		Bolt Diameter (in.)	Bolt Threads per inch	Flat Washer O.D. (in.)	Bolt Lenghts[1] (in.)		Bolt Diameter (in.)	Lug Threads per inch	Flat Washer O.D. (in.)	Bolt Lengths[2] (in.)	Bolt Diameter (in.)	Lug Threads per inch	Flat Washer O.D. (in.)
			Single Side	Dual Flange[3]				Single Side	2nd Flange[2]							
1-1/2	4	12	3-1/4	4-1/4	1/2	13	1-3/8	1-3/4	1-1/2	1/2	13	1-3/8	1-1/2	7/16	14	1-1/4
2	4	25	3-3/4	4-3/4	5/8	11	1-3/4	2	1-3/4	5/8	11	1-3/4	1-1/2	1/2	13	1-3/8
2-1/2	4	25	4-1/4	5-1/4	5/8	11	1-3/4	2-1/4	2	5/8	11	1-3/4	1-3/4	1/2	13	1-3/8
3	4	25	4-1/4	5-1/2	5/8	11	1-3/4	2-1/4	2	5/8	11	1-3/4	2	1/2	13	1-3/8
4	8	25	4-1/2	5-3/4	5/8	11	1-3/4	2-1/2	2	5/8	11	1-3/4	2	1/2	13	1-3/8
6	8	40	5-1/4	6-3/4	3/4	10	2	3-1/4	2-1/4	3/4	10	2	2-1/4	5/8	11	1-3/4
8	8	40	5-3/4	7-1/4	3/4	10	2	3-3/4	2-1/4	3/4	10	2	2-1/4	5/8	11	1-3/4
10	12	64	6-1/2	8-1/4	7/8	9	2-1/4	4	3	7/8	9	2-1/4	2-3/4	3/4	10	2
12	12	95	6-3/4	8-1/2	7/8	9	2-1/4	4-1/4	3	7/8	9	2-1/4	2-3/4	3/4	10	2

1: Minimum bolt lengths based on use of Spears® flanges, 1/8" full faced gaskets, standard S.A.E. hex bolts and Standard Plate Series flat washers.
2: Specified bolt lengths are maximum allowable for maintaining proper clearance in initial Single-Side installation with Lugs where anticipated 2nd Flange installation option is to be retained without removal of valve.
3: Minimum bolt length through 2-flanges, 2-gaskets, 2-flat washers and 1-valve body.

Single-Side (flange one side) Installation Using Standard Valve with Lug Inserts (for field installable Insert Sets or valves with factory installed Lug Inserts)



CAUTION: *Flange must be installed on side of valve* ***opposite*** *the hex nut recesses for Single-Side Installation as illustrated.*

(Flange, bolts, nuts, washers and gaskets not included. Lug inserts may be ordered separately.)

Polypropylene Butterfly Valve Torque and Hardware Requirements

Valve Size	No. of Bolt Holes	Bolt Diameter (in.)	Bolt Torque (ft.- lb.)	Bolt Lengths	Valve Lay Length
1-1/2	4	1/2	12	Bolt lengths will vary according to thickness of valve, mating flanges, nuts and gaskets used. The following formula may be use to calculate bolt length for installation with mating flange each side. **L = V + 2 (F + G + W) + N** **Where: L = Minimum Bolt Length** **V = Valve Lay Length** **F = Flange Thickness** **G = Gasket Thickness** **W = Washer Thickness** **N = Nut Thickness**	1-9/16
2	4	5/8	25		1-7/8
2-1/2	4	5/8	25		2-1/16
3	4	5/8	25		2-1/8
4	8	5/8	25		2-5/16
6	8	3/4	40		3
8	8	3/4	40		2-3/4
10	12	7/8	64		3-1/4
12	12	7/8	95		3-1/2
14	12	1	110		6-1/4
16	16	1	110		6-3/4
18	16	1-1/8	110		7-1/8
20	20	1-1/8	110		7-3/4
24	20	1-1/4	110		8-1/2

Butterfly Valve Accessories

Lug Insert Sets

- Field installable lugs for all Spears® PVC & CPVC Standard Butterfly Valves only.
- Allows easy single-side installation to mating flange.
- Choice of high corrosion resistant 316 stainless steel or zinc plated steel construction.

Valve Size	316 Stainless Steel Part Number	Zinc Plated Steel Part Number
1-1/2	LUG1-015	LUG2-015
2 & 2-1/2	LUG1-020	LUG2-020
3	LUG1-030	LUG2-030
4	LUG1-040	LUG2-040
6 & 8	LUG1-080	LUG2-080
10 & 12	LUG1-120	LUG2-120

Lever Handle Kits

- Exact replacement or conversion handle for Spears® 1-1/2" through 8" Butterfly Valves.
- High impact polypropylene construction featuring quick-action reinforced polymer position stop and grip with built-in lock-out capability.
- Includes all components and hardware assembled for quick installation.

Valve Size	Part Number
1-1/2	BFH-015
2 & 2-1/2	BFH-020
3	BFH-030
4	BFH-040
6	BFH-060
8	BFH-080

T-Handle Kits

- Specialty Handle for minimum space requirements.
- High impact polypropylene construction featuring quick-action reinforced polymer position stop and grip with built-in lock-out capability.

Valve Size	Part Number
3	BFTH-030
4	BFTH-040

Speed Handle for Gear Operator

- Quickly attaches to Spears® Gear Operator Handle to allow rapid opening or closing of valve.

Valve Size	Part Number
1-1/2 - 12	SH-120

Positive Stem Stop for Butterfly Valve with Gear Operator

- Provides positive stop for Gear Operator shaft to avoid changes in the degree of opening for varying flow conditions.

Valve Size	Part Number
1-1/2 - 12	PSS-120
14 - 24	PSS-240

2" Square / T-Style Operator Nuts

- Allows operation with conventional 2" Square or T-Style handle wrenches.
- Fits All Spears® Butterfly Valve Gear Operators.

(NOT FOR USE ON VALVE STEM)

Valve Size	Part Number
1-1/2 - 24	GTN-040

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Gear Operator Kits

For Wafer Style Butterfly Valves replace the “GO” prefix with “GOW” in the part number.

- Bolt-on conversion or replacement unit for all Spears® Butterfly Valves.
- Cast aluminum construction with high efficiency worm gear drive, built-in position indicator and easy-grip polypropylene handwheel.
- Includes all components and hardware for direct mount to valve.

Gear Operator Kits

Valve Size	1-1/2	2	2-1/2	3	4	6	8	10	12
Part Number	GO-015	GO-020	GO-025	GO-030	GO-040	GO-060	GO-080	GO-100	GO-120

Powder Coated Gear Operator Kits

Valve Size	1-1/2	2	2-1/2	3	4	6	8	10	12
Part Number	GOP-015	GOP-020	GOP-025	GOP-030	GOP-040	GOP-060	GOP-080	GOP-100	GOP-120

Extended Chemical Resistance Options

Spears® offers several options for extended chemical resistance in PVC, CPVC and Polypropylene Butterfly Valves, including those listed below. Contact Spears® for additional ordering information.

PTFE Seat Sleeves

- PTFE envelope-type sleeve encases and isolates Spears® standard elastomer seat for extended chemical resistance while maintaining resiliency and sealing capability.
- Available for valve sizes 1-1/2" - 12"
- Sold factory-installed in PVC, CPVC or PP valves.

PTFE Coated Valve Stems

- Durable, bonded PTFE coating over standard SS 316L stem for extended chemical resistance.
- Viable alternative to more costly special alloy stems.
- Available for all valve sizes.
- Sold factory installed in PVC, CPVC or PP valves.

True-Lug Butterfly Valve Bolt Kit

Connects 1-Side of True-Lug Valve to 1-Spears® Flange Includes Bolts & Flat Washers
Use 2-Kits For Dual Spears® Flanges

Size	Part Number		
	Zinc Plated	SS316	SS304
1-1/2	BFHKL-015	BFHKL1-015	BFHKL2-015
2	BFHKL-020	BFHKL1-020	BFHKL2-020
2-1/2	BFHKL-025	BFHKL1-025	BFHKL2-025
3	BFHKL-030	BFHKL1-030	BFHKL2-030
4	BFHKL-040	BFHKL1-040	BFHKL2-040
6 & 8	BFHKL-080	BFHKL1-080	BFHKL2-080
10 & 12	BFHKL-120	BFHKL1-120	BFHKL2-120

(VALVE NOT INCLUDED)

Chainwheel Operator Kits

For Wafer Style Butterfly Valves replace the "CO" prefix with "COW" in the part number.

- Bolt-on conversion unit for all Spears® Butterfly Valves. Includes all hardware for direct mount to valve.
- Enables operation of Spears® Butterfly Valves in high, normally out of reach locations. Makes valve opening or closing easy by means of a slight pull on the sprocket chain.
- Unit consists of Cast Aluminum high efficiency Gear Operator with Aluminum Alloy Sprocket Rim and Chain Guide.
- Chain options provide choice of 316 Stainless Steel, Hot-Dipped Galvanized or Brass. Order separately to desired length.

Note: In horizontal system installations, Chainwheel Operators should be generally mounted with operator below valve (inverted valve) to maintain clearance between chain and system piping. Check for adequate clearance before installing an operator in a top-mount position.

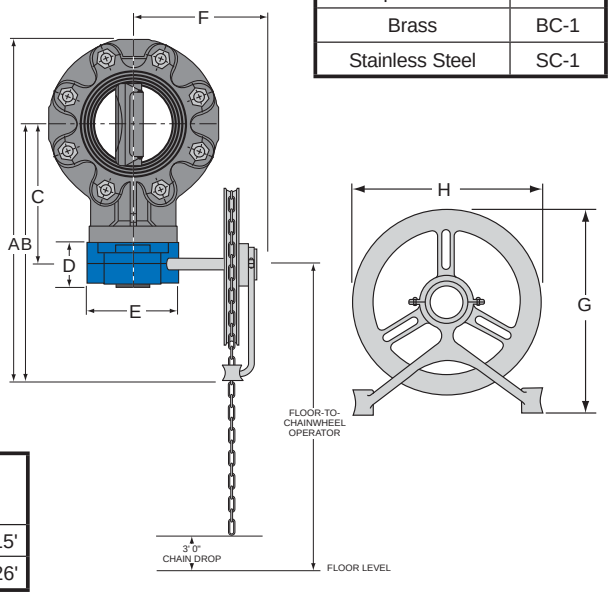
Valve Size	Part Number
2	CO-020
2-1/2	CO-025
3	CO-030
4	CO-040
6	CO-060
8	CO-080
10	CO-100
12	CO-120
14-24	CO-140

2-1/2" and smaller kits available on special order basis.

LOCK-LINK CHAIN OPTIONS	Part Number
Hot-Dip Galvanized	GC-1
Brass	BC-1
Stainless Steel	SC-1

Determining Floor-to-Chainwheel Height

Typical orientation is shown for valve in horizontal piping system installation. Floor-to-Chainwheel height is determined by subtracting the specified "C" dimension from the system centerline height (add "C" dimension if used with top-mount orientation). In vertical piping system installations, the Floor-to-Chainwheel height is the same as that for the centerline location of the valve in the system.



How to Order Chain

Required chain length is based on chain drop at 3 ft. from floor.

Floor-to-Chainwheel Height	7'	8'	9'	10'	11'	12'	13'	14'	15'
Required Chain Length	10'	12'	14'	16'	18'	20'	22'	24'	26'

Chainwheel Operator Dimensions (Note: w denotes Wafer Style Butterfly Valve Dimensions)

Valve Size	A	A w	B	B w	C	C w	D	D w	E	E w	F	F w	G	G w	H	H w
2	12-15/16	12-3/16	9-15/16	9-1/8	5-7/8	5-1/8	2-3/8	2-3/8	4-13/16	4-13/16	5-7/16	5-7/16	7-3/4	7-3/4	7-3/8	7-3/8
2-1/2	13-11/16	13-3/16	10-3/16	9-5/8	6-1/8	5-5/8	2-3/8	2-3/8	4-13/16	4-13/16	5-7/16	5-7/16	7-3/4	7-3/4	7-3/8	7-3/8
3	14-7/16	13-3/4	10-11/16	10-1/16	6-5/8	6-1/16	2-3/8	2-3/8	4-13/16	4-13/16	5-7/16	5-7/16	7-3/4	7-3/4	7-3/8	7-3/8
4	15-15/16	14-13/16	11-7/16	10-1/2	7-3/8	6-1/2	2-3/8	2-3/8	4-13/16	4-13/16	5-7/16	5-7/16	7-3/4	7-3/4	7-3/8	7-3/8
6	19-5/16	17-13/16	13-13/16	12-1/4	9-3/4	8-1/4	2-3/8	2-3/8	4-13/16	4-13/16	5-7/16	5-7/16	7-3/4	7-3/4	7-3/8	7-3/8
8	21-9/16	20-7/16	14-13/16	13-9/16	10-3/4	9-9/16	2-3/8	2-3/8	4-13/16	4-13/16	5-7/16	5-7/16	7-3/4	7-3/4	7-3/8	7-3/8
10	24-3/16	–	16-3/16	–	12-1/8	–	2-3/8	–	5-3/8	–	6-7/16	–	7-3/4	–	7-3/8	–
12	26-11/16	–	17-3/16	–	13-1/8	–	2-3/8	–	5-3/8	–	6-7/16	–	7-3/4	–	7-3/8	–
14	31	–	20-1/2	–	14-1/2	–	2-3/4	–	6-7/8	–	7-1/4	–	10-1/2	–	9	–
16	33-1/2	–	21-3/4	–	15-3/4	–	2-3/4	–	6-7/8	–	7-1/4	–	10-1/2	–	9	–
18	35	–	22-1/2	–	16-1/2	–	2-3/4	–	6-7/8	–	7-1/4	–	10-1/2	–	9	–
20	37-1/2	–	23-3/4	–	17-3/4	–	2-3/4	–	6-7/8	–	7-1/4	–	10-1/2	–	9	–
24	42	–	26	–	20	–	2-3/4	–	6-7/8	–	7-1/4	–	10-1/2	–	9	–

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

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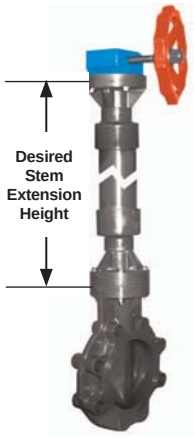


Stem Extensions

For Wafer Style Butterfly Valves replace the “BFSE” prefix with “BFSEW” in the part number.

- Designed for use on Spears® Butterfly Valves.
- Corrosion Resistant PVC Housing.
- Stainless Steel Internal Extension Shaft.
- All Mounting Hardware Included.
- Detailed Instructions for Quick Assembly.
- Fabricated to Order in Standard 6" Increments.

Typical Application ***(VALVE NOT INCLUDED)***

Gear Operator (shown) or Lever Handle Sold with Valve

Stem Extension Height	Valve Size						
	1-1/2	2 & 2-1/2	3	4	6	8	10
24	BFSE-015-240	BFSE-020-240	BFSE-030-240	BFSE-040-240	BFSE-060-240	BFSE-080-240	BFSE-100-240
30	BFSE-015-300	BFSE-020-300	BFSE-030-300	BFSE-040-300	BFSE-060-300	BFSE-080-300	BFSE-100-300
36	BFSE-015-360	BFSE-020-360	BFSE-030-360	BFSE-040-360	BFSE-060-360	BFSE-080-360	BFSE-100-360
42	BFSE-015-420	BFSE-020-420	BFSE-030-420	BFSE-040-420	BFSE-060-420	BFSE-080-420	BFSE-100-420
48	BFSE-015-480	BFSE-020-480	BFSE-030-480	BFSE-040-480	BFSE-060-480	BFSE-080-480	BFSE-100-480
54	BFSE-015-540	BFSE-020-540	BFSE-030-540	BFSE-040-540	BFSE-060-540	BFSE-080-540	BFSE-100-540
60	BFSE-015-600	BFSE-020-600	BFSE-030-600	BFSE-040-600	BFSE-060-600	BFSE-080-600	BFSE-100-600
66	BFSE-015-660	BFSE-020-660	BFSE-030-660	BFSE-040-660	BFSE-060-660	BFSE-080-660	BFSE-100-660
72	BFSE-015-720	BFSE-020-720	BFSE-030-720	BFSE-040-720	BFSE-060-720	BFSE-080-720	BFSE-100-720
78	BFSE-015-780	BFSE-020-780	BFSE-030-780	BFSE-040-780	BFSE-060-780	BFSE-080-780	BFSE-100-780
84	BFSE-015-840	BFSE-020-840	BFSE-030-840	BFSE-040-840	BFSE-060-840	BFSE-080-840	BFSE-100-840
90	BFSE-015-900	BFSE-020-900	BFSE-030-900	BFSE-040-900	BFSE-060-900	BFSE-080-900	BFSE-100-900
96	BFSE-015-960	BFSE-020-960	BFSE-030-960	BFSE-040-960	BFSE-060-960	BFSE-080-960	BFSE-100-960
102	BFSE-015-1020	BFSE-020-1020	BFSE-030-1020	BFSE-040-1020	BFSE-060-1020	BFSE-080-1020	BFSE-100-1020
108	BFSE-015-1060	BFSE-020-1080	BFSE-030-1080	BFSE-040-1080	BFSE-060-1080	BFSE-080-1080	BFSE-100-1080
114	BFSE-015-1140	BFSE-020-1140	BFSE-030-1140	BFSE-040-1140	BFSE-060-1140	BFSE-080-1140	BFSE-100-1140
120	BFSE-015-1200	BFSE-020-1200	BFSE-030-1200	BFSE-040-1200	BFSE-060-1200	BFSE-080-1200	BFSE-100-1200

Stem Extension Height	Valve Size					
	12	14	16	18	20	24
24	BFSE-120-240	BFSE-140-240	BFSE-160-240	BFSE-180-240	BFSE-200-240	BFSE-240-240
30	BFSE-120-300	BFSE-140-300	BFSE-160-300	BFSE-180-300	BFSE-200-300	BFSE-240-300
36	BFSE-120-360	BFSE-140-360	BFSE-160-360	BFSE-180-360	BFSE-200-360	BFSE-240-360
42	BFSE-120-420	BFSE-140-420	BFSE-160-420	BFSE-180-420	BFSE-200-420	BFSE-240-420
48	BFSE-120-480	BFSE-140-480	BFSE-160-480	BFSE-180-480	BFSE-200-480	BFSE-240-480
54	BFSE-120-540	BFSE-140-540	BFSE-160-540	BFSE-180-540	BFSE-200-540	BFSE-240-540
60	BFSE-120-600	BFSE-140-600	BFSE-160-600	BFSE-180-600	BFSE-200-600	BFSE-240-600
66	BFSE-120-660	BFSE-140-660	BFSE-160-660	BFSE-180-660	BFSE-200-660	BFSE-240-660
72	BFSE-120-720	BFSE-140-720	BFSE-160-720	BFSE-180-720	BFSE-200-720	BFSE-240-720
78	BFSE-120-780	BFSE-140-780	BFSE-160-780	BFSE-180-780	BFSE-200-780	BFSE-240-780
84	BFSE-120-840	BFSE-140-840	BFSE-160-840	BFSE-180-840	BFSE-200-840	BFSE-240-840
90	BFSE-120-900	BFSE-140-900	BFSE-160-900	BFSE-180-900	BFSE-200-900	BFSE-240-900
96	BFSE-120-960	BFSE-140-960	BFSE-160-960	BFSE-180-960	BFSE-200-960	BFSE-240-960
102	BFSE-120-1020	BFSE-140-1020	BFSE-160-1020	BFSE-180-1020	BFSE-200-1020	BFSE-240-1020
108	BFSE-120-1080	BFSE-140-1080	BFSE-160-1080	BFSE-180-1080	BFSE-200-1080	BFSE-240-1080
114	BFSE-120-1140	BFSE-140-1140	BFSE-160-1140	BFSE-180-1140	BFSE-200-1140	BFSE-240-1140
120	BFSE-120-1200	BFSE-140-1200	BFSE-160-1200	BFSE-180-1200	BFSE-200-1200	BFSE-240-1200

Basic Stem Extension height is 24" and is manufactured in standard 6" increments. Intermediate Stem Extension heights are available and are priced to the next full 6" increment. For heights over 120", please contact your servicing Spears® Regional Distribution Center.

True Union Ball Check Valves -

See preceding sections on True Union 2000 and Regular True Union Ball Check Valves

Industrial Swing Check Valves

Features – PVC, CPVC & PP

Designed for optimum flow, quick response and positive shutoff with minimum turbulence, this industrial grade Swing Check Valve is used in a variety of industrial and chemical processing applications where high volume fluid transfer is required. Suitable for horizontal or up-flow vertical applications. Available in PVC, CPVC and Glass Filled Polypropylene, IPS 3/4" - 8" with Flanged Body.

Engineered for Quick Response, Full-Flow Fluid Transfer

- Heavy Bodied All-Plastic Interior Construction
- Top Access & O-ring Sealed Drain Plug for In-line Servicing
- Standard O-ring type Seat & Seals in EPDM or FKM
- Sizes 3/4" - 4" Pressure Rated to 150 psi @ 73°F, 6" Pressure Rated to 100 psi and 8" to 70 psi @ 73°F
- Stainless Steel External Hardware
- Fully Serviceable, Replaceable Components
- Suitable for Vacuum Service
- Assembled with Silicone-Free, Water Soluble Lubricants

Sample Engineering Specification

All thermoplastic check valves shall be flanged Swing Check type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447, or Polypropylene, ASTM D 4101. All O-rings shall be EPDM or FKM. All valves components shall be replaceable. All valves shall have top-entry access with O-ring sealed drain plug for in-line servicing. All valves shall have optional external Arrow Position Indicator or optional external Counter Balance. All 3/4" - 4" valves shall be pressure rated to 150 psi, all 6" valves to 100 psi, and all 8" valves to 70 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Options & Accessories

- External Arrow Position Indicator[1]
- External Counter Balance[1]
- Natural Polypropylene Body

1: Available as assembled valve or kit for installed valve

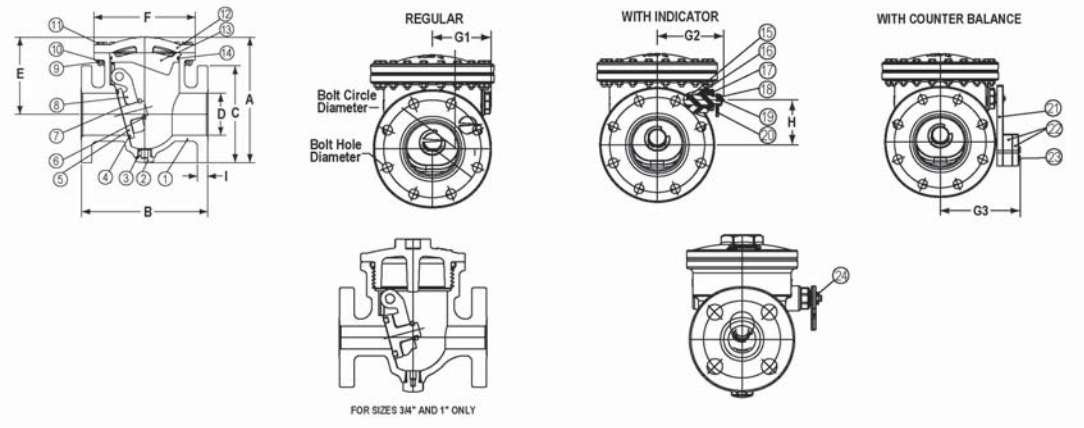
Quick-View Valve Selection Chart

Valve Size	O-ring Material	Part Number[1,2,3]	Pressure Rating
3/4	EPDM	4423-007	150 psi Non-Shock Water @ 73°F
	FKM	4433-007	
1	EPDM	4423-010	
	FKM	4433-010	
1-1/4	EPDM	4423-012	
	FKM	4433-012	
1-1/2	EPDM	4423-015	
	FKM	4433-015	
2	EPDM	4423-020	
	FKM	4433-020	
2-1/2	EPDM	4423-025	
	FKM	4433-025	
3	EPDM	4423-030	
	FKM	4433-030	
4	EPDM	4423-040	
	FKM	4433-040	
6	EPDM	4423-060	100 psi @ 73°F
	FKM	4433-060	
8	EPDM	4423-080	70 psi @ 73°F
	FKM	4433-080	

1: For CPVC valves, add the letter "C" to part numbers listed (e.g. 4423-025**C**).
2: For valve with Arrow Position Indicator, add the letter "I" before the dash separator (e.g., 4423**I**-025).
3: For Polypropylene valves, add the letter "P" to the part number (e.g. 4423-025**P**).

General Installation Information: Industrial Swing check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves should be installed a minimum of ten (10) pipe diameters from pump or other sources of turbulence. Check valves **MUST** be installed with the valves **FLOW** arrow pointing in the direction of flow. Do not install valve upside down. Normal flange-bolt assembly in top holes of the valve flange requires bolt insertion through the companion flange with nuts secured on Swing Check flange side. Certain system configurations involving direct connection of a Swing Check Valve to other flanged equipment may require consideration of this bolt clearance.

Industrial Swing Check Valves



Replacement Parts

No.	Component	Qty.	Material
1	Body	1	PVC/CPVC/PP
2	Plug	1	PVC/CPVC/PP
3	Plug O-ring	1	EPDM/FKM
4	Disc O-ring A	1	EPDM/FKM
5	Disc	1	PVC/CPVC/PP
6	Disc Ret. Clip	1	PP
7	Disc O-ring B	1	EPDM/FKM
8	Swing Arm	1	PVC/CPVC/PP
9	Nut	12-30	SS 316
10	Washer	24-60	SS 316
11	Bolt	12-30	SS 316
12	Bonnet	1	PVC/CPVC/PP

No.	Component	Qty.	Material
13	Seal Carrier	1	PVC/CPVC/PP
14	Body O-ring	1	EPDM/FKM
15	Arm Pin	1	PVC/CPVC/PP
16	Arm Pin Seal	2	FKM
17	Arm Pin Plug	1	PVC/CPVC/PP
18	Arm Pin Washer	1	SS 316
19	Arm Pin Bolt	1	SS 316
20	Indicator	1	PP
21	Counterbalance	1	PVC
22	Weight Block	1	PVC
23	Weight Block Bolt	2	SS 316
24	Arm Pin Ret. Clip	1	PP

Dimensions & Weights

Nominal Size	A	B	C	D	E	F	G1	G2	G3	H	I	Approx. Wt (Lbs.)	
												PVC	CPVC
3/4	5-5/16	5-1/2	3-7/8	3/4	3-3/4	3-3/4	2-1/2	3	4	1-7/16	1/2	1.72	1.80
1	6-5/8	6-5/16	4-1/4	31/32	4-1/2	4-1/2	2-25/32	3-7/32	4-7/32	1-21/32	5/8	2.62	2.80
1-1/4	7-3/8	7-3/32	5	1-19/32	4-9/16	5-3/4	3-3/16	3-25/32	4-3/8	1-27/32	23/32	4.61	4.87
1-1/2	7-3/8	7-3/32	5	1-19/32	4-9/16	5-3/4	3-3/16	3-25/32	4-3/8	1-27/32	23/32	4.61	4.87
2	8-1/2	7-7/8	6	2	5-1/4	7	3-9/16	4-1/8	4-23/32	2-29/32	13/16	6.99	7.24
2-1/2	10-3/4	10-1/4	7-1/2	3-1/8	6-3/4	8-5/8	4-1/4	5	6-9/32	3-1/16	7/8	14.77	15.74
3	10-3/4	10-1/4	7-1/2	3-1/8	6-3/4	8-5/8	4-1/4	5	6-9/32	3-1/16	7/8	14.77	15.74
4	11-3/4	11-13/16	9	3-29/32	7-1/4	9-1/2	4-1/2	5-1/4	6-17/32	3-17/32	31/32	18.37	19.78
6	15-5/8	15-3/4	11	5-7/8	9-1/2	13-7/16	6	6-3/4	8-1/32	5-1/32	1	42.64	44.56
8	19-1/8	19-23/32	13-1/2	7-7/8	11-5/8	16-5/16	7	7-3/4	9-1/32	6-1/2	1-5/32	68.85	76.05

C_V Values

Valve Size	Cv[1]
3/4	18
1	24
1-1/4	70
1-1/2	70
2	95
2-1/2	300
3	300
4	480
6	1100
8	1900

1: Gallons per minute at 1 psi pressure drop.

Nominal Size	Bolt Circle Diameter	Bolt Hole Diameter	Number of Bolt Holes
3/4	2-3/4	5/8	4
1	3-1/8	5/8	4
1-1/4	3-1/2	5/8	4
1-1/2	3-7/8	5/8	4
2	4-3/4	3/4	4
2-1/2	5-1/2	3/4	4
3	6	3/4	4
4	7-1/2	3/4	8
6	9-1/2	7/8	8
8	11-3/4	7/8	8

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	3/4" – 4"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0-
		PP	150 (1.03)	105 (.72)	90 (.62)	80 (.55)	75 (.52)	65 (.45)	55 (.38)	50 (.34)	45 (.31)	-0-	-0-	-0-
	6"	PVC	100 (.70)	90 (.62)	80 (.55)	65 (.38)	50 (.34)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	100 (.70)	95 (.66)	90 (.62)	85 (.59)	80 (.55)	75 (.52)	70 (.48)	65 (.45)	60 (.41)	55 (.38)	50 (.34)	-0-
		PP	100 (.70)	90 (.62)	85 (.59)	75 (.52)	70 (.48)	60 (.41)	55 (.38)	50 (.34)	45 (.31)	-0-	-0-	-0-
	8"	PVC	70 (.48)	65 (.45)	60 (.41)	50 (.34)	45 (.31)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	70 (.48)	65 (.45)	62 (.43)	60 (.41)	57 (.39)	55 (.38)	52 (.36)	50 (.34)	45 (.31)	42 (.29)	40 (.28)	-0-
		PP	70 (.48)	60 (.41)	57 (.39)	55 (.38)	52 (.36)	50 (.34)	47 (.32)	45 (.31)	40 (.28)	-0-	-0-	-0-

Arrow Position Indicator Kit

Spears® Swing Check Valve Indicator Kit is designed for field installation of external Indicator Arrow in Spears® Swing Check Valves. This kit can be installed through the bonnet assembly and removal of valve from line is not required.

Valve Size	Part Numbers		
	PVC Kit	CPVC Kit	PP Kit
3/4	I3K-007	I3K-007C	I3K-007P
1	I3K-010	I3K-010C	I3K-010P
1-1/4 & 1-1/2	I3K-015	I3K-015C	I3K-015P
2	I3K-020	I3K-020C	I3K-020P
2-1/2 & 3	I3K-030	I3K-030C	I3K-030P
4	I3K-040	I3K-040C	I3K-040P
6	I3K-060	I3K-060C	I3K-060P
8	I3K-080	I3K-080C	I3K-080P

Kit Includes:

1 - Extended Shaft
2 - Shaft Cup Seals
1 - Shaft Nut
1 - Indicator Arrow
1 - Retaining clip

Application of Counter Balance

Swing Check Valves operate in response to a fluid stream flow opening a swinging disc. As the fluid stream slows and reverses, the disc responds by swinging to the closed position. Sudden reversal of flow direction can result in “slamming” condition as the disc closes. The function of the Counter Balance mechanism is to start the disc closing earlier as the fluid stream begins to slow so that it is almost closed when flow reversal takes place, thereby eliminating slamming of the disc. Available as installed unit with valve or as a kit for adaptation of installed valves.

Counter Balance Kits

Spears® Swing Check Valve Counter Balance Kit is designed for field installation of counter balance mechanism in Spears® Swing Check Valves. This kit can be installed through the bonnet assembly and removal of valve from line is not required.

Valve Size	Part Numbers		
	PVC Kit	CPVC Kit	PP Kit
3/4	CB3K-007	CB3K-007C	CB3K-007P
1	CB3K-010	CB3K-010C	CB3K-010P
1-1/4 & 1-1/2	CB3K-015	CB3K-015C	CB3K-015P
2	CB3K-020	CB3K-020C	CB3K-020P
2-1/2 & 3	CB3K-030	CB3K-030C	CB3K-030P
4	CB3K-040	CB3K-040C	CB3K-040P
6	CB3K-060	CB3K-060C	CB3K-060P
8	CB3K-080	CB3K-080C	CB3K-080P

Kit Includes:

1 - Extended Shaft
2 - Shaft Cup Seals
1 - Shaft Nut
1 - Counter Balance
1 - Retaining Bolt
1 - Flat Washer
1 - Extra Weight Plates (1-small & 1-large)
1 - Plate Mounting Bolts (2-long & 2 short).

Utility Swing & Spring Check Valves

Sample Engineering Specification

All thermoplastic check valves Shall be Utility Swing Check or Utility Spring Check type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454. All valves shall be maintenance free seal unit construction with EPDM seat and weighted disc. All Spring Check Valves shall have stainless steel spring assisted operation. All valves shall have external flow arrow direction designation. All valves shall be certified by NSF International for use in potable water service. All valves 1/2" – 4" shall be pressure rated to 150 psi for water @ 73°F in full flow (open) position and to 75 psi @ 73°F back pressure (closed), all valves 6" – 8" shall be pressure rated to 100 psi for water @ 73°F in full flow (open) position and to 50 psi @ 73°F back pressure (closed), as manufactured by Spears® Manufacturing Company.

Quick-View Utility Swing Check Valve Selection Chart

Valve Size	Seat Material	PVC Material[1]			Pressure Rating
		Socket	Threaded	SR Threaded	
1/2	EPDM	S1520-05	S1520-05F	S1520-05FSR	150 psi @ 73°F Full Flow (Open) 75 psi Back Pressure (Closed)
3/4	EPDM	S1520-07	S1520-07F	S1520-07FSR	
1	EPDM	S1520-10	S1520-10F	S1520-10FSR	
1-1/4	EPDM	S1520-12	S1520-12F	S1520-12FSR	
1-1/2	EPDM	S1520-15	S1520-15F	S1520-15FSR	
2	EPDM	S1520-20	S1520-20F	S1520-20FSR	
2-1/2	EPDM	S1520-25	S1520-25F	S1520-25FSR	
3	EPDM	S1520-30	S1520-30F	S1520-30FSR	
4	EPDM	S1520-40	S1520-40F	S1520-40FSR	
6	EPDM	S1520-60	S1520-60F	S1520-60FSR	100 psi @ 73°F Full Flow (Open) 50 psi Back Pressure (Closed)
8	EPDM	S1520-80	N/A	N/A	

1: For PVC Clear Swing Check, replace dash (-) separator with the letter "C" in the part number (e.g. S1520**C**05), (e.g. S1520**C**05F) or (e.g. S1520**C**05FSR)

Features - PVC White & PVC Clear

Spears® Utility Swing Check and spring assisted Utility Spring Check Valves offer a compact, high performance check valve for Landscape & Irrigation, Pool & Spa, Aquaculture, OEM and many general purpose applications. These maintenance free sealed units feature long-life EPDM elastomer seats with weighted disc for full-flow with minimal restriction and positive shutoff. Spring assisted "Spring Check" model incorporates a positive-pressure spring to assist in valve closing without slamming. Produced from PVC White or PVC Clear material with Socket, Threaded or SR Threaded end connectors. Available in IPS Sizes 1/2" through 8" for Swing Check Valves and 1/2" through 4" for Spring Check Valves.

- Chemical & Corrosion Resistant PVC White or High Visibility PVC Clear Construction
- No Metal Parts on Swing Check - Stainless Steel Spring on Spring Check
- Maintenance Free Sealed Unit in a Compact Space Saving Design
- Engineered for Maximum Flow, Quick Response & Positive Shutoff
- Long-Life, High Grade EPDM Seat with Weighted Disc
- Spring Assisted Spring Check Model Option for Positive Closing
- Sizes 1/2" – 4" Pressure Rated to 150 psi @ 73°F Full Flow (open) and 75 psi @ 73°F Back Pressure (closed)
- Sizes 6" – 8" Pressure Rated to 100 psi @ 73°F Full Flow (open) and 50 psi @ 73°F Back Pressure (closed)
- Suitable for either Horizontal or Vertical Up-flow Installations and Vacuum Service
- NSF® Certified for Potable Water Use
- Silicone-Free Assembly

Quick-View Utility Spring Check Valve Selection Chart

Valve Size	Seat Material	PVC Material[1]			Pressure Rating
		Socket	Threaded	SR Threaded	
1/2	EPDM	S1580-05	S1580-05F	S1580-05FSR	150 psi @ 73°F Full-Flow (Open) 75 psi Back Pressure (Closed)
3/4	EPDM	S1580-07	S1580-07F	S1580-07FSR	
1	EPDM	S1580-10	S1580-10F	S1580-10FSR	
1-1/4	EPDM	S1580-12	S1580-12F	S1580-12FSR	
1-1/2	EPDM	S1580-15	S1580-15F	S1580-15FSR	
2	EPDM	S1580-20	S1580-20F	S1580-20FSR	
2-1/2	EPDM	S1580-25	S1580-25F	S1580-25FSR	
3	EPDM	S1580-30	S1580-30F	S1580-30FSR	
4	EPDM	S1580-40	S1580-40F	S1580-40FSR	

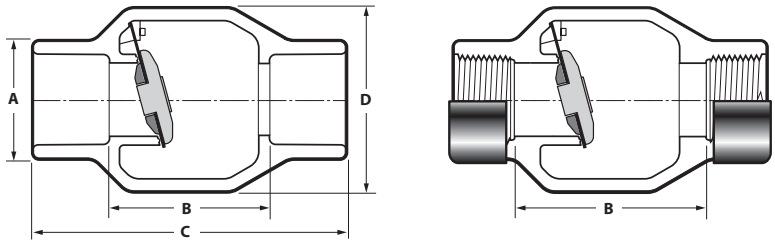
1: For PVC Clear Spring Check, replace dash (-) separator with the letter "C" in the part number (e.g. S1580**C**05), (e.g. S1580**C**05F) or (e.g. S1580**C**05FSR)

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

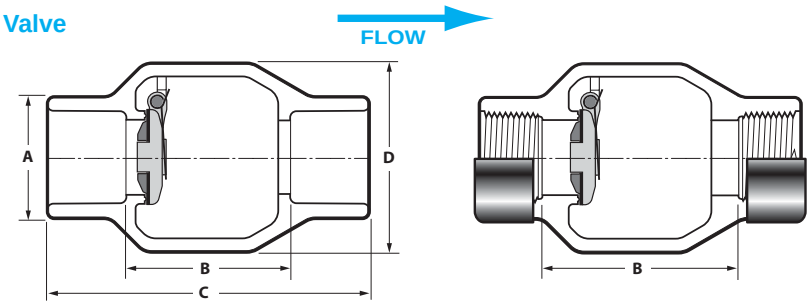
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Utility Swing & Spring Check Valves

Utility Swing Check Valve



Utility Spring Check Valve



Dimensions

Nominal Size	Dimension Reference (inches, ± 1/16)					
	A	B		C	D	
		Socket	Threaded/SR Threaded		Swing	Spring
1/2	1-3/8	2-19/32	2-5/8	4-3/32	2-1/8	2-5/8
3/4	1-3/8	2-5/32	2-1/16	4-1/16	2-1/8	2-5/8
1	1-11/16	2-5/16	2-15/16	4-9/16	2-5/8	2-5/8
1-1/4	2-1/16	2-15/16	3-5/8	5-1/2	3-3/8	3-3/8
1-1/2	2-7/16	3	3-11/16	5-5/8	3-3/8	3-3/8
2	3	3-5/8	4-3/8	6-3/8	4-1/4	4-1/4
2-1/2	3-9/16	4-3/8	5-1/4	7-7/8	5-1/8	5-1/8
3	4-5/16	4-11/16	5-5/8	8-7/16	5-3/4	5-3/4
4	5-1/4	6	7-1/16	10-1/16	6-3/8	6-3/8
6	7-11/16	8-1/2	11-5/16	14-9/16	9-1/4	N/A
8	9-7/16	11-3/16	N/A	19-1/4	11-15/16	N/A

General Installation Information: Utility Swing check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves **MUST** be installed with the valves **FLOW** arrow pointing in the direction of the flow. Do not install valve upside down. Flow velocity should not exceed 5ft./sec. Minimum opening pressure less than 0.5 psi.

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 8"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
			150 (1.03)	140 (.97)	130 (.90)	120 (.83)	-110- (.76)	-100- (.70)	-90- (.62)	-80- (.55)	-70- (.48)	-60- (.41)	-50- (.34)	-0- (-0-)

Check Valves

Features - PVC White & PVC Clear

Spears® True Union Utility Swing Check and spring assisted True Union Utility Spring Check Valves offer a compact, high performance check valve for Landscape & Irrigation, Pool & Spa, Aquaculture, OEM 1 and many general purpose applications. True Union design allows for easy in-line replacement of maintenance free sealed units. These valves feature long-life EPDM elastomer seats with weighted disc for full-flow with minimal restriction and positive shutoff. Spring assisted "Spring Check" model incorporates a positive-pressure spring to assist in valve closing without slamming. Produced from PVC White or PVC Clear material with Socket, Threaded or SR Threaded end connectors in IPS Sizes 1/2" through 4".

- Chemical & Corrosion Resistant PVC White or High Visibility PVC Clear Construction
- No Metal Parts on Swing Check - Stainless Steel Spring on Spring Check
- True Union style for Easy In-line Replacement of Sealed Unit
- Strong Buttress Threaded Union Nuts
- Engineered for Maximum Flow, Quick Response & Positive Shutoff
- Long-Life, High Grade EPDM Seat with Weighted Disc
- Spring Assisted Spring Check Model Option for Positive Closing
- Pressure Rated to 150 psi @ 73°F Full-Flow (open) and 75 psi @ 73°F Back Pressure (closed)
- Suitable for either Horizontal or Vertical Up-flow Installations and Vacuum Service
- NSF® Certified for Potable Water Use
- Silicone-Free Assembly

Sample Engineering Specification

All thermoplastic check valves Shall be True Union Utility Swing Check or True Union Utility Spring Check type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454. All union nuts shall have Buttress threads coupled to a replaceable sealed unit with EPDM seat and weighted disc. All Spring Check Valves shall have stainless steel spring assisted operation. All valves shall have external flow arrow direction designation. All valves shall be certified by NSF International for use in potable water service. All valves shall be pressure rated to 150 psi for water @73°F in full flow (open) position and to 75 psi @ 73°F back pressure (closed), as manufactured by Spears® Manufacturing Company.

Quick-View True Union Utility Swing Check Valve Selection Chart

Valve Size	Seat Material	PVC Material[1]			Pressure Rating
		Socket	Threaded	SR Threaded	
1/2	EPDM	S1720-05	S1720-05F	S1720-05FSR	150 psi @ 73°F Full Flow (Open) 75 psi Back Pressure (Closed)
3/4	EPDM	S1720-07	S1720-07F	S1720-07FSR	
1	EPDM	S1720-10	S1720-10F	S1720-10FSR	
1-1/4	EPDM	S1720-12	S1720-12F	S1720-12FSR	
1-1/2	EPDM	S1720-15	S1720-15F	S1720-15FSR	
2	EPDM	S1720-20	S1720-20F	S1720-20FSR	
2-1/2	EPDM	S1720-25	S1720-25F	S1720-25FSR	
3	EPDM	S1720-30	S1720-30F	S1720-30FSR	
4	EPDM	S1720-40	S1720-40F	S1720-40FSR	

1: For PVC Clear Swing Check, replace dash (-) separator with the letter "C" in the part number (e.g. S1720**C**05), (e.g. S1720**C**05F) or (e.g. S1720**C**05FSR)

Quick-View True Union Utility Spring Check Valve Selection Chart

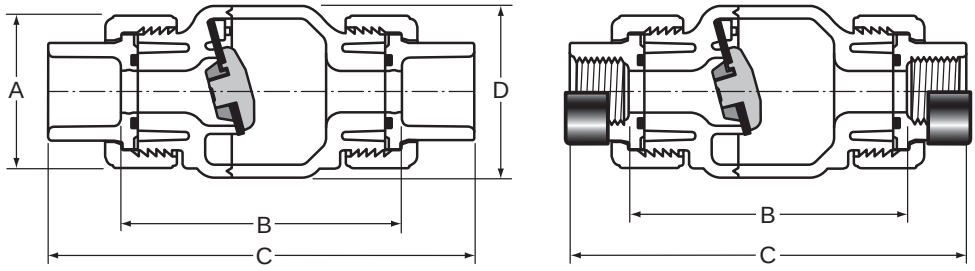
Valve Size	Seat Material	PVC Material[1]			Pressure Rating
		Socket	Threaded	SR Threaded	
1/2	EPDM	S1780-05	S1780-05F	S1780-05FSR	150 psi @ 73°F Full Flow (Open) 75 psi Back Pressure (Closed)
3/4	EPDM	S1780-07	S1780-07F	S1780-07FSR	
1	EPDM	S1780-10	S1780-10F	S1780-10FSR	
1-1/4	EPDM	S1780-12	S1780-12F	S1780-12FSR	
1-1/2	EPDM	S1780-15	S1780-15F	S1780-15FSR	
2	EPDM	S1780-20	S1780-20F	S1780-20FSR	
2-1/2	EPDM	S1780-25	S1780-25F	S1780-25FSR	
3	EPDM	S1780-30	S1780-30F	S1780-30FSR	
4	EPDM	S1780-40	S1780-40F	S1780-40FSR	

1: For PVC Clear Spring Check, replace dash (-) separator with the letter "C" in the part number (e.g. S1780**C**05), (e.g. S1780**C**05F) or (e.g. S1780**C**05FSR)

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

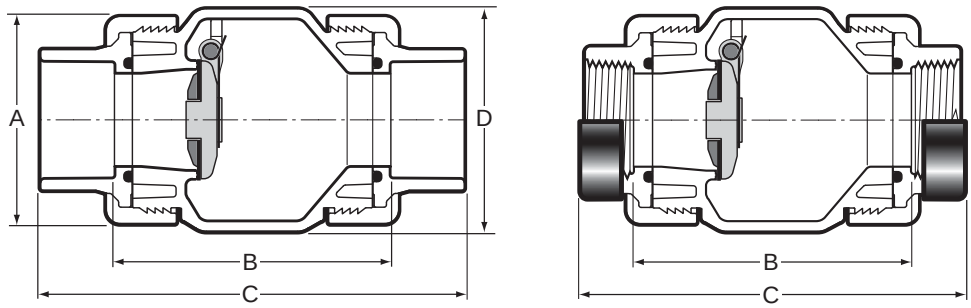
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

True Union Utility Swing Check Valve



True Union Utility Spring Check Valve

FLOW



Dimensions

Nominal Size	A	Dimension Reference (inches, ± 1/16)				D	
		B		C			
		Socket	Threaded/SR Threaded	Socket	Threaded/SR Threaded	Swing	Spring
1/2	1-7/8	3-7/16	3-1/2	5-3/16	4-13/16	2-1/8	2-5/8
3/4	2-1/4	3-9/16	3-9/16	5-1/2	4-15/16	2-1/8	2-5/8
1	2-9/16	4-1/8	4-5/16	6-7/16	6	2-5/8	2-5/8
1-1/4	3-1/8	4-7/8	5-1/16	7-7/16	6-13/16	3-3/8	3-3/8
1-1/2	3-9/16	4-9/16	4-3/4	7-3/8	6-1/2	3-3/8	3-3/8
2	4-5/16	5-5/8	5-3/4	8-5/8	7-9/16	4-1/4	4-1/4
2-1/2	6-3/16	7-7/16	7-9/16	10-15/16	10-3/16	5-11/16	5-11/16
3	6-13/16	7-7/16	7-1/2	11-3/16	10-1/4	5-11/16	5-11/16
4	7-3/4	9-3/4	9-7/8	14-5/16	12-3/4	7-1/4	7-1/4

General Installation Information: True Union Swing Check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves **MUST** be installed with the valves **FLOW** arrow pointing in the direction of the flow. Do not install valve upside down. Flow velocity should not exceed 5ft./sec. Minimum opening pressure less than 0.5 psi.

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 4"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
			150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)

Sample Engineering Specification

All thermoplastic check valves Shall be Utility Compression Swing Check type constructed form PVC Type I, ASTM D 1784 Cell Classification 12454. All valves shall be maintenance free seal unit construction with EPDM seat and weighted disc. All valves shall have external flow arrow direction designation. All valves shall be certified by NSF International for use in potable water service. All valves shall be pressure rated to 150 psi for water @73°F in full flow (open) position and to 75 psi @ 73°F back pressure (closed), as manufactured by Spears® Manufacturing Company.

Features - PVC White & PVC Clear

Spears® Compression Utility Swing Check Valves offer a compact, high performance check valve with EPDM gasketed compression-type ends for fast, convenient connection to virtual and IPS size pipe, plastic or metal. Maintenance-free sealed unit design features long-life EPDM elastomer seats and weighted disc for full flow with minimal restriction and positive shutoff. Produced from PVC White or PVC Clear with White compression end connectors and EPDM seats. Available in IPS Sizes 1/2" through 4".

- Standard Swing Check Assembly Maintains a Positive Seal
- Convenient Compression Ends for Quick Connections
- Engineered for Maximum Flow, Quick Response & Positive Shutoff
- Excellent for Pool & Spa, OEM and General Purpose Applications
- Compact, Space-Saving Design
- Replaceable PVC White or Clear Sealed Unit
- High Grade EPDM Seat
- Suitable for Horizontal or Vertical Up-flow Installations
- Pressure Rated to 150 psi @ 73°F Full Flow (open), 75 psi Back Pressure (closed)
- Maximum Service Temperature 140°F (temperature/pressure de-ratings apply)

Quick-View Compression Utility Swing Check Valve Selection Chart

Valve Size	Seat Material	PVC Material[1] Compression	Pressure Rating
1/2	EPDM	S1500-05	150 psi @ 73°F Full Flow (Open) 75 psi Back Pressure (Closed)
3/4	EPDM	S1500-07	
1	EPDM	S1500-10	
1-1/4	EPDM	S1500-12	
1-1/2	EPDM	S1500-15	
2	EPDM	S1500-20	
2-1/2	EPDM	S1500-25	
3	EPDM	S1500-30	
4	EPDM	S1500-40	

1: For PVC Clear, replace dash (-) separator with the letter "C" in the part number (e.g. S1500**C**05).

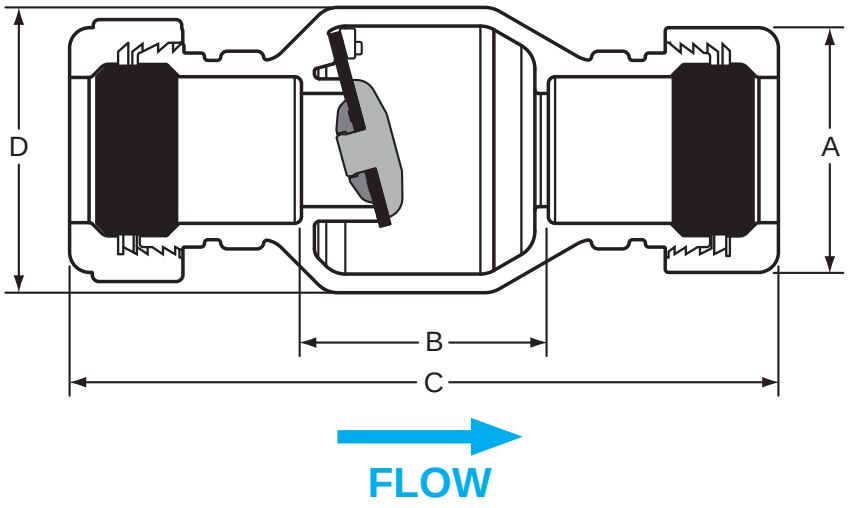
Compression Coupling Nut Wrenches

Part Number	Size
CCW-005	1/2
CCW-007	3/4
CCW-010	1
CCW-012	1-1/4
CCW-015	1-1/2
CCW-020*	2
CCW-030**	3

* CCW-020 - Wrench also fits 2-1/2" Coupling Body
**CCW-030 - Wrench also fits 4" Coupling Body

Compression Coupling Nut Wrench Sets

Part Number	Size
CCW-000	Set
Complete Set of Wrenches, Sizes 1/2" - 3"	



WARNING: The compression joints provide a positive seal but do not restrain pipe from thrust and movement under pressure. Use of compression joint requires blocking of connecting pipe to prevent any movement. Failure to do so can result in system failure or severe personal injury. Use in cold water/fluid applications only.

Dimensions

Nominal Size	Dimension Reference (inches, ± 1/16)			
	A	B	C	D
1/2	1-3/4	1-3/4	5-15/16	2-1/8
3/4	2-1/16	1-3/4	6	2-1/8
1	2-7/16	2-1/4	6-5/16	2-21/32
1-1/4	2-15/16	2-15/16	8-9/16	3-3/8
1-1/2	3-5/16	2-15/16	8-17/32	3-3/8
2	3-3/4	3-1/2	9-7/32	4-1/4
2-1/2	4-11/16	4-1/4	11-3/32	5-1/8
3	5-7/16	4-9/16	12-3/8	5-23/32
4	6-3/4	5-15/16	16-7/8	6-3/8

General Installation Information: Swing check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves **MUST** be installed with the valve's **FLOW** arrow pointing in the direction of the flow. Do not install valve upside down. Flow velocity should not exceed 5 ft./sec. Minimum opening pressure less than 0.5 psi.

Temperature Pressure Rating

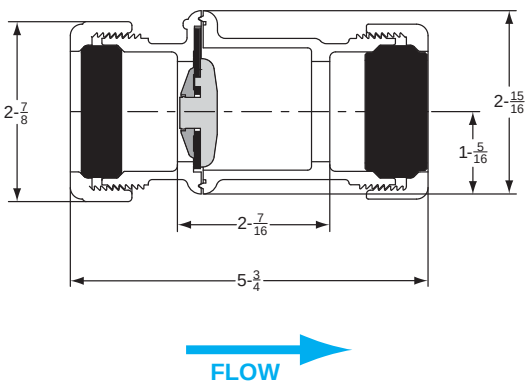
System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 4"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
			150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)

Sump Pump Swing Check Valves

Sample Engineering Specification

All thermoplastic check valves shall be Sump Pump Swing Check type constructed form PVC Type I, ASTM D 1784 Cell Classification 12454. All valves shall be maintenance free seal unit construction with EPDM seat and weighted disc. All valves shall have external flow arrow direction designation. All valves shall be dual-fit design with Buna-N Compression Gaskets for use with either IPS sizes 1-1/4" or 1-1/2" pipe. All valves shall be pressure rated to 150 psi for water @ 73°F in full flow (open) position and to 75 psi @ 73°F back pressure (closed), as manufactured by Spears® Manufacturing Company.

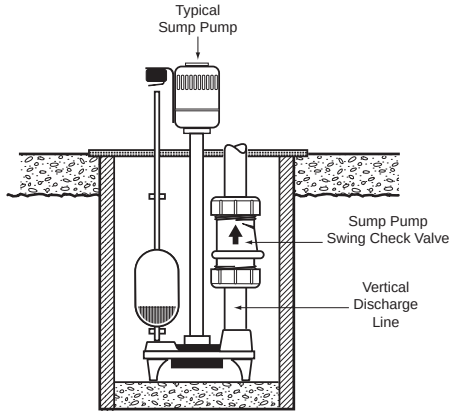
Dimensions



Features - PVC White & PVC Clear

Spears® Sump Pump Swing Check Valves provide a high performance specialty valve engineered for use on sump pump discharge lines, as illustrated. This compact valve is a maintenance free sealed Check Valve featuring long-life EPDM elastomer seats and weighted disc for full-flow with minimal restriction and positive shutoff. Produced in PVC White with compression type end connectors. Dual-fit design is available with Buna-N Gaskets for both 1-1/4" and 1-1/2" pipe.

- All Plastic Construction with Elastomer Seals – No Metal Parts
- Includes Compression End Connectors with Buna-N Gaskets for Use on Either 1-1/4" or 1-1/2" Pipe
- Angled Seat and Weighted Flapper for Low-Pressure Seal
- Pressure Rated to 150 psi @ 73°F Full-Flow (open) and 75 psi @ 73°F Back Pressure (closed)
- Suitable for Vertical Up-flow or Horizontal Installations



General Installation Information: Sump Pump Swing Check Valves may be installed in either vertical up-flow (see illustration) or horizontal positions on pump discharge line. Check valves **MUST** be installed with the valve's **FLOW** arrow pointing in the direction of the flow. In horizontal installations, the designated side must be positioned “up”. Do Not install Check Valve upside down.

Quick-View Sump Pump Swing Check Valve Selection Chart

Valve Size	Seat Material	PVC Material[1] Socket	Pressure Rating
1-1/4 & 1-1/2	EPDM	S1400-15	150 psi @ 73°F Full Flow (Open) 75 psi Back Pressure (Closed)

1: For PVC Clear Sump Pump, replace dash (-) separator with the letter "C" in the part number (e.g., S1400**C**15)

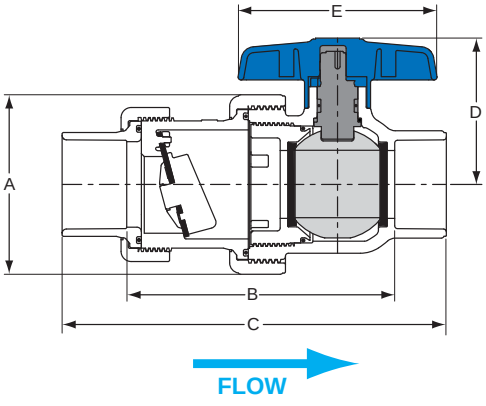
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Swing Check Ball Valves

Sample Engineering Specification

All thermoplastic check valves shall be Swing Check Ball Valve combination type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454. All Ball Valve units shall have Safe-T-Shear® stem, Safe-T-Blocked® Seal Carrier and double stop Polypropylene handle. All valve components shall be replaceable. All Swing Check Units shall be maintenance free seal unit construction with EPDM seat and weighted disc. All valves shall have external flow arrow direction designation. All valves shall be pressure rated to 150 psi for water @73°F in full flow (open) position and to 75 psi @ 73°F back pressure (closed), as manufactured by Spears® Manufacturing Company.



Dimensions

Size	A	B	C	D	E
1-1/2	3-7/8	5-3/4	8-1/4	3-3/16	4-1/4
2	4-7/16	6-11/16	9-3/8	3-7/8	5-1/16

Features - PVC White

Spears® Swing Check Ball Valve offers a compact, high performance one-piece combination valve for applications requiring an in-line Ball Valve and Check Valve. This space, time and labor saving valve is designed for general purpose use and in wastewater pumping applications, such as ejector pits. Provides quick shut-off for easy pump or equipment servicing. Fully serviceable Ball Valve with replaceable, maintenance free sealed Check Valve Cartridge featuring long-life EPDM elastomer seats and weighted disc for full-flow with minimal restriction and positive shutoff. Produced in PVC White with socket end connectors. Available in IPS sizes 1-1/2" and 2".

- Compact, Space-Saving Design
- Union Design Allows Easy Service and Cleaning
- High Grade EPDM Seals
- Replaceable PTFE/HDPE Ball Valve Seats
- Safe-T-Blocked® Seal Carrier on Ball Valve with Safe-T-Shear® Stem and High Impact Polypropylene Handle
- Replaceable Sealed Check Valve Cartridge with Weighted EPDM Seat
- Pressure Rated to 150 psi @ 73°F Full-Flow (open) and 75 psi @ 73°F Back Pressure (closed)
- Suitable for Horizontal or Vertical Up-flow Installations

General Installation Information: Swing Check Ball Valves are designed for horizontal installations, but may be installed in up-flow only vertical position. The Check Valve portion **MUST** be installed with the valve's **FLOW** arrow pointing in the direction of flow and with the designated side up in horizontal installations. Do Not install Check Valve upside down. The Ball Valve portion may be rotated and installed in any position. Flow velocity should not exceed 5 ft./sec. Minimum opening pressure is less than 0.5 psi.

Quick-View Swing Check Ball Valve Selection Chart

Valve Size	Seat Material	PVC Material Socket	Pressure Rating
1-1/2	EPDM	7622-015	150 psi @ 73°F Full Flow (Open) 75 psi Back Pressure (Closed)
2	EPDM	7622-020	

Y-Check Valves

Sample Engineering Specification

All thermoplastic valves shall be Y-Check configuration manufactured to ASTM F 1970 and constructed from PVC, ASTM D 1784 Cell Classification 12454, or CPVC, ASTM D 1784 Cell Classification 23447. All valves shall have Buttress thread bonnet and standard O-ring type seating disc. All O-rings shall be EPDM or FKM. All 1/2" - 2" valves shall be pressure rated at 150 psi and all 3" - 4" valves shall be pressure rated at 90 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Features - PVC Gray, PVC Clear & CPVC

Spears® Y-Check Valves are an angle type check valve that automatically stops reverse flow by the dead weight of the disc plug. Y-checks are less affected by turbulent flow and typically have lower shutoff characteristics than ball checks. Valves are available in PVC Gray, PVC Clear, and CPVC materials in IPS Sizes 1/2" through 4" with Socket, SR Threaded or Flanged end connections, plus True Union styles with Socket and SR Threaded ends.

- Chemical & Corrosion Resistant PVC, PVC Clear, and CPVC Construction
- Improved Flow Characteristics Over Ball Checks, Outperforms Spring Loaded Designs
- Easy Access Cap for In-Line Clean Out & Servicing
- Optional True Union Design for Easy Valve Service Replacement
- Standard O-ring type EPDM or FKM Seat & Seals
- Sizes 1/2" – 2" Pressure Rated to 150psi @ 73°F, Sizes 3" – 4" Pressure Rated to 90 psi @ 73°F
- Suitable for either Horizontal or Vertical Up-flow Installations
- Assembled with Silicone-Free, Water Soluble Lubricants

Quick-View Valve Selection Chart

Valve Size	O-ring Material	PVC Part Number[1,2,3]					Pressure Rating
		Socket	SR Threaded	Flanged	Soc Union	SR Thd Union	
1/2	EPDM	1622-005	1621-005SR	1623-005	162A-005	162B-005SR	150 psi Non-Shock Water @ 73°F
	FKM	1632-005	1631-005SR	1633-005	163A-005	163B-005SR	
3/4	EPDM	1622-007	1621-007SR	1623-007	162A-007	162B-007SR	
	FKM	1632-007	1631-007SR	1633-007	163A-007	163B-007SR	
1	EPDM	1622-010	1621-010SR	1623-010	162A-010	162B-010SR	
	FKM	1632-010	1631-010SR	1633-010	163A-010	163B-010SR	
1-1/4	EPDM	1622-012	1621-012SR	1623-012	162A-012	162B-012SR	
	FKM	1632-012	1631-012SR	1633-012	163A-012	163B-012SR	
1-1/2	EPDM	1622-015	1621-015SR	1623-015	162A-015	162B-015SR	
	FKM	1632-015	1631-015SR	1633-015	163A-015	163B-015SR	
2	EPDM	1622-020	1621-020SR	1623-020	162A-020	162B-020SR	
	FKM	1632-020	1631-020SR	1633-020	163A-020	163B-020SR	
3	EPDM	1622-030	1621-030SR	1623-030	162A-030	162B-030SR	90 psi Non-Shock Water @ 73°F
	FKM	1632-030	1631-030SR	1633-030	163A-030	163B-030SR	
4	EPDM	1622-040	1621-040SR	1623-040	162A-040	162B-040SR	
	FKM	1632-040	1631-040SR	1633-040	163A-040	163B-040SR	

1: For CPVC Y-Check, add the letter "C" to the part number (e.g. 1622-005**C**)
2: For PVC Clear Y-Check, add the letters "CL" to the part number (e.g. 1622-005**CL**) or (e.g. 162A-005**CL**)
3: For CPVC or PVC Clear Special Reinforced Y-Check, (e.g. 1621-005**C**SR) or (e.g.1621-005**CL**SR)

Replacement Parts (next page)

NO.	COMPONENT	QTY.	MATERIAL
1	Body[1] (SOC/SR/FLG/UNION)	1	PVC/CLEAR/CPVC
2	Seat	1	EPDM/FKM
3	Compressor Assembly[2]	1	PVC/CPVC
4	Bonnet O-ring	1	EPDM/FKM
5	Bonnet Nut	1	PVC/CPVC
6	Bonnet	1	PVC/CPVC
7	Retaining Clip	1	PP
8	Plug O-ring	1	EPDM/FKM
9	Plug	1	PVC/CPVC
10	Union O-ring	2	EPDM/FKM
11	Union Socket End	2	PVC/CPVC
12	Union SR Threaded End	2	PVC/CPVC

1 - Body Includes: Body (1), Spigot Adapters (2), SS Collars (2)
- Flange Body Includes: Body (1), Spigot Hubs (2), Flange Rings (2)
- Union Body Includes: Body (1), Spigot Ends (2), Nuts (2)

2 - Compressor Assembly Includes: Compressor (1), Weight (1), Compressor Plug (1)

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 2"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0-
	3" - 4"	PVC	90 (.70)	85 (.62)	75 (.52)	60 (.41)	40 (.30)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	90 (.70)	85 (.62)	80 (.55)	75 (.52)	70 (.48)	60 (.41)	50 (.34)	45 (.31)	40 (.30)	35 (.24)	30 (.21)	-0-

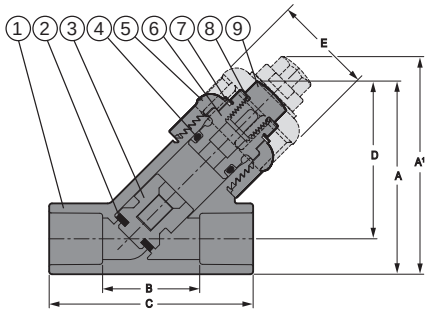
C_V Values

Size	Values
1/2	6.7
3/4	12.6
1	22.9
1-1/4	33.8
1-1/2	50.7
2	79.2
3	235
4	387

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

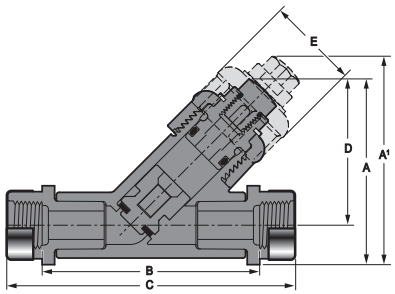
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Y-Check Valves



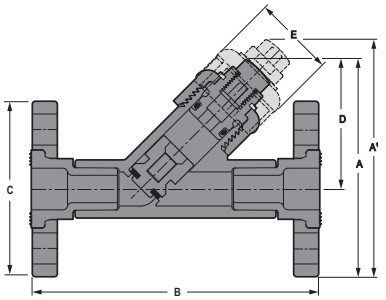
Socket Y-Check Dimensions & Weights

Nominal Size	Dimension Reference (inches, ± 1/16)						Approx. Wt. (Lbs.)	
	A[1]	A	B	C	D	E	Socket	
							PVC	CPVC
1/2	4-1/32	3-5/32	1-19/32	3-11/32	2-19/32	1-5/8	.31	.33
3/4	4-27/32	3-27/32	2	4	3-5/32	2	.50	.53
1	5-5/8	4-1/2	2-15/32	4-23/32	3-5/8	2-1/4	.85	.90
1-1/4	6-1/2	5-5/16	3-1/32	5-9/16	4-9/32	2-13/16	1.21	1.28
1-1/2	7-17/32	6-1/32	3-19/32	6-5/16	4-7/8	3-5/32	1.66	1.76
2	8-15/32	6-29/32	4-31/32	7-1/2	5-1/2	3-23/32	2.96	3.10
3	12-15/32	9-21/32	6-9/16	10-11/32	7-9/16	5-1/4	5.34	5.64
4	15-17/32	12-11/16	8-5/8	13-1/8	9-25/32	6-17/32	9.97	10.45



SR Threaded Y-Check Dimensions & Weights

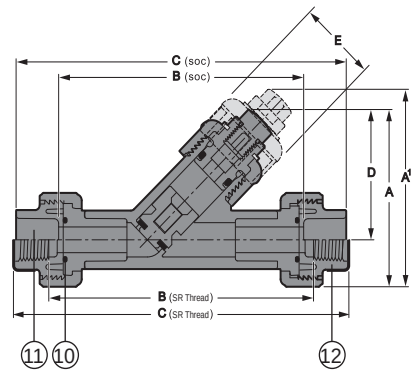
Nominal Size	Dimension Reference (inches, ± 1/16)						Approx. Wt. (Lbs.)	
	A[1]	A	B	C	D	E	SR Threaded	
							PVC	CPVC
1/2	4-5/32	3-9/32	3-27/32	5-1/8	2-19/32	1-5/8	.31	.33
3/4	5	4	4-3/4	5-31/32	3-5/32	2	.50	.53
1	5-25/32	4-21/32	5-9/32	6-15/16	3-5/8	2-1/4	.85	.90
1-1/4	6-23/32	5-1/2	6-1/4	7-31/32	4-9/32	2-13/16	1.21	1.28
1-1/2	7-25/32	6-9/32	7-5/32	8-7/8	4-7/8	3-5/32	1.66	1.76
2	8-3/4	7-3/16	8-5/16	10-1/8	5-1/2	3-23/32	2.96	3.10
3	12-3/4	9-15/16	11-17/32	14-5/16	7-9/16	5-1/4	5.34	5.64
4	15-25/32	12-11/16	14-11/32	17-11/32	9-25/32	6-17/32	9.97	10.45



Flanged Y-Check Dimensions & Weights

Nominal Size	Dimension Reference (inches, ± 1/16)						Approx. Wt. (Lbs.)	
	A[1]	A	B	C	D	E	Flanged	
							PVC	CPVC
1/2	5-7/32	4-11/32	5-23/32	3-1/2	2-19/32	1-5/8	.82	.85
3/4	6-1/16	5-3/32	6-7/16	3-7/8	3-5/32	2	1.23	1.28
1	6-7/8	5-3/4	7-5/32	4-1/4	3-5/8	2-1/4	1.70	1.81
1-1/4	7-25/32	6-9/16	8-1/8	4-5/8	4-9/32	2-13/16	2.40	2.52
1-1/2	8-7/8	7-3/8	9-5/32	5	4-7/8	3-5/32	3.07	3.25
2	10-1/32	8-15/32	10-1/2	5-31/32	5-1/2	3-23/32	5.20	5.42
3	13-29/32	11-5/16	12-1/16	7-1/2	7-9/16	5-1/4	9.44	10.07
4	17-13/32	14-5/16	15-11/16	9-1/16	9-25/32	6-17/32	14.87	16.15

Note: 4" flanged Y-Check use split flange ring



True Union Y-Check Dimensions & Weights

Nominal Size	Dimension Reference (inches, ± 1/16)								Approx. Wt. (Lbs.)	
	A[1]	A	B		C		D	E	Union	
			Socket	SR Thread	Socket	SR Thread			PVC	CPVC
1/2	4-3/8	3-1/2	5-3/32	5-1/2	6-7/8	7	2-19/32	1-5/8	.49	.53
3/4	5-5/16	4-9/32	5-7/8	6-13/32	7-29/32	8	3-5/32	2	.80	.85
1	6-1/16	4-29/32	6-15/32	7-5/16	8-3/4	9	3-5/8	2-1/4	1.13	1.20
1-1/4	7-1/16	5-13/16	7-7/16	8-7/32	10-1/8	10-5/32	4-9/32	2-13/16	1.84	1.90
1-1/2	8-1/8	6-5/8	8-1/4	9	11	11-1/16	4-7/8	3-5/32	2.44	2.52
2	9-7/32	7-5/8	9-13/32	10-13/16	12-7/16	12-13/16	5-1/2	3-23/32	4.33	4.45
3	13-7/16	10-5/8	13-5/8	15-11/32	17-13/32	18-7/32	7-9/16	5-1/4	10.35	10.55
4	16-3/4	13-5/8	17-3/32	19-9/32	21-21/32	22-5/16	9-25/32	6-17/32	18.51	18.80

Drain Plug Tap Size

Y-Check Size	Tap Size (NPT)
1/2	1/4 - 18
3/4	1/4 - 18
1	3/8 - 18
1-1/4	1/2 - 14

Y-Check Size	Tap Size (NPT)
1-1/2	1-11-1/2
2	1-11-1/2
3	1-11-1/2
4	1-11-1/2

Butterfly Check Valves

Features – PVC, CPVC

This multi-purpose check valve provides an extremely low profile and very quick response to back flow without slamming. Since most all components are internal, Spears® Butterfly Check Valves require no more space than a piece of pipe and fitting. Special design incorporates flexible reinforced elastomer seal for long life and is suitable for mounting in any position for greater versatility. Available in IPS sizes 2" - 12" with Flanged, Spigot, Male Threaded, Grooved Pipe style & Wafer end connections, and 14" - 24" Flanged, Spigot, Grooved & Wafer end connections. Can be custom produced to virtually any standard pipe diameter.

- Chemical Resistant PVC & CPVC Construction
- No Metal Components
- Quick Response Shut-off In Any Position
- Replaceable Internal Components - Choice of Reinforced EPDM or FKM
- Suitable for Horizontal or Vertical Installation
- Sizes 2" - 8" Pressure Rated to 150 psi for water at 73°F
- Sizes 10" - 14" Pressure Rated to 100 psi for water at 73°F
- Sizes 16" Pressure Rated to 70 psi for water at 73°F
- Sizes 18" - 24" Pressure Rated to 50 psi for water at 73°F
- Assembled with Silicone-Free, Water Soluble Lubricants

Sample Engineering Specification

All thermoplastic Check Valves shall be Butterfly design constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell classification 23447. Valves shall be Flanged, Spigot, Male Threaded, Grooved end or Wafer style. All valve seals shall be reinforced EPDM or FKM with replaceable internal components. All 2" - 8" valves shall be pressure rated at 150 psi, all 10" - 14" valves at 100 psi for water at 73°F, 16" valves at 70 psi and all 18" - 24" valves at 50 psi for water at 73°F as manufactured by Spears® Manufacturing Company.

Quick-View Butterfly Check Valve Selection Chart

Valve Size	O-ring Material	PVC Material[1]					Pressure Rating
		Flanged	Spigot	Threaded	Grooved	Wafer	
2	EPDM	5423-020	5427-020	5421A-020	542G-020	5420-020	150 psi Non-Shock Water @73°F
	FKM	5433-020	5437-020	5431A-020	543G-020	5430-020	
2-1/2	EPDM	5423-025	5427-025	5421A-025	542G-025	5420-025	
	FKM	5433-025	5437-025	5431A-025	543G-025	5430-025	
3	EPDM	5423-030	5427-030	5421A-030	542G-030	5420-030	
	FKM	5433-030	5437-030	5431A-030	543G-030	5430-030	
4	EPDM	5423-040	5427-040	5421A-040	542G-040	5420-040	
	FKM	5433-040	5437-040	5431A-040	543G-040	5430-040	
6	EPDM	5423-060	5427-060	5421A-060	542G-060	5420-060	
	FKM	5433-060	5437-060	5431A-060	543G-060	5430-060	
8	EPDM	5423-080	5427-080	5421A-080	542G-080	5420-080	
	FKM	5433-080	5437-080	5431A-080	543G-080	5430-080	
10	EPDM	5423-100	5427-100	5421A-100	542G-100	5420-100	100 psi Non-Shock Water @73°F
	FKM	5433-100	5437100	5431A-100	543G-100	5430-100	
12	EPDM	5423-120	5427-120	5421A-120	542G-120	5420-120	
	FKM	5433-120	5437-120	5431A-120	543G-120	5430-120	
14	EPDM	5423-140	5427-140	N/A	542G-140	5420-140	
	FKM	5433-140	5437-140	N/A	543G-140	5430-140	
16	EPDM	5423-160	5427-160	N/A	542G-160	5420-160	70 psi
	FKM	5433-160	5437-160	N/A	543G-160	5430-160	
18	EPDM	5423-180	5427-180	N/A	542G-180	5420-180	50 psi Non-Shock Water @73°F
	FKM	5433-180	5437-180	N/A	543G-180	5430-180	
20	EPDM	5423-200	5427-200	N/A	542G-200	5420-200	
	FKM	5433-200	5437-200	N/A	543G-200	5430-200	
24	EPDM	5423-240	5427-240	N/A	542G-240	5420-240	
	FKM	5433-240	5437-240	N/A	543G-240	5430-240	

1: For CPVC valves add the letter "C" following the size code of the part number listed (e.g., 5423-020**C**)

C_V Values

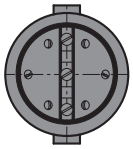
Size	Cv[1]
2	91
2-1/2	123
3	365
4	665
6	1695
8	2990
10	5595
12	8490
14	10,000
16	13,000
18	15,000
20	18,000
24	29,000

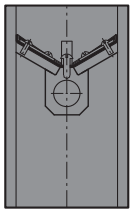
1: Gallons per minute at 1 psi pressure drop.

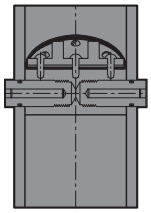
Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	2"- 8"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0-
	10" - 16"	PVC	100 (.70)	90 (.62)	80 (.55)	65 (.38)	50 (.34)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	100 (.70)	95 (.66)	90 (.62)	85 (.59)	80 (.55)	75 (.52)	70 (.48)	65 (.45)	60 (.41)	55 (.38)	50 (.34)	-0-
	18" - 24"	PVC	50 (.34)	45 (.31)	40 (.30)	35 (.24)	30 (.21)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	50 (.34)	47 (.32)	45 (.31)	42 (.83)	40 (.30)	37 (.26)	35 (.24)	30 (.21)	25 (.17)	20 (.14)	15 (.10)	-0-

Butterfly Check Valves

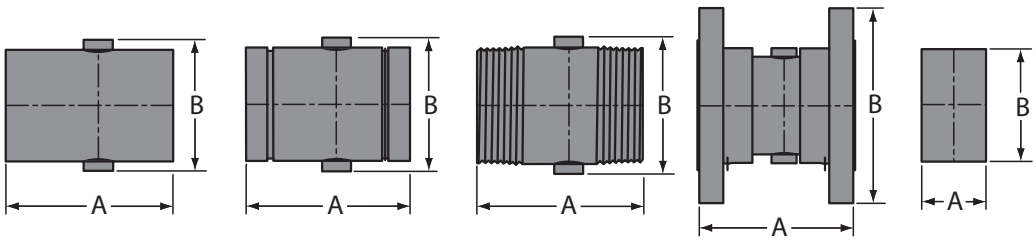






Replacement Parts

No.	Component	Qty.	Material
1	Body	1	PVC/CPVC
2	Flapper	2	PVC/CPVC
3	Flex Seal Gasket	1	EPDM/FKM
4	Flapper Cover	2	PVC/CPVC
5	Flapper Screws	6	PVC/CPVC
6	Hinge Post Screws	3	Encapsulated SS
7	Post Strip	1	PVC/CPVC
8	Post Bolt	3	PVC/CPVC (Steel Reinforced)
9	O-ring	2	EPDM/FKM
10	Hinge Post	1	PVC/CPVC



Dimensions

Size	Spigot (Plain End) Valve, Grooved End Valve & Threaded Valve		Flanged		Wafer		Pressure Rating (psi)
	A	B	A	B	A	B	
2	5-3/4	2-9/16	6-1/16	6	1-3/4	4	150
2-1/2	5-3/4	3-3/32	6-1/8	7	2-3/8	4-3/4	150
3	5-3/4	4-1/32	6-1/4	7-1/2	2-3/4	5-1/4	150
4	6-3/4	4-13/16	7-1/4	9	3-5/8	6-5/8	150
6	10-1/2	7-9/32	11-3/8	11	4-1/4	8-5/8	150
8	14	10-7/32	14-9/16	13-1/2	6	11	150
10	16	11-31/32	17-3/8	16	10	13-1/4	100
12	16	14-1/32	17-1/4	19	12	16	100
14	18	14-3/4	20	21	13	17-5/8	100
16	19-3/4	16-17/32	21-1/4	23-1/2	13-1/2	20-1/8	70
18	26-1/2	19-31/32	27	25	15-1/2	21-1/2	50
20	28-7/8	21-25/32	40-7/8	27-1/2	17	23-3/4	50
24	29-7/8	25-21/32	43-7/8	32	19	24	50

As a general guideline, Opening & Closing Pressures will range from .2 to .5 psi for horizontal applications. Opening pressure tends to decrease in larger size valves. Valves installed in vertical up-flow applications will require slightly higher pressures.

General Installation Information

Butterfly Check Valve seating may be affected by normal system turbulence. Valves should be installed at least 5 pipe diameters away from any fitting. If used as a foot valve, do not place near bottom of a tank. Butterfly type check valves should not be used in continuous cycling applications, such as with reciprocating pumps. This can result in premature failure of sealing membrane. In horizontal installations, always orient the Hinge Post Bolts visible on the external body in a vertical (top and bottom) position, perpendicular to flow. In vertical installations downstream from an elbow, flow velocities can be higher on the outer radius of the elbow. To avoid uneven butterfly plate loading, the Hinge Post Bolts should align with crotch and outer radius of elbow and **NOT** from side to side of the elbow.

Notes: Flanged valves are designed for mounting between two (2) ANSI Class 125/150 bolt pattern flanges using user supplied 1/8" full-faced gaskets, bolts, nuts and flat washers. Male thread ends are standard NPT tapered. Grooved ends are for use with mechanical coupler designed for thermoplastic pipe.

Sample Engineering Specification

All thermoplastic Diaphragm Check Valves shall be Diaphragm design constructed from PVC Type 1, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447. Valves shall be socket or threaded ends. All diaphragms shall be Santoprene™ TPE material. Valves shall be pressure rated at 150 psi full-flow (open), 100 psi back pressure (closed) for water @ 73°F, as manufactured by Spears® Manufacturing Company.

Features – PVC, CPVC

Spears® Diaphragm Check Valves do not depend on gravity, springs, or even reverse flow to seat. Resilient thermoplastic elastomer (TPE) diaphragm is the only moving component, which automatically seats when flow stops. No sticking, no chatter. This specialty elastomer exhibits high flex and tear resistance to provide excellent durability and long life. Valves are available in PVC and CPVC material size of 3/4" with socket and threaded end connections.

- "Normally Closed" operation is excellent for applications with low seating pressure
- Low cracking pressure, 1 to 1-1/2 psi
- Leak-free, silent operation
- Installs just like a Union – in ANY position
- Pressure rated to 150 psi full-flow (open), 100 psi back pressure (closed) for water @ 73°F
- Santoprene™ TPE diaphragm seat provides extended life and durability – fully serviceable and replaceable
- All materials are NSF® Certified for use with potable water

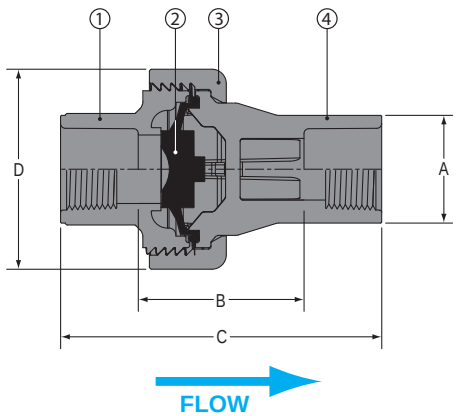
Quick-View Diaphragm Check Valve Selection Chart

Valve Size	Seat Material	PVC Material[1]		Presure Rating
		Socket	Threaded	
3/4	SANTOPRENE™	6562-007	6561-007	150 psi @ 73°F Full Flow (open) 100 psi Back Pressure

1: For CPVC Diaphragm Check Valve, add the letter "C" to the part number (e.g. 6562-007**C**)

Replacement Parts

No.	Component	Qty	Material
1	Body Inlet	1	PVC/CPVC
2	Diaphragm	1	Santoprene™ Rubber
3	Nut	1	PVC/CPVC
4	Body Outlet	1	PVC/CPVC



Dimensions & Weights

Nominal Size	Dimension Reference (inches, ±1/16)					Approx. Wt. (Lbs.)	
	A	B		C	D		
		Socket	Threaded			PVC	CPVC
3/4	1-7/16	2-1/8	2-5/8	4-1/8	2-21/32	.32	.34

NOTE: Check valves **MUST** be installed with the valve's **FLOW** arrow pointing in the direction of the flow. Flow velocity should not exceed 5 ft./sec. Do not use Union Nut to draw together system components. Using a strap wrench, tighten hand-tight plus no more than 1/16 turn. Do not use conventional pipe wrenches.

Santoprene™ is a trademark of Exxon Mobil Corporation

In-Line Adjustable Spring Check Valves

Features - PVC

Adjustable feature allows control of back pressure in system, reduces water hammer, and prevents siphoning. Easily adjusts to hold back from 5 to 32 feet of pressure head, 1 psi (2.3 feet of head) for each full turn of the adjustment screw. Ideal for landscape and irrigation applications, quickly installs with space saving in-line design.

- 2 - 14 lbs. Adjustable Spring Tension (5 to 32 feet of head) Factory Preset to Approx. 5 psi (12 feet of head)
- Stainless Steel Adjustment Spring with EPDM Seat
- Pressure Rated to 200 psi for Water @ 73°F
- Standard Unit Available in 1/2", 3/4", 1" & 1/2" x 3/4" with Fipt Inlet x Mipt Outlet Configuration
- Plus, Popular Configuration Options of 1/2" Mipt Inlet x Fipt Outlet & 3/4" Fipt Inlet x Fipt Outlet

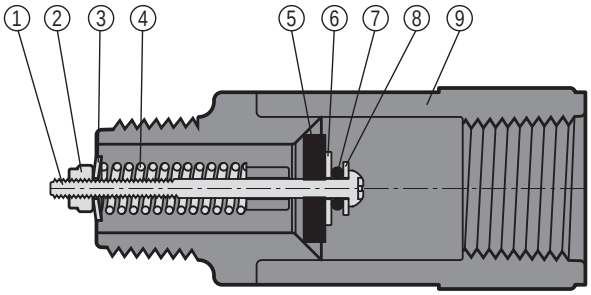
Sample Engineering Specification

All thermoplastic check valves shall be Adjustable Spring Check type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454. All Valve Seats shall be EPDM. All valves shall have external Arrow Flow Indicator. All valves shall be pressure rated to 200 psi water at 73°F, as manufactured by Spears® Manufacturing Company.

Quick-View Valve Selection Chart

Standard Unit - Female Inlet x Male Outlet		
Size	**Part Number**	**Configuration**
1/2	S1102-05	Fipt x Mipt (Inlet x Outlet)
3/4	S1102-07	Fipt x Mipt (Inlet x Outlet)
1	S1102-10	Fipt x Mipt (Inlet x Outlet)
1/2 x 3/4	S1102-05-07	Fipt x Mipt (Inlet x Outlet)
Male Inlet x Female Outlet Option		
Size	**Part Number**	**Configuration**
1/2	S1101-05	Mipt x Fipt (Inlet x Outlet)
Female Inlet x Female Outlet Option		
Size	**Part Number**	**Configuration**
3/4	S1100-07	Fipt x Fipt (Inlet x Outlet)

In-Line Adjustable Spring Check Valves



Replacement Parts

No.	Component	Qty.	Material
1	Screw	1	Stainless Steel
2	Nut	1	Stainless Steel
3	Belleville Washer	1	Stainless Steel
4	Spring	1	Stainless Steel
5	Seat	1	EPDM
6	Washer - A	1	Stainless Steel
7	O-ring	1	EPDM
8	Washer - B	1	Stainless Steel
9	Body	1	PVC

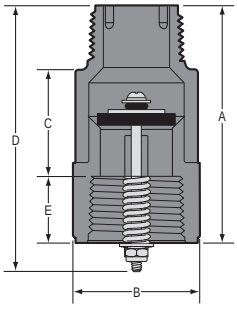


FIG. I

Standard Unit Female Inlet x Male Outlet

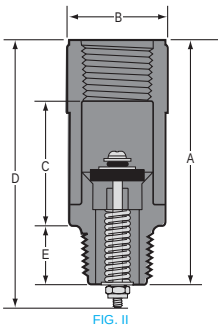


FIG. II

Male Inlet x Female Outlet Option

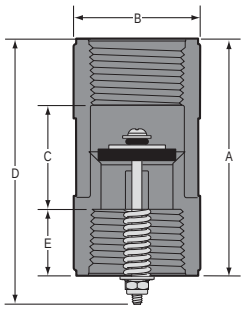


FIG. III

Female Inlet x Female Outlet Option

Dimensions

SIZE	INLET X OUTLET	A ± 1/16	B ± 1/16	C ± 1/16	D ± 1/16	E ± 1/16	FIG.
1/2	FIPT X MIPT	2-5/8	1-3/16	1-3/16	2-3/4	3/4	I
3/4	FIPT X MIPT	2-5/8	1-3/8	1-3/16	2-15/16	3/4	I
1	FIPT X MIPT	3-3/16	1-11/16	1-7/16	3-7/16	7/8	I
1/2 x 3/4	FIPT X MIPT	2-5/8	1-3/8	1-3/16	2-15/16	3/4	I
1/2	MIPT X FIPT	2-7/8	1-3/16	1-7/16	3-1/8	3/4	II
3/4	FIPT X FIPT	2-5/8	1-3/8	1-3/16	2-15/16	3/4	III

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2"-1"	PVC	200 (1.38)	135 (.93)	120 (.83)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)

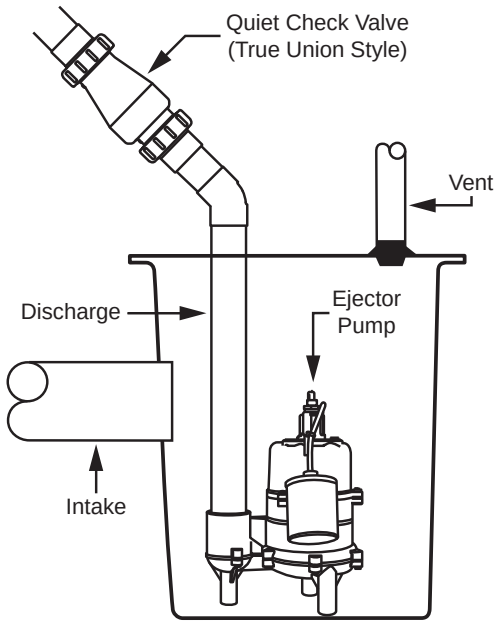
Eliminates Noise in Sump Pump and Sewage Ejector Check Valve Operation

Spears® Quiet Check Valve has been designed to provide quiet operation in sump pump or sewage ejector pump systems typically found in home basements. The back flow of the water column in the discharge pipe can slam conventional check valves closed, producing a disturbing "thump" when the pump shuts off. The Quiet Check Valve uses a spring controlled rate of closing to prevent slamming and eliminates the noise.

Each Spears® Quiet Check Valve contains both regular socket ends for direct solvent cement connection of the valve and True Union style end connectors for easy valve removal or replacement.

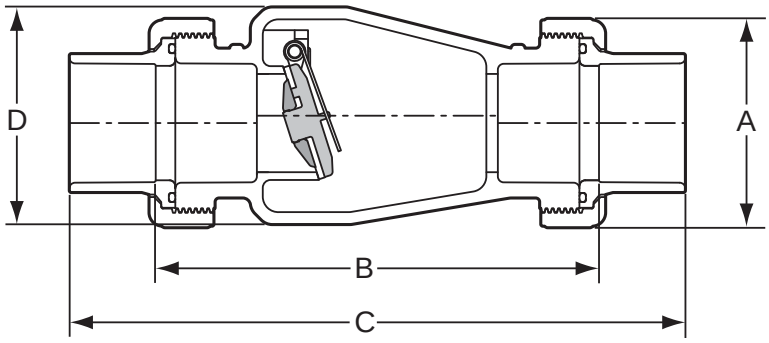
Produced in both 1-1/2" and 2" nominal sizes, the 2" size is the minimum recommended for a sewage discharge system (i.e., sewage ejector pump) while the 1-1/2" size can be used in an effluent system (i.e., sump pump) discharge line to prevent back flow of liquid into sump basin.

Pressure Rating @ 73°F (23°C), Water
Full Flow (open) 150 psi
Back Pressure (closed) 75 psi
Maximum Service Temperature
140°F (60°C)
Temperature/Pressure De-ratings Apply

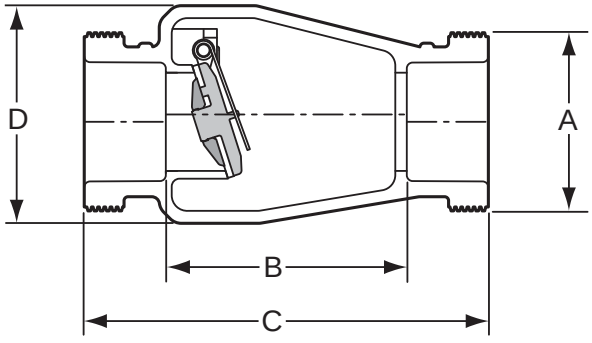


Typical Application

Technical Information



True Union Socket Connection



Direct Socket Connection

FLOW

True Union Socket Connection

Part Number	Size	A	B	C	D
8622-015	1-1/2	3-3/8	7-1/8	9-15/16	3-1/2
8622-020	2	3-3/4	8-3/4	11-13/16	4-1/2

Direct Socket Connection

Part Number	Size	A	B	C	D
8622-015	1-1/2	2-3/4	3-13/16	6-1/2	3-1/2
8622-020	2	3-3/8	5-3/16	8	4-1/2

Note: *Includes Both True Union Sockets for Easy Servicing and Direct Socket Connection for Installation in Confined Space*

The check valve should be installed 12–18" above the pump discharge, or as recommended by the pump system manufacturer. Be sure check valve installation complies with local codes.

The Quiet Check Valve may be installed in either horizontal or vertical position. Check pump system manufacturer's recommendations for horizontal, vertical or angled positioning of check valve in discharge line. In horizontal installations, orient valve according to "This Side Up" marking for best operation. In all installations, valve **MUST** *be installed in proper flow direction as indicated by the flow arrow on body.*

Backwater Valves

Basic Valve

Features - PVC Gray

Backwater Valves are designed to prevent backflow in numerous applications where easy service access for maintenance and cleaning is needed. Excellent for use in sanitary or storm sewer drainage systems to prevent waste back up due to inadequate drainage, for balancing multi-level ponds, aquaculture features or storage tank systems, and many other applications. Spears® Backwater Valve has been engineered for improved function and easier service, especially in buried service with use of optional Service-Access Extension Kit.

Valve with Extension Kit

- All PVC Construction with EPDM Flapper Seal
- Threaded Top Plug for Convenient Service
- Simple Snap-In Internal Flapper Assembly for Easy Replacement
- Optional Factory Assembled Service-Access Extension Kits - External Housing with Internal Extension for Convenient Removal, Inspection or Replacement
- Optional Extension Components Kits for Assembly with User-Supplied Pipe
- Available in Sizes 2", 3", 4" and 6" with Socket Ends
- Direct Connection to ASTM D 2665 PVC DWV or other IPS size pipe. Spears® IPS x Sewer Adapters Available for Connection to ASTM 3034 Sewer
- Conforms to ASME/ANSI A112.14.1 for Backwater Valves
- Pressure Rated to 43 psi (100 feet of head) @ 73°F

Sample Engineering Specification

All thermoplastic valves shall be Backwater type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454. All Valve Seats shall be EPDM. All valves shall have external Arrow Flow Indicator. All valves shall be pressure rated to 43 psi (100 feet of Head) for water @ 73°F as manufactured by Spears® Manufacturing Company.

PVC Service-Access Extension Kit Options:

Available as a complete unit, with or without valve, factory assembled to internal flap assembly, extension pipe, and external extension housing with top access adapter in convenient increments of 12", 16", 20", 24", 36", and 48" (measured from top of valve to top of extension). All extension kits can be cut shorter in the field for custom fits. Also available as Extension Components Kits, with or without valve for assembly with user-supplied Class 125 or Schedule 40 pipe. Kits without valve require use of existing valve top Access Plug, all kits require solvent cement assembly to valve. Contact Spears® for pricing on custom cut lengths.

Quick-View Backwater Valve Selection Chart Standard Valve

Valve Size	Seat Material	PVC Material	Pressure Rating
		Socket	
2	EPDM	S275P	43 psi (100 feet of Head)
3	EPDM	S375P	
4	EPDM	S475P	
6	EPDM	S675P	

Quick View Extension Components Kit Options

Extension Adapters and Flap Assembly with or without valve. Must be assembled with user-supplied Class 125 or Schedule 40 Pipe.

Valve Size	Socket Valve With Extension Component Kit	Extension Component Kit Only	Pressure Rating
2	S275P-AK	S275P-ECK	43 psi (100 feet of head)
3	S375P-AK	S375P-ECK	
4	S475P-AK	S475P-ECK	
6	S675P-AK	S675P-ECK	

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Backwater Valves

Quick View Backwater Valves with Extension Kit to Premade Lengths

Socket Valve with complete Extension Assembly in precut lengths.

Valve x Extension Size[1]	Socket Valve With Extension	Valve x Extension Size[1]	Socket Valve With Extension	Pressure Rating
2 x 12HT	S275P-120	4 x 12HT	S475P-120	43 psi (100 feet of head)
2 x 16HT	S273P-160	4 x 16HT	S473P-160	
2 x 20HT	S275P-200	4 x 20HT	S475P-200	
2 x 24HT	S275P-240	4 x 24HT	S475P-240	
2 x 36HT	S275P-360	4 x 36HT	S475P-360	
2 x 48HT	S275P-480	4 x 48HT	S475P-480	
3 x 12HT	S375P-120	6 x 12HT	S675P-120	
3 x 16HT	S373P-160	6 x 16HT	S673P-160	
3 x 20HT	S375P-200	6 x 20HT	S675P-200	
3 x 24HT	S375P-240	6 x 24HT	S675P-240	
3 x 36HT	S375P-360	6 x 36HT	S675P-360	
3 x 48HT	S375P-480	6 x 48HT	S675P-480	

1 - Size designates nominal valve size x extension height (HT-top of valve to top of extension, inches).

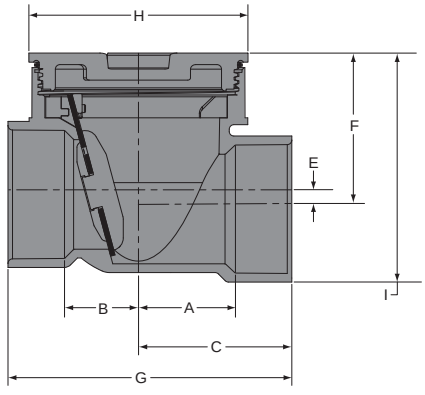
Quick View Service Access Extension Kit Only In Premade Lengths (valve not included)

Extension Assembly in precut lengths. Use existing valve top Access Plug.

Size[1]	Premade Extension	Size[1]	Premade Extension	Pressure Rating
2 x 12HT	SAEK-020-120	4 x 12HT	SAEK-040-120	43 psi (100 feet of head)
2 x 16HT	SAEK-020-160	4 x 16HT	SAEK-040-160	
2 x 20HT	SAEK-020-200	4 x 20HT	SAEK-040-200	
2 x 24HT	SAEK-020-240	4 x 24HT	SAEK-040-240	
2 x 36HT	SAEK-020-360	4 x 36HT	SAEK-040-360	
2 x 48HT	SAEK-020-480	4 x 48HT	SAEK-040-480	
3 x 12HT	SAEK-030-120	6 x 12HT	SAEK-060-120	
3 x 16HT	SAEK-030-160	6 x 16HT	SAEK-060-160	
3 x 20HT	SAEK-030-200	6 x 20HT	SAEK-060-200	
3 x 24HT	SAEK-030-240	6 x 24HT	SAEK-060-240	
3 x 36HT	SAEK-030-360	6 x 36HT	SAEK-060-360	
3 x 48HT	SAEK-030-480	6 x 48HT	SAEK-060-480	

1 - Size designates nominal valve size x extension height (HT-top of valve to top of extension, inches). All extension kits can be cut shorter in the field for custom fits.

STANDARD VALVE



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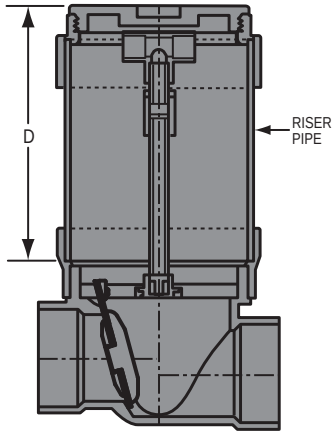
Standard Valve Dimensions

Size	A	B	C	E	F	G	H	I
2	1-13/16	1-3/4	2-5/8	5/16	3-1/4	5-9/32	4-3/16	4-9/16
3	2-5/8	2	4-3/16	13/32	4-1/8	7-3/4	6	6-1/8
4	3-5/8	3-3/4	5-7/16	23/32	5-7/16	10-15/16	8-1/4	7-15/16
6	4-3/4	4-5/8	7-3/4	13/16	7-3/16	15-3/8	11-1/4	10-13/16

VALVE WITH EXTENSION KIT



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Valve with Extension Kit Dimensions (Inches)

HEIGHT-D
12
16
20
24
36
48
D = Top of plug Standard Valve to top of plug with Extension

True Union, Spigot, Flanged Diaphragm Valves

Tee x Spigot

Features – PVC, Low Extractable PVC & CPVC

Spears® Tee-Style "Zero-Dead-Leg" Diaphragm Valve design integrates valve and Tee-fitting for direct branch take-off and eliminates the need for tees and reducing fittings normally required for service drops and other tie-ins to the loop. The Tee-Style valve provides a stronger, more compact connection enabling throttling, sampling, draining or diverting of critical process fluids. The "Zero Dead-leg" design is excellent for DI water and other critical applications. Close proximity of valve to mainline minimizes any areas of fluid stagnation by eliminating "dead leg" that can harbor bacterial growth and other contamination. Produced to order with Spigot, Socket & Threaded, or Special Reinforced (SR) Threaded end connection valve sizes 1/2" through 2", and specified Tee Socket connection sizes for virtually any mainline connection size.

Sample Engineering Specification

All lateral branch valve connections shall be made using Tee-style Diaphragm Valves. All valves shall be constructed from PVC, ASTM D 1784 Cell Classification 12454; CPVC Type IV, ASTM D 1784 Cell Classification 23447; or Low Extractable PVC, ASTM D 1784 Cell Classification 12343. Diaphragms shall be EPDM, FKM or elastomer backed, bonded PTFE. All valves with elastomer diaphragms shall be pressure rated to 235 psi and all valves with PTFE diaphragms to 150 psi, for water at 73°F, as manufactured by Spears® Manufacturing Company.

T-Style Valve Advantages

- Chemical & Corrosion Resistant PVC, CPVC or Low Extractable PVC materials
- Minimizes Fluid Stagnation
- Improves Branch Valve Connection Strength
- Simplifies Installation
- Suitable for Vacuum Service (except with PTFE Diaphragms)

Diaphragm Valve Features

- Multi-featured Industrial Grade
- Built-in Position Indicator
- EPDM, FKM, or Elastomer Backed PTFE Diaphragm
- 235 psi Pressure Rating @ 73°F (150 psi for PTFE Diaphragms)
- High Impact Polypropylene Handle
- Fully Serviceable, Replaceable Components

Quick-View Selection Chart

The following Base Part Numbers must be completed according to desired configuration size. Contact Spears® for the appropriate Tee size x Valve size code designations to replace the "xxx" in each.

Diaphragm Material	PVC Base Part Number			Pressure Rating @ 73°F (23°C)
	Spigot	Socket & Threaded	SR Threaded	
EPDM	2727ZD-xxx	2729ZD-xxx	2721ZD-xxxSR	1/2" – 2" 235 psi
FKM	2737ZD-xxx	2739ZD-xxx	2731ZD-xxxSR	
PTFE, EPDM Backing	2797TZD-xxx	2729TZD-xxx	2721TZD-xxxSR	1/2" – 2" 150 psi
PTFE/FKM Backing	2797VTZD-xxx	2739VTZD-xxx	2731VTZD-xxxSR	

Diaphragm Material	CPVC Base Part Number			Pressure Rating @ 73°F (23°C)
	Spigot	Socket & Threaded	SR Threaded	
EPDM	2727ZD-xxxC	2729ZD-xxxC	2721ZD-xxxCSR	1/2" – 2" 235 psi
FKM	2737ZD-xxxC	2739ZD-xxxC	2731ZD-xxxCSR	
PTFE, EPDM Backing	2797TZD-xxxC	2729TZD-xxxC	2721TZD-xxxCSR	1/2" – 2" 150 psi
PTFE/FKM Backing	2797VTZD-xxxC	2739VTZD-xxxC	2731VTZD-xxxCSR	

Diaphragm Material	Low Extracable PVC Base Part Number			Pressure Rating @ 73°F (23°C)
	Spigot	Socket & Threaded	SR Threaded	
EPDM	2727ZD-xxxBL	2729ZD-xxxBL	2721ZD-xxxSRBL	1/2" – 2" 235 psi
FKM	2737ZD-xxxBL	2739ZD-xxxBL	2731ZD-xxxSRBL	
PTFE, EPDM Backing	2797TZD-xxxBL	2729TZD-xxxBL	2721TZD-xxxSRBL	1/2" – 2" 150 psi
PTFE/FKM Backing	2797VTZD-xxxBL	2739VTZD-xxxBL	2731VTZD-xxxSRBL	

Note: Low Extractable PVC Valves are typically used with elastomer backed PTFE Diaphragms to maintain purity in most applications.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

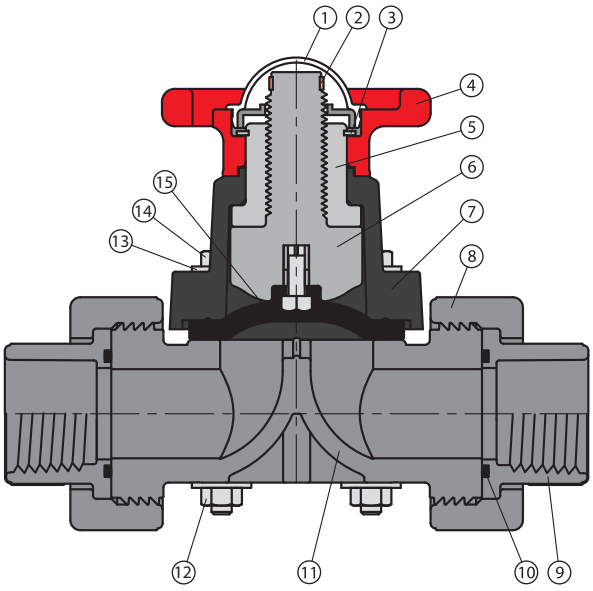
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC, CPVC & PP Diaphragm Valve Quick-View Selection Chart

Size	O-ring Material	Diaphragm Material	PVC Part Number[1]				PP Part Number		Pressure Rating
			Soc/Thd	SR Threaded	Spigot	Flanged	SR Threaded	Flanged	
1/2	EPDM	EPDM	2729-005	2721-005SR	2727-005	2723-005	2721-005PSR		True Union & Spigot Style w/ Elastomer Diaphragms 235 psi Non-Shock Water @ 73°F
		PTFE[2]	2729T-005	2721T-005SR	2797T-005	2793T-005	2721T-005PSR		
	FKM	FKM	2739-005	2731-005SR	2737-005	2733-005	2731-005PSR		
		PTFE[2]	2739VT-005	2731VT-005SR	2797VT-005	2793VT-005	2731VT-005PSR		
3/4	EPDM	EPDM	2729-007	2721-007SR	2727-007	2723-007	2721-007PSR		
		PTFE[2]	2729T-007	2721T-007SR	2797T-007	2793T-007	2721T-007PSR		
	FKM	FKM	2739-007	2731-007SR	2737-007	2733-007	2731-007PSR		
		PTFE[2]	2739VT-007	2731VT-007SR	2797VT-007	2793VT-007	2731VT-007PSR		
1	EPDM	EPDM	2729-010	2721-010SR	2727-010	2723-010	2721-010PSR		
		PTFE[2]	2729T-010	2721T-010SR	2797T-010	2793T-010	2721T-010PSR		
	FKM	FKM	2739-010	2731-010SR	2737-010	2733-010	2731-010PSR		
		PTFE[2]	2739VT-010	2731VT-010SR	2797VT-010	2793VT-010	2731VT-010PSR		
1-1/4	EPDM	EPDM	2729-012	2721-012SR	2727-012	2723-012	2721-012PSR		
		PTFE[2]	2729T-012	2721T-012SR	2797T-012	2793T-012	2721T-012PSR		
	FKM	FKM	2739-012	2731-012SR	2737-012	2733-012	2731-012PSR		
		PTFE[2]	2739VT-012	2731VT-012SR	2797VT-012	2793VT-012	2731VT-012PSR		
1-1/2	EPDM	EPDM	2729-015	2721-015SR	2727-015	2723-015	2721-015PSR		
		PTFE[2]	2729T-015	2721T-015SR	2797T-015	2793T-015	2721T-015PSR		
	FKM	FKM	2739-015	2731-015SR	2737-015	2733-015	2731-015PSR		
		PTFE[2]	2739VT-015	2731VT-015SR	2797VT-015	2793VT-015	2731VT-015PSR		
2	EPDM	EPDM	2729-020	2721-020SR	2727-020	2723-020	2721-020PSR		Flanged Style & Valves w/ PTFE Diaphragms 150 psi Non-Shock Water @ 73°F
		PTFE[2]	2729T-020	2721T-020SR	2797T-020	2793T-020	2721T-020PSR		
	FKM	FKM	2739-020	2731-020SR	2737-020	2733-020	2731-020PSR		
		PTFE[2]	2739VT-020	2731VT-020SR	2797VT-020	2793VT-020	2731VT-020PSR		
2-1/2	EPDM	EPDM				2723-025		2723-025P	
		PTFE[2]				2793T-025		2793T-025P	
	FKM	FKM				2733-025		2733-025P	
		PTFE[2]				2793VT-025		2793VT-025P	
3	EPDM	EPDM				2723-030		2723-030P	
		PTFE[2]				2793T-030		2793T-030P	
	FKM	FKM				2733-030		2733-030P	
		PTFE[2]				2793VT-030		2793VT-030P	
4	EPDM	EPDM				2723-040		2723-040P	
		PTFE[2]				2793T-040		2793T-040P	
	FKM	FKM				2733-040		2733-040P	
		PTFE[2]				2793VT-040		2793VT-040P	
6	EPDM	EPDM				2723-060		2723-060P	100 psi Non-Shock Water @ 73°F
		PTFE[2]				2793T-060		2793T-060P	
	FKM	FKM				2733-060		2733-060P	
		PTFE[2]				2793VT-060		2793VT-060P	
8	EPDM	EPDM				2723-080		2723-080P	75 psi Non-Shock Water @ 73°F
		PTFE[2]				2793T-080		2793T-080P	
	FKM	FKM				2733-080		2733-080P	
		PTFE[2]				2793VT-080		2793VT-080P	

1: For CPVC valves, add the letter "C" to part numbers listed (e.g., 2729-005**C**). Custom end connections available upon request.

2: Elastomer-backed PTFE (standard EPDM backed; special order FKM backed)



Replacement Parts

No.	Component	Qty.	Material
1	Indicator Cover	1	PVC Clear
2	Indicator	1	PE
3	Retaining Ring	1	SS
4	Handwheel	1	PP
5	Compressor Bushing	1	PTFE/CPVC
6	Compressor	1	CPVC
7	Bonnet	1	GFPP
8	Union Nut	1	PVC/CPVC/GFPP
9	Union End	2	PVC/CPVC/GFPP
10	Union End O-ring	2	EPDM/FKM
11	Body	1	PVC/CPVC/GFPP
12	Nut	4-16	SS
13	Flat Washer	8-32	SS
14	Bolt	4-16	SS
15	Diaphragm	1	EPDM/FKM/PTFE

1: Component applicable to True Union style valves only.
2: True Union Socket/Threaded Valve illustrated

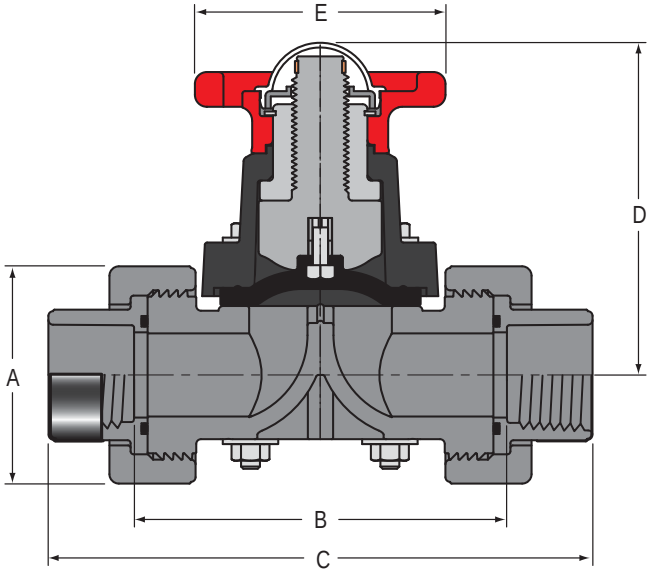
Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 2"	PVC	235 (1.62)	211 (1.45)	150 (1.03)	75 (.52)	50 (.34)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	235 (1.62)	219 (1.51)	170 (1.17)	145 (1.00)	130 (.90)	110 (.76)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0-
		PP	150 (1.03)	105 (.72)	90 (.62)	80 (.55)	75 (.52)	65 (.45)	55 (.38)	50 (.34)	45 (.31)	-0-	-0-	-0-
	2-1/2" - 4"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0-
		PP	150 (1.03)	105 (.72)	90 (.62)	80 (.55)	75 (.52)	65 (.45)	55 (.38)	50 (.34)	45 (.31)	-0-	-0-	-0-
	6"	PVC	100 (.70)	90 (.62)	80 (.55)	65 (.38)	50 (.34)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	100 (.70)	95 (.66)	90 (.62)	85 (.59)	80 (.55)	75 (.52)	70 (.48)	65 (.45)	60 (.41)	55 (.38)	50 (.34)	-0-
		PP	100 (.70)	90 (.62)	85 (.59)	75 (.52)	70 (.48)	60 (.41)	55 (.38)	50 (.34)	45 (.31)	-0-	-0-	-0-
	8"	PVC	75 (.52)	70 (.48)	65 (.45)	60 (.41)	50 (.34)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	75 (.52)	72 (.49)	70 (.48)	67 (.46)	65 (.45)	62 (.43)	60 (.41)	55 (.38)	50 (.34)	45 (.31)	40	-0-
		PP	75 (.52)	62 (.43)	60 (.41)	57 (.39)	55 (.38)	52 (.36)	50 (.34)	47 (.32)	45 (.31)	-0-	-0-	-0-

C_V Values PVC, CPVC & PP

Valve Size	PERCENT OPEN			
	100%	75%	50%	25%
1/2	5.1	4.8	4.2	2.4
3/4	8.0	7.5	6.5	3.8
1	11.5	10.8	9.4	5.4
1-1/4	22.0	20.6	18.0	10.3
1-1/2	28.2	26.4	23.0	13.3
2	52.9	49.6	43.2	24.9
2-1/2	119.0	111.5	97.1	55.9
3	119.0	111.5	97.1	55.9
4	189.2	177.3	154.4	88.9
6	402.2	375.8	327.0	187.5
8	700.0	659.5	573.2	328.4

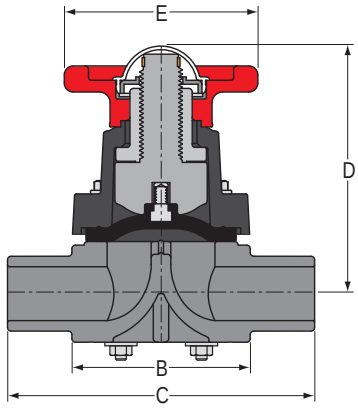
Gallons per minute at 1 psi pressure drop.



Socket, Threaded & SR Threaded End Connectors Dimension & Weights

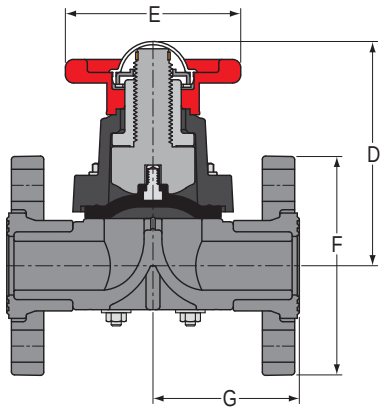
Nominal Size	Dimension Reference (inches, ± 1/16)						Approx. Wt. (Lbs.)	
	A	B[1]	C		D	E	PVC	CPVC
			Socket	Threaded				
1/2	1-15/16	3-7/8	5-9/16	5-3/16	3-11/32	2-7/8	1.12	1.14
3/4	2-1/2	4-1/2	6-7/16	5-15/16	3-3/4	3-1/8	1.37	1.36
1	2-9/16	4-15/16	7-3/16	6-13/16	4-7/16	3-3/8	2.35	2.43
1-1/4	3-5/16	5-1/2	8-7/8	8-1/4	5-5/8	3-7/8	3.91	4.03
1-1/2	3-17/32	6-5/16	9-5/16	8-7/16	5-5/8	4-5/8	4.08	4.21
2	4-7/32	7-1/2	10-9/16	9-1/2	7	6-5/8	7.06	7.25

1: Valve Lay Length.



Spigot Diaphragm Dimensions & Weights

Nominal Size	Dimension Reference (inches, ± 1/16)				Approx. Wt. (Lbs.)	
	B	C	D	E	PVC	CPVC
1/2	2-5/8	4-7/8	3-11/32	2-7/8	.61	.63
3/4	2-3/4	5	3-3/4	3-1/4	.79	.82
1	3-1/8	5-3/8	4-7/16	3-5/16	1.32	1.36
1-1/4	3-3/4	6-1/4	5-5/8	4-19/32	2.41	2.50
1-1/2	3-3/4	6-1/2	5-5/8	4-19/32	2.43	2.52
2	4-3/4	7-3/4	7	5-7/8	4.15	4.43



Flanged Diaphragm Dimensions & Weights

Nominal Size	Dimension Reference (inches, ± 1/16)				Approx. Wt. (Lbs.)	
	D	E	F	G	PVC	CPVC
1/2	3-11/32	2-7/8	3-1/2	2-9/16	.98	1.02
3/4	3-3/4	3-1/4	3-7/8	2-5/8	1.31	1.37
1	4-7/16	3-5/16	4-1/4	2-13/16	2.00	2.08
1-1/4	5-5/8	4-19/32	4-5/8	3-1/4	3.71	3.76
1-1/2	5-5/8	4-19/32	5	3-3/8	3.88	4.04
2	7	5-7/8	6	4	5.59	5.71
2-1/2	10-1/4	8-7/8	7-1/2	5-19/32	15.75	16.43
3	10-1/4	8-7/8	7-1/2	5-19/32	15.75	16.45
4	12-1/4	10-1/2	9	6-5/8	24.44	25.37
6	16-3/4	18-13/32	11	9-3/8	53.90	58.43
8	21	21-19/32	13-1/2	11-5/32	96.28	100.05

Tee-Style "Zero Dead-leg" Diaphragm Valves

Tee x Spigot

Features – PVC, Low Extractable PVC & CPVC

Spears® Tee-Style "Zero-Dead-Leg" Diaphragm Valve design integrates valve and Tee-fitting for direct branch take-off and eliminates the need for tees and reducing fittings normally required for service drops and other tie-ins to the loop. The Tee-Style valve provides a stronger, more compact connection enabling throttling, sampling, draining or diverting of critical process fluids. The "Zero Dead-leg" design is excellent for DI water and other critical applications. Close proximity of valve to mainline minimizes any areas of fluid stagnation by eliminating "dead leg" that can harbor bacterial growth and other contamination. Produced to order with Spigot, Socket & Threaded, or Special Reinforced (SR) Threaded end connection valve sizes 1/2" through 2", and specified Tee Socket connection sizes for virtually any mainline connection size.

Sample Engineering Specification

All lateral branch valve connections shall be made using Tee-style Diaphragm Valves. All valves shall be constructed from PVC, ASTM D 1784 Cell Classification 12454; CPVC Type IV, ASTM D 1784 Cell Classification 23447; or Low Extractable PVC, ASTM D 1784 Cell Classification 12343. Diaphragms shall be EPDM, FKM or elastomer backed, bonded PTFE. All valves with elastomer diaphragms shall be pressure rated to 235 psi and all valves with PTFE diaphragms to 150 psi, for water at 73°F, as manufactured by Spears® Manufacturing Company.

T-Style Valve Advantages

- Chemical & Corrosion Resistant PVC, CPVC or Low Extractable PVC materials
- Minimizes Fluid Stagnation
- Improves Branch Valve Connection Strength
- Simplifies Installation
- Suitable for Vacuum Service (except with PTFE Diaphragms)

Diaphragm Valve Features

- Multi-featured Industrial Grade
- Built-in Position Indicator
- EPDM, FKM, or Elastomer Backed PTFE Diaphragm
- 235 psi Pressure Rating @ 73°F (150 psi for PTFE Diaphragms)
- High Impact Polypropylene Handle
- Fully Serviceable, Replaceable Components

Quick-View Selection Chart

The following Base Part Numbers must be completed according to desired configuration size. Contact Spears® for the appropriate Tee size x Valve size code designations to replace the "xxx" in each.

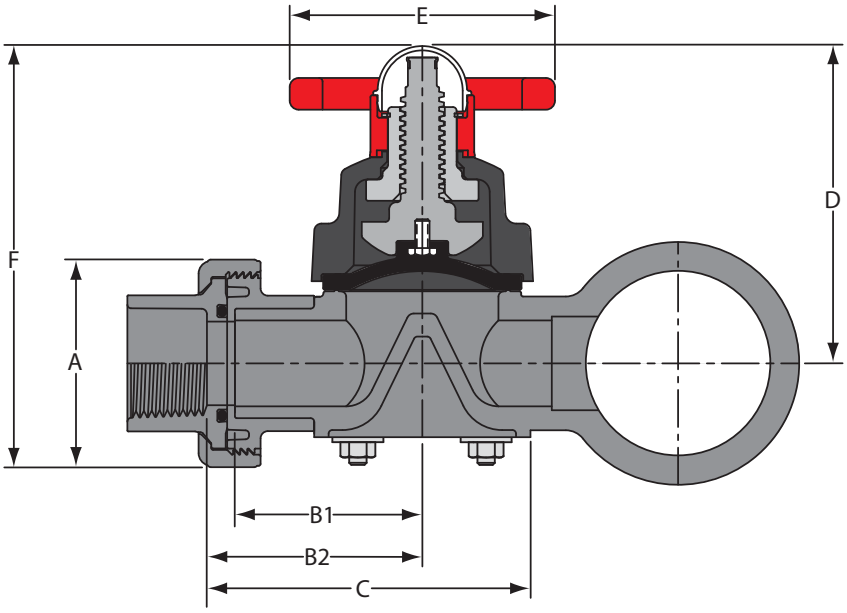
Diaphragm Material	PVC Base Part Number			Pressure Rating @ 73°F (23°C)
	Spigot	Socket & Threaded	SR Threaded	
EPDM	2727ZD-xxx	2729ZD-xxx	2721ZD-xxxSR	1/2" – 2" 235 psi
FKM	2737ZD-xxx	2739ZD-xxx	2731ZD-xxxSR	
PTFE, EPDM Backing	2797TZD-xxx	2729TZD-xxx	2721TZD-xxxSR	1/2" – 2" 150 psi
PTFE/FKM Backing	2797VTZD-xxx	2739VTZD-xxx	2731VTZD-xxxSR	

Diaphragm Material	CPVC Base Part Number			Pressure Rating @ 73°F (23°C)
	Spigot	Socket & Threaded	SR Threaded	
EPDM	2727ZD-xxxC	2729ZD-xxxC	2721ZD-xxxCSR	1/2" – 2" 235 psi
FKM	2737ZD-xxxC	2739ZD-xxxC	2731ZD-xxxCSR	
PTFE, EPDM Backing	2797TZD-xxxC	2729TZD-xxxC	2721TZD-xxxCSR	1/2" – 2" 150 psi
PTFE/FKM Backing	2797VTZD-xxxC	2739VTZD-xxxC	2731VTZD-xxxCSR	

Diaphragm Material	Low Extracable PVC Base Part Number			Pressure Rating @ 73°F (23°C)
	Spigot	Socket & Threaded	SR Threaded	
EPDM	2727ZD-xxxBL	2729ZD-xxxBL	2721ZD-xxxSRBL	1/2" – 2" 235 psi
FKM	2737ZD-xxxBL	2739ZD-xxxBL	2731ZD-xxxSRBL	
PTFE, EPDM Backing	2797TZD-xxxBL	2729TZD-xxxBL	2721TZD-xxxSRBL	1/2" – 2" 150 psi
PTFE/FKM Backing	2797VTZD-xxxBL	2739VTZD-xxxBL	2731VTZD-xxxSRBL	

Note: Low Extractable PVC Valves are typically used with elastomer backed PTFE Diaphragms to maintain purity in most applications.

Tee-Style "Zero Dead-leg" Diaphragm Valves



Dimensions

Nominal Size	Dimension Reference (±1/16)						
	A	Spigot B1	Socket Threaded B2	C	D	E	F
1/2	1-15/16	2-3/16	2-1/2	3-13/16	3-5/16	2-7/8	4-5/16
3/4	2-3/8	2-3/8	2-3/4	4-1/8	3-3/4	3-1/4	4-9/16
1	2-5/8	2-11/16	3-1/16	4-5/8	4-7/16	3-5/16	5-3/4
1-1/4	3-3/16	3-1/8	3-1/2	5-3/8	5-5/8	4-5/8	7-1/4
1-1/2	3-9/16	3-1/4	3-3/4	5-5/8	5-5/8	4-5/8	7-7/16
2	4-5/16	4-7/8	4-3/8	6-3/4	7	5-7/8	9-3/16

Temperature Pressure Rating

Nominal Valve Size	73°F to 100°F	110°F	120°F	130°F	140°F
1/2" - 2"	150	135	110	75	50

Valves have elevated temperature pressure ratings different than pipe, as shown in chart above. Maximum PVC system service temperature is 140°F.

Cv Values

Valve Size	PERCENT OPEN			
	100%	75%	50%	25%
1/2	5.1	4.8	4.2	2.4
3/4	8.0	7.5	6.5	6.5
1	11.5	10.8	9.4	9.4
1-1/4	22.0	20.6	18.0	18.0
1-1/2	28.2	26.4	23.0	23.0
2	52.9	49.6	43.2	43.2

Note: Cv values are for basic Diaphragm Valve only, excluding Tee end connection.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

General Installation Guide

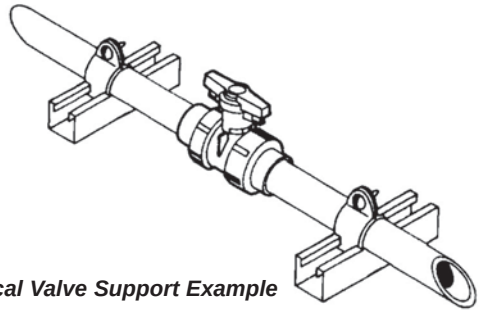
Ease of installation and maintenance is one of the major advantages of using thermoplastic valves. As with any product, certain procedures must be followed for successful installation, service and long life. This section specifies individual installation and maintenance service instructions for Spears® valves. All applicable instructions and procedures should be read thoroughly before starting. Suitability of the intended service application should be determined prior to installation. Please review ***"Material Considerations in Application and System Design"***, in the ***"MATERIALS"*** section of this manual for important additional considerations related valve installations.

Plastic piping systems should be engineered, installed, operated and maintained in accordance with accepted standards and procedures for plastic piping systems. It is absolutely necessary that all design, installation, operation and maintenance personnel be trained in proper handling, installation requirements and precautions for installation and use of plastic piping systems before starting.

Individual valve installation instructions specific to each product type are packaged with product. The following sections of this manual contain safety precautions and procedures for making solvent cement, threaded or flanged joints.

Precautions & Warnings for All Valve, Strainer & Accessories Installations

CAUTION: *The system shall be designed and installed so as not to pull the valve in any direction. Valve and strainers must be supported with conventional piping system support devices.*



Typical Valve Support Example

CAUTION: *All valve connectors and connecting pipe should be inspected for any breaking, chipping, gouging or other visible damage before proceeding. All joining components must be clean and dry. All valves and pipe shall be removed from their packaging or containers and exposed to the environment for a minimum of one hour in order to thermally balance all components. Installation temperatures should be between 40°F and 110°F.*

CAUTION: *All valves with fixed socket end connectors in the body must be installed in the open position to aid in evaporation of solvent vapors which can attack internal components.* ***WARNING: TAKE EXTRA CARE THAT NO PRIMER OR SOLVENT CEMENT IS ALLOWED TO COME IN CONTACT WITH THE BALL OR OTHER INTERNAL VALVE COMPONENTS.***

CAUTION: *Threaded pipe connections require application of a quality grade thread sealant to seal joint assembly. Sealant should be applied to male pipe threads.* ***WARNING: SOME PIPE JOINT COMPOUNDS OR PTFE PASTES MAY CONTAIN SUBSTANCES THAT COULD CAUSE STRESS CRACKING IN THERMOPLASTIC MATERIALS.***

*Spears® Manufacturing Company recommends the use of Spears® **BLUE 75™** thread sealant which has been tested for compatibility with Spears® products. Please follow the sealant manufacturers' application/ installation instructions. Choice of an appropriate thread sealant other than those listed above is at the discretion of the installer.*

CAUTION: ***BEFORE THE VALVE IS CYCLED****, all dirt, sand, grit or other material shall be flushed from the system. This is to prevent scarring of internal components; e.g., ball, cup, wedge, seats, etc.*

WARNING: ***Some Lubricants, including vegetable oils, are known to cause stress cracking in thermoplastic materials.*** *All lubricants should be checked for compatibility with PVC, CPVC or other thermoplastic products. Formulation changes by lubricant manufacturers may alter compatibility of previously acceptable materials and are beyond our control. Choice of lubricant is at the discretion of the installer.*

WARNING: *DO NOT USE COMPRESSED AIR OR GAS TO TEST ANY PVC OR CPVC THERMOPLASTIC PIPING PRODUCT OR SYSTEM, AND DO NOT USE DEVICES PROPELLED BY COMPRESSED AIR OR GAS TO CLEAR SYSTEMS. THESE PRACTICES MAY RESULT IN EXPLOSIVE FRAGMENTATION OF SYSTEM PIPING AND COMPONENTS CAUSING SERIOUS OR FATAL BODILY INJURY. All air must be bled from the system during initial fluid fill. Pressure testing of the system should not be made until all solvent cement joints have properly cured. Initial pressure testing should be made at approximately 10% of the system hydrostatic pressure rating to identify potential problems, prior to testing at higher pressures.*

WARNING: *Systems should not be operated or flushed out at flow velocities greater than 5 feet per second.*

Solvent Cement Welded Joints

Spears® Manufacturing Company recommends following solvent cement manufacturer's recommendations and reading ASTM D 2855, "Standard Practice for Making Solvent-Cemented Joints with Poly Vinyl Chloride (PVC) Pipe and Fittings". This method of joining valves and piping system components is very simple and reliable if procedures are followed correctly. Since variables of temperature, humidity, pipe size, time, and other conditions have a significant effect on solvent cement joints, it is important to understand the principles of each step and make adjustments for actual conditions. Shortcuts or excessive deviations may result in joint failures and / or frozen valve movements.

Safety Precautions

WARNING: **Solvent cements and primers for pipe, fittings and valves are flammable. Extinguish all smoking materials, flames, or other ignition sources in working or storage areas. Be sure to work only in a well-ventilated space. Avoid eye and unnecessary skin contact with all cements, primers or solvents. Ingestion or intentional inhalation of solvent vapors can be harmful or fatal. Additional safety precautions may apply, consult solvent cement manufacturer.**

Selection of Solvent Cement

A wide variety of solvent cements and primers are commercially available. Selection of specific type, grade and consistency of solvent cement should take into account pipe type, size, installation conditions and chemical compatibility of cement and system fluids. Contact solvent cement manufacturer for additional information.

Required Materials

- Saw & miter box or wheel-type cutter
- Pipe deburring & beveling tool or mill file
- Solvent Cement — PVC cement for PVC materials, CPVC cement for CPVC materials; heavy bodied, as manufactured by Spears® Manufacturing Company
- Primer — as manufactured by Spears® Manufacturing Company
- Brush or dauber type cement and primer applicators — select a size no less than 1/2 the pipe diameter (see chart below).
- Use containers — sealable metal or glass to hold cements and primers
- Cotton cleaning rags
- Cleanup solvents — such as tetrahydrofuran (THF) or methylethylketone (MEK)

Recommended Applicator Size for Solvent Cement and Primer

Applicator Type & Size (in.)	Nominal Pipe Size (in.)									
	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	5
Brush*	1/2			1			1-1/2		2	3
Dauber	3/4			1-1/2			Not Recommended			
Roller	Not Recommended							3		

General Procedure Outline

General Preparation

For best results, installation should be made at temperatures between 40°F and 110°F.

All joint components should be inspected for any breaking, chipping, gouging or other visible damage before proceeding. All pipe and fittings should be removed from their packaging or containers and exposed to the installation environment for a minimum of one hour in order to thermally balance all components.

On True Union Ball, Check and Diaphragm valves, remove union nuts and end connectors before priming and cementing connections. With the threads facing the valve, slide the union nut over the pipe to which the end connector socket is to be cemented. Reinstall the valve body and union nuts only after the joint has fully cured.

On valves with fixed socket connections in the body, be sure the valve is in the open position to aid in evaporation of solvent vapors which can attack internal components. **TAKE EXTRA CARE THAT NO PRIMER OR SOLVENT CEMENT IS ALLOWED TO COME IN CONTACT WITH THE BALL OR OTHER INTERNAL VALVE COMPONENTS.**

Step 1: Cut Pipe Square

Pipe ends must be cut square, using a wheel-type cutter or saw & miter box. A fine-toothed hand saw (16-18 teeth / inch) with little or no set is recommended. A power cutoff saw with carbide blade is recommended for high volume cutting.

Step 2: Deburr & Bevel Pipe

Regardless of cutting method used in step 1, burrs are created which must be removed from both the pipe I.D. and O.D. before joining. All pipe ends should be beveled 10° to 15°. Commercially available deburring & beveling tool is recommended, or a mill file may be used.

Step 3: Clean Joint Components

Wipe away all loose dirt and moisture from the pipe O.D. and fitting I.D. with a clean, dry cotton rag. **DO NOT ATTEMPT TO JOIN WET SURFACES.**

Step 4: Check Joint Interference Fit

An interference between pipe and fitting socket is necessary for proper fusion of the joint. To check, lightly insert pipe into fitting socket. **DO NOT FORCE.** Interference between pipe and fitting should occur between 1/3 to 2/3 of the socket depth (full interference fit) and the socket bottom (net fit). Do not use components which improperly mate.

Step 5: Apply Primer

Primer is necessary to penetrate and soften both pipe and fitting socket surfaces in order for the solvent cement to properly bond. **THE MOST FREQUENT CAUSE OF JOINT FAILURES IS INADEQUATE SOLVENT PENETRATION AND SOFTENING OF BONDING SURFACES DURING THE WELDING OPERATION.**

1. Using a brush or applicator size no less than 1/2 the pipe diameter, apply a liberal coat of primer with a scrubbing motion to the fitting socket until the surface is softened and semi-fluid. This may take 5 to 15 seconds depending on size and temperature (larger diameters and lower temperatures will increase required time).
2. Apply primer to pipe in the same manner, extending application area to slightly more than the insertion depth into the fitting socket.
3. Apply a second coat to both the fitting socket and the pipe.
4. Check penetration and softening by scraping the primed surfaces. A few thousandths of the semi-fluid surface should be easily removed. Repeat primer application if necessary.

Step 6: Apply Solvent Cement

Solvent cement must be applied **IMMEDIATELY** to primed surfaces before the primer dries in an alternating 3-coat application. Using a brush or applicator size no less than 1/2 the pipe diameter, apply a liberal coat of solvent cement to the primed pipe surface, then apply a light to medium coat to the primed fitting socket. If a "net fit" was experienced during dry fit check (Step 4), apply an additional coat again to the pipe surface. BE SURE TO USE A VERY LIBERAL AMOUNT OF SOLVENT CEMENT ON PIPE.

VALVE INSTALLATION CAUTION: TAKE EXTRA CARE THAT NO PRIMER OR SOLVENT CEMENT IS ALLOWED TO CONTACT THE BALL OR OTHER INTERNAL VALVE COMPONENTS.

Step 7: Join Components

IMMEDIATELY following application of cement and before it starts to set, insert the pipe into the fitting socket with a one-quarter turn, twisting motion to evenly distribute cement within the joint. A full bead of cement should form around the circumference of the joint. Hold joint together for approximately 30 seconds to make sure the pipe does not move or back out of the socket.

CAUTION: *ABSENCE OF BEAD FORMATION, VOIDS, OR GAPS IN THE BEAD ARE A SIGN OF INSUFFICIENT CEMENT APPLICATION. IF SUCH IS OBSERVED, IMMEDIATELY PULL THE JOINT APART AND REAPPLY AN ADEQUATE AMOUNT OF CEMENT.*

Step 8: Remove Excess Cement

Using a cloth, wipe clean all excess cement from the exterior juncture of the pipe and fitting.

Step 9: Initial Set Time

The joint must not be handled or moved for a minimum of 2 minutes, after which the joint must be handled carefully until the cement has gone through a set period. Recommended minimum set time:

30 minutes minimum at 60° to 100°F (15° to 40°C)
1 hour minimum at 40° to 60°F (5° to 15°C)
2 hours minimum at 20° to 40°F (-5° to 5°C)
4 hours minimum at 0° to 20°F (-20° to -5°C)

Step 10: Joint Cure Time

The joint must adequately cure prior to use (see "Joint Cure Schedule" table below). Required cure time depends on temperature, pipe diameter, and pressure application. The following table is based on the guidelines of ASTM D 2855, "Standard Practice for Making Solvent-Cemented Joints with Poly Vinyl Chloride (PVC) Pipe and Fittings". It is the user's responsibility and risk in determining that the joint has properly cured for handling, testing, and use.

Joint Cure Schedule

Temperature	60° - 100°F		40° - 60°F		20° - 40°F		10° - 20°F	
Nominal Pipe Size (in.)	Test Pressure (psi) 0-180	181-315	Test Pressure (psi) 0-180	181-315	Test Pressure (psi) 0-180	181-315	Test Pressure (psi) 0-180	181-315
1/2 to 1-1/4	1 hour	6 hours	2 hours	12 hours	6 hours	36 hours	8 hours	48 hours
1-1/2 to 3	2 hours	12 hours	4 hours	24 hours	12 hours	72 hours	16 hours	96 hours
3-1/2 to 5	6 hours	18 hours	12 hours	36 hours	36 hours	4 days	72 hours	8 days
6 to 8	8 hours	24 hours	16 hours	48 hours	3 days	9 days	4 days	12 days

NOTE: *Extreme caution should be used when solvent cementing joints at temperatures below 10°F, and many variables exist at temperatures below 20°F. Relative humidity greater than 50% will increase required cure times specified. Consult solvent cement manufacturer for additional information.*

Threaded Connections

Threaded joints are used where piping system dismantling for occasional cleaning or modification is anticipated. Since threading reduces the effective wall thickness of pipe, pressure ratings of the pipe are reduced to one-half that of unthreaded pipe using solvent cement welded joints. Valves, however, have individual pressure ratings substantially different from that of pipe. As a result, no reduction in the valve's specified pressure rating is necessary for threaded connections. Threaded systems should be made with Schedule 80 pipe only, threaded with an ANSI general purpose tapered pipe thread (NPT). Schedule 40 pipe should not be threaded.

General Procedure Outline

Step 1: Apply Joint Sealant

Threaded connections require application of a quality grade thread sealant to seal joint assembly.

WARNING: ***SOME PIPE JOINT COMPOUNDS OR PTFE PASTES MAY CONTAIN SUBSTANCES THAT COULD CAUSE STRESS CRACKING IN THERMOPLASTIC MATERIALS. Spears® Manufacturing Company recommends the use of Spears® BLUE 75™*** thread sealant which has been tested for compatibility with Spears® products. Please follow the sealant manufacturers' application / installation instructions. Choice of an appropriate thread sealant other than those listed above is at the discretion of the installer.

Step 2: Assemble Joint by Hand

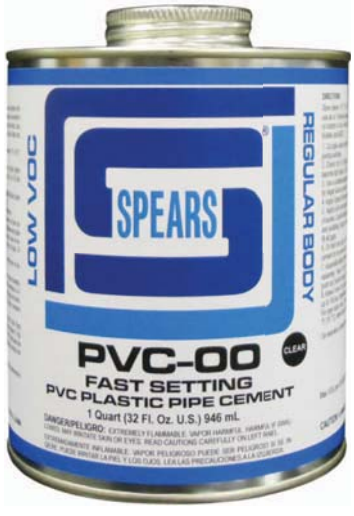
Threaded pipe and valves or fittings should be initially assembled "finger tight" (just enough to fully engage thread clearance).

Step 3: Strap Wrench Make-Up

Threaded plastic pipe and fitting components should always be installed using commercially available strap wrenches. Do not use conventional pipe wrenches which can damage plastic piping materials.

WARNING: ***THE SINGLE MOST COMMON CAUSE OF THREADED JOINT FAILURE IS OVER TIGHTENING.*** *Tapered pipe threads produce radial stress in female fittings. Over tightening can exceed the stress limits of thermoplastic materials, resulting in split fittings.*

Apply strap wrench make-up of ***no more than one to two turns*** beyond finger tight thread engagement. Care should be taken in final positioning so as to avoid the need to "back-up" the wrenched assembly.



Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Flanged Connections

Flanges are used extensively for connections where removable system components are desired. Such includes periodic systen servicing, anticipated system modification or add-on, and temporary component hookups. Flanges are also the standard con nection for industrial butterfly type valves.

Pressure Ratings

Plastic pipe flanges are designed for system maximum internal pressures of 150 psi, water at 73°F, which must be taken into consideration when using flanges with higher pressure rated components, such as pipe or valves. As with all thermoplastic piping materials, pressure rating is a function of temperature. Refer to ***"Temperature Pressure Rating for 150 psi Flanges"*** chart below and that specified for individual products. Certain variations may exist according to product type and size.

Bolt Holes & Pattern

Bolt patterns and number of bolt holes are the same as Class 150 metal flanges per ANSI B16.5.

Gaskets

Full faced, 1/8" thick elastomer gaskets with a Shore "A" Durometer of approximately 70 is recommended.

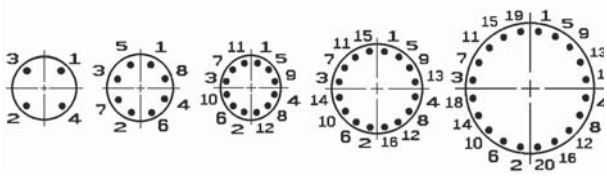
Bolt Torque

Recommended Bolt torque requirements are shown below. Threads should be clean and well lubricated. Actual field conditions may require variations in these recommendations. **CAUTION: UNNECESSARY OVER TORQUING WILL DAMAGE THE FLANGE.**

Flange Size (in.)	Recommended Torque (ft. lbs.)
1/2 - 1-1/2	12
2 - 4	25
5	30
6 - 8	40
10	64
12	95
14 - 24	110

Torque Sequence

Bolts should be tightened in a 180° opposing pattern Recommended bolt torque sequence is shown in the following table.



General Procedure Outline

Once a flange is attached to the pipe or valve, the method o joining two flanges is as follows:

Step 1: Piping runs joined to the flanges must be installed i a straight line position to the flange to avoid stress a the flange due to misalignment. Piping must also b secured and supported to prevent lateral movemen which can create stress and damage the flange.

Step 2: With gasket in place, align the bolt holes of th mating flanges by rotating the ring into position (Consideration should be given to alignment of One Piece Flange prior to joining with pipe.)

Step 3: Insert all bolts, washers (two standard flat washer per bolt), and nuts.

Step 4: Make sure the faces of the mating surfaces are flus against gasket prior to bolting down the flanges.

Step 5: Tighten the nuts by hand until they are snug Establish uniform pressure over the flange face b tightening the bolts in 5 ft.-lbs. increments accordin to the sequence shown in the above table followin a 180° opposing sequence.

Step 6: Care must be taken to avoid "bending" the flang when joining a Spears® flange to a "raised face flange, or a wafer-style valve. Do not use bolts t bring together improperly mated flanges.

Temperature Pressure Rating

System Operating Temperature °F (°C)		100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Flange Pressure Rating psi (MPa)	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
	CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)
	PP	150 (1.03)	105 (.72)	90 (.62)	80 (.55)	65 (.45)	50 (.34)	45 (.31)	30 (.21)	20 (.14)	-0- (-0-)	-0- (-0-)	-0- (-0-)

Valve Service & Replacement Kits

For easy servicing and extended valve life, Spears® provides numerous maintenance repair kits and replaceable components for all repairable valves. Repair Kits generally include applicable seats, O-ring seals, diaphragms and other components typically subjected to normal operational wear.

Full Cartridge Replacement Kits are available for all True Union style ball valves and ball check valves. These include complete valve assembly, less union nuts and end connectors. Replacement Cartridges can be directly installed in place of existing valve unit using existing union nuts and end connectors.

Individual valve replacement parts may be ordered from the factory. Complete maintenance service instructions for each valve are available. Please contact Spears® Technical Services Department.

True Union 2000 Industrial Ball Valve
Seat & O-ring Repair Kit

All kits include PTFE Seats (2), End Connector O-rings (2), Seal Carrier O-ring (1), Stem Bushing (1) and Stem O-rings (2). Sizes 2-1/2" & larger includes Seat O-rings (2).

Size	Part Number	
	w/EPDM O-rings	w/FKM O-rings
1/2	TU2-ERK-005	TU2-VRK-005
3/4	TU2-ERK-007	TU2-VRK-007
1	TU2-ERK-010	TU2-VRK-010
1-1/4	TU2-ERK-012	TU2-VRK-012
1-1/2	TU2-ERK-015	TU2-VRK-015
2	TU2-ERK-020	TU2-VRK-020
2-1/2 & 3	TU2-ERK-030	TU2-VRK-030
4	TU2-ERK-040	TU2-VRK-040
6	TU2-ERK-060	TU2-VRK-060

True Union 2000 Industrial Ball Valve
Cartridge Replacement Kit

Includes valve assembly, less union nuts and end connectors.

Size	PVC Part Number[1]	
	w/EPDM O-rings	w/FKM O-rings
1/2	1820-005	1830-005
3/4	1820-007	1830-007
1	1820-010	1830-010
1-1/4	1820-012	1830-012
1-1/2	1820-015	1830-015
2	1820-020	1830-020
2-1/2 & 3	1820-030	1830-030
4	1820-040	1830-040
6	1820-060	1830-060

1: For CPVC Cartridge Kit, add the letter "C" to the part numbers listed (e.g. 1820-005**C**).

True Union 2000 Standard Ball Valve
Seat & O-ring Repair Kit

All kits include PTFE/HDPE Seats (2), End Connector O-rings (2), Seal Carrier O-ring (1), and Stem O-rings (2).

Size	Part Number	
	w/EPDM O-rings	w/FKM O-rings
1/2	TU1-ERK-005	TU1-VRK-005
3/4	TU1-ERK-007	TU1-VRK-007
1	TU1-ERK-010	TU1-VRK-010
1-1/4	TU1-ERK-012	TU1-VRK-012
1-1/2	TU1-ERK-015	TU1-VRK-015
2	TU1-ERK-020	TU1-VRK-020
2-1/2 & 3	TU1-ERK-030	TU1-VRK-030
4	TU1-ERK-040	TU1-VRK-040

True Union 2000 Standard Ball Valve
Cartridge Replacement Kit

Includes valve assembly, less union nuts and end connectors.

Size	PVC Part Number[1]	
	w/EPDM O-rings	w/FKM O-rings
1/2	3620-005	3630-005
3/4	3620-007	3630-007
1	3620-010	3630-010
1-1/4	3620-012	3630-012
1-1/2	3620-015	3630-015
2	3620-020	3630-020
2-1/2 & 3	3620-030	3630-030
4	3620-040	3630-040

1: For CPVC Cartridge Kit, add the letter "C" to the part numbers listed (e.g. 3620-005**C**).

True Union 2000 Industrial 3-Way Ball Valve

Seat & O-ring Repair Kit (Horizontal or Vertical)

All kits include PTFE Seats (2-no branch seal), End Connector O-rings (3), Seal Carrier O-ring (1), Stem Bushing (1) and Stem O-rings (2). Sizes 2-1/2" & larger includes Seat O-rings (2).

Size	Part Number	
	w/EPDM O-rings	w/FKM O-rings
1/2	TU3-ERK-005	TU3-VRK-005
3/4	TU3-ERK-007	TU3-VRK-007
1	TU3-ERK-010	TU3-VRK-010
1-1/4	TU3-ERK-012	TU3-VRK-012
1-1/2	TU3-ERK-015	TU3-VRK-015
2	TU3-ERK-020	TU3-VRK-020
2-1/2 & 3	TU3-ERK-030	TU3-VRK-030
4	TU3-ERK-040	TU3-VRK-040

True Union 2000 Industrial Ball Check Valve

O-ring Repair Kit

All kits include End Connector O-rings (2), Seal Carrier O-ring (1), Seat Plate O-ring (1).

Size	Part Number	
	w/EPDM O-rings	w/FKM O-rings
1/2	CK2-ERK-005	CK2-VRK-005
3/4	CK2-ERK-007	CK2-VRK-007
1	CK2-ERK-010	CK2-VRK-010
1-1/4	CK2-ERK-012	CK2-VRK-012
1-1/2	CK2-ERK-015	CK2-VRK-015
2	CK2-ERK-020	CK2-VRK-020
2-1/2 & 3	CK2-ERK-030	CK2-VRK-030
4	CK2-ERK-040	CK2-VRK-040
6	CK2-ERK-060	CK2-VRK-060

Regular True Union Ball Valve

Seat & O-ring Repair Kit

All kits include End Connector O-rings (2), Seal Carrier O-ring (1), Stem Bushing (1) and Seat O-ring (1).

Size	Part Number	
	w/EPDM O-rings	w/FKM O-rings
1/2	TU-ERK-005	TU-VRK-005
3/4	TU-ERK-007	TU-VRK-007
1	TU-ERK-010	TU-VRK-010
1-1/4	TU-ERK-012	TU-VRK-012
1-1/2	TU-ERK-015	TU-VRK-015
2	TU-ERK-020	TU-VRK-020
2-1/2 & 3	TU-ERK-030	TU-VRK-030
4 & 6	TU-ERK-040	TU-VRK-040

True Union 2000 Industrial 3-Way Ball Valve

Cartridge Replacement Kit

Includes valve assembly, less union nuts and end connectors.

Size	Vertical PVC Part Number[1,2,5]		Horizontal PVC Part Number[1,2,3,4]	
	w/EPDM O-rings	w/FKM O-rings	w/EPDM O-rings	w/FKM O-rings
1/2	4720L1-005	4730L1-005	5020L1-005	5030L1-005
3/4	4720L1-007	4730L1-007	5020L1-007	5030L1-007
1	4720L1-010	4730L1-010	5020L1-010	5030L1-010
1-1/4	4720L1-012	4730L1-012	5020L1-012	5030L1-012
1-1/2	4720L1-015	4730L1-015	5020L1-015	5030L1-015
2	4720L1-020	4730L1-020	5020L1-020	5030L1-020
2-1/2 & 3	4720L1-030	4730L1-030	5020L1-030	5030L1-030
4	4720L1-040	4730L1-040	5020L1-040	5030L1-040

1: For CPVC Cartridge Kit, add the letter "C" to the part numbers listed (e.g. 4720L1-005**C**).
2: For Double L-Port, change "L1" portion of part number to L2 (e.g. 4720**L2**-005).
3: For Tripple L-Port, change "L1" portion of part number to L3 (e.g. 4720**L3**-005).
4: For T-Port, change "L1" portion of part number to "T" (e.g. 4720**T**-005).

True Union 2000 Industrial Ball Check Valve

Cartridge Replacement Kit

Includes valve assembly, less union nuts and end connectors.

Size	PVC Part Number[1]	
	w/EPDM O-rings	w/FKM O-rings
1/2	4520-005	4530-005
3/4	4520-007	4530-007
1	4520-010	4530-010
1-1/4	4520-012	4530-012
1-1/2	4520-015	4530-015
2	4520-020	4530-020
2-1/2 & 3	4520-030	4530-030
4	4520-040	4530-040
6	4520-060	4530-060

1: For CPVC Cartridge Kit, add the letter "C" to the part numbers listed (e.g. 4520-005**C**).

Regular True Union Ball Check Valve

O-ring Repair Kit

Includes ball seal O-ring (1), end-connector O-rings (2), and seal carrier O-ring (1).

Size	Part Number	
	w/EPDM O-rings	w/FKM O-rings
1/2	CK-ERK-005	CK-VRK-005
3/4	CK-ERK-007	CK-VRK-007
1	CK-ERK-010	CK-VRK-010
1-1/4	CK-ERK-012	CK-VRK-012
1-1/2	CK-ERK-015	CK-VRK-015
2	CK-ERK-020	CK-VRK-020
2-1/2 & 3	CK-ERK-030	CK-VRK-030
4	CK-ERK-040	CK-VRK-040

Valve Service & Replacement Kits

Regular True Union Ball Valve
Cartridge Replacement Kit

Includes valve assembly, less union nuts, and end connectors.

Size	PVC Part Number[1]	
	w/EPDM O-rings	w/FKM O-rings
1/2	2320-005	2330-005
3/4	2320-007	2330-007
1	2320-010	2330-010
1-1/4	2320-012	2330-012
1-1/2	2320-015	2330-015
2	2320-020	2330-020
2-1/2 & 3	2320-030	2330-030
4 & 6	2320-040	2330-040

1 For CPVC Cartridge Kit, add the letter "C" to part numbers listed (e.g., 2320-005**C**).

Regular True Union Ball Check Valve
Cartridge Replacement Kit

Includes valve assembly, less union nuts, and end connectors.

Size	PVC Part Number[1]	
	w/EPDM O-rings	w/FKM O-rings
1/2	2220-005	2230-005
3/4	2220-007	2230-007
1	2220-010	2230-010
1-1/4	2220-012	2230-012
1-1/2	2220-015	2230-015
2	2220-020	2230-020
2-1/2 & 3	2220-030	2230-030
4	2220-040	2230-040

1 For CPVC Cartridge Kit, add the letter "C" to part numbers listed (e.g., 2220-005**C**).

Single Entry Ball Valve
Seat & O-ring Replacement Kit

Includes PTFE seats (2), seat O-rings (2), and seal carrier O-ring (1).

Size	Part Number		
	w/Buna-N O-rings	w/EPDM O-rings	w/FKM O-rings
1/2	SE-BRK-005	SE-ERK-005	SE-VRK-005
3/4	SE-BRK-007	SE-ERK-007	SE-VRK-007
1	SE-BRK-010	SE-ERK-010	SE-VRK-010
1-1/4 & 1-1/2	SE-BRK-015	SE-ERK-015	SE-VRK-015
2	SE-BRK-020	SE-ERK-020	SE-VRK-020
3	SE-BRK-030	SE-ERK-030	SE-VRK-030
4	SE-BRK-040	SE-ERK-040	SE-VRK-040

Gate Valve
O-ring Repair Kit

1/2" through 2" Kit includes stem O-ring (1), body O-ring (1), wedge O-ring or gasket (1), stem bushing (1) and stem washer (1).
2" and 3" Kit includes seal carrier O-ring (1), stem O-ring (1), stem washer (1) and stem bushing (1).
4" Kit includes carrier O-ring (1), stem O-ring (1) and stem bushing.

Size	Part Number		
	w/Buna-N O-rings	w/EPDM O-rings	w/FKM O-rings
1/2	GT-BRK-005	GT-ERK-005	GT-VRK-005
3/4	GT-BRK-007	GT-ERK-007	GT-VRK-007
1	GT-BRK-010	GT-ERK-010	GT-VRK-010
1-1/4	GT-BRK-012	GT-ERK-012	GT-VRK-012
1-1/2	GT-BRK-015	GT-ERK-015	GT-VRK-015
2	GT-BRK-020	GT-ERK-020	GT-VRK-020
2-1/2 & 3	GT-BRK-030	GT-ERK-030	GT-VRK-030
4	GT-BRK-040	GT-ERK-040	GT-VRK-040

Gate Valve
Internal Replacement Cartridge

Includes complete internal assembly with bonnet and handle.

Size	Part Number[1]		
	w/Buna-N O-rings	w/EPDM O-rings	w/FKM O-rings
1/2	2010-005	2020-005	2030-005
3/4	2010-007	2020-007	2030-007
1	2010-010	2020-010	2030-010
1-1/4 & 1-1/2	2010-015	2020-015	2030-015
2	2010-020	2020-020	2030-020

1 For CPVC Cartridge Kit, add the letter "C" to part numbers listed (e.g., 2010-005**C**).

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Butterfly Valve
Standard & True Lug Seat Repair Kit

Standard Valve and True Lug Kit through 12" includes Buna-N, EPDM or FKM seat (1) and PVC or CPVC seal carrier (1).

Sizes 14" and larger include EPDM or FKM seat only.

Size	PVC Part Number[1,2]		
	w/Buna-N	w/EPDM	w/FKM
1-1/2	BF-BRK-015	BF-ERK-015	BF-VRK-015
2	BF-BRK-020	BF-ERK-020	BF-VRK-020
2-1/2	BF-BRK-025	BF-ERK-025	BF-VRK-025
3	BF-BRK-030	BF-ERK-030	BF-VRK-030
4	BF-BRK-040	BF-ERK-040	BF-VRK-040
6	BF-BRK-060	BF-ERK-060	BF-VRK-060
8	BF-BRK-080	BF-ERK-080	BF-VRK-080
10	BF-BRK-100	BF-ERK-100	BF-VRK-100
12	BF-BRK-120	BF-ERK-120	BF-VRK-120
14	—	BF-ERK-140	BF-VRK-140
16	—	BF-ERK-160	BF-VRK-160
18	—	BF-ERK-180	BF-VRK-180
20	—	BF-ERK-200	BF-VRK-200
24	—	BF-ERK-240	BF-VRK-240

1: For CPVC Seat Replacement Kit, add a “C” to the end of the part number shown (e.g., BF-BRK-015**C**).
2: For PP, add a “P” to the end of the part number (e.g., BF-BRK-015**P**).

Butterfly Valve
Standard Valve Overhaul Kit

For standard sizes through 12" includes stem nut (1), stem bushing (1), bushing O-ring (2), stem O-ring (2), stem washer - hex (1), stem washer - round (1), timing stop (1), seat (1), seal carrier (1), disc O-ring (2) and stem bearing (1).

Sizes 14" and larger includes stem nut (1) 14" only, stem bearing (1), bearing O-ring (1), stem bushing (1), bushing O-ring (3), seal carrier (1), seat (1) and stem O-ring (2) 16" and larger only.

Size	PVC Part Number[1,2]		
	w/Buna-N	w/EPDM	w/FKM
1-1/2	BF-BOK-015	BF-EOK-015	BF-VOK-015
2	BF-BOK-020	BF-EOK-020	BF-VOK-020
2-1/2	BF-BOK-025	BF-EOK-025	BF-VOK-025
3	BF-BOK-030	BF-EOK-030	BF-VOK-030
4	BF-BOK-040	BF-EOK-040	BF-VOK-040
6	BF-BOK-060	BF-EOK-060	BF-VOK-060
8	BF-BOK-080	BF-EOK-080	BF-VOK-080
10	BF-BOK-100	BF-EOK-100	BF-VOK-100
12	BF-BOK-120	BF-EOK-120	BF-VOK-120
14	—	BF-EOK-140	BF-VOK-140
16	—	BF-EOK-160	BF-VOK-160
18	—	BF-EOK-180	BF-VOK-180
20	—	BF-EOK-200	BF-VOK-200
24	—	BF-EOK-240	BF-VOK-240

1: CPVC Standard Valve Overhaul Kit available through 12" only. Add a “C” to the end of the part number shown (e.g., BF-BOK-015**C**).
2: For PP, add a “P” to the end of the part number (e.g., BF-BOK-015**P**).

Important Repair & Overhaul Kit Note

Ongoing Butterfly Valve design improvements have resulted in variations to repair kits. Standard cataloged kits are for current 72 part number series, dry-stem type valve revision. Kits for previous revisions are available and can be determined by valve serial number. When ordering kits, please specify valve size, material (PVC, CPVC, PP), Standard or True Lug type valve, Buna-N, EPDM or FKM elastomer material, and valve serial number stamped on the bottom of the valve body to insure proper kit selection. Stainless Steel Stems are normally not replaced, but can be ordered separately on request.

Butterfly Valve
True Lug Valve Overhaul Kit

Includes stem nut (1), stem bushing (1), bushing O-ring (1), stem O-ring (1), stem washer - hex (1), stem washer - round (1), timing stop (1), seat (1), seal carrier (1), seal carrier, flange O-ring (1), disc O-ring (2) and stem bearing (1).

Size	PVC Part Number[1]		
	w/Buna-N	w/EPDM	w/FKM
1-1/2	BFT-BOK-015	BFT-EOK-015	BFT-VOK-015
2	BFT-BOK-020	BFT-EOK-020	BFT-VOK-020
2-1/2	BFT-BOK-025	BFT-EOK-025	BFT-VOK-025
3	BFT-BOK-030	BFT-EOK-030	BFT-VOK-030
4	BFT-BOK-040	BFT-EOK-040	BFT-VOK-040
6	BFT-BOK-060	BFT-EOK-060	BFT-VOK-060
8	BFT-BOK-080	BFT-EOK-080	BFT-VOK-080
10	BFT-BOK-100	BFT-EOK-100	BFT-VOK-100
12	BFT-BOK-120	BFT-EOK-120	BFT-VOK-120

1: For CPVC True Lug Valve Overhaul Kit, add a “C” to the end of the part number shown (e.g., BFT-BOK-015**C**).

Butterfly Valve
True Lug Valve Overhaul Kit with Disc

Includes stem nut (1), stem bushing (1), bushing O-ring (1), stem O-ring (1), stem washer - hex (1), stem washer - round (1), timing stop (1), seat (1), seal carrier (1) seal carrier flange O-ring (1), disc (1), disc O-ring (2) and stem bearing (1).

Size	Part Number[1]		
	w/Buna-N	w/EPDM	w/FKM
1-1/2	BFT-BOKD-015	BFT-EOKD-015	BFT-VOKD-015
2	BFT-BOKD-020	BFT-EOKD-020	BFT-VOKD-020
2-1/2	BFT-BOKD-025	BFT-EOKD-025	BFT-VOKD-025
3	BFT-BOKD-030	BFT-EOKD-030	BFT-VOKD-030
4	BFT-BOKD-040	BFT-EOKD-040	BFT-VOKD-040
6	BFT-BOKD-060	BFT-EOKD-060	BFT-VOKD-060
8	BFT-BOKD-080	BFT-EOKD-080	BFT-VOKD-080
10	BFT-BOKD-100	BFT-EOKD-100	BFT-VOKD-100
12	BFT-BOKD-120	BFT-EOKD-120	BFT-VOKD-120

1: For CPVC True Lug Valve Overhaul Kit with Disc, add a “C” to the end of the part number shown (e.g., BFT-BOKD-015**C**).

Valve Service & Replacement Kits

Butterfly Valve
Standard Valve Overhaul Kit with Disc

For standard sizes through 12" includes stem nut (1), stem bushing (1), bushing O-ring (2), stem O-ring (2), stem washer - hex (1), stem washer - round (1), timing stop (1), seat (1), seal carrier (1), disc (1), disc O-ring (2) and stem bearing (1).

Sizes 14" and larger includes stem nut (1) 14" only, stem bearing (1), bearing O-ring (1), stem bushing (1), bushing O-ring (3), disc (1), seal carrier (1), seat (1) and stem O-ring (2) 16" and larger only.

Size	Part Number[1,2]		
	w/Buna-N	w/EPDM	w/FKM
1-1/2	BF-BOKD-015	BF-EOKD-015	BF-VOKD-015
2	BF-BOKD-020	BF-EOKD-020	BF-VOKD-020
2-1/2	BF-BOKD-025	BF-EOKD-025	BF-VOKD-025
3	BF-BOKD-030	BF-EOKD-030	BF-VOKD-030
4	BF-BOKD-040	BF-EOKD-040	BF-VOKD-040
6	BF-BOKD-060	BF-EOKD-060	BF-VOKD-060
8	BF-BOKD-080	BF-EOKD-080	BF-VOKD-080
10	BF-BOKD-100	BF-EOKD-100	BF-VOKD-100
12	BF-BOKD-120	BF-EOKD-120	BF-VOKD-120
14	—	BF-EOKD-140	BF-VOKD-140
16	—	BF-EOKD-160	BF-VOKD-160
18	—	BF-EOKD-180	BF-VOKD-180
20	—	BF-EOKD-200	BF-VOKD-200
24	—	BF-EOKD-240	BF-VOKD-240

1: CPVC Standard Valve Overhaul Kit available through 12" only. Add a "C" to the end of the part number shown (e.g., BF-BOKD-015**C**).
2: For PP, add a "P" to the end of the part number (e.g., BF-BOKD-O15**P**).

Wafer Butterfly Valve
Overhaul Kit

All Kits include Seat (1), Flange Gaskets (2), Stem Bushing O-rings (2), Bushing Washers (2), Stem Bushings (2).

Size	Part Number		
	w/Buna-N	w/EPDM	w/FKM
2	BFW-BOK-020	BFW-EOK-020	BFW-VOK-020
2-1/2	BFW-BOK-025	BFW-EOK-025	BFW-VOK-025
3	BFW-BOK-030	BFW-EOK-030	BFW-VOK-030
4	BFW-BOK-040	BFW-EOK-040	BFW-VOK-040
6	BFW-BOK-060	BFW-EOK-060	BFW-VOK-060
8	BFW-BOK-080	BFW-EOK-080	BFW-VOK-080
10	BFW-BOK-100	BFW-EOK-100	BFW-VOK-100
12	BFW-BOK-120	BFW-EOK-120	BFW-VOK-120

Wafer Butterfly Valve
Overhaul Kit w/Disc

All Kits include Seat (1), Flange Gaskets (2), Stem Bushing O-rings (2), Stem Bushing Washers (2), Stem Bushings (2), Replacement Disc (1).

Size	Part Number[1]		
	w/Buna-N	w/EPDM	w/FKM
2	BFW-BOKD-020	BFW-EOKD-020	BFW-VOKD-020
2-1/2	BFW-BOKD-025	BFW-EOKD-025	BFW-VOKD-025
3	BFW-BOKD-030	BFW-EOKD-030	BFW-VOKD-030
4	BFW-BOKD-040	BFW-EOKD-040	BFW-VOKD-040
6	BFW-BOKD-060	BFW-EOKD-060	BFW-VOKD-060
8	BFW-BOKD-080	BFW-EOKD-080	BFW-VOKD-080
10	BFW-BOKD-100	BFW-EOKD-100	BFW-VOKD-100
12	BFW-BOKD-120	BFW-EOKD-120	BFW-VOKD-120

1: For CPVC Overhaul Kits with Disc available in EPDM or FKM only. Add a "C" to the end of the part number shown (e.g., BFW-EOKD-020**C**).

Wafer Butterfly Valve
Overhaul Kit

All Kits include Seat (1), Flange Gaskets (2).

Size	Part Number		
	w/Buna-N	w/EPDM	w/FKM
2	BFW-BRK-020	BFW-ERK-020	BFW-VRK-020
2-1/2	BFW-BRK-025	BFW-ERK-025	BFW-VRK-025
3	BFW-BRK-030	BFW-ERK-030	BFW-VRK-030
4	BFW-BRK-040	BFW-ERK-040	BFW-VRK-040
6	BFW-BRK-060	BFW-ERK-060	BFW-VRK-060
8	BFW-BRK-080	BFW-ERK-080	BFW-VRK-080
10	BFW-BRK-100	BFW-ERK-100	BFW-VRK-100
12	BFW-BRK-120	BFW-ERK-120	BFW-VRK-120

Industrial Swing Check Valve
Seat & O-ring Repair Kit

All kits include Bonnet O-ring (1), Disc O-ring (1), Seat O-ring (1), Plug O-ring (1) and Arm Plug O-ring (1).

Size	Part Number	
	w/EPDM O-rings	w/FKM O-rings
3/4	SK-ERK-007	SK-VRK-007
1	SK-ERK-010	SK-VRK-010
1-1/4	SK-ERK-012	SK-VRK-012
1-1/2	SK-ERK-015	SK-VRK-015
2	SK-ERK-020	SK-VRK-020
2-1/2 & 3	SK-ERK-030	SK-VRK-030
4	SK-ERK-040	SK-VRK-040
6	SK-ERK-060	SK-VRK-060
8	SK-ERK-080	SK-VRK-080

Butterfly Check Valve Repair Kit

Repair Kit Contains: 1-Flex Seal Gasket Seat, 1-Hinge Post, 2-Flapper Plates, 2-Flapper Covers, 1-Post Strip, 2-Seat Post O-rings & Plastic Assembly Screws.

Use Existing Hinge post Bolts

Size	Part Number[1]	
	w/EPDM O-rings	w/FKM O-rings
2	BFC-ERK-020	BFC-VRK-020
2-1/2	BFC-ERK-025	BFC-VRK-025
3	BFC-ERK-030	BFC-VRK-030
4	BFC-ERK-040	BFC-VRK-040
6	BFC-ERK-060	BFC-VRK-060
8	BFC-ERK-080	BFC-VRK-080
10	BFC-ERK-100	BFC-VRK-100
12	BFC-ERK-120	BFC-VRK-120

1: For CPVC Butterfly Check Valve Repair Kit, add a "C" to the end of the part number shown (e.g., BFC-ERK-020**C**).

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Y-Pattern Valve - Internal Repair Kit

Internal Repair Kit includes: Stem O-ring (1), Seal Carrier (1), along with a factory assembled (required) internal component replacement unit consisting of Stem assembled with Seat & Seal Carrier components. Install in valve using existing valve Bonnet, Bonnet Nut, and Handle/Nut. True Union style valve kits include additional End Connector O-rings (2).

Size	Part Number							
	w/EPDM O-ring	CPVC w/ EPDM O-ring	w/FKM O-ring	CPVC w/FKM O-ring	Union w/ EPDM O-ring	CPVC Union w/ EPDM O-ring	Union w/ FKM O-ring	CPVC Union w/ FKM O-ring
1/2	YV-ERK-005	YV-ERK-005C	YV-VRK-005	YV-VRK-005C	YV-UERK-005	YV-UERK-005C	YV-UVRK-005	YV-UVRK-005C
3/4	YV-ERK-007	YV-ERK-007C	YV-VRK-007	YV-VRK-007C	YV-UERK-007	YV-UERK-007C	YV-UVRK-007	YV-UVRK-007C
1	YV-ERK-010	YV-ERK-010C	YV-VRK-010	YV-VRK-010C	YV-UERK-010	YV-UERK-010C	YV-UVRK-010	YV-UVRK-010C
1-1/4	YV-ERK-012	YV-ERK-012C	YV-VRK-012	YV-VRK-012C	YV-UERK-012	YV-UERK-012C	YV-UVRK-012	YV-UVRK-012C
1-1/2	YV-ERK-015	YV-ERK-015C	YV-VRK-015	YV-VRK-015C	YV-UERK-015	YV-UERK-015C	YV-UVRK-015	YV-UVRK-015C
2	YV-ERK-020	YV-ERK-020C	YV-VRK-020	YV-VRK-020C	YV-UERK-020	YV-UERK-020C	YV-UVRK-020	YV-UVRK-020C
3	YV-ERK-030	YV-ERK-030C	YV-VRK-030	YV-VRK-030C	YV-UERK-030	YV-UERK-030C	YV-UVRK-030	YV-UVRK-030C
4	YV-ERK-040	YV-ERK-040C	YV-VRK-040	YV-VRK-040C	YV-UERK-040	YV-UERK-040C	YV-UVRK-040	YV-UVRK-040C

Y-Check Valve - Seat & O-ring Repair Kit

All Kits include Seat (1), Bonnet O-ring (1), and Plug O-ring (1).
All True Union Kits include Seat (1), Bonnet O-ring (1), Plug O-ring (1), and End Connector O-rings (2).

Size	Part Number			
	w/EPDM O-ring	w/FKM O-ring	Union w/EPDM O-ring	Union w/FKM O-ring
1/2	YC-ERK-005	YC-VRK-005	YC-UERK-005	YC-UVRK-005
3/4	YC-ERK-007	YC-VRK-007	YC-UERK-007	YC-UVRK-007
1	YC-ERK-010	YC-VRK-010	YC-UERK-010	YC-UVRK-010
1-1/4	YC-ERK-012	YC-VRK-012	YC-UERK-012	YC-UVRK-012
1-1/2	YC-ERK-015	YC-VRK-015	YC-UERK-015	YC-UVRK-015
2	YC-ERK-020	YC-VRK-020	YC-UERK-020	YC-UVRK-020
3	YC-ERK-030	YC-VRK-030	YC-UERK-030	YC-UVRK-030
4	YC-ERK-040	YC-VRK-040	YC-UERK-040	YC-UVRK-040

Diaphragm Valve - Diaphragm & End Connector O-ring Replacement Kit

Includes diaphragm (1), and end connector O-rings (2).

Size	Part Number				
	EPDM O-ring & DIAPHRAGM KIT	EPDM O-ring & PTFE* DIAPHRAGM KIT	FKM O-ring & DIAPHRAGM KIT	FKM O-ring & PTFE* DIAPHRAGM KIT	FKM O-ring & FKM Backed Diaphragm Kit
1/2	DV-ERK-005	DV-TERK-005	DV-VRK-005	DV-TVRK-005	DV-VTVRK-005
3/4	DV-ERK-007	DV-TERK-007	DV-VRK-007	DV-TVRK-007	DV-VTVRK-007
1	DV-ERK-010	DV-TERK-010	DV-VRK-010	DV-TVRK-010	DV-VTVRK-010
1-1/4 or 1-1/2	DV-ERK-015	DV-TERK-015	DV-VRK-015	DV-TVRK-015	DV-VTVRK-015
2	DV-ERK-020	DV-TERK-020	DV-VRK-020	DV-TVRK-020	DV-VTVRK-020

*** Elastomer backed PTFE laminated diaphragm.**

Diaphragm Valve - Replacement Diaphragm

Size	Part Number			
	EPDM DIAPHRAGM	FKM DIAPHRAGM	PTFE* DIAPHRAGM	FKM backed PTFE* DIAPHRAGM
1/2	27-39-00541	27-39-00542	27-39-00565	27-39-00566A
3/4	27-39-00741	27-39-00742	27-39-00765	27-39-00766A
1	27-39-01041	27-39-01042	27-39-01065	27-39-01066A
1-1/4 or 1-1/2	27-39-01541	27-39-01542	27-39-01565	27-39-01566
2	27-39-02041	27-39-02042	27-39-02065	27-39-02066
2-1/2 or 3	27-39-03041	27-39-03042	27-39-03065	27-39-03066
4	27-39-04041	27-39-04042	27-39-04065	27-39-04066
6	27-39-06041	27-39-06042	27-39-06065	27-39-06066
8	27-39-08041	27-39-08042	27-39-08065	27-39-08066

*** Elastomer backed PTFE laminated diaphragm.**

Actuated Valves

PRICING

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Actuated Valves

Spears® Makes Valve Actuation Simple. . .

Sold in Pre-Matched Valve & Actuator Packages

Spears® makes actuation easy by matching each valve type and size with the appropriate actuator for proper operating torque and cycle time to assure optimum performance.

Accessory Add-ons Provide Custom Actuation Configurations

Spears® Premium Actuation Packages can be fully customized to user specifications by addition of selected control accessories purchased separately. Select from our wide variety of accessories and options or contact Spears® for virtually any special actuation need, even if not specified.

Complete Packages Factory Assembled - Ready for Installation

All actuation packages include valve, actuator mounting, coupling, and precision actuator factory assembled with any purchased accessories, ready for installation.

Easy Steps to Locate Desired Product

This catalog provides pricing for both Spears® economical Electro Series Actuated Ball Valves and Spears® full featured Premium Electric and Premium Pneumatic actuated valve packages with optional accessories. Actuated valve packages are listed in separate sections by valve type (ball, butterfly, diaphragm) and actuation type (electric, pneumatic). Optional accessories are listed and priced separately for assembly with the desired package. A complete listing of content is located at the end of this catalog. See Spears® Actuated Thermoplastic Valves Product Guide & Engineering Specification, for additional technical information on valve packages and accessories.

Step 1: Select and Locate Desired Actuated Valve Type
- Section I: Ball Valves
- Section II: Butterfly Valves
- Section III: Diaphragm Valves

Step 2: Select and Locate Desired Actuation Type within Valve Section
- Electric Actuated
- Pneumatic Actuated

Step 3: Select and Locate Desired Material Type Pricing Table
- PVC
- CPVC
- Polypropylene

Step 4: Select and Locate Specific Part Number & Pricing According to Listed Options
Individual pricing tables for actuated valve packages are organized by valve Size, Elastomer type (O-ring, seat, etc.), and valve configuration options such as End Connector (Joint) or other specified criteria. Unit List Price Each is located immediately below the Part Number. Product Code is located in the far right column.

Step 5: Select and Locate Desired Accessories (see important ordering information below)
- Electric Actuator Accessories
- Pneumatic Actuator Accessories for Ball Valves & Butterfly Valves
- Pneumatic Actuator Accessories for Diaphragm Valves

Ordering Premium Valve Packages with Accessory Add-ons
- IMPORTANT -

Accessories are individually ordered separately and factory assembled with the selected Premium Actuated Valve Package. When Accessories are ordered for assembly with an actuated valve package, the suffix "-A" must be added to the actuated valve package part number being ordered. Do not add this suffix if no accessories are being ordered or if ordering Electro Series Ball Valves. Example: Package part number 21101A112-005 would be ordered as 21101A112-005-A REQUIRED ORDER SEQUENCE: Order line items should begin with the actuated valve package part number (with -A suffix) and be immediately followed by the selected accessory part number(s) as the next line item(s). This sequential listing of valve package and applicable accessories on the order assures that selected accessories are properly assembled with the selected package. Failure to follow this simple practice may result in unnecessary delays.

Actuated Valve Packages Overview

Typical Package Illustration	Valve Type	Basic Valve Options				Actuation Package Available		
		Basic Valve Material	Size Range (inch)	Seal Material Options	End Connector Options	Premium Electric Actuation	Premium Pneumatic Actuation	Electro Series Actuation
	True Union 2000 Ball Valves	PVC	1/2 - 6	EPDM FKM	Socket SR Thread Flanged	X	X	X 1/2" - 2"
		CPVC	1/2 - 6	EPDM FKM	Socket SR Thread Flanged	X	X	X 1/2" - 2"
	Compact 2000 Ball Valves	PVC	1/2 - 6	EPDM FKM	Socket Thread Flanged	X	X	X 1/2" - 2"
		CPVC	1/2 - 6	EPDM FKM	Socket Thread Flanged	X	X	X 1/2" - 2"
	Butterfly Valves	PVC	1-1/2 - 12	Buna-N EPDM FKM	Flanged	X	X	
		CPVC	1-1/2 - 12	Buna-N EPDM FKM	Flanged	X	X	
		PP	1-1/2 - 24 [1]	EPDM FKM	Flanged	X	X	
	Diaphragm Valves	PVC	1/2 - 4 [2]	Buna-N EPDM FKM PTFE	Socket [3] Thread [3] Spigot [4] Flanged	X	X	
		CPVC	1/2 - 4 [2]	Buna-N EPDM FKM PTFE	Socket Thread Spigot Flanged	X	X	
		PP	1/2 - 4 [2]	EPDM FKM	Thread Flanged	X	X	

Notes: 1 - Butterfly Valves also available in sizes 30" - 60", quoted and produced to order. Contact Spears®.
2 - 2-1/2" to 4" Diaphragm Valves available in Flanged ends only.
3 - 1/2" - 2" Socket and Thread Diaphragm Valves are True Union style.
4 - Spigot Diaphragm Valves available in sizes 1/2" - 2" only.

Actuated Valves

The following table illustrates actuator features for Premium Electric actuators used in Actuated Valve Packages. Features specified as "Standard" are available on packages in this price sheet. Features specified as "Accessory" are included as package add-ons in this price sheet. Features specified as "Optional" must be special ordered (contact Spears® for pricing).

Electric Actuator Features Overview

Standard 2-Position Electric Actuator Features	Electro Series Ball Valves	Premium Electric TU Ball Valves	Premium Electric Butterfly Valves	Premium Electric Diaphragm Valves
Motor Rotation	Unidirectional	Reversing	Reversing	Reversing
NEMA Rating	4X	4	4	4
Enclosure Material	PP	Powder Coated Aluminum	Powder Coated Aluminum	Powder Coated Aluminum
Enclosure Conduit Entry	1/2 NPT	1/2 NPT (1/2" – 3") 3/4 NPT (4" – 6")	1/2 NPT (1-1/2" – 4") or 3/4 (4" – 12")	1/2 NPT
Voltage	115 VAC	115 VAC	115 VAC	115 VAC
Pre Wired to terminal strip	Wired Direct	Standard	Standard	Standard
Thermal Overload Protection	Wired Direct	Standard	Standard	Standard
Basic Manual Override	—	Standard (1/2" – 3")	Standard (1-1/2" – 4")	Optional
Declutchable Manual Override	—	Standard (4" – 6")	Standard (6" – 12")	Standard (2" – 4")
Limit Switches (SPDT)	1	4 (2 sets of 2 ea)	4 (2 sets of 2 ea)	2 (1 set of 2 ea)
Mounting Position	Any	Any	Any	Any
Permanent Lubrication	Standard	Standard	Standard	Standard
Options & Accessories				
Feedback Potentiometer	—	Accessory	Accessory	Accessory
24 VAC	Optional	Optional	Optional	Optional
230 VAC	Optional	Optional	Optional	Optional
230 VAC 3-phase, 60 Hz	—	Optional	Optional	Optional
230 VAC 3-phase, 50 Hz	—	Optional	Optional	Optional
460 VAC 3-phase, 60 Hz	—	Optional	Optional	—
460 VAC 3-phase, 50 Hz	—	Optional	Optional	—
12 VDC	Optional	Optional	Optional	Optional
24 VDC	Optional	Optional	Optional	Optional
NEMA 4X, 7, 9 Rating	(4X Standard)	Optional	Optional	Optional
Basic Manual Override	—	Standard (1/2" – 3")	Standard (1-1/2" – 4")	Optional
Declutchable Manual Override	—	Optional (Standard 4" – 6")	Optional (Standard 6" – 12")	Optional
Duty Cycle Upgrade	Optional	—	—	Optional
Spring Return (Fail Safe)	—	Optional	Optional	—
Positioner Board (Modulating)	—	Accessory	Accessory	Accessory
Additional Limit Switch Sets	—	Accessory	Accessory	Accessory
LED Indicator Lights	—	Accessory	Accessory	Accessory
Position Indicator (visual)	Standard	Standard	Standard	—
Heater	—	Standard	Standard	Accessory
Thermostat	—	Accessory	Accessory	Accessory

The following table illustrates actuator features for Premium Pneumatic actuators used in Actuated Valve Packages. Features specified as "Standard" are available on packages in this price sheet. Features specified as "Accessory" are included as package add-ons in this price sheet. Features specified as "Options" must be special ordered (contact Spears® for pricing).

Please contact Spears® for any desired features or accessories not specified.

Pneumatic Actuator Features Overview

Standard Pneumatic Actuator Features	Premium Pneumatic TU Ball Valves	Premium Pneumatic Butterfly Valves	Premium Pneumatic Diaphragm Valves
Type	Dual Piston, Rack & Pinion	Dual Piston, Rack & Pinion	Linear Piston
Enclosure Material (ends/body)	Epoxy Coated/Hard Anodized Aluminum	Epoxy Coated/Hard Anodized Aluminum	PES-Polyestersulphone PP-Polypropylene
Standard Operation	Air-to-Air or Air-Spring Closed	Air-to-Air or Air-Spring Closed	Air-to-Air or Air-Spring Closed/Open
Standard Operating Pressure	80 psi	80 psi	80 psi
Air Connection Size	1/8"	1/8"	1/8"
Basic Manual Override	Standard	Standard	(Option)
Options & Accessories			
Air-Spring Open	Option	Option	Option
40 psi Operating Pressure	Option	Option	—
60 psi Operating Pressure	Option	Option	Option
Basic Manual Override	(Standard)	(Standard)	Option
Declutchable Manual Override	Option	Option	—
Pneumatic Positioner	Accessory	Accessory	Accessory
Electro-Pneumatic Positioner	Accessory	Accessory	Accessory
Dome Position Indicator	Accessory	Accessory	Accessory
Pointer Indicator	Accessory	Accessory	—
3 & 4-Way Solenoid Valve	Accessory	Accessory	Accessory
Dual Power Solenoid Valve	Accessory	Accessory	—
Limit Switches	Accessory	Accessory	Accessory
Output Signal Limit Switches	Accessory	Accessory	—
3-Way "Dribble" Control Limit Switches	Accessory	Accessory	—
Stainless Steel Pressure Gauge Set	Accessory	Accessory	Accessory
Stem Extension	Accessory	Accessory	Accessory
ID Tag-SS	Accessory	Accessory	Accessory

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Additional Actuated Valve Configurations, Options & Accessories Not Specified

Spears® can provide virtually any actuation need for Spears® valves. The following actuated valve configurations, options and accessories not currently specified in this price sheet are a few of those available on a special order basis. See the *Accessories* sections for standard configuration and accessory options. Please contact Spears® for additional technical information or other custom actuation needs. Certain special order options and custom Actuation Packages may require extended lead times. Please contact Spears® for details.

Special Actuated Ball Valves

- Compact Ball Valves
- Single Entry Ball Valves
- True Union 2000 3-Way Vertical & Horizontal Ball Valves
- Vented Ball Valves

Special Actuated Butterfly Valves

- Tandem 3-Way - two valves operated from one actuator, both closing or both opening at the same time
- Tandem Diverting - two valves operated from one actuator, one opening while the other closes
- "No Seat" actuated Butterfly Valves for duct (damper) applications
- Polypropylene 30" to 60" Actuated Valves (custom produced)

Actuated Gate Valves

- PVC & CPVC Construction
- Sizes 1/2" – 4"
- Socket, Thread, Flange End Connections

Special Actuator Options

- Actuators Only
- Actuator Brackets Only
- Actuator Stem Extensions
- Double Powder Coated Electric Enclosures
- Stainless Steel Pneumatic Enclosures
- Electric Spring Return Open or Close with No Override
- Battery Back-up Electric Actuators

Special Switch Sets & Solenoids

- Single Limit Switch & Bracket Only (no actuator) for manual valves
- Double Limit Switch & Bracket Only (no actuator) for manual valves
- Dual Coil 5-Way Solenoid Valves

Replacement Parts Many replacement parts are available for Spears® electric and pneumatic actuators and valves. Contact Spears® for specific parts needed.

Electro Actuated Compact 2000 Ball Valve

General purpose industrial grade sealed unit design, 1/4-turn shutoff. Basic On-Off operation.

- Maintenance-free
- PTFE Seats
- 235 psi @ 73°F (23°C) (flanged 150 psi)
- 115 VAC standard, optional voltages available
- High Impact PP NEMA 4x Enclosure, SS316 Fasteners
- 2-Position with Stem-mounted Visual Open/Close Indicator

See **Electric Actuator Accessories** for "2-wire" Control Add-on Actuator Accessory

PVC Electro Actuated Compact 2000 Ball Valve

O-ring	EPDM			FKM			Prod Code
Joint	Socket	Thread	Flanged	Socket	Thread	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	E1404-005 **452.61**	E1406-005 **452.61**	E1408-005 **557.42**	E1405-005 **498.81**	E1407-005 **498.81**	E1409-005 **587.83**	496
3/4	E1404-007 **463.71**	E1406-007 **463.71**	E1408-007 **586.16**	E1405-007 **515.36**	E1407-007 **515.36**	E1409-007 **616.72**	496
1	E1404-010 **472.03**	E1406-010 **472.03**	E1408-010 **604.24**	E1405-010 **523.54**	E1407-010 **523.54**	E1409-010 **635.27**	496
1-1/4	E1504-012 **488.69**	E1506-012 **488.69**	E1508-012 **636.49**	E1505-012 **552.26**	E1507-012 **552.26**	E1509-012 **670.07**	496
1-1/2	E1504-015 **502.61**	E1506-015 **502.61**	E1508-015 **648.42**	E1505-015 **563.01**	E1507-015 **563.01**	E1509-015 **686.42**	496
2	E1504-020 **524.78**	E1506-020 **524.78**	E1508-020 **705.54**	E1505-020 **585.32**	E1507-020 **585.32**	E1509-020 **744.75**	496

CPVC

O-ring	EPDM			FKM			Prod Code
Joint	Socket	Thread	Flanged	Socket	Thread	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	E1404-005C **460.93**	E1406-005C **460.93**	E1408-005C **575.63**	E1405-005C **514.89**	E1407-005C **514.89**	E1409-005C **607.20**	498
3/4	E1404-007C **477.59**	E1406-007C **477.59**	E1408-007C **608.88**	E1405-007C **535.89**	E1407-007C **535.89**	E1409-007C **637.03**	498
1	E1404-010C **499.80**	E1406-010C **499.80**	E1408-010C **624.16**	E1405-010C **544.46**	E1407-010C **544.46**	E1409-010C **656.29**	498
1-1/4	E1504-012C **530.35**	E1506-012C **530.35**	E1508-012C **671.94**	E1505-012C **574.18**	E1507-012C **574.18**	E1509-012C **696.34**	498
1-1/2	E1504-015C **541.43**	E1506-015C **541.43**	E1508-015C **680.32**	E1505-015C **581.44**	E1507-015C **581.44**	E1509-015C **709.23**	498
2	E1504-020C **588.66**	E1506-020C **588.66**	E1508-020C **733.05**	E1505-020C **604.03**	E1507-020C **604.03**	E1509-020C **769.78**	498

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Electro Actuated True Union 2000 Standard Ball Valve

General Purpose True Union design, 1/4-turn shutoff. Basic On-Off operation.

- Blocked Seal Carrier
- PTFE/HDPE Seats
- 235 psi @ 73°F (23°C) (flanged 150 psi)
- 115 VAC standard, optional voltages available
- High Impact PP NEMA 4x Enclosure, SS316 Fasteners
- 2-Position with Stem-mounted Visual Open/Close Indicator

See **Electric Actuator Accessories** for "2-wire" Control Add-on Actuator Accessory

PVC Electro Actuated True Union 2000 Standard Ball Valve

O-ring	EPDM			FKM			Prod Code
Joint	Socket & Thread	SR Thread	Flanged	Socket & Thread	SR Thread	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	E1453-005 **469.73**	E1451-005SR **470.59**	E1457-005 **577.91**	E1454-005 **517.58**	E1452-005SR **518.55**	E1458-005 **636.74**	500
3/4	E1453-007 **479.98**	E1451-007SR **481.93**	E1457-007 **606.21**	E1454-007 **536.13**	E1452-007SR **538.09**	E1458-007 **675.55**	500
1	E1453-010 **494.41**	E1451-010SR **494.41**	E1457-010 **632.88**	E1454-010 **548.11**	E1452-010SR **550.23**	E1458-010 **701.72**	500
1-1/4	E1553-012 **506.39**	E1551-012SR **512.47**	E1557-012 **658.42**	E1554-012 **584.32**	E1552-012SR **590.29**	E1558-012 **759.53**	500
1-1/2	E1553-015 **535.73**	E1551-015SR **542.20**	E1557-015 **691.06**	E1554-015 **599.61**	E1552-015SR **606.21**	E1558-015 **773.62**	500
2	E1553-020 **567.65**	E1551-020SR **574.68**	E1557-020 **760.69**	E1554-020 **631.15**	E1552-020SR **637.77**	E1558-020 **845.79**	500

CPVC

O-ring	EPDM			FKM			Prod Code
Joint	Socket & Thread	SR Thread	Flanged	Socket & Thread	SR Thread	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	E1453-005C **486.67**	E1451-005CSR **489.37**	E1457-005C **601.96**	E1454-005C **543.46**	E1452-005CSR **546.14**	E1458-005C **671.75**	502
3/4	E1453-007C **508.45**	E1451-007CSR **512.24**	E1457-007C **645.41**	E1454-007C **569.79**	E1452-007CSR **573.66**	E1458-007C **722.78**	502
1	E1455-010C **534.46**	E1451-010CSR **534.46**	E1457-010C **691.06**	E1454-010C **582.42**	E1452-010CSR **587.76**	E1458-010C **752.34**	502
1-1/4	E1555-012C **567.12**	E1551-012CSR **575.62**	E1557-012C **748.33**	E1554-012C **615.14**	E1552-012CSR **623.73**	E1558-012C **810.85**	502
1-1/2	E1555-015C **585.08**	E1551-015CSR **599.73**	E1557-015C **773.72**	E1554-015C **629.98**	E1552-015CSR **644.54**	E1558-015C **831.43**	502
2	E1555-020C **649.45**	E1551-020CSR **665.21**	E1557-020C **829.85**	E1554-020C **670.01**	E1552-020CSR **685.85**	E1558-020C **897.02**	502

Electro Actuated True Union 2000 Industrial Ball Valve

Industrial grade True Union design, 1/4-turn shutoff. Basic On-Off operation.

- Blocked Seal Carrier
- Double O-ring Stem Seal
- PTFE Seats
- 235 psi @ 73°F (23°C) (flanged 150 psi)
- 115 VAC standard, optional voltages available
- High Impact PP NEMA 4x Enclosure, SS316 Fasteners
- 2-Position with Stem-mounted Visual Open/Close Indicator

See **Electric Actuator Accessories** for "2-wire" Control Add-on Actuator Accessory

PVC Electro Actuated Industrial Ball Valve

O-ring	EPDM			FKM			Prod Code
Joint	Socket & Thread	SR Thread	Flanged	Socket & Thread	SR Thread	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	E1459-005 **481.93**	E1463-005SR **484.63**	E1465-005 **586.83**	E1460-005 **531.21**	E1464-005SR **533.91**	E1466-005 **620.09**	500
3/4	E1459-007 **494.45**	E1463-007SR **498.29**	E1465-007 **616.88**	E1460-007 **552.27**	E1464-007SR **556.13**	E1466-007 **653.66**	500
1	E1459-010 **511.58**	E1463-010SR **516.92**	E1465-010 **642.60**	E1460-010 **567.29**	E1464-010SR **572.62**	E1466-010 **679.02**	500
1-1/4	E1559-012 **530.28**	E1563-012SR **538.83**	E1565-012 **678.07**	E1560-012 **630.67**	E1564-012SR **639.24**	E1566-012 **731.83**	500
1-1/2	E1559-015 **564.60**	E1563-015SR **579.25**	E1565-015 **710.45**	E1560-015 **631.74**	E1564-015SR **646.38**	E1566-015 **755.06**	500
2	E1559-020 **605.75**	E1563-020SR **621.61**	E1565-020 **786.48**	E1560-020 **672.71**	E1564-020SR **688.57**	E1566-020 **831.81**	500

CPVC

O-ring	EPDM			FKM			Prod Code
Joint	Socket & Thread	SR Thread	Flanged	Socket & Thread	SR Thread	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	E1459-005C **502.83**	E1463-005CSR **505.55**	E1465-005C **617.59**	E1460-005C **561.39**	E1464-005CSR **566.80**	E1466-005C **653.31**	502
3/4	E1459-007C **528.92**	E1463-007CSR **532.74**	E1465-007C **660.09**	E1460-007C **592.45**	E1464-007CSR **613.32**	E1466-007C **698.83**	502
1	E1459-010C **558.72**	E1463-010CSR **564.04**	E1465-010C **683.11**	E1460-010C **609.47**	E1464-010CSR **614.74**	E1466-010C **721.15**	502
1-1/4	E1559-012C **605.81**	E1563-012CSR **614.42**	E1565-012C **732.93**	E1560-012C **658.12**	E1564-012CSR **666.68**	E1566-012C **780.33**	502
1-1/2	E1559-015C **625.94**	E1563-015CSR **640.59**	E1565-015C **780.16**	E1560-015C **660.13**	E1564-015CSR **674.84**	E1566-015C **806.54**	502
2	E1559-020C **738.12**	E1563-020CSR **754.00**	E1565-020C **879.42**	E1560-020C **771.15**	E1564-020CSR **787.20**	E1566-020C **905.27**	502

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Premium Actuated True Union 2000 Industrial Ball Valve - Electric

Industrial grade True Union design, 1/4-turn shutoff for a wide range of applications. Full-featured actuator can be custom configured with add-on accessories. See **Electric Actuator Accessories for Ball Valves**

- Blocked Seal Carrier
- Double O-ring Stem Seal
- PTFE Seats
- 1/2" - 4" 235 psi @ 73°F (23°C)
- 6" and all flanged 150 psi @ 73°F (23°C)
- 115 VAC standard, optional voltages available
- Illuminated Position Indicator
- Heater
- 2-Position Operation with 2-SPDT Limit Switches
- Additional set dry contacts SPDT limit Switches
- NEMA 4 Enclosure, Powder Coated
- Declutchable Manual Override 4" through 6"
- Basic Manual Override 1/2" through 3" (Declutchable Available)

PVC

O-ring	EPDM			FKM			Prod Code
Joint	Socket	SR Thread	Flanged	Socket	SR Thread	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	21101A112-005 **1065.72**	23101A112-005 **1075.91**	24101A112-005 **1096.10**	21201A112-005 **1073.33**	23201A112-005 **1083.01**	24201A112-005 **1102.88**	500
3/4	21101A112-007 **1071.26**	23101A112-007 **1086.56**	24101A112-007 **1106.39**	21201A112-007 **1079.34**	23201A112-007 **1094.23**	24201A112-007 **1114.80**	500
1	21101A112-010 **1087.91**	23101A112-010 **1097.39**	24101A112-010 **1127.19**	21201A112-010 **1097.32**	23201A112-010 **1107.46**	24201A112-010 **1138.47**	500
1-1/4	21101A112-012 **1100.36**	23101A112-012 **1111.07**	24101A112-012 **1147.22**	21201A112-012 **1110.39**	23201A112-012 **1121.12**	24201A112-012 **1155.01**	500
1-1/2	21101A112-015 **1113.58**	23101A112-015 **1123.68**	24101A112-015 **1164.10**	21201A112-015 **1126.70**	23201A112-015 **1137.29**	24201A112-015 **1175.07**	500
2	21101A112-020 **1162.81**	23101A112-020 **1176.79**	24101A112-020 **1217.67**	21201A112-020 **1178.51**	23201A112-020 **1192.62**	24201A112-020 **1228.05**	500
2-1/2	21101A111-025 **1350.14**	23101A111-025 **1402.33**	24101A111-025 **1470.41**	21201A111-025 **1386.53**	23201A111-025 **1441.26**	24201A111-025 **1490.74**	500
3	21101A111-030 **1417.06**	23101A111-030 **1431.39**	24101A111-030 **1497.24**	21201A111-030 **1444.97**	23201A111-030 **1455.14**	24201A111-030 **1516.56**	500
4	21101A121-040 **2585.00**	23101A121-040 **2602.76**	24101A121-040 **2946.19**	21201A121-040 **2638.52**	23201A121-040 **2666.64**	24201A121-040 **3016.21**	500
6	21101A121-060 **3603.81**	23101A121-060 **3644.09**	24101A121-060 **4367.06**	21201A121-060 **3696.56**	23201A121-060 **3731.04**	24201A121-060 **4601.46**	500

CPVC

O-ring	EPDM			FKM			Prod Code
Joint	Socket	SR Thread	Flanged	Socket	SR Thread	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	21102A112-005 **1126.31**	23102A112-005 **1131.98**	24102A112-005 **1172.19**	21202A112-005 **1073.33**	23202A112-005 **1144.09**	24202A112-005 **1191.24**	502
3/4	21102A112-007 **1135.85**	23102A112-007 **1143.79**	24102A112-007 **1183.54**	21202A112-007 **1079.34**	23202A112-007 **1155.19**	24202A112-007 **1210.02**	502
1	21102A112-010 **1147.31**	23102A112-010 **1158.17**	24102A112-010 **1191.59**	21202A112-010 **1097.32**	23202A112-010 **1172.53**	24202A112-010 **1237.66**	502
1-1/4	21102A112-012 **1159.85**	23102A112-012 **1170.40**	24102A112-012 **1223.82**	21202A112-012 **1110.39**	23202A112-012 **1200.49**	24202A112-012 **1256.13**	502
1-1/2	21102A112-015 **1179.13**	23102A112-015 **1189.37**	24102A112-015 **1254.80**	21202A112-015 **1126.70**	23202A112-015 **1226.07**	24202A112-015 **1291.91**	502
2	21102A112-020 **1255.49**	23102A112-020 **1267.89**	24102A112-020 **1353.33**	21202A112-020 **1178.51**	23202A112-020 **1316.91**	24202A112-020 **1379.99**	502
2-1/2	21102A111-025 **1523.49**	23102A111-025 **1538.67**	24102A111-025 **1641.50**	21202A111-025 **1545.14**	23202A111-025 **1613.24**	24202A111-025 **1666.80**	502
3	21102A111-030 **1596.15**	23102A111-030 **1621.50**	24102A111-030 **1864.60**	21202A111-030 **1605.44**	23202A111-030 **1653.89**	24202A111-030 **1885.31**	502
4	21102A121-040 **2948.17**	23102A121-040 **2960.63**	24102A121-040 **3297.05**	21202A121-040 **2970.63**	23202A121-040 **3007.93**	24202A121-040 **3313.32**	502
6	21102A121-060 **4272.70**	23102A121-060 **4416.42**	24102A121-060 **5212.73**	21202A121-060 **4354.28**	23202A121-060 **4502.07**	24202A121-060 **5377.76**	502

NOTE:"Socket" valves up to 2" size include standard plastic thread end connectors.

Electric Actuated True Union 2000 Industrial Ball Valve With Accessories

Valves and Add-on Electric Actuator Accessories are ordered separately. When ordering True Union 2000 Industrial Ball Valves with additional Add-on Electric Actuator Accessories, use the following Valve Part Numbers to properly accommodate the selected accessories.

PVC

O-ring	EPDM			FKM			Prod Code
Joint	Socket	SR Thread	Flanged	Socket	SR Thread	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	21101A1129-005A **1177.20**	23101A1129-005A **1189.94**	24101A1129-005A **1235.66**	21201A1129-005A **1181.01**	23201A1129-005A **1189.94**	24201A1129-005A **1244.05**	500
3/4	21101A1129-007A **1184.27**	23101A1129-007A **1202.19**	24101A1129-007A **1246.65**	21201A1129-007A **1187.31**	23201A1129-007A **1202.19**	24201A1129-007A **1253.33**	500
1	21101A1129-010A **1217.97**	23101A1129-010A **1244.39**	24101A1129-010A **1266.96**	21201A1129-010A **1235.97**	23201A1129-010A **1244.79**	24201A1129-010A **1279.10**	500
1-1/4	21101A1129-012A **1232.46**	23101A1129-012A **1250.90**	24101A1129-012A **1291.99**	21201A1129-012A **1242.48**	23201A1129-012A **1250.90**	24201A1129-012A **1308.18**	500
1-1/2	21101A1129-015A **1250.30**	23101A1129-015A **1266.04**	24101A1129-015A **1303.66**	21201A1129-015A **1263.90**	23201A1129-015A **1266.04**	24201A1129-015A **1318.28**	500
2	21101A1129-020A **1300.90**	23101A1129-020A **1325.25**	24101A1129-020A **1343.07**	21201A1129-020A **1313.51**	23201A1129-020A **1207.46**	24201A1129-020A **1367.02**	500
2-1/2	21101A112-025-A **1552.66**	23101A112-025-A **1594.04**	24101A112-025-A **1673.35**	21201A112-025-A **1570.04**	23201A112-025-A **1610.22**	24201A112-025-A **1692.84**	500
3	21101A112-030-A **1640.39**	23101A112-030-A **1662.61**	24101A112-030-A **1734.11**	21201A112-030-A **1661.46**	23201A112-030-A **1677.21**	24201A112-030-A **1758.80**	500
4	21101A123-040-A **2610.20**	23101A123-040-A **2668.82**	24101A123-040-A **2987.95**	21201A123-040-A **3256.00**	23201A123-040-A **2688.80**	24201A123-040-A **3059.01**	500
6	21101A126-060-A **3704.56**	23101A126-060-A **3793.07**	24101A126-060-A **4451.01**	21201A126-060-A **3803.84**	23201A126-060-A **3833.60**	24201A126-060-A **4674.65**	500

CPVC

O-ring	EPDM			FKM			Prod Code
Joint	Socket	SR Thread	Flanged	Socket	SR Thread	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	21102A1129-005A **1235.20**	23102A1129-005A **1240.29**	24102A1129-005A **1295.84**	21202A1129-005A **1276.97**	23202A1129-005A **1284.98**	24202A1129-005A **1335.68**	502
3/4	21102A1129-007A **1242.37**	23102A1129-007A **1251.02**	24102A1129-007A **1312.43**	21202A1129-007A **1283.63**	23202A1129-007A **1294.15**	24202A1129-007A **1349.55**	502
1	21102A1129-010A **1289.05**	23102A1129-010A **1300.69**	24102A1129-010A **1337.56**	21202A1129-010A **1302.45**	23202A1129-010A **1330.88**	24202A1129-010A **1358.88**	502
1-1/4	21102A1129-012A **1314.18**	23102A1129-012A **1326.30**	24102A1129-012A **1364.81**	21202A1129-012A **1319.85**	23202A1129-012A **1347.26**	24202A1129-012A **1376.61**	502
1-1/2	21102A1129-015A **1340.78**	23102A1129-015A **1352.29**	24102A1129-015A **1398.82**	21202A1129-015A **1339.73**	23202A1129-015A **1352.62**	24202A1129-015A **1399.50**	502
2	21102A1129-020A **1384.16**	23102A1129-020A **1399.01**	24102A1129-020A **1500.54**	21202A1129-020A **1423.00**	23202A1129-020A **1431.88**	24202A1129-020A **1506.11**	502
2-1/2	21102A112-025-A **1814.97**	23102A112-025-A **1845.56**	24102A112-025-A **1946.65**	21202A112-025-A **1386.53**	23202A112-025-A **1879.38**	24202A112-025-A **1913.45**	502
3	21102A112-030-A **1867.26**	23102A112-030-A **1893.94**	24102A112-030-A **2030.20**	21202A112-030-A **1444.97**	23202A112-030-A **1912.43**	24202A112-030-A **2090.37**	502
4	21102A123-040-A **3037.01**	23102A123-040-A **3071.54**	24102A123-040-A **3583.62**	21202A123-040-A **2998.49**	23202A123-040-A **3036.92**	24202A123-040-A **3322.92**	502
6	21102A126-060-A **4351.00**	23102A126-060-A **4499.95**	24102A126-060-A **5603.81**	21202A126-060-A **4373.11**	23202A126-060-A **4522.05**	24202A126-060-A **5380.92**	502

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Electric Actuator Accessories for Ball Valves

Accessory	Description	Accessory Part Number	Price Each Prod Code: 298
Digital Modulating Board 0-10V/0-5V/1-5V/4-20mA (Specify setting at time of order)	120 VAC DIG HI RES POSITIONING CARD ONLY	A-PB01-AA-CD-RF	1409.00
Digital Potentiometer	FEEDBACK POT 360 DEG CONTINUOUS	A-PO45-00-00-RH	178.00
Digital Transmitter	4-20MA TRANSMITTER FOR DHC-100A POS BRD	A-TR33-AK-CD-00	267.00
Analog Modulating Board 0-10V/0-5V/4-20mA (Specify setting at time of order)	120V 2A PROPORTIONAL POSITIONING CONTROL for SIZES 1-1/2 - 4	A-MC01-AC-CA-RC	1077.00
Analog Potentiometer	FEEDBACK POT 360 DEG CONTINUOUS	A-PO45-00-00-RH	178.00
Analog Transmitter	4-20 MA TRANSMITTER FOR ANALOG FEED BACK	A-TR33-AB-CE-RH	533.00
	0-10V TRANSMITTER FOR ANALOG FEED BACK	A-TR33-AK-CA-RH	533.00
Installation bracket (required for any configuration)	MOUNTINMG KIT FOR 005 ACTUATOR on 1/2"- 3" Ball Valves, 1-1/2"-4" Butterfly Valves	A-PK40-00-00-RA	378.00
	MOUNTING BRACKET FOR RCEL004/006/009	A-PK41-00-00-RA	265.44
	MOUNTINMG KIT FOR 015/019/028 ACTUATORS on 6" Ball Valves, 6" - 12" Butterfly Valves	A-PK42-00-00-RD	378.00
ID Tag	Type 316 Stainless Steel ID Tag 1/2" x 3" (3-lines, 12-characters & spaces)	TAG3-015	31.61

Stem Extensions	Ball Valve Stem Extension [1]	A-BVSE-xxx-000	Call for pricing
	True Union 2000 Ball Valve Stem Extension	A-BVSE2-xxx-000	
Thermostat	Call for Application & Pricing		
Speed Control	Call for Application & Pricing		
"2-Wire" Control Relay	Call for Application & Pricing		
Torque Sensor	Call for Application & Pricing		
LED Indicator Lights	Call for Application & Pricing		
Additional Limit Switch Sets	Call for Application & Pricing		
Battery Backup	Call for Application & Pricing		

NOTES: 1 - Stem Extension Part Numbers: Enter size code for "xxx" in part number. Replace "000" with desired length code in part number; length is from top of valve to bottom of actuator.

Premium Actuated True Union 2000 Industrial Ball Valve - Pneumatic

Industrial grade True Union design, 1/4-turn shutoff for a wide range of applications. Full-featured actuator can be custom configured with add-on accessories.

- Blocked Seal Carrier
- Double O-ring Stem Seal
- PTFE Seats
- 1/2" - 4" 235 psi @ 73°F (23°C)
- 6" and all flanged 150 psi @ 73°F (23°C)
- 80 psi Operating Pressure, other options available
- 2-Position Air-Air or Air-Spring Closed (optional spring open)
- Dual Rack & Pinion with Adjustable Stops
- Manual Override
- Position Indicator

See **Pneumatic Actuator Accessories for Ball Valves & Butterfly Valves** for Add-on Actuator Accessories

PVC

O-ring	EPDM			FKM			Prod Code
Joint	Socket	SR Thread	Flanged	Socket	SR Thread	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2 Air to Air	21101H101-005 **591.62**	23101H101-005 **599.01**	24101H101-005 **641.57**	21201H101-005 **598.40**	23201H101-005 **610.36**	24201H101-005 **652.48**	530
1/2 Air to Spring	21101J101-005 **686.34**	23101J101-005 **693.72**	24101J101-005 **734.90**	21201J101-005 **693.12**	23201J101-005 **704.97**	24201J101-005 **747.18**	530
3/4 Air to Air	21101H101-007 **606.97**	23101H101-007 **611.40**	24101H101-007 **655.29**	21201H101-007 **610.39**	23201H101-007 **617.89**	24201H101-007 **669.67**	530
3/4 Air to Spring	21101J101-007 **701.69**	23101J101-007 **706.13**	24101J101-007 **749.90**	21201J101-007 **708.08**	23201J101-007 **712.61**	24201J101-007 **764.40**	530
1 Air to Air	21101H101-010 **629.03**	23101H101-010 **637.05**	24101H101-010 **678.39**	21201H101-010 **635.79**	23201H101-010 **647.74**	24201H101-010 **687.42**	530
1 Air to Spring	21101J101-010 **723.75**	23101J101-010 **731.84**	24101J101-010 **773.09**	21201J101-010 **734.22**	23201J101-010 **742.48**	24201J101-010 **782.19**	530
1-1/4 Air to Air	21101H101-012 **642.25**	23101H101-012 **658.64**	24101H101-012 **699.85**	21201H101-012 **657.68**	23201H101-012 **669.73**	24201H101-012 **710.64**	530
1-1/4 Air to Spring	21101J101-012 **736.97**	23101J101-012 **753.26**	24101J101-012 **794.57**	21201J101-012 **752.39**	23201J101-012 **764.45**	24201J101-012 **810.46**	530
1-1/2 Air to Air	21101H101-015 **663.02**	23101H101-015 **676.14**	24101H101-015 **727.14**	21201H101-015 **670.32**	23201H101-015 **691.02**	24201H101-015 **739.16**	530
1-1/2 Air to Spring	21101J101-015 **757.84**	23101J101-015 **770.77**	24101J101-015 **821.91**	21201J101-015 **765.04**	23201J101-015 **785.74**	24201J101-015 **835.89**	530
2 Air to Air	21101H101-020 **697.65**	23101H101-020 **717.01**	24101H101-020 **764.56**	21201H101-020 **709.37**	23201H101-020 **737.42**	24201H101-020 **774.42**	530
2 Air to Spring	21101J101-020 **894.23**	23101J101-020 **908.53**	24101J101-020 **961.20**	21201J101-020 **905.87**	23201J101-020 **934.03**	24201J101-020 **971.04**	530
2-1/2 Air to Air	21101H101-025 **962.49**	23101H101-025 **1056.31**	24101H101-025 **1084.07**	21201H101-025 **984.65**	23201H101-025 **1076.94**	24201H101-025 **1105.69**	530
2-1/2 Air to Spring	21101J101-025 **1107.45**	23101J101-025 **1193.05**	24101J101-025 **1228.82**	21201J101-025 **1129.15**	23201J101-025 **1221.38**	24201J101-025 **1250.45**	530
3 Air to Air	21101H101-030 **985.88**	23101H101-030 **1072.23**	24101H101-030 **1119.75**	21201H101-030 **1008.24**	23201H101-030 **1098.41**	24201H101-030 **1144.35**	530
3 Air to Spring	21101J101-030 **1131.02**	23101J101-030 **1215.55**	24101J101-030 **1263.04**	21201J101-030 **1153.48**	23201J101-030 **1241.80**	24201J101-030 **1287.71**	530
4 Air to Air	21101H101-040 **1599.55**	23101H101-040 **1651.74**	24101H101-040 **1852.71**	21201H101-040 **1643.09**	23201H101-040 **1695.39**	24201H101-040 **1907.00**	530
4 Air to Spring	21101J101-040 **1748.68**	23101J101-040 **1915.85**	24101J101-040 **2117.03**	21201J101-040 **1907.24**	23201J101-040 **1959.39**	24201J101-040 **2171.03**	530
6 Air to Air	21101H101-060 **2143.46**	23101H101-060 **2301.04**	24101H101-060 **2519.09**	21201H101-060 **2250.54**	23201H101-060 **2566.07**	24201H101-060 **2608.04**	530
6 Air to Spring	21101J101-060 **2427.72**	23101J101-060 **2898.17**	24101J101-060 **3117.61**	21201J101-060 **2862.79**	23201J101-060 **3382.80**	24201J101-060 **3420.94**	530

NOTE: "Socket" valves up to 2" size include standard plastic thread end connectors.
For Air to Spring OPEN, change letter "**J**" to letter "**K**" in listed part number.

CPVC

O-ring	EPDM			FKM			Prod Code
Joint	Socket	SR Thread	Flanged	Socket	SR Thread	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2 Air to Air	21102H101-005 **607.01**	23102H101-005 **613.10**	24102H101-005 **653.70**	21202H101-005 **615.02**	23202H101-005 **619.98**	24202H101-005 **662.24**	532
1/2 Air to Spring	21102J101-005 **700.39**	23102J101-005 **707.81**	24102J101-005 **748.31**	21202J101-005 **709.73**	23202J101-005 **715.30**	24202J101-005 **756.95**	532
3/4 Air to Air	21102H101-007 **618.59**	23102H101-007 **626.57**	24102H101-007 **669.18**	21202H101-007 **628.68**	23202H101-007 **634.60**	24202H101-007 **683.97**	532
3/4 Air to Spring	21102J101-007 **713.31**	23102J101-007 **721.29**	24102J101-007 **763.90**	21202J101-007 **723.39**	23202J101-007 **729.31**	24202J101-007 **778.68**	532

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CPVC (continued)

O-ring	EPDM			FKM			Prod Code
Joint	Socket	SR Thread	Flanged	Socket	SR Thread	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1 Air to Air	21102H101-010 **636.70**	23102H101-010 **649.23**	24102H101-010 **689.19**	21202H101-010 **647.36**	23202H101-010 **656.11**	24202H101-010 **707.47**	532
1 Air to Spring	21102J101-010 **731.42**	23102J101-010 **743.95**	24102J101-010 **783.79**	21202J101-010 **742.08**	23202J101-010 **747.07**	24202J101-010 **802.31**	532
1-1/4 Air to Air	21102H101-012 **659.09**	23102H101-012 **670.43**	24102H101-012 **713.73**	21202H101-012 **667.43**	23202H101-012 **681.71**	24202H101-012 **732.08**	532
1-1/4 Air to Spring	21102J101-012 **753.70**	23102J101-012 **765.15**	24102J101-012 **808.34**	21202J101-012 **762.15**	23202J101-012 **776.43**	24202J101-012 **826.80**	532
1-1/2 Air to Air	21102H101-015 **677.64**	23102H101-015 **689.77**	24102H101-015 **743.73**	21202H101-015 **689.52**	23202H101-015 **707.39**	24202H101-015 **768.70**	532
1-1/2 Air to Spring	21102J101-015 **772.26**	23102J101-015 **784.49**	24102J101-015 **840.87**	21202J101-015 **784.24**	23202J101-015 **802.11**	24202J101-015 **863.42**	532
2 Air to Air	21102H101-020 **718.66**	23102H101-020 **739.82**	24102H101-020 **785.42**	21202H101-020 **751.28**	23202H101-020 **763.01**	24202H101-020 **829.04**	532
2 Air to Spring	21102J101-020 **915.26**	23102J101-020 **936.43**	24102J101-020 **981.93**	21202J101-020 **947.88**	23202J101-020 **959.61**	24202J101-020 **1025.64**	532
2-1/2 Air to Air	21102H101-025 **1032.35**	23102H101-025 **1085.39**	24102H101-025 **1101.24**	21202H101-025 **1055.75**	23202H101-025 **1148.05**	24202H101-025 **1232.58**	532
2-1/2 Air to Spring	21102J101-025 **1176.95**	23102J101-025 **1229.88**	24102J101-025 **1245.71**	21202J101-025 **1200.25**	23202J101-025 **1290.50**	24202J101-025 **1377.37**	532
3 Air to Air	21102H101-030 **1060.86**	23102H101-030 **1105.70**	24102H101-030 **1156.92**	21202H101-030 **1093.88**	23202H101-030 **1179.97**	24202H101-030 **1261.09**	532
3 Air to Spring	21102J101-030 **1206.10**	23102J101-030 **1248.99**	24102J101-030 **1300.31**	21202J101-030 **1240.40**	23202J101-030 **1323.37**	24202J101-030 **1404.59**	532
4 Air to Air	21102H101-040 **2136.50**	23102H101-040 **2147.18**	24102H101-040 **2268.94**	21202H101-040 **2279.55**	23202H101-040 **2286.58**	24202H101-040 **2397.18**	532
4 Air to Spring	21102J101-040 **2400.46**	23102J101-040 **2411.33**	24102J101-040 **2533.09**	21202J101-040 **2543.50**	23202J101-040 **2550.53**	24202J101-040 **2661.40**	532
6 Air to Air	21102H101-060 **3423.52**	23102H101-060 **3444.05**	24102H101-060 **3947.32**	21202H101-060 **3501.33**	23202H101-060 **3525.32**	24202H101-060 **4129.88**	532
6 Air to Spring	21102J101-060 **4016.14**	23102J101-060 **4282.37**	24102J101-060 **4527.94**	21202J101-060 **4137.11**	23202J101-060 **4358.94**	24202J101-060 **4677.32**	532

NOTE:"Socket" valves up to 2" size include standard plastic thread end connectors.

For Air to Spring OPEN, change letter "**J**" to letter "**K**" in listed part number.

Premium Actuated Standard Butterfly Valve - Electric

Industrial grade valve with patented seat design uses no liner. Eliminates seat-creep and reduces operating torque. Full-featured actuator can be custom configured with add-on accessories.

The following Features are Standard with Electric Actuated Standard Butterfly Valves

- Solid SS316L Stem
- ANSI Class 150 Bolt Pattern
- 150 psi @ 73°F (23°C) (Thru 12")
- 14"-100 psi, 16"-85 psi
- 18"-70 psi, 20"-24"-50 psi
- 115 VAC standard, optional voltages available
- 2-Position Operation with 2-SPDT Limit Switches
- Additional set dry contacts SPDT limit Switches
- NEMA 4 Enclosure, Powder Coated
- Basic Manual Override 1-1/2 through 4" (Declutchable Available)
- Declutchable Manual Override 6" through 12"
- Illuminated Position Indicator
- Heater

When ordering Butterfly Valves with additional Actuator Accessories add a "-A" to the end of the basic part number and see **Electric Actuator Accessories for Butterfly Valves** to order add-on Actuator Accessories separately.

EX: 41101A112-015 add the -A to create 41101A112-015-A.

PVC

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Prod Code
1-1/2	41101A112-015 **1553.14**	41201A112-015 **1553.14**	41301A112-015 **1707.83**	510
2	41101A112-020 **1592.02**	41201A112-020 **1592.02**	41301A112-020 **1761.50**	510
2-1/2	41101A112-025 **1649.70**	41201A112-025 **1649.70**	41301A112-025 **1802.36**	510
3	41101A112-030 **1869.28**	41201A112-030 **1869.28**	41301A112-030 **2132.83**	510
4	41101A112-040 **2073.66**	41201A112-040 **2073.66**	41301A112-040 **2394.20**	510
6	41101A126-060 **3094.15**	41201A126-060 **3094.15**	41301A126-060 **3554.10**	510
8	41101A126-080 **3568.14**	41201A126-080 **3568.14**	41301A126-080 **4086.17**	510
10	41101A126-100 **4202.43**	41201A126-100 **4202.43**	41301A126-100 **5105.69**	510
12	41101A123-120 **4929.28**	41201A123-120 **4929.28**	41301A123-120 **6235.70**	510

CPVC

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Prod Code
1-1/2	41102A112-015 **1688.50**	41202A112-015 **1688.50**	41302A112-015 **1894.20**	512
2	41102A112-020 **1745.16**	41202A112-020 **1745.16**	41302A112-020 **1941.80**	512
2-1/2	41102A112-025 **1812.17**	41202A112-025 **1812.17**	41302A112-025 **2051.77**	512
3	41102A112-030 **2092.20**	41202A112-030 **2092.20**	41302A112-030 **2454.20**	512
4	41102A112-040 **2409.80**	41202A112-040 **2409.80**	41302A112-040 **2673.44**	512
6	41102A126-060 **3629.07**	41202A126-060 **3629.07**	41302A126-060 **4211.33**	512
8	41102A126-080 **4160.55**	41202A126-080 **4160.55**	41302A126-080 **4997.33**	512
10	41102A126-100 **5229.60**	41202A126-100 **5229.60**	41302A126-100 **6244.60**	512
12	41102A123-120 **6332.49**	41202A123-120 **6332.49**	41302A123-120 **8092.70**	512

Polypropylene

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Prod Code
1-1/2	41103A112-015 **1816.78**	41203A112-015 **1816.78**	41303A112-015 **1982.44**	514
2	41103A112-020 **1875.80**	41203A112-020 **1875.80**	41303A112-020 **2014.22**	514
2-1/2	41103A112-025 **1907.90**	41203A112-025 **1907.90**	41303A112-025 **2109.75**	512
3	41103A112-030 **2243.40**	41203A112-030 **2243.40**	41303A112-030 **2528.22**	514
4	41103A112-040 **2537.55**	41203A112-040 **2537.55**	41303A112-040 **2746.90**	514
6	41103A126-060 **3775.40**	41203A126-060 **3775.40**	41303A126-060 **4372.33**	514

Polypropylene (continued)

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Prod Code
8	41103A126-080 **4281.32**	41203A126-080 **4281.32**	41303A126-080 **5123.14**	514
10	41103A126-100 **5410.67**	41203A126-100 **5410.67**	41303A126-100 **6504.50**	514
12	41103A123-120 **7548.63**	41203A123-120 **6686.28**	41303A123-120 **8350.91**	514

14, 16, 18, 20 & 24 - Price On Application

NOTE: Due to variations in potential system operating conditions, 14" -24" Actuated Butterfly Valve packages are sized and priced according to application parameters. Please contact Spears® for additional information.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Premium Actuated Standard Butterfly Valve - Pneumatic

Industrial grade valve with patented seat design uses no liner. Eliminates seat-creep and reduces operating torque. Full-featured actuator can be custom configured with add-on accessories.

- Solid SS316L Stem
- ANSI Class 150 Bolt Pattern
- 150 psi @ 73°F (23°C) (Thru 12")
- 14"-100 psi, 16"- 85 psi, 18"-70 psi, 20"-24"-50 psi
- 80 psi Operating Pressure, other options available
- 2-Position Air-Air or Air-Spring Closed (optional spring open)
- Dual Rack & Pinion with Adjustable Stops
- Manual Override
- Position Indicator

See **Pneumatic Actuator Accessories for Ball Valves & Butterfly Valves** for Add-on Actuator Accessories

NOTE: Due to variations in potential system operating conditions, 14" -24" Actuated Butterfly Valve packages are sized and priced according to application parameters. Please contact Spears® for additional information.

PVC

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Prod Code
1-1/2 Air to Air	41101H101-015 621.21	41201H101-015 621.21	41301H101-015 882.73	540
1-1/2 Air to Spring	41101J101-015 690.59	41201J101-015 934.06	41301J101-015 952.09	540
2 Air to Air	41101H101-020 663.34	41201H101-020 663.34	41301H101-020 922.65	540
2 Air to Spring	41101J101-020 827.36	41201J101-020 1075.40	41301J101-020 1086.65	540
2-1/2 Air to Air	41101H101-025 687.93	41201H101-025 687.93	41301H101-025 955.99	540
2-1/2 Air to Spring	41101J101-025 915.02	41201J101-025 1106.30	41301J101-025 1183.09	540
3 Air to Air	41101H101-030 801.76	41201H101-030 801.76	41301H101-030 1074.23	540
3 Air to Spring	41101J101-030 987.84	41201J101-030 1322.67	41301J101-030 1260.33	540
4 Air to Air	41101H101-040 940.31	41201H101-040 940.31	41301H101-040 1309.48	540
4 Air to Spring	41101J101-040 1198.94	41201J101-040 1815.41	41301J101-040 1568.12	540
6 Air to Air	41101H101-060 1318.64	41201H101-060 1318.64	41301H101-060 1951.58	540
6 Air to Spring	41101J101-060 1826.45	41201J101-060 2593.20	41301J101-060 2459.40	540
8 Air to Air	41101H101-080 1871.45	41201H101-080 1871.45	41301H101-080 2917.54	540
8 Air to Spring	41101J101-080 2584.31	41201J101-080 3078.10	41301J101-080 3630.36	540
10 Air to Air	41101H101-100 2788.46	41201H101-100 2788.46	41301H101-100 4880.59	540
10 Air to Spring	41101J101-100 4043.80	41201J101-100 4964.21	41301J101-100 6135.93	540
12 Air to Air	41101H101-120 3300.87	41201H101-120 3300.87	41301H101-120 6522.59	540
12 Air to Spring	41101J101-120 4556.22	41201J101-120 4556.22	41301J101-120 7777.92	540

NOTE: For Air to Spring OPEN, change letter "J" to letter "K" in listed part number.

CPVC

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Prod Code
1-1/2 Air to Air	41102H101-015 724.52	41202H101-015 724.52	41302H101-015 1071.73	542
1-1/2 Air to Spring	41102J101-015 793.89	41202J101-015 793.89	41302J101-015 1141.12	542
2 Air to Air	41102H101-020 764.43	41202H101-020 764.43	41302H101-020 1102.85	542
2 Air to Spring	41102J101-020 928.45	41202J101-020 928.45	41302J101-020 1266.84	542
2-1/2 Air to Air	41102H101-025 795.57	41202H101-025 795.57	41302H101-025 1149.40	542
2-1/2 Air to Spring	41102J101-025 1023.08	41202J101-025 1023.08	41302J101-025 1376.51	542
3 Air to Air	41102H101-030 933.59	41202H101-030 933.59	41302H101-030 1324.76	542
3 Air to Spring	41102J101-030 1119.67	41202J101-030 1119.67	41302J101-030 1510.85	542

CPVC (continued)

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Prod Code
4 Air to Air	41102H101-040 1094.12	41202H101-040 1094.12	41302H101-040 1630.40	542
4 Air to Spring	41102J101-040 1352.76	41202J101-040 1352.76	41302J101-040 1889.04	542
6 Air to Air	41102H101-060 1547.18	41202H101-060 1547.18	41302H101-060 2465.80	542
6 Air to Spring	41102J101-060 2055.01	41202J101-060 2055.01	41302J101-060 2973.61	542
8 Air to Air	41102H101-080 2267.02	41202H101-080 2267.02	41302H101-080 3787.82	542
8 Air to Spring	41102J101-080 2979.84	41202J101-080 2979.84	41302J101-080 4500.64	542
10 Air to Air	41102H101-100 3575.23	41202H101-100 3575.23	41302H101-100 6629.91	542
10 Air to Spring	41102J101-100 4830.57	41202J101-100 4830.57	41302J101-100 7885.23	542
12 Air to Air	41102H101-120 4338.15	41202H101-120 4338.15	41302H101-120 8309.27	542
12 Air to Spring	41102J101-120 5593.48	41202J101-120 5593.48	41302J101-120 9564.60	542

NOTE: For Air to Spring OPEN, change letter "J" to letter "K" in listed part number.

Polypropylene

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Prod Code
1-1/2 Air to Air	41103H101-015 838.05	41203H101-015 838.05	41303H101-015 1286.94	544
1-1/2 Air to Spring	41103J101-015 907.43	41203J101-015 907.43	41303J101-015 1356.32	544
2 Air to Air	41103H101-020 863.08	41203H101-020 863.08	41303H101-020 1319.15	544
2 Air to Spring	41103J101-020 1027.12	41203J101-020 1027.12	41303J101-020 1483.16	544
2-1/2 Air to Air	41103H101-025 896.74	41203H101-025 896.74	41303H101-025 1368.96	544
2-1/2 Air to Spring	41103J101-025 1123.85	41203J101-025 1123.85	41303J101-025 1596.06	544
3 Air to Air	41103H101-030 1019.04	41203H101-030 1019.04	41303H101-030 1501.24	544
3 Air to Spring	41103J101-030 1205.13	41203J101-030 1205.13	41303J101-030 1687.34	544
4 Air to Air	41103H101-040 1185.47	41203H101-040 1185.47	41303H101-040 1831.65	544
4 Air to Spring	41103J101-040 1444.11	41203J101-040 1444.11	41303J101-040 2090.29	544
6 Air to Air	41103H101-060 1698.69	41203H101-060 1698.69	41303H101-060 2794.18	544
6 Air to Spring	41103J101-060 2206.49	41203J101-060 2206.49	41303J101-060 3301.97	544
8 Air to Air	41103H101-080 2517.78	41203H101-080 2517.78	41303H101-080 4351.64	544
8 Air to Spring	41103J101-080 3230.60	41203J101-080 3230.60	41303J101-080 3645.13	544
10 Air to Air	41103H101-100 4072.68	41203H101-100 4072.68	41303H101-100 7757.55	544
10 Air to Spring	41103J101-100 5328.04	41203J101-100 5328.04	41303J101-100 9012.88	544

Polypropylene (continued)

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Prod Code
12 Air to Air	41103H101-120 **4968.57**	41203H101-120 **4968.57**	41303H101-120 **10634.23**	544
12 Air to Spring	41103J101-120 **6223.91**	41203J101-120 **6223.91**	41303J101-120 **11889.59**	544

14, 16, 18, 20 & 24 - Price On Application
NOTE: For Air to Spring OPEN, change letter "J" to letter "K" in listed part number.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com
Spears® Manufacturing Company

Premium Actuated Lug Insert Butterfly Valve - Electric

Industrial grade valve with patented seat design uses no liner. Eliminates seat-creep and reduces operating torque. Full-featured actuator can be custom configured with add-on accessories.

The following Features are Standard with Electric Actuated Lug Insert Butterfly Valves

- Solid SS316L Stem
- ANSI Class 150 Bolt Pattern
- 150 psi @ 73°F (23°C) (Thru 12")
- 14"-100 psi, 16"-85 psi
- 18"-70 psi, 20"-24"-50 psi
- 115 VAC standard, optional voltages available
- 2-Position Operation with 2-SPDT Limit Switches
- Additional set dry contacts SPDT limit Switches
- NEMA 4 Enclosure, Powder Coated
- Basic Manual Override 1-1/2 through 4" (Declutchable Available)
- Declutchable Manual Override 6" through 12"
- Illuminated Position Indicator
- Heater

When ordering Butterfly Valves with additional Actuator Accessories add a "-A" to the end of the basic part number and see **Electric Actuator Accessories for Butterfly Valves** to order add-on Actuator Accessories separately.

EX: 41121A112-015 add the -A to create 41121A112-015-A.

PVC - Stainless Steel Lug Inserts

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Prod Code
1-1/2	41121A112-015 **1647.08**	41221A112-015 **1647.08**	41321A112-015 **1828.16**	510
2	41121A112-020 **1699.71**	41221A112-020 **1699.71**	41321A112-020 **1920.24**	510
2-1/2	41121A112-025 **1738.21**	41221A112-025 **1738.21**	41321A112-025 **1973.60**	510
3	41121A112-030 **2229.55**	41221A112-030 **2229.55**	41321A112-030 **2401.23**	510
4	41121A112-040 **2981.71**	41221A112-040 **2981.71**	41321A112-040 **3129.80**	510
6	41121A126-060 **4001.50**	41221A126-060 **4001.50**	41321A126-060 **4479.57**	510
8	41121A126-080 **4354.26**	41221A126-080 **4354.26**	41321A126-080 **5182.33**	510
10	41121A126-100 **6114.55**	41221A126-100 **6114.55**	41321A126-100 **7608.90**	510
12	41121A123-120 **7781.83**	41221A123-120 **7781.83**	41321A123-120 **8959.16**	510

PVC - Zinc Lug Inserts

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Prod Code
1-1/2	41111A112-015 **1583.91**	41211A112-015 **1583.91**	41311A112-015 **1781.40**	510
2	41111A112-020 **1632.88**	41211A112-020 **1632.88**	41311A112-020 **1893.65**	510
2-1/2	41111A112-025 **1705.71**	41211A112-025 **1705.71**	41311A112-025 **1936.47**	510
3	41111A112-030 **2145.58**	41211A112-030 **2145.58**	41311A112-030 **2352.50**	510
4	41111A112-040 **2830.84**	41211A112-040 **2830.84**	41311A112-040 **3011.60**	510
6	41111A126-060 **3768.60**	41211A126-060 **3768.60**	41311A126-060 **4036.97**	510
8	41111A126-080 **4108.03**	41211A126-080 **4108.03**	41311A126-080 **4942.75**	510
10	41111A126-100 **4941.81**	41211A126-100 **4941.81**	41311A126-100 **5831.63**	510
12	41111A123-120 **5828.11**	41211A123-120 **5828.11**	41311A123-120 **6985.37**	510

CPVC - Stainless Steel Lug Inserts

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Prod Code
1-1/2	41122A112-015 **1813.61**	41222A112-015 **1813.61**	41322A112-015 **2018.90**	512
2	41122A112-020 **1867.73**	41222A112-020 **1867.73**	41322A112-020 **2156.65**	512
2-1/2	41122A112-025 **1930.45**	41222A112-025 **1930.45**	41322A112-025 **2214.11**	512
3	41122A112-030 **2541.80**	41222A112-030 **2541.80**	41322A112-030 **2924.80**	512
4	41122A112-040 **3249.28**	41222A112-040 **3249.28**	41322A112-040 **3567.70**	512
6	41122A126-060 **4426.90**	41222A126-060 **4426.90**	41322A126-060 **4999.83**	512

CPVC - Stainless Steel Lug Inserts (continued)

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Prod Code
8	41122A126-080 **4892.60**	41222A126-080 **4892.60**	41322A126-080 **6049.60**	512
10	41122A126-100 **7235.20**	41222A126-100 **7235.20**	41322A126-100 **8318.57**	512
12	41122A123-120 **8472.60**	41222A123-120 **8472.60**	41322A123-120 **9605.33**	512

CPVC - Zinc Lug Inserts

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Prod Code
1-1/2	41112A112-015 **1712.57**	41212A112-015 **1712.57**	41312A112-015 **1988.20**	512
2	41112A112-020 **1781.70**	41212A112-020 **1781.71**	41312A112-020 **2083.40**	512
2-1/2	41112A112-025 **1880.20**	41212A112-025 **1880.20**	41312A112-025 **2145.60**	512
3	41112A112-030 **2266.56**	41212A112-030 **2266.56**	41312A112-030 **2776.29**	512
4	41112A112-040 **3001.68**	41212A112-040 **3001.68**	41312A112-040 **3287.74**	512
6	41112A126-060 **4056.12**	41212A126-060 **4056.12**	41312A126-060 **4675.17**	512
8	41112A126-080 **4453.89**	41212A126-080 **4453.89**	41312A126-080 **5751.14**	512
10	41112A126-100 **5751.78**	41212A126-100 **5751.78**	41312A126-100 **6544.50**	512
12	41112A123-120 **7027.30**	41212A123-120 **7027.30**	41312A123-120 **8416.30**	512

Premium Actuated Lug Insert Butterfly Valve - Pneumatic

Industrial grade valve with factory assembled lug inserts. Patented seat design uses no liner. Eliminates seat-creep and reduces operating torque. Full-featured actuator can be custom configured with add-on accessories.

- Solid SS316L Stem
- ANSI Class 150 Bolt Pattern
- 150 psi @ 73°F (23°C)
- Zinc or SS Lug Inserts
- 80 psi Operating Pressure, other options available
- 2-Position Air-Air or Air-Spring Closed (optional spring open)
- Dual Rack & Pinion with Adjustable Stops
- Manual Override
- Position Indicator

See **Pneumatic Actuator Accessories for Ball Valves & Butterfly Valves** for Add-on Actuator Accessories

PVC - Stainless Steel Lug Inserts

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Prod Code
1-1/2 Air to Air	41121H101-015 **910.18**	41221H101-015 **898.26**	41321H101-015 **1135.95**	540
1-1/2 Air to Spring	41121J101-015 **962.57**	41221J101-015 **962.57**	41321J101-015 **1200.25**	540
2 Air to Air	41121H101-020 **943.84**	41221H101-020 **943.84**	41321H101-020 **1192.94**	540
2 Air to Spring	41121J101-020 **1098.89**	41221J101-020 **1098.89**	41321J101-020 **1347.97**	540
2-1/2 Air to Air	41121H101-025 **1038.93**	41221H101-025 **1038.93**	41321H101-025 **1258.11**	540
2-1/2 Air to Spring	41121J101-025 **1254.49**	41221J101-025 **1254.49**	41321J101-025 **1473.67**	540
3 Air to Air	41121H101-030 **1299.20**	41221H101-030 **1299.20**	41321H101-030 **1536.89**	540
3 Air to Spring	41121J101-030 **1339.69**	41221J101-030 **1339.69**	41321J101-030 **1577.39**	540
4 Air to Air	41121H101-040 **1729.88**	41221H101-040 **1729.88**	41321H101-040 **2021.65**	540
4 Air to Spring	41121J101-040 **1971.94**	41221J101-040 **1971.94**	41321J101-040 **2263.71**	540
6 Air to Air	41121H101-060 **2446.11**	41221H101-060 **2446.11**	41321H101-060 **2974.15**	540
6 Air to Spring	41121J101-060 **2789.51**	41221J101-060 **2789.51**	41321J101-060 **3317.54**	540
8 Air to Air	41121H101-080 **2924.01**	41221H101-080 **2924.01**	41321H101-080 **3953.04**	540
8 Air to Spring	41121J101-080 **3747.68**	41221J101-080 **3747.68**	41321J101-080 **4776.73**	540
10 Air to Air	41121H101-100 **4817.54**	41221H101-100 **4817.54**	41321H101-100 **6842.91**	540
10 Air to Spring	41121J101-100 **6037.95**	41221J101-100 **6037.95**	41321J101-100 **8063.31**	540
12 Air to Air	41121H101-120 **5388.03**	41221H101-120 **5388.03**	41321H101-120 **8226.08**	540
12 Air to Spring	41121J101-120 **6594.46**	41221J101-120 **6594.46**	41321J101-120 **9432.54**	540

NOTE: For Air to Spring OPEN, change letter "J" to letter "K" in listed part number.

PVC - Zinc Lug Inserts

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Prod Code
1-1/2 Air to Air	41111H101-015 **808.61**	41211H101-015 **808.61**	41311H101-015 **1022.09**	540
1-1/2 Air to Spring	41111J101-015 **872.91**	41211J101-015 **872.91**	41311J101-015 **1086.39**	540
2 Air to Air	41111H101-020 **884.06**	41211H101-020 **884.06**	41311H101-020 **1074.79**	540
2 Air to Spring	41111J101-020 **1039.13**	41211J101-020 **1039.13**	41311J101-020 **1229.85**	540
2-1/2 Air to Air	41111H101-025 **954.95**	41211H101-025 **954.95**	41311H101-025 **1159.89**	540
2-1/2 Air to Spring	41111J101-025 **1170.53**	41211J101-025 **1170.53**	41311J101-025 **1375.47**	540
3 Air to Air	41111H101-030 **1215.23**	41211H101-030 **1215.23**	41311H101-030 **1418.77**	540

PVC - Zinc Lug Inserts (continued)

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Prod Code
3 Air to Spring	41111J101-030 **1255.73**	41211J101-030 **1255.73**	41311J101-030 **1459.26**	540
4 Air to Air	41111H101-040 **1579.01**	41211H101-040 **1579.01**	41311H101-040 **1829.52**	540
4 Air to Spring	41111J101-040 **1821.05**	41211J101-040 **1821.05**	41311J101-040 **2071.56**	540
6 Air to Air	41111H101-060 **2380.64**	41211H101-060 **2380.64**	41311H101-060 **2699.46**	540
6 Air to Spring	41111J101-060 **2591.67**	41211J101-060 **2591.67**	41311J101-060 **3042.85**	540
8 Air to Air	41111H101-080 **2677.76**	41211H101-080 **2677.76**	41311H101-080 **3554.52**	540
8 Air to Spring	41111J101-080 **3501.44**	41211J101-080 **3501.44**	41311J101-080 **4378.19**	540
10 Air to Air	41111H101-100 **4323.67**	41211H101-100 **4323.67**	41311H101-100 **6045.85**	540
10 Air to Spring	41111J101-100 **5544.07**	41211J101-100 **5544.07**	41311J101-100 **7266.26**	540
12 Air to Air	41111H101-120 **4817.29**	41211H101-120 **4817.29**	41311H101-120 **8065.25**	540
12 Air to Spring	41111J101-120 **6023.73**	41211J101-120 **6023.73**	41311J101-120 **9271.69**	540

NOTE: For Air to Spring OPEN, change letter "J" to letter "K" in listed part number.

CPVC - Stainless Steel Lug Inserts

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Prod Code
1-1/2 Air to Air	41122H101-015 **1064.78**	41222H101-015 **1064.78**	41322H101-015 **1363.68**	542
1-1/2 Air to Spring	41122J101-015 **1129.09**	41222J101-015 **1129.09**	41322J101-015 **1427.99**	542
2 Air to Air	41122H101-020 **1118.91**	41222H101-020 **1118.91**	41322H101-020 **1407.84**	542
2 Air to Spring	41122J101-020 **1273.97**	41222J101-020 **1273.97**	41322J101-020 **1562.88**	542
2-1/2 Air to Air	41122H101-025 **1175.57**	41222H101-025 **1175.57**	41322H101-025 **1487.25**	542
2-1/2 Air to Spring	41122J101-025 **1391.13**	41222J101-025 **1391.13**	41322J101-025 **1702.83**	542
3 Air to Air	41122H101-030 **1441.55**	41222H101-030 **1441.55**	41322H101-030 **1748.97**	542
3 Air to Spring	41122J101-030 **1482.38**	41222J101-030 **1482.03**	41322J101-030 **1789.46**	542
4 Air to Air	41122H101-040 **1997.46**	41222H101-040 **1997.46**	41322H101-040 **2354.73**	542
4 Air to Spring	41122J101-040 **2239.51**	41222J101-040 **2239.51**	41322J101-040 **2596.77**	542
6 Air to Air	41122H101-060 **2774.89**	41222H101-060 **2774.89**	41322H101-060 **3443.83**	542
6 Air to Spring	41122J101-060 **3118.29**	41222J101-060 **3118.29**	41322J101-060 **3787.23**	542
8 Air to Air	41122H101-080 **3349.57**	41222H101-080 **3349.57**	41322H101-080 **4710.23**	542
8 Air to Spring	41122J101-080 **4173.23**	41222J101-080 **4173.23**	41322J101-080 **5533.92**	542

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CPVC - Stainless Steel Lug Inserts (continued)

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Prod Code
10 Air to Air	41122H101-100 **5667.25**	41222H101-100 **5667.25**	41322H101-100 **8074.05**	542
10 Air to Spring	41122J101-100 **6279.72**	41222J101-100 **6279.72**	41322J101-100 **8686.51**	542
12 Air to Air	41122H101-120 **6353.03**	41222H101-120 **6353.03**	41322H101-120 **9653.65**	542
12 Air to Spring	41122J101-120 **7559.47**	41222J101-120 **7559.47**	41322J101-120 **10860.09**	542

NOTE: For Air to Spring OPEN, change letter "J" to letter "K" in listed part number.

CPVC - Zinc Lug Inserts

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Prod Code
1-1/2 Air to Air	41112H101-015 **963.74**	41212H101-015 **963.74**	41312H101-015 **1207.13**	542
1-1/2 Air to Spring	41112J101-015 **1027.77**	41212J101-015 **1027.77**	41312J101-015 **1271.42**	542
2 Air to Air	41112H101-020 **1019.27**	41212H101-020 **1019.27**	41312H101-020 **1261.24**	542
2 Air to Spring	41112J101-020 **1174.34**	41212J101-020 **1174.31**	41312J101-020 **1416.31**	542
2-1/2 Air to Air	41112H101-025 **1075.94**	41212H101-025 **1075.94**	41312H101-025 **1329.27**	542
2-1/2 Air to Spring	41112J101-025 **1291.51**	41212J101-025 **1291.51**	41312J101-025 **1544.85**	542
3 Air to Air	41112H101-030 **1336.20**	41212H101-030 **1336.20**	41312H101-030 **1590.98**	542
3 Air to Spring	41112J101-030 **1376.69**	41212J101-030 **1376.69**	41312J101-030 **1631.46**	542
4 Air to Air	41112H101-040 **1749.82**	41212H101-040 **1749.82**	41312H101-040 **2112.76**	542
4 Air to Spring	41112J101-040 **1991.86**	41212J101-040 **1991.86**	41312J101-040 **2354.80**	542
6 Air to Air	41112H101-060 **2535.78**	41212H101-060 **2535.78**	41312H101-060 **3102.25**	542
6 Air to Spring	41112J101-060 **2879.17**	41212J101-060 **2879.17**	41312J101-060 **3445.64**	542
8 Air to Air	41112H101-080 **3023.64**	41212H101-080 **3023.64**	41312H101-080 **4401.39**	542
8 Air to Spring	41112J101-080 **3847.32**	41212J101-080 **3847.32**	41312J101-080 **5225.06**	542
10 Air to Air	41112H101-100 **5025.36**	41212H101-100 **5025.36**	41312H101-100 **7412.23**	542
10 Air to Spring	41112J101-100 **5637.80**	41212J101-100 **5637.80**	41312J101-100 **8024.68**	542
12 Air to Air	41112H101-120 **5628.57**	41212H101-120 **5628.57**	41312H101-120 **9263.67**	542
12 Air to Spring	41112J101-120 **6835.01**	41212J101-120 **6835.01**	41312J101-120 **10470.12**	542

NOTE: For Air to Spring OPEN, change letter "J" to letter "K" in listed part number.

Premium Actuated True Lug Butterfly Valve - Electric

Industrial grade valve with patented seat design uses no liner. Eliminates seat-creep and reduces operating torque. Full-featured actuator can be custom configured with add-on accessories.

The following Features are Standard with Electric Actuated Premium True Lug Butterfly Valves

- Solid SS316L Stem
- ANSI Class 150 Bolt Pattern
- 150 psi @ 73°F (23°C) (Thru 12")
- 14"-100 psi, 16"-85 psi
- 18"-70 psi, 20"-24"-50 psi
- 115 VAC standard, optional voltages available
- 2-Position Operation with 2-SPDT Limit Switches
- Additional set dry contacts SPDT limit Switches
- NEMA 4 Enclosure, Powder Coated
- Basic Manual Override 1-1/2 through 4" (Declutchable Available)
- Declutchable Manual Override 6" through 12"
- Illuminated Position Indicator
- Heater

When ordering Butterfly Valves with additional Actuator Accessories add a "-A" to the end of the basic part number and see **Electric Actuator Accessories for Butterfly Valves** to order add-on Actuator Accessories separately.

EX: 51121A112-015 add the -A to create 51121A112-015-A.

PVC - Stainless Steel Lugs

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Prod Code
1-1/2	51121A112-015 **1901.64**	51221A112-015 **1901.64**	51321A112-015 **2178.85**	510
2	51121A112-020 **2137.09**	51221A112-020 **2137.09**	51321A112-020 **2293.07**	510
2-1/2	51121A112-025 **2181.82**	51221A112-025 **2181.82**	51321A112-025 **2358.20**	510
3	51121A112-030 **2405.72**	51221A112-030 **2405.72**	51321A112-030 **2647.19**	510
4	51121A112-040 **3170.02**	51221A112-040 **3170.02**	51321A112-040 **3619.42**	510
6	51111A126-060 **4428.88**	51221A126-060 **4915.45**	51321A126-060 **5276.27**	510
8	51111A126-080 **4774.84**	51221A126-080 **5070.92**	51321A126-080 **6197.80**	510
10	51111A126-100 **6180.23**	51221A126-100 **7616.58**	51321A126-100 **8592.50**	510
12	51121A123-120 **8311.76**	51221A123-120 **8311.76**	51321A123-120 **9428.33**	510

PVC - Zinc Lugs

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Prod Code
1-1/2	51111A112-015 **1847.37**	51211A112-015 **1847.30**	51311A112-015 **2025.60**	510
2	51111A112-020 **1958.35**	51211A112-020 **1958.35**	51311A112-020 **2212.40**	510
2-1/2	51111A112-025 **2006.70**	51211A112-025 **2006.70**	51311A112-025 **2290.58**	510
3	51111A112-030 **2329.60**	51211A112-030 **2329.60**	51311A112-030 **2562.31**	510
4	51111A112-040 **2961.57**	51211A112-040 **2961.57**	51311A112-040 **3360.10**	510
6	51111A126-060 **4428.88**	51211A126-060 **4428.88**	51311A126-060 **4987.84**	510
8	51111A126-080 **4774.84**	51211A126-080 **4772.84**	51311A126-080 **5576.33**	510
10	51111A126-100 **6180.23**	51211A126-100 **6180.23**	51311A126-100 **6960.31**	510
12	51111A123-120 **7464.31**	51211A123-120 **7464.31**	51311A123-120 **8354.61**	510

CPVC - Stainless Steel Lugs

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Prod Code
1-1/2	51122A112-015 **2122.18**	51222A112-015 **2122.18**	51322A112-015 **2463.37**	512
2	51122A112-020 **2286.85**	51222A112-020 **2286.85**	51322A112-020 **2550.44**	512
2-1/2	51122A112-025 **2312.57**	51222A112-025 **2312.57**	51322A112-025 **2697.50**	512
3	51122A112-030 **2934.72**	51222A112-030 **2934.72**	51322A112-030 **3272.15**	512
4	51122A112-040 **3545.11**	51222A112-040 **3545.11**	51322A112-040 **4046.33**	512

CPVC - Stainless Steel Lugs (continued)

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Prod Code
6	51122A126-060 **5799.88**	51222A126-060 **5799.88**	51322A126-060 **6331.27**	512
8	51122A126-080 **6112.96**	51222A126-080 **6112.96**	51322A126-080 **7350.55**	512
10	51122A126-100 **9430.80**	51222A126-100 **9430.80**	51322A126-100 **10190.66**	512
12	51122A123-120 **10380.13**	51222A123-120 **10380.13**	51322A123-120 **14972.41**	512

CPVC - Zinc Lugs

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Prod Code
1-1/2	51112A112-015 **2069.09**	51212A112-015 **2069.09**	51312A112-015 **2328.40**	512
2	51112A112-020 **2147.42**	51212A112-020 **2147.42**	51312A112-020 **2486.56**	512
2-1/2	51112A112-025 **2264.75**	51212A112-025 **2264.75**	51312A112-025 **2528.73**	512
3	51112A112-030 **2845.60**	51212A112-030 **2845.60**	51312A112-030 **3160.62**	512
4	51112A112-040 **3365.40**	51212A112-040 **3365.04**	51312A112-040 **3987.80**	512
6	51112A126-060 **5001.29**	51212A126-060 **5001.29**	51312A126-060 **6056.20**	512
8	51112A126-080 **5925.45**	51212A126-080 **5925.45**	51312A126-080 **6592.37**	512
10	51112A126-100 **6799.20**	51212A126-100 **6799.20**	51312A126-100 **7903.87**	512
12	51112A123-120 **8831.46**	51212A123-120 **8831.46**	51312A123-120 **9751.58**	512

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Premium Actuated True Lug Butterfly Valve - Pneumatic

Industrial grade lug style valve with patented seat design uses no liner. Eliminates seat-creep and reduces operating torque. Full-featured actuator can be custom configured with add-on accessories.

- Solid SS316L Stem
- ANSI Class 150 Bolt Pattern
- 150 psi @ 73°F (23°C)
- Zinc or SS Lugs
- 80 psi Operating Pressure, other options available
- 2-Position Air-Air or Air-Spring Closed (optional spring open)
- Dual Rack & Pinion with Adjustable Stops
- Manual Override
- Position Indicator

See **Pneumatic Actuator Accessories for Ball Valves & Butterfly Valves** for Add-on Actuator Accessories

PVC - Stainless Steel Lugs

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Prod Code
1-1/2 Air to Air	51121H101-015 **1067.92**	51221H101-015 **1067.92**	51321H101-015 **1400.82**	540
1-1/2 Air to Spring	51121J101-015 **1137.32**	51221J101-015 **1137.32**	51321J101-015 **1470.20**	540
2 Air to Air	51121H101-020 **1101.28**	51221H101-020 **1101.28**	51321H101-020 **1447.48**	540
2 Air to Spring	51121J101-020 **1262.16**	51221J101-020 **1262.16**	51321J101-020 **1611.48**	540
2-1/2 Air to Air	51121H101-025 **1178.24**	51221H101-025 **1178.24**	51321H101-025 **1483.47**	540
2-1/2 Air to Spring	51121J101-025 **1405.36**	51221J101-025 **1405.36**	51321J101-025 **1710.56**	540
3 Air to Air	51121H101-030 **1295.45**	51221H101-030 **1295.45**	51321H101-030 **1629.95**	540
3 Air to Spring	51121J101-030 **1481.55**	51221J101-030 **1481.55**	51321J101-030 **1816.04**	540
4 Air to Air	51121H101-040 **2006.15**	51221H101-040 **2006.15**	51321H101-040 **2414.57**	540
4 Air to Spring	51121J101-040 **2264.78**	51221J101-040 **2264.78**	51321J101-040 **2673.22**	540
6 Air to Air	51121H101-060 **2669.65**	51221H101-060 **2669.65**	51321H101-060 **3408.28**	540
6 Air to Spring	51121J101-060 **3177.44**	51221J101-060 **3177.44**	51321J101-060 **3916.08**	540
8 Air to Air	51121H101-080 **3287.64**	51221H101-080 **3287.64**	51321H101-080 **4727.18**	540
8 Air to Spring	51121J101-080 **4000.46**	51221J101-080 **4000.46**	51321J101-080 **5440.02**	540
10 Air to Air	51121H101-100 **5700.09**	51221H101-100 **5700.09**	51321H101-100 **8533.31**	540
10 Air to Spring	51121J101-100 **6892.34**	51221J101-100 **6892.34**	51321J101-100 **9788.66**	540
12 Air to Air	51121H101-120 **6425.66**	51221H101-120 **6425.66**	51321H101-120 **10394.62**	540
12 Air to Spring	51121J101-120 **7681.00**	51221J101-120 **7681.00**	51321J101-120 **11649.95**	540

NOTE: For Air to Spring OPEN, change letter "J" to letter "K" in listed part number.

PVC - Zinc Lugs

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Prod Code
1-1/2 Air to Air	51111H101-015 **942.95**	51211H101-015 **942.95**	51311H101-015 **1243.12**	540
1-1/2 Air to Spring	51111J101-015 **1012.35**	51211J101-015 **1012.35**	51311J101-015 **1312.48**	540
2 Air to Air	51111H101-020 **1015.25**	51211H101-020 **1015.25**	51311H101-020 **1281.04**	540
2 Air to Spring	51111J101-020 **1179.27**	51211J101-020 **1179.27**	51311J101-020 **1445.07**	540
2-1/2 Air to Air	51111H101-025 **1063.49**	51211H101-025 **1063.49**	51311H101-025 **1347.51**	540
2-1/2 Air to Spring	51111J101-025 **1290.60**	51211J101-025 **1290.60**	51311J101-025 **1574.59**	540

PVC - Zinc Lugs (continued)

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Prod Code
3 Air to Air	51111H101-030 **1179.29**	51211H101-030 **1179.29**	51311H101-030 **1463.54**	540
3 Air to Spring	51111J101-030 **1365.40**	51211J101-030 **1365.40**	51311J101-030 **1649.63**	540
4 Air to Air	51111H101-040 **1797.69**	51211H101-040 **1797.69**	51311H101-040 **2062.13**	540
4 Air to Spring	51111J101-040 **2056.33**	51211J101-040 **2596.38**	51311J101-040 **2320.76**	540
6 Air to Air	51111H101-060 **2395.19**	51211H101-060 **2395.19**	51311H101-060 **3025.40**	540
6 Air to Spring	51111J101-060 **2902.98**	51211J101-060 **2902.98**	51311J101-060 **3533.20**	540
8 Air to Air	51111H101-080 **2945.42**	51211H101-080 **2945.42**	51311H101-080 **4170.98**	540
8 Air to Spring	51111J101-080 **4232.31**	51211J101-080 **4507.76**	51311J101-080 **4883.81**	540
10 Air to Air	51111H101-100 **5010.85**	51211H101-100 **5010.85**	51311H101-100 **7419.13**	540
10 Air to Spring	51111J101-100 **6266.19**	51211J101-100 **6266.19**	51311J101-100 **8674.45**	540
12 Air to Air	51111H101-120 **5628.48**	51211H101-120 **5628.48**	51311H101-120 **8319.40**	540
12 Air to Spring	51111J101-120 **6883.84**	51211J101-120 **6883.84**	51311J101-120 **9574.74**	540

NOTE: For Air to Spring OPEN, change letter "J" to letter "K" in listed part number.

CPVC - Stainless Steel Lugs

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Prod Code
1-1/2 Air to Air	51122H101-015 **1301.76**	51222H101-015 **1301.76**	51322H101-015 **1721.29**	542
1-1/2 Air to Spring	51122J101-015 **1371.16**	51222J101-015 **1371.16**	51322J101-015 **1790.67**	542
2 Air to Air	51122H101-020 **1343.79**	51222H101-020 **1343.79**	51322H101-020 **1747.31**	542
2 Air to Spring	51122J101-020 **1507.80**	51222J101-020 **1507.80**	51322J101-020 **1911.34**	542
2-1/2 Air to Air	51122H101-025 **1369.48**	51222H101-025 **1369.48**	51322H101-025 **1805.85**	542
2-1/2 Air to Spring	51122J101-025 **1596.57**	51222J101-025 **1596.57**	51322J101-025 **2032.96**	542
3 Air to Air	51122H101-030 **1496.19**	51222H101-030 **1496.19**	51322H101-030 **1926.21**	542
3 Air to Spring	51122J101-030 **1682.28**	51222J101-030 **1682.28**	51322J101-030 **2112.32**	542
4 Air to Air	51122H101-040 **2381.24**	51222H101-040 **2381.24**	51322H101-040 **2882.45**	542
4 Air to Spring	51122J101-040 **2639.86**	51222J101-040 **2639.86**	51322J101-040 **3141.09**	542
6 Air to Air	51122H101-060 **3130.47**	51222H101-060 **3130.47**	51322H101-060 **4066.65**	542
6 Air to Spring	51122J101-060 **3638.27**	51222J101-060 **3638.27**	51322J101-060 **4574.49**	542
8 Air to Air	51122H101-080 **3884.34**	51222H101-080 **3884.34**	51322H101-080 **5602.33**	542

CPVC - Stainless Steel Lugs (continued)

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Prod Code
8 Air to Spring	51122J101-080 **4597.16**	51222J101-080 **4597.16**	51322J101-080 **6315.19**	542
10 Air to Air	51122H101-100 **6892.57**	51222H101-100 **6892.57**	51322H101-100 **10255.32**	542
10 Air to Spring	51122J101-100 **8147.92**	51222J101-100 **8147.92**	51322J101-100 **11510.66**	542
12 Air to Air	51122H101-120 **7776.09**	51222H101-120 **7776.09**	51322H101-120 **12392.34**	542
12 Air to Spring	51122J101-120 **9031.45**	51222J101-120 **9031.45**	51322J101-120 **13647.68**	542

NOTE: For Air to Spring OPEN, change letter "J" to letter "K" in listed part number.

CPVC - Zinc Lugs

Size	Buna-N O-ring	EPDM O-ring	FKM O-ring	Prod Code
1-1/2 Air to Air	51112H101-015 **1161.68**	51212H101-015 **1161.68**	51312H101-015 **1500.85**	542
1-1/2 Air to Spring	51112J101-015 **1231.08**	51212J101-015 **1231.08**	51312J101-015 **1570.23**	542
2 Air to Air	51112H101-020 **1204.34**	51212H101-020 **1204.34**	51312H101-020 **1543.47**	542
2 Air to Spring	51112J101-020 **1368.36**	51212J101-020 **1368.36**	51312J101-020 **1707.48**	542
2-1/2 Air to Air	51112H101-025 **1228.71**	51212H101-025 **1228.71**	51312H101-025 **1585.69**	542
2-1/2 Air to Spring	51112J101-025 **1455.80**	51212J101-025 **1455.80**	51312J101-025 **1812.80**	542
3 Air to Air	51112H101-030 **1233.27**	51212H101-030 **1233.27**	51312H101-030 **1706.02**	542
3 Air to Spring	51112J101-030 **1419.34**	51212J101-030 **1419.34**	51312J101-030 **1892.13**	542
4 Air to Air	51112H101-040 **2033.20**	51212H101-040 **2033.20**	51312H101-040 **2544.16**	542
4 Air to Spring	51112J101-040 **2291.83**	51212J101-040 **2291.83**	51312J101-040 **2802.78**	542
6 Air to Air	51112H101-060 **2796.74**	51212H101-060 **2796.74**	51312H101-060 **3588.35**	542
6 Air to Spring	51112J101-060 **3304.58**	51212J101-060 **3304.58**	51312J101-060 **4096.16**	542
8 Air to Air	51112H101-080 **3428.99**	51212H101-080 **3428.99**	51312H101-080 **4984.22**	542
8 Air to Spring	51112J101-080 **4141.80**	51212J101-080 **4141.80**	51312J101-080 **5697.06**	542
10 Air to Air	51112H101-100 **5993.88**	51212H101-100 **5993.88**	51312H101-100 **8959.81**	542
10 Air to Spring	51112J101-100 **7249.24**	51212J101-100 **7249.24**	51312J101-100 **10215.15**	542
12 Air to Air	51112H101-120 **6762.03**	51212H101-120 **6762.03**	51312H101-120 **9625.77**	542
12 Air to Spring	51112J101-120 **8017.36**	51212J101-120 **8017.36**	51312J101-120 **10881.11**	542

NOTE: For Air to Spring OPEN, change letter "J" to letter "K" in listed part number.

Electric Actuator Accessories for Butterfly Valves & Tandem Actuated Butterfly Valves

Custom configured and produced to order, Spears® Tandem Actuated Butterfly Valves are available in multiple configurations to meet variety of operational needs. Tandem Actuated Butterfly Valves utilize a Tee-Style configuration for 3-way or diverting operation where two (2) valves are operated from one (1) actuator.

Electric

Pneumatic

Multi-Featured Options:

- Tandem 3-Way: two valves operated from one actuator, both closing or both opening at the same time.
- Tandem Diverting: two valves operated from one actuator, one opening while the other closes.
- Variable Valve Orientation Available
- Multi Seat Material Options including EPDM, FKM, Buna-N, and PTFE Sleeved Seats.
- Multi Flanged Connection Options including Standard, Lug-Insert or True-Lug Style Valves
- Multi Actuation Option, including Electric or Pneumatic with a host of Actuation Accessories for each (see Electric or Pneumatic Actuator Accessories for Butterfly Valves)

Pressure Rating @ 73°F (23°C), Water
150 psi for Sizes through 12"
(Larger Sizes Available)

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Temperature/Pressure De-ratings Apply

CONTACT SPEARS® FOR SELECTION ASSISTANCE & PRICING

Premium Actuated Diaphragm Valve - Electric

Industrial grade Weir-type design, excellent for throttling and use with viscous fluids. Full-featured actuator can be custom configured with add-on accessories.

- Stainless Steel Hardware
- 235 psi @ 73°F (23°C) - sizes 1/2"- 2" (flanged & PTFE diaphragm-150 psi), 2-1/2"- 4"-150 psi
- 115 VAC standard, optional voltages available
- Multi-turn Operation with 2-SPDT Limit Switches
- NEMA 4 Enclosure, Powder Coated

See **Electric Actuator Accessories** for Add-on Actuator Accessories

PVC - EPDM and FKM Diaphragms

Material	EPDM O-ring & EPDM Diaphragm				FKM O-ring & FKM Diaphragm				Prod Code
Joint	Socket	SR Threaded	Spigot	Flanged	Socket	SR Thread	Spigot	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	91121A101-005 **1904.72**	93121A101-005 **1910.05**	94021A101-005 **1901.34**	95021A101-005 **2755.30**	91231A101-005 **1919.76**	93231A101-005 **1925.12**	94031A101-005 **1915.96**	95031A101-005 **2003.28**	520
3/4	91121A101-007 **1923.00**	93121A101-007 **1930.71**	94021A101-007 **1918.02**	95021A101-007 **2807.10**	91231A101-007 **1940.03**	93231A101-007 **1947.73**	94031A101-007 **1933.88**	95031A101-007 **2018.29**	520
1	91121A101-010 **1964.96**	93121A101-010 **1975.65**	94021A101-010 **1960.15**	95021A101-010 **2861.00**	91231A101-010 **1983.71**	93231A101-010 **1994.35**	94031A101-010 **1976.60**	95031A101-010 **2081.12**	520
1-1/4	91121A101-012 **2059.01**	93121A101-012 **2076.16**	94021A101-012 **2049.91**	95021A101-012 **2915.30**	91231A101-012 **2112.54**	93231A101-012 **2129.35**	94031A101-012 **2106.21**	95031A101-012 **2186.35**	520
1-1/2	91121A101-015 **2715.10**	93121A101-015 **2102.77**	94021A101-015 **2066.04**	95021A101-015 **3045.20**	91231A101-015 **2120.31**	93231A101-015 **2120.31**	94031A101-015 **2111.68**	95031A101-015 **2194.80**	520
2	91121A101-020 **2885.93**	93121A101-020 **2944.49**	94021A101-020 **2874.76**	95021A101-020 **3819.50**	91231A101-020 **2952.52**	93231A101-020 **3012.77**	94031A101-020 **2937.79**	95031A101-020 **3013.66**	520
2-1/2	**---**	**---**	**---**	95021A101-025 **4140.30**	**---**	**---**	---	95031A101-025 **3550.77**	520
3	**---**	**---**	**---**	95021A101-030 **4179.70**	**---**	**---**	---	95031A101-030 **3768.92**	520
4	**---**	**---**	**---**	95021A101-040 **7016.80**	**---**	**---**	---	95031A101-040 **4439.16**	520

NOTE: "Socket" valves up to 2" size include standard plastic thread end connectors.
O-rings used on Socket and SR Thread End Connectors only.

PVC - Elastomer Backed Diaphragms

Material	EPDM O-ring & EPDM Backed PTFE Diaphragm				FKM O-ring & EPDM Backed PTFE Diaphragm				Prod Code
Joint	Socket	SR Thread	Spigot	Flanged	Socket	SR Thread	Spigot	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	91151A101-005 **1985.04**	93151A101-005 **1990.42**	94051A101-005 **1977.64**	95051A101-005 **2064.54**	91251A101-005 **2008.71**	93251A101-005 **2014.07**	---	---	520
3/4	91151A101-007 **1999.71**	93151A101-007 **2007.42**	94051A101-007 **1991.60**	95051A101-007 **2088.47**	91251A101-007 **2027.84**	93251A101-007 **2035.55**	---	---	520
1	91151A101-010 **2107.92**	93151A101-010 **2118.59**	94051A101-010 **2100.04**	95051A101-010 **2182.13**	91251A101-010 **2120.06**	93251A101-010 **2130.73**	---	---	520
1-1/4	91151A101-012 **2232.40**	93151A101-012 **2249.48**	94051A101-012 **2221.79**	95051A101-012 **2323.41**	91251A101-012 **2259.79**	93251A101-012 **2276.91**	---	---	520
1-1/2	91151A101-015 **2263.27**	93151A101-015 **2292.54**	94051A101-015 **2251.11**	95051A101-015 **2343.33**	91251A101-015 **2287.64**	93251A101-015 **2316.92**	---	---	520
2	91151A101-020 **3093.97**	93151A101-020 **3124.66**	94051A101-020 **3076.94**	95051A101-020 **3176.37**	91251A101-020 **3122.49**	93251A101-020 **3186.22**	---	---	520
2-1/2	**---**	**---**	**---**	95051A101-025 **3841.39**	**---**	**---**	---	---	520
3	**---**	**---**	**---**	95051A101-030 **4219.27**	**---**	**---**	---	---	520
4	**---**	**---**	**---**	95051A101-040 **4981.31**	**---**	**---**	---	---	520

NOTE: "Socket" valves up to 2" size include standard plastic thread end connectors.
O-rings used on Socket and SR Thread End Connectors only.

CPVC - EPDM and FKM Diaphragms

Material	EPDM O-ring & EPDM Diaphragm				FKM O-ring & FKM Diaphragm				Prod Code
Joint	Socket	SR Thread	Spigot	Flanged	Socket	SR Thread	Spigot	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	91122A101-005 **2008.96**	93122A101-005 **2014.33**	94022A101-005 **2002.91**	95022A101-005 **2059.01**	91232A101-005 **2076.35**	93232A101-005 **2081.71**	94032A101-005 **2066.69**	95032A101-005 **1947.31**	522
3/4	91122A101-007 **2035.98**	93122A101-007 **2043.68**	94022A101-007 **2028.61**	95022A101-007 **2093.19**	91232A101-007 **2096.67**	93232A101-007 **2104.38**	94032A101-007 **2086.56**	95032A101-007 **2127.05**	522
1	91122A101-010 **2083.36**	93122A101-010 **2094.02**	94022A101-010 **2076.81**	95022A101-010 **2174.43**	91232A101-010 **2173.65**	93232A101-010 **2184.33**	94032A101-010 **2162.53**	95032A101-010 **2221.57**	522
1-1/4	91122A101-012 **2237.77**	93122A101-012 **2254.89**	94022A101-012 **2226.16**	95022A101-012 **2285.12**	91232A101-012 **2372.79**	93232A101-012 **2389.86**	94032A101-012 **2357.74**	95032A101-012 **2359.27**	522

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CPVC - EPDM and FKM Diaphragms (continued)

Material	EPDM O-ring & EPDM Diaphragm				FKM O-ring & FKM Diaphragm				Prod Code
Joint	Socket	SR Thread	Spigot	Flanged	Socket	SR Thread	Spigot	Flanged	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1-1/2	91122A101-015 **2267.07**	93122A101-015 **2267.07**	94022A101-015 **2236.15**	95022A101-015 **2291.87**	91232A101-015 **2395.36**	93232A101-015 **2418.32**	94032A101-015 **2379.13**	95032A101-015 **2436.71**	522
2	91122A101-020 **3043.73**	93122A101-020 **3105.84**	94022A101-020 **2917.48**	95022A101-020 **2679.78**	91232A101-020 **4627.10**	93232A101-020 **3239.72**	94032A101-020 **3158.27**	95032A101-020 **3188.32**	522
2-1/2	---	---	---	95022A101-025 **3895.72**	---	---	---	95032A101-025 **4021.01**	522
3	---	---	---	95022A101-030 **4441.96**	---	---	---	95032A101-030 **4621.80**	522
4	---	---	---	95022A101-040 **5376.61**	---	---	---	95032A101-040 **5623.08**	522

NOTE: "Socket" valves up to 2" size include standard plastic thread end connectors.
O-rings used on Socket and SR Thread End Connectors only.

CPVC Premium Actuated Diaphragm Valves -Electric

O-ring	EPDM O-ring & EPDM Backed PTFE Diaphragm						Prod Code
Joint	Socket	SR Thread	Spigot	Flanged	Socket	SR Thread	
Size	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	Part # Price Each	
1/2	91152A101-005 **2113.69**	93152A101-005 **2119.07**	94052A101-005 **2103.99**	95052A101-005 **2186.85**	91252A101-005 **2140.04**	93252A101-005 **2145.40**	522
3/4	91152A101-007 **2149.63**	93152A101-007 **2157.33**	94052A101-007 **2138.15**	95052A101-007 **2215.72**	91252A101-007 **2166.85**	93252A101-007 **2185.78**	522
1	91152A101-010 **2238.00**	93152A101-010 **2248.65**	94052A101-010 **2226.26**	95052A101-010 **2324.11**	91252A101-010 **2257.95**	93252A101-010 **2268.59**	522
1-1/4	91152A101-012 **2413.65**	93152A101-012 **2430.75**	94052A101-012 **2396.54**	95052A101-012 **2467.96**	91252A101-012 **2436.19**	93252A101-012 **2453.32**	522
1-1/2	91152A101-015 **2423.56**	93152A101-015 **2452.83**	94052A101-015 **2407.27**	95052A101-015 **2602.59**	91252A101-015 **2461.00**	93252A101-015 **2490.27**	522
2	91152A101-020 **3253.81**	93152A101-020 **3320.21**	94052A101-020 **3235.29**	95052A101-020 **3464.61**	91252A101-020 **3332.48**	93252A101-020 **3400.51**	522
2-1/2	---	---	---	95052A101-025 **4675.37**	---	---	522
3	---	---	---	95052A101-030 **5259.75**	---	---	522
4	---	---	---	95052A101-040 **6392.31**	---	---	522

NOTE: "Socket" valves up to 2" size include standard plastic thread end connectors.
O-rings used on Socket and SR Thread End Connectors only.

Premium Actuated Diaphragm Valve - Electric

Polypropylene - EPDM O-ring and EPDM Diaphragm

Size	SR Thread	Flanged	Prod Code
1/2	93123A101-005 **2641.13**	---	524
3/4	93123A101-007 **2675.90**	---	524
1	93123A101-010 **2691.70**	---	524
1-1/4	93123A101-012 **2710.40**	---	524
1-1/2	93123A101-015 **2729.80**	---	524
2	93123A101-020 **2895.56**	---	524
2-1/2	---	95023A101-025 **3503.72**	524
3	---	95023A101-030 **3796.26**	524
4	---	95023A101-040 **4553.73**	524

NOTE: O-rings used on SR Thread End Connectors only.

Polypropylene - FKM O-ring and FKM Diaphragm

Size	SR Thread	Flanged	Prod Code
1/2	93233A101-005 **1924.02**	---	524
3/4	93233A101-007 **1945.02**	---	524
1	93233A101-010 **1991.44**	---	524
1-1/4	93233A101-012 **2106.79**	---	524
1-1/2	93233A101-015 **2120.94**	---	524
2	93233A101-020 **2936.67**	---	524
2-1/2	---	95033A101-025 **3575.22**	524
3	---	95033A101-030 **3898.29**	524
4	---	95033A101-040 **4695.06**	524

NOTE: O-rings used on SR Thread End Connectors only.

Polypropylene - EPDM O-ring and EPDM Backed PTFE Diaphragm

Size	SR Thread	Flanged	Prod Code
1/2	93153A101-005 **1991.58**	---	524
3/4	93153A101-007 **2001.98**	---	524
1	93153A101-010 **2114.75**	---	524
1-1/4	93153A101-012 **2239.88**	---	524
1-1/2	93153A101-015 **2270.66**	---	524
2	93153A101-020 **3147.36**	---	524
2-1/2	---	95053A101-025 **3906.71**	524
3	---	95053A101-030 **4316.74**	524
4	---	95053A101-040 **5127.48**	524

NOTE: O-rings used on SR Thread End Connectors only.

Polypropylene Premium Actuated Diaphragm Valves - Electric

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
FKM O-ring and EPDM Backed PTFE Diaphragm SR Thread					
93253A101-005	1/2	0	0	524	2003.25
93253A101-007	3/4	0	0	524	2016.18
93253A101-010	1	0	0	524	2132.38
93253A101-012	1-1/4	0	0	524	2262.38
93253A101-015	1-1/2	0	0	524	2294.72
93253A101-020	2	0	0	524	3131.36

NOTE: O-rings used on SR Thread End Connectors only.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Unitized Actuated Diaphragm Valve - Pneumatic with Plastic Housing

Industrial grade Weir-type design, excellent for throttling and use with viscous fluids or slurries.

- Compact, Light Weight Design
- True Union Socket/Thread, SR Thread, or Spigot End Connections - sizes 1/2"-2" Pressure Rated to 235 psi @ 73°F (23°C)
- Flanged Ends (& PTFE diaphragms) - sizes 1/2" - 2" Pressure Rated to 150 psi @ 73°F (23°C)
- Corrosion Resistant Plastic Housing
- Stainless Steel Hardware
- 90 psi Operating Pressure
- Linear Action Operation with Preset Stops
- Air-Air, Air-Spring Closed, or Optional Air-Spring Open

NOTE: "Socket" valves include standard plastic thread end connectors.

PVC - EPDM O-ring and EPDM Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Prod Code
1/2 Air to Air	91121H850-005 **182.11**	93121H850-005 **182.11**	94021H850-005 **176.64**	95021H850-005 **209.47**	550
3/4 Air to Air	91121H850-007 **194.74**	93121H850-007 **194.74**	94021H850-007 **188.89**	95021H850-007 **225.26**	550
1 Air to Air	91121H850-010 **205.26**	93121H850-010 **205.26**	94021H850-010 **199.11**	95021H850-010 **238.95**	550
1-1/4 Air to Air	91121H850-012 **322.37**	93121H850-012 **322.37**	94021H850-012 **312.69**	95021H850-012 **296.84**	550
1-1/2 Air to Air	91121H850-015 **324.21**	93121H850-015 **324.21**	94021H850-015 **314.48**	95021H850-015 **374.74**	550
2 Air to Air	91121H850-020 **394.74**	93121H850-020 **394.74**	94021H850-020 **382.89**	95021H850-020 **453.68**	550
1/2 Air to Spring Close	91121J850-005 **260.00**	93121J850-005 **260.00**	94021J850-005 **252.20**	95021J850-005 **301.05**	550
3/4 Air to Spring Close	91121J850-007 **289.47**	93121J850-007 **289.47**	94021J850-007 **280.79**	95021J850-007 **322.11**	550
1 Air to Spring Close	91121J850-010 **335.79**	93121J850-010 **335.79**	94021J850-010 **325.72**	95021J850-010 **342.11**	550
1-1/4 Air to Spring Close	91121J850-012 **413.68**	93121J850-012 **413.68**	94021J850-012 **464.58**	95021J850-012 **428.42**	550
1-1/2 Air to Spring Close	91121J850-015 **478.95**	93121J850-015 **478.95**	94021J850-015 **464.21**	95021J850-015 **513.68**	550
2 Air to Spring Close	91121J850-020 **586.32**	93121J850-020 **586.32**	94021J850-020 **568.73**	95021J850-020 **654.74**	550
1/2 Air to Spring Open	91121K850-005 **182.11**	93121K850-005 **182.11**	94021K850-005 **176.64**	95021K850-005 **209.47**	550
3/4 Air to Spring Open	91121K850-007 **194.74**	93121K850-007 **194.74**	94021K850-007 **188.89**	95021K850-007 **225.26**	550
1 Air to Spring Open	91121K850-010 **205.26**	93121K850-010 **205.26**	94021K850-010 **199.11**	95021K850-010 **238.95**	550
1-1/4 Air to Spring Open	91121K850-012 **257.89**	93121K850-012 **257.89**	94021K850-012 **250.16**	95021K850-012 **296.84**	550
1-1/2 Air to Spring Open	91121K850-015 **324.21**	93121K850-015 **324.21**	94021K850-015 **314.48**	95021K850-015 **374.74**	550
2 Air to Spring Open	91121K850-020 **394.74**	93121K850-020 **394.74**	94021K850-020 **382.89**	95021K850-020 **453.68**	550

PVC - FKM O-ring and FKM Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Prod Code
1/2 Air to Air	91231H850-005 **202.34**	93231H850-005 **202.34**	94031H850-005 **196.27**	95031H850-005 **232.75**	550
3/4 Air to Air	91231H850-007 **216.38**	93231H850-007 **216.38**	94031H850-007 **209.88**	95031H850-007 **250.29**	550
1 Air to Air	91231H850-010 **228.07**	93231H850-010 **228.07**	94031H850-010 **221.23**	95031H850-010 **265.49**	550
1-1/4 Air to Air	91231H850-012 **379.25**	93231H850-012 **379.25**	94031H850-012 **367.88**	95031H850-012 **349.22**	550
1-1/2 Air to Air	91231H850-015 **381.42**	93231H850-015 **381.42**	94031H850-015 **369.98**	95031H850-015 **440.86**	550
2 Air to Air	91231H850-020 **464.40**	93231H850-020 **464.40**	94031H850-020 **450.46**	95031H850-020 **533.75**	550
1/2 Air to Spring Close	91231J850-005 **288.88**	93231J850-005 **288.88**	94031J850-005 **280.22**	95031J850-005 **334.51**	550
3/4 Air to Spring Close	91231J850-007 **321.64**	93231J850-007 **321.64**	94031J850-007 **311.99**	95031J850-007 **357.89**	550

PVC - FKM O-ring and FKM Diaphragm (continued)

Size	Socket	SR Thread	Spigot	Flanged	Prod Code
1 Air to Spring Close	91231J850-010 **373.09**	93231J850-010 **373.09**	94031J850-010 **361.91**	95031J850-010 **380.12**	550
1-1/4 Air to Spring Close	91231J850-012 **486.68**	93231J850-012 **486.68**	94031J850-012 **472.08**	95031J850-012 **504.02**	550
1-1/2 Air to Spring Close	91231J850-015 **563.46**	93231J850-015 **563.46**	94031J850-015 **546.57**	95031J850-015 **604.34**	550
2 Air to Spring Close	91231J850-020 **689.78**	93231J850-020 **689.78**	94031J850-020 **669.09**	95031J850-020 **770.27**	550
1/2 Air to Spring Open	91231K850-005 **202.34**	93231K850-005 **202.34**	94031K850-005 **196.27**	95031K850-005 **232.75**	550
3/4 Air to Spring Open	91231K850-007 **216.38**	93231K850-007 **216.38**	94031K850-007 **209.88**	95031K850-007 **250.29**	550
1 Air to Spring Open	91231K850-010 **228.07**	93231K850-010 **228.07**	94031K850-010 **221.23**	95031K850-010 **265.49**	550
1-1/4 Air to Spring Open	91231K850-012 **303.41**	93231K850-012 **303.41**	94031K850-012 **294.31**	95031K850-012 **349.22**	550
1-1/2 Air to Spring Open	91231K850-015 **381.42**	93231K850-015 **381.42**	94031K850-015 **369.98**	95031K850-015 **440.86**	550
2 Air to Spring Open	91231K850-020 **464.40**	93231K850-020 **464.40**	94031K850-020 **450.46**	95031K850-020 **533.75**	550

PVC - EPDM O-ring and EPDM Backed PTFE Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Prod Code
1/2 Air to Air	91151H850-005 **244.21**	93151H850-005 **244.21**	94051H850-005 **236.88**	95051H850-005 **303.16**	550
3/4 Air to Air	91151H850-007 **262.11**	93151H850-007 **262.11**	94051H850-007 **254.24**	95051H850-007 **302.11**	550
1 Air to Air	91151H850-010 **280.00**	93151H850-010 **280.00**	94051H850-010 **271.60**	95051H850-010 **320.00**	550
1-1/4 Air to Air	91151H850-012 **349.47**	93151H850-012 **349.47**	94051H850-012 **338.99**	95051H850-012 **397.89**	550
1-1/2 Air to Air	91151H850-015 **440.00**	93151H850-015 **440.00**	94051H850-015 **426.80**	95051H850-015 **503.16**	550
2 Air to Air	91151H850-020 **529.47**	93151H850-020 **529.47**	94051H850-020 **513.59**	95051H850-020 **608.42**	550
1/2 Air to Spring Close	91151J850-005 **324.21**	93151J850-005 **324.21**	94051J850-005 **314.48**	95051J850-005 **393.68**	550
3/4 Air to Spring Close	91151J850-007 **347.37**	93151J850-007 **347.37**	94051J850-007 **336.95**	95051J850-007 **416.84**	550
1 Air to Spring Close	91151J850-010 **369.47**	93151J850-010 **369.47**	94051J850-010 **358.39**	95051J850-010 **443.16**	550
1-1/4 Air to Spring Close	91151J850-012 **464.21**	93151J850-012 **464.21**	94051J850-012 **450.28**	95051J850-012 **555.79**	550
1-1/2 Air to Spring Close	91151J850-015 **555.79**	93151J850-015 **555.79**	94051J850-015 **539.12**	95051J850-015 **690.53**	550
2 Air to Spring Close	91151J850-020 **707.37**	93151J850-020 **707.37**	94051J850-020 **686.15**	95051J850-020 **847.37**	550
1/2 Air to Spring Open	91151K850-005 **244.21**	93151K850-005 **244.21**	94051K850-005 **236.88**	95051K850-005 **283.16**	550
3/4 Air to Spring Open	91151K850-007 **262.11**	93151K850-007 **262.11**	94051K850-007 **254.24**	95051K850-007 **303.16**	550
1 Air to Spring Open	91151K850-010 **280.00**	93151K850-010 **280.00**	94051K850-010 **271.60**	95051K850-010 **318.95**	550
1-1/4 Air to Spring Open	91151K850-012 **349.47**	93151K850-012 **349.47**	94051K850-012 **338.99**	95051K850-012 **402.11**	550
1-1/2 Air to Spring Open	91151K850-015 **440.00**	93151K850-015 **440.00**	94051K850-015 **426.80**	95051K850-015 **503.16**	550
2 Air to Spring Open	91151K850-020 **529.47**	93151K850-020 **529.47**	94051K850-020 **513.59**	95051K850-020 **609.47**	550

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Unitized Actuated Diaphragm Valve - Pneumatic with Plastic Housing

PVC - FKM O-ring and EPDM Backed PTFE Diaphragm

Size	Socket	SR Thread	Prod Code
1/2 Air to Air	91251H850-005 **271.35**	93251H850-005 **271.35**	550
3/4 Air to Air	91251H850-007 **291.23**	93251H850-007 **291.23**	550
1 Air to Air	91251H850-010 **311.12**	93251H850-010 **311.12**	550
1-1/4 Air to Air	91251H850-012 **388.31**	93251H850-012 **388.31**	550
1-1/2 Air to Air	91251H850-015 **488.88**	93251H850-015 **488.88**	550
2 Air to Air	91251H850-020 **588.31**	93251H850-020 **588.31**	550
1/2 Air to Spring Close	91251J850-005 **360.23**	93251J850-005 **360.23**	550
3/4 Air to Spring Close	91251J850-007 **385.97**	93251J850-007 **385.97**	550
1 Air to Spring Close	91251J850-010 **410.53**	93251J850-010 **410.53**	550
1-1/4 Air to Spring Close	91251J850-012 **515.79**	93251J850-012 **515.79**	550
1-1/2 Air to Spring Close	91251J850-015 **617.55**	93251J850-015 **617.55**	550
2 Air to Spring Close	91251J850-020 **785.97**	93251J850-020 **785.97**	550
1/2 Air to Spring Open	91251K850-005 **271.35**	93251K850-005 **271.35**	550
3/4 Air to Spring Open	91251K850-007 **291.23**	93251K850-007 **291.23**	550
1 Air to Spring Open	91251K850-010 **311.12**	93251K850-010 **311.12**	550
1-1/4 Air to Spring Open	91251K850-012 **388.31**	93251K850-012 **388.31**	550
1-1/2 Air to Spring Open	91251K850-015 **488.88**	93251K850-015 **488.88**	550
2 Air to Spring Open	91251K850-020 **588.31**	93251K850-020 **588.31**	550

CPVC - EPDM O-ring and EPDM Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Prod Code
1/2 Air to Air	91122H850-005 **262.11**	93122H850-005 **262.11**	94022H850-005 **253.68**	95022H850-005 **301.05**	552
3/4 Air to Air	91122H850-007 **282.11**	93122H850-007 **282.11**	94022H850-007 **272.63**	95022H850-007 **322.11**	552
1 Air to Air	91122H850-010 **298.95**	93122H850-010 **298.95**	94022H850-010 **289.47**	95022H850-010 **341.05**	552
1-1/4 Air to Air	91122H850-012 **371.58**	93122H850-012 **371.58**	94022H850-012 **360.00**	95022H850-012 **426.32**	552
1-1/2 Air to Air	91122H850-015 **468.42**	93122H850-015 **468.42**	94022H850-015 **454.74**	95022H850-015 **536.84**	552
2 Air to Air	91122H850-020 **567.37**	93122H850-020 **567.37**	94022H850-020 **550.53**	95022H850-020 **653.68**	552
1/2 Air to Spring Close	91122J850-005 **374.74**	93122J850-005 **374.74**	94022J850-005 **364.21**	95022J850-005 **430.53**	552
3/4 Air to Spring Close	91122J850-007 **420.00**	93122J850-007 **420.00**	94022J850-007 **407.37**	95022J850-007 **461.05**	552
1 Air to Spring Close	91122J850-010 **489.47**	93122J850-010 **489.47**	94022J850-010 **474.74**	95022J850-010 **487.37**	552
1-1/4 Air to Spring Close	91122J850-012 **598.95**	93122J850-012 **598.95**	94022J850-012 **581.05**	95022J850-012 **609.47**	552
1-1/2 Air to Spring Close	91122J850-015 **688.42**	93122J850-015 **688.42**	94022J850-015 **667.37**	95022J850-015 **767.37**	552
2 Air to Spring Close	91122J850-020 **866.32**	93122J850-020 **866.32**	94022J850-020 **840.00**	95022J850-020 **934.74**	552
1/2 Air to Spring Open	91122K850-005 **262.11**	93122K850-005 **262.11**	94022K850-005 **253.68**	95022K850-005 **301.05**	552
3/4 Air to Spring Open	91122K850-007 **282.11**	93122K850-007 **282.11**	94022K850-007 **272.63**	95022K850-007 **322.11**	552
1 Air to Spring Open	91122K850-010 **298.95**	93122K850-010 **298.95**	94022K850-010 **289.47**	95022K850-010 **341.05**	552
1-1/4 Air to Spring Open	91122K850-012 **371.58**	93122K850-012 **371.58**	94022K850-012 **360.00**	95022K850-012 **426.32**	552
1-1/2 Air to Spring Open	91122K850-015 **468.42**	93122K850-015 **468.42**	94022K850-015 **454.74**	95022K850-015 **536.84**	552

Unitized Actuated Diaphragm Valve - Pneumatic with Plastic Housing

CPVC - EPDM O-ring and EPDM Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Prod Code
1/2 Air to Air	91122H850-005 **262.11**	93122H850-005 **262.11**	94022H850-005 **253.68**	95022H850-005 **301.05**	552
3/4 Air to Air	91122H850-007 **282.11**	93122H850-007 **282.11**	94022H850-007 **272.63**	95022H850-007 **322.11**	552
1 Air to Air	91122H850-010 **298.95**	93122H850-010 **298.95**	94022H850-010 **289.47**	95022H850-010 **341.05**	552
1-1/4 Air to Air	91122H850-012 **371.58**	93122H850-012 **371.58**	94022H850-012 **360.00**	95022H850-012 **426.32**	552
1-1/2 Air to Air	91122H850-015 **468.42**	93122H850-015 **468.42**	94022H850-015 **454.74**	95022H850-015 **536.84**	552
2 Air to Air	91122H850-020 **567.37**	93122H850-020 **567.37**	94022H850-020 **550.53**	95022H850-020 **653.68**	552
1/2 Air to Spring Close	91122J850-005 **374.74**	93122J850-005 **374.74**	94022J850-005 **364.21**	95022J850-005 **430.53**	552
3/4 Air to Spring Close	91122J850-007 **420.00**	93122J850-007 **420.00**	94022J850-007 **407.37**	95022J850-007 **461.05**	552
1 Air to Spring Close	91122J850-010 **489.47**	93122J850-010 **489.47**	94022J850-010 **474.74**	95022J850-010 **487.37**	552
1-1/4 Air to Spring Close	91122J850-012 **598.95**	93122J850-012 **598.95**	94022J850-012 **581.05**	95022J850-012 **609.47**	552
1-1/2 Air to Spring Close	91122J850-015 **688.42**	93122J850-015 **688.42**	94022J850-015 **667.37**	95022J850-015 **767.37**	552
2 Air to Spring Close	91122J850-020 **866.32**	93122J850-020 **866.32**	94022J850-020 **840.00**	95022J850-020 **934.74**	552
1/2 Air to Spring Open	91122K850-005 **262.11**	93122K850-005 **262.11**	94022K850-005 **253.68**	95022K850-005 **301.05**	552
3/4 Air to Spring Open	91122K850-007 **282.11**	93122K850-007 **282.11**	94022K850-007 **272.63**	95022K850-007 **322.11**	552
1 Air to Spring Open	91122K850-010 **298.95**	93122K850-010 **298.95**	94022K850-010 **289.47**	95022K850-010 **341.05**	552
1-1/4 Air to Spring Open	91122K850-012 **371.58**	93122K850-012 **371.58**	94022K850-012 **360.00**	95022K850-012 **426.32**	552
1-1/2 Air to Spring Open	91122K850-015 **468.42**	93122K850-015 **468.42**	94022K850-015 **454.74**	95022K850-015 **536.84**	552
2 Air to Spring Open	91122K850-020 **567.37**	93122K850-020 **567.37**	94022K850-020 **550.53**	95022K850-020 **653.68**	552

CPVC - FKM O-ring and FKM Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Prod Code
1/2 Air to Air	91232H850-005 **327.37**	93232H850-005 **327.37**	94032H850-005 **317.89**	95032H850-005 **334.74**	552
3/4 Air to Air	91232H850-007 **351.58**	93232H850-007 **351.58**	94032H850-007 **341.05**	95032H850-007 **357.89**	552
1 Air to Air	91232H850-010 **373.68**	93232H850-010 **373.68**	94032H850-010 **362.11**	95032H850-010 **378.95**	552
1-1/4 Air to Air	91232H850-012 **464.21**	93232H850-012 **464.21**	94032H850-012 **449.47**	95032H850-012 **501.05**	552
1-1/2 Air to Air	91232H850-015 **585.26**	93232H850-015 **585.26**	94032H850-015 **568.42**	95032H850-015 **631.58**	552
2 Air to Air	91232H850-020 **708.42**	93232H850-020 **708.42**	94032H850-020 **687.37**	95032H850-020 **769.47**	552
1/2 Air to Spring Close	91232J850-005 **468.42**	93232J850-005 **468.42**	94032J850-005 **454.74**	95032J850-005 **506.32**	552
3/4 Air to Spring Close	91232J850-007 **524.21**	93232J850-007 **524.21**	94032J850-007 **508.42**	95032J850-007 **542.11**	552
1 Air to Spring Close	91232J850-010 **611.58**	93232J850-010 **611.58**	94032J850-010 **593.68**	95032J850-010 **572.63**	552
1-1/4 Air to Spring Close	91232J850-012 **748.42**	93232J850-012 **748.42**	94032J850-012 **726.32**	95032J850-012 **716.84**	552
1-1/2 Air to Spring Close	91232J850-015 **860.00**	93232J850-015 **860.00**	94032J850-015 **834.74**	95032J850-015 **902.11**	552
2 Air to Spring Close	91232J850-020 **1082.11**	93232J850-020 **1082.11**	94032J850-020 **1049.47**	95032J850-020 **1098.95**	552
1/2 Air to Spring Open	91232K850-005 **327.37**	93232K850-005 **327.37**	94032K850-005 **317.89**	95032K850-005 **354.74**	552
3/4 Air to Spring Open	91232K850-007 **351.58**	93232K850-007 **351.58**	94032K850-007 **341.05**	95032K850-007 **378.95**	552
1 Air to Spring Open	91232K850-010 **373.68**	93232K850-010 **373.68**	94032K850-010 **362.11**	95032K850-010 **401.05**	552
1-1/4 Air to Spring Open	91232K850-012 **464.21**	93232K850-012 **464.21**	94032K850-012 **449.47**	95032K850-012 **501.05**	552
1-1/2 Air to Spring Open	91232K850-015 **585.26**	93232K850-015 **585.26**	94032K850-015 **568.42**	95032K850-015 **631.58**	552

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CPVC - FKM O-ring and FKM Diaphragm (continued)

Size	Socket	SR Thread	Spigot	Flanged	Prod Code
2 Air to Spring Open	91232K850-020 **708.42**	93232K850-020 **708.42**	94032K850-020 **687.37**	95032K850-020 **769.47**	552

CPVC - EPDM O-ring and EPDM Backed PTFE Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Prod Code
1/2 Air to Air	91152H850-005 **353.68**	93152H850-005 **353.68**	94052H850-005 **343.16**	95052H850-005 **353.68**	552
3/4 Air to Air	91152H850-007 **378.95**	93152H850-007 **378.95**	94052H850-007 **367.37**	95052H850-007 **434.74**	552
1 Air to Air	91152H850-010 **398.95**	93152H850-010 **398.95**	94052H850-010 **386.32**	95052H850-010 **458.95**	552
1-1/4 Air to Air	91152H850-012 **503.16**	93152H850-012 **503.16**	94052H850-012 **487.37**	95052H850-012 **580.00**	552
1-1/2 Air to Air	91152H850-015 **629.47**	93152H850-015 **629.47**	94052H850-015 **610.53**	95052H850-015 **726.32**	552
2 Air to Air	91152H850-020 **762.11**	93152H850-020 **762.11**	94052H850-020 **738.95**	95052H850-020 **876.84**	552
1/2 Air to Spring Close	91152J850-005 **471.58**	93152J850-005 **471.58**	94052J850-005 **456.84**	95052J850-005 **505.26**	552
3/4 Air to Spring Close	91152J850-007 **505.26**	93152J850-007 **505.26**	94052J850-007 **490.53**	95052J850-007 **620.00**	552
1 Air to Spring Close	91152J850-010 **525.26**	93152J850-010 **525.26**	94052J850-010 **509.47**	95052J850-010 **655.79**	552
1-1/4 Air to Spring Close	91152J850-012 **669.47**	93152J850-012 **669.47**	94052J850-012 **649.47**	95052J850-012 **829.47**	552
1-1/2 Air to Spring Close	91152J850-015 **795.79**	93152J850-015 **795.79**	94052J850-015 **772.63**	95052J850-015 **1037.89**	552
2 Air to Spring Close	91152J850-020 **1015.79**	93152J850-020 **1015.79**	94052J850-020 **985.26**	95052J850-020 **1251.58**	552
1/2 Air to Spring Open	91152K850-005 **353.68**	93152K850-005 **353.68**	94052K850-005 **343.16**	95052K850-005 **353.68**	552
3/4 Air to Spring Open	91152K850-007 **378.95**	93152K850-007 **378.95**	94052K850-007 **367.37**	95052K850-007 **434.74**	552
1 Air to Spring Open	91152K850-010 **398.95**	93152K850-010 **398.95**	94052K850-010 **386.32**	95052K850-010 **458.95**	552
1-1/4 Air to Spring Open	91152K850-012 **503.16**	93152K850-012 **503.16**	94052K850-012 **487.37**	95052K850-012 **580.00**	552
1-1/2 Air to Spring Open	91152K850-015 **629.47**	93152K850-015 **629.47**	94052K850-015 **610.53**	95052K850-015 **726.32**	552
2 Air to Spring Open	91152K850-020 **762.11**	93152K850-020 **762.11**	94052K850-020 **738.95**	95052K850-020 **876.84**	552

Unitized Actuated Diaphragm Valve - Pneumatic with Plastic Housing

CPVC - FKM O-ring and EPDM Backed PTFE Diaphragm

Size	Socket	SR Thread	Prod Code
1/2 Air to Air	91252H850-005 **409.47**	93252H850-005 **409.47**	552
3/4 Air to Air	91252H850-007 **440.00**	93252H850-007 **440.00**	552
1 Air to Air	91252H850-010 **466.32**	93252H850-010 **466.32**	552
1-1/4 Air to Air	91252H850-012 **580.00**	93252H850-012 **580.00**	552
1-1/2 Air to Air	91252H850-015 **731.58**	93252H850-015 **731.58**	552
2 Air to Air	91252H850-020 **886.32**	93252H850-020 **886.32**	552
1/2 Air to Spring Close	91252J850-005 **586.32**	93252J850-005 **586.32**	552
3/4 Air to Spring Close	91252J850-007 **655.79**	93252J850-007 **655.79**	552
1 Air to Spring Close	91252J850-010 **765.26**	93252J850-010 **765.26**	552
1-1/4 Air to Spring Close	91252J850-012 **935.79**	93252J850-012 **935.79**	552
1-1/2 Air to Spring Close	91252J850-015 **1074.74**	93252J850-015 **1074.74**	552
2 Air to Spring Close	91252J850-020 **1352.63**	93252J850-020 **1352.63**	552
1/2 Air to Spring Open	91252K850-005 **409.47**	93252K850-005 **409.47**	552
3/4 Air to Spring Open	91252K850-007 **440.00**	93252K850-007 **440.00**	552
1 Air to Spring Open	91252K850-010 **466.32**	93252K850-010 **466.32**	552
1-1/4 Air to Spring Open	91252K850-012 **580.00**	93252K850-012 **580.00**	552
1-1/2 Air to Spring Open	91252K850-015 **731.58**	93252K850-015 **731.58**	552
2 Air to Spring Open	91252K850-020 **886.32**	93252K850-020 **886.32**	552

Polypropylene Premium Actuated Diaphragm Valves - Pneumatic w/Plastic Housing

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
EPDM O-ring and EPDM Diaphragm SR Thread					
93123H850-005	1/2 Air to Air	1	0	554	218.95
93123H850-007	3/4 Air to Air	1	4	554	236.84
93123H850-010	1 Air to Air	1	0	554	247.37
93123H850-012	1-1/4 Air to Air	1	0	554	313.68
93123H850-015	1-1/2 Air to Air	1	0	554	393.68
93123H850-020	2 Air to Air	1	0	554	474.74
93123J850-005	1/2 Air to Spring Close	1	4	554	296.84
93123J850-007	3/4 Air to Spring Close	1	0	554	341.05
93123J850-010	1 Air to Spring Close	1	4	554	387.37
93123J850-012	1-1/4 Air to Spring Close	1	0	554	442.11
93123J850-015	1-1/2 Air to Spring	1	0	554	540.00
93123J850-020	2 Air to Spring Close	1	0	554	664.21
93123K850-005	1/2 Air to Spring Open	1	4	554	218.95
93123K850-007	3/4 Air to Spring Open	1	4	554	236.84
93123K850-010	1 Air to Spring Open	1	4	554	247.37
93123K850-012	1-1/4 Air to Spring Open	1	0	554	313.68
93123K850-015	1-1/2 Air to Spring Open	1	0	554	393.68
93123K850-020	2 Air to Spring Open	1	0	554	474.74

Polypropylene Premium Actuated Diaphragm Valves - Pneumatic w/Plastic Housing

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
FKM O-ring and FKM Diaphragm SR Thread					
93233H850-005	1/2 Air to Air	1	0	554	347.37
93233H850-007	3/4 Air to Air	1	0	554	375.79
93233H850-010	1 Air to Air	1	0	554	392.63
93233H850-012	1-1/4 Air to Air	1	0	554	497.89

Polypropylene Premium Actuated Diaphragm Valves - Pneumatic w/Plastic Housing (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
FKM O-ring and FKM Diaphragm SR Thread					
93233H850-015	1-1/2 Air to Air	1	0	554	625.26
93233H850-020	2 Air to Air	1	0	554	753.68
93233J850-005	1/2 Air to Spring Close	1	4	554	471.58
93233J850-007	3/4 Air to Spring Close	1	0	554	541.05
93233J850-010	1 Air to Spring Close	1	4	554	614.74
93233J850-012	1-1/4 Air to Spring Close	1	0	554	702.11
93233J850-015	1-1/2 Air to Spring Close	1	0	554	856.84
93233J850-020	2 Air to Spring Close	1	0	554	1054.74
93233K850-005	1/2 Air to Spring Open	1	4	554	347.37
93233K850-007	3/4 Air to Spring Open	1	0	554	375.79
93233K850-010	1 Air to Spring Open	1	4	554	392.63
93233K850-012	1-1/4 Air to Spring Open	1	0	554	497.89
93233K850-015	1-1/2 Air to Spring Open	1	0	554	625.26
93233K850-020	2 Air to Spring Open	1	0	554	753.68

Polypropylene Premium Actuated Diaphragm Valves - Pneumatic w/Plastic Housing

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
EPDM O-ring and EPDM Backed PTFE Diaphragm SR Thread					
93153H850-005	1/2 Air to Air	1	4	554	364.21
93153H850-007	3/4 Air to Air	1	0	554	377.89
93153H850-010	1 Air to Air	1	0	554	393.68
93153H850-012	1-1/4 Air to Air	1	0	554	544.21
93153H850-015	1-1/2 Air to Air	1	0	554	654.74
93153H850-020	2 Air to Air	1	0	554	797.89
93153J850-005	1/2 Air to Spring Close	1	4	554	377.89
93153J850-007	3/4 Air to Spring Close	1	0	554	403.16
93153J850-010	1 Air to Spring Close	1	0	554	429.47
93153J850-012	1-1/4 Air to Spring Close	1	0	554	534.74
93153J850-015	1-1/2 Air to Spring Close	1	0	554	641.05
93153J850-020	2 Air to Spring Close	1	0	554	820.00
93153K850-005	1/2 Air to Spring Open	1	4	554	364.21
93153K850-007	3/4 Air to Spring Open	1	0	554	377.89
93153K850-010	1 Air to Spring Open	1	4	554	393.68
93153K850-012	1-1/4 Air to Spring Open	1	0	554	544.21
93153K850-015	1-1/2 Air to Spring Open	1	0	554	654.74
93153K850-020	2 Air to Spring Open	1	0	554	797.89

FKM O-ring and EPDM Backed PTFE Diaphragm SR Thread

93253H850-005	1/2 Air to Air	1	4	554	423.16
93253H850-007	3/4 Air to Air	1	0	554	438.95
93253H850-010	1 Air to Air	1	0	554	457.89
93253H850-012	1-1/4 Air to Air	1	0	554	632.63
93253H850-015	1-1/2 Air to Air	1	0	554	761.05
93253H850-020	2 Air to Air	1	0	554	927.37
93253J850-005	1/2 Air to Spring Close	1	4	554	438.95
93253J850-007	3/4 Air to Spring Close	1	0	554	468.42
93253J850-010	1 Air to Spring Close	1	4	554	498.95
93253J850-012	1-1/4 Air to Spring Close	1	0	554	622.11
93253J850-015	1-1/2 Air to Spring Close	1	0	554	745.26
93253J850-020	2 Air to Spring Close	1	0	554	953.68
93253K850-005	1/2 Air to Spring Open	1	4	554	423.16
93253K850-007	3/4 Air to Spring Open	1	0	554	438.95
93253K850-010	1 Air to Spring Open	1	4	554	457.89
93253K850-012	1-1/4 Air to Spring Open	1	0	554	632.63
93253K850-015	1-1/2 Air to Spring Open	1	0	554	761.05
93253K850-020	2 Air to Spring Open	1	0	554	927.37

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Premium Actuated Diaphragm Valve - Pneumatic

Industrial grade Weir-type design, excellent for throttling and use with viscous fluids. Full-featured actuator can be custom configured with add-on accessories.

- Stainless Steel Hardware
- 235 psi @ 73°F (23°C) - sizes 1/2"- 2" (flanged & PTFE diaphragm-150 psi), 2-1/2"- 4"-150 psi
- 80 psi Operating Pressure
- Linear Action Operation with Preset Stops
- Air-Air or Air-Spring Closed (optional spring open)

See **Pneumatic Actuator Accessories for Diaphragm Valves** for Add-on Actuator Accessories

PVC - EPDM O-ring and EPDM Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Prod Code
1/2 Air to Air	91121H100-005 **857.54**	93121H100-005 **862.91**	94021H100-005 **854.18**	95021H100-005 **938.25**	550
1/2 Air to Spring	91121J100-005 **889.07**	93121J100-005 **894.44**	94021J100-005 **885.72**	95021J100-005 **1043.37**	550
3/4 Air to Air	91121H100-007 **1890.95**	93121H100-007 **1151.62**	94021H100-007 **1138.96**	95021H100-007 **1233.11**	550
3/4 Air to Spring	91121J100-007 **1191.26**	93121J100-007 **1198.94**	94021J100-007 **1186.27**	95021J100-007 **1361.45**	550
1 Air to Air	91121H100-010 **1937.63**	93121H100-010 **1250.18**	94021H100-010 **1234.72**	95021H100-010 **1323.38**	550
1 Air to Spring	91121J100-010 **1290.01**	93121J100-010 **1300.66**	94021J100-010 **1285.19**	95021J100-010 **1499.44**	550
1-1/4 Air to Air	91121H100-012 **2062.16**	93121H100-012 **2079.57**	94021H100-012 **2053.08**	95021H100-012 **2149.82**	550
1-1/4 Air to Spring	91121J100-012 **2144.17**	93121J100-012 **2161.59**	94021J100-012 **2135.08**	95021J100-012 **2370.28**	550
1-1/2 Air to Air	91121H100-015 **2076.64**	93121H100-015 **2105.91**	94021H100-015 **2069.19**	95021H100-015 **2154.27**	550
1-1/2 Air to Spring	91121J100-015 **2158.64**	93121J100-015 **2187.92**	94021J100-015 **2151.21**	95021J100-015 **2377.03**	550
2 Air to Air	91121H100-020 **2355.05**	93121H100-020 **2386.75**	94021H100-020 **2344.15**	95021H100-020 **2448.98**	550
2 Air to Spring	91121J100-020 **2446.52**	93121J100-020 **2478.22**	94021J100-020 **2435.61**	95021J100-020 **4265.91**	550
2-1/2 Air to Air	---	---	---	95021H100-025 **2856.29**	550
2-1/2 Air to Spring	---	---	---	95021J100-025 **4790.55**	550
3 Air to Air	---	---	---	95021H100-030 **4855.47**	550
3 Air to Spring	---	---	---	95021J100-030 **5369.66**	550
4 Air to Air	---	---	---	95021H100-040 **5632.45**	550
4 Air to Spring	---	---	---	95021J100-040 **6402.80**	550
6 Air to Spring	---	---	---	95021J100-060 **14295.04**	550

NOTE: "Socket" valves up to 2" size include standard plastic thread end connectors. For Air to Spring OPEN, change letter "J" to letter " K" in listed part number. O-rings used on Socket and SR Thread End Connectors only.

PVC - FKM O-ring and FKM Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Prod Code
1/2 Air to Air	91231H100-005 **1470.00**	93231H100-005 **877.95**	94031H100-005 **868.81**	95031H100-005 **956.12**	550
1/2 Air to Spring	91231J100-005 **1432.11**	93231J100-005 **909.51**	94031J100-005 **900.35**	95031J100-005 **987.66**	550
3/4 Air to Air	91231H100-007 **1161.01**	93231H100-007 **1168.67**	94031H100-007 **1154.83**	95031H100-007 **1239.22**	550
3/4 Air to Spring	91231J100-007 **1618.42**	93231J100-007 **1215.98**	94031J100-007 **1202.13**	95031J100-007 **1286.53**	550
1 Air to Air	91231H100-010 **1258.22**	93231H100-010 **1268.89**	94031H100-010 **1251.15**	95031H100-010 **1355.67**	550
1 Air to Spring	91231J100-010 **1889.90**	93231J100-010 **1319.37**	94031J100-010 **1301.61**	95031J100-010 **1406.14**	550
1-1/4 Air to Air	91231H100-012 **2115.69**	93231H100-012 **2132.78**	94031H100-012 **2109.16**	95031H100-012 **2189.49**	550

PVC - FKM O-ring and FKM Diaphragm (continued)

Size	Socket	SR Thread	Spigot	Flanged	Prod Code
1-1/4 Air to Spring	91231J100-012 **2829.10**	93231J100-012 **2214.79**	94031J100-012 **2191.17**	95031J100-012 **2271.48**	550
1-1/2 Air to Air	91231H100-015 **2123.45**	93231H100-015 **2152.71**	94031H100-015 **2114.84**	95031H100-015 **2197.94**	550
1-1/2 Air to Spring	91231J100-015 **3003.71**	93231J100-015 **2234.73**	94031J100-015 **2196.84**	95031J100-015 **2279.96**	550
2 Air to Air	91231H100-020 **2420.24**	93231H100-020 **2451.98**	94031H100-020 **2405.88**	95031H100-020 **2480.12**	550
2 Air to Spring	91231J100-020 **4075.65**	93231J100-020 **2543.45**	94031J100-020 **2497.34**	95031J100-020 **2571.57**	550
2-1/2 Air to Air	---	---	---	95031H100-025 **2945.42**	550
2-1/2 Air to Spring	---	---	---	95031J100-025 **3551.01**	550
3 Air to Air	---	---	---	95031H100-030 **3758.22**	550
3 Air to Spring	---	---	---	95031J100-030 **4710.76**	550
4 Air to Air	---	---	---	95031H100-040 **4993.08**	550
4 Air to Spring	---	---	---	95031J100-040 **5485.07**	550

NOTE: "Socket" valves up to 2" size include standard plastic thread end connectors. For Air to Spring OPEN, change letter "J" to letter " K" in listed part number. O-rings used on Socket and SR Thread End Connectors only.

PVC - EPDM O-ring and EPDM Backed PTFE Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Prod Code
1/2 Air to Air	91151H100-005 **1682.50**	93151H100-005 **943.25**	94051H100-005 **930.47**	95051H100-005 **1682.50**	550
1/2 Air to Spring	91151J100-005 **969.43**	93151J100-005 **974.77**	94051J100-005 **961.99**	95051J100-005 **1048.91**	550
3/4 Air to Air	91151H100-007 **1884.44**	93151H100-007 **1228.35**	94051H100-007 **1212.53**	95051H100-007 **1884.40**	550
3/4 Air to Spring	91151J100-007 **1315.26**	93151J100-007 **1275.65**	94051J100-007 **1259.84**	95051J100-007 **1356.72**	550
1 Air to Air	91151H100-010 **1963.58**	93151H100-010 **1393.13**	94051H100-010 **1374.60**	95051H100-010 **1963.58**	550
1 Air to Spring	91151J100-010 **1432.95**	93151J100-010 **1443.61**	94051J100-010 **1425.05**	95051J100-010 **1507.13**	550
1-1/4 Air to Air	91151H100-012 **2235.56**	93151H100-012 **2252.64**	94051H100-012 **2224.94**	95051H100-012 **2235.56**	550
1-1/4 Air to Spring	91151J100-012 **2317.55**	93151J100-012 **2334.66**	94051J100-012 **2306.96**	95051J100-012 **1636.99**	550
1-1/2 Air to Air	91151H100-015 **2266.42**	93151H100-015 **2295.69**	94051H100-015 **2254.27**	95051H100-015 **2266.42**	550
1-1/2 Air to Spring	91151J100-015 **2990.88**	93151J100-015 **2377.69**	94051J100-015 **2336.28**	95051J100-015 **2428.47**	550
2 Air to Air	91151H100-020 **2558.75**	93151H100-020 **2590.48**	94051H100-020 **2542.06**	95051H100-020 **2558.75**	550
2 Air to Spring	91151J100-020 **4046.26**	93151J100-020 **2681.95**	94051J100-020 **2633.52**	95051J100-020 **2730.84**	550
2-1/2 Air to Air	---	---	---	95051H100-025 **3217.42**	550
2-1/2 Air to Spring	---	---	---	95051J100-025 **3823.01**	550
3 Air to Air	---	---	---	95051H100-030 **4123.14**	550
3 Air to Spring	---	---	---	95051J100-030 **5075.66**	550
4 Air to Air	---	---	---	95051H100-040 **5523.12**	550
4 Air to Spring	---	---	---	95051J100-040 **6015.17**	550

NOTE: "Socket" valves up to 2" size include standard plastic thread end connectors. For Air to Spring OPEN, change letter "J" to letter " K" in listed part number. O-rings used on Socket and SR Thread End Connectors only.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com
Spears® Manufacturing Company

Premium Actuated Diaphragm Valve - Pneumatic

PVC - FKM O-ring and EPDM Backed PTFE Diaphragm

Size	Socket	SR Thread	Prod Code
1/2 Air to Air	91251H100-005 **961.53**	93251H100-005 **966.89**	550
1/2 Air to Spring	91251J100-005 **993.08**	93251J100-005 **998.43**	550
3/4 Air to Air	91251H100-007 **1248.77**	93251H100-007 **1256.47**	550
3/4 Air to Spring	91251J100-007 **1296.09**	93251J100-007 **1303.80**	550
1 Air to Air	91251H100-010 **1394.62**	93251H100-010 **1405.27**	550
1 Air to Spring	91251J100-010 **1445.09**	93251J100-010 **1455.76**	550
1-1/4 Air to Air	91251H100-012 **2262.96**	93251H100-012 **2280.05**	550
1-1/4 Air to Spring	91251J100-012 **2344.96**	93251J100-012 **2362.04**	550
1-1/2 Air to Air	91251H100-015 **2290.80**	93251H100-015 **2320.07**	550
1-1/2 Air to Spring	91251J100-015 **2372.82**	93251J100-015 **2402.08**	550
2 Air to Air	91251H100-020 **2586.65**	93251H100-020 **2618.39**	550
2 Air to Spring	91251J100-020 **2678.13**	93251J100-020 **2709.84**	550

NOTE: "Socket" valves up to 2" size include standard plastic thread end connectors. For Air to Spring OPEN, change letter "J" to letter " K" in listed part number. O-rings used on Socket and SR Thread End Connectors only.

CPVC - EPDM O-ring and EPDM Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Prod Code
1/2 Air to Air	91122H100-005 **961.77**	93122H100-005 **967.15**	94022H100-005 **955.74**	95022H100-005 **1011.83**	552
1/2 Air to Spring	91122J100-005 **993.33**	93122J100-005 **998.67**	94022J100-005 **987.26**	95022J100-005 **1043.37**	552
3/4 Air to Air	91122H100-007 **1256.92**	93122H100-007 **1264.61**	94022H100-007 **1249.54**	95022H100-007 **1314.14**	552
3/4 Air to Spring	91122J100-007 **1304.23**	93122J100-007 **1311.93**	94022J100-007 **1296.86**	95022J100-007 **1361.45**	552
1 Air to Air	91122H100-010 **1357.92**	93122H100-010 **1368.58**	94022H100-010 **1351.37**	95022H100-010 **1448.98**	552
1 Air to Spring	91122J100-010 **1408.38**	93122J100-010 **1419.04**	94022J100-010 **1401.80**	95022J100-010 **1499.44**	552
1-1/4 Air to Air	91122H100-012 **2240.94**	93122H100-012 **2258.02**	94022H100-012 **2229.31**	95022H100-012 **2288.25**	552
1-1/4 Air to Spring	91122J100-012 **2322.95**	93122J100-012 **2340.03**	94022J100-012 **2311.31**	95022J100-012 **2370.28**	552
1-1/2 Air to Air	91122H100-015 **2254.63**	93122H100-015 **2283.88**	94022H100-015 **2239.31**	95022H100-015 **2295.04**	552
1-1/2 Air to Spring	91122J100-015 **2336.63**	93122J100-015 **2365.92**	94022J100-015 **2321.28**	95022J100-015 **2377.03**	552
2 Air to Air	91122H100-020 **2509.59**	93122H100-020 **2541.31**	94022H100-020 **2496.81**	95022H100-020 **2580.89**	552
2 Air to Spring	91122J100-020 **2601.04**	93122J100-020 **2632.78**	94022J100-020 **2588.26**	95022J100-020 **4265.91**	552
2-1/2 Air to Air	---	---	---	95022H100-025 **3283.08**	552
2-1/2 Air to Spring	---	---	---	95022J100-025 **4790.55**	552
3 Air to Air	---	---	---	95022H100-030 **4417.13**	552
3 Air to Spring	---	---	---	95022J100-030 **5369.66**	552
4 Air to Air	---	---	---	95022H100-040 **5910.75**	552
4 Air to Spring	---	---	---	95022J100-040 **6402.80**	552

NOTE: "Socket" valves up to 2" size include standard plastic thread end connectors. For Air to Spring OPEN, change letter "J" to letter " K" in listed part number. O-rings used on Socket and SR Thread End Connectors only.

Premium Actuated Diaphragm Valve - Pneumatic

CPVC - EPDM O-ring and EPDM Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Prod Code
1/2 Air to Air	91122H100-005 **961.77**	93122H100-005 **967.15**	94022H100-005 **955.74**	95022H100-005 **1011.83**	552
1/2 Air to Spring	91122J100-005 **993.33**	93122J100-005 **998.67**	94022J100-005 **987.26**	95022J100-005 **1043.37**	552
3/4 Air to Air	91122H100-007 **1256.92**	93122H100-007 **1264.61**	94022H100-007 **1249.54**	95022H100-007 **1314.14**	552
3/4 Air to Spring	91122J100-007 **1304.23**	93122J100-007 **1311.93**	94022J100-007 **1296.86**	95022J100-007 **1361.45**	552
1 Air to Air	91122H100-010 **1357.92**	93122H100-010 **1368.58**	94022H100-010 **1351.37**	95022H100-010 **1448.98**	552
1 Air to Spring	91122J100-010 **1408.38**	93122J100-010 **1419.04**	94022J100-010 **1401.80**	95022J100-010 **1499.44**	552
1-1/4 Air to Air	91122H100-012 **2240.94**	93122H100-012 **2258.02**	94022H100-012 **2229.31**	95022H100-012 **2288.25**	552
1-1/4 Air to Spring	91122J100-012 **2322.95**	93122J100-012 **2340.03**	94022J100-012 **2311.31**	95022J100-012 **2370.28**	552
1-1/2 Air to Air	91122H100-015 **2254.63**	93122H100-015 **2283.88**	94022H100-015 **2239.31**	95022H100-015 **2295.04**	552
1-1/2 Air to Spring	91122J100-015 **2336.63**	93122J100-015 **2365.92**	94022J100-015 **2321.28**	95022J100-015 **2377.03**	552
2 Air to Air	91122H100-020 **2509.59**	93122H100-020 **2541.31**	94022H100-020 **2496.81**	95022H100-020 **2580.89**	552
2 Air to Spring	91122J100-020 **2601.04**	93122J100-020 **2632.78**	94022J100-020 **2588.26**	95022J100-020 **4265.91**	552
2-1/2 Air to Air	---	---	---	95022H100-025 **3283.08**	552
2-1/2 Air to Spring	---	---	---	95022J100-025 **4790.55**	552
3 Air to Air	---	---	---	95022H100-030 **4417.13**	552
3 Air to Spring	---	---	---	95022J100-030 **5369.66**	552
4 Air to Air	---	---	---	95022H100-040 **5910.75**	552
4 Air to Spring	---	---	---	95022J100-040 **6402.80**	552

NOTE: "Socket" valves up to 2" size include standard plastic thread end connectors. For Air to Spring OPEN, change letter "J" to letter " K" in listed part number. O-rings used on Socket and SR Thread End Connectors only.

CPVC - FKM O-ring and FKM Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Prod Code
1/2 Air to Air	91232H100-005 **1620.92**	93232H100-005 **1034.56**	94032H100-005 **1019.54**	95032H100-005 **1042.04**	552
1/2 Air to Spring	91232J100-005 **1060.73**	93232J100-005 **1066.09**	94032J100-005 **1051.08**	95032J100-005 **1073.59**	552
3/4 Air to Air	91232H100-007 **1317.60**	93232H100-007 **1325.29**	94032H100-007 **1307.47**	95032H100-007 **1347.97**	552
3/4 Air to Spring	91232J100-007 **1364.91**	93232J100-007 **1372.61**	94032J100-007 **1354.79**	95032J100-007 **1395.28**	552
1 Air to Air	91232H100-010 **1448.22**	93232H100-010 **1458.88**	94032H100-010 **1437.07**	95032H100-010 **1496.13**	552
1 Air to Spring	91232J100-010 **1498.67**	93232J100-010 **1509.34**	94032J100-010 **1487.55**	95032J100-010 **1546.59**	552
1-1/4 Air to Air	91232H100-012 **2375.94**	93232H100-012 **2393.01**	94032H100-012 **2360.89**	95032H100-012 **2362.44**	552
1-1/4 Air to Spring	91232J100-012 **2457.94**	93232J100-012 **2475.04**	94032J100-012 **2442.88**	95032J100-012 **2444.44**	552
1-1/2 Air to Air	91232H100-015 **2398.52**	93232H100-015 **2427.78**	94032H100-015 **2382.27**	95032H100-015 **2376.79**	552
1-1/2 Air to Spring	91232J100-015 **2480.53**	93232J100-015 **2509.79**	94032J100-015 **2464.28**	95032J100-015 **2458.79**	552
2 Air to Air	91232H100-020 **2638.03**	93232H100-020 **2669.73**	94032H100-020 **2621.71**	95032H100-020 **2651.11**	552
2 Air to Spring	91232J100-020 **2729.48**	93232J100-020 **2761.22**	94032J100-020 **2713.17**	95032J100-020 **2742.59**	552
2-1/2 Air to Air	---	---	---	95032H100-025 **3405.74**	552
2-1/2 Air to Spring	---	---	---	95032J100-025 **4011.33**	552
3 Air to Air	---	---	---	95032H100-030 **4593.16**	552
3 Air to Spring	---	---	---	95032J100-030 **5545.69**	552

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CPVC - FKM O-ring and FKM Diaphragm (continued)

Size	Socket	SR Thread	Spigot	Flanged	Prod Code
4 Air to Air	---	---	---	95032H100-040 **6152.06**	552
4 Air to Spring	---	---	---	95032J100-040 **6644.07**	552

NOTE: "Socket" valves up to 2" size include standard plastic thread end connectors. For Air to Spring OPEN, change letter "J" to letter " K" in listed part number. O-rings used on Socket and SR Thread End Connectors only.

CPVC - EPDM O-ring and EPDM Backed PTFE Diaphragm

Size	Socket	SR Thread	Spigot	Flanged	Prod Code
1/2 Air to Air	91152H100-005 **1066.53**	93152H100-005 **1071.91**	94052H100-005 **1056.81**	95052H100-005 **1139.67**	552
1/2 Air to Spring	91152J100-005 **1528.60**	93152J100-005 **1103.43**	94052J100-005 **1088.36**	95052J100-005 **1171.21**	552
3/4 Air to Air	91152H100-007 **1370.55**	93152H100-007 **1378.25**	94052H100-007 **1359.08**	95052H100-007 **1436.63**	552
3/4 Air to Spring	91152J100-007 **1550.23**	93152J100-007 **1425.58**	94052J100-007 **1406.37**	95052J100-007 **1483.93**	552
1 Air to Air	91152H100-010 **1512.57**	93152H100-010 **1523.21**	94052H100-010 **1500.82**	95052H100-010 **1598.67**	552
1 Air to Spring	91152J100-010 **1563.02**	93152J100-010 **1573.68**	94052J100-010 **1551.29**	95052J100-010 **1649.13**	552
1-1/4 Air to Air	91152H100-012 **2416.81**	93152H100-012 **2447.60**	94052H100-012 **2399.67**	95052H100-012 **2471.12**	552
1-1/4 Air to Spring	91152J100-012 **2498.82**	93152J100-012 **2529.61**	94052J100-012 **2481.69**	95052J100-012 **2553.13**	552
1-1/2 Air to Air	91152H100-015 **2426.71**	93152H100-015 **2455.98**	94052H100-015 **2410.43**	95052H100-015 **2605.76**	552
1-1/2 Air to Spring	91152J100-015 **2508.73**	93152J100-015 **2538.00**	94052J100-015 **2492.45**	95052J100-015 **2687.76**	552
2 Air to Air	91152H100-020 **2715.22**	93152H100-020 **2746.94**	94052H100-020 **2697.08**	95052H100-020 **2921.57**	552
2 Air to Spring	91152J100-020 **2806.69**	93152J100-020 **2838.42**	94052J100-020 **2788.56**	95052J100-020 **3013.02**	552
2-1/2 Air to Air	---	---	---	95052H100-025 **4046.33**	552
2-1/2 Air to Spring	---	---	---	95052J100-025 **4651.91**	552
3 Air to Air	---	---	---	95052H100-030 **5217.69**	552
3 Air to Spring	---	---	---	95052J100-030 **6170.23**	552
4 Air to Air	---	---	---	95052H100-040 **6905.05**	552
4 Air to Spring	---	---	---	95052J100-040 **7397.12**	552

NOTE: "Socket" valves up to 2" size include standard plastic thread end connectors. For Air to Spring OPEN, change letter "J" to letter " K" in listed part number. O-rings used on Socket and SR Thread End Connectors only.

CPVC - FKM O-ring and EPDM Backed PTFE Diaphragm

Size	Socket	SR Thread	Prod Code
1/2 Air to Air	91252H100-005 **1092.87**	93252H100-005 **1098.23**	552
1/2 Air to Spring	91252J100-005 **1124.42**	93252J100-005 **1129.78**	552
3/4 Air to Air	91252H100-007 **1387.78**	93252H100-007 **1395.47**	552
3/4 Air to Spring	91252J100-007 **1435.08**	93252J100-007 **1442.78**	552
1 Air to Air	91252H100-010 **1532.48**	93252H100-010 **1549.60**	552
1 Air to Spring	91252J100-010 **1582.95**	93252J100-010 **1600.05**	552
1-1/4 Air to Air	91252H100-012 **2439.35**	93252H100-012 **2456.46**	552
1-1/4 Air to Spring	91252J100-012 **2521.38**	93252J100-012 **2538.45**	552
1-1/2 Air to Air	91252H100-015 **2464.17**	93252H100-015 **2493.43**	552
1-1/2 Air to Spring	91252J100-015 **2546.16**	93252J100-015 **2575.43**	552
2 Air to Air	91252H100-020 **2792.25**	93252H100-020 **2825.56**	552
2 Air to Spring	91252J100-020 **2883.71**	93252J100-020 **2917.02**	552

NOTE: "Socket" valves up to 2" size include standard plastic thread end connectors. For Air to Spring OPEN, change letter "J" to letter " K" in listed part number. O-rings used on Socket and SR Thread End Connectors only.

Polypropylene - EPDM O-ring and EPDM Diaphragm

Size	SR Thread	Flanged	Prod Code
1/2 Air to Air	93123H100-005 **861.19**	---	554
1/2 Air to Spring	93123J100-005 **892.75**	---	554
3/4 Air to Air	93123H100-007 **1148.61**	---	554
3/4 Air to Spring	93123J100-007 **880.51**	---	554
1 Air to Air	93123H100-010 **1246.07**	---	554
1 Air to Spring	93123J100-010 **1296.54**	---	554
1-1/4 Air to Air	93123H100-012 **2076.16**	---	554
1-1/4 Air to Spring	93123J100-012 **2158.17**	---	554
1-1/2 Air to Air	93123H100-015 **2089.84**	---	554
1-1/2 Air to Spring	93123J100-015 **2171.87**	---	554
2 Air to Air	93123H100-020 **2364.49**	---	554
2 Air to Spring	93123J100-020 **2455.96**	---	554
2-1/2 Air to Air	---	95023H100-025 **2899.34**	554
2-1/2 Air to Spring	---	95023J100-025 **3504.91**	554
3 Air to Air	---	95023H100-030 **3785.01**	554
3 Air to Spring	---	95023J100-030 **4737.56**	554
4 Air to Air	---	95023H100-040 **5105.20**	554
4 Air to Spring	---	95023J100-040 **5597.23**	554

NOTE: For Air to Spring OPEN, change letter "J" to letter "K" in listed part number.

Polypropylene - FKM O-ring and EPDM Diaphragm

Size	SR Thread	Flanged	Prod Code
1/2 Air to Air	93233H100-005 **876.84**	---	554

Polypropylene - FKM O-ring and EPDM Diaphragm (continued)

Size	SR Thread	Flanged	Prod Code
1/2 Air to Spring	93233J100-005 **908.38**	---	554
3/4 Air to Air	93233H100-007 **1165.95**	---	554
3/4 Air to Spring	93233J100-007 **1213.27**	---	554
1 Air to Air	93233H100-010 **1265.99**	---	554
1 Air to Spring	93233J100-010 **1316.47**	---	554
1-1/4 Air to Air	93233H100-012 **2109.95**	---	554
1-1/4 Air to Spring	93233J100-012 **2191.89**	---	554
1-1/2 Air to Air	93233H100-015 **2124.07**	---	554
1-1/2 Air to Spring	93233J100-015 **2206.08**	---	554
2 Air to Air	93233H100-020 **2404.77**	---	554
2 Air to Spring	93233J100-020 **2496.24**	---	554
2-1/2 Air to Air	---	95033H100-025 **2969.35**	554
2-1/2 Air to Spring	---	95033J100-025 **3574.95**	554
3 Air to Air	---	95033H100-030 **3884.91**	554
3 Air to Spring	---	95033J100-030 **4837.43**	554
4 Air to Air	---	95033H100-040 **5243.57**	554
4 Air to Spring	---	95033J100-040 **5735.61**	554

NOTE: For Air to Spring OPEN, change letter "J" to letter "K" in listed part number.

Polypropylene - EPDM O-ring and EPDM Backed PTFE Diaphragm

Size	SR Thread	Flanged	Prod Code
1/2 Air to Air	93153H100-005 **944.39**	---	554
1/2 Air to Spring	93153J100-005 **975.95**	---	554
3/4 Air to Air	93153H100-007 **1222.91**	---	554
3/4 Air to Spring	93153J100-007 **1270.21**	---	554
1 Air to Air	93153H100-010 **1389.31**	---	554
1 Air to Spring	93153J100-010 **1439.78**	---	554
1-1/4 Air to Air	93153H100-012 **2243.04**	---	554
1-1/4 Air to Spring	93153J100-012 **2325.07**	---	554
1-1/2 Air to Air	93153H100-015 **2273.83**	---	554
1-1/2 Air to Spring	93153J100-015 **2355.84**	---	554
2 Air to Air	93153H100-020 **2567.56**	---	554
2 Air to Spring	93153J100-020 **2659.01**	---	554
2-1/2 Air to Air	---	95053H100-025 **3281.33**	554
2-1/2 Air to Spring	---	95053J100-025 **3886.89**	554
3 Air to Air	---	95053H100-030 **4282.03**	554
3 Air to Spring	---	95053J100-030 **5234.57**	554

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Polypropylene - EPDM O-ring and EPDM Backed PTFE Diaphragm (continued)

Size	SR Thread	Flanged	Prod Code
4 Air to Air	---	95053H100-040 **5666.87**	554
4 Air to Spring	---	95053J100-040 **6158.92**	554

Polypropylene - FKM O-ring and EPDM Backed PTFE Diaphragm SR Thread

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
93253H100-005	1/2 Air to Air	0	0	554	956.07
93253J100-005	1/2 Air to Spring	0	0	554	987.62
93253H100-007	3/4 Air to Air	0	0	554	1237.08
93253J100-007	3/4 Air to Spring	0	0	554	1284.42
93253H100-010	1 Air to Air	0	0	554	1406.94
93253J100-010	1 Air to Spring	0	0	554	1457.40
93253H100-012	1-1/4 Air to Air	0	0	554	2265.52
93253J100-012	1-1/4 Air to Spring	0	0	554	2347.51
93253H100-015	1-1/2 Air to Air	0	0	554	2297.87
93253J100-015	1-1/2 Air to Spring	0	0	554	2379.87
93253H100-020	2 Air to Air	0	0	554	2595.34
93253J100-020	2 Air to Spring	0	0	554	2686.81

Pneumatic Actuator Accessories for Ball Valves & Butterfly Valves

The following accessories are for use on Spears® pneumatic actuated Ball Valves and Butterfly Valves. See separate listing for pneumatic Diaphragm Valve accessories. Accessories are individually ordered separately and factory assembled with the selected Premium Actuated Valve Package. See important ordering instructions, *Ordering Premium Valve Packages with Accessory Add-ons*.

Accessory	Description	Accessory Part Number	Price Each Prod Code: 298
Pneumatic Positioners	3-15 psi NEMA 4 Flat-Top Indicator [1]	A-PP1	1485.40
	3-15 psi NEMA 4 Dome Indicator [1]	A-PP2	1598.11
	3-15 psi NEMA 4 Dome Indicator Integrated 2-SPDT Mech. Switches [1]	A-PP3	2197.71
Electro Pneumatic Positioners with Indicator	4-20mA NEMA 4 Flat-Top Indicator [1]	A-EP1	2965.55
	4-20mA NEMA 4 Dome Indicator [1]	A-EP2	3267.76
	4-20 mA NEMA 4 Dome Indicator Integrated 2-SPDT Mech. Switches [1]	A-EP3	3450.99
	4-20mA NEMA 7 Flat-Top Indicator [1]	A-EP4	3549.60
	4-20mA Intrinsically Safe (CSA/UL) Flat-Top Indicator [1]	A-EP5	3599.48
	4-20mA NEMA 7 Dome Indicator [1]	A-EP6	3662.27
	4-20mA Intrinsically Safe w/2-SPST Proximity Switches [1]	A-EP22	3717.58
Solenoid Valves	3 & 4-way 115 VAC NEMA 4/4x	A-SV1	204.93
	3 & 4-way 230 VAC NEMA 4/4x	A-SV2	215.15
	3 & 4-way 24 VAC NEMA 4/4x	A-SV3	215.15
	3 & 4-way 12 VDC NEMA 4/4x	A-SV4	215.15
	3 & 4-way 24 VDC NEMA 4/4x	A-SV5	215.15
	3 & 4-way 115 VAC NEMA 4/4x/7/9	A-SV6	435.46
	3 & 4-way 230 VAC NEMA 4/4x/7/9	A-SV7	435.46
	3 & 4-way 24 VAC NEMA 4/4x/7/9	A-SV8	435.46
	3 & 4-way 12 VDC NEMA 4/4x/7/9	A-SV9	435.46
	3 & 4-way 24 VDC NEMA 4/4x/7/9	A-SV10	435.46
	Dual Coil 3 & 4-way 115 VAC NEMA 4/4x	A-SV11	358.56
	Dual Coil 3 & 4-way 230 VAC NEMA 4/4x	A-SV12	358.56
	Dual Coil 3 & 4-way 24 VAC NEMA 4/4x	A-SV13	358.56
	Dual Coil 3 & 4-way 12 VDC NEMA 4/4x	A-SV14	358.56
	Dual Coil 3 & 4-way 24 VDC NEMA 4/4x	A-SV15	358.56
	Dual Coil 3 & 4-way 115 VAC NEMA 7/9	A-SV16	747.93
	Dual Coil 3 & 4-way 230 VAC NEMA 7/9	A-SV17	747.93
	Dual Coil 3 & 4-way 24 VAC NEMA 7/9	A-SV18	747.93
	Dual Coil 3 & 4-way 12 VDC NEMA 7/9	A-SV19	747.93
	Dual Coil 3 & 4-way 24 VDC NEMA 7/9	A-SV20	747.93
	Stainless Steel 3 & 4-way 115 VAC NEMA 4/4x	A-SV21	891.27
	3-Way 24 VDC Hi Temperature (Class H) NEMA 4x	A-SV22	2554.60
	3 & 4-way 230 VAC NEMA 4/4x 1/2" NPT Din Connector	A-SV23	1144.97
Limit Switch & Transmitter Combination	4-20mA 2-SPDT NEMA 4/4x/7/9	A-LS20	1215.38
	4-20mA 2-SPDT NEMA 4/4x/7/9 w/ Visual Indicator	A-LS21	1280.98
	4-20mA 2-DPDT NEMA 4/4x/7/9	A-LS22	1445.27
	4-20mA 2-DPDT NEMA 4/4x/7/9 w/ Visual Indicator	A-LS23	1511.03
	4-20mA 2-Proximity NEMA 4/4x/7/9	A-LS24	1560.29
	4-20mA 2-Proximity NEMA 4/4x/7/9 w/ Visual Indicator	A-LS25	1612.23
Limit Switches	2-SPDT NEMA 4/4x	A-LS40	337.93
	2-SPDT NEMA 4/4x w/ Visual Indicator	A-LS41	394.19
	2-SPDT NEMA 4/4x w/ Green/Red Dome Indicator	A-LS41D	487.09
	NEMA 4/4x w/ Low Profile Indicator	A-LS41L	496.84
	2-DPDT NEMA 4/4x	A-LS42	558.48
	2-DPDT NEMA 4/4x w/ Visual Indicator	A-LS43	624.25
	2-Proximity NEMA 4/4x	A-LS44	673.37
	2-Proximity NEMA 4/4x w/ Low Profile Indicator (source power requires intrinsic safety barrier or amplifier).	A-LS44L	819.52
	2-Proximity NEMA 4/4x w/ Visual Indicator	A-LS45	739.12
	2-Proximity NEMA 7/9	A-LS46	771.92
	2-Proximity NEMA 7/9 w/ Visual Indicator	A-LS47	837.83
	2-Proximity NEMA 7/9 w/ Low Profile Indicator	A-LS47L	777.00
	2-SPDT NEMA 4/4x/7/9	A-LS48	555.76
	2-SPDT NEMA 4/4x/7/9 w/ Visual Indicator	A-LS49	492.74
	2-DPDT NEMA 4/4x/7/9	A-LS50	994.86
	2-DPDT NEMA 4/4x/7/9 w/ Visual Indicator	A-LS51	1059.87
	4-SPDT NEMA 4/4x w/ 180° Indicator	A-LS52	557.13
Transmitter	4-20mA Output Transmitter	A-PT1	1118.88
Indicator	Dome Indicator	A-V2	92.22
Pressure Gauge Set	Stainless steel case, 3-gauge set for use with positioners: 1 - input pressure gauge 0-30 psi, 2 - output gauges 0-160 psi	A-G1	701.33

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Pneumatic Actuator Accessories for Ball Valves & Butterfly Valves

Accessory	Description	Accessory Part Number	Price Each Prod Code: 298
Pressure Gauge Set	Stainless steel case, 3-gauge set for use with positioners: 1 - input pressure gauge 0-30 psi, 2 - output gauges 0-160 psi	A-G1	701.33
	Plastic case, 3-gauge set for use with positioners: 1 - input pressure gauge 0-30 psi, 2 - output gauges 0-160 psi	A-G2	264.95
Air Mufflers	Standard Sintered Bronze, 40 Micron, 18" NPT	A-M18	15.67
	Standard Sintered Bronze, 40 Micron, 1/4" NPT	A-M14	12.87
	Speed Control Muffler (Adjustable Air Flow) 1/8" NPT	A-M2V18	28.73
	Speed Control Muffler (Adjustable Air Flow) 1/4" NPT	A-M2V14	24.34
ID Tag	Type 316 Stainless Steel ID Tag 1/2" x 3" (3-lines, 12-characters & spaces)	TAG3-015	31.61
Stem Extensions	Ball Valve Stem Extension [2]	A-BVSE-xxx-000	Call for pricing
	True Union 2000 Ball Valve Stem Extension [2]	A-BVSE2-xxx-000	
	Butterfly Valve Stem Extension [2]	A-BFSE-xxx-000	

NOTES: 1 -Pneumatic and Electro-Pneumatic positioners include brass gauges: 1 input gauge @ 0-30 psi and 2 output gauges @ 0-160 psi. Stainless steel gauges may be ordered separately.

2 -Stem Extension Part Numbers: Enter size code for "xxx" in part number. Replace "000" with desired length code in part number; length is from top of valve to bottom of actuator.

Electric Actuator Accessories for Diaphragm Valves

Contact Spears® for any desired accessories or functions not specified in the Accessory Selection Tables

The following accessories are for use on Spears® electric actuated Diaphragm Valves. Accessories are individually ordered separately and factory assembled with the selected Premium Actuated Valve Package. See important ordering instructions, *Ordering Premium Valve Packages with Accessory Add-ons*.

Accessory	Description	Accessory Part Number	Price Each Prod Code: 298
Heater	Heater/Thermostat - On 41°F, Off 60.8°F	A-H1	205.61
	Heater/Thermostat - On 62.6°F, Off 80.6°F	A-H2	185.03
Auxilliary Limit Switches	2-SPDT Limit Switch Set (1/2" shaft cam)	A-LS1	184.44
Position Indicators	LED Indicator Lights	A-P2	235.62
Modulating Positioner Boards	115 VAC 4-20 mA	A-PB1	1884.91
	115 VAC 0-5 VDC	A-PB2	1884.91
	115 VAC 0-10 VDC	A-PB3	1884.91
	230 VAC 4-20 mA	A-PB4	1884.91
	230 VAC 0-5 VDC	A-PB5	1884.91
	230 VAC 0-10 VDC	A-PB6	1884.91
	24 VAC 4-20 mA	A-PB7	1884.91
	24 VAC 0-5 VDC	A-PB8	1884.91
	24 VAC 0-10 VDC	A-PB9	1884.91
	24 VDC 4-20 mA	A-PB10	1884.91
	24 VDC 0-5 VDC	A-PB11	1884.91
	24 VDC 0-10 VDC	A-PB12	1884.91
Transmitter	4-20mA	A-T1	1383.00
Torque Sensors	Adjustable Electronic Torque Sensor	A-TS1	998.80
Speed Controller	Variable Speed Controller	A-SC1	655.89
Lockout Switch	Power disconnect switch activated when manual override is in use	A-LK1	268.76
Battery Backup	115VAC 7 AMP BATTERY BACK UP	A-BB4	4972.24
ID Tag	Type 316 Stainless Steel ID Tag 1/2" x 3" (3-lines, 12-characters & spaces)	TAG3-015	31.61

Stem Extensions	Diaphragm Valve Stem Extension [1]	A-DESE-xxx-000	Call for pricing

NOTES: 1 - Stem Extension Part Numbers: Enter size code for "xxx" in part number. Replace "000" with desired length code in part number; length is from top of valve to bottom of actuator.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Pneumatic Actuator Accessories for Diaphragm Valves

The following accessories are for use on Spears® pneumatic actuated Diaphragm Valves only. See separate listing for Ball Valve and Butterfly Valve pneumatic accessories. Accessories are individually ordered separately and factory assembled with the selected Premium Actuated Valve Package. See important ordering instructions, Ordering Premium Valve Packages with Accessory Add-ons.

Accessory	Description	Accessory Part Number	Price Each Prod Code: 298
Pneumatic Positioners	3-15 psi NEMA 4x w/ Visual Indicator Top Loading (no gauge)	A-DPP1	4579.13
	3-15 psi NEMA 4x w/ Visual Indicator Top Loading w/ gauges (3)	A-DPP2	5183.53
	3-15 psi NEMA 4x w/ Visual Indicator Bottom Loading (no gauge)	A-DPP3	4579.14
	3-15 psi NEMA 4x w/ Visual Indicator Bottom Loading w/ gauges (3)	A-DPP4	5183.53
Electro Pneumatic Positioners	4-20mA (3-15 psi) NEMA 4x w/Visual Indicator (up to 2")	A-DEP1	8763.88
	4-20mA (3-15 psi) NEMA 4x w/Visual Indicator w/SS Gauges (up to 2")	A-DEP2	9368.28
	4-20mA (3-15 psi) NEMA 4x w/Visual Indicator (2-1/2" & up)	A-DEP3	8763.88
	4-20mA (3-15 psi) NEMA 4x w/Visual Indicator w/SS Gauges (2-1/2" & up)	A-DEP4	9368.28
3-Way Solenoid Valves	115 VAC NEMA 4/4x	A-DSV1	377.04
	230 VAC NEMA 4/4x	A-DSV2	377.04
	24 VAC NEMA 4/4x	A-DSV3	377.04
	12 VDC NEMA 4/4x	A-DSV4	377.04
	24 VDC NEMA 4/4x	A-DSV5	377.04
	115 VAC NEMA 4/4x/7/9	A-DSV6	581.96
	230 VAC NEMA 4/4x/7/9	A-DSV7	581.96
	24 VAC NEMA 4/4x/7/9	A-DSV8	581.96
	12 VDC NEMA 4/4x/7/9	A-DSV9	581.96
	24 VDC NEMA 4/4x/7/9	A-DSV10	581.96
4-Way Solenoid Valves	115 VAC NEMA 4/4x	A-DSV11	704.81
	230 VAC NEMA 4/4x	A-DSV12	704.81
	24 VAC NEMA 4/4x	A-DSV13	704.81
	12 VDC NEMA 4/4x	A-DSV14	704.81
	24 VDC NEMA 4/4x	A-DSV15	704.81
	115 VAC NEMA 4/4x/7/9	A-DSV16	987.82
	230 VAC NEMA 4/4x/7/9	A-DSV17	987.82
	24 VAC NEMA 4/4x/7/9	A-DSV18	987.82
	12 VDC NEMA 4/4x/7/9	A-DSV19	987.82
	24 VDC NEMA 4/4x/7/9	A-DSV20	987.82
Micro Limit Switches	2-SPDT NEMA 4 w/ 180° Visual Indicator [1]	A-DLS20	1328.40
	2-SPDT NEMA 7/9 w/ 180° Visual Indicator [1]	A-DLS25	2033.33
Proximity Limit Switches	2-SPDT NEMA 4/4X	A-DLS23	1840.67
Limit Switches	2-SPDT NEMA 4 [2]	A-DLS24	1327.14
Speed Controller	Variable Speed Controller	A-DPSC1	1142.29
ID Tag	Type 316 Stainless Steel ID Tag 1/2" x 3" (3-lines, 12-characters & spaces)	TAG3-015	31.61
Stem Extensions	Diaphragm Valve Stem Extension [1]	A-DPSE-xxx-000	Call for pricing

NOTES: 1 - Micro Limit Switches used on valve sizes ½" through 2".
2 -Limit Switches used on valve sizes 2-1/2" & larger.
3 -Stem Extension Part Numbers: Enter size code for "xxx" in part number. Replace "000" with desired length code in part number; length is from top of valve to bottom of actuator.

Valve Actuation Questionnaire Checklist Ball Valves

Contact Name: _____ **Date:** _____

Business Name: _____

City: _____ **State:** _____ **Country:** _____

Phone: _____ **Fax:** _____ **E-mail:** _____

Project Name: _____

Ball Valves: **System Media Pressure (Required)** psi _____ kPa _____ Bar _____ **Valve Quantity Each** _____

Nominal Size in _____ mm _____ cm _____

Ball Valve Type :

- ☐ True Union Industrial
- ☐ True Union Standard
- ☐ Compact
- ☐ True Union Tee Style
- ☐ Other Valve Type _____
- ☐ Three Way Horizontal *(See 3-way orientation box below)*
- ☐ Three Way Vertical *(See 3-way orientation box below)*
- ☐ Tandem Three Way

Tandem 3-Way Orientation Document Required

Vertical 3- Way Orientation

- ☐ Single L Port
- ☐ Triple L Port
- ☐ Double L Port
- ☐ T Port

Horizontal 3- Way Orientation

- ☐ L Port
- ☐ T Port

Body Material :

- ☐ PVC
- ☐ CPVC
- ☐ Low-Extractable PVC

O-ring Seals :

- ☐ EPDM
- ☐ FKM
- ☐ Other

(If Other Explain) _____

End Connector :

- ☐ Socket
- ☐ Threaded
- ☐ SR Threaded
- ☐ Flange
- ☐ Spigot
- ☐ Metric
  - ☐ DIN
  - ☐ JIS
  - ☐ BSP (Thread)

Pneumatic ☐

Not all combinations may be available.

FailSafe Type - *(Position to which valve cycles upon air loss)*

- ☐ Double Acting (No FailSafe. Stays in last activated position)
- ☐ Spring Return - Close (FailSafe in closed position upon air loss)
- ☐ Spring Return - Open (FailSafe in open position upon air loss)
- ☐ Other: _____

Operating Air Pressure (psi) - *(Compressed air supply required to operate actuator)*

☐ 80-150 ☐ Other: _____

Override Type - *(Override used to cycle valve upon air loss)*

☐ Basic ☐ Declutchable ☐ Other: _____

Aux. Limit Switches- *(Additional mechanical switches to operate external lights, alarms etc. (set of 2)*

☐ SPDT- Mechanical ☐ SPDT - Proximity ☐ DPDT - Mechanical

Voltage Signal Type Specify Voltage: _____

Visual Indicator - *(Provides local visual valve position indication)*

☐ Low Profile ☐ Dome ☐ No Indicator

Positioner Type - *(Positioner accepts an input signal from PLC to control valve cycle).*

☐ **Pneumatic Positioner** *(Air supply required to operate valve)*

Signal Pressure - *(Air pressure required to position the valve)*

☐ 3-15 psi ☐ Other: _____

☐ **Electro-Pneumatic Positioner** *(Air and voltage supply required to operate)*

Signal Voltage Input ☐ 4-20mA ☐ Other: _____

☐ With Transmitter - *(Sends output signal to PLC to provide valve position)*

Transmitter Output ☐ 4-20mA ☐ Other: _____

NEMA Rating - *(Enclosure rating indicates level of ingress protection from fluids, solids and gases)*

☐ 4 ☐ 4x ☐ Other: _____

Solenoid Valve - *(Regulates actuator intake/exhaust air supply)*

☐ 3 & 4 Way ☐ Dual Coil *(Double Acting Actuators only)* ☐ Other: _____

Solenoid Valve Voltage

☐ 115 VAC ☐ 230 VAC ☐ Other: _____

NEMA Rating - *(Enclosure rating indicates level of ingress protection from fluids and solids)*

☐ 4 ☐ 4x ☐ Other: _____

☐ **Other Options:** _____

Electric ☐

Not all combinations may be available.

☐ Basic Two Position (90 Degree Travel Standard)

☐ 3 Position 90 ☐ 180 ☐

FailSafe Position (if required)

- ☐ Fail Open -FailSafe in open position upon power loss
- ☐ Fail Close-FailSafe in closed position upon power loss

Note: On "Fail Safe" Options Two Positions ONLY Override Not Recommended.

Voltage Supply Power:

☐ 115 VAC ☐ 230 VAC ☐ Other: _____

Frequency ☐ 50 Hertz ☐ 60 Hertz

Phase ☐ Single ☐ Three

Override Type - *(Override used to cycle valve upon power loss)*

☐ Basic ☐ Declutchable ☐ Other: _____

Duty Cycle *(Amount of work valve can accomplish before requiring rest)*

☐ 25% ☐ 75% ☐ Other/Min. Requirement : _____

NEMA Rating - *(Enclosure rating indicates level of ingress protection from fluids and solids)*

☐ 4 ☐ 4x ☐ Other: _____

Positioner Type - *(Positioner accepts an input signal from PLC to control valve cycle)*

☐ **Positioner with Transmitter**

Signal Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

Transmitter -*(Sends output signal to PLC to provide valve position)*

Signal Output ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

☐ **Positioner - NO Transmitter**

Signal Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

Auxiliary Limit Switches*(Additional mechanical switches to operate external lights, alarms etc.)*

☐ 2 ☐ 4 *(Set of 2 each)*

Standard Accessories -All options not available in all actuator combinations

- ☐ Torque Sensor
- ☐ Friction Brake
- ☐ Battery Backup
- ☐ LED Indicating Lights (red /green)
- ☐ Speed Control
- ☐ 2 Wire Control Relay
- ☐ Heater & Thermostat ☐ [On @ 41F] [Off @ 60.8F] ☐ [On @ 69.8F] [Off @ 89.6F] ☐ [On @ 62.6F] [Off @ 80.6F]

☐ **Other Options:** _____

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Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Valve Actuation Questionnaire Checklist Butterfly Valves

Contact Name: _____ **Date:** _____

Business Name: _____

City: _____ **State:** _____ **Country:** _____

Phone: _____ **Fax:** _____ **E-mail:** _____

Project Name: _____

Butterfly Valves: **System Media Pressure (Required)** psi _____ kPa _____ Bar _____ **Valve Quantity Each** _____

Nominal Size in _____ mm _____ cm _____

Butterfly Valve Type :

- Standard ☐
- True Lug ☐ Tandem Diverting ☐
- Pool Valve ☐ Tandem Three Way ☐
- Wafer ☐ (Tandem 3-Way Orientation Document Required)
- Other Valve Type ☐ _____

Body Material :

- PVC ☐
- CPVC ☐
- Polypropylene ☐

O-ring Seals :

- Buna- N ☐
- EPDM ☐
- FKM ☐
- Other ☐ (If Other Explain) _____

Lug Materials :

- SS316 ☐
- Zinc ☐

☐ Other Information: _____

Pneumatic ☐ Not all combinations may be available.

FailSafe Type - *(Position to which valve cycles upon air loss)*

- ☐ Double Acting (No FailSafe. Stays in last activated position)
- ☐ Spring Return - Close (FailSafe in closed position upon air loss)
- ☐ Spring Return - Open (FailSafe in open position upon air loss)
- ☐ Other: _____

Operating Air Pressure (psi) - *(Compressed air supply required to operate actuator)*

☐ 80-150 ☐ Other: _____

Override Type - *(Override used to cycle valve upon air loss)*

☐ Basic ☐ Declutchable ☐ Other: _____

Aux. Limit Switches- *(Additional mechanical switches to operate external lights, alarms etc. (set of 2)*

☐ SPDT- Mechanical ☐ SPDT - Proximity ☐ DPDT - Mechanical

Voltage Signal Type Specify Voltage: _____

Visual Indicator - *(Provides local visual valve position indication)*

☐ Low Profile ☐ Dome

Positioner Type - *(Positioner accepts an input signal from PLC to control valve cycle).*

☐ **Pneumatic Positioner** *(Air supply required to operate valve)*

Signal Pressure - *(Air pressure required to position the valve)*

☐ 3-15 psi ☐ Other: _____

☐ **Electro-Pneumatic Positioner** *(Air and voltage supply required to operate)*

Signal Voltage Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

☐ With Transmitter - *(Sends output signal to PLC to provide valve position)*

Transmitter Output ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

NEMA Rating -*(Enclosure rating indicates level of ingress protection from fluids, solids and gases)*

☐ 4 ☐ 4x ☐ Other: _____

Solenoid Valve - *(Regulates actuator intake/exhaust air supply)*

☐ 3 & 4 Way ☐ Dual Coil *(Double Acting Actuators only)* ☐ Other: _____

Solenoid Valve Voltage

☐ 115 VAC ☐ 230 VAC ☐ Other: _____

NEMA Rating - *(Enclosure rating indicates level of ingress protection from fluids and solids)*

☐ 4 ☐ 4x ☐ Other: _____

☐ **Other Options:** _____

Electric ☐ Not all combinations may be available.

☐ Basic Two Position (90 Degree Travel Standard)

FailSafe Position (if required)

- ☐ Fail Open - Open (FailSafe in open position upon power loss)
- ☐ Fail Close - Close (FailSafe in closed position upon power loss)

Note: On "Fail Safe" options two positions ONLY Override Not Recommended.

Voltage Supply Power:

☐ 115 VAC ☐ 230 VAC ☐ Other: _____

Frequency ☐ 50 Hertz ☐ 60 Hertz

Phase ☐ Single ☐ Three

Override Type - *(Override used to cycle valve upon power loss)*

☐ Basic ☐ Declutchable ☐ Other: _____

Duty Cycle *(Amount of work valve can accomplish before requiring rest)*

☐ 25% ☐ 75% ☐ Other/Min. Requirement: _____

NEMA Rating - *(Enclosure rating indicates level of ingress protection from fluids and solids)*

☐ 4 ☐ 4x ☐ Other: _____

Positioner Type - *(Positioner accepts an input signal from PLC to control valve cycle)*

☐ **Positioner with Transmitter**

Signal Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

Transmitter -*(Sends output signal to PLC to provide valve position)*

Signal Output ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

☐ **Positioner - NO Transmitter**

Signal Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

Auxiliary Limit Switches*(Additional mechanical switches to operate external lights, alarms etc.)*

☐ 2 ☐ 4 *(Set of 2 each)*

Standard Accessories -All options not available in all actuator combinations

- ☐ Torque Sensor ☐ Torque Sensor
- ☐ Battery Backup ☐ LED Indicating Lights (red /green)
- ☐ Speed Control ☐ 2 Wire Control Relay
- ☐ Heater & Thermostat ☐ [On @ 41F] [Off @ 60.8F] ☐ [On @ 69.8F] [Off @ 89.6F] ☐ [On @ 62.6F] [Off @ 80.6F]

☐ **Other Options:** _____

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Valve Actuation Questionnaire Checklist Diaphragm Valves

Contact Name: _____ **Date:** _____

Business Name: _____

City: _____ **State:** _____ **Country:** _____

Phone: _____ **Fax:** _____ **E-mail:** _____

Project Name: _____

Diaphragm Valves: System Media Pressure (Required) psi _____ kPa _____ Bar _____ **Valve Quantity Each** _____

Nominal Size in _____ mm _____ cm _____

Diaphragm Valve Type :
- EPDM ☐
- FKM ☐
- PTFE/FKM ☐
- PTFE/EPDM ☐
- Other Valve Type ☐ _____

Body Material :
- PVC ☐
- CPVC ☐
- Low-Extractable PVC ☐
- Polypropylene ☐

End Connector O-rings 1/2" - 2":
- EPDM ☐
- FKM ☐
- PTFE/FKM ☐
- PTFE/EPDM ☐
- Other ☐

(If Other Explain) _____

End Connector :
- Socket ☐
- SR Threaded ☐
- Flange ☐
- Spigot ☐

☐ Other information: _____

Not all combinations may be available.

Unitized Pneumatic ☐

Pneumatic ☐

FailSafe Type *-(Position to which valve cycles upon air loss)*
- ☐ Double Acting (No FailSafe. Stays in last activated position)
- ☐ Spring Return - Close (FailSafe in closed position upon air loss)
- ☐ Spring Return - Open (FailSafe in open position upon air loss)
- ☐ Other: _____

Operating Air Pressure (psi) - *(Compressed air supply required to operate actuator)*
☐ 80-116 ☐ Other: _____

Override Type - *(Override used to cycle valve upon air loss. Not available in sizes 1/2" -2")*
☐ Basic ☐ Declutchable ☐ Other: _____

Aux. Limit Switches- *(Additional mechanical switches to operate external lights, alarms etc. (set of 2)*
☐ SPDT- Mechanical ☐ SPDT - Proximity ☐ DPDT - Mechanical

Voltage Signal Type: Specify Voltage: _____

Visual Indicator - *(Provides local visual valve position indication)*
☐ Low Profile ☐ Dome

Positioner Type - *(Positioner accepts an input signal from PLC to control valve cycle).*
☐ **Pneumatic Positioner** *(Air supply required to operate valve)*
Signal Pressure - *(Air pressure required to position the valve)*
☐ 3-15 psi ☐ Other: _____
☐ **Electro-Pneumatic Positioner** *(Air and voltage supply required to operate)*
Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____
☐ With Transmitter - *(Sends output signal to PLC to provide valve position)*
Transmitter Output ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

NEMA Rating -*(Enclosure rating indicates level of housing ingress protection from fluids and solids)*
☐ 4 ☐ 4x ☐ Other: _____

Solenoid Valve - *(Regulates actuator intake/exhaust air supply)*
☐ 3 way (Air-to-Spring) ☐ 4 way (*Double Acting Actuators only*) ☐ Other: _____

Solenoid Valve Voltage
☐ 115 VAC ☐ 230 VAC ☐ Other: _____

NEMA Rating -*(Enclosure rating indicates level of ingress protection from fluids, solids and gases)*
☐ 4 ☐ 4x ☐ Other: _____

☐ **Other Options:**
_____
_____

Not all combinations may be available.

Electric Multi Turn ☐

Voltage Supply Power:
☐ 115 VAC ☐ 230 VAC ☐ Other: _____

Frequency ☐ 50 Hertz ☐ 60 Hertz

Phase ☐ Single ☐ Three

Override Type - *(Override used to cycle valve upon power loss)*
☐ Basic ☐ Declutchable ☐ Other: _____

Duty Cycle *(Amount of work valve can accomplish before requiring rest)*
☐ 25% ☐ 75% ☐ Other: _____

NEMA Rating - *(Enclosure rating indicates level of ingress protection from fluids and solids)*
☐ 4 ☐ 4x ☐ Other: _____

Positioner Type - *(Positioner accepts an input signal from PLC to control valve cycle)*
☐ **Positioner with Transmitter**
Signal Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____
Transmitter -*(Sends output signal to PLC to provide valve position)*
Signal Output ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____
☐ **Positioner - NO Transmitter**
Signal Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

Auxiliary Limit Switches *(Additional mechanical switches to operate external lights, alarms etc.)*
☐ 2 ☐ 4 *(Set of 2 each)*

Standard Accessories -All options not available in all actuator combinations
- ☐ Torque Sensor
- ☐ Battery Backup
- ☐ LED Indicating Lights (red /green)
- ☐ Speed Control
- ☐ 2 Wire Control Relay
- ☐ Heater & Thermostat ☐ [On @ 41F] [Off @ 60.8F] ☐ [On @ 69.8F] [Off @ 89.6F] ☐ [On @ 62.6F] [Off @ 80.6F]

☐ **Other Options:**
_____
_____

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Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Valve Actuation Questionnaire Checklist Diaphragm Valves

Contact Name: _____ **Date:** _____

Business Name: _____

City: _____ **State:** _____ **Country:** _____

Phone: _____ **Fax:** _____ **E-mail:** _____

Project Name: _____

Diaphragm Valves: System Media Pressure (Required) psi _____ kPa _____ Bar _____

Nominal Size in _____ mm _____ cm _____

Valve Quantity Each _____

Diaphragm Valve Type :
- EPDM ☐
- FKM ☐
- PTFE/FKM ☐
- PTFE/EPDM ☐
- Other Valve Type ☐ _____

Body Material :
- PVC ☐
- CPVC ☐
- Low-Extractable PVC ☐
- Polypropylene ☐

End Connector O-rings 1/2" - 2":
- EPDM ☐
- FKM ☐
- PTFE/FKM ☐
- PTFE/EPDM ☐
- Other ☐

(If Other Explain) _____

End Connector :
- Socket ☐
- SR Threaded ☐
- Flange ☐
- Spigot ☐

☐ Other information: _____

Not all combinations may be available.

Unitized Pneumatic ☐

Pneumatic ☐

FailSafe Type *-(Position to which valve cycles upon air loss)*
- ☐ Double Acting (No FailSafe. Stays in last activated position)
- ☐ Spring Return - Close (FailSafe in closed position upon air loss)
- ☐ Spring Return - Open (FailSafe in open position upon air loss)
- ☐ Other: _____

Operating Air Pressure (psi) - *(Compressed air supply required to operate actuator)*

☐ 80-116 ☐ Other: _____

Override Type - *(Override used to cycle valve upon air loss. Not available in sizes 1/2" -2")*

☐ Basic ☐ Declutchable ☐ Other: _____

Aux. Limit Switches- *(Additional mechanical switches to operate external lights, alarms etc. (set of 2)*

☐ SPDT- Mechanical ☐ SPDT - Proximity ☐ DPDT - Mechanical

Voltage Signal Type: Specify Voltage: _____

Visual Indicator - *(Provides local visual valve position indication)*

☐ Low Profile ☐ Dome

Positioner Type - *(Positioner accepts an input signal from PLC to control valve cycle).*

☐ **Pneumatic Positioner** *(Air supply required to operate valve)*

Signal Pressure - *(Air pressure required to position the valve)*

☐ 3-15 psi ☐ Other: _____

☐ **Electro-Pneumatic Positioner** *(Air and voltage supply required to operate)*

Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

☐ With Transmitter - *(Sends output signal to PLC to provide valve position)*

Transmitter Output ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

NEMA Rating -*(Enclosure rating indicates level of housing ingress protection from fluids and solids)*

☐ 4 ☐ 4x ☐ Other: _____

Solenoid Valve - *(Regulates actuator intake/exhaust air supply)*

☐ 3 way (Air-to-Spring) ☐ 4 way (*Double Acting Actuators only*) ☐ Other: _____

Solenoid Valve Voltage

☐ 115 VAC ☐ 230 VAC ☐ Other: _____

NEMA Rating -*(Enclosure rating indicates level of ingress protection from fluids, solids and gases)*

☐ 4 ☐ 4x ☐ Other: _____

☐ **Other Options:**

_____

_____

Not all combinations may be available.

Electric Multi Turn ☐

Voltage Supply Power:

☐ 115 VAC ☐ 230 VAC ☐ Other: _____

Frequency ☐ 50 Hertz ☐ 60 Hertz

Phase ☐ Single ☐ Three

Override Type - *(Override used to cycle valve upon power loss)*

☐ Basic ☐ Declutchable ☐ Other: _____

Duty Cycle *(Amount of work valve can accomplish before requiring rest)*

☐ 25% ☐ 75% ☐ Other: _____

NEMA Rating - *(Enclosure rating indicates level of ingress protection from fluids and solids)*

☐ 4 ☐ 4x ☐ Other: _____

Positioner Type - *(Positioner accepts an input signal from PLC to control valve cycle)*

☐ **Positioner with Transmitter**

Signal Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

Transmitter -*(Sends output signal to PLC to provide valve position)*

Signal Output ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

☐ **Positioner - NO Transmitter**

Signal Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

Auxiliary Limit Switches *(Additional mechanical switches to operate external lights, alarms etc.)*

☐ 2 ☐ 4 *(Set of 2 each)*

Standard Accessories -All options not available in all actuator combinations

- ☐ Torque Sensor
- ☐ Battery Backup
- ☐ LED Indicating Lights (red /green)
- ☐ Speed Control
- ☐ 2 Wire Control Relay
- ☐ Heater & Thermostat ☐ [On @ 41F] [Off @ 60.8F] ☐ [On @ 69.8F] [Off @ 89.6F] ☐ [On @ 62.6F] [Off @ 80.6F]

☐ **Other Options:**

_____

_____

Rev. A 2010

Thermoplastic Actuated Valves & Accessories

PRODUCT GUIDE & ENGINEERING SPECIFICATIONS

Contact Spears® for any information not found.

Full Line of Valve Actuation

From basic on-off actuation to full feature, custom applications, Spears® offers a wide variety of both pneumatic and Electric actuated valve packages for Ball Valves, Butterfly Valves and Diaphragm Valves. Spears® maintains one of the broadest lines of valve options to select from in PVC, CPVC and Polypropylene materials.

Pre-Matched Valve & Actuator Packages

Spears® makes actuation easy by matching each valve type and size with the appropriate actuator for proper operating torque and cycle time to assure optimum performance.

Custom Actuation Configurations

Spears® Premium Actuation Packages can be fully customized to user specifications by addition of selected control accessories. Select from our wide variety of accessories and options or contact Spears® for virtually any special actuation need, even if not specified.

Factory Assembled - Ready for Installation

Whether standard or custom configured, actuation packages include valve, actuator mounting, coupling and factory assembled precision actuator ready for installation. Spears® uses only the finest materials in interfacing each valve and actuator to provide reliable operation and long service life.

How to Use This Section

This manual provides technical information on Spears® actuated valve packages and accessories. Actuation Packages are listed in separate sections by valve type (ball, butterfly, diaphragm) and actuation type (Electric, Pneumatic).

Each section provides full package information including package description, standard valve specifications and options, package actuator specifications and options, a brief list of available accessories, plus a Sample Engineering Specification.

Specifications for actuator Options & Accessories for custom actuation are described in additional sections according to actuator type (Electric or Pneumatic). Each section includes an overview followed by a brief description of each option and accessory.

The appendices provide additional information on general actuation terminology and definitions, and on Spears® part numbering convention for custom actuation for use at the user's discretion. Part number formulation is not required to order valve packages from Spears®, but is provided for those who wish to select the appropriate part number in preparation of a custom valve package order.

Contact Spears® for any desired accessories, options, functions or special controls not listed in this guide.

The information in this manual is believed to be accurate at the time of publication, but is subject to change without notice.

Package Overviews

Choose from economical Electro Ball Valve packages, or one of Spears® Premium Actuation packages which can be fully customized to user specifications with addition of custom feature and control accessories for Spears® True Union and Compact 2000 Ball Valves, Butterfly Valves or Diaphragm Valves. Retrofit actuation of existing Spears® valve installations is also available. Contact factory for additional information.

Actuated Valve Packages Overview

Basic Valve Illustration	Valve Type	Basic Valve Options				Actuation Package Available		
		Basic Valve Material	Size Range (inch)	Seal Material Options	End Connector Options	Premium Electric Actuation	Premium Pneumatic Actuation	Electro Series Actuation
Typical Illustration	True Union Ball Valves	PVC	1/2 - 6	EPDM FKM PTFE	Socket Threaded Flanged	X	X	X 1/2" - 2"
		CPVC	1/2 - 6	EPDM FKM PTFE	Socket Threaded Flanged	X	X	X 1/2" - 2"
Typical Illustration	Compact 2000 Ball Valves	PVC	1/2 - 6	EPDM FKM	Socket Threaded Flanged	X	X	X 1/2" - 2"
		CPVC	1/2 - 6	EPDM FKM	Socket Threaded Flanged	X	X	X 1/2" - 2"
Typical Illustration	Butterfly Valves	PVC	1-1/2 - 12	Buna-N EPDM FKM PTFE	Flanged	X	X	
		CPVC	1-1/2 - 12	Buna-N EPDM FKM PTFE	Flanged	X	X	
		PP	1-1/2 - 24[1]	EPDM FKM PTFE	Flanged	X	X	
Typical Illustration	Diaphragm Valves	PVC	1/2 - 8[2]	EPDM FKM PTFE	Socket[3] Threaded[3] Spigot[4] Flanged	X	X	
		CPVC	1/2 - 8[2]	EPDM FKM PTFE	Socket Threaded Spigot Flanged	X	X	
		PP	1/2 - 8[2]	EPDM FKM PTFE	Threaded Flanged	X	X	

Notes:
1 - Butterfly Valves sizes 30" - 60" produced to order.
2 - 2-1/2" to 8" Diaphragm Valves available in Flanged ends only.
3 - 1/2" - 2" Socket and threaded Diaphragm Valves are True Union style.
4 - Spigot Diaphragm Valves available in sizes 1/2" - 2" only.

Contact Spears® for Additional Custom Configurations to User Specifications

Electro Series Specifications

The Electro Actuated Ball Valve provides high quality, basic on-off electrical actuation at an economical price, with voltage options and special "2-wire" control available. This prepackaged combination is constructed with an all plastic NEMA 4X enclosure directly mounted to a PVC or CPVC valve body for lighter weight and a low profile design for minimal space requirements. All Electro Series Ball Valves are pressure rated to 235 psi and suitable for vacuum service. Available in IPS sizes 1/2" - 2", with socket, threaded, or flanged ends and choice of EPDM or FKM O-ring seals.

Typical Illustration

Typical Illustration

ELECTRO ACTUATED COMPACT 2000 BALL VALVE

Compact Electro Ball Valves are built around Spears® industrial grade Compact 2000 Ball Valve. This heavy bodied, sealed unit design is well suited for a multitude of general purpose, industrial, and OEM actuation needs.

ELECTRO ACTUATED TRUE UNION BALL VALVE

The Electro True Union Ball Valve utilizes Spears® industrial grade True Union Ball Valve. This fully repairable, double union style allows easy in-line removal for servicing and is the valve of choice for many industrial and chemical processing applications.

ELECTRO 50 & 100 ACTUATOR SPECIFICATIONS

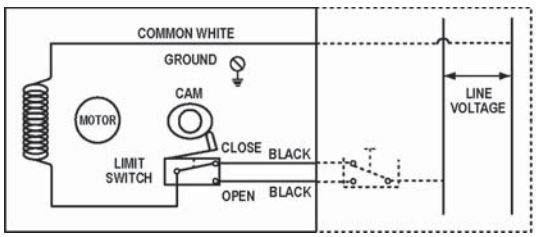
Motor:	Brushless, Non-Reversing, Shaded Pole, Thermally Protected
Torque:	ELECTRO-50 50 in./lbs. (1/2" - 1" Valves) ELECTRO-100 100 in./lbs. (1-1/4" - 2" Valves)
Opening Time:	5 seconds
Closing Time:	5 seconds
Duty Cycle:	25% standard (optional 75% available)
Limit Switch:	Cam Operated, Omni Directional, SPDT
Housing:	NEMA 4X (Weatherproof, Corrosion Proof), High Impact Polypropylene, SS 316 Fasteners 1/2" NPT Connection
Indicator:	Visual Open/Close - Standard
Voltage:	115V standard (see Voltage Options)

Optional "2-Wire" Control:
Control switch setup operates as a solenoid valve. Valve opens when control switch is open 5-seconds and closes when control switch is closed 5-seconds. Uses 4-wire connection with 2 wires to line voltage and 2 wires to SPST control switch.

Voltage Options:

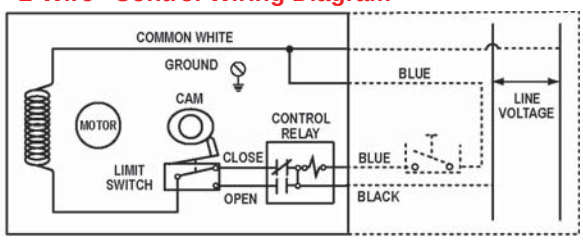
Voltage	Load AMP Electro-50	Load AMP Electro-100
12 VAC	2.40	N/A
24 VAC	2.1	7.8
115 VAC	.6	1.9
230 VAC	.5	1.5
12 VDC	.3	.2
24 VDC	.2	.2

Standard Wiring Diagram 115 VAC Wiring



ELECTRO WIRING EXTERNAL WIRING

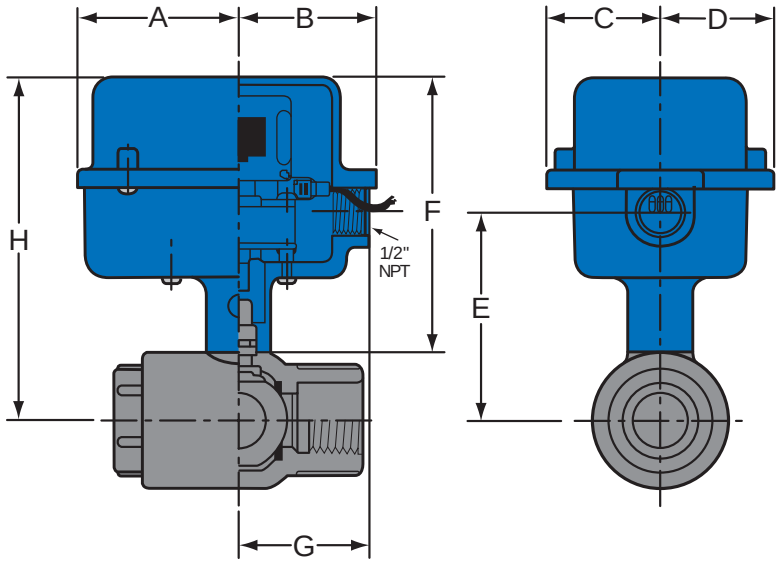
"2-Wire" Control Wiring Diagram



ELECTRO WIRING EXTERNAL WIRING

Electro Compact Ball Valve Dimensions

Compact Ball Valve



Actuated Compact Ball Valve Dimensions

Valve Size	A	B	C	D	E	F	G	H
1/2	2-7/8	2-1/2	2	2	3-3/8	5-5/8	2-5/16	6-5/8
3/4	2-7/8	2-1/2	2	2	3-9/16	5-5/8	2-5/16	6-7/8
1	2-7/8	2-1/2	2	2	3-5/8	5-5/8	2-5/16	7-1/16
1-1/4	3-5/8	2-7/16	2	2	4-3/4	5-7/8	2-7/16	7-5/8
1-1/2	3-5/8	2-7/16	2	2	5	5-7/8	2-7/16	7-7/8
2	3-5/8	2-7/16	2	2	5-1/2	5-7/8	2-7/16	8-3/8

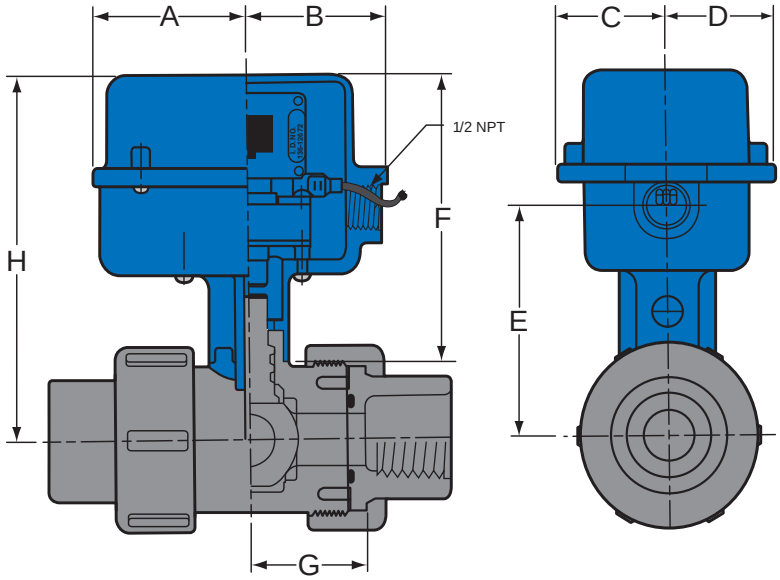
Valve: PVC or CPVC Industrial Grade Valve, Non-Repairable Sealed Unit
PTFE Seats
EPDM or FKM O-rings
Socket, Threaded or Flanged End Connection
Vacuum Service Rated
Pressure rated to 235 psi water @ 73°F (Flanged to 150 psi)

Sample Engineering Specification

All actuated ball valves shall be PVC or CPVC construction with direct mount electric actuator. Valve shall be compact sealed unit type, pressure rated to 235 psi @ 73°F (150 psi for flanged), with PTFE seats, Safe-T-Shear® Stem, EPDM or FKM O-rings, and socket, threaded or flanged end connections. Actuator shall be direct mount, with brushless non-reversing quarter turn motors and built in visual open/close position indicator. Actuator housing shall be weather proof and corrosion proof (NEMA 4X) with type 316 stainless steel fasteners, as manufactured by Spears® Manufacturing Company.

Electro True Union Ball Valve Dimensions

True Union Ball Valve



Actuated True Union Ball Valve Dimensions

Valve Size	A	B	C	D	E	F	G	H
1/2	2-7/8	2-1/2	2	2	3-3/8	5-5/8	2-5/16	6-5/8
3/4	2-7/8	2-1/2	2	2	3-9/16	5-5/8	2-5/16	6-7/8
1	2-7/8	2-1/2	2	2	3-5/8	5-5/8	2-5/16	7-1/16
1-1/4	3-5/8	2-7/16	2	2	4-13/16	5-7/8	2-7/16	7-5/8
1-1/2	3-5/8	2-7/16	2	2	5	5-7/8	2-7/16	7-7/8
2	3-5/8	2-7/16	2	2	5-1/2	5-7/8	2-7/16	8-3/8

Valve:
PVC or CPVC Industrial Grade Valve
Double Union Style with Blocked Seal Carrier
Fully Repairable & Adjustable
PTFE Seats
EPDM or FKM O-rings
Socket, Threaded or Flanged End Connection
Vacuum Service Rated
Pressure rated to 235 psi water @ 73°F
(Flanged to 150 psi)

Sample Engineering Specification

All actuated ball valves shall be PVC or CPVC construction with direct mount electric actuator. Valve shall be True Union type, pressure rated to 235 psi @ 73°F (150 psi for flanged), with buttress threaded union nuts, PTFE seats, Safe-T-Shear® Stem, EPDM or FKM O-rings, and socket, threaded or flanged end connections. Actuator shall be direct mount, with brushless non-reversing quarter turn motors and built in visual open/close position indicator. Actuator housing shall be weather proof and corrosion proof (NEMA 4X) with type 316 stainless steel fasteners, as manufactured by Spears® Manufacturing Company.

Premium Actuated Valve Packages

Typical Illustration

Electric True Union Ball Valve

Typical Illustration

Pneumatic True Union Ball Valve

Typical Illustration

Electric Actuated Butterfly Valve

Typical Illustration

Pneumatic Actuated Butterfly Valve

Typical Illustration

Electric Actuated Diaphragm Valve

Typical Illustration

Typical Illustration

Pneumatic Actuated Diaphragm Valve

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Electric Actuated True Union Ball Valves

Spears® True Union 2000 Ball Valve Premium Electric Actuation Package

The compact design of True Union 2000 Ball Valves provides maximum versatility with minimum space requirements. Fully serviceable valve cartridge also mates with Spears® Union 2000 Schedule 80 pipe unions. Both valves and unions utilize Buttress Thread union nuts for superior strength. All ball valves feature Spears® self adjusting Floating Seat design for extended service, and Spears® Safe-T-Shear® Stem with double O-ring stem seals for assurance of fluid containment in case of inadvertent valve damage. Available in chemical and corrosion resistant PVC or CPVC with socket, flanged or Spears® Patented Special Reinforced (SR) threaded.

Actuated package includes polypropylene valve mounting bracket for accurate valve/actuator alignment and support in any position. Premium electric actuator utilizes a reversing type motor with UL approved, built in thermal overload protection. Gear train is permanently lubricated. All hardware is stainless steel. Standard 115 VAC, 60 HZ, with voltage options available.

Declutchable Style Shown

Typical Illustration

True Union 2000 Ball Valve Specifications

Style	Double union • 1/4 turn shut off • Double O-ring stem seals • Safe-T-Shear® Stem • Blocked seal carrier
Material	PVC or CPVC
Size Range	1/2" - 6" & 8" Venturied*
Pressure Rating	1/2" - 4" = 235 psi @ 73°F 6" - 8" & all flanged valves = 150 psi @ 73°F
Vacuum Service	To 26 in-Hg
Seats	PTFE
O-rings	EPDM or FKM
End Connector	Socket, SR Threaded, or Flanged
Certifications	EPDM Valves NSF® Certified for potable water use.

*8" Venturied is 6" valve fitted with 8 x 6 adapters

Sample Engineering Specification

All ball valves shall be electrically actuated True Union 2000 type constructed from PVC Type I Cell Classification 12454 or CPVC Type IV Cell Classification 23447. All O-rings shall be EPDM or FKM. All valves shall have Safe-T-Shear® stem and double O-ring stem seals. All valve union nuts shall have Buttress threads. All seal carriers shall be Safe-T-Blocked®. All valve components shall be replaceable. All EPDM valves shall be certified by NSF international for use in potable water service. All 1/2" through 4" valves shall be pressure rated at 235 psi and all 6" through 8" & all flanged valves shall be pressure rated at 150 psi for water at 73°F. Electric Actuators shall be factory installed, 115 VAC with thermally protected, reversing motor. All mounting fasteners shall be stainless steel. Actuator shall be equipped with [selected options list], as manufactured by Spears® Manufacturing Company.

Standard Actuator Specifications

- Reversing Motor
- Permanent Lubrication
- Thermal Overload Protection
- 2-Position Operation with 2-SPDT Limit Switches
- Additional set dry contacts SPDT limit Switches
- NEMA 4 Enclosure, Powder Coated
- Basic Manual Override 1/2" through 3" (Declutchable Available)
- Declutchable Manual Override 4" through 6"
- 115 VAC 60 Hz standard, optional voltages available
- Illuminated Position Indicator
- Heater

Custom Electric Actuation Options & Accessories

- Modulating (variable positioning)
- Thermostat
- Additional Limit Switch sets
- Feedback Potentiometer
- Transmitter
- LED Indicator lights
- Torque Sensor
- Declutchable Manual Override
- Duty Cycle Upgrades (75% & 100%)
- NEMA 4x, 7, & 9 Enclosures
- Spring Return Operation (Fail Safe)
- Voltage Options: 24 VAC, 230 VAC, 12 VDC, 24 VDC (additional options available by request)
- Custom ID Tags

Spears® True Union 2000 Ball Valve Premium Pneumatic Actuation Package

The compact design of True Union 2000 Ball Valves provides maximum versatility with minimum space requirements. Fully serviceable valve cartridge also mates with Spears® Union 2000 Schedule 80 pipe unions. Both valves and unions utilize Buttress Thread union nuts for superior strength. All ball valves feature Spears® self adjusting Floating Seat design for extended service, and Spears® Safe-T-Shear® Stem with double O-ring stem seals for assurance of fluid containment in case of inadvertent valve damage. Available in chemical and corrosion resistant PVC or CPVC with socket, flanged or Spears® Patented Special Reinforced (SR) threaded.

Actuated package includes polypropylene valve mounting bracket for accurate valve/actuator alignment and support in any position. Premium pneumatic actuator is an Air-to-Air (Double Acting; optional Spring Return) featuring twin piston rack and pinion operation with adjustable stops, and permanent lubrication. Manual override is standard. Housing is hard anodized aluminum with epoxy coated aluminum end caps.

Typical Illustration

True Union 2000 Ball Valve Specifications

Style	Double union • 1/4 turn shut off • Blocked seal carrier • Double O-ring stem seals • Safe-T-Shear® Stem
Material	PVC or CPVC
Size Range	1/2" - 6" & 8" Venturied*
Pressure Rating	1/2" - 4" = 235 psi @ 73°F 6" - 8" & all flanged valves = 150 psi @ 73°F
Vacuum Service	To 26 in-Hg
Seats	PTFE
O-rings	EPDM or FKM
End Connector	Socket, SR Threaded, or Flanged
Certifications	EPDM Valves NSF® Certified for potable water use.

*8" Venturied is 6" valve fitted with 8 x 6 adapters

Standard 2-Position Actuator Specifications

Type	Dual piston • rack & pinion • adjustable stop
Standard Operation	Air-to-Air (double acting)
Supply Pressure	80 psi
Air Connection	1/4" - 1/8"

Custom Pneumatic Actuation Options & Accessories

- Spring Return Operation (Fail Safe)
- 60 psi or 40 psi Operating Pressure
- Declutchable Manual Override
- Pneumatic & Electro Pneumatic Positioners
- 3 & 4 Way Solenoid Valve
  12VDC, 24VDC, 24VAC, 115VAC, 230VAC
  NEMA 4/4x & 7/9 rating
- Dual Power Solenoids
- Output Signal Limit Switches
- Standard Limit Switches
- Dome Position Indicator
- Stainless Steel Gauge Sets
- Customized ID Tags

Sample Engineering Specification

All ball valves shall be pneumatically actuated True Union 2000 type constructed from PVC Type I Cell Classification 12454 or CPVC Type IV Cell Classification 23447. All O-rings shall be EPDM or FKM. All valves shall have Safe-T-Shear® stem and double O-ring stem seals. All valve union nuts shall have Buttress threads. All seal carriers shall be Safe-T-Blocked®. All valve components shall be replaceable. All EPDM valves shall be Certified by NSF International for use in potable water service. All 1/2" through 4" valves shall be pressure rated at 235 psi and all 6" through 8" and all flanged valves shall be pressure rated at 150 psi for water at 73°F. Pneumatic Actuators shall be factory installed, dual piston, rack & pinion design with adjustable stops. Operation shall be Air-to-Air (double acting) for 80 psi supply pressure. All mounting fasteners shall be stainless steel. Actuator shall be equipped with [selected options list], as manufactured by Spears® Manufacturing Company.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Electric Actuated Butterfly Valves

Spears® Butterfly Valve Premium Electric Actuation Package

Spears® innovative patented seat design departs from traditional liner-seat type valves to eliminate seat creep, reduce operating torque and provide positive seal off. Ideally suited for flow control or throttling, this high performance valve offers a full variety of options for greater application versatility. Fully isolated (Dry Stem), solid type 316 stainless steel with optional PTFE coated stems available for extra protection assurance. PVC and CPVC valves are available in Standard or True Lug style for sizes 1-1/2" through 14". Polypropylene valves are available in Standard valve style for sizes 1-1/2" through 24", plus sizes 30" through 60" produced to order. Premium electric actuator utilizes a reversing type motor with UL approved, built in thermal overload protection. Gear train is permanently lubricated 1/2" NPT conduit outlet. Standard 115 VAC connection.

Declutchable Style Shown

Typical Illustration

Butterfly Valve Specifications

Style	Flanged
Material	PVC, CPVC, UV Stabilized PP
Size Range	PVC/CPVC = 1-1/2" - 12" PP = 1-1/2" - 24" (custom 30" - 60")
Pressure Rating	1-1/2" - 12" =150 psi @ 73°F 14" = 100 psi @ 73°F 16" = 85 psi @ 73°F 18" = 70 psi @ 73°F 20" - 24" = 50 psi @ 73°F
Seats & Seals	Buna-N, EPDM or FKM on PVC/CPVC valves; EPDM or FKM on Polypropylene valves
Bolt Pattern	ANSI Class 125/150

Special Valve Options & Accessories

- PVC & CPVC True-Lug valves w/ factory installed lugs
- PTFE coated stainless steel stem
- Titanium & Hastaloy Stems
- PTFE encased valve seat
- Field installable Lug Insert sets for PVC/ CPVC valves through 12"
- Stem Extensions
- Seat & Seal Replacement Kits
- 30"- 60" Polypropylene valves (contact Spears® for details)

Standard 2-Position Actuator Specifications

- Reversing Motor
- Permanent Lubrication
- Thermal Overload Protection
- 2-Position Operation with 2-SPDT Limit Switches
- Additional set dry contacts SPDT limit Switches
- NEMA 4 Enclosure, Powder Coated
- Basic Manual Override 1-1/2 through 4" (Declutchable Available)
- Declutchable Override 6" through 12"
- 115 VAC 60 Hz standard, optional voltages available
- Illuminated Position Indicator
- Heater

Note: Contact Spears® for information on valve sizes 14" and larger.

Electric Actuation Options & Accessories

- Modulating (variable positioning)
- Thermostat
- Additional limit switch sets
- Feedback Potentiometer
- Transmitter
- LED Indicator lights
- Torque sensor
- Declutchable Manual Override
- Duty Cycle Upgrades (75% & 100%)
- NEMA 4x, 7, & 9 Enclosures
- Voltage Options: 24 VAC, 230 VAC, 12 VDC, 24 VDC (additional VOLTAGE options available by request)
- Custom ID Tag

Sample Engineering Specification

All electrically actuated Butterfly valves shall be constructed from PVC Type I Cell Classification 12454 or CPVC Type IV Cell Classification 23447 or UV stabilized Polypropylene. All valve seats and O-rings shall be Buna-N, EPDM or FKM. Seat shall be a non-liner type interlocked to valve body. Bolt hole pattern shall conform to ANSI/ASME B16.5 CL 125/150. Disc shall be offset design with Type 316 stainless steel stem. Valves shall be pressure rated at [select from specification] for water at 73°F. Electric Actuators shall be factory installed, 115 VAC with thermally protected, reversing motor. Actuator shall be equipped with [selected options list] as manufactured by Spears® Manufacturing Company.

Pneumatic Actuated Butterfly Valves

Spears® Butterfly Valve Premium Pneumatic Actuation Package

Spears® innovative patented seat design departs from traditional liner-seat type valves to eliminate seat creep, reduce operating torque and provide positive seal off. Ideally suited for flow control or throttling, this high performance valve offers a full variety of options for greater application versatility. Fully isolated (Dry Stem), solid type 316 stainless steel stems with optional PTFE coated stems available for extra assurance. PVC and CPVC valves are available in Standard or True Lug style for sizes 1-1/2" through 14". Polypropylene valves are available in Standard valve style for sizes 1-1/2" through 24", plus sizes 30" through 60" produced to order. Premium pneumatic actuator is an Air-to-Air (Double Acting; optional Spring Return) featuring twin piston rack and pinion operation with adjustable stops, and permanent lubrication. Manual override is standard. Housing is hard anodized aluminum with epoxy coated aluminum end caps.

Typical Illustration

Butterfly Valve Specifications

Style	Flanged
Material	PVC, CPVC, PP
Size Range	PVC/CPVC = 1-1/2" - 12" PP = 1-1/2"- 24" (custom 30" - 60")
Pressure Rating	1-1/2" - 12" =150 psi @ 73°F 14" = 100 psi @ 73°F 16" = 85 psi @ 73°F 18" = 70 psi @ 73°F 20" - 24" = 50 psi @ 73°F
Seats & Seals	Buna-N, EPDM or FKM on PVC/CPVC valves; EPDM or FKM on Polypropylene valves
Bolt Pattern	ANSI Class 125/150

Special Valve Options & Accessories

- "True-Lug" style factory installed lugs (PVC & CPVC valves only)
- PTFE coated stainless steel stem
- Titanium & Hastaloy Stems
- PTFE encased valve seat
- Field installable Lug Insert sets for PVC/CPVC valves through 12"
- Stem Extensions
- Seat & Seal Replacement Kits
- 30" - 60" Polypropylene valves (contact Spears® for details)

Standard 2-Position Actuator Specifications

Type	Dual piston • rack & pinion • adjustable stop
Standard Operation	Air-to-Air (double acting)
Supply Pressure	80 psi
Air Connection	1/4" - 1/8" Depends on Actuator

Note: Contact Spears® for information on valve sizes 14" and larger.

Custom Pneumatic Actuation Options & Accessories

- Spring Return Operation (Fail Safe)
- 60 psi or 40 psi Operating Pressure
- Declutchable Manual Override
- Pneumatic & Electro Pneumatic Positioners
- 3 & 4 Way Solenoid Valves
  12VDC, 24 VDC, 24VAC, 115VAC, 230VAC
  NEMA 4/4x & 4.4x.7/9 rating
- Dual Power Solenoids
- Output Signal Limit Switches
- Standard Limit Switches
- Dome Position Indicator
- Stainless Steel Gauge Sets
- Customized ID Tags

Sample Engineering Specification

All pneumatically actuated Butterfly valves shall be constructed from PVC Type I Cell Classification 12454 or CPVC Type IV Cell Classification 23447 or UV stabilized Polypropylene. All valve seats and O-rings shall be Buna-N, EPDM or FKM. Seat shall be a nonliner type interlocked to valve body. Bolt hole pattern shall conform to ANSI/ASME B16.5 CL 125/150. Disc shall be offset design with Type 316 stainless steel stem and hardware. Valves shall be pressure rated at [select from specifications] for water at 73°F. Pneumatic Actuators shall be factory installed, dual piston, rack & pinion design with adjustable stops. Operation shall be Air-to-Air (double acting) for 80 psi supply pressure. Actuator shall be equipped with [selected options list], as manufactured by Spears® Manufacturing Company.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Electric Actuated Diaphragm Valves

Spears® Diaphragm Valve Premium Electric Actuation Package

This full-featured industrial grade valve is engineered to provide accurate throttling and shut off for chemical processing, industrial, and water treatment applications. Weir type design eliminates entrapped fluids in valve. Excellent for handling of liquids with suspended solids, viscous materials and slurries. Premium electric actuator utilizes a multi-turn reversing motor with UL approved, built in thermal overload protection and permanently lubricated gear train. 1/2" NPT conduit outlet. Standard 115 VAC, 60 Hz.

Typical Illustration

Diaphragm Valve Specifications

Style	Diaphragm • Weir type • fully repairable
Material	PVC, CPVC, UV Stabilized PP
Size Range	1/2" - 8"
Pressure Rating	PVC & CPVC 1/2" - 2" = 235 psi @ 73°F 1/2" - 4" Flanged = 150 psi @ 73°F 6" = 100 psi @ 73°F 8" = 75 psi @ 73°F PP: 1/2"- 4" = 150 psi @ 73°F 6" = 100 psi @ 73°F 8" = 75 psi @ 73°F With PTFE Diaphragm: 1/2" - 4" = 150 psi @ 73°F
Diaphragm	EPDM, FKM, or elastomer backed PTFE
End Connector	PVC & CPVC = True Union socket/threaded, or Spigot Body (1/2" - 2") Flanged Body (1/2" - 8") PP: True Union threaded (1/2" - 2"), Flanged Body (sizes 2-1/2" - 8")

Standard 2-Position Actuator Specifications

Motor Multi-turn reversing Thermal Overload Protection	
Voltage	115 VAC, 60 Hz
Lubrication	Permanent

Special Valve Options & Accessories

- Diaphragm & O-ring Replacement Kits
- Hypalon® (CSM) Diaphragms
- EPDM backed PTFE Diaphragms
- FKM backed PTFE Diaphragms

Custom Electric Actuation Options & Accessories

- Declutchable Manual Override
- Auxiliary Limit Switches
- NEMA 7, 9 & NEMA 4X Enclosures
- Position Indicator Lights (red/green)
- Voltage Options: 12 VDC, 24 VDC, 24 VAC, 230 VAC
  (see Accessories & Options section for limitations)
- Custom ID Tags

Sample Engineering Specification

All electrically actuated diaphragm valves shall be True Union Socket/Thread or Flanged or Spigot type constructed from PVC Type I Cell Classification 12454 or CPVC Type IV Cell Classification 23447 or UV Stabilized PP. All valve diaphragms shall be EPDM or FKM or Hypalon® or elastomer backed PTFE. All True Union valve union nuts shall have Buttress threads. All valve components shall be replaceable. All 1/2" through 2" valves shall be pressure rated to 235 psi, all 2-1/2" through 4" valves, 1/2" - 4" flanged valves and 1/2" - 4" PTFE diaphragm valves to 150 psi, all 6" valves to 100 psi, and all 8" valves to 75 psi for water at 73°F. Electric Actuators shall be factory installed, 115 VAC with thermally protected, reversing motor. Actuator shall be equipped with [selected options list] as manufactured by Spears® Manufacturing Company.

Unitized Actuated Diaphragm Valves - Pneumatic with Plastic Housing

Spears® Unitized Pneumatic Actuated Diaphragm Valve Package

Industrial grade Weir-type design, excellent for throttling and use with viscous fluids or slurries.

Compact, Light Weight Design
True Union Socket/Thread, SR Thread, or Spigot End Connections - sizes 1/2"-2" Pressure Rated to 235 psi @ 73°F (23°C)
Flanged Ends (& PTFE diaphragms) - sizes 1/2" - 2" Pressure Rated to 150 psi @ 73°F (23°C)
Corrosion Resistant Plastic Housing
Stainless Steel Hardware
90 psi Operating Pressure
Linear Action Operation with Preset Stops
Air-Air, Air-Spring Closed, or Optional Air-Spring Open

NOTE: "Socket" valves include standard plastic thread end connectors.

Typical Illustration

Diaphragm Valve Specifications

Style	Diaphragm • Weir type • fully repairable
Material	PVC, CPVC, PP
Size Range	1/2" - 2"
Pressure Rating	PVC & CPVC 1/2" - 2" = 235 psi @ 73°F Flanged and PTFE Diaphragm 1/2"- 2" = 150 psi @ 73°F PP: 1/2"- 2" = 150 psi @ 73°F
Diaphragm	EPDM, FKM, or elastomer backed PTFE
End Connector	PVC & CPVC = True Union socket/threaded/SR threaded, or Spigot Body (1/2" - 2") Flanged Body (1/2" - 2") PP: True Union SR threaded (1/2" - 2")

Standard 2-Position Actuator Specifications

Valve Sizes 1/2" -2":

Type	Linear action
Standard Operation	Air-to-Air (double acting), Air-to-Spring Closed or Air-to-Spring Open
Supply Pressure	90 psi
Air Connection	1/8"
Body	Polypropylene
Visual Position Indicator	

Special Valve Options & Accessories

- Diaphragm & O-ring Replacement Kits
- Hypalon® (CSM) Diaphragms
- EPDM backed PTFE Diaphragms
- FKM backed PTFE Diaphragms

Custom Pneumatic Actuation Options & Accessories

- Pneumatic & Electro Pneumatic Positioners
- 3 & 4 Way Solenoid Valves
- Customized ID Tags

Sample Engineering Specification

All pneumatically actuated diaphragm valves shall be True Union Socket/Thread or Flanged or Spigot type constructed from PVC Type I Cell Classification 12454 or CPVC Type IV Cell Classification 23447 or UV Stabilized PP. All valve diaphragms shall be EPDM, FKM or Hypalon® or elastomer backed PTFE. All True Union valve union nuts shall have Buttress threads. All valve components shall be replaceable. All 1/2" through 2" valves shall be pressure rated to 235 psi, 1/2" - 2" flanged valves and 1/2" - 2" PTFE diaphragm valves to 150 psi. Pneumatic Actuators shall be factory installed, linear type with preset stops. Operation shall be Air-to-Air (double acting), Air-to-Spring Closed or Air-to-Spring Open for 90 psi supply pressure range as selected. Actuator shall be equipped with [selected options list], as manufactured by Spears® Manufacturing Company.

Pneumatic Actuated Diaphragm Valves

Spears® Diaphragm Valve Premium Pneumatic Actuation Package

This full-featured industrial grade valve is engineered to provide accurate throttling and shut off for chemical processing, industrial, and water treatment applications. Weir type design eliminates entrapped fluids in valve. Excellent for handling of liquids with suspended solids, viscous materials and slurries. Premium pneumatic actuators are Air-to-Air (double acting) or Air-to-Spring Closed (optional spring open) Actuator for 1/2" - 2" valves features a packless/glandless linear piston design and one-piece actuator/bonnet constructed from high integrity PES (Polyethersulphone), chemically resistant to virtually all acids, caustics, and solvents. Actuator for 2-1/2" - 4" valves features a linear diaphragm design and chemical resistant Polyester coated housing.

Typical Illustration

Diaphragm Valve Specifications

Style	Diaphragm • Weir type • fully repairable
Material	PVC, CPVC, PP
Size Range	1/2" - 6"
Pressure Rating	PVC & CPVC 1/2" - 2" = 235 psi @ 73°F 1/2" - 4" Flanged =150 psi @ 73°F 6" = 100 psi @ 73°F 8" = 75 psi @ 73°F PP: 1/2" - 4" = 150 psi @ 73°F 6" = 100 psi @ 73°F 8" = 75 psi @ 73°F With PTFE Diaphragm 1/2"- 4" = 150 psi @ 73°F
Diaphragm	EPDM, FKM, or elastomer backed PTFE
End Connector	PVC & CPVC = True Union socket/threaded, or Spigot Body (1/2" - 2") Flanged Body (1/2" - 6") PP: True Union threaded (1/2" - 2"), Flanged Body (2-1/2" - 6")

Standard 2-Position Actuator Specifications

Valve Sizes 1/2" -2":	
Type	Linear action
Standard Operation	Air-to-Air (double acting) or Air-to-Spring Closed (optional spring open)
Supply Pressure	80 psi
Air Connection	1/8"
Body	PES (Polyethersulphone)
Valve Sizes 2-1/2" - 4":	
Type	Linear action
Standard Operation	Air-to-Spring and Air to Air
Standard Operating Pressure	80 psi
Air Connection	1/4" (3" & 4" valves)
Body	Polyester coated

Special Valve Options & Accessories

- Diaphragm & O-ring Replacement Kits
- Hypalon® (CSM) Diaphragms
- EPDM backed PTFE Diaphragms
- FKM backed PTFE Diaphragms

Custom Pneumatic Actuation Options & Accessories

- Spring Return Operation (Fail Safe)
- Visual Position Indicator
- Pneumatic & Electro Pneumatic Positioners
- 3 & 4 Way Solenoid Valves
- Micro Limit Switches
- Custom ID Tags

Sample Engineering Specification

All pneumatically actuated diaphragm valves shall be True Union Socket/Thread or Flanged or Spigot type constructed from PVC Type I Cell Classification 12454 or CPVC Type IV Cell Classification 23447 or UV Stabilized PP. All valve diaphragms shall be EPDM, FKM or Hypalon® or elastomer backed PTFE. All True Union valve union nuts shall have Buttress threads. All valve components shall be replaceable. All 1/2" through 2" valves shall be pressure rated to 235 psi, all 2-1/2" through 4" valves, 1/2" - 4" flanged valves and 1/2" - 4" PTFE diaphragm valves to 150 psi, all 6" valves to 100 psi. Pneumatic Actuators shall be factory installed, linear type with preset stops. Operation shall be Air-to-Air (double acting) or Air-to-Spring Closed (optional spring open) for 80 psi supply pressure range. Actuator shall be equipped with [selected options list], as manufactured by Spears® Manufacturing Company.

Electric Options & Accessories Overview

The basic options and accessories listed in this section represent many of the most commonly used for electric actuation, factory configured to order on the actuation package. Contact Spears® for any desired accessories, options, functions, or special controls not listed.

Overview of Basic Options & Accessories

Options & Accessories	Electro Series Ball Valves	Premium Electric TU Ball Valves	Premium Electric Butterfly Valves	Premium Electric Diaphragm Valves
24 VAC	✓	✓	✓	✓
230 VAC	✓	✓	✓	✓
230 VAC 3-phase, 60Hz	--	✓	✓	✓
230 VAC 3-phase, 50 Hz	--	✓	✓	✓
12 VDC	✓	✓	✓	✓
24 VDC	✓	✓	✓	✓
NEMA 4X, 7, 9 Rating	4X Standard	✓	✓	✓
Declutchable Manual Override	--	✓	✓	✓
Duty Cycle Upgrade	✓	✓	✓	✓
Spring Return (Fail Safe)	--	✓	✓	--
Positioner Board (modulating)	--	✓	✓	✓
Transmitter	--	✓	✓	✓
“2-Wire” Control Relay	✓	✓	✓	--
Position Indicator (Visual)	✓	✓	✓	--
LED Indicator Lights	--	✓	✓	✓
Heater	--	Standard	Standard	✓
Thermostat	--	✓	✓	✓
Limit Switch Sets	--	✓	✓	✓
Torque Sensor	--	✓	✓	✓
Speed Controller	--	✓	✓	✓
ID Tag - SS	✓	✓	✓	✓

Contact Spears® for any desired accessories, options, functions, or special controls not listed in this guide.

Standard (2-position) Actuator Voltage Options

Voltage options are listed for each type with 2-position (open/close) actuation. See Modulating Service Option for variable position actuators and applicable voltages.

Electro Series Ball Valves (All 1/2" - 2")

Voltage Options
12 VAC
24 VAC
230 VAC
12 VDC
24 VDC
115 VAC

True Union 2000 Ball Valves

Voltage Options
24 VAC
230 VAC
12 VDC
24 VDC

Diaphragm Valves

Voltage Options
24 VAC
230 VAC
12 VDC
24 VDC

Butterfly Valves

Voltage Options
24 VAC
230 VAC
12 VDC
24 VDC

Enclosure NEMA Rating Options

Standard enclosures are a minimum of NEMA 4. The following NEMA ratings are available for all True Union Ball Valves, Butterfly Valves and Diaphragm Valves (see NEMA Ratings in Terminology & Definitions for additional description detail).

Enclosure Rating	General Description
NEMA 4	Watertight & Dust Tight
NEMA 4X	Watertight & Dust Tight with corrosion resistance
NEMA 7	Explosion Proof (class I, division 1, groups A, B, C, D)
NEMA 9	Explosion Proof (class II, division 1, groups E, F, G)

Declutchable Manual Override Option

Available for all Premium Electric actuated valves.

Valve Type
True Union 2000 Ball Valve
Butterfly Valve
Diaphragm Valve

Slightly different than straight manual override, *Declutchable* Manual Override disengages the actuator gear train for manual operation of the valve. Valves with this option have a hand wheel mounted on top of the actuator for manual valve operation.

Duty Cycle Upgrade Option

Upgrades in duty cycles use heavier motors to handle heat build up from extended operation. Contact Spears® for specific Duty Cycle information.

Spring Return (Fail Safe) Option

An internal spring in the actuator is configured to either open or close upon loss of power supply. Special gear clutch uncouples motor during spring return. Operation can be specified as either fail-open when spring return open is desired or fail-close when spring return close is desired.

Pneumatic Options & Accessories Overview

The basic options and accessories listed in this section represent many of the most commonly used for Pneumatic actuation of Ball Valves and Butterfly Valves (see next section for Pneumatic Diaphragm Valves) factory configured to order on the actuation package. Contact Spears® for any desired accessories, options, functions, or special controls not listed.

Overview of Basic Options & Accessories Available

Standard Pneumatic Actuator Features	Premium Pneumatic True Union Ball Valves	Premium Pneumatic Butterfly Valves
Spring Return (Fail Safe)	✓	✓
40 or 60 psi Operating Pressure	✓	✓
Declutchable Manual Override	✓	✓
Pneumatic Positioner	✓	✓
Electro-Pneumatic Positioner	✓	✓
Transmitter	✓	✓
Dome Position Indicator	✓	✓
Mechanical Limit Switches	✓	✓
Output Signal Mechanical Limit Switches	✓	✓
Output Signal Proximity Limit Switches	✓	✓
3 & 4-Way Solenoid Valve	✓	✓
Dual Power 3 & 4-Way Solenoid Valve	✓	✓
Stainless Steel 3-Gauge Set	✓	✓
ID Tag - SS	✓	✓

Contact Spears® for any desired accessories, options, functions, or special controls not listed in this guide.

Spring Return (Fail Safe) (Air-to-Open or Air-to-Close) Option

An internal spring in the actuator is configured to either open or close upon loss of air supply. Spring return can be specified as either Air-to-Open (fail-close) when spring return close is desired or Air-to-Close (fail-open) when spring return open is desired.

Operating Pressure Option

Standard ball and butterfly valve actuators require an 80 psi supply pressure. With this option, the actuator is configured for lower supply pressures of either 40 psi or 60 psi (must specify).

3 to 15 psi Pneumatic Positioner (for Ball & Butterfly Valves)

Positioner is used to control or throttle flow by modulating the air to the actuator in response to an external 3-15 psi control signal input. Available with NEMA 4 or 4X rated enclosure mounted on top of actuator with flat top green/ black indicator or optional high visibility Dome Indicator. Includes pressure gauge set of one (1) input gauge 0-30 psi and two (2) output gauges 0-160 psi. Optional Stainless Steel gauge set available.

Electro-Pneumatic Positioner 4-20mA, 0-5 VDC, or 0-10 VDC

Positioner is used to control or throttle flow by modulating the air to the actuator in response to an external 4-20 milliamp (current), 0-5 VDC (resistive), or 0-10 VDC (resistive) control signal input which is converted to a proportional 3 - 15 psi pneumatic signal used by the positioner. Available with NEMA 4, 4X, 7 or Intrinsically Safe NEMA 7 rated enclosure mounted on top of actuator with flat top green/ black indicator or dome indicator with green/red 180°high visibility. Includes pressure gauge set of one (1) input gauge 0-30 psi and two (2) output gauges 0-160 psi. Optional Stainless Steel gauge set available.

Dome Indicator

Dome style beacon with high visibility green/red indicator for improved viewing of valve position. Indicator only. Note: Dome indicators may be included with certain selections of positioners or limit switches.

3 & 4-Way Solenoid Valves

This combination valve operates either as a 3-way or 4-way pilot valve mounted to the actuator. The 3-way valve is a normally closed poppet design to insure tight shut-off. These valves are designed for use with spring return actuators. The 4-way valve can be used as either a 4-way 2 position design or a 3-way normally closed design merely by rotating a gasket located in the sub-base prior to assembly to the actuator. The 3-way operation routes the exhaust pressure to the spring side of the actuator to prevent corrosion problems within the actuator. An optional speed control can be purchased. Air inlet connection is 1/4" NPT. Thermoplastic composite enclosure is NEMA 4, 4x (standard) or NEMA 4, 4x, 7, 9 combination with 1/2" male conduit connection. Standard 115 VAC with voltage options of 230 VAC, 24 VAC, 12 VDC, and 24 VDC.

Dual Power Solenoid Valves

This configuration of 3 & 4-way solenoid valves accepts two separate power sources, one to open and one to close the valve, for use on Air-to-Air (double acting) actuators only.

Limit Switch with Indicator

Output Signal Limit Switches

Mechanical SPDT (2) or DPDT (2)
Proximity SPDT (2) or DPDT (2)

Set of two (2) auxiliary limit switches. Switches deliver a specified output current signal of 4-20mA or resistive signals of 0-5 or 0-10 VDC. Mechanical switches are SPDT or DPDT rated at 10 amp 125/250 VAC. Proximity (non-contact) switches are SPDT or DPDT rated at 1 amp 120 VAC. These limit switches are available with or without 180° visual indicator. Switch enclosure is NEMA 4/4x or NEMA 7/9 rated.

Stainless Steel Gauge Set

Three (3) gauge set. Stainless steel gauge replacement for use on Pneumatic and Electro-Pneumatic Positioners. Includes one (1) input pressure gauge 0-30 psi, and two (2) output pressure gauges 0-160 psi.

Custom ID Tag

Stainless steel valve/actuator ID Tag imprinted to user specified identification criteria. Each tag is 1/2" x 3" and accommodates up to 3 lines of text, maximum of 12 characters and spaces per line.

Transmitter

The Transmitter is an internally mounted module for use in the Positioner. The module is designed to give a 4-20 milliamp linear output signal with a 0-90° Positioner shaft rotation. The unit is environmentally sealed and loop powered. Transmitter is designed for use in General Purpose Locations and is not approved for Hazardous Locations as classified by the NEC.

Pneumatic Diaphragm Options Overview

The basic options and accessories listed in this section represent many of the most commonly used for Pneumatic actuation of Pneumatic Diaphragm Valves (see previous section for Pneumatic Ball Valves and Butterfly Valves) factory configured to order on the actuation package. Contact Spears® for any desired accessories, options, functions, or special controls not listed.

Overview of Basic Options & Accessories Available

Pneumatic Actuator Features	Premium Pneumatic Diaphragm Valves
Spring Return	✓
80 psi Operating Pressure	✓
Declutchable Manual Override	✓
Pneumatic Positioner	✓
Electro-Pneumatic Positioner	✓
Micro Limit Switch Module	✓
3 & 4-Way Solenoid Valve	✓
Stainless Steel 3-Gauge Set	✓
ID Tag - SS	✓

Contact Spears® for any desired accessories, options, functions, or special controls not listed in this guide.

Spring Return (Fail Safe)

An internal spring in the actuator is configured to either open or close upon loss of air supply. Spring return can be specified as either Air-to-Open when spring return close is desired or Air-to-Close when spring return open is desired.

Operating Pressure (for Diaphragm Valves)

Spears® Diaphragm Valves use a 80 to 90 psi standard operating pressure. Other optional pressures are available. Specify pressure requirements at time of order.

3 to 15 psi Pneumatic Positioner (for Diaphragm Valves)

Positioner is used to control or throttle flow by modulating the air to the actuator in response to an external 3-15 psi control signal input. Available with NEMA 4x enclosure mounted on top of actuator with 180° visual indicator. Positioner can be top or bottom loading, with or without gauges. Gauge set includes: 1 input pressure gauge 0-30 psi and 2 output pressure gauges 0-160 psi. Optional Stainless Steel gauge set available.

Electro-Pneumatic Positioner (for Diaphragm Valves), not for air-to-air 4 to 20 mA

Positioner is used to control or throttle flow by modulating the air to the actuator in response to an external 4-20 milliamp control signal input which is converted to a proportional 3-15 psi pneumatic signal used by the positioner. Available with NEMA 4x, enclosure mounted on top of actuator with 180° visual indicator. Used with air-to-spring only

3-Way Solenoid Valves 4-Way Solenoid Valves (for Diaphragm Valves)

Universal operation design allows pressure to any port. 4-way solenoid valve is used for double acting (air-to-air) actuators. 3-way solenoid valve is used for spring return (fail open/fail close) actuators. Air inlet is 1/4" NPT. Enclosures are molded epoxy NEMA 4, 4x (standard) or NEMA 4/4x/7/9 combination with 1/2" conduit connection and brass body (stainless steel body available by special order). Standard 115 VAC with voltage options of 230 VAC, 24 VAC, 12 VDC, and 24 VDC.

Micro Limit Switch Module (for Diaphragm Valves) SPDT (2) or DPDT (2)

Module of two (2) auxiliary mechanical limit switches. Switches are SPDT rated at 10 amp 125/250 VAC. Switch module includes 180° visual indicator. Switch enclosure is NEMA 4/4x/7/9 rated.

Custom ID Tag

Stainless steel valve/actuator ID Tag imprinted to user specified identification criteria. Each tag is 1/2" x 3" and accommodates up to 3 lines of text, maximum of 12 characters and spaces per line.

Additional Options & Accessories Not Specified

Spears® can provide virtually any actuation need for Spears® valves. The following actuated valve configurations, options and accessories not currently specified in this manual are a few of those available on a special order basis. **See Appendix B: Premium Actuated Valve Part Number Selection** for configuration and accessory options. Please contact Spears® for additional technical information or other custom actuation needs. Certain special order options and custom Actuation Packages may require extended lead times. Please contact Spears® for details.

Special Actuated Ball Valves

- Compact 2000 Ball Valves
- Single Entry Ball Valves
- True Union 2000 3-Way Vertical & Horizontal Ball Valves
- Vented Ball Valves

Special Actuated Butterfly Valves

- Tandem 3-Way - two valves operated from one actuator, both closing or both opening at the same time.
- Tandem Diverting - two valves operated from one actuator, one opening while the other closes.
- “No Seat” actuated Butterfly Valves for duct (damper) applications.
- Polypropylene 30" to 60" Actuated Valves (custom produced)

Actuated Gate Valves

- PVC & CPVC Construction
- Sizes 1/2" - 4"
- Socket, Threaded, Flanged End Connections

Special Actuator Options

- Actuators Only
- Actuator Brackets Only
- Actuator Stem Extensions
- Double Powder Coated Electric Enclosures
- Stainless Steel Pneumatic Enclosures
- Electric Spring Return Open or Close with No Override
- Battery Back-up Electric Actuators

Special Switch Sets & Solenoids

- Single Limit Switch & Bracket Only (no actuator) for manual valves
- Double Limit Switch & Bracket Only (no actuator) for manual valves
- Dual Coil 5-Way Solenoid Valves

Replacement Parts

Many replacement parts are available for Spears® electric and pneumatic actuators and valves. Contact Spears® for specific parts needed.

General System Terms & Actuator Terms

The following valve actuation terminology is provided for better understanding and elimination of miscommunications. Terms and definitions are grouped by related topics and listed in alphabetical order.

GENERAL SYSTEM TERMS

Ambient Temperature - The temperature of the air surrounding the actuator. Generally stated as a maximum and minimum for proper actuator operation. Note that ambient temperature range for an actuator may exceed that of a plastic valve and should not be considered to be the same as the service temperature.

Maximum Line Pressure - The media pressure against which the valve will have to close.

Maximum Service Temperature - Maximum temperature of the media. Service temperature should be considered in selection of the proper thermoplastic valve material for the application.

Media - The material flowing through a valve.

Modulating - Throttling or regulating the flow through a valve by varying the position between open and closed.

On-Off Service - Basic full open or full closed operation to start or stop flow.

Operating Torque - Force required to operate a valve, expressed in inch-pounds or foot-pounds.

Supply Pressure - Facility air pressure supply required to operate pneumatic actuator.

ACTUATOR TERMS

Double Acting - A Pneumatic actuator which uses air to both open and close the valve. Also referred to as “Air-to-Air” operation.

Electric Actuator - An electromechanical device used to actuate (open, close or modulate) a valve. An electric motor and gear train is used to actuate the valve. Numerous application considerations must be made in using an electric actuator. These include, duty cycle, cycle time, supply voltage, operating temperature and enclosure rating (NEMA) for use of electric devices under various environmental conditions.

Fail-Closed - Spring return in a pneumatic actuator which closes the valve upon loss of air pressure. Also referred to as “Air-to Spring Close” or “Spring-to-Close” operation.

Fail-Open - Spring return in a pneumatic actuator which opens the valve upon loss of air pressure. Also referred to as “Air-to-Spring Open” or “Spring-to-Open” operation.

Pneumatic Actuator - An air operated mechanical device used to actuate (open, close or modulate) a valve. The actuator converts air pressure into mechanical force most commonly using either a piston or diaphragm. The mechanical force output can be either rotational, as in actuation of a ball valve, or linear as commonly used in actuation of a diaphragm valve. Pneumatic actuators are not significantly limited by duty cycles and cycle time (virtually instantaneous) found with electric actuators. However, they may require additional accessories to further control speed of operation and a voltage supply for certain electric signal devices which may be desired.

Spring Return - An actuator using a spring to return the valve to either an open or closed position upon loss of power. Spring returns are most commonly used with pneumatic actuators, but can be used on electric actuators where it is necessary for the valve to open or close by design or by system failure (see also Fail-Close and Fail-Open terms).

ACTUATOR ACCESSORY & RATING TERMS

Duty Cycle - The capability of an Electric actuator motor to operate or "cycle" continuously - a 100% Duty Cycle. Ratings less than 100% mean that the actuator motor is capable of intermittent operation, as is the case with most actuation applications. For example, a 25% Duty Cycle means that for each 1-minute of operation, 3-minutes of non-operation is required. Duty cycles greater than 25% are generally needed only when additional work loads are encountered, such as valve modulation or in actuation of larger butterfly valves.

Limit Switches - Electrical switches which may be applied to either electric or Pneumatic actuators to supply a signal that the valve cycle has been completed. In Electric actuators, the primary limit switches are used to control the open and closed position of the valve. Auxiliary limit switches may be used to perform other functions such as starting or stopping a pump. Limit switches are most often mechanical and are activated by physical contact with either a lever or plunger. Proximity switches are electrically tripped without physical contact and may be used with certain computer or micro processor controls.

NEMA Rating - National Electric Manufacturers Association standard for rating electrical component enclosures. The most commonly used NEMA ratings for electric actuator and electrical accessory enclosures are NEMA 4 and NEMA 4X.

NEMA 1: General Purposes - for indoor use without unusual service conditions, primarily to protect components from contact.

NEMA 2: Drip proof - for indoor use with degree of protection against limited amounts of falling water or dirt.

NEMA 3: Rain tight - for outdoor use with protection from windblown dust, rain and sleet, and undamaged by ice formation.

NEMA 4: Watertight and Dust tight - for indoor/outdoor use with a protection from windblown dust, rain or hose directed wash down environments.

NEMA 4X: Watertight and Dust tight - same as NEMA 4 with addition of corrosion resistance.

NEMA 7: Explosion Proof (class I, division 1, groups A, B, C, D) - designed to contain an internal explosion without causing an external hazard when installed in a designated environment group. Group A= atmospheres containing acetylene; Group B = atmospheres containing hydrogen; Group C = atmospheres containing ethyl-ether vapors, ethylene, or cyclopropane; Group D = atmospheres containing gasoline, hexane, naphtha, benzene, butane, propane, alcohol, acetone, benzol, lacquer, solvent vapors or natural gas.

NEMA 9: Explosion Proof (class II, division 1, groups E, F, G) - Dust-ignition-proof enclosures designed to prevent both entrance of dust and external heating capable of igniting dust on the enclosure or in the surrounding atmosphere.Group E = atmospheres containing metal dust including aluminum, magnesium, their commercial alloys, and other metals of similar hazardous characteristics; Group F = atmospheres containing carbon black, coal or coke dust; Group G = atmospheres containing flour, starch, or grain dust.

Positioner - Attachment for either electric or Pneumatic actuators which provides automatic modulating control of the valve position from open to closed. Electric positioners work by comparison of 2-currents, one derived from the input signal and one from the actuator. Pneumatic positioners increase, decrease and balance the air supply according to an input signal from an external control source. Input signals are generated by either a 3 to 15 psi pneumatic signal, or a 4 to 20 milliamp electro-pneumatic signal.

Solenoid Valve - An electro-magnetically operated valve which enables electrical control of air supply to a pneumatic actuator. Solenoids are wired to a manual switch or any electric controller. Double Acting actuators require a 4-way solenoid, Spring-Return actuators require a 3-way solenoid for proper air control. As electrical devices, solenoid valves are available in various NEMA ratings.

Transducer - A device that converts one signal type to another. In actuation controls, the most common use of a transducer is in conversion between electrical signals and pneumatic signals.

Ball Valve Selection

The section is provided for formulation of part numbers on custom actuated valve packages. A 3-step process is used to build custom actuated valve part numbers:

Step 1 - Select the desired type, style, options and material of valve from appropriate Valve Selection Table. Specify nominal valve size from Size Code available.

Step 2 -Select the desired actuator style options from the Actuator Selection Tables

Step 3 -Select desired actuator accessories (if any) from the Accessories Selection Tables.

IMPORTANT: Custom accessories are ordered under a separate part number from the actuated Valve Package. Accessory part numbers are ordered individually and factory assembled with selected Actuated Valve Package.

If any accessories are being ordered, add the suffix, "- A " to the end of the Actuated Valve Package part number. This suffix is added only if an Accessory(s) is being selected for add on to the initial Actuated Valve Package.

ACTUATED VALVE PACKAGE PART NUMBER POSITIONS

VALVE CODE	ACTUATOR CODE		SIZE CODE	ACCESSORY DESIGNATION
□ □ □ □ □	□ □ □ □	□	□ □ □	- A
1 - 2 - 3 - 4 - 5	6 - 7 - 8 - 9		10 - 11 - 12	

Optional Control Number
(not used on basic packages)

Step 1: Valve & Size Code Selection

Spears actuated valve selection table include Ball Valves (Selection Table 1) Butterfly Valves (Selection Table 2), Diaphragm Valves (Selection Table 3) and Gate Valves (Selection Table 3A). Use the table information to complete the Valve Code in the package part number.

Table 1: BALL VALVES
(Valve Type - End Connector - O-ring - Special Options - Material – Size Selection)

VALVE CODE □ □ □ □ □ — 1 - 2 - 3 - 4 - 5
Reserved for Actuator □ □ □ □ — 6 - 7 - 8 - 9
SIZE CODE □ □ □ — 10 - 11 – 12

Valve Type
0 = Compact Ball
P = Compact 2000
1 = True Union Ball
2 = TU 2000 Ind. Ball
Z = TU 2000 Std Ball
3 = Utility (Special)
S = Single Entry (Special)
T= TU 2000 Ind Tandem
U = Hor 3-way L Tandem
V = Hor 3-way T Tandem
W= Ver 3-way L Tandem
X= Ver 3-way 2L Tandem
Y= Ver 3-way 3L Tandem
R= Ver 3-way T Tandem
A= Hor 3-way L-port
B= Hor 3-Way T-port
C= Ver 3-Way L-port
D= Ver 3-Way 2L-port
E= Ver 3-Way 3L-port
F= Ver 3-Way T-port

End Connector
(see note 1)
1 = Socket
2 = Thread
3 = SR Thread
4 = Flanged
5 = BSP Thread
6 = DIN Plain (socket)
7 = JIS Plain (socket)
8 = Flange CL300 Drilling
9 = Flange PN 16/10 Drilling (to 160 mm)

O-ring
0 = Buna-N.
1 = EPDM
2 = FKM
3 = PTFE Encapsulated EPDM.
4 = Silicone
5 = FKM/ETP
6 = AFLAS® TFE/P (FEPM)
7 = PTFE Encapsulated FKM

Special Options
0 = None
1 = Lubricant Free (see note 2)
2 = Vented Ball

Material
1 = PVC
2 = CPVC
3 = PP
(see note 1)
4 = LE PVC

Size
005 =1/2"
007 = 3/4"
010= 1"
012 = 1-1/4"
015 = 1-1/2"
020 = 2"
025 = 2-1/2"
030 = 3"
040 = 4"
060 = 6"

Notes:

1 – PP valves available in regular True Union style sizes1/2" – 4" only, with threaded or SR threaded end connectors only. 1/2" – 2" PVC & CPVC True Union valves ordered as "socket" come with both socket and regular threaded end connectors. 2-1/2" - 6" valves come with socket only.

2 – All Ball Valves are assembled with non-silicone lubricant.

3 – Tandem (Diverting) part number includes two valves operated from one actuator with one opening while the other closes.

Butterfly Valve Selection

Table 2: BUTTERFLY VALVES
(Valve Type - Stem – Seat & O-ring - Special Options - Material – Size Selection)

VALVE CODE Reserved for Actuator **SIZE CODE**

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

1 - 2 - 3 - 4 - 5 6 - 7 - 8 - 9 10 - 11 – 12

Valve Type

4 = Std. Butterfly
5 = True Lug Butterfly
6 = Tandem 3-Way (see note 6)
7 = Tandem Diverting (see note 7)
8 = High Purity TFM
J = Pool Butterfly- white (see note 8)
K =Wafer Butterfly
L = Shaved Std. Butterfly

Stem Material

1 = SS 316
2 = PTFE Coated SS 316
3 = Titanium
4 = Hastaloy

Material

1 = PVC (see note 1)
2 = CPVC
3 = PP (see note 2)

Special Options (see note 3)

0 = None
1 = Zinc plated Lugs (for True Lug)
2 = SS 316 Lugs (for True Lug)
3 = non lubricated
4 = Zinc lug/ non lubricated
5 = SS 316 lug/ non lubricated
6 = No Seat (duct application)
7= Zinc plated Lug Insert (for Std. Butterfly; see note 9)
8= SS Lug Insert (for Std. Butterfly; see note 9)

Seat & O-ring (see note 4)

1 = Buna-N
2 = EPDM
3 = FKM
4 = PTFE Sleeved FKM
5 = TFM
6 = PTFE Sleeved EPDM

Size (see note 5)

015 = 1-1/2”
020 = 2”
025 = 2-1/2”
030 = 3”
040 = 4”
060 = 6”
080 = 8”
100 = 10”
120 = 12”
140 = 14”
160 = 16”
180 = 18”
200 = 20”
240 = 24”

Notes:

1 – PVC and CPVC valves available through 14" only.
2 – All PP and 14" PVC/CPVC valves available in Standard Butterfly style only.
3 – Lugs specified with True Lug and Lug Insert styles only.
4 – PP valves are standard with EPDM or FKM.
5 – Actuated valve sizes 14" and larger are custom produced to order, contact Spears® Technical Services.
6 – Tandem 3-Way part number includes two valves operated from one actuator, both closing or both opening at the same time.
7 – Tandem Diverting part number includes two valves operated from one actuator with one opening while the other closes.
8 – Pool Butterfly Valves available in sizes 1-1/2" to 12" with SS316 Stem, EPDM Seats, PVC White only. No other options are available.
9 – Lug Inserts are used when Lug Style valve is ordered for Tandem Diverting valve type.

Table 3: DIAPHRAGM VALVES
(Valve Type - End Connector - O-ring - Diaphragm - Material – Size Selection)

VALVE CODE **Reserved for Actuator** **SIZE CODE**

□ □ □ □ □ □ □ □ □ □ □ □ □

1 - 2 - 3 - 4 - 5 6 - 7 - 8 - 9 10 - 11 – 12

Material (see note 1)
1 = PVC
2 = CPVC
3 = PP
4 = LE PVC
5 = PVC/Hastelloy-C Bolts
6 = CPVC/Hastelloy-C Bolts
7 = PVC/Titanium Bolts
8 = CPVC/ Titanium Bolts

Size (see note 1)
005 = 1/2"
007 = 3/4"
010 = 1"
012 = 1-1/4"
015 = 1-1/2"
020 = 2"
025 = 2-1/2"
030 = 3"
040 = 4"
060 = 6"
080 = 8"

Valve Type
9 = Diaphragm Valve
H= Zero Dead Leg

Diaphragm
1 = Buna-N
2 = EPDM
3 = FKM
4 = Hypalon® (CSM)
5 = PTFE w/EPDM
6 = PTFE w/FKM

End Connector
(see note 1)
1 = Socket (True Union)
2 = Thread (True Union)
3 = SR Thread (True Union)
4 = Spigot
5 = Flanged
6 = DIN Plain
7 = JIS
8 = BSP Thread

O-ring (see note 2)
0 = None
1 = EPDM
2 = FKM
3 = PTFE Encapsulated EPDM
7 = PTFE Encapsulated FKM

Notes:

1 – All valves with socket, thread, or SR thread end connectors are True Union style only.
Socket end connectors available on PVC and CPVC valve sizes 1/2" – 2" only.
Thread and SR thread end connectors available on PVC, CPVC, and PP valve sizes 1/2" – 2" only.
DIN, JIS, and BSP end connectors available on PVC and CPVC valve sizes 1/2" – 2" only.
Flanged end connectors available on all sizes of PVC and CPVC valves.
Flanged end connectors available on PP valve sizes 3" and larger only.
Zero Dead Leg valves are Socket Tee x selected End Connector code.

2 – O-rings are use on True Union style valves sizes 1/2" – 2" with socket, thread, or SR thread end connectors only.
Enter “0” for all other end connector selections.

Gate Valves Selection (special order)

Table 3A: GATE VALVES (Special Order Only – Contact Spears® for Availability)
(Valve Type - End Connector - O-ring - Special Options - Material – Size Selection)

VALVE CODE

☐ ☐ ☐ ☐ ☐
1 - 2 - 3 - 4 - 5

Reserved for Actuator

☐ ☐ ☐ ☐
6 - 7 - 8 - 9

SIZE CODE

☐ ☐ ☐
10 - 11 – 12

Valve Type
G = Gate Valve

End Connector
(see note 1)
1 = Socket
2 = Thread
3 = SR Thread
4 = Flanged
5 = BSP Thread
6 = DIN Plain

O-ring
1 = Buna-N
2 = EPDM
3 = FKM
4 = PTFE Encapsulated

Special Options
0 = None
1 = Lubricant Free (see note 3)

Material
(see note 2)
1 = PVC
2 = CPVC

Size
(see note 4)
005 = 1/2"
007 = 3/4"
010 = 1"
012 = 1-1/4"
015 = 1-1/2"
020 = 2"
025 = 2-1/2"
030 = 3"
040 = 4"

Notes:
1 – SR thread style available on 3" & 4" size only.
Din Plain metric available in 20 mm – 63 mm only.
2 – PVC valves have polypropylene gate wedge, CPVC valves have CPVC gate wedge
3 – Standard valves are assembled with non-silicone lubricant.
4 – Valve size 2-1/2" is 3" valve with 2-1/2" reducer bushings.

Electric Actuator Selection

Step 2: Actuator Code Selection

Spears actuated valves are available with either electric or pneumatic motors. Actuators are pre matched to each type and size of valve with proper operating torque and cycle time. Additional actuator accessories are selected and are factory installed on the Actuated Valve Package in Step 3 instructions.

Select the applicable options from either the Electric Actuators (Selection Table 4) or Pneumatic Actuators (Selection Table 5) and enter the designated Actuator Code portion of the package part number.

Table 4: ELECTRIC ACTUATORS (Voltage - Enclosure Rating - Manual Override - Duty Cycle)

ACTUATOR CODE — **Optional Control Number** (not used on basic packages)

□ □ □ □ □ □ □ □ □ □ □ □ □

1 - 2 - 3 - 4 - 5 — 6 - 7 - 8 - 9 — 10 - 11 - 12

Reserved for Valve — Reserved for Size

Voltage (see note 1)
A = 115 VAC 60 Hz
B = 230 VAC 60 Hz
C = 230 VAC 3-phase 50 Hz (EU)
D = 230 VAC 3-phase 60 Hz
E = 24 VAC
F = 12 VDC
G = 24 VDC
L = 460 VAC 3-Phase 50 Hz (EU)
M = 460 VAC 3-Phase 60 Hz
R = 415 VAC 3-Phase 50 Hz (EU)
S = 230 VAC 50 Hz (EU)
T = 575 VAC 3-Phase 60Hz (EU)
U = 115 VAC 50 Hz (EU)
V = 208 VAC 3-Phase 60 Hz
X = Single Indicator Switch Only (see note 2)
Y = Double Indicator Switch Only (see note 2)
Z = Actuator Bracket Only (see note 2)
1 = 480 VAC 50 Hz
2 = 480 VAC 60 Hz
3 = 480 VAC 3-Phase 50 Hz
4 = 480 VAC 3-Phase 60 Hz
5 = 380 VAC 3-Phase 60 Hz

Duty Cycle (see note 3)
1 = 25%
2 = 75%
3 = 100%
4 = 50%
5 = 70% (custom only)
6 = 80% (custom only)
7 = 40%
8 = 60%
9 = 20%

Manual Override (see note 4)
0 = None
1 = Basic Manual Override
2 = Declutchable Manual Override
3 = Spring Return Open with Declutchable Manual Override (see note 5)
4 = Spring Return Close with Declutchable Manual Override (see note 5)
5 = Spring Return Open no override (see note 5)
6 = Spring Return Close no override (see note 5)
7 = RCE Battery Backup Actuator
8 = Spring Return Open with Basic Manual Override (see note 5)
9 = Spring Return Close with Basic Manual Override (see note 5)

Enclosure
1 = NEMA 4
2 = NEMA 4x
3 = NEMA 7
4 = NEMA 9
5 = NEMA 4 Double Powder Coated
6 = NEMA 4x Double Powder Coated
7 = NEMA 7 Double Powder Coated
8 = NEMA 9 Double Powder Coated
9 = AWWA
A = NEMA 7 Modulation enclosure (for 1/2"-2" modulated Ball /Butterfly)
B = NEMA 6
C=NEMA 6P, prolonged submersion at a limited depth.
D=NEMA 8

Notes:

1 – 460 VAC available on Butterfly Valves only.
2 – Bracket & Indicator Switch Only part numbers do not allow any other options (must be Z000, Y000, or X000).
3 – **Standard Duty Cycles** vary according to valve type and size as indicated in chart below. Standard Duty Cycles can be *upgraded* only. Note: 50% duty cycle available on non-standard, special order actuators only.

Valve Type	Size Range	25% Duty Cycle	75% Duty Cycle	100% Duty Cycle
Ball Valve	1/2" - 2"		X	
Ball Valve	2-1/2" - 4"	X		
Butterfly Valve	1-1/2" - 10"	X		
Butterfly Valve	12" – 24"			X
Diaphragm Valve	1/2" - 8"	X		

4 – Basic Manual Override is standard on Ball Valve sizes 1/2" – 3" with Declutchable Manual Override as an option. Declutchable Manual Override is standard on Ball Valve sizes 4" & larger and all Butterfly Valves. Standard Gate Valve and Diaphragm Valve packages have no override with Declutchable Manual Override as an option. Spring return not available on electric Diaphragm valves.
5 – Electric Spring Return Actuators come standard with no type of override. Need to verify if either Declutchable Manual Override or Basic Manual Overrides are available in all applications.

Actuator ONLY Selection

Actuator Only Part Numbers

Individual Premium Electric actuators can be ordered for specific Spears® valve types and sizes. Includes actuator and mounting hardware for specified valve type and size. To specify valve type for actuator only, enter the first digit valve type code followed by zeros (“0”) for remaining 4-digits of the valve code section of the part number plus the applicable 3-digit valve size code (see valve selection Tables 1, 2, or 3). Complete the actuator code selection as described in this section. See Step 3 for any desired actuator accessories.

Example: A 115 VAC electric actuator only with NEMA 4 enclosure, basic manual override and 75% duty cycle for 2" standard True Union Ball Valve would have the following part number: 10000A112-020.

Optional Control Numbers (custom use) – Electric Actuators

1 = AUMA SA07.5-19A/ AUMA-115 Actuator w/remote pilot station
2 = Rotork AQM105 Actuator
3 = RCE15-5-4-1-15 Remote Control Station w/24 VAC Battery Back-up
4 = RCE10-4-1-5-15 Remote Control Station w/24 VDC Battery Back-up
5 = Oversize Housing
6 = AUMA SG05.1 Actuator
7 = AUMA SG05.1-2 Actuator
B = AUMA SG05.1-3 460VAC 3-phase Actuator, indicator lights, 4-20mA positioner, NEMA 4x
8 = AUMA SA07.1-26B Actuator
H = AUMA SAO7.5-38A 115 VAC Single Phase Actuator, (2) Gear Train Limit Switches, Open / Close Torque Switches, Space Heater, Plug & Socket type terminals, Side Mounted hand wheel, Nema 4x enclosure, Reversing starters, Power Supply board, Interface Board - 110 VAC, 3 Push buttons O/S/C, Selector Switch L/O/R, 3 Lights open / fault / close
9 = Actuator Upsize (one size to accommodate accessories)
A = EIM Controls P2N1-3 (460 VA 3-phase Actuator)
C = SURE 25-10, 115 VAC Actuator, Spring return close, w/ modulating 4-20 mA positioner board
D = AUMA SAR07.5-13B/GS63.3, 5000 in.-lb., 460 VAC 3-Phase 60HZ Actuator, indicator lights, 4-20mA positioner, NEMA4x.
E = AUMA SG07.1, 2640 in.-lb., 120VAC Actuator, NEMA 4x/6
F = RCE-40-410-4-115, 115 VAC actuator w/ battery backup
G =Valvcon # IW150HS2DNZN115A. 1-1/2”, w/ heater/thermostat, 2 aux limit switches, Device Net card, declutchable manual override, 115VAC
J = RCE 15-5-4-15, 150 in. lb., 115VAC, 5 sec. cycle, 100% duty rating, NEMA 4x/7/9 enclosure, w/battery backup
X = Actuator assembled with Double Containment Valve & Valve Box (for use in “actuator only” part number)

Note: When control number is used on a package with accessories, the dash (-) is dropped before the “A” due to part number limitations.

Table 5: PNEUMATIC ACTUATOR
(Operation - Operating Pressure - Manual Override)

ACTUATOR CODE

Optional Control Number (not used on basic packages)

□ □ □ □ □ □ □ □ □ □ □ □ □
1 - 2 - 3 - 4 - 5 | 6 - 7 - 8 - 9 | 10 - 11 - 12
Reserved for Valve | Reserved for Size

Operation Mode
H = Air-to-Air
N = Air-to Air, Extended Stops
J = Air-to-Spring Close
K = Air-to Spring Open
O = Air-to-Spring Close, Extended Stops
P = Air-to Spring Open, Extended Stops
W = 3-Way Ball Valve Actuator
(see note 1)

Operating (Supply) Pressure
(see note 2)
1 = 80 psi
2 = 60 psi
3 = 40 psi
4 = 20-100 psi specified (must use with optional Control Number below)
5 = 140 psi (Diaphragm Valve only)
6 = 150 psi
7 = 120 psi
8 = 90 psi (Diaphragm Valve w/Unitized Plastic Housing, 1/2" - 2")

Manual Override
(see note 3)
0 = None
1 = Basic Manual Override (no operator Hand wheel)
2 = Declutchable Manual Override (w/Hand wheel)
3 = Manual Override (w/Hand wheel)

Special Options
0 = None
1 = Polyester Powder Coated
2 = Stainless Steel Housing & Mounting
3 = Autocatalyticly Nickel Infused (ANI) housing
4 = Special Bracketing- TUMB2
5 = Diaphragm w/Unitized Plastic Housing (1/2" - 2")

Notes:
1 – Bracket only part numbers do not allow any other options (must be Z000); available for Ball Valves only.
2 – Operating pressures (1-2-3) apply to Ball valve actuators.
3 – Basic Manual Override is standard on all Ball Valves and Butterfly Valves with Declutchable Manual Override as an option. Standard Diaphragm Valve package has no override. No manual override option sizes 1/2" –2". Declutchable Manual Override is an option on valve sizes 2-1/2" & larger.

Actuator Only Part Numbers
Individual Premium Pneumatic actuators can be ordered for specific Spears® valve types and sizes. Includes actuator and mounting hardware for specified valve type and size. To specify valve type for actuator only, enter the first digit valve type code followed by zeros (“0”) for remaining 4-digits of the valve code section of the part number plus the applicable 3-digit valve size code (see valve selection Tables 1, 2, or 3). Complete the actuator code selection as described in this section. See Step 3 for any desired actuator accessories.

Example: An 80 psi, air-to-air pneumatic actuator only with declutchable manual override for 2" standard Butterfly Valve would have the following part number: 40000H102-020.

Optional Control Numbers (custom use) – Pneumatic Actuators
1 = Downsized actuator for vacuum application
2 = Habonin brand pneumatic actuator
3 = Customer Requested Upsized Actuator (one size larger than standard)
4 = Saunders 602-1/2 actuator
X = Actuator assembled with Double Containment Valve & Valve Box (for use in “actuator only” part number)
Control Numbers for user specified pressure. Must be used with Operating (Supply) Pressure code 7, #4:

A = 20 psi	D = 50 psi	G = 80 psi
B = 30 psi	E = 60 psi	H = 90 psi
C = 40 psi	F = 70 psi	J = 100 psi

Note: When control number is used on a package with accessories, the dash (-) is dropped before the “A” due to part number limitations.

Step 3: Actuator Accessory Selection

Selections for Electric Actuated Ball & Butterfly Valves

Do to variety of accessory combinations for Electric actuated Ball and Butterfly Valves, please contact Spears® for specific accessory availability and application.

Available accessories include, but are not limited to:
- Digital or Analog Modulating Board, 0-10V/0-5V/1-5V/4-20mA (Specify setting at time of order)
- Digital and Analog Potentiometer
- Digital and Analog Transmitters
- Remote/Off/Local Control Switch
- Special Hardware
- I. D. Tags
- Stem Extensions

Selections for Electric Actuated Diaphragm Valves and for Pneumatic Ball, Butterfly and Diaphragm Valves

Premium actuator accessories are available for both Electric Diaphragm Valve actuators (Selection Table 7) and Pneumatic Ball, Butterfly and Diaphragm Valve actuators (Selection Table 8 and 9). Actuator accessory options are selected and ordered separately as individual Accessory part numbers for the actuated valve. If accessory options are to be ordered, be sure the suffix, "- A", was added to the end of the selected Actuated Valve Package part number configured in Step 1 & 2 to designate that the accessories are assembled with the valve package.

A separate part number is used for *each* accessory ordered. Select the desired Accessory Part Number from the selection tables for each accessory.

Example: An electric actuated valve is desired with a heater and thermostat, an SPDT limit switch set and a 0-5 VDC signal positioner board. From Table 7, the following Accessory part numbers should be ordered with the actuated valve package:

Heater & Thermostat = A-H1
Limit Switch Set = A-LS1
Positioner Board = A-PB2

Contact Spears® for any desired accessories or functions not specified in the Accessory Selection Tables.

Selection Table 7: Diaphragm Valve Premium Electric Actuator Accessories

Accessory	Description	Accessory Part Number
Heater	Heater & Thermostat – On @ 41°F, Off @ 60.8°F	**A-H1**
	Heater & Thermostat – On @ 62.6°F, Off @ 80.6°F	**A-H2**
Auxiliary Limit Switches	2-SPDT Limit Switch Set (1/2" shaft cam)	**A-LS1**
	2-SPDT Limit Switch Set (3/8" shaft cam[3])	**A-LS2**
	2-SPDT Limit Switch Set for Electric Spring Return	**A-LS3**
Position Indicators	LED Indicator Lights	**A-P2**
Modulating Positioner Boards	115 VAC 4-20 mA	**A-PB1**
	115 VAC 0-5 VDC	**A-PB2**
	115 VAC 0-10 VDC	**A-PB3**
	230 VAC 4-20 mA	**A-PB4**
	230 VAC 0-5 VDC	**A-PB5**
	230 VAC 0-10 VDC	**A-PB6**
	24 VAC 4-20 mA	**A-PB7**
	24 VAC 0-5 VDC	**A-PB8**
	24 VAC 0-10 VDC	**A-PB9**
	24 VDC 4-20 mA	**A-PB10**
	24 VDC 0-5 VDC	**A-PB11**
	24 VDC 0-10 VDC	**A-PB12**
	115 VAC 4-20MA For Electric Spring Return Actuator	**A-PB13**
Transmitter	4-20mA	**A-T1**
Torque Sensors	Adjustable Electronic Torque Sensor	**A-TS1**

(CONTINUED NEXT PAGE)

(Selection Table 7: Diaphragm Valve Premium Electric Actuator Accessories – continued)

Accessory	Description	Accessory Part Number
Speed Controller	Variable Speed Controller	**A-SC1**
"2-Wire" Control[1] (operates as solenoid valve)	Control Relay Switch Setup 115 VAC– Normally Closed	**A-CR1**
	Control Relay Switch Setup 115 VAC– Normally Open	**A-CR2**
	Control Relay Switch Setup 24 VAC– Normally Closed	**A-CR3**
	Control Relay Switch Setup 24 VAC– Normally Open	**A-CR4**
	Control Relay Switch Setup 230 VAC– Normally Closed	**A-CR5**
	Control Relay Switch Setup 230 VAC– Normally Open	**A-CR6**
	Control Relay Switch Setup 12 VDC– Normally Closed	**A-CR7**
	Control Relay Switch Setup 12 VDC– Normally Open	**A-CR8**
	Control Relay Switch Setup 24 VDC– Normally Closed	**A-CR9**
	Control Relay Switch Setup 24 VDC– Normally Open	**A-CR10**
Friction Brake[2]	Mechanical Brake	**A-FB1**
Lockout Switch	Power disconnect switch activated when manual override is in use	**A-LK1**
Remote/Off/Local Control Switch	Remote/off/local, open/close momentary contact push buttons, red (close) and green (open) position indicating lights	**A-RS1**
Special Hardware	Titanium Bolts	**A-B1**
ID TAG	Type 316 Stainless Steel ID Tag 1/2" x 3" (3-lines, 12-characters & spaces)	**TAG3-015**
Stem Extension	Ball Valve Stem Extension[4]	**A-BVSE-xxx-000**
	True Union 2000 Ball Valve Stem Extension	**A-BVSE2-xxx-000**
	Butterfly Valve Stem Extension	**A-BFSE-xxx-000**
	Diaphragm Valve Stem Extension	**A-DESE-xxx-000**

Notes:
1 – "2-Wire" Control is not applicable to Diaphragm Valves
2 – Friction Brake are standard on Butterfly Valves and not applicable to Diaphragm Valves
3 – The A-LS2 is used on 1/2" – 2" basic Ball Valve packages; A-LS1 used on all others.
4 – Stem Extension Part Numbers: Enter size code for "xxx" in part number. Replace "000" with desired length code in part number; length is from top of valve to bottom of actuator.

(Selection Table 8: Ball Valve & Butterfly Valve Premium Pneumatic Actuator Accessories

Accessory	Description			Accessory Part Number
PNEUMATIC POSITIONERS	3-15 psi	NEMA 4	Flat-Top Indicator	**A-PP1**
	3-15 psi	NEMA 4	Dome Indicator	**A-PP2**
	3-15 psi	NEMA 4	Dome Indicator Integrated 2-SPDT Mech. Switches	**A-PP3**
ELECTRO PNEUMATIC POSITIONERS WITH INDICATOR	4-20mA	NEMA 4	Flat-Top Indicator	**A-EP1**
	4-20mA	NEMA 4	Dome Indicator	**A-EP2**
	4-20 mA	NEMA 4	Dome Indicator Integrated 2-SPDT Mech. Switches	**A-EP3**
	4-20mA	NEMA 7	Flat-Top Indicator	**A-EP4**
	4-20mA	Intrinsically Safe (CSA/UL) Flat-Top Indicator		**A-EP5**
	4-20mA	NEMA 7	Dome Indicator	**A-EP6**
	4-20mA	Intrinsically Safe w/2-SPST Proximity Switches		**A-EP22**
SOLENOID VALVES	3 & 4-way	115 VAC	NEMA 4/4x	**A-SV1**
	3 & 4-way	230 VAC	NEMA 4/4x	**A-SV2**
	3 & 4-way	24 VAC	NEMA 4/4x	**A-SV3**
	3 & 4-way	12 VDC	NEMA 4/4x	**A-SV4**
	3 & 4-way	24 VDC	NEMA 4/4x	**A-SV5**
	3 & 4-way	115 VAC	NEMA 4/4x/7/9	**A-SV6**
	3 & 4-way	230 VAC	NEMA 4/4x/7/9	**A-SV7**
	3 & 4-way	24 VAC	NEMA 4/4x/7/9	**A-SV8**
	3 & 4-way	12 VDC	NEMA 4/4x/7/9	**A-SV9**
	3 & 4-way	24 VDC	NEMA 4/4x/7/9	**A-SV10**
	Dual Coil 3 & 4-way	115 VAC	NEMA 4/4x	**A-SV11**
	Dual Coil 3 & 4-way	230 VAC	NEMA 4/4x	**A-SV12**
	Dual Coil 3 & 4-way	24 VAC	NEMA 4/4x	**A-SV13**
	Dual Coil 3 & 4-way	12 VDC	NEMA 4/4x	**A-SV14**

(CONTINUED NEXT PAGE)

(Table 8: Ball Valve & Butterfly Valve Premium Pneumatic Actuator Accessories – continued)

Accessory	Description	Accessory Part Number
SOLENOID VALVES	Dual Coil 3 & 4-way 24 VDC NEMA 4/4x	**A-SV15**
	Dual Coil 3 & 4-way 115 VAC NEMA 7/9	**A-SV16**
	Dual Coil 3 & 4-way 230 VAC NEMA 7/9	**A-SV17**
	Dual Coil 3 & 4-way 24 VAC NEMA 7/9	**A-SV18**
	Dual Coil 3 & 4-way 12 VDC NEMA 7/9	**A-SV19**
	Dual Coil 3 & 4-way 24 VDC NEMA 7/9	**A-SV20**
	Stainless Steel 3 & 4-way 115VAC NEMA 4/4x	**A-SV21**
	3-Way 24 VDC Hi Temperature (Class H) NEMA 4x	**A-SV22**
	3 & 4-way 230 VAC NEMA 4/4x 1/2" NPT Din Connector	**A-SV23**
LIMIT SWITCH & TRANSMITTER COMBINATION	4-20mA 2-SPDT NEMA 4/4x/7/9	**A-LS20**
	4-20mA 2-SPDT NEMA 4/4x/7/9 w/ Visual Indicator	**A-LS21**
	4-20mA 2-DPDT NEMA 4/4x/7/9	**A-LS22**
	4-20mA 2-DPDT NEMA 4/4x/7/9 w/ Visual Indicator	**A-LS23**
	4-20mA 2-Proximity NEMA 4/4x/7/9	**A-LS24**
	4-20mA 2-Proximity NEMA 4/4x/7/9 w/ Visual Indicator	**A-LS25**
LIMIT SWITCHES	2-SPDT NEMA 4/4x	**A-LS40**
	2-SPDT NEMA 4/4x w/ Visual Indicator	**A-LS41**
	2-SPDT NEMA 4/4x w/ Green/Red Dome Indicator	**A-LS41D**
	2-SPDT NEMA 4/4x w/ Low Profile Indicator	**A-LS41L**
	2-DPDT NEMA 4/4x	**A-LS42**
	2-DPDT NEMA 4/4x w/ Visual Indicator	**A-LS43**
	2-Proximity NEMA 4/4x	**A-LS44**
	2-Proximity NEMA 4/4x w/Low Profile Indicator NOTE - Requires user supplied intrinsic barrier	**A-LS44L**
	2-Proximity NEMA 4/4x w/ Visual Indicator	**A-LS45**
	2-Proximity NEMA 7/9	**A-LS46**
	2-Proximity NEMA 7/9 w/ Visual Indicator	**A-LS47**
	2-Proximity NEMA 7/9 w/ Low Profile Indicator	**A-LS47L**
	2-SPDT NEMA 4/4x/7/9	**A-LS48**
	2-SPDT NEMA 4/4x 7/9 w/ Visual Indicator	**A-LS49**
	2-DPDT NEMA 4/4x/7/9	**A-LS50**
	2-DPDT NEMA 4/4x/7/9 w/ Visual Indicator	**A-LS51**
	4-SPDT NEMA 4/4x w/ 180° Indicator	**A-LS52**
INDICATORS	Dome Indicator	**A-V2**
TRANSMITTER	4-20mA Output Transmitter	**A-PT1**
PRESSURE GAUGE SET	Stainless steel case, 3-gauge set for use with positioners: 1 – input pressure gauge 0-30 psi, 2- output gauges 0-160 psi	**A-G1**
	Plastic case, 3-gauge set for use with positioners: 1 – input pressure gauge 0-30 psi, 2- output gauges 0-160 psi	**A-G2**
AIR MUFFLERS	Standard Sintered Bronze, 40 micron, 1/8" NPT	**A-M18**
	Standard Sintered Bronze, 40 micron, 1/4" NPT	**A-M14**
	Speed Control Muffler (Adjustable Air Flow) 1/8" NPT	**A-M2V18**
	Speed Control Muffler (Adjustable Air Flow) 1/4" NPT	**A-M2V14**
ID TAG	Type 316 Stainless Steel ID Tag 1/2" x 3" (3-lines, 12-characters & spaces)	**TAG3-015**
Stem Extension	Ball Valve Stem Extension[1]	**A-BVSE-xxx-000**
	True Union 2000 Ball Valve Stem Extension[1]	**A-BVSE2-xxx-000**
	Butterfly Valve Stem Extension[1]	**A-BFSE-xxx-000**

Note: Pneumatic and Electro-Pneumatic positioners include brass gauges: 1 input gauge @ 0-30 psi and 2 output gauges @ 0-160 psi. Stainless steel gauges may be ordered separately.

Notes: 1 – Stem Extension Part Numbers: Enter size code for "xxx" in part number. Replace "000" with desired length code in part number; length is from top of valve to bottom of actuator.

Table 9: Diaphragm Valve Premium Pneumatic Actuator Accessories
(Not applicable to Diaphragm Valves with Plastic Actuator Housing)

Accessory	Description		Accessory Part Number
PNEUMATIC POSITIONERS	3-15 psi	NEMA 4x w/ Visual Indicator Top Loading (no gauge)	**A-DPP1**
	3-15 psi	NEMA 4x w/ Visual Indicator Top Loading w/ gauges (3)	**A-DPP2**
	3-15 psi	NEMA 4x w/ Visual Indicator Bottom Loading (no gauge)	**A-DPP3**
	3-15 psi	NEMA 4x w/ Visual Indicator Bottom Loading w/ gauges (3)	**A-DPP4**
ELECTRO PNEUMATIC POSITIONERS	4-20mA (3-15 psi)	NEMA 4 x w/Visual Indicator (up to 2")	**A-DEP1**
	4-20mA (3-15 psi)	NEMA 4 x w/ Visual Indicator w/SS Gauges (up to 2")	**A-DEP2**
	4-20mA (3-15 psi)	NEMA 4 x w/Visual Indicator (2-1/2" & up)	**A-DEP3**
	4-20mA (3-15 psi)	NEMA 4 x w/ Visual Indicator w/SS Gauges (2-1/2" & up)	**A-DEP4**
	4-20mA (3-15 psi)	NEMA 4 x w/ Dome Indicator w/2-SPDT Limit Switches (2-1/2"& up)	**A-DEP5**
3-WAY SOLENOID VALVES	115 VAC	NEMA 4/4x	**A-DSV1**
	230 VAC	NEMA 4/4x	**A-DSV2**
	24 VAC	NEMA 4/4x	**A-DSV3**
	12 VDC	NEMA 4/4x	**A-DSV4**
	24 VDC	NEMA 4/4x	**A-DSV5**
	115 VAC	NEMA 7/9	**A-DSV6**
	230 VAC	NEMA 7/9	**A-DSV7**
	24 VAC	NEMA 7/9	**A-DSV8**
	12 VDC	NEMA 7/9	**A-DSV9**
	24 VDC	NEMA 7/9	**A-DSV10**
4-WAY SOLENOID VALVES	115 VAC	NEMA 4/4x	**A-DSV11**
	230 VAC	NEMA 4/4x	**A-DSV12**
	24 VAC	NEMA 4/4x	**A-DSV13**
	12 VDC	NEMA 4/4x	**A-DSV14**
	24 VDC	NEMA 4/4x	**A-DSV15**
	115 VAC	NEMA 7/9	**A-DSV16**
	230 VAC	NEMA 7/9	**A-DSV17**
	24 VAC	NEMA 7/9	**A-DSV18**
	12 VDC	NEMA 7/9	**A-DSV19**
	24 VDC	NEMA 7/9	**A-DSV20**
MICRO[2] LIMIT SWITCHES	2-SPDT	NEMA 4 w/ 180° Visual Indicator	**A-DLS20**
	2-SPDT	NEMA 7/9 w/ 180° Visual Indicator	**A-DLS25**
PROXIMITY LIMIT SWITCHES	2-SPDT	NEMA 4/4x	**A-DLS23**
LIMIT SWITCHES [3]	2-SPDT	NEMA 4	**A-DLS24**
SPEED CONTROLLER	Variable Speed Controller		**A-DPSC1**
ID TAG	Type 316 Stainless Steel ID Tag 1/2" x 3" (3-lines, 12-characters & spaces)		**TAG3-015**
Stem Extensions	Diaphragm Valve Stem Extension[1]		**A-DPSE-xxx-000**
HANDWHEEL OVERRIDE	Handwheel override for 1/2" to 2" Linear Diaphragm Actuators		**A-DHW1**
	Handwheel override for 2-1/2" to 6" Linear Diaphragm Actuators		**A-DHW2**

Notes: 1 – Stem Extension Part Numbers: Enter size code for "xxx" in part number. Replace "000" with desired length code in part number; length is from top of valve to bottom of actuator.
2 – Micro Limit Switches used on valve sizes 1/2" through 2".
3 – Limit Switches used on valve sizes 2-1/2" & larger.

Ball Valve Actuation Questionnaire Checklist

Contact Name: _____ **Date:** _____

Business Name: _____

City: _____ **State:** _____ **Country:** _____

Phone: _____ **Fax:** _____ **E-mail:** _____

Project Name: _____

Ball Valves: **System Media Pressure (Required)** psi _____ kPa _____ Bar _____

Nominal Size in _____ mm _____ cm _____ **Valve Quantity Each** _____

Ball Valve Type :

- ☐ True Union Industrial
- ☐ True Union Standard
- ☐ Compact
- ☐ True Union Tee Style
- ☐ Other Valve Type _____
- ☐ Three Way Horizontal *(See 3-way orientation box below)*
- ☐ Three Way Vertical *(See 3-way orientation box below)*
- ☐ Tandem Three Way

Tandem 3-Way Orientation Document Required

Body Material :

- ☐ PVC
- ☐ CPVC
- ☐ Low-Extractable PVC

O-ring Seals :

- ☐ EPDM
- ☐ FKM
- ☐ Other

(If Other Explain) _____

End Connector :

- ☐ Socket
- ☐ Threaded
- ☐ SR Threaded
- ☐ Flange
- ☐ Spigot
- ☐ Metric
- ☐ DIN
- ☐ JIS
- ☐ BSP (Thread)

Vertical 3- Way Orientation

- ☐ Single L Port
- ☐ Double L Port
- ☐ Triple L Port
- ☐ T Port

Horizontal 3- Way Orientation

- ☐ L Port
- ☐ T Port

Pneumatic ☐

Not all combinations may be available.

FailSafe Type - *(Position to which valve cycles upon air loss)*

- ☐ Double Acting (No FailSafe. Stays in last activated position)
- ☐ Spring Return - Close (FailSafe in closed position upon air loss)
- ☐ Spring Return - Open (FailSafe in open position upon air loss)
- ☐ Other: _____

Operating Air Pressure (psi) - *(Compressed air supply required to operate actuator)*

- ☐ 80-150 ☐ Other: _____

Override Type - *(Override used to cycle valve upon air loss)*

- ☐ Basic ☐ Declutchable ☐ Other: _____

Aux. Limit Switches- *(Additional mechanical switches to operate external lights, alarms etc. (set of 2)*

- ☐ SPDT- Mechanical ☐ SPDT - Proximity ☐ DPDT - Mechanical

Voltage Signal Type Specify Voltage: _____

Visual Indicator - *(Provides local visual valve position indication)*

- ☐ Low Profile ☐ Dome ☐ No Indicator

Positioner Type - *(Positioner accepts an input signal from PLC to control valve cycle).*

- ☐ **Pneumatic Positioner** *(Air supply required to operate valve)*

Signal Pressure - *(Air pressure required to position the valve)*

- ☐ 3-15 psi ☐ Other: _____
- ☐ **Electro-Pneumatic Positioner** *(Air and voltage supply required to operate)*

Signal Voltage Input ☐ 4-20mA ☐ Other: _____

- ☐ With Transmitter - *(Sends output signal to PLC to provide valve position)*

Transmitter Output ☐ 4-20mA ☐ Other: _____

NEMA Rating - *(Enclosure rating indicates level of ingress protection from fluids, solids and gases)*

- ☐ 4 ☐ 4x ☐ Other: _____

Solenoid Valve - *(Regulates actuator intake/exhaust air supply)*

- ☐ 3 & 4 Way ☐ Dual Coil *(Double Acting Actuators only)* ☐ Other: _____

Solenoid Valve Voltage

- ☐ 115 VAC ☐ 230 VAC ☐ Other: _____

NEMA Rating - *(Enclosure rating indicates level of ingress protection from fluids and solids)*

- ☐ 4 ☐ 4x ☐ Other: _____

☐ **Other Options:** _____

Electric ☐

Not all combinations may be available.

- ☐ Basic Two Position (90 Degree Travel Standard)
- ☐ 3 Position 90 ☐ 180 ☐

FailSafe Position (if required)

- ☐ Fail Open -FailSafe in open position upon power loss
- ☐ Fail Close-FailSafe in closed position upon power loss

Note: On "Fail Safe" Options Two Positions ONLY Override Not Recommended.

Voltage Supply Power:

- ☐ 115 VAC ☐ 230 VAC ☐ Other: _____

Frequency ☐ 50 Hertz ☐ 60 Hertz

Phase ☐ Single ☐ Three

Override Type - *(Override used to cycle valve upon power loss)*

- ☐ Basic ☐ Declutchable ☐ Other: _____

Duty Cycle *(Amount of work valve can accomplish before requiring rest)*

- ☐ 25% ☐ 75% ☐ Other/Min. Requirement : _____

NEMA Rating - *(Enclosure rating indicates level of ingress protection from fluids and solids)*

- ☐ 4 ☐ 4x ☐ Other: _____

Positioner Type - *(Positioner accepts an input signal from PLC to control valve cycle)*

- ☐ **Positioner with Transmitter**

Signal Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

Transmitter -*(Sends output signal to PLC to provide valve position)*

Signal Output ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

- ☐ **Positioner - NO Transmitter**

Signal Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

Auxiliary Limit Switches*(Additional mechanical switches to operate external lights, alarms etc.)*

- ☐ 2 ☐ 4 *(Set of 2 each)*

Standard Accessories -All options not available in all actuator combinations

- ☐ Torque Sensor
- ☐ Friction Brake
- ☐ Battery Backup
- ☐ LED Indicating Lights (red /green)
- ☐ Speed Control
- ☐ 2 Wire Control Relay
- ☐ Heater & Thermostat ☐ [On @ 41F] [Off @ 60.8F] ☐ [On @ 69.8F] [Off @ 89.6F] ☐ [On @ 62.6F] [Off @ 80.6F]

☐ **Other Options:** _____

Butterfly Valve Actuation Questionnaire Checklist

Contact Name: _____ **Date:** _____

Business Name: _____

City: _____ **State:** _____ **Country:** _____

Phone: _____ **Fax:** _____ **E-mail:** _____

Project Name: _____

Butterfly Valves: **System Media Pressure (Required)** psi _____ kPa _____ Bar _____ **Valve Quantity Each**

Nominal Size in _____ mm _____ cm _____ _____

Butterfly Valve Type :

- ☐ Standard
- ☐ True Lug
- ☐ Pool Valve
- ☐ Wafer
- ☐ Other Valve Type _____
- ☐ Tandem Diverting
- ☐ Tandem Three Way

(Tandem 3-Way Orientation Document Required)

Body Material :

- ☐ PVC
- ☐ CPVC
- ☐ Polypropylene

O-ring Seals :

- ☐ Buna- N
- ☐ EPDM
- ☐ FKM
- ☐ Other

(If Other Explain) _____

Lug Materials :

- ☐ SS316
- ☐ Zinc

☐ Other Information: _____

Pneumatic ☐

Not all combinations may be available.

FailSafe Type - *(Position to which valve cycles upon air loss)*

- ☐ Double Acting (No FailSafe. Stays in last activated position)
- ☐ Spring Return - Close (FailSafe in closed position upon air loss)
- ☐ Spring Return - Open (FailSafe in open position upon air loss)
- ☐ Other: _____

Operating Air Pressure (psi) - *(Compressed air supply required to operate actuator)*

☐ 80-150 ☐ Other: _____

Override Type - *(Override used to cycle valve upon air loss)*

☐ Basic ☐ Declutchable ☐ Other: _____

Aux. Limit Switches- *(Additional mechanical switches to operate external lights, alarms etc. (set of 2)*

☐ SPDT- Mechanical ☐ SPDT - Proximity ☐ DPDT - Mechanical

Voltage Signal Type Specify Voltage: _____

Visual Indicator - *(Provides local visual valve position indication)*

☐ Low Profile ☐ Dome

Positioner Type - *(Positioner accepts an input signal from PLC to control valve cycle).*

☐ **Pneumatic Positioner** *(Air supply required to operate valve)*

Signal Pressure - *(Air pressure required to position the valve)*

☐ 3-15 psi ☐ Other: _____

☐ **Electro-Pneumatic Positioner** *(Air and voltage supply required to operate)*

Signal Voltage Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

☐ With Transmitter - *(Sends output signal to PLC to provide valve position)*

Transmitter Output ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

NEMA Rating - *(Enclosure rating indicates level of ingress protection from fluids, solids and gases)*

☐ 4 ☐ 4x ☐ Other: _____

Solenoid Valve - *(Regulates actuator intake/exhaust air supply)*

☐ 3 & 4 Way ☐ Dual Coil *(Double Acting Actuators only)* ☐ Other: _____

Solenoid Valve Voltage

☐ 115 VAC ☐ 230 VAC ☐ Other: _____

NEMA Rating - *(Enclosure rating indicates level of ingress protection from fluids and solids)*

☐ 4 ☐ 4x ☐ Other: _____

☐ **Other Options:**

_____

_____

Electric ☐

Not all combinations may be available.

☐ Basic Two Position (90 Degree Travel Standard)

FailSafe Position (if required)

- ☐ Fail Open - Open (FailSafe in open position upon power loss)
- ☐ Fail Close - Close (FailSafe in closed position upon power loss)

Note: On "Fail Safe" options two positions ONLY Override Not Recommended.

Voltage Supply Power:

☐ 115 VAC ☐ 230 VAC ☐ Other: _____

Frequency ☐ 50 Hertz ☐ 60 Hertz

Phase ☐ Single ☐ Three

Override Type - *(Override used to cycle valve upon power loss)*

☐ Basic ☐ Declutchable ☐ Other: _____

Duty Cycle *(Amount of work valve can accomplish before requiring rest)*

☐ 25% ☐ 75% ☐ Other/Min. Requirement: _____

NEMA Rating - *(Enclosure rating indicates level of ingress protection from fluids and solids)*

☐ 4 ☐ 4x ☐ Other: _____

Positioner Type - *(Positioner accepts an input signal from PLC to control valve cycle)*

☐ **Positioner with Transmitter**

Signal Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

Transmitter -*(Sends output signal to PLC to provide valve position)*

Signal Output ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

☐ **Positioner - NO Transmitter**

Signal Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

Auxiliary Limit Switches*(Additional mechanical switches to operate external lights, alarms etc.)*

☐ 2 ☐ 4 *(Set of 2 each)*

Standard Accessories -All options not available in all actuator combinations

- ☐ Torque Sensor
- ☐ Battery Backup
- ☐ Speed Control
- ☐ Heater & Thermostat ☐ [On @ 41F] [Off @ 60.8F]
- ☐ Torque Sensor
- ☐ LED Indicating Lights (red /green)
- ☐ 2 Wire Control Relay
- ☐ [On @ 69.8F] [Off @ 89.6F]
- ☐ [On @ 62.6F] [Off @ 80.6F]

☐ **Other Options:**

_____

_____

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Diaphragm Valve Actuation Questionnaire Checklist

Contact Name: _____ **Date:** _____

Business Name: _____

City: _____ **State:** _____ **Country:** _____

Phone: _____ **Fax:** _____ **E-mail:** _____

Project Name: _____

Diaphragm Valves: System Media Pressure (Required) psi _____ kPa _____ Bar _____

Nominal Size in _____ mm _____ cm _____

Valve Quantity Each _____

Diaphragm Valve Type :
- ☐ EPDM
- ☐ FKM
- ☐ PTFE/FKM
- ☐ PTFE/EPDM
- ☐ Other Valve Type _____

Body Material :
- ☐ PVC
- ☐ CPVC
- ☐ Low-Extractable PVC
- ☐ Polypropylene

End Connector O-rings 1/2" - 2":
- ☐ EPDM
- ☐ FKM
- ☐ PTFE/FKM
- ☐ PTFE/EPDM
- ☐ Other

(If Other Explain) _____

End Connector :
- ☐ Socket
- ☐ SR Threaded
- ☐ Flange
- ☐ Spigot

☐ Other information: _____

Not all combinations may be available.

☐ **Unitized Pneumatic**

☐ **Pneumatic**

FailSafe Type -*(Position to which valve cycles upon air loss)*

☐ Double Acting (No FailSafe. Stays in last activated position)

☐ Spring Return - Close (FailSafe in closed position upon air loss)

☐ Spring Return - Open (FailSafe in open position upon air loss)

☐ Other: _____

Operating Air Pressure (psi) - *(Compressed air supply required to operate actuator)*

☐ 80-116 ☐ Other: _____

Override Type - *(Override used to cycle valve upon air loss. Not available in sizes 1/2" -2")*

☐ Basic ☐ Declutchable ☐ Other: _____

Aux. Limit Switches- *(Additional mechanical switches to operate external lights, alarms etc. (set of 2)*

☐ SPDT- Mechanical ☐ SPDT - Proximity ☐ DPDT - Mechanical

Voltage Signal Type: Specify Voltage: _____

Visual Indicator - *(Provides local visual valve position indication)*

☐ Low Profile ☐ Dome

Positioner Type - *(Positioner accepts an input signal from PLC to control valve cycle).*

☐ **Pneumatic Positioner** *(Air supply required to operate valve)*

Signal Pressure - *(Air pressure required to position the valve)*

☐ 3-15 psi ☐ Other: _____

☐ **Electro-Pneumatic Positioner** *(Air and voltage supply required to operate)*

Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

☐ With Transmitter - *(Sends output signal to PLC to provide valve position)*

Transmitter Output ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

NEMA Rating -*(Enclosure rating indicates level of housing ingress protection from fluids and solids)*

☐ 4 ☐ 4x ☐ Other: _____

Solenoid Valve - *(Regulates actuator intake/exhaust air supply)*

☐ 3 way (Air-to-Spring) ☐ 4 way (*Double Acting Actuators only*) ☐ Other: _____

Solenoid Valve Voltage

☐ 115 VAC ☐ 230 VAC ☐ Other: _____

NEMA Rating -*(Enclosure rating indicates level of ingress protection from fluids, solids and gases)*

☐ 4 ☐ 4x ☐ Other: _____

☐ **Other Options:** _____

_____

Not all combinations may be available.

☐ **Electric Multi Turn**

Voltage Supply Power:

☐ 115 VAC ☐ 230 VAC ☐ Other: _____

Frequency ☐ 50 Hertz ☐ 60 Hertz

Phase ☐ Single ☐ Three

Override Type - *(Override used to cycle valve upon power loss)*

☐ Basic ☐ Declutchable ☐ Other: _____

Duty Cycle *(Amount of work valve can accomplish before requiring rest)*

☐ 25% ☐ 75% ☐ Other: _____

NEMA Rating - *(Enclosure rating indicates level of ingress protection from fluids and solids)*

☐ 4 ☐ 4x ☐ Other: _____

Positioner Type - *(Positioner accepts an input signal from PLC to control valve cycle)*

☐ **Positioner with Transmitter**

Signal Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

Transmitter -*(Sends output signal to PLC to provide valve position)*

Signal Output ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

☐ **Positioner - NO Transmitter**

Signal Input ☐ 4-20mA ☐ 0-10 VDC ☐ Other: _____

Auxiliary Limit Switches *(Additional mechanical switches to operate external lights, alarms etc.)*

☐ 2 ☐ 4 *(Set of 2 each)*

Standard Accessories -All options not available in all actuator combinations

☐ Torque Sensor

☐ Battery Backup ☐ LED Indicating Lights (red /green)

☐ Speed Control ☐ 2 Wire Control Relay

☐ Heater & Thermostat ☐ [On @ 41F] [Off @ 60.8F] ☐ [On @ 69.8F] [Off @ 89.6F]

☐ [On @ 62.6F] [Off @ 80.6F]

☐ **Other Options:** _____

_____

Irrigation & Hose Filters

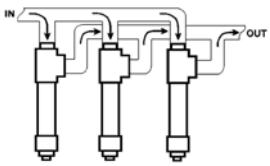
PRICING

Filters

Specially designed for agricultural and irrigation applications. Suitable for any application where cool, filtered water is required. Standard units utilize an internal-to-external filter cartridge. See following page for reverse flow (external to internal) filters.

- 200 psi Working Pressure Non-Shock @ 73°F (23°C)
- Filter Body is made from NSF®-PW Approved PVC Material
- Optional Screen Meshes
- Compact Design, Easy to Clean
- Lightweight, Easy to Install
- Filter Screens are designed using a standard perforated Stainless Steel Screen
- Mesh Sizes include an inner Stainless Steel Cloth with Spring Support (external cloth on reverse flow filters)
- Pressure loss: 100 GPM – 3 psi 50 GPM – 1.25 psi
- May be bushed to required pipe size (Bushings sold separately)

- When more than 100 gpm is required, filters may be installed in parallel
- When installing filter, allow space for removing filter screen for cleaning
- Remove stainless steel filter screen before solvent welding filter to pipe manifold
- When filters are installed in the direct sun, it is suggested the filter body be coated with a water-base latex paint having a high reflectance
- Installation in a shaded area is preferred



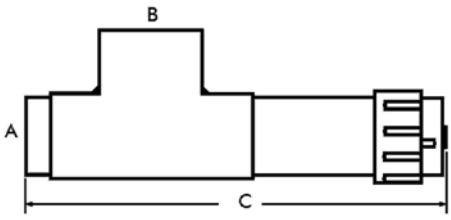
—CAUTION—

- WATER HAMMER MAY CAUSE SEVERE DAMAGE TO THE FILTER ASSEMBLY.
- BACK FLUSHING IS NOT RECOMMENDED.
- QUALITY GRADE THREAD SEALANT IS RECOMMENDED FOR ALL THREADED PVC CONNECTIONS.

Mesh Size	Hole Size (in.)	Part Number Extension
1/16" Holes	.0625	-16
1/32" Holes	.0312	-32
50 Mesh	.0117	-50
76 Mesh	.0095	-76
100 Mesh	.0059	-100
150 Mesh	.0041	-150
200 Mesh	.0029	-200

Additional Mesh Sizes available on request.

Filter Dimensions & Weights



Series	A Inlet		B Outlet	C Overall Length	Screen Length	Filter Approx. Weight
	Socket	Spigot				
FLR	2-1/2	3	4	28	24	8
MFLR	2-1/2	3	4	16	12	4-3/4

Filter Assembly with Stainless Steel Screen

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
100 GPM					
FL-16*	**2-1/2 /3 x 4**	1	0	020	555.11
FL-32*	**2-1/2 /3 x 4**	1	0	020	567.73
FL-50	**2-1/2 /3 x 4**	1	0	020	643.40
FL-76	**2-1/2 /3 x 4**	1	0	020	777.14
FL-100	**2-1/2 /3 x 4**	1	0	020	706.48
FL-150	**2-1/2 /3 x 4**	1	0	020	731.74
FL-200	**2-1/2 /3 x 4**	1	0	020	794.81
*Standard FL-16 and FL-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet. NOTE: Filter Assemblies are furnished standard with a 1-1/4" IPS tapped cap (FL4a) for use with a valve, or may be plugged off (plug not furnished). Optional cap available with 1/4" IPS tapping for use with a pressure gauge — specify FL-5a when ordering.					
50 GPM					
MFL-16*	**2-1/2 /3 x 2**	1	0	020	466.82
MFL-32*	**2-1/2 /3 x 2**	1	0	020	474.37
MFL-50	**2-1/2 /3 x 2**	1	0	020	489.48
MFL-76	**2-1/2 /3 x 2**	1	0	020	592.98
MFL-100	**2-1/2 /3 x 2**	1	0	020	517.27
MFL-150	**2-1/2 /3 x 2**	1	0	020	542.49
MFL-200	**2-1/2 /3 x 2**	1	0	020	605.57
*Standard FL-16 and FL-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet. NOTE: Filter Assemblies are furnished standard with a 1-1/4" IPS tapped cap (FL4a) for use with a valve, or may be plugged off (plug not furnished). Optional cap available with 1/4" IPS tapping for use with a pressure gauge — specify FL-5a when ordering.					

Filter Replacement Screens

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
100 GPM (24" Length)					
FL-16-1	**1/16" Holes**	3	0	020	222.04
FL-32-1	**1/32" Holes**	3	0	020	242.22
FL-50-1	**50 Mesh**	3	0	020	479.42

Filter Replacement Screens (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
100 GPM (24" Length)					
FL-76-1	**76 Mesh**	3	0	020	474.37
FL-100-1	**100 Mesh**	3	0	020	373.45
FL-150-1	**150 Mesh**	3	0	020	403.71
FL-200-1	**200 Mesh**	3	0	020	499.60
NOTE: When ordering replacement screens for FL and MFL Series Filters, please provide exact length of old screen within 1/64" to ensure proper fit of new screen in your filter body.					
50 GPM (12" Length)					
MFL-16-1	**1/16" Holes**	3	0	020	222.04
MFL-32-1	**1/32" Holes**	3	0	020	232.14
MFL-50-1	**50 Mesh**	3	0	020	252.33
MFL-76-1	**76 Mesh**	3	0	020	358.29
MFL-100-1	**100 Mesh**	3	0	020	277.57
MFL-150-1	**150 Mesh**	3	0	020	307.85
MFL-200-1	**200 Mesh**	3	0	020	378.46
NOTE: When ordering replacement screens for FL and MFL Series Filters, please provide exact length of old screen within 1/64" to ensure proper fit of new screen in your filter body.					

Filter Replacement Components

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
100 GPM Filter Body					
FL-11	**2-1/2 /3 X 4**	1	0	020	378.46
50 GPM Filter Body					
MFL-11	**2-1/2 /3 X 2**	1	0	020	290.17

Components for Old-Style Filters w/3" Bottom Cap

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Filter Cap w/Gasket					
FL-4A	**3X1-1/4**	70	0	020	31.55
FL-5A	**3X1/4**	70	0	020	31.55

Filters & Hose Filters

Filters

Components for Old-Style Filters w/3" Bottom Cap

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Cap Gasket Only					
FCG-5	**3**	2	0	020	10.04

Components for New-Style Filters w/4" Bottom Cap

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Filter Cap w/O-rings					
FL-4B	**4X1-1/4**	25	0	020	57.97

Components for New-Style Filters w/4" Bottom Cap (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Filter Cap w/O-rings					
FL-5B	**4X1/4**	1	0	020	93.78
Includes Cap with Cap O-ring (1) and bottom Filter Bushing O-ring (1)					
Cap O-Ring Only					
B-242	**- - -**	100	0	901	.83
Filter Bushing O-Rings					
B-335-60	**- - -**	100	0	901	3.66
Each filter uses two (2) Filter Bushing O-rings for top and bottom screen seals					

Hose Filters

7 GPM Steel

7 GPM Plastic/Nylon

NOTE: It is recommended to connect the inlet of the Hose Filter to the system with a swivel adapter such as Spears® AP Series, to facilitate servicing of the filter element (refer to Hose Fittings).

Mesh Size	Hole Size (in.)	Part Number Extension
20 Mesh	.0331	-20
30 Mesh	.0232	-30
50 Mesh	.0117	-50
80 Mesh	.0070	-80
100 Mesh	.0059	-100
150 Mesh	.0041	-150
200 Mesh	.0029	-200

Additional Mesh Sizes available on request.
Example: HF-50 = 50 Mesh

7 GPM Hose Filter Assembly

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
with Stainless Steel Screen					
HF-20	**3/4**	10	60	020	18.71
HF-30	**3/4**	10	60	020	18.71
HF-50	**3/4**	10	60	020	18.71
HF-80	**3/4**	10	60	020	18.71
HF-100	**3/4**	10	60	020	19.43
HF-150	**3/4**	10	60	020	19.67
HF-200	**3/4**	10	60	020	20.20
with Plastic/Nylon Screen					
HF-150N	**3/4**	10	60	020	19.67

Hose Filter Replacement Screen

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Stainless Steel Screen					
HF-20-1W	**5**	25	150	020	6.84
HF-30-1W	**5**	25	150	020	6.84
HF-50-1W	**5**	25	150	020	6.84
HF-80-1W	**5**	25	150	020	6.84
HF-100-1W	**5**	25	150	020	10.11
HF-150-1W	**5**	25	150	020	10.11
HF-200-1W	**5**	25	150	020	10.11
Plastic/Nylon Screen					
HF-150-1NW	**4-3/4**	25	150	020	10.11

7 GPM Hose Filter Body Components

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Hose Filter Body w/o screen					
HF	**3/4**	10	60	020	14.07
Hose Washer					
W-100	**3/4**	50	1500	020	.15
Screen Washer					
S-W	**- - -**	600	0	901	.21

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

In-line Tee Style Filters and Reverse In−line Tee Style Filters

100 GPM and 50 GPM • PVC White • Buna O-ring Seal

100 GPM

50 GPM

- In-line Design Simplifies Installation.
- Allows Easy Parallel Filter Configuration for Increased Flow and Filtration.
- Removable Type 304 Stainless Steel Filter Cartridges in Assorted Perforations and Screen Mesh.
- Standard Flow Filter (Internal-to-External) Traps Sediment on Inside of Cartridge, Reverse Flow Filter (External-to-Internal) Traps Sediment on Outside of Cartridge.
- Convenient Bottom Drain with 1-1/4" NPT Stainless Steel Reinforced Plastic Thread and Plug. Optional Cap with 1/4" Outlet Available.
- 200 psi Working Pressure for Water @ 73°F (23°C).
- Manufactured from NSF® Certified PVC Material.

Mesh Size	Hole Size (in.)	Part Number Extension
1/16" Holes	.0625	-16
1/32" Holes	.0312	-32
50 Mesh	.0117	-50
76 Mesh	.0095	-76
100 Mesh	.0059	-100
150 Mesh	.0041	-150
200 Mesh	.0029	-200

Additional Mesh Sizes available on request.
Example: TF-50 = 50 Mesh

100 GPM PVC White Tee Filter

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Buna-N O-ring Seal with Stainless Steel Screen					
TF-16*	2-1/2 /3 x 2-1/2 /3	1	0	020	555.11
TF-32*	2-1/2 /3 x 2-1/2 /3	1	0	020	567.73
TF-50	2-1/2 /3 x 2-1/2 /3	1	0	020	643.40
TF-76	2-1/2 /3 x 2-1/2 /3	1	0	020	777.14
TF-100	2-1/2 /3 x 2-1/2 /3	1	0	020	706.48
TF-150	2-1/2 /3 x 2-1/2 /3	1	0	020	731.74
TF-200	2-1/2 /3 x 2-1/2 /3	1	0	020	794.81

50 GPM PVC White Tee Filter

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Buna-N O-ring Seal with Stainless Steel Screen					
MTF-16*	2-1/2 /3 x 2-1/2 /3	1	0	020	466.82
MTF-32*	2-1/2 /3 x 2-1/2 /3	1	0	020	474.37
MTF-50	2-1/2 /3 x 2-1/2 /3	1	0	020	489.48
MTF-76	2-1/2 /3 x 2-1/2 /3	1	0	020	592.98
MTF-100	2-1/2 /3 x 2-1/2 /3	1	0	020	517.27
MTF-150	2-1/2 /3 x 2-1/2 /3	1	0	020	542.49
MTF-200	2-1/2 /3 x 2-1/2 /3	1	0	020	605.57

100 GPM PVC White Reverse Tee Filter

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Buna-N O-ring Seal with Stainless Steel Screen					
TF-16*	2-1/2 /3 x 2-1/2 /3	1	0	020	555.11
TF-32*	2-1/2 /3 x 2-1/2 /3	1	0	020	567.73
TFR-50	2-1/2 /3 x 2-1/2 /3	1	0	020	643.40
TFR-76	2-1/2 /3 x 2-1/2 /3	1	0	020	777.14
TFR-100	2-1/2 /3 x 2-1/2 /3	1	0	020	706.48
TFR-150	2-1/2 /3 x 2-1/2 /3	1	0	020	731.74
TFR-200	2-1/2 /3 x 2-1/2 /3	1	0	020	794.81

50 GPM PVC White Reverse Tee Filter

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Buna-N O-ring Seal with Stainless Steel Screen					
MTF-16*	2-1/2 /3 x 2-1/2 /3	1	0	020	466.82
MTF-32*	2-1/2 /3 x 2-1/2 /3	1	0	020	474.37
MTFR-50	2-1/2 /3 x 2-1/2 /3	1	0	020	489.48
MTFR-76	2-1/2 /3 x 2-1/2 /3	1	0	020	592.98
MTFR-100	2-1/2 /3 x 2-1/2 /3	1	0	020	517.27
MTFR-150	2-1/2 /3 x 2-1/2 /3	1	0	020	542.49
MTFR-200	2-1/2 /3 x 2-1/2 /3	1	0	020	605.57

*Standard TF-16, TF-32, MTF-16 & MTF-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

100 GPM Filter Replacement Screens for TF Filters (24" Length)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
FL-16-1	**1/16" Holes**	3	0	020	222.04
FL-32-1	**1/32" Holes**	3	0	020	242.22
FL-50-1	**50 Mesh**	3	0	020	479.42

100 GPM Filter Replacement Screens for TF Filters (24" Length) (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
FL-76-1	**76 Mesh**	3	0	020	474.37
FL-100-1	**100 Mesh**	3	0	020	373.45
FL-150-1	**150 Mesh**	3	0	020	403.71
FL-200-1	**200 Mesh**	3	0	020	499.60

NOTE: When ordering replacement screens for TF and MTF Series Filters, please provide exact length of old screen within 1/64" to insure proper fit of new screen in your filter body.

50 GPM Filter Replacement Screens for MTF Filters (12" Length)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
MFL-16-1	**1/16" Holes**	3	0	020	222.04
MFL-32-1	**1/32" Holes**	3	0	020	232.14
MFL-50-1	**50 Mesh**	3	0	020	252.33
MFL-76-1	**76 Mesh**	3	0	020	358.29
MFL-100-1	**100 Mesh**	3	0	020	277.57
MFL-150-1	**150 Mesh**	3	0	020	307.85
MFL-200-1	**200 Mesh**	3	0	020	378.46

NOTE: When ordering replacement screens for TF and MTF Series Filters, please provide exact length of old screen within 1/64" to insure proper fit of new screen in your filter body.

100 GPM Reverse Flow Filter Replacement Screens for TFR Filters (24" Length)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
FL-16-1	**1/16" Holes**	3	0	020	222.04
FL-32-1	**1/32" Holes**	3	0	020	242.22
FLR-50-1	**50 Mesh**	3	0	020	243.39
FLR-76-1	**76 Mesh**	3	0	020	474.37
FLR-100-1	**100 Mesh**	3	0	020	337.02
FLR-150-1	**150 Mesh**	3	0	020	383.52
FLR-200-1	**200 Mesh**	3	0	020	474.62

50 GPM Reverse Flow Filter Replacement Screens for MTFR Filters (12" Length)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
MFL-16-1	**1/16" Holes**	3	0	020	222.04
MFL-32-1	**1/32" Holes**	3	0	020	232.14
MFLR-50-1	**50 Mesh**	3	0	020	256.21
MFLR-76-1	**76 Mesh**	3	0	020	358.29
MFLR-100-1	**100 Mesh**	3	0	020	263.67
MFLR-150-1	**150 Mesh**	3	0	020	292.44
MFLR-200-1	**200 Mesh**	3	0	020	359.53

Reverse Flow Filters

100 GPM

50 GPM

- Filter cartridge specially designed for external-to-internal filtration
- Traps sediment and debris on outside of filter (standard filters use internal-to-external flow)
- 100 GPM and 50 GPM styles available

100 GPM Reverse Flow Filter Assembly with Stainless Steel Screen

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Socket x Socket/Spigot					
FLR-16*	**4X2-1/2 /3**	1	0	020	555.11
FLR-32*	**4X2-1/2 /3**	1	0	020	567.73
FLR-50	**4X2-1/2 /3**	1	0	020	643.40
FLR-76	**4X2-1/2 /3**	1	0	020	777.14
FLR-100	**4X2-1/2 /3**	1	0	020	706.48
FLR-150	**4X2-1/2 /3**	1	0	020	731.74
FLR-200	**4X2-1/2 /3**	1	0	020	794.81
*Standard FL-16 and FL-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.					

50 GPM Filter Assembly with Stainless Steel Screen

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Socket x Socket/Spigot					
MFLR-16*	**2X2-1/2 /3**	1	0	020	466.82
MFLR-32*	**2X2-1/2 /3**	1	0	020	474.37
MFLR-50	**2X2-1/2 /3**	1	0	020	489.48
MFLR-76	**2X2-1/2 /3**	1	0	020	592.98
MFLR-100	**2X2-1/2 /3**	1	0	020	517.27
MFLR-150	**2X2-1/2 /3**	1	0	020	542.49
MFLR-200	**2X2-1/2 /3**	1	0	020	605.57
*Standard MFL-16 and MFL-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.					

100 GPM Reverse Flow Filter Replacement Screens (24" Length)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
FL-16-1	**1/16" Holes**	3	0	020	222.04
FL-32-1	**1/32" Holes**	3	0	020	242.22
FLR-50-1	**50 Mesh**	3	0	020	243.39
FLR-76-1	**76 Mesh**	3	0	020	474.37
FLR-100-1	**100 Mesh**	3	0	020	337.02
FLR-150-1	**150 Mesh**	3	0	020	383.52
FLR-200-1	**200 Mesh**	3	0	020	474.62

50 GPM Reverse Flow Filter Replacement Screens (12" Length)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
MFL-16-1	**1/16" Holes**	3	0	020	222.04
MFL-32-1	**1/32" Holes**	3	0	020	232.14
MFLR-50-1	**50 Mesh**	3	0	020	256.21
MFLR-76-1	**76 Mesh**	3	0	020	358.29
MFLR-100-1	**100 Mesh**	3	0	020	263.67
MFLR-150-1	**150 Mesh**	3	0	020	292.44
MFLR-200-1	**200 Mesh**	3	0	020	359.53

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Industrial Strainers & Filters

PRICING

In-line Tee-Style Filters

Socket/Spigot

All Filters are 2-1/2"x 2-1/2"
Inlet/Outlet Connection

Note: 2-1/2" Socket is also a 3" Spigot

Pressure Rating @ 73°F (23°C), Water
200 psi

Mesh Size Codes

Mesh Size	Size Code
1/16" Holes	**16**
1/32" Holes	**32**
50 Mesh	**50**
76 Mesh	**76**
100 Mesh	**100**
150 Mesh	**150**
200 Mesh	**200**

Note: Standard flow filtration path is internal to external. Reverse-flow filtration flows from external to internal side of filter screen.

100 GPM PVC Gray Tee Filter

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Stainless Steel Screen					
16	TF2-16 **722.18**	TF3-16 **775.85**	1	0	295
32	TF2-32 **738.46**	TF3-32 **793.40**	1	0	295
50	TF2-50 **836.89**	TF3-50 **947.41**	1	0	295
76	TF2-76 **1010.88**	TF3-76 **1086.13**	1	0	295
100	TF2-100 **918.88**	TF3-100 **987.20**	1	0	295
150	TF2-150 **951.77**	TF3-150 **1022.47**	1	0	295
200	TF2-200 **1033.93**	TF3-200 **1110.76**	1	0	295

Standard TF2-16, TF2-32, TF3-16, TF3-32, MTF2-16, MTF2-32, MTF3-16 & MTF3-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

50 GPM PVC Gray Tee Filter

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Stainless Steel Screen					
16	MTF2-16 **607.18**	MTF3-16 **652.27**	1	0	295
32	MTF2-32 **617.01**	MTF3-32 **662.93**	1	0	295
50	MTF2-50 **636.66**	MTF3-50 **684.02**	1	0	295
76	MTF2-76 **771.17**	MTF3-76 **828.54**	1	0	295
100	MTF2-100 **672.75**	MTF3-100 **722.68**	1	0	295
150	MTF2-150 **705.62**	MTF3-150 **758.12**	1	0	295
200	MTF2-200 **787.60**	MTF3-200 **846.25**	1	0	295

Standard TF2-16, TF2-32, TF3-16, TF3-32, MTF2-16, MTF2-32, MTF3-16 & MTF3-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

100 GPM PVC Gray Reverse Tee Filter

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Stainless Steel Screen					
16	TF2-16 **722.18**	TF3-16 **775.85**	1	0	295
32	TF2-32 **738.46**	TF3-32 **793.40**	1	0	295
50	TFR2-50 **836.89**	TFR3-50 **899.08**	1	0	295
76	TFR2-76 **1010.88**	TFR3-76 **1086.13**	1	0	295
100	TFR2-100 **918.88**	TFR3-100 **987.20**	1	0	295
150	TFR2-150 **951.77**	TFR3-150 **1022.47**	1	0	295
200	TFR2-200 **1033.93**	TFR3-200 **1110.76**	1	0	295

100 GPM PVC Gray Reverse Tee Filter (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Stainless Steel Screen					

Standard TF2-16, TF2-32, TF3-16, TF3-32, MTF2-16, MTF2-32, MTF3-16 & MTF3-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

50 GPM PVC Gray Reverse Tee Filter

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Stainless Steel Screen					
16	MTF2-16 **607.18**	MTF3-16 **652.27**	1	0	295
32	MTF2-32 **617.01**	MTF3-32 **662.93**	1	0	295
50	MTFR2-50 **636.66**	MTFR3-50 **684.02**	1	0	295
76	MTFR2-76 **771.17**	MTFR3-76 **828.54**	1	0	295
100	MTFR2-100 **672.75**	MTFR3-100 **722.68**	1	0	295
150	MTFR2-150 **705.62**	MTFR3-150 **758.12**	1	0	295
200	MTFR2-200 **787.60**	MTFR3-200 **846.25**	1	0	295

Standard TF2-16, TF2-32, TF3-16, TF3-32, MTF2-16, MTF2-32, MTF3-16 & MTF3-32 can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

100 GPM CPVC Tee Filter

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Stainless Steel Screen					
16	TF2-16C **934.36**	TF3-16C **1003.79**	1	0	296
32	TF2-32C **955.31**	TF3-32C **1026.52**	1	0	296
50	TF2-50C **1082.91**	TF3-50C **1163.12**	1	0	296
76	TF2-76C **1307.78**	TF3-76C **1405.26**	1	0	296
100	TF2-100C **1188.73**	TF3-100C **1277.18**	1	0	296
150	TF2-150C **1231.25**	TF3-150C **1322.93**	1	0	296
200	TF2-200C **1337.60**	TF3-200C **1436.98**	1	0	296

Standard TF2-16C, TF2-32C, TF3-16C, TF3-32C, MTF2-16C, MTF2-32C, MTF3-16C & MTF3-32C can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

50 GPM CPVC Tee Filter

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Stainless Steel Screen					
16	MTF2-16C **785.51**	MTF3-16C **843.82**	1	0	296
32	MTF2-32C **798.24**	MTF3-32C **857.68**	1	0	296
50	MTF2-50C **823.68**	MTF3-50C **884.92**	1	0	296
76	MTF2-76C **997.68**	MTF3-76C **1071.94**	1	0	296

50 GPM CPVC Tee Filter (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Stainless Steel Screen					
100	MTF2-100C **870.24**	MTF3-100C **934.85**	1	0	296
150	MTF2-150C **912.93**	MTF3-150C **979.63**	1	0	296
200	MTF2-200C **1018.96**	MTF3-200C **1094.81**	1	0	296

Standard TF2-16C, TF2-32C, TF3-16C, TF3-32C, MTF2-16C, MTF2-32C, MTF3-16C & MTF3-32C can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

100 GPM CPVC Reverse Tee Filter

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Stainless Steel Screen					
16	TF2-16C **934.36**	TF3-16C **1003.79**	1	0	296
32	TF2-32C **955.31**	TF3-32C **1026.52**	1	0	296
50	TFR2-50C **1082.91**	TFR3-50C **1163.12**	1	0	296
76	TFR2-76C **1307.78**	TFR3-76C **1405.26**	1	0	296
100	TFR2-100C **1188.73**	TFR3-100C **1277.18**	1	0	296
150	TFR2-150C **1231.25**	TFR3-150C **1322.93**	1	0	296
200	TFR2-200C **1337.60**	TFR3-200C **1436.98**	1	0	296

Standard TF2-16C, TF2-32C, TF3-16C, TF3-32C, MTF2-16C, MTF2-32C, MTF3-16C & MTF3-32C can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

50 GPM CPVC Reverse Tee Filter

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Stainless Steel Screen					
16	MTF2-16C **785.51**	MTF3-16C **843.82**	1	0	296
32	MTF2-32C **798.24**	MTF3-32C **857.68**	1	0	296
50	MTFR2-50C **823.68**	MTFR3-50C **884.92**	1	0	296
76	MTFR2-76C **997.68**	MTFR3-76C **1071.94**	1	0	296
100	MTFR2-100C **870.24**	MTFR3-100C **934.85**	1	0	296
150	MTFR2-150C **912.93**	MTFR3-150C **979.63**	1	0	296
200	MTFR2-200C **1018.96**	MTFR3-200C **1094.81**	1	0	296

Standard TF2-16C, TF2-32C, TF3-16C, TF3-32C, MTF2-16C, MTF2-32C, MTF3-16C & MTF3-32C can be utilized as Reverse Flow Filters by reversing installation from current inlet to outlet and current outlet to inlet.

100 GPM Filter Replacement Screens for TF Filters

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
FL-16-1	**1/16" Holes**	3	0	020	222.04
FL-32-1	**1/32" Holes**	3	0	020	242.22
FL-50-1	**50 Mesh**	3	0	020	479.42
FL-76-1	**76 Mesh**	3	0	020	474.37
FL-100-1	**100 Mesh**	3	0	020	373.45
FL-150-1	**150 Mesh**	3	0	020	403.71
FL-200-1	**200 Mesh**	3	0	020	499.60

NOTE: When ordering replacement screens for TF Series Filters, please provide exact length of old screen within 1/64" to insure proper fit of new screen in your filter body.

50 GPM Filter Replacement Screens for MTF Filters

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
MFL-16-1	**1/16" Holes**	3	0	020	222.04

50 GPM Filter Replacement Screens for MTF Filters (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
MFL-32-1	**1/32" Holes**	3	0	020	232.14
MFL-50-1	**50 Mesh**	3	0	020	252.33
MFL-76-1	**76 Mesh**	3	0	020	358.29
MFL-100-1	**100 Mesh**	3	0	020	277.57
MFL-150-1	**150 Mesh**	3	0	020	307.85
MFL-200-1	**200 Mesh**	3	0	020	378.46

NOTE: When ordering replacement screens for MTF Series Filters, please provide exact length of old screen within 1/64" to insure proper fit of new screen in your filter body.

100 GPM Reverse Flow Filter Replacement Screens for TFR Filters

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
FL-16-1	**1/16" Holes**	3	0	020	222.04
FL-32-1	**1/32" Holes**	3	0	020	242.22
FLR-50-1	**50 Mesh**	3	0	020	243.39
FLR-76-1	**76 Mesh**	3	0	020	474.37
FLR-100-1	**100 Mesh**	3	0	020	337.02
FLR-150-1	**150 Mesh**	3	0	020	383.52
FLR-200-1	**200 Mesh**	3	0	020	474.62

50 GPM Reverse Flow Filter Replacement Screens for MTFR Filters

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
MFL-16-1	**1/16" Holes**	3	0	020	222.04
MFL-32-1	**1/32" Holes**	3	0	020	232.14
MFLR-50-1	**50 Mesh**	3	0	020	256.21
MFLR-76-1	**76 Mesh**	3	0	020	358.29
MFLR-100-1	**100 Mesh**	3	0	020	263.67
MFLR-150-1	**150 Mesh**	3	0	020	292.44
MFLR-200-1	**200 Mesh**	3	0	020	359.53

Y-Strainers

Socket

Flanged

SR Thread

True Union

Part numbers shown reflect a mesh size of 8. For different mesh sizes, substitute Mesh Code in part number as specified in chart below.

U.S. Standard Mesh Sieve No.	Sieve Opening Size (in.)	Part Number Mesh Code
8	0.094	8
12	0.062	12
20	0.033	20
30	0.024	30

Example: for 12 Mesh, specify
YS22P12-005
Additional Mesh Sizes available on request.

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" 150 psi
3" - 4" 90 psi

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Temperature/Pressure
De-ratings Apply

PVC - Socket Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Prod Code
1/2	YS22P8-005 **87.04**	YS22S8-005 **172.24**	YS32P8-005 **95.06**	YS32S8-005 **189.25**	1	18	102
3/4	YS22P8-007 **97.25**	YS22S8-007 **196.97**	YS32P8-007 **107.17**	YS32S8-007 **222.15**	1	18	102
1	YS22P8-010 **106.94**	YS22S8-010 **233.65**	YS32P8-010 **117.74**	YS32S8-010 **256.88**	1	12	102
1-1/4	YS22P8-012 **181.08**	YS22S8-012 **337.12**	YS32P8-012 **201.22**	YS32S8-012 **371.68**	1	8	102
1-1/2	YS22P8-015 **191.60**	YS22S8-015 **359.36**	YS32P8-015 **212.92**	YS32S8-015 **394.60**	1	8	102
2	YS22P8-020 **225.07**	YS22S8-020 **405.91**	YS32P8-020 **250.05**	YS32S8-020 **450.99**	1	4	102
3	YS22P8-030 **518.73**	YS22S8-030 **700.77**	YS32P8-030 **557.40**	YS32S8-030 **739.44**	1	0	102
4	YS22P8-040 **906.98**	YS22S8-040 **1135.74**	YS32P8-040 **976.26**	YS32S8-040 **1204.99**	1	0	102

PVC - SR Threaded Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Prod Code
1/2	YS21P8-005SR **91.73**	YS21S8-005SR **176.94**	YS31P8-005SR **99.72**	YS31S8-005SR **193.93**	1	18	102
3/4	YS21P8-007SR **104.00**	YS21S8-007SR **203.71**	YS31P8-007SR **113.89**	YS31S8-007SR **228.94**	1	12	102
1	YS21P8-010SR **116.95**	YS21S8-010SR **243.69**	YS31P8-010SR **127.76**	YS31S8-010SR **266.94**	1	8	102
1-1/4	YS21P8-012SR **197.42**	YS21S8-012SR **353.45**	YS31P8-012SR **217.57**	YS31S8-012SR **388.01**	1	8	102
1-1/2	YS21P8-015SR **211.67**	YS21S8-015SR **379.44**	YS31P8-015SR **232.94**	YS31S8-015SR **414.79**	1	4	102
2	YS21P8-020SR **259.99**	YS21S8-020SR **440.82**	YS31P8-020SR **284.99**	YS31S8-020SR **485.93**	1	0	102
3	YS21P8-030SR **562.40**	YS21S8-030SR **744.27**	YS31P8-030SR **600.91**	YS31S8-030SR **782.93**	1	0	102

PVC - SR Threaded Ends (continued)

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Prod Code
4	YS21P8-040SR **952.08**	YS21S8-040SR **1180.84**	YS31P8-040SR **1250.13**	YS31S8-040SR **1250.13**	1	0	102

PVC - Flanged Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Prod Code
1/2	YS23P8-005 **142.27**	YS23S8-005 **240.64**	YS33P8-005 **157.93**	YS33S8-005 **314.49**	1	8	102
3/4	YS23P8-007 **151.15**	YS23S8-007 **274.78**	YS33P8-007 **163.91**	YS33S8-007 **360.43**	1	8	102
1	YS23P8-010 **161.39**	YS23S8-010 **303.73**	YS33P8-010 **175.81**	YS33S8-010 **422.07**	1	8	102
1-1/4	YS23P8-012 **258.72**	YS23S8-012 **445.11**	YS33P8-012 **282.06**	YS33S8-012 **604.78**	1	4	102
1-1/2	YS23P8-015 **288.31**	YS23S8-015 **481.06**	YS33P8-015 **320.13**	YS33S8-015 **648.98**	1	4	102
2	YS23P8-020 **362.47**	YS23S8-020 **572.98**	YS33P8-020 **397.73**	YS33S8-020 **737.27**	1	0	102
3	YS23P8-030 **800.66**	YS23S8-030 **982.68**	YS33P8-030 **860.24**	YS33S8-030 **1042.78**	1	0	102
4	YS23P8-040 **1290.39**	YS23S8-040 **1519.16**	YS33P8-040 **1387.05**	YS33S8-040 **1615.79**	1	0	102

PVC Clear - Socket Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Prod Code
1/2	YS22P8-005CL **87.04**	YS22S8-005CL **172.24**	YS32P8-005CL **95.06**	YS32S8-005CL **189.25**	1	18	103
3/4	YS22P8-007CL **97.25**	YS22S8-007CL **196.97**	YS32P8-007CL **107.17**	YS32S8-007CL **222.15**	1	18	103
1	YS22P8-010CL **106.94**	YS22S8-010CL **233.65**	YS32P8-010CL **117.74**	YS32S8-010CL **256.88**	1	12	103
1-1/4	YS22P8-012CL **181.08**	YS22S8-012CL **337.12**	YS32P8-012CL **201.22**	YS32S8-012CL **371.68**	1	8	103
1-1/2	YS22P8-015CL **191.60**	YS22S8-015CL **359.36**	YS32P8-015CL **212.92**	YS32S8-015CL **394.60**	1	8	103
2	YS22P8-020CL **225.07**	YS22S8-020CL **439.60**	YS32P8-020CL **250.05**	YS32S8-020CL **450.99**	1	4	103
3	YS22P8-030CL **518.73**	YS22S8-030CL **700.77**	YS32P8-030CL **557.40**	YS32S8-030CL **739.44**	1	0	103
4	YS22P8-040CL **906.98**	YS22S8-040CL **1135.74**	YS32P8-040CL **976.26**	YS32S8-040CL **1204.99**	1	0	103

PVC Clear - SR Threaded Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Prod Code
1/2	YS21P8-005CLSR **91.73**	YS21S8-005CLSR **176.94**	YS31P8-005CLSR **99.72**	YS31S8-005CLSR **193.93**	1	18	103
3/4	YS21P8-007CLSR **104.00**	YS21S8-007CLSR **203.71**	YS31P8-007CLSR **113.89**	YS31S8-007CLSR **228.94**	1	12	103
1	YS21P8-010CLSR **116.95**	YS21S8-010CLSR **243.69**	YS31P8-010CLSR **127.76**	YS31S8-010CLSR **266.94**	1	8	103
1-1/4	YS21P8-012CLSR **197.42**	YS21S8-012CLSR **353.45**	YS31P8-012CLSR **217.57**	YS31S8-012CLSR **388.01**	1	8	103
1-1/2	YS21P8-015CLSR **211.67**	YS21S8-015CLSR **379.44**	YS31P8-015CLSR **232.94**	YS31S8-015CLSR **414.79**	1	4	103
2	YS21P8-020CLSR **259.99**	YS21S8-020CLSR **440.82**	YS31P8-020CLSR **284.99**	YS31S8-020CLSR **485.93**	1	0	103
3	YS21P8-030CLSR **562.40**	YS21S8-030CLSR **744.27**	YS31P8-030CLSR **600.91**	YS31S8-030CLSR **782.93**	1	0	103
4	YS21P8-040CLSR **952.08**	YS21S8-040CLSR **1180.84**	YS31P8-040CLSR **1250.13**	YS31S8-040CLSR **1250.13**	1	0	103

PVC Clear - Flanged Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Prod Code
1/2	YS23P8-005CL **142.27**	YS23S8-005CL **240.64**	YS33P8-005CL **157.93**	YS33S8-005CL **314.49**	1	8	103
3/4	YS23P8-007CL **151.15**	YS23S8-007CL **274.78**	YS33P8-007CL **163.91**	YS33S8-007CL **360.43**	1	8	103
1	YS23P8-010CL **161.39**	YS23S8-010CL **303.73**	YS33P8-010CL **175.81**	YS33S8-010CL **422.07**	1	8	103
1-1/4	YS23P8-012CL **258.72**	YS23S8-012CL **445.11**	YS33P8-012CL **282.06**	YS33S8-012CL **604.78**	1	4	103
1-1/2	YS23P8-015CL **288.31**	YS23S8-015CL **481.06**	YS33P8-015CL **320.13**	YS33S8-015CL **648.98**	1	4	103

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Clear - Flanged Ends (continued)

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Prod Code
2	YS23P8-020CL **362.47**	YS23S8-020CL **572.98**	YS33P8-020CL **397.73**	YS33S8-020CL **737.27**	1	0	103
3	YS23P8-030CL **800.66**	YS23S8-030CL **982.68**	YS33P8-030CL **860.24**	YS33S8-030CL **1042.78**	1	0	103
4	YS23P8-040CL **1290.39**	YS23S8-040CL **1519.16**	YS33P8-040CL **1387.05**	YS33S8-040CL **1615.79**	1	0	103

CPVC - Socket Ends

Size	EPDM Seals CPVC Screen	EPDM Seals SS Screen	FKM Seals CPVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Prod Code
1/2	YS22C8-005C **232.20**	YS22S8-005C **319.13**	YS32C8-005C **260.02**	YS32S8-005C **358.72**	1	18	104
3/4	YS22C8-007C **255.13**	YS22S8-007C **362.93**	YS32C8-007C **287.23**	YS32S8-007C **407.93**	1	18	104
1	YS22C8-010C **324.19**	YS22S8-010C **448.89**	YS32C8-010C **365.17**	YS32S8-010C **503.75**	1	12	104
1-1/4	YS22C8-012C **470.62**	YS22S8-012C **647.68**	YS32C8-012C **566.36**	YS32S8-012C **685.83**	1	8	104
1-1/2	YS22C8-015C **505.52**	YS22S8-015C **669.04**	YS32C8-015C **587.58**	YS32S8-015C **748.02**	1	8	104
2	YS22C8-020C **715.75**	YS22S8-020C **838.72**	YS32C8-020C **756.31**	YS32S8-020C **914.78**	1	4	104
3	YS22C8-030C **853.81**	YS22S8-030C **1021.35**	YS32C8-030C **900.54**	YS32S8-030C **1098.69**	1	0	104
4	YS22C8-040C **1478.88**	YS22S8-040C **1691.52**	YS32C8-040C **1590.03**	YS32S8-040C **1818.78**	1	0	104

CPVC - SR Threaded Ends

Size	EPDM Seals CPVC Screen	EPDM Seals SS Screen	FKM Seals CPVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Prod Code
1/2	YS21C8-005CSR **240.65**	YS21S8-005CSR **327.58**	YS31C8-005CSR **268.48**	YS31S8-005CSR **367.18**	1	18	104
3/4	YS21C8-007CSR **264.18**	YS21S8-007CSR **371.96**	YS31C8-007CSR **296.27**	YS31S8-007CSR **416.98**	1	12	104
1	YS21C8-010CSR **344.92**	YS21S8-010CSR **469.59**	YS31C8-010CSR **385.91**	YS31S8-010CSR **524.43**	1	8	104
1-1/4	YS21C8-012CSR **491.91**	YS21S8-012CSR **632.51**	YS31C8-012CSR **587.65**	YS31S8-012CSR **707.15**	1	8	104
1-1/2	YS21C8-015CSR **530.17**	YS21S8-015CSR **693.68**	YS31C8-015CSR **667.73**	YS31S8-015CSR **772.65**	1	4	104
2	YS21C8-020CSR **750.85**	YS21S8-020CSR **873.82**	YS31C8-020CSR **841.61**	YS31S8-020CSR **949.85**	1	0	104
3	YS21C8-030CSR **897.31**	YS21S8-030CSR **1064.85**	YS31C8-030CSR **960.15**	YS31S8-030CSR **1142.18**	1	0	104
4	YS21C8-040CSR **1523.98**	YS21S8-040CSR **1736.64**	YS31C8-040CSR **1635.14**	YS31S8-040CSR **1863.91**	1	0	104

CPVC - Flanged Ends

Size	EPDM Seals CPVC Screen	EPDM Seals SS Screen	FKM Seals CPVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Prod Code
1/2	YS23C8-005C **374.44**	YS23S8-005C **459.72**	YS33C8-005C **415.61**	YS33S8-005C **512.87**	1	8	104
3/4	YS23C8-007C **397.73**	YS23S8-007C **489.04**	YS33C8-007C **431.29**	YS33S8-007C **545.78**	1	8	104
1	YS23C8-010C **424.71**	YS23S8-010C **543.37**	YS33C8-010C **462.66**	YS33S8-010C **605.78**	1	8	104
1-1/4	YS23C8-012C **680.81**	YS23S8-012C **838.08**	YS33C8-012C **742.20**	YS33S8-012C **933.22**	1	4	104
1-1/2	YS23C8-015C **758.69**	YS23S8-015C **931.21**	YS33C8-015C **842.40**	YS33S8-015C **1038.88**	1	4	104
2	YS23C8-020C **953.87**	YS23S8-020C **1164.35**	YS33C8-020C **1046.67**	YS33S8-020C **1218.31**	1	0	104
3	YS23C8-030C **1303.27**	YS23S8-030C **1472.44**	YS33C8-030C **1300.05**	YS33S8-030C **1583.59**	1	0	104
4	YS23C8-040C **2086.21**	YS23S8-040C **2298.85**	YS33C8-040C **2244.07**	YS33S8-040C **2472.85**	1	0	104

PVC Gray - True Union Socket Ends

Size	EPDM PVC Screen	EPDM SS Screen	FKM PVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Prod Code
1/2	YS2AP8-005 **91.63**	YS2AS8-005 **181.29**	YS3AP8-005 **100.07**	YS3AS8-005 **199.22**	1	12	102
3/4	YS2AP8-007 **102.36**	YS2AS8-007 **207.33**	YS3AP8-007 **112.80**	YS3AS8-007 **233.86**	1	8	102
1	YS2AP8-010 **112.54**	YS2AS8-010 **245.96**	YS3AP8-010 **123.91**	YS3AS8-010 **270.43**	1	8	102

PVC Gray - True Union Socket Ends (continued)

Size	EPDM PVC Screen	EPDM SS Screen	FKM PVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Prod Code
1-1/4	YS2AP8-012 **190.62**	YS2AS8-012 **355.49**	YS3AP8-012 **211.82**	YS3AS8-012 **391.22**	1	4	102
1-1/2	YS2AP8-015 **201.71**	YS2AS8-015 **378.27**	YS3AP8-015 **224.11**	YS3AS8-015 **415.39**	1	0	102
2	YS2AP8-020 **236.91**	YS2AS8-020 **427.24**	YS3AP8-020 **263.23**	YS3AS8-020 **474.74**	1	0	102
3	YS2AP8-030 **546.04**	YS2AS8-030 **737.64**	YS3AP8-030 **586.73**	YS3AS8-030 **778.36**	1	0	102
4	YS2AP8-040 **954.72**	YS2AS8-040 **1195.52**	YS3AP8-040 **1027.61**	YS3AS8-040 **1268.42**	1	0	102

PVC Gray - True Union Threaded Ends

Size	EPDM PVC Screen	EPDM SS Screen	FKM PVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Prod Code
1/2	YS2BP8-005 **91.63**	YS2BS8-005 **181.29**	YS3BP8-005 **100.07**	YS3BS8-005 **199.22**	1	12	102
3/4	YS2BP8-007 **102.36**	YS2BS8-007 **207.33**	YS3BP8-007 **112.80**	YS3BS8-007 **233.86**	1	8	102
1	YS2BP8-010 **112.54**	YS2BS8-010 **245.96**	YS3BP8-010 **123.91**	YS3BS8-010 **270.43**	1	8	102
1-1/4	YS2BP8-012 **190.62**	YS2BS8-012 **355.49**	YS3BP8-012 **211.82**	YS3BS8-012 **391.22**	1	4	102
1-1/2	YS2BP8-015 **201.71**	YS2BS8-015 **378.27**	YS3BP8-015 **224.11**	YS3BS8-015 **415.39**	1	0	102
2	YS2BP8-020 **236.91**	YS2BS8-020 **427.24**	YS3BP8-020 **263.23**	YS3BS8-020 **474.74**	1	0	102
3	YS2BP8-030 **546.04**	YS2BS8-030 **737.64**	YS3BP8-030 **586.73**	YS3BS8-030 **778.36**	1	0	102
4	YS2BP8-040 **954.72**	YS2BS8-040 **1195.52**	YS3BP8-040 **1027.61**	YS3BS8-040 **1268.42**	1	0	102

PVC Gray - True Union SR Threaded Ends

Size	EPDM PVC Screen	EPDM SS Screen	FKM PVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Prod Code
1/2	YS2BP8-005SR **96.54**	YS2BS8-005SR **186.22**	YS3BP8-005SR **104.99**	YS3BS8-005SR **204.16**	1	12	102
3/4	YS2BP8-007SR **109.49**	YS2BS8-007SR **214.43**	YS3BP8-007SR **119.88**	YS3BS8-007SR **240.98**	1	8	102
1	YS2BP8-010SR **123.08**	YS2BS8-010SR **256.48**	YS3BP8-010SR **134.45**	YS3BS8-010SR **280.98**	1	8	102
1-1/4	YS2BP8-012SR **207.80**	YS2BS8-012SR **372.05**	YS3BP8-012SR **229.01**	YS3BS8-012SR **408.42**	1	4	102
1-1/2	YS2BP8-015SR **222.80**	YS2BS8-015SR **399.41**	YS3BP8-015SR **245.21**	YS3BS8-015SR **436.62**	1	0	102
2	YS2BP8-020SR **273.66**	YS2BS8-020SR **464.01**	YS3BP8-020SR **300.00**	YS3BS8-020SR **511.52**	1	0	102
3	YS2BP8-030SR **591.82**	YS2BS8-030SR **783.44**	YS3BP8-030SR **632.51**	YS3BS8-030SR **824.15**	1	0	102
4	YS2BP8-040SR **1002.22**	YS2BS8-040SR **1243.00**	YS3BP8-040SR **1075.13**	YS3BS8-040SR **1315.92**	1	0	102

PVC Clear - True Union Socket Ends

Size	EPDM PVC Screen	EPDM SS Screen	FKM PVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Prod Code
1/2	YS2AP8-005CL **91.63**	YS2AS8-005CL **181.29**	YS3AP8-005CL **100.07**	YS3AS8-005CL **199.22**	1	12	103
3/4	YS2AP8-007CL **102.36**	YS2AS8-007CL **207.33**	YS3AP8-007CL **112.80**	YS3AS8-007CL **233.86**	1	8	103
1	YS2AP8-010CL **112.54**	YS2AS8-010CL **245.96**	YS3AP8-010CL **123.91**	YS3AS8-010CL **270.43**	1	8	103
1-1/4	YS2AP8-012CL **190.62**	YS2AS8-012CL **354.86**	YS3AP8-012CL **211.82**	YS3AS8-012CL **391.22**	1	4	103
1-1/2	YS2AP8-015CL **201.71**	YS2AS8-015CL **378.27**	YS3AP8-015CL **224.11**	YS3AS8-015CL **415.39**	1	0	103
2	YS2AP8-020CL **236.91**	YS2AS8-020CL **427.24**	YS3AP8-020CL **263.23**	YS3AS8-020CL **474.74**	1	0	103
3	YS2AP8-030CL **546.04**	YS2AS8-030CL **737.64**	YS3AP8-030CL **586.73**	YS3AS8-030CL **778.36**	1	0	103
4	YS2AP8-040CL **954.72**	YS2AS8-040CL **1195.52**	YS3AP8-040CL **1027.61**	YS3AS8-040CL **1268.42**	1	0	103

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

True Union Y-Strainers

PVC Clear - True Union Threaded Ends

Size	EPDM PVC Screen	EPDM SS Screen	FKM PVC Screen	FKM	Std Pk	Mstr Pk	Prod Code
1/2	YS2BP8-005CL **91.63**	YS2BS8-005CL **181.29**	YS3BP8-005CL **100.07**	YS3BS8-005CL **199.22**	1	12	103
3/4	YS2BP8-007CL **102.36**	YS2BS8-007CL **207.33**	YS3BP8-007CL **112.80**	YS3BS8-007CL **233.86**	1	8	103
1	YS2BP8-010CL **112.54**	YS2BS8-010CL **245.97**	YS3BP8-010CL **123.91**	YS3BS8-010CL **270.43**	1	8	103
1-1/4	YS2BP8-012CL **190.62**	YS2BS8-012CL **354.86**	YS3BP8-012CL **211.82**	YS3BS8-012CL **391.22**	1	4	103
1-1/2	YS2BP8-015CL **201.71**	YS2BS8-015CL **378.27**	YS3BP8-015CL **224.11**	YS3BS8-015CL **415.39**	1	0	103
2	YS2BP8-020CL **236.91**	YS2BS8-020CL **427.24**	YS3BP8-020CL **263.23**	YS3BS8-020CL **474.74**	1	0	103
3	YS2BP8-030CL **546.04**	YS2BS8-030CL **737.64**	YS3BP8-030CL **586.73**	YS3BS8-030CL **778.36**	1	0	103
4	YS2BP8-040CL **954.72**	YS2BS8-040CL **1195.52**	YS3BP8-040CL **1027.61**	YS3BS8-040CL **1268.42**	1	0	103

PVC Clear - True Union SR Threaded Ends

Size	EPDM PVC Screen	EPDM SS Screen	FKM PVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Prod Code
1/2	YS2BP8-005CLSR **96.54**	YS2BS8-005CLSR **186.22**	YS3BP8-005CLSR **104.99**	YS3BS8-005CLSR **204.16**	1	12	103
3/4	YS2BP8-007CLSR **109.49**	YS2BS8-007CLSR **214.43**	YS3BP8-007CLSR **119.88**	YS3BS8-007CLSR **240.98**	1	8	103
1	YS2BP8-010CLSR **123.08**	YS2BS8-010CLSR **256.48**	YS3BP8-010CLSR **134.45**	YS3BS8-010CLSR **280.98**	1	8	103
1-1/4	YS2BP8-012CLSR **207.80**	YS2BS8-012CLSR **372.05**	YS3BP8-012CLSR **229.01**	YS3BS8-012CLSR **408.42**	1	4	103
1-1/2	YS2BP8-015CLSR **222.80**	YS2BS8-015CLSR **399.41**	YS3BP8-015CLSR **245.21**	YS3BS8-015CLSR **436.62**	1	0	103
2	YS2BP8-020CLSR **273.66**	YS2BS8-020CLSR **464.01**	YS3BP8-020CLSR **300.00**	YS3BS8-020CLSR **511.52**	1	0	103
3	YS2BP8-030CLSR **591.82**	YS2BS8-030CLSR **783.44**	YS3BP8-030CLSR **632.51**	YS3BS8-030CLSR **824.15**	1	0	103
4	YS2BP8-040CLSR **1002.22**	YS2BS8-040CLSR **1243.00**	YS3BP8-040CLSR **1075.13**	YS3BS8-040CLSR **1315.92**	1	0	103

CPVC - True Union Socket Ends

Size	EPDM CPVC Screen	EPDM SS Screen	FKM CPVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Prod Code
1/2	YS2AC8-005C **244.43**	YS2AS8-005C **335.93**	YS3AC8-005C **273.74**	YS3AS8-005C **377.59**	1	12	104
3/4	YS2AC8-007C **268.56**	YS2AS8-007C **382.03**	YS3AC8-007C **302.35**	YS3AS8-007C **429.40**	1	8	104
1	YS2AC8-010C **341.25**	YS2AS8-010C **472.54**	YS3AC8-010C **384.40**	YS3AS8-010C **530.24**	1	8	104
1-1/4	YS2AC8-012C **495.39**	YS2AS8-012C **681.77**	YS3AC8-012C **596.15**	YS3AS8-012C **722.96**	1	4	104
1-1/2	YS2AC8-015C **532.13**	YS2AS8-015C **704.24**	YS3AC8-015C **618.54**	YS3AS8-015C **787.38**	1	0	104
2	YS2AC8-020C **753.41**	YS2AS8-020C **882.85**	YS3AC8-020C **796.12**	YS3AS8-020C **962.93**	1	0	104
3	YS2AC8-030C **898.74**	YS2AS8-030C **1075.13**	YS3AC8-030C **964.91**	YS3AS8-030C **1156.51**	1	0	104
4	YS2AC8-040C **1556.71**	YS2AS8-040C **1780.54**	YS3AC8-040C **1673.73**	YS3AS8-040C **1914.53**	1	0	104

CPVC - True Union Threaded Ends

Size	EPDM CPVC Screen	EPDM SS Screen	FKM CPVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Prod Code
1/2	YS2BC8-005C **244.43**	YS2BS8-005C **335.93**	YS3BC8-005C **273.74**	YS3BS8-005C **377.59**	1	12	104
3/4	YS2BC8-007C **268.56**	YS2BS8-007C **382.03**	YS3BC8-007C **302.35**	YS3BS8-007C **429.40**	1	8	104
1	YS2BC8-010C **341.25**	YS2BS8-010C **472.54**	YS3BC8-010C **384.40**	YS3BS8-010C **530.24**	1	8	104
1-1/4	YS2BC8-012C **495.39**	YS2BS8-012C **681.77**	YS3BC8-012C **596.15**	YS3BS8-012C **721.94**	1	4	104
1-1/2	YS2BC8-015C **532.13**	YS2BS8-015C **704.24**	YS3BC8-015C **618.54**	YS3BS8-015C **787.38**	1	0	104
2	YS2BC8-020C **753.41**	YS2BS8-020C **882.85**	YS3BC8-020C **796.12**	YS3BS8-020C **962.93**	1	0	104
3	YS2BC8-030C **898.74**	YS2BS8-030C **1075.13**	YS3BC8-030C **950.39**	YS3BS8-030C **1156.51**	1	0	104
4	YS2BC8-040C **1556.71**	YS2BS8-040C **1780.54**	YS3BC8-040C **1673.73**	YS3BS8-040C **1914.53**	1	0	104

CPVC - True Union SR Threaded Ends

Size	EPDM CPVC Screen	EPDM SS Screen	FKM CPVC Screen	FKM SS Screen	Std Pk	Mstr Pk	Prod Code
1/2	YS2BC8-005CSR **253.34**	YS2BS8-005CSR **344.79**	YS3BC8-005CSR **282.61**	YS3BS8-005CSR **386.51**	1	12	104
3/4	YS2BC8-007CSR **278.08**	YS2BS8-007CSR **391.52**	YS3BC8-007CSR **311.87**	YS3BS8-007CSR **438.93**	1	12	104
1	YS2BC8-010CSR **363.05**	YS2BS8-010CSR **494.27**	YS3BC8-010CSR **406.20**	YS3BS8-010CSR **552.33**	1	8	104
1-1/4	YS2BC8-012CSR **517.78**	YS2BS8-012CSR **665.80**	YS3BC8-012CSR **618.56**	YS3BS8-012CSR **744.35**	1	4	104
1-1/2	YS2BC8-015CSR **558.05**	YS2BS8-015CSR **730.19**	YS3BC8-015CSR **702.85**	YS3BS8-015CSR **813.32**	1	0	104
2	YS2BC8-020CSR **790.38**	YS2BS8-020CSR **919.80**	YS3BC8-020CSR **885.91**	YS3BS8-020CSR **999.85**	1	0	104
3	YS2BC8-030CSR **944.55**	YS2BS8-030CSR **1120.91**	YS3BC8-030CSR **1010.67**	YS3BS8-030CSR **1202.29**	1	0	104
4	YS2BC8-040CSR **1604.18**	YS2BS8-040CSR **1828.04**	YS3BC8-040CSR **1721.20**	YS3BS8-040CSR **1961.98**	1	0	104

Basket Strainers

Pressure Rating
@ 73°F (23°C), Water

1/2"-8" 150 psi
10"-12" 50 psi

Maximum Service Temperature

PVC = 140°F (60°C)

CPVC = 200°F (93°C)

Temperature/Pressure De-ratings Apply

Important Ordering Information - Column headings indicate Elastomer seal type and Strainer Basket screen material. All Part Numbers shown designate 1/8" perforated (#6 Mesh Code) Strainer Basket Screens. To order other screen perforation sizing, replace the number "6" preceding the dash-separator with the corresponding Mesh Code from chart. Pricing is the same for all listed Mesh Codes.

Perforation Size	Mesh Code
1/16"	12
3/32"	8
1/8"	6
3/16"	4
1/4"	3
3/8"	2

Example: To order a 1/16" screen perforation in listed part number BS22P6-020, change the part number to BS22P12-020

Contact Spears® for additional perforations & wire mesh sizes

PVC - Socket Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Prod Code
1/2	BS22P6-005 **407.06**	BS22S6-005 **650.98**	BS32P6-005 **428.48**	BS32S6-005 **672.40**	1	2	295
3/4	BS22P6-007 **407.06**	BS22S6-007 **650.98**	BS32P6-007 **428.48**	BS32S6-007 **672.40**	1	2	295
1	BS22P6-010 **650.98**	BS22S6-010 **650.98**	BS32P6-010 **428.48**	BS32S6-010 **672.40**	1	2	295
1-1/4	BS22P6-012 **745.59**	BS22S6-012 **1069.75**	BS32P6-012 **837.53**	BS32S6-012 **1202.23**	1	0	295
1-1/2	BS22P6-015 **745.59**	BS22S6-015 **1069.75**	BS32P6-015 **837.53**	BS32S6-015 **1202.23**	1	0	295
2	BS22P6-020 **745.59**	BS22S6-020 **1069.75**	BS32P6-020 **837.53**	BS32S6-020 **1202.23**	1	0	295
2-1/2	BS22P6-025 **1410.09**	BS22S6-025 **1973.29**	BS32P6-025 **1585.14**	BS32S6-025 **2217.25**	1	0	295
3	BS22P6-030 **1720.49**	BS22S6-030 **2283.11**	BS32P6-030 **1933.19**	BS32S6-030 **2565.33**	1	0	295
4	BS22P6-040 **2278.44**	BS22S6-040 **2925.52**	BS32P6-040 **2560.03**	BS32S6-040 **3278.08**	1	0	295
6	BS22P6-060 **3252.76**	BS22S6-060 **4372.12**	BS32P6-060 **3654.91**	BS32S6-060 **4918.53**	1	0	295
8	BS22P6-080 **4335.63**	BS22S6-080 **5857.16**	BS32P6-080 **4872.53**	BS32S6-080 **6582.47**	1	0	295
10	BS22P6-100 **8308.63**	BS22S6-100 **10482.52**	BS32P6-100 **9086.61**	BS32S6-100 **11527.94**	1	0	295
12	BS22P6-120 **10294.12**	BS22S6-120 **13187.22**	BS32P6-120 **11321.27**	BS32S6-120 **14568.98**	1	0	295

PVC - Flanged Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Prod Code
1/2	BS23P6-005 **469.23**	BS23S6-005 **713.14**	BS33P6-005 **492.76**	BS33S6-005 **736.67**	1	0	295
3/4	BS23P6-007 **469.23**	BS23S6-007 **713.14**	BS33P6-007 **492.76**	BS33S6-007 **736.67**	1	0	295
1	BS23P6-010 **469.23**	BS23S6-010 **713.14**	BS33P6-010 **492.76**	BS33S6-010 **736.67**	1	0	295
1-1/4	BS23P6-012 **886.35**	BS23S6-012 **1211.54**	BS33P6-012 **996.79**	BS33S6-012 **1361.48**	1	0	295
1-1/2	BS23P6-015 **886.35**	BS23S6-015 **1186.03**	BS33P6-015 **996.79**	BS33S6-015 **1361.48**	1	0	295
2	BS23P6-020 **886.35**	BS23S6-020 **1211.54**	BS33P6-020 **996.79**	BS33S6-020 **1361.48**	1	0	295
2-1/2	BS23P6-025 **1626.86**	BS23S6-025 **2189.51**	BS33P6-025 **1828.06**	BS33S6-025 **2460.18**	1	0	295

PVC - Flanged Ends (continued)

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Prod Code
3	BS23P6-030 **2065.51**	BS23S6-030 **2627.33**	BS33P6-030 **2320.78**	BS33S6-030 **2951.88**	1	0	295
4	BS23P6-040 **2691.94**	BS23S6-040 **3332.17**	BS33P6-040 **3024.81**	BS33S6-040 **3744.05**	1	0	295
6	BS23P6-060 **5745.36**	BS23S6-060 **6864.52**	BS33P6-060 **6455.43**	BS33S6-060 **7712.97**	1	0	295
8	BS23P6-080 **7571.16**	BS23S6-080 **9134.80**	BS33P6-080 **8507.20**	BS33S6-080 **10217.09**	1	0	295
10	BS23P6-100 **10093.94**	BS23S6-100 **12267.65**	BS33P6-100 **11341.56**	BS33S6-100 **13783.89**	1	0	295
12	BS23P6-120 **13812.05**	BS23S6-120 **16707.00**	BS33P6-120 **15519.16**	BS33S6-120 **18771.91**	1	0	295

PVC - Spigot Ends

Size	EPDM Seals PVC Screen	EPDM Seals SS Screen	FKM Seals PVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Prod Code
1/2	BS27P6-005 **407.06**	BS27S6-005 **650.98**	BS37P6-005 **428.48**	BS37S6-005 **672.40**	1	0	295
3/4	BS27P6-007 **407.06**	BS27S6-007 **650.98**	BS37P6-007 **428.48**	BS37S6-007 **672.40**	1	0	295
1	BS27P6-010 **407.06**	BS27S6-010 **650.98**	BS37P6-010 **428.48**	BS37S6-010 **672.40**	1	0	295
1-1/4	BS27P6-012 **745.59**	BS27S6-012 **1069.75**	BS37P6-012 **837.53**	BS37S6-012 **1202.23**	1	0	295
1-1/2	BS27P6-015 **745.59**	BS27S6-015 **1069.75**	BS37P6-015 **837.53**	BS37S6-015 **1202.23**	1	0	295
2	BS27P6-020 **745.59**	BS27S6-020 **1069.75**	BS37P6-020 **837.53**	BS37S6-020 **1202.23**	1	0	295
2-1/2	BS27P6-025 **1410.09**	BS27S6-025 **1973.32**	BS37P6-025 **1585.14**	BS37S6-025 **2217.25**	1	0	295
3	BS27P6-030 **1720.49**	BS27S6-030 **2283.11**	BS37P6-030 **1933.19**	BS37S6-030 **2565.33**	1	0	295
4	BS27P6-040 **2278.44**	BS27S6-040 **2925.52**	BS37P6-040 **2560.03**	BS37S6-040 **3278.08**	1	0	295
6	BS27P6-060 **3252.76**	BS27S6-060 **4372.12**	BS37P6-060 **3654.91**	BS37S6-060 **4918.53**	1	0	295
8	BS27P6-080 **4335.63**	BS27S6-080 **5857.16**	BS37P6-080 **4872.53**	BS37S6-080 **6582.47**	1	0	295
10	BS27P6-100 **8308.63**	BS27S6-100 **10482.52**	BS37P6-100 **9086.61**	BS37S6-100 **11527.94**	1	0	295
12	BS27P6-120 **10294.12**	BS27S6-120 **13187.22**	BS37P6-120 **11321.27**	BS37S6-120 **14568.98**	1	0	295

CPVC - Socket Ends

Size	EPDM Seals CPVC Screen	EPDM Seals SS Screen	FKM Seals CPVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Prod Code
1/2	BS22C6-005C **634.49**	BS22S6-005C **878.39**	BS32C6-005C **666.55**	BS32S6-005C **910.46**	1	2	297
3/4	BS22C6-007C **634.49**	BS22S6-007C **878.39**	BS32C6-007C **666.55**	BS32S6-007C **910.46**	1	2	297
1	BS22C6-010C **634.49**	BS22S6-010C **878.39**	BS32C6-010C **666.55**	BS32S6-010C **910.46**	1	2	297
1-1/4	BS22C6-012C **1197.36**	BS22S6-012C **1522.57**	BS32C6-012C **1345.85**	BS32S6-012C **1710.55**	1	0	297
1-1/2	BS22C6-015C **1197.36**	BS22S6-015C **1522.57**	BS32C6-015C **1345.85**	BS32S6-015C **1710.55**	1	0	297
2	BS22C6-020C **1197.36**	BS22S6-020C **1522.57**	BS32C6-020C **1345.85**	BS32S6-020C **1710.55**	1	0	297
2-1/2	BS22C6-025C **1961.57**	BS22S6-025C **2522.36**	BS32C6-025C **2203.87**	BS32S6-025C **2834.37**	1	0	297
3	BS22C6-030C **2543.26**	BS22S6-030C **3106.03**	BS32C6-030C **2857.67**	BS32S6-030C **3489.79**	1	0	297
4	BS22C6-040C **3379.36**	BS22S6-040C **4019.18**	BS32C6-040C **3797.74**	BS32S6-040C **4515.97**	1	0	297
6	BS22C6-060C **4466.31**	BS22S6-060C **5587.52**	BS32C6-060C **5018.38**	BS32S6-060C **6277.95**	1	0	297
8	BS22C6-080C **6375.84**	BS22S6-080C **7897.74**	BS32C6-080C **7163.94**	BS32S6-080C **8873.88**	1	0	297
10	BS22C6-100C **11192.03**	BS22S6-100C **13364.49**	BS32C6-100C **12575.39**	BS32S6-100C **15016.73**	1	0	297
12	BS22C6-120C **14212.40**	BS22S6-120C **17107.55**	BS32C6-120C **15968.94**	BS32S6-120C **19222.87**	1	0	297

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Basket Strainers

CPVC - Flanged Ends

Size	EPDM Seals CPVC Screen	EPDM Seals SS Screen	FKM Seals CPVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Prod Code
1/2	BS23C6-005C **694.41**	BS23S6-005C **938.31**	BS33C6-005C **730.83**	BS33S6-005C **974.74**	1	0	297
3/4	BS23C6-007C **694.41**	BS23S6-007C **938.31**	BS33C6-007C **730.83**	BS33S6-007C **974.74**	1	0	297
1	BS23C6-010C **694.41**	BS23S6-010C **938.31**	BS33C6-010C **730.83**	BS33S6-010C **974.74**	1	0	297
1-1/4	BS23C6-012C **1350.35**	BS23S6-012C **1673.28**	BS33C6-012C **1517.06**	BS33S6-012C **1880.14**	1	0	297
1-1/2	BS23C6-015C **1350.35**	BS23S6-015C **1673.28**	BS33C6-015C **1517.06**	BS33S6-015C **1880.14**	1	0	297
2	BS23C6-020C **1350.35**	BS23S6-020C **1673.28**	BS33C6-020C **1517.06**	BS33S6-020C **1880.14**	1	0	297
2-1/2	BS23C6-025C **2562.92**	BS23S6-025C **3124.68**	BS33C6-025C **2878.96**	BS33S6-025C **3511.07**	1	2	297
3	BS23C6-030C **3047.31**	BS23S6-030C **3810.92**	BS33C6-030C **3423.96**	BS33S6-030C **4056.04**	1	0	297
4	BS23C6-040C **3990.21**	BS23S6-040C **8240.56**	BS33C6-040C **4483.56**	BS33S6-040C **9258.82**	1	0	297
6	BS23C6-060C **7662.95**	BS23S6-060C **8783.12**	BS33C6-060C **8610.48**	BS33S6-060C **9868.63**	1	0	297
8	BS23C6-080C **9913.23**	BS23S6-080C **11435.37**	BS33C6-080C **11138.97**	BS33S6-080C **12848.89**	1	0	297
10	BS23C6-100C **13460.75**	BS23S6-100C **15632.63**	BS33C6-100C **15124.09**	BS33S6-100C **17565.43**	1	0	297
12	BS23C6-120C **18415.33**	BS23S6-120C **21309.48**	BS33C6-120C **20691.55**	BS33S6-120C **23946.35**	1	0	297

CPVC - Spigot Ends

Size	EPDM Seals CPVC Screen	EPDM Seals SS Screen	FKM Seals CPVC Screen	FKM Seals SS Screen	Std Pk	Mstr Pk	Prod Code
1/2	BS27C6-005C **634.49**	BS27S6-005C **878.39**	BS37C6-005C **666.55**	BS37S6-005C **910.46**	1	0	297
3/4	BS27C6-007C **634.49**	BS27S6-007C **878.39**	BS37C6-007C **666.55**	BS37S6-007C **910.46**	1	0	297
1	BS27C6-010C **634.49**	BS27S6-010C **878.39**	BS37C6-010C **666.55**	BS37S6-010C **910.46**	1	0	297
1-1/4	BS27C6-012C **1197.36**	BS27S6-012C **1522.57**	BS37C6-012C **1345.85**	BS37S6-012C **1710.55**	1	0	297
1-1/2	BS27C6-015C **1197.36**	BS27S6-015C **1522.57**	BS37C6-015C **1345.85**	BS37S6-015C **1710.55**	1	0	297
2	BS27C6-020C **1197.36**	BS27S6-020C **1522.57**	BS37C6-020C **1345.85**	BS37S6-020C **1710.55**	1	0	297
2-1/2	BS27C6-025C **1961.57**	BS27S6-025C **2522.36**	BS37C6-025C **2203.87**	BS37S6-025C **2834.37**	1	0	297
3	BS27C6-030C **2543.26**	BS27S6-030C **3106.03**	BS37C6-030C **2857.67**	BS37S6-030C **3489.79**	1	0	297
4	BS27C6-040C **3379.36**	BS27S6-040C **4019.18**	BS37C6-040C **3797.74**	BS37S6-040C **4515.97**	1	0	297
6	BS27C6-060C **4466.31**	BS27S6-060C **5587.52**	BS37C6-060C **5018.38**	BS37S6-060C **6277.95**	1	0	297
8	BS27C6-080C **6375.84**	BS27S6-080C **7897.74**	BS37C6-080C **7163.94**	BS37S6-080C **8873.88**	1	0	297
10	BS27C6-100C **11192.03**	BS27S6-100C **13364.49**	BS37C6-100C **12575.39**	BS37S6-100C **15016.73**	1	0	297
12	BS27C6-120C **14212.40**	BS27S6-120C **17107.55**	BS37C6-120C **15968.75**	BS37S6-120C **19222.87**	1	0	297

Duplex Basket Strainers

Custom configured and produced to order, Spears® Duplex Basket Strainer provides individual isolation of strainers for servicing and cleaning without shutting down the line. A center handle on the Duplex unit control valves allows selection of either strainer unit for isolation. Each Basket Strainer features a convenient quick release clamp cap equipped with safety pressure gauge and pressure release ball valve for safer system operation and strainer cleaning. Additional drain plug allows complete drain and flush of unit.

Multi-Featured Options:

- No Flow Shutdown Required
- Sizes 1/2 - 4" Constructed from Corrosion Resistant PVC or CPVC
- True Union Socket, Thread, or Flanged Connections
- Uses Spears® Standard Basket Strainers Configurations
- Simple Single-Throw Lever Operation
- Select EPDM or FKM Seal Options
- Multiple Strainer Mesh Options in Plastic or Stainless Steel (see Industrial Basket Strainer options in this catalog)

Pressure Rating @ 73°F (23°C), Water
1/2" - 4" 150 psi

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Temperature/Pressure De-ratings Apply

CONTACT SPEARS® FOR ADDITIONAL CUSTOM OPTIONS, SELECTION ASSISTANCE & PRICING

Suction Strainers

Pressure Rating @ 73°F (23° C), Water
50 psi

Maximum Service Temperature
PVC = 140°F (60°C)

Temperature/Pressure De-ratings Apply

Suction Strainer is a special Basket Strainer design that reduces pressure drop, a critical element in suction line applications. While same-size (inlet/outlet) units are available, enlarged inlet on reducing sizes performs best in suction line applications. The internal Strainer Basket is bottom-drained for direct flushing through a 360° adjustable side mounted Discharge Valve Assembly (included). Bolt-on Bonnet is fitted with Top Sight-Glass.

Standard units listed have EPDM Seals and Stainless Steel 3/16" Perforated Screen (4–mesh). Contact Spears® for other Mesh Code or Elastomer seal options required.

PVC Suction Strainer

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Flanged End					
SS23BS4SG-040	**4**	1	0	295	2980.31
SS23BS4SG-420	**4X2**	1	0	295	2838.95
SS23BS4SG-421	**4X2-1/2**	1	0	295	2850.05
SS23BS4SG-422	**4X3**	1	0	295	2857.31
SS23BS4SG-060	**6**	1	0	295	3887.53
SS23BS4SG-532	**6X4**	1	0	295	3755.69
SS23BS4SG-080	**8**	1	0	295	4269.93
SS23BS4SG-582	**8X4**	1	0	295	3882.68
SS23BS4SG-585	**8X6**	1	0	295	3905.21
SS23BS4SG-100	**10**	1	0	295	4776.56
SS23BS4SG-626	**10X6**	1	0	295	4648.64
SS23BS4SG-628	**10X8**	1	0	295	4701.59
SS23BS4SG-120	**12**	1	0	295	5251.89
SS23BS4SG-668	**12X8**	1	0	295	5124.93
SS23BS4SG-670	**12X10**	1	0	295	5168.08

Suction Strainer Stainless Steel Baskets 3/16" Perforation

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
SSS4-040	**4**	1	4	299	826.49
SSS4-060	**6**	1	2	299	879.25
SSS4-080	**8**	1	2	299	1101.83
SSS4-100	**10**	1	0	299	1197.65
SSS4-120	**12**	1	2	299	1468.25

Irrigation Filters

Sample Engineering Specification

All sediment filters shall be T-Style cartridge type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, or ASTM D 1784 Cell Classification 23447. All O-rings shall be EPDM or FKM. All filters shall have removable Type 304 stainless steel cartridge with [specify from chart] mesh perforation or reinforced screen. All filters shall be pressure rated to 200 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Quick View T-Style Cartridge Filters Selection Chart

PVC Part Numbers[1]		
Cartridge Filter Mesh[2]	TF Series (Full Size)	
	Standard	Reverse Flow[2]
	EPDM	EPDM
16	TF2-16	TF2-16
32	TF2-32	TF2-32
50	TF2-50	TFR2-50
76	TF2-76	TFR2-76
100	TF2-100	TFR2-100
150	TF2-150	TFR2-150
200	TF2-200	TFR2-200
MTF Series (Half-Size)		
16	MTF2-16	MTF2-16
32	MTF2-32	MTF2-32
50	MTF2-50	MTFR2-50
76	MTF2-76	MTFR2-76
100	MTF2-100	MTFR2-100
150	MTF2-150	MTFR2-150
200	MTF2-200	MTFR2-200

1: For CPVC, Add the letter "C" to the part number (e.g., TF2-16**C**)
2: Mesh sizes 16 and 32 are perforation cartridges. Same cartridge is used for Standard or Reverse Flow filtration. Mesh sizes 50 - 200 are wire cloth screen with perforated stainless steel reinforcement.

Features – PVC, CPVC

In-line T-Style Cartridge Filters provide high capacity filtration of suspended solids, dirt and debris with reusable Type 304 stainless steel filter cartridges in a variety of mesh sizes. Constructed from PVC or CPVC, this special T-style configuration may be easily ganged in parallel for increased flow and filtration capacity. Standard flow (internal-to-external) filter traps sediment inside cartridge while optional reverse flow (external-to-internal) filter traps sediment on outside of cartridge, according to user preference. Available in full-size TF Series or half-size MTF Series units with IPS size 2-1/2" socket - 3" spigot combination inlet/outlet connection that can be easily adapted to other sizes with use of reducer bushings or couplings.

- Provides In-line Protection of Process Equipment
- PVC Construction
- EPDM O-ring Seals
- Heavy, Reinforced Type 304 Stainless Steel Filter Cartridges in Mesh Sizes 16, 32, 50, 76, 100, 150, or 200
- Standard (Internal-to-External) or Reverse Flow (External-to-Internal) Cartridge Design Option
- Bottom Cartridge Removal with Drain Plug for Cleaning, or Bleed-Off Valve Connection
- Installed Units in Parallel for Increased Filtration Capacity
- Pressure Rated to 200 psi @ 73°F
- Assemble with Silicone-Free, Water Soluble Lubricants

Cartridge Filtration Area

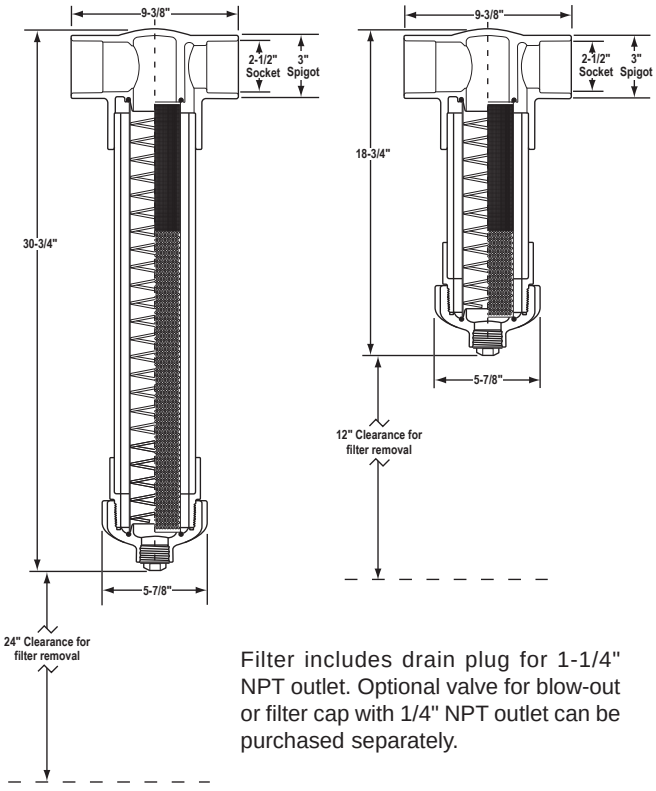
TF Series filter surface area = 214.9 in.^{2} and MTF Series filter surface area = 107.5 in.^{2}. Mesh sizes 16 and 32 are perforated stainless steel, 50 to 200 mesh filters are stainless steel wire cloth with perforated stainless backing and internal wire coil to prevent filter collapse or screen blow-out.

Replacement Filter Cartridges

Mesh Size	Full Size TF Filter Part No.		Half Size MTF Filter Part No.	
	Standard Flow	Reverse Flow	Standard Flow	Reverse Flow
16	FL-16-1	same as Std.	MFL-16-1	same as Std.
32	FL-32-1	same as Std.	MFL-32-1	same as Std.
50	FL-50-1	FLR-50-1	MFL-50-1	MFLR-50-1
76	FL-76-1	FLR-76-1	MFL-76-1	MFLR-76-1
100	FL-100-1	FLR-100-1	MFL-100-1	MFLR-100-1
150	FL-150-1	FLR-150-1	MFL-150-1	MFLR-150-1
200	FL-200-1	FLR-200-1	MFL-200-1	MFLR-200-1

Irrigation Filters

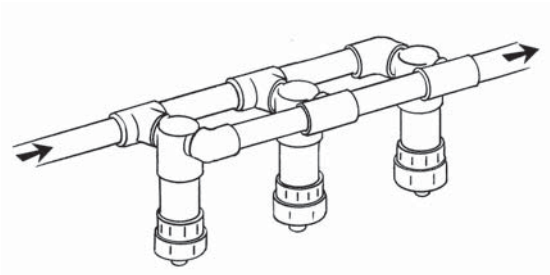
Dimensions



Filter includes drain plug for 1-1/4" NPT outlet. Optional valve for blow-out or filter cap with 1/4" NPT outlet can be purchased separately.

Parallel Filter Installation

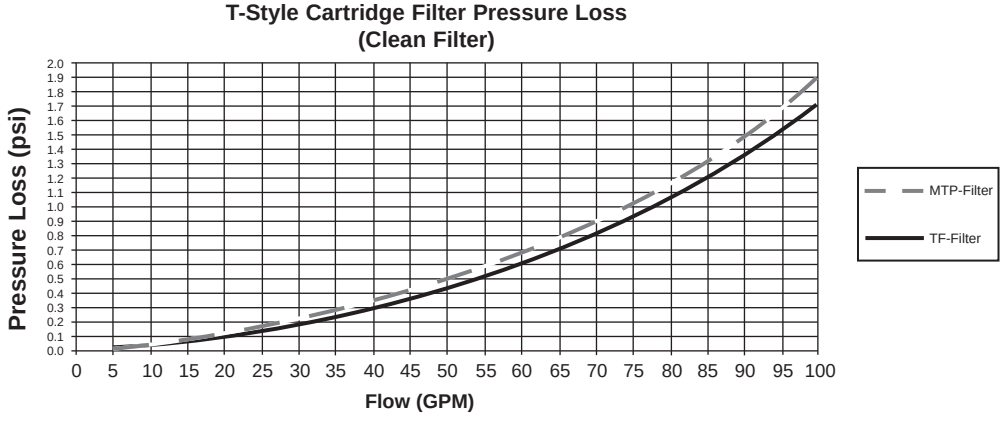
For increased flow or filtration capacity, multiple filters may be installed in parallel as illustrated.



General Installation Information

Avoid installation in direct sun exposure. If required, a white, reflective latex paint coating may be applied to reduce heat absorption. Remove cartridge before solvent cement assembly into system to avoid possible cement contact with screen. Install with proper flow direction as indicated on top of the filter. Be sure to allow clearance in excess of specified space required for removal of cartridge (see drawing notes). Filter drainage or blow-down should be made in normal system flow direction to prevent screen damage. Do not “back flush” unit. Care should be taken in cleaning cartridges to avoid damaging filter screen.

Pressure Loss



Temperature Pressure Rating

System Operating Temperature °F (°C)		100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Filter Pressure Rating psi (MPa)	PVC	200 (1.38)	135 (.93)	120 (.83)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg

Features - PVC Gray, PVC Clear & CPVC

Spears® Y-type sediment strainers are the perfect choice for in-line removal of suspended solids, sediment, dirt and debris. Convenient removable strainer basket allows quick cleaning with an assortment of screen mesh sizes to meet a variety of application needs. Spears® Y-Strainers are produced from PVC Gray, PVC Clear for fluid visibility and CPVC Gray for higher temperatures. Available with socket, Special Reinforced (SR) threads, flanged, or True Union socket and SR threaded end connectors in IPS sizes 1/2" - 4".

- Provides In-line Protection of Process Equipment
- PVC, CPVC or PVC Clear Construction
- EPDM or FKM O-ring Seals
- Removable Strainer Basket with O-ring Sealed Drain Plug Allows Quick-Flushing or Bleed-Off Valve Connection
- Multiple Strainer Screen Options in PVC, CPVC, and Type 316 Stainless Steel (see Mesh Code table)
- Optional Magnetic Drain Plug for Ferrous Metal Pickup
- Suitable for Horizontal or Vertical Installation
- Sizes 1/2"- 2" Pressure Rated to 150 psi @ 73°F Sizes 3"- 4" to 90 psi @ 73°F
- Assembled with Silicone-Free, Water Soluble Lubricants

Sample Engineering Specification

All sediment strainers shall be Y-type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447. All O-rings shall be EPDM or FKM. All Y-strainers shall have replaceable PVC, CPVC or Type 316 stainless steel screens and O-ring sealed drain plugs with magnetic drain plug option. All threaded Y-Strainers shall have Special Reinforced (SR) threads. All Y-Strainers, sizes 1/2"- 2" shall be pressure rated to 150 psi, sizes 3"- 4" to 90 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Quick-View Y-Strainer Selection Chart

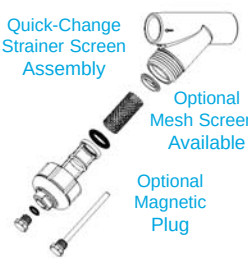
Valve Size	O-ring Material	PVC Material[1,2,3]						Pressure Rating
		Socket	SR Threaded	Flanged	Socket Union	Threaded Union	SR Threaded Union	
1/2	EPDM	YS22P__-005	YS21P__-005SR	YS23P__-005	YS2AP__-005	YS2BP__-005	YS2BP__-005SR	150 psi Non-Shock Water @73°F
	FKM	YS32P__-005	YS31P__-005SR	YS33P__-005	YS3AP__-005	YS3BP__-005	YS3BP__-005SR	
3/4	EPDM	YS22P__-007	YS21P__-007SR	YS23P__-007	YS2AP__-007	YS2BP__-007	YS2BP__-007SR	
	FKM	YS32P__-007	YS31P__-007SR	YS33P__-007	YS3AP__-007	YS3BP__-007	YS3BP__-007SR	
1	EPDM	YS22P__-010	YS21P__-010SR	YS23P__-010	YS2AP__-010	YS2BP__-010	YS2BP__-010SR	
	FKM	YS32P__-010	YS31P__-010SR	YS33P__-010	YS3AP__-010	YS3BP__-010	YS3BP__-010SR	
1-1/4	EPDM	YS22P__-012	YS21P__-012SR	YS23P__-012	YS2AP__-012	YS2BP__-012	YS2BP__-012SR	
	FKM	YS32P__-012	YS31P__-012SR	YS33P__-012	YS3AP__-012	YS3BP__-012	YS3BP__-012SR	
1-1/2	EPDM	YS22P__-015	YS21P__-015SR	YS23P__-015	YS2AP__-015	YS2BP__-015	YS2BP__-015SR	
	FKM	YS32P__-015	YS31P__-015SR	YS33P__-015	YS3AP__-015	YS3BP__-015	YS3BP__-015SR	
2	EPDM	YS22P__-020	YS21P__-020SR	YS23P__-020	YS2AP__-020	YS2BP__-020	YS2BP__-020SR	
	FKM	YS32P__-020	YS31P__-020SR	YS33P__-020	YS3AP__-020	YS3BP__-020	YS3BP__-020SR	
3	EPDM	YS22P__-030	YS21P__-030SR	YS23P__-030	YS2AP__-030	YS2BP__-030	YS2BP__-030SR	90 psi Non-Shock Water @73°F
	FKM	YS32P__-030	YS31P__-030SR	YS33P__-030	YS3AP__-030	YS3BP__-030	YS3BP__-030SR	
4	EPDM	YS22P__-040	YS21P__-040SR	YS23P__-040	YS2AP__-040	YS2BP__-040	YS2BP__-040SR	
	FKM	YS32P__-040	YS31P__-040SR	YS33P__-040	YS3AP__-040	YS3BP__-040	YS3BP__-040SR	

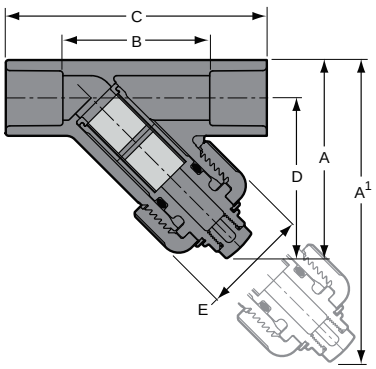
Enter Mesh Code in part number blank as specified in table.
(Contact Spears® for additional strainer sizes).

1: For CPVC body & strainer screen unit, replace the letter "P" before the dash separator with the letter "C" and add the letter "C" to the part number (e.g., YS22C8-020**C**)
2: For stainless steel strainer screens, replace the letter "P" (or "C") before the dash separator with the letter "S" (e.g., YS22S8-020; YS22S8-020**C**)
3: For PVC Clear Y-Strainer, add the letters "CL" to the part number (e.g., YS22P8-005**CL**)
Note: End connections for PVC Clear threaded and flanged Y-strainers are PVC Gray components.

Mesh Codes for PVC, CPVC & SS

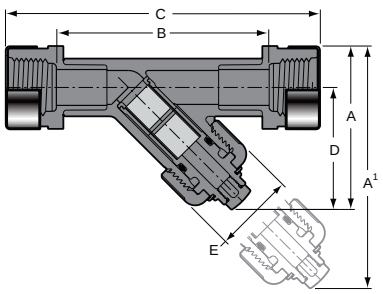
Mesh	Sieve Opening Size (in.)	Mesh Code
8 Mesh	0.094	8
12 Mesh	0.062	12
20 Mesh	0.033	20
30 Mesh	0.024	30





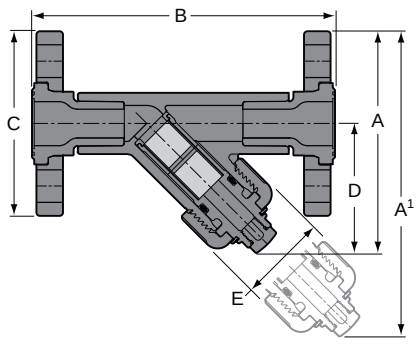
Socket Y-Strainer Dimensions & Weights

Nominal Size	Dimension Reference (inches, ± 1/16)						Approx. Wt. (Lbs.)	
	A1	A	B	C	D	E	Socket	
							PVC	CPVC
1/2	5	3-1/16	1-9/16	3-3/8	2-9/16	1-5/8	.31	.33
3/4	5-3/4	3-11/16	2	4	3	2	.50	.53
1	6-7/8	4-7/16	2-1/2	4-3/4	3-5/8	2-1/4	.85	.90
1-1/4	8-5/32	5-5/16	3-1/16	5-9/16	4-1/4	2-13/16	1.21	1.28
1-1/2	9-1/8	6	3-9/16	6-5/16	4-7/8	3-3/16	1.66	1.76
2	11-3/4	7-5/8	4-1/2	7-1/2	6-3/16	3-1/2	2.96	3.10
3	15	9-11/16	6-9/16	10-5/16	7-5/8	5-1/8	5.34	5.64
4	19-11/16	12-1/2	8-5/8	13-1/8	9-7/8	6-9/16	9.97	10.45



SR Threaded Y-Strainer Dimensions & Weights

Nominal Size	Dimension Reference (inches, ± 1/16)						Approx. Wt. (Lbs.)	
	A1	A	B	C	D	E	SR Threaded	
							PVC	CPVC
1/2	6-1/2	4-11/16	3-5/8	5-1/16	4	2-3/8	.31	.33
3/4	7-5/8	5-7/16	4-3/8	5-13/16	4-9/16	2-3/8	.50	.53
1	8-5/8	6-1/8	5-3/16	7	5-1/8	2-3/8	.85	.90
1-1/4	11-1/8	7-3/4	6	7-15/16	6-1/2	3-1/2	1.21	1.28
1-1/2	12-1/4	8-7/8	6-15/16	8-13/16	7-1/2	3-1/2	1.66	1.76
2	14-1/16	10-3/16	8-1/8	10-1/8	8-1/2	3-1/2	2.96	3.10
3	20	14-13/16	11	14-1/4	12-7/16	6-5/8	5.34	5.64
4	25-13/16	18-1/2	14	14-3/4	15-5/8	7-15/16	9.97	10.45



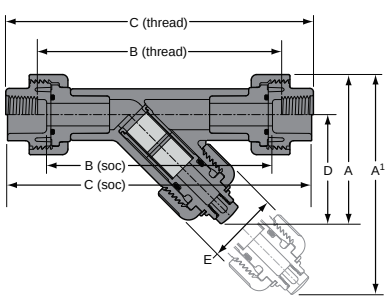
Flanged Y-Strainer Dimensions & Weights

Nominal Size	Dimension Reference (inches, ± 1/16)						Approx. Wt. (Lbs.)	
	A1	A	B	C	D	E	Flanged	
							PVC	CPVC
1/2	5-13/16	4-3/16	5-11/16	3-1/2	2-1/2	1-5/8	.82	.85
3/4	7-1/8	5	6-7/16	3-7/8	3-1/8	2	1.23	1.28
1	8-3/16	5-3/4	7-1/4	4-1/4	3-5/8	2-1/4	1.70	1.81
1-1/4	9-7/16	6-9/16	8-1/8	4-5/8	4-9/32	2-13/16	2.40	2.52
1-1/2	10-7/16	7-3/8	9-3/16	5	4-7/8	3-3/16	3.07	3.25
2	13-1/4	9-1/8	10-3/8	6	6-3/16	3-1/2	5.20	5.42
3	16-21/32	11-3/8	12-1/32	7-1/2	7-5/8	5-1/8	9.44	10.07
4	21-19/32	14-5/16	14-9/16	9-1/16	9-7/8	6-9/16	14.87	16.15

Note: 4" flanged Y-strainer uses split flange ring

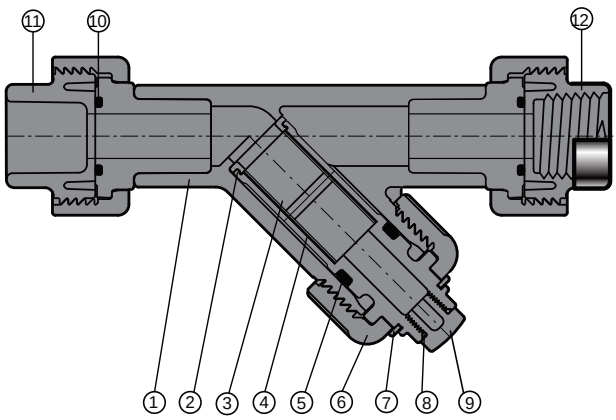
True Union Y-Strainer Dimensions & Weights

Nominal Size	Dimension Reference (inches, ± 1/16)								Approx. Wt. (Lbs.)	
	A1	A	B		C		D	E	Union	
			Socket	SR Thread	Socket	SR Thread			PVC	CPVC
1/2	5	3-7/16	5-1/8	5-1/2	6-7/8	7	2-1/2	1-5/8	.49	.53
3/4	6-3/16	4-1/8	5-7/8	6-7/16	7-7/8	7-7/8	3	2	.80	.85
1	7-5/16	4-7/8	6-1/2	7-3/8	8-3/4	9	3-5/8	2-1/4	1.13	1.20
1-1/4	8-5/8	5-13/16	7-7/16	6-3/16	9-15/16	10-1/8	4-1/4	2-13/16	1.84	1.90
1-1/2	9-3/4	6-5/8	8-3/16	9	10-15/16	10-15/16	4-7/8	3-3/16	2.44	2.52
2	12-7/16	8-15/16	9-7/16	10-13/16	12-7/16	12-13/16	6-3/16	3-1/2	4.33	4.45
3	16-1/6	10-3/4	12-3/16	13-15/16	16	16-3/4	7-5/8	5-1/8	10.35	10.55
4	20-15/16	13-3/4	15-5/16	17-1/2	19-13/16	20-1/2	9-7/8	6-9/16	18.51	18.80



Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com



Replacement Parts

NO.	COMPONENT	OTY.	MATERIAL
1	Body[1] (SOC/SR/FLANGE/UNION)	1	PVC/PVC CLEAR/CPVC
2	Screen Support Ring	1	PVC/CPVC
3	Screen	1	PVC/CPVC/SS 316
4	Screen Support Housing	1	PVC/CPVC
5	Housing O-ring	1	EPDM/FKM
6	Bonnet Nut	1	PVC/CPVC
7	Retaining Clip	1	PP
8	Plug O-ring	1	EPDM/FKM
9	Plug	1	PVC/CPVC
10	Union O-ring	2	EPDM/FKM
11	Union Socket End	2	PVC/CPVC
12	Union SR Threaded End	2	PVC/CPVC

1 - Body Includes: Body (1), Spigot Adapters (2), SS Collars (2)
- Flange Body Includes: Body (1), Spigot Hubs (2), Flange Rings (2)
- Union Body Includes: Body (1), Spigot Ends (2), Nuts (2)

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Strainer Pressure Rating psi (MPa)	1/2" - 2"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0-
	3" - 4"	PVC	90 (.70)	85 (.62)	75 (.52)	60 (.41)	40 (.30)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	90 (.70)	85 (.62)	80 (.55)	75 (.52)	70 (.48)	60 (.41)	50 (.34)	45 (.31)	40 (.30)	35 (.24)	30 (.21)	-0-

Drain Plug Tap Size

Y-Strainer Size	Tap Size (NPT)
1/2	1/4 - 18
3/4	1/4 - 18
1	3/8 - 18
1-1/4	1/2 - 14
1-1/2	1 - 11 - 1/2
2	1 - 11 - 1/2
3	1 - 11 - 1/2
4	1 - 11 - 1/2

Y-Strainer C_V

Nominal Size	Plastic Strainer Mesh			
	8	12	20	30
1/2	5.5	5.4	5.3	5.2
3/4	8.2	7.8	7.5	7.2
1	14.3	13.9	13.6	13.3
1-1/4	33.6	32.9	29.4	25.4
1-1/2	43.8	41.6	33.0	32.1
2	50.6	50.0	49.6	48.8
3	75.2	74.6	74.0	73.4
4	169.5	169.0	168.8	168.0

Gallons per minute at 1 psi pressure drop.
Plastic Strainers are perforated PVC or CPVC screens.
Standard is mesh.

Sample Engineering Specification

All thermoplastic Basket Strainers shall be fabricated from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447 material. All O-rings shall be EPDM or FKM. Strainer baskets shall be perforated PVC, CPVC, or type 316 stainless steel, or type 316 stainless steel wire mesh. Standard strainer perforations shall be 1/8" or 3/32" with a minimum open area ratio of 6:1, or specified perforation/mesh opening. Basket strainer sizes 1/2" - 8" shall have quick release clamp retained bonnet, sizes 10" - 12" shall have bolt-on bonnet. Sizes 1-1/4" and larger Basket Strainers shall have pressure release valve and safety pressure gauge. Unit shall be equipped with O-ring sealed drain plug at lower end. Basket Strainer sizes 1/2" - 8" shall be pressure rated at 150 psi, sizes 10" - 12" to 50 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Quick-View Basket Strainer Selection Chart

Valve Size	O-ring Material	PVC Part Numbers[1,2,3]			Pressure Rating
		Socket	Spigot	Flanged	
1/2	EPDM	BS22P__-005	BS27P__-005	BS23P__-005	150 psi Non-Shock Water @ 73°F
	FKM	BS32P__-005	BS37P__-005	BS33P__-005	
3/4	EPDM	BS22P__-007	BS27P__-007	BS23P__-007	
	FKM	BS32P__-007	BS37P__-007	BS33P__-007	
1	EPDM	BS22P__-010	BS27P__-010	BS23P__-010	
	FKM	BS32P__-010	BS37P__-010	BS33P__-010	
1-1/4	EPDM	BS22P__-012	BS27P__-012	BS23P__-012	
	FKM	BS32P__-012	BS37P__-012	BS33P__-012	
1-1/2	EPDM	BS22P__-015	BS27P__-015	BS23P__-015	
	FKM	BS32P__-015	BS37P__-015	BS33P__-015	
2	EPDM	BS22P__-020	BS27P__-020	BS23P__-020	
	FKM	BS32P__-020	BS37P__-020	BS33P__-020	
2-1/2	EPDM	BS22P__-025	BS27P__-025	BS23P__-025	
	FKM	BS32P__-025	BS37P__-025	BS33P__-025	
3	EPDM	BS22P__-030	BS27P__-030	BS23P__-030	
	FKM	BS32P__-030	BS37P__-030	BS33P__-030	
4	EPDM	BS22P__-040	BS27P__-040	BS23P__-040	
	FKM	BS32P__-040	BS37P__-040	BS33P__-040	
6	EPDM	BS22P__-060	BS27P__-060	BS23P__-060	
	FKM	BS32P__-060	BS37P__-060	BS33P__-060	
8	EPDM	BS22P__-080	BS27P__-080	BS23P__-080	
	FKM	BS32P__-080	BS37P__-080	BS33P__-080	
10	EPDM	BS22P__-100	BS27P__-100	BS23P__-100	50 psi Non-Shock Water @ 73°F
	FKM	BS32P__-100	BS37P__-100	BS33P__-100	
12	EPDM	BS22P__-120	BS27P__-120	BS23P__-120	
	FKM	BS32P__-120	BS37P__-120	BS33P__-120	

Enter Mesh Code in part number blank as specified in table.

(Contact Spears® for additional strainer sizes).

1: For CPVC body & strainer screen unit, replace the letter "P" before the dash separator with the letter "C" and add the letter "C" to the part number (e.g., BS22C8-020**C**)
2: For stainless steel strainer screens, replace the letter "P" (or "C") before the dash separator with the letter "S" (e.g., BS22S8-020; BS22**S**8-020C)
3: For Basket Strainers with PTFE O-rings replace the number 2 with the number 5 (e.g. BS**5**3P-010)

Features – PVC, CPVC

Spears® fabricated Basket Strainers are constructed of heavy bodied PVC or CPVC. Available in IPS sizes 1/2" through 12" with choice of socket, spigot or flanged ends and EPDM, FKM or PTFE encapsulated O-ring seals. A convenient quick release clamp cap is equipped with safety pressure gauge and pressure release ball valve for safer system operation and strainer cleaning. Additional drain plug allows complete drain and flush of unit. Designed to remove unwanted solids from plastic or metal piping systems, Spears® Basket Strainers are ideal for protecting valves, filters, pumps, nozzles or other liquid control devices in corrosive or non-corrosive fluid systems.

- Chemical & Corrosion Resistant PVC or CPVC Construction
- Convenient Quick-Release Clamp For easy Bonnet Removal (Bolt-on Bonnet on Sizes 10" & 12")
- Includes Pressure Release Valve and 0-160 psi Safety Pressure Gauge on sizes 1-1/4" & larger[1] (O-ring sealed plugs provided if valve/gauge not used)
- O-ring Sealed Drain Plug
- EPDM or FKM O-ring Seals
- Perforated PVC & CPVC Strainer Baskets in a Variety of Sizes. Stainless Steel Available in perforation and Multiple Mesh Sizes
- High Volume 6:1 Open Area Ratio
- Sizes 1/2" - 8" Pressure Rated to 150 psi @ 73°F
  Sizes 10" - 12" Pressure Rated to 50 psi @ 73°F
- Assembled with Silicone-Free Seal Lubricants.

1: Commercial bronze bourdon-tube type pressure gauge w/brass NPT inlet. Check for any chemical compatibility issues. Contact Spears® for PVC, CPVC or PP Gauge Guard isolation devices available.

Special Options

- PTFE Encapsulated O-ring Seals
- Bonnet Sight Glass

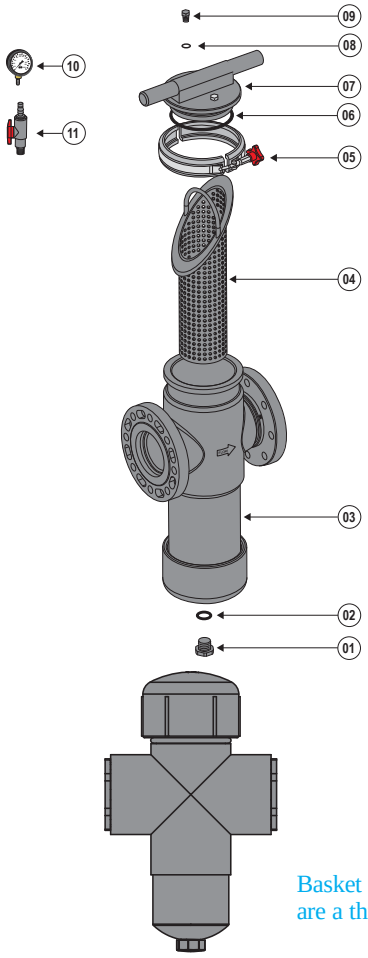
Perforation Mesh Codes

Perforation Size (in.)	Mesh Code
1/16	12
3/32	8
1/8	6
3/16	4
1/4	3
3/8	2

Example: BS22P**6**-020
Additional perforation and mesh sizes available upon request.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

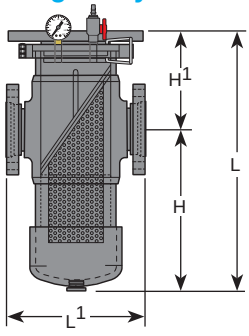


Replacement Parts

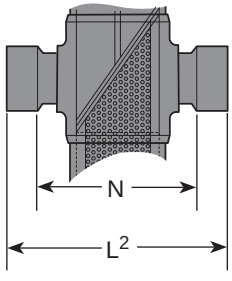
No.	Component	Quantity	Material
1	Drain Plug	1	PVC/CPVC
2	Drain Plug O-ring	1	EPDM/FKM/PTFE
3	Body	1	PVC/CPVC
4	Strainer Basket	1	PVC/CPVC /316 Stainless Steel
5	Bonnet Clamp	1	SS 316
6	Bonnet O-ring	1	EPDM/FKM/PTFE
7	Bonnet	1	PVC/CPVC
8	Plug O-ring	2	EPDM/FKM/PTFE
9	Gauge Port Plug	2	PVC/CPVC
10	Pressure Gauge	1	0-160 psi (1-1/4" & up)
11	Pressure Relief Valve	1	PVC/CPVC (1-1/4" & up)

Notes: 1) Bolt-on Bonnet on Sizes 10" & 12".
2) Port plugs for use when pressure gauge and relief valve are not installed.
3) Valve O-rings correspond to Strainer Basket Specification.

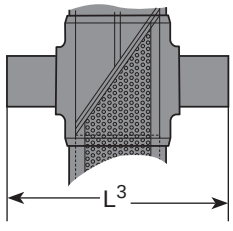
Flanged Style



Socket Style



Spigot Style



Basket Strainer sizes 1/2" through 1" bonnets are a threaded cap with O-ring seal.

Dimensions, Weights & Cv Values

Size	H	H1	L	L1	L2	L3	N	Approx. Wt. (Lbs.)		Cv
								Socket/ Spigot	Flanged	
1/2	5-7/8	4-9/16	10-7/16	9-1/4	6-13/16	9-9/16	5-1/8	2.97	3.35	4.5
3/4	5-7/8	4-9/16	10-7/16	9-1/4	6-7/16	9-7/16	4-7/16	2.99	3.44	10
1	5-7/8	4-9/16	10-7/16	10-3/8	6-13/16	10-1/16	4-1/2	3.02	3.50	15
1-1/4	10-1/4	8	18-1/4	8-9/16	10-1/16	10-1/4	7-9/16	3.20	3.60	30
1-1/2	10-1/4	8	18-1/4	8-3/4	11-1/8	11	8-1/8	3.50	3.75	46
2	10-1/4	8	18-1/4	8-3/4	12-1/8	11	8-5/8	11.00	11.40	72
2-1/2	10-1/4	8	18-1/4	8-3/4	12-3/8	12-7/8	8-3/8	12.30	12.60	110
3	13-13/16	8-3/4	22-9/16	11-5/8	16-1/8	15	11-5/8	25.00	25.40	172
4	17-5/16	8-3/4	26-1/16	12	18	17-1/2	13-1/2	25.70	26.80	270
6	18-7/8	10-9/16	29-7/16	17-1/8	24-3/8	23-5/16	17-7/8	58.40	60.80	630
8	24-1/2	11-9/16	36-1/16	20-1/2	30-1/2	27-1/2	22	93.60	96.00	750
10	27-1/8	16-5/8	43-3/4	26	34-9/16	34-1/2	24-1/16	200.20	210.30	893
12	34-7/8	17-3/16	52-1/16	28-1/8	38-3/4	36-1/4	26-1/4	229.30	239.80	1063

Cv = Gallons per minute at 1 psi pressure drop.

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/2" - 8"	PVC	150 (1.03)	135 (.93)	110 (.76)	75 (.52)	50 (.34)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.70)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0-
	10" - 12"	PVC	50 (.34)	45 (.31)	40 (.30)	35 (.24)	30 (.21)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
		CPVC	50 (.34)	47 (.32)	45 (.31)	42 (.83)	40 (.30)	37 (.26)	35 (.24)	30 (.21)	25 (.17)	20 (.14)	15 (.10)	-0-

Features – PVC

The Suction Strainer is a special Basket Strainer design that reduces pressure drop, a critical element in suction line applications. While same-size (inlet/outlet) units are available, the enlarged inlet performs best in suction-line applications.

- Chemical & Corrosion Resistant PVC Construction
- Bolt-on Bonnet with Top Sight Glass, Standard
- Stainless Steel Strainer Basket with 3/16" Perforation, Standard
- Bottom-Drained Internal Strainer Basket for Direct Flushing
- 360° Adjustable Side Mounted Flush-Discharge Valve Assembly
- EPDM Seals Standard
- Pressure rated to 50 psi @ 73°F

Contact Spears® for additional Basket Mesh/Perforation, Elastomer seal options, or other custom requirements desired.

Sample Engineering Specification

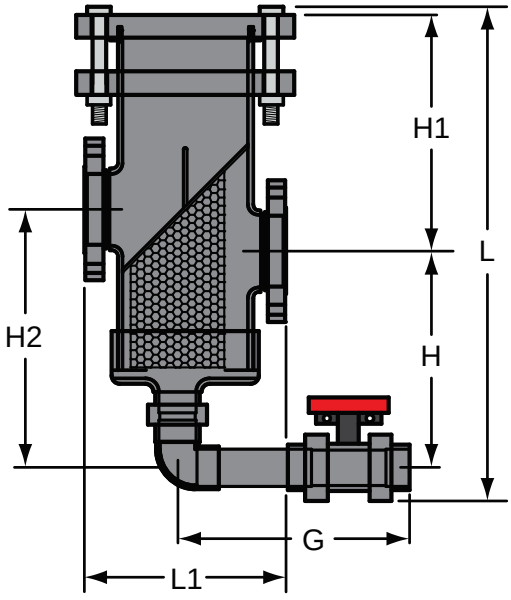
All thermoplastic Suction Strainers shall be fabricated from PVC Type I Cell Classification 12454 material. All O-rings shall be EPDM. Strainer basket shall be type 316 stainless steel. Standard strainer perforations shall be 3/16" with a minimum open area ratio of 6:1. Basket shall have bottom-drained direct discharge with 360° adjustable side discharge assembly, including Ball Valve at terminal end. Unit shall have bolt-on bonnet with built-in sight glass. Suction strainer shall be pressure rated at 50 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Suction Strainer Stainless Steel Baskets 3/16" Perforation

Size	Part Number
4	SSS4-040
6	SSS4-060
8	SSS4-080
10	SSS4-100
12	SSS4-120

Quick-View Suction Strainer Selection Chart

Valve Size	O-ring Material	Part Numbers	Pressure Rating
		Flanged	
4	EPDM	SS23BS4SG-040	50 psi Non-Shock Water @73°F
4 x 2	EPDM	SS23BS4SG-420	
4 x 2-1/2	EPDM	SS23BS4SG-421	
4 x 3	EPDM	SS23BS4SG-422	
6	EPDM	SS23BS4SG-060	
6 x 4	EPDM	SS23BS4SG-532	
8	EPDM	SS23BS4SG-080	
8 x 4	EPDM	SS23BS4SG-582	
8 x 6	EPDM	SS23BS4SG-585	
10	EPDM	SS23BS4SG-100	
10 x 6	EPDM	SS23BS4SG-626	
10 x 8	EPDM	SS23BS4SG-628	
12	EPDM	SS23BS4SG-120	
12 x 8	EPDM	SS23BS4SG-668	
12 x 10	EPDM	SS23BS4SG-670	



Dimensions

Size	G	H	H1	H2	L	L1
4	14-13/16	13-13/16	15-9/16	16-7/16	31-1/2	12-7/8
4 x 2	14-13/16	13-13/16	15-9/16	16-7/16	31-1/2	13-1/2
4 x 2-1/2	14-13/16	13-13/16	15-9/16	16-7/16	31-1/2	12-1/2
4 x 3	14-13/16	13-13/16	15-9/16	16-7/16	31-1/2	12-9/16
6	14-13/16	16-7/8	16-7/8	19-15/16	35-7/8	15-7/8
6 x 4	14-13/16	17-15/16	15-13/16	19-15/16	35-7/8	15-7/8
8	17-15/16	22-1/4	21-13/16	27-7/8	46-1/4	18
8 x 4	17-15/16	24-5/16	19-3/4	27-7/8	46-1/4	18
8 x 6	17-15/16	23-1/4	20-13/16	27-7/8	46-1/4	18-1/8
10	17-15/16	27-13/16	19-11/16	31-11/16	49-11/16	23-15/16
10 x 6	17-15/16	27-13/16	19-11/16	31-11/16	49-11/16	23
10 x 8	17-15/16	27-13/16	19-11/16	31-11/16	49-11/16	22-7/8
12	20-3/16	27-3/16	21-5/8	31-3/16	50-13/16	30
12 x 8	20-3/16	29-1/8	19-9/16	31-3/16	50-13/16	29
12 x 10	20-3/16	28-1/16	20-5/8	31-3/16	50-13/16	29-3/4

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	4" - 12"	PVC	50 (.34)	45 (.31)	40 (.30)	35 (.24)	30 (.21)	-0-	-0-	-0-	-0-	-0-	-0-	-0-

Expansion Joints

PRICING

Fabricated Expansion Joints

Triple O-ring Sealed Telescoping Design
Available with 6" and 12" Travel

- Compact Installation - Eliminates Need For Expansion Loops
- EPDM or FKM Pressure O-ring Seal with Dual "Wiper" O-ring for Extended Life
- Support Piston Eliminates Binding, Minimizes Alignment Problems
- Excellent For Use as a Repair Coupling

PVC Fabricated Expansion Joints
6" Travel with EPDM O-rings

1/2" - 2" 235 psi @ 73°F (23°C)
2-1/2" - 12" 150 psi @ 73°F (23°C)
14" 100 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
826-005X6	1/2	10	0	085	313.03
826-007X6	3/4	6	0	085	336.52
826-010X6	1	5	0	085	340.31
826-012X6	1-1/4	4	0	085	395.55
826-015X6	1-1/2	4	0	085	419.43
826-020X6	2	2	0	085	469.18
826-025X6	2-1/2	1	0	085	535.15
826-030X6	3	1	0	085	555.51
826-040X6	4	1	0	085	596.17
826-060X6	6	1	0	085	982.20
826-080X6	8	1	0	085	1352.21
826-100X6	10	1	0	085	1587.88
826-120X6	12	1	0	085	2813.54
826-140X6	14	1	0	085	3213.82

FKM O-rings available on special order. Add a "V" preceding the dash (-) separator, e.g. 826V-005X6.

PVC Fabricated Expansion Joints
12" Travel with EPDM O-rings

1/2" - 2" 235 psi @ 73°F (23°C)
2-1/2" - 12" 150 psi @ 73°F (23°C)
14" 100 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
826-005X12	1/2	10	0	085	352.11
826-007X12	3/4	6	0	085	372.39
826-010X12	1	5	0	085	446.24
826-012X12	1-1/4	4	0	085	487.57
826-015X12	1-1/2	4	0	085	451.77
826-020X12	2	2	0	085	532.92
826-025X12	2-1/2	1	0	085	895.29
826-030X12	3	1	0	085	688.48
826-040X12	4	1	0	085	773.44
826-060X12	6	1	0	085	1126.68
826-080X12	8	1	0	085	1510.54
826-100X12	10	1	0	085	1846.74
826-120X12	12	1	0	085	2957.95
826-140X12	14	1	0	085	3283.27

FKM O-rings available on special order. Add a "V" preceding the dash (-) separator, e.g. 826V-005X12

CPVC Fabricated Expansion Joints
6" Travel with FKM O-rings

1/2" - 2" 235 psi @ 73°F (23°C)
2-1/2" - 12" 150 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
826-005X6C	1/2	10	0	085	387.05
826-007X6C	3/4	6	0	085	423.54
826-010X6C	1	5	0	085	457.80
826-012X6C	1-1/4	4	0	085	480.84
826-015X6C	1-1/2	4	0	085	524.06
826-020X6C	2	2	0	085	664.05
826-025X6C	2-1/2	1	0	085	788.00
826-030X6C	3	1	0	085	915.43
826-040X6C	4	1	0	085	1350.14
826-060X6C	6	1	0	085	1451.36
826-080X6C	8	1	0	085	2753.19
826-100X6C	10	1	0	085	3514.77
826-120X6C	12	1	0	085	4662.63

EPDM O-rings available on special order. Add an "E" preceding the dash (-) separator, e.g. 826E-005X6C

CPVC Fabricated Expansion Joints
12" Travel with FKM O-rings

1/2" - 2" 235 psi @ 73°F (23°C)
2-1/2" - 12" 150 psi @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
826-005X12C	1/2	10	0	085	394.20
826-007X12C	3/4	6	0	085	452.06
826-010X12C	1	5	0	085	482.24
826-012X12C	1-1/4	4	0	085	539.76
826-015X12C	1-1/2	4	0	085	605.32
826-020X12C	2	2	0	085	772.65
826-025X12C	2 -1/2	1	0	085	1169.72
826-030X12C	3	1	0	085	940.04
826-040X12C	4	1	0	085	1557.18
826-060X12C	6	1	0	085	1715.44
826-080X12C	8	1	0	085	3284.37
826-100X12C	10	1	0	085	3847.76

EPDM O-rings available on special order. Add an "E" preceding the dash (-) separator, e.g. 826E-005X12C

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Elastomer Expansion Joints

PVC & CPVC Schedule 80 Elastomer Expansion Joint

Designed to allow for the expansion, contraction, lateral and angular movement of a piping system. Aids in noise and vibration dampening.

- Convenient, Double Union End Connections with Strong, Buttress Thread Union Nuts
- Internal Nylon Cord Reinforced Elastomer Bellows Tube
- Chemically Resistant Neoprene Elastomer with Optional EPDM Tube Available
- Double Spherical Arch Bellows Provides Improved Movement Capability
- Pressure rated to 150 psi @ 73°F (23°C)
- Suitable for Vacuum Service
- Available in Socket or Spears® Special Reinforced (SR) Female Plastic Thread End Connectors, IPS Sizes 3/4" through 3"

PVC Elastomer Expansion Joint
with Neoprene Bellows Soc

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
EJ02-007	**3/4**	10	0	085	197.85
EJ02-010	**1**	10	0	085	224.34
EJ02-012	**1-1/4**	15	0	085	239.02
EJ02-015	**1-1/2**	10	0	085	294.26
EJ02-020	**2**	8	0	085	360.58
EJ02-025	**2-1/2**	4	0	085	510.09
EJ02-030	**3**	2	0	085	701.17

PVC Elastomer Expansion Joint
with EPDM Bellows Soc

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
EJ22-007	**3/4**	10	0	085	201.88
EJ22-010	**1**	10	0	085	228.89
EJ22-012	**1-1/4**	15	0	085	246.41
EJ22-015	**1-1/2**	10	0	085	299.36
EJ22-020	**2**	8	0	085	367.94
EJ22-025	**2-1/2**	4	0	085	520.48
EJ22-030	**3**	2	0	085	715.45

PVC Elastomer Expansion Joint
with Neoprene Bellows SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
EJ01-007SR	**3/4**	10	0	085	200.62
EJ01-010SR	**1**	10	0	085	228.47
EJ01-012SR	**1-1/4**	15	0	085	248.49
EJ01-015SR	**1-1/2**	10	0	085	317.23
EJ01-020SR	**2**	8	0	085	381.13
EJ01-025SR	**2-1/2**	4	0	085	555.41
EJ01-030SR	**3**	2	0	085	746.94

PVC Elastomer Expansion Joint
with EPDM Bellows SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
EJ21-007SR	**3/4**	10	0	085	204.69
EJ21-010SR	**1**	10	0	085	233.14
EJ21-012SR	**1-1/4**	15	0	085	253.59
EJ21-015SR	**1-1/2**	10	0	085	323.68
EJ21-020SR	**2**	8	0	085	388.92
EJ21-025SR	**2-1/2**	4	0	085	563.59
EJ21-030SR	**3**	2	0	085	762.18

CPVC Elastomer Expansion Joint
with EPDM Bellows Soc

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
EJ22-007C	**3/4**	10	0	085	205.88
EJ22-010C	**1**	10	0	085	234.92
EJ22-012C	**1-1/4**	15	0	085	256.68
EJ22-015C	**1-1/2**	10	0	085	314.45
EJ22-020C	**2**	8	0	085	392.46
EJ22-025C	**2-1/2**	4	0	085	573.51
EJ22-030C	**3**	2	0	085	779.00

CPVC Elastomer Expansion Joint
with EPDM Bellows SR Fipt - Stainless Steel Collar

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
EJ21-007CSR	**3/4**	10	0	085	208.22
EJ21-010CSR	**1**	10	0	085	239.45
EJ21-012CSR	**1-1/4**	15	0	085	264.60
EJ21-015CSR	**1-1/2**	10	0	085	337.27
EJ21-020CSR	**2**	8	0	085	445.81
EJ21-025CSR	**2-1/2**	4	0	085	619.13
EJ21-030CSR	**3**	2	0	085	824.60

Repair Couplings

(S119) Socket x Socket

(S118) Spigot x Socket

- Multi-function Telescoping Design
- Regular and Short configurations
- Socket x Socket Configuration for Pipe Repair or Use as a Short-Stroke Expansion Joint
- Spigot x Socket Configuration for Replacing Damaged Fittings
- Both Configurations can be Easily Modified for Opposite Use
- Double O-ring Seal in EPDM or high-grade FKM
- 1/2" - 2" Pressure Rated to 235 PSI @ 73°F (23°C)
- 2-1/2" - 4" Pressure Rated to 200 PSI @ 73°F (23°C)
- 6" Pressure Rated to 150 PSI @ 73°F (23°C)
- NSF® Certified for Potable Water Use

Regular PVC - Spig x Soc

PVC White with EPDM O-ring

Can be used as short-stroke Expansion Joint

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
S118-05	**1/2**	25	0	025	5.56
S118-07	**3/4**	30	0	025	6.32
S118-10	**1**	15	0	025	7.29
S118-12	**1-1/4**	25	0	025	13.74
S118-15	**1-1/2**	25	0	025	14.96
S118-20	**2**	12	0	025	23.14
S118-25	**2-1/2**	5	0	025	33.57
S118-30	**3**	4	0	025	41.94
S118-40	**4**	2	0	025	73.40
S118-60	**6**	1	0	025	179.60

Regular PVC - Soc x Soc

PVC White with EPDM O-ring

Can be used as short-stroke Expansion Joint

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
S119-05	**1/2**	30	0	025	5.56
S119-07	**3/4**	24	0	025	6.32
S119-10	**1**	20	0	025	7.29
S119-12	**1-1/4**	10	0	025	13.74
S119-15	**1-1/2**	16	0	025	14.96
S119-20	**2**	10	0	025	23.14
S119-25	**2-1/2**	5	0	025	33.57
S119-30	**3**	4	0	025	41.94
S119-40	**4**	2	0	025	73.40
S119-60	**6**	1	0	025	179.60

Short Repair Couplings

Space Saving, Compact Version of Standard Repair Coupling
Requires 1/3 less Space

Short PVC - Spig x Soc

PVC White with EPDM O-ring

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
SH118-05	**1/2**	36	0	025	5.56
SH118-07	**3/4**	30	0	025	6.32
SH118-10	**1**	35	0	025	7.29
SH118-12	**1-1/4**	25	0	025	13.74
SH118-15	**1-1/2**	32	0	025	14.96
SH118-20	**2**	15	0	025	23.14

Short PVC - Soc x Soc

PVC White with EPDM O-ring

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
SH119-05	**1/2**	40	0	025	5.56
SH119-07	**3/4**	30	0	025	6.32
SH119-10	**1**	30	0	025	7.29
SH119-12	**1-1/4**	20	0	025	13.74
SH119-15	**1-1/2**	21	0	025	14.96
SH119-20	**2**	12	0	025	23.14

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Triple O-ring Sealed Telescoping Design Available With 6" and 12" Travel

Linear expansion and contraction from temperature fluctuations can be a major problem in thermoplastic piping systems. Forces left uncontrolled can literally tear systems apart. Spears® Expansion Joint allows a telescoping movement of an inner pipe within a firmly mounted outer tube to eliminate such damage. Available for CPVC 1/2" through 12" and PVC 1/2" through 14" IPS piping systems in 6" or 12" maximum travel lengths. Custom produced for virtually any pipe diameter.

Compact Installation - Eliminates Need For Expansion Loops

Telescoping design allows more compact installation than possible with conventional expansion loops and permits rigid mounting between two fixed points.

EPDM or FKM Pressure O-ring Seal with Dual "Wiper" O-ring for Extended Life

Designed for sealing dependability, O-ring pressure seal utilizes two (2) additional "wiper" O-rings to remove dirt and particles that would normally wear joint seals during operation. Long-life Expansion Joint requires no repair or replacement. Standard O-ring for PVC is EPDM, for CPVC is FKM.

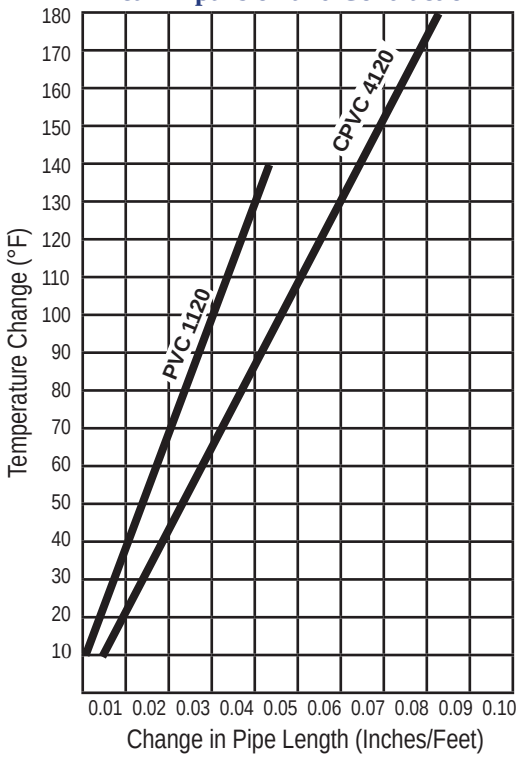
Support Piston Eliminates Binding, Minimizes Alignment Problems

Alignment is critical in use of expansion joints. Specially designed support piston eliminates binding and minimizes alignment problems which can result in cocking or breakage.

Excellent For Use as a Repair Coupling

Simply cut damaged pipe section from line, collapse expansion joint, solvent cement ends and expand halfway to install.

Linear Expansion and Contraction



Coeficient of Thermal Linear Expansion

PVC 1120	=	2.8×10^{-5} in/in/°F
CPVC 4120	=	3.4×10^{-5} in/in/°F

Sample Engineering Specifications

All Expansion Joints shall be telescoping design with triple (3) EPDM or FKM O-ring seals, including center pressure seal and outer debris seals, and internal support piston. Maximum joint travel length shall be either 6" or 12". All Expansion Joints shall be pressure rated according to the manufacturer's specifications [see table] for water at 73°F. All Expansion Joints shall be fabricated from PVC or CPVC material conforming to ASTM D 1784. All sockets shall meet the dimensional requirements of ASTM D 2467, as manufactured by Spears® Manufacturing Company.

DETERMINING TRAVEL LENGTH NEEDED

General Rule: For PVC systems, allow 3/8" expansion for every 10°F change in temperature per 100 feet of pipe, (all diameters). For CPVC systems, allow 1/2" expansion for every 10°F change in temperature per 100 feet of pipe, (all diameters). For example, a 6" travel expansion joint will accommodate approximately 160°F temperature change in 100 ft. of PVC pipe (16 x 3/8" = 6") or approximately 120°F temperature change in 100 ft. of CPVC pipe (12 x 1/2" = 6").

INSTALLATION

Expansion Joints consist of two telescoping tubes with internal O-ring seals. For proper operation, the outer tube should be rmly anchored to allow free movement of the inner tube or “piston”. Support and thrust block the system to direct movement squarely into the Expansion Joint. Alignment is critical, axial guides should be installed to ensure straight movement into expansion joint. Provisions should be made to protect the cylinder shaft from scratches, damage and debris to prevent leaks. Expansion Joints can be installed at the travel range midpoint for most general installations and are shipped from the factory in this position. If desired, the extended position for installation may be additionally adjusted to specific system and installation parameters using the following calculation:

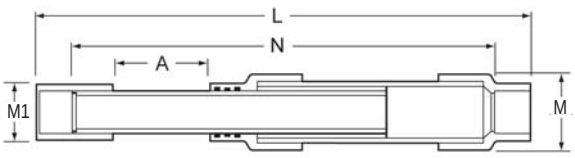
T-A ----- X E = P T-F

T = Maximum Temperature of Pipe Exposure
A = Temperature of Pipe at time of Installation
F = Minimum Temperature of Pipe Exposure
E = Maximum Expansion Joint Travel (6" or 12")
P = Piston Extension for Installation Position (inches)

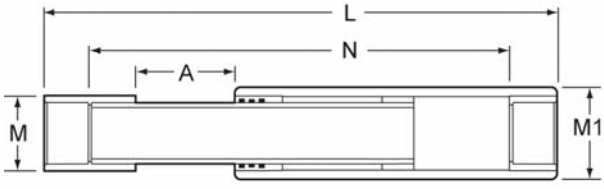
Example: A straight run of pipe will operate at temperatures between 60°F and 110°F. Temperature at time of installation is 75°F using a 6" travel Expansion Joint.

T-A 110-75
----- X E = P -------- X 6 = 4.2 inches extended at installation
T-F 110-60

Maximum operating temperature: PVC = 140°F CPVC = 180°F



1/2”, 3/4” & 1” Configuration



1-1/4” & Up Configuration

6" Travel (All sizes)						
Size	A	L	M	M1	N	Pressure Rating @ 73°F
1/2"	3"	13-11/16"	1-9/32"	1-23/32"	11-15/16"	235
3/4"	3"	14-13/16"	1-1/2"	2-1/16"	12-13/16"	235
1"	3"	15-15/16"	1-23/32"	2-11/32"	13-11/16"	235
1-1/4"	3"	15-3/4"	2-7/32"	2-3/8"	13-3/8"	235
1-1/2"	3"	16-1/8"	2-11/32"	2-7/8"	13-7/16"	235
2"	3"	16-15/16"	2-7/8"	3-1/2"	13-15/16"	235
2-1/2"	3"	18-7/8"	4-3/16"	4-1/2"	14-7/8"	150
3"	3"	18-3/4"	4-3/16"	4-1/2"	15-1/4"	150
4"	3"	19-3/4"	5-5/16"	5-9/16"	15-3/16"	150
6"	3"	22-3/4"	7-11/16"	8-5/8"	16-3/4"	150
8"	3"	27-1/4"	9-11/16"	10-3/4"	19-1/4"	150
10"	3"	35-7/8"	11-13/16"	12-3/4"	25-7/8"	150
12"	3"	39-1/2"	14-1/8"	16"	27-1/2"	150
14"	3"	49-3/4"	15-5/8"	16"	34-7/8"	150

12" Travel (All sizes)						
Size	A	L	M	M1	N	Pressure Rating @ 73°F
1/2"	6"	16-11/16"	1-9/32"	1-23/32"	14-15/16"	235
3/4"	6"	17-13/16"	1-1/2"	2-1/16"	15-13/16"	235
1"	6"	18-15/16"	1-23/32"	2-11/32"	16-11/16"	235
1-1/4"	6"	18-3/4"	2-7/32"	2-3/8"	16-3/8"	235
1-1/2"	6"	19-1/8"	2-11/32"	2-7/8"	16-7/16"	235
2"	6"	19-15/16"	2-7/8"	3-1/2"	16-15/16"	235
2-1/2"	6"	21-7/8"	4-3/16"	4-1/2"	17-7/8"	150
3"	6"	21-3/4"	4-3/16"	4-1/2"	18-1/4"	150
4"	6"	22-3/4"	5-5/16"	5-9/16"	18-3/16"	150
6"	6"	25-3/4"	7-11/16"	8-5/8"	19-3/4"	150
8"	6"	30-1/4"	9-11/16"	10-3/4"	22-1/4"	150
10"	6"	38-7/8"	11-13/16"	12-3/4"	28-7/8"	150
12"	6"	42-1/2"	14-1/8"	16"	30-1/2"	150
14"	6"	52-3/4"	15-5/8"	16"	37-7/8"	150

Elastomer Expansion Joint Overview

Elastomer Expansion Joints allow for expansion, contraction, lateral and angular movement in piping systems. Ideal for use on pumps, chillers, cooling towers, etc., to absorb pipe movement and stress, compensate for minor misalignment and offset, aid in system noise reduction and vibration dampening, and to help protect against start-up surge forces. Features reinforced Double-Arched tube design in chemically resistant Neoprene or optional EPDM elastomers. Produced in IPS sizes 3/4" through 3" with PVC or CPVC Union end connections in Socket or Spears® Patented Special Reinforced (SR) Female Plastic Threads for convenient, reliable installations.

PVC or CPVC & Bonded Elastomer Construction

Constructed from corrosion resistant PVC or higher temperature handling CPVC with high-pressure molded elastomer tube for optimum chemical and corrosion resistance. Never rusts, scales or pits. Select from standard Neoprene or optional EPDM elastomer tube bellows.

Double Spherical Arch, Reinforced Tube

Wide Spherical Double-Arched design provides maximum movement capability in lateral deflection, angular misalignment, axial compression and extension. Special 3-layer construction features internal polyester cord reinforcement bonded within the elastomer so that no reinforcement material will be exposed to atmosphere or media. Maintains high strength while allowing thinner wall for greater flexibility.

Convenient Double Union (True Union) Connectors

Double union design with strong Buttress thread union nuts allows easy servicing and replacement. Available in Socket or Spears® patented Special Reinforced (SR) Female Plastic Threaded End Connectors.

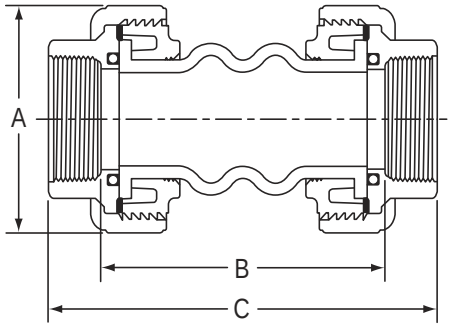
Pressure Rated to 150 psi, Plus Vacuum Service

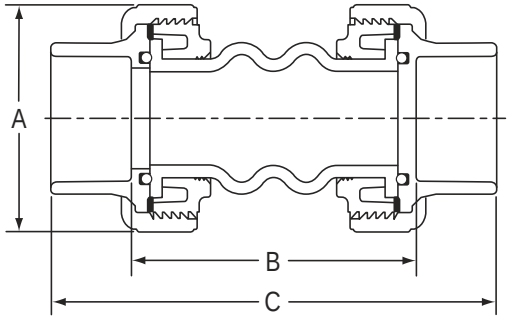
The inherent design strength of the spherical arch allows for full 150 psi pressure rating for water at 73°F (pressure de-ratings apply at elevated temperatures). The spherical arch design and the reinforcing material combine to provide for full vacuum service capability.

Sample Engineering Specifications

Elastomer Expansion Joints shall be elastomer tube design with double-union end connectors. Elastomer tubes shall be double spherical arch constructed from reinforced Neoprene or EPDM. All unions shall be constructed from PVC or CPVC with Buttress threaded Union Nuts and choice of Socket or Special Reinforced (SR) plastic threaded connections. All Elastomer Expansion Joints shall be pressure rated to 150 psi for water @ 73°, as manufactured by Spears® Manufacturing Company.

Technical Information





Dimensions (inches)

Size	A	B		C		MAXIMUM MOVEMENTS			
		Socket	Threaded	Socket	Threaded	COMPRESSION	EXTENSION	LATERAL	ANGULAR
3/4	2-1/4	6-3/8	6-3/8	8-3/8	7-13/16	7/8	1/4	7/8	35°
1	2-9/16	5-15/16	6	8-3/16	7-3/4	7/8	1/4	7/8	25°
1-1/4	3-1/8	6-1/16	6-1/16	8-9/16	7-15/16	7/8	1/4	7/8	25°
1-1/2	3-9/16	5-7/8	5-7/8	8-5/8	7-3/4	7/8	1/4	7/8	20°
2	4-3/16	5-7/16	5-7/16	8-7/16	7-3/8	7/8	1/4	7/8	15°
2-1/2	6-1/8	6-3/16	6-3/16	9-3/4	9	7/8	1/4	7/8	15°
3	6-1/8	6-3/16	6-3/16	10	9	7/8	1/4	7/8	15°

Maximum specified movements are non-concurrent.

General Specifications

Materials:	Union components – PVC/CPVC Elastomers – Neoprene Tube Bellows/ Nitrile O-ring seal EPDM Tube Bellows/ EPDM O-ring seal
Pressure Rating:	150 psi @ 73° F (1.03 MPa @23° C)
Vacuum Service:	Rated @ 26 in-Hg (88 kPa)
Maximum Service Temperature:	PVC = 140° F (60° C) CPVC = 200° F (93° C) Note: Pressure de-ratings apply at elevated temperatures.

Installation Considerations

Piping system must be properly aligned and anchored to prevent damage to an expansion joint of system components. Movement must not exceed maximum specified capacities.

For equipment isolation: Install Elastomer Expansion Joints just before and after the equipment generating the vibration. While vertical and perpendicular installation may be used, for optimum performance install horizontally and parallel to any rotating equipment shaft. For maximum vibration transmission reduction, the piping section beyond the rubber connector must be anchored.

Warning: Excessive noise and vibration may indicate severe problems in system design, operation, or support that cannot be compensated for through use of dampening devices. Such severe problems may also damage union components. Specific application and suitability must be evaluated and determined by the end user.

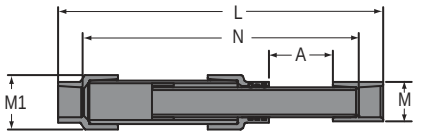
FABRICATED EXPANSION JOINTS WITH 6" & 12" TRAVEL

Socket x Socket

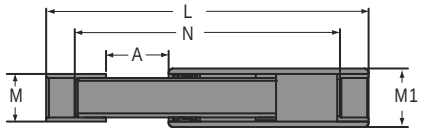
1/2" - 2" 235 psi @ 73°F
2-1/2" & 12" 150 psi @ 73°F
14" 100 psi @ 73°F

Note: "A" = midpoint of extension

Sizes 1/2", 3/4" & 1" Configuration



Sizes 1-1/4" & Up Configuration



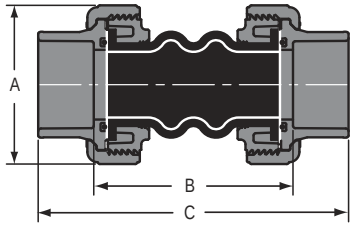
Part Number		Size	A	L	M	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC							PVC	CPVC
826-005x6	826-005x6C	1/2	3	13-11/16	1-9/32	1-23/32	11-15/16	.50	.55
826-007x6	826-007x6C	3/4	3	14-13/16	1-1/2	2-1/16	12-13/16	1.00	1.10
826-010x6	826-010x6C	1	3	15-15/16	1-23/32	2-11/32	13-11/16	1.00	1.10
826-012x6	826-012x6C	1-1/4	3	15-3/4	2-7/32	2-3/8	13-3/8	1.50	1.65
826-015x6	826-015x6C	1-1/2	3	16-1/8	2-11/32	2-7/8	13-7/16	2.00	2.20
826-020x6	826-020x6C	2	3	16-15/16	2-7/8	3-1/2	13-15/16	3.00	3.30
826-025x6	826-025x6C	2-1/2	3	18-7/8	4-3/16	4-1/2	14-7/8	6.00	6.60
826-030x6	826-030x6C	3	3	18-3/4	4-3/16	4-1/2	15-1/4	6.00	6.60
826-040x6	826-040x6C	4	3	19-3/4	5-5/16	5-9/16	15-3/16	7.00	7.70
826-060x6	826-060x6C	6	3	22-3/4	7-11/16	8-5/8	16-3/4	26.50	29.15
826-080x6	826-080x6C	8	3	27-1/4	9-11/16	10-3/4	19-1/4	40.50	44.55
826-100x6	826-100x6C	10	3	35-7/8	11-13/16	12-3/4	25-7/8	67.00	73.70
826-120x6	826-120x6C	12	3	39-1/2	14-1/8	16	27-1/2	134.00	147.40
826-140x6	---	14	3	49-3/4	15-5/8	16	34-7/8	104.27	---

Part Number		Size	A	L	M	M1	N	Approx. Wt. (Lbs.)	
PVC	CPVC							PVC	CPVC
826-005x12	826-005x12C	1/2	6	16-11/16	1-9/32	1-23/32	14-15/16	.57	.63
826-007x12	826-007x12C	3/4	6	17-13/16	1-1/2	2-1/16	15-13/16	1.14	1.26
826-010x12	826-010x12C	1	6	18-15/16	1-23/32	2-11/32	16-11/16	1.14	1.26
826-012x12	826-012x12C	1-1/4	6	18-3/4	2-7/32	2-3/8	16-3/8	1.71	1.88
826-015x12	826-015x12C	1-1/2	6	19-1/8	2-11/32	2-7/8	16-7/16	2.28	2.51
826-020x12	826-020x12C	2	6	19-15/16	2-7/8	3-1/2	16-15/16	3.43	3.77
826-025x12	826-025x12C	2-1/2	6	21-7/8	4-3/16	4-1/2	17-7/8	6.85	7.54
826-030x12	826-030x12C	3	6	21-3/4	4-3/16	4-1/2	18-1/4	6.85	7.54
826-040x12	826-040x12C	4	6	22-3/4	5-5/16	5-9/16	18-3/16	8.00	8.80
826-060x12	826-060x12C	6	6	25-3/4	7-11/16	8-5/8	19-3/4	30.27	33.30
826-080x12	826-080x12C	8	6	30-1/4	9-11/16	10-3/4	22-1/4	46.26	50.89
826-100x12	826-100x12C	10	6	38-7/8	11-13/16	12-3/4	28-7/8	76.53	84.19
826-120x12	826-120x12C	12	6	42-1/2	14-1/8	16	30-1/2	153.07	141.22
826-140x12	---	14	6	52-3/4	15-5/8	16	37-7/8	159.00	---

ELASTOMER EXPANSION JOINT WITH NEOPRENE BELLOWS

Socket x Socket

150 psi @ 73°F

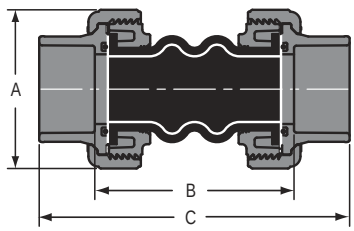


Part Number		Size	A	B	C	MAXIMUM MOVEMENTS				Approx. Wt. (Lbs.)	
PVC	CPVC					COMPRESSION	EXTENSION	LATERAL	ANGULAR	PVC	CPVC
EJ02-007	---	3/4	2-1/4	6-3/8	8-3/8	7/8	1/4	7/8	35°	.50	---
EJ02-010	---	1	2-9/16	5-15/16	8-3/16	7/8	1/4	7/8	25°	.71	---
EJ02-012	---	1-1/4	3-1/8	6-1/16	8-9/16	7/8	1/4	7/8	25°	.70	---
EJ02-015	---	1-1/2	3-9/16	5-7/8	8-5/8	7/8	1/4	7/8	20°	1.07	---
EJ02-020	---	2	4-3/16	5-7/16	8-7/16	7/8	1/4	7/8	15°	1.54	---
EJ20-025	---	2-1/2	6-1/8	6-3/16	9-3/4	7/8	1/4	7/8	15°	4.49	---
EJ02-030	---	3	6-1/8	6-3/16	10	7/8	1/4	7/8	15°	4.71	---

ELASTOMER EXPANSION JOINT WITH EPDM BELLOWS

Socket x Socket

150 psi @ 73°F



Part Number		Size	A	B	C	MAXIMUM MOVEMENTS				Approx. Wt. (Lbs.)	
PVC	CPVC					COMPRESSION	EXTENSION	LATERAL	ANGULAR	PVC	CPVC
EJ22-007	EJ22-007C	3/4	2-1/4	6-3/8	8-3/8	7/8	1/4	7/8	35°	.32	.39
EJ22-010	EJ22-010C	1	2-9/16	5-15/16	8-3/16	7/8	1/4	7/8	25°	.70	.81
EJ22-012	EJ22-012C	1-1/4	3-1/8	6-1/16	8-9/16	7/8	1/4	7/8	25°	.81	.84
EJ22-015	EJ22-015C	1-1/2	3-9/16	5-7/8	8-5/8	7/8	1/4	7/8	20°	1.03	1.07
EJ22-020	EJ22-020C	2	4-3/16	5-7/16	8-7/16	7/8	1/4	7/8	15°	1.54	1.61
EJ22-025	EJ22-025C	2-1/2	6-1/8	6-3/16	9-3/4	7/8	1/4	7/8	15°	4.49	4.77
EJ22-030	EJ22-030C	3	6-1/8	6-3/16	10	7/8	1/4	7/8	15°	4.81	5.04

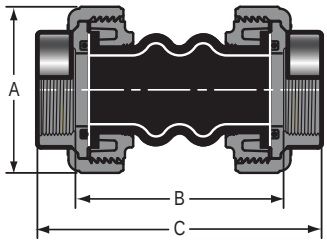
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

ELASTOMER EXPANSION JOINT WITH NEOPRENE BELLOWS

SR Fipt x SR Fipt

150 psi @ 73°F

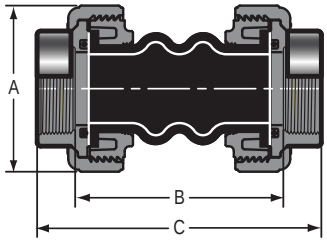


Part Number		Size	A	B	C	MAXIMUM MOVEMENTS				Approx. Wt. (Lbs.)	
PVC	CPVC					COMPRESSION	EXTENSION	LATERAL	ANGULAR	PVC	CPVC
EJ01-007SR	---	3/4	2-1/4	6-3/8	7-3/16	7/8	1/4	7/8	35°	.51	---
EJ01-010SR	---	1	2-9/16	6	7-3/4	7/8	1/4	7/8	25°	.73	---
EJ01-012SR	---	1-1/4	3-1/8	6-1/16	7-15/16	7/8	1/4	7/8	25°	.73	---
EJ01-015SR	---	1-1/2	3-9/16	5-7/8	7-3/4	7/8	1/4	7/8	20°	1.15	---
EJ01-020SR	---	2	4-3/16	5-7/16	7-3/8	7/8	1/4	7/8	15°	1.58	---
EJ01-025SR	---	2-1/2	6-1/8	6-3/16	9	7/8	1/4	7/8	15°	4.63	---
EJ01-030SR	---	3	6-1/8	6-3/16	9	7/8	1/4	7/8	15°	4.84	---

ELASTOMER EXPANSION JOINT WITH EPDM BELLOWS

SR Fipt x SR Fipt

150 psi @ 73°F



Part Number		Size	A	B	C	MAXIMUM MOVEMENTS				Approx. Wt. (Lbs.)	
PVC	CPVC					COMPRESSION	EXTENSION	LATERAL	ANGULAR	PVC	CPVC
EJ21-007SR	EJ21-007CSR	3/4	2-1/4	6-3/8	7-3/16	7/8	1/4	7/8	35°	.33	.39
EJ21-010SR	EJ21-010CSR	1	2-9/16	6	7-3/4	7/8	1/4	7/8	25°	.71	.83
EJ21-012SR	EJ21-012CSR	1-1/4	3-1/8	6-1/16	7-15/16	7/8	1/4	7/8	25°	.74	.76
EJ21-015SR	EJ21-015CSR	1-1/2	3-9/16	5-7/8	7-3/4	7/8	1/4	7/8	20°	1.15	1.19
EJ21-020SR	EJ21-020CSR	2	4-3/16	5-7/16	7-3/8	7/8	1/4	7/8	15°	1.58	1.65
EJ21-025SR	EJ21-025CSR	2-1/2	6-1/8	6-3/16	9	7/8	1/4	7/8	15°	4.63	4.91
EJ21-030SR	EJ21-030CSR	3	6-1/8	6-3/16	9	7/8	1/4	7/8	15°	4.85	5.19

PVC DWV Drain Waste & Vent Pipe and Fittings

PRICING

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC DWV Drain Waste & Vent Pipe

Schedule 40 Pipe
20" Lengths, Price Per Foot

List Price Per Foot

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
PD-400-012	1-1/4	20	3920	947	2.90
PD-400-015	1-1/2	20	3020	947	3.29
PD-400-020	2	20	2460	947	4.52
PD-400-030	3	20	1160	947	8.90

Schedule 40 Pipe (continued)
20" Lengths, Price Per Foot

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
PD-400-040	4	20	1020	947	12.46
PD-400-060	6	20	440	947	22.53
PD-400-080	8	20	280	947	39.95
PD-400-100	10	20	220	947	54.37
PD-400-120	12	20	120	947	78.75
PD-400-140	14	20	60	947	99.58
PD-400-160	16	20	60	947	105.07

PVC DWV Drain Waste & Vent Fittings

STANDARDS & SPECIFICATIONS

Standards provide greater assurance of product performance and consistency, and are available to assist design engineers in system specification. The most frequently referenced industry standards for plastic piping systems are ASTM Standard Specifications and Practices. Along with ASTM Standards, additional product specifications and certifications form the basis of product conformance to which Spears® products are manufactured.

ASTM D 2665 Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings.
ASTM D 3311 Drain, Waste, and Vent (DWV) Plastic Fittings Patterns.
ASTM F 1866 Poly (Vinyl Chloride) (PVC) Plastic Schedule 40 Drainage and DWV Fabricated Fittings.
ASTM D 1784 Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds.
NSF® International Standard 14 (NSF®-dwv) Certified
NSF® International Certified to Uniform Plumbing Code (NSF®-U.P. Code)
See official listing

P100 Coupling
H x H

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P100-015	1-1/2	100	7200	051	.88
P100-020	2	100	3600	051	1.18
P100-030	3	60	840	051	4.32
P100-040	4	25	450	051	7.46
P100-060	6	5	175	051	24.25
P100-080	8	8	64	051	59.41
P100-100	10	1	36	052	120.98
P100-120	12	1	21	052	206.04
P100-140	14	1	12	052	315.89

P101 Female Adapter
FPT x H

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P101-015	1-1/2	100	4800	051	1.76
P101-020	2	100	3500	051	2.97
P101-030	3	35	1260	051	8.00
P101-040	4	10	480	051	10.24
P101-060	6	10	180	051	34.42

P102 Pipe Increaser - Reducer
H x H

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P102-251	2X1-1/2	25	4200	051	2.60
P102-337	3X1-1/2	25	1200	051	8.26
P102-338	3X2	20	960	051	6.34
P102-420	4X2	10	720	051	12.58
P102-422	4X3	20	720	051	13.38
3729-528*	6X2	1	120	390	106.04
3729-530*	6X3	1	120	390	104.38
P102-532	6X4	1	144	051	49.44
P102-582	8X4	2	96	051	75.33
P102-585	8X6	2	96	051	66.37
3729-624*	10X4	1	22	390	211.83

P102 Pipe Increaser - Reducer (continued)
H x H

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P102-626	10X6	1	36	052	309.17
3729-626*	10X6	1	32	390	197.41
P102-628	10X8	1	36	052	206.34
3729-628*	10X8	1	24	390	138.17
3729-661*	12X2	1	12	390	513.37
3729-663*	12X3	1	8	390	509.97
3729-664*	12X4	1	12	390	398.29
3729-666*	12X6	1	12	390	302.00
P102-668	12X8	1	16	052	315.09
3729-670*	12X10	1	18	390	201.13
3729-691*	14X2	1	18	390	750.73
3729-694*	14X4	1	18	390	640.96
3729-696*	14X6	1	12	390	620.52
3729-698*	14X8	1	18	390	449.17
3729-700*	14X10	1	18	390	379.36
3729-702*	14X12	1	16	390	336.89

* Fabricated

Pipe Increaser - Eccentric Reducer
H x H

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P102-338E	3X2	20	600	051	18.48
3729-528E3*	6X2	1	48	390	103.09
3729-530E2*	6X3	1	72	390	94.96
3729-532E2	6X4	1	96	390	47.48
3729-580E3*	8X3	1	22	390	195.86
3729-582E2*	8X4	1	22	390	97.80
3729-585E*	8X6	1	32	390	79.06
3729-624E2*	10X4	1	16	390	223.63
3729-626E*	10X6	1	20	390	205.62
3729-628E*	10X8	1	24	390	193.86
3729-664E3*	12X4	1	12	390	417.24
3729-666E2*	12X6	1	12	390	342.84
3729-668E2*	12X8	1	12	390	227.35
3729-670E*	12X10	1	18	390	197.12

PVC DWV Drain Waste & Vent Fittings

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each

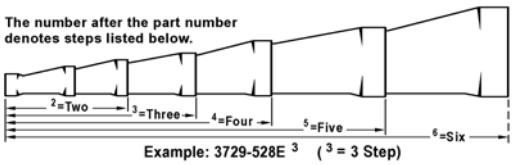
Pipe Increaser - Eccentric Reducer (continued)

H x H

Eccentric Reducer Footnotes

Multi-Step Configurations

The number after the part number denotes steps listed below.



Example: 3729-528E 3 (3 = 3 Step)

* Fabricated

P103 Trap Adapter - Male

S x SLIP

P103-015	**1-1/2**	50	5250	051	2.39
P103-020	**2**	25	4200	051	6.59

P103P Trap Adapter - Male

S x SLIP w/Plastic Nut - Built-in Washer

P103P-212	**1-1/2X1-1/4**	75	5400	051	2.73
P103P-015	**1-1/2**	50	5250	051	2.54
P103P-020	**2**	25	4200	051	8.74

P103R Trap Adapter - Male with 1-1/2 Plastic Nut & Washer and 1-1/2 x1-1/4 Washer

S x SLIP w/Plastic Nut

P103R-015	**1-1/2**	50	3600	051	2.62

P103X Trap Adapter-Male

S x SLIP w/Chrome Nut & Washer

P103X-212	**1-1/2X1-1/4**	100	7200	051	3.84
P103X-015	**1-1/2**	50	5250	051	11.10
P103X-020	**2**	25	4200	051	11.19

P104 Trap Adapter - Female

H x SLIP

P104-015	**1-1/2**	50	8400	051	1.86
P104-020	**2**	50	3600	051	5.36

P104P Trap Adapter - Female

H x SLIP w/Plastic Nut

P104P-212	**1-1/2X1-1/4**	50	5250	051	2.75
P104P-012	**1-1/4**	50	5250	051	8.12
P104P-015	**1-1/2**	50	5250	051	2.35

P104R Trap Adapter - Female w/1-1/2 Plastic Nut & Washer and 1-1/2x1-1/4 Washer

H x SLIP w/Plastic Nut

P104R-015	**1-1/2**	50	3600	051	2.66

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each

P104X Trap Adapter - Female

H x SLIP w/Chrome Nut & Washer

P104X-212	**1-1/2X1-1/4**	50	3600	051	3.84
P104X-015	**1-1/2**	50	3600	051	11.10
P104X-020	**2**	50	3600	051	11.19

P000P HDPE Slip Joint Nut

(Plastic Nut)

P000P-015	**1-1/2**	600	18000	051	.82
P000P-020	**2**	450	13500	051	1.31
P000P-169	**1-1/4X1-1/2**	400	19200	051	1.41

P105 Fitting Cleanout Adapter

S x FPT

P105-015	**1-1/2**	50	5250	051	2.01
P105-020	**2**	50	3600	051	2.84
P105-030	**3**	25	1200	051	8.03
P105-040	**4**	10	720	051	13.19
P105-060	**6**	10	180	051	35.33
P105-080	**8**	8	112	051	104.57

P105H Female Cleanout Adapter

H x FPT

P105H-040	**4**	10	720	051	10.24
P105H-060	**6**	10	180	051	34.42

P105X Fitting Cleanout Adapter w/C.O. Plug

S x FPT

P105X-015	**1-1/2**	50	5250	051	3.02
P105X-020	**2**	50	3600	051	4.14
P105X-030	**3**	25	900	051	8.38
P105X-040	**4**	10	480	051	15.17
P105X-060	**6**	10	180	051	43.73
P105X-080	**8**	8	112	051	130.65
3978-100*	**10**	1	64	400	465.43
3978-120*	**12**	1	32	400	649.82
3978-140*	**14**	1	16	400	805.83

* Fabricated - PVC Gray with HDPE Plug

P106 Cleanout Plug

MPT

P106-015	**1-1/2**	50	12000	051	1.65
P106-020	**2**	50	8400	051	1.71
P106-025	**2-1/2**	50	5250	051	5.48
P106-030	**3**	25	2625	051	3.29
P106-040	**4**	30	2160	051	4.86
P106-060	**6**	10	1050	051	16.16
P106-080	**8**	12	576	051	84.21

P107 Flush Bushing

S x H

[1]Outlet-sized with Bushing

P107-251	**2X1-1/2**	50	8400	051	1.60
P107-337	**3X1-1/2**	30	2520	051	7.72
P107-338	**3X2**	30	2520	051	3.53
P107-420	**4X2**	30	1080	051	13.45
P107-422	**4X3**	30	1080	051	6.86
P107-532	**6X4**	10	300	051	35.58

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

P107 Flush Bushing (continued)
S x H

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P107-582	**8X4**	3	144	051	70.34
P107-585	**8X6**	4	120	051	77.42
P107-624[1]	**10X4**	2	60	052	157.53
P107-626[1]	**10X6**	2	60	052	229.13
P107-628	**10X8**	4	56	052	255.39
P107-666[1]	**12X6**	2	42	052	342.77
P107-668[1]	**12X8**	1	42	052	352.69
P107-670	**12X10**	2	60	052	360.00

[1] Bushed

P108 Flush Bushing (Cleanout Adapter)
S x FPT

P108-212	**1-1/2X1-1/4**	50	12000	051	4.96
P108-628	**10X8**	4	56	052	490.12
P108-668	**12X8**	1	30	052	711.97

P108X Flush Bushing (Cleanout Adapter) w/Plug
S x FPT

P108X-628	**10X8**	1	56	052	721.20
P108X-668	**12X8**	1	30	052	1055.24

P109 Male Adapter (Will not accept tail piece)
MPT x H

P109-015	**1-1/2**	50	5250	051	1.81
P109-020	**2**	50	3600	051	2.35
P109-030	**3**	25	1200	051	6.77
P109-040	**4**	25	900	051	14.98
P109-060	**6**	7	245	051	45.11

P110 Flush C.O. Plug
MPT

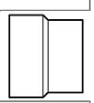
P110-015	**1-1/2**	25	9600	051	6.68
P110-020	**2**	25	9600	051	5.59
P110-025	**2-1/2**	50	5250	051	7.02
P110-030	**3**	50	5250	051	6.47
P110-040	**4**	25	2400	051	6.35
P110-060	**6**	10	960	051	16.01

P116 Cap
SOC

P116-015	**1-1/2**	20	7680	051	3.74
P116-020	**2**	15	5760	051	6.21
P116-030	**3**	10	1680	051	10.77
P116-040	**4**	5	840	051	15.39
P116-060	**6**	5	240	051	38.85
P116-080	**8**	3	90	051	116.41
3747-100*	**10**	1	108	390	116.99
3747-120*	**12**	1	70	390	147.74
3747-140*	**14**	1	44	390	251.21

Note: 8" Cap is Domed Style
* Fabricated

P117 Adapter Coupling (Adapts S&D Spigot to DWV Spigot)
H x H



P117-040	**4**	20	700	051	14.45
P117-422	**4X3**	20	600	051	11.00

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each

P118 Adapter Bushing (Adapts DWV Hub to S&D Spigot)
DWV SPIGOT x HUB

P118-030	**3**	25	1800	051	5.32
P118-040	**4**	10	1050	051	5.75

P119 No-Hub Adapter
S x H

P119-015	**1-1/2**	25	4200	051	10.03
P119-020	**2**	25	2625	051	4.87
P119-030	**3**	20	960	051	7.04
P119-040	**4**	15	720	051	9.06
P119-251	**2X1-1/2**	35	3675	051	9.52
P119-422	**4X3**	10	720	051	11.58

P122 Spigot Adapter, Cast Iron
H x H

P122-040	**4**	15	210	051	18.80

P123 Hub Adapter, Cast Iron
H x S

P123-020	**2**	20	1440	051	7.89
P123-030	**3**	25	750	051	14.15
P123-040	**4**	10	350	051	24.74

P123R Hub Adapter, Cast Iron, Increaser (Plain End: Joint can be made with compression gasket or plastic lead & seal rope - Do Not use hot lead)
H x S

P123R-213	**1-1/2X2**	10	1680	051	9.04
P123R-342	**3X4**	10	350	051	16.68

P130 Repair Coupling
H x H

P130-015	**1-1/2**	25	6000	051	5.09
P130-020	**2**	25	2625	051	3.56
P130-030	**3**	10	960	051	8.98
P130-040	**4**	5	480	051	17.27
P130-060	**6**	5	175	051	63.48
P130-080	**8**	8	64	051	77.43
P130-100	**10**	1	36	052	167.65

P131 Test Cap

P131-015	**1-1/2**	100	38400	051	1.35
P131-020	**2**	100	24000	051	1.28
P131-030	**3**	50	8400	051	1.65
P131-040	**4**	100	4800	051	2.07

P300 1/4 Bend
H x H

P300-015	**1-1/2**	100	3000	051	1.98
P300-020	**2**	50	1500	051	2.91
P300-030	**3**	25	350	051	9.02
P300-040	**4**	10	180	051	16.47
P300-060	**6**	4	56	051	60.54
P300-080	**8**	2	28	051	122.61
P300-100	**10**	1	12	052	327.77

PVC DWV Drain Waste & Vent Fittings

P300 1/4 Bend (continued)
H x H

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P300-120	12	1	5	052	504.81

P300S 1/4 Bend with Side Inlet
ALL HUB

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P300S-338	3X3X2	10	360	051	17.85

P302 1/4 Bend, Street
S x H

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P302-015	1-1/2	100	3000	051	2.42
P302-020	2	50	1500	051	3.74
P302-030	3	20	360	051	9.27
P302-040	4	10	180	051	18.24
P302-060	6	4	56	051	84.33
P302-080	8	2	28	051	168.13
P302-100	10	1	12	052	326.37
P302-120	12	1	7	052	502.95

P303 1/4 Bend w/Low Heel Inlet
H x H x H

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P303-338	3X3X2	25	200	051	15.76
P303-420	4X4X2	6	180	051	31.09

P304 Long Sweep 1/4 Bend
H x H

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P304-015	1-1/2	50	1750	051	4.53
P304-020	2	25	875	051	4.88
P304-030	3	10	300	051	11.23
P304-040	4	5	150	051	21.42
P304-060[1]	6	5	35	051	82.46

6" size assembled from 2-Molded 1/8 Bends

P309 Long Sweep 1/4 Bend, Street
H x S

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P309-015	1-1/2	50	1750	051	5.98
P309-020	2	25	900	051	7.60
P309-030	3	20	280	051	20.89
P309-040	4	5	150	051	32.18
P309-060	6	5	35	051	148.75

P310 1/4 Bend, Street w/Low Heel Inlet
H x S x H

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P310-338	3X3X2	15	270	051	28.21

P319 1/6 Bend
H x H

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P319-015	1-1/2	40	2880	051	3.55
P319-020	2	25	1200	051	4.73
P319-030	3	20	600	051	16.81
P319-040	4	10	180	051	23.89
3724-060*	6	1	56	390	127.62
3724-080*	8	1	28	390	182.08
3724-100*	10	1	16	390	305.13
3724-120*	12	1	6	390	399.78
3724-140*	14	1	4	390	732.80

* Fabricated

P320 1/6 Bend, Street
H X S

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P320-015	1-1/2	40	2880	051	7.09
P320-020	2	25	1800	051	9.60
P320-030	3	20	360	051	22.49
P320-040	4	10	300	051	30.06

P321 1/8 Bend
H x H

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P321-015	1-1/2	100	3000	051	1.81
P321-020	2	50	1800	051	2.79
P321-030	3	25	450	051	7.64
P321-040	4	15	270	051	13.13
P321-060	6	5	90	051	55.41
P321-080	8	1	36	051	110.13
P321-100	10	1	21	052	275.04
P321-120	12	1	12	052	378.46
3717-140*	14	1	6	390	512.16

* Fabricated

P323 1/8 Bend, Street
H x S

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P323-015	1-1/2	100	3600	051	1.83
P323-020	2	50	1800	051	2.81
P323-030	3	25	450	051	7.34
P323-040	4	10	300	051	11.88
P323-060	6	5	90	051	67.86
P323-080	8	1	36	051	119.53
3727-100*	10	1	16	390	210.32
3727-120*	12	1	10	390	295.38
3727-140*	14	1	6	390	512.16

* Fabricated

P324 1/16 Bend
H x H

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P324-015	1-1/2	50	3600	051	2.60
P324-020	2	25	1800	051	3.21
P324-030	3	20	720	051	8.24
P324-040	4	15	270	051	12.58
P324-060	6	3	105	051	75.65
P324-080	8	2	36	051	90.07
3716-100*	10	1	30	390	168.54
3716-120*	12	1	12	390	266.62
3716-140*	14	1	6	390	419.17

* Fabricated

P326 1/16 Bend, Street
H x S

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P326-015	1-1/2	50	3600	051	7.34
P326-020	2	25	1800	051	7.85
P326-030	3	20	720	051	12.36
P326-040	4	10	350	051	18.00
P326-060	6	5	90	051	73.27
P326-080	8	2	36	051	100.86
3742-100*	10	1	30	390	185.38
3742-120*	12	1	12	390	293.27
3742-140*	14	1	6	390	461.07

* Fabricated

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC DWV Drain Waste & Vent Fittings

P327 Double 1/4 Bend
H x H x H

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P327-015	1-1/2	20	1440	051	6.46
P327-020	2	25	875	051	9.04
P327-030	3	15	270	051	27.66
P327-040	4	6	108	051	38.18

P327 Double 1/4 Bend, Reducing
H x H x H

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P327-241	2X1-1/2X1-1/2	25	1200	051	8.61

P329 Closet Bend, Reducing
H x H

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P329-342	3X4	10	300	051	14.16

P330 Closet Bend, Reducing
H x S

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P330-342	3X4	10	300	051	19.16

P330X Closet Bend, Reducing with TEST CAP
H x S

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P330X-342	3X4	10	300	051	26.28

P331 Vent Ell
H x H

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P331-015	1-1/2	25	1800	051	3.78
P331-020	2	30	1440	051	5.27
P331-030	3	25	450	051	13.27
P331-040	4	10	180	051	33.38
P331-060	6	5	40	051	105.21
P331-080	8	2	28	051	109.64
P331-100	10	1	16	052	311.35
P331-120	12	1	12	052	479.61
3706-140*	14	1	2	390	520.49

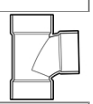
* Fabricated

P333 Vent Ell, Street
H x S

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P333-015	1-1/2	25	3150	051	3.21
P333-020	2	20	1440	051	5.49
P333-030	3	25	450	051	14.43
P333-040	4	10	180	051	50.07
3709-060*	6	1	32	390	122.13
3709-080*	8	1	16	390	168.00
3709-100*	10	1	10	390	280.72
3709-120*	12	1	5	390	409.11
3709-140*	14	1	2	390	565.74

* Fabricated

P400 Sanitary Tee
ALL HUB



Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P400-015	1-1/2	60	1800	051	3.40
P400-020	2	35	630	051	5.02
P400-030	3	30	240	051	12.85
P400-040	4	5	150	051	22.38
P400-060	6	6	42	051	97.69
P400-080	8	2	16	051	292.44

P400 Sanitary Tee (continued)
ALL HUB

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P400-100	10	1	7	052	766.27
P400-120	12	1	8	052	1068.24
3790-140*	14	1	3	390	1404.22

* Fabricated

P401 Sanitary Tee, Reducing
ALL HUB

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P401-241	2X1-1/2X1-1/2	25	875	051	4.40
P401-251	2X2X1-1/2	50	900	051	4.43
P401-257	2X1-1/2X2	25	875	051	5.33
P401-337	3X3X1-1/2	10	350	051	8.15
P401-338	3X3X2	10	350	051	9.60
P401-420	4X4X2	10	300	051	20.94
P401-422	4X4X3	10	180	051	28.44
3790-528*	6X2	1	32	390	104.27
3790-530*	6X3	1	32	390	114.48
P401-532	6X4	4	72	051	94.51
3790-578*	8X2	1	16	390	159.32
3790-580*	8X3	1	16	390	210.53
3790-582*	8X4	1	16	390	199.78
3790-585*	8X6	1	8	390	239.32
3790-621*	10X2	1	8	390	244.49
3790-623*	10X3	1	8	390	248.63
3790-624*	10X4	1	8	390	266.39
3790-626*	10X6	1	8	390	342.84
3790-628*	10X8	1	6	390	419.78
3790-661*	12X2	1	6	390	410.27
3790-663*	12X3	1	6	390	414.95
3790-664*	12X4	1	4	390	427.08
3790-666*	12X6	1	6	390	465.66
3790-668*	12X8	1	6	390	518.46
3790-670*	12X10	1	6	390	653.08
3790-691*	14X2	1	4	390	556.37
3790-693*	14X3	1	4	390	603.71
3790-694*	14X4	1	6	390	609.61
3790-696*	14X6	1	4	390	727.02
3790-698*	14X8	1	4	390	829.24
3790-700*	14X10	1	4	390	996.07
3790-702*	14X12	1	2	390	1174.27

* Fabricated

P403 Sanitary Tee, Street
S x H x H

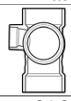
Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P403-015	1-1/2	20	1440	051	9.19
P403-020	2	25	750	051	10.02
P403-030	3	30	210	051	16.67
P403-040	4	10	140	051	43.53
P403-060	6	4	32	051	88.55
P403-080	8	2	16	051	302.98
P403-100	10	1	10	052	848.99
P403-120	12	1	8	052	1271.61

P404 Sanitary Tee, Street, Reducing
S x H x H

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P404-241	2X1-1/2X1-1/2	50	1500	051	8.37
P404-251	2X2X1-1/2	50	700	051	7.84
P404-257	2X1-1/2X2	50	900	051	7.58
P404-337	3X3X1-1/2	10	350	051	17.43
P404-338	3X3X2	10	350	051	16.46
P404-420	4X4X2	5	240	051	26.28
P404-422	4X4X3	5	150	051	29.45

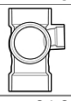
PVC DWV Drain Waste & Vent Fittings

P416 Sanitary Tee with Left Side Inlet
ALL HUB



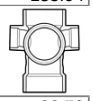
Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P416-337	3X3X3X1-1/2	10	180	051	24.88
P416-338	3X3X3X2	10	180	051	23.97
P416-420	4X4X4X2	4	120	051	42.85

P417 Sanitary Tee with Right Side Inlet
ALL HUB



Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P417-337	3X3X3X1-1/2	10	180	051	24.88
P417-338	3X3X3X2	10	180	051	23.97
P417-420	4X4X4X2	10	80	051	135.94

P418 Sanitary Tee with R&L Side Inlets
ALL HUB



Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P418-337	3X3X3X1-1/2	5	175	051	32.73
P418-338	3X3X3X2X2	5	150	051	31.71
P418-420	4X4X4X2X2	5	90	051	138.50

P428 Double Sanitary Tee
ALL HUB

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P428-015	1-1/2	25	1200	051	6.98
P428-020	2	25	750	051	10.23
P428-030	3	8	240	051	28.62
P428-040	4	6	108	051	46.02
3791-060*	6	1	6	390	210.94
3791-080*	8	1	5	390	336.37
3791-100*	10	1	3	390	600.76
3791-120*	12	1	6	390	872.12
3791-140*	14	1	2	390	1510.54

* Fabricated

P429 Double Sanitary Tee, Reducing
ALL HUB

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P429-251	2X2X1-1/2X1-1/2	25	900	051	7.72
P429-337	3X3X1-1/2X1-1/2	6	432	051	16.43
P429-338	3X3X2X2	10	300	051	17.27
P429-419	4X4X1-1/2X1-1/2	7	245	051	60.87
P429-420	4X4X2X2	7	245	051	38.07
P429-422	4X4X3X3	8	144	051	39.06
3791-528*	6X2	1	16	390	151.05
3791-530*	6X3	1	16	390	158.25
3791-532*	6X4	1	8	390	164.31
3791-578*	8X2	1	16	390	184.42
3791-580*	8X3	1	8	390	229.81
3791-582*	8X4	1	4	390	234.09
3791-585*	8X6	1	5	390	265.28
3791-621*	10X2	1	8	390	274.36
3791-623*	10X3	1	6	390	287.34
3791-624*	10X4	1	4	390	293.69
3791-626*	10X6	1	4	390	369.51
3791-628*	10X8	1	4	390	459.75
3791-661*	12X2	1	6	390	444.58
3791-663*	12X3	1	6	390	453.99
3791-664*	12X4	1	4	390	464.20
3791-666*	12X6	1	4	390	515.82
3791-668*	12X8	1	4	390	578.72
3791-670*	12X10	1	6	390	720.02
3791-691*	14X2	1	4	390	606.21
3791-693*	14X3	1	4	390	684.07
3791-694*	14X4	1	4	390	723.51

P429 Double Sanitary Tee, Reducing (continued)
ALL HUB

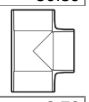
Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
3791-696*	14X6	1	4	390	823.21
3791-698*	14X8	1	4	390	905.67
3791-700*	14X10	1	4	390	1071.85
3791-702*	14X12	1	3	390	1264.80

* Fabricated

P439 Double Sanitary Tee with R&L Side Inlets
ALL HUB

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P439-338	3X3X3X3X2X2	4	120	051	36.53
P439-420	4X4X4X4X2X2	4	72	051	50.89

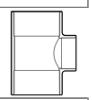
P441 Vent Tee
ALL HUB



Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P441-015	1-1/2	25	1800	051	8.79
P441-020	2	25	900	051	7.46
P441-030	3	10	300	051	23.20
P441-040	4	5	175	051	30.73
P441-060	6	4	32	051	83.43
P441-080	8	2	28	051	214.83
P441-100	10	1	12	052	400.47
P441-120	12	1	10	052	665.75
3701-140*	14	1	4	390	964.59

* Fabricated

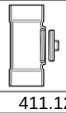
P442 Vent Tee, Reducing
ALL HUB



Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P442-251	2X1-1/2	25	1200	051	9.00
3701-528*	6X2	1	40	390	100.71
3701-530*	6X3	1	24	390	105.78
P442-532	6X4	2	72	051	60.36
3701-578*	8X2	1	24	390	118.41
3701-580*	8X3	1	24	390	124.17
P442-582	8X4	2	36	051	66.38
P442-585	8X6	2	28	051	85.78
3701-621*	10X2	1	24	390	192.76
3701-623*	10X3	1	12	390	196.33
P442-624	10X4	1	12	052	255.69
P442-626	10X6	1	14	052	314.62
P442-628	10X8	1	12	052	354.92
3701-661*	12X2	1	10	390	257.35
3701-663*	12X3	1	8	390	261.15
P442-664	12X4	1	10	052	345.69
P442-666	12X6	1	10	052	394.75
P442-668	12X8	1	10	052	454.01
P442-670	12X10	1	10	052	541.74
3701-691*	14X2	1	12	390	408.13
3701-693*	14X3	1	8	390	451.72
3701-694*	14X4	1	12	390	503.61
3701-696*	14X6	1	6	390	591.03
3701-698*	14X8	1	6	390	704.67
3701-700*	14X10	1	6	390	801.01
3701-702*	14X12	1	4	390	947.58

* Fabricated

3701 Test Tee
SOC x FPT with Plug



Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
3701-060TEST*	6	1	48	390	411.12
3701-080TEST*	8	1	22	390	455.66
3701-100TEST*	10	1	11	390	669.71
3701-120TEST*	12	1	8	390	1140.53

* Fabricated

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC DWV Drain Waste & Vent Fittings

P444X Cleanout Tee w/C.O. Plug
H x H

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P444X-015	**1-1/2**	20	1440	051	8.62
P444X-020	**2**	10	720	051	9.96
P444X-030	**3**	10	350	051	19.02
P444X-040	**4**	10	180	051	29.93
P444X-060	**6**	2	70	051	151.92

P445 Flush C.O. Tee
H x H x FPT

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P445-015	**1-1/2**	20	2100	051	6.18
P445-020	**2**	25	1200	051	7.60
P445-030	**3**	10	360	051	15.17
P445-040	**4**	10	180	051	28.22
P445-060	**6**	3	54	051	94.78

P445X Flush C.O. Tee w/C.O. Plug
H x H

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P445X-015	**1-1/2**	20	1440	051	8.07
P445X-020	**2**	10	1050	051	11.82
P445X-030	**3**	10	300	051	22.27
P445X-040	**4**	10	180	051	30.51
P445X-060	**6**	2	36	051	151.92

P447 Horizontal Twin Tee
ALL HUB

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P447-337	**3X3X1-1/2X1-1/2**	5	360	051	45.01

P448 2-WAY Cleanout
ALL HUB

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P448-030	**3**	12	216	051	30.66
P448-040	**4**	5	90	051	39.69

P500 Double Fixture Fitting
ALL HUB

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P500-020	**2X2X2X2**	10	360	051	17.40
P500-030	**3X3X3X3**	10	80	051	37.61
P500-241	2X1-1/2X1-1/2X1-1/2	20	600	051	19.16
P500-251	**2X2X1-1/2X1-1/2**	20	600	051	20.02
P500-338	**3X2X3X3**	10	80	051	37.24

P501 Combination Wye and 1/8 Bend (One Piece)
ALL HUB

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P501-015	**1-1/2**	50	900	051	7.40
P501-020	**2**	20	600	051	8.81
P501-030	**3**	10	180	051	21.38
P501-040	**4**	8	96	051	38.02
3777-060*	**6**	1	20	390	197.67
3777-080*	**8**	1	8	390	315.23
3777-100*	**10**	1	8	390	563.03
3777-120*	**12**	1	3	390	817.35
3777-140*	**14**	1	2	390	1415.75

* Fabricated

P502 Combination Wye and 1/8 Bend, Reducing (One Piece)
ALL HUB

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P502-251	**2X2X1-1/2**	20	700	051	10.64

P502 Combination Wye and 1/8 Bend, Reducing (One Piece) (continued)
ALL HUB

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P502-337	**3X3X1-1/2**	15	450	051	18.44
P502-338	**3X3X2**	10	180	051	14.14
P502-420	**4X4X2**	5	150	051	23.58
P502-422	**4X4X3**	5	90	051	28.73
3777-528*	**6X2**	1	32	390	144.06
3777-532*	**6X4**	1	32	390	154.00
3777-578*	**8X2**	1	16	390	172.85
3777-580*	**8X3**	1	24	390	215.39
3777-621*	**10X2**	1	16	390	257.13
3777-623*	**10X3**	1	8	390	269.31
3777-624*	**10X4**	1	8	390	275.26
3777-626*	**10X6**	1	4	390	346.29
3777-628*	**10X8**	1	8	390	430.89
3777-661*	**12X2**	1	4	390	416.68
3777-663*	**12X3**	1	4	390	425.48
3777-664*	**12X4**	1	6	390	435.06
3777-666*	**12X6**	1	6	390	483.43
3777-668*	**12X8**	1	6	390	542.36
3777-670*	**12X10**	1	6	390	674.80
3777-691*	**14X2**	1	4	390	626.97
3777-693*	**14X3**	1	4	390	641.13
3777-694*	**14X4**	1	4	390	678.06
3777-696*	**14X6**	1	6	390	771.52
3777-698*	**14X8**	1	4	390	848.81
3777-700*	**14X10**	1	4	390	1004.55
3777-702*	**14X12**	1	4	390	1185.38

* Fabricated

P503 Combination Wye and 1/8 Bend (Two Piece)
ALL HUB

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P503-030	**3**	10	180	051	23.98
P503-040	**4**	5	40	051	56.02
P503-060	**6**	4	28	051	173.84
P503-080	**8**	1	4	051	323.06
P503-100	**10**	1	4	052	1054.17
P503-120	**12**	1	4	052	1227.31

P504 Combination Wye and 1/8 Bend, Reducing (Two Piece)
ALL HUB

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P504-422	**4X3**	5	90	051	43.22
P504-530	**6X3**	5	40	051	174.91
P504-532	**6X4**	5	35	051	161.64
P504-580	**8X3**	2	16	051	176.78
P504-582*	**8X4**	2	16	051	195.82
P504-585	**8X6**	1	8	051	349.04
P504-623*	**10X3**	1	12	052	349.75
P504-624*	**10X4**	1	8	052	370.33
P504-626	**10X6**	1	8	052	465.69
P504-628	**10X8**	1	8	052	579.69
P504-664	**12X4**	1	4	052	575.93
P504-666	**12X6**	1	4	052	598.25
P504-668	**12X8**	1	6	052	729.45
P504-670*	**12X10**	1	6	052	1080.85

* Bushed

P507 Double Combination Wye and 1/8 Bend
ALL HUB

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P507-015	**1-1/2**	10	350	051	20.36
P507-020	**2**	10	300	051	30.57
P507-030	**3**	10	80	051	59.28

PVC DWV Drain Waste & Vent Fittings

P507 Double Combination Wye and 1/8 Bend (continued)

ALL HUB

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P507-040	4	5	35	051	118.25
P507-251	2X2X1-1/2X1-1/2	20	360	051	27.05
P507-338	3X3X2X2	10	80	051	50.25
P507-420	4X4X2X2	5	70	051	95.82
P507-422	4X4X3X3	5	40	051	94.38
3792-060*	6	1	6	390	217.44
3792-080*	8	1	5	390	346.78
3792-100*	10	1	1	390	619.33
3792-120*	12	1	1	390	899.09
3792-140*	14	1	2	390	1557.25
3792-528*	6X2	1	24	390	155.73
3792-530*	6X3	1	24	390	163.17
3792-532*	6X4	1	8	390	169.41
3792-578*	8X2	1	16	390	190.15
3792-580*	8X3	1	8	390	236.92
3792-582*	8X4	1	4	390	241.35
3792-585*	8X6	1	5	390	273.48
3792-621*	10X2	1	16	390	282.82
3792-623*	10X3	1	8	390	296.22
3792-624*	10X4	1	4	390	302.78
3792-626*	10X6	1	4	390	380.93
3792-628*	10X8	1	4	390	473.99
3792-661*	12X2	1	4	390	458.33
3792-663*	12X3	1	6	390	468.03
3792-664*	12X4	1	12	390	478.56
3792-666*	12X6	1	3	390	531.78
3792-668*	12X8	1	3	390	596.61
3792-670*	12X10	1	3	390	742.29
3792-691*	14X2	1	4	390	624.96
3792-693*	14X3	1	4	390	705.25
3792-694*	14X4	1	4	390	745.86
3792-696*	14X6	1	4	390	848.66
3792-698*	14X8	1	4	390	933.71
3792-700*	14X10	1	4	390	1105.02
3792-702*	14X12	1	4	390	1303.91

* Fabricated

P515 Combination Wye and 1/8 Bend with Left Side Inlet

ALL HUB

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P515-338	3X3X3X2	10	140	051	43.94

P516 Combination Wye and 1/8 Bend with Right Side Inlet

ALL HUB

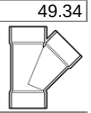
Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P516-338	3X3X3X2	10	140	051	43.94

P517 Combination Wye and 1/8 Bend with R&L Side Inlets

ALL HUB

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P517-338	3X3X3X2	10	80	051	49.34

P600 Wye



ALL HUB

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P600-015	1-1/2	50	700	051	5.21
P600-020	2	25	750	051	6.11
P600-030	3	8	240	051	15.76
P600-040	4	8	144	051	29.18
P600-060	6	4	48	051	90.35
P600-080	8	1	12	051	210.47
P600-100	10	1	6	052	495.95
P600-120	12	1	4	052	805.65

P600 Wye (continued)

ALL HUB

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
3775-140*	14	1	4	390	1189.69

* Fabricated

P601 Wye, Reducing

ALL HUB

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P601-241	2X1-1/2X1-1/2	25	875	051	8.62
P601-251	2X2X1-1/2	25	875	051	7.52
P601-257	2X1-1/2X2	10	480	051	11.80
P601-337	3X3X1-1/2	15	450	051	10.53
P601-338	3X3X2	12	360	051	11.91
P601-419	4X4X1-1/2	10	180	051	32.25
P601-420	4X4X2	10	180	051	16.29
P601-422	4X4X3	10	140	051	23.20
P601-528	6X6X2	5	40	051	90.95
P601-530	6X6X3	6	48	051	87.78
P601-532	6X6X4	5	40	051	66.41
P601-578	8X8X2	3	24	051	177.79
3775-580*	8X3	1	24	390	142.23
P601-582	8X8X4	2	28	051	163.46
P601-585	8X8X6	1	14	051	201.67
3775-621*	10X2	1	11	390	245.03
3775-623*	10X3	1	11	390	256.64
P601-624	10X10X4	1	12	052	282.51
P601-626	10X10X6	1	12	052	366.45
3775-626*	10X6	1	11	390	318.00
P601-628	10X10X8	1	10	052	433.64
3775-661*	12X2	1	6	390	291.54
3775-663*	12X3	1	6	390	302.76
3775-664*	12X4	1	6	390	313.12
P601-664	12X12X4	1	6	052	437.54
P601-666	12X12X6	1	6	052	477.73
3775-666*	12X6	1	6	390	373.12
P601-668	12X12X8	1	6	052	567.35
3775-668*	12X8	1	8	390	414.57
P601-670	12X12X10	1	6	052	635.34
3775-691*	14X2	1	4	390	591.88
3775-693*	14X3	1	4	390	620.75
3775-694*	14X4	1	6	390	631.15
3775-696*	14X6	1	4	390	681.23
3775-698*	14X8	1	4	390	779.57
3775-700*	14X10	1	4	390	833.31
3775-702*	14X12	1	4	390	1065.43
3775-756*	16X6	1	4	390	800.48
3775-786*	18X6	1	4	390	1211.79
3775-816*	20X6	1	3	390	1387.01
3775-906*	24X6	1	2	390	1900.94

* Fabricated

P602 Wye, Street

S x H x H

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P602-015	1-1/2	50	1500	051	8.26
P602-020	2	30	540	051	9.82
P602-030	3	10	180	051	20.92
P602-040	4	10	80	051	41.44

P603 Wye, Street, Reducing

S x H x H

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P603-251	2X2X1-1/2	25	875	051	11.26
P603-420	4X4X2	10	180	051	45.69
P603-422	4X4X3	10	80	051	38.80

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC DWV Drain Waste & Vent Fittings

P611 Double Wye
ALL HUB

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P611-015	1-1/2	40	720	051	11.79
P611-020	2	20	600	051	12.69
P611-030	3	15	120	051	32.73
P611-040	4	5	70	051	66.36
P611-060	6	2	16	051	130.43
3776-080*	8	1	5	390	299.66
3776-100*	10	1	4	390	439.52
3776-120*	12	1	3	390	717.57
3776-140*	14	1	3	390	1272.75

* Fabricated

P611S Double Wye, with 2" Side Inlet
ALL HUB

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P611S-030	3	10	140	051	128.57

P612 Double Wye, Reducing
ALL HUB

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P612-251	2X2X1-1/2X1-1/2	10	720	051	11.59
P612-337	3X3X1-1/2X1-1/2	10	300	051	23.14
P612-338	3X3X2X2	15	210	051	24.38
P612-420	4X4X2X2	5	150	051	39.80
P612-422	4X4X3X3	5	90	051	52.56
3776-528*	6X2	1	24	390	114.17
3776-530*	6X3	1	16	390	118.18
P612-532	6X6X4X4	5	35	051	132.74
3776-578*	8X2	1	16	390	163.16
3776-580*	8X3	1	12	390	174.32
3776-582*	8X4	1	8	390	181.71
3776-585*	8X6	1	4	390	229.44
3776-621*	10X2	1	4	390	232.25
3776-623*	10X3	1	8	390	242.66
3776-624*	10X4	1	8	390	254.81
3776-626*	10X6	1	4	390	315.23
3776-628*	10X8	1	4	390	381.69
3776-661*	12X2	1	4	390	314.38
3776-663*	12X3	1	4	390	324.72
3776-664*	12X4	1	4	390	331.99
3776-666*	12X6	1	4	390	395.19
3776-668*	12X8	1	4	390	504.43
3776-670*	12X10	1	3	390	645.79
3776-691*	14X2	1	3	390	606.52
3776-693*	14X3	1	3	390	634.83
3776-694*	14X4	1	3	390	661.52
3776-696*	14X6	1	3	390	736.45
3776-698*	14X8	1	3	390	853.44
3776-700*	14X10	1	3	390	901.92
3776-702*	14X12	1	3	390	1168.07
3776-756*	16X6	1	3	390	892.40
3776-786*	18X6	1	4	390	1308.65
3776-816*	20X6	1	1	390	1536.66
3776-906*	24X6	1	1	390	2081.00

* Fabricated

P335 Trap Elbow (for use with Traps only)
H x S

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P335-030	3	30	540	051	14.43
P335-040	4	25	200	051	46.26

P700 Return Bend
H x H

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P700-015	1-1/2	20	1440	051	5.22
P700-020	2	35	630	051	10.02
P700-030	3	8	240	051	27.85
P700-040	4	6	108	051	55.02
P700-060	6	2	36	051	121.25
P700-080	8	1	7	051	167.12

P704P Tail Piece Adapter
S x SLIP w/Plastic Nut - Built-in Washer

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P704P-015	1-1/2	25	4200	051	3.55

P704X Tail Piece Adapter
S x SLIP w/Chrome Nut & Washer

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P704X-015	1-1/2	25	4200	051	5.03

P706X P-Trap
H x H

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P706X-015	1-1/2	25	875	051	6.54
P706X-020	2	25	450	051	8.60
P706X-030	3	10	80	051	29.89
P706X-040	4	4	72	051	68.17
P706X-060	6	2	14	051	209.80
P706X-080	8	1	7	051	408.22
P706X-100	10	1	3	052	1030.23
P706X-120	12	1	1	052	1404.34

P707X P-Trap w/Cleanout
H x H

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P707X-015	1-1/2	10	720	051	10.80

P708P Adjustable P-Trap w/Plastic Nut
H x H

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P708P-015	1-1/2	25	875	051	8.37
P708P-020	2	25	450	051	18.18

P711P L.A. Pattern P-Trap w/Plastic Nut
SLIP x H w/Plastic Nut & Washer

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P711P-169	1-1/4X1-1/2	25	750	051	14.25
P711P-015	1-1/2	25	750	051	14.25

P711X L.A. Pattern P-Trap w/Chrome Nut
SLIP x H w/Chrome Nut & Washer

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P711X-015	1-1/2	25	900	051	16.66

P800 Closet Flange
H

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P800-422	4X3	25	750	051	7.67
P800-040	4X4	30	540	051	8.73

P800G Closet Flange w/Gussets
H

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P800G-040	4	30	540	051	37.86

PVC DWV Drain Waste & Vent Fittings

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
P800KO Closet Flange with Knockout H					
P800KO-422	**4X3**	25	750	051	8.93
P800S Closet Flange with Stop H					
P800S-422	**4X3**	25	750	051	7.67
P801 Closet Flange, Reducing SPIGOT					
P801-422	**4X3**	25	750	051	9.33
P811 Closet Flange w/Adjustable Metal Ring H					
P811-040	**4**	30	540	051	21.25
P811-422	**4X3**	30	540	051	15.02
P811KO Closet Flange w/Adjustable Metal Ring and Knockout H					
P811KO-422	**4X3**	25	350	051	21.38
P812 Closet Flange w/Adjustable Metal Ring SPIGOT					
P812-040	**4**	25	450	051	23.18
P812-422	**4X3**	25	450	051	20.13
P813 Flush Closet Flange w/Adjustable Metal Ring Fits Over 3" Pipe or Inside 4" Pipe					
P813-422	**4X3**	25	750	051	20.13
P815 Flush Closet Flange Fits Over 3" Pipe or Inside 4" Pipe					
P815-040	**4X4 / 4X3**	25	750	051	14.76
P815KO Flush Closet Flange with Knockout Fits Over 3" Pipe or Inside 4" Pipe					
P815KO-040	**4X4 / 4X3**	25	750	051	14.28
P820 Offset Closet Flange w/Adjustable Metal Ring (1-1/2" Offset) H					
P820-422	**4X3**	15	450	051	26.54
Uniform Plumbing Code does not accept offset closet flanges					
Floor Drain with Stainless Steel Adjustable Top w/Round Grate					
P1500-015S	**1-1/2X5**	4	216	168	378.74
P1600-015S	**1-1/2X6**	4	216	168	407.98
P1700-015S	**1-1/2X7**	4	0	168	422.63
P1800-015S	**1-1/2X8**	4	216	168	543.58
P1500-020S	**2X5**	4	216	168	378.74
P1600-020S	**2X6**	4	400	168	407.98

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
Floor Drain with Stainless Steel Adjustable Top w/Round Grate (continued)					
P1700-020S	**2X7**	4	0	168	422.63
P1800-020S	**2X8**	4	0	168	543.58
P1500-030S	**3X5**	4	216	168	378.74
P1600-030S	**3X6**	4	400	168	407.98
P1700-030S	**3X7**	2	54	168	422.63
P1800-030S	**3X8**	4	216	168	543.58
P1500-040S	**4X5**	4	216	168	378.74
P1600-040S	**4X6**	4	1	168	407.98
P1700-040S	**4X7**	4	400	168	422.63
P1800-040S	**4X8**	4	144	168	543.58
Floor Drain with Stainless Steel Adjustable Top w/Round Grate & Membrane Collar					
P150M-015S	**1-1/2X5**	4	216	168	407.47
P160M-015S	**1-1/2X6**	4	216	168	461.68
P170M-015S	**1-1/2X7**	4	0	168	475.68
P180M-015S	**1-1/2X8**	4	216	168	566.95
P150M-020S	**2X5**	1	175	168	407.47
P160M-020S	**2X6**	4	216	168	461.68
P170M-020S	**2X7**	4	0	168	475.68
P180M-020S	**2X8**	4	0	168	566.95
P150M-030S	**3X5**	4	216	168	407.47
P160M-030S	**3X6**	4	216	168	461.68
P170M-030S	**3X7**	2	54	168	475.68
P180M-030S	**3X8**	2	144	168	566.95
P150M-040S	**4X5**	4	216	168	407.47
P160M-040S	**4X6**	4	216	168	461.68
P170M-040S	**4X7**	4	192	168	475.68
P180M-040S	**4X8**	4	0	168	566.95
Floor Cleanout w/Stainless Steel Adjustable Round Top & Solid Access Cover					
P1510-015S	**1-1/2X5**	4	216	168	422.89
P1510-020S	**2X5**	6	210	168	422.89
P1510-030S	**3X5**	4	400	168	422.89
P1510-040S	**4X5**	4	400	168	422.89
Floor Cleanout w/Stainless Steel Adjustable Round Top, Solid Access Cover & Membrane Collar					
P151M-015S	**1-1/2X5**	4	216	168	445.43
P151M-020S	**2X5**	4	216	168	445.43
P151M-030S	**3X5**	4	216	168	445.43
P151M-040S	**4X5**	4	54	168	445.43
S119 Expansion Joint Soc x Soc - PVC White with EPDM O–ring					
S119-15	**1-1/2**	16	768	025	14.96
S119-20	**2**	10	480	025	23.14
S119-25	**2-1/2**	5	225	025	33.57
S119-30	**3**	4	144	025	41.94
S119-40	**4**	2	70	025	73.40
S119-60	**6**	1	36	025	179.60
826 Large Diameter Expansion Joint Soc x Soc - PVC Gray with EPDM O–ring					
826-080X6	**8**	1	12	085	1352.21
826-100X6	**10**	1	12	085	1587.88

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

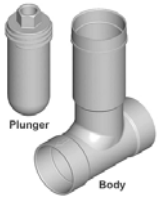
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC DWV Drain Waste & Vent Fittings

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
826 Large Diameter Expansion Joint (continued)					
Soc x Soc - PVC Gray with EPDM O–ring					
826-120X6	**12**	1	4	085	2813.54
826-140X6	**14**	1	4	085	3213.82
Air Admittance Valve					
Spigot					
Maximum 6 DFU (Drainage Fixture Units)					
AAV-015	**1-1/2**	12	2016	285	51.16

Sewer Disconnect

Sewer Disconnect Application
Requires Purchase of SDC-040 Body and SDCP-040 Plunger, Sold Separately.



Screw-down Plunger installs in Body to provide temporary shut-off of Sewer line or to minimize sewage backup from sewer mains during flooding. Body accepts SDR-35 Sewer Pipe (or any ASTM D 3034 /D 2729 pipe), but can easily adapt to Schedule 40 drainage pipe using 4" IPS socket x Sewer spigot adapters, Spears® part no. 3729-04013IXS.

Standpipe to grade can be easily fabricated from user-supplied SDR-35 Sewer Pipe or optionally from Schedule 40 drainage pipe with the addition of a 4" Schedule 40 DWV socket Coupling, Spears® part no. P100-040. For Closure, a 4" Sewer Cap, Spears® part no. 4047-040; or 4" Schedule 40 DWV Cap, Spears® part no. P116-040 can be used as applicable.

A T-handle extension for easy Plunger operation can also be fabricated from user supplied 1" Schedule 40 pipe and a Tee fitting, Spears® part no. 401–010. See installation instructions included with product for additional detail.

Sewer Disconnect Body

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
Sewer Socket X Sewer Socket.					
Requires Separate Purchase of SDCP-040 Plunger					
Requires Purchase of SDCP-040 Plunger					
SDC-040	**4**	6	108	055	72.66

Sewer Disconnect Plunger

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
For Use With Sewer Disconnect					
Body. Requires Separate Purchase of SDC-040 Body					
Requires Purchase of SDC-040 Body					
SDCP-040	**4**	12	420	055	25.02

Industrial PVC Backwater Valves

Backwater Valves are designed to prevent backflow in numerous applications where easy service access for maintenance and cleaning is needed. Excellent for use in sanitary or storm sewer drainage systems to prevent waste back up due to inadequate drainage, for balancing multi-level ponds, aquaculture features or storage tank systems, and many other applications. Spears® Backwater Valve has been engineered for improved function and easier service, especially in buried service with use of optional Service-Access Extension available either preassembled with valve or as an add-on kit.

- Replaceable internal flapper assembly with EPDM Seat.
- Service-Access Extension available either preassembled with valve, as an add-on kit, or as valve & extension kit components with user supplied pipe.
- Direct Connection to ASTM D 2665 PVC DWV or other IPS size pipe. Spears® fabricated IPS x Sewer Adapters or DWV x Sewer & Drain Adapter Bushings are available for connection to ASTM D 3034 & ASTM D 2729 Sewer pipe.
- Pressure Rated to 43 psi (100 feet of head) @ 73°F (23°C).
- All extension kits can be cut shorter for custom application.
- Conforms to ASME/ANSI A112.14.1 for Backwater Valves.

PVC Backwater Valves

Backwater Valves
Soc x Soc - Valve Only

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
S275P	**2**	1	3840	055	59.05
S375P	**3**	2	210	055	59.17
S475P	**4**	1	54	055	65.55
S675P	**6**	1	30	055	279.26

PVC Backwater Valves with Extension Kit to Premade Length

Backwater Valves with Extension Kit to Premade Length
Soc x Soc - Assembled with Extension

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
S275P-120[1]	**2X12HT**	1	98	055	178.12
S275P-160[1]	**2X16HT**	1	98	055	191.59
S275P-200[1]	**2X20HT**	1	98	055	205.05
S275P-240[1]	**2X24HT**	1	98	055	218.53
S275P-360[1]	**2X36HT**	1	98	055	229.52
S275P-480[1]	**2X48HT**	1	98	055	252.25
S375P-120[1]	**3X12HT**	1	36	055	178.12
S375P-160[1]	**3X16HT**	1	15	055	191.59
S375P-200[1]	**3X20HT**	1	15	055	205.05
S375P-240[1]	**3X24HT**	1	15	055	218.53
S375P-360[1]	**3X36HT**	1	15	055	229.52

Backwater Valves with Extension Kit to Premade Length
Soc x Soc - Assembled with Extension (continued)

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
S375P-480[1]	**3X48HT**	1	15	055	252.25
S475P-120[1]	**4X12HT**	1	18	055	231.36
S475P-160[1]	**4X16HT**	1	12	055	249.59
S475P-200[1]	**4X20HT**	1	30	055	266.20
S475P-240[1]	**4X24HT**	1	30	055	283.85
S475P-360[1]	**4X36HT**	1	30	055	298.11
S475P-480[1]	**4X48HT**	1	30	055	327.60
S675P-120[1]	**6X12HT**	1	30	055	485.82
S675P-160[1]	**6X16HT**	1	30	055	524.14
S675P-200[1]	**6X20HT**	1	30	055	559.02
S675P-240[1]	**6X24HT**	1	30	055	596.16
S675P-360[1]	**6X36HT**	1	30	055	626.04
S675P-480[1]	**6X48HT**	1	1	055	687.95

[1] - Size designates nominal valve size x extension height (HT-top of valve to top of extension, inches)

PVC Service-Access Extension Kit Only to Premade Length

PVC Service-Access Extension Kit: includes factory assembled internal flap assembly, assembly extension pipe, and external extension housing with top access adapter. Requires solvent cement assembly to existing valve and uses existing threaded Access Plug. Standard Extensions are available in convenient increments of 12", 16", 20", 24", 36", and 48" (measured from top of valve to top of extension). Contact Spears® for pricing on custom cut lengths. All extension kits can be cut shorter in the field for custom fits prior to cementing access adapter in place.

Service-Access Extension Kit Only to Premade Length

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
SAEK-020-120[1]	**2X12HT**	1	65	055	55.55
SAEK-020-160[1]	**2X16HT**	1	36	055	57.14
SAEK-020-200[1]	**2X20HT**	1	5	055	58.65
SAEK-020-240[1]	**2X24HT**	1	5	055	61.46
SAEK-020-360[1]	**2X36HT**	1	5	055	64.37
SAEK-020-480[1]	**2X48HT**	1	5	055	67.52
SAEK-030-120[1]	**3X12HT**	1	65	055	60.24
SAEK-030-160[1]	**3X16HT**	1	36	055	68.00

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Industrial PVC Backwater Valves

Service-Access Extension Kit Only to Premade Length (continued)

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
SAEK-030-200[1]	**3X20HT**	1	0	055	72.04
SAEK-030-240[1]	**3X24HT**	1	49	055	81.19
SAEK-030-360[1]	**3X36HT**	1	30	055	96.04
SAEK-030-480[1]	**3X48HT**	1	30	055	113.59
SAEK-040-120[1]	**4X12HT**	1	36	055	89.83
SAEK-040-160[1]	**4X16HT**	1	12	055	101.27
SAEK-040-200[1]	**4X20HT**	1	12	055	124.92
SAEK-040-240[1]	**4X24HT**	1	12	055	136.79
SAEK-040-360[1]	**4X36HT**	1	12	055	172.06
SAEK-040-480[1]	**4X48HT**	1	12	055	198.64
SAEK-060-120[1]	**6X12HT**	1	4	055	160.94
SAEK-060-160[1]	**6X16HT**	1	12	055	182.92
SAEK-060-200[1]	**6X20HT**	1	6	055	207.41
SAEK-060-240[1]	**6X24HT**	1	6	055	237.97
SAEK-060-360[1]	**6X36HT**	1	6	055	295.39
SAEK-060-480[1]	**6X48HT**	1	7	055	366.67

[1] - Size designates nominal valve size x extension height (HT-top of valve to top of extension, inches)

PVC Backwater Valve with Extension Components

PVC Backwater Valve with Extension Components Soc x Soc - Components Must be assembled with user supplied pipe (see Table 1)

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
S275P-AK	**2**	1	240	055	87.00
S375P-AK	**3**	1	105	055	87.00
S475P-AK	**4**	1	36	055	101.77
S675P-AK	**6**	1	14	055	360.38

PVC Backwater Valve Extension Components Only

Backwater Valve Extension Components Only Must be assembled with user supplied pipe (see Table 1)

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
S275P-ECK	**2**	1	240	055	46.33
S375P-ECK	**3**	1	168	055	46.33
S475P-ECK	**4**	1	72	055	60.37
S675P-ECK	**6**	1	48	055	126.83

Table 1: User Supplied Pipe Requirements For Use With Extension Components

Valve Size	Acceptable RISER Pipe Types for User-Supplied Pipe	Acceptable HANDLE Pipe
2"	4" Class 125 PVC PIPE 4" Sch 40 PVC PIPE	Use any 3/4" IPS plastic pipe[1]
3"	5" Class 125 PVC PIPE 5" Sch 40 PVC PIPE[3] 6" D3034 (SDR 35) PVC SEWER PIPE[2]	
4"	8" Class 125 PVC PIPE 8" Sch 40 PVC PIPE	
6"	10" Class 125 PVC PIPE 10" Sch 40 PVC PIPE	

Note 1: Riser and Handle pipe are *not* the same length. Sch 40 and/or Sch 80 pipe as well as ABS may be used. Special cement must be used to join PVC to ABS.
Note 2: When 6" SDR35 pipe is used, adapter fits pipe inside diameter.
Note 3: DO NOT use Sch 80 for 3" Riser pipe.

Industrial Backwater Valve Flapper Repair Kit

Industrial Backwater Valve Flapper Repair Kit

Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
Complete Flapper Assembly replacement					
S275P-FRK	**2**	1	1680	055	34.48
S375P-FRK	**3**	1	1050	055	43.48
S475P-FRK	**4**	1	720	055	50.64
S675P-FRK	**6**	1	240	055	90.18

PVC Backwater Valve Metric Adapters

Backwater Valve Metric Adapters

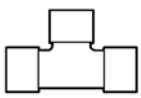
Part Number	Size	Std Pk	Pllt Qty	Prod Code	Price Each
Metric Socket x ASTM Spigot					
S275MA-063	**63mm X 2**	50	2400	055	15.28
S375MA-090	**90mm X 3**	25	750	055	16.42
S475MA-110	**110mm X 4**	10	480	055	19.45
S675MA-160	**160mm X 6**	4	120	055	44.89

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Schedule 40 & 80 DWV Fabricated Fittings

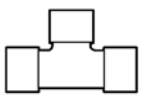
PRICING

TEE (Soc x Soc x Soc)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
6	3701-060 **116.54**	3901-060 **202.68**
6X2	3701-528* **100.71**	3901-528 **151.01**
6X3	3701-530* **105.78**	3901-530 **158.12**
6X4	3701-532 **110.64**	3901-532 **164.16**
8	3701-080 **189.84**	3901-080 **321.71**
8X2	3701-578* **118.41**	3901-578 **211.51**
8X3	3701-580* **124.17**	3901-580 **238.31**
8X4	3701-582 **127.55**	3901-582 **243.62**
8X6	3701-585 **138.40**	3901-585 **252.93**
10	3701-100 **369.23**	3901-100 **501.78**
10X2	3701-621* **192.76**	3901-621 **298.43**
10X3	3701-623* **196.33**	3901-623 **325.04**
10X4	3701-624 **201.13**	3901-624 **367.71**
10X6	3701-626 **245.85**	3901-626 **449.32**
10X8	3701-628 **329.59**	3901-628 **470.85**
12	3701-120 **490.71**	3901-120 **691.36**
12X2	3701-661* **257.35**	3901-661 **369.58**
12X3	3701-663* **261.15**	3901-663 **430.71**
12X4	3701-664 **267.72**	3901-664 **489.34**
12X6	3701-666 **310.95**	3901-666 **569.33**
12X8	3701-668 **371.41**	3901-668 **626.84**
12X10	3701-670 **423.23**	3901-670 **635.05**
14	3701-140* **964.59**	3901-140 **1241.67**
14X2	3701-691* **408.13**	3901-691 **654.45**
14X3	3701-693* **451.72**	3901-693 **732.20**
14X4	3701-694* **503.61**	3901-694 **805.84**
14X6	3701-696* **591.03**	3901-696 **945.67**
14X8	3701-698* **704.67**	3901-698 **1133.01**
14X10	3701-700* **801.01**	3901-700 **1191.92**
14X12	3701-702* **947.58**	3901-702 **1203.49**
16	3701-160 **1365.40**	3901-160 **1956.12**
16X2	3701-751 **581.98**	3901-751 **839.04**
16X3	3701-753 **588.36**	3901-753 **928.06**
16X4	3701-754 **624.56**	3901-754 **999.23**
16X6	3701-756 **675.58**	3901-756 **1080.84**
16X8	3701-758 **790.88**	3901-758 **1266.11**
16X10	3701-760 **994.16**	3901-760 **1417.55**

TEE (Soc x Soc x Soc) (continued)



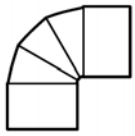
Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
16X12	3701-762 **1128.88**	3901-762 **1797.08**
16X14	3701-764 **1339.73**	3901-764 **1858.28**
18	3701-180 **1696.84**	3901-180 **2111.91**
18X4	3701-784 **997.40**	3901-784 **1159.69**
18X6	3701-786 **1013.19**	3901-786 **1312.28**
18X8	3701-788 **1054.77**	3901-788 **1361.41**
18X10	3701-790 **1188.84**	3901-790 **1375.72**
18X12	3701-792 **1266.49**	3901-792 **1691.18**
18X14	3701-794 **1358.41**	3901-794 **1944.79**
18X16	3701-796 **1458.03**	3901-796 **1987.24**
20	3701-200 **2259.68**	3901-200 **3039.14**
20X4	3701-814 **1205.44**	3901-814 **1610.09**
20X6	3701-816 **1275.55**	3901-816 **1815.75**
20X8	3701-818 **1347.84**	3901-818 **2229.95**
20X10	3701-820 **1446.47**	3901-820 **2303.86**
20X12	3701-822 **1531.62**	3901-822 **2433.54**
20X14	3701-824 **1652.83**	3901-824 **2646.92**
20X16	3701-826 **1760.01**	3901-826 **2695.20**
20X18	3701-828 **1941.35**	3901-828 **2913.97**
24	3701-240 **2815.19**	3901-240 **3645.26**
24X4	3701-904 **1659.87**	3901-904 **1996.06**
24X6	3701-906 **1744.75**	3901-906 **2251.09**
24X8	3701-908 **1851.04**	3901-908 **2435.12**
24X10	3701-910 **1955.56**	3901-910 **2649.68**
24X12	3701-912 **2060.67**	3901-912 **2788.15**
24X14	3701-914 **2201.79**	3901-914 **3091.48**
24X16	3701-916 **2328.91**	3901-916 **3190.04**
24X18	3701-918 **2530.18**	3901-918 **3345.66**
24X20	3701-920 **2716.49**	3901-920 **3499.60**

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

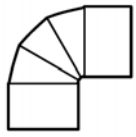
90° Ells

90° ELBOW (Soc x Soc)



Size	SCH 40 LOW PR Prod Code: 390 Part Number Price Each	SCH 80 LOW PR Prod Code: 400 Part Number Price Each
6	3706-060 **115.05**	3906-060 **148.94**
8	3706-080 **159.83**	3906-080 **250.15**
10	3706-100 **252.65**	3906-100 **493.81**
12	3706-120 **388.64**	3906-120 **720.11**
14	3706-140* **520.49**	3906-140 **1059.49**
16	3706-160 **771.87**	3906-160 **1317.69**

90° ELBOW (Soc x Soc) (continued)



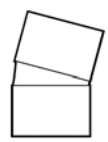
Size	SCH 40 LOW PR Prod Code: 390 Part Number Price Each	SCH 80 LOW PR Prod Code: 400 Part Number Price Each
18	3706-180 **1147.99**	3906-180 **1696.33**
20	3706-200 **1291.21**	3906-200 **2000.03**
24	3706-240 **1614.71**	3906-240 **2992.62**

Non 90° Ells

11-1/4° ELBOW (Soc x Soc)

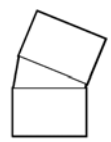
Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
4	3711-040 **41.13**	3911-040 **55.93**
6	3711-060 **66.07**	3911-060 **104.56**
8	3711-080 **111.69**	3911-080 **171.15**
10	3711-100 **168.54**	3911-100 **303.33**
12	3711-120 **266.62**	3911-120 **443.33**
14	3711-140 **419.17**	3911-140 **678.69**
16	3711-160 **571.40**	3911-160 **907.22**
18	3711-180 **639.49**	3911-180 **1171.17**
20	3711-200 **848.25**	3911-200 **1501.41**
24	3711-240 **1516.51**	3911-240 **1718.56**

15° ELBOW (Soc x Soc)



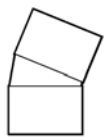
Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
4	3718-040 **41.13**	3918-040 **55.93**
6	3718-060 **66.07**	3918-060 **104.56**
8	3718-080 **111.69**	3918-080 **171.15**
10	3718-100 **168.54**	3918-100 **303.33**
12	3718-120 **266.62**	3918-120 **443.33**
14	3718-140 **419.17**	3918-140 **678.69**
16	3718-160 **571.40**	3918-160 **907.22**
18	3718-180 **639.49**	3918-180 **1171.17**
20	3718-200 **848.25**	3918-200 **1501.41**
24	3718-240 **1516.51**	3918-240 **1718.56**

22-1/2° ELBOW (Soc x Soc)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
4	3716-040 **41.13**	3916-040 **55.93**
6	3716-060 **66.07**	3916-060 **104.56**
8	3716-080 **111.69**	3916-080 **171.15**
10	3716-100* **168.54**	3916-100 **303.33**

22-1/2° ELBOW (Soc x Soc) (continued)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
12	3716-120* **266.62**	3916-120 **443.33**
14	3716-140* **419.17**	3916-140 **678.69**
16	3716-160 **571.40**	3916-160 **907.22**
18	3716-180 **686.21**	3916-180 **1171.17**
20	3716-200 **848.25**	3916-200 **1501.41**
24	3716-240 **1516.51**	3916-240 **1718.56**

22-1/2° STREET ELL (Spig x Soc)

Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
6	3742-060 **72.67**	3942-060 **114.98**
8	3742-080 **122.85**	3942-080 **188.25**
10	3742-100* **185.38**	3942-100 **333.67**
12	3742-120* **293.27**	3942-120 **487.67**
14	3742-140* **461.07**	3942-140 **746.57**
16	3742-160 **453.78**	3942-160 **997.94**
18	3742-180 **754.83**	3942-180 **1286.63**
20	3742-200 **1149.99**	3942-200 **1767.57**
24	3742-240 **1784.12**	3942-240 **2022.27**

30° ELBOW (Soc x Soc)

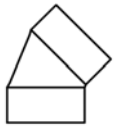
Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
4	3715-040 **41.13**	3915-040 **55.93**
6	3715-060 **66.07**	3915-060 **104.56**
8	3715-080 **111.69**	3915-080 **171.15**
10	3715-100 **168.54**	3915-100 **303.33**
12	3715-120 **266.62**	3915-120 **443.33**
14	3715-140 **419.17**	3915-140 **678.69**
16	3715-160 **571.40**	3915-160 **907.22**
18	3715-180 **686.21**	3915-180 **1171.17**
20	3715-200 **848.25**	3915-200 **1501.41**

Non 90° Ells

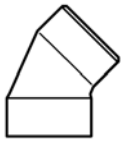
30° ELBOW (Soc x Soc) (continued)

	Size	SCH 40 LOW PR Prod Code: 390 Part Number Price Each	SCH 80 LOW PR Prod Code: 400 Part Number Price Each
	24	3715-240 **1516.51**	3915-240 **1718.56**

45° ELBOW (Soc x Soc)

	Size	SCH 40 LOW PR Prod Code: 390 Part Number Price Each	SCH 80 LOW PR Prod Code: 400 Part Number Price Each
	4	3717-040 **100.47**	3917-040 **122.94**
	6	3717-060 **106.79**	3917-060 **175.23**
	8	3717-080 **127.87**	3917-080 **188.29**
	10	3717-100 **210.32**	3917-100 **344.93**
	12	3717-120 **295.38**	3917-120 **493.09**
	14	3717-140* **512.16**	3917-140 **708.63**
	16	3717-160 **632.38**	3917-160 **917.65**
	18	3717-180 **729.78**	3917-180 **1241.33**
	20	3717-200 **996.44**	3917-200 **1559.17**
	24	3717-240 **1324.03**	3917-240 **1835.55**

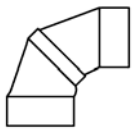
45° STREET ELL (Spig x Soc)

	Size	SCH 40 LOW PR Prod Code: 390 Part Number Price Each	SCH 80 LOW PR Prod Code: 400 Part Number Price Each
	4	3727-040 **100.47**	3927-040 **122.94**
	6	3727-060 **106.79**	3927-060 **175.23**
	8	3727-080 **127.87**	3927-080 **188.29**
	10	3727-100* **210.32**	3927-100 **344.93**
	12	3727-120* **295.38**	3927-120 **493.09**
	14	3727-140* **512.16**	3927-140 **708.63**
	16	3727-160 **632.38**	3927-160 **917.65**
	18	3727-180 **729.78**	3927-180 **1241.33**
	20	3727-200 **996.44**	3927-200 **1559.17**
	24	3727-240 **1324.03**	3927-240 **1835.55**

60° ELBOW (Soc x Soc)

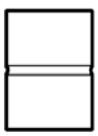
	Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
	6	3724-060* **127.62**	3924-060 **186.16**
	8	3724-080* **182.08**	3924-080 **312.74**
	10	3724-100* **305.13**	3924-100 **586.19**
	12	3724-120* **399.78**	3924-120 **862.77**
	14	3724-140* **732.80**	3924-140 **1253.71**
	16	3724-160 **890.94**	3924-160 **1523.31**
	18	3724-180 **1144.59**	3924-180 **1696.33**
	20	3724-200 **1221.01**	3924-200 **2000.03**
	24	3724-240 **1573.16**	3924-240 **2136.66**

90° STREET ELL (Spig x Soc)

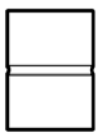
	Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
	4	---	3909-040 **140.14**
	6	3709-060* **122.13**	3909-060 **166.07**
	8	3709-080* **168.00**	3909-080 **273.49**
	10	3709-100* **280.72**	3909-100 **542.07**
	12	3709-120* **409.11**	3909-120 **796.41**
	14	3709-140* **565.74**	3909-140 **1163.83**
	16	3709-160 **879.91**	3909-160 **1445.39**
	18	3709-180 **1272.57**	3909-180 **1861.40**
	20	3709-200 **1434.48**	3909-200 **2196.24**
	24	3709-240 **1793.78**	3909-240 **2346.36**

Couplings

COUPLING (Soc x Soc)

	Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
	8	3729-080 **72.92**	3929-080 **161.42**
	10	3729-100 **89.66**	3929-100 **175.80**
	12	3729-120 **131.99**	3929-120 **202.64**
	14	3729-140 **214.33**	3929-140 **405.21**

COUPLING (Soc x Soc) (continued)

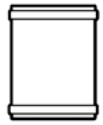
	Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
	16	3729-160 **239.05**	3929-160 **481.75**
	18	3729-180 **407.66**	3929-180 **949.59**
	20	3729-200 **711.17**	3929-200 **1170.80**
	24	3729-240 **987.67**	3929-240 **2019.72**

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

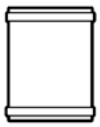
Couplings

REPAIR COUPLING (Gasket x Gasket)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
4	3728-040 **70.67**	3928-040 **82.57**
6	3728-060 **98.31**	3928-060 **116.36**
8	3728-080 **154.75**	3928-080 **196.84**
10	3728-100 **204.17**	3928-100 **275.43**
12	3728-120 **256.14**	3928-120 **350.02**
14	3728-140 **444.46**	3928-140 **775.04**

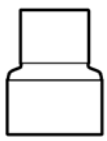
REPAIR COUPLING (Gasket x Gasket) (continued)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
16	3728-160 **654.84**	3928-160 **1162.79**
18	3728-180 **856.07**	3928-180 **1511.54**
20	3728-200 **1329.37**	3928-200 **1813.86**
24	3728-240 **1802.95**	3928-240 **2446.61**

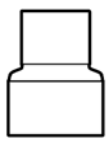
Reducer Couplings

REDUCER COUPLING (Soc x Soc)



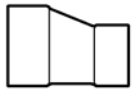
Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
6X2	3729-528* **106.04**	3929-528 **183.86**
6X3	3729-530* **104.38**	3929-530 **135.82**
6X4	3729-532 **37.87**	3929-532 **89.36**
8X2	3729-578 **178.37**	3929-578 **248.39**
8X3	3729-580 **165.13**	3929-580 **217.09**
8X4	3729-582* **93.87**	3929-582 **171.56**
8X6	3729-585* **80.68**	3929-585 **157.88**
10X4	3729-624* **211.83**	3929-624 **403.03**
10X6	3729-626* **197.41**	3929-626 **321.58**
10X8	3729-628* **138.17**	3929-628 **171.88**
12X4	3729-664* **398.29**	3929-664 **579.08**
12X6	3729-666* **302.00**	3929-666 **477.46**
12X8	3729-668* **265.79**	3929-668 **414.33**
12X10	3729-670* **201.13**	3929-670 **254.49**
14X4	3729-694* **640.96**	3929-694 **783.55**
14X6	3729-696* **620.52**	3929-696 **699.88**
14X8	3729-698* **449.17**	3929-698 **688.42**
14X10	3729-700* **379.36**	3929-700 **581.19**
14X12	3729-702* **336.89**	3929-702 **371.54**
16X4	3729-754 **686.02**	3929-754 **1151.38**
16X6	3729-756 **631.89**	3929-756 **1079.43**
16X8	3729-758 **574.99**	3929-758 **1019.47**
16X10	3729-760 **513.52**	3929-760 **708.78**
16X12	3729-762 **466.20**	3929-762 **651.57**
16X14	3729-764 **404.32**	3929-764 **549.29**

REDUCER COUPLING (Soc x Soc) (continued)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
18X6	3729-786 **1141.97**	3929-786 **1664.12**
18X8	3729-788 **968.57**	3929-788 **1539.96**
18X10	3729-790 **903.76**	3929-790 **1415.22**
18X12	3729-792 **846.17**	3929-792 **1182.77**
18X14	3729-794 **780.37**	3929-794 **1145.33**
18X16	3729-796 **582.94**	3929-796 **978.99**
20X6	3729-816 **1430.35**	3929-816 **2340.06**
20X8	3729-818 **1385.24**	3929-818 **2312.98**
20X10	3729-820 **1214.44**	3929-820 **2295.79**
20X12	3729-822 **1197.80**	3929-822 **2153.01**
20X14	3729-824 **1183.01**	3929-824 **2135.89**
20X16	3729-826 **1116.02**	3929-826 **1710.54**
20X18	3729-828 **985.94**	3929-828 **1179.55**
24X6	3729-906 **2876.69**	3929-906 **3956.64**
24X8	3729-908 **2794.27**	3929-908 **3923.63**
24X10	3729-910 **2310.33**	3929-910 **3910.22**
24X12	3729-912 **2234.16**	3929-912 **3847.04**
24X14	3729-914 **2118.48**	3929-914 **3834.16**
24X16	3729-916 **1945.19**	3929-916 **3686.85**
24X18	3729-918 **1722.43**	3929-918 **2810.95**
24X20	3729-920 **1294.84**	3929-920 **2520.93**

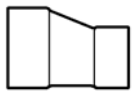
ECCENTRIC REDUCER COUPLING (Soc x Soc)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
3X2	3729-338E **33.63**	3929-338E **46.85**
4X2	3729-420E[2] **45.67**	3929-420E[2] **119.53**
4X3	3729-422E **42.21**	3929-422E **55.31**

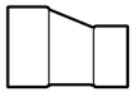
Reducer Couplings

ECCENTRIC REDUCER COUPLING (Soc x Soc) (continued)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
6X2	3729-528E3* **103.09**	3929-528E3 **155.61**
6X3	3729-530E2* **94.96**	3929-530E2 **151.18**
6X4	3729-532E2 **47.48**	3929-532E **115.31**
8X3	3729-580E3* **195.86**	3929-580E3 **219.72**
8X4	3729-582E2* **97.80**	3929-582E2 **199.43**
8X6	3729-585E* **79.06**	3929-585E **153.36**
10X4	3729-624E2* **223.63**	3929-624E3 **337.48**
10X6	3729-626E* **205.62**	3929-626E2 **286.43**
10X8	3729-628E* **193.86**	3929-628E **264.67**
12X4	3729-664E3* **417.24**	3929-664E4 **516.08**
12X6	3729-666E2* **342.84**	3929-666E3 **424.73**
12X8	3729-668E2* **227.35**	3929-668E2 **366.94**
12X10	3729-670E* **197.12**	3929-670E **234.55**
14X6	3729-696E3 **696.46**	3929-696E4 **840.68**
14X8	3729-698E3 **570.52**	3929-698E3 **752.04**

ECCENTRIC REDUCER COUPLING (Soc x Soc) (continued)

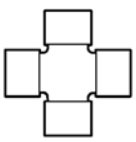


Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
14X10	3729-700E2 **517.91**	3929-700E2 **544.46**
14X12	3729-702E **316.62**	3929-702E **500.72**
16X6	3729-756E3 **727.75**	3929-756E5 **1553.20**
16X8	3729-758E3 **717.55**	3929-758E3 **1422.29**
16X10	3729-760E2 **530.60**	3929-760E3 **1034.67**
16X12	3729-762E **504.89**	3929-762E2 **918.62**
16X14	3729-764E **448.63**	3929-764E **711.53**
18X6	3729-786E4 **1034.39**	3929-786E6 **2144.06**
18X8	3729-788E4 **1019.07**	3929-788E5 **2052.44**
18X10	3729-790E3 **946.11**	3929-790E4 **1917.95**
18X12	3729-792E2 **853.85**	3929-792E3 **1711.92**
18X14	3729-794E2 **754.93**	3929-794E2 **1411.37**
18X16	3729-796E **608.98**	3929-796E **1377.17**

2=Two-Step Design, 3=Three-Step Design, 4=Four-Step Design, 5=Five-Step Design, 6=Six−Step Design

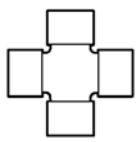
Crosses

CROSS (Soc x Soc x Soc x Soc)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
4X2	---	3920-420 **128.75**
4X3	---	3920-422 **141.68**
6	3720-060 **149.72**	3920-060 **349.19**
6X2	3720-528 **112.39**	3920-528 **180.92**
6X3	3720-530 **133.09**	3920-530 **203.92**
6X4	3720-532 **146.74**	3920-532 **251.77**
8	3720-080 **302.39**	3920-080 **420.56**
8X2	3720-578 **194.14**	3920-578 **228.28**
8X3	3720-580 **210.04**	3920-580 **242.52**
8X4	3720-582 **230.75**	3920-582 **260.17**
8X6	3720-585 **290.34**	3920-585 **337.18**
10	3720-100 **492.23**	3920-100 **899.75**
10X2	3720-621 **206.18**	3920-621 **413.19**
10X3	3720-623 **237.47**	3920-623 **478.12**
10X4	3720-624 **272.42**	3920-624 **490.23**

CROSS (Soc x Soc x Soc x Soc) (continued)

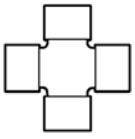


Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
10X6	3720-626 **312.40**	3920-626 **599.02**
10X8	3720-628 **438.59**	3920-628 **790.47**
12	3720-120 **648.92**	3920-120 **1267.88**
12X2	3720-661 **272.48**	3920-661 **559.38**
12X3	3720-663 **305.82**	3920-663 **625.27**
12X4	3720-664 **323.31**	3920-664 **652.46**
12X6	3720-666 **395.19**	3920-666 **757.61**
12X8	3720-668 **480.24**	3920-668 **905.02**
12X10	3720-670 **557.41**	3920-670 **1031.31**
14	3720-140 **1077.99**	3920-140 **2254.40**
14X2	3720-691 **531.85**	3920-691 **849.16**
14X3	3720-693 **592.18**	3920-693 **935.49**
14X4	3720-694 **657.46**	3920-694 **1045.88**
14X6	3720-696 **739.54**	3920-696 **1173.82**
14X8	3720-698 **852.00**	3920-698 **1350.13**

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

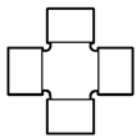
Crosses

CROSS (Soc x Soc x Soc x Soc) (continued)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
14X10	3720-700 **968.07**	3920-700 **1616.67**
14X12	3720-702 **1024.18**	3920-702 **1894.16**
16	3720-160 **1574.71**	3920-160 **2858.03**
16X2	3720-751 **729.81**	3920-751 **1151.72**
16X3	3720-753 **802.09**	3920-753 **1258.22**
16X4	3720-754 **832.74**	3920-754 **1332.33**
16X6	3720-756 **900.67**	3920-756 **1441.11**
16X8	3720-758 **1055.08**	3920-758 **1688.09**
16X10	3720-760 **1256.81**	3920-760 **1943.99**
16X12	3720-762 **1444.37**	3920-762 **2309.34**
16X14	3720-764 **1516.61**	3920-764 **2723.43**
18	3720-180 **2230.98**	3920-180 **3528.26**
18X4	3720-784 **902.92**	3920-784 **1681.48**
18X6	3720-786 **1273.02**	3920-786 **1921.92**
18X8	3720-788 **1442.29**	3920-788 **2292.78**
18X10	3720-790 **1559.93**	3920-790 **2598.43**
18X12	3720-792 **1658.54**	3920-792 **2882.65**
18X14	3720-794 **1747.72**	3920-794 **3080.84**
18X16	3720-796 **2028.41**	3920-796 **3346.52**
20	3720-200 **3795.47**	3920-200 **5956.54**
20X4	3720-814 **1594.17**	3920-814 **2209.73**
20X6	3720-816 **1655.49**	3920-816 **2390.37**

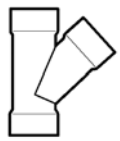
CROSS (Soc x Soc x Soc x Soc) (continued)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
20X8	3720-818 **2056.62**	3920-818 **2601.24**
20X10	3720-820 **2349.43**	3920-820 **3053.78**
20X12	3720-822 **2451.60**	3920-822 **3380.00**
20X14	3720-824 **2666.73**	3920-824 **3651.53**
20X16	3720-826 **2999.00**	3920-826 **4060.64**
20X18	3720-828 **3244.81**	3920-828 **4843.02**
24	3720-240 **4998.78**	3920-240 **7220.62**
24X4	3720-904 **2037.68**	3920-904 **2439.46**
24X6	3720-906 **2419.31**	3920-906 **2781.83**
24X8	3720-908 **2575.44**	3920-908 **3630.64**
24X10	3720-910 **2753.22**	3920-910 **3940.81**
24X12	3720-912 **3032.13**	3920-912 **4520.83**
24X14	3720-914 **3118.65**	3920-914 **5306.63**
24X16	3720-916 **3456.43**	3920-916 **5626.53**
24X18	3720-918 **3860.25**	3920-918 **5909.71**
24X20	3720-920 **4674.09**	3920-920 **6293.38**

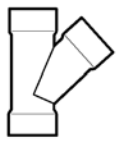
Wyes

WYE (Soc x Soc x Soc)



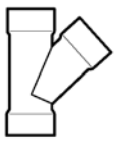
Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
8	3775-080 **209.76**	3975-080 **350.74**
8X2	3775-578 **136.85**	3975-578 **248.07**
8X3	3775-580* **142.23**	3975-580 **274.40**
8X4	3775-582 **148.11**	3975-582 **281.26**
8X6	3775-585 **194.39**	3975-585 **284.15**
10	3775-100 **419.06**	3975-100 **626.00**
10X2	3775-621* **245.03**	3975-621 **361.17**
10X3	3775-623* **256.64**	3975-623 **376.44**
10X4	3775-624 **263.74**	3975-624 **387.13**
10X6	3775-626* **318.00**	3975-626 **489.19**

WYE (Soc x Soc x Soc) (continued)



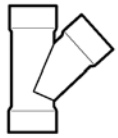
Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
10X8	3775-628 **389.76**	3975-628 **532.74**
12	3775-120 **552.81**	3975-120 **947.13**
12X2	3775-661* **291.54**	3975-661 **607.47**
12X3	3775-663* **302.76**	3975-663 **614.74**
12X4	3775-664* **313.12**	3975-664 **625.08**
12X6	3775-666* **373.12**	3975-666 **681.95**
12X8	3775-668* **414.57**	3975-668 **757.75**
12X10	3775-670 **487.17**	3975-670 **890.28**
14	3775-140* **1189.69**	3975-140 **1438.45**
14X2	3775-691* **591.88**	3975-691 **972.38**

WYE (Soc x Soc x Soc) (continued)



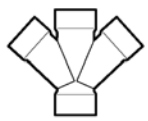
Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
14X3	3775-693* **620.75**	3975-693 **987.19**
14X4	3775-694* **631.15**	3975-694 **995.13**
14X6	3775-696* **681.23**	3975-696 **1089.96**
14X8	3775-698* **779.57**	3975-698 **1207.59**
14X10	3775-700* **833.31**	3975-700 **1260.87**
14X12	3775-702* **1065.43**	3975-702 **1336.37**
16	3775-160 **1513.68**	3975-160 **2214.28**
16X2	3775-751 **672.53**	3975-751 **1127.92**
16X3	3775-753 **711.52**	3975-753 **1142.14**
16X4	3775-754 **743.78**	3975-754 **1190.00**
16X6	3775-756* **800.48**	3975-756 **1280.73**
16X8	3775-758 **912.76**	3975-758 **1349.63**
16X10	3775-760 **1096.51**	3975-760 **1477.49**
16X12	3775-762 **1194.15**	3975-762 **1979.85**
16X14	3775-764 **1447.09**	3975-764 **2107.73**
18	3775-180 **1740.56**	3975-180 **2974.62**
18X4	3775-784 **1192.58**	3975-784 **1538.05**
18X6	3775-786* **1211.79**	3975-786 **1563.84**
18X8	3775-788 **1251.29**	3975-788 **1685.66**
18X10	3775-790 **1331.20**	3975-790 **1734.58**
18X12	3775-792 **1457.91**	3975-792 **1909.45**
18X14	3775-794 **1593.88**	3975-794 **2319.26**
18X16	3775-796 **1689.82**	3975-796 **2796.19**
20	3775-200 **2565.14**	3975-200 **5072.83**
20X4	3775-814 **1381.98**	3975-814 **1793.96**
20X6	3775-816* **1387.01**	3975-816 **1940.66**
20X8	3775-818 **1489.00**	3975-818 **2412.35**
20X10	3775-820 **1540.94**	3975-820 **2510.82**
20X12	3775-822 **1739.48**	3975-822 **2764.03**
20X14	3775-824 **2023.20**	3975-824 **3203.15**
20X16	3775-826 **2222.05**	3975-826 **3289.81**
20X18	3775-828 **2401.45**	3975-828 **3438.77**
24	3775-240 **3191.86**	3975-240 **5712.04**
24X4	3775-904 **1723.04**	3975-904 **2554.79**
24X6	3775-906* **1900.94**	3975-906 **2806.17**
24X8	3775-908 **2014.48**	3975-908 **3248.67**
24X10	3775-910 **2165.69**	3975-910 **3293.49**

WYE (Soc x Soc x Soc) (continued)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
24X12	3775-912 **2234.85**	3975-912 **3612.23**
24X14	3775-914 **2341.93**	3975-914 **3809.29**
24X16	3775-916 **2474.88**	3975-916 **4369.00**
24X18	3775-918 **2647.92**	3975-918 **5130.01**
24X20	3775-920 **2988.49**	3975-920 **5297.14**

DOUBLE WYE (Soc x Soc x Soc x Soc)



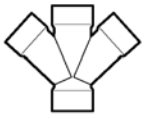
Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
6	3776-060 **155.37**	3976-060 **198.88**
6X4	3776-532 **121.56**	3976-532 **184.73**
8	3776-080* **299.66**	3976-080 **383.58**
8X2	3776-578* **163.16**	3976-578 **219.36**
8X3	3776-580* **174.32**	3976-580 **227.07**
8X4	3776-582* **181.71**	3976-582 **258.49**
8X6	3776-585* **229.44**	3976-585 **330.33**
10	3776-100* **439.52**	3976-100 **703.25**
10X2	3776-621* **232.25**	3976-621 **389.52**
10X3	3776-623* **242.66**	3976-623 **399.37**
10X4	3776-624* **254.81**	3976-624 **407.68**
10X6	3776-626* **315.23**	3976-626 **504.35**
10X8	3776-628* **381.69**	3976-628 **609.32**
12	3776-120* **717.57**	3976-120 **1150.75**
12X2	3776-661* **314.38**	3976-661 **642.34**
12X3	3776-663* **324.72**	3976-663 **648.00**
12X4	3776-664* **331.99**	3976-664 **653.56**
12X6	3776-666* **395.19**	3976-666 **768.96**
12X8	3776-668* **504.43**	3976-668 **934.14**
12X10	3776-670* **645.79**	3976-670 **1054.87**
14	3776-140* **1272.75**	3976-140 **1598.38**
14X2	3776-691* **606.52**	3976-691 **1137.37**
14X3	3776-693* **634.83**	3976-693 **1170.91**
14X4	3776-694* **661.52**	3976-694 **1180.98**
14X6	3776-696* **736.45**	3976-696 **1207.59**
14X8	3776-698* **853.44**	3976-698 **1278.63**
14X10	3776-700* **901.92**	3976-700 **1349.63**
14X12	3776-702* **1168.07**	3976-702 **1520.15**
16	3776-160 **1670.46**	3976-160 **2484.22**
16X2	3776-751 **784.36**	3976-751 **1334.44**
16X3	3776-753 **831.25**	3976-753 **1345.64**

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

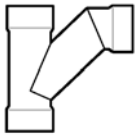
PVC Schedule 40 & 80 DWV Fabricated Fittings

DOUBLE WYE (Soc x Soc x Soc x Soc) (continued)



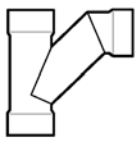
Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
16X4	3776-754 **843.55**	3976-754 **1349.63**
16X6	3776-756* **892.40**	3976-756 **1427.78**
16X8	3776-758 **976.72**	3976-758 **1562.74**
16X10	3776-760 **1196.29**	3976-760 **1782.95**
16X12	3776-762 **1289.27**	3976-762 **1917.94**
16X14	3776-764 **1543.98**	3976-764 **2280.96**
18	3776-180 **2333.55**	3976-180 **3280.63**
18X4	3776-784 **1287.89**	3976-784 **1727.73**
18X6	3776-786* **1308.65**	3976-786 **2003.32**
18X8	3776-788 **1403.52**	3976-788 **2055.40**
18X10	3776-790 **1708.82**	3976-790 **2073.48**
18X12	3776-792 **1740.68**	3976-792 **2227.84**
18X14	3776-794 **1869.08**	3976-794 **2534.33**
18X16	3776-796 **1918.24**	3976-796 **2962.29**
20	3776-200 **3034.21**	3976-200 **5298.00**
20X4	3776-814 **1460.77**	3976-814 **2126.39**
20X6	3776-816* **1536.66**	3976-816 **2261.37**
20X8	3776-818 **1562.11**	3976-818 **2445.94**
20X10	3776-820 **2057.14**	3976-820 **2805.79**
20X12	3776-822 **2251.89**	3976-822 **3113.53**
20X14	3776-824 **2459.34**	3976-824 **3268.93**
20X16	3776-826 **2683.66**	3976-826 **4157.19**
20X18	3776-828 **2935.08**	3976-828 **4420.68**
24	3776-240 **3777.89**	3976-240 **6837.86**
24X4	3776-904 **1882.15**	3976-904 **2764.03**
24X6	3776-906* **2081.00**	3976-906 **3032.61**
24X8	3776-908 **2135.27**	3976-908 **3319.81**
24X10	3776-910 **2246.54**	3976-910 **3489.24**
24X12	3776-912 **2378.29**	3976-912 **3578.63**
24X14	3776-914 **2527.22**	3976-914 **4817.62**
24X16	3776-916 **2749.42**	3976-916 **6018.28**
24X18	3776-918 **2776.77**	3976-918 **6102.65**
24X20	3776-920 **3568.63**	3976-920 **6434.39**

COMBO WYE (Soc x Soc x Soc)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
6	3777-060* **197.67**	3977-060 **316.37**
6X4	3777-532* **154.00**	3977-532 **277.92**
8	3777-080* **315.23**	3977-080 **521.24**

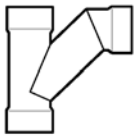
COMBO WYE (Soc x Soc x Soc) (continued)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
8X2	3777-578* **172.85**	3977-578 **343.01**
8X3	3777-580* **215.39**	3977-580 **351.41**
8X4	3777-582 **219.41**	3977-582 **359.07**
8X6	3777-585 **248.63**	3977-585 **397.77**
10	3777-100* **563.03**	3977-100 **994.48**
10X2	3777-621* **257.13**	3977-621 **416.77**
10X3	3777-623* **269.31**	3977-623 **432.57**
10X4	3777-624* **275.26**	3977-624 **440.43**
10X6	3777-626* **346.29**	3977-626 **554.08**
10X8	3777-628* **430.89**	3977-628 **724.55**
12	3777-120* **817.35**	3977-120 **1248.39**
12X2	3777-661* **416.68**	3977-661 **680.56**
12X3	3777-663* **425.48**	3977-663 **691.80**
12X4	3777-664* **435.06**	3977-664 **696.16**
12X6	3777-666* **483.43**	3977-666 **777.87**
12X8	3777-668* **542.36**	3977-668 **923.48**
12X10	3777-670* **674.80**	3977-670 **1079.76**
14	3777-140* **1415.75**	3977-140 **1909.08**
14X2	3777-691* **626.97**	3977-691 **1048.79**
14X3	3777-693* **641.13**	3977-693 **1060.88**
14X4	3777-694* **678.06**	3977-694 **1084.80**
14X6	3777-696* **771.52**	3977-696 **1234.46**
14X8	3777-698* **848.81**	3977-698 **1291.93**
14X10	3777-700* **1004.55**	3977-700 **1469.55**
14X12	3777-702* **1185.38**	3977-702 **1784.76**
16	3777-160 **1662.43**	3977-160 **2659.93**
16X2	3777-751 **814.92**	3977-751 **1325.36**
16X3	3777-753 **830.01**	3977-753 **1345.57**
16X4	3777-754 **849.79**	3977-754 **1359.59**
16X6	3777-756 **898.79**	3977-756 **1438.08**
16X8	3777-758 **988.82**	3977-758 **1633.82**
16X10	3777-760 **1118.77**	3977-760 **1790.06**
16X12	3777-762 **1200.98**	3977-762 **1921.45**
16X14	3777-764 **1474.36**	3977-764 **2313.36**
18	3777-180 **2093.48**	3977-180 **3631.98**
18X4	3777-784 **1276.35**	3977-784 **1611.27**
18X6	3777-786 **1316.11**	3977-786 **1709.26**

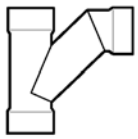
Wyes

COMBO WYE (Soc x Soc x Soc) (continued)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
18X8	3777-788 **1351.61**	3977-788 **1883.52**
18X10	3777-790 **1438.76**	3977-790 **2025.79**
18X12	3777-792 **1495.47**	3977-792 **2673.08**
18X14	3777-794 **1698.01**	3977-794 **3058.29**
18X16	3777-796 **1931.37**	3977-796 **3288.36**
20	3777-200 **2712.71**	3977-200 **6691.89**
20X4	3777-814 **1411.21**	3977-814 **1782.68**
20X6	3777-816 **1528.28**	3977-816 **1974.18**
20X8	3777-818 **1557.25**	3977-818 **2459.12**
20X10	3777-820 **1632.52**	3977-820 **2748.87**
20X12	3777-822 **2051.89**	3977-822 **3247.02**
20X14	3777-824 **2160.07**	3977-824 **3578.75**
20X16	3777-826 **2416.89**	3977-826 **4557.56**

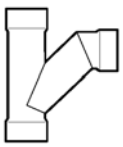
COMBO WYE (Soc x Soc x Soc) (continued)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
20X18	3777-828 **2469.81**	3977-828 **6231.77**
24	3777-240 **3664.36**	3977-240 **7126.43**
24X4	3777-904 **1881.34**	3977-904 **2885.79**
24X6	3777-906 **2054.36**	3977-906 **3070.49**
24X8	3777-908 **2291.68**	3977-908 **3201.52**
24X10	3777-910 **2453.49**	3977-910 **3784.07**
24X12	3777-912 **2555.56**	3977-912 **4073.09**
24X14	3777-914 **2602.65**	3977-914 **4859.00**
24X16	3777-916 **3009.60**	3977-916 **5672.76**
24X18	3777-918 **3215.08**	3977-918 **6430.65**
24X20	3777-920 **3266.33**	3977-920 **6825.43**

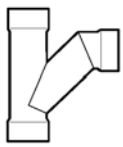
Sanitary Tees

SANITARY TEE (Soc x Soc x Soc)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
6	3790-060 **169.97**	3990-060 **285.86**
6X4	3790-532* **127.34**	3990-532 **225.95**
8	3790-080* **311.44**	3990-080 **517.57**
8X2	3790-578* **159.32**	3990-578 **283.11**
8X3	3790-580* **210.53**	3990-580 **322.46**
8X4	3790-582* **199.78**	3990-582 **343.80**
8X6	3790-585* **239.32**	3990-585 **382.83**
10	3790-100* **556.81**	3990-100 **983.05**
10X2	3790-621* **244.49**	3990-621 **381.09**
10X3	3790-623* **248.63**	3990-623 **391.93**
10X4	3790-624* **266.39**	3990-624 **426.22**
10X6	3790-626* **342.84**	3990-626 **539.87**
10X8	3790-628* **419.78**	3990-628 **695.38**
12	3790-120* **797.33**	3990-120 **1213.62**
12X2	3790-661* **410.27**	3990-661 **644.24**
12X3	3790-663* **414.95**	3990-663 **654.80**
12X4	3790-664* **427.08**	3990-664 **681.95**
12X6	3790-666* **465.66**	3990-666 **763.64**

SANITARY TEE (Soc x Soc x Soc) (continued)

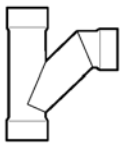


Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
12X8	3790-668* **518.46**	3990-668 **907.05**
12X10	3790-670* **653.08**	3990-670 **1050.83**
14	3790-140* **1404.22**	3990-140 **1860.47**
14X2	3790-691* **556.37**	3990-691 **1015.99**
14X3	3790-693* **603.71**	3990-693 **1031.33**
14X4	3790-694* **609.61**	3990-694 **1052.04**
14X6	3790-696* **727.02**	3990-696 **1199.59**
14X8	3790-698* **829.24**	3990-698 **1261.87**
14X10	3790-700* **996.07**	3990-700 **1434.56**
14X12	3790-702* **1174.27**	3990-702 **1724.44**
16	3790-160 **1806.57**	3990-160 **2220.06**
16X2	3790-751 **809.62**	3990-751 **1254.55**
16X3	3790-753 **817.55**	3990-753 **1305.12**
16X4	3790-754 **835.94**	3990-754 **1346.08**
16X6	3790-756 **888.59**	3990-756 **1424.26**
16X8	3790-758 **979.97**	3990-758 **1594.93**
16X10	3790-760 **1107.38**	3990-760 **1762.53**
16X12	3790-762 **1188.93**	3990-762 **1894.79**

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

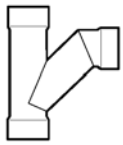
Sanitary Tees

SANITARY TEE (Soc x Soc x Soc) (continued)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
16X14	3790-764 **1424.99**	3990-764 **2067.36**
18	3790-180 **1850.13**	3990-180 **3588.76**
18X4	3790-784 **985.94**	3990-784 **1559.91**
18X6	3790-786 **1057.42**	3990-786 **1654.58**
18X8	3790-788 **1326.53**	3990-788 **1845.04**
18X10	3790-790 **1509.42**	3990-790 **1991.28**
18X12	3790-792 **1550.57**	3990-792 **2593.32**
18X14	3790-794 **1767.65**	3990-794 **2667.31**
18X16	3790-796 **1908.27**	3990-796 **3268.85**
20	3790-200 **2499.27**	3990-200 **6588.60**
20X4	3790-814 **1043.73**	3990-814 **1748.97**
20X6	3790-816 **1194.28**	3990-816 **1900.33**
20X8	3790-818 **1288.25**	3990-818 **2414.16**
20X10	3790-820 **1453.43**	3990-820 **2684.02**
20X12	3790-822 **1627.40**	3990-822 **3173.36**

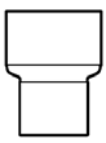
SANITARY TEE (Soc x Soc x Soc) (continued)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
20X14	3790-824 **1935.36**	3990-824 **3442.62**
20X16	3790-826 **2231.48**	3990-826 **4476.45**
20X18	3790-828 **2404.57**	3990-828 **6197.12**
24	3790-240 **3270.01**	3990-240 **7070.49**
24X4	3790-904 **1528.33**	3990-904 **2818.45**
24X6	3790-906 **1696.79**	3990-906 **2955.02**
24X8	3790-908 **2251.96**	3990-908 **3091.56**
24X10	3790-910 **2434.87**	3990-910 **3703.02**
24X12	3790-912 **2544.26**	3990-912 **3988.01**
24X14	3790-914 **2595.61**	3990-914 **4807.60**
24X16	3790-916 **2976.74**	3990-916 **5518.78**
24X18	3790-918 **3120.46**	3990-918 **6346.68**
24X20	3790-920 **3233.16**	3990-920 **6703.52**

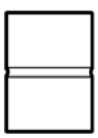
Adapters

IPS X SEWER ADAPTER (Soc x Spig)



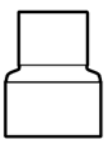
Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
4	3729-04013IXS **17.51**	---
6	3729-06013IXS **36.95**	---
8	3729-08013IXS **71.53**	---
10	3729-10013IXS **193.69**	---
12	3729-12013IXS **210.73**	---

IPS X SEWER ADAPTER (Soc x Soc)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
4	3729-040IXS **30.11**	---
6	3729-060IXS **55.01**	---
8	3729-080IXS **88.39**	---
10	3729-100IXS **142.93**	---
12	3729-120IXS **211.54**	---

IPS X SEWER ADAPTER (Spig x Soc)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
4	3729-04031IXS **22.98**	---
6	3729-06031IXS **53.21**	---
8	3729-08031IXS **87.15**	---
10	3729-10031IXS **135.67**	---
12	3729-12031IXS **201.51**	---

Caps

CAP (Soc)

Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
10	3747-100* **116.99**	3947-100 **228.44**
12	3747-120* **147.74**	3947-120 **395.49**
14	3747-140* **251.21**	3947-140 **448.54**
16	3747-160 **321.58**	3947-160 **592.00**
18	3747-180 **355.83**	3947-180 **777.78**

CAP (Soc) (continued)

Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
20	3747-200 **626.78**	3947-200 **898.79**
24	3747-240 **926.49**	3947-240 **1042.91**

Plugs

SPIGOT PLUG (Spigot)

Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
6	3749-060 **45.22**	3949-060 **136.77**
8	3749-080 **115.51**	3949-080 **230.84**
10	3749-100 **131.73**	3949-100 **291.85**

SPIGOT PLUG (Spigot) (continued)

Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
12	3749-120 **188.81**	3949-120 **464.69**
14	3749-140 **320.34**	---
16	3749-160 **390.34**	3949-160 **675.96**

Cleanouts

CLEANOUT ADAPTER WITH PLUG (Spig x Cleanout)

SOLD AS SET ONLY (Non-Pressure Rated)

Size	SCH 40 LOW PR Prod Code: 390 Part Number Price Each	SCH 80 LOW PR Dusc Code: 400 Part Number Price Each
2	---	3978-020* **96.63**
3	---	3978-030* **123.80**
4	---	3978-040* **155.58**
5	---	3978-050* **165.38**
6	---	3978-060* **175.20**
8	---	3978-080* **278.69**
10	---	3978-100* **465.43**
12	---	3978-120* **649.82**
14	---	3978-140* **805.83**
16	---	3978-160* **1584.95**
18	---	3978-180* **1897.85**
24	---	3978-240* **2332.21**

* HDPE Plug

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Glue-On Saddles

Saddle

IPS O.D.x Socket Schedule 40

Non Pressure Rated

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
3763-528	**6X2**	1	10	390	35.83
3763-530	**6X3**	1	10	390	36.68
3763-532	**6X4**	1	10	390	38.15
3763-578	**8X2**	1	10	390	52.81
3763-580	**8X3**	1	10	390	53.33
3763-582	**8X4**	1	10	390	53.98
3763-585	**8X6**	1	10	390	55.51
3763-621	**10X2**	1	5	390	66.74
3763-623	**10X3**	1	10	390	67.67
3763-624	**10X4**	1	8	390	67.95
3763-626	**10X6**	1	5	390	79.52
3763-628	**10X8**	1	5	390	127.61
3763-661	**12X2**	1	5	390	78.93
3763-663	**12X3**	1	10	390	80.39
3763-664	**12X4**	1	10	390	82.11
3763-666	**12X6**	1	4	390	95.22
3763-668	**12X8**	1	5	390	151.80
3763-670	**12X10**	1	4	390	219.51
3763-691	**14X2**	1	10	390	101.16
3763-693	**14X3**	1	8	390	168.11
3763-694	**14X4**	1	5	390	115.48
3763-696	**14X6**	1	10	390	117.80
3763-698	**14X8**	1	4	390	180.77
3763-700	**14X10**	1	3	390	232.54
3763-702	**14X12**	1	0	390	256.32
3763-751	**16X2**	1	5	390	107.66
3763-753	**16X3**	1	5	390	109.14
3763-754	**16X4**	1	10	390	110.80
3763-756	**16X6**	1	3	390	126.94
3763-758	**16X8**	1	3	390	188.67
3763-760	**16X10**	1	0	390	239.80
3763-762	**16X12**	1	0	390	265.75
3763-764	**16X14**	1	0	390	276.25
3763-781	**18X2**	1	5	390	157.82
3763-783	**18X3**	1	5	390	160.89
3763-784	**18X4**	1	10	390	163.35
3763-786	**18X6**	1	4	390	173.93
3763-788	**18X8**	1	0	390	253.79
3763-790	**18X10**	1	0	390	281.34
3763-792	**18X12**	1	0	390	289.11
3763-794	**18X14**	1	0	390	436.77
3763-796	**18X16**	1	0	390	570.18
3763-811	**20X2**	1	8	390	158.19
3763-813	**20X3**	1	4	390	160.36
3763-814	**20X4**	1	4	390	168.19
3763-816	**20X6**	1	0	390	175.66
3763-818	**20X8**	1	5	390	253.46
3763-820	**20X10**	1	0	390	281.35
3763-822	**20X12**	1	0	390	401.12
3763-824	**20X14**	1	0	390	437.67
3763-826	**20X16**	1	0	390	572.27
3763-828	**20X18**	1	0	390	648.56
3763-901	**24X2**	1	5	390	150.91
3763-903	**24X3**	1	5	390	166.80
3763-904	**24X4**	1	5	390	168.65
3763-906	**24X6**	1	5	390	178.92
3763-908	**24X8**	1	5	390	255.81
3763-910	**24X10**	1	0	390	284.56
3763-912	**24X12**	1	0	390	402.54
3763-914	**24X14**	1	0	390	450.77
3763-916	**24X16**	1	0	390	506.61
3763-918	**24X18**	1	0	390	682.74

Saddle (continued)

IPS O.D.x Socket Schedule 40

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
3763-920	**24X20**	1	0	390	764.43

Saddle

IPS O.D. x Sockett Schedule 80

Non Pressure Rated

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
3963-528	**6X2**	1	5	400	60.22
3963-530	**6X3**	1	10	400	60.76
3963-532	**6X4**	1	5	400	61.28
3963-578	**8X2**	1	10	400	85.07
3963-580	**8X3**	1	8	400	86.11
3963-582	**8X4**	1	5	400	87.03
3963-585	**8X6**	1	5	400	89.06
3963-621	**10X2**	1	8	400	78.77
3963-623	**10X3**	1	5	400	79.88
3963-624	**10X4**	1	8	400	80.22
3963-626	**10X6**	1	5	400	93.28
3963-628	**10X8**	1	5	400	149.49
3963-661	**12X2**	1	10	400	93.06
3963-663	**12X3**	1	8	400	93.61
3963-664	**12X4**	1	5	400	94.40
3963-666	**12X6**	1	6	400	109.48
3963-668	**12X8**	1	2	400	172.28
3963-670	**12X10**	1	4	400	210.86
3963-691	**14X2**	1	5	400	114.61
3963-693	**14X3**	1	8	400	115.68
3963-694	**14X4**	1	5	400	116.24
3963-696	**14X6**	1	5	400	132.32
3963-698	**14X8**	1	4	400	202.85
3963-700	**14X10**	1	3	400	259.77
3963-702	**14X12**	1	4	400	286.83
3963-751	**16X2**	1	8	400	120.69
3963-753	**16X3**	1	8	400	121.74
3963-754	**16X4**	1	10	400	122.43
3963-756	**16X6**	1	10	400	139.54
3963-758	**16X8**	1	3	400	208.08
3963-760	**16X10**	1	0	400	264.96
3963-762	**16X12**	1	0	400	294.28
3963-764	**16X14**	1	0	400	306.66
3963-781	**18X2**	1	8	400	177.31
3963-783	**18X3**	1	4	400	178.38
3963-784	**18X4**	1	5	400	179.19
3963-786	**18X6**	1	5	400	189.65
3963-788	**18X8**	1	5	400	278.65
3963-790	**18X10**	1	0	400	308.91
3963-792	**18X12**	1	0	400	440.55
3963-794	**18X14**	1	0	400	479.48
3963-796	**18X16**	1	0	400	627.41
3963-811	**20X2**	1	0	400	179.33
3963-813	**20X3**	1	4	400	179.75
3963-814	**20X4**	1	4	400	181.91
3963-816	**20X6**	1	0	400	190.82
3963-818	**20X8**	1	0	400	275.64
3963-820	**20X10**	1	5	400	305.68
3963-822	**20X12**	1	0	400	436.02
3963-824	**20X14**	1	0	400	475.54
3963-826	**20X16**	1	0	400	623.04
3963-828	**20X18**	1	0	400	707.43
3963-901	**24X2**	1	5	400	182.47
3963-903	**24X3**	1	5	400	183.44
3963-904	**24X4**	1	5	400	184.28
3963-906	**24X6**	1	5	400	192.29
3963-908	**24X8**	1	5	409	259.52
3963-910	**24X10**	1	5	400	307.00
3963-912	**24X12**	1	0	409	407.26

Glue-On Saddles

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Saddle (continued)					
IPS O.D. x Sockett Schedule 80					
3963-914	**24X14**	1	0	400	473.88
3963-916	**24X16**	1	0	400	648.61
3963-918	**24X18**	1	0	400	731.41
3963-920	**24X20**	1	0	400	823.20
Stub Saddle					
IPS O.D x Socket Schedule 40					
Non Pressure Rated					
3765-528	**6X2**	1	8	390	38.53
3765-530	**6X3**	1	4	390	39.44
3765-532	**6X4**	1	10	390	41.03
3765-578	**8X2**	1	10	390	56.79
3765-580	**8X3**	1	4	390	57.34
3765-582	**8X4**	1	8	390	58.04
3765-585	**8X6**	1	4	390	59.69
3765-621	**10X2**	1	5	390	71.75
3765-623	**10X3**	1	5	390	72.77
3765-624	**10X4**	1	4	390	92.22
3765-626	**10X6**	1	2	390	85.51
3765-628	**10X8**	1	2	390	137.21
3765-661	**12X2**	1	6	390	84.86
3765-663	**12X3**	1	5	390	86.44
3765-664	**12X4**	1	2	390	88.28
3765-666	**12X6**	1	2	390	102.32
3765-668	**12X8**	1	2	390	163.23
3765-670	**12X10**	1	2	390	236.03
3765-691	**14X2**	1	10	390	108.77
3765-693	**14X3**	1	2	390	110.00
3765-694	**14X4**	1	5	390	111.38
3765-696	**14X6**	1	3	390	126.67
3765-698	**14X8**	1	0	390	193.11
3765-700	**14X10**	1	0	390	250.04
3765-702	**14X12**	1	0	390	275.62
3765-751	**16X2**	1	4	390	115.76
3765-753	**16X3**	1	5	390	117.35
3765-754	**16X4**	1	5	390	119.13
3765-756	**16X6**	1	2	390	136.48
3765-758	**16X8**	1	0	390	202.87
3765-760	**16X10**	1	0	390	257.85
3765-762	**16X12**	1	0	390	285.75
3765-764	**16X14**	1	0	390	297.04
3765-781	**18X2**	1	4	390	169.68
3765-783	**18X3**	1	10	390	133.45
3765-784	**18X4**	1	10	390	175.64
3765-786	**18X6**	1	2	390	187.02
3765-788	**18X8**	1	0	390	272.88
3765-790	**18X10**	1	0	390	302.51
3765-792	**18X12**	1	0	390	310.86
3765-794	**18X14**	1	0	390	469.63
3765-796	**18X16**	1	0	390	612.58
3765-811	**20X2**	1	0	390	170.09
3765-813	**20X3**	1	2	390	172.43
3765-814	**20X4**	1	2	390	180.85
3765-816	**20X6**	1	0	390	188.89
3765-818	**20X8**	1	0	390	272.54
3765-820	**20X10**	1	0	390	302.52
3765-822	**20X12**	1	0	390	431.33
3765-824	**20X14**	1	0	390	470.62
3765-826	**20X16**	1	0	390	615.34
3765-828	**20X18**	1	0	390	697.38
3765-901	**24X2**	1	4	390	162.25
3765-903	**24X3**	1	2	390	179.34
3765-904	**24X4**	1	4	390	181.35
3765-906	**24X6**	1	3	390	192.39

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Stub Saddle (continued)					
IPS O.D x Socket Schedule 40					
3765-908	**24X8**	1	0	390	275.06
3765-910	**24X10**	1	0	390	305.96
3765-912	**24X12**	1	0	390	432.83
3765-914	**24X14**	1	0	390	484.71
3765-916	**24X16**	1	0	390	544.75
3765-918	**24X18**	1	0	390	734.11
3765-920	**24X20**	1	0	390	821.97
Stub Saddle					
IPS O.D.x Socket Schedule 80					
Non Pressure Rated					
3965-528	**6X2**	1	10	400	64.76
3965-530	**6X3**	1	3	400	65.32
3965-532	**6X4**	1	10	400	65.91
3965-578	**8X2**	1	5	409	85.99
3965-580	**8X3**	1	4	400	92.59
3965-582	**8X4**	1	6	400	93.58
3965-585	**8X6**	1	4	400	95.77
3965-621	**10X2**	1	6	400	84.71
3965-623	**10X3**	1	6	409	80.75
3965-624	**10X4**	1	4	400	86.26
3965-626	**10X6**	1	4	400	100.29
3965-628	**10X8**	1	4	400	160.74
3965-661	**12X2**	1	2	400	100.06
3965-663	**12X3**	1	2	400	101.13
3965-664	**12X4**	1	2	400	101.51
3965-666	**12X6**	1	2	400	117.73
3965-668	**12X8**	1	2	400	185.25
3965-670	**12X10**	1	2	400	271.75
3965-691	**14X2**	1	4	400	123.25
3965-693	**14X3**	1	0	400	124.40
3965-694	**14X4**	1	5	400	124.98
3965-696	**14X6**	1	2	400	142.27
3965-700	**14X10**	1	0	400	279.33
3965-702	**14X12**	1	0	400	308.41
3965-751	**16X2**	1	5	400	129.77
3965-753	**16X3**	1	4	400	130.89
3965-754	**16X4**	1	3	400	131.63
3965-756	**16X6**	1	2	400	150.03
3965-758	**16X8**	1	3	400	223.75
3965-760	**16X10**	1	3	400	284.92
3965-762	**16X12**	1	0	400	316.43
3965-764	**16X14**	1	0	400	329.76
3965-781	**18X2**	1	2	400	190.64
3965-783	**18X3**	1	0	400	191.80
3965-784	**18X4**	1	0	400	192.67
3965-786	**18X6**	1	2	400	203.93
3965-788	**18X8**	1	0	400	299.62
3965-790	**18X10**	1	0	400	332.16
3965-792	**18X12**	1	0	400	473.71
3965-794	**18X14**	1	0	400	515.58
3965-796	**18X16**	1	0	400	674.63
3965-811	**20X2**	1	0	400	192.82
3965-813	**20X3**	1	2	400	193.27
3965-814	**20X4**	1	0	400	195.59
3965-816	**20X6**	1	0	400	205.17
3965-818	**20X8**	1	0	400	296.39
3965-820	**20X10**	1	0	400	328.69
3965-822	**20X12**	1	0	400	468.84
3965-824	**20X14**	1	0	400	511.33
3965-826	**20X16**	1	0	400	669.96
3965-828	**20X18**	1	0	400	760.68
3965-901	**24X2**	1	5	400	196.20
3965-903	**24X3**	1	5	400	197.24

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Stub Saddle (continued)

IPS O.D.x Socket Schedule 80

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
3965-904	**24X4**	1	5	400	198.15
3965-906	**24X6**	1	3	400	206.78
3965-908	**24X8**	1	0	400	296.86
3965-910	**24X10**	1	0	400	330.12
3965-912	**24X12**	1	0	409	437.93
3965-914	**24X14**	1	0	400	509.55
3965-916	**24X16**	1	0	400	697.43
3965-918	**24X18**	1	0	400	786.46
3965-920	**24X20**	1	0	400	885.16

PVC DWV

Drain Waste Vent Fittings

TECHNICAL INFORMATION

Contact Spears® for any information not found.

SPEARS® LINE OF QUALITY PVC DRAIN, WASTE AND VENT (DWV) FITTINGS ARE MANUFACTURED IN STRICT COMPLIANCE TO ASTM D 2665.

STANDARDS & SPECIFICATIONS

Standards provide greater assurance of product performance and consistency, and are available to assist design engineers in system specification. The most frequently referenced industry standards for plastic piping systems are ASTM Standard Specifications and Practices. Along with ASTM Standards, additional product specifications and certifications form the basis of product conformance to which Spears® products are manufactured.

ASTM D 2665	Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings.
ASTM D 3311	Drain, Waste, and Vent (DWV) Plastic Fittings Patterns.
ASTM F 1866	Poly (Vinyl Chloride) (PVC) Plastic Schedule 40 Drainage and DWV Fabricated Fittings.
ASTM D 1784	Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds.

NSF International Standard 14 (NSF®-dwv) Certified

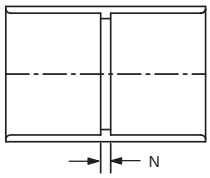
NSF International Certified to Uniform Plumbing Code (NSF®-U.P. Code)

The information contained in this publication is based on current information and Product design at the time of publication and is subject to change without notification. Our ongoing commitment to product improvement may result in some variation. No representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or results to be obtained therefrom. For verification of technical data or additional information not contained herein, please contact Spears® Technical Services Department [West Coast: (818) 364-1611 — East Coast: (678) 985-1263].

DWV Dimensions

P100 Coupling

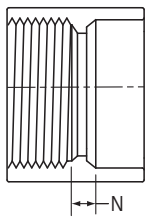
H x H



Part Number	Size	N
P100-015	1-1/2	1/8
P100-020	2	1/8
P100-030	3	3/16
P100-040	4	1/4
P100-060	6	1/4
P100-080	8	1/4
P100-100	10	3/8
P100-120	12	3/8
P100-140	14	3/8

P101 Female Adapter

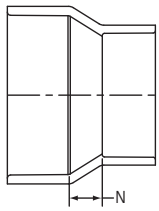
FPT x H



Part Number	Size	N
P101-015	1-1/2	1/4
P101-020	2	1/4
P101-030	3	5/16
P101-040	4	3/8
P101-060	6	11/32

P102 Pipe Increaser - Reducer

H x H



Part Number	Size	N
P102-251	2x1-1/2	11/16
P102-337	3x1-1/2	1-3/32
P102-338	3x2	15/16
P102-420	4x2	1-3/8
P102-422	4x3	15/16
P102-532	6x4	1-7/16
P102-582	8x4	2-11/32
P102-585	8x6	1-3/8
P102-624	10x4	3-3/8
P102-626	10x6	2-9/32
P102-628	10x8	1-5/16
P102-666	12x6	3-1/4
P102-668	12x8	2-1/2
P102-670	12x10	1-11/32
3729-528*	6x2	4-5/8
3729-530*	6x3	6-7/16
3729-578*	8x2	9-1/4
3729-580*	8x3	11-1/16
3729-621*	10x2	11
3729-623*	10x3	16-9/16
3729-661*	12x2	16-3/4
3729-663*	12x3	18-9/16
3729-664*	12x4	15-1/2
3729-691*	14x2	17-7/8
3792-693*	14x3	19-11/16
3729-694*	14x4	16-5/8
3729-696*	14x6	12-1/8
3729-698*	14x8	10-9/16
3729-700*	14x10	4-3/4
3729-702*	14x12	3-1/4

*Fabricated

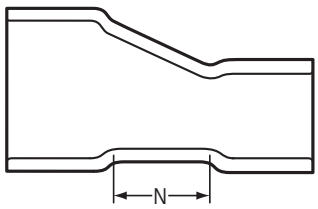
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

DWV Dimensions

Pipe Increaser - Eccentric Reducer

H x H

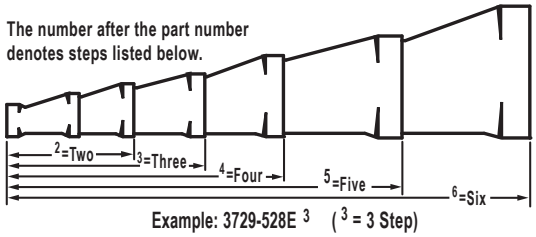


Part Number	Size	N
3729-420E*	4x2	8-13/16
3729-422E*	4x3	4-1/8
3729-528E[3]*	6x2	11-1/4
3729-530E[2]*	6x3	10-13/16
3729-532E*	6x4	5-5/8
3729-580E[3]	8x3	18-3/16
3729-582E[2]*	8x4	13-3/8
3729-585E*	8x6	6-7/8
3729-624E[2]*	10x4	15-1/8
3729-626E*	10x6	8-5/8
3729-628E*	10x8	6-13/16
3729-664E[3]*	12x4	24-1/8
3729-666E[2]*	12x6	17-5/8
3729-668E[2]*	12x8	15-13/16
3729-670E*	12x10	6-7/8

Eccentric Reducer Footnotes

Multi-Step Configurations

The number after the part number denotes steps listed below.

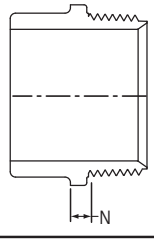


Example: 3729-528E [3] ([3] = 3 Step)

*Fabricated

P103 Trap Adapter - Male

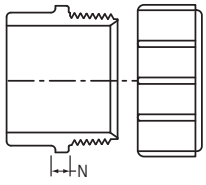
S x SLIP



Part Number	Size	N
P103-015	1-1/2	3/16
P103-020	2	3/16

P103P Trap Adapter - Male

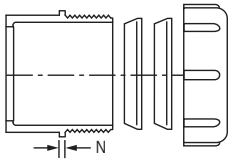
S x SLIP w/Plastic Nut - Built-in Washer



Part Number	Size	N
P103P-212	1-1/2x1-1/4	3/16
P103P-015	1-1/2	3/16
P103P-020	2	3/16

P103R Trap Adapter - Male with 1-1/2 Plastic Nut & Washer and 1-1/2 x 1-1/4 Washer

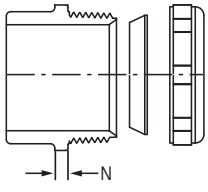
S x SLIP w/Plastic Nut



Part Number	Size	N
P103R-015	1-1/2	3/16

P103X Trap Adapter - Male

S x SLIP w/Chrome Nut & Washer

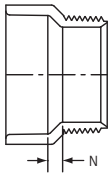


Part Number	Size	N
P103X-212	1-1/2x1-1/4	3/16
P103X-015	1-1/2	3/16
P103X-020	2	3/16

DWV Dimensions

P104 Trap Adapter - Female

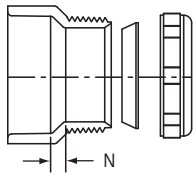
H x SLIP



Part Number	Size	N
P104-015	1-1/2	5/32
P104-020	2	3/16

P104X Trap Adapter - Female

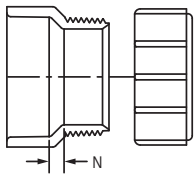
H x SLIP w/Chrome Nut & Washer



Part Number	Size	N
P104X-212	1-1/2x1-1/4	3/16
P104X-015	1-1/2	3/16
P104X-020	2	3/16

P104P Trap Adapter - Female

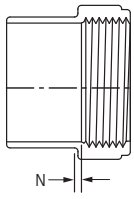
H x SLIP w/Plastic Nut



Part Number	Size	N
P104P-212	1-1/2x1-1/4	3/16
P104P-015	1-1/2	3/16

P105 Fitting Cleanout Adapter

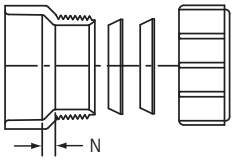
S x FPT



Part Number	Size	N
P105-015	1-1/2	5/32
P105-020	2	1/4
P105-030	3	11/32
P105-040	4	9/32
P105-060	6	3/8
P105-080	8	3/8

P104R Trap Adapter - Female w/1-1/2 Plastic Nut & Washer and 1-1/2x1-1/4 Washer

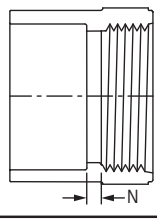
H x SLIP w/Plastic Nut



Part Number	Size	N
P104R-015	1-1/2	3/16

P105H Female Cleanout Adapter

H x FPT



Part Number	Size	N
P105H-040	4	1/4
P105H-060	6	11/32

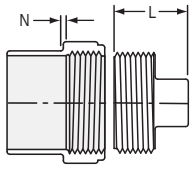
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

DWV Dimensions

P105X Fitting Cleanout Adapter w/C.O. Plug

S X FPT

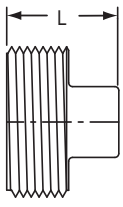


Part Number	Size	L	N
P105X-015	1-1/2	1-3/8	5/32
P105X-020	2	1-17/32	5/32
P105X-030	3	1-1/2	7/32
P105X-040	4	1-25/32	1/4
P105X-060	6	1-31/32	3/8
P105X-080	8	2-1/32	3/8
3978-100*	10	1	0
3978-120*	12	1	0
3978-140*	14	1	0

*Fabricated with Flush C.O. Plugs

P106 Cleanout Plug

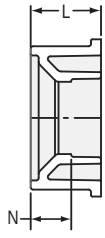
MPT



Part Number	Size	L
P106-015	1-1/2	1-5/16
P106-020	2	1-5/16
P106-025	2-1/2	1-1/2
P106-030	3	1-23/32
P106-040	4	1-7/8
P106-060	6	1-15/16
P106-080	8	2-1/32

P107 Flush Bushing

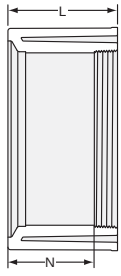
S x H



Part Number	Size	L	N
P107-251	2x1-1/2	1-1/16	1/8
P107-337	3x1-1/2	1-3/4	1
P107-338	3x2	1-25/32	1
P107-420	4x2	2	1-3/16
P107-422	4x3	2	1/2
P107-532	6x4	3-7/16	1-11/16
P107-582	8x4	4-19/32	2-13/16
P107-585	8x6	4-9/16	1-9/16
P107-626	10x6	5-11/32	2-5/16
P107-628	10x8	5-5/16	1-5/16
P107-666	12x6	7-1/2	4-1/2
P107-668	12x8	6-29/32	2-7/8
P107-670	12x10	6-11/32	1-9/32

P108 Flush Bushing (Cleanout Adapter)

S x FPT

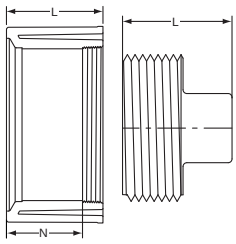


Part Number	Size	L	N
P108-212	1-1/2x1-1/4	7/8	3/16
P108-628	10x8	5-11/32	4-3/16
P108-668	12x8	7-1/2	6-3/8

DWV Dimensions

P108X Flush Bushing (Cleanout Adapter) w/Plug

S x FPT

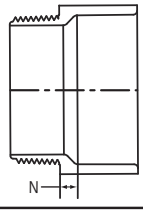


SEE PART NUMBERS - **P108** AND **P106**

P109 Male Adapter

Will not accept tail piece

MPT x H



Part Number	Size	N
P109-169	1-1/4x1-1/2	3/16
P109-015	1-1/2	3/16
P109-020	2	3/16
P109-030	3	3/8
P109-040	4	3/8
P109-060	6	11/16

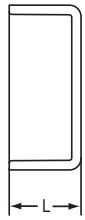
P110 Flush C.O. Plug

MPT

Part Number	Size	L
P110-015	1-1/2	5/8
P110-020	2	5/8
P110-025	2-1/2	3/4
P110-030	3	11/16
P110-040	4	7/8
P110-060	6	31/32

P116 Cap

SOCKET

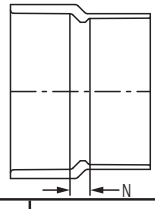


Part Number	Size	L
P116-015	1-1/2	15/16
P116-020	2	1
P116-030	3	1-3/4
P116-040	4	2-1/32
P116-060	6	3-5/16
P116-080	8	6-3/8
3747-100*	10	3-3/4
3747-120*	12	4-1/8
3747-140*	14	5-3/4

*Fabricated

P117 Adapter Coupling (Adapts S&D Spigot to DWV Spigot)

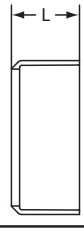
H x H



Part Number	Size	N
P117-040	4	1/2
P117-422	4x3	3/4

P118 Adapter Bushing (Adapts DWV Hub to S&D Spigot)

DWV SPIGOT x HUB



Part Number	Size	L
P118-030	3	1-5/16
P118-040	4	2

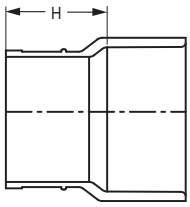
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

DWV Dimensions

P119 No-Hub Adapter

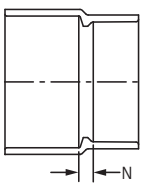
S x H



Part Number	Size	H
P119-015	1-1/2	1-9/16
P119-020	2	1-5/16
P119-030	3	1-13/16
P119-040	4	1-7/8
P119-251	2x1-1/2	1-5/8
P119-422	4x3	2-1/16

P122 Spigot Adapter, Cast Iron

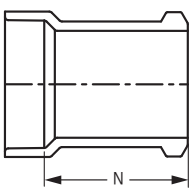
H x H



Part Number	Size	N
P122-040	4x4	9/16

P123 Hub Adapter

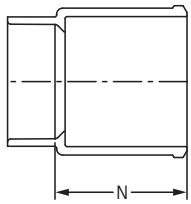
H x S



Part Number	Size	N
P123-020	2	3-7/8
P123-030	3	4-1/8
P123-040	4	4-7/16

P123R Hub Adapter, Cast Iron, Increaser (Plain End: Joint can be made with compression gasket or plastic lead & seal rope - Do Not use hot lead)

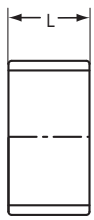
H x S



Part Number	Size	N
P123R-213	1-1/2x2	3-9/16
P123R-342	3x4	4

P130 Repair Coupling

H x H

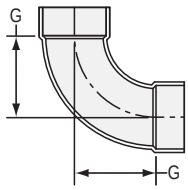


Part Number	Size	L
P130-015	1-1/2	1-9/16
P130-020	2	1-3/4
P130-030	3	3-3/16
P130-040	4	3-3/4
P130-060	6	6-11/32
P130-080	8	8-3/8
P130-100	10	10-3/8

DWV Dimensions

P300 1/4 Bend

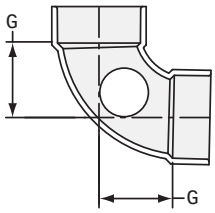
H x H



Part Number	Size	G
P300-015	1-1/2	1-21/32
P300-020	2	2-9/32
P300-030	3	3-1/8
P300-040	4	3-29/32
P300-060	6	4-29/32
P300-080	8	5-29/32
P300-100	10	9-5/8
P300-120	12	10-9/16

P300S 1/4 Bend with Side Inlet

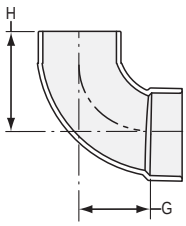
ALL HUB



Part Number	Size	G
P300S-338	3x3x2	3-1/8

P302 1/4 Bend, Street

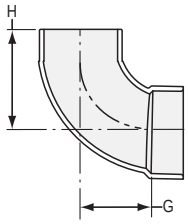
S x H



Part Number	Size	G	H
P302-015	1-1/2	1-21/32	2-13/32
P302-020	2	2-7/32	3-5/32
P302-030	3	3-1/8	4-19/32
P302-040	4	3-15/16	5-5/8
P302-060	6	5	8-11/32

P302 1/4 Bend, Street (continued)

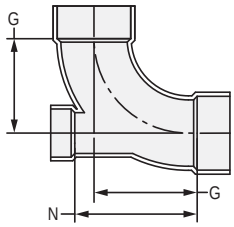
S x H



Part Number	Size	G	
P302-080	8	5-31/32	10-13/32
P302-100	10	9-15/16	15-13/32
P302-120	12	11-3/32	17-7/16

P303 1/4 Bend w/Low Heel Inlet

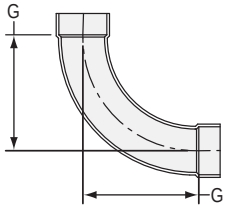
H x H x H



Part Numbe	Size	G	N
P303-338	3x3x2	2-27/32	4-5/32
P303-420	4x4x2	3-5/16	5

P304 Long Sweep 1/4 Bend

H x H



Part Number	Size	G
P304-015	1-1/2	2-3/4
P304-020	2	2-15/16
P304-030	3	4-1/8
P304-040	4	5-1/32
P304-060	6	8-29/32

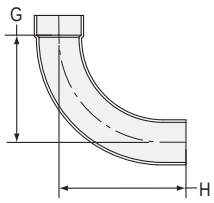
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

DWV Dimensions

P309 Long 1/4 Bend, Street

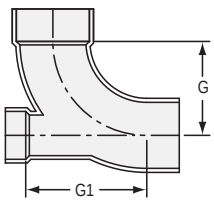
H x S



Part Number	Size	G	H
P309-015	1-1/2	2-3/4	3-1/2
P309-020	2	3-11/32	4-1/16
P309-030	3	4-1/16	5-9/16
P309-040	4	4-15/16	6-11/16
P309-060	6	8-29/32	11-29/32

P310 1/4 Bend, Street w/Low Heel Inlet

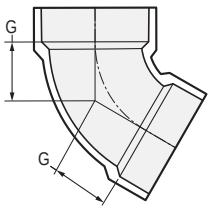
H x S x H



Part Number	Size	G	G1
P310-338	3x3x2	3-1/16	4-5/8

P319 1/6 Bend

H x H

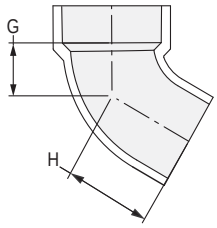


Part Number	Size	G
P319-015	1-1/2	1
P319-020	2	1-5/16
P319-030	3	1-11/16
P319-040	4	2-1/16
3724-060*	6	2-13/16
3724-080*	8	3-3/8
3724-100*	10	4
3724-120*	12	4-3/4
3724-140*	14	10-13/16

*Fabricated

P320 1/6 Bend, Street

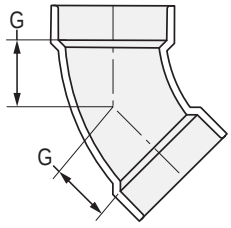
H x S



Part Number	Size	G	H
P320-015	1-1/2	1	1-23/32
P320-020	2	1-5/8	2-1/8
P320-030	3	1-11/32	2-21/32
P320-040	4	1-13/32	3-13/32

P321 1/8 Bend

H x H



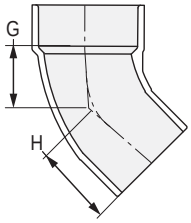
Part Number	Size	G
P321-015	1-1/2	1-1/8
P321-020	2	1-7/16
P321-030	3	1-3/4
P321-040	4	2-5/32
P321-060	6	2-5/32
P321-080	8	2-1/16
P321-100	10	2-5/8
P321-120	12	3-1/8
3717-140*	14	3-7/8

*Fabricated

DWV Dimensions

P323 1/8 Bend, Street

H x S

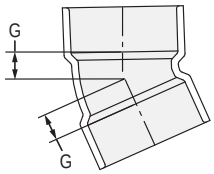


Part Number	Size	G	H
P323-015	1-1/2	1-1/8	1-3/4
P323-020	2	1-13/32	2-3/16
P323-030	3	1-3/4	3-1/4
P323-040	4	2-3/16	3-15/16
P323-060	6	1-9/16	5-5/32
P323-080	8	2-1/16	6-1/2
3727-100*	10	3-1/8	8-3/8

*Fabricated

P324 1/16 Bend

H x H

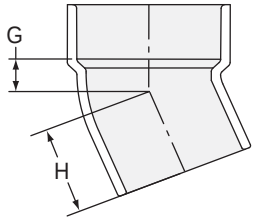


Part Number	Size	G
P324-015	1-1/2	1/2
P324-020	2	11/16
P324-030	3	29/32
P324-040	4	1
P324-060	6	1-5/16
P324-080	8	1-3/8
3716-100*	10	2-3/16
3716-120*	12	2-1/4
3716-140*	14	2-1/2

*Fabricated

P326 1/16 Bend, Street

H X S

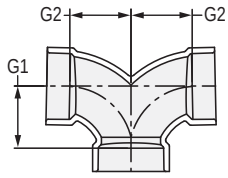


Part Number	Size	G	H
P326-015	1-1/2	1/2	1-5/16
P326-020	2	11/16	1-9/16
P326-030	3	29/32	2-7/32
P326-040	4	1	2-3/4
P326-060	6	1-1/32	4-1/2
P326-080	8	1-1/32	5-17/32
3742-100*	10	13/16	9-9/16
3742-120*	12	2-1/4	11-7/8
3742-140*	14	2-1/2	13-1/2

*Fabricated

P327 Double 1/4 Bend

H x H x H



Part Number	Size	G1	G2
P327-015	1-1/2	1-3/4	1-3/4
P327-020	2	2-5/16	2-5/16
P327-030	3	3-1/16	3-1/16
P327-040	4	3-29/32	3-29/32
P327-241	2x1-1/2x1-1/2	1-3/8	4-1/2

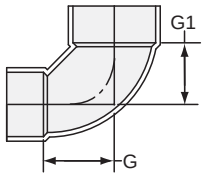
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

DWV Dimensions

P329 Closet Bend, Reducing

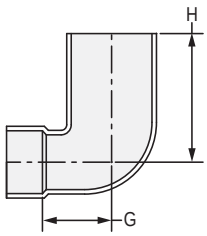
H x H



Part Number	Size	G	G1
P329-342	3x4	3-1/16	2-21/32

P330 Closet Bend, Reducing

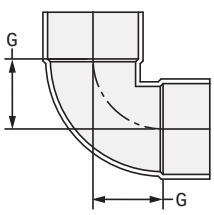
H x S



Part Number	Size	G	H
P330-342	3x4	3-5/8	6

P331 Vent Ell

H x H

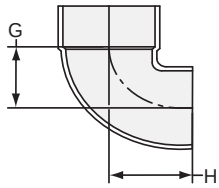


Part Number	Size	G
P331-015	1-1/2	1-3/16
P331-020	2	1-1/2
P331-030	3	1-7/8
P331-040	4	2-1/4
P331-060	6	3-1/2
P331-080	8	4-1/2
P331-100	10	5-3/4
P331-120	12	6-27/32
3706-140*	14	12-1/4

*Fabricated

P333 Vent Ell, Street

H x S

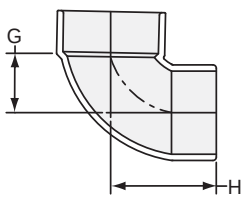


Part Number	Size	G	H
P333-015	1-1/2	1-3/16	2-1/4
P333-020	2	1-3/4	2-3/16
P333-030	3	2-5/16	3-9/16
P333-040	4	3-3/16	4-3/16
3709-060*	6	6-1/8	9-3/8
3709-080*	8	7-1/2	11-3/4
3709-100*	10	8-3/16	13-7/16
3709-120*	12	10-1/2	16-3/4
3709-140*	14	13-15/16	20-15/16

*Fabricated

P335 Trap Elbow (for use with Traps only)

H x S

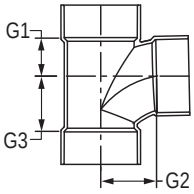


Part Number	Size	G	H
P335-030	3	2-1/8	3-27/32
P335-040	4	2-5/16	4-7/16

DWV Dimensions

P400 Sanitary Tee

ALL HUB

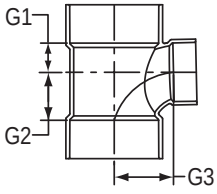


Part Number	Size	G1	G2	G3
P400-015	1-1/2	31/32	1-23/32	1-23/32
P400-020	2	1-11/32	2-5/16	2-5/16
P400-030	3	1-13/16	2-7/8	2-7/8
P400-040	4	2-9/32	3-29/32	3-27/32
P400-060	6	3-7/16	5-1/32	5-1/32
P400-080	8	4-7/16	6	6
P400-100	10	5-1/2	9-29/32	9-29/32
P400-120	12	6-17/32	11	11
3790-140*	14	5-5/16	22-3/4	23-1/16

*Fabricated

P401 Sanitary Tee, Reducing

ALL HUB

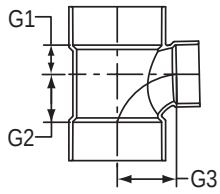


Part Number	Size	G1	G2	G3
P401-241	2x1-1/2x1-1/2	1-3/16	1-15/16	2-3/16
P401-251	2x2x1-1/2	1-1/4	1-27/32	2-3/16
P401-257	2x1-1/2x2	1-3/8	2-5/16	2-5/16
P401-337	3x3x1-1/2	15/16	1-3/4	2-9/16
P401-338	3x3x2	1-5/32	2-5/32	2-7/8
P401-420	4x4x2	7/8	1-27/32	3-5/32
P401-422	4x4x3	1-3/4	3	3-9/16
P401-532	6x6x4	2-5/32	3-19/32	4-11/16
3790-528*	6x2	3	5-3/8	7-1/16

*Fabricated

P401 Sanitary Tee, Reducing (continued)

ALL HUB



Part Number	Size	G1	G2	G3
3790-530*	6x3	3-1/4	7	9-11/16
3790-578*	8x2	3-3/4	6	8
3790-580*	8x3	3-3/4	7-1/2	10-5/8
3790-582*	8x4	3-7/8	8-7/8	11-1/8
3790-585*	8x6	3-7/8	11-3/4	12-7/8
3790-621*	10x2	3-3/4	6	9
3790-623*	10x3	4-1/16	7-11/16	11-5/8
3790-624*	10x4	4-5/16	9-5/16	12-1/8
3790-626*	10x6	4-15/16	12-13/16	13-7/8
3790-628*	10x8	5-1/4	15-3/4	16-3/16
3790-661*	12x2	4-3/16	6-5/16	10
3790-663*	12x3	4-1/4	7-3/4	12-5/8
3790-664*	12x4	4-5/16	9-3/16	13-1/8
3790-666*	12x6	4-7/8	12-5/8	14-7/8
3790-668*	12x8	5	15-1/2	17-1/8
3790-670*	12x10	5-1/16	18-7/16	20-1/16
3790-691*	14x2	4	6	10-9/16
3790-693*	14x3	4-1/2	8	13-3/16
3790-694*	14x4	4-9/16	9-7/16	13-11/16
3790-696*	14x6	4-5/8	12-3/8	15-7/16
3790-698*	14x8	4-13/16	15-3/16	17-3/4
3790-700*	14x10	4-7/8	18-1/8	20-11/16
3790-702*	14x12	6	22	22-3/8
3790-762*	16x12	5-9/16	21-7/16	23-5/16
3790-792*	18x12	6	21-3/4	24-1/4
3790-822*	20x12	6-1/2	22-1/4	25-1/4
3790-912*	24x12	7-1/2	23	27-1/8

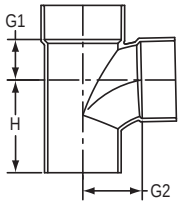
*Fabricated

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

P403 Sanitary Tee, Street

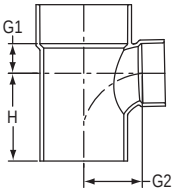
S x H x H



Part Number	Size	G1	G2	H
P403-015	1-1/2	13/16	1-17/32	2-7/16
P403-020	2	1-3/8	2-5/16	3-3/16
P403-030	3	1-7/8	2-15/16	4-3/8
P403-040	4	2-1/4	3-7/8	5-5/8
P403-060	6	3-3/4	4-1/4	7-1/2
P403-080	8	4-13/32	6	9-7/16
P403-100	10	5-15/32	9-15/16	14-9/16
P403-120	12	6-7/16	11-1/16	16-9/32

P404 Sanitary Tee, Street, Reducing

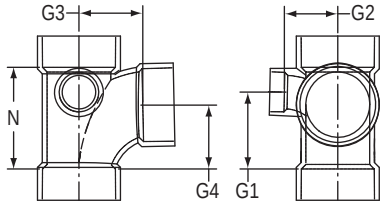
S x H x H



Part Number	Size	G1	G2	H
P404-241	2x1-1/2x1-1/2	1-7/32	2-7/32	2-9/16
P404-251	2x2x1-1/2	1-9/32	2-3/16	2-1/2
P404-257	2x1-1/2x2	1-17/32	2-5/16	2-27/32
P404-337	3x3x1-1/2	7/8	2-1/2	2-3/4
P404-338	3x3x2	1-1/8	2-7/8	2-9/32
P404-420	4x4x2	1-1/8	3-5/16	3-13/16
P404-422	4x4x3	1-3/4	3	5-1/4

P416 Sanitary Tee, with Left Side Inlet

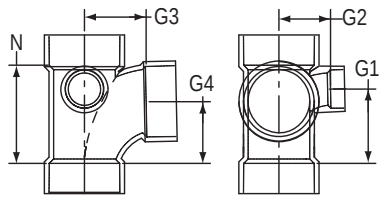
ALL HUB



Part Number	Size	G1	G2	G3	G4	N
P416-337	3x3x3x1-1/2	3-3/4	2-1/2	2-31/32	3-1/16	4-13/16
P416-338	3x3x3x2	3-3/4	2-25/32	2-31/32	3-1/16	4-13/16
P416-420	4x4x4x2	4-1/2	3-1/2	3-3/4	3-1/2	5-7/8

P417 Sanitary Tee, with Right Side Inlet

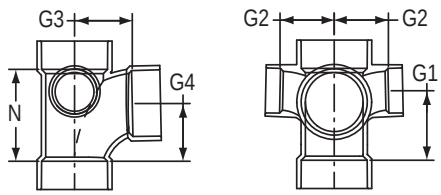
ALL HUB



Part Number	Size	G1	G2	G3	G4	N
P417-337	3x3x3x1-1/2	3-23/32	2-7/16	2-31/32	3-1/32	4-13/16
P417-338	3x3x3x2	3-3/4	2-3/4	2-31/32	3-1/32	4-13/16
P417-420	4x4x4x2	5	3-1/4	3-3/4	3-29/32	6-3/32

P418 Sanitary Tee, with R&L Side Inlets

ALL HUB

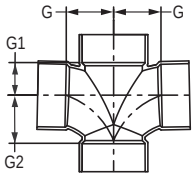


Part Number	Size	G1	G2	G3	G4	N
P418-337	3x3x3x1-1/2	3-23/32	2-19/32	2-31/32	3-1/16	4-13/16
P418-338	3x3x3x2	3-3/4	2-29/32	2-31/32	3-1/16	4-13/16
P418-420	4x4x4x2	5	3-1/4	3-3/4	3-29/32	6-3/32

DWV Dimensions

P428 Double Sanitary Tee

ALL HUB

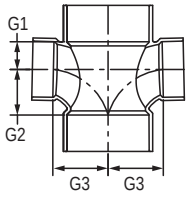


Part Number	Size	G	G1	G2
P428-015	1-1/2	1-11/16	1-5/16	1-5/16
P428-020	2	2-7/32	1-5/16	1-5/16
P428-030	3	3	1-25/32	1-25/32
P428-040	4	3-25/32	2-5/32	2-5/32
3791-060*	6	11-15/16	4-3/16	12-3/16
3791-080*	8	15-3/16	4-5/8	15-5/16
3791-100*	10	19-1/8	5-3/16	18-5/8
3791-120*	12	21-13/16	5-5/8	21-3/4
3791-140*	14	22-3/4	5-5/16	23-1/16

*Fabricated

P429 Double Sanitary Tee, Reducing

ALL HUB

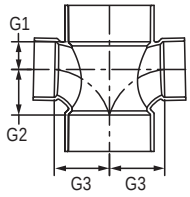


Part Number	Size	G1	G2	G3
P429-251	2x2x1-1/2x1-1/2	1-1/8	1-7/8	2-1/8
P429-337	3x3x1-1/2x1-1/2	27/32	1-11/16	2-15/32
P429-338	3x3x2x2	1-3/16	2-1/8	2-7/8
P429-419	4x4x1-1/2x1-1/2	1-1/32	2	3-7/32
P429-420	4x4x2x2	1-1/8	2	3-1/4
P429-422	4x4x3x3	1-19/32	2-13/16	3-13/32
3791-528*	6x2	3	5-3/8	7-1/16
3791-530*	6x3	3-1/4	7	9-11/16
3791-532*	6x4	3-5/16	8-7/16	10-3/16

*Fabricated

P429 Double Sanitary Tee, Reducing

ALL HUB



(continued)

Part Number	Size	G1	G2	G3
3791-578*	8x2	3-3/4	6	8
3791-580*	8x3	3-3/4	7-1/2	10-5/8
3791-582*	8x4	3-7/8	8-7/8	11-1/8
3791-585*	8x6	3-7/8	11-3/4	12-7/8
3791-621*	10x2	3-3/4	6	9
3791-623*	10x3	4-1/16	7-11/16	11-5/8
3791-624*	10x4	4-5/16	9-5/16	12-1/8
3791-626*	10x6	4-15/16	12-13/16	13-7/8
3791-628*	10x8	5-1/4	15-3/4	16-3/16
3791-661*	12x2	4-3/16	6-5/16	10
3791-663*	12x3	4-1/4	7-3/4	12-5/8
3791-664*	12x4	4-5/16	9-3/16	13-1/8
3791-666*	12x6	4-7/8	12-5/8	14-7/8
3791-668*	12x8	5	15-1/2	17-1/8
3791-670*	12x10	5-1/16	18-7/16	20-1/16
3791-691*	14x2	4	6	10-9/16
3791-693*	14x3	4-1/2	8	13-3/16
3791-694*	14x4	4-9/16	9-7/16	13-11/16
3791-696*	14x6	4-5/8	12-3/8	15-7/16
3791-698*	14x8	4-13/16	15-3/16	17-3/4
3791-700*	14x10	4-7/8	18-1/18	20-11/16
3791-702*	14x12	6	22	22-3/8

*Fabricated

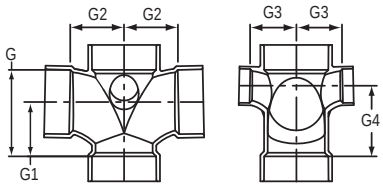
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

DWV Dimensions

P439 Double Sanitary Tee with R&L Side Inlets

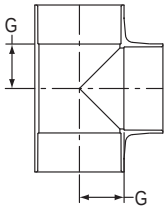
ALL HUB



Part Number	Size	G	G1	G2	G3	G4
P439-338	3x3x3x3x2x2	4-25/32	3-1/32	3-1/32	2-13/16	3-5/8
P439-420	4x4x4x4x2x2	6-1/32	3-27/32	3-7/8	3-1/4	4-15/16

P441 Vent Tee

ALL HUB

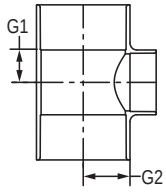


Part Number	Size	G
P441-015	1-1/2	1-3/16
P441-020	2	1-1/2
P441-030	3	1-29/32
P441-040	4	2-11/32
P441-060	6	3-5/8
P441-080	8	4-1/2
P441-100	10	5-13/16
P441-120	12	6-27/32
3701-140*	14	11

*Fabricated

P442 Vent Tee, Reducing

ALL HUB



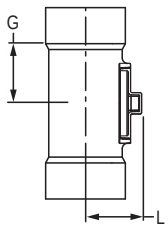
Part Number	Size	G1	G2
P442-251	2x1-1/2	1-1/2	1-3/16
P442-532	6x4	2-9/16	3-25/32
P442-582	8x4	2-17/32	5-3/32
P442-585	8x6	3-5/8	4-25/32
P442-624	10x4	3-31/32	6
P442-626	10x6	3-25/32	6-3/32
P442-628	10x8	5-25/32	7-9/32
P442-664	12x4	4-7/8	10-11/32
P442-666	12x6	4-7/8	8-31/32
P442-668	12x8	4-7/8	7-11/32
P442-670	12x10	6-13/16	7-3/8
3701-528*	6x2	3-3/8	5-5/16
3701-530*	6x3	4-5/8	6-1/16
3701-578*	8x2	4-1/16	6-1/4
3701-580*	8x3	4-9/16	7
3701-621*	10x2	4-3/8	7-1/4
3701-623*	10x3	4-7/8	8
3701-661*	12x2	4-3/4	8-1/4
3701-663*	12x3	5-1/4	9
3701-691*	14x2	4-3/8	8-13/16
3701-693*	14x3	4-7/8	9-9/16
3701-694*	14x4	5-3/8	9-7/8
3701-696*	14x6	6-3/8	9-15/16
3701-698*	14x8	7-3/8	9-7/8
3701-700*	14x10	8-1/2	10-15/16
3701-702*	14x12	9-1/2	10-3/4

*Fabricated

DWV Dimensions

3701 Test Tee

SOC x FPT with Plug

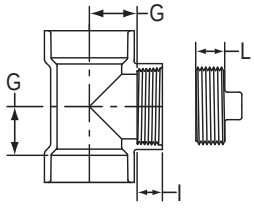


Part Number	Size	G	L
3701-060TEST*	6	5-3/8	5-5/16
3701-080TEST*	8	7-3/8	6-3/16
3701-100TEST*	10	8-5/16	6-3/4
3701-120TEST*	12	9-1/4	8-9/16

*Fabricated (10" & 12" have Flush Plugs)

P444X Cleanout Tee w/C.O. Plug

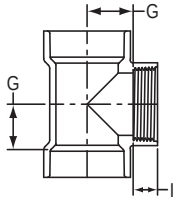
H x H



SEE PART NUMBERS - **P445** AND **P106**

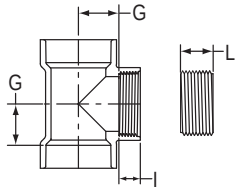
P445 Flush C.O. Tee

H x H x FPT



Part Number	Size	G	I
P445-015	1-1/2	1-1/8	5/8
P445-020	2	1-7/16	5/8
P445-030	3	1-21/32	3/4
P445-040	4	2-7/16	7/8
P445-060	6	3-1/2	1-1/32

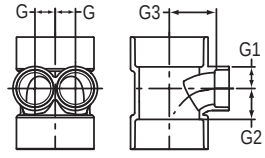
P445X Flush C.O. Tee w/C.O. Plug



SEE PART NUMBERS - **P445** AND **P110**

P447 Horizontal Twin Tee

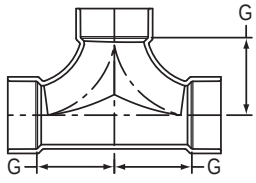
ALL HUB



Part Number	Size	G	G1	G2	G3
P447-337	3x3x1-1/2x1-1/2	1-1/32	1-1/16	1-9/16	2-9/32

P448 2-Way Cleanout

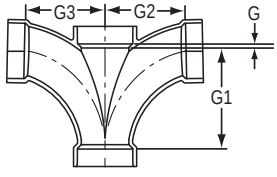
ALL HUB



Part Number	Size	G
P448-030	3	4
P448-040	4	4-13/16

P500 Double Fixture Fitting

ALL HUB



Part Number	Size	G	G1	G2	G3
P500-020	2x2x2x2	9/16	3-9/16	3-5/16	3-5/16
P500-030	3x3x3x3	1/2	6-3/4	4-1/2	4-1/2
P500-241	2x1-1/2x1-1/2x1-1/2	3/8	3-9/16	2-7/16	2-7/16
P500-251	2x2x1-1/2x1-1/2	1/8	3-1/4	2-25/32	2-25/32
P500-338	3x2x3x3	1/2	6-3/4	4-1/2	4-1/2

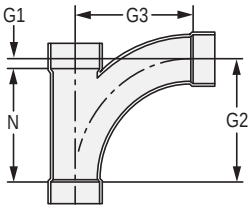
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

DWV Dimensions

P501 Combination Wye and 1/8 Bend (One Piece)

ALL HUB

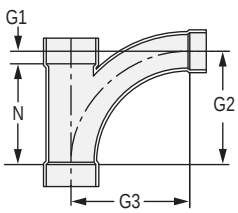


Part Number	Size	G1	G2	G3	N
P501-015	1-1/2	13/32	3-7/8	3-7/8	3-15/32
P501-020	2	11/16	5-1/8	5-1/8	4-7/16
P501-030	3	1-1/16	7-9/16	7-9/16	6-1/2
P501-040	4	1-1/2	10	10	8-1/2
3777-060*	6	15/16	15-7/16	12-9/16	16-3/8
3777-080*	8	1/8	19-13/16	16-1/8	19-15/16
3777-100*	10	3/16	23-5/8	24-1/8	23-13/16
3777-120*	12	5/16	27-11/16	27-3/4	27-3/8
3777-140*	14	1-1/4	29-5/8	29-5/16	28-3/8

*Fabricated

P502 Combination Wye and 1/8 Bend, Reducing (One Piece)

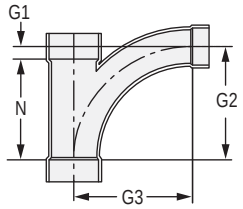
ALL HUB



Part Number	Size	G1	G2	G3	N
P502-251	2x2x1-1/2	7/16	3-15/16	4-3/16	3-1/2
P502-337	3x3x1-1/2	7/16	3-9/16	4-3/4	3-1/2
P502-338	3x3x2	11/16	5-1/8	5-11/16	4-7/16
P502-420	4x4x2	7/32	4-1/2	6-1/8	4-3/32
P502-422	4x4x3	1-1/16	7-9/16	8-1/16	6-1/2
3777-528*	6x2	7/8	7-1/2	8-1/16	8-3/8
3777-530*	6x3	13/16	9-7/16	9-3/8	10-1/4
3777-532*	6x4	3/16	11-9/16	11-3/16	11-3/4
3777-578*	8x2	1-5/8	8-1/8	9-1/16	9-3/4
3777-580*	8x3	1-5/16	9-15/16	10-5/16	11-1/4

P502 Combination Wye and 1/8 Bend, Reducing (One Piece) (continued)

ALL HUB



*Fabricated

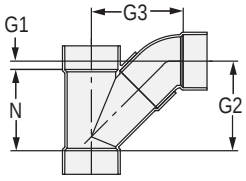
Part Number	Size	G1	G2	G3	N
3777-582*	8x4	3/4	12	12-1/8	12-3/4
3777-585*	8x6	5/8	15	13-9/16	15-5/8
3777-621*	10x2	1-11/16	8-1/16	10-1/16	9-3/4
3777-623*	10x3	1-5/8	10-1/8	11-3/8	11-3/4
3777-624*	10x4	1-1/4	12-3/8	13-1/8	13-5/8
3777-626*	10x6	1-11/16	16-1/16	14-9/16	17-3/4
3777-628*	10x8	3/4	20-1/4	17-3/16	21
3777-661*	12x2	2-1/16	8-7/16	11	10-1/2
3777-663*	12x3	1-13/16	10-3/16	12-5/16	12
3777-664*	12x4	1-3/16	12-5/16	14-1/8	13-1/2
3777-666*	12x6	1-5/8	15-7/8	15-1/2	17-1/2
3777-668*	12x8	1/2	20	18-1/8	20-1/2
3777-670*	12x10	1/16	23-7/16	23-3/8	23-1/2
3777-691*	14x2	1-7/8	8-1/8	11-5/8	10
3777-693*	14x3	2-1/16	10-7/16	12-7/8	12-1/2
3777-694*	14x4	1-1/2	12-1/2	14-11/16	14
3777-696*	14x6	1-7/16	15-9/16	16-1/8	17
3777-698*	14x8	5/16	19-11/16	18-11/16	20
3777-700*	14x10	5/8	23-5/8	24-7/16	23
3777-702*	14x12	1/16	28-1/16	27-1/4	28
3777-760*	16x10	3/8	23-5/8	26-5/8	24
3777-762*	16x12	7/16	27-7/16	29-5/16	27
3777-790*	18x10	13/16	23-15/16	27-9/16	24-3/4
3777-792*	18x12	0	27-3/4	30-1/4	27-3/4
3777-820*	20x10	7/8	23-7/8	28-9/16	24-3/4
3777-822*	20x12	9/16	28-3/16	31-3/16	28-3/4
3777-910*	24x10	1-15/16	24-13/16	30-7/16	26-3/4
3777-912*	24x12	1-1/2	29	33-1/8	30-1/2

*Fabricated

DWV Dimensions

P503 Combination Wye and 1/8 Bend (Two Piece)

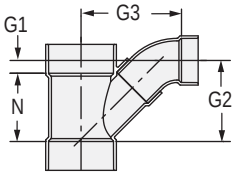
ALL HUB



Part Number	Size	G1	G2	G3	N
P503-030	3	7/8	7-3/8	7-1/2	6-15/32
P503-040	4	7/8	8-15/16	9-1/4	8-1/16
P503-060	6	31/32	10-31/32	11-11/32	9-31/32
P503-080	8	1-1/2	16	16	14-1/2

P504 Combination Wye and 1/8 Bend, Reducing (Two Piece)

ALL HUB

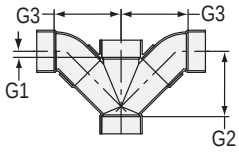


Part Number	Size	G1	G2	G3	N
P504-422	4x3	1	7-19/32	8-7/32	6-19/32
P504-530	6x3	5/8	7-9/16	9-5/16	6-29/32
P504-532	6x4	1-3/8	8-7/32	10-3/32	6-27/32
P504-580	8x3	1-1/8	9-1/8	10-3/8	8
P504-582*	8x4	1-1/4	9-1/4	11-1/8	8
P504-585	8x6	1-1/32	11-9/32	12-3/8	10-11/32
P504-623*	10x3	1-1/4	12-1/16	13-15/16	10-13/16
P504-624*	10x4	-1-7/16	12	14-1/2	10-9/16
P504-626	10x6	15/16	11-3/4	14-1/16	10-13/16
P504-628	10x8	15/16	14-1/4	15-1/2	13-9/16
P504-668	12x8	1-1/16	20-1/8	19-1/8	19-1/16
P504-670*	12x10	5/8	19-3/4	19-1/2	19-1/16

*Bushed

P507 Double Combination Wye and 1/8 Bend

ALL HUB



Part Number	Size	G1	G2	G3
P507-015	1-1/2	7/16	4-5/16	4-5/16
P507-020	2	9/16	5-7/16	5-5/8
P507-030	3	27/32	7-11/32	7-11/32
P507-040	4	1-5/32	9-5/32	9-11/32
P507-251	2x1-1/2	13/32	4-9/16	4-3/4
P507-338	3x3x2x2	29/32	5-11/16	6-15/32
P507-420	4x4x2x2	7/8	5-7/8	7-1/32
P507-422	4x4x3x3	1-1/16	7-1/2	8-1/8
3792-060*	6	15/16	15-7/16	12-9/16
3792-080*	8	1/8	19-13/16	16-1/8
3792-100*	10	3/16	23-5/8	24-1/8
3792-120*	12	5/16	27-11/16	27-3/4
3792-140*	14	1-1/4	29-5/8	29-5/16
3792-528*	6x2	7/8	7-1/2	8-1/16
3792-530*	6x3	13/16	9-7/16	9-3/8
3792-532*	6x4	3/16	11-9/16	11-3/16
3792-578*	8x2	1-5/8	8-1/8	9-1/16
3792-580*	8x3	1-5/16	9-15/16	10-5/16
3792-582*	8x4	3/4	12	12-1/8
3792-585*	8x6	5/8	15	13-9/16
3792-621*	10x2	1-11/16	8-1/16	10-1/16
3792-623*	10x3	1-5/8	10-1/8	11-3/8
3792-624*	10x4	1-1/4	12-3/8	13-1/8
3792-626*	10x6	1-11/16	16-1/16	14-9/16
3792-628*	10x8	3/4	20-1/4	17-3/16

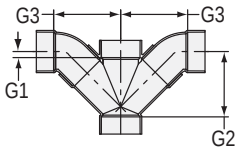
*Fabricated

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

P507 Double Combination Wye and 1/8 Bend (continued)

ALL HUB

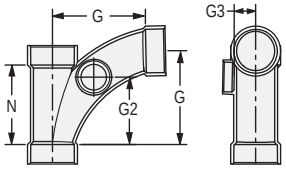


Part Number	Size	G1	G2	G3
3792-661*	12x2	2-1/16	8-7/16	11
3792-663*	12x3	1-13/16	10-3/16	12-5/16
3792-664*	12x4	1-3/16	12-5/16	14-1/8
3792-666*	12x6	1-5/8	15-7/8	15-1/2
3792-668*	12x8	1/2	20	18-1/8
3792-670*	12x10	1/16	23-7/16	25-1/8
3792-691*	14x2	1-7/8	8-1/8	11-5/8
3792-693*	14x3	2-1/16	10-7/16	12-7/8
3792-694*	14x4	1-1/2	12-1/2	14-11/16
3792-696*	14x6	1-7/16	15-9/16	16-1/8
3792-698*	14x8	5/16	19-11/16	18-11/16
3792-700*	14x10	3/16	23-3/16	25-11/16
3792-702*	14x12	0	28	28-3/8
3792-760*	16x10	3/8	23-5/8	26-5/8
3792-762*	16x12	7/16	27-7/16	29-5/16
3792-790*	18x10	13/16	23-15/16	27-9/16

*Fabricated

P515 Combination Wye and 1/8 Bend with Left Side Inlet

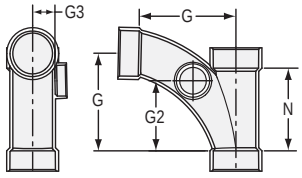
ALL HUB



Part Number	Size	G	G2	G3	N
P515-338	3x3x3x2	7-9/16	5-1/2	1-7/8	6-1/2

P516 Combination Wye and 1/8 Bend with Right Side Inlet

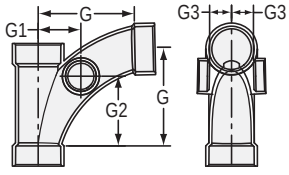
ALL HUB



Part Number	Size	G	G2	G3	N
P516-338	3x3x3x2	7-9/16	5-1/2	1-7/8	6-1/2

P517 Combination Wye and 1/8 Bend with R&L Side Inlets

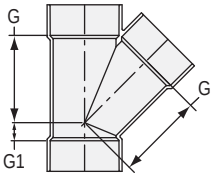
ALL HUB



Part Number	Size	G	G1	G2	G3
P517-338	3x3x3x2	7-9/16	3-5/16	5-1/2	1-7/8

P600 Wye

ALL HUB

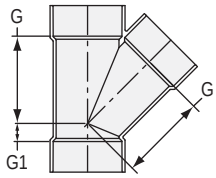


Part Number	Size	G	G1
P600-015	1-1/2	2-7/8	1-1/8
P600-020	2	3-5/8	1-3/8
P600-030	3	5	1-5/8
P600-040	4	6-3/8	1-7/8
P600-060	6	8-7/16	1-3/4
P600-080	8	11-3/4	2-3/8
P600-100	10	13-15/16	2-7/16

DWV Dimensions

P600 Wye (continued)

ALL HUB

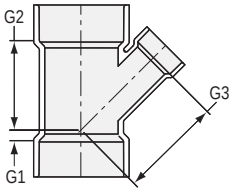


Part Number	Size	G	G1
P600-120	12	16-1/8	2-27/32
3775-140*	14	21-3/16	7-3/16

*Fabricated

P601 Wye, Reducing

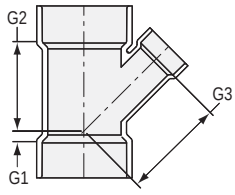
ALL HUB



Part Number	Size	G1	G2	G3
P601-241	2x1-1/2x1-1/2	3/4	2-15/16	2-15/16
P601-251	2x2x1-1/2	1-1/16/16	3-5/16	3-7/16
P601-257	2x1-1/2x2	3/4	4-3/4	3-7/8
P601-337	3x3x1-1/2	1/2	3-3/4	4-5/16
P601-338	3x3x2	7/8	4-1/8	4-5/8
P601-419	4x4x1-1/2	0	3-3/4	4-9/16
P601-420	4x4x2	3/8	4-11/16	5-9/16
P601-422	4x4x3	1-1/16	5-9/16	6
P601-528	6x6x2	3/16	6-15/16	8-3/8
P601-530	6x6x3	3/16	6-15/16	7-7/16
P601-532	6x6x4	3/16	6-11/16	7-7/16
P601-578	8x8x2	3/8	7-5/8	9-15/16
P601-582	8x8x4	3/8	7-5/8	8-5/8
P601-585	8x8x6	1	9-1/2	9-13/16

P601 Wye, Reducing (continued)

ALL HUB



Part Number	Size	G1	G2	G3
P601-626	10x10x6	-3/16	11	12
P601-628	10x10x8	1-1/16	12-1/2	12-15/16
P601-670	12x12x10	3-1/4	16-1/8	17-5/8
3775-580*	8x3	1-5/16	9-15/16	10-7/8
3775-621*	10x2	1/2	10-1/4	11-3/16
3775-623*	10x3	1/2	11-1/4	12-5/16
3775-624*	10x4	1-7/16	12-3/16	13-5/16
3775-661*	12x2	1-1/8	11-5/8	12-9/16
3775-663*	12x3	3/8	12-3/8	13-11/16
3775-664*	12x4	3/8	13-1/8	14-11/16
3775-666*	12x6	2-3/8	15-1/8	15-5/8
3775-668*	12x8	3-7/8	16-5/8	17-1/16
3775-691*	14x2	2	12	13-7/16
3775-693*	14x3	3/4	13-1/4	14-9/16
3775-694*	14x4	0	14	15-9/16
3775-696*	14x6	1-1/2	15-1/2	16-1/2
3775-698*	14x8	3	17	17-15/16
3775-700*	14x10	4-1/2	18-1/2	19
3775-702*	14x12	7	21	20-15/16

*Fabricated

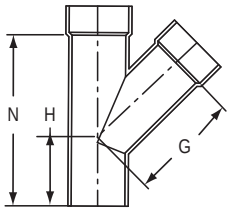
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

DWV Dimensions

P602 Wye, Street

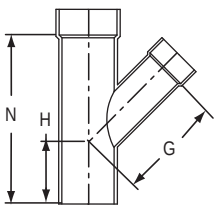
S x H x H



Part Number	Size	G	H	N
P602-015	1-1/2	2-7/8	1-7/8	4-7/16
P602-020	2	3-5/8	2-5/32	5-13/16
P602-030	3	5-1/16	3	8
P602-040	4	6-1/8	5-3/4	10-1/16

P603 Wye, Street, Reducing

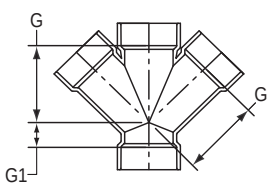
S x H x H



Part Number	Size	G	H	N
P603-251	2x2x1-1/2	3-7/16	2	5-11/32
P603-420	4x4x2	5-9/16	2-7/32	6-9/16
P603-422	4x4x3	6	2-13/16	8-1/16

P611 Double Wye

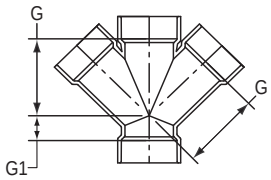
ALL HUB



Part Number	Size	G	G1
P611-015	1-1/2	2-7/8	1-1/8
P611-020	2	3-5/8	1-3/8
P611-030	3	6-1/8	1-5/8
P611-040	4	6-11/32	1-27/32

P611 Double Wye (continued)

ALL HUB

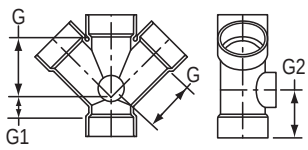


Part Number	Size	G	G1
P611-060	6	8-5/16	1-25/32
3776-080*	8	14-5/16	5-5/8
3776-100*	10	17-1/4	6-9/16
3776-120*	12	20-1/16	7-5/16
3776-140*	14	21-3/16	7-3/16

*Fabricated

P611S Double Wye, with 2" Side Inlet

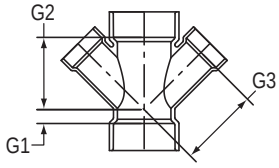
ALL HUB



Part Number	Size	G	G1	G2
P611S-030	3	5	1-5/8	2-1/4

P612 Double Wye, Reducing

ALL HUB

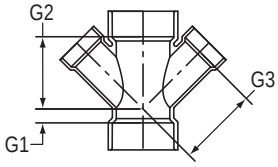


Part Number	Size	G1	G2	G3
P612-251	2x2x1-1/2x1-1/2	1-1/16	3-5/16	3-7/16
P612-337	3x3x1-1/2x1-1/2	1/2	3-3/4	4-5/16
P612-338	3x3x2x2	7/8	4-1/16	4-5/8
P612-420	4x4x2x2	3/8	4-17/32	5-7/16
P612-422	4x4x3x3	1-1/16	5-13/32	5-7/8
P612-532	6x6x4x4	1-1/8	5-3/4	6-9/16

DWV Dimensions

P612 Double Wye, Reducing (continued)

ALL HUB

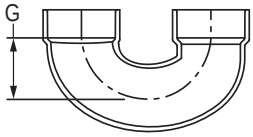


Part Number	Size	G1	G2	G3
3776-528*	6x2	7/8	7-1/2	8-7/16
3776-530*	6x3	1-13/16	8-7/16	9-9/16
3776-578*	8x2	9/16	9-3/16	9-3/4
3776-580*	8x3	1-5/16	9-15/16	10-7/8
3776-582*	8x4	2-1/16	10-11/16	11-7/8
3776-585*	8x6	3-1/2	12-1/8	12-13/16
3776-621*	10x2	1/2	10-1/4	11-3/16
3776-623*	10x3	1/2	11-1/4	12-5/16
3776-624*	10x4	1-7/16	12-3/16	13-5/16
3776-626*	10x6	3-1/2	14-1/4	14-1/4
3776-628*	10x8	5-1/8	15-7/8	15-11/16
3776-661*	12x2	1-1/8	11-5/8	12-9/16
3776-663*	12x3	3/8	12-3/8	13-11/16
3776-664*	12x4	3/8	13-1/8	14-11/16
3776-666*	12x6	2-3/8	15-1/8	15-5/8
3776-668*	12x8	3-7/8	16-5/8	17-1/16
3776-670*	12x10	5-3/8	18-1/8	18-1/8
3776-691*	14x2	2	12	13-7/16
3776-693*	14x3	3/4	13-1/4	14-9/16
3776-694*	14x4	0	14	15-9/16
3776-696*	14x6	1-1/2	15-1/2	16-1/2
3776-698*	14x8	3	17	17-15/16
3776-700*	14x10	4-1/2	18-1/2	19
3776-702*	14x12	7	21	20-15/16

*Fabricated

P700 Return Bend

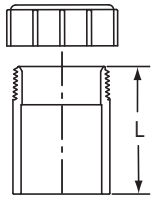
H x H



Part Number	Size	G
P700-015	1-1/2	1-7/16
P700-020	2	2-3/8
P700-030	3	3
P700-040	4	3-25/32
P700-060	6	5
P700-080	8	6-1/8

P704P Tail Piece Adapter

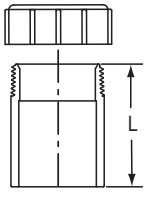
S x SLIP w/Plastic Nut & Built-in Washer



Part Number	Size	L
P704P-015	1-1/2	2-1/2

P704X Tail Piece Adapter

S x SLIP w/Chrome Nut & Washer



Part Number	Size	L
P704X-015	1-1/2	2-1/2

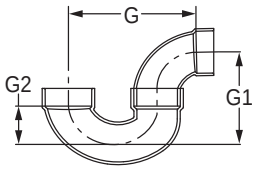
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

DWV Dimensions

P706X P-Trap

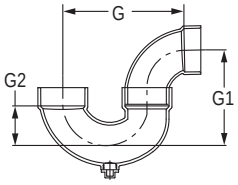
H x H



Part Number	Size	G	G1	G2
P706X-015	1-1/2	4-1/4	3-3/4	1-13/32
P706X-020	2	6-7/16	4-3/4	2-13/32
P706X-030	3	8-11/16	6-15/16	3-1/32
P706X-040	4	11-1/32	8-1/8	3-23/32
P706X-060	6	18-1/2	13-3/8	5
P706X-080	8	23-1/8	16-1/8	6-1/16
P706X-100	10	36-1/4	24-7/8	10
P706X-120	12	40-3/8	27-13/16	11

P707X P-Trap w/Cleanout

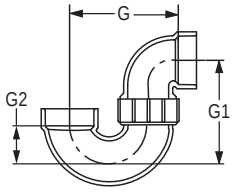
H x H



Part Number	Size	G	G1	G2
P707X-015	1-1/2	4-3/16	3-21/32	1-7/32

P708P Adjustable P-Trap w/Plastic Nut

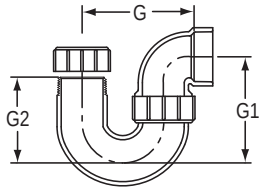
H x H



Part Number	Size	G	G1	G2
P708P-015	1-1/2	4-15/32	3-5/8	1-13/32
P708P-020	2	7-1/4	4-3/4	2-13/32

P711P L.A. Pattern P-Trap w/Plastic Nut

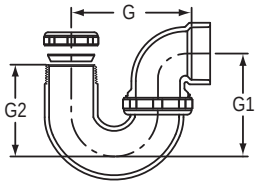
SLIP x H w/Plastic Nut & Washer



Part Number	Size	G	G1	G2
P711P-169	1-1/4x1-1/2	4-11/32	3-3/4	3-1/2
P711P-015	1-1/2	4-11/32	3-3/4	3-1/2

P711X L.A. Pattern P-Trap w/Chrome Nut

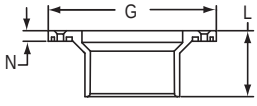
SLIP x H w/Chrome Nut & Washer



Part Number	Size	G	G1	G2
P711X-015	1-1/2	4-1/4	3-3/4	3-1/2

P800 Closet Flange

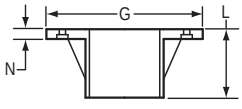
H



Part Number	Size	G	L	N
P800-422	4x3	7	2-3/4	7/16
P800-040	4x4	7-3/32	2	1/4

P800G Closet Flange with Gussets

H

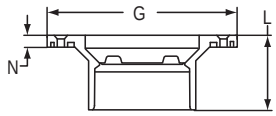


Part Number	Size	G	L	N
P800G-040	4	3-3/4	3-1/2	4-1/4

DWV Dimensions

P800KO Closet Flange with Knockout

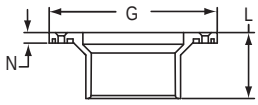
H



Part Number	Size	G	L	N
P800KO-422	4x3	7-1/32	2-25/32	7/16

P800S Closet Flange with Stop

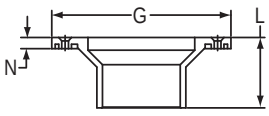
H



Part Number	Size	G	L	N
P800S-422	4x3	7	2-3/4	7/16

P801 Closet Flange, Reducing

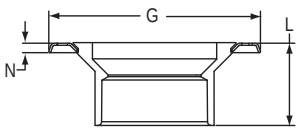
SPIGOT



Part Number	Size	G	L	N
P801-422	4x3	7	2-3/4	1/2

P811 Closet Flange, Adjustable with Metal Ring

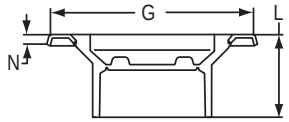
H



Part Number	Size	G	L	N
P811-422	4x3	7-1/32	2-23/32	9/32
P811-040	4x4	7-1/32	2-3/32	9/32

P811KO Closet Flange, Adjustable with Knockout

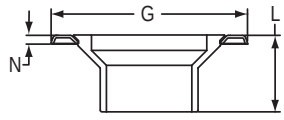
H



Part Number	Size	G	L	N
P811KO-422	4x3	7	2-13/16	1-5/16

P812 Closet Flange, Adjustable with Metal Ring

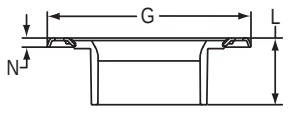
SPIGOT



Part Number	Size	G	L	N
P812-040	4	7-1/32	2-13/32	9/32
P812-422	4x3	7	2-13/16	1-5/16

P813 Closet Flange, Adjustable with Metal Ring

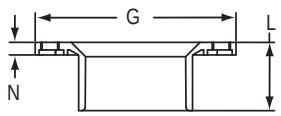
SPIGOT



Part Number	Size	G	L	N
P813-422	4x3	7-1/32	2-1/4	9/32

P815 Flush Closet Flange

Fits Over 3" Pipe or Inside 4" Pipe



Part Number	Size	G	L	N
P815-040	4x4/4x3	7-1/32	2-3/8	15/32

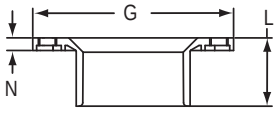
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

DWV Dimensions

P815KO Flush Closet Flange with Knockout

Fits Over 3" Pipe or Inside 4" Pipe

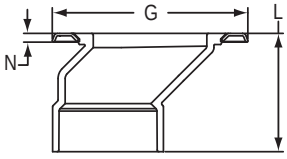


Part Number	Size	G	L	N
P815KO-040	4x4/4x3	7-1/32	2-3/8	15/32

P820 Offset Closet Flange with Adjustable Metal Ring

(1-1/2" Offset)

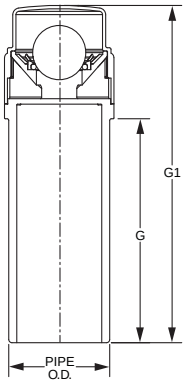
H



Part Number	Size	G	L	N
P820-422	4x3	4-7/32	4-1/4	9/32

Air Admittance Valve

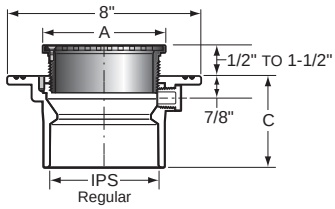
Spigot



MAX: 6DFU Drainage Fixture Units

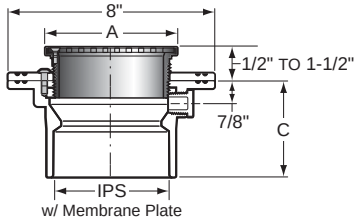
Part Number	Size	G	G1
AAV-015	1-1/2	4-1/8	6-1/4

Floor Drain with Stainless Steel Adjustable Top w/Round Grate



Part Number Regular	Size	A, Nom	IPS	C
P1500-015S	1-1/2x5	5	1-1/2	4-3/16
P1600-015S	1-1/2x6	6	1-1/2	4-3/16
P1700-015S	1-1/2x7	7	1-1/2	4-3/16
P1800-015S	1-1/2x8	8	1-1/2	4-3/16
P1500-020S	2x5	5	2	4
P1600-020S	2x6	6	2	4
P1700-020S	2x7	7	2	4
P1800-020S	2x8	8	2	4
P1500-030S	3x5	5	3	4
P1600-030S	3x6	6	3	4
P1700-030S	3x7	7	3	4
P1800-030S	3x8	8	3	4
P1500-040S	4x5	5	4	3-3/4
P1600-040S	4x6	6	4	3-3/4
P1700-040S	4x7	7	4	3-3/4
P1800-040S	4x8	8	4	3-3/4

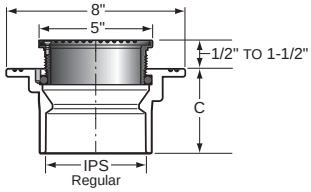
Floor Drain with Stainless Steel Adjustable Top w/Round Grate & Membrane Collar



Part Number Membrane	Size	A, Nom	IPS	C
P150M-015S	1-1/2x5	5	1-1/2	4-3/16
P160M-015S	1-1/2x6	6	1-1/2	4-3/16
P170M-015S	1-1/2x7	7	1-1/2	4-3/16
P180M-015S	1-1/2x8	8	1-1/2	4-3/16
P150M-020S	2x5	5	2	4
P160M-020S	2x6	6	2	4
P170M-020S	2x7	7	2	4
P180M-020S	2x8	8	2	4
P150M-030S	3x5	5	3	4
P160M-030S	3x6	6	3	4
P170M-030S	3x7	7	3	4
P180M-030S	3x8	8	3	4
P150M-040S	4x5	5	4	3-3/4
P160M-040S	4x6	6	4	3-3/4
P170M-040S	4x7	7	4	3-3/4
P180M-040S	4x8	8	4	3-3/4

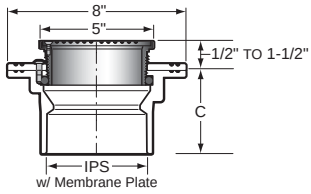
DWV Dimensions

Floor Cleanout w/Stainless Steel Adjustable Round Top & Solid Access Cover



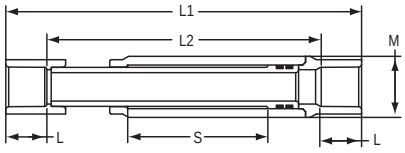
Part Number Regular	Size	IPS	C
P1510-015S	1-1/2x5	1-1/2	4-3/16
P1510-020S	2x5	2	4
P1510-030S	3x5	3	4
P1510-040S	4x5	4	3-3/4

Floor Cleanout w/Stainless Steel Adjustable Round Top, Solid Access Cover & Membrane Collar



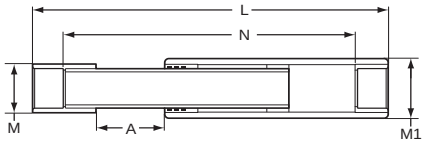
Part Number Membrane Plate	Size	IPS	C
P151M-015S	1-1/2x5	1-1/2	4-3/16
P151M-020S	2x5	2	4
P151M-030S	3x5	3	4
P151M-040S	4x5	4	3-3/4

Expansion Joint • Socket x Socket • PVC White with EPDM O-ring



Part Number	Size	L	L1	L2	M	S
S119-15	1-1/2	1-3/8	11-3/8	8-5/8	2-11/16	4
S119-20	2	1-1/2	12-1/4	9-1/4	3-3/16	4
S119-25	2-1/2	1-3/4	15-7/8	12-3/8	3-15/16	6
S119-30	3	1-7/8	16-1/8	12-3/8	4-9/16	6
S119-40	4	2-1/4	17-3/4	13-1/4	5-11/16	6
S119-60	6	3	22	16	8-3/8	6

Large Diameter Expansion Joint • Socket x Socket • PVC Gray with EPDM O-ring



Part Number	Size	A	L	M	M1	N
826-080X6	8	3	27-1/4	9-11/16	10-3/4	19-1/4
826-100X6	10	3	35-7/8	11-13/16	12-3/4	25-7/8
826-120X6	12	3	39-1/2	14-1/8	16	27-1/2
826-140X6	14	3	49-3/4	15-5/8	16	34-7/8

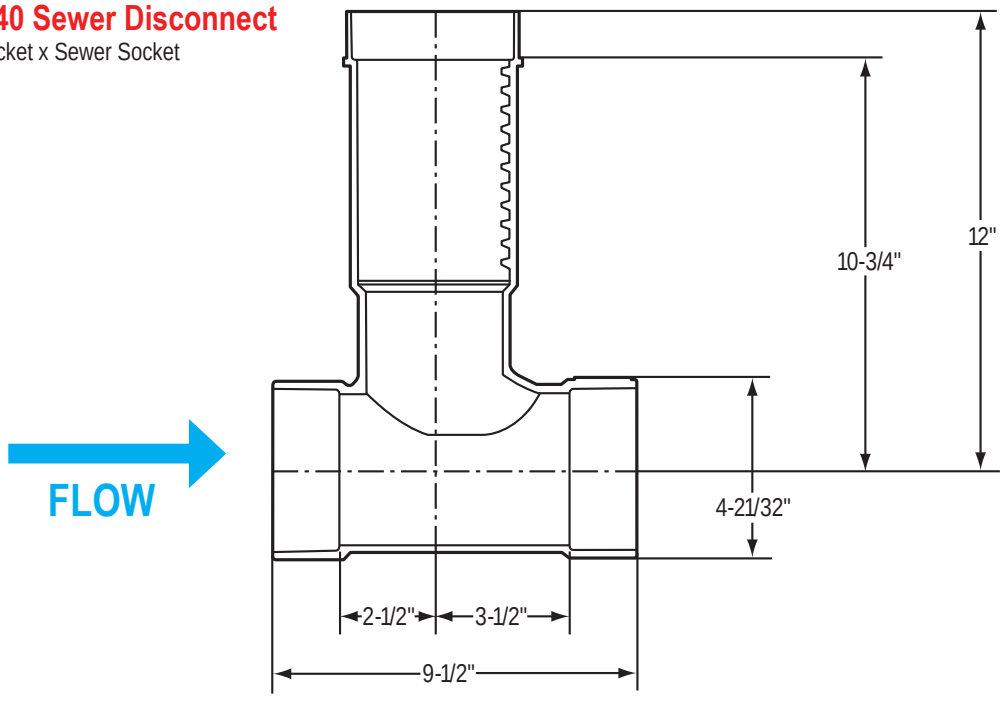
Thermal Expansion Compensation

The change in length of pipe with temperature variation should always be considered when installing pipe lines and provisions made to compensate for this change in length. The table below has been prepared to assist you in determining this expansion. This represents the calculated values of pipe length change (ΔL) in inches based on pipe run lengths of 10 to 100 feet and temperature changes of 30°F to 100°F.

DWV Dimensions

SDC-040 Sewer Disconnect

Sewer Socket x Sewer Socket



PVC Pipe Thermal Expansion (in)

TEMP. CHANGE Δ T (°F)	LENGTH OF RUN (FT)									
	10	20	30	40	50	60	70	80	90	100
30	0.11	0.22	0.32	0.43	0.54	0.65	0.76	0.86	0.97	1.08
40	0.14	0.29	0.43	0.58	0.72	0.86	1.01	1.15	1.30	1.44
50	0.18	0.36	0.54	0.72	0.90	1.08	1.26	1.40	1.62	1.80
60	0.22	0.43	0.65	0.85	1.08	1.30	1.51	1.73	1.94	2.16
70	0.25	0.50	0.76	1.01	1.26	1.51	1.76	2.02	2.27	2.52
80	0.29	0.58	0.86	1.15	1.44	1.73	2.02	2.30	2.59	3.24
90	0.32	0.65	0.97	1.30	1.62	1.94	2.27	2.59	2.92	3.24
100	0.36	0.72	1.03	1.44	1.80	2.16	2.52	2.88	3.24	3.60

Example: Highest temperature expected: 120°F
Lowest temperature expected: 50°F
Total change (ΔT): 70°F
Length of run: 40 feet
From 70° F (ΔT) row, read 1.01 inches length change

EverTUFF® CPVC CTS Fittings, Valves, Pipe & Cement

PRICING

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PRODUCT INFORMATION

APPLICATION

Spears® Copper Tube Size (CTS) fittings are manufactured from chlorinated polyvinyl chloride (CPVC) for use with SDR-11 piping systems of CTS outside diameter in hot and cold water distribution systems. Check state and local codes for application and restrictions.

CONFORMANCE STANDARDS

Spears® CPVC CTS fittings conform to ASTM D 2846 Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Hot and Cold Water Distribution Systems.

WORKING PRESSURE

Spears® CPVC CTS fittings have a continuous working pressure rating of 100 psi at 180°F (82° C) [400 psi at 73°F (23°C)].

PRODUCT CERTIFICATION

Spears® CPVC CTS fittings and Special Reinforced (SR) Thread transition adapters are tested and certified by the National Sanitation Foundation (NSF®) to ASTM D 2846 for use in Hot and Cold Water Distribution Systems, and for safe use in potable water systems under NSF® Standard 14/61.

TESTING

Once the system has been installed and allowed to cure properly, the system shall be tested in accordance with applicable code requirements. When testing with water (hydrostatic testing), the system must be slowly filled with water and the air bled from the highest and furthest points in the system before test pressure is applied. Failure to do so can cause damage to the piping system and could be harmful to the job site personnel should a failure occur. If a leak is found, the affected product must be cut out and discarded. A new section can be installed using couplings or other approved means.

TEE

Socket x Socket x Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4101-005	**1/2**	25	500	035	.94
4101-007	**3/4**	50	250	035	1.75
4101-010	**1**	10	120	035	9.19
4101-012	**1-1/4**	10	80	035	14.09
4101-015	**1-1/2**	5	60	035	18.35
4101-020	**2**	5	0	035	24.27

DROP EAR TEE (Fitting with Bracket)

Socket x Socket x Socket

DE4101-005	**1/2**	25	150	035	3.32

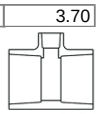
DROP EAR BRACKET ONLY

For 4101-005 and 4106-005

DES-005	**1/2**	800	0	035	3.70

REDUCING TEE

Socket x Socket x Socket



4101-074	**1/2X1/2X3/4**	10	100	035	3.25
4101-094	**3/4X1/2X1/2**	50	250	035	1.81
4101-095	**3/4X1/2X3/4**	25	250	035	1.81
4101-101	**3/4X3/4X1/2**	25	300	035	1.81
4101-102*	**3/4X3/4X1**	10	60	035	13.80
4101-120*	**1X1/2X1/2**	10	120	035	13.80
4101-122*	**1X1/2X1**	10	120	035	13.80
4101-124*	**1X3/4X1/2**	10	120	035	13.80
4101-125	**1X3/4X3/4**	10	120	035	13.80
4101-126*	**1X3/4X1**	10	120	035	13.80
4101-130	**1X1X1/2**	10	100	035	13.80
4101-131	**1X1X3/4**	10	120	035	13.80
4101-138*	**1-1/4X1/2X1/2**	10	80	035	21.13
4101-139*	**1-1/4X1/2X3/4**	10	80	035	21.13
4101-142*	**1-1/4X1/2X1-1/4**	10	80	035	21.13
4101-146*	**1-1/4X3/4X1/2**	10	80	035	21.13
4101-147*	**1-1/4X3/4X3/4**	10	80	035	21.13
4101-148*	**1-1/4X3/4X1**	10	80	035	21.13
4101-149*	**1-1/4X3/4X1-1/4**	10	80	035	21.13
4101-156*	**1-1/4X1X1/2**	10	80	035	21.13
4101-157*	**1-1/4X1X3/4**	10	80	035	21.13
4101-158*	**1-1/4X1X1**	10	100	035	21.13
4101-159*	**1-1/4X1X1-1/4**	10	80	035	21.13
4101-166	**1-1/4X1/2**	10	100	035	21.13
4101-168	**1-1/4X1-1/4X1**	10	40	035	21.13
4101-167	**1-1/4X3/4**	10	100	035	21.13

REDUCING TEE (continued)

Socket x Socket x Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4101-169*	**1-1/4X1-1/4X1-1/2**	5	40	035	21.13
4101-173*	**1-1/2X1/2X1/2**	5	40	035	27.53
4101-174*	**1-1/2X1/2X3/4**	5	40	035	27.53
4101-175*	**1-1/2X1/2X1**	5	40	035	27.53
4101-176*	**1-1/2X1/2X1-1/4**	5	40	035	27.53
4101-177*	**1-1/2X1/2X1-1/2**	5	40	035	27.53
4101-182*	**1-1/2X3/4X1/2**	5	40	035	27.53
4101-184*	**1-1/2X3/4X3/4**	5	40	035	27.53
4101-185*	**1-1/2X3/4X1**	5	40	035	27.53
4101-186*	**1-1/2X3/4X1-1/4**	5	40	035	27.53
4101-188*	**1-1/2X3/4X1-1/2**	5	40	035	27.53
4101-193*	**1-1/2X1X1/2**	5	40	035	27.53
4101-194*	**1-1/2X1X3/4**	5	40	035	27.53
4101-195*	**1-1/2X1X1**	10	100	035	27.53
4101-196*	**1-1/2X1X1-1/4**	5	40	035	27.53
4101-197*	**1-1/2X1X1-1/2**	5	40	035	27.53
4101-199*	**1-1/2X1-1/4X1/2**	5	40	035	27.53
4101-201*	**1-1/2X1-1/4X3/4**	5	40	035	27.53
4101-202*	**1-1/2X1-1/4X1**	5	40	035	27.53
4101-203*	**1-1/2X1-1/4X1-1/4**	5	40	035	27.53
4101-204*	**1-1/2X1-1/4X1-1/2**	5	40	035	27.53
4101-209	**1-1/2X1-1/2X1/2**	25	0	035	27.53
4101-210	**1-1/2X3/4**	10	100	035	27.53
4101-211	**1-1/2X1**	10	30	035	27.53
4101-212*	**1-1/2X1-1/2X1-1/4**	5	50	035	27.53
4101-213*	**1-1/2X1-1/2X2**	5	0	035	27.53
4101-216*	**2X1/2X1/2**	5	0	035	37.00
4101-217*	**2X1/2X3/4**	5	0	035	37.00
4101-218*	**2X1/2X1**	5	0	035	37.00
4101-219*	**2X1/2X1-1/4**	5	0	035	37.00
4101-220*	**2X1/2X1-1/2**	5	0	035	37.00
4101-221*	**2X1/2X2**	5	0	035	37.00
4101-222*	**2X3/4X1/2**	5	0	035	37.00
4101-223*	**2X3/4X3/4**	5	0	035	37.00
4101-224*	**2X3/4X1**	5	0	035	37.00
4101-225*	**2X3/4X1-1/4**	5	0	035	37.00
4101-226*	**2X3/4X1-1/2**	5	0	035	37.00
4101-227*	**2X3/4X2**	5	0	035	37.00
4101-228*	**2X1X1/2**	5	0	035	37.00
4101-229*	**2X1X3/4**	5	0	035	37.00
4101-230*	**2X1X1**	5	0	035	37.00
4101-231*	**2X1X1-1/4**	5	0	035	37.00
4101-232*	**2X1X1-1/2**	5	0	035	37.00
4101-233*	**2X1X2**	5	0	035	37.00
4101-234*	**2X1-1/4X1/2**	5	0	035	37.00
4101-235*	**2X1-1/4X3/4**	5	0	035	37.00
4101-236*	**2X1-1/4X1**	5	0	035	37.00
4101-237*	**2X1-1/2X1/2**	5	0	035	37.00

REDUCING TEE (continued)
Socket x Socket x Socket

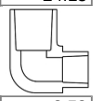
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4101-238*	2X1-1/2X3/4	5	0	035	37.00
4101-239*	2X1-1/2X1	5	0	035	37.00
4101-240*	2X1-1/2X1-1/4	5	0	035	37.00
4101-241*	2X1-1/2X1-1/2	5	0	035	37.00
4101-242*	2X1-1/4X1-1/4	5	0	035	37.00
4101-243*	2X1-1/4X1-1/2	5	0	035	37.00
4101-244*	2X1-1/4X2	5	0	035	37.00
4101-247	2X2X1/2	10	0	035	37.00
4101-248	2X3/4	10	0	035	37.00
4101-249	2X2X1	5	15	035	37.00
4101-250*	2X2X1-1/4	5	25	035	37.00
4101-251	2X2X1-1/2	5	15	035	37.00
4101-257*	2X1-1/2X2	5	0	035	37.00

* Outlet sized with bushing.

90° ELL
Socket x Socket

4106-005	1/2	100	1000	035	.73
4106-007	3/4	50	500	035	1.20
4106-010	1	10	150	035	3.50
4106-012	1-1/4	10	500	035	6.98
4106-015	1-1/2	10	100	035	12.59
4106-020	2	5	30	035	24.15

REDUCING 90° ELL
Socket x Socket



4106-101	3/4X1/2	25	300	035	2.53
4106-130*	1X1/2	25	200	035	8.89
4106-131*	1X3/4	25	200	035	8.89
4106-167*	1-1/4X3/4	10	80	035	13.68
4106-168*	1-1/4X1	10	80	035	13.68
4106-209*	1-1/2X1/2	10	0	035	18.95
4106-210*	1-1/2X3/4	10	0	035	18.95
4106-211*	1-1/2X1	10	0	035	18.95
4106-212*	1-1/2X1-1/4	10	0	035	18.95
4106-247*	2X1/2	5	30	035	42.10
4106-248*	2X3/4	5	30	035	42.10
4106-249*	2X1	5	30	035	42.10
4106-250*	2X1-1/4	5	30	035	42.10
4106-251*	2X1-1/2	5	30	035	42.10

* Outlet sized with bushing.

90° EII - CTS Special Reinforced
Socket x SR Fipt - Stainless Steel Collar

4107-005SR	1/2	50	300	035	5.41

Drop Ear 90° EII - CTS Zinc Reinforced(One Piece Unit)
Socket x SR Fipt - Zinc Collar

DEZ4107-005SR	1/2	10	150	035	12.16

DROP EAR 90° ELL (Fitting with Bracket)
Socket x Socket

DE4106-005	1/2	25	150	035	2.17

DROP EAR BRACKET ONLY
For 4101-005 and 4106-005

DES-005	1/2	800	0	035	3.70

Drop Ear 90° EII - CTS Special Reinforced (Fitting Plus Bracket)
Socket x SR Fipt - Stainless Steel Collar

DE4107-005SR	1/2	10	200	035	8.36

DROP EAR BRACKET ONLY
For 4107-005SR

DET-005	1/2	400	0	035	3.70

90° STREET ELL
Spigot x Socket

4109-005	1/2	100	500	035	.86
4109-007	3/4	25	300	035	1.34
4109-010	1	10	100	035	6.30

45° ELL
Socket x Socket

4117-005	1/2	100	500	035	.92
4117-007	3/4	25	300	035	1.60
4117-010	1	10	100	035	4.06
4117-012	1-1/4	10	120	035	8.60
4117-015	1-1/2	10	80	035	12.47
4117-020	2	10	0	035	26.11

45° STREET ELL
Spigot x Socket

4127-005	1/2	25	600	035	1.96
4127-007	3/4	25	400	035	2.62
4127-010	1	50	250	035	7.54

COUPLING
Socket x Socket

4129-005	1/2	100	1000	035	.60
4129-007	3/4	50	500	035	.79
4129-010	1	10	100	035	3.56
4129-012	1-1/4	10	100	035	4.60
4129-015	1-1/2	10	120	035	6.50
4129-020	2	10	0	035	12.38

REDUCER COUPLING
Socket x Socket

4129-101	3/4X1/2	25	300	035	1.27
4129-130	1X1/2	25	150	035	7.51
4129-131	1X3/4	25	150	035	4.07
4129-166*	1-1/4X1/2	10	120	035	9.41
4129-167*	1-1/4X3/4	10	120	035	9.41
4129-168*	1-1/4X1	10	120	035	13.40
4129-209*	1-1/2X1/2	10	80	035	12.77
4129-210*	1-1/2X3/4	10	60	035	12.77
4129-211*	1-1/2X1	10	60	035	12.77
4129-212*	1-1/2X1-1/4	10	80	035	12.77
4129-247*	2X1/2	10	0	035	27.65
4129-248*	2X3/4	10	0	035	27.65
4129-249	2X1	10	0	035	27.65
4129-250*	2X1-1/4	10	0	035	27.65
4129-251*	2X1-1/2	10	0	035	27.65

* Outlet sized with bushing.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

FEMALE ADAPTER with Gasket

Socket x NPSC

For Cold Water Service Only

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4135-005OR	1/2	25	200	035	2.83
4135-007OR	3/4	25	300	035	4.01
4135-010OR	1	5	100	035	4.57

Female Adapter - Gasket Sealed Brass Threaad Transition

Socket x Gasket FPT - Use NO Thread Sealant

NSF Certified Lead Free

4135-005BRG	1/2	25	150	035	11.21
4135-007BRG	3/4	25	150	035	17.28
4135-010BRG	1	15	90	035	59.66
4135-012BRG	1-1/4	15	60	035	100.01
4135-015BRG	1-1/2	10	40	035	113.87
4135-020BRG	2	8	32	035	178.00

Female Adapter - Reducing Gasket Sealed Brass Threaad Transition

Socket x Gasket FPT - Use NO Thread Sealant

NSF Certified Lead Free

4135-101BRG	3/4X1/2	25	150	035	26.26
4135-130BRG	1X1/2	50	0	035	41.49

Female Adapter - CTS Special Reinforced

Socket x SR Fipt - Stainless Steel Collar

4135-005SR	1/2	25	200	035	6.96
4135-007SR	3/4	25	300	035	7.65
4135-010SR	1	5	100	035	9.71

Female Adapter - CTS Reducing Special Reinforced

Socket x SR Fipt - Stainless Steel Collar

4135-131SR	1X3/4	25	150	035	15.28

MALE ADAPTER

Mipt x Socket

For Cold Water Service Only

4136-005	1/2	25	600	035	.76
4136-007	3/4	50	500	035	1.29
4136-010	1	10	100	035	6.10
4136-012	1-1/4	25	200	035	9.44
4136-015	1-1/2	10	80	035	11.65
4136-020	2	10	80	035	19.20

REDUCING MALE ADAPTER

Mipt x Socket

For Cold Water Service Only

4136-074	1/2X3/4	25	600	035	2.76
4136-101	3/4X1/2	25	600	035	2.96

MALE ADAPTER

Mipt x Spigot

For Cold Water Service Only

4161-005	1/2	50	700	035	2.35

Male Adapter - CTS Reinforce (Internal Stainless Steel Reinforced)

R Mipt x Socket - Stainless Steel Sleeve

4136-005R	1/2	25	300	035	8.93
4136-007R	3/4	25	300	035	9.93
4136-010R	1	10	120	035	14.79

TRANSITION MALE ADAPTER w/BRASS THREAD

Brass Mipt x Socket

NSF Certified Lead Free

4136-005BR	1/2	60	360	035	23.04
4136-007BR	3/4	40	160	035	25.86
4136-010BR	1	10	60	035	59.66
4136-012BR	1-1/4	10	60	035	78.50
4136-015BR	1-1/2	10	40	035	113.87
4136-020BR	2	8	32	035	178.00

REDUCER BUSHING

Spigot x Socket

4137-101	3/4X1/2	10	500	035	.91
4137-130	1X1/2	10	100	035	2.97
4137-131	1X3/4	10	100	035	2.97
4137-166	1-1/4X1/2	10	120	035	3.85
4137-167	1-1/4X3/4	10	300	035	3.85
4137-168	1-1/4X1	10	100	035	3.85
4137-209	1-1/2X1/2	25	100	035	4.84
4137-210	1-1/2X3/4	25	100	035	4.84
4137-211	1-1/2X1	10	120	035	4.84
4137-212	1-1/2X1-1/4	10	200	035	4.84
4137-247	2X1/2	10	60	035	11.00
4137-248	2X3/4	10	60	035	11.00
4137-249	2X1	10	60	035	11.00
4137-250	2X1-1/4	10	120	035	11.00
4137-251	2X1-1/2	10	120	035	11.00

TRANSITION BUSHING

IPS Spigot x CTS Socket

4140-005	1/2	10	600	035	3.84
4140-007	3/4	10	600	035	4.01
4140-010	1	10	400	035	4.43
4140-012	1-1/4	10	60	035	5.48
4140-015	1-1/2	10	60	035	6.91
4140-020	2	10	60	035	7.54

TRANSITION COUPLING

IPS Socket x CTS Socket

4141-007	3/4	25	300	035	4.36
4141-010	1	10	150	035	4.61

CAP

Socket

4147-005	1/2	50	600	035	.65
4147-007	3/4	25	300	035	.83
4147-010	1	10	100	035	3.04
4147-012	1-1/4	10	120	035	4.18
4147-015	1-1/2	10	120	035	6.43
4147-020	2	10	80	035	12.98

UNION

Socket with EPDM O-ring Seal

100 psi Maximum Internal Pressure @ 180°F (82°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4197-005	1/2	25	150	035	8.55
4197-007	3/4	10	60	035	13.01
4197-010	1	10	60	035	16.80

Union - CTS Special Reinforced

Socket x SR Fipt - Stainless Steel Collar

100 psi Maximum Internal Pressure @ 180°F (82°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4199-005SR	1/2	20	120	035	12.75
4199-007SR	3/4	10	60	035	21.89
4199-010SR	1	10	40	035	26.26

Union - Gasket Sealed Brass Threaad Transition

Socket x Gasket FPT
- Use No Thread Sealant

100 psi Maximum Internal Pressure @ 180°F (82°C)
NSF Certified Lead Free

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4199-005BRG	1/2	20	120	035	27.19
4199-007BRG	3/4	10	0	035	31.62
4199-010BRG	1	10	40	035	40.88

1/4-Turn Angle Supply Stop

Socket x NPT

100 psi @ 180°F (82°C)
1/2" & 3/8" Male Thread for Connection to Female Flexible Supply Line

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
7722-005	1/2	50	400	217	9.86
7722-073	1/2X3/8	50	400	217	9.86

1/4-Turn Angle Supply Stop

SR FPT x NPT

100 psi @ 180°F (82°C)
1/2" & 3/8" Male Thread for Connection to Female Flexible Supply Line

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
7721-005SR	1/2	50	400	217	4.97
7721-073SR	1/2X3/8	50	400	217	4.97

CPVC CTS Ball Valves

Socket with EPDM O-ring Seal

100 psi Maximum Internal Pressure @ 180°F (82°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
1922-005	1/2	72	0	217	16.70
1922-007	3/4	24	0	217	19.74
1922-010	1	18	0	217	22.77
1922-012	1-1/4	8	0	217	35.34
1922-015	1-1/2	6	0	217	59.97
1922-020	2	4	0	217	65.30

CPVC CTS Pipe - SDR 11

10' Lengths, Price Per Foot

List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
CTS-005	1/2	500	0	034	.98
CTS-007	3/4	250	0	034	1.76
CTS-010	1	150	0	034	3.61
CTS-012	1-1/4	100	0	034	5.35
CTS-015	1-1/2	100	0	034	7.10
CTS-020	2	50	0	034	12.01

CPVC CTS Pipe - SDR 11 (continued)

10' Lengths, Price Per Foot

- Pipe sold in bag quantities only - no broken bags
- No return on Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.
- See Spears® Manufacturing Company Terms and Conditions of Sale for freight requirements.

CPVC CTS PIPE WEIGHTS:
CTS-005 Weight per Foot .090 lbs; per Bag Weight 45 lbs.
CTS-007 Weight per Foot .149l bs; per Bag Weight 37.25 lbs.
CTS-010 Weight per Foot .239 lbs; per Bag Weight 35.85 lbs.
CTS-012 Weight per Foot .353 lbs; per Bag Weight 35.3 lbs.
CTS-015 Weight per Foot .489 lbs; per Bag Weight 48.9 lbs.
CTS-020 Weight per Foot .810 lbs; per Bag Weight 40.5 lbs.

CPVC CTS Pipe - SDR 11

20' Lengths, Price Per Foot

List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
CTS-005-20	1/2	1000	0	034	.98
CTS-007-20	3/4	500	0	034	1.76
CTS-010-20	1	300	0	034	3.61
CTS-012-20	1-1/4	200	0	034	5.35
CTS-015-20	1-1/2	200	0	034	7.10
CTS-020-20	2	100	0	034	12.01

- Pipe sold in bag quantities only - no broken bags
- No return on Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.
- See Spears® Manufacturing Company Terms and Conditions of Sale for freight requirements.

CPVC CTS PIPE WEIGHTS:
CTS-005 Weight per Foot .090 lbs; per Bag Weight 90 lbs.
CTS-007 Weight per Foot .149 lbs; per Bag Weight 74.5l bs.
CTS-010 Weight per Foot .239 lbs; per Bag Weight 71.7 lbs.
CTS-012 Weight per Foot .353 lbs; per Bag Weight 70.6 lbs.
CTS-015 Weight per Foot .489 lbs; per Bag Weight 97.8 lbs.
CTS-020 Weight per Foot .830 lbs; per Bag Weight 83 lbs.

CPVC CTS Coiled Pipe - SDR 11

100 ft. Coil, Price Per Foot

List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
CTS-005-100	1/2	100	0	034	1.15
CTS-007-100	3/4	100	0	034	2.09
CTS-010-100	1	100	0	034	4.11

- Pipe sold in coil quantities only - no broken coils
- No return on Coiled Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.
- See Spears® Manufacturing Company Terms and Conditions of Sale for freight requirements.

CPVC CTS COILED PIPE WEIGHTS:
CTS-005-100 Weight per Foot .090 lbs; per Coil Weight 9 lbs.
CTS-007-100 Weight per Foot .149 lbs; per Coil Weight 14.9 lbs.
CTS-010-100 Weight per Foot .239 lbs; per Coil Weight 23.9 lbs.

WARNING:
Banded coils will expand when opened. Excercize caution to avoid injury during banding removal.

CTS TUBING STRAPS

Std Pk Bag of 25 For Anchoring CTS Pipe

Sold in Full Bag Quantity Only

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
556A	1/2	25	500	901	.94
556B	3/4	25	500	901	.94

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CTS TUBE TALON with NAIL

Std Pk Bag Quantities as Specified. For Anchoring CTS Pipe

Sold in Full Bag Quantity Only

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
555A	1/2	100	1000	901	1.04
555B	3/4	100	1000	901	1.58
555C	1	50	500	901	4.44

EverTUFF® CTS One Step CPVC Solvent Cement

CTS5-005	1/4 Pint	24	0	701	9.01
CTS5-010	1/2 Pint	24	0	701	14.34
CTS5-020	Pint	12	0	701	23.23
CTS5-030	Quart	12	0	701	40.42
CTS5-040	Gallon	6	0	701	138.29

Cap Daubers

DHP-38	3/8" for 1/2 Pint	50	400	710	1.23
DHP-50	1/2" for 1/2 Pint	50	400	710	1.23
DHP-75	3/4" for 1/2 Pint	50	0	710	1.31
DP-50	1/2" for Pint	50	0	710	1.23
DP-75	3/4" for Pint	50	0	710	1.31
DP-125	1-1/4" for Pint	50	0	710	1.58
DQ-50	1/2" for Quart	50	0	710	1.23
DQ-75	3/4" for Quart	50	0	710	1.23
DQ-125	1-1/4" for Quart	50	0	710	1.58

3/8" Diameter for pipe sizes to 3/4"
1/2" Diameter for pipe sizes to 1"
3/4" Diameter for pipe size to 1-1/2"
1-1/4" Diameter for pipe size 1-1/2" to 3"

Can-Mate Daubers

Adjustable Plastic Applicator with Telescoping Stem for use with Standard 1/2 Pint, Pint and Quart Cans

CM-50	1/2"	50	0	710	5.26
CM-75	3/4"	50	0	710	5.26
CM-150	1-1/4"	50	0	710	5.26

1/2" Diameter for pipe sizes to 1"
3/4" Diameter for pipe size to 1-1/2"
1-1/4" Diameter for pipe size 1-1/2" to 3"

Deburring Tool

Cone Type for pipe from 1/2" through 2"

DEB-2	1/2 to 2 Pipe	1	6	710	97.71

CPVC CTS FITTINGS & VALVES

COPPER-TUBE SIZE

DESIGN & INSTALLATION GUIDE TECHNICAL INFORMATION

Contact Spears® for any information not found.

Certified Safe Alternative to Metal Plumbing Systems

All conventional metal plumbing systems corrode leaving their corrosive wastes for deposit into the water system. CPVC thermoplastic system components never corrode. Spears® EverTUFF® CTS CPVC systems of fittings, pipe, supply stops & valves are Certified lead-free by NSF International (NSF®) for compliance with California and Vermont low-lead plumbing requirements for safe use in drinking water systems. Approved by national, state and municipal building codes*, Spears® CTS CPVC products are ideally suited for hot and cold water distribution systems in residential and commercial structures, as well as recreational vehicles, modular homes and mobile homes.

*Check state and local codes.

Full Line of CTS CPVC Fittings, Pipe, Supply Stops & Ball Valves 1/2" Through 2" Plus Supplemental IPS CPVC in 2-1/2" & Up

EverTUFF® CPVC pipe and fittings are available for most any size project using Copper Tube Size (CTS) in sizes 1/2" through 2". EverTUFF® Schedule 40 and Schedule 80 CPVC Iron Pipe Size (IPS) are available for sizes 2-1/2" and larger for commercial applications such as multi-story installations when adequate design and installation practices have been utilized .

Exceptional Corrosion Resistance

Unlike metal systems, CPVC products never rust, scale, or pit, and will provide many years of maintenance-free service and extended system life.

Energy Savings

Low heat conductivity minimizes heat loss in hot water systems.

Higher Flow Capacity

Smooth interior walls result in lower pressure loss and higher volume than conventional metal systems.

Lower System Costs

Lower material costs than metallic systems, combined with lighter weight and ease of installation, can substantially reduce overall system cost.

Suitable for Commercial Hot Water

CTS CPVC products can handle fluids at service temperatures up to 180°F (82°C). IPS CPVC service temperatures and pressures vary according to pipe size.

CTS CPVC 1/4-Turn Angle Supply Stop

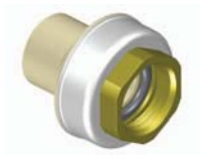
Spears® EverTUFF® lead-free Supply Stops are used at plumbing fixtures to terminate hot and cold water supply. NSF® Certified to ASTM F 1970 for use in ASTM D 2846 Hot & Cold Water Distribution Systems rated to 100 psi @ 180°F Available in 1/2" CTS Socket or Spears® patented Special Reinforced (SR) 1/2" FIPT female thread inlet x 1/2" straight male thread outlet for connection to conventional 1/2" FPT faucet or toilet supply lines with captive seals.

CTS CPVC Ball Valves

Spears® EverTUFF® lead-free Copper-Tube-Size Ball Valves feature one-piece design that never requires adjustment. Standard EPDM O-ring seal and PTFE Seats enable bubble-tight shut off. High impact Polypropylene handle has double stop engagement. 100 psi maximum internal pressure rating at 180°F and NSF® Certified for use in potable water systems.

Spears® EverTUFF® Exclusive Specialty Fittings…

Gasket Sealed Brass-Threaded Transition Fittings



- Eliminates Radial Stress
- Requires NO Thread Sealants
- Eliminates Sealant Incompatibility
- NSF® Certified Lead-Free

Spears® lead-free Gasket-Sealed CTS CPVC Brass-Threaded Transition Fitting design features a special molded-in-place Brass Thread Insert fitted with an elastomer gasket seal at the base of the threads. The gasket sealed design eliminates radial stress and requires no thread sealant.

Special Reinforced (SR) Plastic Threaded Transition Fittings

- Eliminates Split Threads
- Eliminates Leaks Associated with Over and Under Tightening
- Eliminates MIC, Electrolytic & Soil Chemistry Corrosion Problems

Spears® lead-free Patented CTS CPVC Special Reinforced (SR) Fittings reduce problems associated with over tightening of female plastic pipe threads. Not just an added ring, this unique precompression design compensates for expansion forces generated from tapered pipe thread joint make-up.

Anti-Stress Drop-Ear Fittings & Brackets

Drop Ear 90° Elbow

- Secures plumbing drops against horizontal and vertical movement
- Eliminates fitting damage during installation of plumbing drops

Drop Ear Bracket

Spears® EverTUFF®, The Full-Service CTS CPVC Product Line…

Application

Spears® EverTUFF® Copper-Tube-Size (CTS) products are manufactured from chlorinated polyvinyl chloride (CPVC) for use with SDR-11 piping systems of CTS outside diameter in hot and cold water distribution systems in nominal pipe size 1/2" through 2". CTS CPVC products can be used in conjunction with Spears® supplemental Schedule 40 and Schedule 80 CPVC Iron-Pipe-Size (IPS) pipe and fittings for sizes 2-1/2" through 12" in commercial multi-story installations. Check state and local codes for application and restrictions.

Working Pressure

Spears® EverTUFF® CTS CPVC fittings, pipe and valves have a continuous working pressure rating of 100 psi at 180°F.

Conformance Standards

Spears® EverTUFF® CTS CPVC fittings conform to ASTM D 2846 Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Hot and Cold Water Distribution Systems.

Product Certification

Spears® EverTUFF® CTS CPVC pipe and fittings are certified by NSF International (NSF®) to ASTM D 2846 for use in Hot and Cold Water Distribution Systems, to the Uniform Plumbing Code (NSF® U.P.Code) and for use in potable water service. All Spears® EverTUFF® CTS CPVC products are NSF® certified lead-free in accordance with ANSI/NSF® Standard 61, Annex G for compliance with California's Health & Safety Code Section 116875 (commonly known as AB1953) and Vermont Act 193.

Sample Engineering Specif cations

All fittings, supply stops and valves shall be Copper-Tube-Size (CTS) constructed from CPVC Type IV Cell Classification 23447. All CTS CPVC products shall be produced to applicable requirements of ASTM D 2846 and rated to 100 psi at 180°F, unless specifically designated for cold water service only. All supply stops shall be 1/4 turn angle pattern CTS CPVC with male thread outlets. All ball valves shall be CTS CPVC sealed unit type with EPDM O-ring and double stop Polypropylene handle. All CTS CPVC products shall be certified lead-free for potable water use by NSF International in accordance with NSF®-61 Annex G, as manufactured by Spears® Manufacturing Company.

The information contained in this publication is based on current information and Product design at the time of publication and is subject to change without notification. Our ongoing commitment to product improvement may result in some variation. No representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or results to be obtained therefrom. For verification of technical data or additional information not contained herein, please contact Spears® Technical Services Department [West Coast: (818) 364-1611 — East Coast: (678) 985-1263].

Application

Spears® Copper Tube Size (CTS) Pipe and Fittings are manufactured from chlorinated polyvinyl chloride (CPVC) for use with SDR 11 piping systems of CTS outside diameter in hot and cold water distribution systems. Check state and local codes for application and restrictions.

Conformance Standards

Spears® CPVC CTS Pipe and Fittings conform to ASTM D 2846 Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Hot and Cold Water Distribution Systems.

Working Pressure

Spears® CPVC CTS Pipe and Fittings have a continuous working pressure rating of 100 psi at 180°F (400 psi at 73°F).

Product Certification

Spears® CPVC CTS Pipe, Fittings and Special Reinforced (SR) Threaded transition adapters are tested and certified by the National Sanitation Foundation (NSF®) to ASTM D 2846 for use in Hot and Cold Water Distribution Systems, and for safe use in potable water systems under NSF® Standard 14/61.

All Spears® CPVC CTS Pipe and Fittings for CPVC Plastic Hot and Cold Water Distribution Systems in this manual are certified Lead-Free by NSF International under NSF® Standard 61, Annex G. The annex certifies compliance to California California's Health & Safety Code Section 116875 (commonly known as AB1953) and Vermont Act 193. Lead free is defined by these requirements as containing no more than a weighted average lead content of <=0.25%.

Testing

Once the system has been installed and allowed to cure properly, the system shall be tested in accordance with applicable code requirements. When testing with water (hydrostatic testing), the system must be slowly filled with water and the air bled from the highest and furthest points in the system before test pressure is applied. Failure to do so can cause damage to the piping system and could be harmful to the job site personnel should a failure occur. If a leak is found, the affected product must be cut and discarded. A new section can be installed using couplings or other approved means.

PURPOSE OF THIS MANUAL

This manual is intended for use by specifiers, installers, and users in the selection, design, installation, and inspection of CPVC systems installed using Spears® CPVC products. All information contained within this manual is considered vital to obtain proper system performance and must be read and fully understood before attempting to install these products. If you have any questions about the safe and proper installation of these products, contact Spears® Manufacturing Company 15853 Olden Street, Sylmar CA 91342 USA, Telephone (818) 364-1611 • (800) 862-1499.

HAZARD IDENTIFICATION

Definitions for identifying the various hazard levels are provided below.

This safety alert symbol indicates important safety messages. When you see this symbol, be alert to the possibility of personal injury. Carefully read and fully understand the message that follows.

⚠ DANGER

The use of the word "DANGER" identi f es an immediate hazard with a likelihood of severe personal injury or death if instructions, including recommended precautions, are not followed.

⚠ WARNING

The use of the word "WARNING" identif es the presence of hazards or unsafe practices that could result in severe personal injury if instructions, including recommended precautions, are not followed.

⚠ CAUTION

The use of the word "CAUTION" identi f es possible hazards or unsafe prac-tices that could result in personal injury , product damage, and/or property damage if instructions, including recommended precautions, are not followed.

NOTICE

The use of the word "NOTICE" identif es special instructions that are important but not related to hazards.

INSTALLER SAFETY INSTRUCTIONS

Read and understand this manual before proceeding with the installation and testing of the Spears® CPVC system. Education and a complete understanding of the instructions provided are requirements for the installer of the Spears® CPVC system. These instructions contain important information. If you need additional copies of this manual, or if you have any questions about the safe installation and use of this system, contact Spears® Manufacturing Company 15853 Olden Street, Sylmar CA 91342 USA, Telephone (818) 364-1611 • (800) 862-1499.

1. Inspect the product. Make sure all parts are included with the shipment and that all necessary tools are available for proper installation.
2. Wear safety glasses, hard hat, and foot protection.
3. Avoid dangerous environments. If using electrically powered tools for installation, make sure the area is free from moisture or wetness that could create unsafe working conditions. Keep work areas well lit. Allow sufficient space for measuring and dry-fitting the system.
4. Prevent back injury. Always practice safe lifting and installation techniques.
5. Use only tools specifically designed for plastic pipe and fittings.
6. Work in a well-ventilated area. Ensure that there is proper ventilation when applying primers and cements and/or soldering materials.
7. Wear protective gloves. PVA-coated protective gloves are recommended when applying solvent cement. If hands contact solvent cement, use a waterless, abrasive soap to remove all residue.
8. When solvent cementing, avoid sources of heat or open flame. **DO NOT** smoke while handling solvent cement.
9. Keep work areas clean. Cluttered areas and slippery floors can create hazardous working conditions.
10. Wear hearing protection. Protect your hearing if you are exposed to long periods of very noisy job-site operations.
11. Keep visitors away. All visitors should be kept a safe distance away from the work area.
12. Follow all manufacturers' recommended precautions when cutting or sawing pipes, or when using any heat, flame, or power tools.

MODEL CODES

Spears® CPVC products meet ASTM D 2846 requirements, as referenced in the current version of the following model codes.

Code	Organization
BOCA National Plumbing Code	Building Officials and Code Administrators International, Inc.
CABO 1- and 2-Family Dwelling Code	Council of American Building Officials
Canadian Plumbing Code	National Research Council, Canada
International Plumbing Code	BOCA, ICBO, SBCCI
National Standard Plumbing Code	National Association of Plumbing-Heating-Cooling Contractors
Standard Plumbing Code	Southern Building Code Congress International Inc.
Uniform Plumbing Code	International Association of Plumbing and Mechanical Officials

LISTING AGENCIES

Standard	Organization
Standards 14 and 61	NSF International (ANSI/NSF®)

HANDLING AND STORAGE

Spears® CPVC products resist attack from a large group of chemicals that are corrosive to metallic piping. However, care must be taken to avoid contact with chemicals that are harmful to CPVC. Specific chemicals, or chemical vapors, that contact CPVC can weaken or damage the system. Consult with Spears® before using these CPVC products with any questionable materials.

⚠ WARNING

- **DO NOT expose Spears® CPVC products to edible oils, esters, ketones, or petroleum-based products, such as: cutting oils; packing oils; traditional pipe thread paste or dopes; and certain lubricants. Consult with Spears ® before using certain chemicals with these CPVC products.**

Failure to follow this instruction could cause product/system damage, resulting in serious personal injury and/or property damage.

Spears® recommends that CPVC products be stored indoors. If storing outdoors, these products must be covered with a non-transparent material to prevent extended sunlight exposure. Brief exposure to direct sunlight on the job site may result in color fade, but it will not affect the material's physical properties. Spears® CPVC fittings should be stored in their original containers to keep them free from dirt and to help reduce the possibility of damage.

⚠ WARNING

- **Spears® CPVC products must not be subjected to prolonged sunlight exposure.**
- **For outdoor storage, products must be stored in their original shipping containers, or they must be covered with a non-transparent material.**

Failure to follow this instruction could cause product/system damage, resulting in serious personal injury and/or property damage.

Reasonable care must be exercised in handling Spears® CPVC products. Do not drop these products or allow anything to drop on them. If improper handling results in scratches, splits, or gouges, the damaged fitting or section of piping must be discarded.

SYSTEM LISTINGS, USAGE, AND STANDARDS

Penetrating Fire-Rated Walls and Partitions

Spears® CPVC products can be used within fire-rated buildings, provided all penetrations of fire barriers are constructed so that the fire rating of the barrier is not compromised. Most codes accept penetration sealing systems or devices that are UL Listed or have passed the appropriate ASTM E 119 or E 814 tests. The PPFA manual, "Plastic Pipe in Fire Restrictive Construction" (NER370), provides more information and lists the applicable test reports. In addition, reference can be made to the current issue of the "Underwriters Laboratories Inc. Directories of Fire Resistance – Vol. II" or the "WHI Certification Listings." Before starting an installation, always consult the building codes and local authority having jurisdiction.

⚠ WARNING

- **Some f re-stopping systems contain chemicals that can damage CPVC products. Always consult with Spears® and the f re-stop manufacturer concerning compatibility with CPVC products.**

Failure to follow this instruction could cause product/system damage, resulting in serious personal injury and/or property damage.

Underslab Installations

Spears® CPVC products are approved for underslab installations (with joints) in all model-plumbing codes. When performing underslab installations, it is important to support the pipe evenly on a smooth surface. The bedding and backfill should be sand or clean soil that is free from sharp rocks and other debris that could damage the pipe.

Underslab installations that contain joints must be pressure tested before pouring the slab. **NOTE:** IAPMO IS 2098, "Installation Standard for CPVC Solvent Cemented Hot and Cold Water Distribution Systems," requires a test at 150 psi for 2 hours. The pipe should be sleeved where it penetrates the slab, along with construction joints within the slab.

Spears® CPVC products can be used with pipe manufactured in accordance with ASTM D 2846, which is available in coils for underslab installations. When turning coiled piping up through a slab, into walls, etc., make sure the piping does not kink. Sections of pipe that contain kinks must be cut out and replaced.

Freeze Protection/Sunlight Exposure

CPVC piping must be protected from freezing in all installation locations. Attention shall be paid to local insulating techniques and codes that require a particular method. Use only methods and materials suitable for use with CPVC piping. Where freezing is not an issue, CPVC shall not be installed so as to be subject to direct sunlight after installation and not installed on the surface of a building, unless protected by a covering or a chemically compatible paint, such as water based Latex.

Hose Bibb Installation

Hose bibbs are to be connected only to metal system components which are adequately anchored to the building structure. CPVC plastic systems must terminate in the wall.

Water Heater Connections

Before attempting to use Spears® CPVC products in water heater connections, determine if local plumbing codes contain detailed requirements for connections to gas or electric storage-type heaters. **DO NOT** use Spears® CPVC products with commercial-type, non-storage water heaters.

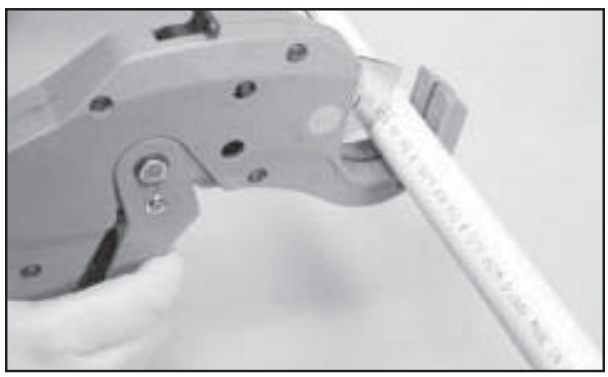
For areas where local plumbing codes do not have requirements, the following information can be used as a guide for water heater connections:

- On electric water heaters, CPVC can be joined directly to the heater, using metal-to-CPVC transition fittings.
- On high-efficiency gas water heaters that use plastic vent piping, CPVC can be joined directly to the heater in the same way as an electric water-heater connection.
- On all other gas water heaters, there should be at least 6" of clearance between the exhaust flue and any CPVC piping. A minimum of 6" metallic pipe should connect directly to the heater so that the CPVC piping cannot be damaged by the buildup of excessive, radiant heat from the flue.
- A temperature/pressure relief valve should be installed so that the sensing element contacts the water at the top of the heater.
- Spears® CPVC products are approved by all model codes for use as relief-valve drain lines. A metal-to-CPVC transition fitting should be used to connect the piping to the relief valve. Then, the piping should be continued to the outlet. Both horizontal and vertical pressure relief drain should be supported every 3 feet.
- For horizontal runs, slope the piping toward the outlet. Support the piping at 3-foot centers or closer. The piping must discharge to the atmosphere at an approved location.
- Instantaneous water heaters (i.e., under sink units) require at least 6" of metallic pipe connected to heater inlet and no CVPC installed down stream.

BASIC JOINT ASSEMBLY

Cutting the Pipe

CPVC piping can be cut easily with a ratchet cutter, wheel-type plastic piping cutter, a power saw, or any other fine-tooth saw.



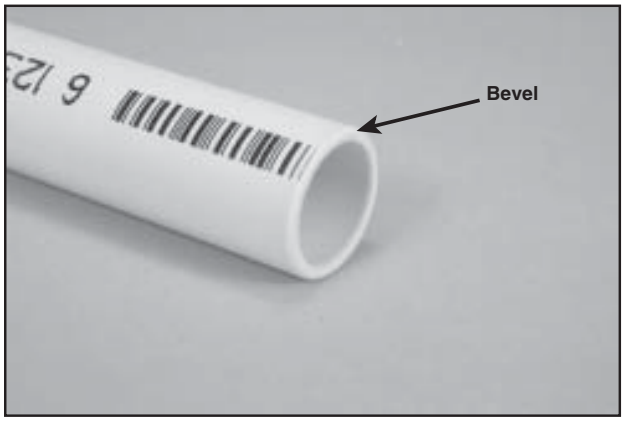
Be careful not to split the pipe if using a ratchet-type cutter, especially in temperatures below 50°F. If any damage or cracking is evident, cut off at least 2" of the pipe beyond any visible crack.

It is important that the cutting tools being used are designed for plastic piping. To ensure that the pipe is cut square, use a miter box when cutting the pipe with a saw. Cutting the pipe as square as possible provides the maximum bonding surface area.

Deburring

Burrs and filings can prevent contact between the pipe and the fitting during assembly and must be removed from the outside and the inside of the pipe. A chamfering tool or file is suitable for this purpose (refer to photos below).

A slight bevel must be placed at the end of the pipe, as shown below. A slight bevel will ease the entry of the pipe into the socket and minimize the chance of cement being wiped off the fitting.



Fitting Preparation

Using a clean, dry rag, wipe any loose dirt and moisture from the fitting's socket and pipe end. Moisture can slow the cure time, and at this stage of assembly, excessive moisture can reduce joint strength.

⚠ WARNING

- **Before assembling any Spears® CPVC products, inspect all components for cuts, scratches, gouges, split ends, or any other irregularities that have occurred during shipping and handling.**

Failure to follow this instruction could cause joint/system failure, resulting in serious personal injury and/or property damage.

Check all mating components to ensure that tolerances and engagements are compatible. **DO NOT** use any components that appear irregular or do not fit properly. Contact Spears® regarding any questions about usability.

Check the dry fit of the pipe and fitting. The pipe should enter the fitting's socket easily 1/4 - 3/4 of the way.

⚠ WARNING

- **Always apply a second coat of cement to the pipe for joints that are 1-1/4 inch and larger.**

Failure to follow these instruction could cause joint/system failure, resulting in serious personal injury and/or property damage.

SOLVENT CEMENTING PROCEDURES

Verify the expiration date located on the solvent cement container. The cement can be used for a period of 2 years from the date stamped on the container. When cementing pipe and fittings in extremely cold temperatures, make sure the cement has not "JELLED." Jelled or expired cement must be discarded in an environmentally friendly fashion, in accordance with local regulations. To prolong the life of solvent cement, keep the containers tightly closed when not in use, and cover the container as much as possible during use. If an unopened solvent cement container is subjected to freezing temperatures, the cement may become extremely thick. Place the closed container in a room temperature area where, after a short time period, the cement will return to a usable condition. **DO NOT** attempt to heat solvent cement.

⚠ WARNING

- **Before assembling any Spears® CPVC products, verify that the solvent cement is within 2 years of the date stamped on the can and that it does not have a "JELLED" appearance. Jelled or expired solvent cement will not provide the strength needed to make a proper joint.**

Failure to follow these instructions could cause joint/system failure, resulting in serious personal injury and/or property damage.

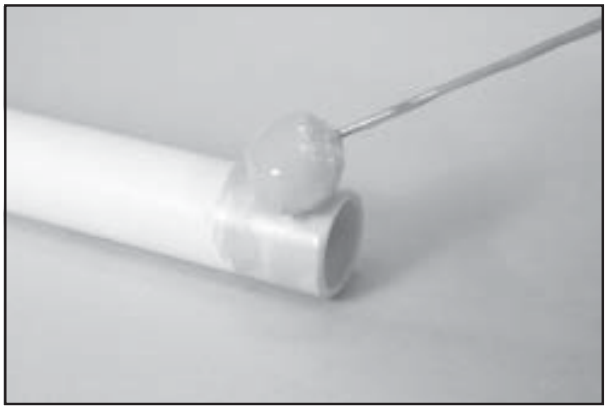
The cement must be applied when the pipes and fittings are clean and free from any moisture and debris.

USING AN APPLICATOR OR NATURAL BRISTLE BRUSH THAT IS AT LEAST 1/2 THE SIZE OF THE PIPE DIAMETER, WORK THE CEMENT INTO THE JOINING SURFACES USING A CONTINUOUS, CIRCULAR MOTION.

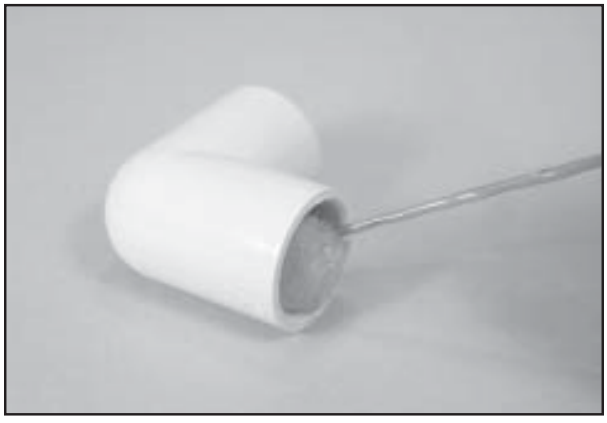
Apply the cement in the following sequence, as pictured below:

1. Apply a coat to the pipe
2. Apply a coat to the fitting
3. Apply a second coat to the pipe, if required

Avoid puddling the cement on or within the fitting and pipe. Puddled cement causes excess softening and damage to the CPVC material.



Apply a heavy, even coat of cement to the outside of the pipe end. Work the cement into the joining surfaces using a continuous, circular motion.



Apply a medium coat to the fitting socket. Avoid getting cement in other sockets or threaded connections.

A second application of cement must be applied to the pipe end if a 1-1/4 inch and larger joint is being prepared.

⚠ WARNING

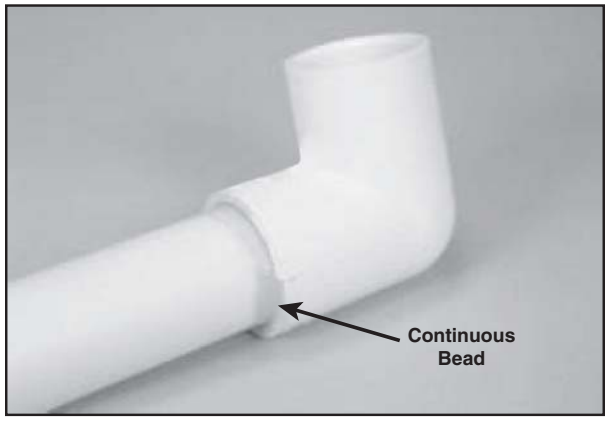
- **Always apply a second coat of cement to the pipe for joints that are 1-1/4 inch and larger.**
- **Avoid puddling the cement on the pipe or within the f tting.**
- **Avoid getting cement into other sockets or threaded connections.**

Failure to follow these instructions could cause joint/system failure, resulting in serious personal injury and/or property damage.

Joint Assembly

Immediately insert the pipe into the fitting's socket while rotating the pipe 1/4 turn. Align the fitting in the proper orientation at this time. Make sure the pipe bottoms out at the fitting's stop.

Hold the assembly for 10 to 15 seconds to ensure initial bonding occurs. A bead of cement must be present around the pipe and fitting juncture. If this bead is not continuous around the socket's shoulder, insufficient cement was applied.



If insufficient cement was applied, the joint must be cut out and discarded, and a new joint must be assembled.

Any cement, in excess of the bead, can be wiped off with a dry, clean rag.

Set and Cure Times

- The set and cure times for CPVC solvent cement depend on pipe size, temperature, relative humidity, and tightness of fit. Drying time is faster for drier environments, smaller pipe sizes, high temperatures, and tighter fits.
- Special care must be taken when assembling Spears® CPVC products in low temperatures (below 40°F) or high temperatures (above 80°F).
- Extra set and handling times must be allowed in colder temperatures. When cementing pipe and fittings in cold temperatures, make sure the cement has not "JELLED." Jelled cement must be discarded.
- In higher temperatures, make sure both surfaces to be joined are still wet with cement during assembly.
- The assembly must be allowed to set, without any stress on the joint, for 5 minutes.
- Following the initial set period, the assembly can be handled carefully by avoiding stress on the joint.

Refer to the following table for minimum cure times before pressure testing.

MINIMUM CURE TIMES FOR SOLVENT CEMENT BEFORE PRESSURE TESTING

150-psi Maximum Test Pressure

Piping Size	*Ambient Temperature During Cure (Relative Humidity 60% or Less)*		
Nominal Diameter inches	*60°F to 100°F*	*40°F to 60°F*	*0°F to 40°F*
1/2	*15 minutes*	*20 minutes*	*30 minutes*
3/4	*15 minutes*	*20 minutes*	*30 minutes*
1	*15 minutes*	*20 minutes*	*30 minutes*
1-1/4	*15 minutes*	*20 minutes*	*30 minutes*
1-1/2	*30 minutes*	*45 minutes*	*1 hour*
2	*30 minutes*	*45 minutes*	*1 hour*

⚠ WARNING

- Make sure the cement is allowed to cure, according to the times listed in the chart, for the pipe size and ambient temperature.

Failure to follow this instruction could cause joint/system failure, resulting in serious personal injury and/or property damage.

TRANSITION JOINTS AND FITTINGS

CPVC pipe can be connected to copper, brass, valves, and other materials using a variety of transition fittings including unions, compression fittings, specially reinforced male and female adapters, flanged joints, grooved joints and other readily available transition fittings.

Do not thread CPVC pipe and do not use regular CPVC female threaded fittings. Regular CPVC male threaded fitings shall only be used on cold water applications. Spears® Special Reinforced Male Adapters, CPVC Lined Brass-Threaded Male Adapters, Special Reinforced Female Adapters and Gasket Sealed Brass-Threaded Female Adapters are recommended for hot water applications and threaded transitions to metal pipe. All approved threaded CPVC joints must be accessible. (See also Water Heater Connections section for additional installation details.)

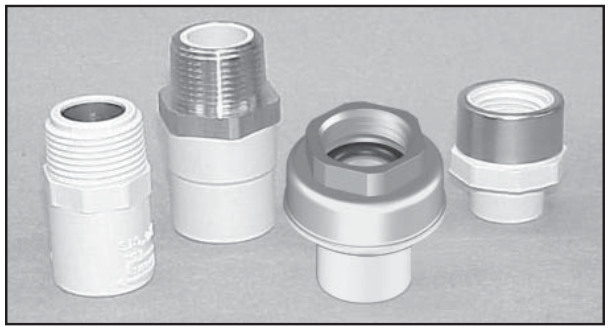
Standard compression fittings with brass ferrules can be used; however, PTFE tape must be applied over the brass ferrule to compensate for the dissimilar thermal expansion rates between the brass and CPVC. Caution must be exercised to prevent over tightening of compression fittings. Use extreme care when soldering any metal system to prevent flame contact with or heat distortion in CPVC pipe and fittings.

Assembling Gasket Sealed Brass-Threaded Female Adapter Connections

Threaded connections using Spears® Gasket Sealed Brass-Threaded Female Adapters with O-ring seal at the base of the fitting thread are designed to be assembled without thread sealants. **DO NOT** use ANY thread sealants, tape or paste, in these joints. Thread hand tight and tighten snug. This produces a leak-free, reliable seal without problems associated with incompatible thread pastes or improperly applied tape (TFE) sealants.

⚠ WARNING

- **DO NOT** use ANY thread sealants on Gasket Sealed Brass-Threaded Female Adapter. Sealants, especially tape (TFE), may prevent proper joint make-up and result in leaks.
- **DO NOT** over tighten. Wrench over tightening of joints my result in f tting damage.



Assembling Standard Threaded Connections

Threaded connections using standard tapered threads (including Spears® Special Reinforced Female Adapters, Special Reinforced Male Adapters, Brass-Threaded and Regular Male Adapters) require the application of a thread sealant that is compatible with CPVC material. Spears® recommends the use of Spears® **Blue 75** Thread Sealant. **DO NOT** use ANY thread sealants on Spears® Gasket Sealed Brass-Threaded Female Adapters (see above).

⚠ WARNING

- Use only thread sealants recommended by Spears ®. Other joint compounds or pastes may contain substances that could cause stress cracks in CPVC or brass materials.

Failure to follow these instructions could cause joint/system failure, resulting in serious personal injury and/or property damage.

Apply sealant to the male threads only. Make sure all threads are covered. **DO NOT** clog the waterway with excess sealant.

If PTFE tape is used, Spears® recommends a thickness of at least .0025" that meets or exceeds military specification, MIL-T-27730A. **DO NOT** use a combination of tape and thread sealant on the same joint.

Apply PTFE tape in the direction of the threads by starting with the first full thread and continuing over the entire thread length. Make sure all threads are covered. Generally, 2 - 3 wraps are sufficient to produce a watertight connection.

⚠ WARNING

- **DO NOT** use more than f ve wraps of PTFE tape. Excessive tape can cause bunching, resulting in fractures of the plastic f tting or the brass insert due to excessive hoop stress.

Failure to follow these instructions could cause joint/system failure, resulting in serious personal injury and/or property damage.

DO NOT over-torque any threaded connections. Generally, one to two turns beyond finger-tight are required for a threaded connection. Factory testing has indicated that 10 - 25 ft-lbs of torque is adequate to obtain a leak-free seal. Use only a smooth-jawed wrench or strap wrench when installing threaded connections.

⚠ WARNING

- **Tools with teeth MUST NEVER be applied to any part of a CPVC fitting. The teeth can damage and weaken CPVC material.**

Failure to follow these instructions could cause joint/system failure, resulting in serious personal injury and/or property damage.

ENGINEERING DATA SECTION

Pipe and Fitting Specifications

CPVC pipe is produced in SDR 11 dimensions using copper tube size (CTS) outside diameters, as specified in ASTM D 2846. Spears® fittings are produced in SDR 11 dimensions, in accordance with ASTM D 2846. The combined pipe and fitting system is NSF listed for potable water. In addition, the system meets test requirements of the Uniform Building Code.

SDR 11 (Ref. ASTM D 2846)			
Size Nominal inches	Average OD inches	Average ID inches	Weight lbs/ft
1/2	0.625	0.469	.090
3/4	0.875	0.695	.149
1	1.125	0.901	.240
1-1/4	1.375	1.105	.353
1-1/2	1.625	1.309	.489
2	2.125	1.716	.829

Pressure Ratings

The Spears® CPVC system, including the joint, has a continuous rated working pressure of 100 psi at 180°F or 400 psi at 73°F. CPVC systems have the capability to withstand short-term temperature/pressure increases above 100 psi at 180°F, as evidenced by their ability to consistently surpass the 48 hour, 150 psi Uniform Building Code test at 210°F. CPVC pipe should not be used where temperatures will consistently exceed 180°F.

Pressure-Temperature De-Rating Factors For CTS CPVC 4120 SDR 11 Piping Systems

°F	Factor	Rating, PSI
73	1.00	400
80	1.00	400
90	0.91	360
100	0.82	325
120	0.65	260
140	0.50	200
160	0.40	160
180	0.25	100

The pressure de-rating factor is the same for all pipe sizes.

Example: Determine the maximum allowable operating pressure for a CTS CPVC piping system with an operating temperature of 140°F. Using de-rating factor of 0.50 for 140° From the above chart, the maximum allowable operating pressure = 400 x 0.50 = 200 psi.

Hydraulic Design

Friction Loss – Friction loss through CPVC pipe is most commonly obtained by the use of the Hazen-Williams equations as expressed below for water:

$$f = .2083 \times \left(\frac{100}{C}\right)^{1.852} \times \frac{G^{1.852}}{di^{4.8655}}$$

where:

f = friction head of feet of water per 100' for the specific pipe size and I.D.

C = a constant for internal pipe roughness. 150 is the commonly accepted value for CPVC pipe.

G = flow rate of gallons per minute (U.S. gallons).

di = inside diameter of pipe in inches.

Compared to other materials on construction for pipe, thermoplastic pipe smoothness remains relatively constant throughout its service life.

Flow Velocities – Velocities for water in feet per second at different GPM's and pipe inside diameters can be calculated as follows:

$$V = .3208\frac{G}{A}$$

where:

V = velocity in feet per second
G = gallons per minute
A = inside cross sectional area in square inches

While these systems can operate with flow velocities in excess of 10 feet per second, a maximum of 8 feet per second velocity is recommended to extend system life.

The following table lists Friction Loss and Flow Velocities for SDR 11 CTS CPVC Pipe at different flow rates.

FRICTION LOSS AND FLOW VELOCITY FOR SDR 11 CTS CPVC PIPE

Friction head and friction loss are per 100 feet of pipe.

Gallons Per Minute	1/2 in.			3/4 in.			1 in.			1-1/4 in.			1-1/2 in.			2 in.		
	Velocity Feet Per Second	Head Loss Feet of Water Per 100 Ft.	Pressure Loss PSI Per 100 Ft.	Velocity Feet Per Second	Head Loss Feet of Water Per 100 Ft.	Pressure Loss PSI Per 100 Ft.	Velocity Feet Per Second	Head Loss Feet of Water Per 100 Ft.	Pressure Loss PSI Per 100 Ft.	Velocity Feet Per Second	Head Loss Feet of Water Per 100 Ft.	Pressure Loss PSI Per 100 Ft.	Velocity Feet Per Second	Head Loss Feet of Water Per 100 Ft.	Pressure Loss PSI Per 100 Ft.	Velocity Feet Per Second	Head Loss Feet of Water Per 100 Ft.	Pressure Loss PSI Per 100 Ft.
1	1.71	3.19	1.38	0.80	0.50	0.22	0.48	0.15	0.06									
2	3.42	11.53	5.00	1.60	1.82	0.79	0.96	0.53	0.23									
3	5.13	24.43	10.59	2.40	3.85	1.67	1.44	1.12	0.49									
4	6.83	41.62	18.04	3.20	6.55	2.84	1.93	1.91	0.83									
5	8.54	62.91	27.27	4.00	9.91	4.29	2.41	2.89	1.25									
6	10.25	88.12	38.23	4.79	13.89	6.02	2.89	4.05	1.76									
7	11.96	117.32	50.86	5.59	18.47	8.01	3.37	5.39	2.34									
8	13.67	150.23	65.13	6.39	23.66	10.26	3.85	6.90	2.99									
9	15.38	186.85	81.00	7.19	29.42	12.76	4.33	8.58	3.72									
10	17.08	227.11	98.45	7.99	35.76	15.50	4.82	10.43	4.52	3.23	3.94	1.71	2.31	1.75	0.76	1.35	0.49	0.21
15				11.99	75.78	32.85	7.22	22.11	9.58	4.84	8.35	3.62	3.47	3.71	1.61	2.03	1.03	0.45
20				15.98	129.11	55.97	9.63	37.67	16.33	6.46	14.23	6.17	4.63	6.33	2.74	2.70	1.76	0.76
25							12.04	56.94	24.69	8.07	21.51	9.33	5.78	9.56	4.15	3.38	2.66	1.15
30							14.45	79.82	34.60	9.68	30.15	13.07	6.94	13.40	5.81	4.05	3.73	1.62
35							16.86	106.19	46.03	11.30	40.11	17.39	8.09	17.83	7.73	4.73	4.96	2.15
40										12.91	51.37	22.27	9.25	22.83	9.90	5.40	6.35	2.75
45										14.52	63.89	27.70	10.41	28.40	12.31	6.08	7.89	3.42
50										16.14	77.66	33.66	11.56	34.52	14.96	6.75	9.60	4.16
55										17.75	92.65	40.16	12.72	41.18	17.85	7.43	11.45	4.96
60													13.88	48.38	20.97	8.10	13.45	5.83
70													16.19	64.37	27.90	9.46	17.89	7.76
80																10.61	22.91	9.93
90																12.16	28.50	12.35
100																13.51	34.64	15.02
125																16.89	52.37	22.70

Hanger/Support Spacing

Since CPVC pipe is rigid, it requires fewer supports than flexible, plastic systems.

Vertical runs should be supported at each level so that the weight of the run is not placed on a fitting or a joint.

Horizontal runs require support every 3 feet for 1/2" - 1" diameter pipe and every 4 feet for 1-1/4" and larger diameters. Support spacing should be in accordance with applicable local codes.

Horizontal runs must be braced so that the stress loads (caused by bending or snaking) will not be placed on a fitting or a joint. Hanger support spacing information is shown in Table A.

Spears® recommends that hangers, designed for supporting CPVC, be used to support CPVC piping. However, some hangers, designed for steel pipe, may be used if their suitability is clearly established. These hangers must be selected to accommodate the specific pipe size. In addition, they cannot contain rough or sharp edges that contact the pipe, and they must not bind the pipe from axial movement that is caused by expansion and contraction.

Table A - Hangers and Supports
Reference CPVC ASTM D 2846 Systems

Pipe Size (CTS) Nominal inches	Maximum Support Spacing Feet	Water-filled Weight lbs/ft
1/2	3	0.153
3/4	3	0.294
1	3	0.486
1-1/4	4	0.726
1-1/2	4	1.014
2	4	1.733

⚠ WARNING

Horizontal runs and vertical risers of CPVC piping require additional support and provision for expansion and contraction, compared to metal piping systems. Systems must be designed and installed by qualified personnel, in accordance with the properties and capabilities of the material.

Failure to follow these instructions could causes joint or system failure, resulting in serious personal injury and/or property damage.

Material Properties

Table I
Modulus of Elasticity and Stress vs. Temperature

Property	Temperature °F							
	73	80	90	100	110	120	140	150
Modulus of Elasticity "E" x 10^5 psi	3.900	3.840	3.780	3.700	3.460	3.210	3.050	2.840
Working Stress "S" psi	1900	1785	1630	1485	1345	1270	950	875

Table II
Physical and Thermal Properties

Property		CPVC	ASTM
Specific Gravity	"Sp. Gr."	1.51	D 792
IZOD Impact Strength (ft-lbs/inch of notch)		5.0	D 256A
Modulus of Elasticity, psi	"E"	3.9 x10^5	D 638
Ultimate Tensile Strength, psi		8,000	D 638
Compressive Strength, psi	"σ"	9,000	D 695
Poisson's Ration	"υ"	.35 - .38	–
Working Stress @ 73°F, psi	"S"	1,900	D 1598
Hazen-Williams "C" Factor	"C"	150	–
Coefficient of Linear Expansion in/(in °F)	"e"	3.2 x 10^{-5}	D 696
Thermal Conductivity BTU/(hr °F ft/in^2)	"k"	0.95	C 177
Upper Temperature Limit	"°F"	205	
Flammability		Flame Retardant	
Electrical Conductivity		Non-Conductor	

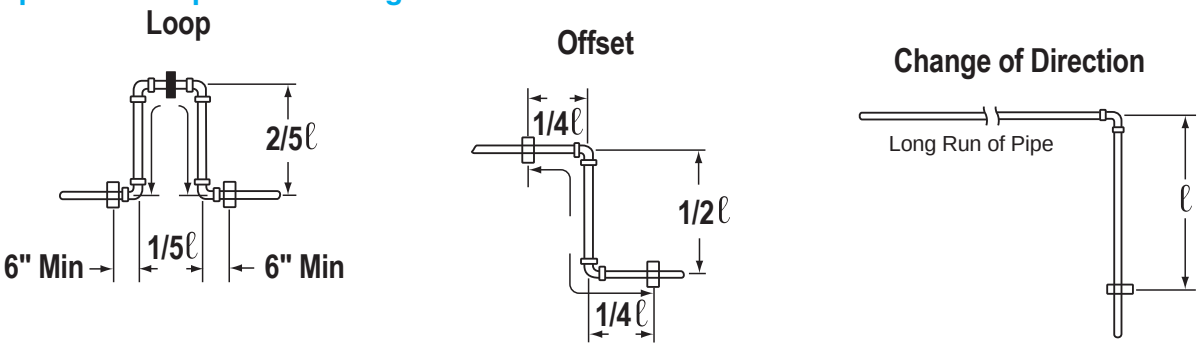
Expansion and Contraction

⚠ WARNING

Horizontal runs and vertical risers of CPVC piping require additional support and provision for expansion and contraction, compared to metal piping systems. Systems must be designed and installed by qualif ed personnel, in accordance with the properties and capabilities of the material.

Failure to follow these instructions could causes joint or system failure, resulting in serious personal injury and/or property damage.

Expansion Loop Offset Configurations



Hangers or guides should only be placed in the loop, offset or change of direction as indicated above. Piping supports should restrict lateral movement and should direct axial movement into the expansion loop.

CPVC, like all piping materials, expands and contracts with changes in temperature. The coefficient of linear expansion for CPVC is 3.2 X 10^{-5} in./in./°F. A 25°F change in temperature will cause an expansion of 1" for a 100-ft straight length. For most installation and operating conditions, expansion and contraction can be accommodated at changes of direction. Based on the following chart, an offset or loop is required on a long, straight run.

Table III: Thermal Expansion in inches

Temp Change ΔT °F	Length of Run in feet													
	5	10	15	20	25	30	35	40	45	50	70	90	120	160
	Thermal Expansion ΔL (inches)													
20	0.04	0.08	0.12	0.15	0.19	0.23	0.27	0.31	0.35	0.38	0.54	0.69	0.92	1.23
30	0.06	0.12	0.17	0.23	0.29	0.35	0.40	0.46	0.52	0.58	0.81	1.04	1.38	1.84
40	0.08	0.15	0.23	0.31	0.38	0.46	0.54	0.61	0.69	0.77	1.08	1.38	1.84	2.46
50	0.10	0.19	0.29	0.38	0.48	0.58	0.67	0.77	0.86	0.96	1.34	1.73	2.30	3.07
60	0.12	0.23	0.35	0.46	0.58	0.69	0.81	0.92	1.04	1.15	1.61	2.07	2.76	3.69
70	0.13	0.27	0.40	0.54	0.67	0.81	0.94	1.08	1.21	1.34	1.88	2.42	3.23	4.30
80	0.15	0.31	0.46	0.61	0.77	0.92	1.08	1.23	1.38	1.54	2.15	2.76	3.69	4.92
90	0.17	0.35	0.52	0.69	0.86	1.04	1.21	1.38	1.56	1.73	2.42	3.11	4.15	5.53
100	0.19	0.38	0.58	0.77	0.96	1.15	1.34	1.54	1.73	1.92	2.69	3.46	4.61	6.14

ΔL = 12 el (ΔT)
e = 3.2 X 10^{-5} in./in./°F (Coefficient of Linear Expansion – Table II)
L = Length of Run in feet
ΔT = Temperature Change in °F

Example: How much will a 40-ft run of 2" CPVC pipe expand if the expected ambient temperature will range from 45°F to 85°F?
ΔL = 12 el (ΔT)
ΔL = 12 (.000032) x 40 x 40
ΔL = .61"

Table IV: Expansion Loop Length in inches

Nominal Pipe Size	Avg. O.D.	Length of Run in feet													
		5	10	15	20	25	30	35	40	45	50	70	90	120	160
		Length of Loop (inches) Temperature Change (ΔT) = 100°F - 30°F = 70°F													
1/2	0.625	6	8	10	11	13	14	15	16	17	18	21	24	27	32
3/4	0.875	7	9	11	13	15	16	18	19	20	21	25	28	32	38
1	1.125	8	11	13	15	17	18	20	21	23	24	28	32	37	43
1-1/4	1.375	8	12	14	17	19	20	22	24	25	26	31	35	41	47
1-1/2	1.625	9	13	16	18	20	22	24	26	27	29	34	38	44	51
2	2.125	10	15	18	21	23	25	27	29	31	33	39	44	51	58

Note: Table IV is based on 70°F temperature change. Values rounded.

$$l = \sqrt{\frac{3ED(\Delta L)}{2S}}$$

l = Length of Expansion Loop in inches
E = Modulus of Elasticity at 100°F (Table I)
D = Average OD of Pipe
ΔL = Change in Length of Pipe Due to Change in Temperature (Table III)
S = Working Stress at 100°F (Table I)

Example: How much expansion can be expected in a 200-ft run of 2" CPVC pipe? How long should the expansion loop be to compensate for the expansion (the expected temperature range will be from 40°F to 110°F)?

First Find:

ΔT = (Change in Temperature)
ΔT = T2 - T1
ΔT = 110°F - 40°F
ΔT = 70°F

To Find

ΔL = (Amount of Expansion in inches from Table III)
ΔL = ΔL of 160 ft with a ΔT of 70°F + ΔL of 40 ft. with a ΔT of 70°F
ΔL = 4.30" + 1.08"
ΔL = 5.38"

— OR —

ΔL = 12 eL (ΔT)
e = 3.2×10^{-5} (from Table II)
L = Length of Run in Feet
ΔT = Change in Temperature in °F
ΔL = 12 x 0.00032 x 200 x 70
ΔL = 5.38"

$$l = \sqrt{\frac{3ED(\Delta L)}{2S}}$$

l = Length of Expansion Loop in inches
E = Modulus of Elasticity at 110°F (Refer to Table I)
D = Average OD of Pipe
ΔL = Change in Length of Pipe Due to Change in Temperature
S = Working Stress at 110°F (Refer to Table I)

To find the length of the expansion loop or offset in inches:

$$l = \sqrt{\frac{3ED(\Delta L)}{2S}}$$

l = Length of Expansion Loop in inches
E = Modulus of Elasticity at Maximum Temperature from Table I
D = Average Outside Diameter of the Pipe from Table IV
S = Working Stress at Maximum Temperature from Table I)
ΔL = Change in Length of Pipe Due to Change in Temperature from Table III

$$l = \sqrt{\frac{3 \quad 346{,}000 \quad 2.125 \times 5.38}{2 \times 1345}}$$

$$l = \sqrt{4412}$$

l = 66.4

CPVC Piping System Guidelines for Commercial Hot & Cold Water Distribution Applications

EverTUFF® CPVC Systems provide highly sustainable, cost effective alternatives to metal piping in commercial multi-story applications for hot and cold water distribution. EverTUFF® CPVC pipe and fittings are available for most any size project using Copper Tube Size (CTS) CPVC in sizes 1/2" through 2" and in supplemental Schedule 40 and Schedule 80 CPVC Iron Pipe Size (IPS) for sizes 2-1/2" through 12".

EverTUFF® CPVC Systems meet applicable code requirements and are fully suitable for use in multi-story installations where adequate design and installation practices have been utilized. The following overview includes, but is not limited to, general considerations that *must* be addressed in all CPVC system designs and installations.

WARNING: Failure to follow proper industry established design and installation practices and requirements for CPVC systems may result in system failure, severe personal injury and/or property damage. The following are general guidelines for issues that must be addressed with use of CPVC in commercial water distribution systems. All design criteria applicable to thermoplastics should be reviewed and approved by a licensed engineering professional.

Product Capability & Ratings

EverTUFF® CPVC CTS piping is produced in Standard Dimensional Ratio (SDR) of 11, where the ratio of wall thickness to outside diameter of the pipe is a constant of 11. This produces the same pressure rating for all sizes.

Available Sizes:	1/2", 3/4", 1", 1-1/4", 1-1/2", 2"
Pressure Rating:	100 psi @ 180°F
Applicable Standard:	ASTM D 2846 for CPVC Copper Tube Size (CTS) Hot & Cold Water Distribution Systems
Potable Water Certification:	ANSI/NSF® Standard 61

EverTUFF® Industrial CPVC IPS piping produced in Schedule 40 or Schedule 80 dimensions can be used for larger pipe sizes. Pressure ratings will vary according to diameter and water temperature. The appropriate Schedule piping (40 or 80) must be selected according to application and system requirements.

Supplemental Available Sizes: 2-1/2", 3", 4", 6", 8", 10", 12"

Pressure Ratings:	According to pipe size and temperature; specified in ASTM F 441
Applicable Standard:	Pipe - ASTM F 441 for CPVC Schedule 40 & Schedule 80 Pipe Fittings – ASTM F 439 for CPVC Schedule 80 Fittings
Potable Water Certification:	ANSI/NSF® Standard 61

Piping Support & Spacing

Hanger and support spacing for horizontal runs of Spears® EverTUFF® CPVC piping varies according to pipe diameter and water temperature. Local code requirements generally affect minimum spacing for CPVC piping and must be verified. Additional support should be provided for valves, flanges, expansion joints or other sources of load concentration. Hangers and straps designed for CPVC should be used, but some hangers designed for steel pipe can be used if suitable. Use only smooth straps or hangers that do not place rough or sharp edges against the pipe. Do not anchor CPVC piping too tight to supports in order to allow movement caused by expansion and contraction, bind or restrict movement.

Vertical runs (risers) must be properly supported to prevent excessive loading on the lower fitting or other stress concentration areas. Maintain vertical piping in straight alignment with supports at each floor level, or at 10 feet (3.05 m) intervals, whichever is less. Hangers and clamps suitable for this purpose include riser clamps or double bolt type clamps that provide a floating system which allows pipe movement due to thermal expansion and contraction when installed. Clamps and hangers must not compress, distort, cut, abrade or exert compressive stresses on the pipe; the use of riser clamps that utilize compression to support the pipe weight are not recommended.

Wall Penetration

Where Spears® EverTUFF® CPVC pipe passes through metal studs, protection must be used to prevent abrasion and reduce noise. Plastic insulators, rubber grommets, pipe insulation or similar devices may be used for this purpose.

Where penetrations of fire barriers are required, Spears® EverTUFF® CPVC piping can be used with Fire–Stop penetration sealing systems approved for use with CPVC. Most codes accept penetration sealing systems or devices that are UL Listed or have passed the appropriate ASTM E 119 or E 84 tests. Before starting an installation, always consult the building codes and local authority having jurisdiction.

Thermal Expansion & Contraction

Expansion and contraction in CPVC thermoplastic systems differs significantly from that of metal systems and can result in major problems if not adequately considered. Spears® EverTUFF® CPVC piping will expand or contract about 1 inch per 50 feet of length with a 50-degree temperature change. This movement must be accommodated in system design or else a system can literally push or pull itself apart. Thermal expansion is a primary concern in hot water lines.

Expansion and contraction expectations must be calculated according to standard industry practices. For most installation and operating conditions, movement accommodation can be made at system changes of direction, through use of use of telescoping expansion joints, an offset or loop on a long straight runs. Telescoping expansion joint needs must be properly calculated and the telescoping units properly aligned and installed. While only one properly sized expansion loop is required in any straight run, two or more properly sized smaller expansion loops can be used to conserve space as required.

Hydraulic Design

Spears® EverTUFF® CPVC piping systems must be sized based on industry standard hydraulic calculations for factors such a friction loss and flow velocity. Surge protection must also be considered.

Friction loss through CPVC pipe is typically determined by the use of the Hazen-Williams equations with a C Factor (internal roughness) of 150. Friction loss and flow velocity tables are also available for both CTS CPVC and Schedule 40 or Schedule 80 IPS CPVC piping.

While hot and cold water CTS CPVC systems can operate with flow velocities of 8 feet per second. A maximum velocity of 5 feet per second is recommended for Schedule 40 or Schedule 80 IPS CPVC systems. System flow velocity should always be maintained close to 5 feet per second in mixed CTS/IPS CPVC systems. Hydraulic designs, and value engineered changes should always be reviewed by a licensed engineering professional.

System Connections

Proper system connections are critical to maintaining system integrity and reliability. It is essential that all installation personnel be thoroughly trained in joining methods.

Solvent Cement Joints are the primary method of making connections between CPVC components. Solvent cements specifically approved to ASTM F 493 for CPVC and for use with ASTM D 2846 systems should be used on CTS CPVC installations. ASTM Standards permit the use of "One-step" (primerless) cements; however, local codes must be checked since some require use of both a primer and cement in CPVC joints. Larger Schedule 40 or Schedule 80 IPS joints should be made using an ASTM F 493 approved CPVC cement and primer. Manufacturer's instructions for cement/primer application, initial set times and applicable cure time in accordance with pipe size and temperature must be followed. Proper sized cement applicators should always be utilized (i.e., no less than 1/2 the pipe diameter). On 6" and larger IPS pipe come-alongs or other mechanical helpers are recommended to assist in joint assembly.

Threaded Transitions to metal systems must be made with appropriate fittings designed for plastic-to-metal connections. Spears® offers a variety of transition fittings including metal threaded adapter and the superior Special Reinforced (SR) Female Plastic Thread fittings for the best transition joints.

The chemical compatibility of any thread sealant, pastes, or lubricants with CPVC must be verified. Spears® recommends the use of Spears® **Blue 75™** Thread Sealant that has been tested for compatibility. If TFE sealant tape is used, it must be selected and applied correctly, according to manufacturer's instructions.

Flanged Connection can be used when properly assembled; a full-faced 1/8" thick elastomer gasket must be used. Flange alignment and system support is critical to prevent adverse stress loads. Flange bolts must **NEVER** be used to draw a flanged system connection together. Flange bolts, nuts, and washers must be properly selected and incrementally tightened in sequence to torque according to flange manufacturer's specifications. Thermoplastic flanges are typically rated at 150 psi for water at 73°F and must be de-rated for systems operating at elevated temperatures (i.e., hot water lines).

Hot Water Heater & Boiler Connections

Connection of CPVC CTS systems to hot water heaters must be made in accordance with code requirements. Typically, 6" metal nipples are required for direct connection to tanks, but approved CPVC CTS piping can be used for connection to temperature/pressure relief valves.

Schedule 80 IPS CPVC Boiler Connections generally *should not* be made directly to the boiler. Most boilers do not have suitable temperature variation control. Connections must assure that the temperature-pressure does not exceed the capability of the CPVC material.

System Pressure Testing

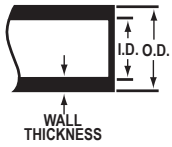
Hydrostatic pressure testing should commence only after all set and cure times for solvent cemented joints have been satisfied. The system should be pressure tested in accordance with local code requirements following industry accepted practices for thermoplastic systems.

Under slab installations that contain joints must be pressure tested before pouring the slab. **NOTE:** IAPMO IS 2098, "Installation Standard for CPVC Solvent Cemented Hot and Cold Water Distribution Systems," requires a test at 150 psi for 2 hours.

In freezing temperatures the system should be adequately purged of water after testing to avoid damage from freezing.

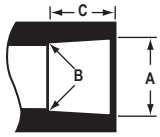
CTS Product Dimensions

CPVC 41, SDR 11 PIPE DIMENSIONS (CTS) ASTM D 2846, D 2846M



Nominal Pipe Size In.	Mean Outside Diameter In.	O. D. Tolerance In.	Minimum Wall Thickness In.
1/2	0.625	± 0.003	0.068
3/4	0.875	± 0.003	0.080
1	1.125	± 0.003	0.102
1-1/4	1.375	± 0.003	0.125
1-1/2	1.625	± 0.004	0.148
2	2.125	± 0.004	0.193

CPVC 41, SDR 11 SOCKET DIMENSIONS (CTS) ASTM D 2846, D 2846M



Nominal Size In.	Diameter			Socket Length Minimum C
	Entrance A	Bottom B	Tolerance In.	
1/2	0.633	0.619	± 0.003	0.500
3/4	0.884	0.870	± 0.003	0.700
1	1.135	1.121	± 0.003	0.900
1-1/4	1.386	1.372	± 0.003	1.100
1-1/2	1.640	1.622	± 0.004	1.300
2	2.141	2.123	± 0.004	1.700

Injection Molded Dimension References:

G = (LAYING LENGTH) intersection of center lines to bottom of socket/thread; 90° elbows, tees, crosses; ± 1/32 inch.
H = Intersection of center lines to face of fitting; 90° elbows, tees, crosses; ± 1/32 inch.
J = Intersection of center lines to bottom of socket/thread; 45° elbows; ± 1/32 inch.
L = Overall length of fittings; ± 1/16 inch.
M = Outside diameter of socket/thread hub; ± 1/16 inch.
N = Socket bottom to socket bottom; couplings; ± 1/16 inch.
W = Height of cap; ± 1/16 inch.

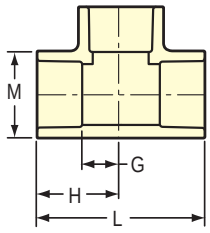
COPPER TUBE SIZE (CTS) CPVC PIPE

Nominal Pipe Size In.	AVG. O.D.	AVG. I.D.	MIN. Wall	MAX. W.P. P.S.I. *	LBS./FT.	Lgths./Carton
1/2	0.625	0.469	0.068	400	.090	50
3/4	0.875	0.695	0.080	400	.149	25
1	1.125	0.901	0.102	400	.240	15
1-1/4	1.375	1.105	0.125	400	.353	10
1-1/2	1.625	1.309	0.148	400	.489	6
2	2.125	1.716	0.193	400	.829	4

Standard Length - 10 Feet • All pipe is packed in boxes sold in carton quantities only.
Pipe has UL 94 V-O rating • * For water, non shock, at 73.4°F with solvent welded joints.

TEE

Socket x Socket x Socket

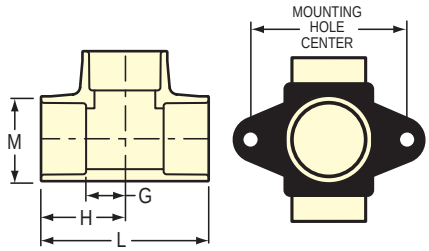


Part Number	Size	G	H	L	M	Approx. Wt. (Lbs.)
4101-005	1/2	13/32	15/16	1-27/32	27/32	.03
4101-007	3/4	17/32	1-1/4	2-1/2	1-3/32	.06
4101-010	1	21/32	1-9/16	3-5/32	1-3/8	.12
4101-012	1-1/4	25/32	1-7/8	3-25/32	1-11/16	.18
4101-015	1-1/2	29/32	2-7/32	4-15/32	1-15/16	.29
4101-020	2	1-5/32	2-7/8	5-25/32	2-9/16	.63

DROP EAR TEE

(Fitting With Bracket)

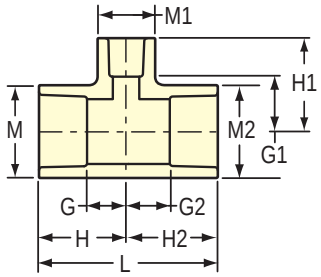
Socket x Socket x Socket



Part Number	Size	G	H	L	M	Mounting Hole Center	Approx. Wt. (Lbs.)
DE4101-005	1/2	13/32	15/16	1-7/8	27/32	1-3/4	.04

REDUCING TEE

Socket x Socket x Socket

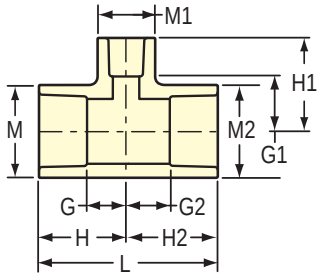


Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4101-074	1/2x1/2x3/4	15/32	13/32	15/32	31/32	1-1/8	31/32	1-15/16	27/32	1-3/32	27/32	.04

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

REDUCING TEE (continued)

Socket x Socket x Socket

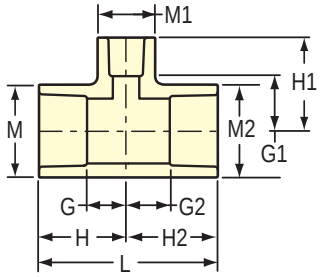


Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4101-094	3/4x1/2x1/2	7/16	17/32	7/16	1-5/32	1-1/32	31/32	2-1/8	1-3/32	27/32	27/32	.05
4101-095	3/4x1/2x3/4	1/2	17/32	19/32	1-7/32	1-1/4	1-1/8	2-11/32	1-3/32	1-3/32	27/32	.06
4101-101	3/4x3/4x1/2	13/32	17/32	13/32	1-1/8	1-1/32	1-1/8	2-1/4	1-3/32	7/8	1-3/32	.05
4101-102[1]	3/4x3/4x1	1-1/8	11/16	1-13/16	1-27/32	1-19/32	1-13/16	3-21/32	1-11/32	1-11/32	1-11/32	.16
4101-120[1]	1x1/2x1/2	11/16	1-5/16	1-1/4	1-19/32	1-27/32	1-25/32	3-3/8	1-11/32	1-11/32	1-11/32	.20
4101-121[1]	1x1/2x3/4	11/16	1-1/8	1-1/4	1-19/32	1-27/32	1-25/32	3-3/8	1-11/32	1-11/32	1-11/32	.18
4101-122[1]	1x1/2x1	11/16	11/16	1-1/4	1-19/32	1-19/32	1-25/32	3-3/8	1-11/32	1-11/32	1-11/32	.15
4101-124[1]	1x3/4x1/2	11/16	1-5/16	1-1/16	1-19/32	1-27/32	1-25/32	3-3/8	1-11/32	1-11/32	1-11/32	.18
4101-125	1x3/4x3/4	17/32	11/16	17/32	1-15/32	1-13/32	1-1/4	2-23/32	1-11/32	1-3/32	1-3/32	.08
4101-126[1]	1x3/4x1	11/16	15/16	1-1/16	1-19/32	1-27/32	1-25/32	3-3/8	1-11/32	1-11/32	1-11/32	.13
4101-130	1x1x1/2	13/32	11/16	13/32	1-11/32	1-7/32	1-11/32	2-21/32	1-3/8	7/8	1-3/8	.08
4101-131	1x1x3/4	17/32	11/16	17/32	1-15/32	1-13/32	1-15/32	2-29/32	1-3/8	1-3/32	1-3/8	.09
4101-138[1]	1-1/4x1/2x1/2	13/16	1-11/16	1-21/32	1-29/32	2-7/32	2-3/16	4-3/32	1-21/32	1-21/32	1-21/32	.30
4101-139[1]	1-1/4x1/2x3/4	13/16	1-1/2	1-21/32	1-29/32	2-7/32	2-3/16	4-3/32	1-21/32	1-21/32	1-21/32	.30
4101-142[1]	1-1/4x1/2x1-1/4	13/16	27/32	1-21/32	1-29/32	1-15/16	2-3/16	4-3/32	1-21/32	1-21/32	1-21/32	.24
4101-146[1]	1-1/4x3/4x1/2	13/16	1-11/16	1-15/32	1-29/32	2-7/32	2-3/16	4-3/32	1-21/32	1-21/32	1-21/32	.30
4101-147[1]	1-1/4x3/4x3/4	13/16	1-1/2	1-15/32	1-29/32	2-7/32	2-3/16	4-3/32	1-21/32	1-21/32	1-21/32	.31
4101-148[1]	1-1/4x3/4x1	13/16	1-5/16	1-15/32	1-29/32	2-7/32	2-3/16	4-3/32	1-21/32	1-21/32	1-21/32	.29
4101-149[1]	1-1/4x3/4x1-1/4	25/32	25/32	1-7/16	1-29/32	1-29/32	2-3/16	4-3/32	1-21/32	1-21/32	1-21/32	.26
4101-156[1]	1-1/4x1x1/2	13/16	1-21/32	1-1/4	1-29/32	2-3/16	2-5/32	4-1/16	1-21/32	1-21/32	1-21/32	.30
4101-157[1]	1-1/4x1x3/4	13/16	1-1/2	1-9/32	1-29/32	2-7/32	2-3/16	4-3/32	1-21/32	1-21/32	1-21/32	.29
4101-158[1]	1-1/4x1x1	13/16	1-5/16	1-9/32	1-29/32	2-7/32	2-3/16	4-3/32	1-21/32	1-21/32	1-21/32	.27
4101-159[1]	1-1/4x1x1-1/4	13/16	27/32	1-9/32	1-29/32	1-15/16	2-3/16	4-3/32	1-21/32	1-21/32	1-21/32	.22
4101-166	1-1/4x1-1/4x1/2	11/32	27/32	13/32	1-17/32	1-11/32	1-17/32	3-9/16	1-21/32	7/8	1-21/32	.12
4101-167	1-1/4x1-1/4x3/4	17/32	13/16	17/32	1-21/32	1-17/32	1-21/32	3-5/16	1-21/32	1-1/8	1-21/32	.13
4101-168	1-1/4x1-1/4x1	11/16	13/16	11/16	1-25/32	1-3/4	1-25/32	3-19/32	1-21/32	1-3/8	1-21/32	.15
4101-169[1]	1-1/4x1-1/4x1-1/2	1-7/16	15/16	2-1/32	2-17/32	2-1/4	2-17/32	5-1/16	1-31/32	1-31/32	1-31/32	.41
4101-173[1]	1-1/2x1/2x1/2	15/16	2-1/32	2-1/32	2-1/4	2-9/16	2-9/16	4-13/16	1-31/32	1-31/32	1-31/32	.49
4101-174[1]	1-1/2x1/2x3/4	15/16	1-27/32	2-1/32	2-1/4	2-9/16	2-9/16	4-13/16	1-31/32	1-31/32	1-31/32	.49
4101-175[1]	1-1/2x1/2x1	11/16	1	1-13/16	2	1-29/32	2-11/32	4-11/32	1-31/32	1-3/8	1-31/32	.48

1 Outlet sized with bushing

REDUCING TEE (continued)

Socket x Socket x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4101-176[1]	1-1/2x1/2x1-1/4	15/16	1-15/32	2-1/32	2-1/4	2-9/16	2-9/16	4-13/16	1-31/32	1-31/32	1-31/32	.45
4101-177[1]	1-1/2x1/2x1-1/2	15/16	15/16	2-1/32	2-1/4	2-1/4	2-9/16	4-13/16	1-31/32	1-31/32	1-31/32	.39
4101-182[1]	1-1/2x3/4x1/2	15/16	2-1/32	1-27/32	2-1/4	2-9/16	2-9/16	4-13/16	1-31/32	1-31/32	1-31/32	.49
4101-184[1]	1-1/2x3/4x3/4	15/16	1-27/32	1-27/32	2-1/4	2-9/16	2-9/16	4-13/16	1-31/32	1-31/32	1-31/32	.48
4101-185[1]	1-1/2x3/4x1	1-1/32	1-5/8	1-27/32	2-1/4	2-9/16	2-9/16	4-23/32	1-31/32	1-31/32	1-31/32	.48
4101-186[1]	1-1/2x3/4x1-1/4	3/4	1-7/16	1-5/16	2-9/16	2-9/16	2-1/4	4-13/16	1-31/32	1-31/32	1-31/32	.44
4101-188[1]	1-1/2x3/4x1-1/2	15/16	15/16	1-27/32	2-1/4	2-1/4	2-9/16	4-13/16	1-31/32	1-31/32	1-31/32	.39
4101-193[1]	1-1/2x1x1/2	15/16	2-1/32	1-21/32	2-1/4	2-9/16	2-9/16	4-13/16	1-31/32	1-31/32	1-31/32	.48
4101-194[1]	1-1/2x1x3/4	15/16	1-27/32	1-21/32	2-1/4	2-9/16	2-9/16	4-13/16	1-31/32	1-31/32	1-31/32	.48
4101-195[1]	1-1/2x1x1	15/16	1-21/32	1-21/32	2-1/4	2-9/16	2-9/16	4-27/32	1-31/32	1-31/32	1-31/32	.48
4101-196[1]	1-1/2x1x1-1/4	15/16	1-15/32	1-11/16	2-1/4	2-9/16	2-19/32	4-27/32	1-31/32	1-31/32	1-31/32	.44
4101-197[1]	1-1/2x1x1-1/2	15/16	15/16	1-21/32	2-1/4	2-1/4	2-9/16	4-13/16	1-31/32	1-31/32	1-31/32	.38
4101-199[1]	1-1/2x1-1/4x1/2	1-3/8	2-1/32	2-1/32	2-1/2	2-9/16	2-1/4	4-23/32	1-31/32	1-31/32	1-31/32	.45
4101-201[1]	1-1/2x1-1/4x3/4	15/16	1-27/32	1-15/32	2-1/4	2-9/16	2-9/16	4-13/16	1-31/32	1-31/32	1-31/32	.44
4101-202[1]	1-1/2x1-1/4x1	15/16	1-21/32	1-15/32	2-1/4	2-9/16	2-9/16	4-13/16	1-31/32	1-31/32	1-31/32	.44
4101-203[1]	1-1/2x1-1/4x1-1/4	15/16	1-15/32	1-15/32	2-1/4	2-9/16	2-9/16	4-13/16	1-31/32	1-31/32	1-31/32	.41
4101-204[1]	1-1/2x1-1/4x1-1/2	15/16	15/16	1-15/32	2-1/4	2-1/4	2-9/16	4-13/16	1-31/32	1-31/32	1-31/32	.35
4101-209	1-1/2x1-1/2x1/2	13/32	31/32	13/32	1-23/32	1-1/2	1-23/32	3-15/32	1-31/32	7/8	1-31/32	.18
4101-210	1-1/2x1-1/2x3/4	11/16	1-7/16	2	2	2-5/32	2	4	1-31/32	1-3/8	1-31/32	.26
4101-211	1-1/2x1-1/2x1	11/16	31/32	11/16	2	1-29/32	1-31/32	3-31/32	1-15/16	1-3/8	1-15/16	.22
4101-212[1]	1-1/2x1-1/2x1-1/4	15/16	1-7/16	2-7/32	2-1/4	2-17/32	2-7/32	4-15/32	1-31/32	1-31/32	1-31/32	.35
4101-213[1]	1-1/2x1-1/2x2	1-29/32	1-3/16	1-29/32	3-7/32	2-7/8	3-19/32	6-13/16	2-9/16	2-9/16	2-9/16	1.01
4101-216[1]	2x1/2x1/2	1-3/16	2-11/16	2-5/8	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.02
4101-217[1]	2x1/2x3/4	1-3/16	2-1/2	2-5/8	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.03
4101-218[1]	2x1/2x1	1-3/16	2-5/16	2-5/8	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.03
4101-219[1]	2x1/2x1-1/4	1-3/16	2-1/8	2-5/8	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.02
4101-220[1]	2x1/2x1-1/2	1-3/16	1-29/32	2-5/8	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.00
4101-221[1]	2x1/2x2	1-3/16	1-5/32	2-5/8	2-29/32	2-7/8	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	.82
4101-222[1]	2x3/4x1/2	1-3/16	2-11/16	2-11/16	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.03
4101-223[1]	2x3/4x3/4	1-3/16	2-1/2	2-7/16	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.04

1 Outlet sized with bushing

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
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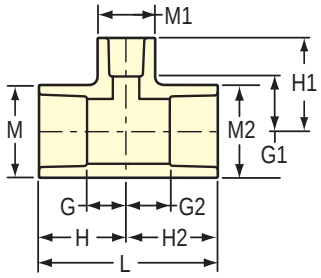
REDUCING TEE (continued)

Socket x Socket x Socket

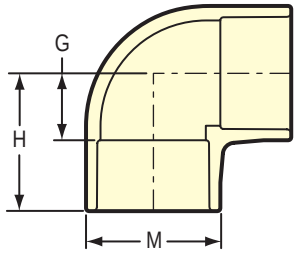


Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4101-224[1]	2x3/4x1	1-3/16	2-5/16	2-7/16	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.04
4101-225[1]	2x3/4x1-1/4	1-5/32	2-1/16	2-7/16	2-7/8	3-5/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.03
4101-226[1]	2x3/4x1-1/2	1-3/16	1-29/32	2-7/16	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.01
4101-227[1]	2x3/4x2	1-3/16	1-5/32	2-7/16	2-29/32	2-7/8	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	.83
4101-228[1]	2x1x1/2	1-3/16	2-11/16	2-1/4	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.03
4101-229	2x1x3/4	1-23/32	2-1/2	2-1/4	2-7/8	3-3/16	3-7/32	6-3/32	2-9/16	2-9/16	2-9/16	1.04
4101-230[1]	2x1x1	1-3/16	2-5/16	2-1/4	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.05
4101-231[1]	2x1x1-1/4	1-3/16	2-1/8	2-1/4	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.04
4101-232[1]	2x1x1-1/2	1-3/16	1-29/32	2-1/4	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.02
4101-233[1]	2x1x2	1-3/16	1-5/32	2-1/4	2-29/32	2-7/8	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	.83
4101-234[1]	2x1-1/4x1/2	1-3/16	2-11/16	2-1/16	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.02
4101-235[1]	2x1-1/4x3/4	1-3/16	2-1/2	2-1/16	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.03
4101-236[1]	2x1-1/4x1	1-3/16	2-5/16	2-1/16	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.04
4101-237[1]	2x1-1/2x1/2	1-3/16	2-11/16	1-27/32	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.00
4101-238[1]	2x1-1/2x3/4	1-3/16	2-1/2	1-27/32	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.01
4101-239[1]	2x1-1/2x1	1-3/16	2-5/16	1-27/32	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.02
4101-240[1]	2x1-1/2x1-1/4	1-3/16	2-1/8	1-27/32	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.00
4101-241[1]	2x1-1/2x1-1/2	1-5/32	1-7/8	1-7/8	2-7/8	3-3/16	3-3/16	6-1/16	2-9/16	2-9/16	2-9/16	1.01
4101-242[1]	2x1-1/4x1-1/4	1-3/16	2-1/8	2-1/16	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.02
4101-243[1]	2x1-1/4x1-1/2	1-3/16	1-29/32	2-1/16	2-29/32	3-7/32	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	1.00
4101-244[1]	2x1-1/4x2	1-5/32	1-1/2	2-3/32	2-7/8	3-7/32	3-3/16	6-1/16	2-9/16	2-9/16	2-9/16	.82
4101-247	2x2x1/2	13/32	1-9/32	13/32	2-1/8	1-25/32	2-1/8	4-9/32	2-9/16	7/8	2-9/16	.37
4101-248	2x2x3/4	17/32	1-1/4	17/32	2-1/4	2	2-1/4	4-17/32	2-9/16	1-1/8	2-9/16	.40
4101-249	2x2x1	11/16	1-9/32	11/16	2-13/32	2-3/16	2-13/32	4-25/32	2-17/32	1-3/8	2-17/32	.43
4101-250[1]	2x2x1-1/4	1-5/32	2-3/8	1-5/32	2-7/8	3-7/32	2-7/8	5-25/32	2-9/16	2-9/16	2-9/16	.90
4101-251	2x2x1-1/2	31/32	1-1/4	31/32	2-11/16	2-9/16	2-11/16	5-3/8	2-17/32	1-31/32	2-17/32	.52
4101-257[1]	2x1-1/2x2	1-3/16	1-5/32	1-27/32	2-29/32	2-7/8	3-5/32	6-1/16	2-9/16	2-9/16	2-9/16	.80

1 Outlet sized with bushing

90° ELBOW

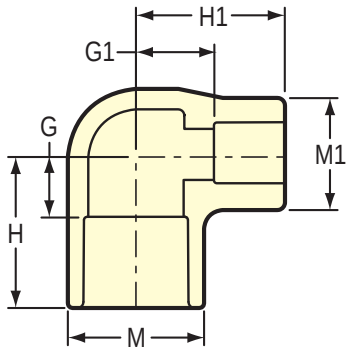
Socket x Socket



Part Number	Size	G	H	M	Approx. Wt. (Lbs.)
4106-005	1/2	13/32	15/16	27/32	.02
4106-007	3/4	17/32	1-1/4	1-1/8	.05
4106-010	1	21/32	1-9/16	1-3/8	.08
4106-012	1-1/4	3/4	1-7/8	1-11/16	.13
4106-015	1-1/2	29/32	2-7/32	2	.22
4106-020	2	1-5/32	2-7/8	2-19/32	.49

REDUCING 90° ELBOW

Socket x Socket



Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
4106-101	3/4x1/2	3/8	1/2	1-3/32	1-1/32	1-3/32	27/32	.04
4106-131[1]	1x3/4	21/32	1	1-9/16	1-3/8	1-3/8	1-3/8	.10
4106-167[1]	1-1/4x3/4	13/16	1-1/2	1-29/32	2-7/32	1-21/32	1-21/32	.20
4106-168[1]	1-1/4x1	13/16	1-5/16	1-29/32	2-7/32	1-21/32	1-21/32	.18
4106-209[1]	1-1/2x1/2	15/16	2-1/32	2-1/4	2-17/32	1-31/32	1-31/32	.32
4106-210[1]	1-1/2x3/4	15/16	1-27/32	2-1/4	2-9/16	1-31/32	1-31/32	.32
4106-211[1]	1-1/2x1	15/16	1-21/32	2-1/4	2-19/32	1-31/32	1-31/32	.31
4106-212[1]	1-1/2x1-1/4	15/16	1-13/32	2-1/4	2-17/32	1-31/32	1-31/32	.28
4106-247[1]	2x1/2	1-3/16	2-11/16	2-29/32	3-3/16	2-9/16	2-9/16	.67
4106-248[1]	2x3/4	1-3/16	2-7/16	2-29/32	3-5/32	2-9/16	2-9/16	.68
4106-249[1]	2x1	1-3/16	2-9/32	2-29/32	3-3/16	2-9/16	2-9/16	.68
4106-250[1]	2x1-1/4	1-3/16	2-1/16	2-29/32	3-5/32	2-9/16	2-9/16	.67
4106-251[1]	2x1-1/2	1-3/16	1-29/32	2-29/32	3-7/32	2-9/16	2-9/16	.65

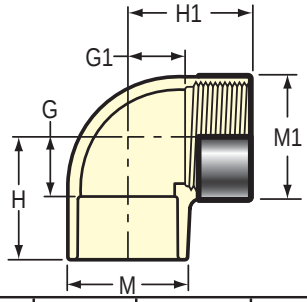
1 Outlet sized with bushing

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

SPECIAL REINFORCED 90° ELBOW – LEAD FREE

Socket x SR Fipt

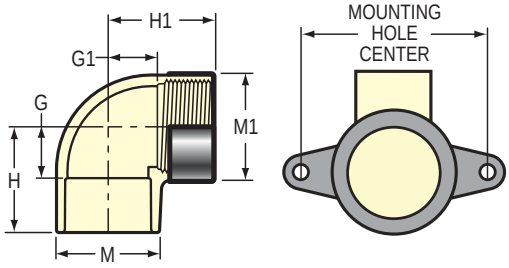


Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
4107-005SR	1/2	13/32	13/32	15/16	1-5/32	27/32	1-7/32	.06

ZINC DROP EAR SPECIAL REINFORCED 90° ELBOW – LEAD FREE

(One Piece Unit)

Socket x SR Fipt – Zinc Collar

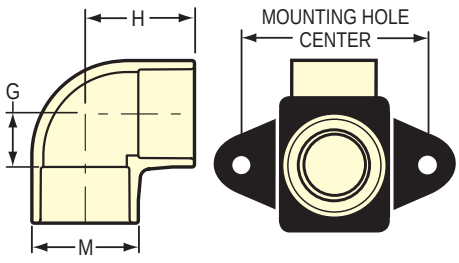


Part Number	Size	G	G1	H	H1	M	M1	Mounting Hole Center	Approx. Wt. (Lbs.)
DEZ4107-005SR	1/2	1/4	3/8	25/32	1-5/32	27/32	1-7/32	2-1/16	.15

DROP EAR 90° ELBOW

(Fitting With Bracket)

Socket x Socket

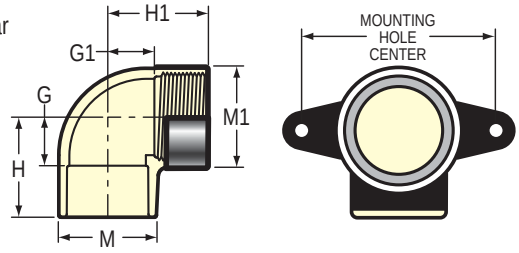


Part Number	Size	G	H	M	Mounting Hole Center	Approx Wt. (Lbs.
DE4106-005	1/2	1/4	25/32	27/32	1-3/4	.03

DROP EAR SPECIAL REINFORCED 90° ELBOW – LEAD FREE

(Fitting With Bracket)

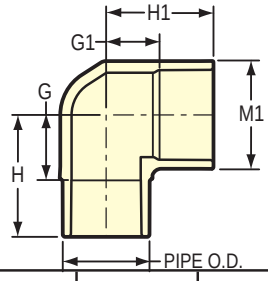
Socket x SR Fipt – Stainless Steel Collar



Part Number	Size	G	G1	H	H1	M	M1	Mounting Hole Center	Approx Wt. (Lbs.)
DE4107-005SR	1/2	13/32	15/32	15/16	1-5/32	27/32	1-7/32	2-1/32	.07

90° STREET ELBOW

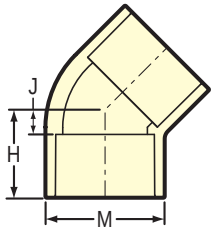
Spigot x Socket



Part Number	Size	G	G1	H	H1	M1	Pipe O.D.	Approx. Wt. (Lbs.)
4109-005	1/2	17/32	3/8	1-1/16	7/8	7/8	5/8	.02
4109-007	3/4	19/32	17/32	1-5/16	1-1/4	1-1/32	7/8	.05
4109-010	1	25/32	21/32	1-13/16	1-9/16	1-11/32	1-1/8	.09

45° ELBOW

Socket x Socket

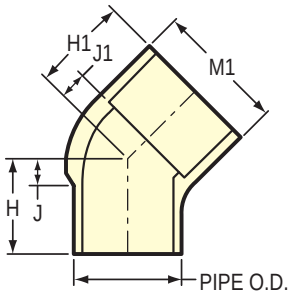


Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
4117-005	1/2	23/32	7/32	27/32	.02
4117-007	3/4	31/32	7/32	1-1/8	.04
4117-010	1	1-7/32	9/32	1-3/8	.06
4117-012	1-1/4	1-15/32	11/32	1-11/16	.11
4117-015	1-1/2	1-3/4	7/16	1-31/32	.18
4117-020	2	2-1/4	17/32	2-9/16	.37

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

45° STREET ELBOW

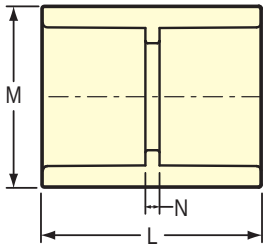
Spigot x Socket



Part Number	Size	H	H1	J	J1	M1	Pipe O.D.	Approx. Wt. (Lbs.)
4127-005	1/2	3/4	23/32	7/32	7/32	27/32	5/8	.02
4127-007	3/4	1	1	9/32	9/32	1-3/32	7/8	.04
4127-010	1	1-5/16	1-11/32	3/8	7/16	1-3/8	1-1/8	.06

COUPLING

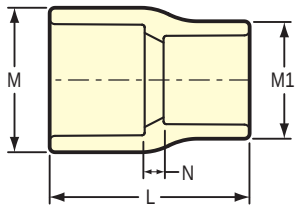
Socket x Socket



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
4129-005	1/2	1-5/32	27/32	1/8	.02
4129-007	3/4	1-9/16	1-1/16	1/8	.03
4129-010	1	1-15/16	1-3/8	1/8	.04
4129-012	1-1/4	2-3/8	1-21/32	3/32	.08
4129-015	1-1/2	2-3/4	1-31/32	1/8	.13
4129-020	2	3-9/16	2-9/16	1/8	.29

REDUCER COUPLING

Socket x Socket

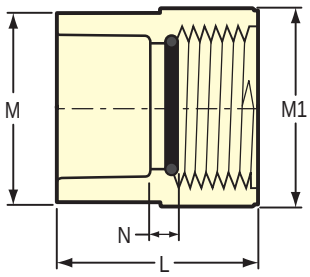


Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
4129-101	3/4x1/2	1-11/32	1-3/32	27/32	1/8	.02
4129-130[1]	1x1/2	2-7/32	1-11/32	1-11/32	25/32	.09
4129-131	1x3/4	1-3/4	1-11/32	1-3/32	1/8	.04
4129-166[1]	1-1/4x1/2	2-5/8	1-21/32	1-21/32	1	.14
4129-167[1]	1-1/4x3/4	2-5/8	1-21/32	1-21/32	13/16	.15
4129-168[1]	1-1/4x1	2-5/8	1-21/32	1-21/32	5/8	.13
4129-209[1]	1-1/2x1/2	3-1/16	1-31/32	1-31/32	1-7/32	.24
4129-210[1]	1-1/2x3/4	3-1/16	1-31/32	1-31/32	1-1/32	.23
4129-211[1]	1-1/2x1	3-1/16	1-31/32	1-31/32	27/32	.23
4129-212[1]	1-1/2x1-1/4	3-1/16	1-31/32	1-31/32	21/32	.19
4129-247[1]	2x1/2	3-27/32	2-9/16	2-9/16	1-19/32	.49
4129-248[1]	2x3/4	3-27/32	2-9/16	2-9/16	1-13/32	.50
4129-249[1]	2x1	3-27/32	2-9/16	2-9/16	1-7/32	.50
4129-250[1]	2x1-1/4	3-27/32	2-9/16	2-9/16	1-1/32	.49
4129-251[1]	2x1-1/2	3-27/32	2-9/16	2-9/16	13/16	.47

1 Outlet sized with bushing

FEMALE ADAPTER with GASKET

Socket x NPSC



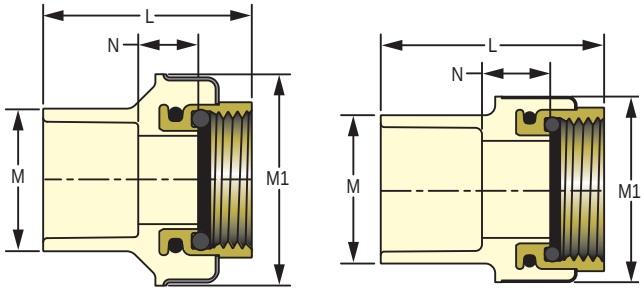
Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
4135-005OR	1/2	1-11/32	27/32	1-3/16	7/32	.04
4135-007OR	3/4	1-9/16	1-3/32	1-3/8	7/32	.05
4135-010OR	1	1-29/32	1-11/32	1-11/16	3/8	.09

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

GASKET SEALED BRASS FEMALE ADAPTER – LEAD FREE

Socket x Gasket FIPT – Use NO Thread Sealant

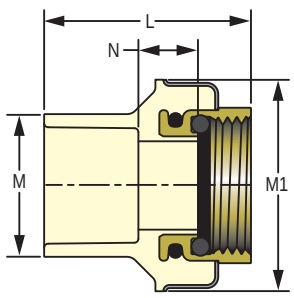


STYLE 1 STYLE 2

Part Number	Size	L	M	M1	N	Style	Approx. Wt. (Lbs.)
4135-005BRG	1/2	1-1/2	27/32	1-7/16	9/16	1	.12
4135-007BRG	3/4	1-9/16	1-3/32	1-5/8	15/32	1	.13
4135-010BRG	1	2-1/32	1-11/32	1-23/32	5/8	2	.21
4135-012BRG	1-1/4	2-7/32	1-21/32	2-1/16	19/32	2	.30
4135-015BRG	1-1/2	2-7/16	1-15/16	2-7/16	5/8	2	.41
4135-020BRG	2	2-27/32	2-17/32	3	19/32	2	.54

GASKET SEALED BRASS FEMALE ADAPTER – LEAD FREE

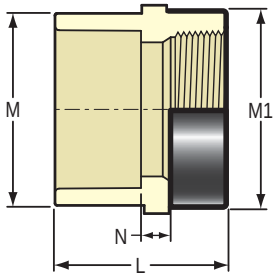
Socket x Gasket FIPT – Use NO Thread Sealant



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
4135-101BRG	3/4 x 1/2	1-9/16	1-3/32	1-7/16	7/16	.12
4135-130BRG	1 x 1/2	1-3/4	1-11/32	1-7/16	13/32	.13

SPECIAL REINFORCED FEMALE ADAPTER – LEAD FREE

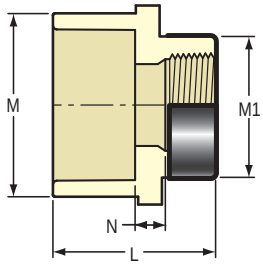
Socket x SR Fipt



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
4135-005SR	1/2	1-3/8	27/32	1-7/32	3/32	.05
4135-007SR	3/4	1-9/16	1-3/32	1-3/8	5/32	.07
4135-010SR	1	1-15/16	1-3/8	1-23/32	1/8	.10

SPECIAL REINFORCED REDUCING FEMALE ADAPTER – LEAD FREE

Socket x SR Fipt

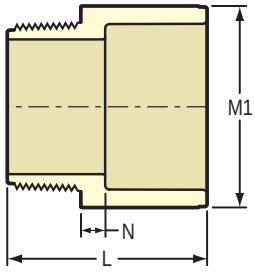


Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
4135-131SR	1x3/4	1-27/32	1-13/32	1-3/8	3/16	.08

MALE ADAPTER

Mipt x Socket

For Cold Water Service Only



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
4136-005	1/2	1-9/32	27/32	3/16	.02
4136-007	3/4	1-17/32	1-3/32	1/8	.04
4136-010	1	1-7/8	1-11/32	7/32	.05
4136-012	1-1/4	2-9/32	1-21/32	5/16	.09
4136-015	1-1/2	2-15/32	1-31/32	5/16	.13
4136-020	2	2-31/32	2-17/32	3/8	.25

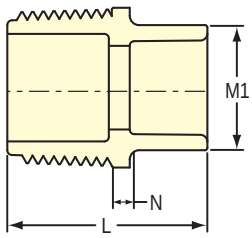
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

REDUCING MALE ADAPTER

Mipt x Socket

For Cold Water Service Only

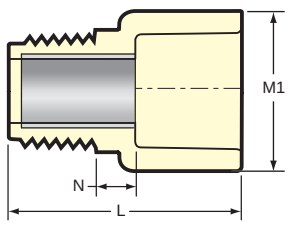


Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
4136-074	1/2x3/4	1-17/32	1-3/32	5/32	.03
4136-101	3/4x1/2	1-11/32	27/32	1/8	.02

REINFORCED MALE ADAPTER – LEAD FREE

(Internal Stainless Steel Reinforced)

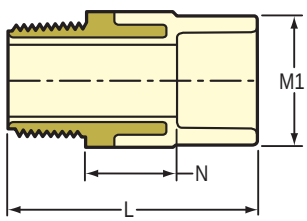
R Mipt x Socket



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
4136-005R	1/2	1-23/32	27/32	17/32	.04
4136-007R	3/4	1-15/16	1-3/32	9/16	.06
4136-010R	1	2-3/8	1-11/32	11/16	.11

TRANSITION MALE ADAPTER – LEAD FREE

Brass Mipt x Socket

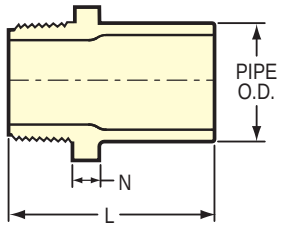


Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
4136-005BR	1/2	2	27/32	25/32	.14
4136-007BR	3/4	2-1/4	1-3/16	27/32	.21
4136-010BR	1	2-11/16	1-3/8	29/32	.38
4136-012BR	1-1/4	2-31/32	1-21/32	31/32	.61
4136-015BR	1-1/2	3-3/16	1-15/16	1-1/32	.74
4136-020BR	2	3-21/32	2-17/32	31/32	.97

MALE ADAPTER

Mipt x Spigot

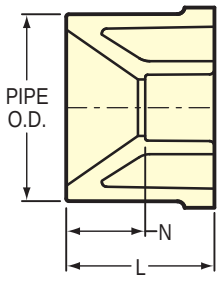
For Cold Water Service Only



Part Number	Size	L	N	Pipe O.D.	Approx. Wt. (Lbs.)
4161-005	1/2	1-5/16	3/16	5/8	.02

REDUCER BUSHING

Spigot x Socket



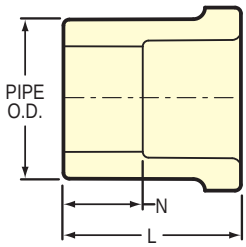
Part Number	Size	L	N	Pipe O.D.	Approx. Wt. (Lbs.)
4137-101	3/4x1/2	27/32	1/8	7/8	.02
4137-130	1x1/2	1-1/8	5/8	1-1/8	.05
4137-131	1x3/4	1-1/16	7/16	1-1/8	.02
4137-166	1-1/4x1/2	1-13/32	7/8	1-3/8	.06
4137-167	1-1/4x3/4	1-3/8	21/32	1-3/8	.06
4137-168	1-1/4x1	1-5/16	3/8	1-3/8	.04
4137-209	1-1/2x1/2	1-21/32	1-1/8	1-5/8	.10
4137-210	1-1/2x3/4	1-5/8	29/32	1-5/8	.10
4137-211	1-1/2x1	1-19/32	21/32	1-5/8	.09
4137-212	1-1/2x1-1/4	1-19/32	7/16	1-5/8	.06
4137-247	2x1/2	2	1-15/32	2-1/8	.20
4137-248	2x3/4	2	1-9/32	2-1/8	.21
4137-249	2x1	2	1-3/32	2-1/8	.21
4137-250	2x1-1/4	1-31/32	7/8	2-1/8	.21
4137-251	2x1-1/2	2-1/32	23/32	2-1/8	.19

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

TRANSITION BUSHING

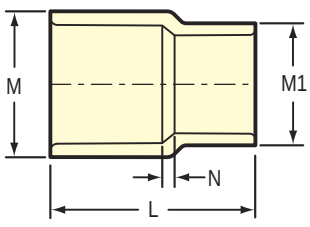
IPS Spigot x CTS Socket



Part Number	Size	L	N	Pipe O.D.	Approx. Wt. (Lbs.)
4140-005	1/2	15/16	13/32	27/32	.02
4140-007	3/4	1-1/8	1/2	1-1/16	.02
4140-010	1	1-3/8	15/32	1-5/16	.04
4140-012	1-1/4	1-17/32	3/8	1-21/32	.07
4140-015	1-1/2	1-21/32	5/16	1-29/32	.08
4140-020	2	1-27/32	1/8	2-3/8	.10

TRANSITION COUPLING

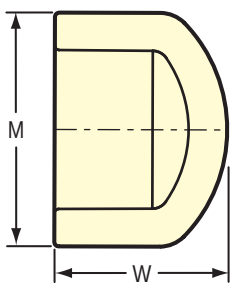
IPS Socket x CTS Socket



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
4141-007	3/4	1-27/32	1-5/16	1-3/32	1/8	.04
4141-010	1	2-5/32	1-19/32	1-3/8	1/8	.07

CAP

Socket



Part Number	Size	M	W	Approx. Wt. (Lbs.)
4147-005	1/2	27/32	25/32	.01
4147-007	3/4	1-1/16	1-3/32	.02
4147-010	1	1-3/8	1-9/32	.04
4147-012	1-1/4	1-21/32	1-19/32	.06
4147-015	1-1/2	1-31/32	1-29/32	.10
4147-020	2	2-9/16	2-13/32	.21

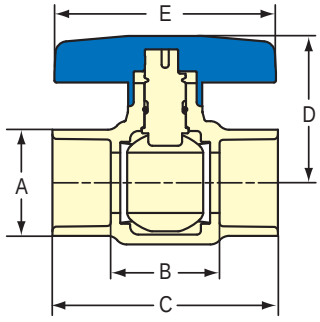
CTS Product Dimensions

CTS BALL VALVES

w/EPDM O-ring Seals

Socket x Socket

100 psi Maximum
Internal Pressure @ 180°F



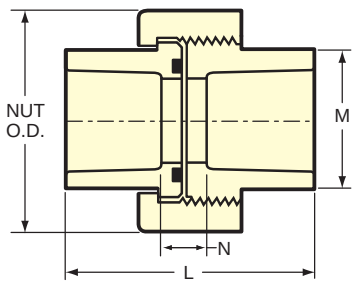
Part Number	Size	A	B	C	D	E	Approx. Wt. (Lbs.)	Cv Values
1922-005	1/2	1-7/32	1-1/16	2-3/32	1-11/32	2	.09	37
1922-007	3/4	1-9/16	1-11/32	2-25/32	1-3/4	2-23/32	.16	84
1922-010	1	1-7/8	1-9/16	3-3/8	2-3/8	3-1/2	.27	151
1922-012	1-1/4	2-13/32	1-15/16	4-3/16	2-25/32	3-3/4	.47	229
1922-015	1-1/2	2-27/32	2-3/8	5-1/32	3-5/32	4-9/32	1.05	330
1922-020	2	3-17/32	2-3/4	6-3/16	3-27/32	5	1.38	598

CTS UNION

w/EPDM O-ring Seals

Socket x Socket

Pressure Rating
100 psi @ 180°F



Part Number	Size	L	M	N	NUT O.D.	Approx. Wt. (Lbs.)
4197-005	1/2	2-3/16	1-1/32	1-5/32	1-25/32	.13
4197-007	3/4	1-3/4	1-3/32	5/16	1-23/32	.08
4197-010	1	2-13/32	1-17/32	9/16	2-1/2	.27

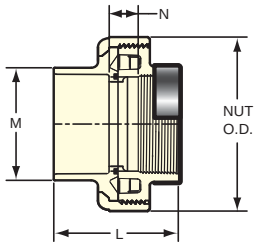
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CTS UNION

w/EPDM O-ring Seals
Socket x SR

Pressure Rating
100 psi @ 180°F

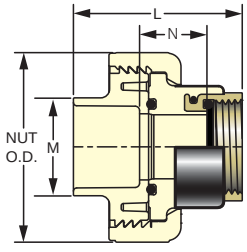


Part Number	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
4199-005SR	1/2	1-1/2	27/32	5/16	1-7/8	.14
4199-007SR	3/4	1-13/16	1-3/32	3/8	2-3/8	.25
4199-010SR	1	2-5/8	1-3/8	7/16	2-5/8	.31

GASKET SEALED BRASS ADAPTER UNION – LEAD FREE

w/EPDM O-ring Seals
Socket x Gasket FIPT With Elastomer Seal

Pressure Rating
100 psi @ 180°F

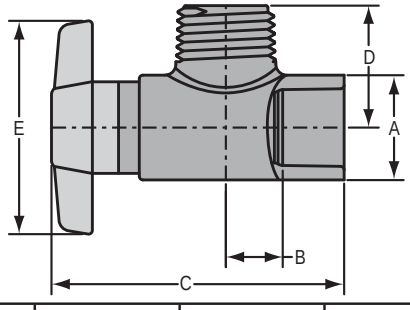


Part Number	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
4199-005BRG	1/2	1-5/8	2-1/8	3/4	2-1/8	.23
4199-007BRG	3/4	1-7/8	2-5/16	3/4	2-5/16	.25
4199-010BRG	1	2-3/8	1-3/8	15/16	2-5/8	.27

1/4 -TURN ANGLE SUPPLY STOP

w/EPDM O-ring Seals
Socket x NPT

Pressure Rating
100 psi @ 180°F

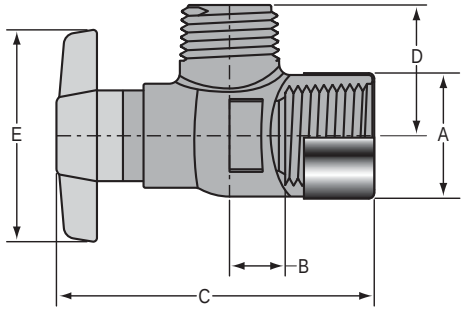


Part Number	Size	A	B	C	D	E	Approx. Wt. (Lbs.)
7722-005	1/2	27/32	7/16	2-13/32	1	1-3/4	.06

1/4 -TURN ANGLE SUPPLY STOP

w/EPDM O-ring Seals
SR Fipt x NPT

Pressure Rating
100 psi @ 180°F

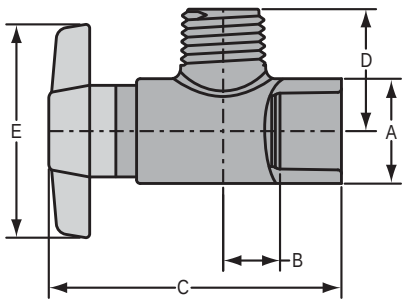


Part Number	Size	A	B	C	D	E	Approx. Wt. (Lbs.)
7721-005SR	1/2	1	15/32	2-21/32	1	1-3/4	.10

1/4 -TURN ANGLE SUPPLY STOP

w/EPDM O-ring Seals
Socket x 3/8" O.D. Comp. For Flex Tube Only

Pressure Rating
100 psi @ 180°F

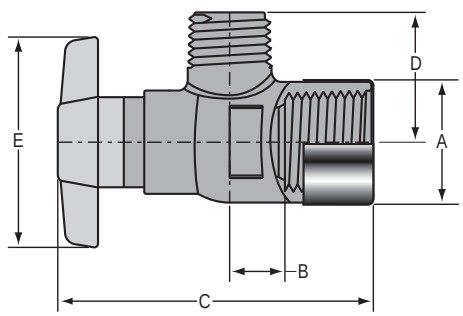


Part Number	Size	A	B	C	D	E	Approx. Wt. (Lbs.)
7722-073	1/2 x 3/8	7/8	7/16	2-3/8	7/8	1-3/4	.05

1/4 -TURN ANGLE SUPPLY STOP

w/EPDM O-ring Seals
SR Fipt x 3/8" O.D. Comp. For Flex Tube Only

Pressure Rating
100 psi @ 180°F



Part Number	Size	A	B	C	D	E	Approx. Wt. (Lbs.)
7721-073SR	1/2 x 3/8	1-1/32	15/32	2-5/8	31/32	1-3/4	.09

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Low-Extractable Piping For Ultra-Pure Water Systems

PRICING

Spears® Low-Extractable Schedule 80 Pipe

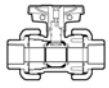
15' Lengths, Price Per Foot

List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
LXT-005	1/2	300	0	064	4.81
LXT-007	3/4	255	0	064	6.52
LXT-010	1	150	0	064	9.60
LXT-012	1-1/4	120	0	064	13.28
LXT-015	1-1/2	105	0	064	16.07
LXT-020	2	75	0	064	22.29
LXT-030	3	45	0	064	45.47
LXT-040	4	30	0	064	66.47
LXT-060	6	15	0	064	154.11

See Spears® Low-Extractable Schedule 80 Pipe Chart for additional information.

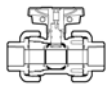
Spears® True Union 2000 Industrial Ball Valves w/Handle Lockout & Safe-T-Block™ Design



EPDM O-ring

1829-005BL	1/2	1	18	066	93.55
1829-007BL	3/4	1	12	066	114.64
1829-010BL	1	1	12	066	145.44
1829-012BL	1-1/4	1	8	066	192.79
1829-015BL	1-1/2	1	8	066	252.12
1829-020BL	2	1	4	066	355.94
1822-030BL	3	1	0	066	658.63
1822-040BL	4	1	0	066	1113.46

Spears® True Union 2000 Industrial Ball Valves w/Handle Lockout & Safe-T-Block™ Design



FKM O-rings

1839-005BL	1/2	1	18	066	109.25
1839-007BL	3/4	1	12	066	129.23
1839-010BL	1	1	12	066	175.08
1839-012BL	1-1/4	1	8	066	244.26
1839-015BL	1-1/2	1	8	066	319.88
1839-020BL	2	1	4	066	418.69
1832-030BL	3	1	0	066	813.73
1832-040BL	4	1	0	066	1374.87

Spears® True Union 2000 Industrial T-Style Ball Valve

EPDM

Mainline Tee x Socket/Spigot

Safe-T-Block™ Design

182901-005BL	1/2	1	12	066	357.84
182901-007BL	3/4	1	8	066	391.01
182901-010BL	1	1	8	066	331.20
182901-012BL	1-1/4	1	0	066	369.44
182901-015BL	1-1/2	1	0	066	382.80
182901-020BL	2	1	0	066	408.95
182901-101BL	3/4X1/2	1	12	066	363.73
182901-130BL	1X1/2	1	8	066	377.36
182901-131BL	1X3/4	1	8	066	398.39
182901-166BL	1-1/4X1/2	1	8	066	403.68
182901-167BL	1-1/4X3/4	1	8	066	405.77
182901-168BL	1-1/4X1	1	8	066	465.12
182901-209BL	1-1/2X1/2	1	8	066	453.40
182901-210BL	1-1/2X3/4	1	8	066	405.77
182901-211BL	1-1/2X1	1	8	066	482.65
182901-247BL	2X1/2	1	8	066	517.75
182901-248BL	2X3/4	1	8	066	558.66
182901-249BL	2X1	1	8	066	587.96
182901-251BL	2X1-1/2	1	8	066	609.54
182901-333BL	3X1/2	1	0	066	681.59

Spears® True Union 2000 Industrial T-Style Ball Valve (continued)

EPDM

Mainline Tee x Socket/Spigot

182901-335BL	3X1	1	0	066	848.65
182901-337BL	3X1-1/2	1	0	066	813.19
182901-338BL	3X2	1	0	066	892.20
182901-417BL	4X1	1	0	066	877.56
182901-419BL	4X1-1/2	1	0	066	977.03
182901-420BL	4X2	1	0	066	1164.22
182901-528BL	6X2	1	0	066	1520.66
182901-578BL	8X2	1	0	066	2243.64

Includes Plugged end with additional Socket and Threaded end connectors.

Spears® True Union 2000 Industrial T-Style Ball Valve

FKM

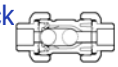
Mainline Tee x Socket/Fipt

Safe-T-Block™ Design

183901-005BL	1/2	1	12	066	374.69
183901-007BL	3/4	1	8	066	410.36
183901-010BL	1	1	8	066	427.41
183901-015BL	1-1/2	1	0	066	441.55
183901-020BL	2	1	0	066	502.77
183901-101BL	3/4X1/2	1	12	066	380.60
183901-130BL	1X1/2	1	8	066	394.23
183901-131BL	1X3/4	1	8	066	417.74
183901-166BL	1-1/4X1/2	1	8	066	420.55
183901-167BL	1-1/4X3/4	1	8	066	425.12
183901-168BL	1-1/4X1	1	8	066	494.15
183901-209BL	1-1/2X1/2	1	8	066	420.55
183901-210BL	1-1/2X3/4	1	8	066	425.12
183901-211BL	1-1/2X1	1	8	066	494.15
183901-247BL	2X1/2	1	8	066	534.64
183901-248BL	2X3/4	1	8	066	578.02
183901-249BL	2X1	1	8	066	617.00
183901-251BL	2X1-1/2	1	8	066	726.59
183901-333BL	3X1/2	1	0	066	698.44
183901-335BL	3X1	1	0	066	742.80
183901-337BL	3X1-1/2	1	0	066	849.44
183901-338BL	3X2	1	0	066	959.67
183901-417BL	4X1	1	0	066	906.60
183901-419BL	4X1-1/2	1	0	066	1013.25
183901-420BL	4X2	1	0	066	1231.74
183901-528BL	6X2	1	0	066	1588.17
183901-578BL	8X2	1	0	066	2311.13

Includes Plugged end with additional Socket and Threaded end connectors.

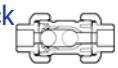
Spears® True Union 2000 Industrial Ball Check Valves



EPDM O-rings

4529-005BL	1/2	1	18	066	136.92
4529-007BL	3/4	1	18	066	165.42
4529-010BL	1	1	12	066	189.37
4529-012BL	1-1/4	1	12	066	335.40
4529-015BL	1-1/2	1	8	066	354.80
4529-020BL	2	1	8	066	593.23
4522-030BL	3	1	0	066	832.82
4522-040BL	4	1	0	066	1562.25

Spears® True Union 2000 Industrial Ball Check Valves



FKM O-rings

4539-005BL	1/2	1	18	066	151.74
4539-007BL	3/4	1	18	066	182.53
4539-010BL	1	1	18	066	205.56
4539-012BL	1-1/4	1	12	066	347.94

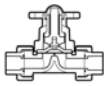
Spears® True Union 2000 Industrial Ball Check Valves (continued)

FKM O-rings

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4539-015BL	1-1/2	1	8	066	376.66
4539-020BL	2	1	8	066	616.06
4532-030BL	3	1	0	066	887.04
4532-040BL	4	1	0	066	1645.98

Spears® Diaphragm Valves

EPDM O-ring Seals EPDM Backed PTFE Diaphragm



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
2729T-005BL	1/2	1	12	066	258.19
2729T-007BL	3/4	1	8	066	277.39
2729T-010BL	1	1	8	066	324.23
2729T-012BL	1-1/4	1	4	066	438.31
2729T-015BL	1-1/2	1	4	066	531.98
2729T-020BL	2	1	0	066	698.91

Note: Both socket and threaded end connectors are provided with valve sizes 1/2" -2" Diaphragm valves. Valves carry a maximum pressure rating of 150 psi for water, non-shock, @ 73°F (23°C).

Spears® T-style "Zero Dead Leg" Diaphragm Valve

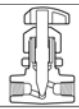
Mainline Tee x Spigot

EPDM O-ring Seals EPDM Backed PTFE Diaphragm

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
2797TZD-005BL	1/2	1	8	066	344.91
2797TZD-007BL	3/4	1	8	066	368.28
2797TZD-010BL	1X1	1	8	066	533.54
2797TZD-015BL	1-1/2	1	4	066	806.49
2797TZD-020BL	2X2	1	0	066	921.56
2797TZD-130BL	1X1/2	1	8	066	346.95
2797TZD-131BL	1X3/4	1	8	066	369.15
2797TZD-247BL	2X1/2	1	8	066	373.69
2797TZD-249BL	2X1	1	12	066	558.61
2797TZD-251BL	2X1-1/2	1	4	066	798.52

Spears® Needle Valve

Globe Pattern - FIPT

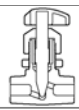


Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
5591-002BL	1/4	1	18	066	124.88
5591-003BL	3/4	1	18	066	124.88

Replaceable PTFE Stem Seal - no elastomer or lubricants used. Needle valves carry a maximum internal pressure rating of 235 psi at 73°F (23°C).

Spears® Needle Valve

Globe Pattern - Soc

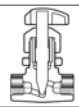


Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
5592-002BL	1/4	1	18	066	124.88
5592-003BL	3/4	1	18	066	124.88
5592-005BL	1/2	1	18	066	129.95

Replaceable PTFE Stem Seal - no elastomer or lubricants used. Needle valves carry a maximum internal pressure rating of 235 psi at 73°F (23°C).

Spears® Needle Valve

Globe Pattern - SR FIPT

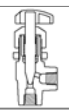


Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
5591-005BLSR	1/2	1	18	066	132.57

Replaceable PTFE Stem Seal - no elastomer or lubricants used. Needle valves carry a maximum internal pressure rating of 235 psi at 73°F (23°C).

Spears® Needle Valve

Angle Pattern - FIPT



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
5691-002BL	1/4	1	18	066	124.88
5691-003BL	3/4	1	18	066	124.88

Replaceable PTFE Stem Seal - no elastomer or lubricants used. Needle valves carry a maximum internal pressure rating of 235 psi at 73°F (23°C).

Spears® Needle Valve

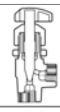
Angle Pattern - Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
5692-002BL	1/4	1	18	066	124.88
5692-003BL	3/8	1	18	066	124.88
5692-005BL	1/2	1	18	066	132.57

Replaceable PTFE Stem Seal - no elastomer or lubricants used. Needle valves carry a maximum internal pressure rating of 235 psi at 73°F (23°C).

Spears® Needle Valve

Angle Pattern - SR FIPT



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
5691-005BLSR	1/2	1	18	066	132.57

Replaceable PTFE Stem Seal - no elastomer or lubricants used. Needle valves carry a maximum internal pressure rating of 235 psi at 73°F (23°C).

Spears® Gauge Guards

PTFE Diaphragm 1/4" Inlet Connection

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
G0004-002BL	No Gauge	1	18	623	141.86
G30V4-002BL	0-30 in-Hg	1	18	623	219.41
G0154-002BL	0-15 psi	1	18	623	207.37
G0304-002BL	0-30 psi	1	18	623	207.37
G0604-002BL	0-60 psi	1	18	623	207.37
G1004-002BL	0-100 psi	1	18	623	207.37
G1604-002BL	0-160 psi	1	18	623	207.37
G2004-002BL	0-200 psi	1	18	623	207.37
G3004-002BL	0-300 psi	1	18	623	207.37

"No Gauge" designates Gauge Guard only, unfilled. Other units are pre-filled and factory assembled with gauge specified in Size column. Gauge Guards carry a maximum pressure rating to 235 psi @ 73°F (23°C) and full vacuum service on vacuum gauges. All inlet connections are Spears® patented Special Reinforced (SR) female plastic NPT thread.

Spears® Gauge Guards

PTFE Diaphragm 1/2" Inlet Connection

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
G0004-005BL	No Gauge	1	18	623	141.86
G30V4-005BL	0-30 in-Hg	1	18	623	219.41
G0154-005BL	0-15 psi	1	18	623	207.37
G0304-005BL	0-30 psi	1	18	623	207.37
G0604-005BL	0-60 psi	1	18	623	207.37
G1004-005BL	0-100 psi	1	18	623	207.37
G1604-005BL	0-160 psi	1	18	623	207.37
G2004-005BL	0-200 psi	1	18	623	207.37
G3004-005BL	0-300 psi	1	18	623	207.37

"No Gauge" designates Gauge Guard only, unfilled. Other units are pre-filled and factory assembled with gauge specified in Size column. Gauge Guards carry a maximum pressure rating to 235 psi @ 73°F (23°C) and full vacuum service on vacuum gauges. All inlet connections are Spears® patented Special Reinforced (SR) female plastic NPT thread.

Spears® Gauge Guards

FKM Diaphragm 1/4" Inlet Connection

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
G0003-002BL	No Gauge	1	18	623	141.86
G30V3-002BL	0-30 in-Hg	1	18	623	219.41
G0153-002BL	0-15 psi	1	18	623	207.37
G0303-002BL	0-30 psi	1	18	623	207.37
G0603-002BL	0-60 psi	1	18	623	207.37
G1003-002BL	0-100 psi	1	18	623	207.37
G1603-002BL	0-160 psi	1	18	623	207.37
G2003-002BL	0-200 psi	1	18	623	207.37
G3003-002BL	0-300 psi	1	18	623	207.37

"No Gauge" designates Gauge Guard only, unfilled. Other units are pre-filled and factory assembled with gauge specified in Size column. Gauge Guards carry a maximum pressure rating to 235 psi @ 73°F (23°C) and full vacuum service on vacuum gauges. All inlet connections are Spears® patented Special Reinforced (SR) female plastic NPT thread.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Spears® Gauge Guards
FKM Diaphragm 1/2" Inlet Connection

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
G0003-005BL	**No Gauge**	1	18	623	141.86
G30V3-005BL	**0-30 in-Hg**	1	18	623	219.41
G0153-005BL	**0-15 psi**	1	18	623	207.37
G0303-005BL	**0-30 psi**	1	18	623	207.37
G0603-005BL	**0-60 psi**	1	18	623	207.37
G1003-005BL	**0-100 psi**	1	18	623	207.37
G1603-005BL	**0-160 psi**	1	18	623	207.37
G2003-005BL	**0-200 psi**	1	18	623	207.37
G3003-005BL	**0-300 psi**	1	18	623	207.37

"No Gauge" designates Gauge Guard only, unfilled. Other units are pre-filled and factory assembled with gauge specified in Size column. Gauge Guards carry a maximum pressure rating to 235 psi @ 73°F (23°C) and full vacuum service on vacuum gauges. All inlet connections are Spears® patented Special Reinforced (SR) female plastic NPT thread.

Spears® Gauge Guards
EPDM Diaphragm 1/4" Inlet Connection

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
G0002-002BL	**No Gauge**	1	18	623	136.19
G30V2-002BL	**0-30 in-Hg**	1	18	623	210.63
G0152-002BL	**0-15 psi**	1	18	623	199.09
G0302-002BL	**0-30 psi**	1	18	623	199.09
G0602-002BL	**0-60 psi**	1	18	623	199.09
G1002-002BL	**0-100 psi**	1	18	623	199.09
G1602-002BL	**0-160 psi**	1	18	623	199.09
G2002-002BL	**0-200 psi**	1	18	623	199.09
G3002-002BL	**0-300 psi**	1	18	623	199.09

"No Gauge" designates Gauge Guard only, unfilled. Other units are pre-filled and factory assembled with gauge specified in Size column. Gauge Guards carry a maximum pressure rating to 235 psi @ 73°F (23°C) and full vacuum service on vacuum gauges. All inlet connections are Spears® patented Special Reinforced (SR) female plastic NPT thread.

Spears® Gauge Guards
EPDM Diaphragm 1/2" Inlet Connection

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
G0002-005BL	**No Gauge**	1	18	623	136.19
G30V2-005BL	**0-30 in-Hg**	1	18	623	210.63
G0152-005BL	**0-15 psi**	1	18	623	199.09
G0302-005BL	**0-30 psi**	1	18	623	199.09
G0602-005BL	**0-60 psi**	1	18	623	199.09
G1002-005BL	**0-100 psi**	1	18	623	199.09
G1602-005BL	**0-160 psi**	1	18	623	199.09
G2002-005BL	**0-200 psi**	1	18	623	199.09
G3002-005BL	**0-300 psi**	1	18	623	199.09

"No Gauge" designates Gauge Guard only, unfilled. Other units are pre-filled and factory assembled with gauge specified in Size column. Gauge Guards carry a maximum pressure rating to 235 psi @ 73°F (23°C) and full vacuum service on vacuum gauges. All inlet connections are Spears® patented Special Reinforced (SR) female plastic NPT thread.

LX-5 Low Extractable One-Step Cement

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
LX5C-020	**Pint**	12	0	702	31.92
LX5C-030	**Quart**	12	0	702	51.48

Empty Can

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
MT-654*	**Pint**	192	0	710	5.50
MT-651*	**Quart**	100	0	710	7.14
MT-653**	**Quart**	12	0	710	8.36

MT-651 & MT-654 cans have1-3/4" Screw Neck size
MT-653 is a TT Paint Type can

Brush
For Pint and Quart cans

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
KD-110	**4-1/2" Length**	25	0	710	9.59
KD-112	**5-1/2" length**	25	0	710	9.59

Fits1-3/4" Screw Cap

Roller

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
3020	**3" length**	20	0	710	16.03

Fits Paint Type Quart Can (MT-653). For use with pipe sizes 3" to 6"

Cap Dauber

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DP-75	**3/4" for Pint**	50	0	710	1.31
DP-125	**1-1/4" for Pint**	50	0	710	1.58
DQ-125	**1-1/4" for Quart**	50	0	710	1.58

1/2" Diameter for pipe sizes to 1"
3/4" Diameter for pipe size to 1-1/2"
1-1/4" Diameter for pipe size 1-1/2" to 3"

Can-Mate Dauber

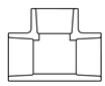
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
CM-75	**3/4"**	50	0	710	5.26
CM-150	**1-1/4"**	50	0	710	5.26

1/2" Diameter for pipe sizes to 1"
3/4" Diameter for pipe size to 1-1/2"
1-1/4" Diameter for pipe size 1-1/2" to 3"

Deburring Tool
Cone Type for pipe from 1/2" through 2"

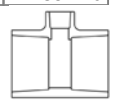
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DEB-2	**1/2 to 2 Pipe**	1	6	710	97.71

Tee
Soc



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
801-005BL	**1/2**	25	0	065	7.27
801-007BL	**3/4**	15	120	065	8.88
801-010BL	**1**	15	0	065	13.09
801-012BL	**1-1/4**	10	0	065	20.40
801-015BL	**1-1/2**	10	0	065	30.63
801-020BL	**2**	10	0	065	48.63
801-030BL	**3**	5	0	065	140.51
801-040BL	**4**	5	0	065	234.93
801-060BL	**6**	4	0	065	352.40

Reducing Tee
Soc



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
801-131BL	**1X1X3/4**	15	0	065	12.22
801-211BL	**1-1/2X1-1/2X1**	10	0	065	26.55
801-249BL	**2X2X1**	10	0	065	33.61
801-251BL	**2X2X1-1/2**	10	0	065	33.61
801-338BL	**3X3X2**	5	0	065	61.63
801-422BL	**4X4X3**	5	0	065	99.63
801-530BL	**6X6X3**	4	0	065	422.69
801-532BL	**6X6X4**	5	0	065	422.69

90° Ell
Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
806-005BL	**1/2**	20	160	065	4.51

90° Ell (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
806-007BL	3/4	20	160	065	5.39
806-010BL	1	10	80	065	10.68
806-012BL	1-1/4	10	0	065	17.05
806-015BL	1-1/2	10	0	065	25.23
806-020BL	2	25	0	065	42.62
806-030BL	3	5	0	065	109.29
806-040BL	4	5	0	065	201.75
806-060BL	6	4	0	065	302.62

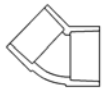
90° Sweep Ell

Soc

806-005SBL	1/2	25	100	065	6.43
806-007SBL	3/4	25	0	065	7.71
806-010SBL	1	25	0	065	15.26
806-012SBL	1-1/4	25	0	065	24.37
806-015SBL	1-1/2	25	0	065	36.02
806-020SBL	2	25	0	065	60.89

45° Ell

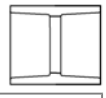
Soc



817-005BL	1/2	20	240	065	7.21
817-007BL	3/4	10	120	065	9.86
817-010BL	1	15	120	065	11.83
817-012BL	1-1/4	10	0	065	20.57
817-015BL	1-1/2	10	0	065	22.81
817-020BL	2	10	0	065	36.02
817-030BL	3	5	0	065	135.52
817-040BL	4	5	0	065	197.68
817-060BL	6	5	0	065	296.53

Coupling

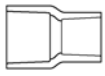
Soc



829-005BL	1/2	25	300	065	3.25
829-007BL	3/4	15	180	065	3.73
829-010BL	1	15	120	065	6.86
829-012BL	1-1/4	10	80	065	10.35
829-015BL	1-1/2	10	0	065	21.34
829-020BL	2	10	0	065	30.63
829-030BL	3	5	0	065	49.83
829-040BL	4	5	0	065	90.65
829-060BL	6	4	0	065	192.45

Reducer Coupling

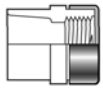
Soc



829-101BL	3/4X1/2	50	0	065	8.66
829-131BL	1X3/4	25	200	065	12.62
829-168BL	1-1/4X1	25	0	065	25.63
829-211BL	1-1/2X1	25	0	065	26.88
829-212BL	1-1/2X1-1/4	25	0	065	33.21
829-249BL	2X1	10	0	065	30.32
829-251BL	2X1-1/2	10	0	065	30.32
829-338BL	3X2	8	0	065	74.39
829-420BL	4X2	4	0	065	141.83
829-422BL	4X3	4	0	065	136.49
829-532BL	6X4	4	0	065	523.09

Special Reinforced Female Adapter

Soc x SR Fipt



835-005SRBL	1/2	25	300	065	6.74

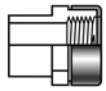
Special Reinforced Female Adapter (continued)

Soc x SR Fipt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
835-007SRBL	3/4	25	200	065	8.26
835-010SRBL	1	25	0	065	13.28
835-012SRBL	1-1/4	10	80	065	17.15
835-015SRBL	1-1/2	10	80	065	21.45
835-020SRBL	2	10	0	065	40.67
835-030SRBL	3	5	0	065	54.99
835-040SRBL	4	5	0	065	88.25

Special Reinforced Reducing Spigot Female Adapter

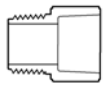
Spig x SR Fipt



878-072SRBL	1/2X1/4	25	450	065	13.43
878-098SRBL	3/4X1/4	50	300	065	18.55
878-128SRBL	1X1/4	50	0	065	19.08

Male Adapter

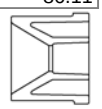
Mipt x Soc



836-005BL	1/2	25	300	065	8.25
836-007BL	3/4	25	200	065	9.12
836-010BL	1	10	60	065	15.80
836-012BL	1-1/4	10	80	065	18.47
836-015BL	1-1/2	10	80	065	26.55
836-020BL	2	10	0	065	38.37
836-030BL	3	5	0	065	60.54
836-040BL	4	5	0	065	86.11

Reducer Bushing Flush Style

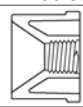
Spig x Soc



837-101BL	3/4X1/2	50	0	065	4.91
837-130BL	1X1/2	50	0	065	7.24
837-131BL	1X3/4	50	0	065	7.24
837-166BL	1-1/4X1/2	25	0	065	10.27
837-168BL	1-1/4X1	25	200	065	10.27
837-210BL	1-1/2X3/4	25	0	065	13.98
837-211BL	1-1/2X1	25	200	065	13.98
837-212BL	1-1/2X1-1/4	25	200	065	13.98
837-249BL	2X1	10	80	065	19.96
837-251BL	2X1-1/2	10	80	065	19.96
837-338BL	3X2	10	0	065	54.86
837-422BL	4X3	6	0	065	94.97
837-532BL	6X4	5	0	065	150.88

Reducer Bushing Flush Style

Spig x Fipt



838-072BL	1/2X1/4	50	400	065	6.28
838-073BL	1/2X3/8	50	600	065	6.28
838-098BL	3/4X1/4	50	0	065	4.15
838-101BL	3/4X1/2	50	0	065	4.15
838-129BL	1X3/8	50	400	065	6.54
838-130BL	1X1/2	50	0	065	6.54
838-131BL	1X3/4	50	0	065	6.54
838-210BL	1-1/2X3/4	25	200	065	17.17
838-211BL	1-1/2X1	25	200	065	17.17

Cap

Soc

847-005BL	1/2	25	300	065	6.95
847-007BL	3/4	25	300	065	7.29
847-010BL	1	15	180	065	12.96
847-012BL	1-1/4	10	120	065	15.65

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Cap (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
847-015BL	1-1/2	10	80	065	22.35
847-020BL	2	10	80	065	30.91
847-030BL	3	5	0	065	73.88
847-040BL	4	5	0	065	124.56
847-060BL	6	4	0	065	420.95

Union

Soc x Soc EPDM O-ring Seals

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
897-005BL	1/2	10	60	065	12.43
897-007BL	3/4	10	40	065	15.60
897-010BL	1	10	40	065	20.40
897-012BL	1-1/4	5	20	065	29.42
897-015BL	1-1/2	5	0	065	40.23
897-020BL	2	5	0	065	60.65
8097-030BL	3	5	0	065	102.73
8097-040BL	4	4	0	065	142.14

Union

Soc x Soc FKM O-ring Seals

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
857-005BL	1/2	10	60	065	15.26
857-007BL	3/4	10	40	065	18.62
857-010BL	1	10	40	065	25.81
857-012BL	1-1/4	5	20	065	34.83
857-015BL	1-1/2	5	0	065	48.63
857-020BL	2	5	0	065	73.85
8057-030BL	3	5	0	065	125.25
8057-040BL	4	4	0	065	173.37

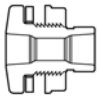
Flange Soc Van Stone Style

Rated @ 150 psi Working Pressure @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
854-005BL	1/2	25	0	065	21.40
854-007BL	3/4	25	0	065	22.91
854-010BL	1	15	0	065	25.51
854-012BL	1-1/4	15	0	065	26.29
854-015BL	1-1/2	20	0	065	26.84
854-020BL	2	10	0	065	35.67
854-030BL	3	10	0	065	60.92
854-040BL	4	5	0	065	77.05
854-060BL	6	4	0	065	172.61

PVC New Style Standard Tank Adapters with EPDM Gaskets

Soc

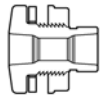


150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8170E-005BL	1/2	25	0	065	41.83
8170E-007BL	3/4	25	0	065	47.47
8170E-010BL	1	25	0	065	54.49
8170E-012BL	1-1/4	20	0	065	68.97
8170E-015BL	1-1/2	20	0	065	72.38
8170E-020BL	2	15	0	065	104.33
8170E-030BL	3	4	0	065	176.42
8170E-040BL	4	2	0	065	292.86

PVC New Style Standard Tank Adapters with FKM Gaskets

Soc



150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8170V-005BL	1/2	25	0	065	54.84
8170V-007BL	3/4	25	0	065	63.09
8170V-010BL	1	25	0	065	73.03
8170V-012BL	1-1/4	20	0	065	89.73
8170V-015BL	1-1/2	20	0	065	93.53
8170V-020BL	2	15	0	065	141.60
8170V-030BL	3	4	0	065	242.61
8170V-040BL	4	2	0	065	537.40

Wrench Sets

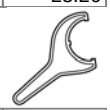
Body Wrench & Nut Wrench

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
TAW-005	1/2	1	25	299	21.89
TAW-007	3/4	1	25	299	22.32
TAW-010	1	1	25	299	23.21
TAW-012	1-1/4	1	20	299	26.18
TAW-015	1-1/2	1	20	299	28.40
TAW-020	2	1	10	299	32.35
TAW-030	3	1	10	299	39.44
TAW-040	4	1	10	299	42.26

Individual Body Wrench

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
TAW1-005	1/2	250	0	299	12.28
TAW1-007	3/4	220	0	299	12.52
TAW1-010	1	200	0	299	13.03
TAW1-012	1-1/4	300	0	299	14.76
TAW1-015	1-1/2	150	0	299	15.89
TAW1-020	2	100	0	299	17.25
TAW1-030	3	74	0	299	22.61
TAW1-040	4	35	0	299	23.26

Individual Nut Wrench



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
TAW2-005	1/2	200	0	299	12.28
TAW2-007	3/4	160	0	299	12.52
TAW2-010	1	110	0	299	13.03
TAW2-012	1-1/4	200	0	299	14.76
TAW2-015	1-1/2	120	0	299	15.89
TAW2-020	2	100	0	299	17.25
TAW2-030	3	40	0	299	22.61
TAW2-040	4	35	0	299	23.26

Standard Deck Mount Lab Fixture

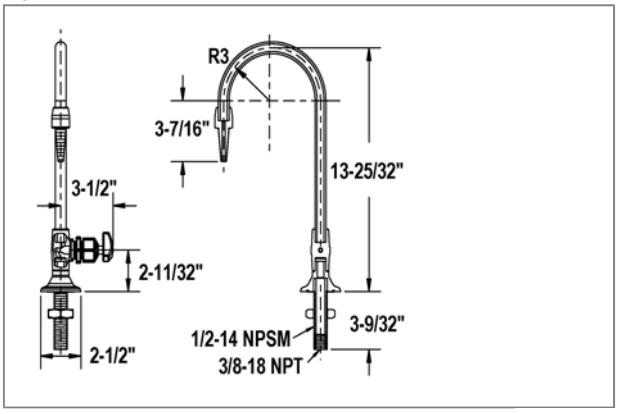
Base with Valve, Gooseneck & Serrated Tip with Needle Valve-Metered Flow

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
LF1000-BLN	LE, PTFE Seal	1	0	066	376.37

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each

Standard Deck Mount Lab Fixture (continued)

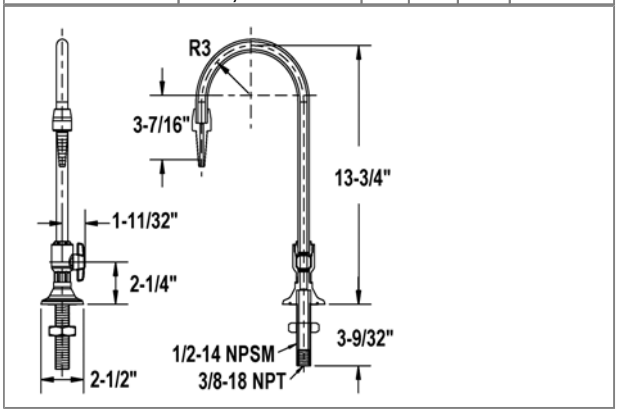
Base with Valve, Gooseneck & Serrated Tip with Needle Valve-Metered Flow



Standard Deck Mount Lab Fixture

With Ball Valve-Direct Flow

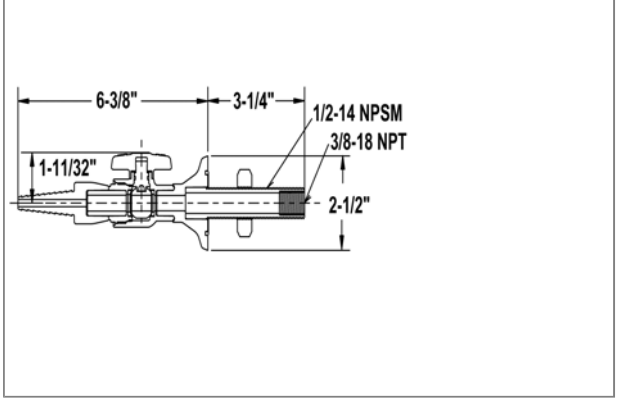
LF1002-BL	**LE, EPDM Seal**	1	0	066	314.74
LF1003-BL	**LE, FKM Seal**	1	0	066	349.72



Panel Mount Turret Lab Fixture

Base with Valve & Serrated Tip with Ball Valve-Direct Flow

LF3002-BL	**PVC, EPDM Seal**	1	0	066	309.60
LF3003-BL	**PVC, FKM Seal**	1	0	066	344.04

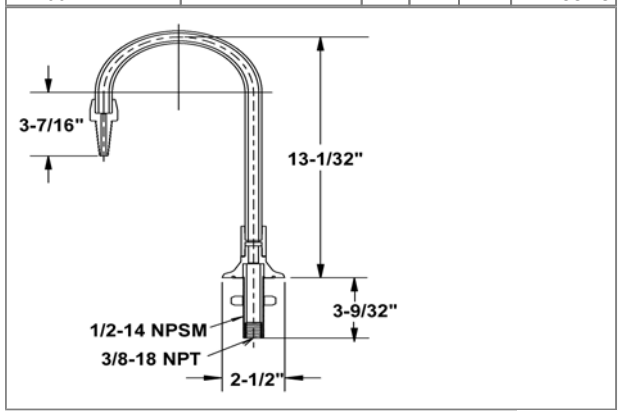


Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each

Deck Mount Gooseneck

Base with Gooseneck & Serrated Tip - For use with Remote Valve

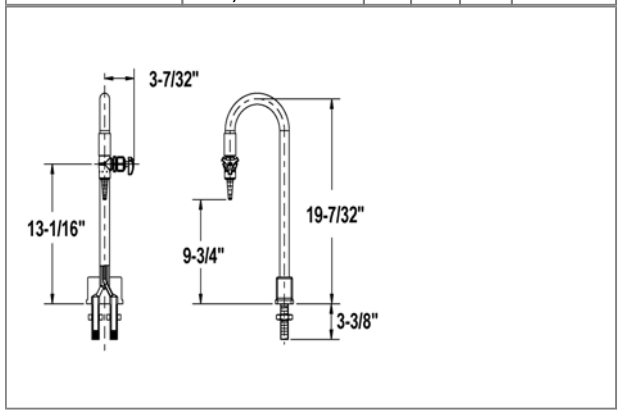
LF100-BL	**LE**	1	0	066	258.28



Recirculating Deck Mount Lab Fixture

Base with Gooseneck, Valve & Serrated Tip with Needle Valve - Metered Flow

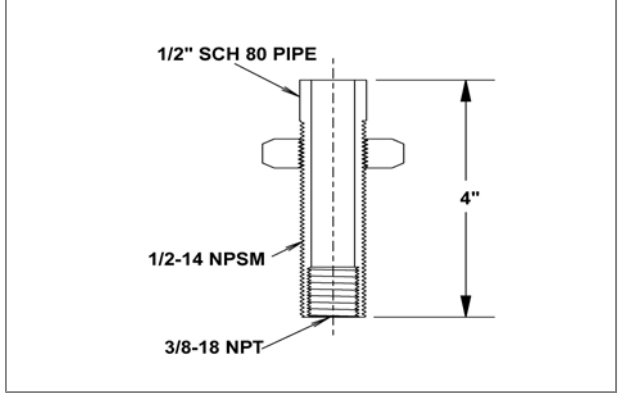
LFR1000-BLN	**LE, PTFE Seal**	1	0	066	784.05



Fixture Connection Nipple

With Locknut (Included on all fixtures listed above)

LF500-BL	**LE**	1	0	066	42.78



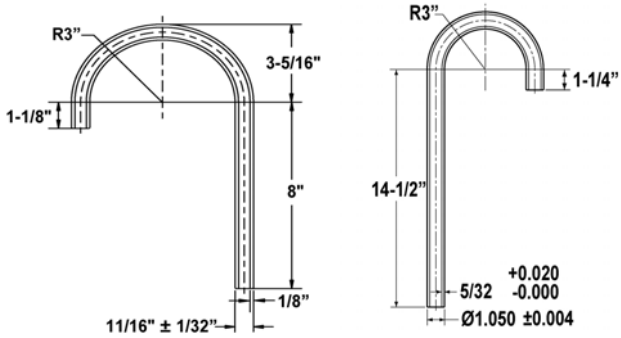
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each

Standard & Recirculating Gooseneck Only

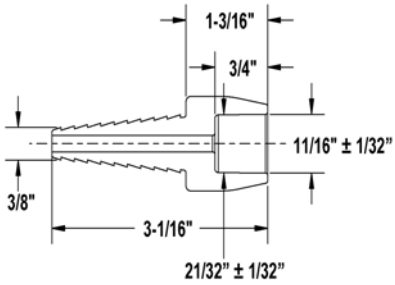
LFGN-BL	**LF**	1	0	066	36.36
LFRGN-BL	**LE**	1	0	066	50.95



Standard Recirculating

Straight Serrated Tip Only

LF400-BL	**LE**	600	0	066	7.69

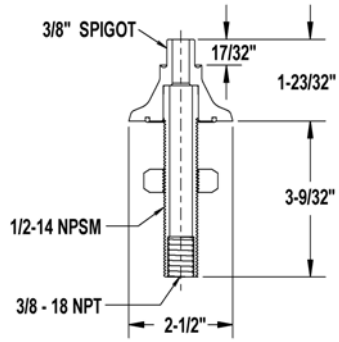


Base Only
Deck Mount

LFB-BL	**LE**	1	0	066	5.38

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each

Base Only (continued)
Deck Mount



LOW-EXTRACTABLE PIPING

For Ultra-pure Water Systems

TECHNICAL INFORMATION
WEIGHTS & DIMENSIONS

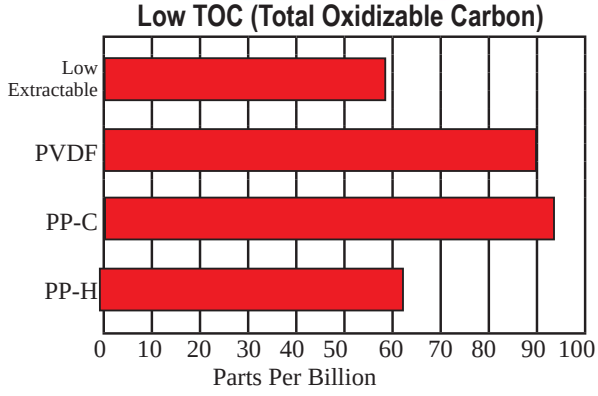
Contact Spears® for any information not found.

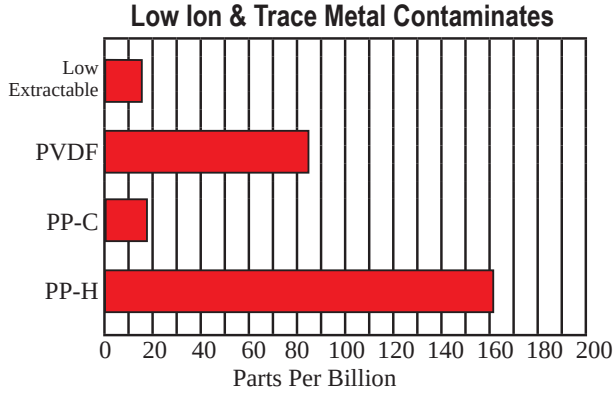
Low Extractable PVC Overview

Non-Contaminating PVC Material
Exceptionally Smooth Surface Characteristics
Low TOC & Chemical Extraction
Fast Particle Rinse Up

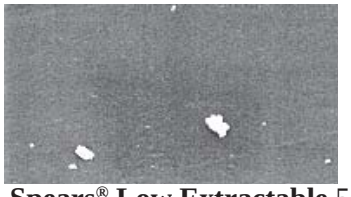
Superior Performance, Lower Installation Costs

Spears® Low Extractable PVC provides a superior, cost effective alternative to conventional high purity piping system materials while providing ease of installation without jeopardizing water quality. Specially developed for ultra-pure water systems in semiconductor, electronics, university research laboratories, hospital dialysis, industrial laboratories, Federal and state police forensic laboratories and biotechnology applications, Spears® Low Extractable PVC material has been subjected to independent laboratory leach studies during both static and dynamic exposure to 18.2 meg-ohm deionized water. Tests have shown relatively low TOC, Anion/Cation and trace metal contamination levels in comparison to conventional high purity piping system materials including PVDF and Natural Polypropylenes.





Material test graphic comparisons from 7-day static leach analysis at ambient temperature, 18.2 meg-ohm ultra pure water on Low Extractable, PVDF, PP Copolymer and PP Homopolymer pipe samples by ICP Mass Spectroscopy. Ion & Trace Metal contaminates reflect cumulative totals. Contact Spears® for individual levels.

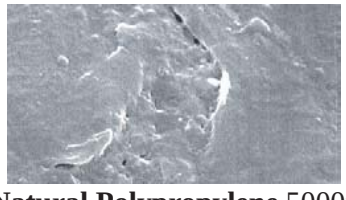


Spears® Low Extractable 5000x

Surface Characteristics Comparable to PVDF, Superior to PP & Conventional PVC

Photographic comparisons on interior wall of pipe.

High Purity PVDF 5000x



Natural Polypropylene 5000x

Conventional PVC 5000x

More Spears® Low Extractable PVC Advantages . . .

Fast System Rinse up

Semiconductor or Electronics grade high purity deionized water systems require an extremely low particle count to avoid process contamination. Drops in resistivity are directly related to particle contamination. Suitable materials must reach and maintain acceptable particle count and resistivity levels. In dynamic flow tests of Low Extractable PVC material using semiconductor grade ultra pure water, average particle counts decreased rapidly in the first 6-minutes and matched 0.05 micron background levels in 12-minutes. Resistance rose rapidly to match the 18.2 meg-ohm background level in 1-hour.

Non-contaminating Solvent Cement Joints for Lower Installation Costs

Spears® Low Extractable PVC is joined using a One-step solvent cement system specially formulated for high purity applications. Low percentages of chemical additives combined with an exceptionally fast set and cure time reduces the potential for TOC contaminates, provides for quick rinse up, and greatly reduces installation costs. The transparency of Low Extractable fittings, valves and pipe allows visual inspection for proper technique and integrity of joints.

Excellent Chemical Resistance

Spears® Low Extractable PVC is highly resistant to a wide variety of chemicals such as ozone, peroxides, and disinfectants. Low Extractable PVC is not recommended for use with chlorinated or aromatic hydrocarbons, esters or ketones.

Multiple Configurations 1/2" Through 6" Manufactured to Strict ASTM Standards

Spears® Low Extractable PVC products are strictly manufactured to ASTM requirements for optimum strength, dimensional stability, and product consistency in Spears® ISO 9001 Certified manufacturing facilities. Sizes 1/2" through 6" produced in a variety of configurations including True Union Ball Valves, Diaphragm Valves, Needle Valves, Gauge Guards, Elbows, Tees, Couplings, Reducer Couplings, Caps, Flanges, Male Adapters, Flush Style Reducer Bushings, Unions, Tank Adapters and Spears® patented Special Reinforced (SR) Female Adapters.

Low Extractable Pipe Pressure Rating

Nominal Size	PSI @ 73° F
1/2	420
3/4	340
1	320
1-1/4	260
1-1/2	240
2	200
3	190
4	160
6	140

Temperature De-rating Factors

Temperature ° F	De-rating Factor
73	1.00
80	.88
90	.75
100	.62
110	.51
120	.40
130	.31
140	.22

Low Extractable System Component Temperature (°F) / Pressure Rating (psi)

System Component	Nominal Size	73°F to 100°F	110°F	120°F	130°F	140°F
Unions	1/2" - 4"	235	211	150	75	50
Ball Valves	1/2" - 4"	235	211	150	75	50
Diaphragm Valves	1/2" - 2"	150	135	110	75	50
Flanges	1/2" - 6"	150	135	110	75	50
Needle Valves	1/4" - 1/2"	235	211	150	75	50
Gauge Guards	1/4" - 1/2"	235	211	150	75	50

To determine pipe pressure rating at a desired elevated temperature, multiply the 73°F pressure rating times the designated De-rating Factor, as found in charts to the left.

Valves, Unions and Flanges have elevated temperature pressure ratings different than pipe, as shown in chart above. Maximum PVC system service temperature is 140°F.

Low-extractable piping for ultra-pure water systems

Spears® low-extractable piping systems provide a cost-effective alternative to other piping materials typically used for ultra-pure water applications in the semiconductor, electronics, biotechnology and other industries. Lower material costs combined with fast, reliable installation greatly reduce installation costs – resulting in significant savings without jeopardizing water quality.

In addition to significant cost savings, these piping systems offer several other advantages for ultra-pure water applications. These include: non-contaminating material with extremely low-extractable contaminants (particularly Total Oxidizable Carbon and trace metals), ultra-smooth interior walls, strong Schedule 80 dimensions, specialty one-step solvent-cement joining system that cures fast, and unique translucency for visual inspection of joint integrity.

Spears® low-extractable Piping Systems offer unique advantages for many ultra-pure water applications

- Complete line of pipe, fittings and valves IPS Sizes 1/2" – 6" diameters
- Strong Schedule 80 dimensions for pressure service
- Advanced low-extractable material significantly reduces leachable contamination compared to conventional PVC and other piping materials.
- Exceptionally smooth interior walls reduce particle contaminants
- Fast, reliable installation with simple, inexpensive joining methods
- Proprietary one-step fast setting joining method reduces TOC contamination and rinses up quickly
- Good chemical/corrosion resistance, high-impact strength, low thermal conductivity
- Bagged, sealed and boxed on-line for use in high-purity environments
- High Quality
- Low Maintenance
- Cost Effective

Technical Information & Dimensions

Materials

Spears® low-extractable piping is produced from an innovative PVC compound that has been specifically formulated to reduce leachable contamination when exposed to ultra-pure water environments. Minor ingredients necessary for processing have been scrupulously selected to address their potential for contamination, and are then carefully blended in precise ratios. This results in a much cleaner material than conventional PVC compounds, and compares favorably to alternate materials typically used for UPW piping applications. This has been validated with extensive static and dynamic leach studies during exposure to 18.2 megohm ultra-pure water conducted by a reputable third party. Refer to testing data on the following pages for comparative evaluation of leachable contaminants obtained from common UPW piping materials.

Spears® low-extractable material meets the toxicological requirements of NSF International Standard 61 as being safe for use in potable water applications, and also complies with the provisions of Title 21 of the United States FDA Code of Federal Regulations as being safe for use in food contact applications.

Processing

Processing conditions for converting this material into pipe form are as critical as the selection of the material itself to ensure that the physical properties of the finished product are optimized. Correct processing techniques ensure proper dispersion and fusion of the compound, resulting in a homogenous melt with uniform properties. Great care is also taken during this process using proprietary techniques to address surface finish characteristics. Optimizing processing conditions and providing smooth internal surfaces greatly reduce the potential for extractable and particle contaminant.

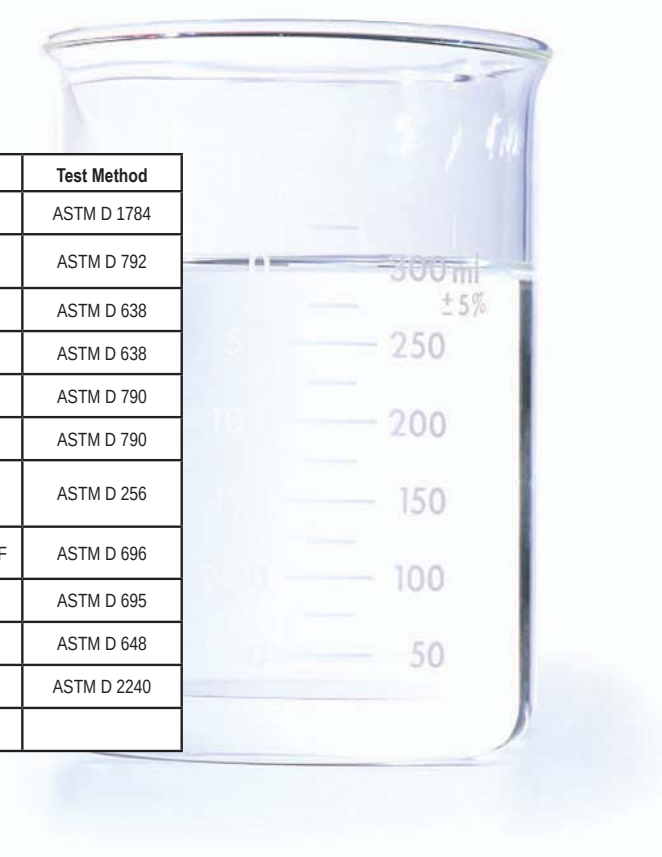
Spears® low-extractable pipe is cut square, purged to remove shavings, sealed in polybags and boxed on-line at time of manufacture to minimize contamination. Contact Spears® for availability of additional cleaning options.

Joining

The Spears® low-extractable system utilizes a one-step solvent-cementing system specifically formulated for use with this product. Unlike conventional PVC solvent cements, this system contains fewer contaminants and cures quickly, reducing the potential for TOC contamination. Joining is accomplished quickly and efficiently utilizing inexpensive tools, thereby greatly reducing labor and installation costs.

Physical Properties

Although the extractable contaminants of this Spears® piping are much lower than those of conventional PVC piping, the physical properties are very similar. As a result, these products exhibit the well-known physical characteristics and other benefits of conventional PVC piping, such as good chemical and corrosion resistance, low thermal conductivity, high strength-to-weight ratio, good impact resistance, and ease of installation.



Physical Properties

Property	Value	Test Method
Cell Classification	12343	ASTM D 1784
Specific Gravity	1.327 g/cu. Cm @ 73°F	ASTM D 792
Tensile Strength @ yield	6720 psi	ASTM D 638
Tensile Modulus of Elasticity	384,200 psi	ASTM D 638
Flexural Strength @ yield	11,440 psi	ASTM D 790
Flexural Modulus of Elasticity	378,000 psi	ASTM D 790
Izod Impact (avg of 2 complete breaks) (avg of 3 partial & 2 complete breaks)	1.3 ft-lbs / inch 10.9 ft-lbs / inch	ASTM D 256
Coefficient of Linear Thermal Expansion	3.89 x 10^{-5} in / in °F	ASTM D 696
Compressive Strength	8732	ASTM D 695
Heat Distortion Temperature	152°F	ASTM D 648
Hardness, Shore D	82.2 ± 3	ASTM D 2240
Maximum Temp Use	140°F	

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Testing

Spears® low-extractable piping has been subjected to extensive low-level defection testing during exposure to UPW by a reputable independent laboratory. Tests under both static and on-line dynamic (flowing) conditions analyze leachable micro contamination (TOC, anions, cations and trace metals) as well as resistivity and particles.

Static Leach Analysis

Detailed extractable analysis is conducted on piping samples after seven-day static leach utilizing 18.2 megohm ultra-pure water at ambient temperature. Static leach of large pipe samples (120-square-inch wet surface area) is representative of a piping system "off-line" for an extended period of time. Under these conditions the effects of UPW can be extremely aggressive, severely affecting the amount of leachable contaminants present within the piping material.

	Pipe Material						
Element	DL (Detection Limit) ppb	Spears®	High Purity PVDF	High Purity PP	Brand X Clean PVC	Conv. PVC	CPVC
TOC	5	59	90	94	1176	•	50
Fluoride	2	•	77	•	•	•	•
Chloride	0.25	2.33	1.0	0.66	2.45	0.84	49.54
Aluminum	0.05	0.30	2.3	0.68	0.54	3.10	1.16
Barium	0.01	0.04	0.24	0.09	0.01	0.22	0.05
Calcium	3	7	•	12	206	2787	15
Magnesium	0.02	0.81	0.66	1.0	2.15	11.15	2.17
Sodium	0.06	0.83	0.51	0.18	0.49	1.23	23.22
Tin	0.02	0.93	•	•	0.15	0.51	1.19
Zinc	0.06	0.49	0.47	0.96	•	0.51	1.19

• = Below Detection Limit

- All samples pre-rinsed identically with UPW prior to test.
- Independent Laboratory Extractable Analysis (Balazs Analytical Laboratory)
- Seven-Day Static Leach @ ambient temperature
- 450ml 18.2 megohm ultra-pure water
- 120-square-inch wet surface contact area
- Based on 1" diameter pipe without solvent-cemented joint
- Concentration units expressed as ug/L of Leachate (ppb)

Dynamic Leach Analysis

Spears® low-extractable piping was subjected to on-line dynamic flow analysis with 18.2 megohm UPW to evaluate particles, TOC, resistivity, anions, cations, and trace metals. This testing utilized solvent-cemented flange assemblies (spool piece) to see the effect that the cement had on TOC, resistivity and particle generation in a freshly assembled pipe section. Grab samples were also pulled periodically (at start-up, five minutes, 50 minutes and five hours) to analyze anions, cations and trace metals under flowing conditions. Flanges were assembled utilizing specially formulated one-step cement and allowed to cure 24 hours prior to testing. Dynamic testing revealed that piping assemblies did not contribute significantly to particle generation or leachable contamination under flowing conditions throughout the test duration.

Dynamic Test Description

Ambient temperature dynamic leach utilizing 18.2 megohm UPW flowing at 9.35 GPM (turbulent flow). 1" diameter pipe 30" long, solvent-cemented flanges each end (approximately 82-square-inch wet surface contact area). Approximately 1-1/2 grams of specially formulated one-step cement used in assembly of components. Solvent-cemented assembly was allowed to cure 24 hours prior to start-up. Dynamic test was conducted for a period of five hours.

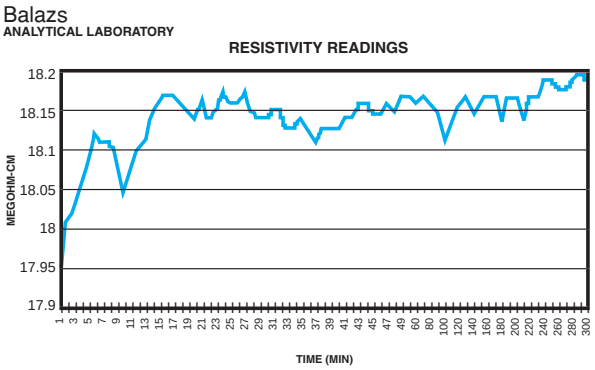
Leachable Contamination

Anions/Cations – IC grab sample analysis revealed low levels of sulfate (0.15 ppb) five minutes into the test, and low levels of ammonium at 50 minutes (0.05 ppb) and five hours (0.07ppb) into the test. All other IC contaminants were below the limit of detection.

Trace Metals – Of the 68 trace metal contaminants evaluated, all were below the limit of detection with the exception of aluminum, detected at 0.012 ppb at the five-minute interval. This element remained below the limit of detection throughout the remainder of the leach.

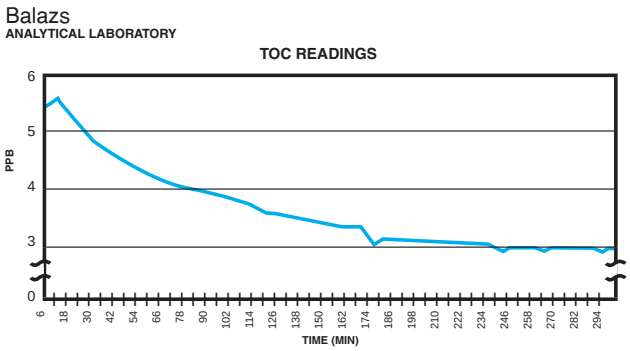
Resistivity

Resistivity measured 17.95 megohms at the start of the leach and rose quickly to 18.12 megohms during the first 6 minutes. Resistivity readings continued to rise until reaching the background level of 18.2 megohms after five hours of leaching.



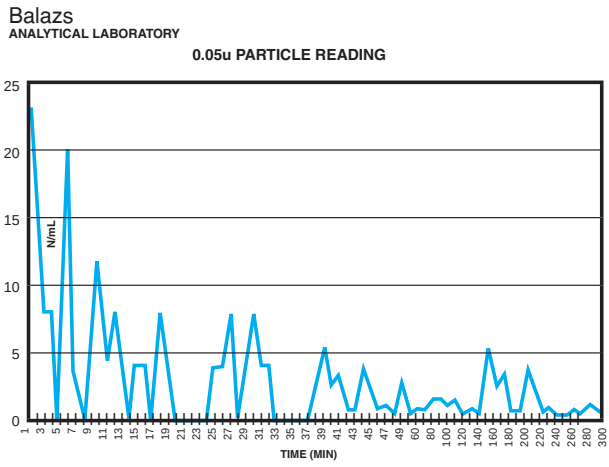
Total Oxidizable Carbon (TOC)

Dynamic testing revealed that after four hours of leaching, TOC readings reached and maintained the background levels throughout the test duration. This data confirmed the fast cure time of specially formulated one-step cement. Conventional solvent cements and primers used for joining typically effect TOC contamination as a result of the leach.



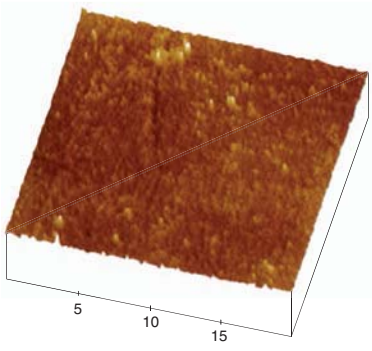
Particles

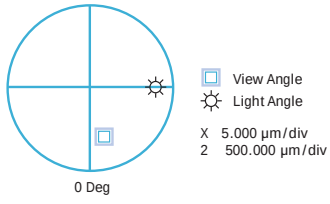
Dynamic testing revealed that average particle counts decreased rapidly during the first six minutes of the leach. After 12 minutes of leaching the average smallest particles measured (0.05 size range) were representative of the background levels.



Surface Analysis

Digital Instruments Nanoscope	
Scan Size	20.00µm
Scan Rate	1.001HZ
Number of Samples	512
Image Data	Height
Data Scale	500.0µm



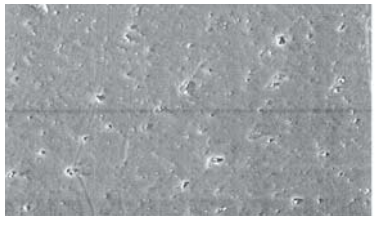


Spears® low-extractable piping has a non-porous, exceptionally smooth interior surface that greatly reduces the potential for extractable and particle contamination while impeding bacterial growth. The components (pipe and fittings) exhibit an average Roughness Analysis value of: **Ra≤ 0.25 µm (≤ 10µ inch)**

Internal Roughness Comparison

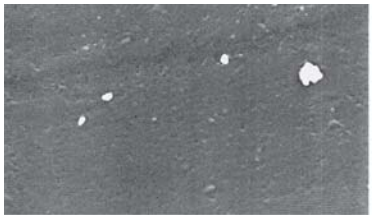
Spears® low-extractable piping has been evaluated side- by-side with other common piping materials at various magnifications for surface roughness comparison.

Conventional PVC 300x

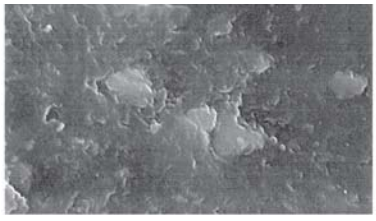


Spears® Low-extractable 300x

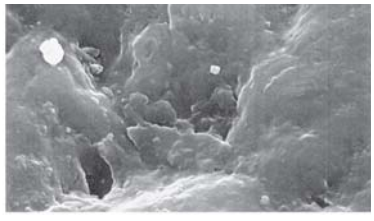
Spears® Low-extractable 5000x



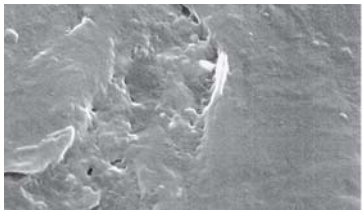
Conventional PVC 5000x



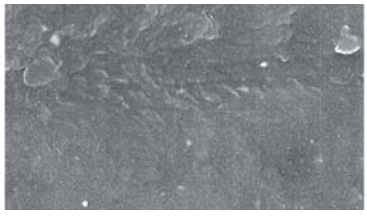
CPVC 5000x



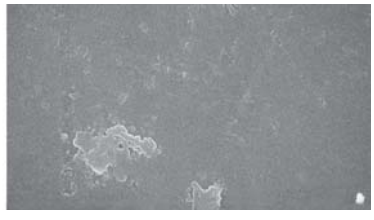
Polypropylene 5000x



Brand X Clean PVC 5000x



PVDF 5000x



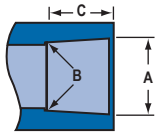
System Components

Spears® fitting and valve components are manufactured from the same low-extractable material. This provides entire system consistency and compatibility, while ensuring that extractable contamination is kept to a minimum. Leading-edge stress analysis technology is applied in the design of fitting and valve components to optimize strength and performance in critical applications.

Fittings

High-quality Spears® low-extractable components are designed to yield optimum performance for each fitting. Material reinforcement is uniformly placed in stress-concentration areas for substantially improved pressure-handling capability. Specialty transition fittings incorporate a stainless steel retaining ring that provides a strong, leak-tight seal for plastic-to-metal transitions while reducing problems associated with overtightening. The reinforced design reduces radial stress encountered with typical threaded connections, thereby eliminating the need for system pressure de-rating traditionally associated with non-reinforced plastic threaded joints.

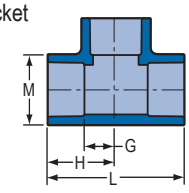
STANDARD SCHEDULE 80 SOCKET DIMENSIONS ASTM D 2467



Size (in.)	Entrance A	Bottom B	Minimum Socket Length C	Tolerance (In.)
1/2	.848	.836	.875	± .004
3/4	1.058	1.046	1.000	± .004
1	1.325	1.310	1.125	± .005
1-1/4	1.670	1.655	1.250	± .005
1-1/2	1.912	1.894	1.375	± .006
2	2.387	2.369	1.500	± .006
3	3.516	3.492	1.875	± .008
4	4.518	4.491	2.250	± .009
6	6.647	6.614	3.000	± .011

Tee

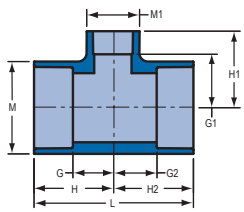
Socket x Socket x Socket



Part #	Size (in.)	G	H	L	M	Weight (lbs.)
801-005BL	1/2	9/16	1-15/32	2-15/16	1-3/16	.10
801-007BL	3/4	11/16	1-11/16	3-3/8	1-13/32	.17
801-010BL	1	27/32	2	4	1-11/16	.28
801-012BL	1-1/4	7/8	2-1/8	4-1/4	2-3/32	.39
801-015BL	1-1/2	1-5/32	2-9/16	5-1/8	2-5/16	.55
801-020BL	2	1-7/16	2-15/16	5-7/8	2-7/8	.90
801-030BL	3	2-1/16	3-31/32	7-15/16	4-7/32	2.38
801-040BL	4	2-5/8	4-7/8	9-3/4	5-1/4	3.43
801-060BL	6	3-13/16	6-13/16	13-5/8	7-5/8	10.79

Reducing Tee

Socket x Socket x Socket

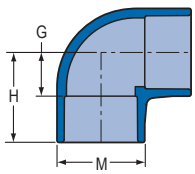


Part #	Size (in.)	G	G1	G2	H	H1	H2	L	M	M1	Weight (lbs.)
801-131BL	1x1x3/4	23/32	27/32	23/32	1-27/32	1-27/32	1-27/32	3-11/16	1-11/16	1-3/8	.23
801-211BL	1-1/2x1-1/2 1	7/8	1-3/16	7/8	2-1/4	2-5/16	2-1/4	4-1/2	2-3/8	1-11/16	.46
801-249BL	2x2x1	7/8	1-7/16	7/8	2-3/8	2-9/16	2-3/8	4-3/4	2-7/8	1-3/4	.58
801-251BL	2x2x1-1/2	1-3/16	1-7/16	1-3/16	2-11/16	2-13/16	2-11/16	5-3/8	2-7/8	2-3/8	.80
801-338BL	3x3x2	1-1/2	1-15/32	1-1/2	3-5/16	3-11/32	3-5/16	6-5/8	4-3/16	2-7/8	1.56
801-422BL	4x4x3	2-1/16	2-21/32	2-1/16	4-11/32	4-15/32	4-11/32	8-11/16	5-7/32	4-3/16	3.09
801-530BL	6x6x3	2-11/16	4-9/16	2-11/16	5-9/16	6-3/8	5-9/16	11-1/8	7-1/2	5-3/16	6.34
801-532BL	6x6x4	2-11/16	3-3/4	2-11/16	5-9/16	5-15/16	5-9/16	11-1/8	7-1/2	5-1/4	7.43

Technical Information & Dimensions

90° Elbow

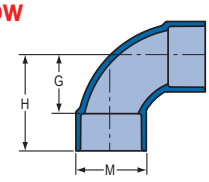
Socket x Socket



Part #	Size (in.)	G	H	M	Weight (lbs.)
806-005BL	1/2	9/16	1-15/32	1-3/16	.08
806-007BL	3/4	11/16	1-11/16	1-7/16	.12
806-010BL	1	13/16	1-31/32	1-23/32	.19
806-012BL	1-1/4	1-1/32	2-5/16	1-31/32	.33
806-015BL	1-1/2	1-3/32	2-15/32	2-11/32	.54
806-020BL	2	1-7/16	2-15/16	2-7/8	.61
806-030BL	3	2-1/16	3-31/32	4-5/32	1.57
806-040BL	4	2-19/32	4-27/32	5-1/4	2.80
806-060BL	6	3-23/32	6-3/4	7-19/32	8.59

Sweep Elbow

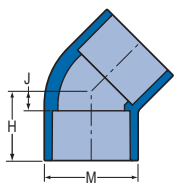
Socket x Socket



Part #	Size (in.)	G	H	M	Weight (lbs.)
806-005SBL	1/2	27/32	1-23/32	1-3/16	.07
806-007SBL	3/4	1-1/32	2-1/32	1-13/32	.11
806-010SBL	1	1-5/16	2-7/16	1-23/32	.19
806-012SBL	1-1/4	1-9/16	2-13/16	2-3/32	.28
806-015SBL	1-1/2	1-3/4	3-1/8	2-11/32	.37
806-020SBL	2	2-5/16	3-13/16	2-7/8	.61

45° Elbow

Socket x Socket



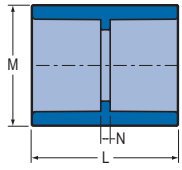
Part #	Size (in.)	H	J	M	Weight (lbs.)
817-005BL	1/2	1-1/8	1/4	1-3/16	.06
817-007BL	3/4	1-11/32	11/32	1-13/32	.09
817-010BL	1	1-7/16	11/32	1-23/32	.15
817-012BL	1-1/4	1-11/16	13/32	2-3/32	.21
817-015BL	1-1/2	1-27/32	7/16	2-3/8	.30
817-020BL	2	2-5/32	21/32	2-7/8	.48
817-030BL	3	2-27/32	31/32	4-1/8	1.13
817-040BL	4	3-3/8	1-3/32	5-1/4	2.24
817-060BL	6	4-7/8	1-7/8	7-9/16	5.37

All Spears® low-extractable fittings are produced in strict dimensional compliance with ASTM D 2467 to Schedule 80 dimensions. Spears® components produced to these dimensions ensure that strong, leak-tight connections with exceptional pressure-bearing capability can be assembled quickly using inexpensive joining tools. Refer to charts below for dimensional and weight data of available fittings.

NOTE: The information contained in this publication is based on current data and product design at time of publication and may be subject to change Additional components and configurations may be added periodically due to our continued commitment to product-line improvements.

Coupling

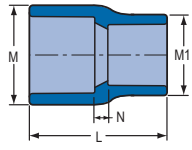
Socket x Socket



Part #	Size (in.)	L	M	N	Weight (lbs.)
829-005BL	1/2	1-7/8	1-3/16	1/8	.07
829-007BL	3/4	2-1/8	1-13/32	1/8	.10
829-010BL	1	2-3/8	1-23/32	1/8	.12
829-012BL	1-1/4	2-23/32	2-7/32	7/32	.22
829-015BL	1-1/2	2-7/8	2-11/32	3/32	.31
829-020BL	2	3-1/8	2-7/8	1/16	.31
829-030BL	3	4	4-3/16	3/16	.82
829-040BL	4	4-3/4	5-5/16	1/4	1.51
829-060BL	6	6-1/4	7-11/16	1/4	3.45

Reducer Coupling

Socket x Socket



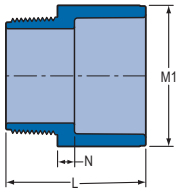
Part #	Size (in.)	L	M	M1	N	Weight (lbs.)
829-101BL	3/4 x 1/2	1-13/32	1-13/32	1-3/16	7/32	.06
829-131BL	1 x 3/4	2-13/32	1-23/32	1-13/32	1/4	.10
829-168BL	1-1/4 x 1	2-23/32	2-3/32	1-23/32	3/8	.17
829-211BL	1-1/2 x 1	2-7/8	2-11/32	1-15/16	3/8	.23
829-212BL	1-1/2 x 1-1/4	2-13/16	2-3/8	2-3/32	5/32	.21
829-249BL	2 x 1	3-1/8	2-7/8	1-23/32	17/32	.28
829-251BL	2 x 1-1/2	3-7/32	2-27/32	2-11/32	7/32	.30
829-338BL	3 x 2	4	4-5/32	2-27/32	11/16	.68
829-420BL	4 x 2	4-5/8	5-9/32	2-7/8	13/16	1.20
829-422BL	4 x 3	4-5/8	5-1/4	4-1/8	1/2	1.25
829-532BL	6 x 4	6-5/8	7-5/8	5-5/16	1-7/16	3.20

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

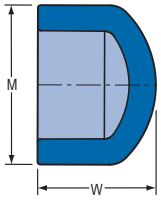
Fittings

Male Adapter
Mipt x Socket



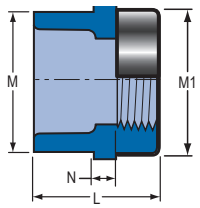
Part #	Size (in.)	L	M	N	Weight (lbs.)
836-005BL	1/2	1-13/16	1-3/16	3/16	.04
836-007BL	3/4	1-29/32	1-13/32	1/4	.06
836-010BL	1	2-1/4	1-3/4	7/32	.10
836-012BL	1-1/4	2-1/2	2-1/8	9/32	.15
836-015BL	1-1/2	2-9/16	2-13/32	1/4	.19
836-020BL	2	2-23/32	2-29/32	9/32	.27
836-030BL	3	3-23/32	4-7/32	3/8	.75
836-040BL	4	4-3/8	5-3/16	1/2	1.13

Cap
Socket



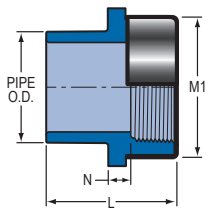
Part #	Size (in.)	M	W	Weight (lbs.)
847-005BL	1/2	1-3/16	1-7/32	.03
847-007BL	3/4	1-3/8	1-13/32	.05
847-010BL	1	1-11/16	1-19/32	.08
847-012BL	1-1/4	2-3/32	1-27/32	.16
847-015BL	1-1/2	2-11/32	2	.16
847-020BL	2	2-27/32	2-9/32	.35
847-030BL	3	4-5/32	3-1/32	.84
847-040BL	4	5-7/32	3-9/16	1.43
847-060BL	6	7-1/2	4-7/8	3.17

Special Reinforced Female Adapter
Socket x SR Fipt



Part #	Size (in.)	L	M	M1	N	Weight (lbs.)
835-005SRBL	1/2	1-3/4	1-5/32	1-3/16	3/16	.07
835-007SRBL	3/4	1-7/8	1-13/32	1-3/8	1/8	.08
835-010SRBL	1	2-5/32	1-23/32	1-23/32	3/32	.12
835-012SRBL	1-1/4	2-5/16	2-1/8	2-1/16	3/16	.19
835-015SRBL	1-1/2	2-7/16	2-13/32	2-7/16	7/32	.26
835-020SRBL	2	2-11/16	3	3-3/32	9/32	.43
835-030SRBL	3	3-1/2	4-1/4	4-9/32	7/32	.89
835-040SRBL	4	3-31/32	5-7/32	5-7/32	1/4	1.29

Special Reinforced Reducing Female Adapter
Spigot x SR Fipt

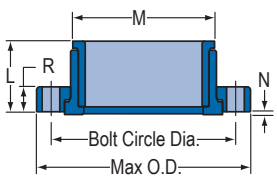


Part #	Size (in.)	L	M1	N	Weight (lbs.)
878-072SRBL	1/2 x 1/4	1-13/32	27/32	3/16	.03
878-098SRBL	3/4 x 1/4	1-27/32	27/32	9/32	.05
878-128SRBL	1 x 1/4	2-3/8	27/32	21/32	.08

Threaded Connections

Use only quality grade PTFE tape as a thread sealant for Spears® low-extractable applications. **Warning:** some pipe joint compounds or PTFE pastes may contain substances that could cause stress cracking to plastics and increase the potential for system contamination. 1 to 2 full turns beyond finger tight is generally all that is required to make a sound plastic threaded connection. Unnecessary over-tightening will cause damage to both pipe and fitting.

Flange Van Stone Style
(Two Piece)
Socket



Part #	Size (in.)	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Max O.D.	Weight (lbs.)
854-005BL	1/2	1-1/32	1-7/32	5/32	17/32	2-3/8	4	1/2	3-1/2	.19
854-007BL	3/4	1-1/8	1-7/16	5/32	9/16	2-3/4	4	1/2	3-7/8	.26
854-010BL	1	1-9/32	1-3/4	5/32	5/8	3-1/8	4	1/2	4-1/4	.36
854-012BL	1-1/4	1-13/32	2-5/32	5/32	11/16	3-1/2	4	1/2	4-5/8	.46
854-015BL	1-1/2	1-17/32	2-7/16	3/16	3/4	3-7/8	4	1/2	5	.56
854-020BL	2	1-11/16	2-15/16	3/16	13/16	4-3/4	4	5/8	6	.85
854-030BL	3	2-1/8	4-1/4	1/4	1-1/16	6	4	5/8	7-1/2	1.66
854-040BL	4	2-1/2	5-1/4	1/4	1-1/8	7-1/2	8	5/8	9	2.68
854-060BL	6	3-3/8	7-9/16	7/16	1-9/32	9-1/2	8	3/4	11	4.54

NOTE: Spears® low-extractable flanges maximum working pressure 150 psi non-shock @ 73° F

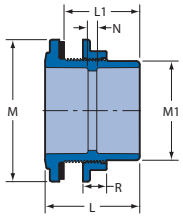
Flanges

Spears® low-extractable Van Stone-style flanges are also available for transition to alternate materials or where disassembly may be required. This unique two-piece design incorporates a rotating flange ring that greatly simplifies bolt hole alignment during installation.

Technical Information & Dimensions

Tank Adapter

Socket x Socket



Part #	Size (in.)	Hole Size (in.)	L	L1	M	M1	N	R	Weight (lbs.)
8170E-005BL	1/2	1.31	2-15/16	2-3/16	2	1-3/16	1-1/8	5/8	.20
8170E-007BL	3/4	1.69	2-15/16	2-3/16	2-1/4	1-5/8	15/16	5/8	.24
8170E-010BL	1	1.94	3-5/16	2-9/16	2-5/8	2	1-1/16	5/8	.35
8170E-012BL	1-1/4	2.39	3-7/16	2-5/8	3-1/8	2-5/16	15/16	5/8	.42
8170E-015BL	1-1/2	2.39	3-5/8	2-13/16	3-5/8	2-11/16	13/16	5/8	.93
8170E-020BL	2	3.51	4-1/8	3-1/4	4-7/8	3-1/4	1-1/16	3/4	1.30
8170E-030BL	3	4.49	5-1/2	4-1/2	6	4-9/16	1-11/16	1	2.50
8170E-040BL	4	5.50	5	4	7-1/2	5-1/2	7/16	1-1/4	3.40

EPDM Gasket – 150 psi maximum working pressure @73°F. For FKM Gasket, replace the E with V.

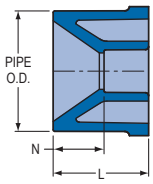
Gauge Guards

Spears® low-extractable gauge guards isolate process pressure or vacuum gauges from corrosive or potentially damaging process media by use of a thin PTFE diaphragm (optional FKM or EPDM available). This flexible membrane accurately transmits system pressure to the gauge connection chamber when properly assembled with gauge and liquid filled. A variety of optional gauges are available, factory assembled to the gauge guard and pre-filled. All gauge guards have 1/4" NPT gauge outlet connections. Inlet connectionsare either 1/4" or 1/2" NPT, featuring Spears® patented Special Reinforced (SR) female plastic thread.

Reducer Bushing

Flush Style

Spigot x Socket

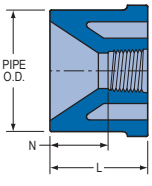


Part #	Size (in.)	L	N	Weight (lbs.)
837-101BL	3/4 x 1/2	1-7/32	11/32	.03
837-130BL	1 x 1/2	1-5/8	13/32	.06
837-131BL	1 x 3/4	1-11/32	5/16	.04
837-166BL	1-1/4 x 1/2	1-1/2	5/8	.12
837-168BL	1-1/4 x 1	1-19/32	15/32	.08
837-210BL	1-1/2 x 3/4	1-3/4	11/16	.19
837-211BL	1-1/2 x 1	1-17/32	13/32	.14
837-212BL	1-1/2 x 1-1/4	1-9/16	5/16	.07
837-249BL	2 x 1	1-29/32	13/16	.26
837-251BL	2 x 1-1/2	1-3/4	11/32	.17
837-338BL	3 x 2	2-27/32	9/16	.62
837-422BL	4 x 3	2-21/32	25/32	.82
837-532BL	6 x 4	4	1-23/32	2.86

Reducer Bushing

Flush Style

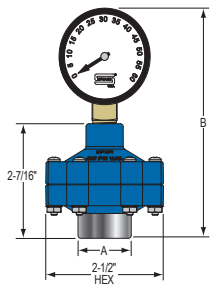
Spigot x Fipt



Part #	Size (in.)	L	N	Weight (lbs.)
838-072BL	1/2 x 1/4	1	7/8	.02
838-073BL	1/2 x 3/8	1-3/32	17/32	.02
838-098BL	3/4 x 1/4	1-7/32	5/8	.04
838-101BL	3/4 x 1/2	1-1/4	7/16	.03
838-129BL	1 x 3/8	1-13/32	19/32	.07
838-130BL	1 x 1/2	1-5/32	21/32	.06
838-131BL	1 x 3/4	1-3/8	21/32	.05
838-210BL	1-1/2 x 3/4	1-3/4	31/32	.15

Gauge Guard

PTFE Diaphragm



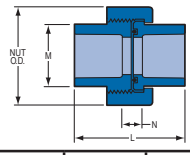
Gauge Configuration	1/4" Inlet	A	B	1/2" Inlet	A	B
No Gauge	G0004-002BL	7/8	—	G0004-005BL	1-3/16	—
0-30 in-Hg	G30V4-002BL	7/8	4-13/16	G30V4-005BL	1-3/16	4-7/8
0-15 psi	G0154-002BL	7/8	4-13/16	G0154-005BL	1-3/16	4-7/8
0-30 psi	G0304-002BL	7/8	4-13/16	G0304-005BL	1-3/16	4-7/8
0-60 psi	G0604-002BL	7/8	4-13/16	G0604-005BL	1-3/16	4-7/8
0-100 psi	G1004-002BL	7/8	4-13/16	G1004-005BL	1-3/16	4-7/8
0-160 psi	G1604-002BL	7/8	4-13/16	G1604-005BL	1-3/16	4-7/8
0-200 psi	G2004-002BL	7/8	4-13/16	G2004-005BL	1-3/16	4-7/8
0-300 psi	G3004-002BL	7/8	4-13/16	G3004-005BL	1-3/16	4-7/8

NOTE: Spears® low-extractable Gauge Guards carry a maximum pressure rating of 235 psi, non-shock, @73°F; vacuum gauges suitable for full vacuum service. All gauge guards have 1/4" NPT gauge outlet connections. Gauges are a standard 1/4" NPT brass bottom mount, epoxy enamel steel case, black marking on white face, black dial.

Union

(Old Style)

Socket x Socket



Part # *EPDM O-ring Seal	Size (in.)	L	M	N	Nut O.D.	Weight (lbs.)
897-005BL	1/2	2-3/32	1-9/32	11/32	1-31/32	.12
897-007BL	3/4	2-3/8	1-17/32	11/32	2-1/2	.17
897-010BL	1	2-9/16	1-27/32	3/8	2-7/8	.28
897-012BL	1-1/4	2-7/8	2-7/32	3/8	3-5/16	.36
897-015BL	1-1/2	3-3/32	2-9/16	15/32	3-9/16	.50
897-020BL	2	3-5/8	3-1/32	9/16	4-3/16	.86
8097-030BL	3	4-1/4	4-3/16	1/2	6-5/32	2.16
8097-040BL	4	5-1/8	5-1/4	5/8	7-3/4	3.43

*For (Socket X Socket) Unions equipped with FKM O-Ring, replace the 897 with an 857 before the dash.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Valves

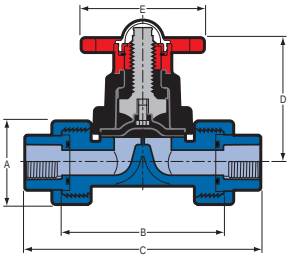
Spears® low-extractable valves are available in two styles: True Union Diaphragm configurations sizes 1/2" – 2" and True Union 2000 ball valve configurations sizes 1/2" – 4". Spears® low-extractable diaphragm valves (sizes 1/2" – 2") carry a maximum pressure rating of 150 psi for water, non-shock, @ 73°F. Spears® low-extractable ball valves sizes 1/2" – 4" carry a maximum pressure rating of 235 psi for water, non-shock, @ 73°F.

Diaphragm Valves

Spears® low-extractable diaphragm valves are engineered to provide accurate throttling control and shut-off, utilizing a positive-stop, non-rising stem. The Weir-type design incorporates a PTFE diaphragm for maintaining purity, and uses EPDM O-ring seals on the union connections. Low-profile True Union design minimizes space while allowing for ease of installation and maintenance. Valves are supplied with both socket and threaded-end connectors for versatility. They incorporate a built-in position indicator, and are operated with a high-impact, hand-wheel-style handle for easy operation.

Ball Valves

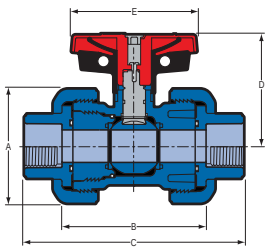
Spears® low-extractable quarter-turn True Union ball valves incorporate the same high degree of unique engineering design characteristics. Among these characteristics are heavy-bodied construction with strong buttress threads, full Schedule 80 bore to minimize pressure drop, PTFE floating seat design to minimize seat wear, EPDM or FKM O-ring seals, Safe-T-Shear® stem, socket and threaded-end connectors, and True Union design for ease of installation and maintenance.



True Union Diaphragm Valves

Part #	Size (in.)	A	B	C	D	E	Weight (lbs.)
2729T-005BL	1/2	1-15/16	3-7/8	5-3/16	3-11/32	2-7/8	.8
2729T-007BL	3/4	2-1/2	4-1/2	5-15/16	3-3/4	3-1/8	1.3
2729T-010BL	1	2-9/16	4-15/16	6-13/16	4-7/16	3-3/8	2.2
2729T-012BL	1-1/4	3-5/16	5-1/2	8-1/4	5-5/8	3-7/8	2.8
2729T-015BL	1-1/2	3-17/32	6-5/16	8-7/16	5-5/8	4-5/8	3.7
2729T-020BL	2	4-7/32	7-1/2	9-1/2	7	6-5/8	6.7

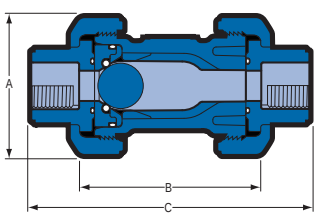
NOTE: Spears® low-extractable True Union Diaphragm valves sizes 1/2" – 2" carry a maximum pressure rating of 150 psi for water, non-shock, @ 73°F.



True Union 2000 Industrial Ball Valves

Part # *EPDM O-rings	Size (in.)	A	B	C	D	E	Weight (lbs.)
1829-005BL	1/2	1-7/8	2-3/8	4-3/16	2-9/16	2-13/16	.36
1829-007BL	3/4	2-1/4	2-3/4	4-3/4	2-7/8	3-3/8	.56
1829-010BL	1	2-1/2	2-7/8	5-1/8	3-1/8	3-7/16	.74
1829-012BL	1-1/4	3-1/16	3-1/4	5-3/4	3-5/8	3-7/8	1.13
1829-015BL	1-1/2	3-1/2	3-1/2	6-1/4	4	4-3/16	1.54
1829-020BL	2	4-1/4	4-3/4	7-3/4	4-1/2	5-1/8	2.72
1822-030BL	3	6-3/16	7	10-11/16	5-7/8	7-5/8	7.46
1822-040BL	4	7-5/8	7-5/16	11-7/8	6-3/4	9-3/16	12.35

NOTE: Spears® low-extractable True Union ball valves sizes 1/2" - 4" carry a maximum pressure rating of 235 psi for water, non-shock, @ 73°F.
*For True Union 2000 ball valves equipped with FKM O-ring seals, replace the **1829** with **1839** in the Part Number.



True Union 2000 Industrial Ball Check Valves

Part # *EPDM O-rings	Size (in.)	Dimension Reference (inches + 1/16)			Approx. Wt. (Lbs.)	Cv²	Horizontal Closing	
		A	B	C	PVC	Soc/Thd	Feet of Head (water)	GPM (minimum)
4529-005BL	1/2	1-7/8	2-7/16	4-3/16	0.72	6.3	1.6	.30
4529-007BL	3/4	2-1/4	2-3/4	4-3/4	1.19	17	1.6	.46
4529-010BL	1	2-1/2	2-7/8	5-1/8	1.53	25	1.6	.70
4529-012BL	1-1/4	3-1/16	3-1/4	5-3/4	1.85	65	1.6	1.04
4529-015BL	1-1/2	3-1/2	3-1/2	6-1/4	2.97	86	1.6	1.37
4529-020BL	2	4-1/4	4-3/4	7-3/4	4.55	130	1.6	2.47
4522-030BL	3	6-3/16	6-7/8	10-11/16	11.15	275	1.0	6.98
4522-040BL	4	7-1/2	7-1/4	11-13/16	16.58	500	1.0	12.13

1: Valve Lay Length
2: Gallons per minute at 1 psi pressure drop. Values based on independent testing by California State Polytechnic University.
NOTE: Spears® low-extractable True Union ball check valves sizes 1/2" - 4" carry a maximum pressure rating of 235 psi for water, non-shock, @ 73°F.
*For True Union 2000 ball check valves equipped with FKM O-ring seals, replace the **4529** with **4539** in the Part Number.

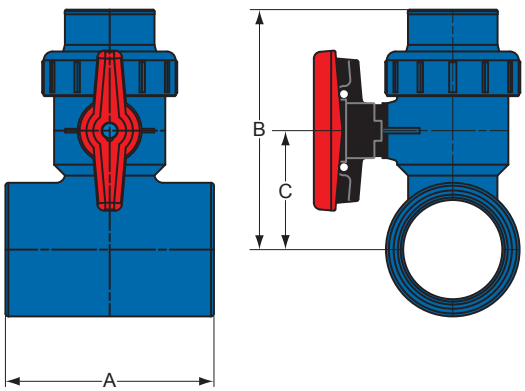
Technical Information & Dimensions

Needle Valves

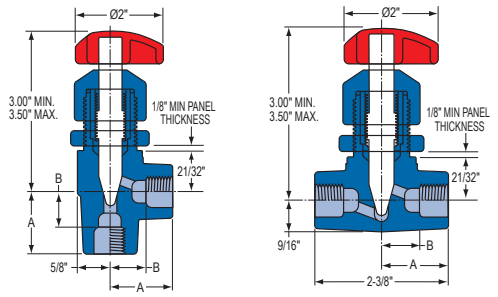
Spears® low-extractable needle valves provide proportional opening to needle travel for more accurate metering and other fine-adjustment flow-control applications. Replaceable PTFE seat eliminates all elastomer seals. Available in Globe and Angle pattern configurations with socket or threaded end connections. Valves include built-in panel mounting nut and easy-grip polypropylene handles.

Lab Fixtures (not shown)

See Part I of this catalog, High Purity PVC System for additional information.



Needle Valves



Angle Pattern | Globe Pattern

Globe Pattern Part #	Angle Pattern Part #	End Connection	Size (in.)	A	B
5592-002BL	5692-002BL	Socket	1/4	1-3/16	9/16
5592-003BL	5692-003BL	Socket	3/8	1-3/16	7/16
5592-005BL	5692-005BL	Socket	1/2	1-3/8	1/2
5591-002BL	5691-002BL	Threaded	1/4	1-3/16	21/32
5591-003BL	5691-003BL	Threaded	3/8	1-3/16	9/16
5591-005BLSR	5691-005BLSR	SR Threaded	1/2	1-3/8	21/32

NOTE: Spears® low-extractable Needle Valves carry a maximum pressure rating of 235 psi, non-shock, @ 73°F. Threaded 1/2" valve only available with Special Reinforced (SR) female threads.

True Union 2000 Industrial Tee-Style Ball Check Valves

Part # EPDM O-rings	Part # FKM O-rings	Nominal Size	Dimension Reference (inches + 1/16)			Weight (lbs.)
			A	B	C	
182901-005BL	183901-005BL	1/2	2-5/16	3-3/4	1-5/8	.48
182901-007BL	183901-007BL	3/4	3-7/16	4-1/4	1-7/8	.70
182901-010BL	183901-010BL	1	4	4-11/16	2-1/16	1.10
182901-012BL	183901-012BL	1-1/4	4-1/4	5-5/16	2-7/16	1.64
182901-015BL	183901-015BL	1-1/2	5-1/8	6-1/8	3	2.26
182901-020BL	183901-020BL	2	5-7/8	7-5/16	3-7/16	3.72
182901-101BL	183901-101BL	3/4x1/2	3-3/16	3-7/8	1-3/4	.51
182901-130BL	183901-130BL	1x1/2	3-7/16	4	1-7/8	.58
182901-131BL	183901-131BL	1x3/4	3-11/16	4-3/8	2	.78
182901-166BL	183901-166BL	1-1/4x1/2	4-1/4	4	1-7/8	.77
182901-167BL	183901-167BL	1-1/4x3/4	4-1/4	4-1/4	1-7/8	.90
182901-168BL	183901-168BL	1-1/4x1	4-1/4	4-13/16	2-3/16	1.78
182901-209BL	183901-209BL	1-1/2x1/2	4-3/8	4-1/4	2-1/8	.86
182901-210BL	183901-210BL	1-1/2x3/4	4-1/8	4-5/8	2-3/16	.91
182901-211BL	183901-211BL	1-1/2x1	4-1/2	5	2-3/8	1.37
182901-247BL	183901-247BL	2x1/2	4-3/16	4-9/16	2-7/16	1.06
182901-248BL	183901-248BL	2x3/4	4-3/8	4-15/16	2-9/16	1.23
182901-249BL	183901-249BL	2x1	4-3/4	5-1/4	2-5/8	1.38
182901-251BL	183901-251BL	2x1-1/2	5-7/8	6-1/16	2-15/16	2.33
182901-333BL	183901-333BL	3x1/2	5-1/2	5-1/8	3	1.60
182901-335BL	183901-335BL	3x1	5-1/2	5-7/8	3-1/4	2.19
182901-337BL	183901-337BL	3x1-1/2	7-1/4	6-9/16	3-7/16	3.66
182901-338BL	183901-338BL	3x2	6-11/16	7-11/16	3-13/16	4.61
182901-417BL	183901-417BL	4x1	7-7/16	6-5/16	3-11/16	3.25
182901-419BL	183901-419BL	4x1-1/2	7-3/8	7-5/16	4-3/16	4.01
182901-420BL	183901-420BL	4x2	7-3/4	8-5/16	4-7/16	5.20
182901-528BL	183901-528BL	6x2	10-3/16	9-5/8	5-3/4	9.26
182901-578BL	183901-578BL	8x2	15-5/8	12-5/8	8-3/4	17.42

Tee-Style Ball Valves

Spears® low-extractable True Union Tee-Style Ball Valve design integrates valve and Tee-fitting for direct branch take-off laterals. The close proximity of the valve to mainline emulates a "zero deadleg" design to minimize any areas of fluid stagnation. Custom produced to specified Tee and Valve connection sizes.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

System Design & Installation

Product Ratings and Capability

Spears® low-extractable piping is produced to Schedule 80 dimensions in strict accordance with ASTM D 1785, and exhibits a Type II pressure rating. Fittings are produced to Schedule 80 dimensions per ASTM D 2467. Joining of product produced to the dimensional requirements of these standards ensures that strong connections with good pressure-bearing capability can be made up quickly and consistently using common, inexpensive tools. Utilizing these dimensions provides a higher pressure-bearing capacity compared to other "clean" systems on the market, and permits the use of standard socket dimensions.

Dimensions

Nominal Pipe Size (in.)	Average O.D.	Average I.D.	Minimum Walll	Nominal Weight Lbs./ft.	Max.W.P. PSI*
1/2	.840	.528	.147	.202	420
3/4	1.050	.724	.154	.273	340
1	1.315	.935	.179	.402	320
1-1/4	1.660	1.256	.191	.554	260
1-1/2	1.900	1.476	.200	.673	240
2	2.375	1.913	.218	.932	200
3	3.500	2.864	.300	1.903	190
4	4.500	3.786	.337	2.782	160
6	6.625	5.709	.432	5.313	140

*PSI water, non-shock @ 73°F with solvent-welded connections. System pressure rating dependent on component pressure ratings (i.e., flanges all sizes = 150 psi max @ 73° F)

Temperature De-rating Factor

Operating Temprature (°F)	De-rating Factor
73	1.00
80	0.88
90	0.75
100	0.62
110	0.51
120	0.40
130	0.31
140	0.22

As with all schedules of thermoplastic pipe, pressure rating is dependent on the pipe diameter as well as the operating temperature of the system. As temperatures rise, the pressure rating of the system decreases. The maximum temperature rating of Spears® low-extractable piping is 140°F. However, **DO NOT** use with "hot" Deionized (DI) water as this may have a detrimental effect on the system. Spears® recommends that Low Extractable PVC systems used with deionized water should be limited operating temperatures of no more than 80°F. Smaller-diameter piping can withstand higher pressure than large-diameter piping at elevated temperatures. Use appropriate temperature de-rating factors to determine maximum allowable pressure at elevated temperatures.

Hangers and Supports

Proper support spacing is critical to ensure that deflection is kept to a minimum. Support location and spacing is dependent on the pipe diameter, operating temperature of the system, and the location of any concentrated stress loads (i.e., valves, flanges, test equipment and any other heavy system components). Hangers used must have an adequate load-bearing surface free of any rough or sharp edges that could damage the pipe during use. Hangers also must not restrict linear movement of the system due to the effects of thermal expansion and contraction as a result of temperature changes; overtightening must be avoided.

Hanger Support Spacing

Pipe Size (in.)	Maximum Support Spacing in Feet				
	73°F	80°F	100°F	120°F	140°F
1/2	5	4-1/2	4-1/2	3	2-1/2
3/4	5-1/2	5	4-1/2	3	2-1/2
1	6	5-1/2	5	3-1/2	3
1-1/4	6	6	5-1/2	3-1/2	3
1-1/2	6-1/2	6	5-1/2	3-1/2	3-1/2
2	7	6-1/2	6	4	3-1/2
3	8	7-1/2	7	4-1/2	4
4	9	8-1/2	7-1/2	5	4-1/2
6	10	9-1/2	9	6	5

Thermal Expansion and Contraction

As with all thermoplastic piping materials, consideration must be given during the design of the system to the effects of thermal expansion and contraction. The coefficient of linear expansion for Spears® low-extractable pipe is 3.89 x 10^{-5} in./in./°F. The rate of expansion or contraction can be calculated as follows:

$\Delta L = 12\ y L\ (T)$

Where:

ΔL = amount of expansion or contraction in inches

y =3.89 x 10^{-5}

L =length of piping run in feet

ΔT = temperature change °F

(T max. – T @ time of installation or lowest system temperature or maximum system temperature, whichever is greater.)

Storage and Handling

Reasonable care and common sense should be used when handling and storing Spears® low-extractable piping products. These products are tough and corrosion resistant, but they should not be dropped or have objects dropped on them. Care should be used when transporting and storing the product to prevent physical damage. Spears® low-extractable products should not be stored or installed close to heat-producing sources, subjected to external loads or over stacked when stored. The product should be inspected for any scratches, splits or gouges. Damaged sections must be cut out and discarded.

Joining Techniques

Spears® low-extractable piping products are easily joined by the solvent-cementing process. Unlike conventional PVC solvent-cementing techniques, this product utilizes a **one-step solvent-cement system specifically formulated for "clean" applications**. This solvent cement exhibits extremely fast set and cure times. When properly used, this system results in very short cure times prior to pressure testing, and produces a solvent-cemented assembly with an exceptionally low percentage of chemical additives, reducing the potential for system contamination.

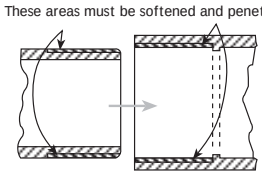
A thorough understanding of the solvent cement joining process and proper assembly techniques must be used during assembly of these products to ensure the highest system integrity. Installers must become familiar with this process prior to use.

Basic Principles of Solvent Cementing

Spears® low-extractable components are manufactured to the dimensional tolerances for Schedule 80 pipe per ASTM D 1785, and Schedule 80 socket-type fittings per ASTM D 2467. When fittings are produced to these dimensions, the ID of the fitting at the entrance of the socket is larger than the ID of the fitting at the socket bottom. The taper created by fitting socket dimensions provides an interference fit during assembly of the components. This provides a proven means for proper mating of components, ensuring adequate joint strength when properly assembled.

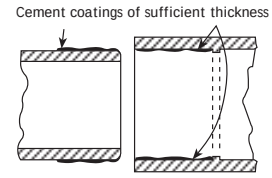
The following points must be clearly understood to ensure satisfactory joints are obtained consistently.

1. The joining surfaces must be softened and made semifluid.
2. Sufficient cement must be applied to fill the gap between the pipe and fitting.
3. Assembly of pipe and fitting must be made immediately while the surfaces are still wet and the cement is fluid.
4. Joint strength develops quickly as the cement dries. In the tight part of the joint, the surfaces will tend to fuse together; in the loose part of the joint the cement will bond to both surfaces.



Softening and Penetration

These areas must be softened and penetrated. (This can be achieved by the cement itself.)

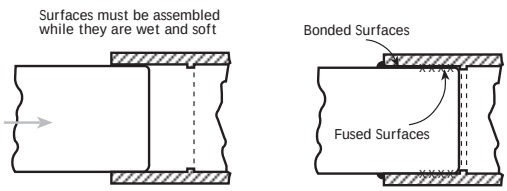


Sufficient Application of Cement

More than sufficient cement to fill the gap in the loose part of the joint must be applied. In addition to filling the gap, adequate cement layers will penetrate the joining surfaces and remain fluid until the joint is assembled.

Joint Integrity

When the cement coating on the pipe and fittings are fluid during assembly, they will tend to flow together and become one cement layer. In addition, the surfaces beneath the cement coating will be soft from surface penetration of the cement. The softened surface areas in the tight part of the joint will tend to fuse together. As the solvent dissipates, the cement layer and the softened surfaces will harden with a corresponding increase in joint strength. The dissipation of the solvent from specially formulated one-step cement occurs very quickly due to its high evaporation rate. Joint strength develops more quickly in the tight (fused) part of the joint than in the looser (bonded) part of the joint. A properly assembled joint will take the required working pressure before the joint is fully dry and final joint strength is obtained.

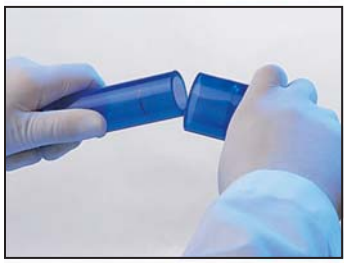


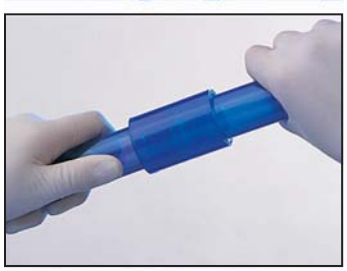
Specially Formulated One-Step Cement

Use only specially formulated one-step cement for Spears® low-extractable applications using the appropriate size applicator. Carefully read and follow the label on the cement can, and application and cure time instructions thoroughly. **NOTE:** Dauber is supplied in pint-can lid (suitable for pipe sizes 1/2" - 1-1/4"). Dauber is supplied in quart-can lid (suitable for pipe sizes 1-1/2" - 3"). For pipe sizes 4" thru 6" use a roller equal in size to 1/2 the pipe diameter.

Specially formulated one-step cement is listed by NSF International and conforms to the requirements of ASTM D 2564.

Technical Information & Dimensions





Safety Precautions:

Before applying cement, appropriate safety precautions should be taken. Solvent cement should be stored in the shade between 40 °F and 110°F. Eliminate all ignition sources. Avoid breathing of vapors. Use only with adequate ventilation; mechanical ventilation or local exhaust is recommended to maintain vapor concentrations below exposure limits. In confined or partially enclosed areas an organic vapor respirator is recommended. Containers should be kept tightly closed when not in use, and covered as much as possible when in use.Avoid frequent contact with skin. Wear clean rubber gloves; do not perform work with bare hands.

Component Preparation:

All pipe, fittings and tools used for joining must be clean and free of dirt, moisture, grease or other contamination prior to and during the joining process.

1. Cutting:

Cutting the pipe as squarely as possible (90°) is required, as it maximizes the bonding area of the joint. Only sharp wheel-type cutters with blades specifically designed for cutting plastic shall be used. Cutters should be rotated slowly to provide optimum cut. Cutting speeds should be further reduced at lower temperatures. The use of a saw is *not* recommended as filings and shavings will cause particulate contamination.

2. Deburring:

All pipe ends shall be properly chamfered by providing a 10° to 15° bevel (1/16" to 3/32" in width). A chamfering tool designed for this purpose shall be used. A proper bevel will aid in assembly and prevent solvent cement being pushed from the wall of the fitting during assembly. Burrs and filings can prevent contact between the pipe and fitting and must be removed from the outside and inside of the pipe during this process. A common practice is to place sterile gauze in the pipe end to prevent shavings from entering the pipe. The gauze is then removed prior to cement application.

3. Joining Preparation:

A. Prior to assembly, all components shall be inspected for any damage or irregularities. Mating components shall be checked to assure that tolerances and engagements are compatible. Do not use components that appear irregular or do not fit properly.

B. Check the dry fit – The pipe should enter the fitting socket easily one-quarter to three-quarters of the way. If the pipe bottoms in the fitting with little interference, use extra solvent cement in making the joint.

C. Measure the socket depth of the fitting and mark this distance on the pipe end. This reference mark can be used when joining to ensure the pipe is completely bottomed into the fitting during assembly.

4. Solvent Cement Application:

Specially formulated one-step cement shall be applied to the joining surfaces using a dauber or natural-bristle brush approximately half the diameter of the pipes being joined. Working quickly, apply a heavy, even coat of solvent cement to the pipe end on the surface equal to the depth of the fitting socket. Apply a light coat to the fitting socket. If there was little interference during the dry fit, apply a second coat of cement to the pipe end at this time. Great care must be used to prevent cement from coming into contact with the interior waterway of the fitting or pipe.

5. Assembly:

Immediately insert the pipe into the fitting socket while rotating one-quarter turn. Properly align the fitting for the installation at this time. The pipe must bottom completely to the fitting stop. Hold the assembly for approximately 30 seconds to ensure initial bonding. Due to the taper on the interference fit, the pipe can back off the fitting stop if steady pressure is not held on the joint during initial bonding. A bead of cement should be evident around the pipe and fitting juncture. If the bead is not continuous, it may indicate that insufficient cement was applied. *Due to the unique translucency of Spears® low-extractable products, visual inspection of the cemented joint can be conducted utilizing a flashlight or alternate light source. Joint integrity can be readily verified by visually inspecting the cemented surfaces for uniformity.* If insufficient cement is applied, the joint must be cut out, discarded and begun again. Excess cement must be wiped off from the pipe OD using a clean rag at this time.

Assembly Instructions

Set and Cure Times:

Set and cure times are a function of pipe size, temperature, pressure, humidity and tightness of fit. The initial *set time* is the recommended waiting period prior to handling a newly assembled joint. After the initial set time, the joints will withstand the stresses of normal installation. (Misalignment of components during assembly will cause excessive stress in the joint, which can affect joint integrity). The *cure time* is the recommended waiting period prior to pressurizing newly assembled joints. Minimum cure time prior to pressure testing is dependent on pipe size, temperature, humidity, tightness of fit and test pressure required. Longer cure times must be allowed when working at higher humidity and colder temperatures.

Refer to the following tables for minimum set and cure times:

Initial Set Time

Temp.	Pipe Size 1/2 - 1-1/4	Pipe Size 1-1/2 - 2	Pipe Size 2-1/2 - 6
60° - 100°F	2 minutes	3 minutes	30 minutes
40° - 60°F	5 minutes	8 minutes	2 hours
0° - 40°F	10 minutes	15 minutes	12 hours

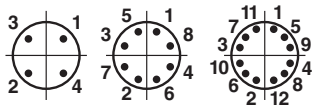
Joint Cure Schedule

Relative Humidity 60% or less*	Pipe Size 1/2 - 1-1/4		Pipe Size 1-1/2 - 2		Pipe Size 2-1/2 - 6
Temp range during assembly and cure periods	up to 160 psi	160 to 360 psi	up to 160 psi	160 to 315 psi	up to 160 psi
60° - 100°F	15 min	6 hrs	25 min	12 hrs	1-1/2 hrs
40° - 60°F	20 min	12 hrs	30 min	24 hrs	4 hrs
0° - 40°F	30 min	48 hrs	45 min	96 hrs	72 hrs

* If damp or humid weather allow 50 percent longer cure time.

Flange Installation:

1. Solvent cement flange to pipe.
2. Piping runs joined must be installed in straight-line position to the flange and supported to avoid stress and damage.
3. Rotate ring into position with gasket in place to align holes.
4. Insert all bolts, washers and nuts.
5. Mating surfaces of flanges must be flush against gasket prior to bolting.
6. Tighten by hand until snug. Tighten bolts in 5 ft.-lb. increments according to opposing sequence shown below.
7. Do not use bolts to bring improperly mated flanges together.



Bolt Torque Sequence

Flange Size (in)	Recommended Torque
1/2 - 1-1/2	12 ft-pounds
2 - 4	25 ft-pounds
6	40 ft-pounds

Installation Notes:

Installers should verify for themselves that they can make satisfactory joints under varying conditions.

Use the appropriate size applicator. Avoid puddling of solvent cement on or within fittings and pipe. This will cause excessive softening of materials, resulting in damage to the product and excessive system contamination.

Spears® low-extractable solvent-cemented assemblies cure very quickly when properly constructed, enabling pressure-bearing capability in a short time. This is a positive attribute of the system for scheduling pressure tests and repair work. However, Spears® Manufacturing Company recommends that newly assembled systems be allowed to cure for a minimum period of 24 hours prior to system rinsing/activation procedures. This reduces the potential for TOC contamination.

Spears® low-extractable piping products should not be connected directly to UV light sources that would expose system components to ultraviolet radiation.

Other Design Considerations

Proper system engineering, design, construction practices and operation are the responsibility of the design authority. Consideration must be given to ensure the Spears® low-extractable system is not exposed to any conditions that will exceed the product limitations regarding temperature, pressure, chemical compatibility, and mechanical strength. Detailed chemical resistance and other design information is available from Spears® Manufacturing Company.

DO NOT use with "hot" Deionized (DI) water as this may have a detrimental effect on the system. Spears® recommends that Low Extractable PVC systems used with deionized water should be limited operating temperatures of no more than 80°F.

Spears® Manufacturing Company does not recommend the use of this product for the transportation or storage of compressed air or gases, nor the testing of these systems using compressed air or gases.

Excessive surge pressure must be avoided. The system must be designed to ensure that surge potentials generated by pump operation, entrapped air, flow velocity, and valve closure are kept to a minimum. Spears® does not recommend flow velocities in excess of five feet per second.

Spears® low-extractable piping systems are not formulated for outdoor use. Prolonged exposure to ultraviolet radiation (UVR) will affect physical properties.

Spears® Manufacturing Company recommends that newly installed systems be allowed to cure for a minimum period of 24 hours prior to rinsing procedures to reduce the potential for TOC contamination. Rinsing procedures, chemical rinse and other cleanup/disinfection procedures to be used are at the discretion of the system design authority. Note: Spears® low-extractable piping is compatible with hydrogen peroxide at concentrations up to 30% at 73°F. Contact Spears® for additional chemical compatibility information concerning the use of these products with various substances prior to use.

Sample Specifications

UPW process piping and fittings shall be manufactured from a specialty low-extractable, Polyvinyl Chloride (PVC) compound with a Cell Classification of 12343 per ASTM D 1784. All pipe and fittings shall be produced to Schedule 80 dimensions, manufactured in strict compliance to ASTM D 1785 (pipe), and ASTM D 2467 (fittings). These products shall carry a Type II pressure rating and consistently meet or exceed the applicable Quality Assurance test requirements of these standards with regard to dimensions, workmanship, burst pressure, flattening resistance and end-product quality. All UPW process valves shall be True Union-style diaphragm or True Union-style quarter-turn ball valves produced from the same low-extractable PVC compound. All valve diaphragms and seats shall be PTFE; valve O-rings shall be EPDM or FKM as applicable. All valve union nuts shall have buttress-style threads. All valve components shall be replaceable. System components shall be joined utilizing specially formulated one-step cement for joining the system. All system components shall be manufactured in the USA by an ISO-certified manufacturer. All UPW piping shall be bagged and sealed immediately after manufacture to maintain cleanliness, and boxed and stored indoors at the manufacturing facility until shipped from the factory. UPW process pipe and UPW piping components shall be those as provided by Spears® Manufacturing Company.

The data furnished herein is provided as a courtesy and is based on past experience, limited testing, and other information believed to be reliable. This information may be considered as a basis for recommendation only. No guarantee is made as to its accuracy, suitability for particular applications, or the results to be obtained therefrom. Materials should be tested under actual service conditions to determine suitability for a particular purpose.

"Lead Free" low lead certification – unless otherwise specified, all Spears® Low-Extractable piping and fittings specified here-in are certified by NSF International to ANSI/NSF® Standard 61, Annex G and is in compliance with California's Health & Safety Code Section 116825 (commonly known as AB1953) and Vermont Act 193. Weighted average lead content <=0.25%.

LabWaste™ CPVC Corrosive Waste Drainage Systems

PRICING

LabWaste™ CPVC Corrosive Waste Drainage Systems

P093 Elastomer Transition Coupling - Glass/IPS Pipe

IPS Clamp Joint x IPS Clamp Joint

For connection to plain end Glass or any same-size IPS pipe systems. Shielded FKM (Fluorocarbon) w/gear clamps.

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
P093-015	1-1/2	20	0	171	816.21
P093-020	2	1	10	171	833.16
P093-030	3	1	6	171	846.53
P093-040	4	10	0	171	872.04
P093-060	6	5	0	171	892.53

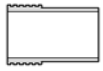
P094 Elastomer Transition Coupling-Duriron

IPS Clamp Joint x Duriron Clamp Joint

For connection to Duriron plain end pipe. Shielded FKM (Fluorocarbon) w/gear clamps.

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
P094-015	1-1/2	20	0	171	666.21
P094-020	2	10	0	171	687.79
P094-030	3	10	0	171	713.48
P094-040	4	10	0	171	727.57

P095 Duriron Transition Fitting



Mechanical Joint x Pipe Size

For connection to Duriron system. Requires Duriron mechanical joint coupling.

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
P095-015C	1-1/2	30	0	169	53.82
P095-020C	2	16	0	169	68.11
P095-030C	3	9	0	169	113.67
P095-040C	4	5	0	169	157.09

P096 Grooved Coupling

Grv x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
P096-015C	1-1/2	10	60	169	26.97
P096-020C	2	10	80	169	36.28
P096-030C	3	10	0	169	71.09
P096-040C	4	5	0	169	120.97
P096-060C	6	5	0	169	173.06

P097 Duriron Transition Coupling

Spig x Caulk Joint

For connection to Duriron system. Requires packing and plastic lead. Warning: Do not use hot lead or oiled Oakum

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
P097-015C	1-1/2	25	0	169	53.82
P097-020C	2	15	0	169	68.11
P097-030C	3	6	0	169	113.67
P097-040C	4	6	0	169	157.09

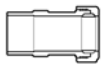
P098 Glass Transition Coupling

Spig x Clamp

For connection to glass system. Requires use of clamp from glass system manufacturer.

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
P098-015C	1-1/2	50	0	169	40.38
P098-020C	2	30	0	169	54.49
P098-030C	3	20	0	169	85.23
P098-040C	4	12	0	169	109.98
P098-060C	6	12	0	169	190.96

P099 Transition Coupling



H x Compression

For connection to PP or PVDF systems. Requires Safety Retaining Groove Tool. Contact Spears®.

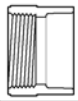
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
P099-015C	1-1/2	16	0	169	111.53
P099-020C	2	12	0	169	126.82
P099-030C	3	4	0	169	158.84
P099-040C	4	4	0	169	189.95
P099-060C	6	1	0	169	220.08
P099-080C	8	1	0	169	1522.96

P100 Coupling

H x H

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
P100-015C	1-1/2	100	0	160	26.51
P100-020C	2	100	0	160	33.09
P100-030C	3	60	0	160	42.34
P100-040C	4	25	0	160	60.26
P100-060C	6	5	0	160	95.50
P100-080C	8	8	0	159	257.56
P100-100C	10	1	0	159	373.48
P100-120C	12	1	0	159	524.79
P100-140C	14	1	0	159	666.36

P101 Female Adapter



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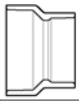
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
P101-015C	1-1/2	100	0	160	20.85
P101-020C	2	100	0	160	28.41
P101-030C	3	30	0	160	46.89
P101-040C	4	6	0	160	90.13
P101-060C	6	10	0	160	150.98

P102 Increaser - Reducer



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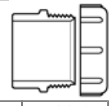
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
P102-251C	2X1-1/2	25	0	160	51.89
P102-337C	3X1-1/2	25	0	160	54.77
P102-338C	3X2	20	0	160	60.26
P102-420C	4X2	10	0	160	66.23
P102-422C	4X3	20	0	160	72.26
P102-530C	6X3	6	0	160	101.52
P102-532C	6X4	4	0	160	122.18
P102-582C	8X4	2	0	159	223.73
P102-585C	8X6	2	0	159	164.86
P102-624C	10X4	2	0	159	377.68
P102-626C	10X6	1	0	159	404.00
P102-628C	10X8	1	0	159	421.92
P102-666C	12X6	1	0	159	517.06
P102-668C	12X8	1	0	159	586.00
P102-670C	12X10	1	0	159	645.02

P103P Trap Adapter - Male



Spig x Slip with Plastic Nut

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
P103P-015C	1-1/2	50	0	160	22.05
P103P-020C	2	25	0	160	25.78

P104R Trap Adapter - Female

w/1-1/2 Plastic Nut & Washer and 1-1/2x1-1/4 Washer H x Slip w/Plastic Nut

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
P104R-015C	1-1/2	50	0	160	24.18

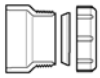
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

LabWaste™ CPVC Corrosive Waste Drainage Systems

P104X Trap Adapter - Female

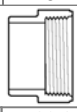
H x Slip w/Chrome Nut & Washer



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
P104X-015C	**1-1/2**	50	0	160	25.72

P105 Cleanout Adapter

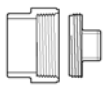
Spig x Fpt



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
P105-015C	**1-1/2**	50	0	160	20.85
P105-020C	**2**	50	0	160	22.30
P105-030C	**3**	25	0	160	42.98
P105-040C	**4**	10	0	160	76.79
P105-060C	**6**	10	0	160	135.14
P105-080C	**8**	8	0	159	209.08

P105X Cleanout Adapter with Square Head Plug

Spig



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
P105X-015C	**1-1/2**	50	0	160	21.96
P105X-020C	**2**	50	0	160	25.89
P105X-030C	**3**	25	0	160	47.76
P105X-040C	**4**	10	0	160	82.17
P105X-060C	**6**	10	0	160	142.13
P105X-080C	**8**	6	0	159	386.93

P106 Square Head Cleanout Plug

Mpt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
P106-015C	**1-1/2**	50	400	160	7.59
P106-020C	**2**	50	0	160	8.30
P106-030C	**3**	25	0	160	14.50
P106-040C	**4**	30	0	160	16.26
P106-060C	**6**	10	0	160	37.95
P106-080C	**8**	12	0	159	196.17

P107 Flush Bushing

Spig x H

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
P107-251C	**2X1-1/2**	50	0	160	28.27
P107-337C	**3X1-1/2**	30	0	160	29.89
P107-338C	**3X2**	30	0	160	32.58
P107-420C	**4X2**	30	0	160	72.30
P107-422C	**4X3**	30	0	160	73.99
P107-530C[1]	**6X3**	10	0	160	135.71
P107-532C	**6X4**	10	0	160	129.43
P107-582C	**8X4**	4	0	159	470.41
P107-585C	**8X6**	4	0	159	490.76
P107-624C[1]	**10X4**	4	0	159	914.08
P107-628C	**10X8**	4	0	159	719.16
P107-670C	**12X10**	2	0	159	896.63

[1]Outlet-sized with Bushing

P108 Flush Bushing (Cleanout Adapter)

Spig x FPT

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
P108-212C	**1-1/2X1-1/4**	50	200	160	6.72

P109 Male Adapter

Mpt x H

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
P109-015C	**1-1/2**	50	0	160	20.63
P109-020C	**2**	50	0	160	24.97
P109-030C	**3**	25	0	160	41.05
P109-040C	**4**	25	0	160	85.58
P109-060C	**6**	7	0	160	230.09

P110 Counter Sunk Cleanout Plug

Mpt

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
P110-015C	**1-1/2**	25	150	160	12.65
P110-020C	**2**	25	150	160	13.74
P110-030C	**3**	50	0	160	14.20
P110-040C	**4**	25	0	160	15.98
P110-060C	**6**	10	0	160	34.64

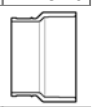
P116 Cap

Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
P116-015C	**1-1/2**	20	240	160	20.63
P116-020C	**2**	15	180	160	24.68
P116-030C	**3**	10	0	160	42.64
P116-040C	**4**	5	0	160	86.92
P116-060C	**6**	5	0	160	143.15
P116-080C	**8**	3	0	159	248.49

P119 No-Hub Adapter

S x H



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
P119-015C	**1-1/2**	25	0	160	36.31
P119-020C	**2**	25	0	160	38.74
P119-030C	**3**	20	0	160	48.80
P119-040C	**4**	15	0	160	71.27
P119-060C	**6**	5	0	160	154.78

P123 Hub Adapter

H x S

For connection to Cast Iron system. Requires packing and plastic lead. Warning: Do not use hot lead or oiled Oakum

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
P123-020C	**2**	20	0	160	43.05
P123-030C	**3**	25	0	160	54.23

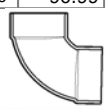
P130 Repair Coupling

H x H

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
P130-015C	**1-1/2**	25	200	160	27.67
P130-020C	**2**	25	0	160	16.38
P130-030C	**3**	10	0	160	54.23
P130-040C	**4**	5	0	160	90.99

P300 1/4 Bend (90° Ell)

H x H



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
P300-015C	**1-1/2**	100	0	160	33.94
P300-020C	**2**	50	0	160	42.17
P300-030C	**3**	25	0	160	71.59
P300-040C	**4**	10	0	160	113.93
P300-060C	**6**	4	0	160	294.81
P300-080C	**8**	2	0	159	410.92
P300-100C	**10**	1	0	159	949.71
P300-120C	**12**	1	0	159	1592.43

P300S 1/4 Bend w/Side Inlet (90° Ell)

All Hub

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
P300S-338C	**3X3X2**	10	0	160	157.47

P302 1/4 Bend, Street (90° Street Ell)

H x Spig

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
P302-015C	**1-1/2**	100	0	160	39.85

LabWaste™ CPVC Corrosive Waste Drainage Systems

P302 1/4 Bend, Street (90° Street Ell) (continued)

H x Spig

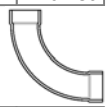
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
P302-020C	**2**	25	0	160	50.58
P302-030C	**3**	20	0	160	67.72
P302-040C	**4**	10	0	160	107.58
P302-060C	**6**	4	0	160	261.04
P302-080C	**8**	2	0	159	406.19
P302-100C	**10**	1	0	159	946.09
P302-120C	**12**	1	0	159	1576.14

P303 1/4 Bend w/Low Heel Inlet

H x H x H

P303-338C	**3X3X2**	25	0	160	99.01
P303-420C	**4X4X2**	6	0	160	204.39

P304 1/4 Bend, Long Sweep (90° LS Ell)



H x H

P304-015C	**1-1/2**	50	0	160	35.11
P304-020C	**2**	25	0	160	47.88
P304-030C	**3**	10	0	160	81.90
P304-040C	**4**	5	0	160	117.71
P304-060C	**6**	5	0	160	378.40

P309 1/4 Bend Long Sweep, Street (90° LS Street Ell)

H x Spig

P309-015C	**1-1/2**	50	0	160	36.93
P309-020C	**2**	25	0	160	49.50
P309-030C	**3**	20	0	160	84.29
P309-040C	**4**	5	0	160	119.78
P309-060C	**6**	5	0	160	307.15

P319 1/6 Bend (60° Ell)

H x H

P319-015C	**1-1/2**	40	0	160	34.02
P319-020C	**2**	25	0	160	41.07
P319-030C	**3**	20	0	160	74.20
P319-040C	**4**	10	0	160	118.96
P319-060CF	**6**	1	4	160	334.36

P320 1/6 Bend, Street (60° Street Ell)

H x Spig

P320-015C	**1-1/2**	40	0	160	34.02
P320-020C	**2**	25	0	160	41.07
P320-030C	**3**	20	0	160	74.97
P320-040C	**4**	10	0	160	118.96

P321 1/8 Bend (45° Ell)

H x H

P321-015C	**1-1/2**	100	0	160	33.34
P321-020C	**2**	50	0	160	40.63
P321-030C	**3**	25	0	160	74.55
P321-040C	**4**	15	0	160	84.49
P321-060C	**6**	5	0	160	246.79
P321-080C	**8**	1	0	159	355.84
P321-100C	**10**	1	0	159	678.48
P321-120C	**12**	1	0	159	1229.23

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each

P323 1/8 Bend, Street (45° Street Ell)

H x Spig

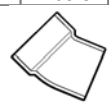
P323-015C	**1-1/2**	100	0	160	25.26
P323-020C	**2**	50	0	160	28.69
P323-030C	**3**	25	0	160	63.58
P323-040C	**4**	10	0	160	65.25
P323-060C	**6**	5	0	160	234.44
P323-080C	**8**	1	0	159	270.03

P324 1/16 Bend (22-1/2° Ell)

H x H

P324-015C	**1-1/2**	50	0	160	34.02
P324-020C	**2**	25	0	160	40.56
P324-030C	**3**	20	0	160	73.33
P324-040C	**4**	15	0	160	90.33
P324-060C	**6**	3	0	160	244.46
P324-080C	**8**	2	0	159	265.34

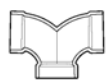
P326 1/16 Bend, Street (22–1/2° Street Ell)



H x Spig

P326-015C	**1-1/2**	50	0	160	30.26
P326-020C	**2**	25	0	160	40.56
P326-030C	**3**	20	0	160	73.33
P326-040C	**4**	10	0	160	90.33
P326-060C	**6**	5	0	160	210.35
P326-080C	**8**	2	0	159	254.91

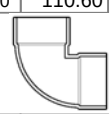
P327 Double 1/4 Bend (3 Way Ell)



All Hub

P327-015C	**1-1/2**	20	0	160	68.50
P327-020C	**2**	25	0	160	119.72
P327-030C	**3**	15	0	160	153.04
P327-040C	**4**	6	0	160	167.51
P327-241C	**2X1-1/2X1-1/2**	25	0	160	110.60

P331 Vent Ell



H x H

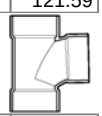
P331-015C	**1-1/2**	25	0	160	33.64
P331-020C	**2**	30	0	160	39.44
P331-030C	**3**	25	0	160	68.24
P331-040C	**4**	10	0	160	109.44
P331-060C	**6**	5	0	160	169.74

P333 Vent Ell, Street

H x Spig

P333-015C	**1-1/2**	25	0	160	35.98
P333-020C	**2**	20	0	160	42.58
P333-030C	**3**	25	0	160	75.82
P333-040C	**4**	10	0	160	121.59

P400 Sanitary Tee



All Hub

P400-015C	**1-1/2**	100	0	160	42.17
P400-020C	**2**	35	0	160	50.50
P400-030C	**3**	30	0	160	101.08
P400-040C	**4**	5	0	160	151.40
P400-060C	**6**	6	0	160	428.96
P400-080C	**8**	2	0	159	703.20

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

LabWaste™ CPVC Corrosive Waste Drainage Systems

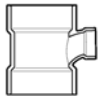
P400 Sanitary Tee (continued)

All Hub

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
P400-100C	**10**	1	0	159	1577.44
P400-120C	**12**	1	0	159	2222.92

P401 Sanitary Tee, Reducing

All Hub



P401-241C	**2X1-1/2X1-1/2**	25	0	160	50.42
P401-251C	**2X2X1-1/2**	50	0	160	50.42
P401-257C	**2X1-1/2X2**	25	0	160	52.70
P401-337C	**3X3X1-1/2**	10	0	160	87.73
P401-338C	**3X3X2**	10	0	160	94.32
P401-420C	**4X4X2**	10	0	160	135.27
P401-422C	**4X4X3**	10	0	160	141.33
P401-532C	**6X4**	4	0	160	353.38
P401-582C	**8X4**	2	0	159	1197.53

P403 Sanitary Tee, Street

S x H x H

P403-015C	**1-1/2**	20	0	160	49.60
P403-020C	**2**	25	0	160	60.14
P403-030C	**3**	30	0	160	120.03
P403-040C	**4**	10	0	160	180.22
P403-060C	**6**	6	0	160	492.44
P403-080C	**8**	2	0	159	804.24
P403-100C	**10**	1	0	159	1915.89
P403-120C	**12**	1	0	159	2742.29

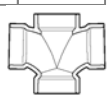
P404 Sanitary Tee, Street, Reducing

S x H x H

P404-241C	**2X1-1/2X1-1/2**	50	0	160	51.41
P404-251C	**2X1-1/2**	50	0	160	55.58
P404-337C	**3X3X1-1/2**	10	0	160	98.27
P404-338C	**3X3X2**	10	0	160	104.81

P428 Double Sanitary Tee

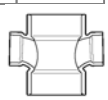
All Hub



P428-015C	**1-1/2**	25	0	160	63.53
P428-020C	**2**	25	0	160	74.91
P428-030C	**3**	8	0	160	100.19
P428-040C	**4**	6	0	160	133.71

P429 Double Sanitary Tee, Reducing

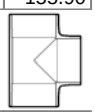
All Hub



P429-241C	**2X1-1/2X1-1/2X1-1/2**	25	0	160	83.58
P429-251C	**2X2X1-1/2X1-1/2**	25	0	160	83.68
P429-337C	**3X3X1-1/2X1-1/2**	6	0	160	129.98
P429-338C	**3X3X2X2**	10	0	160	140.80
P429-419C	**4X4X1-1/2X1-1/2**	7	0	160	139.23
P429-420C	**4X4X2X2**	7	0	160	141.21
P429-422C	**4X4X3X3**	8	0	160	155.90

P441 Vent Tee

All Hub

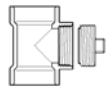


P441-020C	**2**	25	0	160	82.54
P441-030C	**3**	10	0	160	106.18
P441-040C	**4**	5	0	160	149.93
P441-060C	**6**	4	0	160	366.89
P441-080C	**8**	2	0	159	722.64

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each

P444X Cleanout Tee w/Plug

H x H x Fpt



P444X-015C	**1-1/2**	20	0	160	50.21
P444X-020C	**2**	10	0	160	55.47
P444X-030C	**3**	10	0	160	116.30
P444X-040C	**4**	10	0	160	158.39
P444X-060C	**6**	2	0	160	427.76

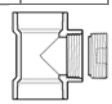
P445 Cleanout Tee

H x H x Fpt

P445-015C	**1-1/2**	20	0	160	42.59
P445-020C	**2**	25	0	160	47.17
P445-030C	**3**	10	0	160	101.81
P445-040C	**4**	10	0	160	142.13
P445-060C	**6**	3	0	160	446.69

P445X Cleanout Tee with Counter Sunk Plug

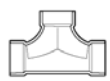
H x H



P445X-015C	**1-1/2**	20	0	160	50.21
P445X-020C	**2**	10	0	160	55.47
P445X-030C	**3**	10	0	160	116.30
P445X-040C	**4**	10	0	160	158.39
P445X-060C	**6**	2	0	160	478.84

P448 2-WAY Cleanout

All Hub



P448-030C	**3**	12	0	160	172.02
P448-040C	**4**	5	0	160	242.30

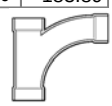
P500 Double Fixture Fitting

All Hub

P500-020C	**2X2X2X2**	10	0	160	98.00
P500-030C	**3X3X3X3**	10	0	160	202.05
P500-241C	**2X1-1/2X1-1/2X1-1/2**	20	0	160	88.63
P500-251C	**2X2X1-1/2X1-1/2**	20	0	160	90.93
P500-338C	**3X2X3X3**	10	0	160	183.89

P501 Combo Wye + 1/8 Bend (Long Turn Tee Wye)

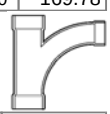
All Hub



P501-015C	**1-1/2**	50	0	160	56.11
P501-020C	**2**	20	0	160	74.88
P501-030C	**3**	10	0	160	119.54
P501-040C	**4**	8	0	160	169.78

P502 Combination Wye + 1/8 Bend Reducing (Long Turn Tee Wye)

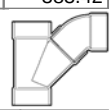
All Hub



P502-251C	**2X2X1-1/2**	20	0	160	67.41
P502-337C	**3X3X1-1/2**	15	0	160	99.43
P502-338C	**3X3X2**	10	0	160	107.71
P502-420C	**4X4X2**	5	0	160	149.14
P502-422C	**4X4X3**	5	0	160	156.48
P502-578C	**8X8X2**	1	0	159	383.42

P503 Combination Wye and 1/8 Bend (Two Piece)

All Hub



P503-060C	**6**	4	0	160	458.90
P503-080C	**8**	1	0	159	844.36

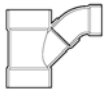
LabWaste™ CPVC Corrosive Waste Drainage Systems

P503 Combination Wye and 1/8 Bend (Two Piece) (continued)

All Hub

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
P503-100C	**10**	1	0	159	1099.29

P504 Combination Wye and 1/8 Bend, Reducing (Two Piece)



All Hub

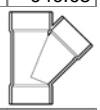
P504-241C	**2X1-1/2X1-1/2**	5	0	160	87.31
P504-528C	**6X2**	5	0	160	310.55
P504-530C	**6X3**	5	0	160	347.34
P504-532C	**6X4**	5	0	160	360.72
P504-582C	**8X4**	2	0	159	558.45
P504-585C	**8X6**	1	0	159	566.85
P504-623C	**10X3**	1	0	159	689.52
P504-624C	**10X4**	1	0	159	741.07
P504-626C	**10X6**	1	0	159	777.05
P504-628C	**10X8**	1	0	159	866.91
P504-664C	**12X4**	1	0	159	1638.45
P504-668C	**12X8**	1	0	159	1439.54
P504-670C	**12X10**	1	0	159	1657.10

P507 Double Combination Wye and 1/8 Bend

All Hub

P507-020C	**2**	10	0	160	148.03
P507-030C	**3**	10	0	160	254.41
P507-040C	**4**	5	0	160	482.09
P507-060C	**6**	2	0	160	1091.23
P507-338C	**3X3X2X2**	10	0	160	213.28
P507-422C	**4X4X3X3**	5	0	160	267.07
P507-530C	**6X6X3X3**	2	0	160	566.66
P507-532C	**6X6X4X4**	1	0	160	646.65

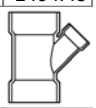
P600 45° Wye



All Hub

P600-015C	**1-1/2**	50	0	160	42.98
P600-020C	**2**	25	0	160	60.29
P600-030C	**3**	8	0	160	107.46
P600-040C	**4**	8	0	160	156.64
P600-060C	**6**	4	0	160	397.65
P600-080C	**8**	1	0	159	432.82
P600-100C	**10**	1	0	159	681.28
P600-120C	**12**	1	0	159	1494.45

P601 45° Wye, Reducing



All Hub

P601-241C	**2X1-1/2X1-1/2**	25	0	160	61.06
P601-251C	**2X2X1-1/2**	25	0	160	60.29
P601-337C	**3X3X1-1/2**	15	0	160	92.52
P601-338C	**3X3X2**	12	0	160	100.18
P601-419C	**4X4X1-1/2**	10	0	160	136.03
P601-420C	**4X4X2**	10	0	160	144.18
P601-422C	**4X4X3**	10	0	160	150.35
P601-528C[1]	**6X6X2**	5	0	160	293.90
P601-530C	**6X6X3**	6	0	160	255.44
P601-532C	**6X6X4**	5	0	160	258.22
P601-580C	**8X8X3**	2	0	159	293.94
P601-582C	**8X8X4**	1	0	159	300.80
P601-585C	**8X8X6**	1	0	159	334.77
P601-624C[1]	**10X10X4**	1	0	159	738.93
P601-626C	**10X10X6**	1	0	159	594.71
P601-628C	**10X10X8**	1	0	159	618.50
P601-661C[1]	**12X12X2**	1	0	159	1813.01

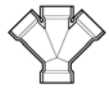
P601 45° Wye, Reducing (continued)

All Hub

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
P601-663C[1]	**12X12X3**	1	0	159	1828.72
P601-664C[1]	**12X12X4**	1	0	159	1833.00
P601-666C[1]	**12X12X6**	1	0	159	1839.16
P601-668C[1]	**12X12X8**	1	0	159	1952.79
P601-670C[1]	**12X10**	1	0	159	1904.10

[1]Sized with Bushing

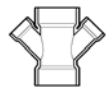
P611 Double Wye



All Hub

P611-015C	**1-1/2**	40	0	160	80.66
P611-020C	**2**	20	0	160	85.26
P611-030C	**3**	15	0	160	154.13
P611-040C	**4**	5	0	160	351.59
P611-060C	**6**	2	0	160	611.43

P612 Double Wye, Reducing



All Hub

P612-241C	**2X1-1/2X1-1/2X1-1/2**	10	0	160	125.67
P612-251C	**2X2X1-1/2X1-1/2**	10	0	160	127.93
P612-337C	**3X3X1-1/2X1-1/2**	10	0	160	142.63
P612-338C	**3X3X2X2**	15	0	160	157.43
P612-420C	**4X4X2X2**	5	0	160	304.86
P612-422C	**4X4X3X3**	5	0	160	311.46
P612-532C	**6X6X4X4**	5	0	160	527.07

P335 Trap Elbow (for use with Traps only)

H x S

P335-030C	**3**	30	0	160	84.98
P335-040C	**4**	25	0	160	197.29

P700 Return Bend

H x H

P700-015C	**1-1/2**	20	0	160	56.25
P700-020C	**2**	35	0	160	78.56
P700-030C	**3**	8	0	160	116.88
P700-040C	**4**	6	0	160	222.65
P700-060C	**6**	2	0	160	322.85
P700-080C	**8**	1	0	159	436.81

P704P Tail Piece Adapter

Spig x Slip w/Plastic Nut

P704P-015C	**1-1/2**	25	0	160	22.05

P705 S-Trap

H x H

P705-015C	**1-1/2**	25	0	160	88.25
P705-020C	**2**	25	0	160	123.15
P705-030C	**3**	10	0	160	224.34
P705-040C	**4**	5	0	160	405.93

P705R Running Trap

H x H

P705R-015C	**1-1/2**	25	0	160	88.25
P705R-020C	**2**	25	0	160	123.15
P705R-030C	**3**	10	0	160	224.34
P705R-040C	**4**	5	0	160	405.49

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

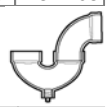
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

LabWaste™ CPVC Corrosive Waste Drainage Systems

P706X P-Trap
H x H

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
P706X-015C	1-1/2	25	0	160	66.18
P706X-020C	2	20	0	160	92.35
P706X-030C	3	10	0	160	167.64
P706X-040C	4	4	0	160	297.98
P706X-060C	6	2	0	160	884.46
P706X-080C	8	1	0	159	1045.81
P706X-100C	10	1	0	159	1666.55
P706X-120C	12	1	0	159	1872.63

P707X P-Trap w/Cleanout
H x H



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
P707X-015C	1-1/2	10	0	160	74.05

P708P P-Trap w/Plastic Nut (Union Connection)
H x H

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
P708P-015C	1-1/2	25	0	160	57.63
P708P-020C	2	25	0	160	99.81

P711P L.A Pattern P-Trap w/Plastic Nut
(Union Connection w/Slip Joint) Slip x H w/Plastic Nut

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
P711P-015C	1-1/2	25	0	160	125.97

P712 Jar Trap
Spig x H

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
P712-015C	1-1/2	1	0	169	113.89

P712P Jar Trap w/Tail Piece Adapter
Slip x H

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
P712P-015C	1-1/2	1	0	169	135.93

P720 Drum Trap
H x H

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
P720-015C	1-1/2	4	0	160	276.69
P720-020C	2	4	0	160	438.27
P720-030C	3	4	0	160	607.20
P720-040C	4	4	0	160	696.85

Flange, Van Stone Style CPVC
Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
854-015C	1-1/2	20	0	090	40.95
854-020C	2	10	0	090	49.59
854-030C	3	10	0	090	107.56
854-040C	4	5	0	090	145.25
854-060C	6	5	0	090	247.51
854-080C	8	2	0	090	744.72
854-100C	10	2	0	091	1792.81
854-120C	12	2	0	091	2690.18
854-140C	14	1	0	095	3031.38
854-160C	16	1	0	095	3789.24

Waste Assembly
Sink Outlet

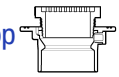
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
LWWA-1	1-1/2	10	0	169	100.50

LabWaste™ Air Admittance Valve
Spigot

Maximum 6 DFU (Drainage Fixture Units)

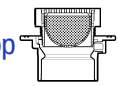
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
AAV-015C	1-1/2	12	0	286	58.32

LW1500 Floor Drain with CPVC Adjustable Top w/5" Round Grate



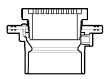
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
LW1500-015C	1-1/2X5	4	0	169	405.99
LW1500-020C	2X5	4	0	169	405.99
LW1500-030C	3X5	4	0	169	405.99
LW1500-040C	4X5	4	0	169	405.99

LW1520 Floor Drain with CPVC Adjustable Top w/5" Round Grate & Strainer



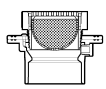
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
LW1520-015C	1-1/2X5	3	0	169	464.21
LW1520-020C	2X5	3	0	169	464.21
LW1520-030C	3X5	3	0	169	464.21
LW1520-040C	4X5	3	0	169	464.21

LW150M Floor Drain with CPVC Adjustable Top w/5" Round Grate & Membrane Collar



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
LW150M-015C	1-1/2X5	4	0	169	450.43
LW150M-020C	2X5	4	0	169	450.43
LW150M-030C	3X5	4	0	169	450.43
LW150M-040C	4X5	4	0	169	450.43

LW152M Floor Drain with CPVC Adjustable Top w/5" Round Grate, Strainer & Membrane Collar

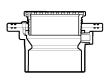


Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
LW152M-015C	1-1/2X5	4	0	169	507.09
LW152M-020C	2X5	4	0	169	507.09
LW152M-030C	3X5	4	0	169	507.09
LW152M-040C	4X5	4	0	169	507.09

Floor Drain with Stainless Steel Adjustable Top w/Round Grate

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
LW1500-015S	1-1/2X5	4	0	169	428.96
LW1600-015S	1-1/2X6	4	0	169	448.89
LW1700-015S	1-1/2X7	4	0	169	478.00
LW1800-015S	1-1/2X8	4	0	169	623.53
LW1500-020S	2X5	4	0	169	428.96
LW1600-020S	2X6	4	0	169	448.89
LW1700-020S	2X7	4	0	169	478.00
LW1800-020S	2X8	4	0	169	623.53
LW1500-030S	3X5	4	0	169	428.96
LW1600-030S	3X6	4	0	169	448.89
LW1700-030S	3X7	2	0	169	478.00
LW1800-030S	3X8	4	0	169	623.53
LW1500-040S	4X5	4	0	169	428.96
LW1600-040S	4X6	4	0	169	448.89
LW1700-040S	4X7	4	0	169	478.00
LW1800-040S	4X8	4	0	169	623.53

Floor Drain with Stainless Steel Adjustable Top w/Round Grate & Membrane Collar



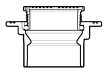
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
LW150M-015S	1-1/2X5	4	0	169	473.39
LW160M-015S	1-1/2X6	4	0	169	493.30
LW170M-015S	1-1/2X7	4	0	169	522.43

LabWaste™ CPVC Corrosive Waste Drainage Systems

Floor Drain with Stainless Steel Adjustable Top w/Round Grate & Membrane Collar (continued)

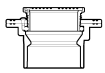
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
LW180M-015S	**1-1/2X8**	4	0	169	667.96
LW150M-020S	**2X5**	1	5	169	473.39
LW160M-020S	**2X6**	4	0	169	493.30
LW170M-020S	**2X7**	4	0	169	522.43
LW180M-020S	**2X8**	4	0	169	667.96
LW150M-030S	**3X5**	4	0	169	473.39
LW160M-030S	**3X6**	4	0	169	493.30
LW170M-030S	**3X7**	4	0	169	522.43
LW180M-030S	**3X8**	2	0	169	667.96
LW150M-040S	**4X5**	4	0	169	473.39
LW160M-040S	**4X6**	4	0	169	493.30
LW170M-040S	**4X7**	4	0	169	522.43
LW180M-040S	**4X8**	4	0	169	667.96

LW1510 Floor Cleanout w/Stainless Steel Adjustable Round Top & Solid Access Cover



LW1510-015S	**1-1/2X5**	4	0	169	459.60
LW1510-020S	**2X5**	6	0	169	459.60
LW1510-030S	**3X5**	4	0	169	459.60
LW1510-040S	**4X5**	4	0	169	459.60

LW151M Floor Cleanout w/Stainless Steel Adjustable Round Top, Solid Access Cover & Membrane Collar



LW151M-015S	**1-1/2X5**	4	0	169	490.26
LW151M-020S	**2X5**	4	0	169	490.26
LW151M-030S	**3X5**	4	0	169	490.26
LW151M-040S	**4X5**	4	0	169	490.26

LWTP CPVC Tail Piece

May be cut to desired length

LWTP-015060	**1-1/2X6**	10	0	169	42.00
LWTP-015120	**1-1/2X12**	20	0	169	63.00
LWTP-015140	**1-1/2X14**	20	0	169	78.07

LWTPN CPVC Tail Piece with Nut

May be cut to desired length

LWTPN-015060	**1-1/2X6**	1	25	169	53.00
LWTPN-015120	**1-1/2X12**	1	25	169	74.00
LWTPN-015140	**1-1/2X14**	1	25	169	84.77

LabWaste™ CPVC Pipe

10' Lengths, Price Per Foot

List Price Per Foot, may be cut to desired length

LW-015	**1-1/2**	10	0	161	7.72
LW-020	**2**	10	0	161	10.45
LW-030	**3**	10	0	161	18.89
LW-040	**4**	10	0	161	26.82
LW-060	**6**	10	0	161	48.41
LW-080	**8**	10	0	157	93.53
LW-100	**10**	10	0	157	151.44
LW-120	**12**	10	0	157	200.06
LW-140	**14**	10	0	158	243.98
LW-160	**16**	10	0	158	318.41

20' length available upon request

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each

LW-5 LabWaste™ One-Step CPVC Cement

LW5-020	**Pint**	12	0	704	45.51
LW5-030	**Quart**	12	0	704	60.67
LW5-040	**Gallon**	6	0	704	246.82
LW5-050	**5 Gallon**	1	0	704	1234.15

AVERAGE NUMBER OF JOINTS Per Quart of Solvent Cement

PIPE DIAMETER	NUMBER OF JOINTS
1/2"	300
3/4"	200
1"	125
1-1/2"	90
2"	60
3"	40
4"	30
6"	10
8"	5
10"	2-3
12"	1-2

These figures are based on laboratory tests. Due to many field variations, these should be used as a **general guide** only.

Cement Empty Cans

MT-654*	**Pint**	192	0	710	5.50
MT-651*	**Quart**	100	0	710	7.14
MT-653**	**Quart**	12	0	710	8.36
MT-647	**Gallon**	40	0	710	16.88
MT-648	**Gallon**	40	0	710	18.72

MT-647, MT-651 & MT-654 have 1-3/4 Screw Neck
MT-648 has 2-7/8" Screw Neck
MT-653 is Paint-Type Can

Cenent Brush

For Pint and Quart Cans

KD-110	**4-1/2" Length**	25	0	710	9.59
KD-112	**5-1/2" length**	25	0	710	9.59

1" Brush w/1-3/4" Screw Cap, for pipe size 3/4" - 2"

Cenent Cap Swab

5020	**4" Length**	24	0	710	14.89

Fits 1-3/4" Neck Quart Cans (MT-651). 4" length for pipe size 3" to 8"

Cenent Large Mouth Can Swab

4020	**4" Length**	24	0	710	21.96

Fits 2-7/8" Neck Gallon Can MT-648

Cenent Swab with Heavy Handle

4520	**4" length**	12	0	710	18.59

For Pipe Sizes 6" & Larger

Cenent Roller

3020	**3" length**	20	0	710	16.03

Fits Paint Type Quart Can (MT-653). For use with pipe sizes 3" to 6"

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

LabWaste™ CPVC Corrosive Waste Drainage Systems

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each

Cenent Large Roller

7020	**7" length**	20	0	710	19.97
Fits 2-78" Neck Gallon Can MT-648					

Cenent Roller with Heavy Handle

Replaceable Cover

5520	**4" length**	12	0	710	15.17
6520	**6" length**	12	0	710	18.59
For Pipe Sizes 6" & Larger					

Cenent Cap Dauber

DP-75	**3/4" for Pint**	50	0	710	1.31
DP-125	**1-1/4" for Pint**	50	0	710	1.58
DQ-125	**1-1/4" for Quart**	50	0	710	1.58
DP Fits Pint Cans DQ Fits Quart Cans					

Cenent Can-Mate Dauber

CM-75	**3/4"**	50	0	710	5.26
CM-150	**1-1/4"**	50	0	710	5.26
3/4" Diameter for pipe size to 1-1/2" 1-1/4" Diameter for pipe size 1-1/2" to 3"					

LabWaste™ Standard CPVC & HDPE Neutralization Tanks

PRICING

LabWaste™ Standard CPVC & HDPE Neutralization Tanks

Acid Neutralization/Dilution Tanks for Use With **LabWaste™ CPVC Systems**

Neutralization or dilution tanks are required by codes for the purpose of neutralizing corrosive wastes. Corrosive liquids, spent acids or other harmful chemicals that destroy or damage a drain, sewer, soil or waste pipe, or create noxious or toxic fumes or interfere with sewage treatment processes are prohibited from discharge into the plumbing system without being neutralized or treated. Spears® offers a standard selection of HDPE tanks in 5 gallon to 3000 gallon capacities and CPVC tanks in 5 gallon to 55 gallon capacities with connection and vent options listed below, plus convenient 1- gallon Dilution Tank designed for under-sink installation. Tanks can also be produced in virtually any custom size, shape, or connection configuration. Contact Spears® Technical Services with desired specifications for custom quotation.

Standard HDPE Round Tanks Technical Information
Construction: HDPE – High Density Polyethylene

Tank Capacity US Gallons	Approx Useable Capacity, US Gallons		Inside Dimension Dia. x Ht. (in.)	Wall Thickness (in.)	Approx Weight (lbs)	Standard Inlet & Outlet Connection Size (in.)	Standard Fitting Connection	**LabWaste™** Transition Connection Fitting[3]	Optional[4] Vent Connection Size (in.)	Approx. Centerline Height (in.)[5]		
	Without Limestone	With Limestone								Inlet	Outlet	Vent
5	3	1	11 x 14	3/16	10	1-1/2 or 2	Mipt	P101	1-1/2 or 2	11	8	12
15	7	2	18 x 15	3/16	20	1-1/2 or 2	Mipt	P101	1-1/2 or 2	11	8	12
30	19	6	18 x 29	3/16	35	3	Mipt	P101	2 or 3	23	19	25
55	35	12	22 x 36	3/16	50	4	Mipt	P101	3 or 4	27	23	31
100	77	26	28 x 42	1/4	85	4	Mipt	P101	3 or 4	35	31	37
150	105	35	31 x 48	1/4	100	4	Mipt	P101	3 or 4	38	34	42
175	135	45	30 x 60	1/4	125	4	Mipt	P101	3 or 4	51	47	54
200	137	46	36 x 48	1/4	125	4 or 6	Mipt/Flange	P101/854	4 or 6	38	34	42
275	186	62	42 x 48	1/4	160	4 or 6	Mipt/Flange	P101/854	4 or 6	38	34	42
300	230	76	36 x 74	5/16	175	4 or 6	Mipt/Flange	P101/854	4 or 6	61	56	65
350	243	81	48 x 48	5/16	200	4 or 6	Mipt/Flange	P101/854	4 or 6	38	34	42
500	395	132	52 x 60	3/8	225	4 or 6	Mipt/Flange	P101/854	4 or 6	51	47	54
550	447	149	48 x 72	3/8	275	4 or 6	Mipt/Flange	P101/854	4 or 6	64	60	67
650	548	183	48 x 84	3/8	375	4 or 6	Mipt/Flange	P101/854	4 or 6	75	71	76
1200	1052	351	69 x 84	3/8	600	4 or 6	Mipt/Flange	P101/854	4 or 6	74	68	76
2000[1]	1559	521	84 x 84	1/2	850	4 or 6	Mipt/Flange	P101/854	4 or 6	74	68	76
3000[1]	2203	735	95 x 97	1/2	1350	4 or 6	Mipt/Flange	P101/854	4 or 6	87	83	91

Standard CPVC Round Tanks Technical Information
Construction: Chlorinated Polyvinyl Chloride (CPVC)

Tank Capacity US Gallons	Approx Useable Capacity, US Gallons		Inside Dimension Dia. x Ht. (in.)	Wall Thickness (in.)	Approx Weight (lbs)	Standard[2] Inlet & Outlet Connection Size (in.)	Standard Fitting Connection	**LabWaste™** Transition Connection Fitting[3]	Optional[4] Vent Connection Size (in.)	Approx. Centerline Height (in.)[5]		
	Without Limestone	With Limestone								Inlet	Outlet	Vent
5	5	3	12-3/8 x 14-11/16	3/16	20	1-1/2 or 2	Soc	direct	1-1/2 or 2	11	8	12
15	15	7	17-11/16 x 17-1/4	3/16	35	1-1/2 or 2	Soc	direct	1-1/2 or 2	11	8	12
30	30	18	17-5/8 x 33	3/16	54	3	Soc	direct	2 or 3	23	18	25
55	55	35	23-1/2 x 38-1/2	1/4	70	4	Soc	direct	3 or 4	27	23	31

Important Notes

1 Larger HDPE tanks may include exterior steel banding or fiberglass reinforcement for additional strength. Special ordered optional inspection manhole ports are recommended for larger tanks (includes cover with neoprene gasket, stainless steel nuts, bolts, and washers).

2 All tanks can be special ordered with Mipt, Flanged (150#), and Fipt connections or varying combinations other than standard connections specified. Inlets or vents may also be custom ordered for installation in covers instead of tank sides.

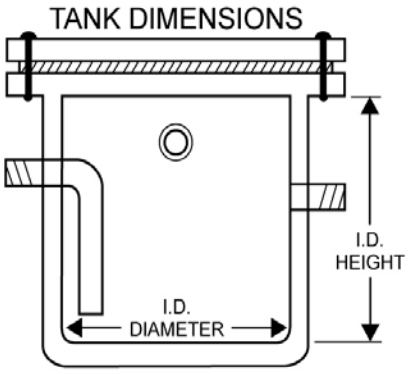
3 For transitions from Mipt HDPE tank connections to **LabWaste™** piping use part numbers P101-xxxC, Female Adapter. CPVC tank sockets can be cemented directly to **LabWaste™** piping. For transitions from ALL flanged connections to **LabWaste™** piping use part numbers 854-xxxC, Flange (xxx = size code).

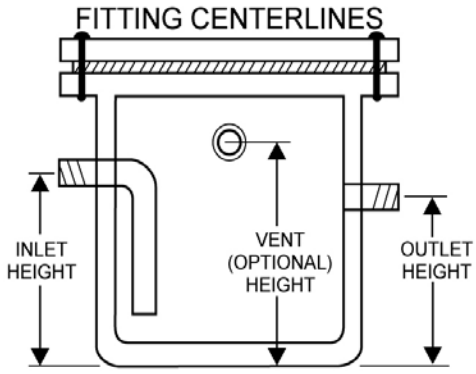
4 Venting is required by codes but may be accomplished either at the tank or in-line.

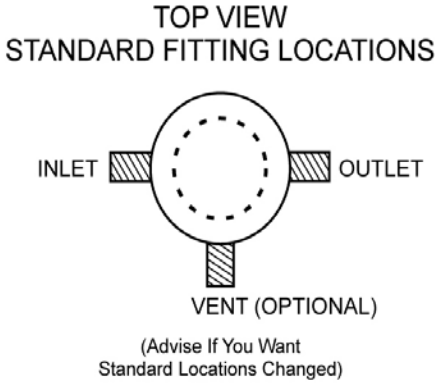
5 Neutralization tanks and tank extensions are not warranted for direct burial applications. Tanks must be properly placed and secured with no applied stresses, within a dry concrete vault with use of a protective traffic cover as deemed appropriate. However, if direct burial is used without warranty, custom centerlines must be furnished from top of cover down to fitting centerline instead of specified tank bottom to fittings centerline since tank heights can vary.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

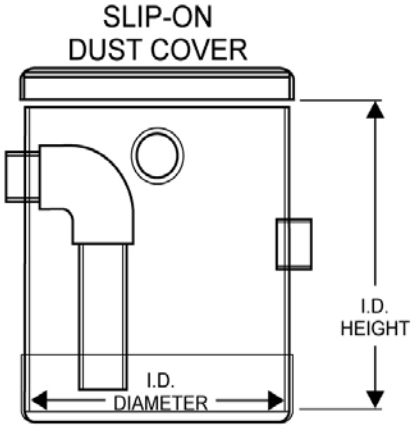
HDPE Tanks

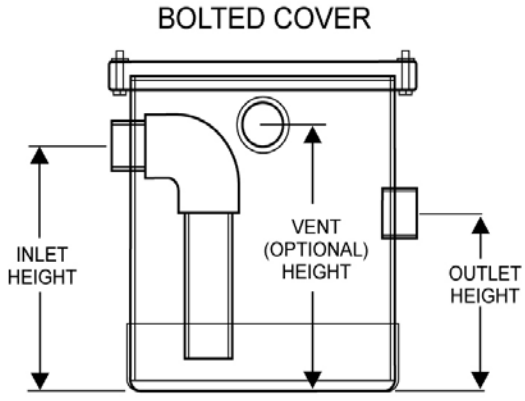






CPVC Tanks





PRICE SCHEDULE

LabWaste™ Standard HDPE Round Neutralization Tanks

Nominal US Gallons	Inlet & Outlet Size (in.)	Inlet & Outlet Connection	HDPE Tank Part No./ Price	Disc Code
5	1-1/2	Mipt	T20051414B 871.11	169
5	2	Mipt	T20052424B 871.11	169
15	1-1/2	Mipt	T20151414B 1,368.89	169
15	2	Mipt	T20152424B 1,368.89	169
30	3	Mipt	T20303434B 1,953.78	169
55	4	Mipt	T20554444B 2,483.91	169
100	4	Mipt	T21004444B 3,297.78	169
150	4	Mipt	T21504444B 4,293.33	169
175	4	Mipt	T21754444B 5,600.00	169
200	4	Mipt	T22004444B 6,097.78	169
275	4	Mipt	T22754444B 7,155.56	169
300	4	Mipt	T23004444B 7,840.00	169
350	4	Mipt	T23504444B 8,151.11	169
500	4	Mipt	T25004444B 11,200.00	169
550	4	Mipt	T25504444B 13,253.33	169
650	4	Mipt	T26504444B 14,746.67	169
1200	4	Mipt	T212C4444B 27,253.33	169
2000	4	Mipt	T220C4444B 37,955.56	169
3000	4	Mipt	T230C4444B 52,204.44	169

Optional Vent Outlet (recommended) for HDPE Tank			
Vent Size (in.)	Vent Connection	Add-on to Part No. / and to Price	Disc Code
1-1/2	Mipt	14 149.33	169
2	Mipt	24 149.33	169
3	Mipt	34 211.55	169
4	Mipt	44 298.66	169
6	Mipt	63 497.77	169

Example: T20051414B14

LabWaste™ Standard CPVC Round Neutralization Tanks

LabWaste™ Standard CPVC Round Neutralization Tanks

Additional Inlet/Outlet Sizes, Combinations & Custom Configurations Available

Nominal US Gallons	Inlet & Outlet Size (in.)	Inlet & Outlet Connection	CPVC Tank Part No./Price		Disc Code
			Dust (slip) Cover	Bolted Cover	
5	1-1/2	Soc	T30051212A 1,394.75	T30051212B 3,205.14	169
5	2	Soc	T30052222A 1,394.75	T30052222B 3,205.14	169
15	1-1/2	Soc	T30151212A 1,926.04	T30151212B 4,455.49	169
15	2	Soc	T30152222A 1,926.04	T30152222B 4,455.49	169
30	3	Soc	T30303232A 2,575.76	T30303232B 5,004.89	169
55	4	Soc	T30554242A 4,974.78	T30554242B 8,237.62	169

Optional Vent Outlet (recommended) for CPVC Tank

Vent Size (in.)	Vent Connection	Add-on to Part No. / and to Price	Disc Code
1-1/2	Soc	12 147.07	169
2	Soc	22 147.07	169
3	Soc	32 220.62	169
4	Soc	42 294.15	169

Example: T30051212A12

Neutralization Tank Sizing Table

The following recommendation from the American Society of Plumbing Engineers (ASPE) may be used as a guideline for sizing tanks according to the number of lab sinks.

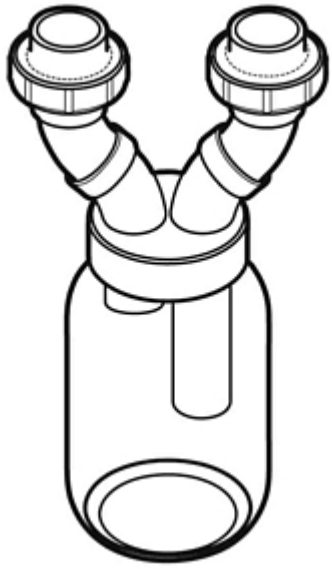
Number of Lab Sinks	Tank Size, Gal (L)	
2	5	(18.9)
4	15	(56.8)
8	30	(113.6)
16	55	(208.2)
22	75	(283.9)
27	90	(340.7)
30	108	(408.8)
40	150	(567.8)
50	175	(662.4)
60	200	(757.0)
75	275	(1040.9)
110	360	(1362.6)
150	500	(1898.5)
175	550	(2081.8)
200	650	(2460.3)
300	1200	(4542)
500	2000	(7570)
600	3000	(11355)

Note: For commercial and industrial laboratories, the number of lab sinks should be multiplied by a 0.5 use factor. (ASPE Data Book Vol. 3, Page 42, 2001).

1-Gallon LabWaste™ Dilution Tanks

LabWaste™ 1-Gallon CPVC Dilution Tanks

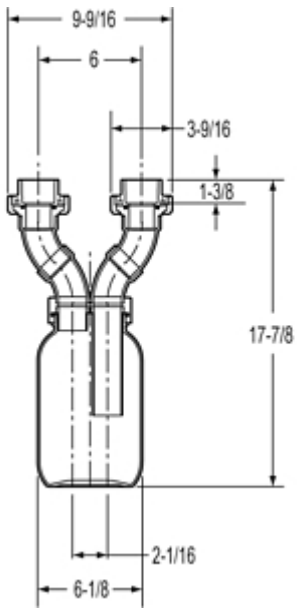
Provides chemical dilution from water rinse during use. Designed for under-sink installations. CPVC construction with Glass or PP Jar type tank.



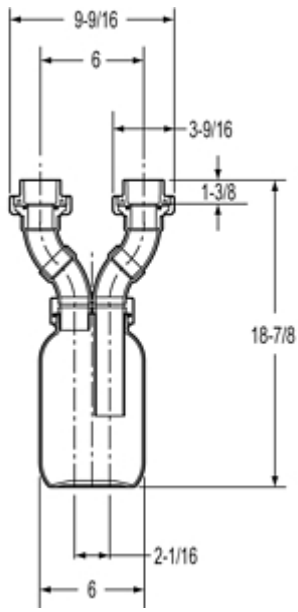
Nominal US Gallons	Inlet & Outlet Size (in.)	Inlet & Outlet Connection	CPVC Tank Part Glass Jar Tank No./Price	Disc Code
1	1-1/2	Socket Union	T3001G1515 404.45	169

Nominal US Gallons	Inlet & Outlet Size (in.)	Inlet & Outlet Connection	CPVC Tank Part Polypropylene Jar Tank No./Price	Disc Code
1	1-1/2	Socket Union	T3001P1515 291.20	169

Dimensions



Glass



Polypropylene

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

1-Gallon LabWaste™ Dilution Traps

LabWaste™ 1-Gallon CPVC Dilution Traps

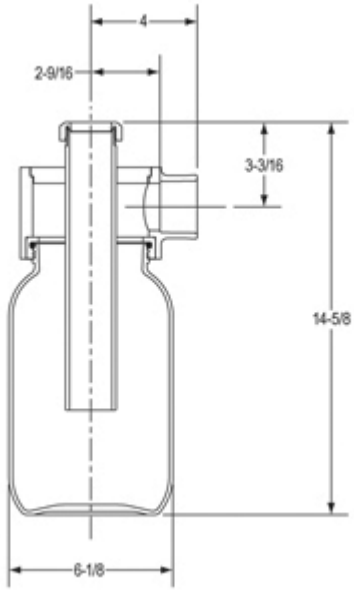
Provides chemical dilution from water rinse during use. Designed for under-sink installations as a trap. CPVC construction with Glass or PP Jar type tank.

Nominal US Gallons	Inlet & Outlet Size (in.)	Inlet	Outlet	CPVC Tank Part Glass Jar Tank No./Price	Disc Code
1	1-1/2	Slip	Socket	T4001G1612 404.45	169

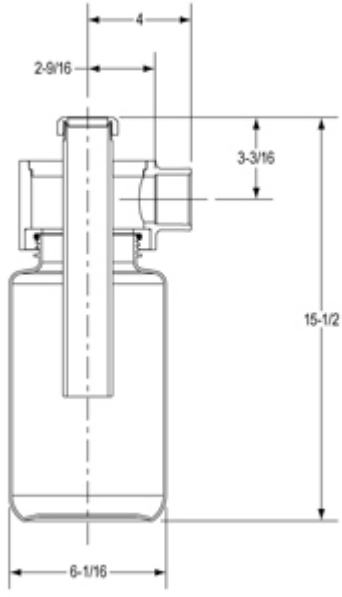
Nominal US Gallons	Inlet & Outlet Size (in.)	Inlet	Outlet	CPVC Tank Part Polypropylene Jar Tank No./Price	Disc Code
1	1-1/2	Slip	Socket	T4001P1612 291.20	169

Note: Slip connections are for sink drain tailpiece.

Dimensions

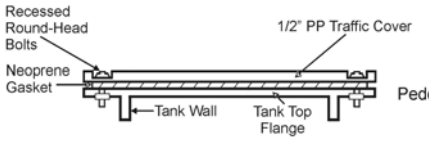


Glass

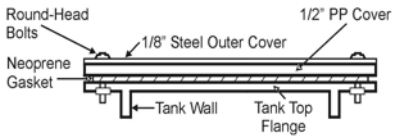


Polypropylene

LabWaste™ Optional Covers



Light-Duty
Pedestrian Traffic Covers



Heavy-Duty
Pedestrian Traffic Covers

Pedestrian Traffic Covers

Traffic Covers are priced and ordered separately with tank order in lieu of standard tank cover. Constructed from 1/2" white PP with recessed bolts and anchoring nuts. Covers are designed for light pedestrian traffic and flush floor installation.

Heavy-Duty Pedestrian Traffic Covers

Traffic Covers are priced and ordered separately with tank order in lieu of standard tank cover. Constructed with 1/8" steel, primer coated, over 1/2" white PP with round head slotted bolts and anchoring nuts. Heavy-Duty Traffic Covers are designed for heavy pedestrian traffic and flush floor installation.

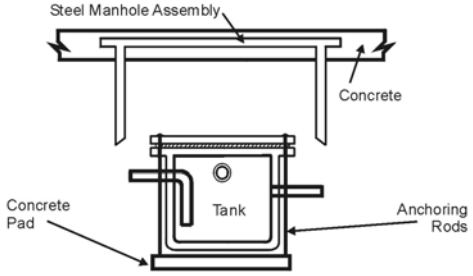
Part Number	Tank Size Range	List Price Each	Disc Code
PTC-5	5-gal thru 55-gal	735.38	169
PTC-100	100-gal thru 300-gal	882.44	169
PTC-350	350-gal thru 650-gal	1,250.13	169
PTC-1200	1200-gal thru 3000-gal	2,206.12	169

Part Number	Tank Size Range	List Price Each	Disc Code
HPTC-5	5-gal thru 55-gal	1,470.74	169
HPTC-100	100-gal thru 300-gal	1,911.95	169
HPTC-350	350-gal thru 650-gal	2,500.25	169
HPTC-1200	1200-gal thru 3000-gal	4,412.22	169

Vehicular Traffic Covers

Vehicular Traffic Covers are priced and ordered separately with tank. Covers are constructed from minimum 3/8" Diamond Plate steel supported by an external steel frame. Standard tank covers are used on tanks located below these steel manhole assemblies. Requires concrete pad below tank. Check with factory for frame height (may be extended in the field).

Part Number	Cover Size	Tank Application	Approx. Wt.(lbs.)	List Price Each	Disc Code
VTC18R	18" round	Fits 5-gallon units	100	735.38	169
VTC24S	24" square	Fits 5-gallon units	100	1,029.52	169
VTC30R	30" round	Fits 15 & 30-gallon units	150	1,456.02	169
VTC30S	30" square			1,456.02	169
VTC36R	36" round	Fits 55-gallon units	200	2,059.04	169
VTC36S	36" square			2,059.04	169
VTC42R	42" round	Fits 100, 150 & 175-gallon units	300	2,941.46	169
VTC42S	42" square			2,941.46	169
VTC48R	48" round	Fits 200 & 300-gallon units	400	3,676.85	169
VTC48S	48" square			3,676.85	169
VTC54R	54" round	Fits 275-gallon units	500	5,882.96	169
VTC54S	54" square			5,882.96	169
VTC60R	60" round	Fits 350, 550 & 650-gallon units	750	6,618.33	169
VTC60S	60" square			6,618.33	169



Vehicular Traffic Covers with Manhole Assembly

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

LabWaste™ Manhole Ports, Tank Extensions and Limestone Chips

Optional Inspection Manhole Ports & Tank Extensions

Manhole Assemblies are priced and ordered separately with tank order in lieu of standard tank cover. Assemblies include matching covers, Neoprene gaskets and stainless steel nuts, bolts, and washers; fabricated into the standard tank cover.

Part Number	Manhole Size	List Price Each	Disc Code
MH180	18	1,176.60	169
MH110	11	764.79	169
MH060	6	573.58	169
MH040	4	441.22	169

Tank Extensions

Tanks may be special ordered with extensions to increase the overall height of the tank. Extensions ranging from 1" to almost two (2) times the tank height are at a charge of double the list price for the basic tank. For example, a 55−gallon tank has a height of 36". Extended tank heights of 37" to 70" are twice the price of a standard 55-gallon tank. For higher extensions, contact Spears®. Special covers are needed for flush floor, in-ground installations. Standard covers are not designed for any traffic or load bearing.

Limestone Chips for Acid Neutralization Tanks

Most state and local codes require the addition of a neutralization medium in acid waste tanks with the addition of water for dilution prior to discharge into a sanitary sewer system. Limestone must be 1" to 3" in diameter with a calcium carbonate content of at least 90%. Spears® offers high grade Limestone Chips having a calcium carbonate content of approximately 95%. The use of Limestone Chips is generally one of the best and least expensive means of acid neutralization, but may be used in conjunction with more sophisticated chemical treatments if necessary.

How Much to Use: The following is a guideline for pounds of Limestone Chips to use for one (1) tank filling (charge). It is recommended that sufficient quantity be ordered for more than one filling.

Tank Size (gallons)	Approx. Pounds
5	50
15	100
30	200
55	500
100	1,000
150	1,750
175	1,900
200	2,500
275	3,200
300	3,200
350	4,000
500	5,000
550	7,500
650	9,000
1200	11,000
2000	16,000
3000	25,000

Maintenance: Tanks should be inspected routinely for accumulation of precipitated sludge and debris that must be cleaned out (usually scooped out) and for periodic addition of limestone and water if necessary. While once every one to three months may be sufficient, professional assistance should be sought to establish a proper schedule based on actual use. Note: Tank must be filled with water prior to carefully adding Limestone Chips to charge the system. Request instruction sheet.

Standard 50-lb. Bags
Regular & Dolomitic Limestone

Limestone Chips are conveniently packaged in 50-lb. plastic bags but may be special ordered loose. Actual bag weight may vary by + 15%. Special dolomitic limestone is used for wastes predominantly composed of sulfuric acid (battery acid). Allow three to five weeks delivery.

Part Number	List Price Each				Disc Code
	1-4 bags	5-20 bags	21-39 bags	40 & up bags	
Regular Limestone					
RLC-50	73.54	66.19	58.82	44.11	169
Dolomitic Limestone					
DLC-50	147.07	132.36	117.66	88.25	169

LabWaste™

CPVC Corrosive Waste Drainage Systems

DESIGN & INSTALLATION GUIDE
TECHNICAL INFORMATION

U.S. Patent No. 7,178,557
Manufactured to ASTM F 2618
NSF® cw Certif ed For Corrosive Waste

Contact Spears® for any information not found.

LabWaste™ Overview

Proven Solvent Cement Joining Eliminates Troublesome Fusion Equipment, Mechanical Joints & Elastomer Problems

NSF® Certified for Corrosive Waste Use & Listed to ASTM F 2618 Specification For CPVC Pipe & Fittings for Chemical Waste Drainage Systems

Meets IAPMO IGC 210 and ICC-ES PMG-1018 For CPVC Chemical Waste Systems

U.S. Patent No. 7,178,557

- **Complete System of Pipe, Fittings & Adapters**
- **Meets 25/50 Flame & Smoke Requirement for use in Return Air Plenums**
- **Non-Pressure Drainage Service to 220º F**
- **All CPVC Construction in a Full Assortment of Standard DWV Patterns**
- **Accessories including Drains, Neutralization Tanks, and Dilution Traps**
- **Specially Formulated One-Step Solvent Cement Provides Chemical Resistance Equal to System Pipe & Fittings – Now in Special Yellow Color**

Chemical & Corrosion Resistant CPVC

One of the key advantages of Spears® **LabWaste™** CPVC System is its excellent resistance to a broad range of corrosive environments. CPVC is inert to most mineral acids, bases, salts and aliphatic hydrocarbons, and compares favorably to other plastics in these chemical environments.

General Chemical Resistance Overview:

Weak Acids	Excellent	Salts	Excellent
Strong Acids	Excellent	Aliphatic Solutions	Good
Weak Bases	Excellent	Halogens	Good-Fair
Strong Bases	Excellent	Strong Oxidants	Good-Fair

The **LabWaste™** CPVC System has been developed for use in Academic, Research, and Institutional Laboratory chemical waste drainage applications. These plumbing systems are characterized by the routine disposal of a wide variety of hot and cold chemical wastes in accordance with prudent laboratory practices for drainage disposal.

Manufactured to ASTM F 2618 in Full Line of Drainage Pattern Fitting Configurations

Spears® broad line of **LabWaste™** CPVC pipe & fittings are manufactured to ASTM F 2618 Specifications for CPVC Pipe & Fittings for Chemical Waste Drainage Systems and produced in ASTM D 3311 drainage patterns or to manufacturer's specifications. Standard configurations are available in nominal sizes of 1-1/2" through 24" with many specialty fittings and accessories, like dilution traps, (water dilution being critical in the prevention of exothermic chemical interactions within all plumbing systems).

NSF® Certified For Corrosive Waste

Spears® **LabWaste™** Corrosive Water Drainage System of pipe, fittings, and cement is tested and certified for use in corrosive waste systems by NSF International to ASTM F 2618, tested to IAPMO IGC 210, Certified to the Uniform Plumbing Code and ICC-ES listed to PMG-1018 for CPVC Chemical Waste Systems.

Cost Saving Solvent Weld Joining Eliminates the need for Electro-Fusion Joints and for Mechanical Joint Connections in Concealed Spaces

A proven joining method reliably used for over 50 years, Solvent Cement Welding requires no special tools, no costly fusion easy installation, repairs or alterations. Most importantly, solvent cement joints end problems typical of polypropylene system installation, such as mechanical connector pullout, maintaining mechanically sealed joints, leaks from fusion wire corrosion, and cumbersome fusion joining methods. Saves time, saves cost, saves worry!

A Flame & Smoke Rated Piping System

Spears® **LabWaste™** system components have been evaluated and Listed by Underwriters Laboratories of Canada (ULC®) as finished products for surface burning characteristics under CAN/ULC S102.2 and tested to UL 723/ASTM E 84, for Surface Burning Characteristics of Building Materials (NFPA 255, ANSI/UL 723 and UBC 8-1), and showed a flame spread of < 25 and a smoke developed index of < 50.

LabWaste™ Overview

Industrial & Commercial Special Waste Applications

Spears® **LabWaste**™ CPVC products can be used in a very broad variety of dedicated waste applications with proper evaluation of waste medium and service conditions. **DO NOT** follow Chemical Resistance Tables recommendations in this manual for these applications. For non-laboratory applications, refer to CPVC pressure system resistance data for appropriate chemical resistance guidelines. Please contact Spears® Technical Services for additional information.

American Bureau of Shipping (ABS) Type Approval

Spears® **LabWaste**™ CPVC Corrosive Waste Drainage System pipe and fittings are ABS Type Approved for marine and offshore applications in nominal pipe sizes through 12". Type Approval details and restrictions are specified in ABS Certificate # 10-HS539421-2-PDA available on the ABS website at www.eagle.org.

Applicable Conformance Standards & Certifications

Spears® **LabWaste**™ CPVC Corrosive Waste Drainage System is a complete system of pipe, fittings and solvent cement independently (3rd party) tested, evaluated and certified by the following laboratories and agencies. Each of these approvals is routinely monitored through an ongoing program of periodic inspection and testing by the certifying agency.

- **ASTM F 2618** - Certified for corrosive waste and use by NSF International (NSF®-cw) in accordance with ASTM F 2618, *Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Pipe and Fittings for Chemical Waste Drainage Systems.*
- **Uniform Plumbing Code** - Certified for use in accordance with the Uniform Plumbing Code (UPC®) by NSF International as specified in IAPMO IGC 210, *Interim Guide Criteria for Chlorinated Poly (Vinyl Chloride) (CPVC) Pipe and Fittings for Limited Chemical Waste Drainage System.* (NSF®-U.P.Code).
- **International Plumbing Code** - Spears® **LabWaste**™ CPVC system has been approved for use in accordance with the International Plumbing Code (IPC®) by the International Codes Council Evaluation Services (ICC-ES) in accordance with ICC-ES PMG Listing PMG-1018 for Spears® **LabWaste**™ CPVC Corrosive Waste Drainage System (See ICC-ES PMG Listing PMG-1018 at www.icc-es-pmg.org).

System Integrity – Limited Lifetime Warranty

Spears® **LabWaste**™ products have been developed and designed to be used as a total system consisting of pipe, fittings, accessories, solvent cement and thread sealant. All Spears® **LabWaste**™ components must be used in order to ensure a sound piping system. Substitution of other products for Spears® **LabWaste**™ pipe, fittings, or solvent cement may be detrimental to system integrity and is not recommended. The Spears® Limited Lifetime Warranty (located at the end of the manual) does not cover problems occurring as the direct result of the use of products other than Spears® **LabWaste**™ system products, or products and materials not compatible with CPVC materials.

The information contained in this publication is based on current information and Product design at the time of publication and is subject to change without notification. Our ongoing commitment to product improvement may result in some variation. No representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or results to be obtained therefrom. For verification of technical data or additional information not contained herein, please contact Spears® Technical Services Department [West Coast: (818) 364-1611 — East Coast: (678) 985-1263].

LabWaste™ Technical Information

Typical Physical Properties of Spears® LabWaste™ CPVC Material

Property	Test Method	Typical Value
Mechanical Properties @ 73°F		
Specific Gravity		1.49
Tensile Strength, psi	ASTM D 792	9000
Tensile Modulus, psi	ASTM D 638	420,000
Flexural Strength	ASTM D 638	12,000
Izod Impact (notched @73°F)	ASTM D 790	
Fittings	ASTM D 256	3.0
Pipe		5.5
Thermal Properties		
Heat Deflection Temperature 264 psi	ASTM D 648	
Fitting		214°F
Pipe		230°F
Thermal Conductivity, BTU/hr/sq ft/°F/in	ASTM C 177	.95
Coefficient of Linear Expansion, in/in/°F	ASTM D 696	3.2 x 10^{-5}
Flammability		
Limiting Oxygen Index	ASTM D 2863	60
UL 94 Rating	UL 94	V-0, 5VB
Flame & Smoke Rating[1]		
Flame Spread	CAN/ULC S 102.2	<25
Smoke Developed	UL 723/ASTM E 84	<50
Solvent Cement	ASTM F 2618/ASTM F 493	Heavy Body; Mustard Yellow Color

Typical Physical Properties data is based on information from material suppliers. It is provided as a guideline for service and is not to be considered a warranty of performance.
1- Based on test of physical product, including solvent cement welded pipe and fittings assemblies, as opposed to test of material only.

Fire Resistance

Material used in Spears® **LabWaste**™ CPVC systems has a UL 94 flammability rating of V-0, 5VB. Pipe and fittings have been Listed and rated based on ***finished product*** tests, as opposed to a material test only, for surface burning characteristics of flame spread and smoke density developed by Underwriters Laboratories of Canada under standard test method CAN/ULC S102.2. Additional test of **LabWaste**™ pipe with dry fit caps was conducted by Southwest Research Institute (SwRI) Department of Fire Technology under UL 723/ASTM E 84 (modified to test finished product). Pipe and fitting components ratings are below the 25 maximum flame spread and 50 maximum smoke density developed typically required for exposed air plenum installation. Check local codes for acceptability. Use of approved plenum wrap or transition connectors to other material may be used if required.

Pipe & Fittings

Spears® **LabWaste**™ CPVC pipe and fittings are produced to the dimensional and performance requirements of ASTM F 2618, ***Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Pipe and Fittings for Chemical Waste Drainage Systems***. **LabWaste™** CPVC fitting configurations are produced to applicable DWV patterns of ASTM D 3311, ***Standard Specification for Drain, Waste, and Vent (DWV) Plastic Fittings Patterns,*** plus various specialty patterns and manufactured specified configurations not included in D 3311. All drainage fittings with 90° angles (sanitary tees, elbows, etc.) have socket pitch to maintain approximately 1/4" per foot drainage. **LabWaste**™ CPVC pipe is produced to dimensions specified in ASTM F 2618 with sizes greater than 12" produced to Schedule 40 dimensions of ASTM F 441, ***Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe, Schedule 40 and 80.***

Schedule 40 CPVC Pipe Dimensions (inch)

Pipe Diameter	1-1/2	2	3	4	6	8	10	12	14	16	18	20	24
Avg. O.D.	1.900	2.375	3.500	4.500	6.625	8.625	10.750	12.750	14.000	16.000	18.000	20.000	24.000
Avg. I.D.	1.592	2.049	3.042	3.998	6.031	7.943	9.976	11.889	13.073	14.940	16.809	18.743	22.544
Min. Wall	.145	.154	.216	.237	.280	.322	.365	.406	.437	.500	.562	.593	.687

Expansion & Contraction

Spears® **LabWaste**™ CPVC products, like all piping materials, expand and contract with changes in temperature. If the coefficient of linear expansion is 3.2 x 10^{-5} in./in. °F, a 25°F change in temperature will cause an expansion of 1 inch for a 100-foot straight length. For most operating and installation conditions, expansion and contraction can be accommodated at changes of direction, or simple expansion loops can be used. For underground installations, snaking the pipe in the trench can be used where necessary to accommodate expansion and contraction.

Thermal expansion change in length is calculated from Length of Run in feet, expected Change in Temperature and given Coefficient of Linear Thermal Expansion of 3.2 x 10^{-5} in./in. °F for CPVC:

$\Delta L = 12eL (\Delta T)$
Where:
e = 3.2 x 10^{-5} in./in. °F
L = Length of Run in feet
ΔT = Temperature Change in °F

Example:
How much will a 50 ft. run Spears® **LabWaste**™ pipe expand if the expected ambient temperature will range from 45°F to 85°F?
$\Delta L = 12eL (\Delta T)$
$\Delta L = 12 \times .000032 \times 50 \times 40$
$\Delta L = .768$ inches

The following table provides quick reference in identifying expansion length change for different run lengths of pipe at various anticipated temperature changes.

Thermal Expansion Table

Length of Run (L) in feet	Length Change in Inches (ΔL) for Specified Change in Temperature (ΔT)								
	20°F	30°F	40°F	50°F	60°F	70°F	80°F	90°F	100°F
10	.08	.12	.15	.19	.23	.27	.31	.35	.38
20	.15	.23	.31	.38	.46	.54	.61	.69	.77
40	.31	.46	.61	.77	.92	1.08	1.23	1.38	1.54
50	.38	.58	.77	.96	1.15	1.34	1.54	1.73	1.92
70	.54	.81	1.08	1.34	1.61	1.88	2.15	2.42	2.69
90	.69	1.04	1.38	1.73	2.07	2.42	2.76	3.11	3.46
120	.92	1.38	1.84	2.30	2.76	3.23	3.69	4.15	4.61

LabWaste™ Technical Information

Joining Methods

Spears® **LabWaste**™ CPVC pipe and fittings are easily joined using Spears® LW-5 One-Step Solvent Cement that has been specially formulated for corrosive/acid waste applications and manufactured in accordance with ASTM F 493, ***Standard Specification for Solvent Cements for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe and Fittings,*** as specified in ASTM F 2618**.** When cured, this cement provides a fused joint that maintains the same physical and chemical resistance properties as the CPVC components in the system. Spears® LW-5 is a "one-step" cement and does not require the use of primer. Spears® **LabWaste**™ CPVC systems may be additionally joined using threaded (NPT) or flanged connections where removal or connection to supplementary equipment is required. Special transition couplings are available for joining to Polypropylene, PVDF, glass or Duriron systems.

Solvent Cement Joints – Store below 90°F (33°C). Stir and use as is. If jelled, replace. Use within 2 years of date stamped on can. This cement is designed for use without a Primer. Check local code requirements before using Spears® LW - 5 cement.

1. Cut pipe square, deburr and chamfer (bevel 10° to 15°). Clean and dry joining surfaces.
2. Check dry fit. For interference fit, pipe should push 1/4 to 3/4 way into fitting snugly.
3. Use a suitable applicator at least 1/2 size of pipe diameter; for larger sizes use brush or roller.
4. Apply a full even layer of cement on the pipe equal to the socket depth. Coat the fitting socket with a medium layer. Avoid excess and puddling. If necessary, apply a second full layer on pipe.
5. Assemble while cement is wet. If not wet, recoat all parts before assembly. Assure pipe bottoms into fitting socket using a 1/8 to 1/4 turns twist. To avoid push out and allow for initial set, hold for about 30 seconds. Wipe off excess. Handle newly assembled joints carefully.

An Initial Set time is recommended to provide good handling strength after which the joint will handle normal stresses of installation. Cure Time is the recommended waiting period prior to placing the joint into service and before any pressure testing of the system. Set and cure times are relative to temperature at time of installation. Best results are obtained at temperatures between 40° and 110°F. Due to the many field variables, these should be used as a general guide only.

Recommended Set & Cure Times

Temperature	Initial Set	Cure
60°F - 100°F	30 min.	1 hr.
40°F - 60°F	1 hr.	2 hrs.
0°F	2 hrs.	4 hrs.

In moist or humid conditions (relative humidity above 60%) allow 50% more cure time.

Average Number of Joints per Quart of LW-5 One-step Cement

Pipe Diameter	1-1/2	2	3	4	6	8	10	12	14	16
No. of Joints	90	60	40	30	10	5	2-3	1-2	3/4	1/2-3/4

Estimate based on laboratory tests. Due to many field variables, these figures should be used as a general guide only.

Threaded Joints - Spears® Manufacturing Company highly recommends the use of Spears® **BLUE 75™** thread sealant, which has been tested for compatibility with Spears® products. Please follow the sealant Manufacturer's Application/Installation instructions. Choice of another appropriate thread sealant is at the discretion of the installer.

WARNING: Some pipe joint compounds or pastes may contain substances that could cause stress cracks in CPVC. For transitions to metal threaded systems, all cutting oils must be removed and the metal pipe thoroughly flushed and degreased prior to assembly with CPVC systems.

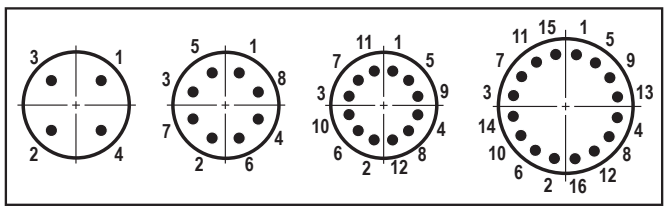
1. Apply joint sealant to the male pipe threads ONLY.
2. Thread joint hand tight for initial assembly.
3. Using commercial strap wrenches tighten 1 to 2 turns beyond hand tight; avoid over tightening. **DO NOT** use conventional pipe wrenches that can damage plastic fittings.

If a tape sealant is used:

1. Use TFE tape no less than 25 mil thick.
2. Initial wrap must fully cover the thread end.
3. Wrap clockwise with standard pipe threads.
4. Use only 2-3 wraps of tape.

DO NOT use combination of paste and tape sealants.

Flanged Connections - Solvent cement flange hub to pipe according to preceding instructions. Use full faced, 1/8" thick gaskets of a material suitable for the intended application having a Shore "A" durometer of approximately 60. Use of well lubricated bolts and flat washers is required. Bolts must be tightened in a 180° opposing pattern to the recommended torque values.

Flange Size (in.)	Bolt Torque (ft.-lb.)	Torque Sequence
1-1/2	12	
2-4	25	
6-8	40	
10	64	
12	95	
14-16	110	

LabWaste™ Transitions To Other Systems – Spears® **LabWaste™** Corrosive Waste Drainage System provides a complete line of transition fittings for use with other corrosive waste piping materials for system additions and retrofits.

P099 Transition Coupling: Hub X Compression. Allows connection of **LabWaste™** to Polypropylene or PVDF pipe and solvent cement socket connection to CPVC system. A safety groove must be cut into the Polypropylene or PVDF pipe to resist pull out. A groove cutting tool is available from Spears®

P093 Elastomer Transitions Coupling For Glass: IPS Clamp Joint X Glass Clamp Joint. Allows mechanical connection of **LabWaste™** CPVC pipe to plain end Kimax® glass pipe. Consists of high performance fluoroelastomer (FKM) sleeve, an outer stainless steel shear ring and two AISI 301 stainless steel clamping bands.

P098 Glass Transition Coupling: Spigot X Bead Clamp. Allows mechanical connection of **LabWaste™** to beaded-end glass drainage pipe. Coupling consists of a CPVC beaded-end matching glass pipe bead and CPVC pipe diameter spigot end for solvent cement connection. This requires a glass system's mechanical connector, available from Schott Scientific Glass, part# 6650-XXXX Bead-to-Bead end.

P094 Elastomer Transitions Coupling For Duriron®: IPS Clamp Joint X Duriron® Clamp Joint. Allows mechanical connection of **LabWaste™** CPVC pipe to plain end Duriron® pipe. Consists of high performance fluoroelastomer (FKM) sleeve, an outer stainless steel shear ring and two AISI 301 stainless steel clamping bands.

P095 Duriron® Mechanical Transition Fitting: Mechanical Joint X CPVC Pipe Size. Allows mechanical connection of **LabWaste™** to Duriron (siliconized iron) pipe. Fitting consists of Duriron pipe diameter spigot (male pipe end) and CPVC pipe diameter spigot end for solvent cement connection. Requires use of Duriron Mechanical Joint Coupling that consists of an inner sleeve of PTFE surrounded by an outer sleeve of Neoprene rubber held in place by a stainless steel coupling. Duriron® Mechanical Joint Coupling available through Flowserve.

P097 Duriron® Caulk Transition Coupling: Spigot x Caulk Joint. Allows caulk-joint connection of **LabWaste™** pipe to Duriron boro-silicate systems. Coupling consists of Duriron pipe diameter male end for mating to Duriron belled pipe end and CPVC pipe diameter spigot end for solvent cement connection. This requires use of special chemical acid-resistant oakum packing available from Flowserve (Red Stripe Sealite A312 Rope) and plastic lead/caulk purchased from others. **DO NOT** use hot lead or oiled Oakum for this type of caulk-joint.

P096 Grooved Coupling Adapter: Groove X Socket. Allows connection of the **LabWaste™** to grooved metal piping systems. Requires use of a Metal Grooved Coupling with gasket. A flexible style grooved coupling must be used for plastic only. **Do not use rigid style couplings.** Use either Victaulic Flexible Grooved Couplings Part # 75 & 77 or Gruvlok Flexible Grooved Couplings Part # 7001 & 7000.

Please contact Spears® for special construction of any system transition connection needs not specified.

Support Spacing

Spears® **LabWaste™** CPVC systems should be properly supported to avoid stress caused by sagging and system component loads. Support should be given to concentrated system loads, such a flanges and where changes in direction occur. Such support should be made as close to fittings as possible, yet allow for movement due to expansion and contraction.

Conventional pipe hangers and brackets can be used. However, hangers must **NOT** be used to pull the piping system into position or over tightened to either restrict necessary movement or cut into pipe. Hangers should be smooth, free of burrs and provide as much load-bearing surface as possible.

Systems should be supported in accordance with applicable plumbing codes. Check local codes for additional requirements. The following chart shows recommended horizontal support spacing for un-insulated continuous spans with no concentrated loads. This information is provided as a general guideline. Local codes, engineering specifications, and system installation conditions may require significant variations.

Recommended Hanger Spacing (feet)

Pipe Diameter	1-1/2	2	3	4	6	8	10	12	14	16
Hanger Spacing	6	6	7	7-1/2	8	9	10	10-1/2	11	12

Underground Installation

Spears® **LabWaste™** CPVC systems may be installed underground in a smooth, uniform trench bottom that supports the pipe over its entire length, free of rocks and debris. Subsoil should be stable to provide physical protection for the pipe and fittings. Where large boulders are not removed, trench should be padded with sand or fine-grained soil. Trench should be wide enough to provide room for joining pipe in the trench and to allow snaking from side-to-side to provide slack for future expansion-contraction. Install a larger size pipe as a sleeve where piping must pass through masonry walls. Use only solvent cement connection in underground piping. System should be tested in accordance with local plumbing codes prior to back filling. Pipe should be surrounded with an initial backfill material having a particle size of 1/2" or less, free of sharp rock or debris and uniformly compacted in layers. Refer to ASTM D 2321, ***Underground Installation of Thermoplastic Pipe for Sewer and Other Gravity-Flow Applications***, for additional information on underground installations.

Acid Neutralization/Dilution Tanks for Use With LabWaste™ CPVC Systems

Neutralization or dilution tanks are required by codes for the purpose of neutralizing corrosive wastes. Corrosive liquids, spent acids or other harmful chemicals that destroy or injure a drain, sewer, soil or waste pipe, or create noxious or toxic fumes or interfere with sewage treatment processes are prohibited from discharge into the plumbing system without being neutralized or treated. A variety of system designs and treatment methods can be used for neutralization and dilution. For proper performance, Spears® recommends use of professional assistance in analysis of the application, neutralization system design, equipment selection, and specific maintenance requirements.

Spears® offers a standard selection of HDPE in 5 gallon to 3000 gallon capacities and CPVC tanks in 5 gallon to 55 gallon capacities with a variety of connection and vent options, plus convenient 1-gallon Dilution Tank designed for under-sink installation. Tanks can also be custom produced in virtually any size, shape, or connection configuration, including custom double-containment tanks. Contact Spears® Technical Services with desired specifications for custom quotation. See **SSB-1 Part 1 List Price Catalog – LabWaste™ *CPVC Waste Drainage Systems***, for pricing, additional information, selection detail and available options such as venting, tank extensions, manhole ports, pedestrian and traffic covers.

Installation Considerations - Except for under-sink installations, tank should be located on the lowest floor or basement room. It is recommended that the tank be in a concrete vault on a smooth flat surface. Where necessary, tanks may be installed on sturdy sheeting or directly into the ground. In all cases, the surface must be capable of uniformly supporting the tank weight, including effluent and neutralization medium.

Neutralization tanks and tank extensions are not warranted for direct burial applications. Tanks must be properly placed and secured with no applied stresses, within a dry concrete vault. However, if direct burial is used without warranty, custom centerlines must be furnished from top of cover down to fitting centerline instead of specified tank bottom to fittings centerline since tank heights can vary. The top of the tank must remain accessible for servicing and clean out either directly or by manhole cover. Tanks may be installed under foot or light vehicle traffic with use of appropriate covers and support. Tanks themselves are not to be used to support traffic loading.

Avoid strain when installing the pipe to tank fitting connections. Tanks must **NOT** be supported by the inlet, outlet, or vent piping.

The following recommendation from the American Society of Plumbing Engineers (ASPE) may be used as a guideline for sizing tanks according to the number of lab sinks.

LabWaste™ Technical Information

Neutralization Tank Sizing Table

Number of Lab Sinks	Tank Size	
	Gallons	Liters
2	5	18.9
4	15	56.8
8	30	113.6
16	55	208.2
22	75	283.9
27	90	340.7
30	108	408.8
40	150	567.8
50	175	662.4

Number of Lab Sinks	Tank Size	
	Gallons	Liters
60	200	757
75	275	1040.9
110	360	1362.6
150	500	1898.5
175	550	2081.8
200	650	2460.3
300	1200	4542
500	2000	7570
600	3000	11355

Limestone Chips for Acid Neutralization Tanks - Most state and local codes require the addition of a neutralization medium in acid waste tanks with the addition of water for dilution prior to discharge into a sanitary sewer system. Limestone must be 1" to 3" in diameter with a calcium carbonate content of at least 90%. Spears® offers high grade Limestone Chips having a calcium carbonate content of approximately 95%. The use of Limestone Chips is generally one of the best and least expensive means of acid neutralization, but may be used in conjunction with more sophisticated chemical treatments if necessary.

How Much Limestone to Use - The following is a guideline for pounds of Limestone Chips to use for one (1) tank filling (charge). It is recommended that sufficient quantity be ordered for more than one filling.

Tank Size Gallons	Approx. Pounds
5	50
15	100
30	200
55	500
100	1,000
150	1,750
175	1,900
200	2,500
275	3,200

Tank Size Gallons	Approx. Pounds
300	3,200
350	4,000
500	5,000
550	7,500
650	9,000
1200	11,000
2000	16,000
3000	25,000

General Tank Maintenance Guidelines - Tanks should be inspected routinely for accumulation of precipitated sludge and debris that must be cleaned out (usually scooped out) and for periodic addition of limestone and water if necessary. While once every one to three months may be sufficient, professional assistance should be sought to establish a proper schedule based on actual use. **Note:** Tank must be filled with water prior to carefully adding Limestone Chips to charge the system. Request instruction sheet.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

System Pressure Testing

Spears® **LabWaste**™ CPVC systems should be tested with water as follows, or according to local plumbing codes. Test only after sufficient joint cure (see "Recommended Set & Cure Time"). The system may be tested in its entirety or isolated at each floor or in sections for testing.

Close all openings tight except the highest opening and fill the system to the point of overflow. Fill the system slowly, being sure to allow all air to escape. A minimum of ten (10) foot (3048 mm) head should be used for entire system or section tested. Allow the system/section under test to set 15 minutes before inspection for leaks.

Drain each section after inspection. Any leaking solvent cement joints should be cut from the system, replaced and retested after proper joint cure. Check any leaking mechanical joints for proper installation, applicable tightening, and presence of any debris in the joint. Reassemble and retest.

Supplemental Equipment Not Specified in this Manual

A variety of supplemental equipment including, pump stations, laboratory workstations, and fume hoods are built to customer specifications. Standard Laboratory fixtures, floor drains, wall drains and traps plus manual or actuated valves are also available. Spears® can custom fabricate virtually any **LabWaste**™ system component. Contact Spears® for additional needs or a custom quotation.

System Integrity

Spears® **LabWaste**™ products have been developed and designed to be used as a total system consisting of pipe, fittings, accessories, solvent cement and thread sealant. All-Spears® **LabWaste**™ components should be used in order to insure a sound piping system. Substitution of other products for Spears® **LabWaste**™ pipe, fittings, or solvent cement may be detrimental to system integrity and is not recommended. The Spears® Limited Lifetime Warranty (located on the back cover of this manual) does not cover problems occurring within the piping system as the direct result of non-use of Spears® **LabWaste**™ system products.

Sample Engineering Specification

Special drainage systems for corrosive chemical or acid waste shall be manufactured from CPVC Type IV, ASTM Cell Classification 23447 per ASTM D 1784. All pipe, fittings and solvent cement shall be manufactured in accordance with ASTM F 2618 and certified by NSF International for corrosive waste end use (NSF® cw). All pipe and molded fittings shall be CAN/ULC S102.2 Listed for Surface Burning Characteristics with a flame spread of less than 25 and a smoke development of less than 50 as designated on the original package labeling for fittings and on the pipe print string marking. All pipe markings shall be accompanied by a yellow stripe for identification of CPVC chemical waste system. All fittings shall be CPVC drainage patterns meeting the requirements of ASTM D 3311 and specialty patterns according to the manufacturer's specifications. Joining method for pipe and fittings shall be solvent cement welding. Solvent cement shall be a "one-step" primerless type CPVC cement designated by the system manufacturer, specially formulated for resistance to corrosive chemicals and manufactured in accordance with ASTM F 493, as specified in ASTM F 2618. Mechanical connections for special equipment connection or transition to other system materials shall be as specified by the CPVC system manufacturer. All pipe, fittings, and cement shall be supplied together as a complete system. Installation shall be in accordance with the manufacturer's instructions and all applicable codes. Special drainage system to be Spears® **LabWaste**™ CPVC Corrosive Waste Drainage Systems manufactured by Spears® Manufacturing Company.

Neutralization Tanks

Standard HDPE Round Neutralization/Dilution Tanks

Construction: HDPE – High Density Polyethylene

Tank Capacity US Gallions	Approx. Useable Capacity, US Gallons		Inside Dimension Dia x Ht. (in.)	Wall Thickness (in.)	Approx. Weight (lbs.)	Standard Inlet & Outlet Connection Size (in.)	Standard Fitting Connection	LabWaste™ Transition Connection Fitting	Optional Vent Connection Size (in.)	Approx. Centerline Height (in.)		
	Without Liimestone	With Limestone								Inlet	Outlet	Vent
5	3	1	11 x 14	3/16	10	1-1/2 or 2	Mipt	P101	1-1/2 or 2	11	8	12
15	7	2	18 x 15	3/16	20	1-1/2 or 2	Mipt	P101	1-1/2 or 2	11	8	12
30	19	6	18 x 29	3/16	35	3	Mipt	P101	2 or 3	23	19	25
55	35	12	22 x 36	3/16	50	4	Mipt	P101	3 or 4	27	23	31
100	77	26	28 x 42	1/4	85	4	Mipt	P101	3 or 4	35	31	37
150	105	35	31 x 48	1/4	100	4	Mipt	P101	3 or 4	38	34	42
175	135	45	30 x 60	1/4	125	4	Mipt	P101	3 or 4	51	47	54
200	137	46	36 x 48	1/4	125	4 or 6	Mipt/Flange	P101/854	4 or 6	38	34	42
275	186	62	42 x 48	1/4	160	4 or 6	Mipt/Flange	P101/854	4 or 6	38	34	42
300	230	76	36 x 74	5/16	175	4 or 6	Mipt/Flange	P101/854	4 or 6	61	56	65
350	243	81	48 x 48	5/16	200	4 or 6	Mipt/Flange	P101/854	4 or 6	38	34	42
500	395	132	52 x 60	3/8	225	4 or 6	Mipt/Flange	P101/854	4 or 6	51	47	54
550	447	149	48 x 72	3/8	275	4 or 6	Mipt/Flange	P101/854	4 or 6	64	60	67
650	548	183	48 x 84	3/8	375	4 or 6	Mipt/Flange	P101/854	4 or 6	75	71	76
1200	1052	351	69 x 84	3/8	600	4 or 6	Mipt/Flange	P101/854	4 or 6	74	68	76
2000[1]	1559	521	84 x 84	1/2	850	4 or 6	Mipt/Flange	P101/854	4 or 6	74	68	76
3000[1]	2203	735	95 x 97	1/2	1350	4 or 6	Mipt/Flange	P101/854	4 or 6	87	83	91

Standard CPVC Round Neutralization/Dilution Tanks

Construction: Chlorinated Polyvinyl Chloride (CPVC)

Tank Capacity US Gallions	Approx. Useable Capacity, US Gallons		Inside Dimension Dia. x Ht. (in.)	Wall Thickness (in.)	Approx. Weight (lbs.)	Standard[2] Inlet & Outlet Connection Size (in.)	Standard Fitting Connection	LabWaste™ Transition Connection Fitting[3]	Optional[4] Vent Connection Size (in.)	Approx. Centerline Height (in.)[5]		
	Without Limestone	With Limestone								Inlet	Outlet	Vent
5	5	3	12-3/8 x 14-11/16	3/16	20	1-1/2 or 2	Socket	Direct	1-1/2 or 2	11	8	12
15	15	7	17-11/16 x 17-1/4	3/16	35	1-1/2 or 2	Socket	Direct	1-1/2 or 2	11	8	12
30	30	18	17-5/8 x 33	3/16	54	3	Socket	Direct	2 or 3	23	18	25
55	55	35	23-1/2 x 38-1/2	1/4	70	4	Socket	Direct	3 or 4	27	23	31

Important Notes

1 Larger HDPE tanks may include exterior steel banding or fiberglass reinforcement for additional strength. Special ordered optional inspection manhole ports are recommended for larger tanks (includes cover with neoprene gasket, stainless steel nuts, bolts, and washers).

2 All tanks can be special ordered with Mipt, Flanged (CL150), and Fipt connections or varying combinations other than standard connections specified. Inlets or vents may also be custom ordered for installation in covers instead of tank sides.

3 For transitions from Mipt HDPE tank connections to **LabWaste™** piping use part numbers P101-xxxC, Female Adapter. CPVC tank sockets can be cemented directly to **LabWaste™** piping. For transitions from ALL flanged connections to **LabWaste™** piping use part numbers 854-xxxC, Flange (xxx = size code).

4 Venting is required by codes but may be accomplished either at the tank or in-line.

5 Neutralization tanks and tank extensions are not warranted for direct burial applications. Tanks must be properly placed and secured with no applied stresses, within a dry concrete vault with use of a protective traffic cover as deemed appropriate. However, if direct burial is used without warranty, custom centerlines must be furnished from top of cover down to fitting centerline instead of specified tank bottom to fitting centerline since tank heights can vary.

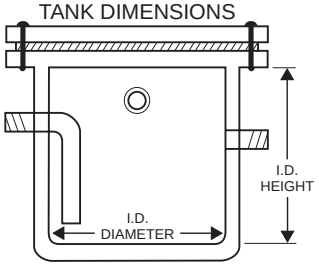
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

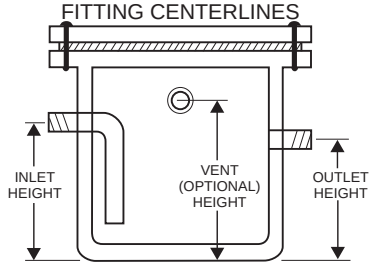
Neutralization Tanks

HDPE Tanks

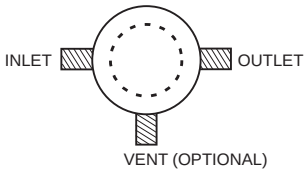
TANK DIMENSIONS



FITTING CENTERLINES



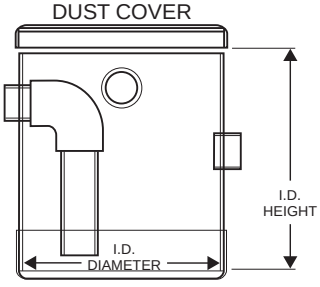
TOP VIEW
STANDARD FITTING LOCATIONS



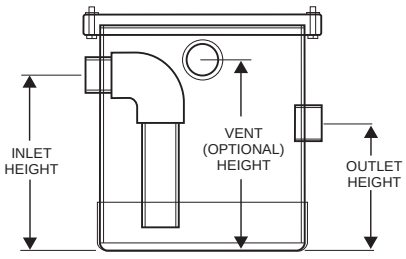
(Advise If You Want Standard Locations Changed)

CPVC Tanks

SLIP-ON
DUST COVER

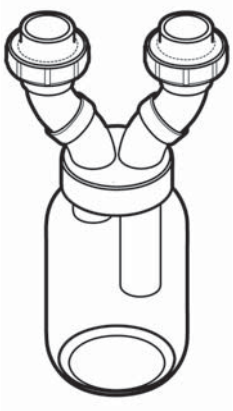


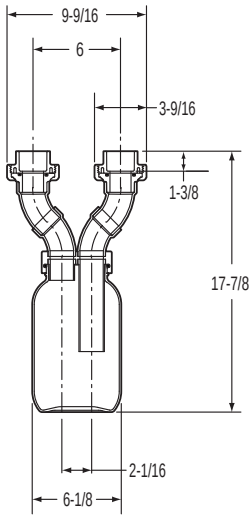
BOLTED COVER



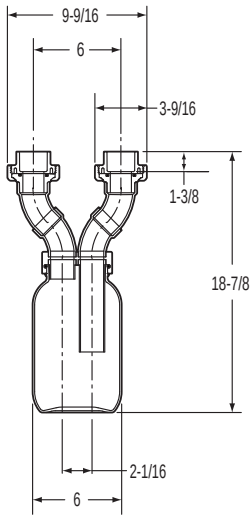
1-Gallon CPVC Dilution Tanks

Provides chemical dilution from water rinse during use. Designed for under-sink installations.
CPVC construction with Glass or PP Jar type tank.





Glass

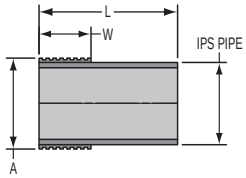


Polypropylene

Product Dimensions

P095 Duriron Transition Fitting

Mechanical Joint x Pipe Size

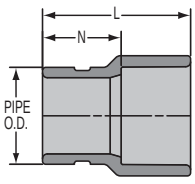


For connection to Duriron system. Requires duriron mechanical joint coupling.

Part Number	Size	A	L	W
P095-015C	1-1/2	1-3/16	4	1-3/8
P095-020C	2	2-5/8	4	1-1/2
P095-030C	3	3-3/4	4	1-7/8
P095-040C	4	4-3/4	4	2-5/16

P096 Grooved Coupling

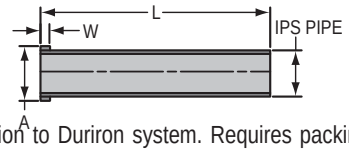
Grv x Soc



Part Number	Size	L	N
P096-015C	1-1/2	2-15/16	1-1/2
P096-020C	2	3-1/16	1-9/16
P096-030C	3	3-9/16	1-11/16
P096-040C	4	4-1/2	2-1/4
P096-060C	6	5-3/8	2-3/8

P097 Duriron Transition Coupling

Spig x Caulk Joint

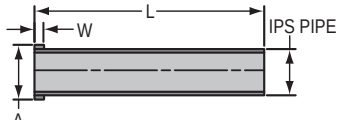


For connection to Duriron system. Requires packing and plastic lead. **Warning:** Do not use hot lead or oiled Oakum.

Part Number	Size	A	L	W
P097-015C	1-1/2	2-1/4	12	1/2
P097-020C	2	2-7/8	12	1/2
P097-030C	3	4-3/16	12	1/2
P097-040C	4	5-1/4	12	1/2

P097 Duriron Transition Coupling (continued)

Spig x Caulk Joint

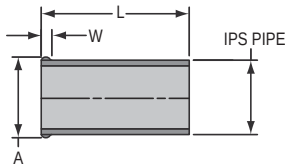


For connection to Duriron system. Requires packing and plastic lead. **Warning:** Do not use hot lead or oiled Oakum.

Part Number	Size	A	L	W
P097-060C	6	7-9/16	12	1/2
P097-080C	8	9-11/16	12	1/2

P098 Glass Transition Coupling

Spig x Clamp

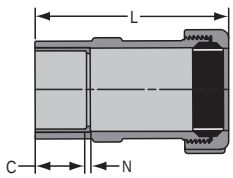


For connection to glass system. Requires use of clamp from glass system manufacturer.

Part Number	Size	A	L	W
P098-015C	1-1/2	2-1/16	4	1/4
P098-020C	2	2-1/16	5	1/4
P098-030C	3	3-11/16	6	5/16
P098-040C	4	4-27/32	6	5/16
P098-060C	6	7-1/8	6	1/2

P099 Transition Coupling

H x Compression



For connection to PP or PVDF systems. Requires Safety Retaining Groove Tool. Contact Spears®.

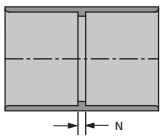
Part Number	Size	C	L	N
P099-015C	1-1/2	1-3/8	5-1/8	3/32
P099-020C	2	1-1/2	5-3/4	1/8
P099-030C	3	1-7/8	10-5/16	3/16
P099-040C	4	2-1/4	11-5/32	7/32
P099-060C	6	3	13-3/8	9/32

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

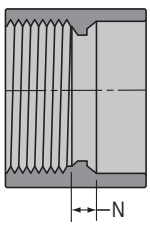
Product Dimensions

P100 Coupling
H x H



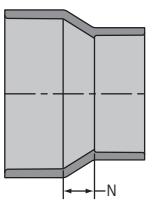
Part Number	Size	N
P100-015C	1-1/2	1/8
P100-020C	2	1/8
P100-030C	3	3/16
P100-040C	4	1/4
P100-060C	6	1/4
P100-080C	8	1/4
P100-100C	10	3/8
P100-120C	12	3/8
P100-140C	14	3/8

P101 Female Adapter
FPT x H



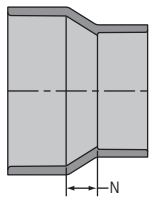
Part Number	Size	N
P101-015C	1-1/2	1/4
P101-020C	2	1/4
P101-030C	3	5/16
P101-040C	4	3/8
P101-060C	6	15/32

P102 Increaser Reducer
H x H



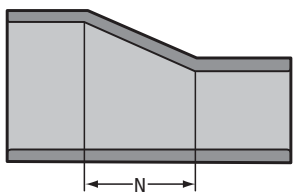
Part Number	Size	N
P102-251C	2x1-1/2	11/16
P102-337C	3x1-1/2	1-3/32
P102-338C	3x2	15/16
P102-420C	4x2	1-3/4
P102-422C	4x3	15/16
P102-530C	6x3	1-15/16
P102-532C	6x4	1-7/16
P102-582C	8x4	2-11/32
P102-585C	8x6	1-11/32

P102 Increaser Reducer (continued)
H x H



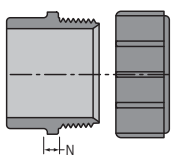
Part Number	Size	N
P102-624C	10x4	3-3/8
P102-626C	10x6	2-3/16
P102-628C	10x8	1-9/32
P102-666C	12x6	3-9/32
P102-668C	12x8	2-1/4

Pipe Increaser - Eccentric Reducer
H x H



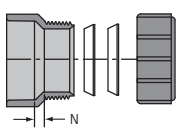
Part Number	Size	N
P102-338EC	3x2	2-15/32

P103P Trap Adapter - Male
Spig x Slip with Plastic Nut



Part Number	Size	N
P103P-015C	1-1/2	3/16
P103P-020C	2	3/16

P104R Trap Adapter - Female w/1-1/2 Plastic Nut & Washer and 1-1/2x1-1/4 Washer
H x Slip w/Plastic Nut

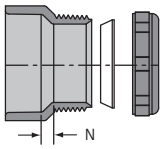


Part Number	Size	N
P104R-015C	1-1/2	3/16

Product Dimensions

P104X Trap Adapter - Female

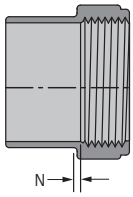
H x Slip w/ Chrome Nut & Washer



Part Number	Size	N
P104X-015C	1-1/2	3/16

P105 Cleanout Adapter

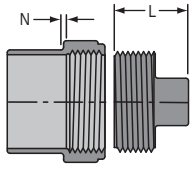
Spig x FPT



Part Number	Size	N
P105-015C	1-1/2	5/32
P105-020C	2	1/4
P105-030C	3	11/32
P105-040C	4	1/4
P105-060C	6	11/32
P105-080C	8	13/32

P105X Cleanout Adapter with Square Head Plug

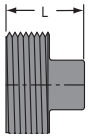
Spig x FPT



SEE PART NO. P105 AND P106

P106 Square Head Cleanout Plug

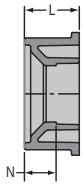
MPT



Part Number	Size	L
P106-015C	1-1/2	1-3/8
P106-020C	2	1-5/16
P106-030C	3	1-25/32
P106-040C	4	1-7/8
P106-060C	6	1-15/16
P106-080C	8	2-1/8

P107 Flush Bushing

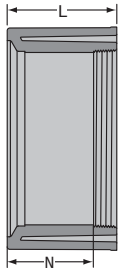
Spig x H



Part Number	Size	L	N
P107-251C	2x1-1/2	1-1/16	7/32
P107-337C	3x1-1/2	1-3/4	1
P107-338C	3x2	1-25/32	1
P107-420C	4x2	2	1-3/16
P107-422C	4x3	2	1/2
P107-530C	6x3	3-23/32	2-11/32
P107-532C	6x4	3-7/16	1-11/16
P107-582C	8x4	4-9/16	2-13/16
P107-585C	8x6	4-19/32	1-9/16
P107-628C	10x8	5-11/32	1-5/16

P108 Flush Bushing (Cleanout Adapter)

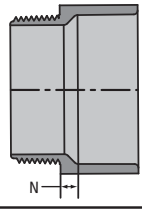
S x FPT



Part Number	Size	L	N
P108-212C	1-1/2x1-1/4	7/8	3/16

P109 Male Adapter

MPT x H



Part Number	Size	N
P109-169C	1-1/4x1-1/2	3/16
P109-015C	1-1/2	3/16
P109-020C	2	3/16
P109-030C	3	3/8
P109-040C	4	3/8
P109-060C	6	11/16

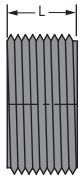
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Product Dimensions

P110 Counter Sunk Cleanout Plug

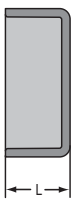
MPT



Part Number	Size	L
P110-015C	1-1/2	5/8
P110-020C	2	5/8
P110-030C	3	3/4
P110-040C	4	7/8
P110-060C	6	31/32

P116 Cap

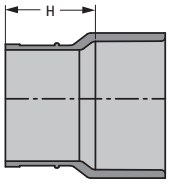
Socket



Part Number	Size	L
P116-015C	1-1/2	15/16
P116-020C	2	1
P116-030C	3	1-3/4
P116-040C	4	2
P116-060C	6	3-9/32
P116-080C	8	6-3/8

P119 No-Hub Adapter

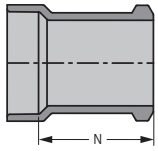
S x H



Part Number	Size	H
P119-015C	1-1/2	1-9/16
P119-020C	2	1-5/8
P119-030C	3	1-13/16
P119-040C	4	1-7/8

P123 Hub Adapter

H x S

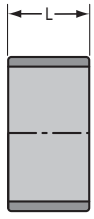


For connection to Cast Iron system. Requires packing and plastic lead. **Warning:** Do not use hot lead or oiled Oakum.

Part Number	Size	N
P123-020C	2	4-5/8
P123-030C	3	5-5/8

P130 Repair Coupling

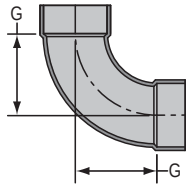
H x H



Part Number	Size	L
P130-015C	1-1/2	1-17/32
P130-020C	2	1-21/32
P130-030C	3	3-7/32
P130-040C	4	3-13/16

P300 1/4 Bend (90° Ell)

H x H

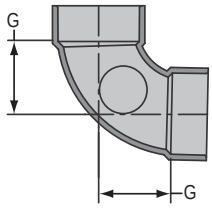


Part Number	Size	G
P300-015C	1-1/2	1-11/16
P300-020C	2	2-9/32
P300-030C	3	2-7/8
P300-040C	4	3-29/32
P300-060C	6	5
P300-080C	8	6
P300-100C	10	9-29/32
P300-120C	12	10-29/32

Product Dimensions

P300S 1/4 Bend w/Side Inlet (90° Ell)

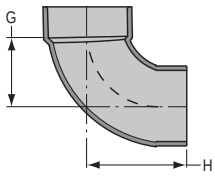
All Hub



Part Number	Size	G
P300S-338C	3x3x2	3-1/8

P302 1/4 Bend, Street (90° Street Ell)

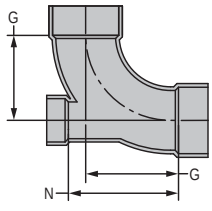
H x Spig



Part Number	Size	G	H
P302-015C	1-1/2	1-9/16	2-13/32
P302-020C	2	2-7/32	3-5/32
P302-030C	3	3-1/8	4-19/32
P302-040C	4	3-15/16	5-5/8
P302-060C	6	5	8-11/32
P302-080C	8	6	10-1/2
P302-100C	10	9-29/32	15-3/8
P302-120C	12	10-15/16	17-3/8

P303 1/4 Bend with Low Heel Inlet

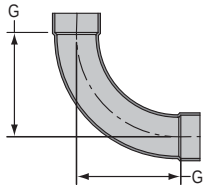
H x H x H



Part Number	Size	G	N
P303-338C	3x3x2	2-27/32	4-5/32
P303-420C	4x4x2	3-5/16	5

P304 1/4 Bend, Long Sweep (90° LS Ell)

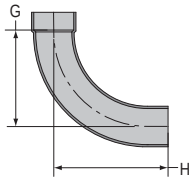
H x H



Part Number	Size	G
P304-015C	1-1/2	2-3/4
P304-020C	2	3-3/32
P304-030C	3	4-5/32
P304-040C	4	5-25/32
P304-060C	6	8-29/32

P309 Long Sweep 1/4 Bend, Street (90° LS Street Ell)

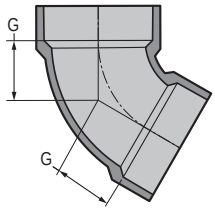
H x Spig



Part Number	Size	G	H
P309-015C	1-1/2	2-3/4	3-11/32
P309-020C	2	3-9/32	4-3/32
P309-030C	3	4-1/8	5-23/32
P309-040C	4	5-1/32	6-7/16
P309-060C	6	8-31/32	11-29/32

P319 1/6 Bend (60° Ell)

H x H



Part Number	Size	G
P319-015C	1-1/2	1-1/16
P319-020C	2	1-3/8
P319-030C	3	1-11/16
P319-040C	4	2-5/32
P319-060CF	6	4-9/16

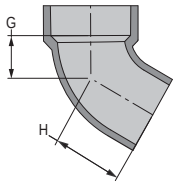
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Product Dimensions

P320 1/6 Bend, Street (60° Street Ell)

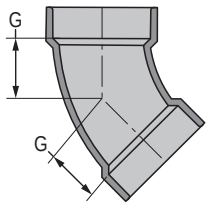
H x Spig



Part Number	Size	G	H
P320-015C	1-1/2	1-1/16	1-3/4
P320-020C	2	1-5/8	2-1/4
P320-030C	3	1-11/16	3-1/16
P320-040C	4	2-5/32	3-19/32

P321 1/8 Bend (45° Ell)

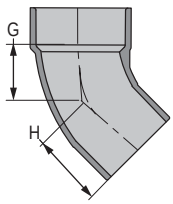
H x H



Part Number	Size	G
P321-015C	1-1/2	1-1/8
P321-020C	2	1-7/16
P321-030C	3	1-23/32
P321-040C	4	2-1/8
P321-060C	6	2-1/16
P321-080C	8	2
P321-100C	10	2-5/8
P321-120C	12	3-1/8

P323 1/8 Bend, Street (45° Street Ell)

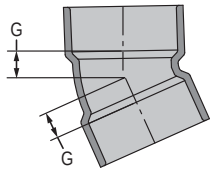
H x Spig



Part Number	Size	G	H
P323-015C	1-1/2	1-1/8	1-3/4
P323-020C	2	1-13/32	2-3/16
P323-030C	3	1-3/4	3-1/4
P323-040C	4	2-3/16	3-15/16
P323-060C	6	1-29/32	5-1/16
P323-080C	8	3-1/8	6-1/2

P324 1/16 Bend (22-1/2 Ell)

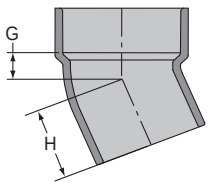
H x H



Part Number	Size	G
P324-015C	1-1/2	1/2
P324-020C	2	11/16
P324-030C	3	13/16
P324-040C	4	1
P324-060C	6	1-5/16
P324-080C	8	1-11/32

P326 1/16 Bend, Street (22-1/2° Street Ell)

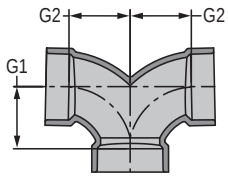
H x Spig



Part Number	Size	G	H
P326-015C	1-1/2	1/2	1-1/4
P326-020C	2	11/16	1-1/2
P326-030C	3	13/16	2-5/16
P326-040C	4	3/16	2-1/4
P326-060C	6	1-3/8	4-1/2
P326-080C	8	1-3/4	5-5/8

P327 Double 1/4 Bend (3 Way Ell)

All Hub

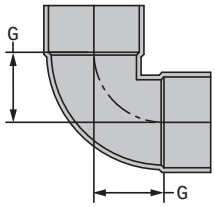


Part Number	Size	G1	G2
P327-015C	1-1/2	1-3/4	1-3/4
P327-020C	2	2-5/16	2-5/16
P327-030C	3	3-1/16	3-1/16
P327-040C	4	3-29/32	3-29/32
P327-241C	2x1-1/2x1-1/2	1-3/8	4-1/2

Product Dimensions

P331 Vent Ell

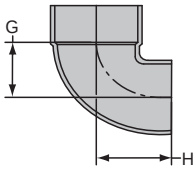
H x H



Part Number	Size	G
P331-015C	1-1/2	1-3/16
P331-020C	2	1-1/2
P331-030C	3	1-7/8
P331-040C	4	2-5/16
P331-060C	6	3-15/32

P333 Vent Ell, Street

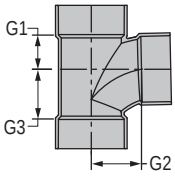
H x Spig



Part Number	Size	G	H
P333-015C	1-1/2	1-3/16	2
P333-020C	2	1-1/2	2-1/8
P333-030C	3	1-7/8	3-5/8
P333-040C	4	4-3/16	4-7/16

P400 Sanitary Tee

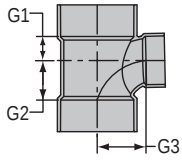
All Hub



Part Number	Size	G1	G2	G3
P400-015C	1-1/2	25/32	1-9/16	1-9/16
P400-020C	2	1-11/32	2-5/16	2-5/16
P400-030C	3	1-13/16	2-7/8	2-7/8
P400-040C	4	2-1/32	3-11/16	3-11/16
P400-060C	6	3-7/16	5-1/32	5-1/32
P400-080C	8	4-13/32	6-1/16	6-1/16
P400-100C	10	5-17/32	9-31/32	9-29/32
P400-120C	12	6-1/2	10-31/32	11-1/32

P401 Sanitary Tee, Reducing

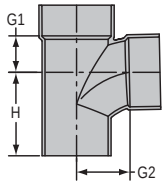
All Hub



Part Number	Size	G1	G2	G3
P401-241C	2x1-1/2x1-1/2	1-3/16	1-15/16	2-3/16
P401-251C	2x2x1-1/2	1-1/4	1-27/32	2-3/16
P401-257C	2x1-1/2x2	1-3/8	2-5/16	2-5/16
P401-337C	3x3x1-1/2	15/16	1-3/4	2-1/2
P401-338C	3x3x2	1-5/32	2-5/32	2-7/8
P401-420C	4x4x2	7/8	1-27/32	3-5/32
P401-422C	4x4x3	1-11/16	3	3-1/2
P401-532C	6x6x4	2-1/8	3-19/32	4-11/16
P401-582C	8x8x4	4-17/32	5-7/8	8-7/8

P403 Sanitary Tee, Street

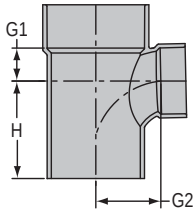
S x H x H



Part Number	Size	G1	G2	H
P403-015C	1-1/2	13/16	1-17/32	2-7/16
P403-030C	3	1-7/8	2-15/16	4-3/8
P403-040C	4	2-1/4	3-7/8	5-5/8
P403-080C	8	4-3/8	5-31/32	9-13/32
P403-100C	10	5-19/32	9-1/2	14-19/32
P403-120C	12	6-15/32	11-1/32	16-9/32

P404 Sanitary Tee, Street, Reducing

S x H x H



Part Number	Size	G1	G2	H
P404-241C	2x1-1/2x1-1/2	1-7/32	2-7/32	2-9/16
P404-251C	2x2x1-1/2	1-9/32	2-3/16	2-1/2
P404-337C	3x3x1-1/2	13/16	2-15/32	2-15/16
P404-338C	3x3x2	1-1/16	2-3/4	3-7/32

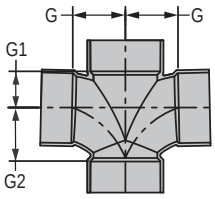
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Product Dimensions

P428 Double Sanitary Tee

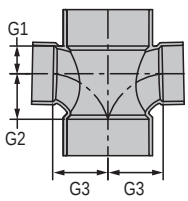
All HUB



Part Number	Size	G	G1	G2
P428-015C	1-1/2	1-3/4	1	1
P428-020C	2	2-7/8	1-25/32	1-25/32
P428-030C	3	3-1/16	1-13/16	1-13/16
P428-040C	4	3-7/8	2-1/4	2-1/4

P429 Double Sanitary Tee, Reducing

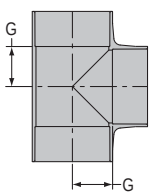
All Hub



Part Number	Size	G1	G2	G3
P429-241C	2x1-1/2x1-1/2x1-1/2	1-3/16	1-7/8	2-1/16
P429-251C	2x2x1-1/2x1-1/2	1-1/8	1-7/8	2-1/8
P429-337C	3x3x1-1/2x1-1/2	15/16	1-3/4	4
P429-338C	3x3x2x2	1-3/16	2-1/8	2-7/8
P429-419C	4x4x1-1/2x1-1/2	1-1/16	2	5-1/16
P429-420C	4x4x2x2	1-1/8	2-1/16	5-1/16
P429-422C	4x4x3x3	1-3/4	3	5-1/16

P441 Vent Tee

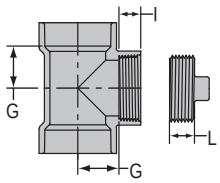
All Hub



Part Number	Size	G
P441-015C	1-1/2	1-5/32
P441-030C	3	1-29/32
P441-040C	4	2-3/8
P441-060C	6	3-5/8

P444X Cleanout Tee w/Plug

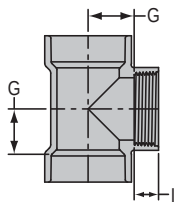
H x H x FPT



SEE PART NO. P445 AND P106

P445 Cleanout Tee

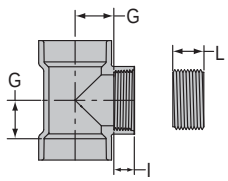
H x H x FPT



Part Number	Size	G	I
P445-015C	1-1/2	1-1/8	5/8
P445-020C	2	1-13/32	5/8
P445-030C	3	1-7/8	3/4
P445-040C	4	2-7/16	7/8
P445-060C	6	3-1/2	1

P445X Cleanout Tee with Counter Sunk Plug

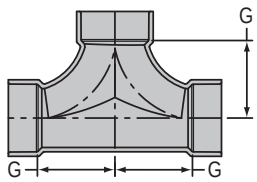
H x H x FPT



SEE PART NO. P445 AND P110

P448 2-Way Cleanout

ALL HUB

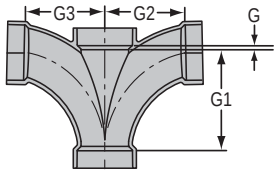


Part Number	Size	G
P448-030C	3	4
P448-040C	4	4-13/16

Product Dimensions

P500 Double Fixture Fitting

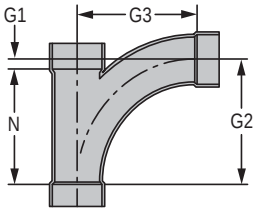
All Hub



Part Number	Size	G	G1	G2	G3
P500-020C	2x2x2x2	9/16	3-9/16	3-5/16	3-5/16
P500-241C	2x1-1/2x1-1/2x1-1/2	3/8	3-1/8	2-7/8	2-7/8
P500-251C	2x2x1-1/2x1-1/2	1/8	3-1/4	2-25/32	2-25/32
P500-338C	3x2x3x3	1/2	6-9/32	4-7/8	4-7/8
P500-030C	3x3x3x3	1/2	6-9/32	4-29/32	4-29/32

P501 Combination Wye and 1/8 Bend (Long Turn Tee Wye)

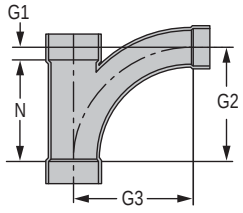
All Hub



Part Number	Size	G1	G2	G3	N
P501-015C	1-1/2	13/32	3-7/8	3-7/8	3-15/32
P501-020C	2	11/16	5-1/8	5-1/8	4-7/16
P501-030C	3	1-1/16	7-9/16	7-9/16	6-1/2
P501-040C	4	1-1/2	10	10	8-1/2

P502 Combination Wye and 1/8 Bend, Reducing (Long Turn Tee Wye)

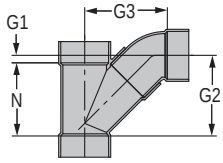
All Hub



Part Number	Size	G1	G2	G3	N
P502-251C	2x2x1-1/2	7/16	3-15/16	4-3/16	3-1/2
P502-337C	3x3x1-1/2	7/16	3-15/16	4-3/4	3-1/2
P502-338C	3x3x2	11/16	5-1/8	5-11/16	4-7/16
P502-420C	4x4x2	7/32	4-1/2	6-1/8	4-3/32
P502-422C	4x4x3	1-1/16	7-9/16	8-1/16	6-1/2

P503 Combination Wye and 1/8 Bend (Two Piece)

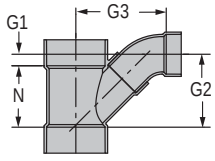
All Hub



Part Number	Size	G1	G2	G3	N
P503-060C	6	31/32	10-31/32	11-11/32	10
P503-080C	8	1-1/2	16	16	14-1/2
P503-100C	10	2-1/2	21-7/8	17-15/16	16-9/16

P504 Combination Wye and 1/8 Bend, Reducing (Two Piece)

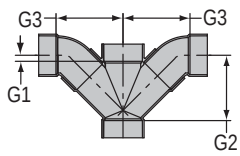
All Hub



Part Number	Size	G1	G2	G3	N
P504-241C	2x1-1/2	3/32	4-7/16	4-15/32	4-5/16
P504-528C	6x2	15/32	7-9/16	8-27/32	7-3/32
P504-530C	6x3	5/8	7-1/4	8-29/32	7-3/32
P504-532C	6x4	1-5/16	8-3/32	10-3/32	6-27/32
P504-582C	8x4	1-1/4	9-1/4	11-1/8	8
P504-585C	8x6	1	11-5/16	12-7/16	10-7/16
P504-623C	10x3	2-3/8	11-1/16	13-15/16	11-1/16
P504-624C	10x4	1-3/8	12-3/16	14-5/8	10-13/16
P504-626C	10x6	2-1/2	11-3/4	14-1/16	10-13/16
P504-628C	10x8	2-1/2	14-1/2	15-1/2	13-9/16
P504-668C	12x8	3	20-1/8	19-1/8	19-1/8
P504-670C	12x10	3	19-13/16	19-1/2	19-1/8

P507 Double Combination Wye and 1/8 Bend

All Hub



Part Number	Size	G1	G2	G3
P507-020C	2	11/16	5-9/16	5-13/16
P507-030C	3	27/32	7-11/32	7-11/32
P507-040C	4	1-1/8	8-31/32	9-7/32
P507-060C	6	1	11-1/32	11-13/32
P507-338C	3x3x2x2	29/32	5-3/4	6-1/2
P507-422C	4x4x3x3	1-1/16	7-1/2	8-1/8
P507-530C	6x6x3x3	1-1/32	10-7/8	10-7/8
P507-532C	6x6x4x4	1-23/32	11-5/8	12-5/32

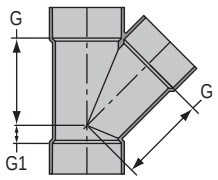
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Product Dimensions

P600 45° Wye

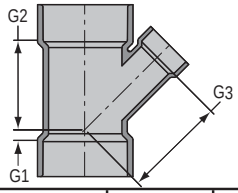
All Hub



Part Number	Size	G	G1
P600-015C	1-1/2	2-7/8	1-3/32
P600-020C	2	3-5/8	7/8
P600-030C	3	5	1-5/8
P600-040C	4	6-1/4	1-7/8
P600-060C	6	8	1-3/8
P600-080C	8	11-5/16	2
P600-100C	10	14-1/32	2-7/16
P600-120C	12	16-1/4	3-3/32

P601 45° Wye, Reducing

All Hub

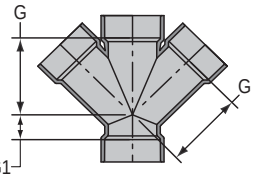


Part Number	Size	G1	G2	G3
P601-241C	2x1-1/2x1-1/2	3/4	2-15/16	2-15/16
P601-251C	2x2x1-1/2	13/16	3-15/32	3-17/32
P601-337C	3x3x1-1/2	1/2	3-25/32	4-3/8
P601-338C	3x3x2	7/8	4-3/32	4-17/32
P601-419C	4x4x1-1/2	3/8	3-9/32	4-3/8
P601-420C	4x4x2	9/32	4-1/4	5-5/16
P601-422C	4x4x3	21/32	5-1/2	5-29/32
P601-528C	6x6x2	7/32	6-7/8	8-3/8
P601-530C	6x6x3	1-1/8	6	6-7/8
P601-532C	6x6x4	23/32	6-3/16	7-1/8
P601-578C	8x8x2	3/8	7-5/8	9-13/16
P601-580C	8x8x3	7/32	9-1/8	7-11/32
P601-582C	8x8x4	3/8	6-31/32	8-5/16
P601-585C	8x8x6	1	9-1/2	9-13/16
P601-626C	10x10x6	9/32	10-31/32	11-31/32
P601-628C	10x10x8	1-1/16	12-3/8	11-27/32
P601-661C[1]	12x12x2	3	16-3/16	23-1/2
P601-663C[1]	12x12x3	3	16-3/16	22-7/8
P601-664C[1]	12x12x4	3	16-3/16	22-3/8
P601-666C[1]	12x12x6	3	16-3/16	21-1/8
P601-670C[1]	12x12x10	2-15/16	16-3/16	17-3/16

[1] Sized with Bushing

P611 Double Wye

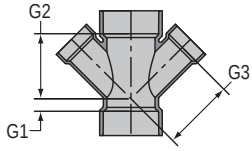
All Hub



Part Number	Size	G	G1
P611-015C	1-1/2	2-7/8	1-1/8
P611-020C	2	3-9/16	1-3/8
P611-030C	3	4-15/16	1-5/8
P611-040C	4	6-11/32	1-27/32
P611-060C	6	8-5/16	1-25/32

P612 Double Wye, Reducing

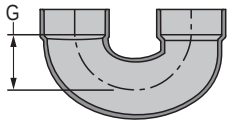
All Hub



Part Number	Size	G1	G2	G3
P612-241C	2x1-1/2x1-1/2x1-1/2	25/32	3-3/8	4-3/16
P612-251C	2x2x1-1/2x1-1/2	1-1/16	3-5-16	3-7/16
P612-337C	3x3x1-1/2x1-1/2	1/2	3-3/4	4-5/16
P612-338C	3x3x2x2	7/8	4-1/16	4-5/8
P612-420C	4x4x2x2	3/8	4-5/8	5-17/32
P612-422C	4x4x3x3	1-1/2	5-1/32	5-9/32
P612-532C	6x6x4x4	3/16	6-11/16	7-7/16

P700 Return Bend

H x H

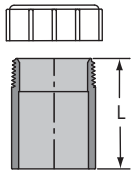


Part Number	Size	G
P700-015C	1-1/2	1-7/16
P700-020C	2	2-3/8
P700-030C	3	3
P700-040C	4	3-7/16
P700-060C	6	5

Product Dimensions

P704P Tail Piece Adapter

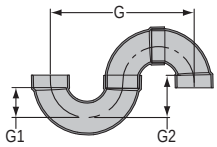
Spig x Slip w/Plastic Nut



Part Number	Size	L
P704P-015C	1-1/2	2-1/2

P705 S-Trap

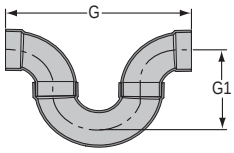
H x H



Part Number	Size	G	G1	G2
P705-015C	1-1/2	7-1/2	1-3/4	2-3/8
P705-020C	2	14-1/2	2-3/8	3-13/32
P705-030C	3	15-1/2	3-3/16	4-7/16
P705-040C	4	19-1/16	3-7/8	5-9/16

P705R Running Trap

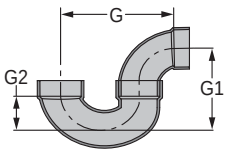
H x H



Part Number	Size	G	G1
P705R-015C	1-1/2	8	3-3/4
P705R-020C	2	12-1/2	5-7/16
P705R-030C	3	17-1/8	7-21/32
P705R-040C	4	20-7/8	9-9/32

P706X P-Trap

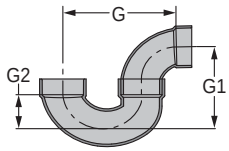
H x H



Part Number	Size	G	G1	G2
P706X-015C	1-1/2	4-3/16	3-29/32	1-13/32
P706X-020C	2	6-7/16	4-21/32	2-11/32

P706X P-Trap (continued)

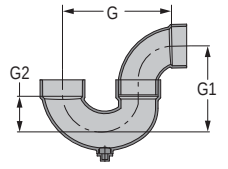
H x H



Part Number	Size	G	G1	G2
P706X-030C	3	8-11/16	6-15/16	3-1/32
P706X-040C	4	11-1/32	8-1/8	3-23/32
P706X-060C	6	18-25/32	14-3/4	5-13/16
P706X-080C	8	22	17	6-3/4

P707X P-Trap w/Cleanout

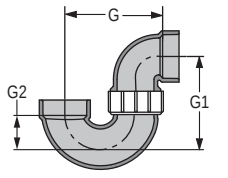
H x H



Part Number	Size	G	G1	G2
P707X-015C	1-1/2	4-3/16	3-21/32	1-7/32

P708P P-Trap w/Plastic Nut (Union Connection)

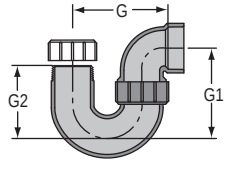
H x H



Part Number	Size	G	G1	G2
P708P-015C	1-1/2	4-15/32	3-5/8	1-13/32
P708P-020C	2	7-1/4	4-3/8	2-13/32

P711P L.A. Pattern P-Trap w/Plastic Nut (Union Connection w/Slip Joint)

Slip x H w/Plastic Nut



Part Number	Size	G	G1	G2
P711P-015C	1-1/2	4-11/32	3-3/4	3-1/2

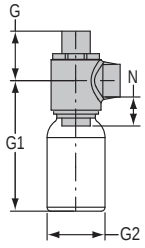
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Product Dimensions

P712 Jar Trap

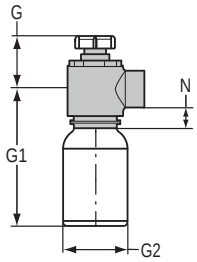
Spig x H



Part Number	Size	G	G1	G2	N
P712-015C	1-1/2	3-3/16	8-1/4	3-29/32	1-7/8

P712P Jar Trap w/Tail Piece Adapter

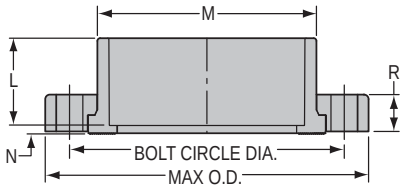
Slip x H



Part Number	Size	G	G1	G2	N
P712P-015C	1-1/2	3-5/16	8-1/4	3-7/8	1-3/4

Flange - Van Stone Style

Soc

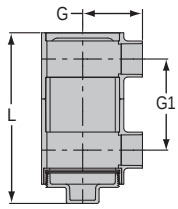


Part Number	Size	L	M	N	R	No. of Bolt Holes	Bolt Circle Dia.	Bolt Size	Min. Bolt Length	Max O.D.
854-015C	1-1/2	1-17/32	2-7/16	3/16	3/4	4	3-7/8	1/2	2-1/2	5
854-020C	2	1-11/16	2-15/16	3/16	13/16	4	4-3/4	5/8	3	6
854-030C	3	2-1/8	4-1/4	1/4	1-1/16	4	6	5/8	3-1/4	7-1/2
854-040C	4	2-1/2	5-1/4	1/4	1-1/8	8	7-1/2	5/8	3-1/2	9
854-060C	6	3-3/8	7-9/16	7/16	1-9/32	8	9-1/2	3/4	4	11
854-080C	8	4-3/8	9-5/16	9/32	1-3/8	8	11-3/4	3/4	4-1/2	13-1/2
854-100C	10	5-11/16	11-3/4	21/32	1-5/8	12	14-1/4	7/8	5	16
854-120C	12	7-1/4	13-3/4	5/8	1-1/2	12	17	7/8	5	19
854-140C	14	7-1/2	15-1/2	1/2	2	12	18-3/4	1	5-1/2	21
854-160C	16	8-3/4	17-3/4	3/4	2-3/8	16	21-1/4	1	6-1/2	23-1/2

Product Dimensions

P720 Drum Trap

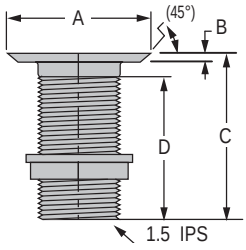
H x H



Part Number	Size	G	G1	L
P720-015C	1-1/2	3-5/8	5-11/16	10-5/8
P720-020C	2	3-7/8	5	10-3/8
P720-030C	3	4-1/2	6-3/4	13-7/16
P720-040C	4	4-3/8	8-1/4	15-11/16

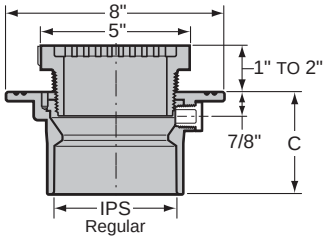
Waste Assembly

Sink Oultet



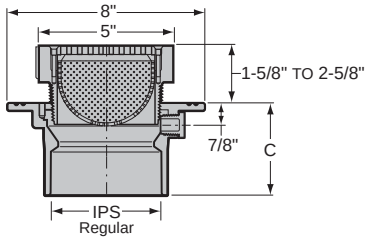
Part Number	Size	A	B	C	D
LWWA-1	1-1/2	2-7/16	9/32	4-9/32	3-27/32

LW1500 Floor Drain with CPVC Adjustable Top w/5" Round Grate



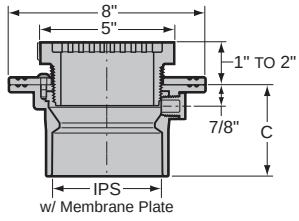
Part Number Regular	Size	IPS	C
LW1500-015C	1-1/2x5	1-1/2	4-3/16
LW1500-020C	2x5	2	4
LW1500-030C	3x5	3	4
LW1500-040C	4x5	4	3-3/4

LW1520 Floor Drain with CPVC Adjustable Top w/5" Round Grate & Strainer



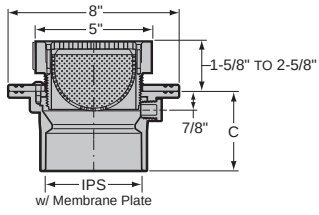
Part Number	Size	IPS	C
LW1520-015C	1-1/2x5	1-1/2	4-3/16
LW1520-020C	2x5	2	4
LW1520-030C	3x5	3	4
LW1520-040C	4x5	4	3-3/4

LW150M Floor Drain with CPVC Adjustable Top w/5" Round Grate & Membrane Collar



Part Number Membrane Plate	Size	C
LW150M-015C	1-1/2x5	4-3/16
LW150M-020C	2x5	4
LW150M-030C	3x5	4
LW150M-040C	4x5	3-3/4

LW152M Floor Drain with CPVC Adjustable Top w/5" Round Grate, Strainer & Membrane Collar



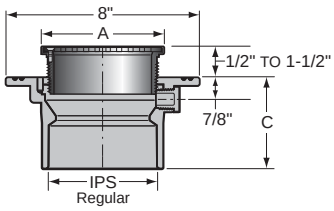
Part Number Regular	Size	IPS	C
LW152M-015C	1-1/2x5	1-1/2	4-3/16
LW152M-020C	2x5	2	4
LW152M-030C	3x5	3	4
LW152M-040C	4x5	4	3-3/4

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

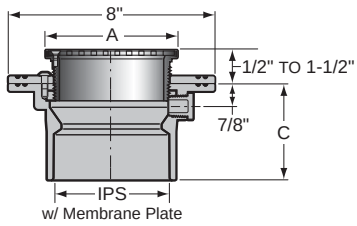
Product Dimensions

Floor Drain with Stainless Steel Adjustable Top w/Round Grate



Part Number Regular	Size	A, Nom	IPS	C
LW1500-015S	1-1/2x5	5	1-1/2	4-3/16
LW1600-015S	1-1/2x6	6	1-1/2	4-3/16
LW1700-015S	1-1/2x7	7	1-1/2	4-3/16
LW1800-015S	1-1/2x8	8	1-1/2	4-3/16
LW1500-020S	2x5	5	2	4
LW1600-020S	2x6	6	2	4
LW1700-020S	2x7	7	2	4
LW1800-020S	2x8	8	2	4
LW1500-030S	3x5	5	3	4
LW1600-030S	3x6	6	3	4
LW1700-030S	3x7	7	3	4
LW1800-030S	3x8	8	3	4
LW1500-040S	4x5	5	4	3-3/4
LW1600-040S	4x6	6	4	3-3/4
LW1700-040S	4x7	7	4	3-3/4
LW1800-040S	4x8	8	4	3-3/4

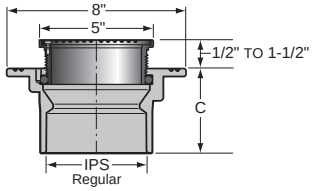
Floor Drain with Stainless Steel Adjustable Top w/Round Grate & Membrane Collar



Part Number Membrane	Size	A, Nom	IPS	C
LW150M-015S	1-1/2x5	5	1-1/2	4-3/16
LW160M-015S	1-1/2x6	6	1-1/2	4-3/16
LW170M-015S	1-1/2x7	7	1-1/2	4-3/16
LW180M-015S	1-1/2x8	8	1-1/2	4-3/16
LW150M-020S	2x5	5	2	4
LW160M-020S	2x6	6	2	4
LW170M-020S	2x7	7	2	4
LW180M-020S	2x8	8	2	4
LW150M-030S	3x5	5	3	4
LW160M-030S	3x6	6	3	4
LW170M-030S	3x7	7	3	4
LW180M-030S	3x8	8	3	4
LW150M-040S	4x5	5	4	3-3/4
LW160M-040S	4x6	6	4	3-3/4
LW170M-040S	4x7	7	4	3-3/4
LW180M-040S	4x8	8	4	3-3/4

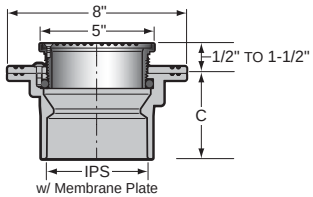
Product Dimensions

LW1510 Floor Cleanout w/Stainless Steel Adjustable Round Top & Solid Access Cover



Part Number Regular	Size	IPS	C
LW1510-015S	1-1/2x5	1-1/2	4-3/16
LW1510-020S	2x5	2	4
LW1510-030S	3x5	3	4
LW1510-040S	4x5	4	3-3/4

LW151M Floor Cleanout w/Stainless Steel Adjustable Round Top, Solid Access Cover & Membrane Collar



Part Number Membrane Plate	Size	IPS	C
LW151M-015S	1-1/2x5	1-1/2	4-3/16
LW151M-020S	2x5	2	4
LW151M-030S	3x5	3	4
LW151M-040S	4x5	4	3-3/4

LW LabWaste™ Pipe

10' Lengths

Part Number	Pipe Dia. (inches)	Avg. O.D.	Avg. I.D.	Min. Wall
LW-015	1-1/2	1.900	1.592	.145
LW-020	2	2.375	2.049	.154
LW-030	3	3.500	3.042	.216
LW-040	4	4.500	3.998	.237
LW-060	6	6.625	6.031	.280
LW-080	8	8.625	7.943	.322
LW-100	10	10.750	9.976	.365
LW-120	12	12.750	11.890	.406
LW-140	14	14	13.073	.437
LW-160	16	16	14.490	.500
LW-180	18	18	16.810	.562

LW LabWaste™ Pipe (continued)

10' Lengths

Part Number	Pipe Dia. (inches)	Avg. O.D.	Avg. I.D.	Min. Wall
LW-200	20	20	18.743	.593
LW-240	24	24	22.544	.687

One-Step CPVC Cement Yellow-Heavy Bodied

Part Number	Size
LW5-030	Quart
LW5-040	Gallon

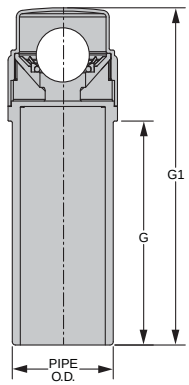
Average Number of Joints per Quart of Solvent Cement

Pipe Diameter	Number of Joints
1-1/2"	90
2"	60
3"	40
4"	30
6"	10
8"	5
10"	2 - 3
12"	1 - 2

Note: These figures are based on laboratory tests. Due to many field variations, these should be used as a general guide only.

LabWaste™ Air Admittance Valve

Spigot



MAX: 6DFU Drainage Fixture Units

Part Number	Size	G	G1
AAV-015C	1-1/2	4-1/8	6-1/4

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CPVC Drainage System Chemical Resistance

Chemical Resistance Information

CPVC is inert to most acids, bases, salts, plus a wide variety of organic compounds. Application conditions including chemical concentration and temperature must be taken into consideration. Due to the many variables involved, final suitability often must be based on in-service testing.

The following Chemical Resistance Table recommendations apply only to non-pressure, laboratory drainage applications, which are those characterized as the routine disposal of a wide variety of hot and cold chemicals in relatively small quantities accompanied by water for the purpose of dilution and flushing. For use of **LabWaste**™ CPVC products in continuous or dedicated chemical waste drainage systems, chemical resistance data for pressure applications must be followed. Contact Spears® Technical Services for additional information.

In many cases compatibility or solubility data is not available. While specific data may not be available, please note that virtually all aqueous solutions of chemicals used in a laboratory can be safely used with proper dilution and flushing. This includes chemicals that readily disperse in water (such as many fat-soluble vitamins and oils) that can be flushed during disposal.

This information is compiled from commercially available industry sources. It is offered in good faith and believed to be accurate at the time of its preparation, but is offered without any warranty, expressed or implied, by information sources or Spears® Manufacturing Company. These recommendations are guidelines for use and the final decision regarding material suitability must rest with the end-user.

Noted Caution Areas for CPVC

- Disposed chemicals must be properly diluted. Chemicals that individually have no affect may have an affect when used in combination. Due to the wide variety of potential chemical concentrations and combinations, testing under actual service conditions is highly recommended.

- CPVC is not recommended for use with chlorinated solvents. Most solvents are prohibited by law from disposal in drainage systems.

- Chemicals that do not normally affect CPVC may cause cracking when excessive stress is applied. Tests under applied adverse stress conditions indicate that environmental stress cracking may occur when exposed to surfactants, certain oils, or grease. Such stresses include external stresses from expansion/contraction and installation. Special consideration should be taken during design and installation to avoid unusual stresses in the piping system.

- Chemical resistance of plastics tends to decrease with an increase in chemical concentration and/or temperature. As a result, various chemicals may be safely handled in limited concentrations or within certain temperature limits. Most all aqueous solutions of water-soluble chemical not specified in the Chemical Resistance Tables can be used in CPVC drainage systems.

- While **LabWaste**™ CPVC products are suitable for many continuous commercial and industrial chemical waste applications, the following Chemical Resistance Tables should **NOT** be used for these applications. Consult chemical resistance data for CPVC pressure piping to determine suitability for continuous chemical waste drainage applications.

WARNING: Hazardous material (including certain solvents and high concentrations of certain acids), are typically not discharged into lab waste piping. Laboratories routinely have specialized collection equipment and contracted disposal services for waste considered “hazardous”. Proper laboratory protocols on handling materials identified by OSHA and EPA as “hazardous” must be established and followed. Such requirements typically specify special storage and disposal apart from drainage disposal via dilution or neutralization. Even improper handling and disposal of HAZARDOUS materials by accident are subject to heavy fines by Federal, State and Local Authorities.

CPVC Drainage System Chemical Resistance

Chemical Resistance Tables

Resistance Rating Codes
R = Recommended
C = Use with Caution.
N = Not Recommended.
--- = No data available

IMPORTANT NOTE: Chemical Resistance data is provide for material compatibility information purposes only and in no way addresses the legal discharge of chemicals into any waste system, some of which may be prohibited by law. Nor does the data address the compatibility of chemical mixtures, issues of hazardous decomposition, or other potentially dangerous circumstances that might be involved. Data is applicable to laboratory drainage systems only and may not be suitable for continuous service or pressure applications.

CHEMICAL	RATING
A	
Acacia, Gum Arabic	R
Acetaldehyde	R
Acetamide	R
Acetic Acid Vapor 25%	R
Acetic Acid 60%	R
Acetic Acid 85%	R
Acectic Acid Glacial	R
Acetic Anhydride	R
Acetone	R
Acetophenone	C
Acetyl Chloride	R
Acetylene	N
Acetylnitrile	R
Acetylsalicylic acid, aspirin	R
Acrylic Acid	R
Acrylonitrile	R
Adenine, 6-aminopurine	R
Adenosine Triphosphate	R
Adipic Acid	R
Agarose	R
Alizarin stain Mordant Red 11	R
Alizarin Red S Mordant Red 3	R
Alizarin Yellow R Mordant Orange 1	R
Allyl Alcohol	R
Allyl Chloride	N
Aluminum Acetate	R
Aluminum Ammonium	R
Aluminum Chloride	R
Aluminum Fluoride	R
Aluminum Hydroxide	R
Aluminum Nitrate	R
Aluminum Oxychloride	R
Aluminum Potassium	R
Aluminum Potassium Sulfate, Alum	R
Aluminum Sulfate	R
Ammonia Anhydrous	R
Ammonia Gas	R
Ammonia Liquid	R
Ammonia Acetate	R
Ammonium Bicarbonate	R
Ammonium Biflouride	R
Ammonium Bisulfide	R
Ammonium Bromide	R
Ammonium Carbonate	R
Ammonium Chloride	R
Ammonium Citrate	R
Ammonium Dichromate	R
Ammonium Dihydrogen Phosphate	R
Ammonium Ferric Sulfate	R
Ammonium Ferrous Sulfate	R
Ammonium Fluoride 10%	R
Ammonium Fluoride 25%	R
Ammonium Hydroxide 10% - 28%	R
Ammonium Hydroxide 100%	R
Ammonium Iodide	R
Ammonium Nitrate	R
Ammonium Persulfate	R
Ammonium Phosphate Monbasic/Dibasic	R
Ammonium Sulfate	R
Ammonium Sulfide	R
Ammonium Sulfite	R
Ammonium Thiocyanate	R
Amyl Acetate	C
Amyl Alcohol 1%	R
Amyl Alcohol >1%	C
n-Amyl Chloride	C
Aniline	C
Aniline Chlorohydrate	C
Aniline Hydrochloride	C
Anthraquinone	R
Anthraquinone Sulfonic Acid	R
Antimony Trichloride	R
Aqua Regia	R
Argon	---
Arsenic Acid	R
Aryl Sulfonic Acid	R
Asorbic Acid	R
L-Asparagine	R
Asphalt	N
B	
Barium Acetate	R
Barium Carbonate	R
Barium Chloride	R
Barium Hydroxide	R
Barium Nitrate	R
Barium Sulfate	R
Barium Sulfide	R
Beer	R
Beer Sugar Liquors	R
Benzaldehyde	R
Benzene	C
Benzene Sulfonic Acid	R
Benzoic Acid	R
Benzyl Alcohol	R
Bismuth Carbonate	R
Biuret	R
Black Liquor	R
Bleach 5%	R
Bleach 12%	R
Blood	R
Borax	R
Boric Acid	R
Brake Fluid	---
Brine	R
Brilliant Blue G-250	R
Brilliant Blue R-250	R
Brilliant Cresyl Blue	R
Brilliant Green	R
Bromcresal Green	R
Bromcresal purple	R
Bromic Acid	R
Bromine Liquid	R
Bromine Vapor	R
Bromine Water	R
Bromotoluene	---
Bromphenol Blue	R
Bromthymol Blue	R
Butadiene	R
Butane	R
Butyl Acetate	C
Butyl Alcohol	C
Butyl Cellosolve	R
n-Butyl Chloride	---
Butylene (C)	---
Butyl Phenol	C
Butyl Phthalate	---
Butyl Stearate	---
Butynediol	---
Butyric Acid	R
C	
Cadium Cyanide	R
Calcium Acetate	R
Calcium Bisulfide	R
Calcium Bisulfate	R
Calcium Carbonate	R
Calcium Chlorate	R
Calcium Chloride	R
Calcium Fluoride	R
Calcium Hydroxide	R
Calcium Hypochlorite	R
Calcium Nitrate	R
Calcium Oxide	R
Calcium Sulfate	R
Camphor	---
Cane Sugar Liquors	R
Caprylic Acid	---
Carbitol	---
Carbolic Acid	R
Carbon Dioxide Dry	R
Carbon Dioxide Wet	R
Carbon Disulfide	C
Carbon Monoxide	R
Carbon Tetrachloride	N
Carbonic Acid	R
Castor Oil	C
Caustic Potash	R
Caustic Soda	R
Cellosolve	C
Cellosolve Acetate	R
Chloral Hydrate	R
Chloramine	R
Chloric Acid	R
Chloric Acid 20%	R
Chlorine, Aqueous	R
Chlorinated Water 10 PPM	R
Chlorinated Water Sat'd	R
Chloroacetic Acid	R
Chloroacetyl Chloride	---
Chlorobenzene	N
Chlorobenzyl Chloride	N
Chloroform	N
Chlorophenol Red	R
Chloropicrin	---
Chlorosulfonic Acid	R
Chromic Acid 10%	R
Chromic Acid 30%	R
Chromic Acid 40%	R
Chromic Acid 50%	C
Chromium	R
Chromium Tetroxide	R
Citric Acid	R
Clayton Yellow	R
Coconut Oil	C
Coffee	R
Congo Red solution	R
Copper Acetate	R
Copper Carbonate	R
Copper Chloride	R
Copper Cyanide	R
Copper Fluoride	R
Copper Nitrate	R
Copper Sulfate	R
Corn Oil	C
Corn Syrup	R
Cottonseed Oil	C
m-Cresal Purple	R
Cresal Red	R
Creosote	N
Cresol	N
Cresylic Acid	R
Croton Aldehyde	R
Crude Oil	R
Cumene	C
Cupric Chloride	R
Cupric Fluoride	R
Cupric Nitrate	R
Cupric Sulfate	R
Cuprous Chloride	R
Cyclohexane	R
Cyclohexanol	R
Cyclohexanone	R
D	
Decahydronapthalene	R
Detergents	R
Dexrin	R
Dextrose	R
Diacetone Alcohol	R
Diastase of malt	R
Dibutoxyethyl Phthalate	N
Dibutyl Ether	R
Dibutyl Phthalate	N
Dibutyl Sebacate	N
Dichlorobenzene	R
Dichloroethylene	N
2,6 – Dichloroindophenal	R

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CPVC Drainage System Chemical Resistance

CHEMICAL	RATING
Diesel Fuels	R
Diethylamine	R
Diethyl Cellosolve	R
Diethyl Ether	R
Diglycolic Acid	R
Dimethylamine	R
Dimethyl Formamide	R
Dimethylhydrazine	R
Dimethyl Phthalate	N
Dimethyl Sulfoxide	R
Dioctyl Phthalate	N
Dodecyl Alcohol	R
Dodecyl Sulfate	R
Dioxane	R
Diphenyl Oxide	---
Disodium Phosphate	R
Drierite	R
E	
Eosin Y	R
Eriochrome Black T	R
Ether	R
Ethyl Acetate	R
Ethyl Acetoacetate	R
Ethyl Acrylate	R
Ethyl Alcohol	R
Ethyl Benzene	C
Ethyl Chloride	N
Ethyl Chloroacetate	N
Ethylene Bromide	N
Ethylene Chloride	N
Ethylene Chlorohydrin	N
Ethylenediamine	R
Ethylene Dichloride	N
Ethylene Glycol	C
Ethylene Oxide	R
Ethyl Ether	R
Ethyl Formate	R
Ethylene Glycol	R
2- Ethylhexanol	R
Ethyl Mercaptan	R
Ethyl Oxalate	R
F	
Fast Green FCF	R
Fatty Acids	R
Fehlings solution A	R
Fehlings solution B	R
Ferric Ammonium Sulfate	R
Ferric Chloride	R
Ferric Hydroxide	R
Ferric Nitrate	R
Ferric Sulfate	R
Ferrous Chloride	R
Ferrous Hydroxide	R
Ferrous Nitrate	R
Ferrous Sulfate	R
Fish Oil	R
Fluoboric Acid	R
Fluorine Gas (Dry)	R
Fluorine Gas (Wet)	R
Fluosilicic Acid 30%	R
Fluosilicic Acid 50%	R
Flormaldehyde Dilute	R
Flormaldehyde 35%	R
Flormaldehyde 37%	R
Flormaldehyde 50%	C
Formic Acid	R
Freon	R
Freon 12	R
Freon 21	---
Freon 22	R
Freon 113	C
Freon 114	---
Fructose	R
Furfural	R
G	
Gallic Acid	R
Gasoline	R
Gasohol	R
Gelatin	R
Glauber's Salt	---
Glucose	R
Glue, PVA	R
Glutathione	R
Glycerine	R
Glycine	R
Glycogen	R
Glycol	C
Glycol Amine	---
Glycolic Acid	R
Glyoxal	R
Grape Sugar	R
Grease	---
Green Liquor	R

CHEMICAL	RATING
H	
Heptane (Type 1)	R
n-Hexane	R
Hexamethylenediamine	R
Hexanol, Tertiary	R
Hydraulic Oil	---
Hydrazine	R
Hydrobromic Acid 20%	R
Hydrobromic Acid 50%	R
Hydrochloric Acid 10%	R
Hydrochloric Acid 30%	R
Hydrocyanic Acid	R
Hydrofluoric Acid Dilute	R
Hydrofluoric Acid 30%	R
Hydrofluoric Acid 50%	R
Hydrofluoric Acid 100%	R
Hydrofluosilic Acid 50%	R
Hydrogen	R
Hydrogen Cyanide	R
Hydrogen Fluoride	C
Hydrogen Peroxide 50%	R
Hydrogen Peroxide 90%	R
Hydrogen Phosphide	R
Hydrogen Sulfide Dry	R
Hydrogen Sulfide Wet	R
Hydrogen Sulfide, aqueous	R
Hydroquinone, aqueous	R
Hydroxylamine Hyrochloride	R
Hydroxylamine Sulfate	R
Hypochlorous Acid	R
I	
Indigo Carmine	R
Inks	R
Iodine	R
Iodine solution, Lugol's	R
Iron Phosphate	---
Isobutane	C
Isobutyl Alcohol	R
Isooctane	R
Isopropyl Acetate	R
Isopropyl Alcohol	R
Isopropyl Chloride	N
Isopropyl Ether	R
Isophorone	R
J	
Janus Green	R
JP-3 Fuel	R
JP-4 Fuel	R
JP-5 Fuel	R
JP-6 Fuel	R
K	
Kerosene	R
Ketchup	R
Kraft Liquors	R
L	
Lactic Acid 25%	R
Lactic Acid 80%	R
Lactose	R
Lard Oil	C
Latex	---
Lauric Acid	R
Lauryl Chloride	R
Lead Acetate	R
Lead Chloride	R
Lead Nitrate	R
Lead Sulfate	R
Lemon Oil	R
Ligroin	R
Limonene	R
Lime Slurry	R
Lime Sulfur	R
Linoleic Acid	C
Linoleic Oil	---
Linseed Oil	C
Liqueurs	R
Lithium Bromide	R
Lithium Carbonate	R
Lithium Chloride	R
Lithium Hyrdroxide 50%	R
Lithium Nitrate	R
Lithium Sulfate	R
Lubricating Oil #1	R
Lubricating Oil #2	R
Lubricating Oil #3	R
Ludox	---
Luminol 3-amino Phthalhydrazide	R
DL-lysine Hydrochloride	R
Lysozyme	R
M	
Magnesium Acetate	R

CHEMICAL	RATING
Magnesium Bromide	R
Magensium Carbonate	R
Magnesium Chloride	R
Magnesium Citrate	R
Magnesium Fluoride	---
Magnesium Hydroxide	R
Magnesium Nitrate	R
Magnesium Oxide	---
Magnesium Sulfate	R
Malachite Green	R
Maleic Acid	R
Malic Acid	R
Maltose	R
Manganese Chloride	R
Manganese Nitrate	R
Manganese Sulfate	R
Menthol	R
Mercuric Chloride	R
Mercuric Cyanide	R
Mercuric Sulfate	R
Mercurous Nitrate	R
Mercury	R
Methane	R
Methanol	R
DL-methionine	R
Methoxyethyl Oleate	---
Methyl Acetate	R
Methyl Acetone	R
Methyl Acrylate	---
Methyl Amine	R
Methyl Bromide	N
Methyl Cellosolve	R
Methyl cellulose	R
Methyl Chloride	N
Methyl Chloroform	N
Methyl Ethyl Ketone	R
Methyl Formate	R\
Methyl Green	R
Methyl Isobutyl Carbinol	R
Methyl Isobutyl Ketone	R
Methyl Isopropyl Ketone	R
Methyl Methacrylate	R
Methyl Red	R
Methyl Sulfate	R
Methyl Violet-2B	R
Methyl Violet-6B	R
Methylene Blue	R
Methylene Bromide	N
Methylene Chloride	N
Methylene Chlorobromide	N
Methylene Iodine	N
Methysulfuric Acid	R
Milk	R
Mineral Oil	R
Molasses	R
Monochloroacetic Acid	R
Monochlorobenzene	N
Monoethanolamine	R
Monosodium Glutamate	R
Motor Oil	R
Morpholine	R
N	
Naphtha	R
Naphthalene	C
Natural Gas	R
Neutral Red	R
Nickel Acetate	R
Nickel Ammonium Sulfate	---
Nickel Chloride	R
Nickel Nitrate	R
Nickel Sulfate	R
Nicotine	R
Nicotinic Acid	R
Nitric Acid 10%	R
Nitric Acid 30%	R
Nitric Acid 40%	R
Nitric Acid 50%	R
Nitric Acid 70%	R
Nitric Acid 100%	R
Nitrobenzene	N
Nitroethane	C
Nitrogen Gas	---
Nitroglycerine	C
Nitroglycol	---
Nitromethane	C
Nitrous Acid	R
Nitrous Oxide	R
O	
n-Octane	C
Octanol	R
Oleic Acid	R
Oleum	R
Olive Oil	C
Orange G - acid orange 10	R

CPVC Drainage System Chemical Resistance

CHEMICAL	RATING
Orange IV - acid orange 5	R
Orcinol	R
Osmium Tetroxide	R
Oxalic Acid	R
Oxygen Gas	R
Ozone	R
Ozonized Water	R
P	
Palm Oil	R
Palmitic Acid 10%	R
Palmitic Acid 70%	R
Pancreatin	R
Papain	R
Paraffin	R
Peanut Oil	C
Pectin	R
n-Pentane	C
Pepsin	R
Peracetic Acid	R
Perchloric Acid 15%	R
Perchloric Acid 70%	R
Perchloroethylene	C
Periodic Acid	R
Perphosphate	R
Phenol	R
Phenolphthalein	R
Phenyl Salicylate	R
Phenylhydrazine	C
Phosphate Esters	---
Phosphoric Acid 10%	R
Phosphoric Acid 50%	R
Phosphoric Acid 85%	R
Phosphoric Anhydride	R
Phosphorous (Red)	C
Phosphorous (Yellow)	C
Phosphorous Pentoxide	R
Phosphorous Trichloride	R
Photographic Solutions	R
Phthalic Acid	R
Picric Acid	R
Pine Oil	C
Plating Solutions Brass	R
Plating Solutions Cadium	R
Plating Solutions Chrome	R
Plating Solutions Copper	R
Plating Solutions Gold	R
Plating Solutions Lead	R
Plating Solutions Nickel	R
Plating Solutions Rhodium	R
Plating Solutions Silver	R
Plating Solutions Tin	R
Plating Solutions Zinc	R
Polyvinyl Acetate	---
Polyvinyl Alcohol	R
Potash	R
Potassium Acetate	R
Potassium Alum	R
Potassium Aluminum	R
Potassium Bicacbonate	R
Potassium Bichromate	R
Potassium Bisulfate	R
Potassium Bitartrate	R
Potassium Borate	R
Potassium Bromate	R
Potassium Bromide	R
Potassium Carbonate	R
Potassium Chlorate	R
Potassium Chloride	R
Potassium Chromate	R
Potassium Citrate	R
Potassium Cyanide	R
Potassium Dichromate	R
Potassium Ethyl Xanthate	---
Potassium Ferricyanide	R
Potassium Ferroycanide	R
Potassium Fluoride	R
Potassium Hydrogen Phosphate	R
Potassium Hydrogen Phthalate	R
Potassium Hydroxide	R
Potassium Hyprochlorite	R
Potassium Iodate	R
Potassium Iodide	R
Potassium Nitrate	R
Potassium Nitrite	R
Potassium Perborate	R
Potassium Perchlorate	R
Potassium Permanganate 10%	R
Potassium Permanganate 25%	R
Potassium Persulfate	R
Potassium Phosphate	R
Potassium Sodium Tartrate	R
Potassium Sulfate	R
Potassium Sulfide	R
Potassium Sulfite	R
Potassium Thiocyanate	R
Propane	R
Propargyl Alcohol	R
Propionic Acid	R
Propyl Acetate	---
Propyl Alcohol	R
N-Propyl Bromide	---
Propylene Dichloride	N
Propylene Glycol	R
Propylene Oxide	R
Pyridine	R
Pyrogallic Acid	R
Pyrrole	R
Q	
Quinine Sulfate	R
Quinine Chloride Dihydrate	R
Quinone	---
R	
Rayon Coagulating Bath	R
Rennin	R
Resazurin	R
Ringers Solution	R
Rose Bengal Acid Red 94	R
S	
Safranin O	R
Salicylaldehyde	N
Salicylic Acid	R
Selenic Acid, Aq.	R
Silicic Acid	R
Silicone Oil	R
Silver Acetate	R
Silver Chloride	R
Silver Cyanide	R
Silver Nitrate	R
Silver Sulfate	R
Soaps	R
Sodium Acetate	R
Sodium Alum	R
Sodium Aluminate	R
Sodium Arsenate	R
Sodium Benzoate	R
Sodium Bicarbonate	R
Sodium Bichromate	R
Sodium Bisulfate	R
Sodium Bisulfite	R
Sodium Borate	R
Sodium Bromide	R
Sodium Carbonate	R
Sodium Chlorate	R
Sodium Chloride	R
Sodium Chlorite	R
Sodium Chromate	R
Sodium Citrate	R
Sodium Cyanide	R
Sodium Dichromate	R
Sodium Diphenylamine Sulfonate	R
Sodium Dithionite	R
Sodium Ferricyanide	R
Sodium Ferrocyanide	R
Sodium Fluoride	R
Sodium Hexametaphosphate	R
Sodium Hydroxide 15%	R
Sodium Hydroxide 30%	R
Sodium Hydroxide 50%	R
Sodium Hydroxide 70%	R
Sodium Hypochlorite	R
Sodium Iodate	R
Sodium Iodide	R
Sodium Metabisulfite	R
Sodium Metaphosphate	R
Sodium Nitrate	R
Sodium Nitrite	R
Sodium Palmitrate	R
Sodium Perborate	R
Sodium Perchlorate	R
Sodium Periodate	R
Sodium Peroxide	R
Sodium Phosphate Acid	R
Sodium Phosphate Alkaline	R
Sodium Phosphate Neutral	R
Sodium Propionate	R
Sodium Silicate	R
Sodium Sulfate	R
Sodium Sulfide	R
Sodium Sulfite	R
Sodium Thiousulphate	R
Sour Crude Oil	R
Soybean Oil	C
Stannic Chloride	R
Stannous Chloride	R
Stannous Sulfate	R
Starch	R
Stearic Acid	R
Streptomycin Sulfate	R
Strontium Bromide	R
Strontium Chloride	R
Styrene	N
Succinic Acid	R
Sugar	R
Sulfamic Acid	R
Sulfate Liquors	R
Sulfite Liquors	R
Sulfur	R
Sulfur Chloride	R
Sulfur Dioxide Gas Dry	R
Sulfur Dioxide Gas Wet	R
Sulfur Trioxide Gas Dry	---
Sulfur Trioxide Gas Wet	N
Sulfuric Acid Up to 30%	R
Sulfuric Acid 50%	R
Sulfuric Acid 60%	R
Sulfuric Acid 70%	R
Sulfuric Acid 80%	R
Sulfuric Acid 90%	R
Sulfuric Acid 93%	R
Sulfuric Acid 94%	R
Sulfuric Acid 95%	R
Sulfuric Acid 96%	R
Sulfuric Acid 98%	R
Sulfuric Acid 100%	R
Sulfurous Acid	R
T	
Tall Oil	R
Tannic Acid	R
Tanning Liquors	R
Tar	C
Tartaric Acid	R
Terpineol	---
Tetrachloroethane	N
Tetrachloroethylene	N
Tetracycline hydrochloride	
Tetraethyl Lead	R
Tetrahydrofuran	R
Tetralin	N
Thiamine Hydrochloride	R
Thionin	R
Thionyl Chloride	R
Thymol	R
Titanium Dioxide	R
Titanium Tetrachloride	R
Toluene	C
Tomato Juice	R
Transformer Oil	R
Transformer Oil DTE/30	R
Tributyl Citrate	---
Tributyl Phosphate	R
Trichloroacetic Acid	R
Trichloroethylene	N
Triethanolamine	R
Triethylamine	R
Trimethylpropane	R
Trisodium Phosphate	R
Trypsin	R
Tung Oil	C
Turpentine	C
U	
Urea	R
Urease	R
Urine	R
V	
Varnish	---
Vaseline	C
Vegetable Oil	C
Vinegar	R
Vinyl Acetate	R
W	
Water, Acid Mine	R
Water, Deionized	R
Water, Distilled	R
Water, Potable	R
Water, Salt	R
Water, Sea	R
Water, Soft	R
Water, Waste	R
Whiskey	R
White Liquor	R
Wine	R
X	
Xylene	C
Z	
Zinc Acetate	R
Zinc Carbonate	R
Zinc Chloride	R
Zinc Nitrate	R
Zinc Stearate	R
Zinc Sulfate	R

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Lab Specialty Products

PRICING

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
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Lab Ball Valves & Needle Valves

Lab Ball Valves

Valve Only

Pressure Rating @ 73°F (23°C), Water
1/4" - 3/8" 150 psi
Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
Temperature/Pressure De-ratings Apply
Rated for Vacuum Service

Socket/Threaded

Valve & Adapters includes:
1 - Threaded 1/4" Valve
2 - O-ring Sealed 1/4" MPT x Mipt Adapters
2 - EPDM or FKM O-rings (AS568-013 size)
1 - End Connector Wrench
2 - O-ring Sealed 1/4" MPT x 3/8" I.D. Tubing Barb Adapters
- OR -
2 - O-ring Sealed 1/4" MPT x 1/4" I.D. Tubing Barb Adapters

& Adapters

All Valves Assembled with Silicone-Free, Water Soluble Lubricant

PVC Lab Valve

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Valve & Adapters Threaded Ends					
1/4X1/4T	1529-002A **25.75**	1539-002A **26.92**	1	25	218
1/4X3/8T	1529-002 **25.75**	1539-002 **26.92**	1	25	218
Valve only Threaded Ends					
1/4	1521-002 **20.58**	1531-002 **22.91**	50	200	218
3/8	1521-003 **28.93**	1531-003 **32.07**	50	200	218
Valve only Socket Ends					
1/4	1522-002 **20.58**	1532-002 **23.28**	50	200	218
3/8	1522-003 **28.93**	1532-003 **32.07**	50	200	218

CPVC Lab Valve

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
Valve & Adapters Threaded Ends					
1/4X1/4T	1529-002CA **30.91**	1539-002CA **31.51**	1	25	219
1/4X3/8T	1529-002C **30.91**	1539-002C **31.51**	1	25	219
Valve only Threaded Ends					
1/4	1521-002C **24.75**	1531-002C **27.21**	50	200	219
3/8	1521-003C **34.71**	1531-003C **32.53**	50	200	219
Valve only Socket Ends					
1/4	1522-002C **24.75**	1532-002C **29.45**	50	200	219
3/8	1522-003C **34.71**	1532-003C **38.53**	50	200	219

Needle Valves

Pressure Rating @ 73°F (23°C), Water
PVC or CPVC 235 psi
PP 150 psi

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
PP = 180°F (82°C)

Solid PTFE Stem Seals
No Elastomer or Lubricants used
Valves include Panel Mounting Nut

PVC Needle Valve

Size	Threaded	Socket	SR Threaded	Std Pk	Mstr Pk	Prod Code
Globe Pattern						
1/4	5591-002 71.27	5592-002 71.27	---	1	18	218
3/8	5591-003 71.27	5592-003 71.27	5591-003SR 65.01	1	18	218
1/2	5591-005 79.11	5592-005 79.11	5591-005SR 81.23	1	18	218
Angle Pattern						
1/4	5691-002 71.27	5692-002 71.27	---	1	18	218
3/8	5691-003 71.27	5692-003 71.27	---	1	18	218
1/2	5691-005 79.11	5692-005 79.11	5691-005SR 81.23	1	18	218

CPVC Needle Valve

Size	Threaded	Socket	SR Threaded	Std Pk	Mstr Pk	Prod Code
Globe Pattern						
1/4	5591-002C 83.94	5592-002C 83.94	---	1	18	219
3/8	5591-003C 83.94	5592-003C 83.94	5591-003CSR 83.75	1	18	219
1/2	5591-005C 88.77	5592-005C 88.77	5591-005CSR 91.04	1	18	219
Angle Pattern						
1/4	5691-002C 83.94	5692-002C 83.94	---	1	18	219
3/8	5691-003C 83.94	5692-003C 83.94	---	1	18	219
1/2	5691-005C 88.77	5692-005C 88.77	5691-005CSR 91.04	1	18	219

Needle Valves

PP Needle Valve

Size	Threaded		SR Threaded	Std Pk	Mstr Pk	Prod Code
Globe Pattern						
1/4	5591-002P 78.54	---	---	1	18	219
3/8	5591-003P 78.54	---	---	1	18	219
1/2	---	---	5591-005PSR 86.85	1	18	219
Angle Pattern						
1/4	5691-002P 78.54	---	---	1	18	219
3/8	5691-003P 78.54	---	---	1	18	219
1/2	---	---	5691-005PSR 86.85	1	18	219

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Gauge Guards

Connections use Spears® Patented Special Reinforced (SR) Female Threads on Pressure Inlet (1/4" or 1/2")

Pressure Rating
235 psi @ 73°F
16 BAR @ 22°C

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)
PP = 180°F (82°C)

Temperature/Pressure De-ratings Apply
Rated for Full Vacuum Service

Gauge Guards are pre-filled with glycerin-water on units with Factory Installed Gauges.
"No Gauge" units are to be filled by end user.

PVC GAUGE GUARDS

Size	1/4" Inlet Connection	1/2" Inlet Connection	Std Pk	Mstr Pk	Prod Code
PTFE Diaphragm					
No Gauge	G0004-002 **103.83**	G0004-005 **103.83**	1	18	624
0-30 in-Hg	G30V4-002 **175.28**	G30V4-005 **175.28**	1	18	624
0-15 psi	G0154-002 **165.69**	G0154-005 **165.69**	1	18	624
0-30 psi	G0304-002 **165.69**	G0304-005 **165.69**	1	18	624
0-60 psi	G0604-002 **165.69**	G0604-005 **165.69**	1	18	624
0-100 psi	G1004-002 **165.69**	G1004-005 **165.69**	1	18	624
0-160 psi	G1604-002 **165.69**	G1604-005 **165.69**	1	18	624
0-200 psi	G2004-002 **165.69**	G2004-005 **165.69**	1	18	624
0-300 psi	G3004-002 **165.69**	G3004-005 **165.69**	1	18	624
FKM Diaphragm					
No Gauge	G0003-002 **103.83**	G0003-005 **103.83**	1	18	624
0-30 in-Hg	G30V3-002 **175.28**	G30V3-005 **175.28**	1	18	624
0-15 psi	G0153-002 **165.69**	G0153-005 **165.69**	1	18	624
0-30 psi	G0303-002 **165.69**	G0303-005 **165.69**	1	18	624
0-60 psi	G0603-002 **165.69**	G0603-005 **165.69**	1	18	624
0-100 psi	G1003-002 **165.69**	G1003-005 **165.69**	1	18	624
0-160 psi	G1603-002 **165.69**	G1603-005 **165.69**	1	18	624
0-200 psi	G2003-002 **165.69**	G2003-005 **165.69**	1	18	624
0-300 psi	G3003-002 **165.69**	G3003-005 **165.69**	1	18	624
EPDM Diaphragm					
No Gauge	G0002-002 **99.63**	G0002-005 **99.63**	1	18	624
0-30 in-Hg	G30V2-002 **168.24**	G30V2-005 **168.24**	1	18	624
0-15 psi	G0152-002 **159.12**	G0152-005 **159.12**	1	18	624
0-30 psi	G0302-002 **159.12**	G0302-005 **159.12**	1	18	624

PVC GAUGE GUARDS (continued)

Size	1/4" Inlet Connection	1/2" Inlet Connection	Std Pk	Mstr Pk	Prod Code
EPDM Diaphragm					
0-60 psi	G0602-002 **159.12**	G0602-005 **159.12**	1	18	624
0-100 psi	G1002-002 **159.12**	G1002-005 **159.12**	1	18	624
0-160 psi	G1602-002 **159.12**	G1602-005 **159.12**	1	18	624
0-200 psi	G2002-002 **159.12**	G2002-005 **159.12**	1	18	624
0-300 psi	G3002-002 **159.12**	G3002-005 **159.12**	1	18	624

GAUGE GUARDS, CPVC

Size	1/4" Inlet Connection	1/2" Inlet Connection	Std Pk	Mstr Pk	Prod Code
PTFE Diaphragm					
No Gauge	G0004-002C **134.98**	G0004-005C **134.98**	1	18	625
0-30 in-Hg	G30V4-002C **227.88**	G30V4-005C **227.88**	1	18	625
0-15 psi	G0154-002C **215.43**	G0154-005C **215.43**	1	18	625
0-30 psi	G0304-002C **215.43**	G0304-005C **215.43**	1	18	625
0-60 psi	G0604-002C **215.43**	G0604-005C **215.43**	1	18	625
0-100 psi	G1004-002C **215.43**	G1004-005C **215.43**	1	18	625
0-160 psi	G1604-002C **215.43**	G1604-005C **215.43**	1	18	625
0-200 psi	G2004-002C **215.43**	G2004-005C **215.43**	1	18	625
0-300 psi	G3004-002C **215.43**	G3004-005C **215.43**	1	18	625
FKM Diaphragm					
No Gauge	G0003-002C **134.98**	G0003-005C **134.98**	1	18	625
0-30 in-Hg	G30V3-002C **227.88**	G30V3-005C **227.88**	1	18	625
0-15 psi	G0153-002C **215.43**	G0153-005C **215.43**	1	18	625
0-30 psi	G0303-002C **215.43**	G0303-005C **215.43**	1	18	625
0-60 psi	G0603-002C **215.43**	G0603-005C **215.43**	1	18	625
0-100 psi	G1003-002C **215.43**	G1003-005C **215.43**	1	18	625

Gauge Guards

GAUGE GUARDS, CPVC (continued)

Size	1/4" Inlet Connection	1/2" Inlet Connection	Std Pk	Mstr Pk	Prod Code
FKM Diaphragm					
0-160 psi	G1603-002C **215.43**	G1603-005C **215.43**	1	18	625
0-200 psi	G2003-002C **215.43**	G2003-005C **215.43**	1	18	625
0-300 psi	G3003-002C **215.43**	G3003-005C **215.43**	1	18	625
EPDM Diaphragm					
No Gauge	G0002-002C **129.60**	G0002-005C **129.60**	1	18	625
0-30 in-Hg	G30V2-002C **218.74**	G30V2-005C **218.74**	1	18	625
0-15 psi	G0152-002C **206.91**	G0152-005C **206.91**	1	18	625
0-30 psi	G0302-002C **206.91**	G0302-005C **206.91**	1	18	625
0-60 psi	G0602-002C **206.91**	G0602-005C **206.91**	1	18	625
0-100 psi	G1002-002C **206.91**	G1002-005C **206.91**	1	18	625
0-160 psi	G1602-002C **206.91**	G1602-005C **206.91**	1	18	625
0-200 psi	G2002-002C **206.91**	G2002-005C **206.91**	1	18	625
0-300 psi	G3002-002C **206.91**	G3002-005C **206.91**	1	18	625

GAUGE GUARDS, PP

Size	1/4" Inlet Connection	1/2" Inlet Connection	Std Pk	Mstr Pk	Prod Code
PTFE Diaphragm					
No Gauge	G0004-002P **121.51**	G0004-005P **121.51**	1	18	626
0-30 in-Hg	G30V4-002P **186.67**	G30V4-005P **186.67**	1	18	626
0-15 psi	G0154-002P **177.54**	G0154-005P **177.54**	1	18	626
0-30 psi	G0304-002P **177.54**	G0304-005P **177.54**	1	18	626
0-60 psi	G0604-002P **177.54**	G0604-005P **177.54**	1	18	626
0-100 psi	G1004-002P **177.54**	G1004-005P **177.54**	1	18	626
0-160 psi	G1604-002P **177.54**	G1604-005P **177.54**	1	18	626
0-200 psi	G2004-002P **177.54**	G2004-005P **177.54**	1	18	626
0-300 psi	G3004-002P **177.54**	G3004-005P **177.54**	1	18	626
FKM Diaphragm					
No Gauge	G0003-002P **121.51**	G0003-005P **121.51**	1	18	626
0-30 in-Hg	G30V3-002P **186.67**	G30V3-005P **186.67**	1	18	626
0-15 psi	G0153-002P **177.54**	G0153-005P **177.54**	1	18	626
0-30 psi	G0303-002P **177.54**	G0303-005P **177.54**	1	18	626
0-60 psi	G0603-002P **177.54**	G0603-005P **177.54**	1	18	626
0-100 psi	G1003-002P **177.54**	G1003-005P **177.54**	1	18	626
0-160 psi	G1603-002P **177.54**	G1603-005P **177.54**	1	18	626
0-200 psi	G2003-002P **177.54**	G2003-005P **177.54**	1	18	626
0-300 psi	G3003-002P **177.54**	G3003-005P **177.54**	1	18	626
EPDM Diaphragm					
No Gauge	G0002-002P **116.71**	G0002-005P **116.71**	1	18	626
0-30 in-Hg	G30V2-002P **179.18**	G30V2-005P **179.18**	1	18	626

GAUGE GUARDS, PP (continued)

Size	1/4" Inlet Connection	1/2" Inlet Connection	Std Pk	Mstr Pk	Prod Code
EPDM Diaphragm					
0-15 psi	G0152-002P **170.51**	G0152-005P **170.51**	1	18	626
0-30 psi	G0302-002P **170.51**	G0302-005P **170.51**	1	18	626
0-60 psi	G0602-002P **170.51**	G0602-005P **170.51**	1	18	626
0-100 psi	G1002-002P **170.51**	G1002-005P **170.51**	1	18	626
0-160 psi	G1602-002P **170.51**	G1602-005P **170.51**	1	18	626
0-200 psi	G2002-002P **170.51**	G2002-005P **170.51**	1	18	626
0-300 psi	G3002-002P **170.51**	G3002-005P **170.51**	1	18	626

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

100% Corrosion Resistance - No Metal Parts

Spears® Lab Fixtures have no metal parts; this provides full resistance to internal or environmental corrosion. These fixtures are compatible with all laboratory service lines. Lab Fixtures are produced from PVC (gray) and CPVC (for hot water), or special Low-Extractable PVC for high purity applications, and are available in a variety of types and configurations.
Deck Mount – base configuration for horizontal surface mounting.

Panel Mount – base configuration for vertical surface mounting.

Standard Gooseneck Units – select all-plastic needle valve unit (no elastomer seals) for metered flow or ball valve unit (choice of EPDM or FKM seals) for direct flow. Unit includes valve, gooseneck with serrated tip, and base with nut for mounting. Select Deck or Panel Mount style.

Standard Turret Units – direct flow ball valve (choice of EPDM or FKM seals) with serrated tip and base with connecting nipple and nut for mounting. Select Deck or Panel Mount style.

Remote Valve Units (No Valve) – same as standard units less valve for use with remotely located valve.

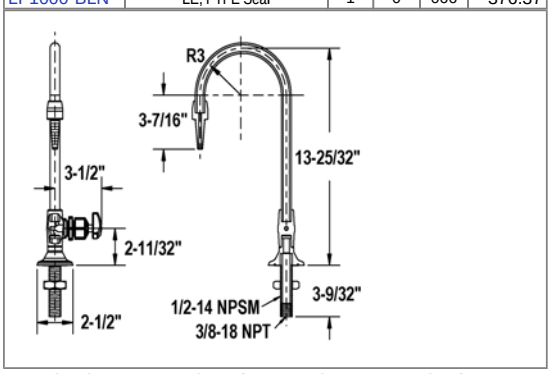
Recirculating Units – Special design provides continuous water motion without dead-leg areas of contamination and potential bacteria build-up. Internal supply tube fully circulates water through the entire fixture when connected to circulating water supply. Unit features gooseneck with terminally mounted all-plastic needle valve and serrated tip (no elastomer seals) for metered flow. Base is Deck Mount only with inlet and outlet connecting nipples with mounting nuts.

NPT - American National Standard Tapered Pipe Thread • NPSM - American National Standard Straight Thread For Free Fitting Mechanical Joints

For information on Spears® Low Extractable PVC see publication LX-4

Standard Gooseneck Units - Deck Mount Lab Fixture -

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Base with Valve, Gooseneck & Serrated Tip with Needle Valve-Metered Flow					
LF1000-N	PVC, PTFE Seal	1	0	218	189.25
LF1000-CN	CPVC, PTFE Seal	1	0	219	236.28
LF1000-BLN	LE, PTFE Seal	1	0	066	376.37

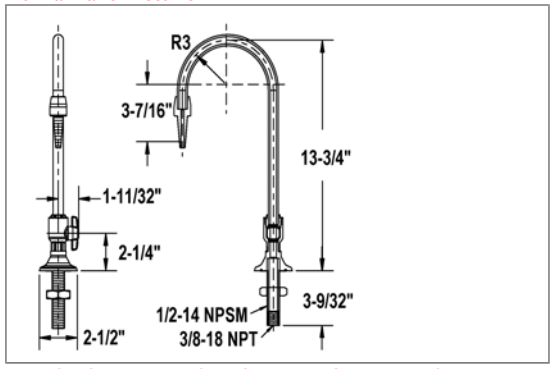


Standard Gooseneck Units - Deck Mount Lab Fixture -

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
with Ball Valve Direct Flow					
LF1002	PVC, EPDM Seal	1	0	218	158.08
LF1003	PVC, FKM Seal	1	0	218	175.64
LF1002-C	CPVC, EPDM Seal	1	0	219	197.60
LF1003-C	CPVC, FKM Seal	1	0	219	219.55
LF1002-BL	LE, EPDM Seal	1	0	066	314.74
LF1003-BL	LE, FKM Seal	1	0	066	349.72

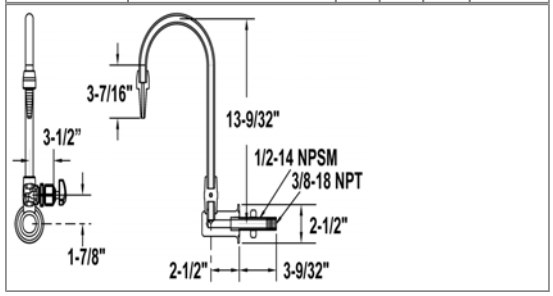
Standard Gooseneck Units - Deck Mount Lab Fixture - (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
with Ball Valve Direct Flow					



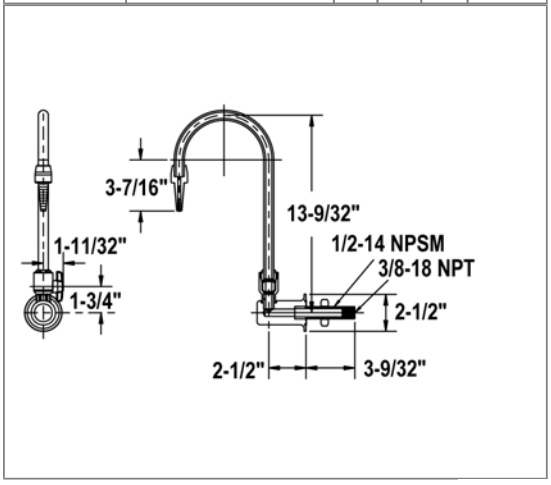
Standard Gooseneck Units - Panel Mount Lab Fixture -

Base with Valve, Gooseneck & Serrated Tip with Needle Valve-Metered Flow					
LF2000-N	PVC, PTFE Seal	1	0	218	275.81
LF2000-CN	CPVC, PTFE Seal	1	0	219	344.75



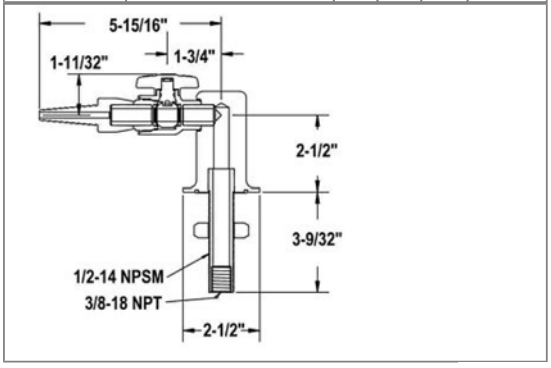
Standard Gooseneck Units - Panel Mount Lab Fixture -
with Ball Valve-Direct Flow

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
LF2002	PVC, EPDM Seal	3	0	218	237.77
LF2003	PVC, FKM Seal	3	0	218	264.20
LF2002-C	CPVC, EPDM Seal	1	0	219	297.23
LF2003-C	CPVC, FKM Seal	1	0	219	330.23



Standard Turret Units - Deck Mount Turret Lab Fixtures Base -
with Valve & Serrated Tip with Ball Valve-Direct Flow

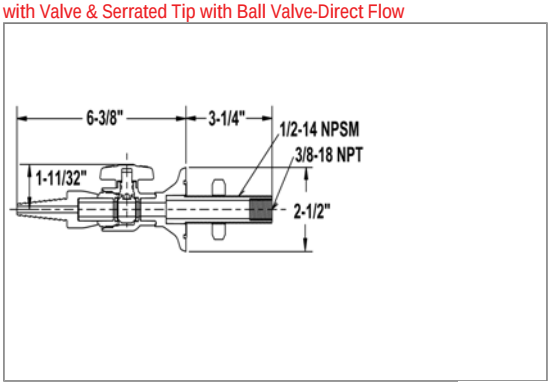
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
LF4002	PVC, EPDM Seal	1	0	218	200.62
LF4003	PVC, FKM Seal	1	0	218	222.91
LF4002-C	CPVC, EPDM Seal	1	0	219	250.77
LF4003-C	CPVC, FKM Seal	1	0	219	278.64



Standard Turret Units - Panel Mount Turret Lab Fixture Base -
with Valve & Serrated Tip with Ball Valve-Direct Flow

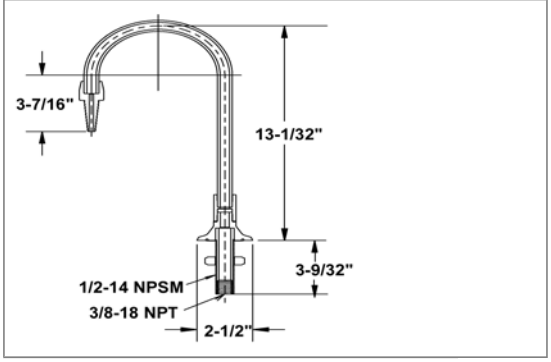
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
LF3002	PVC, EPDM Seal	1	0	218	155.49
LF3003	PVC, FKM Seal	1	0	218	172.79
LF3002-C	CPVC, EPDM Seal	1	0	219	194.39
LF3003-C	CPVC, FKM Seal	1	0	219	215.99
LF3002-BL	LE, EPDM Seal	1	0	066	309.60
LF3003-BL	LE, FKM Seal	1	0	066	344.04

Standard Turret Units - Panel Mount Turret Lab Fixture Base - (continued)
with Valve & Serrated Tip with Ball Valve-Direct Flow



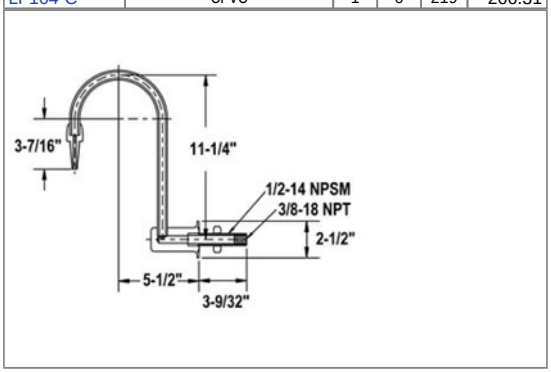
Remote Valve Units (No Valve) - Deck Mount Gooseneck -
Base with Gooseneck & Serrated Tip

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
LF100	PVC	1	0	218	129.73
LF100-C	CPVC	1	0	219	162.17
LF100-BL	LE	1	0	066	258.28



Remote Valve Units (No Valve) - Panel Mount Gooseneck -
Base with Gooseneck & Serrated Tip

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
LF104	PVC	1	0	218	160.24
LF104-C	CPVC	1	0	219	200.31



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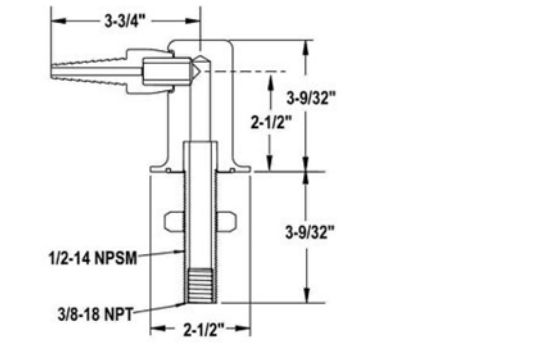
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each

Remote Valve Units (No Valve) - Deck Mount Turret -

Base with Serrated Tip

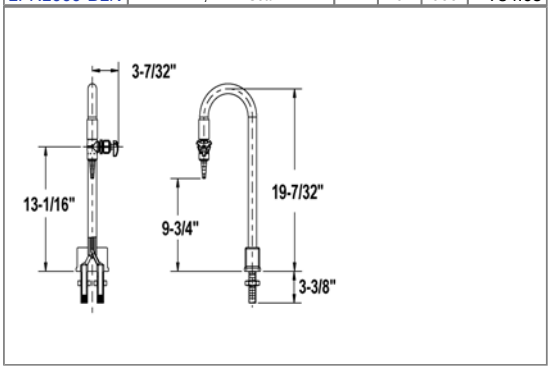
LF300	PVC	1	0	218	42.75
LF300-C	CPVC	1	0	219	53.44



Recirculating Units - Recirculating Deck Mount Lab Fixture -

Base with Gooseneck, Valve & Serrated Tip with Needle Valve

LFR1000-N	PVC, PTFE Seal	1	0	218	329.36
LFR1000-CN	CPVC, PTFE Seal	1	0	219	492.24
LFR1000-BLN	LE, PTFE Seal	1	0	066	784.05



Accessory/ Replacement - Fixture Connection Nipple -

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each

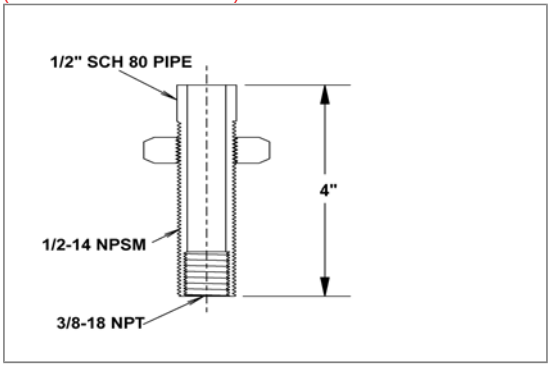
(included on all fixtures above) with Locknut

LF500	PVC	1	0	218	21.46
LF500-C	CPVC	1	0	219	26.84
LF500-BL	LE	1	0	066	42.78

Accessory/ Replacement - Fixture Connection Nipple - (continued)

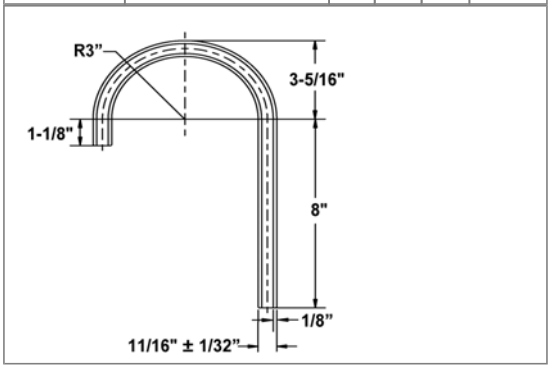
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each

(included on all fixtures above) with Locknut



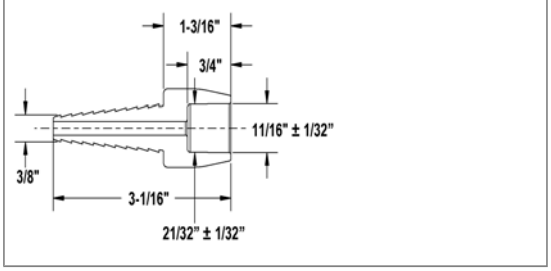
Accessory/ Replacement - Gooseneck (3/8")

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
LFGN	PVC	1	0	218	18.24
LFGN-C	CPVC	1	0	219	22.83
LFGN-BL	LF	1	0	066	36.36



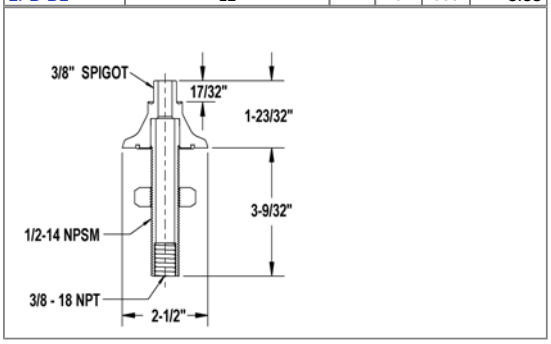
Accessory/ Replacement - Straight Serrated Tip

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
LF400	PVC	600	0	218	3.86
LF400-C	CPVC	600	0	219	4.85
LF400-BL	LE	600	0	066	7.69



Accessory/ Replacement - Base

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Deck Mount					
LFB	PVC	1	0	218	7.87
LFB-C	CPVC	1	0	219	9.40
LFB-BL	LE	1	0	066	5.38



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Spears® Manufacturing Company

Lab Ball Valves

Sample Engineering Specification

All thermoplastic valves shall be sealed unit Lab type constructed from PVC Type I, ASTM D 1784 Cell Classification 12454 or CPVC Type IV, ASTM D 1784 Cell Classification 23447. All O-rings shall be EPDM or FKM. All valves shall have double stop Polypropylene handle. All 1/4" valves shall have optional field installable male thread and tubing end connector adapters. All EPDM valves shall be certified by NSF International for use in potable water service. All EPDM valves shall be pressure rated at 150 psi for water at 73°F, as manufactured by Spears® Manufacturing Company.

Features – PVC, CPVC

This versatile quarter-turn shutoff valve is ideally suited for a variety of laboratory, system monitoring and OEM applications. Available in IPS sizes 1/4" - 3/8" with socket or threaded end connectors, plus 1/4" threaded Valve & Adapter Kit to provide multiple connection options.

- Chemical & Corrosion Resistant PVC or CPVC Construction
- Maintenance-Free Sealed Unit
- Individual Valve or Multi-functional Valve & Adapter Kit
- Schedule 80 Full-Bore Design
- High Impact Polypropylene Handle
- EPDM or FKM O-rings
- PTFE Floating Seat Design
- Sizes 1/4" - 3/8" Pressure Rated to 150 psi @ 73°F
- EPDM Valves NSF® Certified for Potable Water use
- Assembled with Silicone-Free, Water Soluble Lubricant

Quick-View Valve Selection Chart

Valve Size	O-ring Material	PVC Part Number[1,2]			Pressure Rating
		Socket	Threaded	Threaded with Kit	
1/4	EPDM	1522-002	1521-002	1529-002	150 psi Non-Shock Water @ 73°F
	FKM	1532-002	1531-002	1539-002	
3/8	EPDM	1522-003	1521-003	N/A	
	FKM	1532-003	1531-003	N/A	

1: For CPVC Valves, add the letter "C" to part number listed (e.g., 1521-002**C**)
2: For valves with 1/4" I.D. tubing adapters, add the letter "A" to the part number listed (e.g., 1529-002**A**)

LAB BALL VALVE WITH ADAPTER KIT

Valve & Adapter Kit

Kit allows multiple connection options. Adapters use O-ring seals for easy connection to threaded valve. Complete Kit includes:

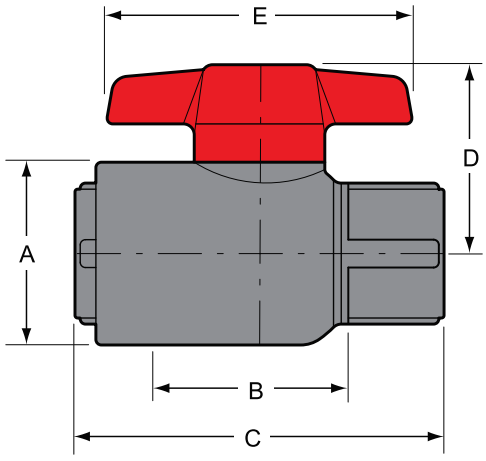
1 – Threaded 1/4" Valve
2 – O-ring Sealed 1/4" MPT x Mipt Adapters
2 – EPDM or FKM O-rings (AS568-013 size)
1 – End Connector Wrench

2 – O-ring Sealed 1/4" MPT x 3/8" I.D. Tubing Barb Adapters
- OR -
2 – O-ring Sealed 1/4" MPT x 1/4" I.D. Tubing Barb Adapters
(Must Add "**A**" to Valve/Kit Part No.)

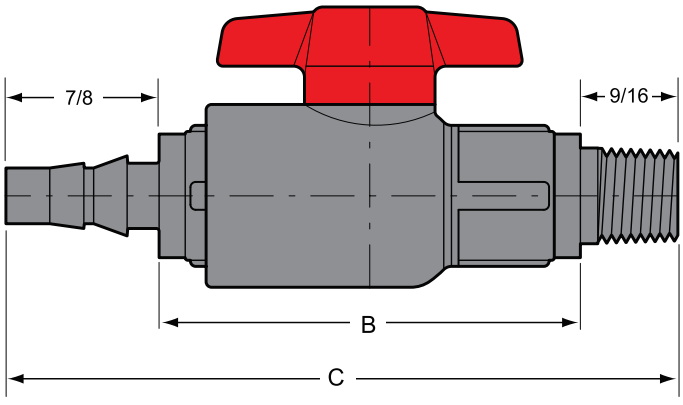
Lab Ball Valve Adapter Kit Only

Valve Size	O-ring Material	Part Number	
		PVC	CPVC
1/4	EPDM	LVKE-002	LVKE-002C
	FKM	LVKV-002	LVKV-002C

Kit Includes:
2 – O-rings
1 – End Connector Wrench
2 – 1/4" MPT x Mipt Adapters
2 – 1/4" MPT x 3/8" I.D. Tubing Barb Adapters



Basic Valve



Valve with Adapter Kit

Dimensions, Weights & C_V Values

Nominal Size	Dimension Reference (inches, ± 1/16)					Approx. Wt. (Lbs.)		C_v[2] Values
	A	B[1]	C	D	E	PVC	CPVC	
1/4	1-1/16	15/16	2-1/8	1-1/16	1-3/4	.10	.11	10
1/4 w/Kit	1-1/16	2-7/16	3-7/8	1-1/16	1-3/4	.14	.15	6
3/8	1-5/16	1	2-3/16	1-1/4	2	.12	.13	24

1: Valve Lay Length
2: Gallons per minute at 1 psi pressure drop. Values calculated from valve laying length, based on derivative of Hazen-Williams equation with roughness factor of C=150.

Temperature Pressure Rating

System Operating Temperature °F (°C)		73 (23)	100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)
Valve Pressure Rating psi (MPa)	PVC	150 (1.03)	124 (.85)	100 (.69)	75 (.52)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
	CPVC	150 (1.03)	140 (.97)	130 (.90)	120 (.83)	110 (.76)	100 (.69)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	-0- (-0-)

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

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Needle Valves

Features – PVC, CPVC & PP

Needle Valves provide proportional opening to needle travel for more accurate metering applications and other fine adjustment flow control applications. Special design PTFE seal eliminates elastomer type seals or O-rings that can contribute to chemical compatibility problems. PVC, CPVC and Polypropylene valves are available with 1/4", 3/8" and 1/2" NPT female threaded ends in either standard Globe Pattern or special Angle Pattern configuration that eliminates need for additional elbow in various system setups.

- Chemical & Corrosion Resistant PVC, CPVC or PP Construction
- Precision Metering Chamber
- Globe & Angle Body Configurations
- Removable Bonnet For Easy Disassembly & Cleaning
- Solid PTFE Stem Seal - No Elastomer Seal or Lubricants Used
- Built-in Panel or Bracket Mounting Nut
- Easy-Grip Polypropylene Handle
- PVC & CPVC Pressure Rated to 235 psi @ 73°F
  Polypropylene Pressure Rated to 150 psi @ 73°F

Sample Engineering Specification

All thermoplastic Needle Valves shall be constructed from PVC, ASTM D 1784 Cell Classification 12454, CPVC, ASTM D 1784 Cell Classification 23447, or Polypropylene, ASTM D 4101. All valves shall be globe pattern or angle pattern body configuration with 1/4", 3/8" or 1/2" female NPT end connections. All valves shall have removable bonnet cap with replaceable PTFE seal. No elastomer seals shall be used. All valves shall have built-in panel mounting nut and high impact polypropylene handles. All PVC and CPVC valves shall be pressure rated to 235 psi and all Polypropylene valves to 150 psi for water @ 73°F, as manufactured by Spears® Manufacturing Company.

Cv Values

Size	Globe Pattern	Angle Pattern
1/4" - 3/8"	.310	.426
1/2"	.62	.78

Gallons per minute at 1 psi pressure drop.

Quick-View Needle Valve Selection Chart

Valve Size	PVC Part Numbers[1,2]						Pressure Rating
	Globe Pattern			Angle Pattern			
	Socket	SR Threaded	Threaded	Socket	SR Threaded	Threaded	
1/4"	5592-002	N/A	5591-002	5692-002	N/A	5691-002	PVC & CPVC 235 psi, PP 150 psi Non-Shock Water @ 73°F
3/8"	5592-003	5591-003SR	5591-003	5692-003	N/A	5691-003	
1/2"	5592-005	5591-005SR	5591-005	5692-005	5691-005SR	5691-005	

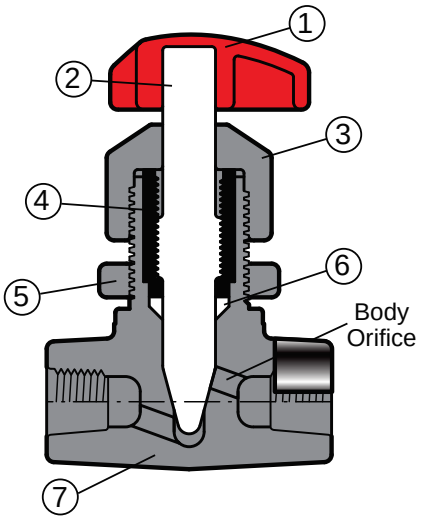
1: For CPVC Valve, add the letter "C" to the part number (e.g. 5591-002**C**)
2: For threaded Polypropylene Valve, add the letter "P" to the part number (e.g. 5591-002**P**, 5591-005**P**SR)

Temperature Pressure Rating

System Operating Temperature °F (°C)			100 (38)	110 (43)	120 (49)	130 (54)	140 (60)	150 (66)	160 (71)	170 (77)	180 (82)	190 (88)	200 (93)	210 (99)
Valve Pressure Rating psi (MPa)	1/4"-1/2"	PVC	235 (1.62)	211 (1.45)	150 (1.03)	75 (.52)	50 (.34)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)	-0- (-0-)
		CPVC	235 (1.62)	219 (1.51)	170 (1.17)	145 (1.00)	130 (.90)	110 (.76)	90 (.62)	80 (.55)	70 (.48)	60 (.41)	50 (.34)	-0- (-0-)
		PP	150	105	90	80	65	50	45	30	20	-0-	-0-	-0-

Panel Mounting Instructions

Spears® Needle Valves may be easily mounted to panel or bracket ranging from 3/16" to 1/2" in thickness using the accompanying template. Prepare mounting hole to panel opening dimensions. Slots may be cut in various positions to allow more versatile orientation. Open valve partially. Remove Bonnet Cap with needle assembly (do not fully disassemble) and Panel Nut from valve body. Insert valve body through mounting hole and seat lugs. Reinstall Panel Nut and tighten snug. Carefully reinstall Bonnet Cap and needle assembly, tighten snug. ***Caution:*** *Failure to partially open the valve or back the needle off prior to re-assembly may damage needle when tightening Bonnet Cap.*



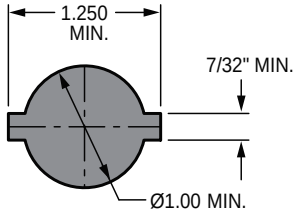
Replacement Parts

No.	Component	Qty.	Material
1	Handle	1	PP
2	Needle Stem	1	PVC/CPVC/PP
3	Bonnet Cap	1	PVC/CPVC/PP
4	Stem Nut	1	GFPP
5	Panel Nut	1	PVC/CPVC/PP
6	Seal	1	PTFE
7	Body	1	PVC/CPVC/PP

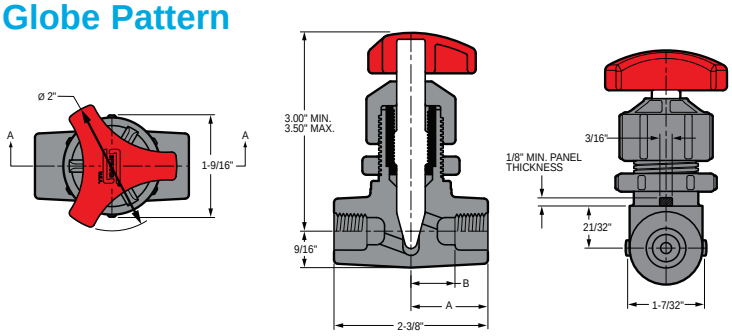
Body Orifice Dimensions

Valve Size	Body Orifice Ø
1/4	3/16"
3/8	3/16"
1/2	1/4"

Panel Opening



Globe Pattern

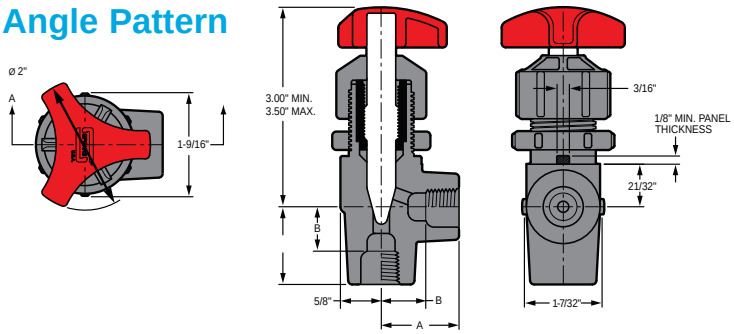


Dimensions

Valve Size	End Connection	A	B
1/4	Threaded	1-3/16	21/32
	Socket		9/16
3/8	Threaded		9/16
	Socket		7/16
1/2	Threaded	1-3/8	21/32
	Socket		1/2

Threaded Valve Dimensions apply to both Standard and SR Threads.

Angle Pattern



Needle Valve Adapter Kit

Valve Size	O-ring Material	Part Number	
		PVC	CPVC
1/4	EPDM	LVKE-002	LVKE-002C
	FKM	LVKV-002	LVKV-002C

Kit Includes:
2 – O-rings
1 – End Connector Wrench
2 – 1/4" MPT x Mipt Adapters
2 – 1/4" MPT x 3/8" I.D. Tubing Barb Adapters

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Gauge Guards

Optional gauge shown, not included with basic unit

Features - PVC, CPVC & PP

Gauge Guards isolate process pressure or vacuum gauges from corrosive or other potentially damaging process media by use of a thin PTFE (standard) FKM, or EPDM diaphragm. This flexible membrane accurately transmits system pressure to gauge connection chamber when properly assembled with gauge and liquid filled. Available in PVC, CPVC or Polypropylene construction with 1/2" x 1/4" or 1/4" x 1/4" inlet x outlet NPT connections.

- PTFE Diaphragm (Standard), FKM or EPDM Available
- Type 316 Stainless Steel Fasteners
- 1/4" NPT Gauge Port with O-ring Seal - No Thread Sealant Required
- 1/4" or 1/2" NPT Pressure Inlet Featuring Spears® Patented Special Reinforced (SR) Female Plastic Thread - Suitable for either Plastic or Metal Male NPT Thread Connection
- Pressure Rated to 235 psi @ 73°F, 16 Bar @ 22°C and Full Vacuum Service
- Mount in Any Position

Note: Elevated service temperatures require system pressure de-rating.

Quick View Gauge Guard Selection

Inlet Size (in.)	PVC Part Numbers[1,2,3,4]		
	Diaphragm		
	PTFE	EPDM	FKM
1/4	G0004-002	G0002-002	G0003-002
1/2	G0004-005	G0002-005	G0003-005

1: Gauge Guard only. Contact Spears® for pre-filled Gauge & Gauge Guard combination units.
2: For CPVC, add the letter "C" to the part number (e.g., G0004-002**C**)
3: For PP, add the letter "P" to the part number (e.g., G0004-002**P**)
4: For Special Reinforced add the letters "SR" to the part number (e.g., G0004-002**SR**)

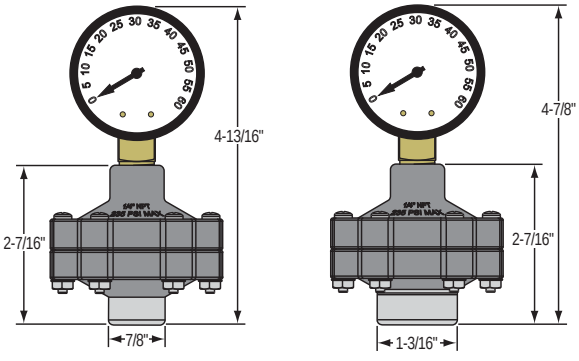
General Installation Information

The Gauge Guard and gauge must be completely filled with a suitable liquid, such as glycerin or distilled water, on the gauge side of the diaphragm in order to accurately transmit system pressure or vacuum. Follow packaged instructions for proper filling and installation. Factory installed Gauge & Gauge Guard units are pre-filled. (Contact Spears® Technical Service for additional information). While PTFE diaphragms generally have a broader range of chemical resistance, FKM or EPDM elastomer diaphragms are more sensitive and should be used in low pressure (i.e., 0-15 psi) and vacuum applications.

Optional Pre-filled, Factory Installed Gauge & Gauge Guard

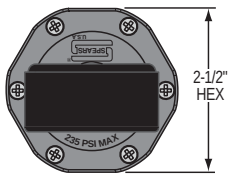
Gauge Type	Available Range	Dial	Connection	Housing
Pressure	0-15 psi 0-30 psi 0-60 psi 0-100 psi 0-160 psi 0-200 psi 0-300 psi	Black marking on white face, black dial	1/4 NPT Brass, Bottom Mount	Steel cased, Epoxy enamel finish
Vacuum	0-30 in-Hg			

Dimensions



1/4" x 1/4" 1/2" x 1/4"

Top View



Optional gauge shown, not included with basic unit

Lab Fixtures

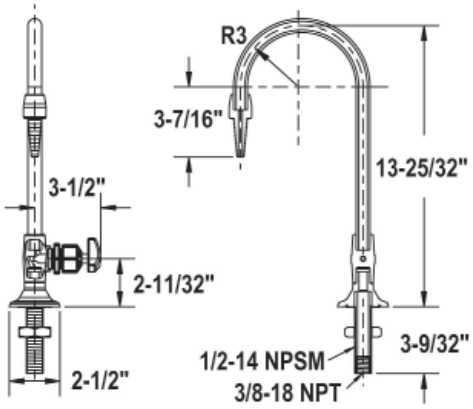
100% Corrosion Resistance - No Metal Parts

Spears® Lab Fixtures have no metal parts; this provides full resistance to internal or environmental corrosion. These fixtures are compatible with all laboratory service lines. Lab Fixtures are produced from PVC (gray) and CPVC (for hot water), or special Low-Extractable PVC for high purity applications, and are available in a variety of types and configurations.

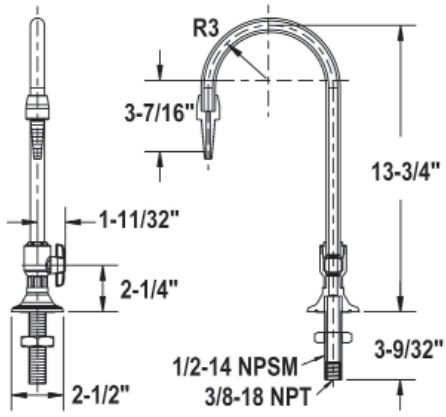
- **Deck Mount** – base configuration for horizontal surface mounting.
- **Panel Mount** – base configuration for vertical surface mounting.
- **Standard Gooseneck Units** – select all-plastic needle valve unit (no elastomer seals) for metered flow or ball valve unit (choice of EPDM or FKM seals) for direct flow. Unit includes valve, gooseneck with serrated tip, and base with nut for mounting. Select Deck or Panel Mount style.
- **Standard Turret Units** – direct flow ball valve (choice of EPDM or FKM seals) with serrated tip and base with connecting nipple and nut for mounting. Select Deck or Panel Mount style.
- **Remote Valve Units (No Valve)** – same as standard units less valve for use with remotely located valve.
- **Recirculating Units** – Special design provides continuous water motion without dead-leg areas of contamination and potential bacteria build-up. Internal supply tube fully circulates water through the entire fixture when connected to circulating water supply. Unit features gooseneck with terminally mounted all-plastic needle valve and serrated tip (no elastomer seals) for metered flow. Base is Deck Mount only with inlet and outlet connecting nipples with mounting nuts.

NPT - American National Standard Tapered Pipe Thread • NPSM - American National Standard Straight Thread For Free Fitting Mechanical Joints

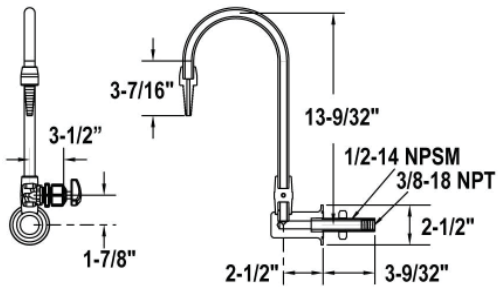
Standard Gooseneck Units - Deck Mount Lab Fixture -
Base with Valve, Gooseneck & Serrated Tip with Needle Valve-Metered Flow



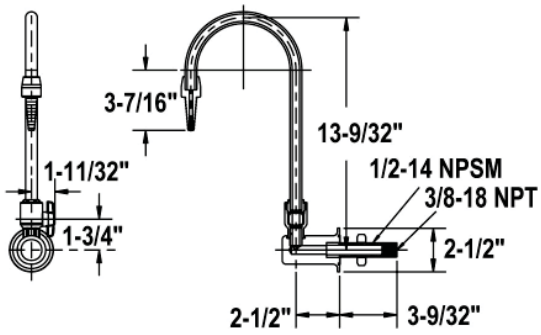
Standard Gooseneck Units - Deck Mount Lab Fixture -
with Ball Valve Direct Flow



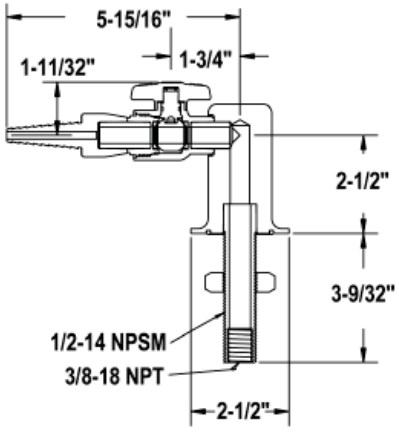
Standard Gooseneck Units - Panel Mount Lab Fixture -
Base with Valve, Gooseneck & Serrated Tip with Needle Valve-Metered Flow



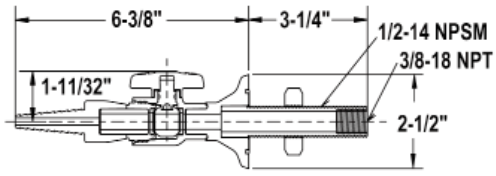
Standard Gooseneck Units - Panel Mount Lab Fixture -
with Ball Valve-Direct Flow



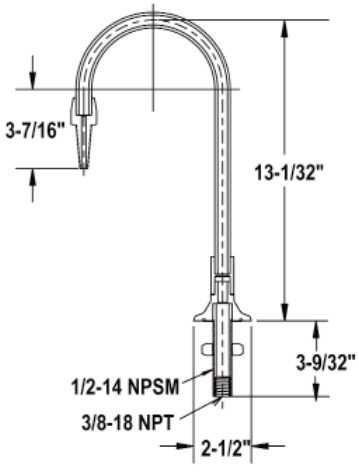
Standard Turret Units - Deck Mount Turret Lab Fixtures Base -
with Valve & Serrated Tip with Ball Valve-Direct Flow



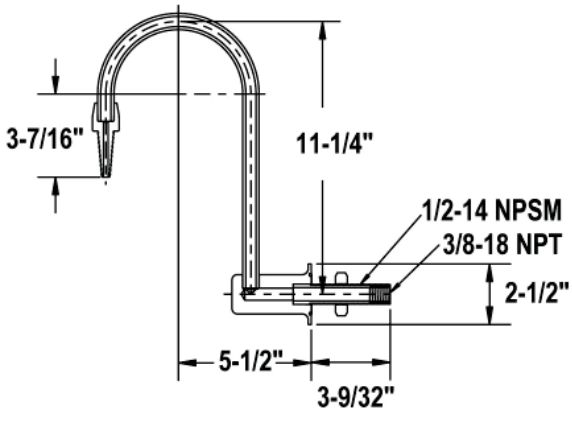
Standard Turret Units - Pannel Mount Turret Lab Fixtures Base -
with Valve & Serrated Tip with Ball Valve-Direct Flow



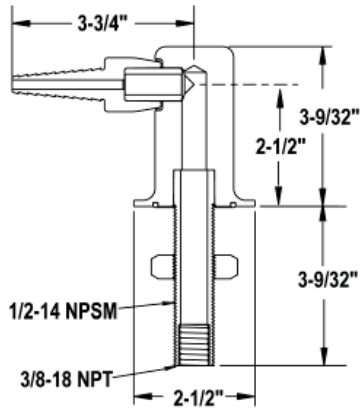
Remote Valve Units (No Valve) - Deck Mount Gooseneck -
Base with Gooseneck & Serrated Tip



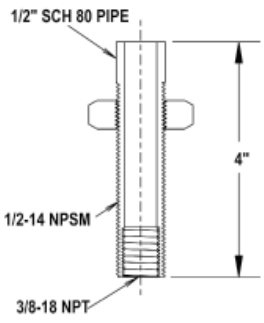
Remote Valve Units (No Valve) - Panel Mount Gooseneck -
Base with Gooseneck & Serrated Tip



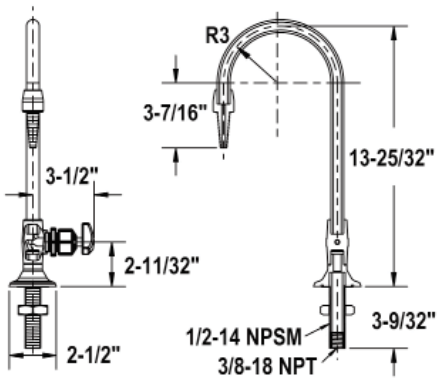
Remote Valve Units (No Valve) - Deck Mount Turret -
Base with Serrated Tip



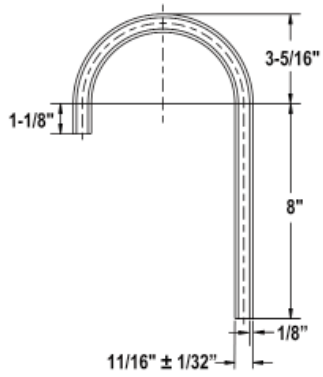
Accessory/ Replacement - Fixture Connection Nipple -
(included on all fixtures above) with Locknut



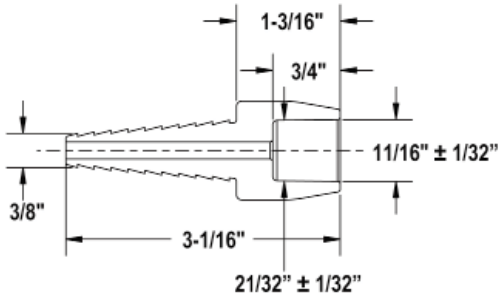
Recirculating Units - Recirculating Deck Mount Lab Fixture -
Base with Gooseneck, Valve & Serrated Tip with Needle Valve



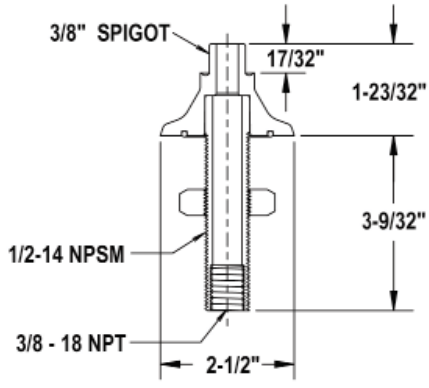
Accessory/ Replacement - Gooseneck (3/8")



Accessory/Replacement - Straight Serrated Tip



Accessory/ Replacement - Base



PVC & CPVC Duct & Fabricated Duct Fittings

PRICING

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC & CPVC Round Seamless Duct

10 ft.PVC Duct - Plain End

Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PD-430-060-10	**6**	10	0	748	13.00
PD-430-080-10	**8**	10	0	748	16.37
PD-430-100-10	**10**	10	0	748	20.51
PD-430-120-10	**12**	10	0	748	24.39
PD-430-140-10	**14**	10	0	948	88.12
PD-430-160-10	**16**	10	0	948	100.68
PD-430-180-10	**18**	10	0	948	148.98
PD-430-200-10	**20**	10	0	948	187.03
PD-430-240-10	**24**	10	0	948	237.45

• Pipe sold in individual lengths or lift quantities. No cut lengths.
• No return on Pipe
• Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.

20 ft. PVC Duct - Plain End

Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PD-430-060	**6**	20	0	748	13.00
PD-430-080	**8**	20	0	748	16.37
PD-430-100	**10**	20	0	748	20.51
PD-430-120	**12**	20	0	748	24.39
PD-430-140	**14**	20	0	948	88.12
PD-430-160	**16**	20	0	948	100.68
PD-430-180	**18**	20	0	948	148.98
PD-430-200	**20**	20	0	948	187.03
PD-430-240	**24**	20	0	948	237.45

• Pipe sold in individual lengths or lift quantities. No cut lengths.
• No return on Pipe
• Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.

10 ft.CPVC Duct - Plain End

Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PD-430-060C-10	**6**	10	0	749	27.76
PD-430-080C-10	**8**	10	0	749	36.40
PD-430-100C-10	**10**	10	0	749	45.56
PD-430-120C-10	**12**	10	0	749	54.18
PD-430-140C-10	**14**	10	0	949	350.79
PD-430-160C-10	**16**	10	0	949	424.59

• Pipe sold in individual lengths or lift quantities. No cut lengths.
• No return on Pipe
• Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.

20 ft.CPVC Duct - Plain End

Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PD-430-060C	**6**	20	0	749	27.76
PD-430-080C	**8**	20	0	749	36.40
PD-430-100C	**10**	20	0	749	45.56
PD-430-120C	**12**	20	0	749	54.18
PD-430-140C	**14**	20	0	949	350.79
PD-430-160C	**16**	20	0	949	424.59
PD-430-180C	**18**	20	0	949	488.01
PD-430-200C	**20**	20	0	949	669.00
PD-430-240C	**24**	20	0	949	790.37

• Pipe sold in individual lengths or lift quantities. No cut lengths.
• No return on Pipe
• Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.

PVC & CPVC Cold Rolled Fabricated Duct

4' PVC Cold Rolled Duct - Plain End

Price Each

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PD-430-260	**26X4**	4	0	434	434.63
PD-430-280	**28X4**	4	0	434	517.75
PD-430-300	**30X4**	4	0	434	635.16
PD-430-320	**32X4**	4	0	434	684.18
PD-430-360	**36X4**	4	0	434	774.33
PD-430-380	**38X4**	4	0	434	840.62
PD-430-400	**40X4**	4	0	434	861.79
PD-430-420	**42X4**	4	0	434	990.91
PD-430-460	**46X4**	4	0	434	1070.85
PD-430-480	**48X4**	4	0	434	1150.28

• Pipe sold in individual lengths or lift quantities. No cut lengths.
• No return on Pipe
• Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.

4' CPVC Cold Rolled Duct - Plain End

Price Each

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PD-430-260C	**26X4**	4	0	435	1299.24
PD-430-280C	**28X4**	4	0	435	1495.12

4' CPVC Cold Rolled Duct - Plain End (continued)

Price Each

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PD-430-300C	**30X4**	4	0	435	1659.65
PD-430-320C	**32X4**	4	0	435	1713.17
PD-430-360C	**36X4**	4	0	435	1831.13
PD-430-380C	**38X4**	4	0	435	2026.00
PD-430-400C	**40X4**	4	0	435	2122.95
PD-430-420C	**42X4**	4	0	435	2226.37
PD-430-460C	**46X4**	4	0	435	2504.78
PD-430-480C	**48X4**	4	0	435	2886.56

• Pipe sold in individual lengths or lift quantities. No cut lengths.
• No return on Pipe
• Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.

PVC & CPVC Duct Fittings

PVC Tee
Belled Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4301-060	6	1	4	430	195.44
4301-080	8	1	0	430	248.74
4301-100	10	1	0	430	313.76
4301-120	12	1	0	430	345.68
4301-140	14	1	0	430	402.09
4301-160	16	1	0	430	518.00
4301-180	18	1	0	430	681.71
4301-200	20	1	0	430	1001.78
4301-240	24	1	0	430	1338.91

PVC Tee, Reducing
Belled Socket

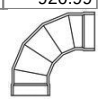
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4301-532	6X4	1	4	430	217.64
4301-582	8X4	1	2	430	226.61
4301-585	8X6	1	0	430	240.18
4301-624	10X4	1	2	430	255.11
4301-626	10X6	1	0	430	266.86
4301-628	10X8	1	0	430	328.80
4301-664	12X4	1	2	430	306.21
4301-666	12X6	1	0	430	345.67
4301-668	12X8	1	0	430	368.42
4301-670	12X10	1	0	430	427.12
4301-694	14X4	1	0	430	344.56
4301-696	14X6	1	0	430	373.25
4301-698	14X8	1	0	430	398.89
4301-700	14X10	1	0	430	438.93
4301-702	14X12	1	0	430	515.43
4301-754	16X4	1	0	430	381.26
4301-756	16X6	1	0	430	405.20
4301-758	16X8	1	0	430	457.99
4301-760	16X10	1	0	430	510.48
4301-762	16X12	1	0	430	547.31
4301-764	16X14	1	0	430	619.26
4301-784	18X4	1	0	430	425.42
4301-786	18X6	1	0	430	446.36
4301-788	18X8	1	0	430	506.54
4301-790	18X10	1	0	430	553.36
4301-792	18X12	1	0	430	621.04
4301-794	18X14	1	0	430	677.44
4301-796	18X16	1	0	430	784.84
4301-814	20X4	1	0	430	480.28
4301-816	20X6	1	0	430	494.20
4301-818	20X8	1	0	430	559.35
4301-820	20X10	1	0	430	587.44
4301-822	20X12	1	0	430	675.23
4301-824	20X14	1	0	430	744.53
4301-826	20X16	1	0	430	871.72
4301-828	20X18	1	0	430	1042.61
4301-904	24X4	1	0	430	504.17
4301-906	24X6	1	0	430	526.11
4301-908	24X8	1	0	430	604.68
4301-910	24X10	1	0	430	687.16
4301-912	24X12	1	0	430	800.71
4301-914	24X14	1	0	430	884.81
4301-916	24X16	1	0	430	976.71
4301-918	24X18	1	0	430	1163.41
4301-920	24X20	1	0	430	1335.48

PVC 90° Elbow
Belled Socket

General Purpose 2-piece Construction

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4306-060	6	1	2	430	154.41
4306-080	8	1	2	430	174.00
4306-100	10	1	0	430	209.96
4306-120	12	1	0	430	236.77
4306-140	14	1	0	430	279.15
4306-160	16	1	0	430	360.64
4306-180	18	1	0	430	501.91
4306-200	20	1	0	430	763.47
4306-240	24	1	0	430	920.99

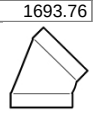
PVC 90° Elbow - SMACNA 5-Piece
Belled Socket



SMACNA Compliant 5-Piece Construction

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
43065-060	6	1	0	430	348.95
43065-080	8	1	0	430	367.83
43065-100	10	1	0	430	422.18
43065-120	12	1	0	430	487.32
43065-140	14	1	0	430	572.49
43065-160	16	1	0	430	644.68
43065-180	18	1	0	431	876.29
43065-200	20	1	0	430	952.05
43065-240	24	1	0	431	1693.76

PVC 45° Elbow
Belled Socket



General Purpose 1-piece Construction

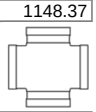
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4317-060	6	1	4	430	108.18
4317-080	8	1	6	430	134.86
4317-100	10	1	2	430	146.18
4317-120	12	1	2	430	181.07
4317-140	14	1	0	430	213.91
4317-160	16	1	0	430	259.23
4317-180	18	1	0	430	378.37
4317-200	20	1	0	430	519.06
4317-240	24	1	0	430	675.51

PVC 45° Elbow - SMACNA 3-Piece
Belled Socket

SMACNA Compliant 3-Piece Construction

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
43173-060	6	1	0	430	127.09
43173-080	8	1	0	430	167.40
43173-100	10	1	0	430	195.73
43173-120	12	1	0	430	215.77
43173-140	14	1	0	430	264.52
43173-160	16	1	0	430	395.63
43173-180	18	1	0	430	548.58
43173-200	20	1	0	430	885.88
43173-240	24	1	0	430	1148.37

PVC Cross
Belled Socket



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4320-060	6	1	0	430	342.65
4320-080	8	1	0	430	471.57
4320-100	10	1	0	430	562.41
4320-120	12	1	0	430	610.04
4320-140	14	1	0	430	755.08
4320-160	16	1	0	430	863.81

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC & CPVC Duct Fittings

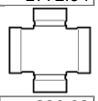
PVC Cross (continued)

Belled Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4320-180	**18**	1	0	430	1101.48
4320-200	**20**	1	0	430	1345.92
4320-240	**24**	1	0	430	1772.94

PVC Cross, Reducing

Belled Socket



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4320-532	**6X4**	1	3	430	326.08
4320-582	**8X4**	1	0	430	403.63
4320-585	**8X6**	1	0	430	427.18
4320-624	**10X4**	1	0	430	445.39
4320-626	**10X6**	1	0	430	499.44
4320-628	**10X8**	1	0	430	526.84
4320-664	**12X4**	1	0	430	434.61
4320-666	**12X6**	1	0	430	475.74
4320-668	**12X8**	1	0	430	535.12
4320-670	**12X10**	1	0	430	569.61
4320-694	**14X4**	1	0	430	469.28
4320-696	**14X6**	1	0	430	539.87
4320-698	**14X8**	1	0	430	603.91
4320-700	**14X10**	1	0	430	656.12
4320-702	**14X12**	1	0	430	728.13
4320-754	**16X4**	1	0	430	607.36
4320-756	**16X6**	1	0	430	670.03
4320-758	**16X8**	1	0	430	720.99
4320-760	**16X10**	1	0	430	756.97
4320-762	**16X12**	1	0	430	790.67
4320-764	**16X14**	1	0	430	829.96
4320-784	**18X4**	1	0	430	688.06
4320-786	**18X6**	1	0	430	779.58
4320-788	**18X8**	1	0	430	823.31
4320-790	**18X10**	1	0	430	877.88
4320-792	**18X12**	1	0	430	932.33
4320-794	**18X14**	1	0	430	1010.23
4320-796	**18X16**	1	0	430	1055.69
4320-814	**20X4**	1	0	430	805.77
4320-816	**20X6**	1	0	430	892.74
4320-818	**20X8**	1	0	430	957.83
4320-820	**20X10**	1	0	430	1007.82
4320-822	**20X12**	1	0	430	1072.34
4320-824	**20X14**	1	0	430	1144.23
4320-826	**20X16**	1	0	430	1209.94
4320-828	**20X18**	1	0	430	1303.33
4320-904	**24X4**	1	0	430	886.73
4320-906	**24X6**	1	0	430	903.81
4320-908	**24X8**	1	0	430	998.81
4320-910	**24X10**	1	0	430	1101.76
4320-912	**24X12**	1	0	430	1215.39
4320-914	**24X14**	1	0	430	1328.07
4320-916	**24X16**	1	0	430	1423.28
4320-918	**24X18**	1	0	430	1573.12
4320-920	**24X20**	1	0	430	1673.15

PVC Coupling

Belled Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4329-060	**6**	1	4	430	41.82
4329-080	**8**	1	4	430	49.12
4329-100	**10**	1	2	430	57.87
4329-120	**12**	1	4	430	65.37
4329-140	**14**	1	2	430	71.69
4329-160	**16**	1	2	430	88.52
4329-180	**18**	1	2	430	129.31
4329-200	**20**	1	0	430	199.81

PVC Coupling (continued)

Belled Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4329-240	**24**	1	0	430	270.51

PVC Coupling, Reducer

Belled Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4329-532	**6X4**	1	4	430	54.63
4329-582	**8X4**	1	5	430	168.92
4329-585	**8X6**	1	8	430	71.63
4329-624	**10X4**	1	2	430	315.72
4329-626	**10X6**	1	2	430	196.28
4329-628	**10X8**	1	4	430	92.04
4329-664	**12X4**	1	2	430	351.65
4329-666	**12X6**	1	2	430	339.61
4329-668	**12X8**	1	2	430	245.75
4329-670	**12X10**	1	4	430	107.13
4329-694	**14X4**	1	0	430	873.45
4329-696	**14X6**	1	0	430	632.81
4329-698	**14X8**	1	0	430	372.07
4329-700	**14X10**	1	0	430	307.37
4329-702	**14X12**	1	4	430	175.85
4329-754	**16X4**	1	0	430	1055.04
4329-756	**16X6**	1	0	430	854.63
4329-758	**16X8**	1	0	430	616.41
4329-760	**16X10**	1	0	430	428.77
4329-762	**16X12**	1	0	430	365.37
4329-764	**16X14**	1	0	430	198.73
4329-784	**18X4**	1	0	430	1318.09
4329-786	**18X6**	1	0	430	1076.65
4329-788	**18X8**	1	0	430	922.83
4329-790	**18X10**	1	0	430	630.28
4329-792	**18X12**	1	0	430	541.80
4329-794	**18X14**	1	0	430	457.41
4329-796	**18X16**	1	0	430	228.25
4329-814	**20X4**	1	0	430	1575.16
4329-816	**20X6**	1	0	430	1348.47
4329-818	**20X8**	1	0	430	1099.32
4329-820	**20X10**	1	0	430	988.61
4329-822	**20X12**	1	0	430	863.45
4329-824	**20X14**	1	0	430	647.56
4329-826	**20X16**	1	0	430	630.86
4329-828	**20X18**	1	0	430	402.61
4329-904	**24X4**	1	0	430	2011.81
4329-906	**24X6**	1	0	430	1799.31
4329-908	**24X8**	1	0	430	1564.77
4329-910	**24X10**	1	0	430	1335.45
4329-912	**24X12**	1	0	430	1126.77
4329-914	**24X14**	1	0	430	991.54
4329-916	**24X16**	1	0	430	1001.14
4329-918	**24X18**	1	0	430	746.55
4329-920	**24X20**	1	0	430	732.43

PVC Sleeve Coupling

Socket (No Stop)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4329S-060	**6**	1	5	431	34.57
4329S-080	**8**	1	8	431	45.46
4329S-100	**10**	1	4	431	51.21
4329S-120	**12**	1	4	431	55.95
4329S-140	**14**	1	4	431	71.77
4329S-160	**16**	1	0	431	79.41
4329S-180	**18**	1	2	431	104.97
4329S-200	**20**	1	2	431	131.77
4329S-240	**24**	1	2	431	152.81

PVC & CPVC Duct Fittings

PVC Flat Cap
Belled Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4347-060	6	1	10	430	85.94
4347-080	8	1	5	430	87.47
4347-100	10	1	5	430	94.33
4347-120	12	1	4	430	103.16
4347-140	14	1	4	430	166.32
4347-160	16	1	2	430	181.24
4347-180	18	1	4	430	197.48
4347-200	20	1	5	430	294.34
4347-240	24	1	4	430	300.91

PVC Rain Cap
Belled Socket Style A

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4347-060A	6	1	4	430	654.49
4347-080A	8	1	0	430	657.58
4347-100A	10	1	0	430	684.87
4347-120A	12	1	0	430	709.16
4347-140A	14	1	0	430	776.63
4347-160A	16	1	0	430	847.71
4347-180A	18	1	0	430	1131.03
4347-200A	20	1	0	430	1203.56
4347-240A	24	1	0	430	1363.67

PVC Rain Cap
Belled Socket Style B

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4347-060B	6	1	0	430	618.17
4347-080B	8	1	0	430	699.53
4347-100B	10	1	0	430	756.36
4347-120B	12	1	8	430	823.57
4347-140B	14	1	0	430	925.79
4347-160B	16	1	0	430	1123.08
4347-180B	18	1	0	430	1357.80
4347-200B	20	1	0	430	1557.86
4347-240B	24	1	0	430	1803.25

PVC Flange - SMACNA
Belled Socket One Piece

SMACNA Bolt Pattern

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4351S-060	6	1	5	430	89.06
4351S-080	8	1	2	430	113.20
4351S-100	10	1	4	430	120.96
4351S-120	12	1	2	430	141.12
4351S-140	14	1	0	430	154.79
4351S-160	16	1	0	430	199.67
4351S-180	18	1	3	430	297.61
4351S-200	20	1	0	430	365.05
4351S-240	24	1	0	430	392.96

Also available in ANSI Class 150 Bolt Pattern.

PVC Flange, Blind
One Piece

Class 150 Bolt Pattern

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4353-060	6	1	36	430	86.16
4353-080	8	1	52	430	108.08
4353-100	10	1	18	430	119.23
4353-120	12	1	50	430	143.32
4353-140	14	1	50	430	182.39
4353-160	16	1	50	430	207.37
4353-180	18	1	50	430	252.56

PVC Flange, Blind (continued)
One Piece

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4353-200	20	1	57	430	352.25
4353-240	24	1	0	430	379.19

PVC Flange, Blind - SMACNA
One Piece

SMACNA Bolt Pattern

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4353S-060	6	1	0	430	91.68
4353S-080	8	1	10	430	114.98
4353S-100	10	1	52	430	126.83
4353S-120	12	1	52	430	152.47
4353S-140	14	1	52	430	194.04
4353S-160	16	1	50	430	220.60
4353S-180	18	1	50	430	273.36
4353S-200	20	1	50	430	374.72
4353S-240	24	1	0	430	403.38

PVC Wye
Belled Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4375-060	6	1	2	430	269.26
4375-080	8	1	0	430	324.63
4375-100	10	1	0	430	402.40
4375-120	12	1	0	430	536.22
4375-140	14	1	0	430	620.92
4375-160	16	1	0	430	1550.58
4375-180	18	1	0	430	2007.47
4375-200	20	1	0	430	2772.00
4375-240	24	1	0	430	3303.08

PVC Wye, Reducing
Belled Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4375-532	6X4	1	2	430	262.41
4375-582	8X4	1	2	430	286.95
4375-585	8X6	1	0	430	301.05
4375-624	10X4	1	0	430	326.49
4375-626	10X6	1	0	430	350.00
4375-628	10X8	1	0	430	383.87
4375-664	12X4	1	0	430	357.27
4375-666	12X6	1	0	430	375.95
4375-668	12X8	1	0	430	426.53
4375-670	12X10	1	0	430	477.57
4375-694	14X4	1	0	430	417.56
4375-696	14X6	1	0	430	446.82
4375-698	14X8	1	0	430	478.85
4375-700	14X10	1	0	430	546.82
4375-702	14X12	1	0	430	613.18
4375-754	16X4	1	0	430	495.47
4375-756	16X6	1	0	430	530.00
4375-758	16X8	1	0	430	549.11
4375-760	16X10	1	0	430	580.81
4375-762	16X12	1	0	430	634.52
4375-764	16X14	1	0	430	721.45
4375-784	18X4	1	0	430	582.82
4375-786	18X6	1	0	430	607.93
4375-788	18X8	1	0	430	661.99
4375-790	18X10	1	0	430	694.73
4375-792	18X12	1	0	430	731.80
4375-794	18X14	1	0	430	831.25
4375-796	18X16	1	0	430	973.41
4375-814	20X4	1	0	430	656.27
4375-816	20X6	1	0	430	698.42
4375-818	20X8	1	0	430	741.72

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC & CPVC Duct Fittings

PVC Wye, Reducing (continued)

Belled Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4375-820	**20X10**	1	0	430	784.27
4375-822	**20X12**	1	0	430	833.02
4375-824	**20X14**	1	0	430	885.91
4375-826	**20X16**	1	0	430	1058.38
4375-828	**20X18**	1	0	430	1217.75
4375-904	**24X4**	1	0	430	788.36
4375-906	**24X6**	1	0	430	832.94
4375-908	**24X8**	1	0	430	911.36
4375-910	**24X10**	1	0	430	1006.84
4375-912	**24X12**	1	0	430	1072.54
4375-914	**24X14**	1	0	430	1174.48
4375-916	**24X16**	1	0	430	1224.60
4375-918	**24X18**	1	0	430	1389.19
4375-920	**24X20**	1	0	430	1570.23

PVC Wye, Double

Belled Socket

4376-060	**6**	1	0	430	269.05
4376-080	**8**	1	0	430	310.91
4376-100	**10**	1	0	430	353.30
4376-120	**12**	1	0	430	418.59
4376-140	**14**	1	0	430	875.11
4376-160	**16**	1	0	430	1048.77
4376-180	**18**	1	0	430	1501.30
4376-200	**20**	1	0	430	2134.11
4376-240	**24**	1	0	430	4044.11

PVC Wye, Double Reducing

Belled Soccket

4376-532	**6X4**	1	0	430	350.33
4376-585	**8X6**	1	0	430	290.56
4376-582	**8X4**	1	0	430	257.18
4376-624	**10X4**	1	0	430	466.42
4376-626	**10X6**	1	0	430	492.50
4376-628	**10X8**	1	0	430	498.70
4376-668	**12X4**	1	0	430	381.50
4376-666	**12X6**	1	0	430	373.80
4376-670	**12X10**	1	0	430	386.74
4376-694	**14X4**	1	0	430	595.64
4376-698	**14X8**	1	0	430	620.40
4376-700	**14X10**	1	0	430	696.43
4376-702	**14X12**	1	0	430	827.03
4376-754	**16X4**	1	0	430	538.89
4376-756	**16X6**	1	0	430	630.48
4376-758	**16X8**	1	0	430	661.74
4376-760	**16X10**	1	0	430	711.16
4376-762	**16X12**	1	0	430	778.67
4376-764	**16X14**	1	0	430	1030.98
4376-784	**18X4**	1	0	430	640.37
4376-786	**18X6**	1	0	430	717.12
4376-788	**18X8**	1	0	430	764.57
4376-790	**18X10**	1	0	430	849.20
4376-792	**18X12**	1	0	430	898.54
4376-794	**18X14**	1	0	430	1112.70
4376-796	**18X16**	1	0	430	1382.47
4376-814	**20X4**	1	0	430	739.26
4376-816	**20X6**	1	0	430	932.74
4376-818	**20X8**	1	0	430	1002.07
4376-820	**20X10**	1	0	430	1113.80
4376-822	**20X12**	1	0	430	1209.82
4376-824	**20X14**	1	0	430	1673.88
4376-826	**20X16**	1	0	430	1851.80

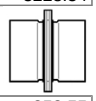
PVC Wye, Double Reducing (continued)

Belled Soccket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4376-828	**20X18**	1	0	430	2158.86
4376-904	**24X4**	1	0	430	862.81
4376-906	**24X6**	1	0	430	1087.25
4376-908	**24X8**	1	0	430	1190.22
4376-910	**24X10**	1	0	430	1346.45
4376-912	**24X12**	1	0	430	1476.27
4376-914	**24X14**	1	0	430	1614.59
4376-916	**24X16**	1	0	430	1779.54
4376-918	**24X18**	1	0	430	2093.63
4376-920	**24X20**	1	0	430	3228.34

PVC Blast Gate

Belled End



43BG-060	**6**	1	0	430	258.55
43BG-080	**8**	1	2	430	293.91
43BG-100	**10**	1	0	430	311.52
43BG-120	**12**	1	2	430	390.34
43BG-140	**14**	1	0	430	518.13
43BG-160	**16**	1	0	430	575.77
43BG-180	**18**	1	0	430	679.24
43BG-200	**20**	1	0	430	770.89
43BG-240	**24**	1	2	430	1050.39

PVC Butterfly Damper

Belled Socket

43BD-060	**6**	1	2	430	253.23
43BD-080	**8**	1	2	430	261.00
43BD-100	**10**	1	0	430	298.97
43BD-120	**12**	1	0	430	320.38
43BD-140	**14**	1	2	430	428.96
43BD-160	**16**	1	0	430	478.03
43BD-180	**18**	1	0	430	648.80
43BD-200	**20**	1	0	430	764.57
43BD-240	**24**	1	0	430	988.14

CPVC Tee

Belled Socket

4301-060C	**6**	1	4	432	360.15
4301-080C	**8**	1	0	432	478.45
4301-100C	**10**	1	0	432	669.47
4301-120C	**12**	1	0	432	809.41
4301-140C	**14**	1	0	432	950.03
4301-160C	**16**	1	0	432	1177.17
4301-180C	**18**	1	0	432	1401.20
4301-200C	**20**	1	0	432	1941.87
4301-240C	**24**	1	0	432	2772.78

CPVC Tee, Reducing

Belled Socket

4301-532C	**6X4**	1	4	432	309.52
4301-582C	**8X4**	1	2	432	356.71
4301-585C	**8X6**	1	0	432	413.52
4301-624C	**10X4**	1	2	432	446.33
4301-626C	**10X6**	1	0	432	510.95
4301-628C	**10X8**	1	0	432	560.99
4301-664C	**12X4**	1	2	432	514.34
4301-666C	**12X6**	1	0	432	549.19
4301-668C	**12X8**	1	0	432	669.08
4301-670C	**12X10**	1	0	432	784.43
4301-694C	**14X4**	1	0	432	651.06

PVC & CPVC Duct Fittings

CPVC Tee, Reducing (continued)

Belled Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4301-696C	14X6	1	0	432	685.04
4301-698C	14X8	1	0	432	763.65
4301-700C	14X10	1	0	432	887.67
4301-702C	14X12	1	0	432	921.61
4301-754C	16X4	1	0	432	716.19
4301-756C	16X6	1	0	432	753.87
4301-758C	16X8	1	0	432	837.64
4301-760C	16X10	1	0	432	974.03
4301-762C	16X12	1	0	432	1040.11
4301-764C	16X14	1	0	432	1197.68
4301-784C	18X4	1	0	432	905.43
4301-786C	18X6	1	0	432	973.61
4301-788C	18X8	1	0	432	1034.41
4301-790C	18X10	1	0	432	1112.28
4301-792C	18X12	1	0	432	1183.27
4301-794C	18X14	1	0	432	1333.15
4301-796C	18X16	1	0	432	1380.98
4301-814C	20X4	1	0	432	1085.99
4301-816C	20X6	1	0	432	1132.58
4301-818C	20X8	1	0	432	1272.57
4301-820C	20X10	1	0	432	1328.35
4301-822C	20X12	1	0	432	1413.14
4301-824C	20X14	1	0	432	1519.52
4301-826C	20X16	1	0	432	1693.93
4301-828C	20X18	1	0	432	1938.11
4301-904C	24X4	1	0	432	1256.68
4301-906C	24X6	1	0	432	1445.33
4301-908C	24X8	1	0	432	1537.57
4301-910C	24X10	1	0	432	1618.53
4301-912C	24X12	1	0	432	1759.26
4301-914C	24X14	1	0	432	1891.67
4301-916C	24X16	1	0	432	2012.42
4301-918C	24X18	1	0	432	2356.34
4301-920C	24X20	1	0	432	2688.01

CPVC 90° Elbow

Belled Socket

General Purpose 2-piece Construction

4306-060C	6	1	2	432	254.42
4306-080C	8	1	2	432	341.00
4306-100C	10	1	0	432	463.78
4306-120C	12	1	0	432	554.60
4306-140C	14	1	0	432	697.02
4306-160C	16	1	0	432	854.78
4306-180C	18	1	0	432	1076.97
4306-200C	20	1	0	432	3166.31
4306-240C	24	1	0	432	4355.90

CPVC 90° Elbow - SMACNA 5-Piece

Belled Socket

SMACNA Compliant 5-Piece Construction

43065-060C	6	1	2	432	405.72
43065-080C	8	1	0	432	591.20
43065-100C	10	1	0	432	727.93
43065-120C	12	1	0	432	1773.69
43065-140C	14	1	0	432	1908.01
43065-160C	16	1	0	432	2810.71
43065-180C	18	1	0	432	3469.44
43065-200C	20	1	0	432	3914.52
43065-240C	24	1	0	432	6107.87

CPVC 45° Elbow

Belled Socket

General Purpose 1-piece Construction

4317-060C	6	1	4	432	194.45
4317-080C	8	1	6	432	260.16
4317-100C	10	1	2	432	351.56
4317-120C	12	1	2	432	425.17
4317-140C	14	1	0	432	524.20
4317-160C	16	1	0	432	603.62
4317-180C	18	1	0	432	813.52
4317-200C	20	1	0	432	1097.86
4317-240C	24	1	0	432	1543.68

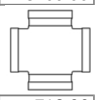
CPVC 45° Elbow - SMACNA 3-Piece

Belled Socket

SMACNA Compliant 3-Piece Construction

43173-060C	6	1	0	432	261.41
43173-080C	8	1	0	432	421.43
43173-100C	10	1	0	432	739.92
43173-120C	12	1	0	432	1022.26
43173-140C	14	1	0	432	1076.86
43173-160C	16	1	0	432	1551.86
43173-180C	18	1	0	432	1641.59
43173-200C	20	1	0	432	2112.76
43173-240C	24	1	0	432	3109.99

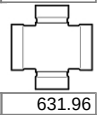
CPVC Cross



Belled Socket

4320-060C	6	1	0	432	713.06
4320-080C	8	1	0	432	947.33
4320-100C	10	1	0	432	1325.55
4320-120C	12	1	0	432	1602.64
4320-140C	14	1	0	432	1881.06
4320-160C	16	1	0	432	2330.81
4320-180C	18	1	0	432	2774.37
4320-200C	20	1	0	432	3844.93
4320-240C	24	1	0	432	5490.07

CPVC Cross, Reducing



Belled Socket

4320-532C	6X4	1	3	432	631.96
4320-582C	8X4	1	0	432	783.74
4320-585C	8X6	1	0	432	827.03
4320-624C	10X4	1	0	432	883.72
4320-626C	10X6	1	0	432	1011.69
4320-628C	10X8	1	0	432	1110.74
4320-664C	12X4	1	0	432	1018.40
4320-666C	12X6	1	0	432	1087.40
4320-668C	12X8	1	0	432	1324.80
4320-670C	12X10	1	0	432	1553.17
4320-694C	14X4	1	0	432	1289.11
4320-696C	14X6	1	0	432	1356.42
4320-698C	14X8	1	0	432	1512.03
4320-700C	14X10	1	0	432	1757.59
4320-702C	14X12	1	0	432	1824.79
4320-754C	16X4	1	0	432	1418.04
4320-756C	16X6	1	0	432	1492.68
4320-758C	16X8	1	0	432	1658.56
4320-760C	16X10	1	0	432	1928.57
4320-762C	16X12	1	0	432	2059.37
4320-764C	16X14	1	0	432	2371.42

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

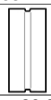
CPVC Cross, Reducing (continued)

Belled Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4320-784C	18X4	1	0	432	1792.80
4320-786C	18X6	1	0	432	1927.72
4320-788C	18X8	1	0	432	2048.15
4320-790C	18X10	1	0	432	2202.31
4320-792C	18X12	1	0	432	2342.88
4320-794C	18X14	1	0	432	2639.63
4320-796C	18X16	1	0	432	2734.35
4320-814C	20X4	1	0	432	2150.27
4320-816C	20X6	1	0	432	2242.52
4320-818C	20X8	1	0	432	2519.69
4320-820C	20X10	1	0	432	2630.14
4320-822C	20X12	1	0	432	2798.02
4320-824C	20X14	1	0	432	3008.60
4320-826C	20X16	1	0	432	3354.00
4320-828C	20X18	1	0	432	3837.44
4320-904C	24X4	1	0	432	2488.23
4320-906C	24X6	1	0	432	2861.77
4320-908C	24X8	1	0	432	3044.40
4320-910C	24X10	1	0	432	3204.63
4320-912C	24X12	1	0	432	3483.33
4320-914C	24X14	1	0	432	3745.48
4320-916C	24X16	1	0	432	3984.57
4320-918C	24X18	1	0	432	4665.54
4320-920C	24X20	1	0	432	5322.25

CPVC Coupling

Belled Socket



4329-060C	6	1	4	432	89.34
4329-080C	8	1	8	432	113.92
4329-100C	10	1	2	432	150.05
4329-120C	12	1	3	432	167.13
4329-140C	14	1	2	432	206.78
4329-160C	16	1	0	432	225.63
4329-180C	18	1	0	432	282.06
4329-200C	20	1	0	432	354.61
4329-240C	24	1	2	432	436.20

CPVC Coupling, Reducer

Belled Socket

4329-532C	6X4	1	4	432	174.40
4329-582C	8X4	1	8	432	429.45
4329-585C	8X6	1	8	432	168.94
4329-624C	10X4	1	2	432	591.59
4329-626C	10X6	1	2	432	438.02
4329-628C	10X8	1	4	432	224.09
4329-664C	12X4	1	2	432	836.02
4329-666C	12X6	1	2	432	662.23
4329-668C	12X8	1	2	432	575.65
4329-670C	12X10	1	0	432	306.56
4329-694C	14X4	1	0	432	1073.81
4329-696C	14X6	1	0	432	859.06
4329-698C	14X8	1	0	432	730.22
4329-700C	14X10	1	0	432	748.28
4329-702C	14X12	1	0	432	419.64
4329-754C	16X4	1	0	432	1398.69
4329-756C	16X6	1	0	432	1113.62
4329-758C	16X8	1	0	432	943.75
4329-760C	16X10	1	0	432	896.24
4329-762C	16X12	1	0	432	872.14
4329-764C	16X14	1	0	432	539.16
4329-784C	18X4	1	0	432	1691.65
4329-786C	18X6	1	0	432	1358.77

CPVC Coupling, Reducer (continued)

Belled Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4329-788C	18X8	1	0	432	1151.48
4329-790C	18X10	1	0	432	1090.41
4329-792C	18X12	1	0	432	1050.51
4329-794C	18X14	1	0	432	1021.39
4329-796C	18X16	1	0	432	633.68
4329-814C	20X4	1	0	432	2205.26
4329-816C	20X6	1	0	432	1778.45
4329-818C	20X8	1	0	432	1515.09
4329-820C	20X10	1	0	432	1429.32
4329-822C	20X12	1	0	432	1370.56
4329-824C	20X14	1	0	432	1293.01
4329-826C	20X16	1	0	432	1269.95
4329-828C	20X18	1	0	432	925.63
4329-904C	24X4	1	0	432	2833.35
4329-906C	24X6	1	0	432	2282.32
4329-908C	24X8	1	0	432	1968.77
4329-910C	24X10	1	0	432	1841.96
4329-912C	24X12	1	0	432	1772.81
4329-914C	24X14	1	0	432	1672.46
4329-916C	24X16	1	0	432	2282.67
4329-918C	24X18	1	0	432	1481.63
4329-920C	24X20	1	0	432	1469.36

CPVC Sleeve Coupling

Socket (No Stop)

4329S-060C	6	1	5	433	95.66
4329S-080C	8	1	6	433	122.84
4329S-100C	10	1	0	433	161.93
4329S-120C	12	1	3	433	180.45
4329S-140C	14	1	2	433	223.28
4329S-160C	16	1	0	433	243.82
4329S-180C	18	1	2	433	304.73
4329S-200C	20	1	2	433	383.84
4329S-240C	24	1	2	433	471.27

CPVC Flat Cap

Belled Socket

4347-060C	6	1	6	432	164.84
4347-080C	8	1	5	432	196.39
4347-100C	10	1	4	432	228.97
4347-120C	12	1	5	432	261.46
4347-140C	14	1	4	432	294.17
4347-160C	16	1	2	432	338.01
4347-180C	18	1	5	432	426.78
4347-200C	20	1	5	432	612.77
4347-240C	24	1	5	432	653.85

CPVC Rain Cap

Belled Socket Style A

4347-060AC	6	1	2	432	778.84
4347-080AC	8	1	0	432	1065.66
4347-100AC	10	1	0	432	1238.94
4347-120AC	12	1	0	432	1498.81
4347-140AC	14	1	0	432	2022.99
4347-160AC	16	1	0	432	2308.48
4347-180AC	18	1	0	432	2660.46
4347-200AC	20	1	0	432	3884.20
4347-240AC	24	1	0	432	4582.34

PVC & CPVC Duct Fittings

CPVC Rain Cap
Belled Socket Style B

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4347-060BC	6	1	0	432	697.25
4347-080BC	8	1	0	432	1033.97
4347-100BC	10	1	0	432	1253.53
4347-120BC	12	1	0	432	1506.33
4347-140BC	14	1	0	432	2030.46
4347-160BC	16	1	0	432	2312.04
4347-180BC	18	1	0	432	2834.09
4347-200BC	20	1	0	432	4168.22
4347-240BC	24	1	0	432	4539.20

CPVC Flange - SMACNA
Belled Socket One Piece

SMACNA Bolt Pattern

4351S-060C	6	1	4	432	203.36
4351S-080C	8	1	2	432	235.38
4351S-100C	10	1	4	432	290.58
4351S-120C	12	1	2	432	309.06
4351S-140C	14	1	0	432	358.39
4351S-160C	16	1	4	432	417.05
4351S-180C	18	1	0	432	557.87
4351S-200C	20	1	0	432	677.37
4351S-240C	24	1	0	432	954.24

Also available in ANSI Class 150 Bolt Pattern.

CPVC Flange, Blind
One Piece

Class 150 Bolt Pattern

4353-060C	6	1	36	432	204.69
4353-080C	8	1	36	432	235.20
4353-100C	10	1	18	432	283.69
4353-120C	12	1	4	432	311.93
4353-140C	14	1	6	432	370.51
4353-160C	16	1	0	432	407.99
4353-180C	18	1	0	432	580.07
4353-200C	20	1	14	432	718.74
4353-240C	24	1	0	432	958.88

CPVC Flange, Blind - SMACNA
One Piece

SMACNA Bolt Pattern

4353S-060C	6	1	52	432	217.77
4353S-080C	8	1	52	432	250.21
4353S-100C	10	1	52	432	301.80
4353S-120C	12	1	52	432	331.82
4353S-140C	14	1	52	432	394.17
4353S-160C	16	1	50	432	438.43
4353S-180C	18	1	50	432	617.13
4353S-200C	20	1	50	432	764.60
4353S-240C	24	1	57	432	1019.46

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CPVC Wye
Belled Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4375-060C	6	1	2	432	401.52
4375-080C	8	1	0	432	530.89
4375-100C	10	1	0	432	800.27
4375-120C	12	1	0	432	1014.26
4375-140C	14	1	0	432	2667.16

CPVC Wye (continued)
Belled Socket

4375-160C	16	1	0	432	4382.06
4375-180C	18	1	0	432	5221.37
4375-200C	20	1	0	432	7571.46
4375-240C	24	1	0	432	9881.69

CPVC Wye, Reducing
Belled Socket

4375-532C	6X4	1	2	432	405.54
4375-582C	8X4	1	2	432	490.65
4375-585C	8X6	1	0	432	494.04
4375-624C	10X4	1	0	432	586.49
4375-626C	10X6	1	0	432	598.46
4375-628C	10X8	1	0	432	710.47
4375-664C	12X4	1	0	432	670.74
4375-666C	12X6	1	0	432	690.45
4375-668C	12X8	1	0	432	806.37
4375-670C	12X10	1	0	432	1368.73
4375-694C	14X4	1	0	432	736.63
4375-696C	14X6	1	0	432	746.25
4375-698C	14X8	1	0	432	910.05
4375-700C	14X10	1	0	432	1060.51
4375-702C	14X12	1	0	432	2224.74
4375-754C	16X4	1	0	432	779.34
4375-756C	16X6	1	0	432	784.55
4375-758C	16X8	1	0	432	956.75
4375-760C	16X10	1	0	432	1139.04
4375-762C	16X12	1	0	432	1257.05
4375-764C	16X14	1	0	432	1378.12
4375-784C	18X4	1	0	432	844.53
4375-786C	18X6	1	0	432	856.66
4375-788C	18X8	1	0	432	1007.84
4375-790C	18X10	1	0	432	1244.24
4375-792C	18X12	1	0	432	1382.71
4375-794C	18X14	1	0	432	1657.34
4375-796C	18X16	1	0	432	1872.68
4375-814C	20X4	1	0	432	1543.13
4375-816C	20X6	1	0	432	1612.85
4375-818C	20X8	1	0	432	1749.76
4375-820C	20X10	1	0	432	1818.47
4375-822C	20X12	1	0	432	2271.45
4375-824C	20X14	1	0	432	2354.17
4375-826C	20X16	1	0	432	2542.56
4375-828C	20X18	1	0	432	2731.40
4375-904C	24X4	1	0	432	1733.51
4375-906C	24X6	1	0	432	1832.82
4375-908C	24X8	1	0	432	2102.01
4375-910C	24X10	1	0	432	2385.38
4375-912C	24X12	1	0	432	2566.85
4375-914C	24X14	1	0	432	2693.75
4375-916C	24X16	1	0	432	2827.23
4375-918C	24X18	1	0	432	3150.64
4375-920C	24X20	1	0	432	3513.84

CPVC Wye, Double
Belled Socket

4376-060C	6	1	0	432	389.40
4376-080C	8	1	0	432	518.29
4376-100C	10	1	0	432	552.47
4376-120C	12	1	0	432	776.30
4376-140C	14	1	0	432	3118.89
4376-160C	16	1	0	432	3638.44
4376-180C	18	1	0	432	4770.10

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC & CPVC Duct Fittings

CPVC Wye, Double (continued)
Belled Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4376-200C	20	1	0	432	6473.20
4376-240C	24	1	0	432	13018.11

CPVC Wye, Double Reducing
Belled Socket

CPVC Blast Gate
Belled End

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
43BG-060C	6	1	0	432	579.59
43BG-080C	8	1	2	432	710.85
43BG-100C	10	1	0	432	877.18
43BG-120C	12	1	0	432	1003.48
43BG-140C	14	1	2	432	1255.25
43BG-160C	16	1	0	432	1481.27
43BG-180C	18	1	0	432	1881.20

CPVC Blast Gate (continued)
Belled End

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
43BG-200C	20	1	0	432	2276.20
43BG-240C	24	1	0	432	3072.85

CPVC Butterfly Damper
Belled Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
43BD-060C	6	1	2	432	398.73
43BD-080C	8	1	4	432	435.55
43BD-100C	10	1	0	432	562.32
43BD-120C	12	1	4	432	682.36
43BD-140C	14	1	0	432	817.14
43BD-160C	16	1	0	432	949.45
43BD-180C	18	1	0	432	1212.74
43BD-200C	20	1	0	432	1467.73
43BD-240C	24	1	0	432	1990.68

PVC & CPVC Duct Hangers

Duct Hangers - PVC

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
43DH-060	6	1	0	430	112.38
43DH-080	8	1	0	430	119.95
43DH-100	10	1	0	430	130.95
43DH-120	12	1	0	430	138.30
43DH-140	14	1	0	430	149.20
43DH-160	16	1	0	430	165.29
43DH-180	18	1	0	430	196.05
43DH-200	20	1	0	430	245.24
43DH-240	24	1	0	430	286.51

Duct Hangers - CPVC

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
43DH-100C	10	1	0	432	235.16
43DH-120C	12	1	0	432	256.19
43DH-140C	14	1	0	432	271.59
43DH-160C	16	1	0	432	301.80
43DH-180C	18	1	0	432	342.90
43DH-200C	20	1	0	432	417.46
43DH-240C	24	1	0	432	556.35
43DH-060C	6	1	0	432	186.55
43DH-080C	8	1	0	432	203.97

Industrial Grade for General Purpose & Corrosive Vapor Fumes

Spears® Industrial Grade Fabricated PVC & CPVC Duct provides a light weight and low maintenance alternative to conventional metal ducting with superior chemical & corrosion resistance. Produced in a wide variety of sizes and configurations from 6" through 24" Seamless Extruded Round Duct and Cold Rolled Fabricated Duct in larger sizes with custom fabrication available to virtually any size and shape.

Thermoplastic Duct & Fittings Construction

Spears® Fabricated duct and fittings are manufactured in accordance with applicable guidelines and requirements to assure sound, reliable construction, performance and compatibility that meet customer design specifications. Included with our high quality standard duct line, Spears® offers duct product designed to the Sheet Metal and Air Conditioning Contractors' National Association (SMACNA) requirements.

Chemical & Corrosion Resistant PVC & CPVC Construction

Unlike metal, PVC & CPVC Duct never rusts, scales or pits remaining virtually maintenance free for years. Spears® Fabricated Duct & Duct Fittings are produced from premium quality PVC & CPVC materials conforming to ASTM D1784.

Custom Fabricated Duct Fittings, Accessories & Complete Exhaust Systems

Spears® offers custom fabrication for a wide variety of specialty needs including:

- Square Duct
- Rectangular Duct
- Fume Hoods
- Fume Exhaust Systems

General Specifications for Round PVC & CPVC Duct Fittings

Materials

All fabricated duct fittings, sizes 6" to 24", shall be constructed from ASTM D1784 PVC or CPVC seamless Extruded Duct. Sizes above 24" shall be custom produced from Cold Rolled PVC Type I & Type II, Grade I extruded sheet with thermal fused seam.

Elbow Conf gurations

Elbow angles are manufactured through the use of thermoforming and hot gas welding. Standard 45° elbows are offered 1-piece formed, with 2-piece or 3-piece welded. The 45° 3-piece meets SMACNA requirements. Standard 90° elbows are offered in 2-piece formed, with 3-piece or 5-piece welded. The 90° 5-piece meets SMACNA requirements. Additional elbow configurations meeting SMACNA requirements are available upon request.

Flange Conf gurations

Flanges are fabricated to SMACNA bolt pattern specifications and can be provided in ANSI Class 150 bolt patterns.

Maximum Service Temperatures

PVC = 140°F; CPVC = 200°F

Joining Methods

Solvent cement, hot-gas welding, or flanged connections.

Cold Rolled Fabricated Round Duct

Round duct nominal size 26" to 48" is cold rolled from extruded PVC or CPVC sheet material. The seam is thermal fused utilizing a computerized welding machine. The sheet edges are heated and pressed together pneumatically, achieving 100% weld strength using no filler rod. Wall thickness is 3/16" for sizes up to 32" diameter. Above 32" diameter, 1/4" material will be used, unless otherwise specified. Cold rolled duct is produced in 4 foot lengths. Large duct fittings can be fabricated to order. Contact Spears® with requirements for additional information.

SMACNA Flange Bolt Pattern Dimensions

Nominal Duct Size	Flange Outside Dia.	Flange Thickness	Bolt Circle Dia.	Bolt Hole Dia	No. Of Bolts
6	10"	1/4"	8-1/2"	5/16"	8
7	11"	1/4"	9-1/2"	5/16"	8
8	12"	1/4"	10-1/2"	5/16"	10
9	13"	1/4"	11-1/2"	5/16"	10
10	14"	1/4"	12-1/2"	5/16"	12
11	15"	1/4"	13-1/2"	5/16"	12
12	16"	1/4"	14-3/8"	5/16"	16
14	18"	1/4"	16-1/2"	5/16"	16
16	20"	1/4"	18-1/2"	5/16"	18
18	22"	1/4"	20-1/2"	5/16"	20
20	24"	1/4"	22-1/2"	5/16"	22
24	28"	1/4"	26-1/2"	5/16"	24

Dimensions

Round Duct socket dimensions shall meet the requirements of the Sheet Metal and Air Conditioning Contractors' National Association Thermoplastic Duct Construction Manual. Fittings shall be constructed from seamless duct meeting the following dimensional specifications. All dimensions are in inches:

Size	Average O.D.	Average O.D. TOL.	Out of Round[1]	Min. Wall	Max. Wall	WT (lbs.) Per Ft.
6"	6.625	± .020	± .050	.172	.202	2.555
8"	8.625	± .020	± .075	.172	.202	3.349
10"	10.750	± .025	± .075	.172	.202	4.192
12"	12.750	± .025	± .075	.172	.202	4.986
14"	14.000	± .030	± .075	.172	.202	5.485
16"	16.000	± .030	± .075	.172	.202	6.273
18"	18.000	± .040	± .080	.172	.202	7.580
20"	20.000	± .070	± .140	.199	.239	9.146
24"	24.000	± .090	± .180	.230	.270	12.536

1 : Out-of-Round as produced at factory.

Negative Pressure Ratings

PVC MAX. Internal Negative Pressure Rating
Inches of Water @ Various Temperatures °F

	TEMPERATURE °F							
Size (in.)	73	80	90	100	110	120	130	140
6"	415	365	311	257	212	166	129	91
8"	188	166	141	117	96	75	58	41
10"	97	85	73	60	50	39	30	21
12"	58	51	44	36	30	23	18	13
14"	44	39	33	27	22	18	14	10
16"	29	26	22	18	15	12	9	6
18"	21	18	16	13	11	8	6	4
20"	24	21	18	15	12	10	7	5
24"	21	18	16	13	11	8	6	4

PSI = Inches of Water x .0361; Inches of Mercury = Inches of Water x .07355

Positive Pressure Ratings

PVC MAX. Internal Positive Pressure Rating
PSI @ Various Temperatures °F

	TEMPERATURE °F							
Size (in.)	73	80	90	100	110	120	130	140
6"	70	62	52	43	35	28	22	15
8"	53	47	40	33	27	21	16	12
10"	43	39	32	27	22	17	13	9
12"	36	32	27	22	18	14	11	8
14"	33	29	25	20	17	13	10	7
16"	28	25	21	17	14	11	9	6
18"	25	22	19	15	13	10	8	5
20"	26	23	20	16	13	10	8	6
24"	25	22	19	15	13	10	8	5

CPVC MAX. Internal Negative Pressure Rating
Inches of Water @ Various Temperature °F

	TEMPERATURE °F						
Size (in.)	73	100	120	140	160	180	200
6"	426	371	316	263	208	153	98
8"	193	168	143	118	93	70	45
10"	100	86	73	60	48	35	23
12"	60	51	43	36	28	20	13
14"	45	38	33	26	21	15	10
16"	30	26	21	18	13	10	6
18"	26	23	20	16	13	10	6
20"	28	25	21	16	13	10	6
24"	20	18	15	13	10	6	3

PSI = Inches of Water x .0361; Inches of Mercury = Inches of Water x .07355

CPVC MAX. Internal Positive Pressure Rating
PSI @ Various Temperatures °F

	TEMPERATURE °F						
Size (in.)	73	100	120	140	160	180	200
6"	70	56	45	35	26	16	13
8"	53	43	33	26	20	13	10
10"	43	35	28	21	16	10	8
12"	36	30	23	18	15	8	6
14"	33	26	21	16	13	8	6
16"	28	23	18	13	11	6	5
18"	25	20	15	11	10	5	5
20"	26	21	16	13	10	6	5
24"	25	20	15	11	10	5	5

Hanger & Support Spacing

Support spacing is based on duct diameter, system temperature, location of stress loads, and loads from solids accumulation in the system. Heavy system components and loads must be independently supported. Secure hangers and supports to building structure to prevent vibration and properly aligned to prevent stress on the system. Use hangers with an adequate load-bearing surface free of rough or sharp edges and of a type that will not restrict linear movement of the system due to expansion and contraction. Avoid over tightening.

Duct Size (in.)	PVC Maximum Hanger Support Spacing (ft.)							
	Temperature °F							
	73	80	90	100	110	120	130	140
6"	10	10	9.5	9	8.5	8	7.5	6.5
8"	10	10	10	10	9	9	8	7.5
10"	10	10	10	10	10	10	9	8.5
12"	12	12	12	12	10	10	10	9.5
14"	12	12	12	12	11.5	11.5	11	10
16"	12	12	12	12	12	12	11	10
18"	12	12	12	12	12	12	11.5	11
20"	12	12	12	12	12	12	12	11.5
24"	12	12	12	12	12	12	12	12

Duct Size (in.)	CPVC Maximum Hanger Support Spacing (ft.)						
	Temperature °F						
	73	100	120	140	160	180	200
6"	10	10	10	10	10	8	8
8"	10	10	10	10	10	8	8
10"	10	10	10	10	10	10	10
12"	10	10	10	10	10	10	10
14"	12	12	12	12	10	10	10
16"	12	12	12	12	12	10	10
18"	12	12	12	12	12	12	12
20"	12	12	12	12	12	12	12
24"	12	12	12	12	12	12	12

Thermal Expansion & Contraction

Thermal expansion and contraction of the system must be properly addressed during system design and installation. In-line expansion joints or use of the system's inherent line flexibility can be used to construct expansion loops and offsets as required. The expansion or contraction rate of Spears® PVC or CPVC Duct can be calculated using the coefficient of linear expansion (y) in the following formula:

$\Delta L = 12\ yL\ (\Delta T)$

where: ΔL = expansion or contraction of duct in inches

y for **PVC** = 2.9×10^{-5} in/in/°F

-OR-

y for **CPVC** = 3.2×10^{-5} in/in/°F

L = Length of duct run in feet

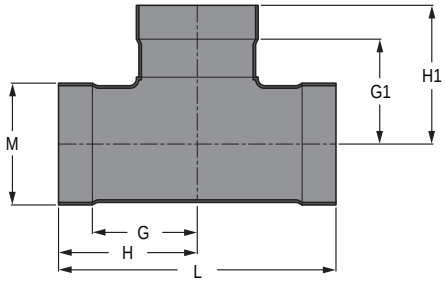
ΔT = Temperature change °F (T max. - T min.)

T max. = maximum change in operating temperature (°F)

T min. = temperature at time of installation (°F)

TEE

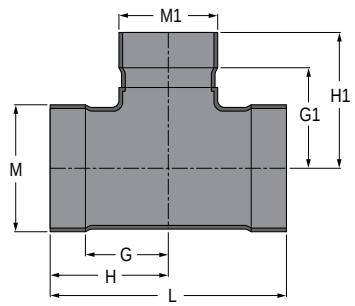
Belled Socket



PART NUMBER		SIZE	G	G1	H	H1	L	M
PVC	CPVC							
4301-060	4301-060C	6	6	6-1/8	8-1/2	8-5/8	17	7
4301-080	4301-080C	8	7	7-1/8	9-1/2	9-5/8	19	9
4301-100	4301-100C	10	8	8-11/16	10-1/2	11-3/16	21	11-1/8
4301-120	4301-120C	12	9 -1/16	9-11/16	11-9/16	12-3/16	23-1/8	13-1/8
4301-140	4301-140C	14	9-3/4	10-13/16	12-1/4	13-5/16	24-1/2	14-3/8
4301-160	4301-160C	16	10-3/4	11-13/16	13-1/4	14-5/16	26-1/2	16-3/8
4301-180	4301-180C	18	11-3/4	12-13/16	14-1/4	15-5/16	28-1/2	18-3/8
4301-200	4301-200C	20	12-3/4	13-3/4	15-1/4	16-1/4	30-1/2	20-7/16
4301-240	4301-240C	24	14-3/4	16-1/2	17-1/4	19	34-1/2	24-1/2

REDUCING TEE

Belled Socket

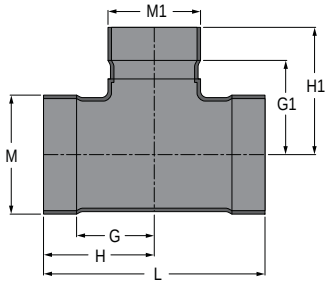


PART NUMBER		SIZE	G	G1	H	H1	L	M	M1
PVC	CPVC								
4301-532	4301-532C	6x4	5	6-7/16	7-1/2	8-15/16	15	7	5
4301-582	4301-582C	8x4	5	7-7/16	7-1/2	9-15/16	15	9	5
4301-585	4301-585C	8x6	6	7-1/8	8-1/2	9-5/8	17	9	7
4301-624	4301-624C	10x4	5	8-1/2	7-1/2	11	15	11-1/8	5
4301-626	4301-626C	10x6	6	8-3/16	8-1/2	10-11/16	17	11-1/8	7
4301-628	4301-628C	10x8	7	8-3/16	9-1/2	10-11/16	19	11-1/8	9
4301-664	4301-664C	12x4	5	9-1/2	7-1/2	12	15	13-1/8	5
4301-666	4301-666C	12x6	6	9-3/16	8-1/2	11-11/16	17	13-1/8	7
4301-668	4301-668C	12x8	7	9-3/16	9-1/2	11-11/16	19	13-1/8	9
4301-670	4301-670C	12x10	8	9-11/16	10-1/2	12-3/16	21	13-1/8	11-1/8
4301-694	4301-694C	14x4	5	11-1/8	7-1/2	13-5/8	15	14-3/8	5
4301-696	4301-696C	14x6	6	10-13/16	8-1/2	13-5/16	17	14-3/8	7
4301-698	4301-698C	14x8	7	10-13/16	9-1/2	13-5/16	19	14-3/8	9
4301-700	4301-700C	14x10	8	10-13/16	10-1/2	13-5/16	21	14-3/8	11-1/8

REDUCING TEE

Belled Socket

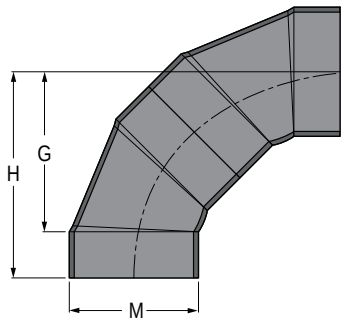
(continued)



PART NUMBER		SIZE	G	G1	H	H1	L	M	M1
PVC	CPVC								
4301-702	4301-702C	14x12	9-1/16	10-13/16	11-9/16	13-5/16	23-1/8	14-3/8	13-1/8
4301-754	4301-754C	16x4	5	12-1/8	7-1/2	14-5/8	15	16-3/8	5
4301-756	4301-756C	16x6	6	11-13/16	8-1/2	14-5/16	17	16-3/8	7
4301-758	4301-758C	16x8	7	11-13/16	9-1/2	14-5/16	19	16-3/8	9
4301-760	4301-760C	16x10	8	11-13/16	10-1/2	14-5/16	21	16-3/8	11-1/8
4301-762	4301-762C	16x12	9-1/16	11-13/16	11-9/16	14-5/16	23-1/8	16-3/8	13-1/8
4301-764	4301-764C	16x14	9-3/4	11-13/16	12-1/4	14-5/16	24-1/2	16-3/8	14-3/8
4301-784	4301-784C	18x4	5	13-1/8	7-1/2	15-5/8	15	18-3/8	5
4301-786	4301-786C	18x6	6	12-13/16	8-1/2	15-5/16	17	18-3/8	7
4301-788	4301-788C	18x8	7	12-13/16	9-1/2	15-5/16	19	18-3/8	9
4301-790	4301-790C	18x10	8	12-13/16	10-1/2	15-5/16	21	18-3/8	11-1/8
4301-792	4301-792C	18x12	9-1/16	12-13/16	11-9/16	15-5/16	23-1/8	18-3/8	13-1/8
4301-794	4301-794C	18x14	9-3/4	12-13/16	12-1/4	15-5/16	24-1/2	18-3/8	14-3/8
4301-796	4301-796C	18x16	10-3/4	12-13/16	13-1/4	15-5/16	26-1/2	18-3/8	16-3/8
4301-814	4301-814C	20x4	5	14-1/16	7 -1/2	16-9/16	15	20-7/16	5
4301-816	4301-816C	20x6	6	13-3/4	8-1/2	16-1/4	17	20-7/16	7
4301-818	4301-818C	20x8	7	13-3/4	9-1/2	16-1/4	19	20-7/16	9
4301-820	4301-820C	20x10	8	13-3/4	10-1/2	16-1/4	21	20-7/16	11-1/8
4301-822	4301-822C	20x12	9-1/16	13-3/4	11-9/16	16-1/4	23-1/8	20-7/16	13-1/8
4301-824	4301-824C	20x14	9-3/4	13-3/4	12-1/4	16-1/4	24-1/2	20-7/16	14-3/8
4301-826	4301-826C	20x16	10-3/4	13-3/4	13-1/4	16-1/4	26-1/2	20-7/16	16-3/8
4301-828	4301-828C	20x18	11-3/4	13-3/4	14-1/4	16-1/4	28-1/2	20-7/16	18-3/8
4301-904	4301-904C	24x4	5	16-1/16	7-1/2	18-9/16	15	24-1/2	5
4301-906	4301-906C	24x6	6	15-3/4	8-1/2	18-1/4	17	24-1/2	7
4301-908	4301-908C	24x8	7	15-3/4	9-1/2	18-1/4	19	24-1/2	9
4301-910	4301-910C	24x10	8	15-3/4	10-1/2	18-1/4	21	24-1/2	11-1/8
4301-912	4301-912C	24x12	9-1/16	15-3/4	11-9/16	18-1/4	23-1/8	24-1/2	13-1/8
4301-914	4301-914C	24x14	9-3/4	15-3/4	12-1/4	18-1/4	24-1/2	24-1/2	14-3/8
4301-916	4301-916C	24x16	10-3/4	15-1/4	13-1/4	17-3/4	26-1/2	24-1/2	16-3/8
4301-918	4301-918C	24x18	11-3/4	15-3/4	14-1/4	18-1/4	28-1/2	24-1/2	18-3/8
4301-920	4301-920C	24x20	12-3/4	15-3/4	15-1/4	18-1/4	30-1/2	24-1/2	20-7/16

90° ELBOW

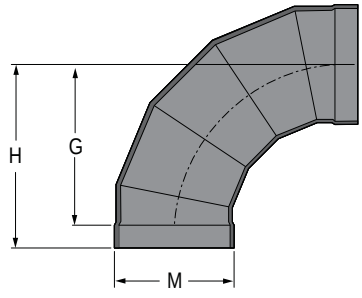
Belled Socket



PART NUMBER		SIZE	G	H	M
PVC	CPVC				
4306-060	4306-060C	6	8-5/16	10-13/16	7
4306-080	4306-080C	8	9-5/16	11-13/16	9
4306-100	4306-100C	10	10-3/8	12-7/8	11-1/8
4306-120	4306-120C	12	11-3/8	13-7/8	13-1/8
4306-140	4306-140C	14	12-11/16	15-3/16	14-3/8
4306-160	4306-160C	16	13-11/16	16-3/16	16-3/8
4306-180	4306-180C	18	14-11/16	17-3/16	18-3/8
4306-200	4306-200C	20	15-11/16	18-3/16	20-7/16
4306-240	4306-240C	24	17-3/4	20-1/4	24-1/2

90° ELBOW SMACNA 5-PIECE

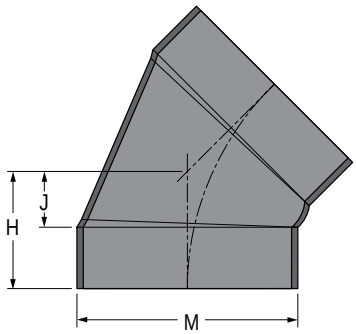
Belled Socket



PART NUMBER		SIZE	G	H	M
PVC	CPVC				
43065-060	43065-060C	6	9-7/8	12-3/8	7
43065-080	43065-080C	8	12-1/2	15	9
43065-100	43065-100C	10	15-1/16	17-9/16	11-1/8
43065-120	43065-120C	12	17-5/8	20-1/8	13-1/8
43065-140	43065-140C	14	20-1/8	22-5/8	14-3/8
43065-160	43065-160C	16	22-7/8	25-3/8	16-3/8
43065-180	43065-180C	18	25-7/16	27-15/16	18-3/8
43065-200	43065-200C	20	28	30-1/2	20-7/16
43065-240	43065-240C	24	33-1/2	36	24-1/2

45° ELBOW

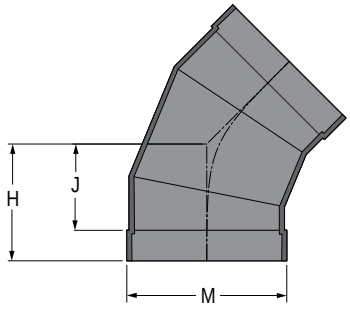
Belled Socket



PART NUMBER		SIZE	H	J	M
PVC	CPVC				
4317-060	4317-060C	6	4-1/2	2	7
4317-080	4317-080C	8	4-7/8	2-3/8	9
4317-100	4317-100C	10	5-3/8	2-7/8	11-1/8
4317-120	4317-120C	12	5-3/4	3-1/4	13-1/8
4317-140	4317-140C	14	6-5/16	3-13/16	14-3/8
4317-160	4317-160C	16	6-11/16	4-3/16	16-3/8
4317-180	4317-180C	18	7-1/8	4-5/8	18-3/8
4317-200	4317-200C	20	7-9/16	5-1/16	20-7/16
4317-240	4317-240C	24	8-3/8	5-7/8	24-1/2

45° ELBOW SMACNA 3-PIECE

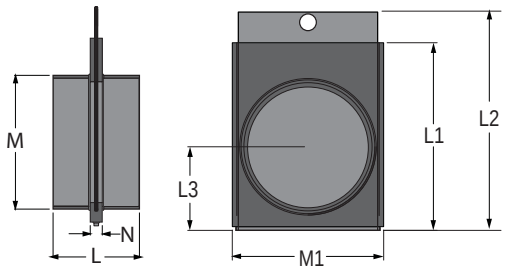
Belled Socket



PART NUMBER		SIZE	H	J	M
PVC	CPVC				
43173-060	43173-060C	6"	7-1/8	4-5/8	7
43173-080	43173-080C	8"	8	5-1/2	9
43173-100	43173-100C	10"	8-13/16	6-5/16	11-1/8
43173-120	43173-120C	12"	9-9/16	7-1/16	13-1/8
43173-140	43173-140C	14"	10-5/16	7-13/16	14-3/8
43173-160	43173-160C	16"	11-5/16	8-13/16	16-3/8
43173-180	43173-180C	18"	12-1/8	9-5/8	18-3/8
43173-200	43173-200C	20"	12-15/16	10-7/16	20-7/16
43173-240	43173-240C	24"	14-7/8	12-3/8	24-1/2

BLAST GATE

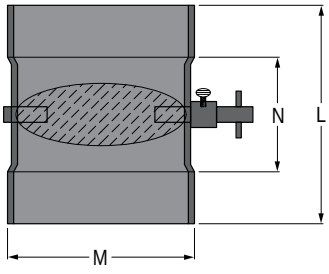
Belled End



PART NUMBER		Size	L	L1	L2	L3	M	M1	N
PVC	CPVC								
43BG-060	43BG-060C	6	5-13/16	11-3/4	10-1/4	4-1/2	7	8-1/2	13/16
43BG-080	43BG-080C	8	5-5/8	14	12-1/2	5-1/2	9	10-3/16	5/8
43BG-100	43BG-100C	10	5-13/16	16-1/8	14-5/8	6-7/8	11-1/8	13-1/4	13/16
43BG-120	43BG-120C	12	5-9/16	19	17-1/2	7-7/8	13-1/8	14	9/16
43BG-140	43BG-140C	14	5-5/8	22-1/4	20-3/4	8-1/2	14-3/8	16-5/8	5/8
43BG-160	43BG-160C	16	5-5/8	22-1/4	20-3/4	9-1/2	16-3/8	16-5/8	5/8
43BG-180	43BG-180C	18	5-5/8	25-1/4	23-3/4	10-1/2	18-3/8	19-5/8	5/8
43BG-200	43BG-200C	20	6	26-1/4	24-3/4	11-1/2	20-7/16	23-1/16	1
43BG-240	43BG-240C	24	6	31-5/16	29-13/16	13-9/16	24-1/2	27-3/16	1

BUTTERFLY DAMPER

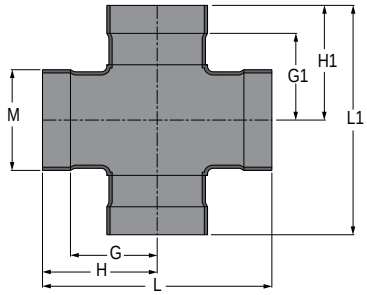
Belled Socket



PART NUMBER		Size	L	M	N
PVC	CPVC				
43BD-060	43BD-060C	6	8-1/4	7	3-1/4
43BD-080	43BD-080C	8	10-1/2	9	5-1/2
43BD-100	43BD-100C	10	13	11-1/8	8
43BD-120	43BD-120C	12	14-1/2	13-1/8	9-1/2
43BD-140	43BD-140C	14	14-1/2	14-3/8	9-1/2
43BD-160	43BD-160C	16	17	16-3/8	12
43BD-180	43BD-180C	18	20	18-3/8	15
43BD-200	43BD-200C	20	22	20-7/16	17
43BD-240	43BD-240C	24	26	24-1/2	21

CROSS

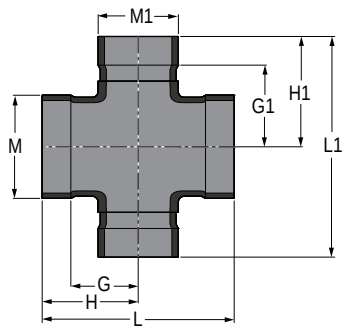
Belled Socket



PART NUMBER		Size	G	G1	H	H1	L	L1	M
PVC	CPVC								
4320-060	4320-060C	6	6	6-1/8	8-1/2	8-5/8	17	17-1/4	7
4320-080	4320-080C	8	7	7-1/8	9-1/2	9-5/8	19	19-1/4	9
4320-100	4320-100C	10	8	8-11/16	10-1/2	11-3/16	21	22-3/8	11 1/8
4320-120	4320-120C	12	9-1/16	9-11/16	11-9/16	12-3/16	23-1/8	24-3/8	13 1/8
4320-140	4320-140C	14	9-3/4	10-13/16	12-1/4	13-5/16	24-1/2	26-5/8	14 3/8
4320-160	4320-160C	16	10-3/4	11-13/16	13-1/4	14-5/16	26-1/2	28-5/8	16 3/8
4320-180	4320-180C	18	11-3/4	12-13/16	14-1/4	15-5/16	28-1/2	30-5/8	18 3/8
4320-200	4320-200C	20	12-3/4	13-3/4	15-1/4	16-1/4	30-1/2	32-1/2	20 7/16
4320-240	4320-240C	24	14-3/4	16-1/2	17-1/4	19	34-1/2	38	24 1/2

REDUCING CROSS

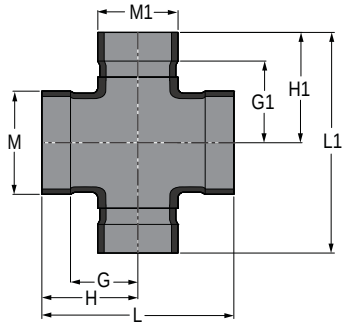
Belled Socket



PART NUMBER		Size	G	G1	H	H1	L	L1	M	M1
PVC	CPVC									
4320-532	4320-532C	6x4	5	6-7/16	7-1/2	8-15/16	15	17-7/8	7	5
4320-582	4320-582C	8x4	5	7-7/16	7-1/2	9-15/16	15	19-7/8	9	5
4320-585	4320-585C	8x6	6	7-1/8	8-1/2	9-5/8	17	19-1/4	9	7
4320-624	4320-624C	10x4	5	8-1/2	7-1/2	11	15	22	11-1/8	5
4320-626	4320-626C	10x6	6	8-3/16	8-1/2	10-11/16	17	21-3/8	11-1/8	7
4320-628	4320-628C	10x8	7	8-3/16	9-1/2	10-11/16	19	21-3/8	11-1/8	9
4320-664	4320-664C	12x4	5	9-1/2	7-1/2	12	15	24	13-1/8	5
4320-666	4320-666C	12x6	6	9	8-1/2	11-11/16	17	23-3/8	13-1/8	7
4320-668	4320-668C	12x8	7	9-3/16	9-1/2	11-11/16v	19	23-3/8	13-1/8	9
4320-670	4320-670C	12x10	8	9-3/16	10-1/2	12-3/16	21	24-3/8	13-1/8	11-1/8
4320-694	4320-694C	14x4	5	11-1/8	7-1/2	13-5/8	15	27-1/4	14-3/8	5
4320-696	4320-696C	14x6	6	10-13/16	8-1/2	13-5/16	17	26-5/8	14-3/8	7

REDUCING CROSS

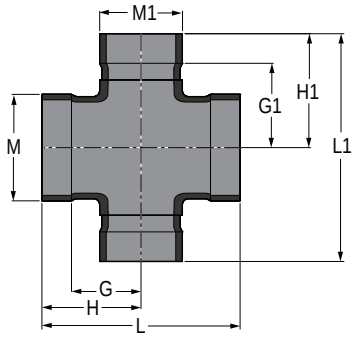
Belled Socket **(continued)**



PART NUMBER		Size	G	G1	H	H1	L	L1	M	M1
PVC	CPVC									
4320-698	4320-698C	14x8	7	10-13/16	9-1/2	13-5/16	19	26-5/8	14-3/8	9
4320-700	7320-700C	14x10	8	10-13/16	10-1/2	13-5/16	21	26-5/8	14-3/8	11-1/8
4320-702	4320-702C	14x12	9-1/16	10-13/16	11-9/16	13-5/16	23-1/8	26-5/8	14-3/8	13-1/8
4320-754	4320-754C	16x4	5	12-1/8	7-1/2	14-5/8	15	28-1/4	16-3/8	5
4320-756	4320-756C	16x6	6	11-13/16	8-1/2	14-5/16	17	28-5/8	16-3/8	7
4320-758	4320-758C	16x8	7	11-13/16	9-1/2	14-5/16	19	28-5/8	16-3/8	9
4320-760	4320-760C	16x10	8	11-13/16	10-1/2	14-5/16	21	28-5/8	16-3/8	11-1/8
4320-762	4320-762C	16x12	9-1/16	11-13/16	11-9/16	14-5/16	23-1/8	28-5/8	16-3/8	13-1/8
4320-764	4320-764C	16x14	9-3/4	11-13/16	12-1/4	14-5/16	24-1/2	28-5/8	16-3/8	14-3/8
4320-784	4320-784C	18x4	5	13-1/8	7-1/2	15-5/8	15	31-1/4	18-3/8	5
4320-786	4320-786C	18x6	6	12-13/16	8-1/2	15-5/16	17	30-5/8	18-3/8	7
4320-788	4320-788C	18x8	7	12-13/16	9-1/2	15-5/16	19	30-5/8	18-3/8	9
4320-790	4320-790C	18x10	8	12-13/16	10-1/2	15-5/16	21	30-5/8	18-3/8	11-1/8
4320-792	4320-792C	18x12	9-1/16	12-13/16	11-9/16	15-5/16	23-1/8	30-5/8	18-3/8	13-1/8
4320-794	4320-794C	18x14	9-3/4	12-13/16	12-1/4	15-5/16	24-1/2	30-5/8	18-3/8	14-3/8
4320-796	4320-796C	18x16	10-3/4	12-13/16	13-1/4	15-5/16	26-1/2	30-5/8	18-3/8	16-3/8
4320-814	4320-814C	20x4	5	14-1/16	7-1/2	16-9/16	15	33-1/8	20-7/16	5
4320-816	4320-816C	20x6	6	13-3/4	8-1/2	16-1/4	17	32-1/2	20-7/16	7
4320-818	4320-818C	20x8	7	13-3/4	9-1/2	16-1/4	19	32-1/2	20-7/16	9
4320-820	4320-820C	20x10	8	13-3/4	10-1/2	16-1/4	21	32-1/2	20-7/16	11-1/8
4320-822	4320-822C	20x12	9-1/16	13-3/4	11-9/16	16-1/4	23-1/8	32-1/2	20-7/16	13-1/8
4320-824	4320-824C	20x14	9-3/4	13-3/4	12-1/4	16-1/4	24-1/2	32-1/2	20-7/16	14-3/8
4320-826	4320-826C	20x16	10-3/4	13-3/4	13-1/4	16-1/4	26-1/2	32-1/2	20-7/16	16-3/8
4320-828	4320-828C	20x18	11-3/4	13-3/4	14-1/4	16-1/4	28-1/2	32-1/2	20-7/16	18-3/8
4320-904	4320-904C	24x4	5	16-1/16	7-1/2	18-9/16	15	37-1/8	24-1/2	5
4320-906	4320-906C	24x6	6	15-3/4	8-1/2	18-1/8	17	36-1/2	24-1/2	7
4320-908	4320-908C	24x8	7	15-3/4	9-1/2	18-1/4	19	36-1/2	24-1/2	9
4320-910	4320-910C	24x10	8	15-3/4	10-1/2	18-1/4	21	36-1/2	24-1/2	11-1/8
4320-912	4320-912C	24x12	9-1/16	15-3/4	11-9/16	18-1/4	23-1/8	36-1/2	24-1/2	13-1/8
4320-914	4320-914C	24x14	9-3/4	15-3/4	12-41/4	18-1/4	24-1/2	36-1/2	24-1/2	14-3/8
4320-916	4320-916C	24x16	10-3/4	15-1/4	13-1/4	17-3/4	26-1/2	35-1/2	24-1/2	16-3/8
4320-918	4320-918C	24x18	11-3/4	15-3/4	14-1/4	18-1/4	28-1/2	36-1/2	24-1/2	18-3/8
4320-920	4320-920C	24x20	12-3/4	15-3/4	15-1/4	18-1/4	30-1/2	36-1/2	24-1/2	20-7/16
4320-822	4320-822C	20x12	9 1/16	13 3/4	11 9/16	16 1/4	23 1/8	32 1/2	20 7/16	13 1/8

REDUCING CROSS

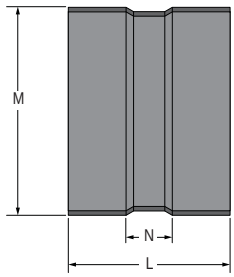
Belled Socket **(continued)**



PART NUMBER		Size	G	G1	H	H1	L	L1	M	M1
PVC	CPVC									
4320-698	4320-698C	14x8	7	10-13/16	9-1/2	13-5/16	19	26-5/8	14-3/8	9
4320-700	7320-700C	14x10	8	10-13/16	10-1/2	13-5/16	21	26-5/8	14-3/8	11-1/8
4320-702	4320-702C	14x12	9-1/16	10-13/16	11-9/16	13-5/16	23-1/8	26-5/8	14-3/8	13-1/8
4320-754	4320-754C	16x4	5	12-1/8	7-1/2	14-5/8	15	28-1/4	16-3/8	5
4320-756	4320-756C	16x6	6	11-13/16	8-1/2	14-5/16	17	28-5/8	16-3/8	7
4320-758	4320-758C	16x8	7	11-13/16	9-1/2	14-5/16	19	28-5/8	16-3/8	9
4320-760	4320-760C	16x10	8	11-13/16	10-1/2	14-5/16	21	28-5/8	16-3/8	11-1/8
4320-762	4320-762C	16x12	9-1/16	11-13/16	11-9/16	14-5/16	23-1/8	28-5/8	16-3/8	13-1/8
4320-764	4320-764C	16x14	9-3/4	11-13/16	12-1/4	14-5/16	24-1/2	28-5/8	16-3/8	14-3/8
4320-784	4320-784C	18x4	5	13-1/8	7-1/2	15-5/8	15	31-1/4	18-3/8	5
4320-786	4320-786C	18x6	6	12-13/16	8-1/2	15-5/16	17	30-5/8	18-3/8	7
4320-788	4320-788C	18x8	7	12-13/16	9-1/2	15-5/16	19	30-5/8	18-3/8	9
4320-790	4320-790C	18x10	8	12-13/16	10-1/2	15-5/16	21	30-5/8	18-3/8	11-1/8
4320-792	4320-792C	18x12	9-1/16	12-13/16	11-9/16	15-5/16	23-1/8	30-5/8	18-3/8	13-1/8
4320-794	4320-794C	18x14	9-3/4	12-13/16	12-1/4	15-5/16	24-1/2	30-5/8	18-3/8	14-3/8
4320-796	4320-796C	18x16	10-3/4	12-13/16	13-1/4	15-5/16	26-1/2	30-5/8	18-3/8	16-3/8
4320-814	4320-814C	20x4	5	14-1/16	7-1/2	16-9/16	15	33-1/8	20-7/16	5
4320-816	4320-816C	20x6	6	13-3/4	8-1/2	16-1/4	17	32-1/2	20-7/16	7
4320-818	4320-818C	20x8	7	13-3/4	9-1/2	16-1/4	19	32-1/2	20-7/16	9
4320-820	4320-820C	20x10	8	13-3/4	10-1/2	16-1/4	21	32-1/2	20-7/16	11-1/8
4320-822	4320-822C	20x12	9-1/16	13-3/4	11-9/16	16-1/4	23-1/8	32-1/2	20-7/16	13-1/8
4320-824	4320-824C	20x14	9-3/4	13-3/4	12-1/4	16-1/4	24-1/2	32-1/2	20-7/16	14-3/8
4320-826	4320-826C	20x16	10-3/4	13-3/4	13-1/4	16-1/4	26-1/2	32-1/2	20-7/16	16-3/8
4320-828	4320-828C	20x18	11-3/4	13-3/4	14-1/4	16-1/4	28-1/2	32-1/2	20-7/16	18-3/8
4320-904	4320-904C	24x4	5	16-1/16	7-1/2	18-9/16	15	37-1/8	24-1/2	5
4320-906	4320-906C	24x6	6	15-3/4	8-1/2	18-1/8	17	36-1/2	24-1/2	7
4320-908	4320-908C	24x8	7	15-3/4	9-1/2	18-1/4	19	36-1/2	24-1/2	9
4320-910	4320-910C	24x10	8	15-3/4	10-1/2	18-1/4	21	36-1/2	24-1/2	11-1/8
4320-912	4320-912C	24x12	9-1/16	15-3/4	11-9/16	18-1/4	23-1/8	36-1/2	24-1/2	13-1/8
4320-914	4320-914C	24x14	9-3/4	15-3/4	12-1/4	18-1/4	24-1/2	36-1/2	24-1/2	14-3/8
4320-916	4320-916C	24x16	10-3/4	15-1/4	13-1/4	17-3/4	26-1/2	35-1/2	24-1/2	16-3/8
4320-918	4320-918C	24x18	11-3/4	15-3/4	14-1/4	18-1/4	28-1/2	36-1/2	24-1/2	18-3/8
4320-920	4320-920C	24x20	12-3/4	15-3/4	15-1/4	18-1/4	30-1/2	36-1/2	24-1/2	20-7/16
4320-822	4320-822C	20x12	9 1/16	13 3/4	11 9/16	16 1/4	23 1/8	32 1/2	20 7/16	13 1/8

COUPLING

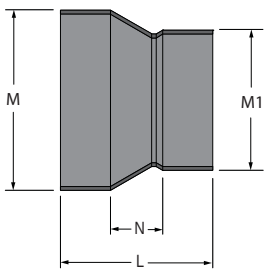
Belled Socket



PART NUMBER		SIZE	L	M	N
PVC	CPVC				
4329-060	4329-060C	6	7	7	2
4329-080	4329-080C	8	7	9	2
4329-100	4329-100C	10	7	11-1/8	2
4329-120	4329-120C	12	7	13-1/8	2
4329-140	4329-140C	14	7	14-3/8	2
4329-160	4329-160C	16	7	16-3/8	2
4329-180	4329-180C	18	7	18-3/8	2
4329-200	4329-200C	20	7-1/2	20-7/16	2-1/2
4329-240	4329-240C	24	7-1/2	24-1/2	2-1/2

REDUCER COUPLING

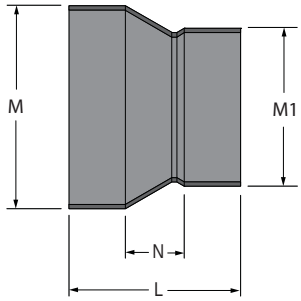
Belled Socket



PART NUMBER		SIZE	L	M	M1	N
PVC	CPVC					
4329-532	4329-532C	6x4	8-3/8	7-1/8	5	3-3/8
4329-582	4329-582C	8x4	13-7/16	9	5	8-7/16
4329-585	4329-585C	8x6	7-5/8	9	7	2-5/8
4329-624	4329-624C	10x4	18-5/8	11-1/8	5	13-5/8
4329-626	4329-626C	10x6	12-13/16	11-1/8	7	7-13/16
4329-628	4329-628C	10x8	7-15/16	11-1/8	9	2-15/16
4329-664	4329-664C	12x4	23-5/8	13-1/8	5	18-5/8
4329-666	4329-666C	12x6	17-7/8	13-1/8	7	12-7/8
4329-668	4329-668C	12x8	13	13-1/8	9	8
4329-670	4329-670C	12x10	7-13/16	13-1/8	11-1/8	2-13/16

REDUCER COUPLING

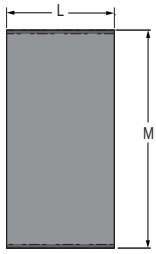
Belled Socket **(continued)**



PART NUMBER		SIZE	L	M	M1	N
PVC	CPVC					
4329-694	4329-694C	14x4	28-1/16	14-3/8	5	23-1/16
4329-696	4329-696C	14x6	22-1/4	14-3/8	7	17-1/4
4329-698	4329-698C	14x8	17-3/8	14-3/8	9	12-3/8
4329-700	4329-700C	14x10	12-3/16	14-3/8	11-1/8	7-3/16
4329-702	4329-702C	14x12	7-3/16	14-3/8	13-1/8	2-3/16
4329-754	4329-754C	16x4	33-1/8	16-3/8	5	28-1/8
4329-756	4329-756C	16x6	27-5/16	16-3/8	7	22-5/16
4329-758	4329-758C	16x8	22-7/16	16-3/8	9	17-7/16
4329-760	4329-760C	16x10	17-1/4	16-3/8	11-1/8	12-1/4
4329-762	4329-762C	16x12	12-3/16	16-3/8	13-1/8	7-3/16
4329-764	4329-764C	16x14	7-13/16	16-3/8	14-3/8	2-13/16
4329-784	4329-784C	18x4	38-3/16	18-3/8	5	33-3/16
4329-786	4329-786C	18x6	32-3/8	18-3/8	7	27-3/8
4329-788	4329-788C	18x8	27-1/2	18-3/8	9	22-1/2
4329-790	4329-790C	18x10	22-5/16	18-3/8	11-1/8	17-5/16
4329-792	4329-792C	18x12	17-1/4	18-3/8	13-1/8	12-1/4
4329-794	4329-794C	18x14	12-7/8	18-3/8	14-3/8	7-7/8
4329-796	4329-796C	18x16	7-13/16	18-3/8	16-3/8	2-13/16
4329-814	4329-814C	20x4	43-1/4	20-3/8	5	38-1/4
4329-816	4329-816C	20x6	37-7/16	20-3/8	7	32-7/16
4329-818	4329-818C	20x8	32-9/16	20-3/8	9	27-9/16
4329-820	4329-820C	20x10	27-3/8	20-3/8	11-1/8	22-3/8
4329-822	4329-822C	20x12	22-5/16	20-3/8	13-1/8	17-5/16
4329-824	4329-824C	20x14	17-15/16	20-3/8	14-3/8	12-15/16
4329-826	4329-826C	20x16	12-7/8	20-3/8	16-3/8	7-7/8
4329-828	4329-828C	20x18	7-7/8	20-3/8	18-3/8	2-7/8
4329-904	4329-904C	24x4	50-5/8	24-1/2	5	45-5/8
4329-906	4329-906C	24x6	44-13/16	24-1/2	7	39-13/16
4329-908	4329-908C	24x8	39-15/16	24-1/2	9	34-15/16
4329-910	4329-910C	24x10	34-3/4	24-1/2	11-1/8	29-3/4
4329-912	4329-912C	24x12	29-3/4	24-1/2	13-1/8	24-3/4
4329-914	4329-914C	24x14	25-5/16	24-1/2	14-3/8	20-5/16
4329-916	4329-916C	24x16	19-3/4	24-1/2	16-3/8	14-3/4
4329-918	4329-918C	24x18	14-3/4	24-1/2	18-3/8	9-3/4
4329-920	4329-920C	24x20	9-7/16	24-1/2	20-3/8	4-7/16

SLEEVE COUPLING

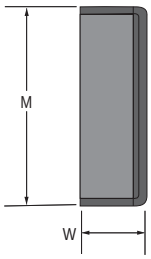
Socket (No Stop)



PART NUMBER		SIZE	L	M
PVC	CPVC			
4329S-060	4329S-060C	6	6	7
4329S-080	4329S-080C	8	6	9
4329S-100	4329S-100C	10	6	11-1/8
4329S-120	4329S-120C	12	6	13-1/8
4329S-140	4329S-140C	14	6	14-3/8
4329S-160	4329S-160C	16	6	16-3/8
4329S-180	4329S-180C	18	6	18-3/8
4329S-200	4329S-200C	20	6	20-7/16
4329S-240	4329S-240C	24	6	24-1/2

FLAT CAP

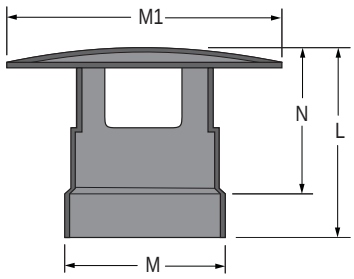
Bell Socket



PART NUMBER		SIZE	W	M
PVC	CPVC			
4347-060	4347-060C	6	3-1/4	7
4347-080	4347-080C	8	3-1/4	9
4347-100	4347-100C	10	3-3/16	11-1/4
4347-120	4347-120C	12	3-1/4	13-1/4
4347-140	4347-140C	14	3-1/4	14-3/8
4347-160	4347-160C	16	2-15/16	16-3/8
4347-180	4347-180C	18	3-1/4	18-3/8
4347-200	4347-200C	20	3	20-7/16
4347-240	4347-240C	24"	3 1/4	24 1/2

RAIN CAP

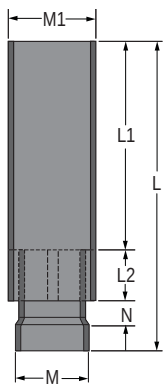
Belled Socket Style A



PART NUMBER		SIZE	L	M	M1	N
PVC	CPVC					
4347-060A	4347-060AC	6	8-13/16	7	12	6-5/16
4347-080A	4347-080AC	8	11-3/8	9	16	8-7/8
4347-100A	4347-100AC	10	12-3/8	11-1/8	20	9-7/8
4347-120A	4347-120AC	12	15	13-1/8	24	12-1/2
4347-140A	4347-140AC	14	17-13/16	14-3/8	28	15-5/16
4347-160A	4347-160AC	16	18-11/16	16-3/8	32	16-3/16
4347-180A	4347-180AC	18	20-7/8	18-3/8	36	18-3/8
4347-200A	4347-200AC	20	21-7/8	20-7/16	40	19-3/8
4347-240A	4347-240AC	24	25-1/16	24-1/2	48	22-9/16

RAIN CAP

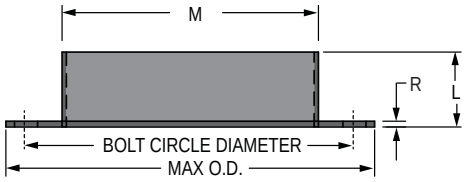
Belled Socket Style B



PART NUMBER		Size	L	L1	L2	M	M1	N
PVC	CPVC							
4347-060B	4347-060BC	6	34-1/2	24	6	7	8-5/8	2
4347-080B	4347-080BC	8	42-1/2	32	6	9	10-3/4	2
4347-100B	4347-100BC	10	50-1/2	40	6	11-1/8	12-3/4	2
4347-120B	4347-120BC	12	58-1/2	48	6	13-1/8	14	2
4347-140B	4347-140BC	14	66-1/2	56	6	14-3/8	16	2
4347-160B	4347-160BC	16	74-1/2	64	6	16-3/8	18	2
4347-180B	4347-180BC	18	82-1/2	72	6	18-3/8	20	2
4347-200B	4347-200BC	20	90-1/2	80	6	20-7/16	24	2
4347-240B	4347-240BC	24	109-1/2	96	6	2	24 -1/2	26

DUCT FLANGE SMACNA BOLT PATTERN

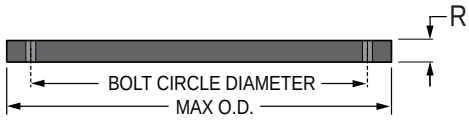
Belled Socket One Piece



PART NUMBER		Size	L		M	R		BOLT CIRCLE DIA.	NO. OF BOLT HOLES	HOLE SIZE	MAX O.D.
PVC	CPVC		PVC	CPVC		PVC	CPVC				
4351S-060	4351S-060C	6	3-1/2	2-11/16	7	3/16	3/16	8-1/2	8	5/16	10
4351S-080	4351S-080C	8	3-1/2	2-11/16	9	3/16	3/16	10-1/2	10	5/16	12
4351S-100	4351S-100C	10	3-1/2	2-11/16	11-1/8	3/16	3/16	12-1/2	12	5/16	14
4351S-120	4351S-120C	12	3/16	1/4	13-1/8	3/16	1/4	14-3/8	16	5/16	16
4351S-140	4351S-140C	14	3/16	1/4	14-3/8	3/16	1/4	16-1/2	16	5/16	18
4351S-160	4351S-160C	16	1/4	1/4	16-3/8	1/4	1/4	18-1/2	18	5/16	20
4351S-180	4351S-180C	18	1/4	1/4	18-3/8	1/4	1/4	20-1/2	20	5/16	22
4351S-200	4351S-200C	20	1/4	1/4	20-7/16	1/4	1/4	22-1/2	22	5/16	24
4351S-240	4351S-240C	24	1/4	1/4	24-1/2	1/4	1/4	26-1/2	24	5/16	28

BLIND DUCT FLANGE CLASS 150 BOLT PATTERN

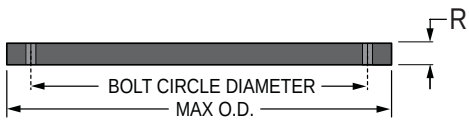
One Piece



PART NUMBER		Size	R	BOLT CIRCLE DIA.	NO. OF BOLT HOLES	HOLE SIZE	MAX O.D.
PVC	CPVC						
4353-060	4353-060C	6	1/4	9-1/2	8	7/8	11
4353-080	4353-080C	8	1/4	11-3/4	8	7/8	13-1/2
4353-100	4353-100C	10	1/4	14-1/4	12	1	16
4353-120	4353-120C	12	1/4	17	12	1	19
4353-140	4353-140C	14	1/4	18-3/4	12	1-1/8	21
4353-160	4353-160C	16	1/4	21-1/4	16	1-1/8	23-1/2
4353-180	4353-180C	18	1/4	22-3/4	16	1-1/4	25
4353-200	4353-200C	20	1/4	25	20	1-1/4	27-1/2
4353-240	4353-240C	24	1/4	29-1/2	20	1-/8	32

BLIND DUCT FLANGE SMACNA BOLT PATTERN

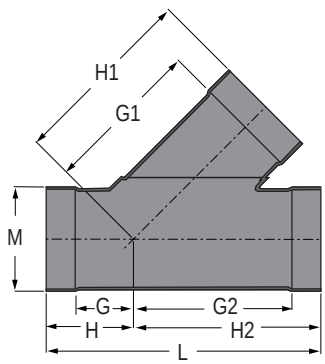
One Piece



PART NUMBER		Size	R	BOLT CIRCLE DIA.	NO. OF BOLT HOLES	HOLE SIZE	O.D.
PVC	CPVC						
4353S-060	4353S-060C	6	1/4	8-1/2	8	5/16	10
4353S-080	4353S-080C	8	1/4	10-1/2	10	5/16	12
4353S-100	4353S-100C	10	1/4	12-1/2	12	5/16	14
4353S-120	4353S-120C	12	1/4	14-3/8	16	5/16	16
4353S-140	4353S-140C	14	1/4	16-1/2	16	5/16	18
4353S-160	4353S-160C	16	1/4	18-1/2	18	5/16	20
4353S-180	4353S-180C	18	1/4	20-1/2	20	5/16	22
4353S-200	4353S-200C	20	1/4	22-1/2	22	5/16	24
4353S-240	4353S-240C	24	1/4	26-1/2	24	5/16	28

WYE

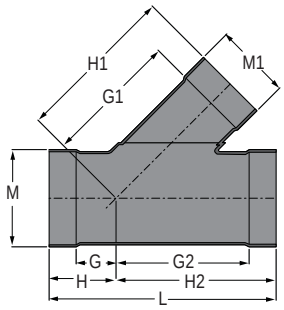
Belled Socket



PART NUMBER		Size	G	G1	G2	H	H1	H2	L	M
PVC	CPVC									
4375-060	4375-060C	6	4-3/16	11-1/4	10-13/16	6-11/16	13-3/4	13-5/16	20	7
4375-080	4375-080C	8	5-1/4	13-5/8	13-1/2	7-3/4	16-1/8	16	23-3/4	9
4375-100	4375-100C	10	6-1/4	16-3/16	17	8-3/4	18-11/16	19-1/2	28-1/4	11-1/8
4375-120	4375-120C	12	5-13/16	18-5/8	18-9/16	8-3/8	21-1/8	21-1/8	29-1/2	13-1/8
4375-140	4375-140C	14	7-7/8	20-5/8	21-7/8	10-3/8	23-1/8	24-3/8	34-3/4	14-3/8
4375-160	4375-160C	16	7-1/8	23-1/16	23-1/8	9-5/8	25-9/16	25-5/8	35-1/4	16-3/8
4375-180	4375-180C	18	7-1/2	25-7/16	25-1/2	10	27-15/16	28	38	18-3/8
4375-200	4375-200C	20	11	28-1/16	30-1/2	13-1/2	30-9/16	33	46-1/2	20-7/16
4375-240	4375-240C	24	9-11/16	33-11/16	33-11/16	12-3/16	36-3/16	36-3/16	48-3/8	24-1/2

REDUCING WYE

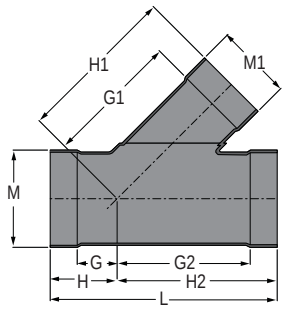
Belled Socket



PART NUMBER		Size	G	G1	G2	H	H1	H2	L	M	M1
PVC	CPVC										
4375-532	4375-532C	6x4	2-7/16	9-11/16	9-1/16	4-15/16	12-3/16	11-9/16	16-1/2	7	5
4375-582	4375-582C	8x4	1-7/16	11-1/16	10-1/16	3-15/16	13-9/16	12-9/16	16-1/2	9	5
4375-585	4375-585C	8x6	3-11/16	12-5/8	12-5/16	6-3/16	15-1/8	14-13/16	21	9	7
4375-624	4375-624C	10x4	16-1/2	12-9/16	11-1/8	2-7/8	15-1/16	13-5/8	16-1/2	11-1/8	5
4375-626	4375-626C	10x6	2-5/8	14-1/8	13-3/8	5-1/8	16-5/8	15-7/8	21	11-1/8	7
4375-628	4375-628C	10x8	4	15-1/8	14-3/4	6-1/2	17-5/8	17-1/4	23-3/4	11-1/8	9
4375-664	4375-664C	12x4	5/8	14	12-1/8	1-7/8	16-1/2	14-5/8	16-1/2	13-1/18	5
4375-666	4375-666C	12x6	1-5/8	15-9/16	14-3/8	4-1/8	18-1/16	16-7/8	21	13-1/18	7
4375-668	4375-668C	12x8	3-1/16	16-1/2	15-11/16	5-9/16	19	18-3/16	23-3/4	13-1/18	9
4375-670	4375-670C	12x10	4-1/2	17-5/8	17-1/4	7	20-1/8	19-3/4	26-3/4	13-1/18	11-1/8
4375-694	4375-694C	14x4	1-1/4	14-7/8	12-3/4	1-1/4	17-3/8	15-1/4	16-1/2	14-3/8	5
4375-696	4375-696C	14x6	1	16-7/16	15	3-1/2	18-15/16	17-1/2	21	14-3/8	7
4375-698	4375-698C	14x8	2-3/8	17-7/16	16-3/8	4-7/8	19-15/16	18-7/8	23-3/4	14-3/8	9
4375-700	4375-700C	14x10	3-7/8	18-1/2	17-7/8	6-3/8	21	20-3/8	26-3/4	14-3/8	11-1/8
4375-702	4375-702C	14x12	5-1/4	19-1/2	19-1/4	7-3/4	22	21-3/4	29-1/2	14-3/8	13-1/8
4375-754	4375-754C	16x4	2-1/4	16-1/2	13-3/4	1/4	18-13/16	16-1/4	16-1/2	16-3/8	5
4375-756	4375-756C	16x6	0	17-7/8	16	2-1/2	20-3/8	18-1/2	21	16-3/8	7
4375-758	4375-758C	16x8	1-3/8	18-7/8	17-3/8	3-7/8	21-3/8	19-7/8	23-3/4	16-3/8	9
4375-760	4375-760C	16x10	2-7/8	19-15/16	18-7/8	5-3/8	22-7/16	21-3/8	26-3/4	16-3/8	11-1/8
4375-762	4375-762C	16x12	4-1/4	20-15/16	20-1/4	6-3/4	23-7/16	22-3/4	29-1/2	16-3/8	13-1/8
4375-764	4375-764C	16x14	6-1/8	22-1/16	22-1/8	8-5/8	24-9/16	24-5/8	33-1/4	16-3/8	14-3/8
4375-784	4375-784C	18x4	3/4	17-11/16	14-3/4	3-1/4	20-3/16	17-1/4	16-1/2	18-3/8	5
4375-786	4375-786C	18x6	1	19-1/4	17	1-1/2	21-3/4	19-1/2	21	18-3/8	7
4375-788	4375-788C	18x8	3/8	20-1/4	18-3/8	2-7/8	22-3/4	20-7/8	23-3/4	18-3/8	9
4375-790	4375-790C	18x10	1-7/8	21-5/16	19-7/8	4-3/8	23-13/16	22-3/8	26-3/4	18-3/8	11-1/8
4375-792	4375-792C	18x12	3-1/4	22-5/16	21-1/4	5-3/4	24-13/16	23-3/4	29-1/2	18-3/8	13-1/8
4375-794	4375-794C	18x14	5-1/8	23-7/16	23-1/8	7-5/8	25-15/16	25-5/8	33-1/4	18-3/8	14-3/8
4375-796	4375-796C	18x16	6-1/8	24-7/16	24-1/8	8-5/8	26-15/16	26-5/8	35-1/4	18-3/8	16-3/8
4375-814	4375-814C	20x4	4-1/4	19-1/16	15-3/4	1-3/4	21-9/16	18-1/4	16-1/2	20-7/16	5
4375-816	4375-816C	20x6	2	20-5/8	18	1/2	23-1/8	20-1/2	21	20-7/16	7
4375-818	4375-818C	20x8	5/8	21-5/8	19-3/8	1-7/8	24-1/8	21-7/8	23-3/4	20-7/16	9
4375-820	4375-820C	20x10	7/8	22-11/16	20-7/8	3-3/8	25-3/16	23-3/8	26-3/4	20-7/16	11-1/8
4375-822	4375-822C	20x12	2-1/4	23-11/16	22-1/4	4-3/4	26-3/16	24-3/4	29-1/2	20-7/16	13-1/8
4375-824	4375-824C	20x14	4-1/8	24-13/16	24-1/8	6-5/8	27-5/16	26-5/8	33-1/4	20-7/16	14-3/8

REDUCING WYE

Belled Socket **(continued)**



PART NUMBER		Size	G	G1	G2	H	H1	H2	L	M	M1
PVC	CPVC										
4375-826	4375-826C	20x16	5-1/8	25-13/16	25-1/8	7-5/8	28-5/16	27-5/8	35-1/4	20-7/16	16-3/8
4375-828	4375-828C	20x18	6-1/2	26-13/16	26-1/2	9	29-5/16	29	38	20-7/16	18-3/8
4375-904	4375-904C	24x4	3-3/4	21-7/8	17-3/4	6-1/4	24-3/8	20-1/4	16-1/2	24-1/2	5
4375-906	4375-906C	24x6	4	23-7/16	20	1-1/2	25-15/16	22-1/2	21	24-1/2	7
4375-908	4375-908C	24x8	2-5/8	24-7/16	21-3/8	1/8	26-15/16	23-7/8	23-3/4	24-1/2	9
4375-910	4375-910C	24x10	1-1/8	25-1/2	22-7/8	1-3/8	28	25-3/8	26-3/4	24-1/2	11-1/8
4375-912	4375-912C	24x12	1/4	26-1/2	24-1/4	2-3/4	29	26-3/4	29-1/2	24-1/2	13-1/8
4375-914	4375-914C	24x14	2-1/8	27-5/8	26-1/8	4-5/8	30-1/8	28-5/8	33-1/4	24-1/2	14-3/8
4375-916	4375-916C	24x16	3-1/8	28-5/8	27-1/8	5-5/8	31-1/8	29-5/8	35-1/4	24-1/2	16-3/8
4375-918	4375-918C	24x18	4-1/2	29-5/8	28-1/2	7	32-1/8	31	38	24-1/2	18-3/8
4375-920	4375-920C	24x20	6-7/8	31-5/8	30-7/8	9-3/8	34-1/8	33-3/8	42-3/4	24-1/2	20-7/16

Double Containment

PRICING

DOUBLE CONTAINMENT SYSTEM DESIGN

Spears® Double Containment (DC) Fittings are constructed from standard fittings that are to be *assembled on the jobsite*. Spears® DC fittings work with standard pipe for both Carrier and Containment lines. Carrier fittings are equipped with special extender couplings for connection to carrier pipe. Simple, slip-on centralizer brackets used on the carrier pipe support this assembly inside the containment pipe. This design allows the carrier fitting to "float" within the containment fitting, allowing ease of movement for installation while reducing problems associated with thermal expansion and contraction during operation. This simplified approach to double containment makes installation very easy. However, successful installation requires proper design and planning of system layout, a basic understanding of how Spears® double containment fitting design works, and specific attention to a proper sequence of general assembly. See *Double Containment Design & Installation Guide* for additional details on design, installation and different configuration applications. DC fitting sizes are listed through 12", but additional sizes are available on request.

CONFIGURATIONS

DC Pipe: Spears® DC Fittings can be used with any standard pipe of the corresponding size and schedule. As a result, pipe is not listed in this Price Schedule.

DC Fittings: Each configuration includes all components to form an internal Carrier Fitting with applicable Extender-Couplings and an external Containment fitting. Each DC Fitting configuration is specified as Carrier Material & Schedule x Containment Material & Schedule. Refer to example below (additional information is found in specific fitting sections).

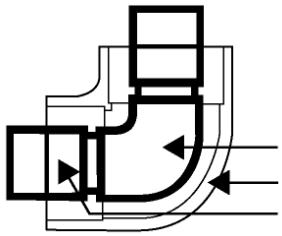
Note: Assembled carrier/containment pipe available on request. Contact Spears® for additional information.

Example

A Double Containment 90° Ell having a 1/2" Schedule 40 Carrier and 2" Schedule 40 Containment pipe would be listed as follows:

Product Name — DC 90° Ell
Configuration Description — PVC Sch 40 x PVC Sch 40

Part Number	Size	Prod Code	Price Each
DC06-A005-A020	1/2X2	470	32.78



Carrier Elbow
Containment Elbow
Extender Couplings

Centralizer Brackets should be ordered separately for Carrier pipe support in runs of Containment pipe.

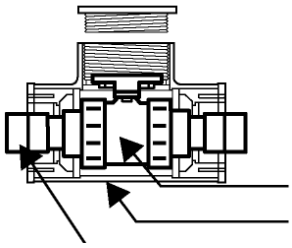
Valve Boxes: Like DC Fittings, Valve Boxes include all necessary components for connection to the designated Carrier x Containment system. Valve Boxes include the applicable True Union Industrial Ball Valve, Ball Check Valve, or Diaphragm Valve, with designated elastomer seals. Refer to example below (additional information is found in specific Valve Box sections).

Example

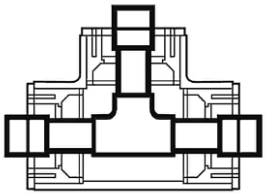
A Valve Box with True Union 2000 Industrial Ball Valve having a 1/2" valve with Schedule 40 Carrier and 2" Schedule 40 Containment pipe would be listed as follows:

Product Name — Valve Box, with PVC True Union 2000 Industrial Ball Valve
Configuration Description — PVC Sch 40 x PVC Sch 40

Size	EPDM	FKM	Prod Code
1/2X2	VBA20-A005-A020 **280.17**	VBA30-A005-A020 **285.10**	470



Carrier Valve
Containment Valve Box
Extender Couplings



DC Tees are made from standard Spears® pressure fittings in designated material and Schedule selected. Included are separate internal Carrier and external Containment fittings of the same configuration. Carrier fittings are equipped with extenders to facilitate cement assembly. Certain combinations use larger Containment tees that are bushed to specified size.

Important Note: Some Tees are shipped with the Carrier Tee branch extender separated from the Carrier Tee assembly to facilitate assembly. The Carrier Tee branch extension must be cemented in place after the run Carrier Tee assembly is completed. See *Double Containment Design & Installation Guide* for proper installation.

Centralizers are used inside the Containment piping system, but not inside fittings, installed on Carrier pipe and must be ordered separately according to same Carrier x Containment size and pipe schedule selected.

[1] Configuration uses larger size Containment Tee with Outlets Bushed down

DC Tee PVC Sch 40 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DC01-A005-A020	**1/2X2**	1	8	470	43.32
DC01-A007-A030	**3/4X3**	1	10	470	60.33
DC01-A010-A030	**1X3**	1	10	470	62.47
DC01-A015-A040	**1-1/2X4**	1	4	470	82.12
DC01-A020-A040[1]	**2X4**	1	4	470	294.54
DC01-A030-A060	**3X6**	1	2	470	680.28
DC01-A040-A080	**4X8**	1	2	470	414.36
DC01-A060-A100	**6X10**	1	0	470	1028.82
DC01-A080-A120	**8X12**	1	0	470	1573.28

DC Tee PVC Sch 40 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DC01-A005-G020	**1/2X2**	1	8	470	114.81
DC01-A007-G030	**3/4X3**	1	10	470	367.00
DC01-A010-G030	**1X3**	1	10	470	369.15
DC01-A015-G040	**1-1/2X4**	1	4	470	637.35
DC01-A020-G040[1]	**2X4**	1	4	470	1130.42
DC01-A030-G060	**3X6**	1	2	470	1428.14
DC01-A040-G080	**4X8**	1	2	470	2115.85

DC Tee PVC Sch 80 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DC01-B005-A020	**1/2X2**	1	9	470	69.09
DC01-B007-A030	**3/4X3**	1	10	470	91.73
DC01-B010-A030	**1X3**	1	10	470	94.83
DC01-B015-A040	**1-1/2X4**	1	4	470	143.63
DC01-B020-A040[1]	**2X4**	1	2	470	356.12
DC01-B030-A060	**3X6**	1	2	470	819.77
DC01-B040-A080	**4X8**	1	2	470	970.95
DC01-B060-A100	**6X10**	1	0	470	1537.65
DC01-B080-A120	**8X12**	1	0	470	2456.25

DC Tee PVC Sch 80 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DC01-B005-G020	**1/2X2**	1	9	470	140.47
DC01-B007-G030	**3/4X3**	1	10	470	399.45
DC01-B010-G030	**1X3**	1	10	470	402.07
DC01-B015-G040	**1-1/2X4**	1	4	470	704.07
DC01-B020-G040	**2X4**	1	2	470	2702.39
DC01-B030-G060	**3X6**	1	2	470	1088.83
DC01-B040-G080	**4X8**	1	2	470	2265.19

DC Tee PVC Sch 80 x PVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DC01-B005-B020	**1/2X2**	1	10	470	106.39
DC01-B007-B030	**3/4X3**	1	10	470	128.26
DC01-B010-B030	**1X3**	1	5	470	131.27
DC01-B015-B040	**1-1/2X4**	1	4	470	177.72
DC01-B020-B040[1]	**2X4**	1	0	470	663.87
DC01-B030-B060[1]	**3X6**	1	2	470	991.53
DC01-B040-B080	**4X8**	1	0	470	1227.55
DC01-B060-B100	**6X10**	1	0	470	1517.74
DC01-B080-B120	**8X12**	1	0	470	3502.40

DC Tee CPVC Sch 80 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DC01-C005-A020	**1/2X2**	1	10	470	75.14
DC01-C007-A030	**3/4X3**	1	5	470	98.85
DC01-C010-A030	**1X3**	1	10	470	111.26
DC01-C015-A040	**1-1/2X4**	1	4	470	184.97
DC01-C020-A040[1]	**2X4**	1	3	470	411.23
DC01-C030-A060	**3X6**	1	2	470	950.32
DC01-C040-A080	**4X8**	1	0	470	757.61
DC01-C060-A100	**6X10**	1	0	470	1766.48
DC01-C080-A120	**8X12**	1	0	470	2781.34

DC Tee CPVC Sch 80 x PVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DC01-C005-B020	**1/2X2**	1	9	470	112.35
DC01-C007-B030	**3/4X3**	1	5	470	135.31
DC01-C010-B030	**1X3**	1	5	470	147.83
DC01-C015-B040	**1-1/2X4**	1	4	470	213.83
DC01-C020-B040[1]	**2X4**	1	4	470	742.23
DC01-C030-B060	**3X6**	1	2	470	1353.71
DC01-C040-B080	**4X8**	1	0	470	987.58
DC01-C060-B100	**6X10**	1	0	470	2825.52
DC01-C080-B120	**8X12**	1	0	470	3440.76

DC Tee CPVC Sch 80 x CPVC Sch 80

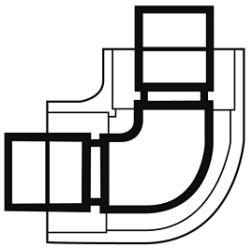
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DC01-C005-C020	**1/2X2**	1	10	470	117.85
DC01-C007-C030	**3/4X3**	1	10	470	199.16
DC01-C010-C030	**1X3**	1	5	470	211.68
DC01-C015-C040	**1-1/2X4**	1	5	470	308.63
DC01-C020-C040[1]	**2X4**	1	0	470	513.23
DC01-C030-C060	**3X6**	1	2	470	1081.06
DC01-C040-C080	**4X8**	1	2	470	1663.62
DC01-C060-C100	**6X10**	1	0	470	2908.24
DC01-C080-C120	**8X12**	1	0	470	5253.18

DC Tee CPVC Sch 80 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DC01-C005-G020	**1/2X2**	1	9	470	146.06
DC01-C007-G030	**3/4X3**	1	5	470	405.52
DC01-C010-G030	**1X3**	1	10	470	418.04
DC01-C015-G040	**1-1/2X4**	1	6	470	787.84
DC01-C020-G040[1]	**2X4**	1	6	470	2741.34
DC01-C030-G060[1]	**3X6**	1	2	470	1787.00
DC01-C040-G080	**4X8**	1	2	470	2383.74

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com



DC 90° Ells are made from standard Spears® pressure fittings in designated material and Schedule selected. Included are separate internal Carrier and external Containment fittings of the same configuration. Carrier fittings are equipped with extenders to facilitate cement assembly. See *Double Containment Design & Installation Guide* for proper installation.

Centralizers are used inside the Containment piping system, but not inside fittings, installed on Carrier pipe and must be ordered separately according to same Carrier x Containment size and pipe schedule selected.

DC 90° Ell PVC Sch 40 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DC06-A005-A020	**1/2X2**	1	25	470	34.51
DC06-A007-A030	**3/4X3**	1	10	470	44.98
DC06-A010-A030	**1X3**	1	10	470	46.48
DC06-A015-A040	**1-1/2X4**	1	5	470	59.67
DC06-A020-A040	**2X4**	1	5	470	75.93
DC06-A030-A060	**3X6**	2	0	470	152.33
DC06-A040-A080	**4X8**	1	2	470	295.95
DC06-A060-A100	**6X10**	1	0	470	968.87
DC06-A080-A120	**8X12**	1	0	470	1420.85

DC 90° Ell PVC Sch 40 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DC06-A005-G020	**1/2X2**	1	25	470	92.07
DC06-A007-G030	**3/4X3**	1	10	470	254.03
DC06-A010-G030	**1X3**	1	4	470	255.61
DC06-A015-G040	**1-1/2X4**	1	5	470	433.89
DC06-A020-G040	**2X4**	1	8	470	450.16
DC06-A030-G060	**3X6**	1	2	470	791.11
DC06-A040-G080	**4X8**	1	2	470	1384.05

DC 90° Ell PVC Sch 80 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DC06-B005-A020	**1/2X2**	1	25	470	48.26
DC06-B007-A030	**3/4X3**	1	10	470	63.59
DC06-B010-A030	**1X3**	1	10	470	66.59
DC06-B015-A040	**1-1/2X4**	1	5	470	92.63
DC06-B020-A040	**2X4**	1	5	470	109.58
DC06-B030-A060	**3X6**	1	2	470	236.12
DC06-B040-A080	**4X8**	1	2	470	398.84
DC06-B060-A100	**6X10**	1	0	470	1173.99
DC06-B080-A120	**8X12**	1	0	470	1754.57

DC 90° Ell PVC Sch 80 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DC06-B005-G020	**1/2X2**	1	25	470	105.44
DC06-B007-G030	**3/4X3**	1	10	470	272.60
DC06-B010-G030	**1X3**	1	10	470	275.59
DC06-B015-G040	**1-1/2X4**	1	8	470	465.54
DC06-B020-G040	**2X4**	1	4	470	469.59
DC06-B030-G060	**3X6**	1	4	470	234.93
DC06-B040-G080	**4X8**	1	2	470	1486.96

DC 90° Ell PVC Sch 80 x PVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DC06-B005-B020	**1/2X2**	1	20	470	56.20
DC06-B007-B030	**3/4X3**	1	10	470	80.58
DC06-B010-B030	**1X3**	1	10	470	83.61
DC06-B015-B040	**1-1/2X4**	1	5	470	113.36
DC06-B020-B040	**2X4**	1	4	470	117.55
DC06-B030-B060	**3X6**	2	0	470	290.48
DC06-B040-B080	**4X8**	1	2	470	563.22
DC06-B060-B100	**6X10**	1	0	470	2055.33
DC06-B080-B120	**8X12**	1	0	470	2874.16

DC 90° Ell CPVC Sch 80 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DC06-C005-A020	**1/2X2**	1	8	470	51.81
DC06-C007-A030	**3/4X3**	1	5	470	68.27
DC06-C010-A030	**1X3**	1	5	470	79.43
DC06-C015-A040	**1-1/2X4**	1	8	470	129.05
DC06-C020-A040	**2X4**	1	5	470	155.74
DC06-C030-A060	**3X6**	1	5	470	302.64
DC06-C040-A080	**4X8**	1	2	470	582.09
DC06-C060-A100	**6X10**	1	0	470	1545.61
DC06-C080-A120	**8X12**	1	0	470	2965.48

DC 90° Ell CPVC Sch 80 x PVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DC06-C005-B020	**1/2X2**	1	25	470	59.76
DC06-C007-B030	**3/4X3**	1	5	470	85.27
DC06-C010-B030	**1X3**	1	5	470	109.64
DC06-C015-B040	**1-1/2X4**	1	4	470	151.11
DC06-C020-B040	**2X4**	1	4	470	177.79
DC06-C030-B060	**3X6**	1	0	470	396.81
DC06-C040-B080	**4X8**	1	2	470	746.47
DC06-C060-B100	**6X10**	1	0	470	2426.91
DC06-C080-B120	**8X12**	1	0	470	4085.25

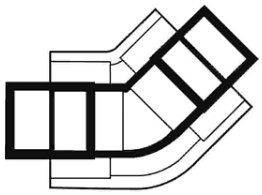
DC 90° Ell CPVC Sch 80 x CPVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DC06-C005-C020	**1/2X2**	1	25	470	83.61
DC06-C007-C030	**3/4X3**	1	10	470	147.61
DC06-C010-C030	**1X3**	1	5	470	158.36
DC06-C015-C040	**1-1/2X4**	1	5	470	279.35
DC06-C020-C040	**2X4**	1	4	470	298.11
DC06-C030-C060	**3X6**	1	2	470	519.85
DC06-C040-C080	**4X8**	1	2	470	1199.99
DC06-C060-C100	**6X10**	1	0	470	2972.03
DC06-C080-C120	**8X12**	1	0	470	4904.56

DC 90° Ell CPVC Sch 80 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DC06-C005-G020	**1/2X2**	1	23	470	109.38
DC06-C007-G030	**3/4X3**	1	4	470	277.68
DC06-C010-G030	**1X3**	1	5	470	288.42
DC06-C015-G040	**1-1/2X4**	1	8	470	503.29
DC06-C020-G040	**2X4**	1	8	470	529.86
DC06-C030-G060	**3X6**	1	5	470	981.41
DC06-C040-G080	**4X8**	1	2	470	1673.05

45° Ells



DC 45° Ells are made from standard Spears® pressure fittings in designated material and Schedule selected. Included are separate internal Carrier and external Containment fittings of the same configuration. Carrier fittings are equipped with extenders to facilitate cement assembly. See *Double Containment Design & Installation Guide* for proper installation.

Centralizers are used inside the Containment piping system, but not inside fittings, installed on Carrier pipe and must be ordered separately according to same Carrier x Containment size and pipe schedule selected.

DC 45° Ell PVC Sch 40 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DC17-A005-A020	**1/2X2**	1	25	470	35.52
DC17-A007-A030	**3/4X3**	1	5	470	50.17
DC17-A010-A030	**1X3**	1	5	470	51.38
DC17-A015-A040	**1-1/2X4**	1	5	470	68.27
DC17-A020-A040	**2X4**	1	4	470	84.16
DC17-A030-A060	**3X6**	2	0	470	157.27
DC17-A040-A080	**4X8**	1	3	470	292.29
DC17-A060-A100	**6X10**	1	0	470	696.24
DC17-A080-A120	**8X12**	1	0	470	1145.46

DC 45° Ell PVC Sch 40 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DC17-A005-G020	**1/2X2**	1	25	470	111.24
DC17-A007-G030	**3/4X3**	1	8	470	321.71
DC17-A010-G030	**1X3**	1	5	470	322.84
DC17-A015-G040	**1-1/2X4**	1	5	470	569.01
DC17-A020-G040	**2X4**	1	4	470	571.93
DC17-A030-G060	**3X6**	1	2	470	1013.56
DC17-A040-G080	**4X8**	1	3	470	1222.25

DC 45° Ell PVC Sch 80 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DC17-B005-A020	**1/2X2**	1	25	470	51.12
DC17-B007-A030	**3/4X3**	1	8	470	73.05
DC17-B010-A030	**1X3**	1	10	470	78.25
DC17-B015-A040	**1-1/2X4**	1	5	470	110.60
DC17-B020-A040	**2X4**	1	5	470	132.21
DC17-B030-A060	**3X6**	1	7	470	277.18
DC17-B040-A080	**4X8**	1	2	470	468.49
DC17-B060-A100	**6X10**	1	0	470	932.77
DC17-B080-A120	**8X12**	1	0	470	1445.42

DC 45° Ell PVC Sch 80 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DC17-B005-G020	**1/2X2**	1	10	470	119.18
DC17-B007-G030	**3/4X3**	1	8	470	344.60
DC17-B010-G030	**1X3**	1	5	470	351.22
DC17-B015-G040	**1-1/2X4**	1	5	470	600.13
DC17-B020-G040	**2X4**	1	5	470	619.98
DC17-B030-G060	**3X6**	1	4	470	1133.36
DC17-B040-G080	**4X8**	1	3	470	1873.04

DC 45° Ell PVC Sch 80 x PVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DC17-B005-B020	**1/2X2**	1	10	470	75.16
DC17-B007-B030	**3/4X3**	1	8	470	125.94
DC17-B010-B030	**1X3**	1	5	470	136.42
DC17-B015-B040	**1-1/2X4**	1	5	470	205.97
DC17-B020-B040	**2X4**	1	5	470	214.20
DC17-B030-B060	**3X6**	1	2	470	357.23
DC17-B040-B080	**4X8**	1	2	470	623.89
DC17-B060-B100	**6X10**	1	0	470	1530.56
DC17-B080-B120	**8X12**	1	0	470	2116.07

DC 45° Ell CPVC Sch 80 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DC17-C005-A020	**1/2X2**	1	25	470	53.76
DC17-C007-A030	**3/4X3**	1	8	470	75.84
DC17-C010-A030	**1X3**	1	10	470	88.37
DC17-C015-A040	**1-1/2X4**	1	5	470	141.31
DC17-C020-A040	**2X4**	1	5	470	165.85
DC17-C030-A060	**3X6**	1	5	470	271.63
DC17-C040-A080	**4X8**	1	3	470	542.15
DC17-C060-A100	**6X10**	1	0	470	1367.03
DC17-C080-A120	**8X12**	1	0	470	2740.09

DC 45° Ell CPVC Sch 80 x PVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DC17-C005-B020	**1/2X2**	1	25	470	77.08
DC17-C007-B030	**3/4X3**	1	5	470	128.72
DC17-C010-B030	**1X3**	1	5	470	140.84
DC17-C015-B040	**1-1/2X4**	1	4	470	160.58
DC17-C020-B040	**2X4**	1	5	470	185.32
DC17-C030-B060	**3X6**	1	5	470	382.32
DC17-C040-B080	**4X8**	1	2	470	697.06
DC17-C060-B100	**6X10**	1	0	470	1962.17
DC17-C080-B120	**8X12**	1	0	470	3410.74

DC 45° Ell CPVC Sch 80 x CPVC Sch 80

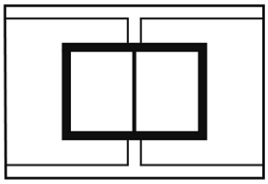
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DC17-C005-C020	**1/2X2**	1	10	470	87.66
DC17-C007-C030	**3/4X3**	1	8	470	158.40
DC17-C010-C030	**1X3**	1	10	470	170.92
DC17-C015-C040	**1-1/2X4**	1	5	470	246.99
DC17-C020-C040	**2X4**	1	5	470	271.73
DC17-C030-C060	**3X6**	1	2	470	617.20
DC17-C040-C080	**4X8**	1	2	470	1234.23
DC17-C060-C100	**6X10**	1	0	470	3738.62
DC17-C080-C120	**8X12**	1	0	470	5136.51

DC 45° Ell CPVC Sch 80 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DC17-C005-G020	**1/2X2**	1	10	470	120.99
DC17-C007-G030	**3/4X3**	1	8	470	347.38
DC17-C010-G030	**1X3**	1	10	470	359.89
DC17-C015-G040	**1-1/2X4**	1	5	470	642.35
DC17-C020-G040	**2X4**	1	5	470	653.83
DC17-C030-G060	**3X6**	1	5	470	1217.66
DC17-C040-G080	**4X8**	1	3	470	2060.25

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com



DC Couplings are made from standard Spears® pressure fittings in designated material and Schedule selected. Included are separate internal Carrier and external Containment fittings of the same configuration (no extenders required on Couplings). See *Double Containment Design & Installation Guide* for proper installation.

Centralizers are used inside the Containment piping system, but not inside fittings, installed on Carrier pipe and must be ordered separately according to same Carrier x Containment size and pipe schedule selected.

DC Coupling PVC Sch 40 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DC29-A005-A020	**1/2X2**	1	25	470	2.74
DC29-A007-A030	**3/4X3**	1	10	470	8.56
DC29-A010-A030	**1X3**	1	10	470	9.00
DC29-A015-A040	**1-1/2X4**	1	6	470	13.02
DC29-A020-A040	**2X4**	1	10	470	13.82
DC29-A030-A060	**3X6**	1	4	470	44.37
DC29-A040-A080	**4X8**	1	6	470	79.49
DC29-A060-A100	**6X10**	1	2	470	234.56
DC29-A080-A120	**8X12**	1	0	470	462.79

DC Coupling PVC Sch 40 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DC29-A005-G020	**1/2X2**	1	10	470	37.43
DC29-A007-G030	**3/4X3**	1	10	470	127.42
DC29-A010-G030	**1X3**	1	10	470	127.79
DC29-A015-G040	**1-1/2X4**	1	6	470	184.62
DC29-A020-G040	**2X4**	1	8	470	185.41
DC29-A030-G060	**3X6**	1	4	470	351.39
DC29-A040-G080	**4X8**	1	6	470	604.84

DC Coupling PVC Sch 80 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DC29-B005-A020	**1/2X2**	1	25	470	8.28
DC29-B007-A030	**3/4X3**	1	10	470	16.16
DC29-B010-A030	**1X3**	1	5	470	16.28
DC29-B015-A040	**1-1/2X4**	1	6	470	25.17
DC29-B020-A040	**2X4**	1	5	470	26.18
DC29-B030-A060	**3X6**	1	4	470	77.88
DC29-B040-A080	**4X8**	1	6	470	119.94
DC29-B060-A100	**6X10**	1	2	470	309.94
DC29-B080-A120	**8X12**	1	4	470	546.88

DC Coupling PVC Sch 80 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DC29-B005-G020	**1/2X2**	1	10	470	42.88
DC29-B007-G030	**3/4X3**	1	10	470	134.94
DC29-B010-G030	**1X3**	1	10	470	135.14
DC29-B015-G040	**1-1/2X4**	1	6	470	191.47
DC29-B020-G040	**2X4**	1	8	470	197.78
DC29-B030-G060	**3X6**	1	4	470	344.32
DC29-B040-G080	**4X8**	1	4	470	638.11

DC Coupling PVC Sch 80 x PVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DC29-B005-B020	**1/2X2**	1	10	470	20.62
DC29-B007-B030	**3/4X3**	1	5	470	49.59
DC29-B010-B030	**1X3**	1	5	470	49.80
DC29-B015-B040	**1-1/2X4**	1	5	470	65.61
DC29-B020-B040	**2X4**	1	8	470	66.61
DC29-B030-B060	**3X6**	1	8	470	153.25
DC29-B040-B080	**4X8**	1	4	470	204.03
DC29-B060-B100	**6X10**	1	2	470	633.80
DC29-B080-B120	**8X12**	1	0	470	753.85

DC Coupling CPVC Sch 80 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DC29-C005-A020	**1/2X2**	1	25	470	8.69
DC29-C007-A030	**3/4X3**	1	10	470	16.89
DC29-C010-A030	**1X3**	1	10	470	19.99
DC29-C015-A040	**1-1/2X4**	1	6	470	34.16
DC29-C020-A040	**2X4**	1	6	470	37.84
DC29-C030-A060	**3X6**	1	4	470	100.04
DC29-C040-A080	**4X8**	1	6	470	151.40
DC29-C060-A100	**6X10**	1	2	470	394.58
DC29-C080-A120	**8X12**	1	4	470	925.68

DC Coupling CPVC Sch 80 x PVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DC29-C005-B020	**1/2X2**	1	10	470	20.52
DC29-C007-B030	**3/4X3**	1	5	470	50.40
DC29-C010-B030	**1X3**	1	5	470	53.51
DC29-C015-B040	**1-1/2X4**	1	6	470	74.60
DC29-C020-B040	**2X4**	1	4	470	75.98
DC29-C030-B060	**3X6**	1	4	470	175.37
DC29-C040-B080	**4X8**	1	4	470	215.34
DC29-C060-B100	**6X10**	1	2	470	638.99
DC29-C080-B120	**8X12**	1	0	470	1132.53

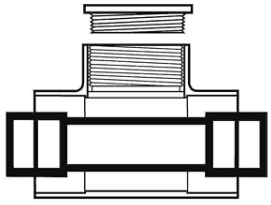
DC Coupling CPVC Sch 80 x CPVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DC29-C005-C020	**1/2X2**	1	10	470	32.68
DC29-C007-C030	**3/4X3**	1	5	470	72.57
DC29-C010-C030	**1X3**	1	10	470	75.63
DC29-C015-C040	**1-1/2X4**	1	5	470	106.07
DC29-C020-C040	**2X4**	1	8	470	109.73
DC29-C030-C060	**3X6**	1	4	470	260.06
DC29-C040-C080	**4X8**	1	4	470	614.33
DC29-C060-C100	**6X10**	1	2	470	864.21
DC29-C080-C120	**8X12**	1	0	470	1311.19

DC Coupling CPVC Sch 80 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DC29-C005-G020	**1/2X2**	1	10	470	43.28
DC29-C007-G030	**3/4X3**	1	10	470	135.76
DC29-C010-G030	**1X3**	1	10	470	138.85
DC29-C015-G040	**1-1/2X4**	1	6	470	205.78
DC29-C020-G040	**2X4**	1	6	470	209.43
DC29-C030-G060	**3X6**	1	10	470	393.28
DC29-C040-G080	**4X8**	1	6	470	676.74

Access Tees



DC Access Tees are made from standard Spears® pressure fittings in designated material and Schedule selected. Included is an internal Carrier pipe section equipped with couplings and an external Containment Tee fitting equipped with a threaded Plug on the branch for access. See *Double Containment Design & Installation Guide* for proper installation.

Centralizers are used inside the Containment piping system, but not inside fittings, installed on Carrier pipe and must be ordered separately according to same Carrier x Containment size and pipe schedule selected.

DC Access Tee PVC Sch 40 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DCAT-A005-A020	**1/2X2**	1	10	470	42.41
DCAT-A007-A030	**3/4X3**	1	5	470	70.63
DCAT-A010-A030	**1X3**	1	5	470	71.51
DCAT-A015-A040	**1-1/2X4**	1	3	470	100.55
DCAT-A020-A040	**2X4**	1	5	470	131.16
DCAT-A030-A060	**3X6**	1	4	470	361.41
DCAT-A040-A080	**4X8**	1	0	470	753.43
DCAT-A060-A100	**6X10**	1	0	470	1714.91
DCAT-A080-A120	**8X12**	1	0	470	2421.59

DC Access Tee PVC Sch 40 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DCAT-A005-G020	**1/2X2**	1	10	470	214.78
DCAT-A007-G030	**3/4X3**	1	10	470	570.43
DCAT-A010-G030	**1X3**	1	10	470	571.33
DCAT-A015-G040	**1-1/2X4**	1	6	470	939.09
DCAT-A020-G040	**2X4**	1	6	470	951.28
DCAT-A030-G060	**3X6**	1	4	470	1291.93
DCAT-A040-G080	**4X8**	1	0	470	2371.73

DC Access Tee PVC Sch 80 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DCAT-B005-A020	**1/2X2**	1	10	470	53.53
DCAT-B007-A030	**3/4X3**	1	10	470	85.66
DCAT-B010-A030	**1X3**	1	6	470	86.09
DCAT-B015-A040	**1-1/2X4**	1	6	470	124.87
DCAT-B020-A040	**2X4**	1	6	470	137.48
DCAT-B030-A060	**3X6**	1	4	470	428.44
DCAT-B040-A080	**4X8**	1	2	470	834.27
DCAT-B060-A100	**6X10**	1	0	470	1878.81
DCAT-B080-A120	**8X12**	1	0	470	2680.34

DC Access Tee PVC Sch 80 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DCAT-B005-G020	**1/2X2**	1	10	470	259.34
DCAT-B007-G030	**3/4X3**	1	10	470	585.48
DCAT-B010-G030	**1X3**	1	10	470	585.78
DCAT-B015-G040	**1-1/2X4**	1	3	470	962.09
DCAT-B020-G040	**2X4**	1	6	470	965.43
DCAT-B030-G060	**3X6**	1	4	470	1358.95
DCAT-B040-G080	**4X8**	1	2	470	2452.57

DC Access Tee PVC Sch 80 x PVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DCAT-B005-B020	**1/2X2**	1	5	470	88.87
DCAT-B007-B030	**3/4X3**	1	5	470	162.11
DCAT-B010-B030	**1X3**	1	5	470	162.64
DCAT-B015-B040	**1-1/2X4**	1	5	470	278.77
DCAT-B020-B040	**2X4**	1	5	470	291.37
DCAT-B030-B060	**3X6**	1	4	470	643.88
DCAT-B040-B080	**4X8**	1	2	470	1069.58
DCAT-B060-B100	**6X10**	1	0	470	2897.51
DCAT-B080-B120	**8X12**	1	0	470	3523.17

DC Access Tee CPVC Sch 80 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DCAT-C007-A030	**3/4X3**	1	5	470	87.29
DCAT-C010-A030	**1X3**	1	6	470	93.51
DCAT-C015-A040	**1-1/2X4**	1	6	470	142.84
DCAT-C020-A040	**2X4**	1	6	470	160.77
DCAT-C030-A060	**3X6**	1	4	470	459.55
DCAT-C040-A080	**4X8**	1	2	470	895.64
DCAT-C060-A100	**6X10**	1	0	470	2048.17
DCAT-C080-A120	**8X12**	1	0	470	2678.48

DC Access Tee CPVC Sch 80 x PVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DCAT-C005-B020	**1/2X2**	1	10	470	89.66
DCAT-C007-B030	**3/4X3**	1	5	470	163.71
DCAT-C010-B030	**1X3**	1	5	470	169.93
DCAT-C015-B040	**1-1/2X4**	1	5	470	235.75
DCAT-C020-B040	**2X4**	1	5	470	314.66
DCAT-C030-B060	**3X6**	1	4	470	712.05
DCAT-C040-B080	**4X8**	1	2	470	1330.55
DCAT-C060-B100	**6X10**	1	0	470	2849.31
DCAT-C080-B120	**8X12**	1	0	470	4457.02

DC Access Tee CPVC Sch 80 x CPVC Sch 80

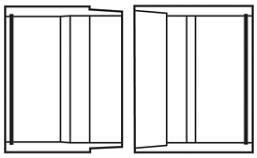
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DCAT-C005-C020	**1/2X2**	1	10	470	149.91
DCAT-C007-C030	**3/4X3**	1	5	470	495.66
DCAT-C010-C030	**1X3**	1	6	470	500.42
DCAT-C015-C040	**1-1/2X4**	1	5	470	707.60
DCAT-C020-C040	**2X4**	1	5	470	714.94
DCAT-C030-C060	**3X6**	1	4	470	1530.16
DCAT-C040-C080	**4X8**	1	2	470	3886.15
DCAT-C060-C100	**6X10**	1	0	470	4155.95
DCAT-C080-C120	**8X12**	1	0	470	6333.11

DC Access Tee CPVC Sch 80 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DCAT-C005-G020	**1/2X2**	1	10	470	278.92
DCAT-C007-G030	**3/4X3**	1	5	470	587.09
DCAT-C010-G030	**1X3**	1	5	470	593.32
DCAT-C015-G040	**1-1/2X4**	1	3	470	981.39
DCAT-C020-G040	**2X4**	1	6	470	988.74
DCAT-C030-G060	**3X6**	1	4	470	1413.88
DCAT-C040-G080	**4X8**	1	2	470	2525.98

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com



DC Closure Fittings are special split couplings for joining meeting runs of Containment piping, such as before the final Termination Fitting. Closure Fittings consist of a male component and a female component. An internal O-ring on each component serves as a "cement-wiper" during installation to assure a proper joint. A "One-step" type cement should be used to facilitate rapid assembly. See *Double Containment Design & Installation Guide* for proper installation.

Centralizers are used inside the Containment piping system, but not inside fittings, installed on Carrier pipe and must be ordered separately according to same Carrier x Containment size and pipe schedule selected.

DC Solvent Cement Closure Fitting PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DCCF-A030	**3**	1	10	470	469.84
DCCF-A040	**4**	1	5	470	481.39
DCCF-A060	**6**	1	2	470	500.98
DCCF-A080	**8**	1	0	470	691.06
DCCF-A100	**10**	1	2	470	762.33
DCCF-A120	**12**	1	2	470	1204.21

DC Solvent Cement Closure Fitting PVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DCCF-B020	**2**	1	10	470	469.42
DCCF-B030	**3**	1	10	470	477.47
DCCF-B040	**4**	1	5	470	491.98
DCCF-B060	**6**	1	2	470	521.09
DCCF-B080	**8**	1	3	470	690.85
DCCF-B100	**10**	1	2	470	916.82
DCCF-B120	**12**	1	0	470	1469.69

DC Solvent Cement Closure Fitting CPVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DCCF-C020	**2**	1	10	470	476.56
DCCF-C030	**3**	1	10	470	496.43
DCCF-C040	**4**	1	5	470	518.13
DCCF-C060	**6**	1	2	470	631.55
DCCF-C080	**8**	1	3	470	849.59
DCCF-C100	**10**	1	2	470	1581.61
DCCF-C120	**12**	1	0	470	2509.35

DC Solvent Cement Closure Fitting PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DCCF-G030	**3**	1	10	470	524.27
DCCF-G040	**4**	1	5	470	544.68
DCCF-G060	**6**	1	2	470	646.06
DCCF-G080	**8**	1	6	470	960.03

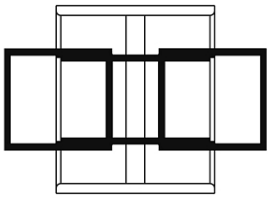
DC Union Closure Fittings PVC Clear - EPDM Seals

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DCUC-040	**4**	1	0	471	514.80
DCUC-060	**6**	1	0	471	659.36
Maximum 100 psi Short Term Hydrostatic Test Only. 50 psi Working Pressure @ 73° F (23° C)					

DC Union Closure Fittings PVC Clear - FKM Seals

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DCUC2-040	**4**	0	0	471	576.88
DCUC2-060	**6**	1	0	471	687.42
Maximum 100 psi Short Term Hydrostatic Test Only. 50 psi Working Pressure @ 73° F (23° C)					

Isolation Couplers



DC Isolation Couplers are to isolate a containment section for improved location identification if a leak is detected. When cemented into place, a suitable seal is formed for isolation of the containment sections. See *Double Containment Design & Installation Guide* for proper installation.

Centralizers are used inside the Containment piping system, but not inside fittings, installed on Carrier pipe and must be ordered separately according to same Carrier x Containment size and pipe schedule selected.

DC Isolation Coupler PVC Sch 40 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DCDB-A005-A020	**1/2X2**	1	5	470	34.66
DCDB-A007-A030	**3/4X3**	1	5	470	55.20
DCDB-A010-A030	**1X3**	1	5	470	55.48
DCDB-A015-A040	**1-1/2X4**	1	6	470	61.19
DCDB-A020-A040	**2X4**	1	4	470	65.41
DCDB-A030-A060	**3X6**	1	4	470	104.88
DCDB-A040-A080	**4X8**	1	4	470	150.91
DCDB-A060-A100	**6X10**	1	10	470	201.48
DCDB-A080-A120	**8X12**	1	0	470	340.80

DC Isolation Coupler PVC Sch 40 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DCDB-A005-G020	**1/2X2**	1	5	470	80.06
DCDB-A007-G030	**3/4X3**	1	5	470	98.96
DCDB-A010-G030	**1X3**	1	5	470	207.14
DCDB-A015-G040	**1-1/2X4**	1	4	470	238.53
DCDB-A020-G040	**2X4**	1	4	470	246.84
DCDB-A030-G060	**3X6**	1	4	470	270.03
DCDB-A040-G080	**4X8**	1	4	470	340.58

DC Isolation Coupler PVC Sch 80 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DCDB-B005-A020	**1/2X2**	1	5	470	50.03
DCDB-B007-A030	**3/4X3**	1	5	470	59.91
DCDB-B010-A030	**1X3**	1	4	470	66.08
DCDB-B015-A040	**1-1/2X4**	1	4	470	70.66
DCDB-B020-A040	**2X4**	1	4	470	76.37
DCDB-B030-A060	**3X6**	1	5	470	109.55
DCDB-B040-A080	**4X8**	1	4	470	164.01
DCDB-B060-A100	**6X10**	1	0	470	214.33
DCDB-B080-A120	**8X12**	1	0	470	368.66

DC Isolation Coupler PVC Sch 80 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DCDB-B005-G020	**1/2X2**	1	5	470	105.58
DCDB-B010-G030	**1X3**	1	5	470	211.97
DCDB-B015-G040	**1-1/2X4**	1	4	470	274.21
DCDB-B020-G040	**2X4**	1	4	470	300.16
DCDB-B030-G060	**3X6**	1	5	470	333.31
DCDB-B040-G080	**4X8**	1	4	470	393.49

DC Isolation Coupler PVC Sch 80 x PVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DCDB-B005-B020	**1/2X2**	1	5	470	127.97
DCDB-B007-B030	**3/4X3**	1	5	470	156.97
DCDB-B010-B030	**1X3**	1	5	470	188.31
DCDB-B015-B040	**1-1/2X4**	1	4	470	198.65
DCDB-B020-B040	**2X4**	1	4	470	209.66
DCDB-B030-B060	**3X6**	1	4	470	226.51
DCDB-B040-B080	**4X8**	1	4	470	245.25
DCDB-B060-B100	**6X10**	1	0	470	251.23

DC Isolation Coupler PVC Sch 80 x PVC Sch 80 (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DCDB-B080-B120	**8X12**	1	0	470	413.15

DC Isolation Coupler CPVC Sch 80 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DCDB-C005-A020	**1/2X2**	1	5	470	51.38
DCDB-C007-A030	**3/4X3**	1	5	470	68.91
DCDB-C010-A030	**1X3**	1	5	470	69.67
DCDB-C015-A040	**1-1/2X4**	1	4	470	81.77
DCDB-C020-A040	**2X4**	1	4	470	114.37
DCDB-C030-A060	**3X6**	1	5	470	185.21
DCDB-C040-A080	**4X8**	1	4	470	312.12
DCDB-C060-A100	**6X10**	1	0	470	480.38

DC Isolation Coupler CPVC Sch 80 x Sch 80 Gray

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DCDB-C005-B020	**1/2X2**	1	5	470	51.81
DCDB-C007-B030	**3/4X3**	1	5	470	60.98
DCDB-C010-B030	**1X3**	1	5	470	61.76
DCDB-C015-B040	**1-1/2X4**	1	4	470	86.92
DCDB-C020-B040	**2X4**	1	4	470	119.49
DCDB-C030-B060	**3X6**	1	5	470	195.22
DCDB-C040-B080	**4X8**	1	4	470	329.80
DCDB-C060-B100	**6X10**	1	0	470	517.32

DC Isolation Coupler CPVC Sch 80 x CPVC Sch 80

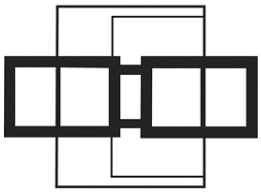
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DCDB-C005-C020	**1/2X2**	1	4	470	105.31
DCDB-C007-C030	**3/4X3**	1	5	470	116.43
DCDB-C010-C030	**1X3**	1	5	470	244.78
DCDB-C015-C040	**1-1/2X4**	1	4	470	265.84
DCDB-C020-C040	**2X4**	1	4	470	297.64
DCDB-C030-C060	**3X6**	1	4	470	385.98
DCDB-C040-C080	**4X8**	1	4	470	393.65
DCDB-C060-C100	**6X10**	1	0	470	658.07

DC Isolation Coupler CPVC Sch 80 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DCDB-C005-G020	**1/2X2**	1	5	470	111.40
DCDB-C007-G030	**3/4X3**	1	5	470	122.60
DCDB-C010-G030	**1X3**	1	5	470	254.71
DCDB-C015-G040	**1-1/2X4**	1	4	470	348.33
DCDB-C020-G040	**2X4**	1	4	470	380.89
DCDB-C030-G060	**3X6**	1	5	470	404.78

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com



DC Termination Fittings are a special configuration for starting or stopping the containment portion of a system. Termination Fittings consist of a reducer coupling to accept the Containment pipe that is pre-fabricated to an internal extender coupling for connection to existing Carrier system. See *Double Containment Design & Installation Guide* for proper installation.

Centralizers are used inside the Containment piping system, but not inside fittings, installed on Carrier pipe and must be ordered separately according to same Carrier x Containment size and pipe schedule selected.

DC Termination Fitting PVC Sch 40 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DCTM-A005-A020	**1/2X2**	8	0	470	114.81
DCTM-A007-A030	**3/4X3**	1	7	470	120.80
DCTM-A010-A030	**1X3**	9	0	470	126.52
DCTM-A015-A040	**1-1/2X4**	4	0	470	136.57
DCTM-A020-A040	**2X4**	4	0	470	143.38
DCTM-A030-A060	**3X6**	1	2	470	195.61
DCTM-A040-A080	**4X8**	1	3	470	255.15
DCTM-A060-A100	**6X10**	1	2	470	483.08
DCTM-A080-A120	**8X12**	1	2	470	781.44

DC Termination Fitting PVC Sch 40 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DCTM-A005-G020	**1/2X2**	8	0	470	149.42
DCTM-A007-G030	**3/4X3**	1	7	470	244.51
DCTM-A010-G030	**1X3**	1	9	470	245.39
DCTM-A015-G040	**1-1/2X4**	1	4	470	308.18
DCTM-A020-G040	**2X4**	1	4	470	315.08
DCTM-A030-G060	**3X6**	1	2	470	488.85
DCTM-A040-G080	**4X8**	1	3	470	780.49

DC Termination Fitting PVC Sch 80 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DCTM-B005-A020	**1/2X2**	8	0	470	125.94
DCTM-B007-A030	**3/4X3**	9	0	470	140.68
DCTM-B010-A030	**1X3**	8	0	470	141.09
DCTM-B015-A040	**1-1/2X4**	4	0	470	160.91
DCTM-B020-A040	**2X4**	5	0	470	168.21
DCTM-B030-A060	**3X6**	1	4	470	262.64
DCTM-B040-A080	**4X8**	1	3	470	335.99
DCTM-B060-A100	**6X10**	1	0	470	639.71
DCTM-B080-A120	**8X12**	1	3	470	949.65

DC Termination Fitting PVC Sch 80 x PVC Sch 40 Clear

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DCTM-B005-G020	**1/2X2**	9	0	470	165.12
DCTM-B007-G030	**3/4X3**	10	0	470	263.33
DCTM-B010-G030	**1X3**	8	0	470	263.75
DCTM-B015-G040	**1-1/2X4**	1	4	470	335.91
DCTM-B020-G040	**2X4**	5	0	470	342.66
DCTM-B030-G060	**3X6**	1	2	470	561.39
DCTM-B040-G080	**4X8**	1	3	470	985.48

DC Termination Fitting PVC Sch 80 x PVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DCTM-B005-B020	**1/2X2**	10	0	470	142.87
DCTM-B007-B030	**3/4X3**	8	0	470	177.99
DCTM-B010-B030	**1X3**	8	0	470	178.41
DCTM-B015-B040	**1-1/2X4**	4	0	470	204.19
DCTM-B020-B040	**2X4**	4	0	470	211.48
DCTM-B030-B060	**3X6**	1	2	470	343.53
DCTM-B040-B080	**4X8**	1	2	470	427.39

DC Termination Fitting PVC Sch 80 x PVC Sch 80 (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DCTM-B060-B100	**6X10**	1	2	470	976.65
DCTM-B080-B120	**8X12**	1	3	470	1177.33

DC Termination Fitting CPVC Sch 80 x PVC Sch 40

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DCTM-C005-A020	**1/2X2**	8	0	470	126.73
DCTM-C007-A030	**3/4X3**	1	8	470	142.28
DCTM-C010-A030	**1X3**	8	0	470	148.53
DCTM-C015-A040	**1-1/2X4**	4	0	470	178.88
DCTM-C020-A040	**2X4**	3	0	470	191.52
DCTM-C030-A060	**3X6**	1	2	470	306.99
DCTM-C040-A080	**4X8**	1	3	470	398.96
DCTM-C060-A100	**6X10**	1	2	470	808.09
DCTM-C080-A120	**8X12**	1	3	470	1707.23

DC Termination Fitting CPVC Sch 80 x Sch 80 Gray

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DCTM-C005-B020	**1/2X2**	8	0	470	143.67
DCTM-C007-B030	**3/4X3**	8	0	470	179.60
DCTM-C010-B030	**1X3**	8	0	470	185.82
DCTM-C015-B040	**1-1/2X4**	4	0	470	222.14
DCTM-C020-B040	**2X4**	1	4	470	234.79
DCTM-C030-B060	**3X6**	1	2	470	387.78
DCTM-C040-B080	**4X8**	1	3	470	490.34
DCTM-C060-B100	**6X10**	1	2	470	1146.08
DCTM-C080-B120	**8X12**	1	3	470	1934.75

DC Termination Fitting CPVC Sch 80 x PVC Sch 40 Clear

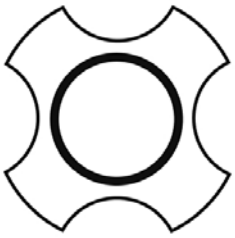
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DCTM-C005-G020	**1/2X2**	8	0	470	171.46
DCTM-C007-G030	**3/4X3**	10	0	470	283.14
DCTM-C010-G030	**1X3**	1	9	470	294.12
DCTM-C015-G040	**1-1/2X4**	10	0	470	385.94
DCTM-C020-G040	**2X4**	3	0	470	398.59
DCTM-C030-G060	**3X6**	1	15	470	674.59
DCTM-C040-G080	**4X8**	1	3	470	1021.40

DC Termination Fitting CPVC Sch 80 x CPVC Sch 80

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DCTM-C005-C020	**1/2X2**	9	0	470	215.23
DCTM-C007-C030	**3/4X3**	8	0	470	219.94
DCTM-C010-C030	**1X3**	4	0	470	226.16
DCTM-C015-C040	**1-1/2X4**	4	0	470	286.26
DCTM-C020-C040	**2X4**	4	0	470	298.88
DCTM-C030-C060	**3X6**	1	3	470	541.38
DCTM-C040-C080	**4X8**	1	2	470	967.82
DCTM-C060-C100	**6X10**	1	2	470	1473.00

DC Termination Fitting CPVC Sch 80 x CPVC Sch 80
(continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DCTM-C080-C120	**8X12**	1	3	470	2368.27



Centralizers are a simple slip-on design that are positioned and held in place by a few wraps of clean-room adhesive on each side. Centralizers hold the Carrier piping centrally located within the Containment piping and are designed with an annular space for routing of leak detection cable, if used. See *Double Containment Design & Installation Guide* for proper installation.

The following Spacing Chart can be used as a guide for determining the quantity of Centralizers needed, based on temperature and Carrier pipe size and schedule selected.

RECOMMENDED MINIMUM CENTRALIZER SUPPORT SPACING (ft.) *

Carrier Size (in.)	PVC SCHEDULE 40 CARRIER Temperature °F					PVC SCHEDULE 80 CARRIER Temperature °F					CPVC SCHEDULE 80 CARRIER Temperature °F					
	60°	80°	100°	120°	140°	60°	80°	100°	120°	140°	73°	100°	120°	140°	160°	180°
1/2	4-1/2	4-1/2	4	2-1/2	2-1/2	5	4-1/2	4-1/2	3	2-1/2	5-1/2	5	4-1/2	4-1/2	3	2-1/2
3/4	5	4-1/2	4	2-1/2	2-1/2	5-1/2	5	4-1/2	3	2-1/2	5-1/2	5-1/2	5	4-1/2	3	2-1/2
1	5-1/2	5	4-1/2	3	2-1/2	6	5-1/2	5	3-1/2	3	6	6	5-1/2	5	3-1/2	2
1-1/2	6	5-1/2	5	3-1/2	3	6-1/2	6	5-1/2	3-1/2	3-1/2	7	6-1/2	6	5-1/2	3-1/2	3-1/2
2	6	5-1/2	5	3-1/2	3	7	6-1/2	6	4	3-1/2	7	7	6-1/2	6	4	3-1/2
3	7	7	6	4	3-1/2	8	7-1/2	7	4-1/2	4	8	8	7-1/2	7	4-1/2	4
4	7-1/2	7	6-1/2	4-1/2	4	9	8-1/2	7-1/2	5	4-1/2	9	8-1/2	8	7-1/2	5	4-1/2
6	8-1/2	8	7-1/2	5	4-1/2	10	9-1/2	9	6	5	10	9-1/2	9	8	5-1/2	5
8	9	8-1/2	8	5	4-1/2	11	10-1/2	9-1/2	6-1/2	5-1/2	11	10-1/2	10	9	6	5-1/2
10	10	9	8-1/2	5-1/2	5	12	11	10	7	6	11-1/2	11	10-1/2	9-1/2	6-1/2	6
12	11-1/2	10-1/2	9-1/2	6-1/2	5-1/2	13	12	10-1/2	7-1/2	6-1/2	12-1/2	12	11-1/2	10-1/2	7-1/2	6-1/2

Note: Specified minimum spacing can also be used for system support according to the secondary Containment pipe size and schedule used. Where practical, system support should correspond to internal carrier support (centralizers) to minimize concentrated point loads.

* Note: Data furnished is based on raw material manufacturer's information. This information can be considered a reliable recommendation, but not a guarantee. Actual service conditions and system parameters should be evaluated by qualified personnel.

DC Centralizer IPS O.D. x Sch 40 White I.D.

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Carrier x Containment					
DCCT-H005-A020	**1/2X2**	55	330	470	13.23
DCCT-H007-A030	**3/4X3**	55	220	470	14.73
DCCT-H010-A030	**1X3**	55	220	470	14.73
DCCT-H015-A040	**1-1/2X4**	55	0	470	19.11
DCCT-H020-A040	**2X4**	55	0	470	19.11
DCCT-H030-A060	**3X6**	55	0	470	24.41
DCCT-H040-A080	**4X8**	55	0	470	30.16
DCCT-H060-A100	**6X10**	25	0	470	39.13
DCCT-H080-A120	**8X12**	25	0	470	49.13

DC Centralizer IPS O.D. x Sch 40 Clear I.D.

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Carrier x Containment					
DCCT-H005-G020	**1/2X2**	55	330	470	13.23
DCCT-H007-G020	**3/4X2**	55	330	470	13.23
DCCT-H010-G030	**1X3**	55	220	470	14.73
DCCT-H015-G040	**1-1/2X4**	55	220	470	19.11
DCCT-H020-G040	**2X4**	55	0	470	19.11
DCCT-H030-G060	**3X6**	55	0	470	24.41
DCCT-H040-G080	**4X8**	55	0	470	30.16

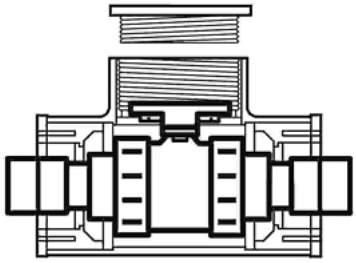
DC Centralizer IPS O.D. x Sch 80 PVC I.D.

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Carrier x Containment					
DCCT-H005-B020	**1/2X2**	55	330	470	13.23
DCCT-H007-B020	**3/4X2**	55	330	470	13.23
DCCT-H010-B030	**1X3**	55	220	470	14.73
DCCT-H015-B040	**1-1/2X4**	55	0	470	19.11
DCCT-H020-B040	**2X4**	55	0	470	19.11
DCCT-H030-B060	**3X6**	55	0	470	24.41
DCCT-H040-B080	**4X8**	55	0	470	30.16
DCCT-H060-B100	**6X10**	25	0	470	39.13
DCCT-H080-B120	**8X12**	20	0	470	49.13

DC Centralizer IPS O.D. x Sch 80 CPVC I.D.

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Carrier x Containment					
DCCT-H005-C020	**1/2X2**	55	330	470	13.23
DCCT-H007-C030	**3/4X3**	55	220	470	14.73
DCCT-H010-C030	**1X3**	55	220	470	14.73
DCCT-H015-C040	**1-1/2X4**	55	0	470	19.11
DCCT-H020-C040	**2X4**	55	0	470	19.11
DCCT-H030-C060	**3X6**	55	0	470	24.41
DCCT-H040-C080	**4X8**	55	0	470	30.16
DCCT-H060-C100	**6X10**	1	24	470	39.13
DCCT-H080-C120	**8X12**	20	0	470	49.13

Ball Valve Box With Valve



DC Ball Valve Boxes are made from a standard Spears® Tee fitting in designated material and Schedule selected, which is fitted with Carrier pipe size Ball Valve and bushed to specified Containment size. Includes Containment Valve Box fitting with threaded Access Plug, True Union 2000 Industrial Ball Valve with Lockout Handle and Centralizers for positioning valve in box. Carrier valves are equipped with extenders to facilitate cement assembly. See *Double Containment Design & Installation Guide* for proper installation.

True Union 2000 Industrial Ball Valve Specifications, Sizes 1/2" - 2":

Material:	PVC/CPVC
Seats:	PTFE
Seals:	EPDM/FKM
PR, Water:	235 psi @ 73°F (23°C), 1/2" - 2"

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Temperature/Pressure De-ratings Apply
All Valves assembled with Silicone-Free, Water Soluble Lubricant

Contact Spears® for Pricing & Availability on Additional Sizes, Optional External Stem & Handle Extensions, Custom Elastomer Seals, or Seat & Seal Repair Kits

While Valve Boxes include Centralizers for valve, additional Centralizers are used inside the Containment piping system installed on Carrier pipe and must be ordered separately according to same Carrier x Containment size and pipe schedule selected.

Valve Box, with PVC True Union 2000 Industrial Ball Valve
PVC Sch 40 x PVC Sch 40

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2X2	VBA20-A005-A020 294.92	VBA30-A005-A020 300.11	1	0	470
3/4X3	VBA20-A007-A030 307.17	VBA30-A007-A030 313.34	1	5	470
1X3	VBA20-A010-A030 315.89	VBA30-A010-A030 323.29	1	0	470
1-1/2X4	VBA20-A015-A040 542.13	VBA30-A015-A040 554.06	1	0	470
2X4	VBA20-A020-A040 616.43	VBA30-A020-A040 576.02	1	0	470

Valve Box, with PVC True Union 2000 Industrial Ball Valve
PVC Sch 40 x PVC Sch 40 Clear

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2X2	VBA20-A005-G020 1308.18	VBA30-A005-G020 1313.37	1	0	470
3/4X3	VBA20-A007-G030 1316.97	VBA30-A007-G030 1323.14	1	0	470
1X3	VBA20-A010-G030 1327.69	VBA30-A010-G030 1336.14	1	0	470
1-1/2X4	VBA20-A015-G040 2387.56	VBA30-A015-G040 2399.48	1	0	470
2X4	VBA20-A020-G040 2423.22	VBA30-A020-G040 2438.36	1	0	470

Valve Box, with PVC True Union 2000 Industrial Ball Valve
PVC Sch 80 x PVC Sch 40

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2X2	VBA20-B005-A020 309.49	VBA30-B005-A020 314.69	1	5	470
3/4X3	VBA20-B007-A030 322.21	VBA30-B007-A030 328.37	1	0	470

Valve Box, with PVC True Union 2000 Industrial Ball Valve
PVC Sch 80 x PVC Sch 40 (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1X3	VBA20-B010-A030 333.06	VBA30-B010-A030 626.58	1	0	470
1-1/2X4	VBA20-B015-A040 575.59	VBA30-B015-A040 730.40	1	0	470
2X4	VBA20-B020-A040 633.16	VBA30-B020-A040 758.16	1	0	470

Valve Box, with PVC True Union 2000 Industrial Ball Valve
PVC Sch 80 x PVC Sch 40 Clear

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2X2	VBA20-B005-G020 1318.61	VBA30-B005-G020 1323.80	1	0	470
3/4X3	VBA20-B007-G030 1332.08	VBA30-B007-G030 1338.25	1	0	470
1X3	VBA20-B010-G030 1342.87	VBA30-B010-G030 1350.54	1	0	470
1-1/2X4	VBA20-B015-G040 2417.84	VBA30-B015-G040 2429.78	1	0	470
2X4	VBA20-B020-G040 2454.53	VBA30-B020-G040 2469.04	1	0	470

Valve Box, with PVC True Union 2000 Industrial Ball Valve
PVC Sch 80 x PVC Sch 80

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2X2	VBA20-B005-B020 441.42	VBA30-B005-B020 623.96	1	0	470
3/4X3	VBA20-B007-B030 632.26	VBA30-B007-B030 638.43	1	0	470
1X3	VBA20-B010-B030 642.33	VBA30-B010-B030 649.38	1	0	470
1-1/2X4	VBA20-B015-B040 833.28	VBA30-B015-B040 845.34	1	0	470

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Valve Box, with PVC True Union 2000 Industrial Ball Valve

PVC Sch 80 x PVC Sch 80 (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
2X4	VBA20-B020-B040 978.56	VBA30-B020-B040 993.17	1	0	470

Valve Box, with CPVC True Union 2000 Industrial Ball Valve

CPVC Sch 80 x PVC Sch 40

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2X2	VBA20-C005-A020 333.21	VBA30-C005-A020 340.00	1	0	470
3/4X3	VBA20-C007-A030 345.96	VBA30-C007-A030 354.54	1	0	470
1X3	VBA20-C010-A030 366.87	VBA30-C010-A030 377.03	1	0	470
1-1/2X4	VBA20-C015-A040 649.68	VBA30-C015-A040 683.83	1	0	470
2X4	VBA20-C020-A040 698.25	VBA30-C020-A040 1075.27	1	0	470

Valve Box, with CPVC True Union 2000 Industrial Ball Valve

CPVC Sch 80 x PVC Sch 80

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2X2	VBA20-C005-B020 635.17	VBA30-C005-B020 641.96	1	0	470
3/4X3	VBA20-C007-B030 656.06	VBA30-C007-B030 664.63	1	5	470
1X3	VBA20-C010-B030 676.92	VBA30-C010-B030 687.08	1	4	470
1-1/2X4	VBA20-C015-B040 1009.69	VBA30-C015-B040 1027.96	1	3	470
2X4	VBA20-C020-B040 1068.99	VBA30-C020-B040 1099.72	1	5	470

Valve Box, with CPVC True Union 2000 Industrial Ball Valve

CPVC Sch 80 x CPVC Sch 80

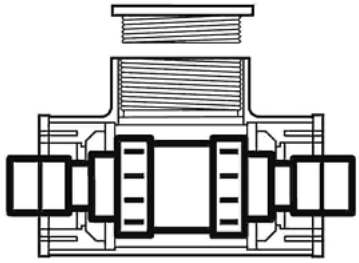
Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2X2	VBA20-C005-C020 959.13	VBA30-C005-C020 965.91	1	0	470
3/4X3	VBA20-C007-C030 983.27	VBA30-C007-C030 991.85	1	3	470
1X3	VBA20-C010-C030 1024.84	VBA30-C010-C030 1839.80	1	0	470
1-1/2X4	VBA20-C015-C040 1983.59	VBA30-C015-C040 2000.69	1	3	470
2X4	VBA20-C020-C040 2042.49	VBA30-C020-C040 2073.22	1	5	470

Valve Box, with CPVC True Union 2000 Industrial Ball Valve

CPVC Sch 80 x PVC Sch 40 Clear

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2X2	VBA20-C005-G020 1334.95	VBA30-C005-G020 1341.73	1	4	470
3/4X3	VBA20-C007-G030 1355.83	VBA30-C007-G030 1364.40	1	0	470
1X3	VBA20-C010-G030 1376.68	VBA30-C010-G030 1410.68	1	0	470
1-1/2X4	VBA20-C015-G040 2480.95	VBA30-C015-G040 920.21	1	0	470
2X4	VBA20-C020-G040 2540.12	VBA30-C020-G040 2570.85	1	0	470

Ball Check Valve Box With Valve



DC Ball Check Valve Boxes are made from a standard Spears® Tee fitting in designated material and Schedule selected, which is fitted with Carrier pipe size Ball Check Valve and bushed to specified Containment size. Includes Containment Valve Box fitting with threaded Access Plug, True Union 2000 Industrial Ball Check Valve and Centralizers for positioning valve in box. Carrier valves are equipped with extenders to facilitate cement assembly. See *Double Containment Design & Installation Guide* for proper installation.

True Union 2000 Industrial Ball Check Valve Specifications, Sizes 1/2" - 2":

Material: PVC/CPVC
Seals: EPDM/FKM
PR, Water: 235 psi @ 73°F (23°C), 1/2" - 2"

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Temperature/Pressure De-ratings Apply
All Valves assembled with Silicone-Free, Water Soluble Lubricant

Contact Spears® for Pricing & Availability on Additional Sizes, Custom Elastomer Seals, or Seat & Seal Repair Kits

General Installation Information: Ball check valves may be installed in either horizontal or vertical position. A minimum of ten (10) pipe diameters' distance maintained from any pump or other source of turbulence. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of flow.

While Valve Boxes include Centralizers for valve, additional Centralizers are used inside the Containment piping system installed on Carrier pipe and must be ordered separately according to same Carrier x Containment size and pipe schedule selected.

Valve Box, with PVC True Union 2000 Industrial Ball Check Valve
PVC Sch 40 x PVC Sch 40

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2X2	VBC2-A005-A020 299.28	VBC3-A005-A020 305.95	1	4	470
3/4X3	VBC2-A007-A030 309.68	VBC3-A007-A030 316.97	1	4	470
1X3	VBC2-A010-A030 322.39	VBC3-A010-A030 330.92	1	0	470
1-1/2X4	VBC2-A015-A040 567.82	VBC3-A015-A040 581.57	1	3	470
2X4	VBC2-A020-A040 615.11	VBC3-A020-A040 634.17	1	3	470

Valve Box, with PVC True Union 2000 Industrial Ball Check Valve
PVC Sch 40 x PVC Sch 40 Clear

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2X2	VBC2-A005-G020 1314.63	VBC3-A005-G020 1320.35	1	4	470
3/4X3	VBC2-A007-G030 1324.80	VBC3-A007-G030 1332.08	1	4	470
1X3	VBC2-A010-G030 1337.51	VBC3-A010-G030 1346.06	1	3	470
1-1/2X4	VBC2-A015-G040 2409.67	VBC3-A015-G040 2423.43	1	3	470
2X4	VBC2-A020-G040 2456.83	VBC3-A020-G040 2475.89	1	3	470

Valve Box, with PVC True Union 2000 Industrial Ball Check Valve
PVC Sch 80 x PVC Sch 40

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2X2	VBC2-B005-A020 315.68	VBC3-B005-A020 322.36	1	4	470
3/4X3	VBC2-B007-A030 330.01	VBC3-B007-A030 337.29	1	4	470

Valve Box, with PVC True Union 2000 Industrial Ball Check Valve
PVC Sch 80 x PVC Sch 40 (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1X3	VBC2-B010-A030 342.27	VBC3-B010-A030 344.14	1	3	470
1-1/2X4	VBC2-B015-A040 592.16	VBC3-B015-A040 605.89	1	3	470
2X4	VBC2-B020-A040 639.71	VBC3-B020-A040 658.77	1	3	470

Valve Box, with PVC True Union 2000 Industrial Ball Check Valve
PVC Sch 80 x PVC Sch 40 Clear

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2X2	VBC2-B005-G020 1325.52	VBC3-B005-G020 1332.20	1	4	470
3/4X3	VBC2-B007-G030 1339.84	VBC3-B007-G030 1347.13	1	4	470
1X3	VBC2-B010-G030 1352.11	VBC3-B010-G030 605.89	1	3	470
1-1/2X4	VBC2-B015-G040 2434.01	VBC3-B015-G040 2447.75	1	3	470
2X4	VBC2-B020-G040 2481.47	VBC3-B020-G040 1029.38	1	3	470

Valve Box, with PVC True Union 2000 Industrial Ball Check Valve
PVC Sch 80 x PVC Sch 80

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2X2	VBC2-B005-B020 625.76	VBC3-B005-B020 631.72	1	0	470
3/4X3	VBC2-B007-B030 640.07	VBC3-B007-B030 647.36	1	4	470
1X3	VBC2-B010-B030 652.33	VBC3-B010-B030 459.32	1	3	470
1-1/2X4	VBC2-B015-B040 962.69	VBC3-B015-B040 976.44	1	3	470

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Valve Box, with PVC True Union 2000 Industrial Ball Check Valve
PVC Sch 80 x PVC Sch 80 (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
2X4	VBC2-B020-B040 1010.31	VBC3-B020-B040 1029.36	1	3	470

Valve Box, with CPVC True Union 2000 Industrial Ball Check Valve
CPVC Sch 80 x PVC Sch 40

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2X2	VBC2-C005-A020 346.80	VBC3-C005-A020 355.59	1	4	470
3/4X3	VBC2-C007-A030 366.97	VBC3-C007-A030 377.31	1	4	470
1X3	VBC2-C010-A030 391.71	VBC3-C010-A030 402.03	1	3	470
1-1/2X4	VBC2-C015-A040 702.31	VBC3-C015-A040 723.06	1	4	470
2X4	VBC2-C020-A040 772.92	VBC3-C020-A040 801.65	1	4	470

Valve Box, with CPVC True Union 2000 Industrial Ball Check Valve
CPVC Sch 80 x PVC Sch 80

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2X2	VBC2-C005-B020 651.59	VBC3-C005-B020 660.37	1	4	470
3/4X3	VBC2-C007-B030 671.76	VBC3-C007-B030 682.09	1	4	470
1X3	VBC2-C010-B030 694.81	VBC3-C010-B030 706.97	1	3	470
1-1/2X4	VBC2-C015-B040 999.45	VBC3-C015-B040 1020.20	1	3	470
2X4	VBC2-C020-B040 1075.38	VBC3-C020-B040 1104.12	1	0	470

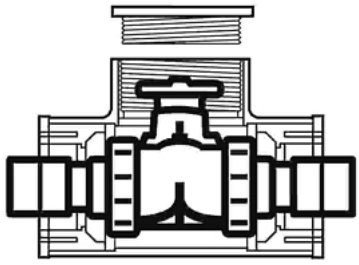
Valve Box, with CPVC True Union 2000 Industrial Ball Check Valve
CPVC Sch 80 x CPVC Sch 80

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2X2	VBC2-C005-C020 1031.77	VBC3-C005-C020 1040.56	1	0	470
3/4X3	VBC2-C007-C030 1052.07	VBC3-C007-C030 1062.40	1	4	470
1X3	VBC2-C010-C030 1074.98	VBC3-C010-C030 1087.14	1	4	470
1-1/2X4	VBC2-C015-C040 1868.85	VBC3-C015-C040 1889.62	1	3	470
2X4	VBC2-C020-C040 1936.81	VBC3-C020-C040 1965.56	1	3	470

Valve Box, with CPVC True Union 2000 Industrial Ball Check Valve
CPVC Sch 80 x PVC Sch 40 Clear

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2X2	VBC2-C005-G020 1323.97	VBC3-C005-G020 1332.75	1	4	470
3/4X3	VBC2-C007-G030 1371.68	VBC3-C007-G030 1382.01	1	4	470
1X3	VBC2-C010-G030 1394.58	VBC3-C010-G030 1406.73	1	3	470
1-1/2X4	VBC2-C015-G040 2515.74	VBC3-C015-G040 2536.49	1	4	470
2X4	VBC2-C020-G040 2586.34	VBC3-C020-G040 2615.09	1	4	470

Diaphragm Valve Box With Valve



DC Diaphragm Valve Boxes are made from a standard Spears® Tee fitting in designated material and Schedule selected, which is fitted with Carrier pipe size Diaphragm Valve and bushed to specified Containment size. Includes Containment Valve Box fitting with threaded Access Plug, True Union Diaphragm Valve and Centralizers for positioning valve in box. Carrier valves are equipped with extenders to facilitate cement assembly. See *Double Containment Design & Installation Guide* for proper installation.

True Union Diaphragm Valve Specifications, Sizes 1/2" - 2":

Material: PVC/CPVC
Seals: EPDM/FKM
PR, Water: 235 psi @ 73°F (23°C), 1/2" - 2"

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Temperature/Pressure De-ratings Apply
No Lubricants in Media Contact Area

Contact Spears® for Pricing & Availability on Additional Sizes, Elastomer Backed PTFE Diaphragms, or Diaphragm & Seal Repair Kits.

While Valve Boxes include Centralizers for valve, additional Centralizers are used inside the Containment piping system installed on Carrier pipe and must be ordered separately according to same Carrier x Containment size and pipe schedule selected.

Valve Box, with PVC True Union Diaphragm Valve PVC Sch 40 x PVC Sch 40

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2X2	VBD20-A005-A020 380.66	VBD30-A005-A020 394.93	1	0	470
3/4X3	VBD20-A007-A030 398.35	VBD30-A007-A030 414.55	1	0	470
1X3	VBD20-A010-A030 433.12	VBD30-A010-A030 450.87	1	0	470
1-1/2X4	VBD20-A015-A040 738.49	VBD30-A015-A040 782.71	1	0	470
2X4	VBD20-A020-A040 791.87	VBD30-A020-A040 853.82	1	0	470

Valve Box, with PVC True Union Diaphragm Valve PVC Sch 40 x PVC Sch 40 Clear

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2X2	VBD20-A005-G020 1390.48	VBD30-A005-G020 1404.76	1	0	470
3/4X3	VBD20-A007-G030 1434.64	VBD30-A007-G030 1450.85	1	0	470
1X3	VBD20-A010-G030 1469.57	VBD30-A010-G030 1487.33	1	0	470
1-1/2X4	VBD20-A015-G040 2581.06	VBD30-A015-G040 2625.27	1	0	470
2X4	VBD20-A020-G040 2634.39	VBD30-A020-G040 2696.34	1	0	470

Valve Box, with PVC True Union Diaphragm Valve PVC Sch 80 x PVC Sch 40

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2X2	VBD20-B005-A020 391.78	VBD30-B005-A020 406.04	1	0	470
3/4X3	VBD20-B007-A030 413.38	VBD30-B007-A030 429.59	1	0	470
1X3	VBD20-B010-A030 447.69	VBD30-B010-A030 465.45	1	0	470

Valve Box, with PVC True Union Diaphragm Valve PVC Sch 80 x PVC Sch 40 (continued)

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1-1/2X4	VBD20-B015-A040 762.99	VBD30-B015-A040 807.20	1	0	470
2X4	VBD20-B020-A040 816.60	VBD30-B020-A040 878.55	1	0	470

Valve Box, with PVC True Union Diaphragm Valve PVC Sch 80 x PVC Sch 40 Clear

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2X2	VBD20-B005-G020 1430.49	VBD30-B005-G020 1444.76	1	0	470
3/4X3	VBD20-B007-G030 1449.67	VBD30-B007-G030 1465.88	1	0	470
1X3	VBD20-B010-G030 1483.99	VBD30-B010-G030 1501.75	1	0	470
1-1/2X4	VBD20-B015-G040 2605.40	VBD30-B015-G040 2649.61	1	0	470
2X4	VBD20-B020-G040 2659.17	VBD30-B020-G040 2721.12	1	0	470

Valve Box, with PVC True Union Diaphragm Valve PVC Sch 80 x PVC Sch 80

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2X2	VBD20-B005-B020 701.82	VBD30-B005-B020 716.11	1	0	470
3/4X3	VBD20-B007-B030 723.38	VBD30-B007-B030 739.59	1	0	470
1X3	VBD20-B010-B030 757.67	VBD30-B010-B030 775.43	1	0	470
1-1/2X4	VBD20-B015-B040 1115.61	VBD30-B015-B040 1159.82	1	0	470
2X4	VBD20-B020-B040 1169.38	VBD30-B020-B040 1231.33	1	0	470

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Diaphragm Valve Box With Valve

Valve Box, with CPVC True Union Diaphragm Valve CPVC Sch 80 x PVC Sch 40

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2X2	VBD20-C005-A020 491.73	VBD30-C005-A020 555.78	1	0	470
3/4X3	VBD20-C007-A030 522.32	VBD30-C007-A030 637.62	1	0	470
1X3	VBD20-C010-A030 589.54	VBD30-C010-A030 675.31	1	0	470
1-1/2X4	VBD20-C015-A040 937.07	VBD30-C015-A040 1040.33	1	0	470
2X4	VBD20-C020-A040 973.87	VBD30-C020-A040 1095.31	1	0	470

Valve Box, with CPVC True Union Diaphragm Valve CPVC Sch 80 x PVC Sch 80

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2X2	VBD20-C005-B020 761.13	VBD30-C005-B020 825.20	1	5	470
3/4X3	VBD20-C007-B030 832.38	VBD30-C007-B030 947.69	1	6	470
1X3	VBD20-C010-B030 877.61	VBD30-C010-B030 963.39	1	6	470
1-1/2X4	VBD20-C015-B040 1307.94	VBD30-C015-B040 1384.72	1	4	470
2X4	VBD20-C020-B040 1344.74	VBD30-C020-B040 1466.17	1	0	470

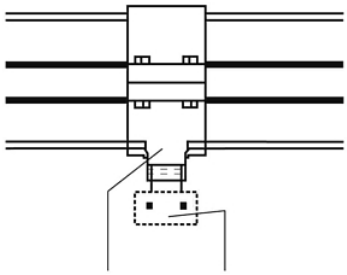
Valve Box, with CPVC True Union Diaphragm Valve CPVC Sch 80 x CPVC Sch 80

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2X2	VBD20-C005-C020 1089.14	VBD30-C005-C020 1153.20	1	0	470
3/4X3	VBD20-C007-C030 1159.59	VBD30-C007-C030 1274.91	1	0	470
1X3	VBD20-C010-C030 1204.77	VBD30-C010-C030 1290.55	1	0	470
1-1/2X4	VBD20-C015-C040 2133.62	VBD30-C015-C040 2210.38	1	0	470
2X4	VBD20-C020-C040 2170.41	VBD30-C020-C040 2291.85	1	0	470

Valve Box, with CPVC True Union Diaphragm Valve CPVC Sch 80 x PVC Sch 40 Clear

Size	EPDM	FKM	Std Pk	Mstr Pk	Prod Code
1/2X2	VBD20-C005-G020 1501.41	VBD30-C005-G020 1565.47	1	0	470
3/4X3	VBD20-C007-G030 1532.14	VBD30-C007-G030 1647.46	1	0	470
1X3	VBD20-C010-G030 1577.39	VBD30-C010-G030 1663.16	1	0	470
1-1/2X4	VBD20-C015-G040 2779.19	VBD30-C015-G040 2855.62	1	0	470
2X4	VBD20-C020-G040 2815.99	VBD30-C020-G040 2937.42	1	0	470

Clamp-On Saddles for Leak Detection Sensors



Leak Detection Sensor Saddles are special devices which can be installed on the Containment system where a "low-point" is desired for leak detection apparatus. Spears® Clamp-on style saddles feature an internal O-ring seal to allow easy installation anywhere on the containment piping. Saddles may also be used in Containment high points for air relief or for connection of Containment drainage valves (see note below). See *Double Containment Design & Installation Guide* for proper installation.

Clamp-on Saddle Specifications, Containment sizes 2" - 8":

Material:	PVC White/PVC Gray/CPVC
Seals:	EPDM/FKM
Hardware:	Stainless Steel (no fluid contact)
Outlet:	Special Reinforced (SR) Female Plastic thread 1/2" or 3/4" NPT (see note below)
PR, Water:	235 psi @ 73°F (23°C), 2" - 4" 200 psi @ 73°F (23°C), 6" 150 psi @ 73°F (23°C), 8"

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Temperature/Pressure De-ratings Apply

Note: Saddles specified in this catalog are for listed containment pipe sizes through 8", with 1/2" or 3/4" NPT connections. For a wide variety of additional pipe and outlet sizes, including solvent weld outlets, please refer to Spears® *PVC/CPVC Clamp-On & Hot-Tap Saddles*.

PVC White Clamp-On Saddle x SR Thread

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
with EPDM O-ring Seal & SS Hardware						
2"-4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)						
467SE-247SR	2X1/2	3/4	1	10	046	53.52
467SE-248SR	2X3/4	7/8	1	10	046	53.52
467SE-333SR[1]	3X1/2	7/8	1	10	046	71.82
467SE-334SR	3X3/4	7/8	1	10	046	71.82
467SE-415SR[1]	4X1/2	1-1/8	1	10	046	90.12
467SE-416SR[1]	4X3/4	1-1/8	1	10	046	90.12
467SE-523SR[1]	6X1/2	1-1/8	1	4	046	151.43
467SE-524SR[1]	6X3/4	1-1/8	1	4	046	151.43
467SE-573SR[1]	8X1/2	4	1	0	046	217.25
467SE-574SR[1]	8X3/4	4	1	0	046	217.25
1-Outlet Sized with Adapter PVC White Saddles with FKM O-ring seals available by special order						

PVC Gray Clamp-On Saddle x SR Thread

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
with EPDM O-ring Seal & SS Hardware						
2"-4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)						
867S-247SR	2X1/2	3/4	1	10	086	57.77
867S-248SR	2X3/4	7/8	1	10	086	57.77
867S-333SR[1]	3X1/2	7/8	1	10	086	77.67
867S-334SR	3X3/4	7/8	1	10	086	77.67
867S-415SR[1]	4X1/2	1-1/8	1	10	086	97.79
867S-416SR[1]	4X3/4	1-1/8	1	10	086	97.79
867S-523SR[1]	6X1/2	1-1/8	1	4	086	141.37
867S-524SR[1]	6X3/4	1-1/8	1	4	086	141.37
867S-573SR[1]	8X1/2	4	1	0	086	262.14
867S-574SR[1]	8X3/4	4	1	0	086	262.14
1- Outlet sized with Adapter						

PVC Gray Clamp-On Saddle x SR Thread

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
with FKM O-ring Seal & SS Hardware						
2"-4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)						
867SV-247SR	2X1/2	3/4	1	10	086	64.64
867SV-248SR	2X3/4	7/8	1	10	086	64.64
867SV-333SR[1]	3X1/2	7/8	1	10	086	86.42
867SV-334SR	3X3/4	7/8	1	10	086	86.42
867SV-415SR[1]	4X1/2	1-1/8	1	10	086	109.12
867SV-416SR[1]	4X3/4	1-1/8	1	10	086	109.12
867SV-523SR[1]	6X1/2	1-1/8	1	4	086	160.27
867SV-524SR[1]	6X3/4	1-1/8	1	4	086	160.27
867SV-573SR[1]	8X1/2	4	1	0	086	286.42
867SV-574SR[1]	8X3/4	4	1	0	086	286.42

PVC Gray Clamp-On Saddle x SR Thread (continued)

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
with FKM O-ring Seal & SS Hardware						
1-Outlet sized with Adapter						

CPVC Gray Clamp-On Saddle x SR Thread

Part Number	Size	Hole Saw Dia	Std Pk	Mstr Ctn	Prod Code	Price Each
with EPDM O-ring Seal & SS Hardware						
2"-4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)						
867S-247CSR	2X1/2	3/4	1	10	096	96.75
867S-248CSR	2X3/4	7/8	1	10	096	96.75
867S-333CSR[1]	3X1/2	7/8	1	10	096	129.51
867S-334CSR	3X3/4	7/8	1	10	096	129.51
867S-415CSR[1]	4X1/2	1-1/8	1	10	096	162.99
867S-416CSR[1]	4X3/4	1-1/8	1	10	096	162.99
867S-523CSR[1]	6X1/2	1-1/8	1	4	096	271.65
867S-524CSR[1]	6X3/4	1-1/8	1	4	096	271.65
867S-573CSR	8X1/2	4	1	0	096	482.60
867S-574CSR[1]	8X3/4	4	1	0	096	482.60
1-Outlet sized with Adapter						
with FKM O-ring Seal & SS Hardware						
2"-4" 235, 6" 200, 8"-12" 150 psi @ 73°F (23°C)						
867SV-247CSR	2X1/2	3/4	1	10	096	107.72
867SV-248CSR	2X3/4	7/8	1	10	096	107.72
867SV-333CSR[1]	3X1/2	7/8	1	10	096	144.71
867SV-334CSR	3X3/4	7/8	1	10	096	144.71
867SV-415CSR[1]	4X1/2	1-1/8	1	10	096	182.83
867SV-416CSR[1]	4X3/4	1-1/8	1	10	096	182.83
867SV-523CSR[1]	6X1/2	1-1/8	1	4	096	304.72
867SV-524CSR[1]	6X3/4	1-1/8	1	4	096	304.72
867SV-573CSR[1]	8X1/2	4	1	0	096	524.93
867SV-574CSR[1]	8X3/4	4	1	0	096	524.93
1-Outlet sized with Adapter						

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Double Containment

DESIGN & INSTALLATION GUIDE

TECHNICAL INFORMATION

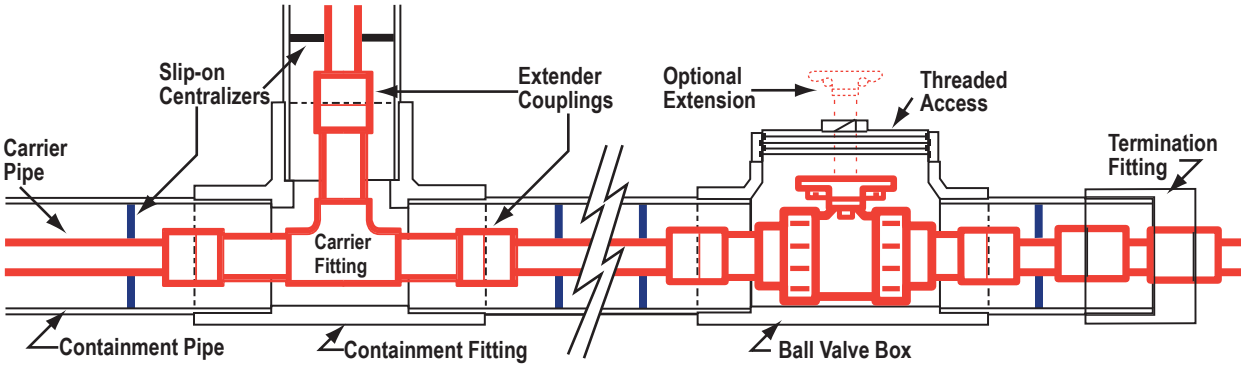
Contact Spears® for any information not found.

Double Containment Made Simple!

Simplified Design, Easier Installation, Lower Overall Cost

Spears® Double Containment (DC) Fittings are constructed from standard fittings that are to be assembled on the jobsite. Spears® DC fittings work with standard pipe for both Carrier and Containment lines. Standard DC fitting configurations include Tees, Access Tees, Elbows, Couplings, Isolation Couplers, Termination & Closure Fittings, and Pipe Centralizers. Plus supplemental equipment such as Clamp-on Saddles for Sensors, Expansion Joints, and In-line Valve Boxes assembled with Spears® quality Industrial Ball Valve, Ball Check or Diaphragm Valves.

• Spears® Floating Carrier System Design



Carrier fittings are equipped with special extender couplings for connection to carrier pipe. Simple, slip-on centralizer brackets used on the carrier pipe support this assembly inside the containment pipe. This design allows the carrier fitting to "float" within the containment fitting, allowing ease of movement for installation while reducing problems associated with thermal expansion and contraction during operation.

• Full Size Range for Virtually Any Application

Carrier x Containment Sizes 1/2x2, 3/4x3, 1x3, 1-1/2x4, 2x4, 3x6, 4x8, 6x10, 8x12, plus additional sizes on request.

• PVC & CPVC Carrier/Containment Combination Configured to Order

Select any combination of carrier and containment pipe/fittings from PVC Sch 40, PVC Clear Sch 40, PVC Sch 80, CPVC Sch 80.

• Full Service Pressure Rating

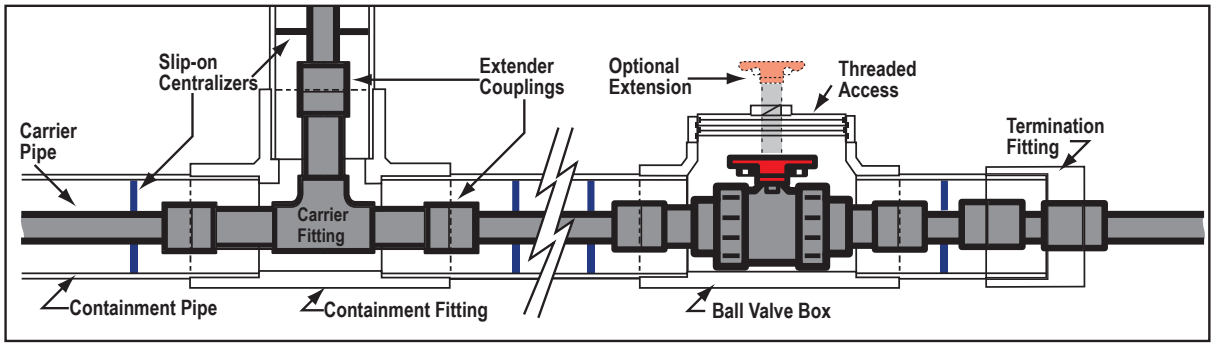
Spears® Double Containment carrier pipe and fittings are suitable for full Sch 40 or Sch 80 pressure applications, except where limited by addition of valves, saddles and other system components with lower pressure ratings. Secondary containment rated at 10 psi unless otherwise specified.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

The information contained in this publication is based on current information and Product design at the time of publication and is subject to change without notification. Our ongoing commitment to product improvement may result in some variation. No representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or results to be obtained therefrom. For verification of technical data or additional information not contained herein, please contact Spears® Technical Services Department [West Coast: (818) 364-1611 — East Coast: (678) 985-1263].

Spears® Double Containment Systems are engineered for ease of installation and lower associated installation costs. Complete systems include all necessary components - carrier pipe, containment pipe, centralizer brackets, valves and valve boxes, plus a full assortment of simplified double containment configurations including elbows, tees, closure and termination fittings. Typical user-supplied components include leak detection cable and sensors, air relief valves, and solvent cement for assembly.



Successful installation requires proper design and planning of system layout, a basic understanding of how Spears® double containment fitting design works, and specific attention to a proper sequence of general assembly. This manual is designed as a general guide and may not address all situations encountered. Due to the variety of selected Carrier/ Containment combinations some design variations may occur.

PLEASE READ ALL INSTRUCTIONS PRIOR TO SYSTEM ASSEMBLY

I. SYSTEM PLANNING & LAYOUT

The following issues need to be addressed in the planning stage of System Layout:

- **Carrier/Containment Combinations:** System primary carrier and secondary containment size, and material and pipe Schedule must be determined based on system temperature, pressure, and volume requirements. Standard Carrier x Containment sizes and material/Schedule combinations are shown in the table below. Double containment systems can be custom produced to virtually any standard pipe size, material, or material combinations not shown, including multiple carriers in a single containment system. Contact Spears® Technical Services.

STANDARD CARRIER X CONTAINMENT COMBINATIONS

Carrier x Containment Size	PVC Sch 40 x PVC Sch 40	PVC Sch 40 x PVC Sch 40 Clear	PVC Sch 80 x PVC Sch 40	PVC Sch 80 x PVC Sch 40 Clear	PVC Sch 80 x PVC Sch 80	CPVC Sch 80 x PVC Sch 40	CPVC Sch 80 x CPVC Sch 80	CPVC Sch 80 x PVC Sch 40 Clear
1/2 x 2	•	•	•	•	•	•	•	•
3/4 x 3	•	•	•	•	•	•	•	•
1 x 3	•	•	•	•	•	•	•	•
1-1/2 x 4	•	•	•	•	•	•	•	•
2 x 4	•	•	•	•	•	•	•	•
3 x 6	•	•	•	•	•	•	•	•
4 x 8	•	•	•	•	•	•	•	•
6 x 10	•	N/A	•	N/A	•	•	•	N/A
8 x 12	•	N/A	•	N/A	•	•	•	N/A

N/A = Not available in specified size and material

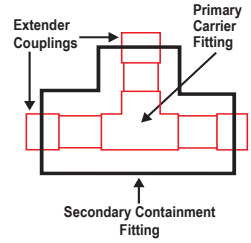
System Support: The system must be supported according to standard pipe support methods and criteria for installation of the Containment-size pipe. Where practical, system support should align with internal carrier support (centralizers) to reduce concentrated point loads.

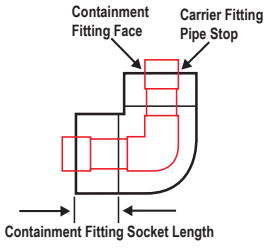
- **Caution:** System must be designed so that if carrier fails (leaks), the Containment pipe must not be pressurized beyond 10 psi pressure. An extremely hazardous condition can result from the air in the containment pipe becoming compressed. An air relief valve can be used or a vent to a containment vessel can be installed.
- **Thermal Expansion & Contraction:** Both Containment and Carrier system expansion and contraction must be determined, just like any other system. This is especially important where significantly different fluid temperatures are anticipated between the Carrier system and the Containment system. The primary line must be designed to allow for expansion & contraction due to process media temperature. The secondary line must be designed to accommodate temperature changes, especially in above ground installation where environmental factors will affect the temperature of the pipe.
- **Containment Thrust Blocking:** Adequate thrust blocking must be determined for the system and related loads.
- **Termination Points:** Must be determined for both start and end of Containment portion of the system.
- **Leak Detection Sensors, Drains, Valve Box, etc.:** Location and type must be determined (i.e. ball valve, gate valve, etc.)

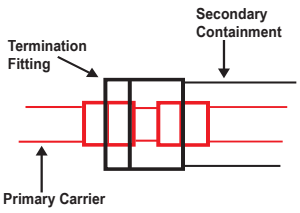
II. DOUBLE CONTAINMENT FITTING & COMPONENT DESIGN OVERVIEW

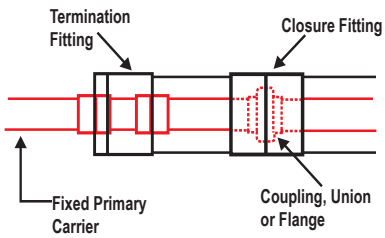
A basic understanding of Spears® double containment fitting and component design will make assembly much easier. Additional details of their application is found in each specific installation section.

- General configurations (elbows, tees, etc.) of Spears® double containment fittings consist of separate internal Carrier and external Containment fittings of the same configuration. Carrier fittings (except standard couplings) are equipped with extenders to facilitate cement assembly. Centralizers are used inside the Containment piping system, but not inside fittings in order to; 1) allow movement of the Carrier assembly inside the Containment system during expansion and contraction; and 2) allow the Carrier assembly to be more easily cemented before cementing the Containment assembly. **NOTE:** Certain configurations may require oversized containment fittings bushed to specified containment pipe size in order to accommodate specified carrier fitting configurations.
- Most double containment fitting configurations (where practical) are designed with dimensions that bring the pipe stop of the Carrier fitting flush to the face of the socket of the Containment fitting. This facilitates solvent cementing and determination of Carrier and Containment pipe cut lengths. On each pipe run, the Carrier pipe cut length is equal to the face-to-face distance between Containment fittings. The Containment pipe cut length is equal to the Carrier pipe length plus two (2) Containment pipe socket lengths.
- Termination Fittings are a special configuration for starting or stopping the containment portion of a system. Termination fittings will consist of a reducer coupling to accept the Containment pipe that is pre-fabricated to an internal extender coupling for connection to existing carrier system, thereby terminating (start or stop) the secondary containment portion of the system.
- System installation is best accomplished by consecutive assembly from a starting point to the end of the system. In situations where runs of Carrier and Containment system must meet, the Closure Fitting is a special coupling configuration for joining both Carrier and Containment piping. Closure Fittings are frequently used at the end of a system where the final Termination Fitting must connect to a fixed point in the system.

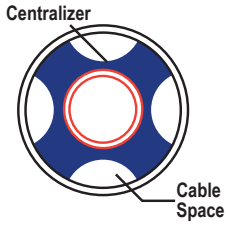






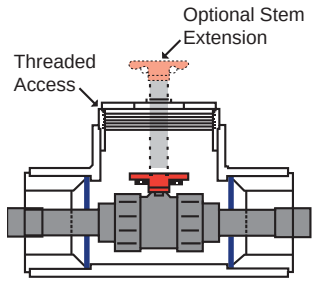


- Centralizers are a simple slip-on design which are positioned and held in place by a few wraps of Clean-room adhesive on each side. Centralizers hold the Carrier piping centrally located within the Containment piping and are designed with an annular space for routing of leak detection cable, if used.

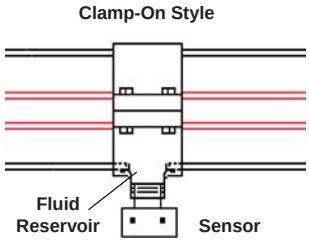


- In-Line Ball Valve Boxes are a pre-assembled "Tee-style" configuration with a valve installed for connection to Carrier and Containment piping. A threaded access is provided through the tee-box branch. Valve handle extensions through the cap are available as an option.

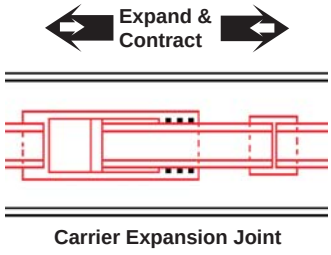
  NOTE: Tee-style valve boxes are normally over specified containment pipe size and bushed down in order to accommodate carrier valve.



- Sensor Saddles are special devices which can be installed on the Containment system where a "low-point" is desired for leak-detection apparatus. Saddles may also be used in Containment piping high points for air relief or for connection of Containment drainage valves.



- Expansion Joints are designed to accommodate linear thermal expansion and contraction in thermoplastic systems using an O-ring sealed internal piston. These units can be used on either primary Carrier or secondary Containment portions of the system, especially where a significant temperature differential exists between the two. Expansion Joints also double as an adjustable coupling or repair coupling for making pipe connections.
- Additional specialty configurations can be custom produced according to user requirements.



III. PRODUCT RECEIVED

Carrier and Containment pipe are sold and shipped separate from each other in standard stock 20-foot lengths. Finished cut lengths are prepared by the user at time of installation.

Likewise, each configuration of a double containment fitting is shipped with Carrier and Containment fittings separately, except special configurations that require factory pre-assembly. Upon receipt, each double containment configuration (Carrier fitting and Containment fitting) should be matched up in preparation for installation.

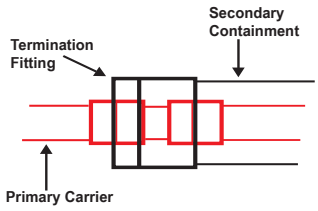
NOTE: ASSEMBLED CARRIER/CONTAINMENTS PIPE AVAILABLE ON REQUEST

IV. GENERAL INSTALLATION ASSEMBLY

Important: Proper solvent cementing procedures must be followed. See Appendix A

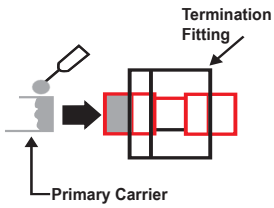
Termination Fitting - The Proper Starting Point

Where practical, it is easiest to start using a Termination fitting. This special fitting terminates (start/stop) the secondary Containment portion of the system. The Termination fitting is assembled to the existing primary piping system which continues as the Carrier in the double containment portion of the system and provides a connection for starting (or ending) the Containment piping.



Step 1: Install Termination Fitting to Primary Carrier Pipe

Using proper dauber size, cement Termination Fitting to the primary carrier piping.



Step 2: Cut Carrier & Containment Pipe Lengths

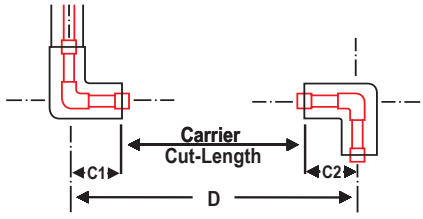
Important: All pipe MUST be cut square and properly deburred and beveled.

1. Carrier Pipe Cut Length: Determine the distance between the Containment socket end face of the first fitting to the socket end face of the next Containment fitting and cut Carrier pipe to that length.

Note: This dimension can be calculated from system centerlines as follows:

Lcar = D - (C1 + C2)

Where: Lcar = Carrier Pipe Cut Length
D = Centerline to Centerline distance between Containment fittings
C1 = Centerline to socket end of first Containment fitting
C2 = Centerline to socket end of second Containment fitting

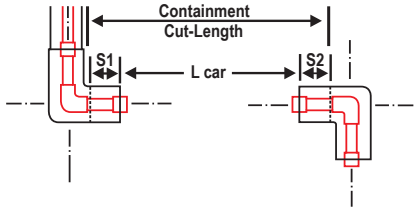


2. Containment Pipe Cut Length: Add the socket lengths for each of the two (2) connecting Containment fittings to the Carrier pipe cut length and cut the Containment pipe to that length.

Note: This dimension can be calculated as follows:

Lcon = Lcar + S1 + S2

Where: Lcon = Containment Pipe Cut Length
Lcar = Carrier Pipe Cut Length
S1 = Socket Length of first Containment fitting
S2 = Socket Length of second Containment fitting



COUPLING NOTE: Regular couplings do not come with extenders. Where a continuation of a straight pipe run is made with a coupling on carrier or containment pipe, use the overall coupled length in the above calculations. Special allowances should also be made for Closure Fittings and Expansion Joints in determining cut lengths.

Step 3: Assemble Slip-On Centralizers

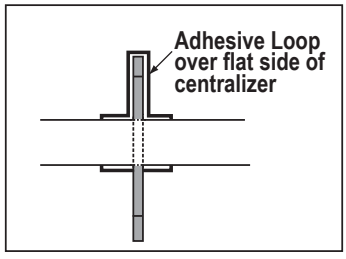
The chart below shows recommended Centralizer support spacing according to Carrier pipe size, material and Schedule at specified operating temperature for liquids up to 1.00 specific gravity, but does not include concentrated loads (see chart note on double containment system support).

RECOMMENDED MINIMUM CENTRALIZER SUPPORT SPACING (ft.) *

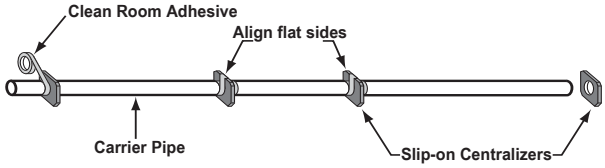
Carrier Size (in.)	PVC SCHEDULE 40 CARRIER Temperature °F					PVC SCHEDULE 80 CARRIER Temperature °F					CPVC SCHEDULE 80 CARRIER Temperature °F					
	60°	80°	100°	120°	140°	60°	80°	100°	120°	140°	73°	100°	120°	140°	160°	180°
1/2	4-1/2	4-1/2	4	2-1/2	2-1/2	5	4-1/2	4-1/2	3	2-1/2	5-1/2	5	4-1/2	4-1/2	3	2-1/2
3/4	5	4-1/2	4	2-1/2	2-1/2	5-1/2	5	4-1/2	3	2-1/2	5-1/2	5-1/2	5	4-1/2	3	2-1/2
1	5-1/2	5	4-1/2	3	2-1/2	6	5-1/2	5	3-1/2	3	6	6	5-1/2	5	3-1/2	3
1-1/2	6	5-1/2	5	3-1/2	3	6-1/2	6	5-1/2	3-1/2	3-1/2	7	6-1/2	6	5-1/2	3-1/2	3-1/2
2	6	5-1/2	5	3-1/2	3	7	6-1/2	6	4	3-1/2	7	7	6-1/2	6	4	3-1/2
3	7	7	6	4	3-1/2	8	7-1/2	7	4-1/2	4	8	8	7-1/2	7	4-1/2	4
4	7-1/2	7	6-1/2	4-1/2	4	9	8-1/2	7-1/2	5	4-1/2	9	8-1/2	8	7-1/2	5	4-1/2
6	8-1/2	8	7-1/2	5	4-1/2	10	9-1/2	9	6	5	10	9-1/2	9	8	5-1/2	5
8	9	8-1/2	8	5	4-1/2	11	10-1/2	9-1/2	6-1/2	5-1/2	11	10-1/2	10	9	6	5-1/2
10	10	9	8-1/2	5-1/2	5	12	11	10	7	6	11-1/2	11	10-1/2	9-1/2	6-1/2	6
12	11-1/2	10-1/2	9-1/2	6-1/2	5-1/2	13	12	10-1/2	7-1/2	6-1/2	12-1/2	12	11-1/2	10-1/2	7-1/2	6-1/2

Note: Specified minimum spacing can also be used for system support according to the secondary Containment pipe size and Schedule used. Where practical, system support should correspond to internal Carrier support (Centralizers) to minimize concentrated point loads.

*** Note:** Data furnished is based on raw material manufacturer's information. This information can be considered a reliable recommendation, but not a guarantee. Actual service conditions and system parameters should be evaluated by qualified personnel.

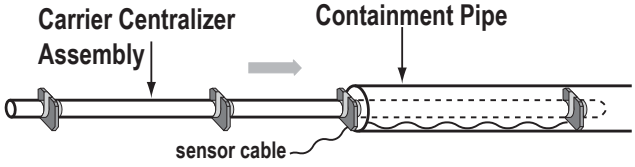


Assemble Centralizers to Carrier pipe as required (see chart above) holding in place with a loop of Clean-room adhesive over one flat side of each Centralizer followed by 3-wraps of adhesive around Carrier pipe on each side of Centralizer to hold loop. Orient so that the flat sides of all Centralizers align. On horizontal runs, the flat side should also lay parallel to the ground to accommodate any sensor wire used.



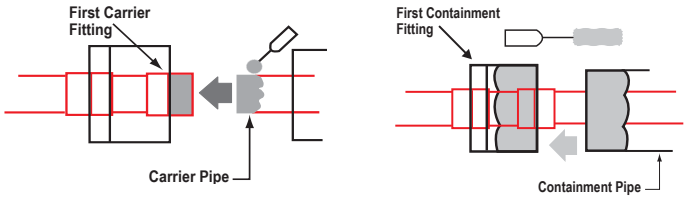
Step 4: Assemble Carrier Pipe Run Into Containment Pipe Run

Insert Carrier pipe run with Centralizers into Containment pipe run while feeding sensor wire through and under Centralizers as required.



Step 5: Solvent Cement Start of Carrier & Containment Run

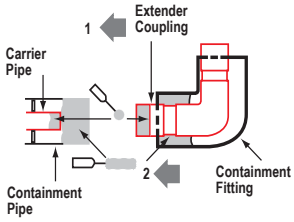
Position double containment pipe assembly and pull Carrier pipe out enough to allow joint make-up. Using proper dauber size, cement Carrier pipe to first Carrier (or Termination) fitting being sure to properly orient Centralizers. Using a different size dauber if necessary, cement Containment pipe and slide into first Containment (or Termination) fitting.



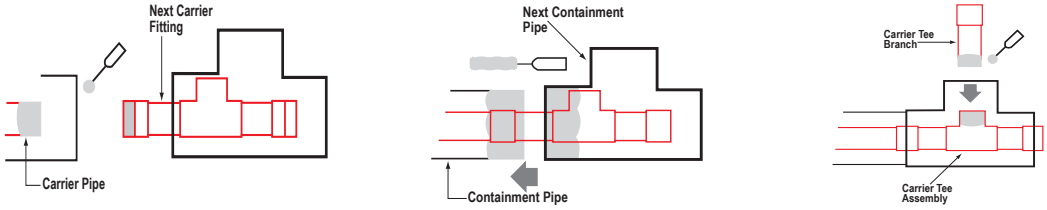
Step 6: Solvent Cement Next Carrier & Containment Run

At the opposite end of the run, install the next carrier and containment fitting assembly. **Important Note:** Certain carrier x containment sizes and configurations (such as elbows) may require cementing and installation of both fittings at the same time. A dry fit check of both fittings should be made to verify that there is clearance to slide the Containment fitting over the Carrier fitting once the Carrier fitting has been cemented to the carrier pipe. In such cases, slide the Containment fitting back as much as possible and apply cement to both Carrier pipe and extender coupling and to both Containment pipe and Containment fitting using appropriate size daubers. Immediately assemble next Carrier fitting to Carrier pipe and Containment fitting to Containment pipe being sure to align properly. Note: This process must be done quickly to prevent cement from drying out before assembly.

Other size and configuration combinations allow Containment fitting to be installed after Carrier fitting is in place. In such cases, slide Containment fitting away from Carrier fitting and cement Carrier pipe to next Carrier fitting, using proper dauber size. Slide next Containment fitting back over Carrier assembly and cement Containment pipe to next Containment fitting, using a different size dauber if necessary. For tees or crosses, where possible, always cement the run double containment assembly before the branch.



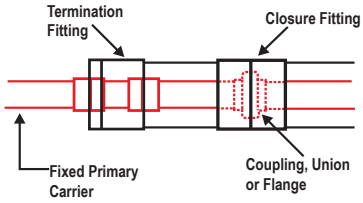
Important Note: Some Tees are shipped with the Carrier Tee branch socket extension separated from the Carrier Tee assembly to allow easy movement of the Carrier fitting to facilitate assembly, as shown below. The Carrier Tee branch extension must be **cemented in place** after the run Carrier Tee assembly is completed.



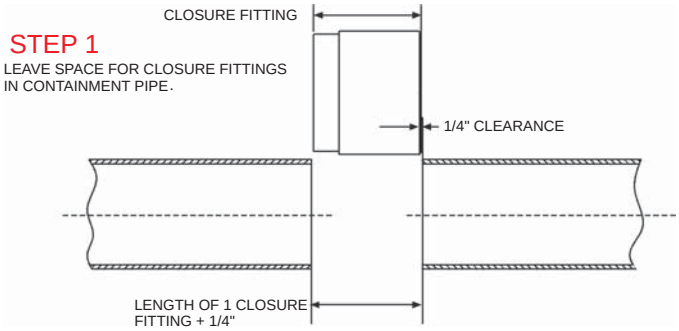
Repeat Step 2 through 6 above to consecutively assemble each additional section of the Double Containment System. Finish with installation of an additional Termination Fitting. See following instructions on Closure Fittings or on Expansion Joints for joining Double Containment system sections which must meet.

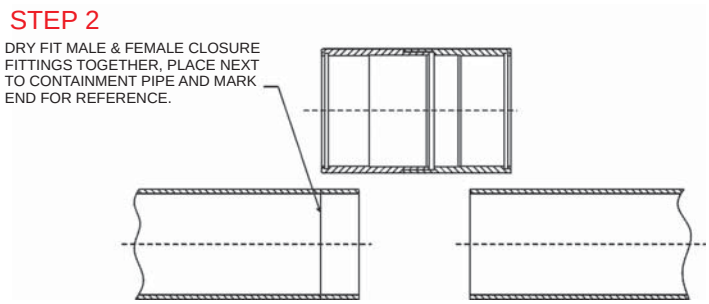
V. SPECIAL CLOSURE FITTING INSTALLATION

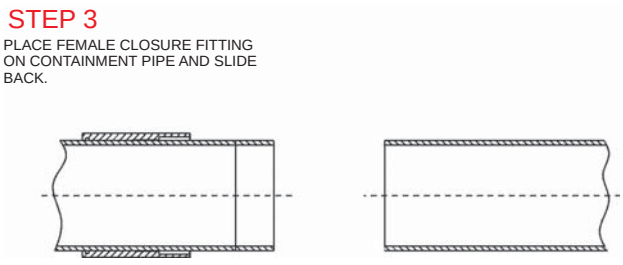
Closure Fittings are a special split coupling for joining meeting runs of Containment piping such as before the final Termination Fitting. Closure Fittings consists of 1 male Closure Fitting and 1 female Closure Fitting. An internal O-ring on each component serves as a “cement-wiper” during installation to assure a proper joint. A “One-step” type cement should be used to facilitate rapid assembly.



Typical Closure Fitting Use

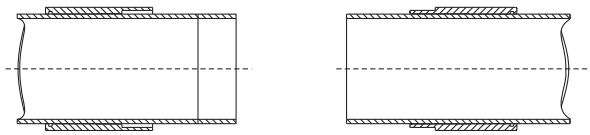






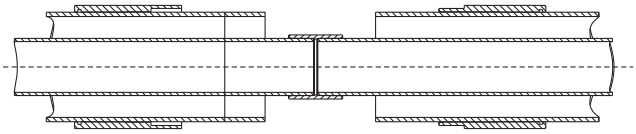
STEP 4

PLACE MALE CLOSURE FITTING ON CONTAINMENT PIPE AND SLIDE BACK.



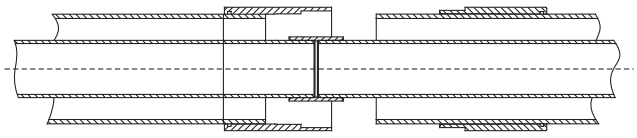
STEP 5

COMPLETE CARRIER PIPE. IF SUFFICIENT MOVEMENT FOR A SOCKET JOINT CANNOT BE MADE, A UNION, FLANGE OR EXPANSION JOINT MAY BE REQUIRED.



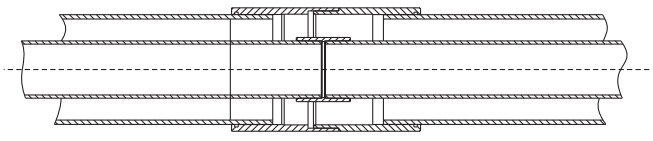
STEP 6

USE ONE-STEP CEMENT ON FEMALE CONTAINMENT PIPE. APPLY WELL PAST MARK ON PIPE. O-RING WILL WIPE OFF EXCESS. SLIDE CLOSURE FITTING FORWARD TO MARK ON PIPE MADE IN (STEP 2) LET CEMENT CURE BEFORE CONTINUING TO NEXT STEP.



STEP 7

USE ONE-STEP CEMENT ON CONTAINMENT PIPE. APPLY WELL PAST WHERE THE END OF CLOSURE FITTING WILL BE INSTALLED. ALSO CEMENT MALE PORTION OF CLOSURE FITTING AND INSIDE THE MATING FEMALE JOINT. SLIDE MALE FITTING INTO FEMALE FITTING AND CLAMP WITH A BAR OR PIPE-TYPE CLAMP.



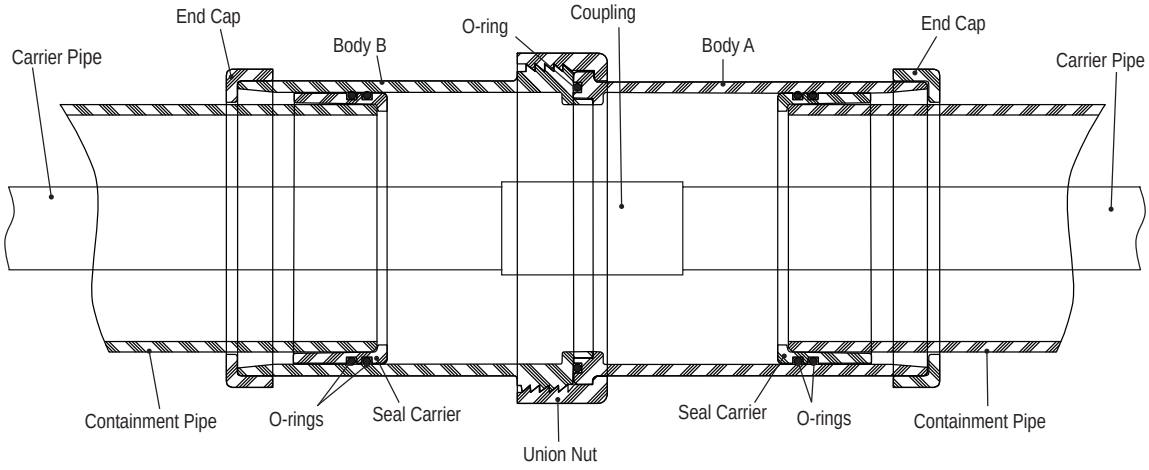
A Closure Fitting is a special coupling configuration for joining both Carrier and Containment piping in situations where opposing runs of Carrier and Containment system must meet. Closure Fittings are frequently used at the end of a system where the final Termination Fitting must connect to a fixed point in the system. Spears® Union Closure Fitting provides an easily installed union to join these opposing Containment piping runs.

Spears® Double Containment Union Closure Fittings also provide a small amount of expansion and contraction.

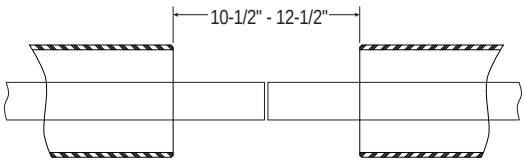
These instructions should be used in conjunction with Spears® publication DC-3, Double Containment Design & Installation Guide, for additional system installation instructions.

Maximum 100 PSI Short Term Hydrostatic Test Only. 50 PSI Working Pressure @ 73°F (23°C)

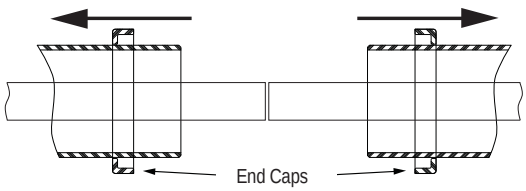
Spears® Double Containment Union Closure Fitting



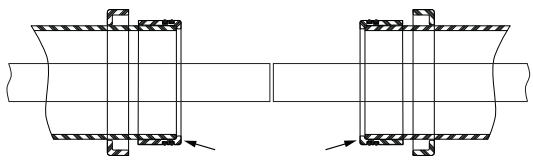
STEP 1 Leave space for Closure Fittings in containment pipe.



STEP 2 Slide End Caps onto containment pipe facing the proper direction.

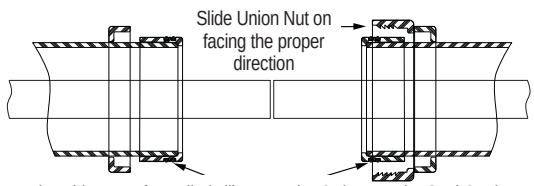


STEP 3 Install Seal Carriers.



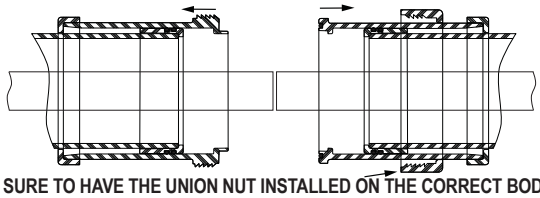
Solvent Cement the Seal Carriers in place on each end of both sections of the containment pipe.

STEP 4 Install Union Nut and apply supplied silicone to O-rings.



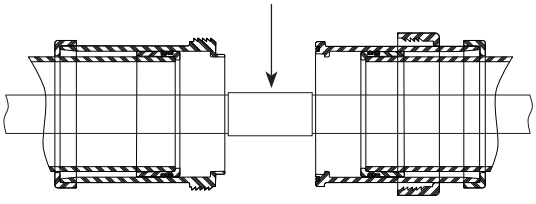
Apply a thin coat of supplied silicone to the O-rings on the Seal Carriers, being careful not to get any silicone on any of the surfaces that will need to be solvent cemented.

STEP 5 Install Body A to the same side Union Nut is on. Install Body B to other side.

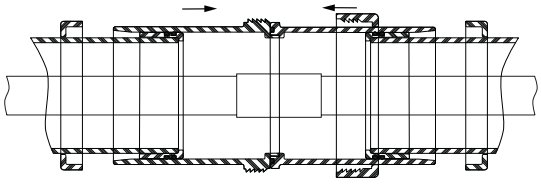


MAKE SURE TO HAVE THE UNION NUT INSTALLED ON THE CORRECT BODY HALF.

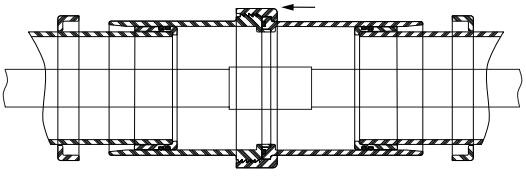
STEP 6 Complete Carrier Pipe. If sufficient movement for a socket joint cannot be made, a Union, Flange or Expansion Joint may be required.



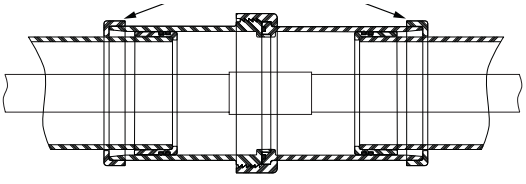
STEP 7 Slide Body Halves together.



STEP 8 Tighten Union Nut.



STEP 9 Solvent Cement End Caps into place. End caps restrain movement and prevent body from sliding off seal carriers.



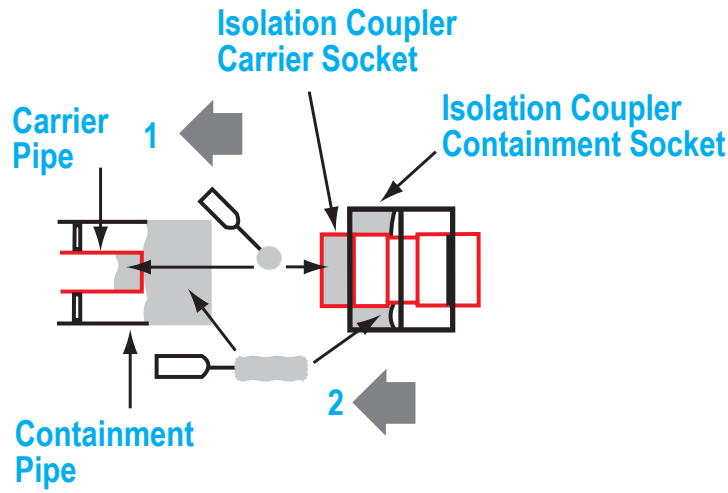
Installation is complete.

VI. ISOLATION COUPLER INSTALLATION

The purpose of the Isolation Coupler is to isolate a containment section for improved location identification if a leak is detected. To accomplish this, the Isolation Coupler has a partition in the Containment section fixed to the Carrier section.

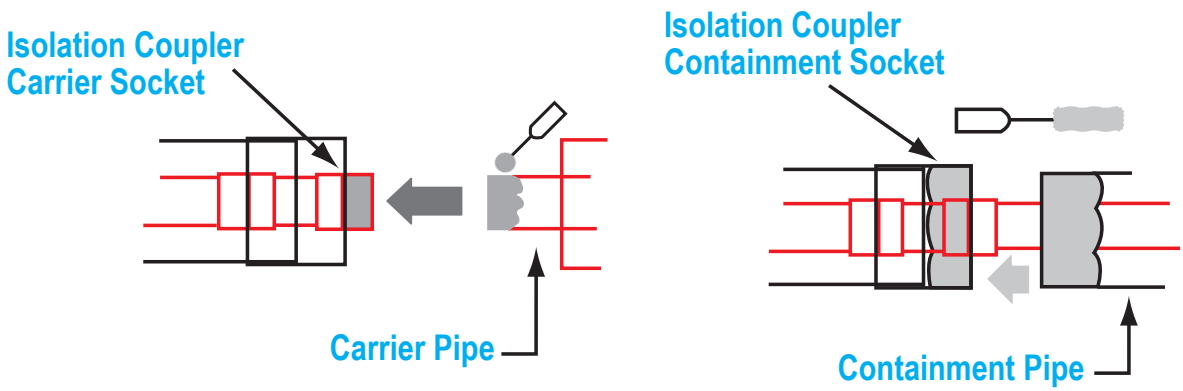
Step 1: Solvent Cement Isolation Coupler on Carrier and Containment Pipe Run

This coupler requires cementing of both primary Carrier and Containment joints at the same time. Using the right size dauber, cement both sockets on one end of the Isolation Coupler and both pipe ends of the Carrier and Containment pipe run. Assemble both joints immediately. **Note:** This process must be done quickly to prevent cement from drying out before assembly.



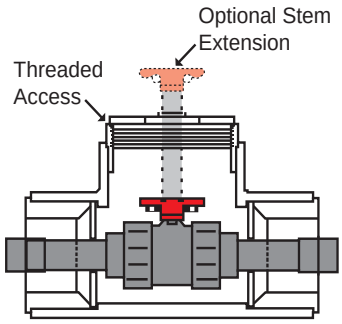
Step 2: Solvent Cement Start of Next Carrier & Containment Run

Position the next double containment pipe and centralizer assembly and pull Carrier pipe out enough to allow joint make-up. Using proper dauber size, cement Carrier pipe to Carrier socket of Isolation Coupler being sure to properly orient Centralizers. Using a different size dauber if necessary, cement Containment pipe and slide into Containment socket of the Isolation Coupler.



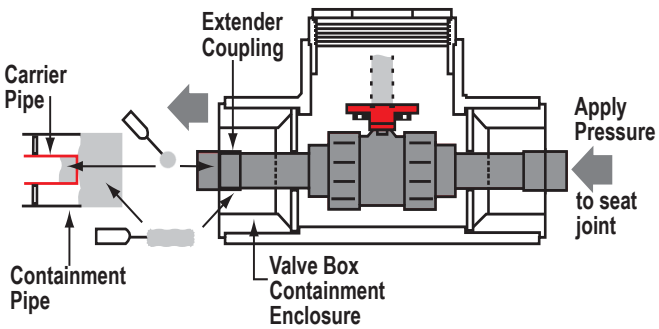
VII. IN-LINE VALVE BOX INSTALLATION

Tee-style valve boxes come with Spears® True Union 2000 style ball valves or ball check valves installed. Centralizers are pre-installed in box to give support to the valve. In-Line Valve Boxes are constructed in a larger diameter than the secondary containment system in order to accommodate the appropriate valve for the carrier system. These are fitted with reducers for connection to the containment system. Valve boxes can be ordered with stem extensions for exterior operation of valve. Ball and Ball Check Valves are available for use with Carrier pipe sizes 1/2" through 4", PVC or CPVC using EPDM or FKM seals. Other valve types available on request.



Using appropriate size daubers, apply cement to both Carrier pipe and extender coupling and to both Containment pipe and Valve Box Containment enclosure. Assemble immediately being sure to apply pressure to the opposite end extender coupling to seat Carrier connection.

Note: This process must be done quickly to prevent cement from drying out before assembly. A one-step type cement is recommended for this installation.

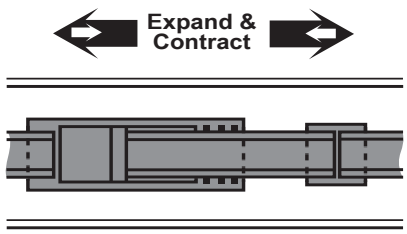


VIII. EXPANSION JOINT INSTALLATION

Expansion Joints can be used to compensate for linear thermal expansion in Carrier or Containment portions of the system. Expansion Joints are available in either 6" or 12" extension lengths.

Step 1: Determine Travel Length Needed

General Rule: For PVC systems, allow 3/8" expansion for every 10°F change in temperature per 100 feet of pipe (all diameters). For CPVC systems, allow 1/2" expansion for every 10°F change in temperature per 100 feet of pipe (all diameters). For example, a 6" travel expansion joint will accommodate approximately 160°F temperature change in 100 ft. of PVC pipe (16 x 3/8" = 6") or approximately 120°F temperature change in 100 ft. of CPVC pipe (12 x 1/2" = 6").



Carrier Expansion Joint

Step 2: Support & Thrust Block

ON SECONDARY CONTAINMENT PIPING: For proper operation, the outer tube of the Expansion Joint should be firmly anchored to allow free movement of the inner tube or "piston." Alignment is critical. Support and thrust block the system to direct movement squarely into the Expansion Joint. Alignment is critical and axial guides should be installed to ensure straight movement into Expansion Joint. Provisions should be made to protect the cylinder shaft from scratches, damage and debris in order to prevent leaks.

ON PRIMARY CARRIER PIPING: A Centralizer bracket should be located at each end of the Expansion Joint to serve as an axial guide to ensure straight movement into Expansion Joint. Protect the cylinder shaft from scratches, damage and debris during installation.

Step 3: Install Expansion Joint in Line

Determine installed extension length and solvent cement unit in system. Expansion Joints can be installed at the travel range midpoint for most general installations and are shipped from the factory in this position. If desired, the extended position for installation may be additionally adjusted to specific system and installation parameters using the following calculation:

$$\frac{T-A}{T-F} \times E = P$$

T = Maximum Temperature of Pipe Exposure
A = Temperature of Pipe at time of Installation
E = Maximum Expansion Joint Travel (6" or 12")
P = Piston Extension for Installation Position (inches)
F = Minimum Temperature of Pipe Exposure

Example: A straight run of pipe will operate at temperatures between 60°F and 110°F. Temperature at time of installation is 75°F using a 6" travel Expansion Joint.

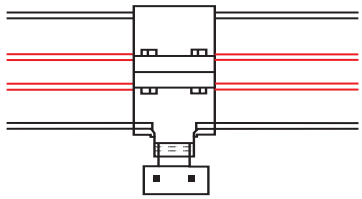
$$\frac{110-75}{110-60} \times 6 = 4.2 \text{ inches extended at installation}$$

Supplemental Information Notes:

Maximum operating temperature:	PVC = 140°F
	CPVC = 180°F
Coefficient of Linear Thermal Expansion:	PVC 1120 = 2.8 x 10^{-5} in/in/°F
	CPVC 4120 = 3.4 x 10^{-5} in/in/°F

XI. SENSOR SADDLE INSTALLATION

PVC and CPVC Sensor Saddles are available in Clamp-On type with O-ring seal for Containment pipe sizes 2" through 6" or in Glue-On style for Containment pipe sizes 1/2" and larger. Specify branch outlet size in thread or socket connection. Sensor Saddles should be installed in a low point along a Containment pipe run for collection of any fluid leakage. Install user-supplied sensor device. Saddles may also be used in Containment piping high points for air relief or for connection of Containment drainage valves.



Clamp-On Style Sensor Saddle

Clamp-On style Saddle Installation

1. Using a standard industrial-grade hole saw, cut specified hole in desired position on pipe according to recommended hole saw size engraved on saddle. Note: Care must be taken to deburr hole and remove all residue from hole area to assure tight fit and avoid leakage.
2. Fully seat O-ring in groove on underside of saddle outlet component. Position over hole and fully seat saddle onto pipe. Note: Saddle outlets are piloted. Be sure pilot lip fully engages with hole in pipe.
3. Place strap component opposite outlet and secure with bolts (4), nuts (4), and washers (8). Washers MUST be placed under each bolt head and nut to avoid damage to saddle.
4. Tighten bolts to specified torque.
5. Saddle is now ready for user-supplied sensor device installation.

Glue-On style Saddle Installation

1. Using a standard industrial-grade hole saw, cut specified hole in desired position on pipe according to recommended hole saw size. Note: Care must be taken to deburr hole and remove all residue from hole and cement area to assure proper fit.
2. Dry fit saddle over hole and mark perimeter on pipe.
3. Clean pipe and saddle glue surface, apply solvent cement to saddle and to pipe, fully covering marked area.
4. Immediately press saddle onto pipe while rotating the saddle on the pipe slightly to distribute the cement. Secure each end of saddle with gear-type clamp or strap to maintain compression until solvent cement fully cures.
5. Saddle is now ready for user-supplied sensor device installation.

X. PRESSURE TESTING SYSTEM

After all joints have properly cured, the Secondary Containment system may be air tested at 5 to 8 psig regulated pressure. **WARNING: System must NOT be tested with direct connection of air-line, nitrogen bottle, or similar unregulated pressure device. Test apparatus must be equipped with both a pressure limiting device at the source to assure that 8 psig pressure is not exceeded and an air relief device at the far end of the system set at a maximum pressure of 8 psig. FAILURE TO FOLLOW THIS PROCEDURE CAN RESULT IN SERIOUS OR FATAL BODILY INJURY.** Use a spray bottle of soap and water solution to check for leaks at joints. The Primary Carrier system should be hydrostatically tested. Flush the system to remove any debris and slowly fill to remove all entrapped air.

General Solvent Cement Welding Procedures

For best results, installation should be made at temperatures between 40°F and 110°F. All joint components should be inspected for any breaking, chipping, gouging or other visible damage before proceeding. All pipe, fittings and valves should be removed from packaging or containers and exposed to the installation environment for a minimum of one hour in order to thermally balance all components. All joining components must be clean and dry.

Important: TAKE EXTRA CARE THAT NO PRIMER OR SOLVENT CEMENT IS ALLOWED TO COME IN CONTACT WITH THE BALL OR OTHER INTERNAL COMPONENTS OF VALVES, EXPANSION JOINTS, OR UNIONS.

Step 1: Cut Pipe Square

Pipe ends must be cut square, using a wheel-type cutter or saw & miter box. A fine-toothed hand saw (16-18 teeth/inch) with little or no set is recommended. A power cut-off saw with carbide blade is recommended for high volume cutting.

Step 2: Deburr & Bevel Pipe

Regardless of cutting method used in Step 1, burrs are created which must be removed from both the pipe I.D. and O.D. before joining. All pipe ends should be beveled 10° to 15°. Commercially available deburring & beveling tool is recommended, or a mill file may be used.

Step 3: Clean Joint Components

Wipe away all loose dirt and moisture from the pipe O.D. and fitting I.D. with a clean, dry cotton rag. **DO NOT** ATTEMPT TO JOIN WET SURFACES.

Step 4: Check Joint Interference Fit

An interference between pipe and fitting socket is necessary for proper fusion of the joint. To check, lightly insert pipe into fitting socket. **DO NOT FORCE**. Interference between pipe and fitting must occur between ½ of the socket depth (full interference fit) and the socket bottom (net fit). Do not use components which improperly mate.

Step 5: Apply Primer

NOTE: Certain Double Containment solvent cement connections should be made using a "one-step" type cement specifically designed for use without primer. Go to Step 6 if using a one-step type of solvent cement.

Primer is necessary to penetrate and soften both pipe and fitting socket surfaces in order for the solvent cement to properly bond. THE MOST FREQUENT CAUSE OF JOINT FAILURES IS INADEQUATE SOLVENT PENETRATION AND SOFTENING OF BONDING SURFACES DURING THE WELDING OPERATION.

1. Using a brush or applicator size not less than ½ the pipe diameter, apply a liberal coat of primer with a scrubbing motion to the fitting socket until the surface is softened and semi-fluid. This may take 5 to 15 seconds depending on size and temperature (larger diameters and lower temperatures will increase required time).
2. Apply primer to pipe in the same manner, extending application area to slightly more than the insertion depth into the fitting socket.
3. Apply a second coat to both the fitting socket and the pipe.
4. Check penetration and softening by scraping the primed surfaces. A few thousandths of the semi-fluid surface should be easily removed. Repeat primer application if necessary.

Step 6: Apply Solvent Cement

Solvent cement must be applied IMMEDIATELY to primed surfaces before the primer dries, in an alternating 3-coat application. Using a brush or applicator size no less than 1/2 the pipe diameter, apply a liberal coat of solvent cement to the primed pipe surface, then apply a light to medium coat to the primed fitting socket. If a "net fit" was experienced during dry fit check (Step 4), apply an additional coat again to the pipe surface. BE SURE TO USE A VERY LIBERAL AMOUNT OF SOLVENT CEMENT ON PIPE.

Step 7: Join Components

IMMEDIATELY following application of cement and before it starts to set, insert the pipe into the socket with a 1/4-turn twisting motion to evenly distribute cement within the joint. A full bead of cement should form around the circumference of the joint. Hold joint together for approximately 30 seconds to make sure the pipe does not move or back out of the socket.

Step 8: Remove Excess Cement

Using a cloth, wipe clean all excess cement from the exterior juncture of the pipe and fitting.

Step 9: Initial Set & Cure Time

Initial Set & Cure Time must be followed in accordance with the solvent cement manufacturer's instructions.

Sample Engineering Specification

1.0 System Design and Manufacturer

1.1 Thermoplastic Double Containment System shall be a floating carrier design constructed from conventional pipe and fittings meeting applicable ASTM requirements for all standard configurations of primary carrier and secondary containment. System shall include all pipe, fittings, centralizers, valves and valve boxes to be supplied by Spears® Manufacturing Company.

1.2 Standard configurations (tees, elbows, crosses, etc.) of primary carrier fitting shall be equipped with extender couplings for installation in secondary containment pipe and fittings.

1.3 Primary carrier system shall be supported by polypropylene slide-on centralizer brackets positioned with clean room adhesive. Centralizers shall provide annular space suitable for drainage or installation of user-supplied leak detection cable.

1.4 Specialty fittings shall be according to manufacturer's specifications and suitable for use with specified primary carrier and secondary containment system. Specialty fittings include the following:

Termination Fitting for start and stop of secondary containment.

Closure Fitting for joining two (2) secondary containment lines that meet.

Expansion Joint/Coupling for thermal expansion/contraction compensation or joining of pipe lines.

Sensor Saddles for connection of user-supplied leak detection apparatus.

Any other custom fitting configuration designed for the system.

1.5 Double Containment System shall be air-vented in the secondary containment to prohibit pressurization in excess of 10 psi.

1.6 Valve Box enclosure for ball and ball check valves shall be Tee-Style with specified valve installed and [option: external stem extension].

2.0 Size & Materials

2.1 Double Containment system shall be [specify size, material & schedule *] primary carrier pipe and fittings and [specify size, material & schedule] secondary containment pipe and fittings.

2.2 All primary carrier and secondary containment pipe and fittings shall be manufactured from [specify: PVC, cell class 12454 or CPVC, cell class 23447] materials, according to ASTM D 1784.

2.3 All primary carrier and secondary containment pipe shall meet the requirements of [specify: ASTM D 1785 for PVC or ASTM F 441 for CPVC].

2.4 All standard configuration primary carrier and secondary containment fittings shall meet the requirements of [specify: ASTM D 2466 for PVC Schedule 40, D 2467 for PVC Schedule 80 or F 439 for Schedule 80 CPVC]. All special configuration fittings shall meet the manufacturer's design requirements and be suitable for use with the designated pipe.

3.0 Installation

3.1 Double Containment System shall be installed in accordance with Spears® Double Containment Design & Installation Guide.

3.2 Installation shall be made by qualified personnel trained in making solvent cement joints per ASTM practice D 2855, and flanged joint assembly according to manufacturer's instructions.

3.3 Primary carrier and secondary containment pipe and fitting connections shall be made by conventional solvent cement welding. Flanged assembly connections may be used where required for disassembly or as a design necessity. Solvent cement shall be user supplied and medium to heavy bodied as required.

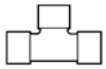
* = See standard size, material and pipe Schedule combinations. Custom size, material and Schedule combinations by request.

PVC Low Head PIP Fabricated Fittings, Risers & Accessories

PRICING

PVC Low Head PIP Fabricated Fittings, Risers & Accessories

Tee
Soc x Soc x Soc



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
280-102502	**6**	1	8	300	46.59
280-102499	**6X2**	1	6	300	36.79
280-102500	**6X3**	1	4	300	39.88
280-102501	**6X4**	1	4	300	41.73
280-102507	**8**	1	2	300	73.79
280-102503	**8X2**	1	2	300	47.46
280-102504	**8X3**	1	3	300	56.39
280-102505	**8X4**	1	2	300	58.85
280-102506	**8X6**	1	0	300	67.43
280-102513	**10**	1	0	300	92.01
280-102508	**10X2**	1	0	300	74.81
280-102509	**10X3**	1	0	300	76.04
280-102510	**10X4**	1	0	300	77.93
280-102511	**10X6**	1	0	300	79.73
280-102512	**10X8**	1	0	300	85.49
280-102520	**12**	1	0	300	149.65
280-102514	**12X2**	1	2	300	98.14
280-102515	**12X3**	1	0	300	104.32
280-102516	**12X4**	1	0	300	109.16
280-102517	**12X6**	1	0	300	111.33
280-102518	**12X8**	1	0	300	116.59
280-102519	**12X10**	1	0	300	127.58
280-102528	**15**	1	0	300	296.92
280-102521	**15X2**	1	0	300	159.47
280-102522	**15X3**	1	0	300	159.47
280-102523	**15X4**	1	0	300	165.62
280-102524	**15X6**	1	0	300	170.51
280-102525	**15X8**	1	0	300	190.15
280-102526	**15X10**	1	0	300	212.21
280-102527	**15X12**	1	0	300	247.80
280-102537	**18**	1	0	300	516.55
280-102529	**18X2**	1	0	300	300.56
280-102530	**18X3**	1	0	300	302.98
280-102531	**18X4**	1	0	300	305.48
280-102532	**18X6**	1	0	300	311.61
280-102533	**18X8**	1	0	300	316.54
280-102534	**18X10**	1	0	300	345.99
280-102535	**18X12**	1	0	300	381.59
280-102536	**18X15**	1	0	300	417.15
280-102547	**20**	1	0	300	639.23
280-102538	**20X2**	1	0	300	380.34
280-102539	**20X3**	1	0	300	384.27
280-102540	**20X4**	1	0	300	390.14
280-102541	**20X6**	1	0	300	402.44
280-102542	**20X8**	1	0	300	411.01
280-102543	**20X10**	1	0	300	455.16
280-102544	**20X12**	1	0	300	483.40
280-102545	**20X15**	1	0	300	519.02
280-102546	**20X18**	1	0	300	584.00

90° Elbow
Soc x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
280-100812	**6**	1	4	300	73.61
280-100813	**8**	1	2	300	90.75
280-100814	**10**	1	0	300	144.79
280-100815	**12**	1	0	300	190.15
280-100816	**15**	1	0	300	310.38
280-100817	**18**	1	0	300	537.36
280-100818	**20**	1	0	300	723.93

11-1/4° Elbow
Soc x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
280-100114	**6**	1	10	300	23.32
280-100115	**8**	1	4	300	33.15
280-100116	**10**	1	2	300	47.82
280-100117	**12**	1	2	300	66.24
280-100118	**15**	1	0	300	114.09
280-100119	**18**	1	0	300	196.32
280-100120	**20**	1	0	300	249.05

15° Elbow
Soc x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
280-100234	**6**	1	10	300	23.32
280-100235	**8**	1	4	300	33.15
280-100236	**10**	1	2	300	47.82
280-100237	**12**	1	2	300	66.24
280-100238	**15**	1	0	300	114.09
280-100239	**18**	1	0	300	199.97
280-100240	**20**	1	0	300	258.84

22-1/2° Elbow
Soc x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
280-100354	**6**	1	4	300	23.32
280-100355	**8**	1	3	300	33.15
280-100356	**10**	1	2	300	47.82
280-100357	**12**	1	2	300	66.24
280-100358	**15**	1	0	300	114.09
280-100359	**18**	1	0	300	199.97
280-100360	**20**	1	0	300	258.84

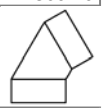
30° Elbow
Soc x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
280-100474	**6**	1	8	300	39.23
280-100475	**8**	1	4	300	57.61
280-100476	**10**	1	2	300	71.15
280-100477	**12**	1	2	300	116.59
280-100478	**15**	1	0	300	187.72
280-100479	**18**	1	0	300	332.45
280-100480	**20**	1	0	300	369.29

45° Elbow
Soc x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
280-100592	**6**	1	4	300	39.23
280-100593	**8**	1	4	300	57.61
280-100594	**10**	1	2	300	71.15
280-100595	**12**	1	2	300	116.59
280-100596	**15**	1	0	300	187.72
280-100597	**18**	1	0	300	332.45
280-100598	**20**	1	0	300	369.29

60° Elbow
Soc x Soc



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
280-100702	**6**	1	4	300	73.61
280-100703	**8**	1	2	300	90.75
280-100704	**10**	1	0	300	144.79
280-100705	**12**	1	0	300	190.15
280-100706	**15**	1	0	300	310.38
280-100707	**18**	1	0	300	537.36
280-100708	**20**	1	0	300	723.93

PVC Low Head PIP Fabricated Fittings, Risers & Accessories

Coupling
Soc x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
280-100001	**4 IPS**	1	10	300	15.89
280-100002	**6**	1	5	300	19.61
280-100003	**8**	1	6	300	22.07
280-100004	**10**	1	4	300	30.68
280-100005	**12**	1	4	300	41.73
280-100006	**15**	1	0	300	73.61
280-100007	**18**	1	0	300	131.24
280-100008	**20**	1	0	300	161.93

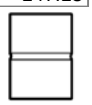
Reducer
Soc x Soc

280-100928	**8X6**	1	2	300	34.35
2829-626	**10X6**	1	4	300	138.38
280-100931	**10X8**	1	4	300	52.76
280-100933	**12X6**	1	6	300	197.32
280-100934	**12X8**	1	4	300	153.36
280-100935	**12X10**	1	4	300	76.09
2829-726	**15X6**	1	0	300	342.43
2829-728	**15X8**	1	0	309	245.95
280-100939	**15X10**	1	0	300	174.87
280-100940	**15X12**	1	0	300	115.28
2829-786	**18X6**	1	0	300	514.23
2829-788	**18X8**	1	0	300	483.79
280-100944	**18X10**	1	0	300	423.29
280-100945	**18X12**	1	0	300	379.04
280-100946	**18X15**	1	0	300	185.26
2829-816	**20X6**	1	0	300	791.83
2829-818	**20X8**	1	0	300	753.89
2829-820	**20X10**	1	0	300	697.04
2829-822	**20X12**	1	0	300	640.64
2829-825	**20X15**	1	0	300	523.91
280-100953	**20X18**	1	0	300	271.12

PIP x IPS Reducer
Soc x Soc

280-101536	**6X4**	1	4	300	27.59
280-101537	**8X6**	1	8	300	39.88
280-101538	**10X8**	1	4	300	52.76
280-101534	**12X8**	1	4	300	153.36
280-101539	**12X10**	1	4	300	92.00
280-101540	**15X12**	1	0	300	147.18

IPS X PIP Adapter
Soc x Soc



280-101649	**6**	1	4	300	30.68
280-101650	**8**	1	4	300	45.36
280-101651	**10**	1	4	300	71.15
280-101652	**12**	1	4	300	100.59

Concrete Adapter
Soc x Concrete

280-101761	**6X6**	1	5	300	29.44
280-101762	**8X8**	1	6	300	42.92
280-101763	**10X10**	1	4	300	66.24
280-101764	**12X12**	1	4	300	93.20
280-101765	**12X14**	1	0	300	99.34
280-101766	**15X14**	1	0	300	137.37
280-101767	**15X15**	1	0	300	141.09

Concrete Adapter (continued)
Soc x Concrete

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
280-101768	**15X16**	1	0	300	143.55
280-101769	**18X18**	1	0	300	166.85
280-101770	**20X20**	1	0	300	208.56

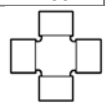
Linegate Valve Adapter
Linegate x Soc

280-101777	**6**	1	6	300	24.45
280-101778	**8**	1	6	300	27.74
280-101779	**10**	1	4	300	44.20
280-101780	**12**	1	4	300	62.58
280-101781	**15**	1	0	300	107.94
2845-180	**18**	1	0	300	155.42

Linegate Valve PIP Adapter
Linegate x Soc

2845-180P	**18**	1	0	300	155.42

Cross
Soc x Soc x Soc x Soc



280-103286	**6**	1	0	300	77.27
280-103283	**6X2**	1	0	300	61.33
280-103284	**6X3**	1	0	300	61.33
280-103285	**6X4**	1	4	300	67.43
280-103291	**8**	1	0	300	105.54
280-103287	**8X2**	1	0	300	85.85
280-103288	**8X3**	1	0	300	85.85
280-103289	**8X4**	1	0	300	92.00
280-103290	**8X6**	1	0	300	96.87
280-103297	**10**	1	0	300	143.55
280-103292	**10X2**	1	2	300	85.85
280-103293	**10X3**	1	0	300	88.95
280-103294	**10X4**	1	0	300	92.00
280-103295	**10X6**	1	0	300	103.06
280-103296	**10X8**	1	0	300	117.73
280-103304	**12**	1	0	300	199.97
280-103298	**12X2**	1	0	300	115.95
280-103299	**12X3**	1	0	300	117.13
280-103300	**12X4**	1	0	300	120.20
280-103301	**12X6**	1	0	300	130.04
280-103302	**12X8**	1	0	300	141.09
280-103303	**12X10**	1	0	300	170.51
280-103321	**15**	1	0	300	381.59
280-103313	**15X2**	1	0	300	170.51
280-103314	**15X3**	1	0	300	174.21
280-103315	**15X4**	1	0	300	182.82
280-103316	**15X6**	1	0	300	193.84
280-103317	**15X8**	1	0	300	208.56
280-103318	**15X10**	1	0	300	246.62
280-103319	**15X12**	1	0	300	296.92
280-103342	**18**	1	0	300	612.22
280-103332	**18X2**	1	0	300	331.26
280-103333	**18X3**	1	0	300	334.35
280-103334	**18X4**	1	0	300	337.42
280-103335	**18X6**	1	0	300	345.99
280-103336	**18X8**	1	0	300	355.79
280-103337	**18X10**	1	0	300	404.84
280-103338	**18X12**	1	0	300	430.69
280-103340	**18X15**	1	0	300	490.80
280-103354	**20**	1	0	300	806.11
280-103343	**20X2**	1	0	300	464.98
280-103344	**20X3**	1	0	300	468.66
280-103345	**20X4**	1	0	300	472.38

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Low Head PIP Fabricated Fittings, Risers & Accessories

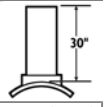
Cross (continued)

Soc x Soc x Soc x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
280-103346	**20X6**	1	0	300	483.40
280-103347	**20X8**	1	0	300	495.68
280-103348	**20X10**	1	0	300	531.23
280-103349	**20X12**	1	0	300	571.75
280-103351	**20X15**	1	0	300	598.73
280-103353	**20X18**	1	0	300	703.03

Orchard Riser

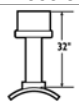
Saddle x Riser



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
2880-04030	**4X4**	1	0	301	35.52
2880-53230	**6X4**	1	25	301	35.52
2880-06030	**6X6**	1	25	301	61.33
2880-58230	**8X4**	1	25	301	35.52
2880-58530	**8X6**	1	25	301	46.59
2880-08030	**8X8**	1	12	301	85.89
2880-62430	**10X4**	1	30	301	36.79
2880-62630	**10X6**	1	20	301	46.59
2880-62830	**10X8**	1	16	301	63.79
2880-10030	**10X10**	1	6	301	122.65
2880-66430	**12X4**	1	25	301	38.01
2880-66630	**12X6**	1	20	301	46.59
2880-66830	**12X8**	1	12	301	63.79
2880-67030	**12X10**	1	9	301	88.31
2880-12030	**12X12**	1	6	301	171.75
2880-72430	**15X4**	1	25	301	40.46
2880-72630	**15X6**	1	25	301	53.94
2880-72830	**15X8**	1	12	301	72.39
2880-73030	**15X10**	1	9	301	100.59
2880-73230	**15X12**	1	6	301	138.62
2880-15030	**15X15**	1	4	301	287.08
2880-78430	**18X4**	1	25	301	44.20
2880-78630	**18X6**	1	25	301	52.46
2880-78830	**18X8**	1	10	301	76.09
2880-79030	**18X10**	1	9	301	101.82
2880-79230	**18X12**	1	6	301	157.01
2880-79530	**18X15**	1	4	301	226.96
2880-18030	**18X18**	1	3	301	430.62
2880-81430	**20X4**	1	0	301	46.62
2880-81630	**20X6**	1	12	301	61.36
2880-81830	**20X8**	1	12	301	92.00
2880-82030	**20X10**	1	6	301	143.56
2880-82230	**20X12**	1	5	301	174.21
2880-82530	**20X15**	1	4	301	256.46
2880-82830	**20X18**	1	0	301	315.31
2880-20030	**20X20**	1	2	301	555.82

Erosion Pot Riser

Saddle x Riser x Pot



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
2881-53232	**6X4X8**	1	16	301	67.99
2881-06032	**6X6X10**	1	0	301	81.36
2881-58232	**8X4X8**	1	20	301	67.99
2881-58532	**8X6X10**	1	0	301	81.36
2881-08032	**8X8X12**	1	0	301	115.05
2881-62432	**10X4X8**	1	16	301	67.99
2881-62632	**10X6X10**	1	0	301	81.36
2881-62832	**10X8X12**	1	12	301	115.05
2881-10032	**10X10X15**	1	0	301	158.07
2881-66432	**12X4X8**	1	20	301	67.99
2881-66632	**12X6X10**	1	12	301	81.36
2881-66832	**12X8X12**	1	12	301	115.05
2881-67032	**12X10X15**	1	0	301	158.07
2881-12032	**12X12X18**	1	0	301	209.24
2881-72432	**15X4X8**	1	0	301	67.99

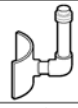
Erosion Pot Riser (continued)

Saddle x Riser x Pot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
2881-72632	**15X6X10**	1	12	301	81.36
2881-72832	**15X8X12**	1	0	301	115.05
2881-73032	**15X10X15**	1	0	301	158.07
2881-73232	**15X12X18**	1	0	301	209.24
2881-15032	**15X15X20**	1	0	301	308.03
2881-78432	**18X4X8**	1	0	301	67.99
2881-78632	**18X6X10**	1	0	301	81.36
2881-78832	**18X8X12**	1	0	301	115.05
2881-79032	**18X10X15**	1	0	301	158.07
2881-79232	**18X12X18**	1	0	301	209.24
2881-79532	**18X15X20**	1	0	301	308.03
2881-81432	**20X4X8**	1	0	301	67.99
2881-81632	**20X6X10**	1	0	301	81.36
2881-81832	**20X8X12**	1	0	301	115.05
2881-82032	**20X10X15**	1	0	301	158.07
2881-82232	**20X12X18**	1	0	301	209.24
2881-82532	**20X15X20**	1	0	301	308.03

Mechanical Vent Assembly

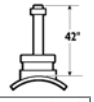
Saddle x Riser/Vent



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
2882-420	**4X2**	1	10	301	67.43
2882-422	**4X3**	1	0	301	104.24
2882-528	**6X2**	1	10	301	67.43
2882-530	**6X3**	1	5	301	104.24
2882-532	**6X4**	1	5	301	144.79
2882-578	**8X2**	1	8	301	67.43
2882-580	**8X3**	1	4	301	104.24
2882-582	**8X4**	1	8	301	144.79
2882-621	**10X2**	1	10	301	67.43
2882-623	**10X3**	1	5	301	104.24
2882-624	**10X4**	1	3	301	144.79
2882-661	**12X2**	1	10	301	67.43
2882-663	**12X3**	1	5	301	104.24
2882-664	**12X4**	1	4	301	144.79
2882-721	**15X2**	1	0	301	67.44
2882-723	**15X3**	1	6	301	104.24
2882-724	**15X4**	1	4	301	144.79
2882-781	**18X2**	1	0	301	67.44
2882-783	**18X3**	1	0	301	104.24
2882-784	**18X4**	1	4	301	144.79
2882-811	**20X2**	1	0	301	67.44
2882-813	**20X3**	1	0	301	104.24
2882-814	**20X4**	1	0	301	144.79

Mechanical Vent Riser

Saddle x Riser/Vent x Chamber



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
2883-52842	**6X2X4**	1	0	301	78.52
2883-57842	**8X2X6**	1	0	301	84.66
2883-58042	**8X3X6**	1	0	301	106.71
2883-62142	**10X2X8**	1	12	301	103.06
2883-62342	**10X3X8**	1	8	301	122.65
2883-62442	**10X4X8**	1	12	301	144.79
2883-66142	**12X2X10**	1	0	301	132.48
2883-66342	**12X3X10**	1	16	301	150.88
2883-66442	**12X4X10**	1	12	301	171.75
2883-72442	**15X4X12**	1	6	301	223.27
2883-78442	**18X4X15**	1	0	301	288.31
2883-81442	**20X4X18**	1	0	301	406.12

Vent Base

Saddle x Riser x Outlet

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
2888-532020	**6X4X2**	1	2	301	50.94

PVC Low Head PIP Fabricated Fittings, Risers & Accessories

Vent Base (continued)

Saddle x Riser x Outlet

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
2888-585030	**8X6X3**	1	0	301	157.60
2888-585040	**8X6X4**	1	4	301	79.73
2888-628060	**10X8X6**	1	0	301	122.65
2888-670060	**12X10X6**	1	0	301	130.04
2888-732080	**15X12X8**	1	0	301	195.05
2888-795080	**18X15X8**	1	0	301	269.94
2888-828080	**20X18X8**	1	0	301	488.35

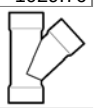
Low Head Wye

Soc x Soc

2875-060	**6**	1	2	300	86.11
2875-080	**8**	1	0	300	113.89
2875-100	**10**	1	0	300	148.17
2875-120	**12**	1	0	300	206.43
2875-150	**15**	1	0	300	319.35
2875-183	**18**	1	0	300	767.89
2875-200	**20**	1	0	300	1029.76

Reducing Low Head Wye

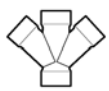
Soc x Soc



2875-532	**6X4**	1	4	300	67.15
2875-585	**8X6**	1	0	300	99.34
2875-626	**10X6**	1	0	300	127.04
2875-628	**10X8**	1	0	300	134.01
2875-666	**12X6**	1	0	300	139.62
2875-668	**12X8**	1	0	300	160.28
2875-670	**12X10**	1	0	300	171.22
2875-726	**15X6**	1	0	300	188.21
2875-728	**15X8**	1	0	300	203.99
2875-730	**15X10**	1	0	300	223.41
2875-732	**15X12**	1	0	300	245.28
2875-786	**18X6**	1	0	300	303.59
2875-788	**18X8**	1	0	300	308.39
2875-790	**18X10**	1	0	300	337.00
2875-792	**18X12**	1	0	300	371.67
2875-795	**18X15**	1	0	300	406.34
2875-816	**20X6**	1	0	300	379.47
2875-818	**20X8**	1	0	300	385.47
2875-820	**20X10**	1	0	300	421.24
2875-822	**20X12**	1	0	300	464.58
2875-825	**20X15**	1	0	300	507.94
2875-828	**20X18**	1	0	300	893.68

Double Wye

Soc x Soc



2876-060	**6**	1	0	300	135.23
2876-080	**8**	1	0	300	154.05
2876-100	**10**	1	0	300	257.96
2876-120	**12**	1	0	300	308.09
2876-150	**15**	1	0	300	476.64
2876-183	**18**	1	0	300	1292.38
2876-200	**20**	1	0	300	1837.24

Reducing Double Wye

Soc x Soc

2876-585	**8X6**	1	0	300	108.76
2876-626	**10X6**	1	0	300	154.05
2876-628	**10X8**	1	0	300	170.38
2876-666	**12X6**	1	0	300	208.39
2876-668	**12X8**	1	0	300	239.23

Reducing Double Wye (continued)

Soc x Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
2876-670	**12X10**	1	0	300	286.01
2876-726	**15X6**	1	0	300	280.91
2876-728	**15X8**	1	0	300	304.45
2876-730	**15X10**	1	0	300	333.47
2876-732	**15X12**	1	0	300	452.14
2876-786	**18X6**	1	0	300	453.14
2876-788	**18X8**	1	0	300	460.28
2876-790	**18X10**	1	0	300	502.98
2876-792	**18X12**	1	0	300	554.74
2876-795	**18X15**	1	0	300	606.48
2876-816	**20X6**	1	0	300	625.86
2876-818	**20X8**	1	0	300	642.18
2876-820	**20X10**	1	0	300	657.37
2876-822	**20X12**	1	0	300	693.40
2876-825	**20X15**	1	0	300	758.11
2876-828	**20X18**	1	0	300	1402.01

End Cap

Soc

280-107539	**4 IPS**	1	10	300	11.04
280-107540	**6**	1	10	300	12.26
280-107541	**8**	10	0	300	20.83
280-107542	**10**	1	10	300	33.15
280-107543	**12**	1	10	300	51.52
280-107545	**15**	1	5	300	72.39
280-107547	**18**	1	5	300	132.48
280-107548	**20**	1	5	300	177.89

Surface Reducer

Soc

280-102013	**6X2**	1	10	300	19.61
280-102015	**6X3**	1	10	300	19.61
280-102016	**6X4**	1	10	300	19.61
280-102018	**8X2**	1	10	300	26.95
280-102020	**8X3**	1	10	300	26.95
280-102021	**8X4**	1	10	300	26.95
280-102022	**8X6**	1	10	300	26.95
280-102024	**10X2**	1	10	300	53.94
280-102026	**10X3**	1	10	300	53.94
280-102027	**10X4**	1	10	300	53.94
280-102028	**10X6**	1	10	300	53.94
280-102029	**10X8**	1	10	300	53.94
280-102031	**12X2**	1	10	300	66.24
280-102033	**12X3**	1	10	300	66.24
280-102034	**12X4**	1	10	300	66.24
280-102035	**12X6**	1	10	300	66.24
280-102036	**12X8**	1	10	300	66.24
280-102037	**12X10**	1	10	300	66.24
280-102048	**15X2**	1	5	300	93.20
280-102050	**15X3**	1	5	300	93.20
280-102051	**15X4**	1	5	300	93.20
280-102052	**15X6**	1	5	300	93.20
280-102053	**15X8**	1	5	300	93.20
280-102054	**15X10**	1	5	300	93.20
280-102055	**15X12**	1	5	300	93.20
280-102067	**18X2**	1	5	300	139.85
280-102069	**18X3**	1	4	300	139.85
280-102070	**18X4**	1	5	300	139.85
280-102071	**18X6**	1	5	300	139.85
280-102072	**18X8**	1	5	300	139.85
280-102073	**18X10**	1	5	300	139.85
280-102074	**18X12**	1	5	300	139.85
280-102075	**18X15**	1	5	300	139.85

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Low Head PIP Fabricated Fittings, Risers & Accessories & Glue-On Saddles

Caps

Surface Reducer (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
280-102077	**20X2**	1	0	300	185.26
280-102136	**20X3**	1	0	300	185.26
280-102137	**20X4**	1	5	300	185.26
280-102138	**20X6**	1	5	300	185.26
280-102139	**20X8**	1	5	300	185.26

Surface Reducer (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
280-102140	**20X10**	1	5	300	185.26
280-102141	**20X12**	1	5	300	185.26
280-102142	**20X15**	1	5	300	185.26
280-102143	**20X18**	1	5	300	185.26

Glue-On Saddles

Saddle

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
280-101788	**4X2**	1	40	300	19.61
280-101789	**6X2**	1	10	300	19.61
280-101790	**8X2**	1	10	300	19.61
280-101791	**10X2**	1	10	300	19.61
280-101792	**12X2**	1	10	300	19.61
280-101793	**15X2**	1	10	300	19.61
280-101794	**18X2**	1	20	300	19.61
280-101795	**20X2**	1	10	300	20.83
280-101796	**4X3**	1	5	300	20.83
280-101797	**6X3**	1	10	300	20.83
280-101798	**8X3**	1	10	300	20.83
280-101799	**10X3**	1	10	300	20.83
280-101800	**12X3**	1	10	300	20.83
280-101801	**15X3**	1	10	300	20.83
280-101802	**18X3**	1	20	300	20.83
280-101803	**20X3**	1	10	300	30.92
280-101804	**6X4**	1	10	300	23.32
280-101805	**8X4**	1	10	300	23.32
280-101806	**10X4**	1	10	300	23.32
280-101807	**12X4**	1	10	300	23.32
280-101808	**15X4**	1	10	300	23.32
280-101809	**18X4**	1	10	300	23.32
280-101810	**20X4**	1	8	300	23.32
280-101811	**8X6**	1	8	300	29.44
280-101812	**10X6**	1	8	300	29.44
280-101813	**12X6**	1	8	300	29.44
280-101814	**15X6**	1	8	300	29.44
280-101815	**18X6**	1	10	300	29.44
280-101816	**20X6**	1	7	300	33.15
280-101817	**10X8**	1	8	300	34.35
280-101818	**12X8**	1	8	300	34.35
280-101819	**15X8**	1	8	300	34.35
280-101820	**18X8**	1	8	300	38.01
280-101821	**20X8**	1	8	300	53.94
280-101822	**12X10**	1	10	300	41.73
280-101823	**15X10**	1	10	300	47.82
280-101824	**18X10**	1	10	300	49.05
280-101825	**20X10**	1	7	300	90.75
280-101826	**15X12**	1	5	300	63.79
280-101827	**18X12**	1	3	300	82.16
280-101828	**20X12**	1	0	300	99.34
280-101829	**18X15**	1	0	300	106.71
280-101830	**20X15**	1	0	300	136.16
280-101831	**20X18**	1	0	300	150.88

Stub Saddle

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
280-101883	**4X2**	1	10	300	24.45

Stub Saddle (continued)

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
280-101884	**6X2**	1	10	300	24.45
280-101885	**8X2**	1	10	300	24.45
280-101886	**10X2**	1	10	300	24.45
280-101887	**12X2**	1	10	300	25.75
280-101888	**15X2**	1	10	300	28.22
280-101889	**18X2**	1	10	300	28.22
280-101890	**20X2**	1	10	300	31.88
280-101891	**4X3**	1	10	300	29.44
280-101892	**6X3**	1	5	300	29.44
280-101893	**8X3**	1	5	300	29.44
280-101894	**10X3**	1	5	300	29.44
280-101895	**12X3**	1	5	300	31.88
280-101896	**15X3**	1	5	300	31.88
280-101897	**18X3**	1	10	300	31.88
280-101898	**20X3**	1	5	300	34.35
280-101899	**6X4**	1	10	300	34.35
280-101900	**8X4**	1	10	300	34.35
280-101901	**10X4**	1	10	300	34.35
280-101902	**12X4**	1	10	300	34.35
280-101903	**15X4**	1	10	300	34.35
280-101904	**18X4**	1	10	300	36.09
280-101905	**20X4**	1	10	300	36.79
280-101906	**8X6**	1	6	300	40.46
280-101907	**10X6**	1	8	300	40.46
280-101908	**12X6**	1	6	300	40.46
280-101909	**15X6**	1	8	300	42.92
280-101910	**18X6**	1	10	300	42.92
280-101911	**20X6**	1	7	300	49.05
280-101912	**10X8**	1	4	300	53.94
280-101913	**12X8**	1	3	300	53.94
280-101914	**15X8**	1	5	300	57.61
280-101915	**18X8**	1	5	300	61.33
280-101916	**20X8**	1	0	300	77.27
280-101917	**12X10**	1	3	300	71.15
280-101918	**15X10**	1	5	300	74.84
280-101919	**18X10**	1	4	300	76.09
280-101920	**20X10**	1	0	300	117.73
280-101921	**15X12**	1	0	300	106.71
280-101922	**18X12**	1	0	300	123.91
280-101923	**20X12**	1	0	300	141.09
280-101924	**18X15**	1	0	300	166.85
280-101925	**20X15**	1	0	300	197.51
280-101926	**20X18**	1	0	300	240.45

Same Size Saddle

Soc

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
280-101937	**6X6**	1	10	300	33.71
280-101938	**8X8**	1	5	300	49.05
280-101939	**10X10**	1	5	300	67.43
280-101940	**12X12**	1	4	300	98.14
280-101941	**15X15**	1	0	300	147.18

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each

Same Size Saddle (continued)

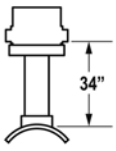
Soc

280-101942	**18X18**	1	0	300	251.52
280-101943	**20X20**	1	0	300	343.53

Same Size Stub Saddle

Soc

280-101949	**6X6**	1	5	300	58.85
280-101950	**8X8**	1	4	300	94.21
280-101951	**10X10**	1	0	300	115.28
280-101952	**12X12**	1	0	300	131.24
280-101953	**15X15**	1	0	300	196.32
280-101954	**18X18**	1	0	300	341.08
280-101955	**20X20**	1	0	300	398.72

	Size	Disc Code	Part Number List Price Each	
Distributing Gate Riser (Saddle x Riser x Pot)				
Gates Not Included In Price (See CHART #1 on Next Page)				
	6x4x8	301	2884-53234 103.08	_ _ _
	8x4x8	301	2884-58234 103.08	_ _ _
	8x6x10	301	2884-58534 132.48	_ _ _
	10x4x8	301	2884-62434 103.08	_ _ _
	10x6x10	301	2884-62634 132.48	_ _ _
	10x8x12	301	2884-62834 196.32	_ _ _
	12x4x8	301	2884-66434 103.08	_ _ _
	12x6x10	301	2884-66634 132.48	_ _ _
	12x8x12	301	2884-66834 196.32	_ _ _
	12x10x15	301	2884-67034 280.36	_ _ _
	15x4x8	301	2884-72334 103.08	_ _ _
	15x6x10	301	2884-72634 132.48	_ _ _
	15x8x12	301	2884-72834 196.32	_ _ _
	15x10x15	301	2884-73034 281.00	_ _ _
	15x12x18	301	2884-73234 510.40	_ _ _
	18x4x8	301	2884-78434 103.08	_ _ _
	18x6x10	301	2884-78634 132.48	_ _ _
	18x8x12	301	2884-78834 196.32	_ _ _
	18x10x15	301	2884-79034 280.36	_ _ _
	18x12x18	301	2884-79234 510.40	_ _ _
	20x4x8	301	2884-81434 103.08	_ _ _
	20x6x10	301	2884-81634 132.48	_ _ _
	20x8x12	301	2884-81834 196.34	_ _ _
	20x10x15	301	2884-82034 280.36	_ _ _
	20x12x18	301	2884-82234 510.40	_ _ _

HOW TO ORDER A DISTRIBUTING GATE RISER

Choose the Distributing Gate Riser size required:
Example: 6 x 4 x 8
(6" Saddle x 4" Riser x 8" Pot)
Part Number 2884-53234 _ _ _

Next, choose the Gate size required from CHART #1:
Example: 2-1/2" Gates
(Code Number "2")

Next, add this Code Number to the end of the Part Number:
Example: 2884-53234 2 _ _

Next, choose the position required for the gates from CHART #2:
Example: Standard 2-Way Gates
(Code Number "05")

Next, add this Code Number to the very end of the Part Number:
Example: 2884-532342 0 5

The Part Number is now complete for a
6" Saddle x 4" Riser x 8" Pot
with 2-1/2" Standard 2-Way Gates –

2884–53234205

HOW TO CALCULATE A DISTRIBUTING GATE RISER TOTAL LIST PRICE EACH WITH GATES INSTALLED

Find the base unit List Price Each at left:
Example: $103.08

Next, find the List Price Each for the size of Gate required from CHART #1:
Example: 2-1/2" Gate – $15.92 each

Next, multiply the Gate price by the number of Gates required:
Example: $15.92 x 2 = $31.84

Next, add this amount to the base unit price, for the Total List Price Each:
Example: $103.08 + $31.84 = $134.92

The Total List Price Each for a
6" Saddle x 4" Riser x 8" Pot with 2-1/2"
Standard 2-Way Gates installed is

$134.92

CHART #1

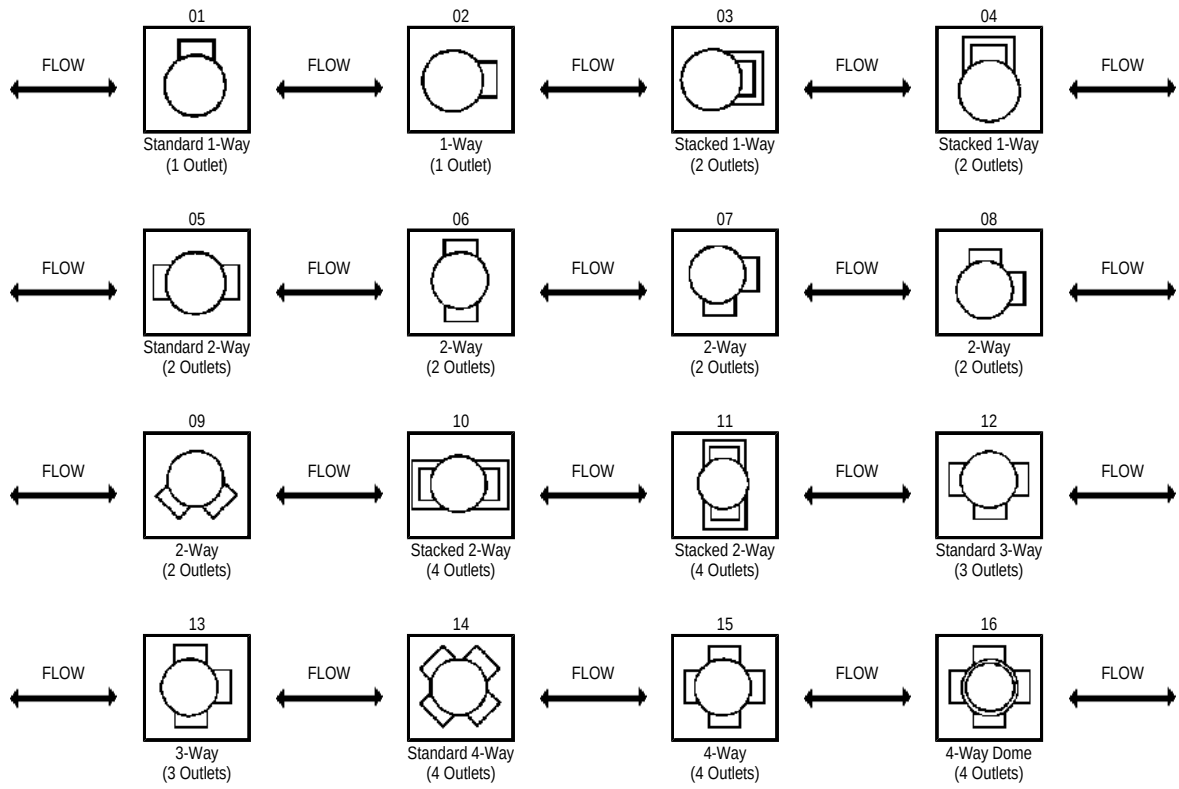
Gate/Hole Size	Distributing Gate Size Code	Disc Code	List Price Each Installed
2" Gate	1	301	13.49
2- 1/2" Gate	2	301	15.92
3" Gate	3	301	18.38
4" Gate	4	301	26.98
2" Hole*	5	301	—
2- 1/2" Hole*	6	301	—
3" Hole*	7	301	—
4" Hole*	8	301	—

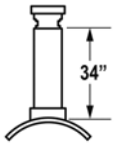
* Hole Size Codes MUST be chosen ONLY when ordering with NO GATES INSTALLED.

Number code for Gate Hole positioning must also be chosen from CHART #2 below.

CHART #2

Number Codes for Gate Quantity & Positioning on Saddle



Part Number Size		Disc Code	List Price Each			
Rite Flo Riser (Saddle x Riser)						
Gates Not Included In Price (See CHART #3 on Next Page)			1 Outlet	2 Outlets	3 Outlets	4 Outlets
	2885-58534 _ _ _ 8x6	301	124.62	128.53	131.15	133.41
	2885-62634 _ _ _ 10x6	301	124.62	128.53	131.15	133.41
	2885-66634 _ _ _ 12x6	301	124.62	128.53	131.15	133.41
	2885-72634 _ _ _ 15x6	301	124.62	128.53	131.15	133.41
	2885-78634 _ _ _ 18x6	301	124.62	128.53	131.15	133.41
	2885-81634 _ _ _ 20x6	301	124.62	128.53	131.15	133.41

HOW TO ORDER A RITE FLO RISER

Choose the Rite Flo Riser size required:
Example: 8 x 6 Riser
(8" Saddle x 6" Riser)
Part Number 2885-58534 _ _ _

Next, choose the Gate size required from CHART #3:
Example: 3" Gates
(Code Number "3")

Next, add this Code Number to the end of the Part Number:
Example: 2885-58534 3 _ _

Next, choose the position required for the gates from CHART #4:
Example: Standard 2-Way (2 Outlets)
(Code Number "05")

Next, add this Code Number to the very end of the Part Number:
Example: 2885-585343 0 5

The Part Number is now complete for an 8" Saddle x 6" Standard 2-Way Riser with 3" Gates –

2885–58534305

HOW TO CALCULATE A RITE FLO RISER TOTAL LIST PRICE EACH WITH GATES INSTALLED

Find the base unit List Price Each at left:
Example: $133.41

Next, find the List Price Each for the 3" Gate required from CHART #3:
Example: 3" Gate – $47.20 each

Next, multiply the Gate price by the number of Gates required:
Example: $47.20 x 4 = $188.80

Next, add this amount to the base unit price, for the Total List Price Each:
Example: $133.41 + $188.80 = $322.21

The Total List Price Each for a 8" Saddle x 6" 4-Way Dome Riser with 3" Gates installed is

$322.21

CHART #3

Gate/Hole Size	Gate Size Code	Disc Code	Rite Flo List Price Each Installed
3" Gate	3	301	47.20
2" Hole*	5	301	—
3" Hole*	7	301	—

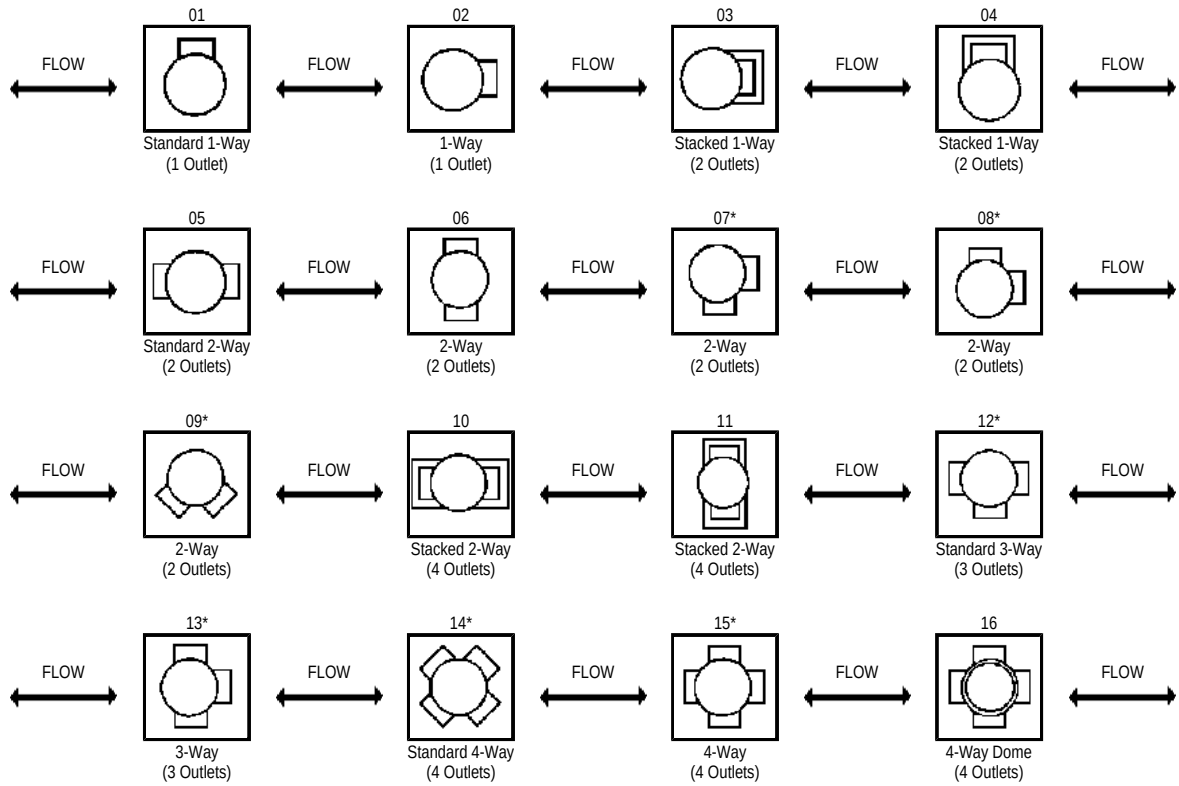
* Hole Size Codes MUST be chosen ONLY when ordering with NO GATES INSTALLED.

Number code for Gate Hole positioning must also be chosen from CHART #4 below.

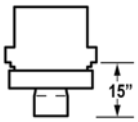
NOTE: 3" Rite Flo Gates can be installed on 6" Risers ONLY.

CHART #4

Number Codes for Gate Quantity & Positioning on Saddle



*Staggered gates are provided for Rite Flo Risers to allow adequate room for gates to operate properly.

	Size	Disc Code	Part Number List Price Each
Distributing Gate Repair Unit (Riser x Pot)			
Gates Not Included In Price (See CHART #5 on Next Page)			
	4x8	301	28840-42715 _ _ _ 85.89
	6x10	301	28840-53715 _ _ _ 115.33
	8x12	301	28840-59115 _ _ _ 165.61
	10x15	301	28840-63515 _ _ _ 218.92
	12x18	301	28840-67815 _ _ _ 413.51

HOW TO ORDER DISTRIBUTING GATE AND RITE FLO RISER REPAIR UNITS

Choose the Repair Unit size required:
Example: 4 x 8 Distributing Gate Repair Unit
(4" Riser x 8" Pot)
Part Number 28840-42715 _ _ _

Next, choose the Gate size required from CHART #5:
Example: 2" Gate
(Code Number "1")

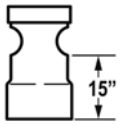
Next, add this Code Number to the end of the Part Number:
Example: 28840-42715 1 _ _

Next, choose the position required for the gates from CHART #6:
Example: 4-Way
(Code Number "14")

Next, add this Code Number to the very end of the Part Number:
Example: 28840-427151 1 4

The Part Number is now complete for a
4" Riser x 8" Pot Distributing Gate Riser Repair Unit with 2" 4-Way Gates –

28840–42715114

	Part Number Size	Disc Code	List Price Each			
Rite Flo Riser Repair Unit						
Gates Not Included In Price (See CHART #5 on Next Page)			1 Outlet	2 Outlets	3 Outlets	4 Outlets
	28850-06015 6" _ _ _	301	62.95	68.18	73.39	78.67

HOW TO CALCULATE DISTRIBUTING GATE AND RITE FLO RISER REPAIR UNITS TOTAL LIST PRICE EACH WITH GATES INSTALLED

Find the base unit List Price Each above:
Example: $85.89

Next, find the List Price Each for the size of Gate required from CHART #5:
Example: 2" Gate – $13.50 each

Next, multiply the Gate price by the number of Gates required:
Example: $13.50 x 4 = $54.00

Next, add this amount to the base unit price, for the Total List Price Each:
Example: $85.89 + $54.00 = $139.89

The Total List Price Each for a
4" Riser x 8" Pot Distributing Gate Riser Repair Unit
with 2" 4-Way Gates installed is

$139.89

CHART #5

Gate/Hole Size	Gate Size Code	Disc Code	Distributing Gate List Price Each Installed	Rite Flo Gate List Price Each Installed
2" Gate	1	301	13.49	—
2- 1/2" Gate	2	301	15.92	—
3" Gate	3	301	18.38	47.20
4" Gate	4	301	26.98	—
2" Hole*	5	301	—	—
2- 1/2" Hole*	6	301	—	—
3" Hole*	7	301	—	—
4" Hole*	8	301	—	—

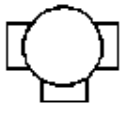
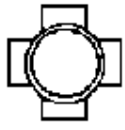
* Hole Size Codes MUST be chosen ONLY when ordering with NO GATES INSTALLED.

Number code for Gate Hole positioning must also be chosen from CHART #6 below.

NOTE: 3" Rite Flo Gates can be installed on 6" Risers ONLY.

CHART #6

Repair Unit Number Codes for Gate Quantity & Positioning

02 1-Way (1 Outlet)	04 Stacked 1-Way (2 Outlets)	06 2-Way (2 Outlets)	08* 2-Way (2 Outlets)
10 Stacked 2-Way (4 Outlets)	12*  3-Way (3 Outlets)	14* 4-Way (4 Outlets)	16  4-Way Dome (4 Outlets)

*Staggered gates are provided for Rite Flo Riser Repair Units
to allow adequate room for gate to operate properly.

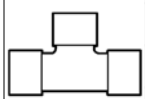
All Low Head PIP Fabricated Fittings showing size outlets of 4" and under are IPS size on that outlet

PVC 80, 100 & 125 PSI PIP Fabricated Fittings

PRICING

PVC 80, 100 & 125 PSI PIP Fabricated Fittings

Tee (Socket)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-102502 **89.55**	300-102502 **107.15**	3301-060P **107.73**
6X2	290-102499 **62.58**	300-102499 **72.39**	3301-528P **81.24**
6X3	290-102500 **67.43**	300-102500 **77.27**	3301-530P **87.42**
6X4	290-102501 **69.93**	300-102501 **80.94**	3301-532P **90.69**
8	290-102507 **154.43**	300-102507 **158.24**	3301-080P **215.97**
8X2	290-102503 **77.27**	300-102503 **89.55**	3301-578P **122.51**
8X3	290-102504 **85.85**	300-102504 **96.87**	3301-580P **133.51**
8X4	290-102505 **96.87**	300-102505 **105.54**	3301-582P **144.42**
8X6	290-102506 **115.28**	300-102506 **130.04**	3301-585P **178.94**
10	290-102513 **223.27**	300-102513 **254.00**	3301-100P **322.38**
10X2	290-102508 **112.85**	300-102508 **123.91**	3301-621P **170.32**
10X3	290-102509 **123.91**	300-102509 **158.24**	3301-623P **216.73**
10X4	290-102510 **143.55**	300-102510 **161.93**	3301-624P **223.28**
10X6	290-102511 **158.24**	300-102511 **165.62**	3301-626P **244.97**
10X8	290-102512 **182.82**	300-102512 **220.85**	3301-628P **303.81**
12	290-102520 **316.54**	300-102520 **404.84**	3301-120P **506.86**
12X2	290-102514 **149.65**	300-102514 **179.06**	3301-661P **266.96**
12X3	290-102515 **176.69**	300-102515 **214.68**	3301-663P **295.07**
12X4	290-102516 **199.97**	300-102516 **238.01**	3301-664P **325.83**
12X6	290-102517 **210.99**	300-102517 **258.84**	3301-666P **356.63**
12X8	290-102518 **249.05**	300-102518 **305.48**	3301-668P **422.18**
12X10	290-102519 **287.08**	300-102519 **352.11**	3301-670P **468.41**
15	290-102528 **592.58**	300-102528 **696.89**	3301-150P **905.48**
15X2	290-102521 **276.06**	300-102521 **322.65**	3301-721P **404.84**
15X3	290-102522 **290.78**	300-102522 **339.85**	3301-723P **430.69**
15X4	290-102523 **299.36**	300-102523 **354.58**	3301-724P **445.36**
15X6	290-102524 **325.09**	300-102524 **390.14**	3301-726P **504.26**
15X8	290-102525 **375.41**	300-102525 **436.78**	3301-728P **580.36**
15X10	290-102526 **425.73**	300-102526 **516.55**	3301-730P **656.39**
15X12	290-102527 **487.04**	300-102527 **580.36**	3301-732P **757.67**
18	290-102537 **917.74**	300-102537 **1069.86**	3301-180P **1523.89**
18X2	290-102529 **479.53**	300-102529 **523.85**	3301-781P **639.23**
18X3	290-102530 **494.45**	300-102530 **537.36**	3301-783P **715.27**
18X4	290-102531 **547.19**	300-102531 **591.39**	3301-784P **761.92**
18X6	290-102532 **563.14**	300-102532 **612.22**	3301-786P **780.33**
18X8	290-102533 **586.47**	300-102533 **637.99**	3301-788P **871.11**
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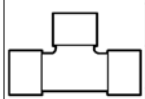
Tee (Socket) (continued)



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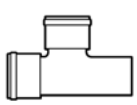
18X15	290-102536 **795.05**	300-102536 **985.22**	3301-795P **1245.38**
21	290-102558 **1693.18**	300-102558 **1992.56**	3301-210P **2271.07**
21X2	290-102548 **695.20**	300-102548 **873.56**	3301-841P **993.81**
21X3	290-102549 **712.15**	300-102549 **879.68**	3301-843P **1011.02**
21X4	290-102550 **736.14**	300-102550 **889.52**	3301-844P **1055.17**
21X6	290-102551 **780.33**	300-102551 **1078.45**	3301-846P **1209.78**
21X8	290-102552 **833.06**	300-102552 **1110.36**	3301-848P **1260.05**
21X10	290-102553 **888.27**	300-102553 **1152.07**	3301-850P **1318.97**
21X12	290-102554 **972.97**	300-102554 **1163.14**	3301-852P **1640.42**
21X15	290-102555 **1072.34**	300-102555 **1333.66**	3301-855P **1874.77**
21X18	290-102556 **1251.44**	300-102556 **1523.89**	3301-858P **2138.60**
24	290-102570 **2311.60**	300-102570 **2666.15**	3301-240P **2725.08**
24X2	290-102559 **917.74**	300-102559 **1084.60**	3301-901P **1171.69**
24X3	290-102560 **976.61**	300-102560 **1143.51**	3301-903P **1230.60**
24X4	290-102561 **1031.86**	300-102561 **1230.60**	3301-904P **1318.97**
24X6	290-102562 **1087.08**	300-102562 **1318.97**	3301-906P **1406.08**
24X8	290-102563 **1158.23**	300-102563 **1406.08**	3301-908P **1523.89**
24X10	290-102564 **1192.57**	300-102564 **1523.89**	3301-910P **1640.42**
24X12	290-102565 **1289.53**	300-102565 **1640.42**	3301-912P **1758.20**
24X15	290-102566 **1415.85**	300-102566 **1787.67**	3301-915P **1933.69**
24X18	290-102567 **1612.21**	300-102567 **2022.00**	3301-918P **2197.47**
24X21	290-102569 **1813.39**	300-102569 **2166.74**	3301-921P **2607.26**
27	2901-270 **3501.91**	3001-270 **4148.83**	3301-270P **5133.46**
27X4	2901-934 **1248.57**	3001-934 **1567.65**	3301-934P **1958.03**
27X6	2901-936 **1317.42**	3001-936 **1687.79**	3301-936P **2109.55**
27X8	2901-938 **1402.36**	3001-938 **1806.63**	3301-938P **2259.69**
27X10	2901-940 **1420.94**	3001-940 **1931.77**	3301-940P **2416.06**
27X12	2901-942 **1561.67**	3001-942 **2087.01**	3301-942P **2608.71**
27X15	2901-945 **1714.12**	3001-945 **2297.20**	3301-945P **2872.63**
27X18	2901-948 **1952.92**	3001-948 **2604.86**	3301-948P **3255.45**
27X21	2901-951 **2197.16**	3001-951 **2771.29**	3301-951P **3463.31**
27X24	2901-954 **2801.35**	3001-954 **3421.93**	3301-954P **4276.42**

Tee (Gasket x Spigot x Gasket)



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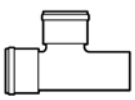
6	290-103062 **184.02**	300-103062 **190.15**	3301-060232P **202.88**
6X4	290-103061 **159.47**	300-103061 **177.89**	3301-532232P **191.69**
8	290-103067 **233.13**	300-103067 **254.00**	3301-080232P **305.08**

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

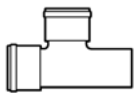
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Tee (Gasket x Spigot x Gasket) (continued)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
8X4	290-103065 **196.32**	300-103065 **215.91**	3301-582232P **229.00**
8X6	290-103066 **220.85**	300-103066 **228.21**	3301-585232P **267.02**
10	290-103073 **348.45**	300-103073 **386.49**	3301-100232P **457.88**
10X4	290-103070 **304.27**	300-103070 **316.54**	3301-624232P **331.04**
10X6	290-103071 **310.38**	300-103071 **330.02**	3301-626232P **368.09**
10X8	290-103072 **342.29**	300-103072 **354.58**	3301-628232P **400.12**
12	290-103080 **480.94**	300-103080 **525.13**	3301-120232P **634.93**
12X4	290-103076 **354.58**	300-103076 **398.72**	3301-664232P **444.23**
12X6	290-103077 **364.38**	300-103077 **412.21**	3301-666232P **476.63**
12X8	290-103078 **422.05**	300-103078 **424.52**	3301-668232P **508.14**
12X10	290-103079 **434.34**	300-103079 **468.66**	3301-670232P **571.55**
15	290-103088 **768.05**	300-103088 **949.65**	3301-150232P **1138.56**
15X4	290-103083 **569.29**	300-103083 **601.16**	3301-724232P **791.36**
15X6	290-103084 **576.38**	300-103084 **696.89**	3301-726232P **841.64**
15X8	290-103085 **607.31**	300-103085 **709.17**	3301-728232P **873.56**
15X10	290-103086 **653.92**	300-103086 **727.59**	3301-730232P **917.74**
15X12	290-103087 **696.89**	300-103087 **791.36**	3301-732232P **976.27**
18	290-103097 **1224.46**	300-103097 **1423.23**	3301-180232P **1834.27**
18X4	290-103091 **738.60**	300-103091 **823.26**	3301-784232P **1012.20**
18X6	290-103092 **791.36**	300-103092 **885.82**	3301-786232P **1107.92**
18X8	290-103093 **808.55**	300-103093 **999.97**	3301-788232P **1202.40**
18X10	290-103094 **899.35**	300-103094 **1044.12**	3301-790232P **1296.87**
18X12	290-103095 **975.40**	300-103095 **1107.92**	3301-792232P **1360.71**
18X15	290-103096 **1019.57**	300-103096 **1170.48**	3301-795232P **1455.14**
21	2901-210232 **1927.53**	3001-210232 **2371.74**	3301-210232P **2896.81**
21X4	290-103110 **1145.98**	300-103110 **1392.60**	3301-844232P **1676.01**
21X6	290-103111 **1158.23**	300-103111 **1423.23**	3301-846232P **1707.89**
21X8	290-103112 **1219.57**	300-103112 **1499.33**	3301-848232P **1790.09**
21X10	290-103113 **1257.60**	300-103113 **1518.94**	3301-850232P **1847.74**
21X12	290-103114 **1380.34**	300-103114 **1613.43**	3301-852232P **2024.46**
21X15	290-103115 **1494.43**	300-103115 **1676.01**	3301-855232P **2182.71**
21X18	290-103116 **1690.73**	300-103116 **2024.46**	3301-858232P **2467.40**
24	2901-240232 **4322.97**	3001-240232 **4579.35**	3301-240232P **6243.22**
24X6	2901-906232 **3074.15**	3001-906232 **3483.32**	3301-906232P **4354.19**
24X8	2901-908232 **3235.31**	3001-908232 **3612.11**	3301-908232P **4579.20**
24X10	2901-910232 **3400.77**	3001-910232 **3677.29**	3301-910232P **4879.46**
24X12	2901-912232 **3584.27**	3001-912232 **3773.58**	3301-912232P **5095.95**

Tee (Gasket x Spigot x Gasket) (continued)



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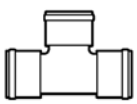
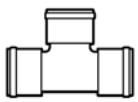
24X15	2901-915232 **3772.13**	3001-915232 **3935.01**	3301-915232P **5353.69**
24X18	2901-918232 **3967.42**	3001-918232 **4127.62**	3301-918232P **5611.53**
24X21	2901-921232 **4177.64**	3001-921232 **4386.61**	3301-921232P **5934.20**
27	2901-270232 **6503.11**	3001-270232 **7255.56**	3301-270232P **9191.09**
27X6	2901-936232 **3842.27**	3001-936232 **4354.06**	3301-936232P **5482.61**
27X8	2901-938232 **4043.65**	3001-938232 **4579.28**	3301-938232P **5740.28**
27X10	2901-940232 **4251.53**	3001-940232 **4837.07**	3301-940232P **5998.07**
27X12	2901-942232 **4481.67**	3001-942232 **5095.99**	3301-942232P **6288.28**
27X15	2901-945232 **4716.81**	3001-945232 **5353.69**	3301-945232P **6514.74**
27X18	2901-948232 **4960.88**	3001-948232 **5643.92**	3301-948232P **7030.25**
27X21	2901-951232 **5222.40**	3001-951232 **5934.33**	3301-951232P **7416.87**
27X24	2901-954232 **5497.60**	3001-954232 **6192.08**	3301-954232P **7836.11**

Tee (Gasketed)



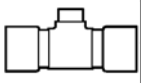
Size			
6	290-103174 **184.02**	300-103174 **190.15**	3301-0602P **202.88**
6X4	290-103173 **159.47**	300-103173 **177.89**	3301-5322P **191.69**
8	290-103179 **233.13**	300-103179 **254.00**	3301-0802P **305.08**
8X4	290-103177 **196.32**	300-103177 **215.91**	3301-5822P **229.00**
8X6	290-103178 **220.85**	300-103178 **228.21**	3301-5852P **267.02**
10	290-103185 **348.45**	300-103185 **386.49**	3301-1002P **457.88**
10X4	290-103182 **304.27**	300-103182 **316.54**	3301-6242P **331.04**
10X6	290-103183 **310.38**	300-103183 **330.02**	3301-6262P **368.09**
10X8	290-103184 **342.29**	300-103184 **354.58**	3301-6282P **400.12**
12	290-103192 **480.94**	300-103192 **525.13**	3301-1202P **634.93**
12X4	290-103188 **354.58**	300-103188 **398.72**	3301-6642P **444.23**
12X6	290-103189 **364.38**	300-103189 **412.21**	3301-6662P **476.62**
12X8	290-103190 **422.05**	300-103190 **424.52**	3301-6682P **508.14**
12X10	290-103191 **434.34**	300-103191 **468.66**	3301-6702P **571.55**
15	290-103200 **768.05**	300-103200 **949.65**	3301-1502P **1138.56**
15X4	290-103195 **569.29**	300-103195 **601.16**	3301-7242P **791.36**
15X6	290-103196 **576.38**	300-103196 **696.89**	3301-7262P **841.64**
15X8	290-103197 **607.31**	300-103197 **709.17**	3301-7282P **873.56**
15X10	290-103198 **653.92**	300-103198 **727.59**	3301-7302P **917.74**
15X12	290-103199 **696.89**	300-103199 **791.36**	3301-7322P **980.33**
18	290-103209 **1224.46**	300-103209 **1423.23**	3301-1802P **1834.27**
18X4	290-103203 **738.60**	300-103203 **823.26**	3301-7842P **1012.20**
18X6	290-103204 **791.36**	300-103204 **885.82**	3301-7862P **1107.92**
18X8	290-103205 **808.55**	300-103205 **999.97**	3301-7882P **1202.40**

Tee (Gasketed) (continued)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
18X10	290-103206 **899.35**	300-103206 **1044.12**	3301-7902P **1296.87**
18X12	290-103207 **975.40**	300-103207 **1107.92**	3301-7922P **1360.71**
18X15	290-103208 **1019.57**	300-103208 **1170.48**	3301-7952P **1455.14**
21	290-103230 **1927.53**	300-103230 **2371.74**	3301-2102P **2896.81**
21X4	290-103222 **1145.98**	300-103222 **1392.60**	3301-8442P **1676.01**
21X6	290-103223 **1158.23**	300-103223 **1423.23**	3301-8462P **1707.89**
21X8	290-103224 **1219.57**	300-103224 **1499.33**	3301-8482P **1790.09**
21X10	290-103225 **1257.60**	300-103225 **1518.94**	3301-8502P **1847.74**
21X12	290-103226 **1380.34**	300-103226 **1613.43**	3301-8522P **2024.46**
21X15	290-103227 **1494.43**	300-103227 **1676.01**	3301-8552P **2182.71**
21X18	290-103228 **1690.73**	300-103228 **2024.46**	3301-8582P **2467.40**
24	2901-2402 **4322.97**	3001-2402 **4579.35**	3301-2402P **6243.22**
24X6	2901-9062 **3074.15**	3001-9062 **3483.32**	3301-9062P **4354.19**
24X8	2901-9082 **3235.31**	3001-9082 **3612.11**	3301-9082P **4579.20**
24X10	2901-9102 **3400.77**	3001-9102 **3677.29**	3301-9102P **4879.46**
24X12	2901-9122 **3584.27**	3001-9122 **3773.58**	3301-9122P **5095.95**
24X15	2901-9152 **3772.13**	3001-9152 **3935.01**	3301-9152P **5353.69**
24X18	2901-9182 **3967.42**	3001-9182 **4127.62**	3301-9182P **5611.53**
24X21	2901-9212 **4177.64**	3001-9212 **4386.61**	3301-9212P **5934.20**
27	2901-2702 **6503.11**	3001-2702 **7255.56**	3301-2702P **9191.09**
27X6	2901-9362 **3842.27**	3001-9362 **4354.06**	3301-9362P **5482.61**
27X8	2901-9382 **4043.65**	3001-9382 **4579.28**	3301-9382P **5740.28**
27X10	2901-9402 **4251.53**	3001-9402 **4837.07**	3301-9402P **5998.07**
27X12	2901-9422 **4481.67**	3001-9422 **5095.99**	3301-9422P **6288.28**
27X15	2901-9452 **4716.81**	3001-9452 **5353.69**	3301-9452P **6514.74**
27X18	2901-9482 **4960.88**	3001-9482 **5643.92**	3301-9482P **7030.25**
27X21	2901-9512 **5222.40**	3001-9512 **5934.33**	3301-9512P **7416.87**
27X24	2901-9542 **5497.60**	3001-9542 **6192.08**	3301-9542P **7836.11**

Reinforced Tee (Soc x Soc x Fipt)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
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6X3	---	300-202154 **82.16**	3302-530P **131.24**
6X4	---	300-202155 **92.00**	3302-532P **134.95**
8X2	---	300-202157 **114.09**	3302-578P **185.38**
8X3	---	300-202159 **120.20**	3302-580P **197.95**
8X4	---	300-202160 **130.04**	3302-582P **167.85**
10X2	---	300-202162 **155.83**	3302-621P **209.27**
10X3	---	300-202164 **191.37**	3302-623P **259.22**

Reinforced Tee (Soc x Soc x Fipt) (continued)

Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
10X4	---	300-202165 **204.89**	3302-624P **255.07**
12X2	---	300-202167 **238.01**	3302-661P **257.58**
12X3	---	300-202169 **263.75**	3302-663P **283.15**
12X4	---	300-202170 **301.80**	3302-664P **331.39**
15X2	---	300-202172 **392.28**	3302-721P **453.93**
15X3	---	300-202174 **417.29**	3302-723P **478.49**
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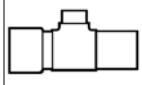
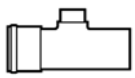
Reinforced Tee (Soc x Spig x Fipt)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6X2	---	300-202222 **62.58**	---
6X3	---	300-202224 **73.61**	---
6X4	---	300-202225 **85.85**	---
8X2	---	300-202227 **100.59**	---
8X3	---	300-202229 **110.41**	---
8X4	---	300-202230 **120.20**	---
10X2	---	300-202232 **149.61**	---
10X3	---	300-202234 **182.82**	---
10X4	---	300-202235 **193.84**	---
12X2	---	300-202237 **223.27**	---
12X3	---	300-202239 **255.17**	---
12X4	---	300-202240 **290.78**	---
15X2	---	300-202242 **390.14**	3302-72113P **441.69**
15X3	---	300-202244 **413.46**	3302-72313P **472.38**
15X4	---	300-202245 **440.43**	3302-72413P **484.61**

Reinforced Tee (Gasket x Spig x Fipt)



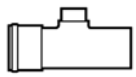
Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6X2	---	300-202362 **107.94**	---
6X3	---	300-202364 **139.85**	---
6X4	---	300-202365 **146.01**	---
8X2	---	300-202367 **152.13**	---
8X3	---	300-202369 **177.89**	---
8X4	---	300-202370 **196.32**	---
10X2	---	300-202372 **228.21**	---
10X3	---	300-202374 **240.45**	---
10X4	---	300-202375 **250.25**	---
12X2	---	300-202377 **316.54**	---
12X3	---	300-202379 **342.29**	---
12X4	---	300-202380 **354.58**	---
15X2	---	300-202382 **442.92**	3302-72123P **539.55**
15X3	---	300-202384 **468.66**	3302-72323P **578.24**

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Tees

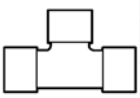
Reinforced Tee (Gasket x Spig x Fipt) (continued)

	Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
	15X4	---	300-202385 **506.71**	3302-72423P **630.48**

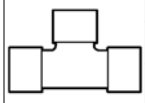
Reinforced Tee (Gasket x Fipt)

	Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
	6X2	---	300-202432 **114.09**	---
	6X3	---	300-202434 **139.85**	---
	6X4	---	300-202435 **152.13**	---
	8X2	---	300-202437 **171.75**	---
	8X3	---	300-202439 **187.72**	---
	8X4	---	300-202440 **202.42**	---
	10X2	---	300-202442 **247.80**	---
	10X3	---	300-202444 **272.35**	---
	10X4	---	300-202445 **291.97**	---
	12X2	---	300-202447 **348.45**	---
	12X3	---	300-202449 **366.82**	---
	12X4	---	300-202450 **392.63**	---
	15X2	---	300-202452 **506.71**	3302-7212P **619.11**
	15X3	---	300-202454 **525.13**	3302-7232P **672.68**
	15X4	---	300-202455 **550.91**	3302-7242P **707.42**

PIP X IPS Tee (Socket)

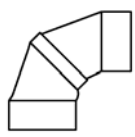
	Size	80 PIP Prod Code: 310 Part Number Price Each	100 PIP Prod Code: 320 Part Number Price Each	125 PIP Prod Code: 330 Part Number Price Each
	6	2901-060PXI **84.18**	3001-060PXI **107.15**	3301-060PXI **107.73**
	8	2901-080PXI **154.43**	3001-080PXI **215.28**	3301-080PXI **215.97**
	8X6	2901-585PXI **212.44**	3001-585PXI **130.04**	3301-585PXI **168.20**
	10	2901-100PXI **209.87**	3001-100PXI **254.00**	3301-100PXI **322.38**

PIP X IPS Tee (Socket) (continued)

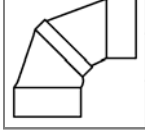
	Size	80 PIP Prod Code: 310 Part Number Price Each	100 PIP Prod Code: 320 Part Number Price Each	125 PIP Prod Code: 330 Part Number Price Each
	10X6	2901-626PXI **148.75**	300-102821 **165.62**	3301-626PXI **230.27**
	10X8	2901-628PXI **171.85**	3001-628PXI **339.99**	3301-628PXI **285.58**
	12	2901-120PXI **316.54**	3001-120PXI **404.84**	3301-120PXI **476.45**
	12X6	2901-666PXI **251.54**	300-102599 **258.84**	3301-666PXI **335.23**
	12X8	2901-668PXI **234.11**	300-102607 **305.48**	3301-668PXI **396.85**
	12X10	2901-670PXI **287.08**	3001-670PXI **352.11**	3301-670PXI **440.31**
	15X6	2901-726PXI **305.59**	300-102708 **390.14**	3301-726PXI **474.01**
	15X8	2901-728PXI **352.88**	300-102709 **492.14**	3301-728PXI **545.54**
	15X10	2901-730PXI **400.18**	3001-730PXI **516.55**	3301-730PXI **617.01**
	15X12	2901-732PXI **457.82**	300-102817 **580.36**	3301-732PXI **712.21**
	18X6	2901-786PXI **529.35**	3001-786PXI **612.22**	3301-786PXI **733.51**
	18X8	2901-788PXI **551.28**	3001-788PXI **637.99**	3301-788PXI **818.84**
	18X10	2901-790PXI **619.59**	3001-790PXI **685.85**	3301-790PXI **894.96**
	18X12	2901-792PXI **685.85**	3001-792PXI **814.69**	3301-792PXI **1005.67**
	21X6	2901-846PXI **780.33**	3001-846PXI **1078.08**	3301-846PXI **1137.19**
	21X8	2901-848PXI **783.08**	3001-848PXI **1110.36**	3301-848PXI **1184.45**
	21X10	2901-850PXI **888.27**	3001-850PXI **1152.07**	3301-850PXI **1239.83**
	21X12	2901-852PXI **914.59**	3001-852PXI **1163.14**	3301-852PXI **1542.00**
	24X6	2901-906PXI **1087.08**	3001-906PXI **1318.97**	3301-906PXI **1321.72**
	24X8	2901-908PXI **1158.23**	3001-908PXI **1406.08**	3301-908PXI **1432.46**
	24X10	2901-910PXI **1192.57**	3001-910PXI **1523.89**	3301-910PXI **1542.00**
	24X12	2901-912PXI **1212.16**	3001-912PXI **1640.42**	3301-912PXI **1652.71**

90° Ells

90° Elbow (Socket)

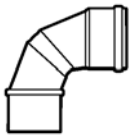
	Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
	6	290-100812 **121.46**	300-100812 **142.33**	3306-060P **176.45**
	8	290-100813 **164.40**	300-100813 **224.55**	3306-080P **256.04**
	10	290-100814 **269.93**	300-100814 **316.54**	3306-100P **353.34**
	12	290-100815 **347.17**	300-100815 **444.11**	3306-120P **459.67**
	15	290-100816 **579.12**	300-100816 **688.32**	3306-150P **787.68**
	18	290-100817 **871.11**	300-100817 **1025.67**	3306-180P **1348.39**

90° Elbow (Socket) (continued)

	Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
	21	290-100819 **1363.12**	300-100819 **1652.67**	3306-210P **2030.60**
	24	290-100820 **3046.54**	300-100820 **3633.02**	3306-240P **3826.83**
	27	2906-270 **3245.43**	3006-270 **3853.56**	3306-270P **4260.29**

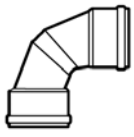
90° Ells

90° Elbow (Gasket x Spigot)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-100878 **147.18**	300-100878 **159.47**	3306-06023P **234.72**
8	290-100879 **233.13**	300-100879 **255.17**	3306-08023P **304.95**
10	290-100880 **347.17**	300-100880 **393.81**	3306-10023P **471.04**
12	290-100881 **472.38**	300-100881 **559.47**	3306-12023P **677.71**
15	290-100882 **905.48**	300-100882 **1143.51**	3306-15023P **1289.53**
18	290-100883 **1518.94**	300-100883 **1758.20**	3306-18023P **1787.67**
21	290-100885 **2201.15**	300-100885 **2639.19**	3306-21023P **3187.65**
24	2906-24023 **3513.18**	3006-24023 **3992.52**	3306-24023P **4992.22**
27	2906-27023 **4767.00**	3006-27023 **5521.54**	3306-27023P **6563.63**

90° Elbow (Gasketed)



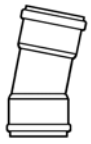
Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-100900 **147.18**	300-100900 **159.47**	3306-0602P **234.72**
8	290-100901 **233.13**	300-100901 **255.17**	3306-0802P **304.95**
10	290-100902 **347.17**	300-100902 **393.81**	3306-1002P **471.04**
12	290-100903 **472.38**	300-100903 **559.47**	3306-1202P **677.71**
15	290-100904 **905.48**	300-100904 **1143.51**	3306-1502P **1289.53**
18	290-100905 **1518.94**	300-100905 **1758.20**	3306-1802P **1787.67**
21	290-100907 **2201.15**	300-100907 **2639.19**	3306-2102P **3187.65**
24	2906-2402 **3513.18**	3006-2402 **3992.52**	3306-2402P **4992.22**
27	2906-2702 **4767.00**	3006-2702 **5521.54**	3306-2702P **6563.63**

Non 90° Ells

11-1/4° Elbow (Socket)

Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PIP Prod Code: 330 Part Number Price Each
6	290-100114 **33.15**	300-100114 **39.23**	3311-060P **48.57**
8	290-100115 **53.94**	300-100115 **58.85**	3311-080P **72.28**
10	290-100116 **96.87**	300-100116 **111.63**	3311-100P **140.02**
12	290-100117 **137.37**	300-100117 **155.83**	3311-120P **192.71**
15	290-100118 **213.47**	300-100118 **261.29**	3311-150P **339.85**
18	290-100119 **366.82**	300-100119 **434.34**	3311-180P **539.85**
21	290-100121 **612.22**	300-100121 **698.09**	3311-210P **909.17**
24	290-100122 **823.26**	300-100122 **909.17**	3311-240P **981.54**
27	2911-270 **1032.16**	3011-270 **1102.41**	3311-270P **1433.89**

11-1/4° Elbow (Gasketed)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PIP Prod Code: 330 Part Number Price Each
6	290-100210 **98.14**	300-100210 **120.20**	3311-0602P **139.99**
8	290-100211 **159.47**	300-100211 **177.89**	3311-0802P **208.33**
10	290-100212 **239.24**	300-100212 **263.75**	3311-1002P **305.67**
12	290-100213 **325.09**	300-100213 **380.34**	3311-1202P **441.98**
15	290-100214 **572.98**	300-100214 **628.17**	3311-1502P **743.53**
18	290-100215 **907.92**	300-100215 **1040.43**	3311-1802P **1236.77**
21	290-100217 **1341.02**	300-100217 **1442.91**	3311-2102P **1875.99**
24	2911-2402 **2219.44**	3011-2402 **2511.59**	3311-2402P **3152.73**
27	2911-2702 **2871.55**	3011-2702 **3248.12**	3311-2702P **3925.54**

11-1/4° Elbow (Gasket x Spigot)

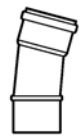
Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-100186 **98.14**	300-100186 **120.20**	3311-06023P **139.99**
8	290-100187 **159.47**	300-100187 **177.89**	3311-08023P **208.33**
10	290-100188 **239.24**	300-100188 **263.75**	3311-10023P **305.67**
12	290-100189 **325.09**	300-100189 **380.34**	3311-12023P **441.98**
15	290-100190 **572.98**	300-100190 **628.17**	3311-15023P **743.53**
18	290-100191 **907.92**	300-100191 **1040.43**	3311-18023P **1236.77**
21	290-100193 **1341.02**	300-100193 **1442.91**	3311-21023P **1875.99**
24	2911-24023 **2219.44**	3011-24023 **2511.59**	3311-24023P **3152.73**
27	2911-27023 **2871.55**	3011-27023 **3248.12**	3311-27023P **3925.54**

15° Elbow (Socket)

Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-100234 **33.15**	300-100234 **39.23**	3318-060P **48.57**
8	290-100235 **53.94**	300-100235 **58.85**	3318-080P **72.28**
10	290-100236 **96.87**	300-100236 **111.63**	3318-100P **140.02**
12	290-100237 **137.37**	300-100237 **155.83**	3318-120P **192.71**
15	290-100238 **213.47**	300-100238 **261.29**	3318-150P **339.85**
18	290-100239 **366.82**	300-100239 **434.34**	3318-180P **539.85**
21	290-100241 **612.22**	300-100241 **698.09**	3318-210P **909.17**
24	290-100242 **823.26**	300-100242 **909.17**	3318-240P **981.54**
27	2918-270 **1032.16**	3018-270 **1102.41**	3318-270P **1433.89**

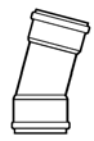
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

15° Elbow (Gasket x Spigot)



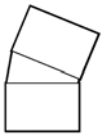
Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PIP Prod Code: 330 Part Number Price Each
6	290-100306 **98.14**	300-100306 **120.20**	3318-06023P **139.99**
8	290-100307 **159.47**	300-100307 **177.89**	3318-08023P **208.33**
10	290-100308 **239.24**	300-100308 **263.75**	3318-10023P **305.67**
12	290-100309 **325.09**	300-100309 **380.34**	3318-12023P **441.98**
15	290-100310 **572.98**	300-100310 **628.17**	3318-15023P **743.53**
18	290-100311 **907.92**	300-100311 **1040.43**	3318-18023P **1236.77**
21	290-100313 **1341.02**	300-100313 **1442.91**	3318-21023P **1875.99**
24	2918-24023 **2219.44**	3018-24023 **2511.59**	3318-24023P **3152.73**
27	2918-27023 **2871.55**	3018-27023 **3248.12**	3318-27023P **3925.54**

15° Elbow (Gasketed)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-100330 **98.14**	300-100330 **120.20**	3318-0602P **139.99**
8	290-100331 **159.47**	300-100331 **177.89**	3318-0802P **208.33**
10	290-100332 **239.24**	300-100332 **263.75**	3318-1002P **305.67**
12	290-100333 **325.09**	300-100333 **380.34**	3318-1202P **441.98**
15	290-100334 **572.98**	300-100334 **628.17**	3318-1502P **743.53**
18	290-100335 **907.92**	300-100335 **1040.43**	3318-1802P **1236.77**
21	290-100336 **1341.06**	300-100336 **1442.91**	3318-2102P **1875.99**
24	2918-2402 **2219.44**	3018-2402 **2511.59**	3318-2402P **3152.73**
27	2918-2702 **2871.55**	3018-2702 **3248.12**	3318-2702P **3925.54**

22-1/2° Elbow (Socket)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-100354 **33.15**	300-100354 **39.23**	3316-060P **47.84**
8	290-100355 **53.94**	300-100355 **58.85**	3316-080P **71.68**
10	290-100356 **96.87**	300-100356 **111.63**	3316-100P **140.02**
12	290-100357 **137.37**	300-100357 **155.83**	3316-120P **192.71**
15	290-100358 **213.47**	300-100358 **261.29**	3316-150P **339.85**
18	290-100359 **366.82**	300-100359 **434.34**	3316-180P **539.85**
21	290-100361 **612.22**	300-100361 **698.09**	3316-210P **909.17**
24	290-100362 **823.26**	300-100362 **909.17**	3316-240P **981.54**
27	2916-270 **1032.16**	3016-270 **1102.41**	3316-270P **1433.89**

22-1/2° Elbow (Gasket x Spigot)

Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-100426 **98.14**	300-100426 **120.20**	3316-06023P **139.99**
8	290-100427 **159.47**	300-100427 **177.89**	3316-08023P **208.33**
10	290-100428 **239.24**	300-100428 **263.75**	3316-10023P **305.67**
12	290-100429 **325.09**	300-100429 **380.34**	3316-12023P **441.98**
15	290-100430 **572.98**	300-100430 **628.17**	3316-15023P **743.53**
18	290-100431 **907.92**	300-100431 **1040.43**	3316-18023P **1236.77**
21	290-100433 **1341.02**	300-100433 **1442.91**	3316-21023P **1875.99**
24	2916-24023 **2219.44**	3016-24023 **2511.59**	3316-24023P **3152.73**

22-1/2° Elbow (Gasket x Spigot) (continued)

Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
27	2916-27023 **2871.55**	3016-27023 **3248.12**	3316-27023P **3925.54**

22-1/2° Elbow (Gasketed)

Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-100450 **98.14**	300-100450 **120.20**	3316-0602P **139.99**
8	290-100451 **159.47**	300-100451 **177.89**	3316-0802P **208.33**
10	290-100452 **239.24**	300-100452 **263.75**	3316-1002P **305.67**
12	290-100453 **325.09**	300-100453 **380.34**	3316-1202P **441.98**
15	290-100454 **572.98**	300-100454 **628.17**	3316-1502P **743.53**
18	290-100455 **907.92**	300-100455 **1040.43**	3316-1802P **1236.77**
21	290-100457 **1341.02**	300-100457 **1442.91**	3316-2102P **1875.99**
24	2916-2402 **2219.44**	3016-2402 **2511.59**	3316-2402P **3152.73**
27	2916-2702 **2871.55**	3016-2702 **3248.12**	3316-2702P **3925.54**

30° Elbow (Socket)

Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-100474 **50.27**	300-100474 **52.76**	3315-060P **67.48**
8	290-100475 **76.09**	300-100475 **92.00**	3315-080P **113.92**
10	290-100476 **117.73**	300-100476 **138.62**	3315-100P **172.42**
12	290-100477 **169.27**	300-100477 **206.12**	3315-120P **228.61**
15	290-100478 **267.44**	300-100478 **320.22**	3315-150P **396.27**
18	290-100479 **436.78**	300-100479 **533.71**	3315-180P **668.65**
21	290-100481 **706.72**	300-100481 **861.34**	3315-210P **1084.60**
24	290-100482 **2015.89**	300-100482 **2343.47**	3315-240P **2460.04**
27	2915-270 **2221.92**	3015-270 **2499.78**	3315-270P **2753.83**

30° Elbow (Gasket x Spigot)

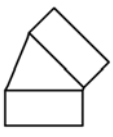
Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-100546 **122.65**	300-100546 **141.09**	3315-06023P **168.47**
8	290-100547 **184.02**	300-100547 **199.97**	3315-08023P **237.75**
10	290-100548 **258.84**	300-100548 **287.08**	3315-10023P **336.21**
12	290-100549 **348.45**	300-100549 **408.57**	3315-12023P **480.14**
15	290-100550 **709.17**	300-100550 **826.96**	3315-15023P **923.86**
18	290-100551 **996.25**	300-100551 **1171.69**	3315-18023P **1464.93**
21	290-100553 **1484.59**	300-100553 **1268.36**	3315-21023P **2085.81**
24	2915-24023 **2381.81**	3015-24023 **3266.20**	3315-24023P **3383.18**
27	2915-27023 **3217.97**	3015-27023 **3755.29**	3315-27023P **4397.72**

PVC 80, 100 & 125 PSI PIP Fabricated Fittings

30° Elbow (Gasketed)

Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-100570 **122.65**	300-100570 **141.09**	3315-0602P **168.47**
8	290-100571 **184.02**	300-100571 **199.97**	3315-0802P **237.75**
10	290-100572 **258.84**	300-100572 **287.08**	3315-1002P **336.21**
12	290-100573 **348.45**	300-100573 **408.57**	3315-1202P **480.14**
15	290-100574 **709.17**	300-100574 **826.96**	3315-1502P **923.86**
18	290-100575 **996.25**	300-100575 **1171.69**	3315-1802P **1464.93**
21	290-100577 **1484.59**	300-100577 **1268.36**	3315-2102P **2085.81**
24	2915-2402 **2382.07**	3015-2402 **3266.20**	3315-2402P **3383.18**
27	2915-2702 **3217.97**	3015-2702 **3755.29**	3315-2702P **4397.72**

45°Elbow (Socket)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-100592 **50.27**	300-100592 **52.76**	3317-060P **67.51**
8	290-100593 **76.09**	300-100593 **92.00**	3317-080P **113.92**
10	290-100594 **117.73**	300-100594 **138.62**	3317-100P **172.42**
12	290-100595 **169.27**	300-100595 **206.12**	3317-120P **228.61**
15	290-100596 **267.44**	300-100596 **320.22**	3317-150P **396.27**
18	290-100597 **436.78**	300-100597 **533.71**	3317-180P **668.65**
21	290-100599 **706.72**	300-100599 **861.34**	3317-210P **1084.60**
24	290-100600 **2015.89**	300-100600 **2343.47**	3317-240P **2460.04**
27	2917-270 **2221.92**	3017-270 **2499.78**	3317-270P **2753.83**

45°Elbow (Gasket x Spigot)

Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-100658 **122.65**	300-100658 **141.09**	3317-06023P **168.47**
8	290-100659 **184.02**	300-100659 **199.97**	3317-08023P **237.75**
10	290-100660 **258.84**	300-100660 **287.08**	3317-10023P **336.21**
12	290-100661 **348.45**	300-100661 **408.57**	3317-12023P **480.14**
15	290-100662 **709.17**	300-100662 **826.96**	3317-15023P **923.86**
18	290-100663 **996.25**	300-100663 **1171.69**	3317-18023P **1464.93**
21	290-100665 **1484.59**	300-100665 **1268.36**	3317-21023P **2085.81**
24	2917-24023 **2382.07**	3017-24023 **3266.20**	3317-24023P **3383.18**
27	2917-27023 **3217.97**	3017-27023 **3755.29**	3317-27023P **4397.72**

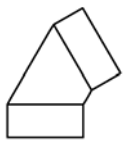
45°Elbow (Gasketed)

Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-100680 **122.65**	300-100680 **141.09**	3317-0602P **168.47**
8	290-100681 **184.02**	300-100681 **199.97**	3317-0802P **237.75**
10	290-100682 **258.84**	300-100682 **287.08**	3317-1002P **336.21**
12	290-100683 **348.45**	300-100683 **408.57**	3317-1202P **480.14**
15	290-100684 **709.17**	300-100684 **826.96**	3317-1502P **923.86**
18	290-100685 **996.25**	300-100685 **1171.69**	3317-1802P **1464.93**
21	290-100687 **1484.59**	300-100687 **1765.59**	3317-2102P **2085.81**
24	2917-2402 **2382.07**	3017-2402 **3266.20**	3317-2402P **3383.18**

45°Elbow (Gasketed) (continued)

Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
27	2917-2702 **3217.97**	3017-2702 **3755.29**	3317-2702P **4397.72**

60° Elbow (Socket)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-100702 **121.46**	300-100702 **142.33**	3324-060P **176.45**
8	290-100703 **164.40**	300-100703 **224.55**	3324-080P **256.01**
10	290-100704 **269.93**	300-100704 **316.54**	3324-100P **353.34**
12	290-100705 **347.17**	300-100705 **444.11**	3324-120P **459.67**
15	290-100706 **579.12**	300-100706 **688.32**	3324-150P **787.68**
18	290-100707 **871.11**	300-100707 **1025.67**	3324-180P **1348.39**
21	290-100709 **1363.12**	300-100709 **1652.67**	3324-210P **2030.60**
24	290-100710 **3046.54**	300-100710 **3633.02**	3324-240P **3826.83**
27	2924-270 **3245.43**	3024-270 **3853.56**	3324-270P **4260.29**

60° Elbow (Gasket x Spigot)

Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-100768 **147.18**	300-100768 **159.47**	3324-06023P **234.72**
8	290-100769 **233.13**	300-100769 **255.17**	3324-08023P **304.95**
10	290-100770 **347.17**	300-100770 **393.81**	3324-10023P **471.04**
12	290-100771 **472.38**	300-100771 **559.47**	3324-12023P **677.71**
15	290-100772 **905.48**	300-100772 **1143.51**	3324-15023P **1289.53**
18	290-100773 **1518.94**	300-100773 **1758.20**	3324-18023P **1787.67**
21	290-100775 **2201.15**	300-100775 **2639.19**	3324-21023P **3187.65**
24	2924-24023 **3513.18**	3024-24023 **3992.52**	3324-24023P **4992.22**
27	2924-27023 **4767.00**	3024-27023 **5521.54**	3324-27023P **6563.63**

60° Elbow (Gasketed)

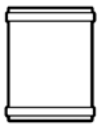
Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-100790 **147.18**	300-100790 **159.47**	3324-0602P **234.72**
8	290-100791 **233.13**	300-100791 **255.17**	3324-0802P **304.95**
10	290-100792 **347.17**	300-100792 **393.81**	3324-1002P **471.04**
12	290-100793 **472.38**	300-100793 **559.47**	3324-1202P **677.71**
15	290-100794 **905.48**	300-100794 **1143.51**	3324-1502P **1289.53**
18	290-100795 **1518.94**	300-100795 **1758.20**	3324-1802P **1787.67**
21	290-100797 **2201.15**	300-100797 **2639.19**	3324-2102P **3187.65**
24	2924-2402 **3513.18**	3024-2402 **3992.52**	3324-2402P **4992.22**
27	2924-2702 **4767.00**	3024-2702 **5521.54**	3324-2702P **6563.63**

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

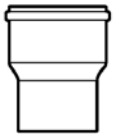
Couplings

Repair Coupling (Gasketed)



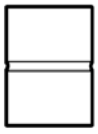
Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	2928-060 **98.24**	3028-060 **111.63**	3328-060P **127.58**
8	2928-080 **137.62**	3028-080 **158.24**	3328-080P **190.12**
10	2928-100 **237.58**	3028-100 **254.00**	3328-100P **299.59**
12	2928-120 **331.39**	3028-120 **348.45**	3328-120P **414.85**
15	2928-150 **494.45**	3028-150 **519.02**	3328-150P **628.17**
18	2928-180 **823.82**	3028-180 **949.65**	3328-180P **1307.73**
21	2928-210 **1138.33**	3028-210 **1366.62**	3328-210P **1837.55**
24	2928-240 **1578.09**	3028-240 **1894.93**	3328-240P **2570.13**
27	2928-270 **2021.01**	3028-270 **2522.91**	3328-270P **3211.64**

Coupling (Gasket x Spigot)



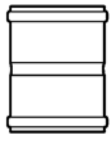
Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-100068 **61.33**	300-100068 **65.01**	3329-06023P **81.35**
8	290-100069 **93.20**	300-100069 **100.59**	3329-08023P **128.77**
10	290-100070 **138.62**	300-100070 **147.18**	3329-10023P **191.23**
12	290-100071 **170.51**	300-100071 **199.97**	3329-12023P **250.99**
15	290-100072 **263.75**	300-100072 **398.72**	3329-15023P **463.79**
18	290-100073 **442.92**	300-100073 **539.85**	3329-18023P **610.22**
21	290-100075 **647.83**	300-100075 **837.99**	3329-21023P **929.94**
24	2929-24023 **791.36**	3029-24023 **1053.89**	3329-24023P **1316.86**
27	2929-27023 **1027.62**	3029-27023 **1284.38**	3329-27023P **1605.76**

Coupling (Socket)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-100002 **29.44**	300-100002 **33.15**	3329-060P **43.92**
8	290-100003 **36.79**	300-100003 **45.36**	3329-080P **55.85**
10	290-100004 **61.33**	300-100004 **72.39**	3329-100P **89.37**
12	290-100005 **92.00**	300-100005 **111.63**	3329-120P **145.09**
15	290-100006 **139.85**	300-100006 **191.37**	3329-150P **217.99**
18	290-100007 **320.22**	300-100007 **402.44**	3329-180P **490.69**
21	290-100009 **425.73**	300-100009 **703.03**	3329-210P **793.75**
24	290-100010 **747.17**	300-100010 **937.36**	3329-240P **954.62**
27	2929-270 **905.76**	3029-270 **1128.48**	3329-270P **1743.17**
30	2929-300 **1187.95**	3029-300 **1832.56**	---

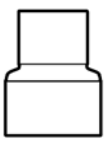
Coupling (Gasketed)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-100090 **73.61**	300-100090 **82.16**	3329-0602P **106.32**
8	290-100091 **134.95**	300-100091 **152.28**	3329-0802P **174.62**
10	290-100092 **172.69**	300-100092 **193.84**	3329-1002P **256.74**
12	290-100093 **217.18**	300-100093 **283.68**	3329-1202P **285.58**
15	290-100094 **349.64**	300-100094 **521.42**	3329-1502P **542.26**
18	290-100095 **584.00**	300-100095 **615.94**	3329-1802P **770.05**
21	290-100097 **730.02**	300-100097 **996.25**	3329-2102P **1133.41**
24	2929-2402 **1225.75**	3029-2402 **1326.19**	3329-2402P **1591.69**
27	2929-2702 **1412.60**	3029-2702 **1657.74**	3329-2702P **2073.12**

Reducer Couplings

Reducer Coupling (Socket)

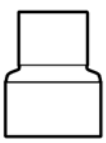


Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6X2	2929-528 **62.74**	3029-528 **111.20**	---
6X2-1/2	---	3029-529 **92.82**	---
6X3	---	3029-530 **96.87**	---
6X4	2929-532 **36.24**	3029-532 **40.48**	3329-532P **43.17**
8X2	2929-578 **156.55**	---	---
8X2-1/2	---	3029-579 **161.92**	---
8X3	---	3029-580 **169.72**	---
8X4	2929-582 **103.05**	300-100927 **110.57**	3329-582P **128.64**
8X6	2929-585 **53.65**	300-100928 **62.58**	3329-585P **72.54**

Reducer Coupling (Socket) (continued)

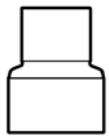
Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
10X2	2929-621 **185.06**	3029-621 **227.92**	---
10X2-1/2	---	3029-622 **187.26**	---
10X3	---	3029-623 **133.67**	---
10X4	2929-624 **141.76**	3029-624 **164.38**	3329-624P **180.64**
10X6	2929-626 **117.21**	300-100930 **128.77**	3329-626P **126.52**
10X8	2929-628 **73.69**	300-100931 **85.85**	3329-628P **160.42**
12X2	---	3029-661 **455.60**	---
12X2-1/2	---	3029-662 **311.31**	---
12X3	---	3029-663 **281.94**	---

Reducer Coupling (Socket) (continued)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
12X4	2929-664 **203.46**	3029-664 **212.21**	3329-664P **309.44**
12X6	2929-666 **186.56**	300-100933 **198.77**	3329-666P **286.61**
12X8	2929-668 **130.00**	300-100934 **137.79**	3329-668P **250.87**
12X10	2929-670 **107.36**	300-100935 **123.91**	3329-670P **236.67**
15X2	2929-721 **464.68**	---	---
15X3	2929-723 **422.94**	3029-723 **487.43**	---
15X4	2929-724 **438.67**	3029-724 **469.40**	3329-724P **556.32**
15X6	2929-726 **414.73**	3029-726 **443.76**	3329-726P **482.86**
15X8	2929-728 **389.20**	3029-728 **420.35**	3329-728P **453.02**
15X10	2929-730 **268.53**	3029-730 **336.16**	3329-730P **365.64**
15X12	2929-732 **173.34**	300-100940 **199.97**	3329-732P **344.96**
18X4	2929-784 **853.66**	3029-784 **958.60**	3329-784P **1015.27**
18X6	2929-786 **889.07**	3029-786 **937.97**	3329-786P **994.15**
18X8	2929-788 **819.58**	3029-788 **868.76**	3329-788P **929.58**
18X10	2929-790 **527.42**	3029-790 **568.67**	3329-790P **642.64**
18X12	2929-792 **517.04**	3029-792 **534.17**	3329-792P **605.64**
18X15	2929-795 **310.71**	300-100946 **364.38**	3329-795P **442.92**
21X3	2929-843 **1060.92**	---	---
21X4	2929-844 **1084.28**	3029-844 **1142.83**	3329-844P **1234.27**
21X6	2929-846 **1038.74**	3029-846 **1101.05**	3329-846P **1172.63**
21X8	2929-848 **866.92**	3029-848 **910.63**	3329-848P **934.56**
21X10	2929-850 **803.05**	3029-850 **848.03**	3329-850P **876.77**
21X12	2929-852 **808.61**	3029-852 **776.64**	3329-852P **823.25**
21X15	2929-855 **711.96**	3029-855 **754.59**	3329-855P **904.83**
21X18	2929-858 **428.55**	300-100960 **501.79**	3329-858P **629.44**
24X3	2929-903 **1684.06**	3029-903 **1016.94**	---
24X6	2929-906 **1719.93**	3029-906 **1834.22**	3329-906P **1999.29**
24X8	2929-908 **1631.80**	3029-908 **1711.24**	3329-908P **1804.79**
24X10	2929-910 **1553.34**	3029-910 **1637.21**	3329-910P **1758.00**
24X12	2929-912 **1359.62**	3029-912 **1440.82**	3329-912P **1538.79**
24X15	2929-915 **989.16**	3029-915 **1068.29**	3329-915P **1081.53**
24X18	2929-918 **938.59**	3029-918 **1004.28**	3329-918P **1072.17**
24X20	---	3029-920 **1380.34**	---
24X21	2929-921 **635.31**	300-100969 **738.60**	3329-921P **898.09**
27X6	2929-936 **2236.27**	3029-936 **2387.36**	3329-936P **2578.36**
27X8	2929-938 **2080.05**	3029-938 **2257.80**	3329-938P **2411.02**
27X10	2929-940 **1950.16**	3029-940 **2077.73**	3329-940P **2220.99**

Reducer Coupling (Socket) (continued)



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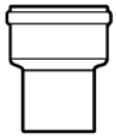
27X12	2929-942 **1832.18**	3029-942 **1942.12**	3329-942P **2097.17**
27X15	2929-945 **1443.26**	3029-945 **1542.17**	3329-945P **1645.57**
27X18	2929-948 **1353.89**	3029-948 **1448.05**	3329-948P **1524.12**
27X21	2929-951 **1122.86**	3029-951 **1344.85**	3329-951P **1437.85**
27X24	2929-954 **873.35**	3029-954 **1089.17**	3329-954P **1358.20**
30X18	2929-978 **2702.25**	3029-978 **3375.63**	---
30X21	---	3029-981 **2847.40**	---
30X24	2929-984 **2022.41**	3029-984 **2539.97**	---
30X27	2929-987 **2006.92**	3029-987 **2160.51**	---

Reducer Coupling (Gasket x Spigot)



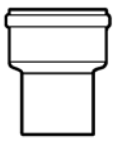
6X4	2929-53223 **87.36**	300-101310 **89.55**	3329-53223P **127.69**
8X4	2929-58223 **198.41**	300-100927 **110.57**	3329-58223P **247.40**
8X6	2929-58523 **105.15**	300-101312 **127.58**	3329-58523P **165.67**
10X4	2929-62423 **290.01**	3029-62423 **316.12**	3329-62423P **347.38**
10X6	2929-62623 **225.41**	300-100930 **128.77**	3329-62623P **282.65**
10X8	2929-62823 **171.39**	300-101315 **184.02**	3329-62823P **253.20**
12X4	2929-66423 **391.26**	3029-66423 **408.09**	3329-66423P **572.17**
12X6	2929-66623 **358.76**	300-100933 **198.77**	3329-66623P **551.16**
12X8	2929-66823 **249.99**	300-100934 **137.79**	3329-66823P **482.45**
12X10	2929-67023 **240.05**	300-101319 **269.93**	3329-67023P **329.66**
15X4	2929-72423 **843.62**	3029-72423 **902.68**	3329-72423P **1138.13**
15X6	2929-72623 **797.55**	3029-72623 **853.38**	3329-72623P **872.87**
15X8	2929-72823 **748.47**	3029-72823 **808.37**	3329-72823P **858.23**
15X10	2929-73023 **516.38**	3029-73023 **646.46**	3329-73023P **749.65**
15X12	2929-73223 **412.58**	300-101324 **449.05**	3329-73223P **579.58**
18X4	2929-78423 **1746.44**	3029-78423 **1843.46**	3329-78423P **1952.44**
18X6	2929-78623 **1709.75**	3029-78623 **1803.79**	3329-78623P **1911.80**
18X8	2929-78823 **1575.99**	3029-78823 **1670.67**	3329-78823P **1787.64**
18X10	2929-79023 **1014.26**	3029-79023 **1093.62**	3329-79023P **1235.85**
18X12	2929-79223 **994.33**	3029-79223 **1027.24**	3329-79223P **1164.69**
18X15	2929-79523 **726.66**	300-101330 **853.97**	3329-79523P **885.82**
21X6	2929-84623 **1997.56**	3029-84623 **2117.48**	3329-84623P **2255.06**
21X8	2929-84823 **1733.84**	3029-84823 **1750.52**	3329-84823P **1797.23**
21X10	2929-85023 **1544.35**	3029-85023 **1630.82**	3329-85023P **1686.08**
21X12	2929-85223 **1436.22**	3029-85223 **1493.54**	3329-85223P **1583.17**
21X15	2929-85523 **1369.15**	3029-85523 **1451.15**	3329-85523P **1541.57**
21X18	2929-85823 **1076.09**	300-101344 **1364.54**	3329-85823P **1455.14**

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

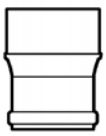
PVC 80, 100 & 125 PSI PIP Fabricated Fittings

Reducer Coupling (Gasket x Spigot) (continued)



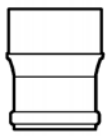
Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
24X6	2929-90623 **3307.55**	3029-90623 **3527.34**	3329-90623P **3844.22**
24X8	2929-90823 **3138.08**	3029-90823 **3290.84**	3329-90823P **3470.75**
24X10	2929-91023 **2987.18**	3029-91023 **3147.78**	3329-91023P **3380.76**
24X12	2929-91223 **2614.64**	3029-91223 **2769.77**	3329-91223P **2959.20**
24X15	2929-91523 **1902.23**	3029-91523 **2054.42**	3329-91523P **2689.13**
24X18	2929-91823 **1804.97**	3029-91823 **2026.63**	3329-91823P **2559.72**
24X21	2929-92123 **1605.79**	3029-92123 **1992.56**	3329-92123P **2440.59**
27X6	2929-93623 **4300.52**	3029-93623 **4591.08**	3329-93623P **4957.64**
27X8	2929-93823 **3999.88**	3029-93823 **4341.37**	3329-93823P **4634.60**
27X10	2929-94023 **3750.31**	3029-94023 **4007.35**	3329-94023P **4270.36**
27X12	2929-94223 **3521.21**	3029-94223 **3734.26**	3329-94223P **4032.09**
27X15	2929-94523 **2774.36**	3029-94523 **2964.51**	3329-94523P **3521.21**
27X18	2929-94823 **2595.66**	3029-94823 **2783.52**	3329-94823P **3405.93**
27X21	2929-95123 **2295.54**	3029-95123 **2584.20**	3329-95123P **3358.55**
27X24	2929-95423 **2247.96**	3029-95423 **2826.59**	3329-95423P **3323.27**

Reducer Coupling (Spigot x Gasket)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6X4	2929-53232 **83.20**	300-101383 **86.25**	3329-53232P **110.99**
8X4	2929-58232 **190.48**	3029-58232 **204.15**	3329-58232P **237.51**
8X6	2929-58532 **100.95**	300-101385 **120.20**	3329-58532P **128.27**
10X4	2929-62432 **278.41**	3029-62432 **303.47**	3329-62432P **333.49**
10X6	2929-62632 **216.38**	3029-62632 **237.74**	3329-62632P **271.36**
10X8	2929-62832 **158.63**	300-101388 **179.34**	3329-62832P **229.05**
12X4	2929-66432 **375.62**	3029-66432 **391.77**	3329-66432P **549.28**
12X6	2929-66632 **344.40**	3029-66632 **366.97**	3329-66632P **529.11**
12X8	2929-66832 **240.00**	3029-66832 **277.26**	3329-66832P **463.05**
12X10	2929-67032 **229.49**	300-101392 **254.00**	3329-67032P **323.96**
15X4	2929-72432 **809.86**	3029-72432 **866.57**	3329-72432P **1092.61**
15X6	2929-72632 **765.64**	3029-72632 **819.26**	3329-72632P **891.44**
15X8	2929-72832 **718.55**	3029-72832 **776.03**	3329-72832P **823.89**
15X10	2929-73032 **495.62**	3029-73032 **620.59**	3329-73032P **719.66**
15X12	2929-73232 **337.00**	300-101397 **392.63**	3329-73232P **557.00**
18X4	2929-78432 **1676.59**	3029-78432 **1769.72**	3329-78432P **1874.35**
18X6	2929-78632 **1641.35**	3029-78632 **1731.62**	3329-78632P **1835.34**
18X8	2929-78832 **1512.95**	3029-78832 **1603.84**	3329-78832P **1716.14**
18X10	2929-79032 **973.45**	3029-79032 **1049.86**	3329-79032P **1186.42**
18X12	2929-79232 **954.54**	3029-79232 **986.16**	3329-79232P **1118.11**
18X15	2929-79532 **660.74**	300-101403 **759.46**	3329-79532P **852.76**

Reducer Coupling (Spigot x Gasket) (continued)



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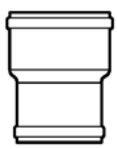
21X6	2929-84632 **1917.66**	3029-84632 **2032.79**	3329-84632P **2164.85**
21X8	2929-84832 **1664.48**	3029-84832 **1680.49**	3329-84832P **1773.22**
21X10	2929-85032 **1458.75**	3029-85032 **1565.58**	3329-85032P **1618.64**
21X12	2929-85232 **1378.79**	3029-85232 **1433.80**	3329-85232P **1518.66**
21X15	2929-85532 **1314.38**	3029-85532 **1392.96**	3329-85532P **1479.87**
21X18	2929-85832 **1015.26**	300-101417 **1144.72**	3329-85832P **1328.80**
24X6	2929-90632 **3175.24**	3029-90632 **3386.24**	3329-90632P **3690.55**
24X8	2929-90832 **3012.56**	3029-90832 **3159.20**	3329-90832P **3331.92**
24X10	2929-91032 **2867.69**	3029-91032 **3021.87**	3329-91032P **3245.66**
24X12	2929-91232 **2510.31**	3029-91232 **2658.98**	3329-91232P **2840.82**
24X15	2929-91532 **1826.41**	3029-91532 **1973.86**	3329-91532P **2581.57**
24X18	2929-91832 **1732.77**	3029-91832 **1945.56**	3329-91832P **2456.55**
24X21	2929-92132 **1580.17**	3029-92132 **1902.99**	3329-92132P **2116.43**
27X6	2929-93632 **4128.48**	3029-93632 **4407.61**	3329-93632P **4759.34**
27X8	2929-93832 **3839.89**	3029-93832 **4167.44**	3329-93832P **4445.21**
27X10	2929-94032 **3600.20**	3029-94032 **3847.06**	3329-94032P **4099.54**
27X12	2929-94232 **3380.36**	3029-94232 **3584.91**	3329-94232P **3870.82**
27X15	2929-94532 **2663.56**	3029-94532 **2845.92**	3329-94532P **3379.47**
27X18	2929-94832 **2491.83**	3029-94832 **2672.18**	3329-94832P **3269.68**
27X21	2929-95132 **2203.71**	3029-95132 **2480.83**	3329-95132P **3030.51**
27X24	2929-95432 **2208.33**	3029-95432 **2644.97**	3329-95432P **3189.63**

Reducer Coupling (Gasketed)



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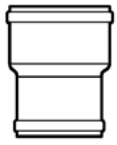
6X4	2929-5322 **101.18**	300-101456 **120.20**	3329-5322P **152.82**
8X4	2929-5822 **226.66**	3029-5822 **242.94**	3329-5822P **282.62**
8X6	2929-5852 **127.97**	300-101458 **158.24**	3329-5852P **196.69**
10X4	2929-6242 **331.29**	3029-6242 **361.13**	3329-6242P **395.51**
10X6	2929-6262 **257.91**	3029-6262 **282.92**	3329-6262P **322.93**
10X8	2929-6282 **224.53**	300-101461 **254.00**	3329-6282P **317.47**
12X4	2929-6642 **446.99**	3029-6642 **466.41**	3329-6642P **653.65**
12X6	2929-6662 **409.84**	3029-6662 **436.69**	3329-6662P **629.64**
12X8	2929-6682 **334.02**	3029-6682 **389.87**	3329-6682P **551.03**
12X10	2929-6702 **301.62**	300-101465 **348.45**	3329-6702P **438.95**
15X4	2929-7242 **964.94**	3029-7242 **1031.35**	3329-7242P **1300.27**
15X6	2929-7262 **911.12**	3029-7262 **974.92**	3329-7262P **1061.81**
15X8	2929-7282 **855.06**	3029-7282 **923.48**	3329-7282P **980.43**
15X10	2929-7302 **589.69**	3029-7302 **719.88**	3329-7302P **856.41**
15X12	2929-7322 **444.96**	300-101470 **506.71**	3329-7322P **633.08**

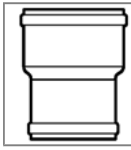
Reducer Couplings

Reducer Coupling (Gasketed) (continued)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
18X4	2929-7842 **1994.62**	3029-7842 **2105.94**	3329-7842P **2229.96**
18X6	2929-7862 **1953.20**	3029-7862 **2060.64**	3329-7862P **2184.05**
18X8	2929-7882 **1800.41**	3029-7882 **1908.58**	3329-7882P **2042.23**
18X10	2929-7902 **1158.40**	3029-7902 **1249.34**	3329-7902P **1411.83**
18X12	2929-7922 **1135.85**	3029-7922 **1173.53**	3329-7922P **1331.17**
18X15	2929-7952 **794.96**	300-101476 **885.82**	3329-7952P **1012.20**
21X6	2929-8462 **2281.98**	3029-8462 **2419.01**	3329-8462P **2576.17**
21X8	2929-8482 **1980.74**	3029-8482 **1998.88**	3329-8482P **2109.45**
21X10	2929-8502 **1735.92**	3029-8502 **1862.79**	3329-8502P **1926.59**
21X12	2929-8522 **1640.77**	3029-8522 **1706.22**	3329-8522P **1807.51**
21X15	2929-8552 **1563.66**	3029-8552 **1657.22**	3329-8552P **1760.72**
21X18	2929-8582 **1301.41**	300-101489 **1392.60**	3329-8582P **1549.64**
24X6	2929-9062 **3778.03**	3029-9062 **4030.37**	3329-9062P **4390.45**
24X8	2929-9082 **3585.23**	3029-9082 **3759.45**	3329-9082P **3964.98**
24X10	2929-9102 **3412.27**	3029-9102 **3595.15**	3329-9102P **3861.67**
24X12	2929-9122 **2986.98**	3029-9122 **3164.19**	3329-9122P **3381.08**
24X15	2929-9152 **2173.25**	3029-9152 **2348.89**	3329-9152P **3072.04**
24X18	2929-9182 **2122.01**	3029-9182 **2315.02**	3329-9182P **2923.18**
24X21	2929-9212 **2097.08**	3029-9212 **2289.48**	3329-9212P **2902.71**
27X6	2929-9362 **4913.56**	3029-9362 **5202.76**	3329-9362P **5663.49**
27X8	2929-9382 **4570.49**	3029-9382 **4958.93**	3329-9382P **5289.24**
27X10	2929-9402 **4284.12**	3029-9402 **4577.58**	3329-9402P **4878.12**
27X12	2929-9422 **4021.82**	3029-9422 **4265.69**	3329-9422P **4605.94**
27X15	2929-9452 **3169.85**	3029-9452 **3385.34**	3329-9452P **4020.45**
27X18	2929-9482 **2964.31**	3029-9482 **3179.78**	3329-9482P **3890.02**
27X21	2929-9512 **2741.77**	3029-9512 **3070.28**	3329-9512P **3836.15**

Reducer Coupling (Gasketed) (continued)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
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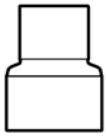
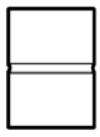
PIP X IPS Reducer (Socket)



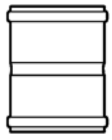
Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6X4	2929-532 **36.24**	---	---
8X6	---	300-101537 **47.82**	---
10X6	---	3029-626PXI **147.37**	---
10X8	---	300-101538 **108.75**	---
12X10	---	300-101539 **131.24**	---
15X10	---	300-101541 **331.26**	---
15X12	---	300-101540 **225.75**	---

IPS X PIP Adapter (Socket)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	---	300-101649 **39.23**	---
8	---	300-101650 **56.39**	---
10	---	300-101651 **94.48**	---
12	---	300-101652 **147.18**	---

IPS X PIP Adapter (Gasketed)



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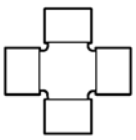
6	---	300-101747 **95.66**	---
8	---	300-101748 **156.15**	---
10	---	300-101749 **224.58**	---
12	---	300-101750 **316.54**	---

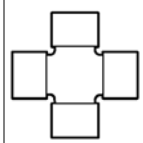
Crosses

Cross (Socket)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-103286 **101.82**	300-103286 **141.09**	3320-060P **175.58**
6X2	290-103283 **77.27**	300-103283 **89.55**	3320-528P **109.28**
6X3	290-103284 **84.66**	300-103284 **100.59**	3320-530P **118.02**
6X4	290-103285 **92.00**	300-103285 **107.94**	3320-532P **124.01**
8	290-103291 **172.97**	300-103291 **206.12**	3320-080P **254.14**
8X2	290-103287 **95.66**	300-103287 **115.28**	3320-578P **132.56**

Cross (Socket) (continued)



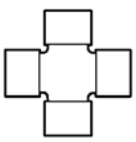
Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
8X3	290-103288 **104.24**	300-103288 **126.35**	3320-580P **148.58**
8X4	290-103289 **111.63**	300-103289 **134.95**	3320-582P **168.12**
8X6	290-103290 **130.04**	300-103290 **155.83**	3320-585P **192.71**
10	290-103297 **293.21**	300-103297 **354.58**	3320-100P **411.99**
10X2	290-103292 **147.18**	300-103292 **153.36**	3320-621P **171.88**
10X3	290-103293 **158.24**	300-103293 **179.06**	3320-623P **194.53**

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

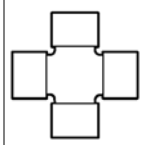
PVC 80, 100 & 125 PSI PIP Fabricated Fittings

Cross (Socket) (continued)



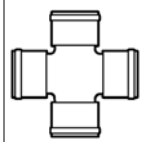
Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
10X4	290-103294 **176.69**	300-103294 **191.37**	3320-624P **236.41**
10X6	290-103295 **199.97**	300-103295 **214.68**	3320-626P **264.92**
10X8	290-103296 **234.31**	300-103296 **261.29**	3320-628P **323.76**
12	290-103304 **455.16**	300-103304 **536.17**	3320-120P **662.04**
12X2	290-103298 **220.85**	300-103298 **225.75**	3320-661P **285.98**
12X3	290-103299 **244.14**	300-103299 **246.62**	3320-663P **311.48**
12X4	290-103300 **249.05**	300-103300 **269.93**	3320-664P **333.67**
12X6	290-103301 **267.44**	300-103301 **296.92**	3320-666P **367.91**
12X8	290-103302 **311.61**	300-103302 **345.99**	3320-668P **378.88**
12X10	290-103303 **366.82**	300-103303 **417.15**	3320-670P **514.80**
15	290-103321 **761.92**	300-103321 **923.86**	3320-150P **1177.87**
15X2	290-103313 **311.61**	300-103313 **352.11**	3320-721P **411.01**
15X3	290-103314 **316.54**	300-103314 **373.00**	3320-723P **449.05**
15X4	290-103315 **331.26**	300-103315 **381.59**	3320-724P **466.20**
15X6	290-103316 **364.38**	300-103316 **422.05**	3320-726P **483.40**
15X8	290-103317 **430.69**	300-103317 **483.40**	3320-728P **660.09**
15X10	290-103318 **498.12**	300-103318 **601.16**	3320-730P **799.95**
15X12	290-103319 **586.47**	300-103319 **703.03**	3320-732P **914.01**
18	290-103342 **1318.97**	300-103342 **1494.43**	3320-180P **1904.21**
18X2	290-103332 **466.20**	300-103332 **545.97**	3320-781P **711.58**
18X3	290-103333 **478.49**	300-103333 **571.75**	3320-783P **750.88**
18X4	290-103334 **495.68**	300-103334 **584.00**	3320-784P **797.46**
18X6	290-103335 **531.23**	300-103335 **630.63**	3320-786P **879.68**
18X8	290-103336 **588.91**	300-103336 **689.54**	3320-788P **996.25**
18X10	290-103337 **650.25**	300-103337 **747.17**	3320-790P **1143.51**
18X12	290-103338 **759.46**	300-103338 **923.86**	3320-792P **1295.65**
18X15	290-103340 **920.20**	300-103340 **1201.20**	3320-795P **1538.60**
21	290-103367 **1947.19**	300-103367 **2461.23**	3320-210P **2929.97**
21X2	290-103355 **711.58**	300-103355 **907.92**	3320-841P **932.46**
21X3	290-103356 **742.28**	300-103356 **956.99**	3320-843P **1055.17**
21X4	290-103357 **785.22**	300-103357 **996.25**	3320-844P **1177.87**
21X6	290-103358 **835.49**	300-103358 **1055.17**	3320-846P **1272.29**
21X8	290-103359 **903.01**	300-103359 **1143.51**	3320-848P **1406.08**
21X10	290-103360 **976.61**	300-103360 **1260.05**	3320-850P **1553.32**
21X12	290-103361 **1093.20**	300-103361 **1406.08**	3320-852P **1728.78**
21X15	290-103363 **1253.93**	300-103363 **1640.42**	3320-855P **1992.56**
21X18	290-103365 **1502.99**	300-103365 **1963.12**	3320-858P **2431.81**

Cross (Socket) (continued)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
24	290-103381 **2783.93**	300-103381 **3280.85**	3320-240P **4511.54**
24X2	290-103368 **981.54**	300-103368 **1177.87**	3320-901P **1226.94**
24X3	290-103369 **1030.59**	300-103369 **1226.94**	3320-903P **1282.16**
24X4	290-103370 **1093.20**	300-103370 **1289.53**	3320-904P **1348.39**
24X6	290-103371 **1186.43**	300-103371 **1374.16**	3320-906P **1435.54**
24X8	290-103372 **1260.05**	300-103372 **1494.43**	3320-908P **1582.75**
24X10	290-103373 **1348.39**	300-103373 **1612.21**	3320-910P **1758.20**
24X12	290-103374 **1464.93**	300-103374 **1787.67**	3320-912P **1933.69**
24X15	290-103376 **1758.20**	300-103376 **2022.00**	3320-915P **2197.47**
24X18	290-103378 **1992.56**	300-103378 **2343.47**	3320-918P **2636.73**
24X21	290-103380 **2372.92**	300-103380 **2783.93**	3320-921P **3193.74**
27	2920-270 **4215.02**	3020-270 **4967.07**	3320-270P **6456.02**
27X4	2920-934 **1246.62**	3020-934 **1561.47**	3320-934P **2029.38**
27X6	2920-936 **1438.81**	3020-936 **1666.69**	3320-936P **2168.18**
27X8	2920-938 **1527.60**	3020-938 **1811.69**	3320-938P **2355.95**
27X10	2920-940 **1632.80**	3020-940 **1953.22**	3320-940P **2539.85**
27X12	2920-942 **1774.16**	3020-942 **2165.78**	3320-942P **2815.11**
27X15	2920-945 **2129.36**	3020-945 **2449.77**	3320-945P **3184.38**
27X18	2920-948 **2412.35**	3020-948 **2839.00**	3320-948P **3675.84**
27X21	2920-951 **2875.19**	3020-951 **3371.97**	3320-951P **4385.44**
27X24	2920-954 **3371.93**	3020-954 **3973.74**	3320-954P **5164.61**

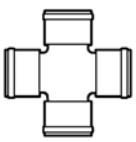
Cross (Gasketed)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	290-104001 **245.32**	300-104001 **252.69**	3320-0602P **303.23**
6X4	290-104000 **227.32**	300-104000 **233.13**	3320-5322P **260.82**
8	290-104006 **343.53**	300-104006 **364.38**	3320-0802P **438.25**
8X4	290-104004 **273.45**	300-104004 **282.15**	3320-5822P **352.88**
8X6	290-104005 **311.24**	300-104005 **318.99**	3320-5852P **379.64**
10	290-104012 **510.38**	300-104012 **512.84**	3320-1002P **604.24**
10X4	290-104009 **364.06**	300-104009 **368.07**	3320-6242P **433.96**
10X6	290-104010 **398.72**	300-104010 **411.01**	3320-6262P **458.31**
10X8	290-104011 **427.60**	300-104011 **460.11**	3320-6282P **515.01**
12	290-104019 **732.51**	300-104019 **761.92**	3320-1202P **916.42**
12X4	290-104015 **441.69**	300-104015 **472.38**	3320-6642P **600.67**
12X6	290-104016 **478.49**	300-104016 **515.27**	3320-6662P **639.71**
12X8	290-104017 **539.85**	300-104017 **588.91**	3320-6682P **656.60**
12X10	290-104018 **625.72**	300-104018 **662.58**	3320-6702P **777.35**
15	290-104036 **1143.51**	300-104036 **1318.97**	3320-1502P **1656.36**

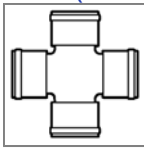
PVC 80, 100 & 125 PSI PIP Fabricated Fittings

Cross (Gasketed) (continued)



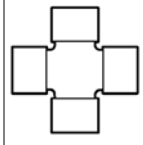
Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
15X4	290-104030 **662.58**	300-104030 **834.32**	3320-7242P **886.45**
15X6	290-104031 **711.58**	300-104031 **889.52**	3320-7262P **923.18**
15X8	290-104032 **797.46**	300-104032 **950.86**	3320-7282P **981.54**
15X10	290-104033 **920.20**	300-104033 **1042.91**	3320-7302P **1104.26**
15X12	290-104034 **977.92**	300-104034 **1165.60**	3320-7322P **1318.97**
18	290-104057 **1758.20**	300-104057 **1992.56**	3320-1802P **2515.26**
18X4	290-104049 **981.54**	300-104049 **1104.26**	3320-7842P **1128.76**
18X6	290-104050 **1067.42**	300-104050 **1226.94**	3320-7862P **1282.45**
18X8	290-104051 **1202.40**	300-104051 **1349.63**	3320-7882P **1368.99**
18X10	290-104052 **1288.28**	300-104052 **1472.36**	3320-7902P **1524.79**
18X12	290-104053 **1411.01**	300-104053 **1595.01**	3320-7922P **1668.69**
18X15	2920-7952 **1614.22**	3020-7952 **1814.67**	3320-7952P **2143.55**
21	290-104082 **2910.36**	300-104082 **3875.43**	3320-2102P **4101.00**
21X4	290-104072 **1570.49**	300-104072 **2657.15**	3320-8442P **3147.16**
21X6	290-104073 **1680.88**	300-104073 **2760.37**	3320-8462P **3212.73**
21X8	290-104074 **1840.40**	300-104074 **2879.75**	3320-8482P **3356.98**
21X10	290-104075 **2024.46**	300-104075 **3045.68**	3320-8502P **3435.63**
21X12	290-104076 **2269.87**	300-104076 **3212.21**	3320-8522P **3593.00**
21X15	290-104078 **2515.26**	300-104078 **3359.35**	3320-8552P **3615.11**
21X18	290-104080 **2699.29**	300-104080 **3709.48**	3320-8582P **3804.26**
24	2920-2402 **5516.67**	3020-2402 **6595.12**	3320-2402P **8222.40**
24X4	2920-9042 **2877.74**	3020-9042 **3199.51**	3320-9042P **3998.76**
24X6	2920-9062 **2889.88**	3020-9062 **3230.39**	3320-9062P **4014.24**
24X8	2920-9082 **3120.58**	3020-9082 **3468.63**	3320-9082P **4334.80**
24X10	2920-9102 **3377.53**	3020-9102 **3751.98**	3320-9102P **4688.87**
24X12	2920-9122 **3634.61**	3020-9122 **4037.34**	3320-9122P **5045.31**
24X15	2920-9152 **4211.38**	3020-9152 **4678.82**	3320-9152P **5848.73**
24X18	2920-9182 **4652.59**	3020-9182 **5168.58**	3320-9182P **6461.76**
24X21	2920-9212 **5350.72**	3020-9212 **5945.69**	3320-9212P **7431.11**
27	2920-2702 **7673.88**	3020-2702 **11029.28**	3320-2702P **13751.19**
27X4	2920-9342 **3382.29**	3020-9342 **4000.89**	3320-9342P **4998.58**
27X6	2920-9362 **3630.57**	3020-9362 **4016.54**	3320-9362P **5071.82**
27X8	2920-9382 **3891.62**	3020-9382 **4336.81**	3320-9382P **5421.37**
27X10	2920-9402 **4221.51**	3020-9402 **4688.98**	3320-9402P **5862.76**
27X12	2920-9422 **4543.27**	3020-9422 **5049.19**	3320-9422P **6310.13**
27X15	2920-9452 **5263.71**	3020-9452 **5848.56**	3320-9452P **7311.73**
27X18	2920-9482 **5816.17**	3020-9482 **6461.76**	3320-9482P **8075.85**

Cross (Gasketed) (continued)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
27X21	2920-9512 **6688.39**	3020-9512 **7431.11**	3320-9512P **9290.89**
27X24	2920-9542 **7240.95**	3020-9542 **8222.56**	3320-9542P **10278.47**

PIP X IPS Cross (Socket)



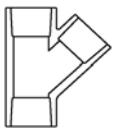
6	2920-060PXI **101.82**	3020-060PXI **141.09**	3320-060PXI **175.58**
8	2920-080PXI **172.97**	3020-080PXI **206.12**	3320-080PXI **254.14**
8X6	2920-585PXI **122.24**	3020-585PXI **155.83**	3320-585PXI **192.71**
10	2920-100PXI **293.21**	3020-100PXI **354.58**	3320-100PXI **411.99**
10X6	2920-626PXI **187.97**	300-103700 **214.68**	3320-626PXI **249.02**
10X8	2920-628PXI **220.24**	3020-628PXI **291.83**	3320-628PXI **304.34**
12	2920-120PXI **455.16**	3020-120PXI **536.17**	3320-120PXI **662.04**
12X6	2920-666PXI **267.44**	3020-666PXI **296.92**	3320-666PXI **345.83**
12X8	2920-668PXI **311.61**	3020-668PXI **345.99**	3320-668PXI **729.43**
12X10	2920-670PXI **344.81**	3020-670PXI **417.15**	3320-670PXI **483.92**
15X6	2920-726PXI **342.52**	3020-726PXI **422.05**	3320-726PXI **454.40**
15X8	2920-728PXI **404.85**	3020-728PXI **483.40**	3320-728PXI **620.48**
15X10	2920-730PXI **468.23**	3020-730PXI **601.16**	3320-730PXI **751.95**
15X12	2920-732PXI **551.28**	3020-732PXI **703.03**	3320-732PXI **859.17**
18X6	2920-786PXI **531.23**	3020-786PXI **630.63**	3320-786PXI **879.68**
18X8	2920-788PXI **553.57**	3020-788PXI **689.54**	3320-788PXI **936.47**
18X10	2920-790PXI **650.25**	3020-790PXI **747.17**	3320-790PXI **1074.89**
18X12	2920-792PXI **759.46**	3020-792PXI **923.86**	3320-792PXI **1217.92**
21X6	2920-846PXI **875.21**	3020-846PXI **1055.17**	3320-846PXI **1195.96**
21X8	2920-848PXI **903.01**	3020-848PXI **1143.51**	3320-848PXI **1321.72**
21X10	2920-850PXI **976.61**	3020-850PXI **1260.05**	3320-850PXI **1460.12**
21X12	2920-852PXI **1027.61**	3020-852PXI **1406.08**	3320-852PXI **1625.05**
24X6	2920-906PXI **1186.43**	3020-906PXI **1374.16**	3320-906PXI **1349.40**
24X8	2920-908PXI **1260.05**	3020-908PXI **1494.43**	3320-908PXI **1487.78**
24X10	2920-910PXI **1348.39**	3020-910PXI **1612.21**	3320-910PXI **1652.71**
24X12	2920-912PXI **1464.93**	3020-912PXI **1787.67**	3320-912PXI **1817.67**

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

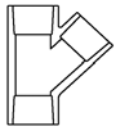
Wyes

Wyes (Socket)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6	2975-060 **193.72**	---	---
6X4	2975-532 **108.97**	---	---
8	2975-080 **205.64**	---	---
8X4	2975-582 **178.48**	---	---
8X6	2975-585 **290.84**	---	---
10	2975-100 **323.82**	---	---
10X4	2975-624 **198.36**	---	---
10X6	2975-626 **208.63**	---	---
10X8	2975-628 **266.78**	---	---
12	2975-120 **463.55**	---	---
12X4	2975-664 **235.29**	---	---
12X6	2975-666 **257.32**	---	---
12X8	2975-668 **290.76**	---	---
12X10	2975-670 **310.29**	---	---
15	2975-150 **928.65**	---	---

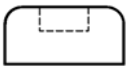
Wyes (Socket) (continued)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
15X4	2975-724 **373.21**	---	---
15X6	2975-726 **399.42**	---	---
15X8	2975-728 **483.19**	---	---
15X10	2975-730 **519.02**	---	---
15X12	2975-732 **717.49**	---	---
18	2975-187 **1356.41**	---	---
18X4	2975-784 **585.98**	---	---
18X6	2975-786 **621.27**	---	---
18X8	2975-788 **686.02**	---	---
18X10	2975-790 **715.55**	---	---
18X12	2975-792 **938.63**	---	---
18X15	2975-795 **1176.62**	---	---

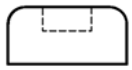
Surface Reducers

Surface Reducer (Socket)



Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
6X2	---	300-102013 **49.05**	---
6X3	---	300-102015 **49.05**	---
8X2	---	300-102018 **92.00**	---
8X3	---	300-102020 **92.00**	---
8X4	---	300-102021 **92.00**	---
10X2	---	300-102024 **116.59**	---
10X3	---	300-102026 **116.59**	---
10X4	---	300-102027 **116.59**	---
10X6	---	300-102028 **116.59**	---
12X2	---	300-102031 **171.75**	---
12X3	---	300-102033 **171.75**	---
12X4	---	300-102034 **171.75**	---
12X6	---	300-102035 **171.75**	---
12X8	---	300-102036 **171.75**	---
15X2	---	300-102048 **312.75**	---
15X3	---	300-102050 **312.75**	---
15X4	---	300-102051 **312.75**	---

Surface Reducer (Socket) (continued)

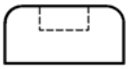


Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
15X6	---	300-102052 **312.75**	---
15X8	---	300-102053 **312.75**	---
15X10	---	300-102054 **312.75**	---
18X2	---	300-102067 **472.38**	---
18X3	---	300-102069 **472.38**	---
18X4	---	300-102070 **472.38**	---
18X6	---	300-102071 **472.38**	---
18X8	---	300-102072 **472.38**	---
18X10	---	300-102073 **472.38**	---
18X12	---	300-102074 **472.38**	---
21X2	---	300-102088 **779.13**	---
21X3	---	300-102089 **779.13**	---
21X4	---	300-102090 **779.13**	---
21X6	---	300-102091 **779.13**	---
21X8	---	300-102092 **779.13**	---
21X10	---	300-102093 **779.13**	---
21X12	---	300-102094 **779.13**	---

Surface Reducers

	Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each

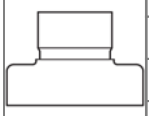
Surface Reducer (Socket) (continued)

	**21X15**	**---**	300-102095 **779.13**	**---**

Stub Surface Reducers

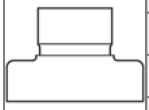
	Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each

Stub Surface Reducer (Socket)

	**6X4**	**---**	30040-532 **120.85**	**---**
	8X4	**---**	30040-582 **138.64**	**---**
	8X6	**---**	30040-585 **148.02**	**---**
	10X4	**---**	30040-624 **157.51**	**---**
	10X6	**---**	30040-626 **166.36**	**---**
	10X8	**---**	30040-628 **174.94**	**---**
	12X4	**---**	30040-664 **177.31**	**---**
	12X6	**---**	30040-666 **180.89**	**---**
	12X8	**---**	30040-668 **208.49**	**---**
	12X10	**---**	30040-670 **240.16**	**---**
	15X4	**---**	30040-724 **290.84**	**---**
	15X6	**---**	30040-726 **304.26**	**---**
	15X8	**---**	30040-728 **319.22**	**---**
	15X10	**---**	30040-730 **352.28**	**---**
	15X12	**---**	30040-732 **363.27**	**---**
	18X4	**---**	30040-784 **695.20**	**---**
	18X6	**---**	30040-786 **715.28**	**---**
	18X8	**---**	30040-788 **730.60**	**---**
	18X10	**---**	30040-790 **757.43**	**---**
	18X12	**---**	30040-792 **778.33**	**---**
	18X15	**---**	30040-795 **891.63**	**---**
	21X4	**---**	30040-844 **964.83**	**---**

	Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each

Stub Surface Reducer (Socket) (continued)

	**21X6**	**---**	30040-846 **974.55**	**---**
	21X8	**---**	30040-848 **1001.13**	**---**
	21X10	**---**	30040-850 **1034.19**	**---**
	21X12	**---**	30040-852 **1047.96**	**---**
	21X15	**---**	30040-855 **1161.64**	**---**
	21X18	**---**	30040-858 **1282.81**	**---**
	24X4	**---**	30040-904 **1089.32**	**---**
	24X6	**---**	30040-906 **1096.77**	**---**
	24X8	**---**	30040-908 **1124.53**	**---**
	24X10	**---**	30040-910 **1157.58**	**---**
	24X12	**---**	30040-912 **1172.25**	**---**
	24X15	**---**	30040-915 **1286.03**	**---**
	24X18	**---**	30040-918 **1407.25**	**---**
	24X21	**---**	30040-921 **1669.24**	**---**

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC 80, 100 & 125 PSI PIP Fabricated Fittings & Glue-On Saddles

Caps

Cap (Socket)

	Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
	6	---	300-107540 **49.05**	---
	8	---	300-107541 **62.58**	---
	10	---	300-107542 **100.59**	---
	12	---	300-107543 **132.48**	---
	15	---	300-107545 **215.91**	---
	18	---	300-107547 **421.81**	---

Cap (Socket) (continued)

	Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
	21	---	300-107549 **645.34**	---
	24	---	300-107550 **882.46**	---
	27	---	3047-270 **1107.38**	---
	30	---	3047-300 **2705.66**	---

Glue-On Saddles

Saddle (Socket)

	Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
	6X2	---	300-101789 **61.33**	---
	6X3	---	300-101797 **73.61**	---
	6X4	---	300-101804 **85.85**	---
	8X2	---	300-101790 **61.33**	---
	8X3	---	300-101798 **73.61**	---
	8X4	---	300-101805 **85.85**	---
	8X6	---	300-101811 **98.14**	---
	10X2	---	300-101791 **61.33**	---
	10X3	---	300-101799 **73.61**	---
	10X4	---	300-101806 **85.85**	---
	10X6	---	300-101812 **98.14**	---
	10X8	---	300-101817 **110.41**	---
	12X2	---	300-101792 **61.33**	---
	12X3	---	300-101800 **73.61**	---
	12X4	---	300-101807 **85.85**	---
	12X6	---	300-101813 **98.14**	---
	12X8	---	300-101818 **110.41**	---
	12X10	---	300-101822 **122.65**	---
	15X2	---	300-101793 **61.33**	---
	15X3	---	300-101801 **88.61**	---
	15X4	---	300-101808 **85.85**	---
	15X6	---	300-101814 **98.14**	---
	15X8	---	300-101819 **110.41**	---
	15X10	---	300-101823 **122.65**	---
	15X12	---	300-101826 **170.62**	---

Saddle (Socket) (continued)

	Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
	18X2	---	300-101794 **61.33**	---
	18X3	---	300-101802 **131.61**	---
	18X4	---	300-101809 **167.82**	---
	18X6	---	300-101815 **202.64**	---
	18X8	---	300-101820 **216.49**	---
	18X10	---	300-101824 **249.22**	---
	18X12	---	300-101827 **262.77**	---
	18X15	---	300-101829 **402.01**	---

NOTE: When assembling Spears® Saddles to PVC pipe, Spears® Manufacturing Company recommends Industrial Polychemical Service (IPS) #719 Solvent Cement and #P-68 Primer, or equivalent. Although good connections may be accomplished without Saddle Straps, Spears® Manufacturing Company recommends the use of clamp or strap device during the asssembly step to insure good compression between the pipe and fitting surfaces as the solvent cures. PVC Fabricated Saddle connections are designed for use in low pressure open ended systems and are not intended for use in high pressure applications. For further details, contact Spears® Technical Services Department.

Stub Saddle (Socket)

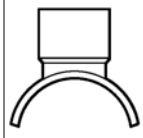
	Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
	6X2	---	300-101884 **85.85**	---
	6X3	---	300-101892 **94.48**	---
	6X4	---	300-101899 **109.16**	---
	8X2	---	300-101885 **85.85**	---
	8X3	---	300-101893 **94.48**	---
	8X4	---	300-101900 **109.16**	---
	8X6	---	300-101906 **134.95**	---
	10X2	---	300-101886 **85.85**	---
	10X3	---	300-101894 **94.48**	---
	10X4	---	300-101901 **109.16**	---
	10X6	---	300-101907 **134.95**	---
	10X8	---	300-101912 **176.69**	---

Glue-On Saddles

Stub Saddle (Socket) (continued)

	Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
	12X2	---	300-101887 **85.85**	---
	12X3	---	300-101895 **94.48**	---
	12X4	---	300-101902 **109.16**	---
	12X6	---	300-101908 **134.95**	---
	12X8	---	300-101913 **176.69**	---
	12X10	---	300-101917 **191.37**	---
	15X2	---	300-101888 **123.91**	---
	15X3	---	300-101896 **137.37**	---
	15X4	---	300-101903 **143.55**	---
	15X6	---	300-101909 **148.43**	---
	15X8	---	300-101914 **176.69**	---
	15X10	---	300-101918 **203.64**	---
	15X12	---	300-101921 **268.67**	---
	18X2	---	300-101889 **202.42**	---

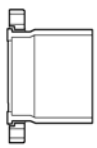
Stub Saddle (Socket) (continued)

	Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
	18X3	---	300-101897 **207.34**	---
	18X4	---	300-101904 **250.25**	---
	18X6	---	300-101910 **318.99**	---
	18X8	---	300-101915 **341.08**	---
	18X10	---	300-101919 **392.63**	---
	18X12	---	300-101922 **452.77**	---
	18X15	---	300-101924 **633.08**	---

NOTE: When assembling Spears® Saddles to PVC pipe, Spears® Manufacturing Company recommends Industrial Polychemical Service (IPS) #719 Solvent Cement and #P-68 Primer, or equivalent. Although good connections may be accomplished without Saddle Straps, Spears® Manufacturing Company recommends the use of clamp or strap device during the assembly step to insure good compression between the pipe and fitting surfaces as the solvent cures. PVC Fabricated Saddle connections are designed for use in low pressure open ended systems and are not intended for use in high pressure applications. For further details, contact Spears® Technical Services Department.

Pipe Flanges

Flange x PIP (Socket)

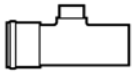
	Size	80 PSI Prod Code: 310 Part Number Price Each	100 PSI Prod Code: 320 Part Number Price Each	125 PSI Prod Code: 330 Part Number Price Each
	6X6.140	---	---	354-060F **133.67**
	8X8.160	---	---	354-080F **202.42**
	10X10.200	---	---	354-100F **284.61**
	12X12.240	---	---	354-120F **412.21**
	14X15.300	---	---	354-150F **1098.76**
	16X15.300	---	---	354-151F **1253.46**
	18X18.360	---	354-182F **1904.21**	---
	18X18.701	---	354-181F **1904.21**	---
	20X22.047	---	354-201F **2900.51**	---
	24X24.803	---	354-241F **4247.72**	---

PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125

PRICING

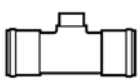
PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125

Tee (Gasket x Spigot x Fipt)



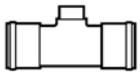
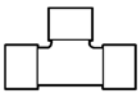
Size	CLASS 63 Prod Code: 340 Part Number Price Each	CLASS 100 Prod Code: 350 Part Number Price Each	CLASS 125 Prod Code: 360 Part Number Price Each	CLASS 160 Prod Code: 370 Part Number Price Each	CLASS 200 Prod Code: 380 Part Number Price Each
4X1-1/2	---	---	---	340-102356 **189.49**	350-102356 **220.87**
4X2	---	---	---	340-102357 **189.49**	350-102357 **220.87**
4X2-1/2	---	---	---	340-102358 **202.32**	350-102358 **234.83**
4X3	---	---	---	340-102359 **202.32**	---
6X1-1/2	---	---	---	340-102361 **275.58**	350-102361 **287.19**
6X2	---	---	---	340-102362 **275.58**	350-102362 **287.19**
6X2-1/2	---	---	---	340-102363 **293.03**	350-102363 **299.97**
6X3	---	---	---	340-102364 **293.03**	350-102364 **299.97**
6X4	---	---	---	340-102365 **304.60**	350-102365 **316.24**
8X1-1/2	---	---	---	340-102366 **336.01**	350-102366 **409.26**
8X2	---	---	---	340-102367 **336.01**	350-102367 **409.26**
8X2-1/2	---	---	---	340-102368 **353.45**	350-102368 **426.69**
8X3	---	---	---	340-102369 **353.45**	350-102369 **426.69**
8X4	---	---	---	340-102370 **382.52**	350-102370 **444.12**
10X2	---	---	---	340-102372 **570.87**	350-102372 **623.20**
10X2-1/2	---	---	---	340-102373 **605.77**	---
10X3	---	---	---	340-102374 **605.77**	350-102374 **653.43**
10X4	---	---	---	340-102375 **637.13**	350-102375 **687.17**
12X2	---	---	---	340-102377 **760.40**	350-102377 **818.52**
12X2-1/2	---	---	---	340-102378 **792.95**	---
12X3	---	---	---	340-102379 **792.95**	350-102379 **862.69**
12X4	---	---	---	340-102380 **830.18**	350-102380 **906.91**

Tee (Gasket x Gasket x Fipt)



Size	CLASS 63 Prod Code: 340 Part Number Price Each	CLASS 100 Prod Code: 350 Part Number Price Each	CLASS 125 Prod Code: 360 Part Number Price Each	CLASS 160 Prod Code: 370 Part Number Price Each	CLASS 200 Prod Code: 380 Part Number Price Each
4X1-1/2	---	---	---	340-102426 **209.28**	350-102426 **229.06**
4X2	---	---	---	340-102427 **209.28**	350-102427 **229.06**
4X2-1/2	---	---	---	340-102428 **227.86**	350-102428 **246.48**
4X3	---	---	---	340-102429 **227.86**	350-102429 **246.48**
6X1-1/2	---	---	---	340-102431 **301.12**	350-102431 **316.24**
6X2	---	---	---	340-102432 **301.12**	350-102432 **316.24**
6X2-1/2	---	---	---	340-102433 **312.76**	350-102433 **331.39**
6X3	---	---	---	340-102434 **312.76**	350-102434 **331.39**
6X4	---	---	---	340-102435 **322.06**	350-102435 **345.33**
8X1-1/2	---	---	---	340-102436 **368.59**	350-102436 **441.82**
8X2	---	---	---	340-102437 **368.59**	350-102437 **441.82**
8X2-1/2	---	---	---	340-102438 **390.66**	350-102438 **465.06**
8X3	---	---	---	340-102439 **390.66**	350-102439 **465.06**
8X4	---	---	---	340-102440 **415.07**	350-102440 **641.20**

PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125

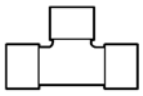
	Size	CLASS 63 Prod Code: 340 Part Number Price Each	CLASS 100 Prod Code: 350 Part Number Price Each	CLASS 125 Prod Code: 360 Part Number Price Each	CLASS 160 Prod Code: 370 Part Number Price Each	CLASS 200 Prod Code: 380 Part Number Price Each
Tee (Gasket x Gasket x Fipt) (continued)						
	**10X2**	---	---	---	340-102442 **624.35**	350-102442 **687.17**
	10X2-1/2	---	---	---	340-102443 **653.43**	350-102443 **725.55**
	10X3	---	---	---	340-102444 **653.43**	350-102444 **725.55**
	10X4	---	---	---	340-102445 **689.44**	350-102445 **754.56**
	12X2	---	---	---	340-102447 **805.40**	350-102447 **876.67**
	12X2-1/2	---	---	---	340-102448 **845.27**	---
	12X3	---	---	---	340-102449 **845.27**	350-102449 **920.85**
	12X4	---	---	---	340-102450 **888.27**	350-102450 **965.04**
Tee (Soc x Soc x Soc)						
	**6**	310-102502 **72.27**	320-102502 **145.69**	330-102502 **161.97**	340-102502 **285.59**	350-102502 **302.22**
	6X2	310-102499 **57.08**	320-102499 **75.75**	330-102499 **90.89**	340-102499 **226.69**	350-102499 **235.45**
	6X3	310-102500 **60.60**	320-102500 **85.06**	330-102500 **96.71**	340-102500 **241.20**	350-102500 **247.16**
	6X4	310-102501 **66.44**	320-102501 **93.25**	330-102501 **108.38**	340-102501 **249.94**	350-102501 **264.61**
	8	310-102507 **121.25**	320-102507 **184.15**	330-102507 **217.99**	340-102507 **447.66**	350-102507 **532.53**
	8X2	310-102503 **79.25**	320-102503 **100.23**	330-102503 **108.38**	340-102503 **288.35**	350-102503 **318.58**
	8X3	310-102504 **85.06**	320-102504 **111.86**	330-102504 **121.25**	340-102504 **323.23**	350-102504 **345.33**
	8X4	310-102505 **90.89**	320-102505 **127.00**	330-102505 **138.65**	340-102505 **341.83**	350-102505 **362.76**
	8X6	310-102506 **108.38**	320-102506 **163.18**	330-102506 **172.48**	340-102506 **396.48**	350-102506 **430.18**
	10	310-102513 **180.64**	320-102513 **256.38**	330-102513 **354.32**	340-102513 **695.27**	350-102513 **845.27**
	10X2	310-102508 **108.38**	320-102508 **132.83**	330-102508 **170.15**	340-102508 **408.12**	350-102508 **485.98**
	10X3	310-102509 **127.00**	320-102509 **153.83**	330-102509 **200.47**	340-102509 **438.36**	350-102509 **517.37**
	10X4	310-102510 **144.54**	320-102510 **172.48**	330-102510 **226.09**	340-102510 **474.39**	350-102510 **555.75**
	10X6	310-102511 **157.35**	320-102511 **189.98**	330-102511 **250.55**	340-102511 **522.04**	350-102511 **611.55**
	10X8	310-102512 **167.83**	320-102512 **220.28**	330-102512 **298.36**	340-102512 **588.33**	350-102512 **687.17**
	12	310-102520 **248.24**	320-102520 **404.44**	330-102520 **531.47**	340-102520 **989.47**	350-102520 **1306.84**
	12X2	310-102514 **186.52**	320-102514 **200.47**	330-102514 **262.27**	340-102514 **539.46**	350-102514 **640.65**
	12X3	310-102515 **192.29**	320-102515 **212.13**	330-102515 **284.38**	340-102515 **575.55**	350-102515 **690.63**
	12X4	310-102516 **199.32**	320-102516 **236.60**	330-102516 **314.71**	340-102516 **615.07**	350-102516 **737.09**
	12X6	310-102517 **205.12**	320-102517 **270.40**	330-102517 **354.32**	340-102517 **683.68**	350-102517 **835.96**
	12X8	310-102518 **216.80**	320-102518 **298.36**	330-102518 **398.65**	340-102518 **761.55**	350-102518 **891.78**
	12X10	310-102519 **222.58**	320-102519 **356.66**	330-102519 **473.19**	340-102519 **851.09**	350-102519 **1044.09**
	15X2	310-102521** **221.46**	---	---	---	---
	15X3	310-102522** **233.09**	---	---	---	---
	15X4	310-102523** **258.75**	---	---	---	---
	15X6	310-102524** **264.58**	---	---	---	---
	15X8	310-102525** **284.38**	---	---	---	---
	15X10	310-102526** **298.36**	---	---	---	---

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

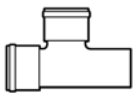
PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125

Tee (Soc x Soc x Soc) (continued)

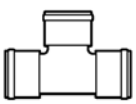
	Size	CLASS 63 Prod Code: 340 Part Number Price Each	CLASS 100 Prod Code: 350 Part Number Price Each	CLASS 125 Prod Code: 360 Part Number Price Each	CLASS 160 Prod Code: 370 Part Number Price Each	CLASS 200 Prod Code: 380 Part Number Price Each
	**15X12**	310-102527** **336.83**	---	---	---	---
	15X15	310-102528* **428.92**	---	---	---	---

* 15" PIP O.D.
** 15" PIP O.D. x IPS

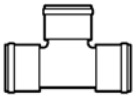
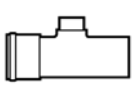
Tee (Gasket x Spigot x Gasket)

	Size					
	**4**	---	320-103058 **116.54**	330-103058 **121.25**	340-103058 **221.46**	350-103058 **248.47**
	6	---	320-103062 **169.01**	330-103062 **180.64**	340-103062 **342.98**	350-103062 **395.29**
	6X4	---	320-103061 **144.54**	330-103061 **174.81**	340-103061 **304.60**	350-103061 **327.86**
	8	---	320-103067 **233.62**	330-103067 **300.71**	340-103067 **509.26**	350-103067 **640.65**
	8X4	---	320-103065 **182.35**	330-103065 **199.32**	340-103065 **380.18**	350-103065 **462.75**
	8X6	---	320-103066 **212.13**	330-103066 **251.77**	340-103066 **420.89**	350-103066 **526.69**
	10	---	320-103073 **396.29**	330-103073 **481.38**	340-103073 **833.66**	350-103073 **1051.96**
	10X4	---	320-103070 **272.73**	330-103070 **348.47**	340-103070 **559.27**	350-103070 **702.26**
	10X6	---	320-103071 **300.71**	330-103071 **378.82**	340-103071 **611.55**	350-103071 **766.20**
	10X8	---	320-103072 **334.52**	330-103072 **420.76**	340-103072 **687.17**	350-103072 **865.04**
	12	---	320-103080 **554.80**	330-103080 **662.03**	---	---
	12X4	---	320-103076 **368.32**	330-103076 **451.12**	340-103076 **731.31**	350-103076 **918.49**
	12X6	---	320-103077 **392.79**	330-103077 **456.89**	340-103077 **804.58**	350-103077 **1011.55**
	12X8	---	320-103078 **434.74**	330-103078 **481.38**	340-103078 **891.78**	350-103078 **1110.36**
	12X10	---	320-103079 **495.37**	330-103079 **540.83**	340-103079 **1009.22**	350-103079 **1256.85**
	12X12	---	---	---	340-103080 **1183.57**	---

Tee (Gasket x Gasket x Gasket)

	Size					
	**4**	---	320-103170 **139.85**	330-103170 **191.08**	340-103170 **219.76**	350-103170 **272.07**
	6	---	320-103174 **163.18**	330-103174 **216.80**	340-103174 **366.24**	350-103174 **397.61**
	6X4	---	320-103173 **144.54**	330-103173 **205.12**	340-103173 **316.24**	350-103173 **339.49**
	8	---	320-103179 **289.04**	330-103179 **312.76**	340-103179 **570.87**	350-103179 **673.19**
	8X4	---	320-103177 **216.80**	330-103177 **241.26**	340-103177 **447.66**	350-103177 **497.60**
	8X6	---	320-103178 **222.58**	330-103178 **272.73**	340-103178 **497.60**	350-103178 **549.98**
	10	---	320-103185 **420.76**	330-103185 **529.14**	340-103185 **935.96**	350-103185 **1098.76**
	10X4	---	320-103182 **322.86**	330-103182 **400.95**	340-103182 **702.26**	350-103182 **716.20**
	10X6	---	320-103183 **346.18**	330-103183 **418.42**	340-103183 **745.28**	350-103183 **777.87**
	10X8	---	320-103184 **376.47**	330-103184 **487.22**	340-103184 **833.66**	350-103184 **876.67**
	12	---	320-103192 **585.13**	330-103192 **765.77**	340-103192 **1301.06**	350-103192 **1519.65**
	12X4	---	320-103188 **412.58**	330-103188 **487.22**	340-103188 **891.78**	350-103188 **932.47**
	12X6	---	320-103189 **423.12**	330-103189 **501.17**	340-103189 **974.32**	350-103189 **1031.31**
	12X8	---	320-103190 **445.26**	330-103190 **601.45**	340-103190 **1067.56**	350-103190 **1127.79**

PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125

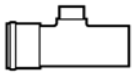
	Size	CLASS 63 Prod Code: 340 Part Number Price Each	CLASS 100 Prod Code: 350 Part Number Price Each	CLASS 125 Prod Code: 360 Part Number Price Each	CLASS160 Prod Code: 370 Part Number Price Each	CLASS 200 Prod Code: 380 Part Number Price Each
Tee (Gasket x Gasket x Gasket) (continued)						
	**12X10**	---	320-103191 **529.14**	330-103191 **641.08**	340-103191 **1198.77**	350-103191 **1276.62**
Reinforced Tee (Soc x Soc x Fipt)						
	6X2	---	---	330-202152 **81.59**	---	---
	6X3	---	---	330-202154 **93.25**	---	---
	6X4	---	---	330-202155 **106.03**	---	---
	8X2	---	---	330-202157 **117.71**	---	---
	8X3	---	---	330-202159 **137.52**	---	---
	8X4	---	---	330-202160 **150.31**	---	---
	10X2	---	---	330-202162 **181.79**	---	---
	10X3	---	---	330-202164 **212.13**	---	---
	10X4	---	---	330-202165 **231.92**	---	---
	12X2	---	---	330-202167 **262.27**	---	---
	12X3	---	---	330-202169 **292.57**	---	---
	12X4	---	---	330-202170 **322.86**	---	---
Reinforced Tee (Soc x Spigot x Fipt)						
	6X2	---	---	330-202222 **81.59**	---	---
	6X3	---	---	330-202224 **93.25**	---	---
	6X4	---	---	330-202225 **106.03**	---	---
	8X2	---	---	330-202227 **116.54**	---	---
	8X3	---	---	330-202229 **130.48**	---	---
	8X4	---	---	330-202230 **143.32**	---	---
	10X2	---	---	330-202232 **172.48**	---	---
	10X3	---	---	330-202234 **201.61**	---	---
	10X4	---	---	330-202235 **222.58**	---	---
	12X2	---	---	330-202237 **249.41**	---	---
	12X3	---	---	330-202239 **278.57**	---	---
	12X4	---	---	330-202240 **310.05**	---	---
Reinforced Tee (Gasket x Spigot x Fipt)						
	**6X2**	---	---	330-202362 **139.85**	---	---
	6X3	---	---	330-202364 **159.64**	---	---
	6X4	---	---	330-202365 **169.01**	---	---
	8X2	---	---	330-202367 **174.81**	---	---
	8X3	---	---	330-202369 **186.52**	---	---

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125

Reinforced Tee (Gasket x Spigot x Fipt) (continued)

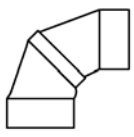


Size	CLASS 63 Prod Code: 340 Part Number Price Each	CLASS 100 Prod Code: 350 Part Number Price Each	CLASS 125 Prod Code: 360 Part Number Price Each	CLASS 160 Prod Code: 370 Part Number Price Each	CLASS 200 Prod Code: 380 Part Number Price Each
8X4	---	---	330-202370 **199.32**	---	---
10X2	---	---	330-202372 **264.58**	---	---
10X3	---	---	330-202374 **285.55**	---	---
10X4	---	---	330-202375 **313.53**	---	---
12X2	---	---	330-202377 **361.31**	---	---
12X3	---	---	330-202379 **391.61**	---	---
12X4	---	---	330-202380 **420.76**	---	---

Reinforced Tee (Gasket x Gasket x Fipt)

Size	CLASS 63 Prod Code: 340 Part Number Price Each	CLASS 100 Prod Code: 350 Part Number Price Each	CLASS 125 Prod Code: 360 Part Number Price Each	CLASS 160 Prod Code: 370 Part Number Price Each	CLASS 200 Prod Code: 380 Part Number Price Each
6X2	---	---	330-202432 **169.01**	---	---
6X3	---	---	330-202434 **180.64**	---	---
6X4	---	---	330-202435 **192.29**	---	---
8X2	---	---	330-202437 **210.96**	---	---
8X3	---	---	330-202439 **222.58**	---	---
8X4	---	---	330-202440 **241.26**	---	---
10X2	---	---	330-202442 **328.69**	---	---
10X3	---	---	330-202444 **346.18**	---	---
10X4	---	---	330-202445 **382.29**	---	---
12X2	---	---	330-202447 **445.26**	---	---
12X3	---	---	330-202449 **487.22**	---	---
12X4	---	---	330-202450 **509.40**	---	---

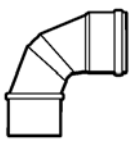
90° Elbow (Soc x Soc)



Size	CLASS 63 Prod Code: 340 Part Number Price Each	CLASS 100 Prod Code: 350 Part Number Price Each	CLASS 125 Prod Code: 360 Part Number Price Each	CLASS 160 Prod Code: 370 Part Number Price Each	CLASS 200 Prod Code: 380 Part Number Price Each
6	310-100812 **79.25**	320-100812 **102.53**	330-100812 **114.20**	340-100812 **294.15**	350-100812 **318.58**
8	310-100813 **108.38**	320-100813 **157.35**	330-100813 **187.62**	340-100813 **408.12**	350-100813 **462.75**
10	310-100814 **169.01**	320-100814 **245.93**	330-100814 **297.21**	340-100814 **620.88**	350-100814 **762.71**
12	310-100815 **241.26**	320-100815 **342.64**	330-100815 **454.58**	340-100815 **899.91**	350-100815 **1023.18**
15	310-100816* **451.12**	---	---	---	---

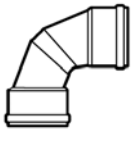
* 15" PIP O.D.

90° Elbow (Gasket x Spigot)



Size	CLASS 63 Prod Code: 340 Part Number Price Each	CLASS 100 Prod Code: 350 Part Number Price Each	CLASS 125 Prod Code: 360 Part Number Price Each	CLASS 160 Prod Code: 370 Part Number Price Each	CLASS 200 Prod Code: 380 Part Number Price Each
4	---	---	330-100877 **177.00**	---	---
6	---	320-100878 **207.48**	330-100878 **238.94**	340-100878 **389.47**	350-100878 **409.26**
8	---	320-100879 **314.71**	330-100879 **385.82**	340-100879 **555.75**	350-100879 **596.47**
10	---	320-100880 **458.07**	330-100880 **607.23**	340-100880 **804.58**	350-100880 **982.45**
12	---	320-100881 **614.26**	330-100881 **723.83**	340-100881 **1081.34**	350-100881 **1242.91**

90° Elbow (Gasket x Gasket)

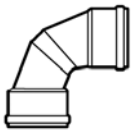


Size	CLASS 63 Prod Code: 340 Part Number Price Each	CLASS 100 Prod Code: 350 Part Number Price Each	CLASS 125 Prod Code: 360 Part Number Price Each	CLASS 160 Prod Code: 370 Part Number Price Each	CLASS 200 Prod Code: 380 Part Number Price Each
4	---	---	330-100899 **177.00**	340-100899 **263.92**	350-100899 **293.03**
6	---	320-100900 **207.48**	330-100900 **238.94**	340-100900 **389.47**	350-100900 **409.26**
8	---	320-100901 **314.71**	330-100901 **385.82**	340-100901 **555.75**	350-100901 **596.47**
10	---	320-100902 **458.07**	330-100902 **607.23**	340-100902 **804.58**	350-100902 **982.45**

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125

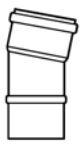
90° Elbow (Gasket x Gasket) (continued)

	Size	CLASS 63 Prod Code: 340	CLASS 100 Prod Code: 350	CLASS 125 Prod Code: 360	CLASS 160 Prod Code: 370	CLASS 200 Prod Code: 380
		Part Number Price Each	Part Number Price Each	Part Number Price Each	Part Number Price Each	Part Number Price Each
	**12**	---	320-100903 **614.26**	330-100903 **723.83**	3406-1202 **900.63**	350-100903 **1242.91**

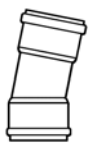
11-1/4° Elbow (Soc x Soc)

	4	---	---	330-100113 **33.76**	340-100113 **37.38**	350-100113 **44.84**
	6	310-100114 **30.25**	320-100114 **39.64**	330-100114 **47.76**	340-100114 **52.31**	350-100114 **55.79**
	8	310-100115 **47.76**	320-100115 **60.60**	330-100115 **94.37**	340-100115 **90.68**	350-100115 **102.31**
	10	310-100116 **67.57**	320-100116 **96.71**	330-100116 **134.04**	340-100116 **156.98**	350-100116 **210.40**
	12	310-100117 **109.51**	320-100117 **151.53**	330-100117 **217.99**	340-100117 **246.48**	350-100117 **351.15**
	15	310-100118 **184.15**	---	---	---	---

11-1/4° Elbow (Gasket x Spigot)

	**4**	---	---	330-100185 **121.25**	340-100185 **134.55**	350-100185 **165.57**
	6	---	320-100186 **135.19**	330-100186 **169.01**	340-100186 **186.87**	350-100186 **204.63**
	8	---	320-100187 **165.51**	330-100187 **252.93**	340-100187 **274.06**	350-100187 **330.20**
	10	---	320-100188 **283.25**	330-100188 **336.83**	340-100188 **389.47**	350-100188 **573.17**
	12	---	320-100189 **378.82**	330-100189 **456.89**	340-100189 **567.40**	350-100189 **789.48**

11-1/4° Elbow (Gasket x Gasket)

	**4**	---	---	330-100209 **121.25**	340-100209 **134.55**	350-100209 **165.57**
	6	---	320-100210 **135.19**	330-100210 **169.01**	340-100210 **186.87**	350-100210 **204.63**
	8	---	320-100211 **165.51**	330-100211 **252.93**	340-100211 **274.06**	350-100211 **330.20**
	10	---	320-100212 **283.25**	330-100212 **336.83**	340-100212 **389.47**	350-100212 **573.17**
	12	---	320-100213 **378.82**	330-100213 **456.89**	340-100213 **567.40**	350-100213 **789.48**

15° Elbow (Soc x Soc)

	4	---	---	330-100233 **33.76**	340-100233 **37.38**	350-100233 **44.84**
	6	310-100234 **30.25**	320-100234 **39.64**	330-100234 **47.76**	340-100234 **52.31**	350-100234 **55.79**
	8	310-100235 **47.76**	320-100235 **60.60**	330-100235 **73.39**	340-100235 **90.68**	350-100235 **104.32**
	10	310-100236 **67.57**	320-100236 **96.71**	330-100236 **134.04**	340-100236 **156.98**	350-100236 **210.40**
	12	310-100237 **109.51**	320-100237 **151.53**	330-100237 **217.99**	340-100237 **246.48**	350-100237 **351.15**
	15	310-100238* **184.15**	---	---	---	---

* 15" PIP O.D.

15° Elbow (Gasket x Spigot)

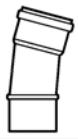
	4	---	---	330-100305 **121.25**	340-100305 **134.55**	350-100305 **165.57**
	6	---	320-100306 **135.19**	330-100306 **169.01**	340-100306 **186.87**	350-100306 **204.63**
	8	---	320-100307 **165.51**	330-100307 **252.93**	340-100307 **274.06**	350-100307 **330.20**
	10	---	320-100308 **283.25**	330-100308 **336.83**	340-100308 **389.47**	350-100308 **573.17**

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

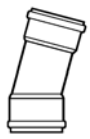
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125

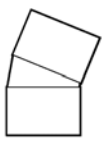
15° Elbow (Gasket x Spigot) (continued)

	Size	CLASS 63 Prod Code: 340	CLASS 100 Prod Code: 350	CLASS 125 Prod Code: 360	CLASS 160 Prod Code: 370	CLASS 200 Prod Code: 380
		Part Number Price Each	Part Number Price Each	Part Number Price Each	Part Number Price Each	Part Number Price Each
	12	---	320-100309 **378.82**	330-100309 **456.89**	340-100309 **567.40**	350-100309 **789.48**

15° Elbow (Gasket x Gasket)

	4	---	---	330-100329 **121.25**	340-100329 **134.55**	350-100329 **165.57**
	6	---	320-100330 **135.19**	330-100330 **169.01**	340-100330 **186.87**	350-100330 **204.63**
	8	---	320-100331 **177.89**	330-100331 **252.93**	340-100331 **274.06**	350-100331 **330.20**
	10	---	320-100332 **263.75**	330-100332 **336.83**	340-100332 **389.47**	350-100332 **573.17**
	12	---	320-100333 **380.32**	330-100333 **456.89**	340-100333 **567.40**	350-100333 **789.48**

22-1/2° Elbow (Soc x Soc)

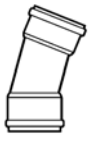
	4	---	---	330-100353 **33.76**	340-100353 **37.38**	350-100353 **44.84**
	6	310-100354 **30.25**	320-100354 **39.64**	330-100354 **47.76**	340-100354 **52.31**	350-100354 **55.79**
	8	310-100355 **47.76**	320-100355 **60.60**	330-100355 **73.39**	340-100355 **90.68**	350-100355 **104.32**
	10	310-100356 **67.57**	320-100356 **96.71**	330-100356 **134.04**	340-100356 **156.98**	350-100356 **210.40**
	12	310-100357 **109.51**	320-100357 **151.53**	330-100357 **217.99**	340-100357 **246.48**	350-100357 **351.15**
	15	310-100358* **184.15**	---	---	---	---

* 15" PIP O.D.

22-1/2° Elbow (Gasket x Spigot)

	4	---	---	330-100425 **121.25**	340-100425 **134.55**	350-100425 **165.57**
	6	---	320-100426 **135.19**	330-100426 **169.01**	340-100426 **186.87**	350-100426 **204.63**
	8	---	320-100427 **165.51**	330-100427 **252.93**	340-100427 **274.06**	350-100427 **330.20**
	10	---	320-100428 **283.25**	330-100428 **336.83**	340-100428 **389.47**	350-100428 **573.17**
	12	---	320-100429 **378.82**	330-100429 **456.89**	340-100429 **567.40**	350-100429 **789.48**

22-1/2° Elbow (Gasket x Gasket)

	4	---	---	330-100449 **121.25**	340-100449 **134.55**	350-100449 **165.57**
	6	---	320-100450 **135.19**	330-100450 **169.01**	340-100450 **186.87**	350-100450 **204.63**
	8	---	320-100451 **165.51**	330-100451 **252.93**	340-100451 **274.06**	350-100451 **330.20**
	10	---	320-100452 **283.25**	330-100452 **336.83**	340-100452 **389.47**	350-100452 **573.17**
	12	---	320-100453 **378.82**	330-100453 **456.89**	340-100453 **567.40**	350-100453 **789.48**

30° Elbow (Soc x Soc)

	4	---	---	330-100473 **41.94**	340-100473 **88.31**	350-100473 **146.81**
	6	310-100474 **41.94**	320-100474 **52.46**	330-100474 **59.42**	340-100474 **216.26**	350-100474 **261.36**
	8	310-100475 **61.74**	320-100475 **87.41**	330-100475 **92.05**	340-100475 **294.15**	350-100475 **351.15**
	10	310-100476 **89.75**	320-100476 **134.04**	330-100476 **189.98**	340-100476 **455.78**	350-100476 **549.98**
	12	310-100477 **145.69**	320-100477 **195.80**	330-100477 **278.57**	340-100477 **660.40**	350-100477 **768.54**

PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125

	Size	CLASS 63 Prod Code: 340 Part Number Price Each	CLASS 100 Prod Code: 350 Part Number Price Each	CLASS 125 Prod Code: 360 Part Number Price Each	CLASS 160 Prod Code: 370 Part Number Price Each	CLASS 200 Prod Code: 380 Part Number Price Each
30° Elbow (Soc x Soc) (continued)						
	15	310-100478 **217.99**	---	---	---	---
30° Elbow (Gasket x Spigot)						
	4	---	---	330-100545 **139.13**	340-100545 **167.42**	350-100545 **175.56**
	6	---	320-100546 **180.64**	330-100546 **192.29**	340-100546 **248.82**	350-100546 **304.60**
	8	---	320-100547 **222.58**	330-100547 **270.40**	340-100547 **366.24**	350-100547 **453.43**
	10	---	320-100548 **313.53**	330-100548 **397.42**	340-100548 **608.07**	350-100548 **756.95**
	12	---	320-100549 **433.61**	330-100549 **576.95**	340-100549 **804.58**	350-100549 **949.93**
30° Elbow (Gasket x Gasket)						
	4	---	---	330-100569 **139.13**	340-100569 **167.42**	350-100569 **175.56**
	6	---	320-100570 **180.64**	330-100570 **192.29**	340-100570 **248.82**	350-100570 **304.60**
	8	---	320-100571 **222.58**	330-100571 **270.40**	340-100571 **366.24**	350-100571 **453.43**
	10	---	320-100572 **313.53**	330-100572 **397.42**	340-100572 **608.07**	350-100572 **756.95**
	12	---	320-100573 **433.61**	330-100573 **576.95**	340-100573 **804.58**	350-100573 **949.93**
45° Elbow (Soc x Soc)						
	6	310-100592 **41.94**	320-100592 **52.46**	330-100592 **59.42**	340-100592 **216.26**	350-100592 **225.54**
	8	310-100593 **61.74**	320-100593 **87.41**	330-100593 **92.05**	340-100593 **294.15**	350-100593 **351.15**
	10	310-100594 **89.75**	320-100594 **134.04**	330-100594 **189.98**	340-100594 **455.78**	350-100594 **549.98**
	12	310-100595 **145.69**	320-100595 **195.80**	330-100595 **278.57**	340-100595 **660.40**	350-100595 **768.54**
	15	310-100596* **217.99**	---	---	---	---
* 15" PIP O.D.						
45° Elbow (Gasket x Spigot)						
	4	---	---	330-100657 **139.13**	340-100657 **167.42**	350-100657 **175.56**
	6	---	320-100658 **141.09**	330-100658 **192.29**	340-100658 **248.82**	350-100658 **304.60**
	8	---	320-100659 **199.97**	330-100659 **270.40**	340-100659 **366.24**	350-100659 **453.43**
	10	---	320-100660 **287.06**	330-100660 **397.42**	340-100660 **608.07**	350-100660 **755.13**
	12	---	320-100661 **408.54**	330-100661 **576.95**	340-100661 **804.58**	350-100661 **949.93**
45° Elbow (Gasket x Gasket)						
	4	---	---	330-100679 **139.13**	340-100679 **167.42**	350-100679 **175.56**
	6	---	320-100680 **141.09**	330-100680 **192.29**	340-100680 **248.82**	350-100680 **304.60**
	8	---	320-100681 **199.97**	330-100681 **270.40**	340-100681 **366.24**	350-100681 **453.43**
	10	---	320-100682 **287.06**	330-100682 **397.42**	340-100682 **608.07**	350-100682 **756.95**
	12	---	320-100683 **433.58**	330-100683 **576.95**	340-100683 **804.58**	350-100683 **949.93**

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125

60° Elbow (Soc x Soc)

	Size	CLASS 63 Prod Code: 340 Part Number Price Each	CLASS 100 Prod Code: 350 Part Number Price Each	CLASS 125 Prod Code: 360 Part Number Price Each	CLASS 160 Prod Code: 370 Part Number Price Each	CLASS 200 Prod Code: 380 Part Number Price Each
	4	---	---	330-100701 **75.01**	---	---
	6	310-100702 **79.25**	320-100702 **102.53**	330-100702 **114.20**	340-100702 **294.15**	350-100702 **318.58**
	8	310-100703 **108.38**	320-100703 **157.35**	330-100703 **187.62**	340-100703 **408.12**	350-100703 **462.75**
	10	310-100704 **169.01**	320-100704 **245.93**	330-100704 **297.21**	340-100704 **620.88**	350-100704 **762.71**
	12	310-100705 **241.26**	320-100705 **342.64**	330-100705 **454.58**	340-100705 **899.91**	350-100705 **1023.18**
	15	310-100706* **451.12**	---	---	---	---

* 15" PIP O.D.

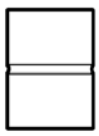
60° Elbow (Gasket x Spigot)

	4	---	---	330-100767 **177.00**	340-100767 **263.92**	350-100767 **293.03**
	6	---	320-100768 **207.48**	330-100768 **238.94**	340-100768 **389.47**	350-100768 **409.26**
	8	---	320-100769 **314.71**	330-100769 **385.82**	340-100769 **555.75**	350-100769 **596.47**
	10	---	320-100770 **458.07**	330-100770 **607.23**	340-100770 **804.58**	350-100770 **982.45**
	12	---	320-100771 **614.26**	330-100771 **723.83**	340-100771 **1081.34**	350-100771 **1242.91**

60° Elbow (Gasket x Gasket)

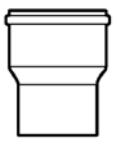
	4	---	---	330-100789 **177.00**	340-100789 **263.92**	350-100789 **293.03**
	6	---	320-100790 **207.48**	330-100790 **238.94**	340-100790 **389.47**	350-100790 **409.26**
	8	---	320-100791 **314.71**	330-100791 **385.82**	340-100791 **555.75**	350-100791 **596.47**
	10	---	320-100792 **458.07**	330-100792 **607.23**	340-100792 **804.58**	350-100792 **982.45**
	12	---	320-100793 **614.26**	330-100793 **723.83**	340-100793 **1081.34**	350-100793 **1242.91**

Coupling (Soc x Soc)

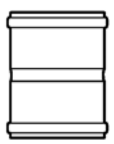
	6	310-100002 **22.15**	320-100002 **26.77**	330-100002 **30.25**	340-100002 **36.02**	350-100002 **44.20**
	8	310-100003 **38.44**	320-100003 **46.60**	330-100003 **50.13**	340-100003 **66.31**	350-100003 **84.86**
	10	310-100004 **45.46**	320-100004 **76.92**	330-100004 **92.05**	340-100004 **105.28**	350-100004 **184.87**
	12	310-100005 **69.93**	320-100005 **120.03**	330-100005 **148.04**	340-100005 **168.60**	350-100005 **277.88**
	15	310-100006* **104.91**	---	---	---	---

* 15" PIP O.D.

Coupling (Gasket x Spigot)

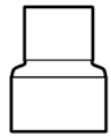
	4	---	320-100067 **40.77**	330-100067 **52.46**	340-100067 **58.54**	350-100067 **70.88**
	6	---	320-100068 **64.06**	330-100068 **69.93**	340-100068 **94.19**	350-100068 **99.99**
	8	---	320-100069 **103.72**	330-100069 **125.84**	340-100069 **150.00**	350-100069 **167.42**
	10	---	320-100070 **137.52**	330-100070 **167.83**	340-100070 **219.76**	350-100070 **277.88**
	12	---	320-100071 **189.98**	330-100071 **228.44**	340-100071 **330.20**	350-100071 **397.61**

Coupling (Gasket x Gasket)

	4	---	320-100089 **64.06**	330-100089 **75.75**	340-100089 **83.03**	350-100089 **91.33**
	6	---	320-100090 **96.71**	330-100090 **108.38**	340-100090 **113.89**	350-100090 **144.16**
	8	---	320-100091 **144.54**	330-100091 **157.35**	340-100091 **170.56**	350-100091 **190.68**
	10	---	320-100092 **205.12**	330-100092 **228.44**	340-100092 **275.58**	350-100092 **330.20**
	12	---	320-100093 **270.40**	330-100093 **313.53**	340-100093 **362.76**	350-100093 **491.79**

PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125

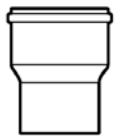
Reducer Coupling (Soc x Soc)



Size	CLASS 63 Prod Code: 340 Part Number Price Each	CLASS 100 Prod Code: 350 Part Number Price Each	CLASS 125 Prod Code: 360 Part Number Price Each	CLASS 160 Prod Code: 370 Part Number Price Each	CLASS 200 Prod Code: 380 Part Number Price Each
6X4	310-100926 **30.25**	320-100926 **33.76**	330-100926 **38.44**	340-100926 **40.65**	350-100926 **51.15**
8X6	310-100928 **39.64**	320-100928 **53.58**	330-100928 **59.42**	340-100928 **65.09**	350-100928 **70.88**
10X8	310-100931 **55.93**	320-100931 **106.44**	330-100931 **95.56**	340-100931 **120.91**	350-100931 **144.16**
12X10	310-100935 **97.93**	320-100935 **145.69**	330-100935 **181.79**	340-100935 **222.06**	350-100935 **237.19**
15X12	310-100940** **184.15**	---	---	---	---

** 15" PIP O.D. x IPS

Reducer Coupling (Gasket x Spigot)

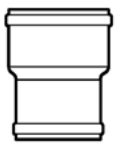


6X4	---	320-101310 **96.51**	330-101310 **114.20**	340-101310 **133.67**	350-101310 **147.65**
8X6	---	320-101312 **138.65**	330-101312 **169.01**	340-101312 **208.09**	350-101312 **231.38**
10X8	---	320-101315 **192.29**	330-101315 **228.44**	340-101315 **286.03**	350-101315 **325.54**
12X10	---	320-101319 **272.73**	330-101319 **328.69**	340-101319 **462.75**	350-101319 **522.04**

Reducer Coupling (Spigot x Gasket)

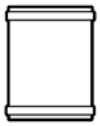
6X4	---	320-101383 **90.89**	330-101383 **102.53**	340-101383 **111.63**	350-101383 **127.87**
8X6	---	320-101385 **121.25**	330-101385 **144.54**	340-101385 **184.87**	350-101385 **210.40**
10X8	---	320-101388 **180.64**	330-101388 **222.58**	340-101388 **268.60**	350-101388 **316.24**
12X10	---	320-101392 **270.40**	330-101392 **310.05**	340-101392 **436.00**	350-101392 **511.57**

Reducer Coupling (Gasket x Gasket)



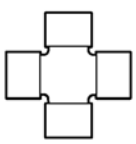
6X4	---	320-101456 **121.25**	330-101456 **132.83**	340-101456 **156.98**	350-101456 **172.06**
8X6	---	320-101458 **174.81**	330-101458 **192.29**	340-101458 **252.28**	350-101458 **275.58**
10X8	---	320-101461 **241.26**	330-101461 **300.71**	340-101461 **360.39**	350-101461 **526.69**
12X10	---	320-101465 **334.52**	330-101465 **378.82**	340-101465 **478.53**	350-101465 **783.66**

Repair Coupling (Gasket x Gasket)



4	---	3228-040 **70.78**	3328-040 **75.75**	3428-040 **100.04**	3528-040 **121.36**
6	---	3228-060 **99.16**	3328-060 **102.53**	3428-060 **127.95**	3528-060 **148.20**
8	---	3228-080 **151.31**	3328-080 **157.35**	3428-080 **183.17**	3528-080 **199.64**
10	---	3228-100 **216.02**	3328-100 **234.27**	3428-100 **288.46**	3528-100 **320.23**
12	---	3228-120 **289.41**	3328-120 **313.53**	3428-120 **375.58**	3528-120 **447.24**
14	---	3228-140 **415.63**	3328-140 **437.32**	3428-140 **474.68**	---
16	---	3228-160 **548.04**	3328-160 **622.56**	3428-160 **675.27**	---

Cross (Soc x Soc x Soc x Soc)



4X2	---	320-103280 **58.25**	330-103280 **87.41**	---	---
4X3	---	320-103281 **64.06**	330-103281 **90.33**	---	---
6	310-103286 **96.71**	320-103286 **167.83**	330-103286 **189.98**	340-103286 **391.80**	350-103286 **430.18**
6X2	310-103283 **66.44**	320-103283 **72.27**	330-103283 **96.71**	340-103283 **287.19**	350-103283 **289.52**
6X3	310-103284 **75.75**	320-103284 **90.89**	330-103284 **121.25**	340-103284 **298.80**	350-103284 **304.60**
6X4	310-103285 **81.59**	320-103285 **102.53**	330-103285 **138.65**	340-103285 **322.06**	350-103285 **345.33**
8	310-103291 **125.84**	320-103291 **217.99**	330-103291 **264.58**	340-103291 **590.63**	350-103291 **631.35**
8X2	310-103287 **85.06**	320-103287 **108.38**	330-103287 **121.25**	340-103287 **368.59**	350-103287 **374.22**

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

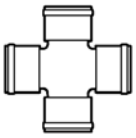
PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125

Cross (Soc x Soc x Soc x Soc) (continued)

Size	CLASS 63 Prod Code: 340 Part Number / Price Each	CLASS 100 Prod Code: 350 Part Number / Price Each	CLASS 125 Prod Code: 360 Part Number / Price Each	CLASS 160 Prod Code: 370 Part Number / Price Each	CLASS 200 Prod Code: 380 Part Number / Price Each
8X3	310-103288 **90.89**	320-103288 **121.25**	330-103288 **132.83**	340-103288 **380.18**	350-103288 **420.89**
8X4	310-103289 **103.72**	320-103289 **138.65**	330-103289 **159.64**	340-103289 **406.92**	350-103289 **444.12**
8X6	310-103290 **114.20**	320-103290 **169.01**	330-103290 **200.47**	340-103290 **474.39**	350-103290 **509.26**
10	310-103297 **203.97**	320-103297 **325.17**	330-103297 **456.89**	340-103297 **976.66**	350-103297 **1041.43**
10X2	310-103292 **103.72**	320-103292 **150.31**	330-103292 **178.32**	340-103292 **570.87**	350-103292 **619.75**
10X3	310-103293 **114.20**	320-103293 **170.15**	330-103293 **214.43**	340-103293 **579.01**	350-103293 **634.80**
10X4	310-103294 **125.84**	320-103294 **189.98**	330-103294 **242.43**	340-103294 **628.99**	350-103294 **666.22**
10X6	310-103295 **139.85**	320-103295 **210.96**	330-103295 **282.06**	340-103295 **702.26**	350-103295 **742.97**
10X8	310-103296 **159.64**	320-103296 **258.75**	330-103296 **350.84**	340-103296 **789.48**	350-103296 **845.27**
12	310-103304 **318.19**	320-103304 **501.17**	330-103304 **737.80**	340-103304 **1446.39**	350-103304 **1671.94**
12X2	310-103298 **148.04**	320-103298 **198.14**	330-103298 **289.04**	340-103298 **725.55**	350-103298 **731.31**
12X3	310-103299 **161.97**	320-103299 **228.44**	330-103299 **300.71**	340-103299 **764.03**	350-103299 **803.57**
12X4	310-103300 **172.48**	320-103300 **273.16**	330-103300 **336.83**	340-103300 **862.69**	350-103300 **876.67**
12X6	310-103301 **181.79**	320-103301 **284.38**	330-103301 **386.96**	340-103301 **947.58**	350-103301 **965.04**
12X8	310-103302 **209.79**	320-103302 **332.17**	330-103302 **454.58**	340-103302 **1058.02**	350-103302 **1081.34**
12X10	310-103303 **250.55**	320-103303 **412.58**	330-103303 **576.95**	340-103303 **1212.65**	350-103303 **1256.85**
15	310-103321* **540.83**	---	---	---	---
15X2	310-103313** **233.09**	---	---	---	---
15X3	310-103314** **262.27**	---	---	---	---
15X4	310-103315** **289.04**	---	---	---	---
15X6	310-103316** **331.03**	---	---	---	---
15X8	310-103317** **361.31**	---	---	---	---
15X10	310-103318** **391.61**	---	---	---	---
15X12	310-103319** **433.61**	---	---	---	---

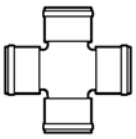
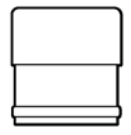
* 15" PIP O.D.
** 15" PIP O.D. x IPS

Cross (Gasket x Gasket x Gasket x Gasket)



4	---	320-103997 **203.97**	330-103997 **221.46**	340-103997 **276.84**	350-103997 **298.99**
6	---	320-104001 **237.75**	330-104001 **298.36**	340-104001 **497.60**	350-104001 **631.35**
6X4	---	320-104000 **215.63**	330-104000 **273.89**	340-104000 **391.80**	350-104000 **491.79**
8	---	320-104006 **389.31**	330-104006 **445.26**	340-104006 **772.04**	350-104006 **959.24**
8X4	---	320-104004 **291.38**	330-104004 **337.99**	340-104004 **534.78**	350-104004 **642.96**
8X6	---	320-104005 **349.64**	330-104005 **384.60**	340-104005 **641.80**	350-104005 **748.76**
10	---	320-104012 **585.13**	330-104012 **773.98**	340-104012 **1285.93**	350-104012 **1432.42**
10X4	---	320-104009 **407.94**	330-104009 **495.37**	340-104009 **695.27**	350-104009 **830.18**
10X6	---	320-104010 **466.20**	330-104010 **512.85**	340-104010 **851.09**	350-104010 **947.58**
10X8	---	320-104011 **524.52**	330-104011 **670.22**	340-104011 **1046.43**	350-104011 **1081.34**
12	---	320-104019 **793.75**	330-104019 **1086.36**	340-104019 **1791.69**	350-104019 **2017.25**

PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125 & Glue-On Saddles

	Size	CLASS 63 Prod Code: 340 Part Number Price Each	CLASS 100 Prod Code: 350 Part Number Price Each	CLASS 125 Prod Code: 360 Part Number Price Each	CLASS 160 Prod Code: 370 Part Number Price Each	CLASS 200 Prod Code: 380 Part Number Price Each
Cross (Gasket x Gasket x Gasket x Gasket) (continued)						
	**12X4**	---	320-104015 **582.79**	330-104015 **641.08**	340-104015 **1019.64**	350-104015 **1169.65**
	12X6	---	320-104016 **641.08**	330-104016 **676.03**	340-104016 **1169.16**	350-104016 **1247.56**
	12X8	---	320-104017 **699.34**	330-104017 **792.60**	340-104017 **1319.61**	350-104017 **1348.72**
	12X10	---	320-104018 **745.99**	330-104018 **955.78**	340-104018 **1546.39**	350-104018 **1578.94**
Surface Reducer (Soc)						
	6X2	310-102013 **32.62**	---	330-102013 **46.60**	---	---
	6X3	310-102015 **32.62**	---	330-102015 **46.60**	---	---
	6X4	310-102016 **32.62**	---	---	---	---
	8X2	310-102018 **44.23**	---	330-102018 **93.25**	---	---
	8X3	310-102020 **44.23**	---	330-102020 **93.25**	---	---
	8X4	310-102021 **44.23**	---	330-102021 **93.25**	---	---
	8X6	310-102022 **44.23**	---	3340-585 **93.25**	---	---
	10X2	310-102024 **71.07**	---	330-102024 **145.69**	---	---
	10X3	310-102026 **71.07**	---	330-102026 **145.69**	---	---
	10X4	310-102027 **71.07**	---	330-102027 **145.69**	---	---
	10X6	310-102028 **71.07**	---	330-102028 **145.69**	---	---
	10X8	310-102029 **71.07**	---	330-102029 **145.69**	---	---
	12X2	310-102031 **87.41**	---	330-102031 **262.27**	---	---
	12X3	310-102033 **87.41**	---	330-102033 **262.27**	---	---
	12X4	310-102034 **87.41**	---	330-102034 **262.27**	---	---
	12X6	310-102035 **87.41**	---	330-102035 **262.27**	---	---
	12X8	310-102036 **87.41**	---	330-102036 **262.27**	---	---
	12X10	310-102037 **87.41**	---	330-102037 **262.27**	---	---
Cap (Soc)						
	6	310-107540 **22.15**	---	330-107540 **43.11**	---	---
	8	310-107541 **40.77**	---	330-107541 **55.93**	---	---
	10	310-107542 **69.93**	---	330-107542 **89.75**	---	---
	12	310-107543 **85.59**	---	330-107543 **172.48**	---	---
Cap (Gasket)						
	**4**	---	---	330-107565 **78.64**	---	---
	6	---	---	330-107566 **111.86**	---	---
	8	---	---	330-107567 **189.98**	---	---
	10	---	---	330-107568 **306.51**	---	---
	12	---	---	330-107569 **462.73**	---	---

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Glue-On Saddles

Saddle (Soc)

Size	CLASS 63 Prod Code: 340 Part Number / Price Each	CLASS 100 Prod Code: 350 Part Number / Price Each	CLASS 125 Prod Code: 360 Part Number / Price Each	CLASS 160 Prod Code: 370 Part Number / Price Each	CLASS 200 Prod Code: 380 Part Number / Price Each
6	310-101937 **31.47**	---	---	---	---
6X2	310-101789 **24.44**	---	330-101789 **69.93**	---	---
6X3	310-101797 **26.77**	---	330-101797 **81.59**	---	---
6X4	310-101804 **30.25**	---	330-101804 **93.25**	---	---
8	310-101938 **46.60**	---	---	---	---
8X2	310-101790 **24.44**	---	330-101790 **69.93**	---	---
8X3	310-101798 **26.77**	---	330-101798 **81.59**	---	---
8X4	310-101805 **30.25**	---	330-101805 **93.25**	---	---
8X6	310-101811 **31.47**	---	330-101811 **104.91**	---	---
10	310-101939 **72.27**	---	---	---	---
10X2	310-101791 **24.44**	---	330-101791 **69.93**	---	---
10X3	310-101799 **26.77**	---	330-101799 **81.59**	---	---
10X4	310-101806 **30.25**	---	330-101806 **93.25**	---	---
10X6	310-101812 **31.47**	---	330-101812 **104.91**	---	---
10X8	310-101817 **46.60**	---	330-101817 **116.54**	---	---
12	310-101940 **108.12**	---	---	---	---
12X2	310-101792 **32.78**	---	330-101792 **69.93**	---	---
12X3	310-101800 **26.77**	---	330-101800 **81.59**	---	---
12X4	310-101807 **30.25**	---	330-101807 **93.25**	---	---
12X6	310-101813 **31.47**	---	330-101813 **104.91**	---	---
12X8	310-101818 **46.60**	---	330-101818 **116.54**	---	---
12X10	310-101822 **72.27**	---	330-101822 **128.20**	---	---

Stub Saddle (Soc)

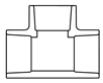
Size	CLASS 63 Prod Code: 340 Part Number / Price Each	CLASS 100 Prod Code: 350 Part Number / Price Each	CLASS 125 Prod Code: 360 Part Number / Price Each	CLASS 160 Prod Code: 370 Part Number / Price Each	CLASS 200 Prod Code: 380 Part Number / Price Each
6	310-101949 **51.25**	---	---	---	---
6X2	310-101884 **33.76**	---	330-101884 **61.74**	---	---
6X3	310-101892 **39.64**	---	330-101892 **67.57**	---	---
6X4	310-101899 **45.46**	---	330-101899 **75.75**	---	---
8	310-101950 **69.93**	---	---	---	---
8X2	310-101885 **33.76**	---	330-101885 **61.74**	---	---
8X3	310-101893 **39.64**	---	330-101893 **67.57**	---	---
8X4	310-101900 **45.46**	---	330-101900 **75.75**	---	---
8X6	310-101906 **51.25**	---	330-101906 **92.05**	---	---
10	310-101951 **96.71**	---	---	---	---
10X2	310-101886 **33.76**	---	330-101886 **61.74**	---	---
10X3	310-101894 **39.64**	---	330-101894 **67.57**	---	---
10X4	310-101901 **45.46**	---	330-101901 **75.75**	---	---
10X6	310-101907 **51.25**	---	330-101907 **92.05**	---	---

Stub Saddle (Soc) (continued)

	Size	CLASS 63 Prod Code: 340 Part Number Price Each	CLASS 100 Prod Code: 350 Part Number Price Each	CLASS 125 Prod Code: 360 Part Number Price Each	CLASS 160 Prod Code: 370 Part Number Price Each	CLASS 200 Prod Code: 380 Part Number Price Each
	10X8	310-101912 **69.93**	---	330-101912 **106.03**	---	---
	12	310-101952 **121.25**	---	---	---	---
	12X2	310-101887 **33.76**	---	330-101887 **61.74**	---	---
	12X3	310-101895 **39.64**	---	330-101895 **67.57**	---	---
	12X4	310-101902 **45.46**	---	330-101902 **87.44**	---	---
	12X6	310-101908 **51.25**	---	330-101908 **92.05**	---	---
	12X8	310-101913 **69.93**	---	330-101913 **106.03**	---	---
	12X10	310-101917 **96.71**	---	330-101917 **111.86**	---	---

PVC Class 63, 100, 125, 160 & 200 IPS Fabricated Fittings & Molded Class 125

Tee, Class 125 Molded

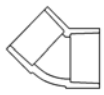


Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
12501-100	**10**	1	0	361	378.71
12501-120	**12**	1	0	361	568.02

90° Elbow, Class 125 Molded

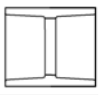
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
12506-100	**10**	1	0	361	317.65
12506-120	**12**	1	0	361	485.84

45° Elbow, Class 125 Molded



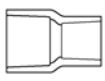
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
12517-100	**10**	1	0	361	203.04
12517-120	**12**	1	0	361	297.73

Coupling, Class 125 Molded



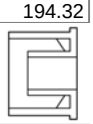
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
12529-100	**10**	1	0	361	98.39
12529-120	**12**	1	0	361	158.24

Reducer Coupling, Class 125 Molded



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
12529-626	**10X6**	1	0	361	164.04
12529-628	**10X8**	1	0	361	102.16
12529-668	**12X8**	1	0	361	244.08
12529-670	**12X10**	1	0	361	194.32

Reducer Bushing, Class 125 Molded



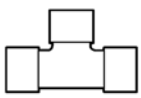
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
12537-626	**10X6**	3	0	361	155.73
12537-628	**10X8**	1	4	361	155.73
12537-668	**12X8**	1	2	361	280.33
12537-670	**12X10**	1	2	361	278.63

PVC Schedule 40 & 80 DWV Fabricated Fittings

PRICING

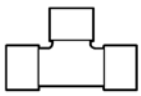
PVC Schedule 40 & 80 DWV Fabricated Fittings

TEE (Soc x Soc x Soc)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
6	3701-060 **116.54**	3901-060 **202.68**
6X2	3701-528* **100.71**	3901-528 **151.01**
6X3	3701-530* **105.78**	3901-530 **158.12**
6X4	3701-532 **110.64**	3901-532 **164.16**
8	3701-080 **189.84**	3901-080 **321.71**
8X2	3701-578* **118.41**	3901-578 **211.51**
8X3	3701-580* **124.17**	3901-580 **238.31**
8X4	3701-582 **127.55**	3901-582 **243.62**
8X6	3701-585 **138.40**	3901-585 **252.93**
10	3701-100 **369.23**	3901-100 **501.78**
10X2	3701-621* **192.76**	3901-621 **298.43**
10X3	3701-623* **196.33**	3901-623 **325.04**
10X4	3701-624 **201.13**	3901-624 **367.71**
10X6	3701-626 **245.85**	3901-626 **449.32**
10X8	3701-628 **329.59**	3901-628 **470.85**
12	3701-120 **490.71**	3901-120 **691.36**
12X2	3701-661* **257.35**	3901-661 **369.58**
12X3	3701-663* **261.15**	3901-663 **430.71**
12X4	3701-664 **267.72**	3901-664 **489.34**
12X6	3701-666 **310.95**	3901-666 **569.33**
12X8	3701-668 **371.41**	3901-668 **626.84**
12X10	3701-670 **423.23**	3901-670 **635.05**
14	3701-140* **964.59**	3901-140 **1241.67**
14X2	3701-691* **408.13**	3901-691 **654.45**
14X3	3701-693* **451.72**	3901-693 **732.20**
14X4	3701-694* **503.61**	3901-694 **805.84**
14X6	3701-696* **591.03**	3901-696 **945.67**
14X8	3701-698* **704.67**	3901-698 **1133.01**
14X10	3701-700* **801.01**	3901-700 **1191.92**
14X12	3701-702* **947.58**	3901-702 **1203.49**
16	3701-160 **1365.40**	3901-160 **1956.12**
16X2	3701-751 **581.98**	3901-751 **839.04**
16X3	3701-753 **588.36**	3901-753 **928.06**
16X4	3701-754 **624.56**	3901-754 **999.23**
16X6	3701-756 **675.58**	3901-756 **1080.84**
16X8	3701-758 **790.88**	3901-758 **1266.11**
16X10	3701-760 **994.16**	3901-760 **1417.55**

TEE (Soc x Soc x Soc) (continued)



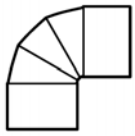
Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
16X12	3701-762 **1128.88**	3901-762 **1797.08**
16X14	3701-764 **1339.73**	3901-764 **1858.28**
18	3701-180 **1696.84**	3901-180 **2111.91**
18X4	3701-784 **997.40**	3901-784 **1159.69**
18X6	3701-786 **1013.19**	3901-786 **1312.28**
18X8	3701-788 **1054.77**	3901-788 **1361.41**
18X10	3701-790 **1188.84**	3901-790 **1375.72**
18X12	3701-792 **1266.49**	3901-792 **1691.18**
18X14	3701-794 **1358.41**	3901-794 **1944.79**
18X16	3701-796 **1458.03**	3901-796 **1987.24**
20	3701-200 **2259.68**	3901-200 **3039.14**
20X4	3701-814 **1205.44**	3901-814 **1610.09**
20X6	3701-816 **1275.55**	3901-816 **1815.75**
20X8	3701-818 **1347.84**	3901-818 **2229.95**
20X10	3701-820 **1446.47**	3901-820 **2303.86**
20X12	3701-822 **1531.62**	3901-822 **2433.54**
20X14	3701-824 **1652.83**	3901-824 **2646.92**
20X16	3701-826 **1760.01**	3901-826 **2695.20**
20X18	3701-828 **1941.35**	3901-828 **2913.97**
24	3701-240 **2815.19**	3901-240 **3645.26**
24X4	3701-904 **1659.87**	3901-904 **1996.06**
24X6	3701-906 **1744.75**	3901-906 **2251.09**
24X8	3701-908 **1851.04**	3901-908 **2435.12**
24X10	3701-910 **1955.56**	3901-910 **2649.68**
24X12	3701-912 **2060.67**	3901-912 **2788.15**
24X14	3701-914 **2201.79**	3901-914 **3091.48**
24X16	3701-916 **2328.91**	3901-916 **3190.04**
24X18	3701-918 **2530.18**	3901-918 **3345.66**
24X20	3701-920 **2716.49**	3901-920 **3499.60**

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

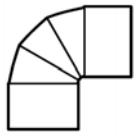
90° Ells

90° ELBOW (Soc x Soc)



Size	SCH 40 LOW PR Prod Code: 390 Part Number Price Each	SCH 80 LOW PR Prod Code: 400 Part Number Price Each
6	3706-060 **115.05**	3906-060 **148.94**
8	3706-080 **159.83**	3906-080 **250.15**
10	3706-100 **252.65**	3906-100 **493.81**
12	3706-120 **388.64**	3906-120 **720.11**
14	3706-140* **520.49**	3906-140 **1059.49**
16	3706-160 **771.87**	3906-160 **1317.69**

90° ELBOW (Soc x Soc) (continued)



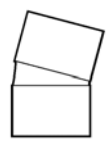
Size	SCH 40 LOW PR Prod Code: 390 Part Number Price Each	SCH 80 LOW PR Prod Code: 400 Part Number Price Each
18	3706-180 **1147.99**	3906-180 **1696.33**
20	3706-200 **1291.21**	3906-200 **2000.03**
24	3706-240 **1614.71**	3906-240 **2992.62**

Non 90° Ells

11-1/4° ELBOW (Soc x Soc)

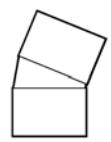
Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
4	3711-040 **41.13**	3911-040 **55.93**
6	3711-060 **66.07**	3911-060 **104.56**
8	3711-080 **111.69**	3911-080 **171.15**
10	3711-100 **168.54**	3911-100 **303.33**
12	3711-120 **266.62**	3911-120 **443.33**
14	3711-140 **419.17**	3911-140 **678.69**
16	3711-160 **571.40**	3911-160 **907.22**
18	3711-180 **639.49**	3911-180 **1171.17**
20	3711-200 **848.25**	3911-200 **1501.41**
24	3711-240 **1516.51**	3911-240 **1718.56**

15° ELBOW (Soc x Soc)



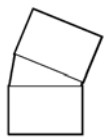
Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
4	3718-040 **41.13**	3918-040 **55.93**
6	3718-060 **66.07**	3918-060 **104.56**
8	3718-080 **111.69**	3918-080 **171.15**
10	3718-100 **168.54**	3918-100 **303.33**
12	3718-120 **266.62**	3918-120 **443.33**
14	3718-140 **419.17**	3918-140 **678.69**
16	3718-160 **571.40**	3918-160 **907.22**
18	3718-180 **639.49**	3918-180 **1171.17**
20	3718-200 **848.25**	3918-200 **1501.41**
24	3718-240 **1516.51**	3918-240 **1718.56**

22-1/2° ELBOW (Soc x Soc)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
4	3716-040 **41.13**	3916-040 **55.93**
6	3716-060 **66.07**	3916-060 **104.56**
8	3716-080 **111.69**	3916-080 **171.15**
10	3716-100* **168.54**	3916-100 **303.33**

22-1/2° ELBOW (Soc x Soc) (continued)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
12	3716-120* **266.62**	3916-120 **443.33**
14	3716-140* **419.17**	3916-140 **678.69**
16	3716-160 **571.40**	3916-160 **907.22**
18	3716-180 **686.21**	3916-180 **1171.17**
20	3716-200 **848.25**	3916-200 **1501.41**
24	3716-240 **1516.51**	3916-240 **1718.56**

22-1/2° STREET ELL (Spig x Soc)

Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
6	3742-060 **72.67**	3942-060 **114.98**
8	3742-080 **122.85**	3942-080 **188.25**
10	3742-100* **185.38**	3942-100 **333.67**
12	3742-120* **293.27**	3942-120 **487.67**
14	3742-140* **461.07**	3942-140 **746.57**
16	3742-160 **453.78**	3942-160 **997.94**
18	3742-180 **754.83**	3942-180 **1286.63**
20	3742-200 **1149.99**	3942-200 **1767.57**
24	3742-240 **1784.12**	3942-240 **2022.27**

30° ELBOW (Soc x Soc)

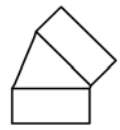
Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
4	3715-040 **41.13**	3915-040 **55.93**
6	3715-060 **66.07**	3915-060 **104.56**
8	3715-080 **111.69**	3915-080 **171.15**
10	3715-100 **168.54**	3915-100 **303.33**
12	3715-120 **266.62**	3915-120 **443.33**
14	3715-140 **419.17**	3915-140 **678.69**
16	3715-160 **571.40**	3915-160 **907.22**
18	3715-180 **686.21**	3915-180 **1171.17**
20	3715-200 **848.25**	3915-200 **1501.41**

PVC Schedule 40 & 80 DWV Fabricated Fittings

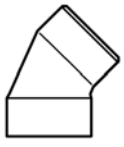
30° ELBOW (Soc x Soc) (continued)

	Size	SCH 40 LOW PR Prod Code: 390 Part Number Price Each	SCH 80 LOW PR Prod Code: 400 Part Number Price Each
	24	3715-240 **1516.51**	3915-240 **1718.56**

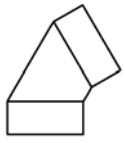
45° ELBOW (Soc x Soc)

	Size	SCH 40 LOW PR Prod Code: 390 Part Number Price Each	SCH 80 LOW PR Prod Code: 400 Part Number Price Each
	4	3717-040 **100.47**	3917-040 **122.94**
	6	3717-060 **106.79**	3917-060 **175.23**
	8	3717-080 **127.87**	3917-080 **188.29**
	10	3717-100 **210.32**	3917-100 **344.93**
	12	3717-120 **295.38**	3917-120 **493.09**
	14	3717-140* **512.16**	3917-140 **708.63**
	16	3717-160 **632.38**	3917-160 **917.65**
	18	3717-180 **729.78**	3917-180 **1241.33**
	20	3717-200 **996.44**	3917-200 **1559.17**
	24	3717-240 **1324.03**	3917-240 **1835.55**

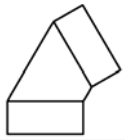
45° STREET ELL (Spig x Soc)

	Size	SCH 40 LOW PR Prod Code: 390 Part Number Price Each	SCH 80 LOW PR Prod Code: 400 Part Number Price Each
	4	3727-040 **100.47**	3927-040 **122.94**
	6	3727-060 **106.79**	3927-060 **175.23**
	8	3727-080 **127.87**	3927-080 **188.29**
	10	3727-100* **210.32**	3927-100 **344.93**
	12	3727-120* **295.38**	3927-120 **493.09**
	14	3727-140* **512.16**	3927-140 **708.63**
	16	3727-160 **632.38**	3927-160 **917.65**
	18	3727-180 **729.78**	3927-180 **1241.33**
	20	3727-200 **996.44**	3927-200 **1559.17**
	24	3727-240 **1324.03**	3927-240 **1835.55**

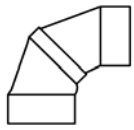
60° ELBOW (Soc x Soc)

	Size	SCH 40 LOW PR Prod Code: 390 Part Number Price Each	SCH 80 LOW PR Prod Code: 400 Part Number Price Each
	4	3724-040 **121.35**	**---**
	6	3724-060* **127.62**	3924-060 **186.16**
	8	3724-080* **182.08**	3924-080 **312.74**
	10	3724-100* **305.13**	3924-100 **586.19**
	12	3724-120* **399.78**	3924-120 **862.77**
	14	3724-140* **732.80**	3924-140 **1253.71**
	16	3724-160 **890.94**	3924-160 **1523.31**
	18	3724-180 **1144.59**	3924-180 **1696.33**
	20	3724-200 **1221.01**	3924-200 **2000.03**

60° ELBOW (Soc x Soc) (continued)

	Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
	24	3724-240 **1573.16**	3924-240 **2136.66**

90° STREET ELL (Spig x Soc)

	Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
	4	**---**	3909-040 **140.14**
	6	3709-060* **122.13**	3909-060 **166.07**
	8	3709-080* **168.00**	3909-080 **273.49**
	10	3709-100* **280.72**	3909-100 **542.07**
	12	3709-120* **409.11**	3909-120 **796.41**
	14	3709-140* **565.74**	3909-140 **1163.83**
	16	3709-160 **879.91**	3909-160 **1445.39**
	18	3709-180 **1272.57**	3909-180 **1861.40**
	20	3709-200 **1434.48**	3909-200 **2196.24**
	24	3709-240 **1793.78**	3909-240 **2346.36**

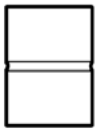
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Schedule 40 & 80 DWV Fabricated Fittings

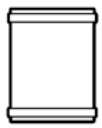
Couplings

COUPLING (Soc x Soc)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
8	3729-080 **72.92**	3929-080 **161.42**
10	3729-100 **89.66**	3929-100 **175.80**
12	3729-120 **131.99**	3929-120 **202.64**
14	3729-140 **214.33**	3929-140 **405.21**
16	3729-160 **239.05**	3929-160 **481.75**
18	3729-180 **407.66**	3929-180 **949.59**
20	3729-200 **711.17**	3929-200 **1170.80**
24	3729-240 **987.67**	3929-240 **2019.72**

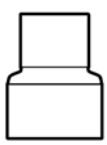
REPAIR COUPLING (Gasket x Gasket)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
4	3728-040 **70.67**	3928-040 **82.57**
6	3728-060 **98.31**	3928-060 **116.36**
8	3728-080 **154.75**	3928-080 **196.84**
10	3728-100 **204.17**	3928-100 **275.43**
12	3728-120 **256.14**	3928-120 **350.02**
14	3728-140 **444.46**	3928-140 **775.04**
16	3728-160 **654.84**	3928-160 **1162.79**
18	3728-180 **856.07**	3928-180 **1511.54**
20	3728-200 **1329.37**	3928-200 **1813.86**
24	3728-240 **1802.95**	3928-240 **2446.61**

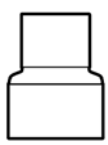
Reducer Couplings

REDUCER COUPLING (Soc x Soc)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
6X2	3729-528* **106.04**	3929-528 **183.86**
6X3	3729-530* **104.38**	3929-530 **135.82**
6X4	3729-532 **37.87**	3929-532 **89.36**
8X2	3729-578 **178.37**	3929-578 **248.39**
8X3	3729-580 **165.13**	3929-580 **217.09**
8X4	3729-582* **93.87**	3929-582 **171.56**
8X6	3729-585* **80.68**	3929-585 **157.88**
10X4	3729-624* **211.83**	3929-624 **403.03**
10X6	3729-626* **197.41**	3929-626 **321.58**
10X8	3729-628* **138.17**	3929-628 **171.88**
12X4	3729-664* **398.29**	3929-664 **579.08**
12X6	3729-666* **302.00**	3929-666 **477.46**
12X8	3729-668* **265.79**	3929-668 **414.33**
12X10	3729-670* **201.13**	3929-670 **254.49**
14X4	3729-694* **640.96**	3929-694 **783.55**
14X6	3729-696* **620.52**	3929-696 **699.88**
14X8	3729-698* **449.17**	3929-698 **688.42**
14X10	3729-700* **379.36**	3929-700 **581.19**
14X12	3729-702* **336.89**	3929-702 **371.54**
16X4	3729-754 **686.02**	3929-754 **1151.38**
16X6	3729-756 **631.89**	3929-756 **1079.43**

REDUCER COUPLING (Soc x Soc) (continued)



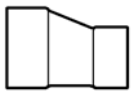
Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
16X8	3729-758 **574.99**	3929-758 **1019.47**
16X10	3729-760 **513.52**	3929-760 **708.78**
16X12	3729-762 **466.20**	3929-762 **651.57**
16X14	3729-764 **404.32**	3929-764 **549.29**
18X6	3729-786 **1141.97**	3929-786 **1664.12**
18X8	3729-788 **968.57**	3929-788 **1539.96**
18X10	3729-790 **903.76**	3929-790 **1415.22**
18X12	3729-792 **846.17**	3929-792 **1182.77**
18X14	3729-794 **780.37**	3929-794 **1145.33**
18X16	3729-796 **582.94**	3929-796 **978.99**
20X6	3729-816 **1430.35**	3929-816 **2340.06**
20X8	3729-818 **1385.24**	3929-818 **2312.98**
20X10	3729-820 **1214.44**	3929-820 **2295.79**
20X12	3729-822 **1197.80**	3929-822 **2153.01**
20X14	3729-824 **1183.01**	3929-824 **2135.89**
20X16	3729-826 **1116.02**	3929-826 **1710.54**
20X18	3729-828 **985.94**	3929-828 **1179.55**
24X6	3729-906 **2876.69**	3929-906 **3956.64**
24X8	3729-908 **2794.27**	3929-908 **3923.63**
24X10	3729-910 **2310.33**	3929-910 **3910.22**
24X12	3729-912 **2234.16**	3929-912 **3847.04**

Reducer Couplings

REDUCER COUPLING (Soc x Soc) (continued)

Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
24X14	3729-914 **2118.48**	3929-914 **3834.16**
24X16	3729-916 **1945.19**	3929-916 **3686.85**
24X18	3729-918 **1722.43**	3929-918 **2810.95**
24X20	3729-920 **1294.84**	3929-920 **2520.93**

ECCENTRIC REDUCER COUPLING (Soc x Soc)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
3X2	3729-338E **33.63**	3929-338E **46.85**
4X2	3729-420E[2] **45.67**	3929-420E[2] **119.53**
4X3	3729-422E **42.21**	3929-422E **55.31**
6X2	3729-528E[3*] **103.09**	3929-528E[3] **155.61**
6X3	3729-530E[2*] **94.96**	3929-530E[2] **151.18**
6X4	3729-532E[2] **47.48**	3929-532E **115.31**
8X3	3729-580E[3*] **195.86**	3929-580E[3] **219.72**
8X4	3729-582E[2*] **97.80**	3929-582E[2] **199.43**
8X6	3729-585E[*] **79.06**	3929-585E **153.36**
10X4	3729-624E[2*] **223.63**	3929-624E[3] **337.48**
10X6	3729-626E[*] **205.62**	3929-626E[2] **286.43**
10X8	3729-628E[*] **193.86**	3929-628E **264.67**
12X4	3729-664E[3*] **417.24**	3929-664E[4] **516.08**
12X6	3729-666E[2*] **342.84**	3929-666E[3] **424.73**
12X8	3729-668E[2*] **227.35**	3929-668E[2] **366.94**

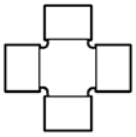
ECCENTRIC REDUCER COUPLING (Soc x Soc) (continued)

Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
12X10	3729-670E[*] **197.12**	3929-670E **234.55**
14X6	3729-696E[3] **696.46**	3929-696E[4] **840.68**
14X8	3729-698E[3] **570.52**	3929-698E[3] **752.04**
14X10	3729-700E[2] **517.91**	3929-700E[2] **544.46**
14X12	3729-702E **316.62**	3929-702E **500.72**
16X6	3729-756E[3] **727.75**	3929-756E[5] **1553.20**
16X8	3729-758E[3] **717.55**	3929-758E[3] **1422.29**
16X10	3729-760E[2] **530.60**	3929-760E[3] **1034.67**
16X12	3729-762E **504.89**	3929-762E[2] **918.62**
16X14	3729-764E **448.63**	3929-764E **711.53**
18X6	3729-786E[4] **1034.39**	3929-786E[6] **2144.06**
18X8	3729-788E[4] **1019.07**	3929-788E[5] **2052.44**
18X10	3729-790E[3] **946.11**	3929-790E[4] **1917.95**
18X12	3729-792E[2] **853.85**	3929-792E[3] **1711.92**
18X14	3729-794E[2] **754.93**	3929-794E[2] **1411.37**
18X16	3729-796E **608.98**	3929-796E **1377.17**

2=Two-Step Design, 3=Three-Step Design, 4=Four-Step Design, 5=Five-Step Design, 6=Six−Step Design

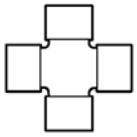
Crosses

CROSS (Soc x Soc x Soc x Soc)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
4	3720-040 **256.96**	---
4X2	---	3920-420 **128.75**
4X3	---	3920-422 **141.68**
6	3720-060 **149.72**	3920-060 **349.19**
6X2	3720-528 **112.39**	3920-528 **180.92**
6X3	3720-530 **133.09**	3920-530 **203.92**
6X4	3720-532 **146.74**	3920-532 **251.77**
8	3720-080 **302.39**	3920-080 **420.56**
8X2	3720-578 **194.14**	3920-578 **228.28**
8X3	3720-580 **210.04**	3920-580 **242.52**
8X4	3720-582 **230.75**	3920-582 **260.17**
8X6	3720-585 **290.34**	3920-585 **337.18**

CROSS (Soc x Soc x Soc x Soc) (continued)



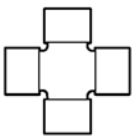
Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
10	3720-100 **492.23**	3920-100 **899.75**
10X2	3720-621 **206.18**	3920-621 **413.19**
10X3	3720-623 **237.47**	3920-623 **478.12**
10X4	3720-624 **272.42**	3920-624 **490.23**
10X6	3720-626 **312.40**	3920-626 **599.02**
10X8	3720-628 **438.59**	3920-628 **790.47**
12	3720-120 **648.92**	3920-120 **1267.88**
12X2	3720-661 **272.48**	3920-661 **559.38**
12X3	3720-663 **305.82**	3920-663 **625.27**
12X4	3720-664 **323.31**	3920-664 **652.46**
12X6	3720-666 **395.19**	3920-666 **757.61**
12X8	3720-668 **480.24**	3920-668 **905.02**

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

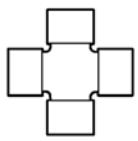
Crosses

CROSS (Soc x Soc x Soc x Soc) (continued)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
12X10	3720-670 **557.41**	3920-670 **1031.31**
14	3720-140 **1077.99**	3920-140 **2254.40**
14X2	3720-691 **531.85**	3920-691 **849.16**
14X3	3720-693 **592.18**	3920-693 **935.49**
14X4	3720-694 **657.46**	3920-694 **1045.88**
14X6	3720-696 **739.54**	3920-696 **1173.82**
14X8	3720-698 **852.00**	3920-698 **1350.13**
14X10	3720-700 **968.07**	3920-700 **1616.67**
14X12	3720-702 **1024.18**	3920-702 **1894.16**
16	3720-160 **1574.71**	3920-160 **2858.03**
16X2	3720-751 **729.81**	3920-751 **1151.72**
16X3	3720-753 **802.09**	3920-753 **1258.22**
16X4	3720-754 **832.74**	3920-754 **1332.33**
16X6	3720-756 **900.67**	3920-756 **1441.11**
16X8	3720-758 **1055.08**	3920-758 **1688.09**
16X10	3720-760 **1256.81**	3920-760 **1943.99**
16X12	3720-762 **1444.37**	3920-762 **2309.34**
16X14	3720-764 **1516.61**	3920-764 **2723.43**
18	3720-180 **2230.98**	3920-180 **3528.26**
18X4	3720-784 **902.92**	3920-784 **1681.48**
18X6	3720-786 **1273.02**	3920-786 **1921.92**
18X8	3720-788 **1442.29**	3920-788 **2292.78**
18X10	3720-790 **1559.93**	3920-790 **2598.43**
18X12	3720-792 **1658.54**	3920-792 **2882.65**

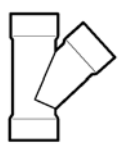
CROSS (Soc x Soc x Soc x Soc) (continued)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
18X14	3720-794 **1747.72**	3920-794 **3080.84**
18X16	3720-796 **2028.41**	3920-796 **3346.52**
20	3720-200 **3795.47**	3920-200 **5956.54**
20X4	3720-814 **1594.17**	3920-814 **2209.73**
20X6	3720-816 **1655.49**	3920-816 **2390.37**
20X8	3720-818 **2056.62**	3920-818 **2601.24**
20X10	3720-820 **2349.43**	3920-820 **3053.78**
20X12	3720-822 **2451.60**	3920-822 **3380.00**
20X14	3720-824 **2666.73**	3920-824 **3651.53**
20X16	3720-826 **2999.00**	3920-826 **4060.64**
20X18	3720-828 **3244.81**	3920-828 **4843.02**
24	3720-240 **4998.78**	3920-240 **7220.62**
24X4	3720-904 **2037.68**	3920-904 **2439.46**
24X6	3720-906 **2419.31**	3920-906 **2781.83**
24X8	3720-908 **2575.44**	3920-908 **3630.64**
24X10	3720-910 **2753.22**	3920-910 **3940.81**
24X12	3720-912 **3032.13**	3920-912 **4520.83**
24X14	3720-914 **3118.65**	3920-914 **5306.63**
24X16	3720-916 **3456.43**	3920-916 **5626.53**
24X18	3720-918 **3860.25**	3920-918 **5909.71**
24X20	3720-920 **4674.09**	3920-920 **6293.38**

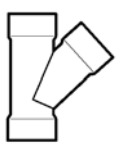
Wyes

WYE (Soc x Soc x Soc)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
8	3775-080 **209.76**	3975-080 **350.74**
8X2	3775-578 **136.85**	3975-578 **248.07**
8X3	3775-580* **142.23**	3975-580 **274.40**
8X4	3775-582 **148.11**	3975-582 **281.26**
8X6	3775-585 **194.39**	3975-585 **284.15**
10	3775-100 **419.06**	3975-100 **626.00**
10X2	3775-621* **245.03**	3975-621 **361.17**

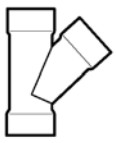
WYE (Soc x Soc x Soc) (continued)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
10X3	3775-623* **256.64**	3975-623 **376.44**
10X4	3775-624 **263.74**	3975-624 **387.13**
10X6	3775-626* **318.00**	3975-626 **489.19**
10X8	3775-628 **389.76**	3975-628 **532.74**
12	3775-120 **552.81**	3975-120 **947.13**
12X2	3775-661* **291.54**	3975-661 **607.47**
12X3	3775-663* **302.76**	3975-663 **614.74**

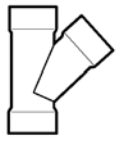
PVC Schedule 40 & 80 DWV Fabricated Fittings

WYE (Soc x Soc x Soc) (continued)



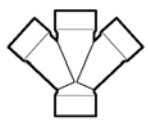
Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
12X4	3775-664* **313.12**	3975-664 **625.08**
12X6	3775-666* **373.12**	3975-666 **681.95**
12X8	3775-668* **414.57**	3975-668 **757.75**
12X10	3775-670 **487.17**	3975-670 **890.28**
14	3775-140* **1189.69**	3975-140 **1438.45**
14X2	3775-691* **591.88**	3975-691 **972.38**
14X3	3775-693* **620.75**	3975-693 **987.19**
14X4	3775-694* **631.15**	3975-694 **995.13**
14X6	3775-696* **681.23**	3975-696 **1089.96**
14X8	3775-698* **779.57**	3975-698 **1207.59**
14X10	3775-700* **833.31**	3975-700 **1260.87**
14X12	3775-702* **1065.43**	3975-702 **1336.37**
16	3775-160 **1513.68**	3975-160 **2214.28**
16X2	3775-751 **672.53**	3975-751 **1127.92**
16X3	3775-753 **711.52**	3975-753 **1142.14**
16X4	3775-754 **743.78**	3975-754 **1190.00**
16X6	3775-756* **800.48**	3975-756 **1280.73**
16X8	3775-758 **912.76**	3975-758 **1349.63**
16X10	3775-760 **1096.51**	3975-760 **1477.49**
16X12	3775-762 **1194.15**	3975-762 **1979.85**
16X14	3775-764 **1447.09**	3975-764 **2107.73**
18	3775-180 **1740.56**	3975-180 **2974.62**
18X4	3775-784 **1192.58**	3975-784 **1538.05**
18X6	3775-786* **1211.79**	3975-786 **1563.84**
18X8	3775-788 **1251.29**	3975-788 **1685.66**
18X10	3775-790 **1331.20**	3975-790 **1734.58**
18X12	3775-792 **1457.91**	3975-792 **1909.45**
18X14	3775-794 **1593.88**	3975-794 **2319.26**
18X16	3775-796 **1689.82**	3975-796 **2796.19**
20	3775-200 **2565.14**	3975-200 **5072.83**
20X4	3775-814 **1381.98**	3975-814 **1793.96**
20X6	3775-816* **1387.01**	3975-816 **1940.66**
20X8	3775-818 **1489.00**	3975-818 **2412.35**
20X10	3775-820 **1540.94**	3975-820 **2510.82**
20X12	3775-822 **1739.48**	3975-822 **2764.03**
20X14	3775-824 **2023.20**	3975-824 **3203.15**
20X16	3775-826 **2222.05**	3975-826 **3289.81**

WYE (Soc x Soc x Soc) (continued)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
20X18	3775-828 **2401.45**	3975-828 **3438.77**
24	3775-240 **3191.86**	3975-240 **5712.04**
24X4	3775-904 **1723.04**	3975-904 **2554.79**
24X6	3775-906* **1900.94**	3975-906 **2806.17**
24X8	3775-908 **2014.48**	3975-908 **3248.67**
24X10	3775-910 **2165.69**	3975-910 **3293.49**
24X12	3775-912 **2234.85**	3975-912 **3612.23**
24X14	3775-914 **2341.93**	3975-914 **3809.29**
24X16	3775-916 **2474.88**	3975-916 **4369.00**
24X18	3775-918 **2647.92**	3975-918 **5130.01**
24X20	3775-920 **2988.49**	3975-920 **5297.14**

DOUBLE WYE (Soc x Soc x Soc x Soc)



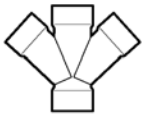
Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
6	3776-060 **155.37**	3976-060 **198.88**
6X4	3776-532 **121.56**	3976-532 **184.73**
8	3776-080* **299.66**	3976-080 **383.58**
8X2	3776-578* **163.16**	3976-578 **219.36**
8X3	3776-580* **174.32**	3976-580 **227.07**
8X4	3776-582* **181.71**	3976-582 **258.49**
8X6	3776-585* **229.44**	3976-585 **330.33**
10	3776-100* **439.52**	3976-100 **703.25**
10X2	3776-621* **232.25**	3976-621 **389.52**
10X3	3776-623* **242.66**	3976-623 **399.37**
10X4	3776-624* **254.81**	3976-624 **407.68**
10X6	3776-626* **315.23**	3976-626 **504.35**
10X8	3776-628* **381.69**	3976-628 **609.32**
12	3776-120* **717.57**	3976-120 **1150.75**
12X2	3776-661* **314.38**	3976-661 **642.34**
12X3	3776-663* **324.72**	3976-663 **648.00**
12X4	3776-664* **331.99**	3976-664 **653.56**
12X6	3776-666* **395.19**	3976-666 **768.96**
12X8	3776-668* **504.43**	3976-668 **934.14**
12X10	3776-670* **645.79**	3976-670 **1054.87**
14	3776-140* **1272.75**	3976-140 **1598.38**
14X2	3776-691* **606.52**	3976-691 **1137.37**
14X3	3776-693* **634.83**	3976-693 **1170.91**
14X4	3776-694* **661.52**	3976-694 **1180.98**
14X6	3776-696* **736.45**	3976-696 **1207.59**

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

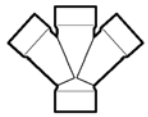
PVC Schedule 40 & 80 DWV Fabricated Fittings

DOUBLE WYE (Soc x Soc x Soc x Soc) (continued)



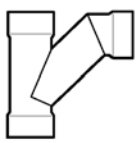
Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
14X8	3776-698* **853.44**	3976-698 **1278.63**
14X10	3776-700* **901.92**	3976-700 **1349.63**
14X12	3776-702* **1168.07**	3976-702 **1520.15**
16	3776-160 **1670.46**	3976-160 **2484.22**
16X2	3776-751 **784.36**	3976-751 **1334.44**
16X3	3776-753 **831.25**	3976-753 **1345.64**
16X4	3776-754 **843.55**	3976-754 **1349.63**
16X6	3776-756* **892.40**	3976-756 **1427.78**
16X8	3776-758 **976.72**	3976-758 **1562.74**
16X10	3776-760 **1196.29**	3976-760 **1782.95**
16X12	3776-762 **1289.27**	3976-762 **1917.94**
16X14	3776-764 **1543.98**	3976-764 **2280.96**
18	3776-180 **2333.55**	3976-180 **3280.63**
18X4	3776-784 **1287.89**	3976-784 **1727.73**
18X6	3776-786* **1308.65**	3976-786 **2003.32**
18X8	3776-788 **1403.52**	3976-788 **2055.40**
18X10	3776-790 **1708.82**	3976-790 **2073.48**
18X12	3776-792 **1740.68**	3976-792 **2227.84**
18X14	3776-794 **1869.08**	3976-794 **2534.33**
18X16	3776-796 **1918.24**	3976-796 **2962.29**
20	3776-200 **3034.21**	3976-200 **5298.00**
20X4	3776-814 **1460.77**	3976-814 **2126.39**
20X6	3776-816* **1536.66**	3976-816 **2261.37**
20X8	3776-818 **1562.11**	3976-818 **2445.94**
20X10	3776-820 **2057.14**	3976-820 **2805.79**
20X12	3776-822 **2251.89**	3976-822 **3113.53**
20X14	3776-824 **2459.34**	3976-824 **3268.93**
20X16	3776-826 **2683.66**	3976-826 **4157.19**
20X18	3776-828 **2935.08**	3976-828 **4420.68**
24	3776-240 **3777.89**	3976-240 **6837.86**
24X4	3776-904 **1882.15**	3976-904 **2764.03**
24X6	3776-906* **2081.00**	3976-906 **3032.61**
24X8	3776-908 **2135.27**	3976-908 **3319.81**
24X10	3776-910 **2246.54**	3976-910 **3489.24**
24X12	3776-912 **2378.29**	3976-912 **3578.63**
24X14	3776-914 **2527.22**	3976-914 **4817.62**
24X16	3776-916 **2749.42**	3976-916 **6018.28**

DOUBLE WYE (Soc x Soc x Soc x Soc) (continued)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
24X18	3776-918 **2776.77**	3976-918 **6102.65**
24X20	3776-920 **3568.63**	3976-920 **6434.39**

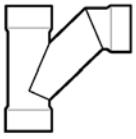
COMBO WYE (Soc x Soc x Soc)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
6	3777-060* **197.67**	3977-060 **316.37**
6X4	3777-532* **154.00**	3977-532 **277.92**
8	3777-080* **315.23**	3977-080 **521.24**
8X2	3777-578* **172.85**	3977-578 **343.01**
8X3	3777-580* **215.39**	3977-580 **351.41**
8X4	3777-582 **219.41**	3977-582 **359.07**
8X6	3777-585 **248.63**	3977-585 **397.77**
10	3777-100* **563.03**	3977-100 **994.48**
10X2	3777-621* **257.13**	3977-621 **416.77**
10X3	3777-623* **269.31**	3977-623 **432.57**
10X4	3777-624* **275.26**	3977-624 **440.43**
10X6	3777-626* **346.29**	3977-626 **554.08**
10X8	3777-628* **430.89**	3977-628 **724.55**
12	3777-120* **817.35**	3977-120 **1248.39**
12X2	3777-661* **416.68**	3977-661 **680.56**
12X3	3777-663* **425.48**	3977-663 **691.80**
12X4	3777-664* **435.06**	3977-664 **696.16**
12X6	3777-666* **483.43**	3977-666 **777.87**
12X8	3777-668* **542.36**	3977-668 **923.48**
12X10	3777-670* **674.80**	3977-670 **1079.76**
14	3777-140* **1415.75**	3977-140 **1909.08**
14X2	3777-691* **626.97**	3977-691 **1048.79**
14X3	3777-693* **641.13**	3977-693 **1060.88**
14X4	3777-694* **678.06**	3977-694 **1084.80**
14X6	3777-696* **771.52**	3977-696 **1234.46**
14X8	3777-698* **848.81**	3977-698 **1291.93**
14X10	3777-700* **1004.55**	3977-700 **1469.55**
14X12	3777-702* **1185.38**	3977-702 **1784.76**
16	3777-160 **1662.43**	3977-160 **2659.93**
16X2	3777-751 **814.92**	3977-751 **1325.36**
16X3	3777-753 **830.01**	3977-753 **1345.57**
16X4	3777-754 **849.79**	3977-754 **1359.59**

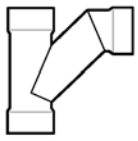
Wyes

COMBO WYE (Soc x Soc x Soc) (continued)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
16X6	3777-756 **898.79**	3977-756 **1438.08**
16X8	3777-758 **988.82**	3977-758 **1633.82**
16X10	3777-760 **1118.77**	3977-760 **1790.06**
16X12	3777-762 **1200.98**	3977-762 **1921.45**
16X14	3777-764 **1474.36**	3977-764 **2313.36**
18	3777-180 **2093.48**	3977-180 **3631.98**
18X4	3777-784 **1276.35**	3977-784 **1611.27**
18X6	3777-786 **1316.11**	3977-786 **1709.26**
18X8	3777-788 **1351.61**	3977-788 **1883.52**
18X10	3777-790 **1438.76**	3977-790 **2025.79**
18X12	3777-792 **1495.47**	3977-792 **2673.08**
18X14	3777-794 **1698.01**	3977-794 **3058.29**
18X16	3777-796 **1931.37**	3977-796 **3288.36**
20	3777-200 **2712.71**	3977-200 **6691.89**
20X4	3777-814 **1411.21**	3977-814 **1782.68**
20X6	3777-816 **1528.28**	3977-816 **1974.18**
20X8	3777-818 **1557.25**	3977-818 **2459.12**

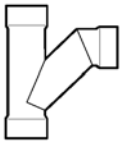
COMBO WYE (Soc x Soc x Soc) (continued)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
20X10	3777-820 **1632.52**	3977-820 **2748.87**
20X12	3777-822 **2051.89**	3977-822 **3247.02**
20X14	3777-824 **2160.07**	3977-824 **3578.75**
20X16	3777-826 **2416.89**	3977-826 **4557.56**
20X18	3777-828 **2469.81**	3977-828 **6231.77**
24	3777-240 **3664.36**	3977-240 **7126.43**
24X4	3777-904 **1881.34**	3977-904 **2885.79**
24X6	3777-906 **2054.36**	3977-906 **3070.49**
24X8	3777-908 **2291.68**	3977-908 **3201.52**
24X10	3777-910 **2453.49**	3977-910 **3784.07**
24X12	3777-912 **2555.56**	3977-912 **4073.09**
24X14	3777-914 **2602.65**	3977-914 **4859.00**
24X16	3777-916 **3009.60**	3977-916 **5672.76**
24X18	3777-918 **3215.08**	3977-918 **6430.65**
24X20	3777-920 **3266.33**	3977-920 **6825.43**

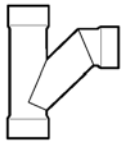
Sanitary Tees

SANITARY TEE (Soc x Soc x Soc)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
6	3790-060 **169.97**	3990-060 **285.86**
6X4	3790-532* **127.34**	3990-532 **225.95**
8	3790-080* **311.44**	3990-080 **517.57**
8X2	3790-578* **159.32**	3990-578 **283.11**
8X3	3790-580* **210.53**	3990-580 **322.46**
8X4	3790-582* **199.78**	3990-582 **343.80**
8X6	3790-585* **239.32**	3990-585 **382.83**
10	3790-100* **556.81**	3990-100 **983.05**
10X2	3790-621* **244.49**	3990-621 **381.09**
10X3	3790-623* **248.63**	3990-623 **391.93**
10X4	3790-624* **266.39**	3990-624 **426.22**
10X6	3790-626* **342.84**	3990-626 **539.87**
10X8	3790-628* **419.78**	3990-628 **695.38**
12	3790-120* **797.33**	3990-120 **1213.62**

SANITARY TEE (Soc x Soc x Soc) (continued)



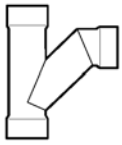
Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
12X2	3790-661* **410.27**	3990-661 **644.24**
12X3	3790-663* **414.95**	3990-663 **654.80**
12X4	3790-664* **427.08**	3990-664 **681.95**
12X6	3790-666* **465.66**	3990-666 **763.64**
12X8	3790-668* **518.46**	3990-668 **907.05**
12X10	3790-670* **653.08**	3990-670 **1050.83**
14	3790-140* **1404.22**	3990-140 **1860.47**
14X2	3790-691* **556.37**	3990-691 **1015.99**
14X3	3790-693* **603.71**	3990-693 **1031.33**
14X4	3790-694* **609.61**	3990-694 **1052.04**
14X6	3790-696* **727.02**	3990-696 **1199.59**
14X8	3790-698* **829.24**	3990-698 **1261.87**
14X10	3790-700* **996.07**	3990-700 **1434.56**
14X12	3790-702* **1174.27**	3990-702 **1724.44**

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

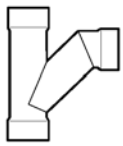
Sanitary Tees

SANITARY TEE (Soc x Soc x Soc) (continued)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
16	3790-160 **1806.57**	3990-160 **2220.06**
16X2	3790-751 **809.62**	3990-751 **1254.55**
16X3	3790-753 **817.55**	3990-753 **1305.12**
16X4	3790-754 **835.94**	3990-754 **1346.08**
16X6	3790-756 **888.59**	3990-756 **1424.26**
16X8	3790-758 **979.97**	3990-758 **1594.93**
16X10	3790-760 **1107.38**	3990-760 **1762.53**
16X12	3790-762 **1188.93**	3990-762 **1894.79**
16X14	3790-764 **1424.99**	3990-764 **2067.36**
18	3790-180 **1850.13**	3990-180 **3588.76**
18X4	3790-784 **985.94**	3990-784 **1559.91**
18X6	3790-786 **1057.42**	3990-786 **1654.58**
18X8	3790-788 **1326.53**	3990-788 **1845.04**
18X10	3790-790 **1509.42**	3990-790 **1991.28**
18X12	3790-792 **1550.57**	3990-792 **2593.32**
18X14	3790-794 **1767.65**	3990-794 **2667.31**
18X16	3790-796 **1908.27**	3990-796 **3268.85**
20	3790-200 **2499.27**	3990-200 **6588.60**
20X4	3790-814 **1043.73**	3990-814 **1748.97**

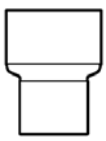
SANITARY TEE (Soc x Soc x Soc) (continued)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
20X6	3790-816 **1194.28**	3990-816 **1900.33**
20X8	3790-818 **1288.25**	3990-818 **2414.16**
20X10	3790-820 **1453.43**	3990-820 **2684.02**
20X12	3790-822 **1627.40**	3990-822 **3173.36**
20X14	3790-824 **1935.36**	3990-824 **3442.62**
20X16	3790-826 **2231.48**	3990-826 **4476.45**
20X18	3790-828 **2404.57**	3990-828 **6197.12**
24	3790-240 **3270.01**	3990-240 **7070.49**
24X4	3790-904 **1528.33**	3990-904 **2818.45**
24X6	3790-906 **1696.79**	3990-906 **2955.02**
24X8	3790-908 **2251.96**	3990-908 **3091.56**
24X10	3790-910 **2434.87**	3990-910 **3703.02**
24X12	3790-912 **2544.26**	3990-912 **3988.01**
24X14	3790-914 **2595.61**	3990-914 **4807.60**
24X16	3790-916 **2976.74**	3990-916 **5518.78**
24X18	3790-918 **3120.46**	3990-918 **6346.68**
24X20	3790-920 **3233.16**	3990-920 **6703.52**

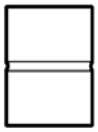
Adapters

IPS X SEWER ADAPTER (Soc x Spig)



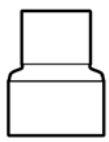
Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
4	3729-04013IXS **17.51**	---
6	3729-06013IXS **36.95**	---
8	3729-08013IXS **71.53**	---
10	3729-10013IXS **193.69**	---
12	3729-12013IXS **210.73**	---

IPS X SEWER ADAPTER (Soc x Soc)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
4	3729-040IXS **30.11**	---
6	3729-060IXS **55.01**	---
8	3729-080IXS **88.39**	---
10	3729-100IXS **142.93**	---
12	3729-120IXS **211.54**	---

IPS X SEWER ADAPTER (Spig x Soc)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
4	3729-04031IXS **22.98**	---
6	3729-06031IXS **53.21**	---
8	3729-08031IXS **87.15**	---
10	3729-10031IXS **135.67**	---
12	3729-12031IXS **201.51**	---

Caps

CAP (Soc)

Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
10	3747-100* **116.99**	3947-100 **228.44**
12	3747-120* **147.74**	3947-120 **395.49**
14	3747-140* **251.21**	3947-140 **448.54**
16	3747-160 **321.58**	3947-160 **592.00**
18	3747-180 **355.83**	3947-180 **777.78**

CAP (Soc) (continued)

Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
20	3747-200 **626.78**	3947-200 **898.79**
24	3747-240 **926.49**	3947-240 **1042.91**

Plugs

SPIGOT PLUG (Spigot)

Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
6	3749-060 **45.22**	3949-060 **136.77**
8	3749-080 **115.51**	3949-080 **230.84**
10	3749-100 **131.73**	3949-100 **291.85**

SPIGOT PLUG (Spigot) (continued)

Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
12	3749-120 **188.81**	3949-120 **464.69**
14	3749-140 **320.34**	---
16	3749-160 **390.34**	3949-160 **675.96**

Cleanouts

CLEANOUT ADAPTER WITH PLUG (Spig x Cleanout)

SOLD AS SET ONLY (Non-Pressure Rated)

Size	SCH 40 LOW PR Prod Code: 390 Part Number Price Each	SCH 80 LOW PR Dusc Code: 400 Part Number Price Each
2	---	3978-020* **96.63**
3	---	3978-030* **123.80**
4	---	3978-040* **155.58**
5	---	3978-050* **165.38**
6	---	3978-060* **175.20**
8	---	3978-080* **278.69**
10	---	3978-100* **465.43**
12	---	3978-120* **649.82**
14	---	3978-140* **805.83**
16	---	3978-160* **1584.95**
18	---	3978-180* **1897.85**
24	---	3978-240* **2332.21**

* HDPE Plug

Glue-On Saddles

Saddle

IPS O.D.x Socket Schedule 40

Non Pressure Rated

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
3763-528	**6X2**	1	10	390	35.83
3763-530	**6X3**	1	10	390	36.68
3763-532	**6X4**	1	10	390	38.15
3763-578	**8X2**	1	10	390	52.81
3763-580	**8X3**	1	10	390	53.33
3763-582	**8X4**	1	10	390	53.98
3763-585	**8X6**	1	10	390	55.51
3763-621	**10X2**	1	5	390	66.74
3763-623	**10X3**	1	10	390	67.67
3763-624	**10X4**	1	8	390	67.95
3763-626	**10X6**	1	5	390	79.52
3763-628	**10X8**	1	5	390	127.61
3763-661	**12X2**	1	5	390	78.93
3763-663	**12X3**	1	10	390	80.39
3763-664	**12X4**	1	10	390	82.11
3763-666	**12X6**	1	4	390	95.22
3763-668	**12X8**	1	5	390	151.80
3763-670	**12X10**	1	4	390	219.51
3763-691	**14X2**	1	10	390	101.16
3763-693	**14X3**	1	8	390	168.11
3763-694	**14X4**	1	5	390	115.48
3763-696	**14X6**	1	10	390	117.80
3763-698	**14X8**	1	4	390	180.77
3763-700	**14X10**	1	3	390	232.54
3763-702	**14X12**	1	0	390	256.32
3763-751	**16X2**	1	5	390	107.66
3763-753	**16X3**	1	5	390	109.14
3763-754	**16X4**	1	10	390	110.80
3763-756	**16X6**	1	3	390	126.94
3763-758	**16X8**	1	3	390	188.67
3763-760	**16X10**	1	0	390	239.80
3763-762	**16X12**	1	0	390	265.75
3763-764	**16X14**	1	0	390	276.25
3763-781	**18X2**	1	5	390	157.82
3763-783	**18X3**	1	5	390	160.89
3763-784	**18X4**	1	10	390	163.35
3763-786	**18X6**	1	4	390	173.93
3763-788	**18X8**	1	0	390	253.79
3763-790	**18X10**	1	0	390	281.34
3763-792	**18X12**	1	0	390	289.11
3763-794	**18X14**	1	0	390	436.77
3763-796	**18X16**	1	0	390	570.18
3763-811	**20X2**	1	8	390	158.19
3763-813	**20X3**	1	4	390	160.36
3763-814	**20X4**	1	4	390	168.19
3763-816	**20X6**	1	0	390	175.66
3763-818	**20X8**	1	5	390	253.46
3763-820	**20X10**	1	0	390	281.35
3763-822	**20X12**	1	0	390	401.12
3763-824	**20X14**	1	0	390	437.67
3763-826	**20X16**	1	0	390	572.27
3763-828	**20X18**	1	0	390	648.56
3763-901	**24X2**	1	5	390	150.91
3763-903	**24X3**	1	5	390	166.80
3763-904	**24X4**	1	5	390	168.65
3763-906	**24X6**	1	5	390	178.92
3763-908	**24X8**	1	5	390	255.81
3763-910	**24X10**	1	0	390	284.56
3763-912	**24X12**	1	0	390	402.54
3763-914	**24X14**	1	0	390	450.77
3763-916	**24X16**	1	0	390	506.61
3763-918	**24X18**	1	0	390	682.74

Saddle (continued)

IPS O.D.x Socket Schedule 40

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
3763-920	**24X20**	1	0	390	764.43

Saddle

IPS O.D. x Sockett Schedule 80

Non Pressure Rated

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
3963-528	**6X2**	1	5	400	60.22
3963-530	**6X3**	1	10	400	60.76
3963-532	**6X4**	1	5	400	61.28
3963-578	**8X2**	1	10	400	85.07
3963-580	**8X3**	1	8	400	86.11
3963-582	**8X4**	1	5	400	87.03
3963-585	**8X6**	1	5	400	89.06
3963-621	**10X2**	1	8	400	78.77
3963-623	**10X3**	1	5	400	79.88
3963-624	**10X4**	1	8	400	80.22
3963-626	**10X6**	1	5	400	93.28
3963-628	**10X8**	1	5	400	149.49
3963-661	**12X2**	1	10	400	93.06
3963-663	**12X3**	1	8	400	93.61
3963-664	**12X4**	1	5	400	94.40
3963-666	**12X6**	1	6	400	109.48
3963-668	**12X8**	1	2	400	172.28
3963-670	**12X10**	1	4	400	210.86
3963-691	**14X2**	1	5	400	114.61
3963-693	**14X3**	1	8	400	115.68
3963-694	**14X4**	1	5	400	116.24
3963-696	**14X6**	1	5	400	132.32
3963-698	**14X8**	1	4	400	202.85
3963-700	**14X10**	1	3	400	259.77
3963-702	**14X12**	1	4	400	286.83
3963-751	**16X2**	1	8	400	120.69
3963-753	**16X3**	1	8	400	121.74
3963-754	**16X4**	1	10	400	122.43
3963-756	**16X6**	1	10	400	139.54
3963-758	**16X8**	1	3	400	208.08
3963-760	**16X10**	1	0	400	264.96
3963-762	**16X12**	1	0	400	294.28
3963-764	**16X14**	1	0	400	306.66
3963-781	**18X2**	1	8	400	177.31
3963-783	**18X3**	1	4	400	178.38
3963-784	**18X4**	1	5	400	179.19
3963-786	**18X6**	1	5	400	189.65
3963-788	**18X8**	1	5	400	278.65
3963-790	**18X10**	1	0	400	308.91
3963-792	**18X12**	1	0	400	440.55
3963-794	**18X14**	1	0	400	479.48
3963-796	**18X16**	1	0	400	627.41
3963-811	**20X2**	1	0	400	179.33
3963-813	**20X3**	1	4	400	179.75
3963-814	**20X4**	1	4	400	181.91
3963-816	**20X6**	1	0	400	190.82
3963-818	**20X8**	1	0	400	275.64
3963-820	**20X10**	1	5	400	305.68
3963-822	**20X12**	1	0	400	436.02
3963-824	**20X14**	1	0	400	475.54
3963-826	**20X16**	1	0	400	623.04
3963-828	**20X18**	1	0	400	707.43
3963-901	**24X2**	1	5	400	182.47
3963-903	**24X3**	1	5	400	183.44
3963-904	**24X4**	1	5	400	184.28
3963-906	**24X6**	1	5	400	192.29
3963-908	**24X8**	1	5	409	259.52
3963-910	**24X10**	1	5	400	307.00
3963-912	**24X12**	1	0	409	407.26

Glue-On Saddles

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Saddle (continued)					
IPS O.D. x Sockett Schedule 80					
3963-914	**24X14**	1	0	400	473.88
3963-916	**24X16**	1	0	400	648.61
3963-918	**24X18**	1	0	400	731.41
3963-920	**24X20**	1	0	400	823.20
Stub Saddle					
IPS O.D x Socket Schedule 40					
Non Pressure Rated					
3765-528	**6X2**	1	8	390	38.53
3765-530	**6X3**	1	4	390	39.44
3765-532	**6X4**	1	10	390	41.03
3765-578	**8X2**	1	10	390	56.79
3765-580	**8X3**	1	4	390	57.34
3765-582	**8X4**	1	8	390	58.04
3765-585	**8X6**	1	4	390	59.69
3765-621	**10X2**	1	5	390	71.75
3765-623	**10X3**	1	5	390	72.77
3765-624	**10X4**	1	4	390	92.22
3765-626	**10X6**	1	2	390	85.51
3765-628	**10X8**	1	2	390	137.21
3765-661	**12X2**	1	6	390	84.86
3765-663	**12X3**	1	5	390	86.44
3765-664	**12X4**	1	2	390	88.28
3765-666	**12X6**	1	2	390	102.32
3765-668	**12X8**	1	2	390	163.23
3765-670	**12X10**	1	2	390	236.03
3765-691	**14X2**	1	10	390	108.77
3765-693	**14X3**	1	2	390	110.00
3765-694	**14X4**	1	5	390	111.38
3765-696	**14X6**	1	3	390	126.67
3765-698	**14X8**	1	0	390	193.11
3765-700	**14X10**	1	0	390	250.04
3765-702	**14X12**	1	0	390	275.62
3765-751	**16X2**	1	4	390	115.76
3765-753	**16X3**	1	5	390	117.35
3765-754	**16X4**	1	5	390	119.13
3765-756	**16X6**	1	2	390	136.48
3765-758	**16X8**	1	0	390	202.87
3765-760	**16X10**	1	0	390	257.85
3765-762	**16X12**	1	0	390	285.75
3765-764	**16X14**	1	0	390	297.04
3765-781	**18X2**	1	4	390	169.68
3765-783	**18X3**	1	10	390	133.45
3765-784	**18X4**	1	10	390	175.64
3765-786	**18X6**	1	2	390	187.02
3765-788	**18X8**	1	0	390	272.88
3765-790	**18X10**	1	0	390	302.51
3765-792	**18X12**	1	0	390	310.86
3765-794	**18X14**	1	0	390	469.63
3765-796	**18X16**	1	0	390	612.58
3765-811	**20X2**	1	0	390	170.09
3765-813	**20X3**	1	2	390	172.43
3765-814	**20X4**	1	2	390	180.85
3765-816	**20X6**	1	0	390	188.89
3765-818	**20X8**	1	0	390	272.54
3765-820	**20X10**	1	0	390	302.52
3765-822	**20X12**	1	0	390	431.33
3765-824	**20X14**	1	0	390	470.62
3765-826	**20X16**	1	0	390	615.34
3765-828	**20X18**	1	0	390	697.38
3765-901	**24X2**	1	4	390	162.25
3765-903	**24X3**	1	2	390	179.34
3765-904	**24X4**	1	4	390	181.35
3765-906	**24X6**	1	3	390	192.39

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Stub Saddle (continued)					
IPS O.D x Socket Schedule 40					
3765-908	**24X8**	1	0	390	275.06
3765-910	**24X10**	1	0	390	305.96
3765-912	**24X12**	1	0	390	432.83
3765-914	**24X14**	1	0	390	484.71
3765-916	**24X16**	1	0	390	544.75
3765-918	**24X18**	1	0	390	734.11
3765-920	**24X20**	1	0	390	821.97
Stub Saddle					
IPS O.D.x Socket Schedule 80					
Non Pressure Rated					
3965-528	**6X2**	1	10	400	64.76
3965-530	**6X3**	1	3	400	65.32
3965-532	**6X4**	1	10	400	65.91
3965-578	**8X2**	1	5	409	85.99
3965-580	**8X3**	1	4	400	92.59
3965-582	**8X4**	1	6	400	93.58
3965-585	**8X6**	1	4	400	95.77
3965-621	**10X2**	1	6	400	84.71
3965-623	**10X3**	1	6	409	80.75
3965-624	**10X4**	1	4	400	86.26
3965-626	**10X6**	1	4	400	100.29
3965-628	**10X8**	1	4	400	160.74
3965-661	**12X2**	1	2	400	100.06
3965-663	**12X3**	1	2	400	101.13
3965-664	**12X4**	1	2	400	101.51
3965-666	**12X6**	1	2	400	117.73
3965-668	**12X8**	1	2	400	185.25
3965-670	**12X10**	1	2	400	271.75
3965-691	**14X2**	1	4	400	123.25
3965-693	**14X3**	1	0	400	124.40
3965-694	**14X4**	1	5	400	124.98
3965-696	**14X6**	1	2	400	142.27
3965-700	**14X10**	1	0	400	279.33
3965-702	**14X12**	1	0	400	308.41
3965-751	**16X2**	1	5	400	129.77
3965-753	**16X3**	1	4	400	130.89
3965-754	**16X4**	1	3	400	131.63
3965-756	**16X6**	1	2	400	150.03
3965-758	**16X8**	1	3	400	223.75
3965-760	**16X10**	1	3	400	284.92
3965-762	**16X12**	1	0	400	316.43
3965-764	**16X14**	1	0	400	329.76
3965-781	**18X2**	1	2	400	190.64
3965-783	**18X3**	1	0	400	191.80
3965-784	**18X4**	1	0	400	192.67
3965-786	**18X6**	1	2	400	203.93
3965-788	**18X8**	1	0	400	299.62
3965-790	**18X10**	1	0	400	332.16
3965-792	**18X12**	1	0	400	473.71
3965-794	**18X14**	1	0	400	515.58
3965-796	**18X16**	1	0	400	674.63
3965-811	**20X2**	1	0	400	192.82
3965-813	**20X3**	1	2	400	193.27
3965-814	**20X4**	1	0	400	195.59
3965-816	**20X6**	1	0	400	205.17
3965-818	**20X8**	1	0	400	296.39
3965-820	**20X10**	1	0	400	328.69
3965-822	**20X12**	1	0	400	468.84
3965-824	**20X14**	1	0	400	511.33
3965-826	**20X16**	1	0	400	669.96
3965-828	**20X18**	1	0	400	760.68
3965-901	**24X2**	1	5	400	196.20
3965-903	**24X3**	1	5	400	197.24

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Stub Saddle (continued)

IPS O.D.x Socket Schedule 80

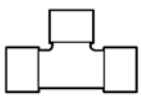
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
3965-904	**24X4**	1	5	400	198.15
3965-906	**24X6**	1	3	400	206.78
3965-908	**24X8**	1	0	400	296.86
3965-910	**24X10**	1	0	400	330.12
3965-912	**24X12**	1	0	409	437.93
3965-914	**24X14**	1	0	400	509.55
3965-916	**24X16**	1	0	400	697.43
3965-918	**24X18**	1	0	400	786.46
3965-920	**24X20**	1	0	400	885.16

PVC Schedule 40 & 80 Low Pressure Fabricated Fittings

PRICING

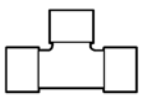
PVC Schedule 40 & 80 Low Pressure Fabricated Fittings

TEE (Soc x Soc x Soc)



Size	SCH 40 LOW PR Prod Code: 390 Part Number Price Each	SCH 80 LOW PR Prod Code: 400 Part Number Price Each
6	3701-060 **116.54**	3901-060 **202.68**
6X2	3701-528* **100.71**	3901-528 **151.01**
6X3	3701-530* **105.78**	3901-530 **158.12**
6X4	3701-532 **110.64**	3901-532 **164.16**
8	3701-080 **189.84**	3901-080 **321.71**
8X2	3701-578* **118.41**	3901-578 **211.51**
8X3	3701-580* **124.17**	3901-580 **238.31**
8X4	3701-582 **127.55**	3901-582 **243.62**
8X6	3701-585 **138.40**	3901-585 **252.93**
10	3701-100 **369.23**	3901-100 **501.78**
10X2	3701-621* **192.76**	3901-621 **298.43**
10X3	3701-623* **196.33**	3901-623 **325.04**
10X4	3701-624 **201.13**	3901-624 **367.71**
10X6	3701-626 **245.85**	3901-626 **449.32**
10X8	3701-628 **329.59**	3901-628 **470.85**
12	3701-120 **490.71**	3901-120 **691.36**
12X2	3701-661* **257.35**	3901-661 **369.58**
12X3	3701-663* **261.15**	3901-663 **430.71**
12X4	3701-664 **267.72**	3901-664 **489.34**
12X6	3701-666 **310.95**	3901-666 **569.33**
12X8	3701-668 **371.41**	3901-668 **626.84**
12X10	3701-670 **423.23**	3901-670 **635.05**
14	3701-140* **964.59**	3901-140 **1241.67**
14X2	3701-691* **408.13**	3901-691 **654.45**
14X3	3701-693* **451.72**	3901-693 **732.20**
14X4	3701-694* **503.61**	3901-694 **805.84**
14X6	3701-696* **591.03**	3901-696 **945.67**
14X8	3701-698* **704.67**	3901-698 **1133.01**
14X10	3701-700* **801.01**	3901-700 **1191.92**
14X12	3701-702* **947.58**	3901-702 **1203.49**
16	3701-160 **1365.40**	3901-160 **1956.12**
16X2	3701-751 **581.98**	3901-751 **839.04**
16X3	3701-753 **588.36**	3901-753 **928.06**
16X4	3701-754 **624.56**	3901-754 **999.23**
16X6	3701-756 **675.58**	3901-756 **1080.84**
16X8	3701-758 **790.88**	3901-758 **1266.11**
16X10	3701-760 **994.16**	3901-760 **1417.55**

TEE (Soc x Soc x Soc) (continued)

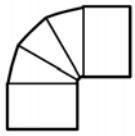


Size	SCH 40 LOW PR Prod Code: 390 Part Number Price Each	SCH 80 LOW PR Prod Code: 400 Part Number Price Each
16X12	3701-762 **1128.88**	3901-762 **1797.08**
16X14	3701-764 **1339.73**	3901-764 **1858.28**
18	3701-180 **1696.84**	3901-180 **2111.91**
18X4	3701-784 **997.40**	3901-784 **1159.69**
18X6	3701-786 **1013.19**	3901-786 **1312.28**
18X8	3701-788 **1054.77**	3901-788 **1361.41**
18X10	3701-790 **1188.84**	3901-790 **1375.72**
18X12	3701-792 **1266.49**	3901-792 **1691.18**
18X14	3701-794 **1358.41**	3901-794 **1944.79**
18X16	3701-796 **1458.03**	3901-796 **1987.24**
20	3701-200 **2259.68**	3901-200 **3039.14**
20X4	3701-814 **1205.44**	3901-814 **1610.09**
20X6	3701-816 **1275.55**	3901-816 **1815.75**
20X8	3701-818 **1347.84**	3901-818 **2229.95**
20X10	3701-820 **1446.47**	3901-820 **2303.86**
20X12	3701-822 **1531.62**	3901-822 **2433.54**
20X14	3701-824 **1652.83**	3901-824 **2646.92**
20X16	3701-826 **1760.01**	3901-826 **2695.20**
20X18	3701-828 **1941.35**	3901-828 **2913.97**
24	3701-240 **2815.19**	3901-240 **3645.26**
24X4	3701-904 **1659.87**	3901-904 **1996.06**
24X6	3701-906 **1744.75**	3901-906 **2251.09**
24X8	3701-908 **1851.04**	3901-908 **2435.12**
24X10	3701-910 **1955.56**	3901-910 **2649.68**
24X12	3701-912 **2060.67**	3901-912 **2788.15**
24X14	3701-914 **2201.79**	3901-914 **3091.48**
24X16	3701-916 **2328.91**	3901-916 **3190.04**
24X18	3701-918 **2530.18**	3901-918 **3345.66**
24X20	3701-920 **2716.49**	3901-920 **3499.60**

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

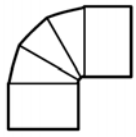
90° Ells

90° ELBOW (Soc x Soc)



Size	SCH 40 LOW PR Prod Code: 390 Part Number Price Each	SCH 80 LOW PR Prod Code: 400 Part Number Price Each
6	3706-060 **115.05**	3906-060 **148.94**
8	3706-080 **159.83**	3906-080 **250.15**
10	3706-100 **252.65**	3906-100 **493.81**
12	3706-120 **388.64**	3906-120 **720.11**
14	3706-140* **520.49**	3906-140 **1059.49**
16	3706-160 **771.87**	3906-160 **1317.69**

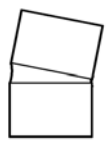
90° ELBOW (Soc x Soc) (continued)



Size	SCH 40 LOW PR Prod Code: 390 Part Number Price Each	SCH 80 LOW PR Prod Code: 400 Part Number Price Each
18	3706-180 **1147.99**	3906-180 **1696.33**
20	3706-200 **1291.21**	3906-200 **2000.03**
24	3706-240 **1614.71**	3906-240 **2992.62**

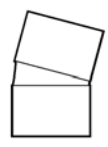
Non 90° Ells

11-1/4° ELBOW (Soc x Soc)



Size	SCH 40 LOW PR Prod Code: 390 Part Number Price Each	SCH 80 LOW PR Prod Code: 400 Part Number Price Each
4	3711-040 **41.13**	3911-040 **55.93**
6	3711-060 **66.07**	3911-060 **104.56**
8	3711-080 **111.69**	3911-080 **171.15**
10	3711-100 **168.54**	3911-100 **303.33**
12	3711-120 **266.62**	3911-120 **443.33**
14	3711-140 **419.17**	3911-140 **678.69**
16	3711-160 **571.40**	3911-160 **907.22**
18	3711-180 **639.49**	3911-180 **1171.17**
20	3711-200 **848.25**	3911-200 **1501.41**
24	3711-240 **1516.51**	3911-240 **1718.56**

15° ELBOW (Soc x Soc)

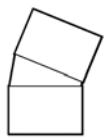


Size	SCH 40 LOW PR Prod Code: 390 Part Number Price Each	SCH 80 LOW PR Prod Code: 400 Part Number Price Each
4	3718-040 **41.13**	3918-040 **55.93**
6	3718-060 **66.07**	3918-060 **104.56**
8	3718-080 **111.69**	3918-080 **171.15**
10	3718-100 **168.54**	3918-100 **303.33**
12	3718-120 **266.62**	3918-120 **443.33**
14	3718-140 **419.17**	3918-140 **678.69**
16	3718-160 **571.40**	3918-160 **907.22**
18	3718-180 **639.49**	3918-180 **1171.17**
20	3718-200 **848.25**	3918-200 **1501.41**
24	3718-240 **1516.51**	3918-240 **1718.56**

22-1/2° ELBOW (Soc x Soc)

Size	SCH 40 LOW PR Prod Code: 390 Part Number Price Each	SCH 80 LOW PR Prod Code: 400 Part Number Price Each
4	3716-040 **41.13**	3916-040 **55.93**
6	3716-060 **66.07**	3916-060 **104.56**
8	3716-080 **111.69**	3916-080 **171.15**
10	3716-100* **168.54**	3916-100 **303.33**

22-1/2° ELBOW (Soc x Soc) (continued)



Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
12	3716-120* **266.62**	3916-120 **443.33**
14	3716-140* **419.17**	3916-140 **678.69**
16	3716-160 **571.40**	3916-160 **907.22**
18	3716-180 **686.21**	3916-180 **1171.17**
20	3716-200 **848.25**	3916-200 **1501.41**
24	3716-240 **1516.51**	3916-240 **1718.56**

22-1/2° STREET ELL (Spig x Soc)

Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
6	3742-060 **72.67**	3942-060 **114.98**
8	3742-080 **122.85**	3942-080 **188.25**
10	3742-100* **185.38**	3942-100 **333.67**
12	3742-120* **293.27**	3942-120 **487.67**
14	3742-140* **461.07**	3942-140 **746.57**
16	3742-160 **453.78**	3942-160 **997.94**
18	3742-180 **754.83**	3942-180 **1286.63**
20	3742-200 **1149.99**	3942-200 **1767.57**
24	3742-240 **1784.12**	3942-240 **2022.27**

30° ELBOW (Soc x Soc)

Size	SCH 40 DWV Prod Code: 390 Part Number Price Each	SCH 80 DWV Prod Code: 400 Part Number Price Each
4	3715-040 **41.13**	3915-040 **55.93**
6	3715-060 **66.07**	3915-060 **104.56**
8	3715-080 **111.69**	3915-080 **171.15**
10	3715-100 **168.54**	3915-100 **303.33**
12	3715-120 **266.62**	3915-120 **443.33**
14	3715-140 **419.17**	3915-140 **678.69**
16	3715-160 **571.40**	3915-160 **907.22**
18	3715-180 **686.21**	3915-180 **1171.17**
20	3715-200 **848.25**	3915-200 **1501.41**

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

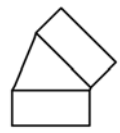
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Non 90° Ells

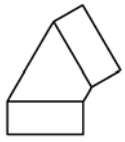
30° ELBOW (Soc x Soc) (continued)

	Size	SCH 40 LOW PR Prod Code: 390 Part Number Price Each	SCH 80 LOW PR Prod Code: 400 Part Number Price Each
	24	3715-240 **1516.51**	3915-240 **1718.56**

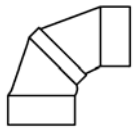
45° ELBOW (Soc x Soc)

	Size	SCH 40 LOW PR Prod Code: 390 Part Number Price Each	SCH 80 LOW PR Prod Code: 400 Part Number Price Each
	6	3717-060 **106.79**	3917-060 **175.23**
	8	3717-080 **127.87**	3917-080 **188.29**
	10	3717-100 **210.32**	3917-100 **344.93**
	12	3717-120 **295.38**	3917-120 **493.09**
	14	3717-140* **512.16**	3917-140 **708.63**
	16	3717-160 **632.38**	3917-160 **917.65**
	18	3717-180 **729.78**	3917-180 **1241.33**
	20	3717-200 **996.44**	3917-200 **1559.17**
	24	3717-240 **1324.03**	3917-240 **1835.55**

60° ELBOW (Soc x Soc)

	Size	SCH 40 LOW PR Prod Code: 390 Part Number Price Each	SCH 80 LOW PR Prod Code: 400 Part Number Price Each
	6	3724-060* **127.62**	3924-060 **186.16**
	8	3724-080* **182.08**	3924-080 **312.74**
	10	3724-100* **305.13**	3924-100 **586.19**
	12	3724-120* **399.78**	3924-120 **862.77**
	14	3724-140* **732.80**	3924-140 **1253.71**
	16	3724-160 **890.94**	3924-160 **1523.31**
	18	3724-180 **1144.59**	3924-180 **1696.33**
	20	3724-200 **1221.01**	3924-200 **2000.03**
	24	3724-240 **1573.16**	3924-240 **2136.66**

90° STREET ELL (Spig x Soc)

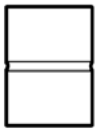
	Size	SCH 40 LOW PR Prod Code: 390 Part Number Price Each	SCH 80 LOW PR Prod Code: 400 Part Number Price Each
	4	---	3909-040 **140.14**
	6	3709-060* **122.13**	3909-060 **166.07**
	8	3709-080* **168.00**	3909-080 **273.49**
	10	3709-100* **280.72**	3909-100 **542.07**
	12	3709-120* **409.11**	3909-120 **796.41**
	14	3709-140* **565.74**	3909-140 **1163.83**
	16	3709-160 **879.91**	3909-160 **1445.39**
	18	3709-180 **1272.57**	3909-180 **1861.40**
	20	3709-200 **1434.48**	3909-200 **2196.24**
	24	3709-240 **1793.78**	3909-240 **2346.36**

45° STREET ELL (Spig x Soc)

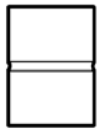
	Size	SCH 40 LOW PR Prod Code: 390 Part Number Price Each	SCH 80 LOW PR Prod Code: 400 Part Number Price Each
	4	3727-040 **100.47**	3927-040 **122.94**
	6	3727-060 **106.79**	3927-060 **175.23**
	8	3727-080 **127.87**	3927-080 **188.29**
	10	3727-100* **210.32**	3927-100 **344.93**
	12	3727-120* **295.38**	3927-120 **493.09**
	14	3727-140* **512.16**	3927-140 **708.63**
	16	3727-160 **632.38**	3927-160 **917.65**
	18	3727-180 **729.78**	3927-180 **1241.33**
	20	3727-200 **996.44**	3927-200 **1559.17**
	24	3727-240 **1324.03**	3927-240 **1835.55**

Couplings

COUPLING (Soc x Soc)

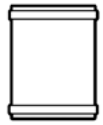
	Size	SCH 40 LOW PR Prod Code: 390 Part Number Price Each	SCH 80 LOW PR Dusc Code: 400 Part Number Price Each
	8	3729-080 **72.92**	3929-080 **161.42**
	10	3729-100 **89.66**	3929-100 **175.80**
	12	3729-120 **131.99**	3929-120 **202.64**
	14	3729-140 **214.33**	3929-140 **405.21**

COUPLING (Soc x Soc) (continued)

	Size	SCH 40 LOW PR Prod Code: 390 Part Number Price Each	SCH 80 LOW PR Dusc Code: 400 Part Number Price Each
	16	3729-160 **239.05**	3929-160 **481.75**
	18	3729-180 **407.66**	3929-180 **949.59**
	20	3729-200 **711.17**	3929-200 **1170.80**
	24	3729-240 **987.67**	3929-240 **2019.72**

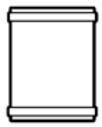
Couplings

REPAIR COUPLING (Gasket x Gasket)



Size	SCH 40 LOW PR Prod Code: 390 Part Number Price Each	SCH 80 LOW PR Prod Code: 400 Part Number Price Each
4	3728-040 **70.67**	3928-040 **82.57**
6	3728-060 **98.31**	3928-060 **116.36**
8	3728-080 **154.75**	3928-080 **196.84**
10	3728-100 **204.17**	3928-100 **275.43**
12	3728-120 **256.14**	3928-120 **350.02**
14	3728-140 **444.46**	3928-140 **775.04**

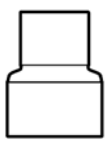
REPAIR COUPLING (Gasket x Gasket) (continued)



Size	SCH 40 LOW PR Prod Code: 390 Part Number Price Each	SCH 80 LOW PR Prod Code: 400 Part Number Price Each
16	3728-160 **654.84**	3928-160 **1162.79**
18	3728-180 **856.07**	3928-180 **1511.54**
20	3728-200 **1329.37**	3928-200 **1813.86**
24	3728-240 **1802.95**	3928-240 **2446.61**

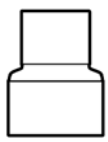
Reducer Couplings

REDUCER COUPLING (Soc x Soc)



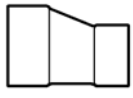
Size	SCH 40 LOW PR Prod Code: 390 Part Number Price Each	SCH 80 LOW PR Prod Code: 400 Part Number Price Each
6X2	3729-528* **106.04**	3929-528 **183.86**
6X3	3729-530* **104.38**	3929-530 **135.82**
6X4	3729-532 **37.87**	3929-532 **89.36**
8X2	3729-578 **178.37**	3929-578 **248.39**
8X3	3729-580 **165.13**	3929-580 **217.09**
8X4	3729-582* **93.87**	3929-582 **171.56**
8X6	3729-585* **80.68**	3929-585 **157.88**
10X4	3729-624* **211.83**	3929-624 **403.03**
10X6	3729-626* **197.41**	3929-626 **321.58**
10X8	3729-628* **138.17**	3929-628 **171.88**
12X4	3729-664* **398.29**	3929-664 **579.08**
12X6	3729-666* **302.00**	3929-666 **477.46**
12X8	3729-668* **265.79**	3929-668 **414.33**
12X10	3729-670* **201.13**	3929-670 **254.49**
14X4	3729-694* **640.96**	3929-694 **783.55**
14X6	3729-696* **620.52**	3929-696 **699.88**
14X8	3729-698* **449.17**	3929-698 **688.42**
14X10	3729-700* **379.36**	3929-700 **581.19**
14X12	3729-702* **336.89**	3929-702 **371.54**
16X4	3729-754 **686.02**	3929-754 **1151.38**
16X6	3729-756 **631.89**	3929-756 **1079.43**
16X8	3729-758 **574.99**	3929-758 **1019.47**
16X10	3729-760 **513.52**	3929-760 **708.78**
16X12	3729-762 **466.20**	3929-762 **651.57**
16X14	3729-764 **404.32**	3929-764 **549.29**

REDUCER COUPLING (Soc x Soc) (continued)



Size	SCH 40 LOW PR Prod Code: 390 Part Number Price Each	SCH 80 LOW PR Prod Code: 400 Part Number Price Each
18X6	3729-786 **1141.97**	3929-786 **1664.12**
18X8	3729-788 **968.57**	3929-788 **1539.96**
18X10	3729-790 **903.76**	3929-790 **1415.22**
18X12	3729-792 **846.17**	3929-792 **1182.77**
18X14	3729-794 **780.37**	3929-794 **1145.33**
18X16	3729-796 **582.94**	3929-796 **978.99**
20X6	3729-816 **1430.35**	3929-816 **2340.06**
20X8	3729-818 **1385.24**	3929-818 **2312.98**
20X10	3729-820 **1214.44**	3929-820 **2295.79**
20X12	3729-822 **1197.80**	3929-822 **2153.01**
20X14	3729-824 **1183.01**	3929-824 **2135.89**
20X16	3729-826 **1116.02**	3929-826 **1710.54**
20X18	3729-828 **985.94**	3929-828 **1179.55**
24X6	3729-906 **2876.69**	3929-906 **3956.64**
24X8	3729-908 **2794.27**	3929-908 **3923.63**
24X10	3729-910 **2310.33**	3929-910 **3910.22**
24X12	3729-912 **2234.16**	3929-912 **3847.04**
24X14	3729-914 **2118.48**	3929-914 **3834.16**
24X16	3729-916 **1945.19**	3929-916 **3686.85**
24X18	3729-918 **1722.43**	3929-918 **2810.95**
24X20	3729-920 **1294.84**	3929-920 **2520.93**

ECCENTRIC REDUCER COUPLING (Soc x Soc)



3X2	3729-338E **33.63**	3929-338E **46.85**
4X2	3729-420E[2] **45.67**	3929-420E[2] **119.53**
4X3	3729-422E **42.21**	3929-422E **55.31**

Reducer Couplings

ECCENTRIC REDUCER COUPLING (Soc x Soc) (continued)

Size	SCH 40 LOW PR Prod Code: 390 Part Number Price Each	SCH 80 LOW PR Prod Code: 400 Part Number Price Each
6X2	3729-528E3* **103.09**	3929-528E3 **155.61**
6X3	3729-530E2* **94.96**	3929-530E2 **151.18**
6X4	3729-532E2 **47.48**	3929-532E **115.31**
8X3	3729-580E3* **195.86**	3929-580E3 **219.72**
8X4	3729-582E2* **97.80**	3929-582E2 **199.43**
8X6	3729-585E* **79.06**	3929-585E **153.36**
10X4	3729-624E2* **223.63**	3929-624E3 **337.48**
10X6	3729-626E* **205.62**	3929-626E2 **286.43**
10X8	3729-628E* **193.86**	3929-628E **264.67**
12X4	3729-664E3* **417.24**	3929-664E4 **516.08**
12X6	3729-666E2* **342.84**	3929-666E3 **424.73**
12X8	3729-668E2* **227.35**	3929-668E2 **366.94**
12X10	3729-670E* **197.12**	3929-670E **234.55**
14X6	3729-696E3 **696.46**	3929-696E4 **840.68**
14X8	3729-698E3 **570.52**	3929-698E3 **752.04**

ECCENTRIC REDUCER COUPLING (Soc x Soc) (continued)

Size	SCH 40 LOW PR Prod Code: 390 Part Number Price Each	SCH 80 LOW PR Prod Code: 400 Part Number Price Each
14X10	3729-700E2 **517.91**	3929-700E2 **544.46**
14X12	3729-702E **316.62**	3929-702E **500.72**
16X6	3729-756E3 **727.75**	3929-756E5 **1553.20**
16X8	3729-758E3 **717.55**	3929-758E3 **1422.29**
16X10	3729-760E2 **530.60**	3929-760E3 **1034.67**
16X12	3729-762E **504.89**	3929-762E2 **918.62**
16X14	3729-764E **448.63**	3929-764E **711.53**
18X6	3729-786E4 **1034.39**	3929-786E6 **2144.06**
18X8	3729-788E4 **1019.07**	3929-788E5 **2052.44**
18X10	3729-790E3 **946.11**	3929-790E4 **1917.95**
18X12	3729-792E2 **853.85**	3929-792E3 **1711.92**
18X14	3729-794E2 **754.93**	3929-794E2 **1411.37**
18X16	3729-796E **608.98**	3929-796E **1377.17**

2=Two-Step Design, 3=Three-Step Design, 4=Four-Step Design, 5=Five-Step Design, 6=Six−Step Design

Crosses

CROSS (Soc x Soc x Soc x Soc)

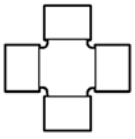
Size	SCH 40 LOW PR Prod Code: 390 Part Number Price Each	SCH 80 LOW PR Prod Code: 400 Part Number Price Each
4X2	---	3920-420 **128.75**
4X3	---	3920-422 **141.68**
6	3720-060 **149.72**	3920-060 **349.19**
6X2	3720-528 **112.39**	3920-528 **180.92**
6X3	3720-530 **133.09**	3920-530 **203.92**
6X4	3720-532 **146.74**	3920-532 **251.77**
8	3720-080 **302.39**	3920-080 **420.56**
8X2	3720-578 **194.14**	3920-578 **228.28**
8X3	3720-580 **210.04**	3920-580 **242.52**
8X4	3720-582 **230.75**	3920-582 **260.17**
8X6	3720-585 **290.34**	3920-585 **337.18**
10	3720-100 **492.23**	3920-100 **899.75**
10X2	3720-621 **206.18**	3920-621 **413.19**
10X3	3720-623 **237.47**	3920-623 **478.12**
10X4	3720-624 **272.42**	3920-624 **490.23**

CROSS (Soc x Soc x Soc x Soc) (continued)

Size	SCH 40 LOW PR Prod Code: 390 Part Number Price Each	SCH 80 LOW PR Prod Code: 400 Part Number Price Each
10X6	3720-626 **312.40**	3920-626 **599.02**
10X8	3720-628 **438.59**	3920-628 **790.47**
12	3720-120 **648.92**	3920-120 **1267.88**
12X2	3720-661 **272.48**	3920-661 **559.38**
12X3	3720-663 **305.82**	3920-663 **625.27**
12X4	3720-664 **323.31**	3920-664 **652.46**
12X6	3720-666 **395.19**	3920-666 **757.61**
12X8	3720-668 **480.24**	3920-668 **905.02**
12X10	3720-670 **557.41**	3920-670 **1031.31**
14	3720-140 **1077.99**	3920-140 **2254.40**
14X2	3720-691 **531.85**	3920-691 **849.16**
14X3	3720-693 **592.18**	3920-693 **935.49**
14X4	3720-694 **657.46**	3920-694 **1045.88**
14X6	3720-696 **739.54**	3920-696 **1173.82**
14X8	3720-698 **852.00**	3920-698 **1350.13**

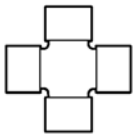
Crosses

CROSS (Soc x Soc x Soc x Soc) (continued)



Size	SCH 40 LOW PR Prod Code: 390 Part Number Price Each	SCH 80 LOW PR Prod Code: 400 Part Number Price Each
14X10	3720-700 **968.07**	3920-700 **1616.67**
14X12	3720-702 **1024.18**	3920-702 **1894.16**
16	3720-160 **1574.71**	3920-160 **2858.03**
16X2	3720-751 **729.81**	3920-751 **1151.72**
16X3	3720-753 **802.09**	3920-753 **1258.22**
16X4	3720-754 **832.74**	3920-754 **1332.33**
16X6	3720-756 **900.67**	3920-756 **1441.11**
16X8	3720-758 **1055.08**	3920-758 **1688.09**
16X10	3720-760 **1256.81**	3920-760 **1943.99**
16X12	3720-762 **1444.37**	3920-762 **2309.34**
16X14	3720-764 **1516.61**	3920-764 **2723.43**
18	3720-180 **2230.98**	3920-180 **3528.26**
18X4	3720-784 **902.92**	3920-784 **1681.48**
18X6	3720-786 **1273.02**	3920-786 **1921.92**
18X8	3720-788 **1442.29**	3920-788 **2292.78**
18X10	3720-790 **1559.93**	3920-790 **2598.43**
18X12	3720-792 **1658.54**	3920-792 **2882.65**
18X14	3720-794 **1747.72**	3920-794 **3080.84**
18X16	3720-796 **2028.41**	3920-796 **3346.52**
20	3720-200 **3795.47**	3920-200 **5956.54**
20X4	3720-814 **1594.17**	3920-814 **2209.73**
20X6	3720-816 **1655.49**	3920-816 **2390.37**

CROSS (Soc x Soc x Soc x Soc) (continued)



Size	SCH 40 LOW PR Prod Code: 390 Part Number Price Each	SCH 80 LOW PR Prod Code: 400 Part Number Price Each
20X8	3720-818 **2056.62**	3920-818 **2601.24**
20X10	3720-820 **2349.43**	3920-820 **3053.78**
20X12	3720-822 **2451.60**	3920-822 **3380.00**
20X14	3720-824 **2666.73**	3920-824 **3651.53**
20X16	3720-826 **2999.00**	3920-826 **4060.64**
20X18	3720-828 **3244.81**	3920-828 **4843.02**
24	3720-240 **4998.78**	3920-240 **7220.62**
24X4	3720-904 **2037.68**	3920-904 **2439.46**
24X6	3720-906 **2419.31**	3920-906 **2781.83**
24X8	3720-908 **2575.44**	3920-908 **3630.64**
24X10	3720-910 **2753.22**	3920-910 **3940.81**
24X12	3720-912 **3032.13**	3920-912 **4520.83**
24X14	3720-914 **3118.65**	3920-914 **5306.63**
24X16	3720-916 **3456.43**	3920-916 **5626.53**
24X18	3720-918 **3860.25**	3920-918 **5909.71**
24X20	3720-920 **4674.09**	3920-920 **6293.38**

Caps

CAP (Soc)

Size	SCH 40 LOW PR Prod Code: 390 Part Number Price Each	SCH 80 LOW PR Prod Code: 400 Part Number Price Each
10	3747-100* **116.99**	3947-100 **228.44**
12	3747-120* **147.74**	3947-120 **395.49**
14	3747-140* **251.21**	3947-140 **448.54**
16	3747-160 **321.58**	3947-160 **592.00**
18	3747-180 **355.83**	3947-180 **777.78**
20	3747-200 **626.78**	3947-200 **898.79**
24	3747-240 **926.49**	3947-240 **1042.91**

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

SPIGOT PLUG (Spigot)

	Size	SCH 40 LOW PR Prod Code: 390 Part Number Price Each	SCH 80 LOW PR Prod Code: 400 Part Number Price Each
	6	3749-060 **45.22**	3949-060 **136.77**
	8	3749-080 **115.51**	3949-080 **230.84**
	10	3749-100 **131.73**	3949-100 **291.85**
	12	3749-120 **188.81**	3949-120 **464.69**
	14	3749-140 **320.34**	**---**
	16	3749-160 **390.34**	3949-160 **675.96**

Manifolds Custom Fittings Offset Connectors

Custom Component Fabrication For Virtually Any Piping System Need!

Spears® has the capability to build custom piping system components to virtually any specifications for either pressure or nonpressure applications. Spears® experience in piping system component fabrications provides the highest quality and technology available for a variety of industry needs including Agriculture, Turf Irrigation, Water Parks, Aquariums, Pulp & Paper, Industrial and Chemical Processing.

Up to 48" Nominal Diameter Fabrication

Spears® forming capabilities can handle some of the largest thermoplastic piping component custom fabrication needs.

Pressure & Non-Pressure Applications

Produced primarily from thermoplastic pipe and piping system components, custom products can be fabricated for a variety of pressure applications based on design criteria and material selection from a variety of Schedule, Class and SDR ratings.

Superior FRP Bonding Technology

Spears® research in Fiberglass Reinforced Plastic (FRP) technology has developed superior bonding of fiberglass resin to PVC and CPVC thermoplastic materials. This eliminates weaker, “egg shell” reinforcement typical in many competitor FRP products.

High Quality Joining & Welding

From basic solvent cement welding to precision Hot-Air welds, Spears® controlled quality fabrication gives the highest assurance of sound, reliable construction.

Muti-Outlet Manifolding

Spears® specializes in multi-outlet manifolds built to specifications for a wide variety of inlet, outlet and reductions in socket, flanged, or threaded connections.

Special Fabrication Overview

Spears® Offers A Wide Variety of Cataloged PVC & CPVC Piping System Components Which Can Be Custom Fabricated to Almost Any User Specification Or Need . . .

Pressure Fitting - Schedule 40 & Schedule 80, CPVC up to 12", PVC up to 36" and higher!

Low Pressure Fittings - 130 psi Schedule 40 & Schedule 80 through 12"
100 psi Schedule 40 & Schedule 80 14" through 24"

DWV Fittings - ASTM F1866 Schedule 40 & Schedule 80 through 24"

Fabricated Flanges - IPS & PIP sizes, ANSI Class 125/150 or any specified Bolt Pattern

Duct Fittings - PVC & CPVC Fittings plus, Blast Gates, Rain Caps and Dampers through 24"

IPS Class Fittings - PVC Class 63, 125, 160 & 200 Socket & Gasketed through 24"

PIP Fittings - PVC 80#, 100#, 125# Socket & Gasketed through 24"

Low Head PIP - PVC Fittings, Vent & Gate Risers, Flanges

Virtually Endless Variety of Configurations . . .

Elbows	Wyes	Eccentric Reducers	Flanged
Tees	Double Wyes	Couplings	Threaded
Sanitary Tees	Combo Wyes	Gasketed	IPS x PIP
Bushings	Reducers	Socketed	Metric

Plus, Spears® Offers a Full Line of Injection Molded PVC, CPVC, & Polypropylene Fittings, Valves & Accessories To Compliment Any Custom Fabrication Project . . .

Schedule 40 Fittings	Ball Check Valves	Y-strainers	Large Butterfly Valves
Schedule 80 Fittings	Swing Check Valves	Basket Strainers	Valve Actuation
Ball Valves	Diaphragm Valves	Butterfly Valves	And Many More!

Quality Custom Fabrication For Today's Growing Industry Applications . . .

Industrial	Chemical	Mining	Municipal Water
Waste Water	Pulp & Paper	Plating	Cooling Systems
Water Parks	Aquariums	Agriculture	Turf Irrigation
Pharmaceutical	Food Processing	Air Handling	Chemical Waste

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

General Specifications For Standard Fabricated Fittings

In view of limited industry standards for fabricated fittings, a conscientious supplier should use due caution in selecting a fabricated fitting supplier. Considerable variations in product quality assurance and performance levels may exist with other manufacturers and similar products. Comparison of performance criteria should be evaluated in accordance with accepted industry and engineering practices.

1.0 Scope

1.1 This general specification covers fittings fabricated from PVC or CPVC pipe for both pressure rated and drainage, waste and vent (DWV) applications. Included are *general requirements* for materials, dimensions, structural conformance, pressure ratings, testing and workmanship. Additional requirements may be found in applicable referenced specifications.

2.0 Applicable Specifications & Referenced Documents

2.1 American Society for Testing and Materials (ASTM)

- D 1599 Test Method for Short-Term Hydraulic Failure Pressure of Plastic Pipe, Tubing and Fittings.
- D 1784 Specification for Rigid Poly (Vinyl Chloride) (PVC) Compound and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds
- D 1785 Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedule 40, 80 and 120
- D 2241 Specification for Poly (Vinyl Chloride) (PVC) Pressure-Rated Pipe (SDR Series)
- D 2466 Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40
- D 2467 Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80
- D 2563 Standard Practice for Classifying Visual Defects in Glass-Reinforced Plastic Laminate Parts
- D 2564 Specification for Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems
- D 2665 Specification for Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste and Vent Pipe and Fittings
- F 441 Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe, Schedule 40 & 80
- F 442 Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe (SDR-PR)
- F 477 Specification for Elastomeric Seals (Gaskets for Joining Plastic Pipe
- F 1498 Specification for Tapered Pipe Threads 60° for Thermoplastic Pipe and Fittings
- F 1866 Specification for Poly (Vinyl Chloride) (PVC) Plastic Schedule 40 Drainage and DWV Fabricated Fittings

2.2 Canadian Standards Association (CAN/CSA) B181.2 PVC Drain, Waste and Vent Pipe and Pipe Fittings

3.0 Basic Materials

3.1 Pipe - Fittings shall be fabricated from pipe stock certified by the National Sanitation Foundation (NSF) for use with potable water and in conformance with all applicable ASTM Specifications.

3.2 Solvent Cements - solvent cements shall be certified by NSF for use with potable water and in conformance with ASTM Specification D 2564.

3.3 Injection Molded Components - molded components used in fitting fabrication shall be certified by NSF for use with potable water and in conformance with applicable ASTM Specifications.

3.4 Gaskets - gaskets shall be in conformance with ASTM Specification F 477.

4.0 General Performance Specifications

4.1 All fabricated fittings shall meet or exceed the applicable performance criterial list below

1. Dimensional Conformance
   a. All sockets shall have an interference fit with applicable pipe.
   b. All change-of-direction fittings shall not exceed ± 1° variance in the specified angle.
   c. All standard stock fittings shall have specified cut lengths for all components in order to maintain dimensional consistence. Maximum overall deviations shall not exceed ± ½" for fittings to 12", ± 1" for sizes 14" & larger and all wyes.

2. Structural Conformance
   a. Burst Pressure - representative sample of fittings shall be tested to a minimum of two times the applicable maximum internal pressure rating in accordance with ASTM D 1599.
   b. Fabricated fittings shall meet the applicable requirements of the following Quality Assurance testing in accordance with the designated Standard Test Method.

TEST	STANDARD TEST METHOD
Burst Test	ASTM D 1599
Lap Shear Test	CAN/CSA B181.2
Joint Delamination	Spears® Test
Air-Gap Spark Test	Spears® Test
Fusion Bond Tensile Test	CAN/CSA B181.2
Fusion Bond Deflection	CAN/CSA B181.2
Branch Deflection Test (Bending)	CAN/CSA B181.2/ ASTM F 1866

   c. All DWV and Low Pressure fittings shall additionally meet the requirements of ASTM F 1866 and the applicable portions of CAN/CSA B181.2.

d. Fittings designed for use at pressures in excess of 130 psi may be reinforced where reinforcement has been deemed necessary for proper fitting performance.

e. Fiberglass reinforced fittings shall be free of visible chips, cracks, foreign inclusions, air bubbles, lack of fill-out, delamination and sharp obtrusive surfaces as defined in ASTM D 2563.

5.0 Product Labeling

5.1 Fittings or product packaging shall be labeled with the manufacturer's name, part number, size, description, product code and ASTM Specification Number, if applicable.

6.0 Pressure Rating of Spears® Fabricated Fittings

6.1 Spears® fabricated fittings are rated to the following maximum internal pressures for water at 73°F.

6.2 Schedule 40 & Schedule 80 Pressure Fittings

NOMINAL SIZE	SCHEDULE 40 PSI RATING	SCHEDULE 80 PSI RATING
2"	280	400
3"	260	370
4"	220	320
5"	190	290
6"	180	280
8"	160	250
10"	140	230
12"	130	230
14"	130	220
16"	130	220
18"	130	220
20"	120	220
24"	120	210

6.3 SDR Series Pressure Fittings (IPS & PIP Sizes)

SDR	COMMON REFERENCE	PSI RATING
21	Class 200 IPS	200
26	Class 160 IPS	160
32.5	Class 125 IPS / 125# PIP	125
41	Class 100 IPS / 100# PIP	100
51	80# PIP	80
64	Class 63 IPS	63

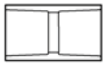
6.4 Ratings for Special Fabricated Fitting Configurations

TYPE	PSI RATING
Saddles	NPR
Duct Fittings	NPR
DWV Fittings	NPR
Wye, Combo Wye, Double Wye, Sanitary Tee (DWV)	NPR
Wye, Sanitary Tee (reinforced)	100
Schedule 40 & 80 Low Pressure (thru 12")	130
Schedule 40 & 80 Low Pressure (14" thru 24")	100
50 & 100 ft. Head (Low Head)	43
IPS Flange (Steel Ring)	150
IPS Flange (Plastic Ring)	50
PIP Flange 6" - 16" (Plastic Ring)	125
PIP Flange 14" - 24" (Steel Ring)	125
Blind Flange 14" - 24"	50

Note: NPR = Non Pressure Rated
Custom fabricated fittings and manifolds are manufactured to user specification and may not meet the above specified requirements.

PN16 PVC Metric Fittings

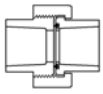
PVC TRANSITION COUPLING
JIS Socket (mm) x ASTM Socket (in)



PN 16 - 232 psi Pressure Rating at 23°C (73°F)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8229-016	**16 DN X 1/2**	25	150	197	5.98
8229-020	**20 DN X 3/4**	25	150	197	8.09
8229-025	**25 DN X 1**	20	160	197	8.32
8229-030	**30 DN X1-1/4**	20	0	197	12.67
8229-040	**40 DN X 1-1/2**	10	0	197	13.66
8229-050	**50 DN X 2**	10	0	197	14.67

PVC UNION FKM
Socket



PN 16 - 232 psi Pressure Rating at 23°C (73°F)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
657-020	**20 d**	10	60	190	12.26
657-025	**25 d**	10	60	190	15.58
657-032	**32 d**	10	40	190	17.77

PVC UNION FKM (continued)
Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
657-040	**40 d**	5	20	190	35.31
657-050	**50 d**	5	0	190	39.99
657-063	**63 d**	5	0	190	54.21

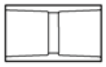
PVC UNION EPDM
Socket

PN 16 - 232 psi Pressure Rating at 23°C (73°F)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
697-020	**20 d**	10	60	190	12.08
697-025	**25 d**	10	60	190	15.38
697-032	**32 d**	10	40	190	17.60
697-040	**40 d**	5	20	190	34.89
697-050	**50 d**	5	0	190	39.48
697-063	**63 d**	5	0	190	53.57

PN16 CPVC Metric Fittings

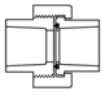
CPVC TRANSITION COUPLING
JIS Socket (mm) x ASTM Socket (in)



PN 16 - 232 psi Pressure Rating at 23°C (73°F)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8229-016C	**16 DN X1/2**	25	150	197	6.38
8229-020C	**20 DN X 3/4**	25	150	197	8.92
8229-025C	**25 DN X 1**	20	160	197	12.01
8229-030C	**30 DN X 1-1/4**	20	0	197	17.99
8229-040C	**40 DN X 1-1/2**	10	0	197	22.64
8229-050C	**50 DN X 2**	10	0	197	26.32

CPVC UNION FKM
Socket



PN 16 - 232 psi Pressure Rating at 23°C (73°F)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
657-020C	**20 d**	10	60	192	27.38
657-025C	**25 d**	10	60	192	28.60
657-032C	**32 d**	10	40	192	34.33
657-040C	**40 d**	5	20	192	69.46
657-050C	**50 d**	5	0	192	70.73
657-063C	**63 d**	5	0	192	117.24

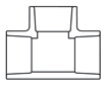
CPVC UNION EPDM
Socket

PN 16 - 232 psi Pressure Rating at 23°C (73°F)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
697-020C	**20 d**	10	60	192	27.29
697-025C	**25 d**	10	40	192	28.26
697-032C	**32 d**	10	40	192	33.86
697-040C	**40 d**	5	20	192	68.57
697-050C	**50 d**	5	0	192	69.87
697-063C	**63 d**	5	0	192	115.80

Class 10/12 PVC & CPVC Metric Fittings & Class 150 Flanges

PVC TEE
Socket



PN 10

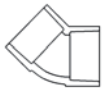
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
6201-060	**160 d**	4	0	190	225.66
6201-080	**225 d**	2	0	190	523.37
6201-160040	**160 d X 4**	2	0	190	225.66
601-280	**280 d**	1	0	191	1729.11

PVC 90° ELL
Socket

PN 10

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
6206-060	**160 d**	4	0	190	134.19
6206-080	**225 d**	2	0	190	369.86
606-280	**280 d**	1	0	191	1655.26

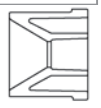
PVC 45° ELL
Socket



PN 10

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
6217-060	**160 d**	5	0	190	161.26
6217-080	**225 d**	2	0	190	349.63
617-280	**280 d**	2	0	191	921.33

PVC REDUCER BUSHING
Spigot x Socket



PN 10

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
637-225160	**225 X 160 d**	3	0	190	216.89

PVC CAP
Socket

PN 10

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
6247-060	**160 d**	4	0	190	261.68

CPVC WYE
Socket

PN 10

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
6275-160110C	**160 d X 110 d**	5	0	192	635.33

PVC FLANGE One Piece*
ASTM Socket x Multi-bolt Pattern Ring

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
M851-100	**10**	2	0	081	189.75
M851-120	**12**	2	0	081	326.80

Hubs fit 10" and 12" ASTM IPS pipe. Rings are manufactured to accept bolt patterns in size 10" and 12" in ANSI Class 150, B.S. 4504 PN10, B.S. 4504 PN16, Table E & JIS 10K for size 10", Table D & E for size 12" Consult Spears® Manufacturing Company Technical Services for additional information. Not for use with wafer valves.

CPVC FLANGE One Piece*
ASTM Socket x Multi-bolt Pattern Ring

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
M851-100C	**10**	2	0	091	518.75
M851-120C	**12**	2	0	091	799.50

Hubs fit 10" and 12" ASTM IPS pipe. Rings are manufactured to accept bolt patterns in size 10" and 12" in ANSI Class 150, B.S. 4504 PN10, B.S. 4504 PN16, B.S. 10 Table E for size 10". Consult Spears® Manufacturing Company Technical Services for additional information. Not for use with wafer valves.

PVC FLANGE* Van Stone Style
ASTM Socket x Multi-bolt Pattern Ring

150 psi

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
M854-020	**2**	10	0	080	30.14
M854-060	**6**	5	0	080	102.36
M854-080	**8**	2	0	080	166.68

* Hubs fit 2", 6" and 8" ASTM IPS pipe. Rings are manufactured to accept bolt patterns in size 2", 6" and 8" in ANSI Class 150, B.S. 4504 PN10 B.S. 4504 PN16 (except 8"), B.S. 10 Table D and B.S. 10 Table E. Consult Spears® Manufacturing Company Technical Services for additional information. Not for use with wafer valves.

PVC FLANGE* Van Stone Style
Spigot x Multi-bolt Pattern Ring

150 psi

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
M856-020	**2**	10	0	080	30.37
M856-060	**6**	4	0	080	103.20
M856-080	**8**	2	0	080	167.94

* Spigots fit 2", 6" and 8" ASTM IPS fitting socket. Rings are manufactured to accept bolt patterns in size 2", 6" and 8" in ANSI Class 150, B.S. 4504 PN10 B.S. 4504 PN16 (except 8"), B.S. 10 Table D and B.S. 10 Table E. Consult Spears® Manufacturing Company Technical Services for additional information. Not for use with wafer valves.

PVC FLANGE* Van Stone Style
ASTM Socket x Table D&E Drilling

150 psi

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
854-030DE	**3"/80 nom.**	10	0	080	51.44
854-040DE	**4"/110 nom.**	5	0	080	65.07

* Hubs fit 3"or 4" ASTM IPS Pipe. Rings are manufactured to BS 10 Table D & Table E bolt patterns.

PVC FLANGE* Van Stone Style
ASTM Spigot x Table D&E Drilling

150 psi

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
856-030DE	**3"/80 nom.**	10	0	080	51.85
856-040DE	**4"/110 nom.**	10	0	080	65.61

* Spigots fit 3" or 4" ASTM IPS fitting sockets. Rings are manufactured to BS 10 Table D & Table E bolt patterns.

PVC FLANGE* Van Stone Style
ASTM Socket x DIN PN 10/16 Drilling

150 psi

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
854-030DIN	**3"/80 nom.**	10	0	080	51.44
854-040DIN	**4"/110 nom.**	5	0	080	65.07

* Hubs fit 3" or 4" ASTM IPS Pipe. Rings are manufactured to DIN 8063-4 PN 10 and PN 16 bolt patterns.

CPVC FLANGE* Van Stone Style
ASTM Socket x DIN PN 10/16 Drilling

150 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
854-030CDIN	**3**	10	0	090	107.56
854-040CDIN	**4**	5	0	090	145.25

* Hubs fit 3" or 4" ASTM IPS Pipe. Rings are manufactured to DIN 8063-4 PN 10 and PN 16 bolt patterns.

PVC FLANGE* Van Stone Style
ASTM Spigot x DIN PN 10/16 Drilling

150 psi

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
856-030DIN	**3"/80 nom.**	10	0	080	51.85
856-040DIN	**4"/110 nom.**	5	0	080	65.61

* Spigots fit 3" or 4" ASTM IPS fitting sockets. Rings are manufactured to DIN 8063-4 PN 10 and PN 16 bolt patterns.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Class 10/12 PVC & CPVC Metric Fittings & Class 150 Flanges & PVC ASTM Schedule 40 Socket x BSP Adapter Fittings (White & Gray)

Class 10/12 PVC & CPVC Metric Fittings & Class 150 Flanges

PVC FLANGE* Van Stone Style
Metric Socket x Multi Pattern Ring

150 psi

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
6254-160	**160 d**	5	0	190	102.36
6254-200	**200 d**	2	0	190	166.68
6254-225	**225 d**	2	0	190	166.68

PVC FLANGE* Van Stone Style (continued)
Metric Socket x Multi Pattern Ring

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
6254-280	**280 d**	2	0	191	215.79

* Hubs are manufactured to fit 160mm - 225mm and 280 mm O.D. Pipe. Rings are manufactured to accept bolt patterns for ANSI Class 150, B.S. 4504 PN10, B.S. 4504 PN16 (except 225mm), B.S. 10 Table D (except 280mm) and B.S. 10 Table E. Consult Spears® Manufacturing Company Technical Services for additional information. Not for use with wafer valves.

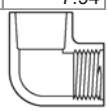
PVC ASTM Schedule 40 Socket x BSP Adapter Fittings (White & Gray)

PVC WHITE TEE
ASTM Socket x FBSP

SCH 40

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
302-007	**3/4**	50	0	195	1.64
302-010	**1**	50	0	195	3.04
302-131	**1X3/4**	50	0	195	3.04
302-211	**1-1/2X1**	25	0	195	6.31
302-249	**2X1**	10	0	195	7.94

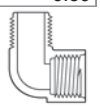
PVC WHITE 90° ELL
ASTM Socket x FBSP



SCH 40

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
307-007	**3/4**	50	0	195	.92
307-010	**1**	50	0	195	1.72
307-131	**1X3/4**	50	0	195	2.64
307-211	**1-1/2X1**	25	0	195	6.39

HDPE BLACK 90° STREET ELL
MBSP X FBSP



N.P.R.

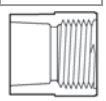
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
M312-010	**1**	50	0	195	3.69

PVC WHITE RISER EXTENSION
MBSP X FBSP

SCH 40

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
334-007	**3/4**	50	400	195	1.98
334-010	**1**	50	0	195	2.47

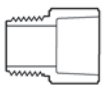
PVC WHITE FEMALE ADAPTER
ASTM Socket x FBSP



SCH 40

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
335-010	**1**	50	0	195	1.06
335-012	**1-1/4**	25	0	195	1.64
335-015	**1-1/2**	25	0	195	1.88
335-020	**2**	10	0	195	2.53

PVC WHITE MALE ADAPTER
MBSP x ASTM Socket



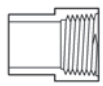
SCH 40

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
336-005	**1/2**	50	300	195	.58
336-007	**3/4**	50	400	195	.64
336-010	**1**	50	300	195	1.16
336-012	**1-1/4**	25	200	195	1.41
336-015	**1-1/2**	25	0	195	1.88
336-020	**2**	25	0	195	2.47
336-030	**3**	10	0	195	10.67

PVC WHITE MALE ADAPTER (continued)
MBSP x ASTM Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
336-131	**1X3/4**	50	400	195	3.54

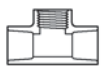
PVC WHITE FEMALE ADAPTER
ASTM Spigot x FBSP



SCH 40

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
378-010	**1**	50	0	195	1.62
378-015	**1-1/2**	20	0	195	2.62
378-020	**2**	20	0	195	3.85

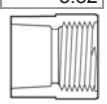
PVC GRAY TEE
Socket



SCH 40

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
302-010G	**1**	50	0	196	3.40
302-012G	**1-1/4**	25	0	196	5.40
302-211G	**1-1/2X1**	25	0	196	6.99
302-249G	**2X1**	10	0	196	8.82

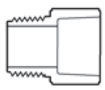
PVC GRAY FEMALE ADAPTER
ASTM Socket x FBSP



SCH 40

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
335-010G	**1**	50	0	196	1.19
335-012G	**1-1/4**	25	0	196	1.81
335-015G	**1-1/2**	25	0	196	2.12
335-020G	**2**	10	0	196	2.83
335-025G	**2-1/2**	5	0	196	7.13

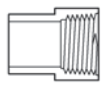
PVC GRAY MALE ADAPTER
MBSP x ASTM Socket



SCH 40

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
336-010G	**1**	50	300	196	1.27
336-012G	**1-1/4**	25	200	196	1.54
336-015G	**1-1/2**	25	0	196	2.12
336-020G	**2**	25	0	196	2.74
336-025G	**2-1/2**	5	0	196	8.09
336-030G	**3**	10	0	196	11.87
336-040G	**4**	5	0	196	15.11

PVC GRAY FEMALE ADAPTER
ASTM Spigot x FBSP

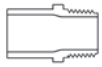


Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
378-010G	**1**	50	0	196	1.71
378-015G	**1-1/2**	25	0	196	2.92
378-020G	**2**	20	0	196	4.28

PVC ASTM Schedule 40 Socket x BSP Adapter Fittings (White & Gray) & PVC Transition Unions

PVC ASTM Schedule 40 Socket x BSP Adapter Fittings (White & Gray)

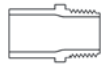
PVC GRAY TAKE-OFF ADAPTER
Spigot x MBSP



SCH 40

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
361-005G	**1/2**	50	300	196	1.02
361-007G	**3/4**	50	400	196	1.16
361-010G	**1**	50	0	196	2.00
361-012G	**1-1/4**	25	100	196	2.47
361-015G	**1-1/2**	25	0	196	3.31
361-020G	**2**	25	0	196	4.07

PVC GRAY REDUCING TAKE–OFF ADAPTER
Spigot/Socket x MBSP

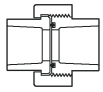


SCH 40

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
361-168G	**1-1/4X1X1**	25	100	196	2.47
361-212G	**1-1/2X1-1/4X1-1/4**	25	0	196	3.31
361-251G	**2X1-1/2X1-1/2**	25	0	196	4.07

PVC Transition Unions

PVC Transition Union
DIN (mm) Soc x ASTM (in.) Soc with FKM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

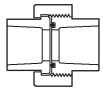
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8657-020	**20 d X 1/2**	10	60	197	11.01
8657-025	**25 d X 3/4**	10	40	197	14.02
8657-032	**32 d X1**	10	40	197	16.00
8657-040	**40 d X 1-1/4**	10	0	197	31.78
8657-050	**50 d X 1-1/2**	10	0	197	35.99
8657-063	**63 d X 2**	5	0	197	48.81
8657-090	**90 d X 3**	5	0	197	90.85
8657-110	**110 d X 4**	4	0	197	126.54

PVC Transition Union
DIN (mm) Soc x ASTM (in.) Fipt with FKM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8658-020	**20 d X 1/2**	10	60	197	13.45
8658-025	**25 d X 3/4**	20	80	197	18.80
8658-032	**32 d X1**	15	90	197	25.01
8658-040	**40 d X 1-1/4**	10	0	197	47.76
8658-050	**50 d X 1-1/2**	10	0	197	59.12
8658-063	**63 d X 2**	5	0	197	90.96
8658-090	**90 d X 3**	5	0	197	214.72
8658-110	**110 d X 4**	4	0	197	246.77

PVC Transition Union
DIN (mm) Soc x ASTM (in.) Soc with EPDM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8697-020	**20 d X1/2**	20	240	197	10.87
8697-025	**25 d X 3/4**	10	60	197	13.85
8697-032	**32d X 1**	15	90	197	15.84
8697-040	**40 d X 1-1/4**	10	0	197	31.40
8697-050	**50 d X 1-1/2**	10	0	197	35.55
8697-063	**63 d X 2**	5	0	197	48.21
8697-090	**90 d X 3**	5	0	197	89.72
8697-110	**110 d X 4**	4	0	197	124.08

PVC Transition Union
DIN (mm) Soc x ASTM (in.) Fipt with EPDM O-ring Seal

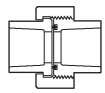
235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8698-020	**20 d X 1/2**	20	160	197	13.26
8698-025	**25 d X 3/4**	20	80	197	18.56
8698-032	**32 d X 1**	15	90	197	24.69
8698-040	**40 d X 1-1/4**	10	0	197	46.94
8698-050	**50 d X 1-1/2**	10	0	197	58.38
8698-063	**63 d X 2**	5	0	197	89.84

PVC Transition Union (continued)
DIN (mm) Soc x ASTM (in.) Fipt with EPDM O-ring Seal

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8698-090	**90 d X 3**	5	0	197	212.03
8698-110	**110 d X 4**	4	0	197	243.45

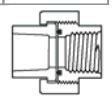
PVC Transition Union
JIS (mm) Soc x ASTM (in.) Soc with FKM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8257-016	**16 DN X 1/2**	20	160	197	11.01
8257-020	**20 DN X 3/4**	10	40	197	14.02
8257-025	**25 DN X1**	15	90	197	16.00
8257-030	**30 DN X 1-1/4**	10	0	197	31.78
8257-040	**40 DN X 1-1/2**	10	0	197	35.99
8257-050	**50 DN X 2**	5	0	197	48.81
8257-075	**75 DN X 3**	5	0	197	90.85
8257-100	**100 DN X 4**	4	0	197	126.54

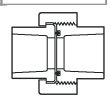
PVC Transition Union
JIS (mm) Soc x ASTM (in.) Fipt with FKM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8258-016	**16 DN X 1/2**	20	160	197	13.45
8258-020	**20 DN X 3/4**	20	80	197	18.80
8258-025	**25 DN X 1**	15	90	197	25.01
8258-030	**30 DN X 1-1/4**	10	0	197	47.76
8258-040	**40 DN X 1-1/2**	10	0	197	59.12
8258-050	**50 DN X 2**	5	0	197	90.96
8258-075	**75 DN X 3**	5	0	197	214.72
8258-100	**100 DN X 4**	4	0	197	246.77

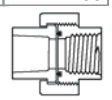
PVC Transition Union
JIS (mm) Soc x ASTM (in.) Soc with EPDM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8297-016	**16 DN X 1/2**	20	160	197	10.87
8297-020	**20 DN X 3/4**	20	80	197	13.85
8297-025	**25 DN X 1**	15	90	197	15.84
8297-030	**30 DN X 1-1/4**	10	0	197	31.40
8297-040	**40 DN X 1-1/2**	10	0	197	35.55
8297-050	**50 DN X 2**	5	0	197	48.21
8297-075	**75 DN X 3**	5	0	197	89.72
8297-100	**100 DN X 4**	4	0	197	124.08

PVC Transition Union
JIS (mm) Soc x ASTM (in.) Fipt with EPDM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8298-016	**16 DN X 1/2**	20	160	197	13.26
8298-020	**20 DN X 3/4**	20	80	197	18.56

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

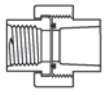
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Transition Unions

PVC Transition Union (continued)
JIS (mm) Soc x ASTM (in.) Fipt with EPDM O-ring Seal

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
8298-025	**25 DN X 1**	15	90	197	24.69
8298-030	**30 DN X 1-1/4**	10	0	197	46.94
8298-040	**40 DN X 1-1/2**	10	0	197	58.38
8298-050	**50 DN X 2**	5	0	197	89.84
8298-075	**75 DN X 3**	5	0	197	212.03
8298-100	**100 DN X 4**	4	0	197	243.45

PVC Transition Union
BSP Thread (in.) x ASTM (in.) Soc with FKM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

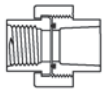
8359-005	**1/2**	20	160	197	13.45
8359-007	**3/4**	20	80	197	18.80
8359-010	**1**	15	90	197	25.01
8359-012	**1-1/4**	10	0	197	47.76
8359-015	**1-1/2**	10	0	197	59.12
8359-020	**2**	5	0	197	90.96
8359-030	**3**	5	0	197	214.72
8359-040	**4**	4	0	197	246.77

PVC Transition Union
BSP Thread (in.) x ASTM (in.) Fipt with FKM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8358-005	**1/2**	20	160	197	12.82
8358-007	**3/4**	20	80	197	17.91
8358-010	**1**	15	90	197	23.84
8358-012	**1-1/4**	10	0	197	45.48
8358-015	**1-1/2**	10	0	197	56.31
8358-020	**2**	5	0	197	86.64
8358-030	**3**	5	0	197	219.76
8358-040	**4**	4	0	197	258.26

PVC Transition Union
BSP Thread (in.) x ASTM (in.) Soc with EPDM O-ring Seal



235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8399-005	**1/2**	10	60	197	13.26
8399-007	**3/4**	20	80	197	18.56
8399-010	**1**	15	90	197	24.69
8399-012	**1-1/4**	10	0	197	47.17
8399-015	**1-1/2**	10	0	197	58.38
8399-020	**2**	5	0	197	89.84
8399-030	**3**	5	0	197	212.03
8399-040	**4**	4	0	197	243.45

PVC Transition Union
BSP Thread (in.) x ASTM (in.) Fipt with EPDM O-ring Seal

235 psi Maximum Internal Pressure Rating @ 73°F (23°C)

8398-005	**1/2**	10	60	197	12.63
8398-007	**3/4**	10	60	197	17.68
8398-010	**1**	10	40	197	23.54
8398-012	**1-1/4**	5	20	197	44.92
8398-015	**1-1/2**	5	0	197	55.60
8398-020	**2**	5	0	197	89.33
8398-030	**3**	5	0	197	217.04
8398-040	**4**	4	0	197	253.84

True Union Ball Valves (Regular Style)

Pressure Rating @ 73°F (23°C), Water
2-1/2" - 4" PN 10

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Pressure Deratings Apply

Rated for Vacuum Service

PTFE Seats

PVC True Union Ball Valve (Regular Style)
DIN SOC EPDM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
2324-025	**75MM**	1	0	238	323.80
2324-030	**90MM**	1	0	238	426.91
2324-040	**110MM**	1	0	238	721.29

PVC True Union Ball Valve (Regular Style)
DIN SOC FKM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
2334-025	**75MM**	1	0	238	438.75
2334-030	**90MM**	1	0	238	474.35
2334-040	**110MM**	1	0	238	801.42

True Union Ball Valves (Regular Style)

PVC True Union Ball Valve (Regular Style)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BSP Threaded EPDM					
2325-025	**2-1/2**	1	0	238	323.80
2325-030	**3**	1	0	238	426.91
2325-040	**4**	1	0	238	721.29

PVC True Union Ball Valve (Regular Style)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BSP Threaded FKM					
2335-025	**2-1/2**	1	0	238	438.75
2335-030	**3**	1	0	238	474.35
2335-040	**4**	1	0	238	801.42

CPVC True Union Ball Valve (Regular Style)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DIN SOC EPDM					
2324-025C	**75MM**	1	0	239	542.01
2324-030C	**90MM**	1	0	239	633.75
2324-040C	**110MM**	1	0	239	1148.37

CPVC True Union Ball Valve (Regular Style)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DIN SOC FKM					
2334-025C	**75MM**	1	0	239	602.21
2334-030C	**90MM**	1	0	239	704.19
2334-040C	**110MM**	1	0	239	1275.97

CPVC True Union Ball Valve (Regular Style)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BSP Threaded EPDM					
2325-025C	**2-1/2**	1	0	239	542.15
2325-030C	**3**	1	0	239	633.75
2325-040C	**4**	1	0	239	1148.37

CPVC True Union Ball Valve (Regular Style)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BSP Threaded FKM					
2335-025C	**2-1/2**	1	0	239	602.21
2335-030C	**3**	1	0	239	704.19
2335-040C	**4**	1	0	239	1275.97

PVC & CPVC True Union 2000 Industrial Ball Valves

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" PN 16

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Pressure Deratings Apply
Rated for Vacuum Service
PTFE Seats
Locking Handle

PVC True Union 2000 Industrial Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DIN SOC EPDM					
1824-005	**20 d**	1	18	238	49.69
1824-007	**25 d**	1	18	238	58.80
1824-010	**32 d**	1	12	238	70.02
1824-012	**40 d**	1	8	238	96.86
1824-015	**50 d**	1	8	238	116.67
1824-020	**63 d**	1	4	238	153.96

PVC True Union 2000 Industrial Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DIN SOC FKM					
1834-005	**20 d**	1	18	238	55.27
1834-007	**25 d**	1	18	238	65.41
1834-010	**32 d**	1	12	238	77.99
1834-012	**40 d**	1	8	238	123.64
1834-015	**50 d**	1	8	238	129.52
1834-020	**63 d**	1	4	238	169.54

PVC True Union 2000 Industrial Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BSP Threaded EPDM					
1825-005	**1/2**	1	18	238	49.69
1825-007	**3/4**	1	18	238	58.80

PVC True Union 2000 Industrial Ball Valves (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BSP Threaded EPDM					
1825-010	**1**	1	12	238	70.02
1825-012	**1-1/4**	1	8	238	96.86
1825-015	**1-1/2**	1	8	238	116.67
1825-020	**2**	1	4	238	153.96

PVC True Union 2000 Industrial Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BSP Threaded FKM					
1835-005	**1/2**	1	18	238	55.27
1835-007	**3/4**	1	18	238	65.41
1835-010	**1**	1	12	238	77.99
1835-012	**1-1/4**	1	8	238	123.64
1835-015	**1-1/2**	1	8	238	129.52
1835-020	**2**	1	4	238	169.54

PVC True Union 2000 Industrial Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
JIS SOC EPDM					
1828-005	**16 DN**	1	18	238	49.69
1828-007	**20 DN**	1	18	238	58.80
1828-010	**25 DN**	1	12	238	70.02
1828-012	**30 DN**	1	8	238	96.86
1828-015	**40 DN**	1	8	238	116.67

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC & CPVC True Union 2000 Industrial Ball Valves

PVC True Union 2000 Industrial Ball Valves (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
JIS SOC EPDM					
1828-020	**50 DN**	1	4	238	153.96

PVC True Union 2000 Industrial Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
JIS SOC FKM					
1838-005	**16 DN**	1	18	238	55.27
1838-007	**20 DN**	1	18	238	65.41
1838-010	**25 DN**	1	12	238	77.99
1838-012	**30 DN**	1	8	238	123.64
1838-015	**40 DN**	1	8	238	129.52
1838-020	**50 DN**	1	4	238	169.54

CPVC True Union 2000 Industrial Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DIN SOC EPDM					
1824-005C	**20 d**	1	18	239	65.63
1824-007C	**25 d**	1	18	239	82.65
1824-010C	**32 d**	1	12	239	98.40
1824-012C	**40 d**	1	8	239	156.43
1824-015C	**50 d**	1	8	239	165.21
1824-020C	**63 d**	1	4	239	220.95

CPVC True Union 2000 Industrial Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DIN SOC FKM					
1834-005C	**20 d**	1	18	239	72.93
1834-007C	**25 d**	1	18	239	91.86
1834-010C	**32 d**	1	12	239	109.33
1834-012C	**40 d**	1	8	239	173.86
1834-015C	**50 d**	1	8	239	183.57
1834-020C	**63 d**	1	4	239	254.00

CPVC True Union 2000 Industrial Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BSP Threaded EPDM					
1825-005C	**1/2**	1	18	239	65.63
1825-007C	**3/4**	1	18	239	82.65
1825-010C	**1**	1	12	239	98.40
1825-012C	**1-1/4**	1	8	239	156.43
1825-015C	**1-1/2**	1	8	239	165.21
1825-020C	**2**	1	4	239	220.95

CPVC True Union 2000 Industrial Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BSP Threaded FKM					
1835-005C	**1/2**	1	18	239	72.93
1835-007C	**3/4**	1	18	239	91.86
1835-010C	**1**	1	12	239	109.33
1835-012C	**1-1/4**	1	8	239	173.86
1835-015C	**1-1/2**	1	8	239	183.57
1835-020C	**2**	1	4	239	254.00

CPVC True Union 2000 Industrial Ball Valves

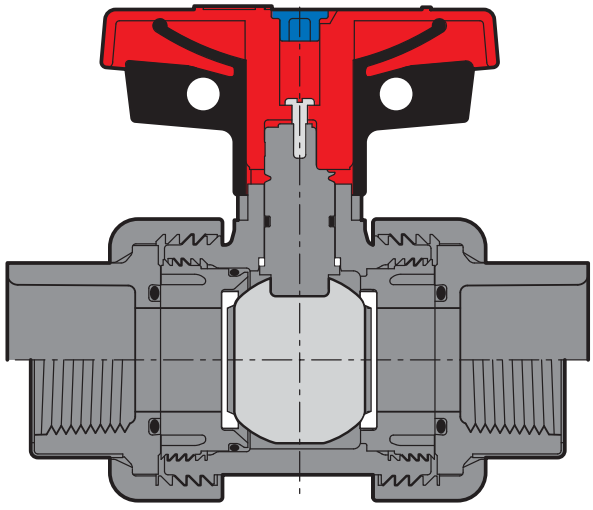
Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
JIS SOC EPDM					
1828-005C	**16 DN**	1	18	239	65.63
1828-007C	**20 DN**	1	18	239	82.65

CPVC True Union 2000 Industrial Ball Valves (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
JIS SOC EPDM					
1828-010C	**25 DN**	1	12	239	98.40
1828-012C	**30 DN**	1	8	239	156.43
1828-015C	**40 DN**	1	8	239	165.21
1828-020C	**50 DN**	1	4	239	220.95

CPVC True Union 2000 Industrial Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
JIS SOC FKM					
1838-005C	**16 DN**	1	18	239	72.93
1838-007C	**20 DN**	1	18	239	91.86
1838-010C	**25 DN**	1	12	239	109.02
1838-012C	**30 DN**	1	8	239	173.86
1838-015C	**40 DN**	1	8	239	183.57
1838-020C	**50 DN**	1	4	239	254.00



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PVC & CPVC True Union 2000 Standard Ball Valves

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" PN 16

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Pressure Deratings Apply
PE Seats

PVC True Union 2000 Standard Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DIN SOC EPDM					
3624-005	**20 d**	1	18	238	39.77
3624-007	**25 d**	1	18	238	47.03
3624-010	**32 d**	1	18	238	56.02
3624-012	**40 d**	1	12	238	77.48
3624-015	**50 d**	1	8	238	93.35
3624-020	**63 d**	1	8	238	123.18

PVC True Union 2000 Standard Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DIN SOC FKM					
3634-005	**20 d**	1	18	238	44.23
3634-007	**25 d**	1	18	238	52.32
3634-010	**32 d**	1	18	238	62.40
3634-012	**40 d**	1	12	238	98.91
3634-015	**50 d**	1	8	238	103.62
3634-020	**63 d**	1	8	238	135.62

PVC True Union 2000 Standard Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BSP Threaded EPDM					
3625-005	**1/2**	1	18	238	39.77
3625-007	**3/4**	1	18	238	47.03
3625-010	**1**	1	18	238	56.02
3625-012	**1-1/4**	1	12	238	77.48
3625-015	**1-1/2**	1	8	238	93.35
3625-020	**2**	1	8	238	123.18

PVC True Union 2000 Standard Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BSP Threaded FKM					
3635-005	**1/2**	1	18	238	44.23
3635-007	**3/4**	1	18	238	52.32
3635-010	**1**	1	18	238	62.40
3635-015	**1-1/2**	1	8	238	103.62
3635-012	**1-1/4**	1	12	238	98.91
3635-020	**2**	1	8	238	135.62

PVC True Union 2000 Standard Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
JIS SOC EPDM					
3628-005	**16 DN**	1	18	238	39.77
3628-007	**20 DN**	1	18	238	47.03
3628-010	**25 DN**	1	18	238	56.02
3628-012	**30 DN**	1	12	238	77.48
3628-015	**40 DN**	1	8	238	93.35
3628-020	**50 DN**	1	8	238	123.18

PVC True Union 2000 Standard Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
JIS SOC FKM					
3638-005	**16 DN**	1	18	238	44.23
3638-007	**20 DN**	1	18	238	52.32
3638-010	**25 DN**	1	18	238	62.40
3638-012	**30 DN**	1	12	238	98.91
3638-015	**40 DN**	1	8	238	103.62
3638-020	**50 DN**	1	8	238	135.62

CPVC True Union 2000 Standard Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DIN SOC EPDM					
3624-005C	**20 d**	1	18	239	52.48
3624-007C	**25 d**	1	18	239	66.13
3624-010C	**32 d**	1	18	239	78.73
3624-012C	**40 d**	1	12	239	125.16
3624-015C	**50 d**	1	8	239	132.16
3624-020C	**63 d**	1	8	239	176.78

CPVC True Union 2000 Standard Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DIN SOC FKM					
3634-005C	**20 d**	1	18	239	58.36
3634-007C	**25 d**	1	18	239	73.49
3634-010C	**32 d**	1	18	239	87.47
3634-012C	**40 d**	1	12	239	139.11
3634-015C	**50 d**	1	8	239	146.85
3634-020C	**63 d**	1	8	239	203.21

CPVC True Union 2000 Standard Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BSP Threaded EPDM					
3625-005C	**1/2**	1	18	239	52.48
3625-007C	**3/4**	1	18	239	66.13
3625-010C	**1**	1	18	239	78.41
3625-012C	**1-1/4**	1	12	239	125.16
3625-015C	**1-1/2**	1	8	239	132.16
3625-020C	**2**	1	8	239	176.78

CPVC True Union 2000 Standard Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BSP Threaded FKM					
3635-005C	**1/2**	1	18	239	58.36
3635-007C	**3/4**	1	18	239	73.49
3635-010C	**1**	1	18	239	87.47
3635-012C	**1-1/4**	1	12	239	139.11
3635-015C	**1-1/2**	1	8	239	146.85
3635-020C	**2**	1	8	239	203.21

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC & CPVC True Union 2000 Standard Ball Valves

CPVC True Union 2000 Standard Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
JIS SOC EPDM					
3628-005C	**16 DN**	1	18	239	52.48
3628-007C	**20 DN**	1	18	239	66.13
3638-010C	**25 DN**	1	18	239	87.47
3628-012C	**30 DN**	1	12	239	125.16
3628-015C	**40 DN**	1	8	239	132.16
3628-020C	**50 DN**	1	8	239	176.78

CPVC True Union 2000 Standard Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
JIS SOC FKM					
3638-005C	**16 DN**	1	18	239	58.36
3638-007C	**20 DN**	1	18	239	73.49
3638-010C	**25 DN**	1	18	239	87.47
3638-012C	**30 DN**	1	12	239	139.11
3638-015C	**40 DN**	1	8	239	146.85
3638-020C	**50 DN**	1	8	239	203.21

PVC & CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

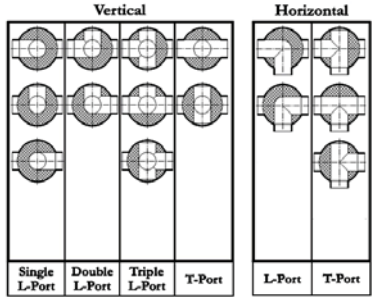
Pressure Rating @ 73°F (23°C), Water
1/2" - 2" PN 16

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Pressure Deratings Apply

Vertical 3-Way or Horizontal Diverter No Branch Shut-off)

All Standard Carton Quantities are one
All Valves assembled with Silicone-Free, Water Soluble Lubricant
Contact Spears® for Pricing on Additional Specialty Valves Available



Ball port options viewed from top of valve

PVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DIN SOC with L1 Port EPDM					
5024L1-005	**20 d**	1	12	238	102.54
5024L1-007	**25 d**	1	8	238	122.29
5024L1-010	**32 d**	1	8	238	148.27
5024L1-012	**40 d**	1	8	238	171.86
5024L1-015	**50 d**	1	8	238	200.95
5024L1-020	**63 d**	1	0	238	246.51

PVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DIN SOC with L1 Port FKM					
5034L1-005	**20 d**	1	12	238	111.22
5034L1-007	**25 d**	1	8	238	131.63
5034L1-010	**32 d**	1	8	238	163.35
5034L1-012	**40 d**	1	8	238	193.32
5034L1-015	**50 d**	1	8	238	220.00
5034L1-020	**63 d**	1	0	238	287.39

PVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BSP Threaded with L1 Port EPDM					
5025L1-005	**1/2**	1	12	238	102.54
5025L1-007	**3/4**	1	8	238	122.29
5025L1-010	**1**	1	8	238	148.27
5025L1-012	**1-1/4**	1	8	238	171.86

PVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BSP Threaded with L1 Port EPDM					
5025L1-015	**1-1/2**	1	8	238	200.95
5025L1-020	**2**	1	0	238	246.51

PVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BSP Threaded with L1 Port FKM					
5035L1-005	**1/2**	1	12	238	111.22
5035L1-007	**3/4**	1	8	238	131.63
5035L1-010	**1**	1	8	238	163.35
5035L1-012	**1-1/4**	1	8	238	193.32
5035L1-015	**1-1/2**	1	8	238	220.00
5035L1-020	**2**	1	0	238	287.39

PVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
JIS SOC with L1 Port EPDM					
5028L1-005	**16 DN**	1	12	238	102.54
5028L1-007	**20 DN**	1	8	238	122.29
5028L1-010	**25 DN**	1	8	238	148.27
5028L1-012	**30 DN**	1	8	238	171.86
5028L1-015	**40 DN**	1	8	238	200.95
5028L1-020	**50 DN**	1	0	238	246.51

PVC & CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

PVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
JIS SOC with L1 Port					
FKM					
5038L1-005	**16 DN**	1	12	238	111.22
5038L1-007	**20 DN**	1	8	238	131.63
5038L1-010	**25 DN**	1	8	238	163.35
5038L1-012	**32 DN**	1	8	238	193.32
5038L1-015	**40 DN**	1	8	238	220.00
5038L1-020	**50 DN**	1	0	238	287.39

PVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
JIS SOC with T1 Port					
EPDM					
5028T1-005	**16 DN**	1	12	238	102.54
5028T1-007	**20 DN**	1	8	238	122.29
5028T1-010	**25 DN**	1	8	238	148.27
5028T1-012	**30 DN**	1	8	238	171.86
5028T1-015	**40 DN**	1	8	238	200.95
5028T1-020	**50 DN**	1	0	238	246.51

PVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DIN SOC with T1 Port					
EPDM					
5024T1-005	**20 d**	1	12	238	102.54
5024T1-007	**25 d**	1	8	238	122.29
5024T1-010	**32 d**	1	8	238	148.27
5024T1-012	**40 d**	1	8	238	171.86
5024T1-015	**50 d**	1	8	238	200.95
5024T1-020	**63 d**	1	0	238	246.51

PVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
JIS SOC with T1 Port					
FKM					
5038T1-005	**16 DN**	1	12	238	111.22
5038T1-007	**20 DN**	1	8	238	131.63
5038T1-010	**25 DN**	1	8	238	163.35
5038T1-012	**32 DN**	1	8	238	193.32
5038T1-015	**40 DN**	1	8	238	220.00
5038T1-020	**50 DN**	1	0	238	287.39

PVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DIN SOC with T1 Port					
FKM					
5034T1-005	**20 d**	1	12	238	111.22
5034T1-007	**25 d**	1	8	238	131.63
5034T1-010	**32 d**	1	8	238	163.35
5034T1-012	**40 d**	1	8	238	193.32
5034T1-015	**50 d**	1	8	238	220.00
5034T1-020	**63 d**	1	0	238	287.39

CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DIN SOC with L1 Port					
EPDM					
5024L1-005C	**20 d**	1	12	239	157.82
5024L1-007C	**25 d**	1	8	239	188.12
5024L1-010C	**32 d**	1	8	239	228.12
5024L1-012C	**40 d**	1	8	239	264.35
5024L1-015C	**50 d**	1	8	239	309.22
5024L1-020C	**63 d**	1	0	239	379.35

PVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BSP Threaded with T1 Port					
EPDM					
5025T1-005	**1/2**	1	12	238	102.54
5025T1-007	**3/4**	1	8	238	122.29
5025T1-010	**1**	1	8	238	148.27
5025T1-012	**1-1/4**	1	8	238	171.86
5025T1-015	**1-1/2**	1	8	238	200.95
5025T1-020	**2**	1	0	238	246.51

CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DIN SOC with L1 Port					
FKM					
5034L1-005C	**20 d**	1	12	239	170.98
5034L1-007C	**25 d**	1	8	239	202.49
5034L1-010C	**32 d**	1	8	239	251.35
5034L1-012C	**40 d**	1	8	239	296.38
5034L1-015C	**50 d**	1	8	239	338.44
5034L1-020C	**63 d**	1	0	239	442.12

PVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BSP Threaded with T1 Port					
FKM					
5035T1-005	**1/2**	1	12	238	111.22
5035T1-007	**3/4**	1	8	238	131.63
5035T1-010	**1**	1	8	238	163.35
5035T1-012	**1-1/4**	1	8	238	193.32
5035T1-015	**1-1/2**	1	8	238	220.00
5035T1-020	**2**	1	0	238	287.39

CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BSP Threaded with L1 Port					
EPDM					
5025L1-005C	**1/2**	1	12	239	157.82
5025L1-007C	**3/4**	1	8	239	188.12
5025L1-010C	**1**	1	8	239	228.12
5025L1-012C	**1-1/4**	1	8	239	264.35
5025L1-015C	**1-1/2**	1	8	239	309.22
5025L1-020C	**2**	1	0	239	379.35

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC & CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BSP Threaded with L1 Port					
FKM					
5035L1-005C	**1/2**	1	12	239	170.98
5035L1-007C	**3/4**	1	8	239	202.49
5035L1-010C	**1**	1	8	239	251.35
5035L1-012C	**1-1/4**	1	8	239	306.06
5035L1-015C	**1-1/2**	1	8	239	338.44
5035L1-020C	**2**	1	0	239	442.12

CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
JIS SOC with L1 Port					
EPDM					
5028L1-005C	**16 DN**	1	12	239	157.82
5028L1-007C	**20 DN**	1	8	239	188.12
5028L1-010C	**25 DN**	1	8	239	228.12
5028L1-012C	**30 DN**	1	8	239	264.35
5028L1-015C	**40 DN**	1	8	239	309.22
5028L1-020C	**50 DN**	1	0	239	379.35

CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
JIS SOC with L1 Port					
FKM					
5038L1-005C	**16 DN**	1	12	239	170.98
5038L1-007C	**20 DN**	1	8	239	202.49
5038L1-010C	**25 DN**	1	8	239	251.35
5038L1-012C	**32 DN**	1	8	239	296.38
5038L1-015C	**40 DN**	1	8	239	338.44
5038L1-020C	**50 DN**	1	0	239	442.12

CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DIN SOC with T1 Port					
EPDM					
5024T1-005C	**20 d**	1	12	239	157.82
5024T1-007C	**25 d**	1	8	239	188.12
5024T1-010C	**32 d**	1	8	239	228.12
5024T1-012C	**40 d**	1	8	239	264.35
5024T1-015C	**50 d**	1	8	239	309.22
5024T1-020C	**63 d**	1	0	239	379.35

CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DIN SOC with T1 Port					
FKM					
5034T1-005C	**20 d**	1	12	239	170.98
5034T1-007C	**25 d**	1	8	239	202.49
5034T1-010C	**32 d**	1	8	239	251.35
5034T1-012C	**40 d**	1	8	239	296.38
5034T1-015C	**50 d**	1	8	239	338.44
5034T1-020C	**63 d**	1	0	239	442.12

CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BSP Threaded with T1 Port					
EPDM					
5025T1-005C	**1/2**	1	12	239	157.82
5025T1-007C	**3/4**	1	8	239	188.12
5025T1-010C	**1**	1	8	239	228.12
5025T1-012C	**1-1/4**	1	8	239	264.35
5025T1-015C	**1-1/2**	1	8	239	309.22
5025T1-020C	**2**	1	0	239	379.35

CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BSP Threaded with T1 Port					
FKM					
5035T1-005C	**1/2**	1	12	239	170.98
5035T1-007C	**3/4**	1	8	239	202.49
5035T1-010C	**1**	1	8	239	251.35
5035T1-012C	**1-1/4**	1	8	239	296.38
5035T1-015C	**1-1/2**	1	8	239	338.44
5035T1-020C	**2**	1	0	239	442.12

CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
JIS SOC with T1 Port					
EPDM					
5028T1-005C	**16 DN**	1	720	239	157.82
5028T1-007C	**20 DN**	1	8	239	188.12
5028T1-010C	**25 DN**	1	8	239	228.12
5028T1-012C	**30 DN**	1	8	239	264.35
5028T1-015C	**40 DN**	1	8	239	309.22
5028T1-020C	**50 DN**	1	0	239	379.35

CPVC True Union 2000 Industrial 3-Way Horizontal Diverter Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
JIS SOC with T1 Port					
FKM					
5038T1-005C	**16 DN**	1	12	239	170.98
5038T1-007C	**20 DN**	1	8	239	202.49
5038T1-010C	**25 DN**	1	8	239	251.35
5038T1-012C	**32 DN**	1	8	239	296.38
5038T1-015C	**40 DN**	1	8	239	338.44
5038T1-020C	**50 DN**	1	0	239	442.12

PVC & CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

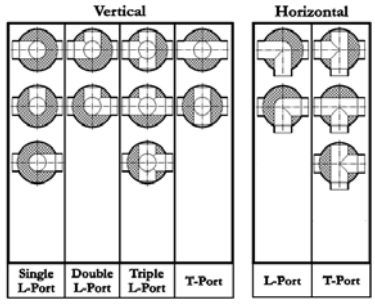
Pressure Rating @ 73°F (23°C), Water
1/2" - 2" PN 16

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Pressure Deratings Apply

Vertical 3-Way or Horizontal Diverter (No Branch Shut-off)

All Standard Carton Quantities are one
All Valves assembled with Silicone-Free, Water Soluble Lubricant
Contact Spears® for Pricing on Additional Specialty Valves Available



Ball port options viewed from top of valve

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DIN SOC with L1 Port					
EPDM					
4724L1-005	**20 d**	1	12	238	102.03
4724L1-007	**25 d**	1	8	238	119.68
4724L1-010	**32 d**	1	8	238	145.49
4724L1-012	**40 d**	1	8	238	175.99
4724L1-015	**50 d**	1	8	238	203.52
4724L1-020	**63 d**	1	4	238	249.61

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
JIS SOC with L1 port					
EPDM					
4728L1-005	**16 DN**	1	12	238	102.03
4728L1-007	**20 DN**	1	8	238	119.68
4728L1-010	**25 DN**	1	8	238	145.49
4728L1-012	**32 DN**	1	8	238	175.99
4728L1-015	**40 DN**	1	8	238	203.52
4728L1-020	**50 DN**	1	4	238	249.61

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DIN SOC with L1 port					
FKM					
4734L1-005	**20 d**	1	12	238	110.51
4734L1-007	**25 d**	1	8	238	130.43
4734L1-010	**32 d**	1	8	238	161.98
4734L1-012	**40 d**	1	8	238	207.36
4734L1-015	**50 d**	1	8	238	223.11
4734L1-020	**63 d**	1	4	238	289.81

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
JIS SOC with L1 Port					
FKM					
4738L1-005	**16 DN**	1	12	238	110.51
4738L1-007	**20 DN**	1	8	238	130.43
4738L1-010	**25 DN**	1	8	238	161.98
4738L1-012	**30 DN**	1	8	238	207.36
4738L1-015	**40 DN**	1	8	238	223.11
4738L1-020	**50 DN**	1	4	238	289.81

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BSP Threaded with L1 Port					
EPDM					
4725L1-005	**1/2**	1	12	238	102.03
4725L1-007	**3/4**	1	8	238	119.68
4725L1-010	**1**	1	8	238	145.49
4725L1-012	**1-1/4**	1	8	238	175.99
4725L1-015	**1-1/2**	1	8	238	203.52
4725L1-020	**2**	1	4	238	249.61

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DIN SOC with L2 Port					
EPDM					
4724L2-005	**20 d**	1	12	238	203.20
4724L2-007	**25 d**	1	8	238	220.86
4724L2-010	**32 d**	1	8	238	246.69
4724L2-012	**40 d**	1	8	238	277.17
4724L2-015	**50 d**	1	8	238	304.71
4724L2-020	**63 d**	1	4	238	350.76

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BSP Threaded with L1 Port					
FKM					
4735L1-005	**1/2**	1	12	238	110.51
4735L1-007	**3/4**	1	8	238	130.43
4735L1-010	**1**	1	8	238	161.98
4735L1-012	**1-1/4**	1	8	238	207.36
4735L1-015	**1-1/2**	1	8	238	223.11
4735L1-020	**2**	1	4	238	289.81

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DIN SOC with L2 Port					
FKM					
4734L2-005	**20 d**	1	12	238	211.68
4734L2-007	**25 d**	1	8	238	231.60
4734L2-010	**32 d**	1	8	238	263.12
4734L2-012	**40 d**	1	8	238	308.53
4734L2-015	**50 d**	1	8	238	324.26
4734L2-020	**63 d**	1	4	238	390.98

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

BSP Threaded with L2 Port
EPDM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4725L2-005	1/2	1	12	238	203.20
4725L2-007	3/4	1	8	238	220.86
4725L2-010	1	1	8	238	246.69
4725L2-012	1-1/4	1	8	238	277.17
4725L2-015	1-1/2	1	8	238	304.71
4725L2-020	2	1	4	238	350.76

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

BSP Threaded with L2 Port
FKM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4735L2-005	1/2	1	720	238	211.68
4735L2-007	3/4	1	8	238	231.60
4735L2-010	1	1	8	238	263.12
4735L2-012	1-1/4	1	8	238	308.53
4735L2-015	1-1/2	1	8	238	324.26
4735L2-020	2	1	4	238	390.98

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

JIS SOC with L2 Port
EPDM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4728L2-005	16 DN	1	12	238	203.20
4728L2-007	20 DN	1	8	238	220.86
4728L2-010	25 DN	1	8	238	246.69
4728L2-012	30 DN	1	8	238	277.17
4728L2-015	40 DN	1	8	238	304.71
4728L2-020	50 DN	1	4	238	350.76

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

JIS SOC with L2 Port
FKM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4738L2-005	16 DN	1	12	238	211.68
4738L2-007	20 DN	1	8	238	231.60
4738L2-010	25 DN	1	8	238	263.12
4738L2-012	30 DN	1	8	238	308.53
4738L2-015	40 DN	1	8	238	324.26
4738L2-020	50 DN	1	4	238	390.98

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

DIN SOC with L3 Port
EPDM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4724L3-005	20 d	1	12	238	203.20
4724L3-007	25 d	1	8	238	220.86
4724L3-010	32 d	1	8	238	246.69
4724L3-012	40 d	1	8	238	277.17
4724L3-015	50 d	1	8	238	304.71
4724L3-020	63 d	1	4	238	350.76

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

DIN SOC with L3 Port
FKM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4734L3-005	20 d	1	12	238	211.68
4734L3-007	25 d	1	8	238	231.60
4734L3-010	32 d	1	8	238	263.12
4734L3-012	40 d	1	8	238	308.53
4734L3-015	50 d	1	8	238	324.26
4734L3-020	63 d	1	4	238	390.98

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

BSP Threaded with L3 Port
EPDM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4725L3-005	1/2	1	12	238	203.20
4725L3-007	3/4	1	8	238	220.86
4725L3-010	1	1	8	238	246.69
4725L3-012	1-1/4	1	8	238	277.17
4725L3-015	1-1/2	1	8	238	304.71
4725L3-020	2	1	4	238	350.76

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

BSP Threaded with L3 Port
FKM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4735L3-005	1/2	1	12	238	211.68
4735L3-007	3/4	1	8	238	231.60
4735L3-010	1	1	8	238	263.12
4735L3-012	1-1/4	1	8	238	308.53
4735L3-015	1-1/2	1	8	238	324.26
4735L3-020	2	1	4	238	390.98

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

JIS SOC with L3 Port
EPDM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4728L3-005	16 DN	1	12	238	203.20
4728L3-007	20 DN	1	8	238	220.86
4728L3-010	25 DN	1	8	238	246.69
4728L3-012	30 DN	1	8	238	277.17
4728L3-015	40 DN	1	8	238	304.71
4728L3-020	50 DN	1	4	238	350.76

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

JIS SOC with L3 Port
FKM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4738L3-005	16 DN	1	12	238	211.68
4738L3-007	20 DN	1	8	238	231.60
4738L3-010	25 DN	1	8	238	263.12
4738L3-012	30 DN	1	8	238	308.53
4738L3-015	40 DN	1	8	238	324.26
4738L3-020	50 DN	1	4	238	390.98

PVC & CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

DIN SOC with T1 Port
EPDM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4724T1-005	**20 d**	1	12	238	102.03
4724T1-007	**25 d**	1	8	238	119.68
4724T1-010	**32 d**	1	8	238	145.49
4724T1-012	**40 d**	1	8	238	175.99
4724T1-015	**50 d**	1	8	238	203.52
4724T1-020	**63 d**	1	4	238	249.61

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

DIN SOC with T1 Port
FKM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4734T1-005	**20 d**	1	12	238	110.51
4734T1-007	**25 d**	1	8	238	130.43
4734T1-010	**32 d**	1	8	238	161.98
4734T1-012	**40 d**	1	8	238	207.36
4734T1-015	**50 d**	1	8	238	223.83
4734T1-020	**63 d**	1	4	238	289.81

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

BSP Threaded with T1 Port
EPDM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4725T1-005	**1/2**	1	12	238	102.03
4725T1-007	**3/4**	1	8	238	119.68
4725T1-010	**1**	1	8	238	145.49
4725T1-012	**1-1/4**	1	8	238	175.99
4725T1-015	**1-1/2**	1	8	238	203.52
4725T1-020	**2**	1	4	238	249.61

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

BSP Threaded with T1 Port
FKM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4735T1-005	**1/2**	1	12	238	110.51
4735T1-007	**3/4**	1	8	238	130.43
4735T1-010	**1**	1	8	238	161.98
4735T1-012	**1-1/4**	1	8	238	207.36
4735T1-015	**1-1/2**	1	8	238	223.11
4735T1-020	**2**	1	4	238	289.81

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

JIS SOC with T1 Port
EPDM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4728T1-005	**16 DN**	1	12	238	102.03
4728T1-007	**20 DN**	1	8	238	119.68
4728T1-010	**25 DN**	1	8	238	145.49
4728T1-012	**30 DN**	1	8	238	175.99
4728T1-015	**40 DN**	1	8	238	203.52
4728T1-020	**50 DN**	1	4	238	249.61

PVC True Union 2000 Industrial 3-Way Vertical Ball Valves

JIS SOC with T1 Port
FKM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4738T1-005	**16 DN**	1	12	238	110.51
4738T1-007	**20 DN**	1	8	238	130.43
4738T1-010	**25 DN**	1	8	238	161.98
4738T1-012	**30 DN**	1	8	238	207.36
4738T1-015	**40 DN**	1	8	238	223.11
4738T1-020	**50 DN**	1	4	238	289.81

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

DIN SOC with L1 Port
EPDM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4724L1-005C	**20 d**	1	12	239	156.94
4724L1-007C	**25 d**	1	8	239	184.15
4724L1-010C	**32 d**	1	8	239	223.81
4724L1-012C	**40 d**	1	8	239	270.75
4724L1-015C	**50 d**	1	8	239	313.00
4724L1-020C	**63 d**	1	4	239	384.04

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

DIN SOC with L1 Port
FKM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4734L1-005C	**20 d**	1	12	239	169.93
4734L1-007C	**25 d**	1	8	239	200.60
4734L1-010C	**32 d**	1	8	239	249.27
4734L1-012C	**40 d**	1	8	239	319.07
4734L1-015C	**50 d**	1	8	239	343.15
4734L1-020C	**63 d**	1	4	239	445.86

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

BSP Threaded with L1 Port
EPDM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4725L1-005C	**1/2**	1	12	239	156.94
4725L1-007C	**3/4**	1	8	239	184.15
4724L1-010C	**32 d**	1	8	239	223.81
4725L1-012C	**1-1/4**	1	8	239	270.75
4725L1-015C	**1-1/2**	1	8	239	313.00
4725L1-020C	**2**	1	4	239	384.04

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

BSP Threaded with L1 Port
FKM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4735L1-005C	**1/2**	1	12	239	169.93
4735L1-007C	**3/4**	1	8	239	200.60
4735L1-010C	**1**	1	8	239	249.27
4735L1-012C	**1-1/4**	1	8	239	319.07
4735L1-015C	**1-1/2**	1	8	239	343.15
4735L1-020C	**2**	1	4	239	445.86

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC & CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

JIS SOC with L1 Port
EPDM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4728L1-005C	16 DN	1	12	239	156.94
4728L1-007C	20 DN	1	8	239	184.15
4728L1-010C	25 DN	1	8	239	223.81
4728L1-012C	32 DN	1	8	239	270.75
4728L1-015C	40 DN	1	8	239	313.00
4728L1-020C	50 DN	1	4	239	384.04

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

JIS SOC with L1 Port
FKM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4738L1-005C	16 DN	1	12	239	169.93
4738L1-007C	20 DN	1	8	239	200.60
4738L1-010C	25 DN	1	8	239	249.27
4738L1-012C	30 DN	1	8	239	319.07
4738L1-015C	40 DN	1	8	239	343.15
4738L1-020C	50 DN	1	4	239	445.86

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

DIN SOC with L2 Port
EPDM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4724L2-005C	20 d	1	12	239	312.67
4724L2-007C	25 d	1	8	239	339.86
4724L2-010C	32 d	1	8	239	379.52
4724L2-012C	40 d	1	8	239	426.29
4724L2-015C	50 d	1	8	239	468.76
4724L2-020C	63 d	1	4	239	539.61

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

DIN SOC with L2 Port
FKM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4734L2-005C	20 d	1	12	239	325.66
4734L2-007C	25 d	1	8	239	356.32
4734L2-010C	32 d	1	8	239	404.81
4734L2-012C	40 d	1	8	239	474.64
4734L2-015C	50 d	1	8	239	498.89
4734L2-020C	63 d	1	4	239	601.44

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

BSP Threaded with L2 Port
EPDM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4725L2-005C	1/2	1	12	239	312.67
4725L2-007C	3/4	1	8	239	339.86
4725L2-010C	1	1	8	239	379.52
4725L2-012C	1-1/4	1	8	239	426.29
4725L2-015C	1-1/2	1	8	239	468.76
4725L2-020C	2	1	4	239	539.61

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

BSP Threaded with L2 Port
FKM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4735L2-005C	1/2	1	12	239	325.66
4735L2-007C	3/4	1	8	239	356.32
4735L2-010C	1	1	8	239	404.81
4735L2-012C	1-1/4	1	8	239	474.62
4735L2-015C	1-1/2	1	8	239	498.89
4735L2-020C	2	1	4	239	601.44

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

JIS SOC with L2 Port
EPDM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4728L2-005C	16 DN	1	12	239	312.67
4728L2-007C	20 DN	1	8	239	339.86
4728L2-010C	25 DN	1	8	239	379.52
4728L2-012C	30 DN	1	8	239	426.29
4728L2-015C	40 DN	1	8	239	468.76
4728L2-020C	50 DN	1	4	239	539.61

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

JIS SOC with L2 Port
FKM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4738L2-005C	16 DN	1	12	239	325.66
4738L2-007C	20 DN	1	8	239	356.32
4738L2-010C	25 DN	1	8	239	404.81
4738L2-012C	30 DN	1	8	239	474.62
4738L2-015C	40 DN	1	8	239	498.89
4738L2-020C	50 DN	1	4	239	601.44

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

DIN SOC with L3 Port
EPDM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4724L3-005C	20 d	1	12	239	312.67
4724L3-007C	25 d	1	8	239	339.86
4724L3-010C	32 d	1	8	239	379.52
4724L3-012C	40 d	1	8	239	426.29
4724L3-015C	50 d	1	8	239	468.76
4724L3-020C	63 d	1	4	239	539.61

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

DIN SOC with L3 Port
FKM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4734L3-005C	20 d	1	12	239	325.66
4734L3-007C	25 d	1	8	239	356.32
4734L3-010C	32 d	1	8	239	404.81
4734L3-012C	40 d	1	8	239	474.62
4734L3-015C	50 d	1	8	239	498.89
4734L3-020C	63 d	1	4	239	601.44

PVC & CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

BSP Threaded with L3 Port
EPDM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4725L3-005C	1/2	1	12	239	312.67
4725L3-007C	3/4	1	8	239	339.86
4725L3-010C	1	1	8	239	379.52
4725L3-012C	1-1/4	1	8	239	426.29
4725L3-015C	1-1/2	1	8	239	468.76
4725L3-020C	2	1	4	239	539.61

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

BSP Threaded with L3 Port
FKM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4735L3-005C	1/2	1	12	239	325.66
4735L3-007C	3/4	1	8	239	356.32
4735L3-010C	1	1	8	239	404.81
4735L3-012C	1-1/4	1	8	239	474.62
4735L3-015C	1-1/2	1	8	239	498.89
4735L3-020C	2	1	4	239	601.44

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

JIS SOC with L1 Port
EPDM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4728L3-005C	16 DN	1	12	239	312.60
4728L3-007C	20 DN	1	8	239	339.86
4728L3-010C	25 DN	1	8	239	379.52
4728L3-012C	30 DN	1	8	239	426.29
4728L3-015C	40 DN	1	8	239	468.76
4728L3-020C	50 DN	1	4	239	539.61

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

JIS SOC with L3 Port
FKM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4738L3-005C	16 DN	1	12	239	325.66
4738L3-007C	20 DN	1	8	239	356.32
4738L3-010C	25 DN	1	8	239	404.81
4738L3-012C	30 DN	1	8	239	474.62
4738L3-015C	40 DN	1	8	239	498.89
4738L3-020C	50 DN	1	4	239	601.44

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

DIN SOC with T1 Port
EPDM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4724T1-005C	20 d	1	12	239	156.94
4724T1-007C	25 d	1	8	239	184.15
4724T1-010C	32 d	1	8	239	219.19
4724T1-012C	40 d	1	8	239	270.75
4724T1-015C	50 d	1	8	239	313.00
4724T1-020C	63 d	1	4	239	384.04

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

DIN SOC with T1 Port
FKM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4734T1-005C	20 d	1	12	239	169.93
4734T1-007C	25 d	1	8	239	216.71
4734T1-010C	32 d	1	8	239	249.27
4734T1-012C	40 d	1	8	239	319.07
4734T1-015C	50 d	1	8	239	343.15
4734T1-020C	63 d	1	4	239	445.86

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

BSP Threaded with T1 Port
EPDM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4725T1-005C	1/2	1	12	239	156.94
4725T1-007C	3/4	1	8	239	184.15
4725T1-010C	1	1	8	239	223.81
4725T1-012C	1-1/4	1	8	239	270.75
4725T1-015C	1-1/2	1	8	239	313.00
4725T1-020C	2	1	4	239	384.04

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

BSP Threaded with T1 Port
FKM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4735T1-005C	1/2	1	12	239	169.93
4735T1-007C	3/4	1	8	239	200.60
4735T1-010C	1	1	8	239	249.27
4735T1-012C	1-1/4	1	8	239	314.48
4735T1-015C	1-1/2	1	8	239	343.15
4735T1-020C	2	1	4	239	445.86

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

JIS SOC with T1 Port
EPDM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4728T1-005C	16 DN	1	12	239	156.94
4728T1-007C	20 DN	1	8	239	184.15
4728T1-010C	25 DN	1	8	239	223.81
4728T1-012C	30 DN	1	8	239	270.75
4728T1-015C	40 DN	1	8	239	313.00
4728T1-020C	50 DN	1	4	239	384.04

CPVC True Union 2000 Industrial 3-Way Vertical Ball Valves

JIS SOC with T1 Port
FKM

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4738T1-005C	16 DN	1	12	239	169.93
4738T1-007C	20 DN	1	8	239	200.60
4738T1-010C	25 DN	1	8	239	249.27
4738T1-012C	30 DN	1	8	239	319.07
4738T1-015C	40 DN	1	8	239	343.15
4738T1-020C	50 DN	1	4	239	445.86

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC & CPVC True Union 2000 Industrial Ball Check Valves

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" PN 16

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Pressure Deratings Apply

Rated for Vacuum Service

All Valves assembled with Silicone-Free, Water Soluble Lubricant

Contact Spears® for Pricing on Additional Specialty Valves Available

PVC True Union 2000 Ball Check Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DIN SOC EPDM					
4524-005	**20 d**	1	18	228	56.36
4524-007	**25 d**	1	18	228	67.20
4524-010	**32 d**	1	18	228	79.93
4524-012	**40 d**	1	12	228	116.72
4524-015	**50 d**	1	8	228	134.05
4524-020	**63 d**	1	8	228	183.02

PVC True Union 2000 Ball Check Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DIN SOC FKM					
4534-005	**20 d**	1	18	228	63.52
4534-007	**25 d**	1	18	228	70.93
4534-010	**32 d**	1	18	228	89.09
4534-012	**40 d**	1	12	228	131.00
4534-015	**50 d**	1	8	228	148.78
4534-020	**63 d**	1	8	228	203.51

PVC True Union 2000 Ball Check Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BSP Threaded EPDM					
4525-005	**1/2**	1	18	228	56.36
4525-007	**3/4**	1	18	228	67.20
4525-010	**1**	1	18	228	79.93
4525-012	**1-1/4**	1	12	228	116.72
4525-015	**1-1/2**	1	8	228	134.05
4525-020	**2**	1	8	228	183.02

PVC True Union 2000 Ball Check Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BSP Threaded FKM					
4535-005	**1/2**	1	18	228	63.52
4535-007	**3/4**	1	18	228	70.93
4535-010	**1**	1	18	228	89.09
4535-012	**1-1/4**	1	12	228	131.00
4535-015	**1-1/2**	1	8	228	148.78
4535-020	**2**	1	8	228	203.51

PVC True Union 2000 Ball Check Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
JIS SOC EPDM					
4528-005	**16 DN**	1	18	228	56.36
4528-007	**20 DN**	1	18	228	67.20

PVC True Union 2000 Ball Check Valves (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
JIS SOC EPDM					
4528-010	**25 DN**	1	18	228	79.93
4528-012	**30 DN**	1	12	228	116.72
4528-015	**40 DN**	1	8	228	134.05
4528-020	**50 DN**	1	8	228	183.02

PVC True Union 2000 Ball Check Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
JIS SOC FKM					
4538-005	**16 DN**	1	18	228	63.52
4538-007	**20 DN**	1	18	228	70.93
4538-010	**25 DN**	1	18	228	89.09
4538-012	**30 DN**	1	12	228	131.00
4538-015	**40 DN**	1	8	228	148.78
4538-020	**50 DN**	1	8	228	203.51

CPVC True Union 2000 Ball Check Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DIN SOC EPDM					
4524-005C	**20 d**	1	18	229	83.31
4524-007C	**25 d**	1	18	229	99.71
4524-010C	**32 d**	1	18	229	117.65
4524-012C	**40 d**	1	12	229	202.63
4524-015C	**50 d**	1	8	229	202.63
4524-020C	**63 d**	1	8	229	270.65

CPVC True Union 2000 Ball Check Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DIN SOC FKM					
4534-005C	**20 d**	1	18	229	92.74
4534-007C	**25 d**	1	18	229	110.81
4534-010C	**32 d**	1	18	229	130.71
4534-012C	**40 d**	1	12	229	224.94
4534-015C	**50 d**	1	8	229	224.94
4534-020C	**63 d**	1	8	229	301.56

CPVC True Union 2000 Ball Check Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BSP Threaded EPDM					
4525-005C	**1/2**	1	18	229	83.31
4525-007C	**3/4**	1	18	229	99.71
4525-010C	**1**	1	18	229	117.65
4525-012C	**1-1/4**	1	12	229	202.63

PVC & CPVC True Union 2000 Industrial Ball Check Valves

CPVC True Union 2000 Ball Check Valves (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BSP Threaded EPDM					
4525-015C	**1-1/2**	1	8	229	202.63
4525-020C	**2**	1	8	229	270.65

CPVC True Union 2000 Ball Check Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BSP Threaded FKM					
4535-005C	**1/2**	1	18	229	92.74
4535-007C	**3/4**	1	18	229	110.81
4535-010C	**1**	1	18	229	130.71
4535-012C	**1-1/4**	1	12	229	224.94
4535-015C	**1-1/2**	1	8	229	224.94
4535-020C	**2**	1	8	229	301.56

CPVC True Union 2000 Ball Check Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
JIS SOC EPDM					
4528-005C	**16 DN**	1	18	229	83.31
4528-007C	**20 DN**	1	18	229	99.71
4528-010C	**25 DN**	1	18	229	117.65
4528-012C	**30 DN**	1	12	229	202.63
4528-015C	**40 DN**	1	8	229	202.63
4528-020C	**50 DN**	1	8	229	270.65

CPVC True Union 2000 Ball Check Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
JIS SOC FKM					
4538-005C	**16 DN**	1	18	229	92.74
4538-007C	**20 DN**	1	18	229	110.81
4538-010C	**25 DN**	1	18	229	130.71
4538-012C	**30 DN**	1	12	229	224.94
4538-015C	**40 DN**	1	8	229	224.94
4538-020C	**50 DN**	1	8	229	301.56

PVC & CPVC Gate Valves

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" PN 16

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Pressure Deratings Apply

All Valves assembled with Silicone-Free, Water Soluble Lubricant

PVC Gate Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DIN SOC Buna-N					
2014-005	**20 d**	12	0	208	24.19
2014-007	**25 d**	12	0	208	29.58
2014-010	**32 d**	12	0	208	35.06
2014-012	**40 d**	6	0	208	48.48
2014-015	**50 d**	6	0	208	61.86
2014-020	**63 d**	6	0	208	79.45

PVC Gate Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DIN SOC EPDM					
2024-005	**20 d**	12	0	208	26.55
2024-007	**25 d**	12	0	208	32.56
2024-010	**32 d**	12	0	208	38.61
2024-012	**40 d**	6	0	208	53.35
2024-015	**50 d**	6	0	208	68.73
2024-020	**63 d**	6	0	208	87.47

PVC Gate Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DIN SOC FKM					
2034-005	**20 d**	12	0	208	29.24
2034-007	**25 d**	12	0	208	34.27
2034-010	**32 d**	12	0	208	42.51

PVC Gate Valves (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DIN SOC FKM					
2034-012	**40 d**	6	0	208	58.65
2034-015	**50 d**	6	0	208	74.84
2034-020	**63 d**	6	0	208	96.16

PVC Gate Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BSP Threaded Buna-N					
2015-005	**1/2**	12	0	208	24.19
2015-007	**3/4**	12	0	208	29.58
2015-010	**1**	12	0	208	35.06
2015-012	**1-1/4**	6	0	208	48.48
2015-015	**1-1/2**	6	0	208	61.86
2015-020	**2**	6	0	208	79.45

PVC Gate Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BSP Threaded EPDM					
2025-005	**1/2**	12	0	208	26.55
2025-007	**3/4**	12	0	208	32.56
2025-010	**1**	12	0	208	38.61
2025-012	**1-1/4**	6	0	208	53.35
2025-015	**1-1/2**	6	0	208	68.73
2025-020	**2**	6	0	208	87.47

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC & CPVC Gate Valves

PVC Gate Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BSP Threaded FKM					
2035-005	**1/2**	12	0	208	29.24
2035-007	**3/4**	12	0	208	34.27
2035-010	**1**	12	0	208	42.51
2035-012	**1-1/4**	6	0	208	58.65
2035-015	**1-1/2**	6	0	208	74.84
2035-020	**2**	6	0	208	96.16

CPVC Gate Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DIN SOC EPDM					
2024-005C	**20 d**	12	0	209	78.63
2024-007C	**25 d**	12	0	209	85.04
2024-010C	**32 d**	12	0	209	93.25
2024-012C	**40 d**	6	0	209	163.79
2024-015C	**50 d**	6	0	209	179.51
2024-020C	**63 d**	6	0	209	207.06

CPVC Gate Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DIN SOC FKM					
2034-005C	**20 d**	12	0	209	86.54
2034-007C	**25 d**	12	0	209	93.56
2034-010C	**32 d**	12	0	209	102.54
2034-012C	**40 d**	6	0	209	180.17

CPVC Gate Valves (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DIN SOC FKM					
2034-015C	**50 d**	6	0	209	197.47
2034-020C	**63 d**	6	0	209	227.77

CPVC Gate Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BSP Threaded EPDM					
2025-005C	**1/2**	12	0	209	78.63
2025-007C	**3/4**	12	0	209	85.04
2025-010C	**1**	12	0	209	93.25
2025-012C	**1-1/4**	6	0	209	163.79
2025-015C	**1-1/2**	6	0	209	179.51
2025-020C	**2**	6	0	209	207.06

CPVC Gate Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BSP Threaded FKM					
2035-005C	**1/2**	12	0	209	86.54
2035-007C	**3/4**	12	0	209	93.56
2035-010C	**1**	12	0	209	102.54
2035-012C	**1-1/4**	6	0	209	180.17
2035-015C	**1-1/2**	6	0	209	197.47
2035-020C	**2**	6	0	209	227.77

PVC & CPVC Diaphragm Valves

Pressure Rating @ 73°F (23°C), Water
1/2" - 2" PN 16

Maximum Service Temperature
PVC = 140°F (60°C)
CPVC = 200°F (93°C)

Pressure Deratings Apply

No Lubricants in Media Contact Area

PVC Diaphragm Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DIN SOC EPDM					
2724-005	**20 d**	1	12	274	138.17
2724-007	**25 d**	1	8	274	156.82
2724-010	**32 d**	1	8	274	193.27
2724-012	**40 d**	1	4	274	289.32
2724-015	**50 d**	1	4	274	304.11
2724-020	**63 d**	1	0	274	359.78

PVC Diaphragm Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DIN SOC FKM					
2734-005	**20 d**	1	12	274	153.52
2734-007	**25 d**	1	8	274	174.26
2734-010	**32 d**	1	8	274	212.38
2734-012	**40 d**	1	4	274	344.00
2734-015	**50 d**	1	4	274	351.93
2734-020	**63 d**	1	0	274	426.36

PVC Diaphragm Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BSP Threaded EPDM					
2725-005	**1/2**	1	12	274	138.17
2725-007	**3/4**	1	8	274	156.82
2725-010	**1**	1	8	274	180.39
2725-012	**1-1/4**	1	4	274	289.32
2725-015	**1-1/2**	1	4	274	304.11
2725-020	**2**	1	0	274	359.78

PVC Diaphragm Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BSP Threaded FKM					
2735-005	**1/2**	1	12	274	153.52
2735-007	**3/4**	1	8	274	174.26
2735-010	**1**	1	8	274	212.38
2735-012	**1-1/4**	1	4	274	344.00
2735-015	**1-1/2**	1	4	274	351.93
2735-020	**2**	1	0	274	426.36

PVC & CPVC Diaphragm Valves

PVC Diaphragm Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
JIS SOC EPDM					
2728-005	**16 DN**	1	12	274	138.17
2728-007	**20 DN**	1	8	274	156.82
2728-010	**25 DN**	1	8	274	193.27
2728-012	**32 DN**	1	4	274	289.32
2728-015	**40 DN**	1	4	274	304.11
2728-020	**50 DN**	1	0	274	359.78

PVC Diaphragm Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
JIS SOC FKM					
2738-005	**16 DN**	1	12	274	153.52
2738-007	**20 DN**	1	8	274	174.26
2738-010	**25 DN**	1	8	274	212.38
2738-012	**32 DN**	1	4	274	344.00
2738-015	**40 DN**	1	4	274	351.93
2738-020	**50 DN**	1	0	274	426.36

CPVC Diaphragm Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DIN SOC EPDM					
2724-005C	**20 d**	1	12	276	244.62
2724-007C	**25 d**	1	8	276	272.25
2724-010C	**32 d**	1	8	276	314.22
2724-012C	**40 d**	1	4	276	471.96
2724-015C	**50 d**	1	4	276	485.93
2724-020C	**63 d**	1	0	276	517.58

CPVC Diaphragm Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DIN SOC FKM					
2734-005C	**20 d**	1	12	276	313.51
2734-007C	**25 d**	1	8	276	334.25
2734-010C	**32 d**	1	8	276	406.44
2734-012C	**40 d**	1	4	276	561.55
2734-015C	**50 d**	1	4	276	568.38
2734-020C	**63 d**	1	0	276	648.78

CPVC Diaphragm Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BSP Threaded EPDM					
2725-005C	**1/2**	1	12	276	244.62

CPVC Diaphragm Valves (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BSP Threaded EPDM					
2725-007C	**3/4**	1	8	276	272.25
2725-010C	**1**	1	8	276	314.22
2725-012C	**1-1/4**	1	4	276	471.96
2725-015C	**1-1/2**	1	4	276	485.93
2725-020C	**2**	1	0	276	517.58

CPVC Diaphragm Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
BSP Threaded FKM					
2735-005C	**1/2**	1	12	276	313.51
2735-007C	**3/4**	1	8	276	334.25
2735-010C	**1**	1	8	276	406.44
2735-012C	**1-1/4**	1	4	276	561.55
2735-015C	**1-1/2**	1	4	276	568.38
2735-020C	**2**	1	0	276	648.78

CPVC Diaphragm Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
JIS SOC EPDM					
2728-005C	**16 DN**	1	12	276	244.62
2728-007C	**20 DN**	1	8	276	272.25
2728-010C	**25 DN**	1	8	276	314.22
2728-012C	**32 DN**	1	4	276	471.96
2728-015C	**40 DN**	1	4	276	485.93
2728-020C	**50 DN**	1	0	276	517.58

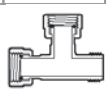
CPVC Diaphragm Valves

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
JIS SOC FKM					
2738-005C	**16 DN**	1	12	276	313.51
2738-007C	**20 DN**	1	8	276	334.25
2738-010C	**25 DN**	1	8	276	406.44
2738-012C	**32 DN**	1	4	276	561.55
2738-015C	**40 DN**	1	4	276	568.46
2738-020C	**50 DN**	1	0	276	648.78

PVC Irrigation Manifold Systems

Manifold Tee

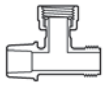
Swivel x MBSP x Swivel with O-ring Seal



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
MA0101-010BT	**1**	25	0	019	9.91

PVC Manifold Tee

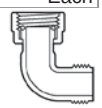
Soc (Spig) x MBSP x Swivel with O–ring Seal For Solvent Cement Connection



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
MA0109-010BT	**1**	25	0	019	8.81

Manifold 90° Street Ell

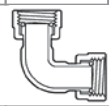
MBSP x Swivel with O-ring Seal



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
MA0602-010BT	**1**	25	0	019	8.46

Manifold 90° Ell

Swivel x Swivel with O-ring Seal



Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
MA0603-010	**1**	20	0	019	9.34

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC Irrigation Manifold Systems

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Manifold Cross Swivel x MBSP x Swivel x Swivel with O-ring Seal					
MA2004-010BT	**1**	25	0	019	13.15
Manifold Coupling Swivel x Swivel with O-ring Seal					
MA2903-010	**1**	25	200	019	7.01
Manifold Coupling Swivel x MBSP with O-ring Seal					
MA2907-010BT	**1**	25	200	019	5.12
PVC Manifold Coupling Swivel x Soc (Spig) with O-ring Seal For Solvent Cement Connection					
MA2908-010	**1 (1-1/4)**	25	0	019	5.12
Manifold Insert Coupling Swivel x Barbed Insert with O-ring Seal					
MA3505-010	**1**	25	200	019	5.43
Manifold Cap with O-ring Seal					
MA4800-010	**1**	50	600	019	2.14
Manifold Nipple MBSP x MBSP with O-ring Seal					
MA8306-010BT	**1**	25	200	019	2.29
Manifold Replacement O–ring For All 1" Cap/Swivel Connectors & For 3/4" Nipple End					
MA-214	**1 & 3/4**	50	500	901	.49
Manifold Replacement O-ring For 1" Nipple & For 1" Nippled Coupling End					
MA-218	**1**	50	500	901	.53

TECHNICAL INFORMATION

MATERIALS

THERMOPLASTICS

UPVC — All PVC referenced in this publication is unplasticized PVC, commonly referred to as UPVC.

PVC — Poly Vinyl Chloride

PVC is one of the most specified thermoplastics for piping system components, including valves, fittings, flanges and many specialty products. PVC has excellent chemical and corrosion resistance to a broad range of fluids including water, deionized water, most mineral acids, bases, salts and paraffinic hydrocarbon solutions. PVC is not recommended for use with chlorinated or aromatic hydrocarbons, esters or polar solvents such as ketones. Spears® PVC materials conform to ASTM Cell Classification 12454-B (formerly designated as Type I, Grade 1). The maximum recommended service temperature of PVC products is 60°C (140°F).

CPVC — Chlorinated Poly Vinyl Chloride

Chlorinated PVC is used for higher temperature applications than PVC, especially for handling hot corrosive liquids. With similar chemical and corrosion resistance to PVC, increased chlorine content gives CPVC superior thermal resistance. CPVC is not recommended for use with chlorinated or aromatic hydrocarbons, esters, or polar solvents such as ketones. Spears® CPVC materials conform to ASTM Cell Classification 23447-B (formerly designated as Type IV, Grade 1). The maximum recommended service temperature of CPVC products is 93°C (200°F).

ELASTOMERS

EPR (EPDM) Ethylene propylene rubber

Used in O-ring seals, EPR is recommended for water, chlorinated water, dilute acids and alkalines, alcohols, and has excellent resistance to ozone. EPR is not recommended for petroleum oils, di-ester lubricants, strong acids, or strong alkalines. The maximum recommended service temperature of EPR is 149°C (300°F).

FKM — Fluorocarbon elastomer

Used in O-ring seals, FKM exhibits a very broad range of chemical resistance, including petroleum oils, di-ester based lubricants, silicate fluids and greases, halogenated hydrocarbons and mineral acids. FKM is not recommended for ketones, amines, anhydrous ammonia, hot hydrofluoric or chlorosulfonic acids or automotive brake fluids. The maximum recommended service temperature of FKM is 204°C (400°F).

NITRILE (Buna-N) — Nitrile elastomer

Used in O-ring seals, nitrile elastomers are recommended for petroleum oils and fluids, silicone oils and greases, Di-ester based lubricants, ethylene glycol based fluids and cold water. Nitrile is not recommended for phosphate ester hydraulic fluids, halogenated hydrocarbons, strong acids, ketone, ozone or automotive brake fluids. The maximum recommended service temperature of nitrile is 135°C (275°F).

IMPORTANT

SPECIFICATION STANDARDS ORIGIN

Not all metric fitting sizes are the same. Today's global markets have varying standards, norms and interpretations of metric sizing. Identification of the standards origin for which fittings are being specified is essential in assuring that the proper fitting is obtained for each application.

METRIC SIZE DIAMETERS: ACTUAL (O.D.) vs. NOMINAL (I.D.)

Pipe and fitting sizes are specified according to a diameter. It is important to know if a specification of size is an actual O.D. (d), or a nominal diameter (DN) which is based on pipe I.D.

Where applicable, Spears® metric socket fittings in this price schedule have size columns to indicate both actual "d" and nominal "DN". It is always best to identify the actual pipe O.D. being used in order to select the proper fitting.

THREADS

Spears® metric thread fittings use BSP (British Standard Pipe) threads designated in inch-sizes, which also conform to ISO 7/1 metric threads. ASTM Iron Pipe Size (IPS) threads use NPT (National Pipe Thread) threads which are also designated as inch size, conforming to ASTM F 1498. BSP threads are not compatible with NPT threads.

SPEARS® METRIC FITTINGS

PN16 PVC AND CPVC METRIC FITTINGS (PG 190/192)

Injection Molded.

Size Range:	20mm through 63mm socket, actual "d" 1/2" through 2" threaded
Sockets:	ISO 727
Threads - BSP:	ISO 7/1
Laying Lengths:	ISO 264
Pressure Rating:	PN16 = 16 BAR at 23°C (232 psi at 73°F)

PN10 (CLASS 10/12) PVC METRIC SOCKET FITTINGS (PG 190)

Injection Molded.

Size Range:	160mm and 225mm socket, actual "d"73°F)
Sockets:	ISO 727 diameters (ASTM D 2467 socket length)
Pressure Rating:	160mm: PN12 = 12 BAR at 23°C (174 psi at 73°F) 225mm: PN10 = 10 BAR at 23°C (145 psi at 73°F)

PVC ASTM SCHEDULE 40 SOCKET X BSP ADAPTER FITTINGS (WHITE & GRAY) **(PG 195/6)**

Injection molded.

Size Range:	3/4" through 3" socket x threaded, nominal
Sockets:	Iron Pipe Size (IPS) to ASTM D 2466
Threads - BSP:	ISO 7/1
Pressure Rating:	Designed for use with corresponding size and pressure of ASTM D 1785 Schedule 40 pipe with 50% derating of threaded system.

PVC TRANSITION UNIONS **(PG 197)**

Injection molded; specially designed for transitions between ASTM IPS (Iron Pipe Size) systems and either ISO (International Standards Organization) metric, or JIS (Japanese Industrial Standards) metric systems.

Size Range:	ASTM IPS (inch): 1/2" through 4", nominal	
	— connect to —	
	ISO Metric (mm): 20mm through 110mm socket, actual "d" 1/2" through 4" BSP threaded	
	— or to —	
	JIS Metric (mm):	16mm through 100mm socket, nominal "DN"
Sockets:	ASTM IPS (inch):	ASTM D 2467
	ISO Metric (mm):	ISO 727 diameters (ASTM D 2467 socket length)
	JIS Metric (mm):	JIS K6741 diameters (ASTM D 2467 socket length)
Threads:	NPT	ASTM F 1498
	BSP:	ISO 7/1
Pressure Rating:	16.2 BAR at 23°C (235 psi at 73°F)	

PVC & CPVC METRIC VALVES

TRUE UNION BALL VALVES & BALL CHECK VALVES **(PG 238/239 & 228/229)**

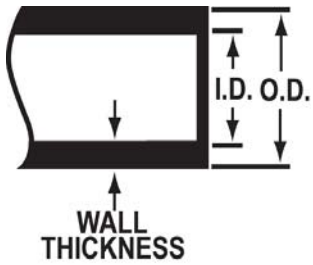
Size Range:	20mm through 110mm socket, actual "d" 1/2" through 2" BSP threaded	
Sockets:	ISO 727 diameters (ASTM D 2467 socket length)	
Threads - BSP:	ISO 7/1	
Pressure Rating:	20mm - 62mm	16.2 BAR at 23°C (235 psi at 73°F)
	75mm - 110mm	10.3 BAR at 23°C (150 psi at 73°F)

GATE VALVES **(PG 208/209)**

Size Range:	20mm through 63mm socket, actual "d" 1/2" through 2" BSP threaded
Sockets:	ISO 727 diameters (ASTM 2467 socket length)
Threads - BSP:	ISO 7/1
Pressure Rating:	13.8 BAR at 23°C (200 psi at 73°F)

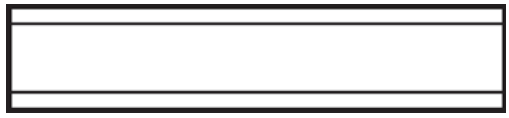
ASTM & Metric Dimensions & Standards Comparison

SCHEDULE 40 & SCHEDULE 80 PIPE DIMENSIONS
ASTM STANDARD D 1785



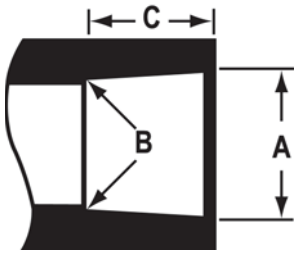
Nominal Pipe Size (inch)	Mean Outside Diameter (inch)	O.D. Tolerance (inch)	Minimum Wall Thickness (inch)	
			Schedule 40	Schedule 80
1/2	0.840	± 0.004	0.109	0.147
3/4	1.050	± 0.004	0.113	0.154
1	1.315	± 0.005	0.133	0.179
1-1/4	1.660	± 0.005	0.140	0.191
1-1/2	1.900	± 0.006	0.145	0.200
2	2.375	± 0.006	0.154	0.218
2-1/2	2.875	± 0.007	0.203	0.276
3	3.500	± 0.008	0.216	0.300
4	4.500	± 0.009	0.237	0.337
6	6.625	± 0.011	0.280	0.420
8	8.625	± 0.015	0.322	0.500
10	10.750	± 0.015	0.365	0.593
12	12.750	± 0.015	0.406	0.687

ASTM PIPE PRESSURE RATINGS



Inch	mm O.D.	Schedule 40		Schedule 80	
		psi	BAR	psi	BAR
1/2	21.34	600	41.3	850	58.6
3/4	26.67	480	33.1	690	47.5
1	33.40	450	31.0	630	43.4
1-1/4	42.16	370	25.5	520	35.8
1-1/2	48.26	330	22.7	470	32.4
2	60.32	280	19.3	400	27.5
2-1/2	73.02	300	20.6	420	28.9
3	88.90	260	17.9	370	25.5
4	114.30	220	15.1	320	22.0
6	168.28	180	12.4	280	19.3
8	219.08	160	11.0	250	17.2
10	273.05	140	9.7	230	15.8
12	323.85	130	8.9	230	15.8

SCHEDULE 40 & SCHEDULE 80 BASIC SOCKET DIMENSIONS
ASTM STANDARDS D 2466 & D 2467



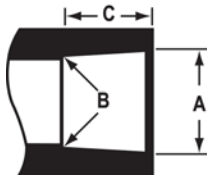
Nominal Size (inch)	Diameter			Schedule 40 Socket Length Minimum C	Schedule 80 Socket Length Minimum C
	Entrance A	Bottom B	Tolerance (inch)		
1/2	0.848	0.836	± 0.004	0.688	0.875
3/4	1.058	1.046	± 0.004	0.719	1.000
1	1.325	1.310	± 0.005	0.875	1.125
1-1/4	1.670	1.655	± 0.005	0.938	1.250
1-1/2	1.912	1.894	± 0.006	1.094	1.375
2	2.387	2.369	± 0.006	1.156	1.500
2-1/2	2.889	2.868	± 0.007	1.750	1.750
3	3.516	3.492	± 0.008	1.875	1.875
4	4.518	4.491	± 0.009	2.000	2.250
6	6.647	6.614	± 0.011	3.000	3.000
8	8.655	8.610	± 0.015	4.000	4.000
10	10.780	10.735	± 0.015	5.000	5.000
12	12.780	12.735	± 0.015	6.000	6.000

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

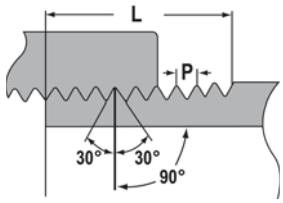
ASTM & Metric Dimensions & Standards Comparison

PVC METRIC FABRICATED FITTINGS BASIC SOCKET DIMENSIONS



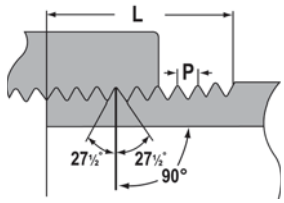
Size	Socket Entrance A		Tolerance ±		Socket Botttom B		Tolerance ±		C Socket Depth (Minimum)	
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
110mm	4.346	110.39	0.015	0.38	4.316	109.63	0.015	0.38	2.500	63.50
125mm	4.934	125.32	0.016	0.41	4.930	125.22	0.016	0.41	2.750	69.85
160mm	6.319	160.50	0.020	0.51	6.270	159.26	0.020	0.51	3.500	88.90
200mm	7.900	200.66	0.026	0.66	7.848	199.34	0.026	0.66	4.250	107.95
225mm	8.870	225.30	0.029	0.74	8.829	224.26	0.029	0.74	4.750	120.65
250mm	9.875	250.83	0.032	0.81	9.811	249.20	0.032	0.81	5.250	133.35
280mm	11.059	280.90	0.035	0.89	10.992	279.20	0.035	0.89	5.750	146.05
315mm	12.441	316.00	0.039	0.99	12.363	314.02	0.039	0.99	6.500	165.10

AMERICAN NATIONAL STANDARD TAPER PIPE THREADS (NPT)
ANSI STANDARD B1.20.1
ASTM STANDARDS D 2464, F 437, F 1498



Nominal Size (inch)	Threads per Inch	Effective Thread Length L inches	Pitch of Thread P inches
1/2	14	0.5337	0.07143
3/4	14	0.5457	0.07143
1	11-1/2	0.6828	0.08696
1-1/4	11-1/2	0.7068	0.08696
1-1/2	11-1/2	0.7235	0.08696
2	11-1/2	0.7565	0.08696
2-1/2	8	1.1375	0.12500
3	8	1.2000	0.12500
4	8	1.3000	0.12500

BSP ISO 7/1
PARALLEL THREADS



Nominal Size (inch)	Threads per Inch	Effective Thread Length L mm	Pitch of Thread P mm
1/2	14	13.152	1.8143
3/4	14	14.514	1.8143
1	11	16.714	2.3091
1-1/4	11	19.050	2.3091
1-1/2	11	19.050	2.3091
2	11	23.378	2.3091
2-1/2	11	26.698	2.3091
3	11	29.873	2.3091
4	11	35.791	2.3091

STANDARDS COMPARISON

JIS K6741 mm		DIN 8062 mm		ASTM D 1785			NPT — ANSI B1.20.1 Tapered Thread		BSP — ISO 7/1 Parallel Thread	
				Nominal	Actual O.D.					
Nominal	Actual O.D.	Nominal	Actual O.D.	inches	inches	mm	Designation	Threads per inch	Designation	Threads per 25.4mm
16	22	15	20	1/2	.840	21.34	1/2	14	1/2	14
20	26	20	25	3/4	1.050	26.67	3/4	14	3/4	14
25	32	25	32	1	1.315	33.40	1	11-1/2	1	11
30	38	32	40	1-1/4	1.660	42.16	1-1/4	11-1/2	1-1/4	11
40	48	40	50	1-1/2	1.900	48.26	1-1/2	11-1/2	1-1/2	11
50	60	50	63	2	2.375	60.32	2	11-1/2	2	11
75	89	80	90	3	3.500	88.90	3	8	3	11
100	114	100	110	4	4.500	114.30	4	8	4	11

Thermoplastic Pipe

PRICING

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CPVC Industrial Pipe

Pipe, CPVC Schedule 40 Plain End

10' Lengths, Price Per Foot

List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PD-400-001C-10	1/8	570	0	745	3.60
PD-400-002C-10	1/4	250	0	745	4.50
PD-400-003C-10	3/8	730	0	745	6.35
PD-400-005C-10	1/2	10	0	745	1.89
PD-400-007C-10	3/4	10	0	745	2.52
PD-400-010C-10	1	10	0	745	3.68
PD-400-012C-10	1-1/4	10	0	745	4.98
PD-400-015C-10	1-1/2	10	0	745	5.97
PD-400-020C-10	2	10	0	745	8.00
PD-400-025C-10	2-1/2	10	0	745	12.64
PD-400-030C-10	3	10	0	745	16.51
PD-400-040C-10	4	10	0	745	23.52
PD-400-060C-10	6	10	0	745	43.40
PD-400-080C-10	8	10	0	745	70.68
PD-400-100C-10	10	10	0	745	120.87
PD-400-120C-10	12	10	0	745	159.67
PD-400-140C-10	14	10	0	945	365.21
PD-400-160C-10	16	10	0	945	476.76
PD-400-180C-10	18	10	0	945	621.98
PD-400-200C-10	20	10	0	945	729.90
PD-400-240C-10	24	10	0	945	1016.60

CPVC Schedule 40 Plain End

20' Lengths, Price Per Foot

List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PD-400-001C	1/8	1140	0	745	3.60
PD-400-002C	1/4	500	0	745	4.50
PD-400-003C	3/8	1460	0	745	6.35
PD-400-005C	1/2	20	0	745	1.89
PD-400-007C	3/4	20	0	745	2.52
PD-400-010C	1	20	0	745	3.68
PD-400-012C	1-1/4	20	0	745	4.98
PD-400-015C	1-1/2	20	0	745	5.97
PD-400-020C	2	20	0	745	8.00
PD-400-025C	2-1/2	20	0	745	12.64
PD-400-030C	3	20	0	745	16.51
PD-400-040C	4	20	0	745	23.52
PD-400-050C	5	20	0	745	35.84
PD-400-060C	6	20	0	745	43.40
PD-400-080C	8	20	0	745	70.68
PD-400-100C	10	20	0	745	120.87
PD-400-120C	12	20	0	745	159.67
PD-400-140C	14	20	0	945	384.44
PD-400-160C	16	20	0	945	501.85
PD-400-180C	18	20	0	945	654.71
PD-400-200C	20	20	0	945	768.32
PD-400-240C	24	20	0	945	1070.10

- Pipe sold in individual lengths or lift quantities. No cut lengths.
- No return on Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.
- See Spears® Manufacturing Company Terms and Conditions of Sale for freight requirements.

Pipe, CPVC Schedule 80 Plain End

10' Lengths, Price Per Foot

List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PD-800-001C-10	1/8	570	0	745	4.46
PD-800-002C-10	1/4	250	0	745	5.14
PD-800-003C-10	3/8	570	0	745	7.00

Pipe, CPVC Schedule 80 Plain End (continued)

10' Lengths, Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PD-800-005C-10	1/2	10	0	745	2.21
PD-800-007C-10	3/4	10	0	745	3.01
PD-800-010C-10	1	10	0	745	4.44
PD-800-012C-10	1-1/4	10	0	745	6.11
PD-800-015C-10	1-1/2	10	0	745	7.41
PD-800-020C-10	2	10	0	745	10.27
PD-800-025C-10	2-1/2	10	0	745	15.66
PD-800-030C-10	3	10	0	745	20.99
PD-800-040C-10	4	10	0	745	30.68
PD-800-060C-10	6	10	0	745	59.71
PD-800-080C-10	8	10	0	745	99.02
PD-800-100C-10	10	10	0	745	179.59
PD-800-120C-10	12	10	0	745	246.87
PD-800-140C-10	14	10	0	945	600.39
PD-800-160C-10	16	10	0	945	772.13
PD-800-180C-10	18	10	0	945	972.14
PD-800-200C-10	20	10	0	945	1224.48
PD-800-240C-10	24	10	0	945	1737.32

CPVC Schedule 80 Plain End

20' Lengths, Price Per Foot

List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PD-800-001C	1/8	1140	0	745	4.46
PD-800-002C	1/4	500	0	745	5.14
PD-800-003C	3/8	1140	0	745	7.00
PD-800-005C	1/2	20	0	745	2.21
PD-800-007C	3/4	20	0	745	3.01
PD-800-010C	1	20	0	745	4.44
PD-800-012C	1-1/4	20	0	745	6.11
PD-800-015C	1-1/2	20	0	745	7.41
PD-800-020C	2	20	0	745	10.27
PD-800-025C	2-1/2	20	0	745	15.66
PD-800-030C	3	20	0	745	20.99
PD-800-040C	4	20	0	745	30.68
PD-800-050C	5	20	0	745	42.17
PD-800-060C	6	20	0	745	59.71
PD-800-080C	8	20	0	745	99.02
PD-800-100C	10	20	0	745	179.59
PD-800-120C	12	20	0	745	246.87
PD-800-140C	14	20	0	945	600.39
PD-800-160C	16	20	0	945	772.13
PD-800-180C	18	20	0	945	972.14
PD-800-200C	20	20	0	945	1224.48
PD-800-240C	24	20	0	945	1737.32

- Pipe sold in individual lengths or lift quantities. No cut lengths.
- No return on Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.
- See Spears® Manufacturing Company Terms and Conditions of Sale for freight requirements.

CPVC CTS Hot & Cold Water Distribution Pipe

CPVC CTS Pipe - SDR 11

10' Lengths, Price Per Foot

List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
CTS-005	1/2	500	0	034	.98
CTS-007	3/4	250	0	034	1.76
CTS-010	1	150	0	034	3.61
CTS-012	1-1/4	100	0	034	5.35
CTS-015	1-1/2	100	0	034	7.10
CTS-020	2	50	0	034	12.01

- Pipe sold in bag quantities only - no broken bags
- No return on Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.
- See Spears® Manufacturing Company Terms and Conditions of Sale for freight requirements.

CPVC CTS PIPE WEIGHTS:
CTS-005 Weight per Foot .090 lbs; per Bag Weight 45 lbs.
CTS-007 Weight per Foot .149l bs; per Bag Weight 37.25 lbs.
CTS-010 Weight per Foot .239 lbs; per Bag Weight 35.85 lbs.
CTS-012 Weight per Foot .353 lbs; per Bag Weight 35.3 lbs.
CTS-015 Weight per Foot .489 lbs; per Bag Weight 48.9 lbs.
CTS-020 Weight per Foot .810 lbs; per Bag Weight 40.5 lbs.

CPVC CTS Pipe - SDR 11

20' Lengths, Price Per Foot

List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
CTS-005-20	1/2	1000	0	034	.98
CTS-007-20	3/4	500	0	034	1.76
CTS-010-20	1	300	0	034	3.61
CTS-012-20	1-1/4	200	0	034	5.35
CTS-015-20	1-1/2	200	0	034	7.10
CTS-020-20	2	100	0	034	12.01

CPVC CTS Pipe - SDR 11 (continued)

20' Lengths, Price Per Foot

- Pipe sold in bag quantities only - no broken bags
- No return on Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.
- See Spears® Manufacturing Company Terms and Conditions of Sale for freight requirements.

CPVC CTS PIPE WEIGHTS:
CTS-005 Weight per Foot .090 lbs; per Bag Weight 90 lbs.
CTS-007 Weight per Foot .149 lbs; per Bag Weight 74.5l bs.
CTS-010 Weight per Foot .239 lbs; per Bag Weight 71.7 lbs.
CTS-012 Weight per Foot .353 lbs; per Bag Weight 70.6 lbs.
CTS-015 Weight per Foot .489 lbs; per Bag Weight 97.8 lbs.
CTS-020 Weight per Foot .830 lbs; per Bag Weight 83 lbs.

CPVC CTS Coiled Pipe - SDR 11

100 ft. Coil, Price Per Foot

List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
CTS-005-100	1/2	100	0	034	1.15
CTS-007-100	3/4	100	0	034	2.09
CTS-010-100	1	100	0	034	4.11

- Pipe sold in coil quantities only - no broken coils
- No return on Coiled Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.
- See Spears® Manufacturing Company Terms and Conditions of Sale for freight requirements.

CPVC CTS COILED PIPE WEIGHTS:
CTS-005-100 Weight per Foot .090 lbs; per Coil Weight 9 lbs.
CTS-007-100 Weight per Foot .149 lbs; per Coil Weight 14.9 lbs.
CTS-010-100 Weight per Foot .239 lbs; per Coil Weight 23.9 lbs.

WARNING:
Banded coils will expand when opened. Excercize caution to avoid injury during banding removal.

Pipe, Schedule 80 PVC Industrial

PVC Schedule 80 Plain End

10' Lengths, Price Per Foot

List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PD-800-001-10	1/8	250	0	744	1.97
PD-800-002-10	1/4	250	0	744	2.94
PD-800-003-10	3/8	570	0	744	4.08
PD-800-005-10	1/2	10	0	744	1.23
PD-800-007-10	3/4	10	0	744	1.66
PD-800-010-10	1	10	0	744	2.44
PD-800-012-10	1-1/4	10	0	744	3.37
PD-800-015-10	1-1/2	10	0	744	3.82
PD-800-020-10	2	10	0	744	5.29
PD-800-025-10	2-1/2	10	0	744	8.92
PD-800-030-10	3	10	0	744	10.82
PD-800-040-10	4	10	0	744	15.83
PD-800-060-10	6	10	0	744	30.23
PD-800-080-10	8	10	0	744	45.85
PD-800-100-10	10	10	0	744	68.03
PD-800-120-10	12	10	0	744	93.53
PD-800-140-10	14	10	0	947	128.21
PD-800-160-10	16	10	0	947	145.75

PVC Schedule 80 Plain End (continued)

10' Lengths, Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PD-800-180-10	18	10	0	947	214.48
PD-800-200-10	20	10	0	947	270.21
PD-800-240-10	24	10	0	947	339.02

20' Lengths, Price Per Foot

List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PD-800-001	1/8	500	0	744	1.97
PD-800-002	1/4	500	0	744	2.94
PD-800-003	3/8	500	0	744	4.08
PD-800-005	1/2	20	0	744	1.23
PD-800-007	3/4	20	0	744	1.66
PD-800-010	1	20	0	744	2.44
PD-800-012	1-1/4	20	0	744	3.37
PD-800-015	1-1/2	20	0	744	3.82
PD-800-020	2	20	0	744	5.29
PD-800-025	2-1/2	20	0	744	8.92
PD-800-030	3	20	0	744	10.82
PD-800-040	4	20	0	744	15.83
PD-800-050	5	20	0	744	21.73
PD-800-060	6	20	0	744	30.23
PD-800-080	8	20	0	744	45.85
PD-800-100	10	20	0	744	68.03
PD-800-120	12	20	0	744	93.53

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Pipe, Schedule 80 PVC Industrial

PVC Schedule 80 Plain End (continued)

20' Lengths, Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PD-800-140	**14**	20	0	947	128.21
PD-800-160	**16**	20	0	947	145.75
PD-800-180	**18**	20	0	947	214.48
PD-800-200	**20**	20	0	947	270.21
PD-800-240	**24**	20	0	947	339.02

PVC Schedule 80 Plain End (continued)

20' Lengths, Price Per Foot

- Pipe sold in individual lengths or lift quantities. No cut lengths.
- No return on Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.
- See Spears® Manufacturing Company Terms and Conditions of Sale for freight requirements.

PVC White Schedule 40 Pipe

Pipe, Schedule 40 White Plain End

20' Lengths, Price Per Foot

List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PD-400-005	**1/2**	20	0	947	1.12
PD-400-007	**3/4**	20	0	947	1.37
PD-400-010	**1**	20	0	947	2.18
PD-400-012	**1-1/4**	20	0	947	2.90
PD-400-015	**1-1/2**	20	0	947	3.29
PD-400-020	**2**	20	0	947	4.52

Pipe, Schedule 40 White Plain End (continued)

20' Lengths, Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PD-400-025	**2-1/2**	20	0	947	7.62
PD-400-030	**3**	20	0	947	8.90
PD-400-040	**4**	20	0	947	12.46
PD-400-050	**5**	20	0	947	20.45
PD-400-060	**6**	20	0	947	22.53
PD-400-080	**8**	20	0	947	39.95
PD-400-100	**10**	20	0	947	54.37
PD-400-120	**12**	20	0	947	78.75
PD-400-140	**14**	20	0	947	99.58
PD-400-160	**16**	20	0	947	105.07

PVC Black Schedule 40 Pipe

Pipe, Schedule 40 Black PVC

20' Lengths, Price Per Foot

List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PD-400-005B	**1/2**	20	0	744	1.78
PD-400-007B	**3/4**	20	0	744	2.37
PD-400-010B	**1**	20	0	744	3.46

Pipe, Schedule 80 Clear & Low Extractable PVC Pipe & LabWaste™ CPVC Corrosive Waste Drainage System Pipe

Schedule 40 Clear Pipe

Pipe, Schedule 40 Clear PVC

10' Lengths, Price Per Foot

List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PL-002	**1/4**	190	0	742	1.02
PL-003	**3/8**	100	0	742	1.38
PL-005	**1/2**	420	0	742	2.06
PL-007	**3/4**	360	0	742	2.77
PL-010	**1**	360	0	742	4.09
PL-012	**1-1/4**	360	0	742	5.55
PL-015	**1-1/2**	160	0	742	6.64

Pipe, Schedule 40 Clear PVC (continued)

10' Lengths, Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PL-020	**2**	180	0	742	8.95
PL-025	**2-1/2**	40	0	742	14.14
PL-030	**3**	80	0	742	18.46
PL-040	**4**	40	0	742	27.80
PL-060	**6**	10	0	038	50.82
PL-080	**8**	10	0	038	76.21
PL-100	**10**	10	0	038	122.68
PL-120	**12**	10	0	038	162.05

Pipe, Schedule 80 Clear

PVC Clear Schedule 80 Pipe

10' Lengths, Price Per Foot

List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PD-800-002L-10	**1/4**	1000	0	742	1.29
PD-800-003L-10	**3/8**	1100	0	742	1.79
PD-800-005L-10	**1/2**	420	0	742	2.62
PD-800-007L-10	**3/4**	360	0	742	3.54

PVC Clear Schedule 80 Pipe (continued)

10' Lengths, Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PD-800-010L-10	**1**	360	0	742	5.21
PD-800-012L-10	**1-1/4**	360	0	742	7.18
PD-800-015L-10	**1-1/2**	160	0	742	8.73
PD-800-020L-10	**2**	180	0	742	12.07
PD-800-025L-10	**2-1/2**	40	0	742	18.40
PD-800-030L-10	**3**	80	0	742	24.67
PD-800-040L-10	**4**	40	0	742	36.06
PD-800-060L-10	**6**	10	0	742	68.88

Low Extractable PVC Pipe

Spears® Low-Extractable Schedule 80 Pipe

15' Lengths, Price Per Foot

List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
LXT-005	**1/2**	630	0	064	4.81
LXT-007	**3/4**	540	0	064	6.52
LXT-010	**1**	450	0	064	9.60
LXT-012	**1-1/4**	540	0	064	13.28
LXT-015	**1-1/2**	240	0	064	16.07
LXT-020	**2**	240	0	064	22.29
LXT-030	**3**	45	0	064	45.47
LXT-040	**4**	30	0	064	66.47
LXT-060	**6**	15	0	064	154.11

See Spears® Low-Extractable Schedule 80 Pipe Chart for additional information.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

LabWaste™ CPVC Corrosive Waste Drainage System Pipe

LabWaste™ CPVC Pipe
10' Lengths, Price Per Foot

List Price Per Foot, may be cut to desired length

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
LW-015	1-1/2	10	0	161	7.72
LW-020	2	10	0	161	10.45
LW-030	3	10	0	161	18.89
LW-040	4	10	0	161	26.82

LabWaste™ CPVC Pipe (continued)
10' Lengths, Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
LW-060	6	10	0	161	48.41
LW-080	8	10	0	157	93.53
LW-100	10	10	0	157	151.44
LW-120	12	10	0	157	200.06
LW-140	14	10	0	158	243.98
LW-160	16	10	0	158	318.41

20' length available upon request

Clear Ultra Violet Resistant (UVR) PVC Pipe

Pipe, Thin Walled Clear UVR PVC
10' Lengths, Price Per Foot

List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PL091-020UVR-10	2	180	0	742	4.75
PL135-030UVR-10	3	10	0	742	10.06
PL172-040UVR-10	4	40	0	742	17.38
PL172-060UVR-10	6	10	0	742	27.45
PL172-080UVR-10	8	10	0	742	35.96
PL172-100UVR-10	10	10	0	742	51.04
PL172-120UVR-10	12	10	0	742	60.71

* Size (in.) = Wall Thickness (in.)

2 = 0.091

3 = 0.135

4-12 = 0.172

See application information above
Custom lengths available, contact Spears®

Pipe, Schedule 40 Clear UVR PVC
10' Lengths, Price Per Foot

List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PL400-005UVR-10	1/2	90	0	742	1.73
PL400-007UVR-10	3/4	360	0	742	2.32
PL400-010UVR-10	1	90	0	742	2.44
PL400-012UVR-10	1-1/4	360	0	742	4.66
PL400-015UVR-10	1-1/2	50	0	742	5.58
PL400-020UVR-10	2	180	0	742	7.51
PL400-025UVR-10	2-1/2	40	0	742	11.86
PL400-030UVR-10	3	10	0	742	15.50
PL400-035UVR-10	3-1/2	10	0	742	19.69
PL400-040UVR-10	4	40	0	742	23.33
PL400-060UVR-10	6	10	0	742	42.66

See application information above
Custom lengths available, contact Spears®

FlameGuard® CPVC Fire Sprinkler Pipe

FlameGuard® CPVC Fire Sprinkler Pipe
SDR 13.5 10' Lengths, Price Per Foot

List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
CP-007-10	3/4	260	0	071	1.94
CP-010-10	1	170	0	071	2.99
CP-012-10	1-1/4	90	0	071	4.68
CP-015-10	1-1/2	70	0	071	6.47
CP-020-10	2	50	0	071	9.67
CP-025-10	2-1/2	40	0	071	14.76
CP-030-10	3	30	0	071	22.43

FlameGuard® CPVC Fire Sprinkler Pipe
SDR 13.5, 15' Lengths, Price Per Foot

List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
CP-007	3/4	390	0	071	1.94
CP-010	1	255	0	071	2.99
CP-012	1-1/4	135	0	071	4.68
CP-015	1-1/2	105	0	071	6.47
CP-020	2	75	0	071	9.67
CP-025	2-1/2	60	0	071	14.76

FlameGuard® CPVC Fire Sprinkler Pipe (continued)
SDR 13.5, 15' Lengths, Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
CP-030	3	45	0	071	22.43

PVC & CPVC Round Seamless Duct & PVC & CPVC Cold Rolled Fabricated Duct

PVC & CPVC Round Seamless Duct

10 ft.PVC Duct - Plain End

Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PD-430-060-10	6	10	0	748	13.00
PD-430-080-10	8	10	0	748	16.37
PD-430-100-10	10	10	0	748	20.51
PD-430-120-10	12	10	0	748	24.39
PD-430-140-10	14	10	0	948	88.12
PD-430-160-10	16	10	0	948	100.68
PD-430-180-10	18	10	0	948	148.98
PD-430-200-10	20	10	0	948	187.03
PD-430-240-10	24	10	0	948	237.45

- Pipe sold in individual lengths or lift quantities. No cut lengths.
- No return on Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.

20 ft. PVC Duct - Plain End

Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PD-430-060	6	20	0	748	13.00
PD-430-080	8	20	0	748	16.37
PD-430-100	10	20	0	748	20.51
PD-430-120	12	20	0	748	24.39
PD-430-140	14	20	0	948	88.12
PD-430-160	16	20	0	948	100.68
PD-430-180	18	20	0	948	148.98
PD-430-200	20	20	0	948	187.03
PD-430-240	24	20	0	948	237.45

- Pipe sold in individual lengths or lift quantities. No cut lengths.
- No return on Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.

10 ft.CPVC Duct - Plain End

Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PD-430-060C-10	6	10	0	749	27.76
PD-430-080C-10	8	10	0	749	36.40
PD-430-100C-10	10	10	0	749	45.56
PD-430-120C-10	12	10	0	749	54.18
PD-430-140C-10	14	10	0	949	350.79
PD-430-160C-10	16	10	0	949	424.59

- Pipe sold in individual lengths or lift quantities. No cut lengths.
- No return on Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.

20 ft.CPVC Duct - Plain End

Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PD-430-060C	6	20	0	749	27.76
PD-430-080C	8	20	0	749	36.40
PD-430-100C	10	20	0	749	45.56
PD-430-120C	12	20	0	749	54.18
PD-430-140C	14	20	0	949	350.79
PD-430-160C	16	20	0	949	424.59
PD-430-180C	18	20	0	949	488.01
PD-430-200C	20	20	0	949	669.00
PD-430-240C	24	20	0	949	790.37

- Pipe sold in individual lengths or lift quantities. No cut lengths.
- No return on Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.

PVC & CPVC Cold Rolled Fabricated Duct

4' PVC Cold Rolled Duct - Plain End

Price Each

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PD-430-260	26X4	4	0	434	434.63
PD-430-280	28X4	4	0	434	517.75
PD-430-300	30X4	4	0	434	635.16
PD-430-320	32X4	4	0	434	684.18
PD-430-360	36X4	4	0	434	774.33
PD-430-380	38X4	4	0	434	840.62
PD-430-400	40X4	4	0	434	861.79
PD-430-420	42X4	4	0	434	990.91
PD-430-460	46X4	4	0	434	1070.85
PD-430-480	48X4	4	0	434	1150.28

- Pipe sold in individual lengths or lift quantities. No cut lengths.
- No return on Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.

4' CPVC Cold Rolled Duct - Plain End

Price Each

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PD-430-260C	26X4	4	0	435	1299.24
PD-430-280C	28X4	4	0	435	1495.12

4' CPVC Cold Rolled Duct - Plain End (continued)

Price Each

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PD-430-300C	30X4	4	0	435	1659.65
PD-430-320C	32X4	4	0	435	1713.17
PD-430-360C	36X4	4	0	435	1831.13
PD-430-380C	38X4	4	0	435	2026.00
PD-430-400C	40X4	4	0	435	2122.95
PD-430-420C	42X4	4	0	435	2226.37
PD-430-460C	46X4	4	0	435	2504.78
PD-430-480C	48X4	4	0	435	2886.56

- Pipe sold in individual lengths or lift quantities. No cut lengths.
- No return on Pipe
- Large orders may be shipped directly from Spears® manufacturing facility. Note: Multiple drops may be made on TL shipments. Contact Spears® Regional Distribution Center for requirements and drop-off charges.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CLIC® TOP & CLIC® Pipe Clamp Hangers, Spacers & Accesssories

PRICING

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CLIC® TOP Premium Pipe Hangers & CLIC® Economical Pipe Hangers

CLIC® TOP Premium Pipe Hangers

Premium Hangers for IPS Pipe

1/8" IPS Dia Through 4"

For Internal or External Use

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
CLIC-001	1/8	100	0	893	1.55
CLIC-002	1/4	100	0	893	1.78
CLIC-003	3/8	100	0	893	2.21
CLIC-005	1/2	100	0	893	2.36
CLIC-007	3/4	50	0	893	3.38
CLIC-012CTS/010	1 IPS &1-1/4CTS	50	0	893	4.56
CLIC-015CTS/012	1-1/4IPS&1-1/2CTS	25	0	893	5.12
CLIC-015	1-1/2	25	0	893	8.26
CLIC-020	2	20	0	893	11.66
CLIC-025	2-1/2	40	0	893	28.84
CLIC-030	3	40	0	893	34.37
CLIC-040	4	25	0	893	52.62

Premium Hangers for CTS Pipe

1/2" CTS Dia Through 2"

For Internal of External Use

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
CLIC-005CTS	1/2	100	0	893	1.85
CLIC-007CTS	3/4	100	0	893	2.93
CLIC-010CTS	1	50	0	893	4.10
CLIC-012CTS/010	1 IPS &1-1/4CTS	50	0	893	4.56
CLIC-015CTS/012	1-1/4IPS&1-1/2CTS	25	0	893	5.12
CLIC-020CTS	2	25	0	893	9.81

Premium Hangers for Tubing

1-1/2" & 2-12" Tubing

For internal or External Use

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
CLIC-015-TUBING	1-1/2 Tubing	50	0	893	6.87
CLIC-025-TUBING	2-1/2	25	0	893	28.80

CLIC® Economical Pipe Hangers

Hangers for IPS Pipe

1/8" IPS Dia. Through 4"

Recommended for Internal Use Only

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
CLIC2-001	1/8	100	0	893	1.06
CLIC2-002	1/4	100	0	893	1.53
CLIC2-003	3/8	100	0	893	1.75
CLIC2-005	1/2	100	0	893	2.09
CLIC2-007	3/4	50	0	893	2.42
CLIC2-012CTS010	1 IPS & 1-1/4 CTS	50	0	893	3.44
CLIC2-015CTS012	1-1/4 IPS & 1-1/2 CTS	25	0	893	4.48
CLIC2-015	1-1/2	25	0	893	5.67
CLIC2-020	2	20	0	893	8.34
CLIC2-025	2-1/2	40	0	893	17.65
CLIC2-030	3	40	0	893	21.03
CLIC2-040	4	25	0	893	28.21

Hangers for CTS Pipe

1/2" Dia Through 2"

Recommended for Internal Use Only

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
CLIC2-005CTS	1/2	100	0	893	1.55
CLIC2-007CTS	3/4	100	0	893	2.18
CLIC2-010CTS	1	50	0	893	2.47
CLIC2-012CTS010	1 IPS & 1-1/4 CTS	50	0	893	3.44
CLIC2-015CTS012	1-1/4 IPS & 1-1/2 CTS	25	0	893	4.48
CLIC2-020CTS	2	25	0	893	6.31

Hangers for Tubing

1-1/2" & 2-1/2" Tubing

Recommended for Internal Use Only

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
CLIC2-015-TUBE	1-1/2	50	0	893	4.26
CLIC2-025-TUBE	2-1/2	25	0	893	15.75

CLIC® TOP & CLIC® Spacers & CLIC® TOP & CLIC® Mounting Accessories

CLIC® TOP & CLIC® Spacers

CLIC® Stand-Off Spacers

Fits All CLIC® TOP & CLIC® Hangers

Approximate distance from mounting surface to surface of pipe. For Internal or External Use

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
CLIC-SP2	**3/32**	100	0	893	1.53
CLIC-SP5	**3/16**	100	0	893	1.81

CLIC® Stand-Off Spacers (continued)

Fits All CLIC® TOP & CLIC® Hangers

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
CLIC-SP15	**9/16**	100	0	893	2.46
CLIC-SP25	**1**	100	0	893	2.68
CLIC-SP35	**1-3/8**	100	0	893	3.34
CLIC-SP45	**1-3/4**	100	0	893	3.75
CLIC-SP85	**3-5/16**	50	0	893	6.19

CLIC® TOP & CLIC® Mounting Accessories

Strut Hangers

With Mounting Screw - Fits All CLIC® TOP & CLIC® Hangers or Spacers

Provides Easy Mount to Standard 1-5/8" width Strut Channel

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
SH-109CLIC	**for 3/8" - 2" Pipe Clamps**	25	0	892	6.13

Designed for Single (1) Installation on 3/8" - 2" Hangers, Use Double (2) Strut Hangers on Each 2-1/2" through 4" Size CLIC® TOP or CLIC® Pipe Hangers

Mounting Flange Nut - Stainless Steel

Fits All CLIC® TOP & CLIC® Hangers

Fits Hanger Base to provide 1/4"-20 threaded rod, stud or bolt connection

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
FN-101CLIC	**1/4-20**	25	1500	892	.60

Flange Nut Mounting Adapter - Stainless Steel

1/4"-20 Male to 3/8"-16 Female Adapter

Adapts CLIC Flange Nut to 3/8"-16 threaded rod, stud or bolt connection

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
FA-102CLIC	**1/4-20X3/8-16**	10	0	892	9.20

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

CLIC® TOP & CLIC® PIPE HANGERS

1/8" - 2" Style

2-1/2" - 4" Style

CLIC® TOP - The Premium One-Piece Self Locking Plastic Pipe Clamp. Pure Polyamide Construction UV Resistant for Indoor or Outdoor Installation

Engineered for Exceptional Ease of Use

Even One-Handed fastening can be made with this unique CLIC® TOP clamp assembly. Easily secured to supporting structures with user supplied bolts or screws. Stand-Off spacers in assorted lengths allow convenient spacing from mounting surfaces.

- Excellent Protection for Plastic Piping - No Sharp Edges
- Available for IPS Pipe 1/8" - 4" & CTS Pipe 1/2" – 2", Plus Popular 1-1/2" Tubing Size for Conduit & Other Applications
- Working Temperature -40° to 230°F Long-term
- Excellent Chemical Resistance
- Hinges Allow Installation Down to -13°F
- High Low-Temperature Impact Strength
- High Flexibility at Low and High Temperatures
- UL® 94 HB Flammability Rating

CLIC® Economical - One-Piece Self Locking Plastic Pipe Clamp. Copolymer Construction for Indoor Installation Only

- Excellent Protection for Plastic Piping - No Sharp Edges
- Available for IPS Pipe 1/8" - 4" & CTS Pipe 1/2" – 2", Plus Popular 1-1/2" Tubing Size for Conduit & Other Applications
- Working Temperature -13° to 194°F Long-term
- Good Chemical Resistance
- Hinges Allow Installation Down to 14°F
- UL® 94 HB Flammability Rating

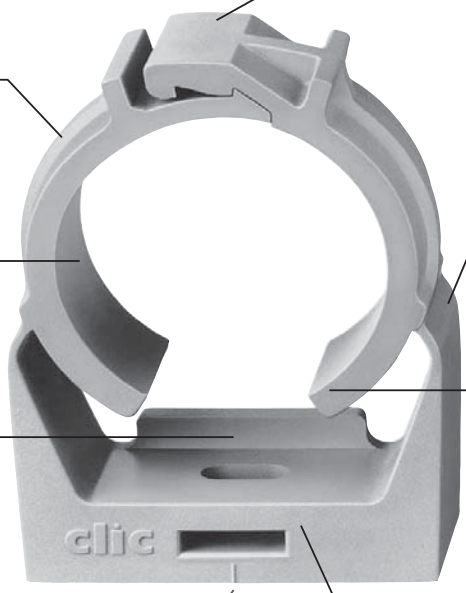
CLICÈ Spacer

For indoor and outdoor mounting of Clic® plastic cable clamps at a distance of 1/8 - 4 inches.

CLIC® TOP & CLIC® 1/8" to 2" – Pipe Sizes

The advantages of the original

Secure, fast, economical, user-friendly – a true fact. The outstanding features of CLIC are self-explanatory. Benefit from the advantages and the safety of the original that has proved itself since 1975.



Safety lock
The lock with two catches combines essential features in a unique manner.
- wide clamping range
- high loading capacity, secure hold
- easy to open

Compact design
One-piece:
- space saving
- no loss of screws

Strong swivel joints
The patented joint mechanism together with high-quality plastics allows installation work also at very low temperatures.

Smooth surface
Allows pipe expansion/contraction lengthwise.

Flexible jaws
In conjunction with the flexibility of the material, pipe tolerances can be compensated to a large extent.

Slotted holes for accurate fixation
For position adjustments.

Center marks
Perfect positioning.

Slot for threaded Flange Nut

Flange Nut
For 1/4" - 20 Rod or Bolt

Flange Nut Adapter
Adapter for 3/8" - 16 Rod or Bolt

Less inventory
The flexible locking system allows installation of multiple diameter pipes with fewer clamp sizes.

Strut Hanger
Mounts to standard 1-5/8" width Strut Channel. Includes screw for mounting to center of CLIC® Hanger.

Integrated rotary lock
Easiest mounting on base plates.

Toothed annulus
Accurate positioning on spacers.

- No corrosion
- Electromagnetically neutral
- Noise absorbing
- Internationally certified
- Recyclable plastics
- Halogen-free, CFC-free
- Several colors

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg

CLIC® TOP & CLIC® 2-1/2" to 4" – Pipe Sizes

Perfect for large pipes

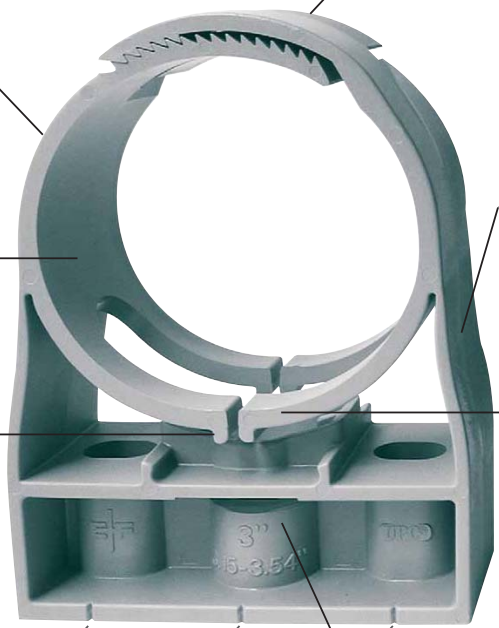
For large diameters CLIC also offers the perfect solution with high-quality plastic materials. Count on the advantages and quality of the original that proves itself world-wide successfully, even under very hard conditions, for more than 25 years.

Safety lock
The only pipe clamp with the extra strong double interlocking closing mechanism for absolute secure hold.
- wide clamping range
- high loading capacity, secure hold
- easy to open

Compact design
One-piece:
- space saving
- no loss of screws

Strong swivel joints
The patented joint mechanism together with high-quality plastics allows installation work also at very low temperatures.

Smooth surface
Allows pipe expansion/contraction lengthwise.



Flexible jaws
In conjunction with the flexibility of the material, pipe tolerances can be compensated to a large extent.

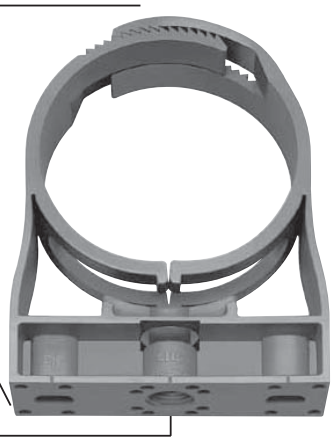
3 slotted holes for secure and accurate fixation
For position adjustments.

Center marks for threads and screws
Perfect positioning.

Slot for threaded Flange Nut

Flange Nut
For 1/4" - 20 Rod or Bolt

Less inventory
The flexible locking system allows installation of multiple diameter pipes with fewer clamp sizes.



Flange Nut Adapter
Adapter for 3/8" - 16 Rod or Bolt

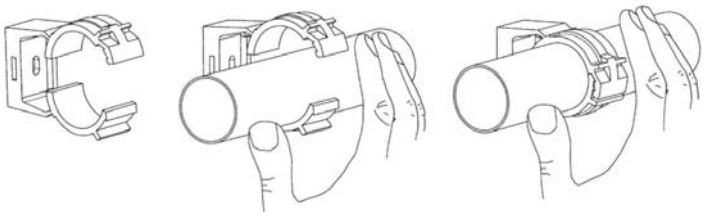
Strut Hanger
Mounts to standard 1-5/8" width Strut Channel. Includes screw for mounting to center of CLIC® Hanger.

Large base
For high stability.

Integrated thread
The larger CLIC® is provided with an inside thread for mountings with 1/2" threads.

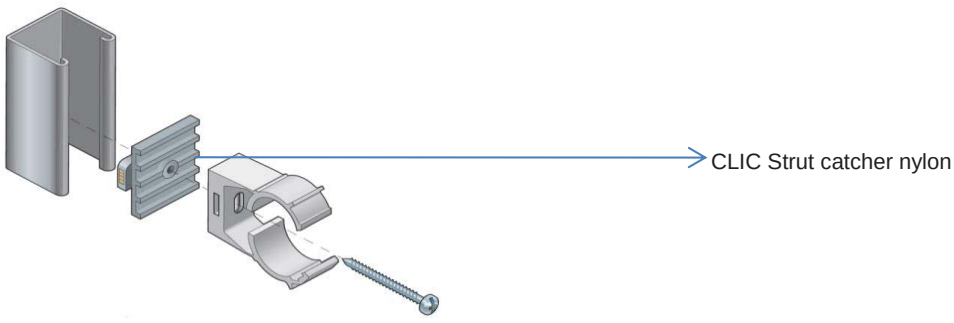
- No corrosion
- Electromagnetically neutral
- Noise absorbing
- Internationally certified
- Recyclable plastics
- Halogen-free, CFC-free
- Diverse colors

Easy to install



Simply mount CLIC, push pipe in by hand, grips and locks by applying slight pressure.
To open: unlock the CLIC latch with screwdriver.

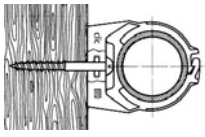
Strut Hanger



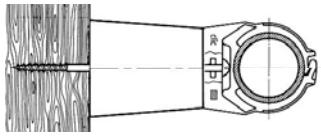
For 2-1/2" to 4" use 2 Strut hangers on each hanger.

Typical Installation

Wood

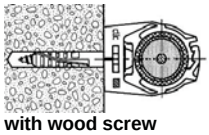


with wood screw

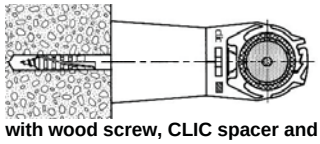


with wood screw and CLIC spacer

Concrete

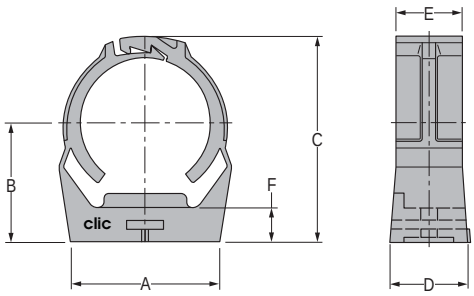


with wood screw and nylon plug

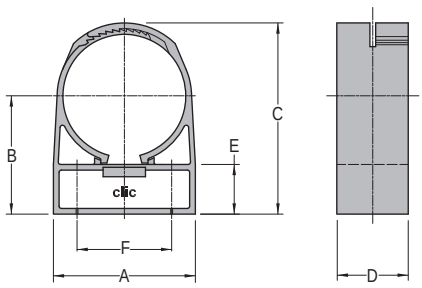


with wood screw, CLIC spacer and nylon plug

Technical Information – Clamps



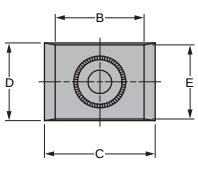
1/8" through 2" Dimensions



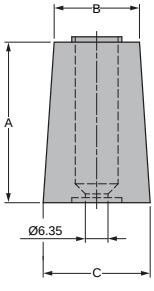
2-1/2" through 4" Dimensions

CLIC® TOP Part Number	CLIC® Original Part Number	Pipe Size [inches]	A [inches]	B [inches]	C [inches]	D [inches]	E [inches]	F [inches]	Safe Working Load [lbs. Force]
CLIC-001	CLIC2-001	1/8 IPS	11/16	11/16	1-1/32	11/16	19/32	5/16	41.6
CLIC-002	CLIC2-002	1/4 IPS	13/16	25/32	1-1/8	11/16	19/32	5/16	45.0
CLIC-003	CLIC2-003	3/8 IPS	29/32	15/16	1-13/32	25/32	21/32	5/16	52.8
CLIC-005CTS	CLIC2-005CTS	1/2 CTS	27/32	3/4	1-9/32	11/16	19/32	5/16	49.5
CLIC-005	CLIC2-005	1/2 IPS	1	1	1-9/16	25/32	21/32	5/16	56.2
CLIC-007CTS	CLIC2-007CTS	3/4 CTS	1-1/8	1-1/32	1-21/32	25/32	21/32	5/16	60.7
CLIC-007	CLIC2-007	3/4 IPS	1-7/32	1-1/8	1-25/32	25/32	11/16	11/32	67.4
CLIC-010CTS	CLIC2-010CTS	1 CTS	1-5/16	1-1/4	1-15/16	13/16	11/16	11/32	71.9
CLIC-012CTS/010	CLIC2-012CTS/010	1 IPS & 1-1/4 CTS	1-1/2	1-3/8	2-5/32	27/32	11/16	3/8	83.2
CLIC-015-TUBING	CLIC2-015-TUBE	1-1/2 TUBING	1-21/32	1-7/16	2-11/32	27/32	23/32	3/8	98.9
CLIC-015CTS/012	CLIC2-015CTS/012	1-1/4 IPS & 1-1/2 CTS	1-13/16	1-1/2	2-17/32	27/32	3/4	3/8	89.9
CLIC-025-TUBING	CLIC2-025-TUBE	2-1/2 TUBING	3-7/16	3-1/32	4-29/32	1-19/32	1-1/4	2-9.32	121.4
CLIC-015	CLIC2-015	1-1/2 IPS	2-1/8	1-23/32	2-7/8	7/8	25/32	13/32	105.7
CLIC-020CTS	CLIC2-020CTS	2 CTS	2-5/16	1-27/32	3-1/8	29/32	25/32	13/32	112.4
CLIC-020	CLIC2-020	2 IPS	2-5/8	2-1/16	3-15/32	15/16	27/32	7/16	121.4
CLIC-025	CLIC2-025	2-1/2 IPS	3-7/16	3-1/32	4-29/32	1-19/32	1-1/4	2-9/32	98.9
CLIC-030	CLIC2-030	3 IPS	4-29/32	3-25/32	6-7/16	1-19/32	1-1/4	3-13/32	121.4
CLIC-040	CLIC2-040	4 IPS	5-1/2	4-5/32	7-3/32	1-19/32	1-1/4	4-1/32	188.8

Technical Information – Stand-Off Spacers



view from top



front view

Spears® Part Number	A [inches]	B [inches]	C [inches]	D [inches]	E [inches]
CLIC-SP2	1/8	31/32	1	27/32	25/32
CLIC-SP5	7/32	31/32	1	27/32	25/32
CLIC-SP15	19/32	31/32	1-3/16	27/32	25/32
CLIC-SP25	1	31/32	1-3/16	27/32	25/32
CLIC-SP35	1-3/8	31/32	1-3/16	27/32	25/32
CLIC-SP45	1-25/32	31/32	1-3/16	27/32	25/32
CLIC-SP85	3-11/32	1-3/16	1-31/32	1-3/16	29/32

Plastic Pipe

ENGINEERING GUIDE

Contact Spears® for any information not found.

The information contained in this publication is based on current information and Product design at the time of publication and is subject to change without notification. Our ongoing commitment to product improvement may result in some variation. No representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or results to be obtained therefrom. For verification of technical data or additional information not contained herein, please contact Spears® Technical Services Department [West Coast: (818) 364-1611 — East Coast: (678) 985-1263].

Purpose of this Section

This section is intended as resource for use by specification engineers, installers, and users in the selection, design and installation of PVC and CPVC systems installed using Spears® or other pipe products. All information contained within this section is considered vital to obtain proper system performance and must be read and fully understood before attempting to install these products. If you have any questions about the safe and proper installation of these products, contact Spears® Manufacturing Company, 15853 Olden Street, Sylmar CA 91342 USA, Telephone (818) 364-1611.

Spears® PVC and CPVC Materials

PVC

Polyvinyl Chlorides (PVC) is one of the most widely used plastic piping materials. PVC is environmentally sound, provides long service life, is light weight and easy to install, has superior corrosion resistance, is cost effective, and widely accepted by codes. PVC pipe is manufactured by extrusion and PVC fittings are manufactured by injection molding or fabrication. PVC is an amorphous thermoplastic material with physical properties that make it suitable for a wide variety of pressure and non-pressure applications and can be compounded for optimum performance. PVC pipe and fittings are used for drain-waste-vent (DWV), sewers, water mains, water service lines, irrigation, conduit, and various industrial installations.

Spears® high quality PVC compounds give optimum chemical and corrosion resistance with a full range of pressure handling capabilities. Spears® PVC materials are certified by NSF International to applicable standards, including NSF® Standard 61 for use in potable water service, certified lead-free, and to ASTM STD D1784, Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds that specifies Cell Classification for minimum physical property requirements. These include resin type, impact strength, tensile strength, modulus of elasticity in tension, heat deflection temperature and flammability. Spears® minimum PVC Cell Classification is 12454 for rigid (unplasticized) PVC.

The ASTM Type and Grade is PVC Type I, Grade I and the typical long and short term strength designation of material for pressure piping is PVC 1120.

See Industry Standards and Test Methods, Physical Properties and Chemical Resistance sections for additional information.

Spears® PVC Pipe & Systems Product Lines

EverTUFF® Industrial Schedule 80 Pressure Pipe & Fittings

Spears® Clear PVC Schedule 40 & Schedule 80 Pipe & Fittings

Spears® Low Extractable Ultra Pure Water Piping & Fittings

Spears® PVC Duct & Fittings

Spears® PVC Double Containment Pipe & Fittings

Spears® Supplemental PVC Fittings, Valves & Accessories

CPVC

Chlorinated polyvinyl chloride (CPVC) is created by post chlorination of the PVC polymer. This produces up to a 60°F higher heat handling capability than PVC and greater fire resistance, plus a broad range of chemical resistance. CPVC is excellent for use in process piping, hot and cold water service, corrosive waste drainage and other elevated temperature applications. CPVC provides relatively low cost compared to alternative materials for similar use. CPVC pipe is manufactured by extrusion and CPVC fittings are manufactured by injection molding or fabrication. Spears® produces a variety of CPVC pipe, fittings, valves, system accessories and specialty systems.

Spears® high quality CPVC compounds give optimum chemical and corrosion resistance with a full range of pressure handling capabilities. Spears® CPVC materials are certified by NSF International to applicable standards, including NSF® Standard 61 for use in potable water service, certified lead-free, and to ASTM STD D1784, Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds that specifies Cell Classification for minimum physical property requirements. These include resin type, impact strength, tensile strength, modulus of elasticity in tension, heat deflection temperature and flammability. Spears® minimum CPVC Cell Classification is 23447 for rigid (unplasticized) CPVC.

The ASTM Type and Grade is CPVC Type IV Grade I and the typical long and short term strength designation of material for pressure piping is CPVC 4120.

See Industry Standards and Test Methods, Physical Properties and Chemical Resistance sections for additional information.

Spears® CPVC Pipe & Systems Product Lines

EverTUFF® Industrial Schedule 40 & Schedule 80 CPVC Pressure Pipe & Fittings

EverTUFF® CTS CPVC Hot and Cold Water Plumbing Distribution Pipe & Fittings

LabWaste™ CPVC Corrosive Waste Drainage System Pipe & Fittings

FlameGuard® CPVC Fire Sprinkler Products Pipe & Fittings

Spears® CPVC Duct & Fittings

Spears® CPVC Double Containment Pipe & Fittings

Spears® Supplemental CPVC Fittings, Valves & Accessories

"Lead Free" low lead certification – unless otherwise specified, all Spears® Plastic Piping specified here-in are certified by NSF International to ANSI/NSF® Standard 61, Annex G and is in compliance with California's Health & Safety Code Section 116825 (commonly known as AB1953) and Vermont Act 193. Weighted average lead content <=0.25%.

Physical Properties of PVC & CPVC Pipe

GENERAL	PVC Value	CPVC Value	Test Method
Cell Classification	12454	23447	ASTM D 1784
Maximum Service Temp.	140°F	200°F	
Color	White, Dark Gray	Medium Gray	
Specific Gravity, (g/cu.cm @ 73°F)	1.41	1.51	ASTM D 792
Water Absorption % increase 24 hrs @ 25°C	0.05	0.03	ASTM D 570
Hardness, Rockwell	110 - 120	117 - 119	ASTM D 785
Poisson's Ratio @ 73°F	0.410	0.370	
MECHANICAL			
Tensile Strength, psi @ 73°F	7,450	7,900	ASTM D 638
Tensile Modulus of Elasticity, psi @ 73°F	420,000	426,000	ASTM D 638
Flexural Strength, psi @ 73°F	14,450	15,000	ASTM D 790
Flexural Modulus, psi @ 73°F	360,000	360,000	ASTM D 790
Compressive Strength, psi @ 73°F	9,600	10,000	ASTM D 695
Izod Impact, notched, ft-lb/in @ 73°F	0.75	2.9	ASTM D 256
THERMAL			
Coefficient of Linear Expansion (in/in/°F)	2.9×10^{-5}	3.2×10^{-5}	ASTM D 696
Coefficient of Thermal Conductivity			ASTM C 177
Calories • cm/second • cm2 • °C	3.5×10^{-4}	3.27×10^{-4}	
BTU • inches/hour • Ft.2 • °F	1.02	0.95	
Watt/m/K	0.147	0.137	
Heat Deflection Temperature			
Under Load (264 psi, annealed)	170	235	ASTM D 648
ELECTRICAL			
Dielectric Strength, volts/mil	1,413	1,250	ASTM D 149
Dielectric Constant, 60Hz, 30°F	3.70	3.70	ASTM D 150
Volume Resistivity, ohm/cm @ 95°C	1.2 x 1012	3.4 x 1012	ASTM D 257
Spears® PVC & CPVC Pipe is non-electrolytic			
FIRE PERFORMANCE			
Flammability Rating	V-0	V-0, 5VB, 5VA	UL-94
Flame Spread Index	<10	<10	
Flame Spread	0-25	<25	ULC
Smoke Generation	80-225	<50	ULC
Flash Ignition Temp.	730°F	900°F	
Average Time of Burning (sec.)	<5	<5	ASTM D 635
Average Extent of Burning (mm)	<10	<10	
Burning Rate (in/min)	Self Extinguishing	Self Extinguishing	
Softening Starts (approx.)	250°F	295°F	
Material Becomes Viscous	350°F	395°F	
Material Carbonizes	425°F	450°F	
Limiting Oxygen Index (LOI)	43	60	ASTM D 2863

NOTE: The physical properties shown above are considered general for PVC and CPVC. Contact Spears® Technical Services for additional information if necessary.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Dimensions & Pressure Ratings

PVC & CPVC pipe is produced in several different outside diameters, sizes and dimensions for different applications. Different classifications based on outside diameter are not interchangeable, but can often be connected with specialty adapter fittings.

Basic Pipe Sizing Classifications Based on Outside Diameter

• Iron Pipe Size (IPS) - PVC & CPVC Pressure Pipe and Drainage Waste & Vent DWV pipe, forms one of the most widely used sizing classifications including Schedule 40, 80 & 120 pipe and Class pipe in various Standard Dimension Ratios (SDR); plus several specialty piping products such as Spears® **FlameGuard®** CPVC Fire Sprinkler Systems, **LabWaste™** CPVC Corrosive Waste Drainage Systems, and Low Extractable PVC Systems for Ultra Pure Water.

• Plastic Irrigation Pipe (PIP) – PVC for agricultural irrigation
• Copper Tube Size (CTS) – CPVC for Hot & Cold Waste Distribution
• Plastic Sewer Main (Type PSM) – PVC for gravity sewer mains
• AWWA C900/905 – PVC with Cast Iron O.D. for municipal water systems

The following Pipe Dimension Reference chart is for quick reference to some of the commonly used sizing classifications and nominal sizes. The following pages give additional detail for widely used PVC & CPVC pipe in IPS and CTS sizes.

Pipe Dimension Reference Chart

Pipe Type O.D. Size SDR		LH PIP 91	80 PIP 51	100 PIP 41	125 PIP 32.5	CL 63 IPS 64	CL 100 IPS 41	SEWER PSM 35	CL 125 IPS 32.5	CL 160 IPS 26	CL 200 IPS 21	40 DWV IPS —	80 DWV IPS —	SCH 40 IPS —	SCH 80 IPS —	C-900 CI DR 18
4"	O.D.	4.130	4.130	4.130	4.130	4.500	4.500	4.215	4.500	4.500	4.500	4.500	4.500	4.500	4.500	4.800
	I.D.	4.000	3.968	3.928	3.876	4.360	4.280	3.89	4.224	4.154	4.072	3.998	3.786	3.998	3.786	4.22
	Wall	.065	.081	.101	.127	.070	.110	0.125	.138	.173	.214	.237	.337	.237	.337	.267
	PSI	43	80	100	125	63	100	117.5	125	160	200	100	100	220	320	150
6"	O.D.	6.140	6.140	6.140	6.140	6.625	6.625	6.275	6.625	6.625	6.625	6.625	6.625	6.625	6.625	6.900
	I.D.	6.000	5.898	5.840	5.762	6.417	6.301	5.742	6.217	6.115	5.993	6.031	5.709	6.031	5.709	6.08
	Wall	.070	.121	.150	.189	.104	.162	0.18	.204	.255	.316	.280	.432	.280	.432	.383
	PSI	43	80	100	125	63	100	117.5	125	160	200	100	100	180	280	150
8"	O.D.	8.160	8.160	8.160	8.160	8.625	8.625	8.4	8.625	8.625	8.625	8.625	8.625	8.625	8.625	9.050
	I.D.	7.984	7.840	7.762	7.658	8.355	8.205	7.665	8.095	7.961	7.805	7.943	7.565	7.943	7.565	7.97
	Wall	.088	.160	.199	.251	.135	.210	.024	.265	.332	.410	.322	.500	.322	.500	.503
	PSI	43	80	100	125	63	100	117.5	125	160	200	100	100	160	250	150
10"	O.D.	10.200	10.200	10.200	10.200	10.750	10.750	10.5	10.750	10.750	10.750	10.750	10.750	10.750	10.750	11.100
	I.D.	9.980	9.800	9.702	9.572	10.414	10.226	9.563	10.088	9.924	9.748	9.976	9.492	9.976	9.492	9.78
	Wall	.110	.200	.249	.314	.168	.262	0.3	.331	.413	.511	.365	.593	.365	.593	.617
	PSI	43	80	100	125	63	100	117.5	125	160	200	100	100	140	230	150
12"	O.D.	12.240	12.240	12.240	12.240	12.750	12.750	12.5	12.750	12.750	12.750	12.750	12.750	12.750	12.750	13.200
	I.D.	11.975	11.760	11.642	11.486	12.352	12.128	11.361	11.966	11.770	11.538	11.890	11.294	11.890	11.294	11.63
	Wall	.132	.240	.299	.377	.199	.311	0.36	.392	.490	.606	.406	.687	.406	.687	.733
	PSI	43	80	100	125	63	100	117.5	125	160	200	100	100	130	230	150
14"	O.D.	14.280	14.280	14.280	14.280					14		14.000	14.000	14.000	14.000	15.3
	I.D.	14.000	13.720	13.584	13.402	*	*	*	*	12.86	*	13.072	12.410	13.072	12.410	13.48
	Wall	.140	.280	.348	.439					0.538		.438	.750	.438	.750	0.85
	PSI	43	80	100	125					160		100	100	130	220	235
15"	O.D.	15.300	15.300	15.300	15.300			15.3								
	I.D.	14.970	14.700	14.550	14.358	*	*	13.898	*	*	*	*	*	*	*	*
	Wall	.165	.300	.375	.471			0.44								
	PSI	43	80	100	125			117.5								
16"	O.D.									16		16.000	16.000	16.000	16.000	17.4
	I.D.	*	*	*	*	*	*	*	*	14.696	*	14.940	14.214	14.940	14.214	15.33
	Wall									0.615		.500	.843	.500	.843	0.967
	PSI									160		100	100	130	220	235
18"	O.D.	18.360	18.701	18.701	18.701		18.000	18.701		18.000		18	18.000	18	18.000	19.5
	I.D.	17.964	17.967	17.789	17.551	*	17.122	17.629	*	16.616	*	16.808	16.014	16.808	16.014	17.83
	Wall	.198	.367	.456	.575		.439	0.536		.692		0.562	.937	0.582	.937	1.083
	PSI	43	80	100	125		100	117.5		160		100	100	120	220	235
20"	O.D.	20.400					20.000			20.000		20	20	20	20	21.6
	I.D.	19.962	*	*	*	*	19.026	*	*	18.462	*	18.863	17.814	18.863	17.614	19.03
	Wall	.219					.487			.769		0.533	1.031	0.533	1.031	1.2
	PSI	43					100			160		100	100	120	220	235
21"	O.D.		22.047	22.047	22.047			22.047								
	I.D.	*	21.183	20.971	20.691	*	*	20.783	*	*	*	*	*	*	*	*
	Wall		.432	.538	.678			0.632								
	PSI		80	100	125			117.5								
24"	O.D.		24.803	24.803	24.803		24.000	24.8		24		24	24	24	24	25.800
	I.D.	*	23.831	23.593	23.277	*	22.748	23.381	*	22.043	*	22.54	21.418	22.54	21.418	23.73
	Wall		.486	.605	.763		.585	0.711		0.923		0.687	1.218	0.687	1.218	1.200
	PSI		80	100	125		100	117.5		160		100	100	120	210	235

* Information Not Available

PVC PIPE

Schedule 40

Nom. Pipe Size (in)	O.D.	Average I.D.	Min. Wall	Nominal Wt./Ft.	Maximum W.P. PSI*
1/8	0.405	0.249	0.068	0.051	810
1/4	0.540	0.344	0.088	0.086	780
3/8	0.675	0.473	0.091	0.115	620
1/2	0.840	0.602	0.109	0.170	600
3/4	1.050	0.804	0.113	0.226	480
1	1.315	1.029	0.133	0.333	450
1-1/4	1.660	1.360	0.140	0.450	370
1-1/2	1.900	1.590	0.145	0.537	330
2	2.375	2.047	0.154	0.720	280
2-1/2	2.875	2.445	0.203	1.136	300
3	3.500	3.042	0.216	1.488	260
3-1/2	4.000	3.521	0.226	1.789	240
4	4.500	3.998	0.237	2.118	220
5	5.563	5.016	0.258	2.874	190
6	6.625	6.031	0.280	3.733	180
8	8.625	7.942	0.322	5.619	160
10	10.750	9.976	0.365	7.966	140
12	12.750	11.889	0.406	10.534	130
14	14.000	13.073	0.437	12.462	130
16	16.000	14.940	0.500	16.286	130
18	18.000	16.809	0.562	20.587	130
20	20.000	18.743	0.593	24.183	120
24	24.000	22.544	0.687	33.652	120

SDR 13.5 - Class 315

Maximum W.P. 315 PSI* (all sizes)

Nominal Pipe Size (in)	O.D.	Average I.D.	Min. Wall	Nominal Wt./ft.
1/2	0.840	0.716	.062	0.096
3/4	1.050	0.874	.078	0.168
1	1.315	1.101	.097	0.257
1-1/4	1.660	1.394	.123	0.403
1-1/2	1.900	1.598	.141	0.525
2	2.375	2.003	.176	0.809
2-1/2	2.875	2.423	.213	1.189
3	3.500	2.950	.259	1.762
4	4.500	3.794	.333	2.908
6	6.625	5.584	.491	6.313

SDR 21 - Class 200

Maximum W.P. 200 PSI* (all sizes)

Nominal Pipe Size (in)	O.D.	Average I.D.	Min. Wall	Nominal Wt./Ft.
3/4	1.050	0.910	0.060	0.136
1	1.315	1.169	0.063	0.180
1-1/4	1.660	1.482	0.079	0.278
1-1/2	1.900	1.700	0.090	0.358
2	2.375	2.129	0.113	0.550
2-1/2	2.875	2.581	0.137	0.797
3	3.500	3.146	0.167	1.169
4	4.500	4.046	0.214	1.927
6	6.625	5.955	0.316	4.186
8	8.625	7.756	0.410	7.070
10	10.750	9.667	0.511	10.983
12	12.750	11.465	0.606	15.455
14	14.000	12.588	0.666	18.647
16	16.000	14.385	0.762	24.373
18	18.000	16.183	0.857	30.849
20	20.000	17.982	0.952	38.070
24	24.000	21.577	1.143	54.850

Schedule 80

Nom. Pipe Size (in)	O.D.	Average I.D.	Min. Wall	Nominal Wt./Ft.	Maximum. W.P. PSI*
1/8	.405	.195	0.095	0.063	1230
1/4	.540	.282	0.119	0.105	1130
3/8	.675	.403	0.126	0.146	920
1/2	.840	.526	0.147	0.213	850
3/4	1.050	.722	0.154	0.289	690
1	1.315	.936	0.179	0.424	630
1-1/4	1.660	1.255	0.191	0.586	520
1-1/2	1.900	1.476	0.200	0.711	470
2	2.375	1.913	0.218	0.984	400
2-1/2	2.875	2.290	0.276	1.500	420
3	3.500	2.864	0.300	2.010	370
3-1/2	4.000	3.326	0.318	2.452	350
4	4.500	3.786	0.337	2.938	320
5	5.563	4.768	0.375	4.078	290
6	6.625	5.709	0.432	5.610	280
8	8.625	7.565	0.500	8.522	250
10	10.750	9.493	0.593	12.635	230
12	12.750	11.294	0.687	17.384	230
14	14.000	12.410	0.750	20.852	220
16	16.000	14.213	0.843	26.810	220
18	18.000	16.014	0.937	33.544	220
20	20.000	17.814	1.031	41.047	220
24	24.000	21.418	1.218	58.233	210

SDR 26 - Class 160

Maximum W.P. 160 PSI* (all sizes)

Nominal Pipe Size (in)	O.D.	Average I.D.	Min. Wall	Nominal Wt./Ft.
1	1.315	1.175	0.060	0.173
1-1/4	1.660	1.512	0.064	0.233
1-1/2	1.900	1.734	0.073	0.300
2	2.375	2.173	0.091	0.456
2-1/2	2.875	2.635	0.110	0.657
3	3.500	3.210	0.135	0.967
4	4.500	4.134	0.173	1.570
6	6.625	6.084	0.255	3.415
8	8.625	7.921	0.332	5.786
10	10.750	9.874	0.413	8.973
12	12.750	11.711	0.490	12.623
14	14.000	12.860	0.538	15.209
16	16.000	14.696	0.615	19.881
18	18.000	16.533	0.692	25.162
20	20.000	18.370	0.769	31.064
24	24.000	22.043	0.923	44.754

SDR 41 - Class 100

Maximum W.P. 100 PSI* (all sizes)

Nominal Pipe Size (in)	O.D.	Average I.D.	Min. Wall	Nominal Wt./Ft.
2-1/2	2.875	2.715	0.070	0.444
3	3.500	3.310	0.085	0.643
4	4.500	4.260	0.110	1.044
6	6.625	6.281	0.162	2.205
8	8.625	8.180	0.210	3.714
10	10.750	10.195	0.262	5.774
12	12.750	12.421	0.311	4.113
14	14.000	13.270	0.341	9.888
16	16.000	15.165	0.390	12.925
18	18.000	17.061	0.439	16.352
20	20.000	18.956	0.488	20.200
24	24.000	22.748	0.585	29.070

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

SDR 32.5 - Class 125
Maximum W.P. 125 PSI* (all sizes)

Nom. Pipe Size (in)	O.D.	Average I.D.	Min. Wall	Nominal Wt./Ft.
1/2	.840	.750	.045	.071
3/4	1.050	0.950	0.050	0.099
1	1.315	1.215	0.051	0.126
1-1/4	1.660	1.520	0.060	0.221
1-1/2	1.900	1.760	0.060	0.255
2	2.375	2.209	0.073	0.378
2-1/2	2.875	2.679	0.088	0.541
3	3.500	3.264	0.108	0.793
4	4.500	4.204	0.138	1.280

SDR 32.5 - Class 125
Maximum W.P. 125 PSI* (all sizes)

Nom. Pipe Size (in)	O.D.	Average I.D.	Min. Wall	Nominal Wt./Ft.
6	6.625	6.196	0.204	2.732
8	8.625	8.063	0.265	4.658
10	10.750	10.048	0.331	7.252
12	12.750	11.919	0.392	10.182
14	14.000	13.088	0.430	12.270
16	16.000	14.957	0.492	16.037
18	18.000	16.826	0.554	20.307
20	20.000	18.696	0.615	25.063
24	24.000	22.436	0.738	36.072

Schedule 120

Nom. Pipe Size (in)	O.D.	Average I.D.	Minimum Wall	Nominal Wt./Ft.	Maximum W.P. PSI*
1/2	.840	.480	0.170	0.236	1010
3/4	1.050	.690	0.170	0.311	770
1	1.315	.891	0.200	0.464	720
1-1/4	1.660	1.204	0.215	0.649	600
1-1/2	1.900	1.423	0.225	0.787	540
2	2.375	1.845	0.250	1.111	470

Schedule 120

Nom. Pipe Size (in)	O.D.	Average I.D.	Minimum Wall	Nominal Wt./Ft.	Maximum W.P. PSI*
2-1/2"	2.875	2.239	0.300	1.615	470
3"	3.500	2.758	0.350	2.306	440
4"	4.500	3.574	0.437	3.713	430
6"	6.625	5.434	0.562	7.132	370
8"	8.625	7.189	0.718	11.277	380

CPVC INDUSTRIAL PIPE

Schedule 40

Nominal Pipe Size (in)	O.D.	Average I.D.	Min. Wall	Nominal Wt./ft.	Maximum W.P. PSI*
1/4	0.540	0.344	0.088	0.096	780
3/8	0.675	0.473	0.091	0.128	620
1/2	0.840	0.602	0.109	0.190	600
3/4	1.050	0.804	0.113	0.253	480
1	1.315	1.029	0.133	0.371	450
1-1/4	1.660	1.360	0.140	0.502	370
1-1/2	1.900	1.590	0.145	0.599	330
2	2.375	2.047	0.154	0.803	280
2-1/2	2.875	2.445	0.203	1.267	300
3	3.500	3.042	0.216	1.660	260
3-1/2	4.000	3.521	0.226	1.996	240
4	4.500	3.998	0.237	2.363	220
5	5.563	5.016	0.258	2.874	190
6	6.625	6.031	0.280	4.164	180
8	8.625	7.942	0.322	6.268	160
10	10.750	9.976	0.365	8.886	140
12	12.750	11.889	0.406	11.751	130
14	14.000	13.073	0.437	13.916	130
16	16.000	14.940	0.500	18.167	130
18	18.000	16.809	0.562	22.965	130
20	20.000	18.743	0.593	26.976	120
24	24.000	22.544	0.687	37.539	120

Schedule 80

Nominal Pipe Size (in)	O.D.	Average I.D.	Min. Wall	Nominal Wt./ft.	Maximum W.P. PSI*
1/4	0.540	0.282	0.119	0.117	1130
3/8	0.675	0.403	0.126	0.162	920
1/2	0.840	0.526	0.147	0.238	850
3/4	1.050	0.722	0.154	0.322	690
1	1.315	0.936	0.179	0.473	630
1-1/4	1.660	1.255	0.191	0.654	520
1-1/2	1.900	1.476	0.200	0.793	470
2	2.375	1.913	0.218	1.097	400
2-1/2	2.875	2.29	0.276	1.674	420
3	3.500	2.864	0.300	2.242	370
3-1/2	4.000	3.326	0.318	2.735	350
4	4.500	3.786	0.337	3.277	320
5	5.563	4.768	0.375	4.078	290
6	6.625	5.709	0.432	6.258	280
8	8.625	7.565	0.500	9.506	250
10	10.750	9.493	0.593	14.095	230
12	12.750	11.294	0.687	19.392	230
14	14.000	12.41	0.750	23.261	220
16	16.000	14.213	0.843	29.891	220
18	18.000	16.014	0.937	35.419	220
20	20.000	17.814	1.031	45.879	220
24	24.000	21.418	1.218	64.959	210

SDR 11 - Copper Tube Size (CTS)
Maximum W.P. 400 PSI* (all sizes)

Nominal Pipe Size (in)	Average O.D.	Average I.D.	Min. Wall	Nominal Wt./Ft.
1/2	0.625	0.469	0.068	1.393
3/4	0.875	0.695	0.080	0.149
1	1.125	0.901	0.102	0.240
1 1/4	1.375	1.105	0.125	0.353
1 1/2	1.625	1.309	0.148	0.489
2	2.125	1.716	0.193	0.829

SDR13.5 - Class 315
Maximum Working Pressure 315 psi (all sizes)

Nominal Pipe Size (in)	O.D.	Average I.D.	Min. Wall	Nominal Wt./ft.
3/4	1.050	0.874	0.078	0.182
1	1.315	1.101	0.097	0.278
1-1/4	1.660	1.394	0.123	0.436
1-1/2	1.900	1.598	0.141	0.568
2	2.375	2.003	0.176	0.875
2-1/2	2.875	2.423	0.213	1.286
3	3.500	2.950	0.259	1.906
4	4.500	3.794	.333	3.146
6	6.625	5.584	.491	6.828

Note: *Pressure ratings are for water, non-shock, @73°F. Threaded pipe requires a 50% reduction in the pressure ratings stated for plain-end pipe @ 73°F. Threading recommended for Schedule 80 or heavier walls only. Maximum service temperature for PVC is 140°F. Maximum service temperature for CPVC is 200°F. The pressure rating of the pipe must be de-rated when working at elevated temperatures.
Chemical resistance data should be referenced for proper material selection and possible de-rating when working with fluids other than water.

Temperature De-rating

The pressure ratings given are for water, non-shock, @ 73°F. The specified derating factors for PVC or for CPVC are suitable for pipe conveying water at elevated temperatures. To determine elevated temperature rating, multiply 73°F [23°C] pressure rating by appropriate factor shown in the tables.

When working near maximum specified temperature, solvent cement joints are recommended in place of threaded connections. Where disassembly is required at elevated temperatures use Spears® Special reinforced (SR) adapters, flanges, unions or grooved coupling connections.

Only Schedule 80 or heavier wall thickness pipe (PVC or CPVC) should be threaded. Do NOT thread Schedule 40 pipe or other thinner-walled pipe such as SDR 13.5, SDR 21, SDR 26, etc. Threading requires a 50% reduction in the pipe's specified pressure rating @ 73°F.

See Chemical Resistance Data for Pressure Piping information for both chemical compatibility and potential temperature limitations when using certain chemicals.

PVC Pipe

Operating Temp (°F)	De-Rating Factor
73	1.00
80	0.88
90	0.75
100	0.62
110	0.51
120	0.40
130	0.31
140	0.22

EX: 2" PVC SCHEDULE 80 @ 120°F = 400 psi x 0.40 = 160 psi max. @ 120°F .

CPVC Pipe

Operating Temp (°F)	De-Rating Factor
73-80	1.00
90	0.91
100	0.82
110	0.72
120	0.65
130	0.57
140	0.50
150	0.42
160	0.40
170	0.29
180	0.25
200	0.20

EX: 2" CPVC SCHEDULE 80 @ 120°F = 400 psi x 0.65 = 260 psi max. @ 120°F

FLOW VELOCITY & FRICTION LOSS

Friction Loss Through Pipe

The Hazen-Williams equation below is widely used to calculate friction loss for water through PVC and CPVC pipe

$$f = .2083 \times \left(\frac{100}{C}\right)^{1.852} \times \frac{G^{1.852}}{di^{4.8655}}$$

Where: f = friction head of feet of water per 100' for the specific pipe size and I.D.
C = a constant for internal pipe roughness. 150 is the commonly accepted value for PVC and CPVC pipe.
G = flow rate of gallons per minute (U.S. gallons).
di = inside diameter of pipe in inches.

Friction Loss Through Fittings

Friction loss through fittings is expressed in equivalent feet of the same pipe size and schedule for the system flow rate. Schedule 40 head loss per 100' values are usually used for other wall thicknesses and standard iron pipe size O.D.'s.

Average Friction Loss for PVC and CPVC Fittings in Equivalent Feet of Straight Run Pipe

Item	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	6	8	10	12	14	16	18	20	24
Tee Run	1.0	1.4	1.7	2.3	2.7	4.0	4.9	6.1	7.9	12.3	14.0	17.5	20.0	25.0	27.0	32.0	35.0	42.0
Tee Branch	3.8	4.9	6.0	7.3	8.4	12.0	14.7	16.4	22.0	32.7	49.0	57.0	67.0	78.0	88.0	107.0	118.0	137.0
90° Ell	1.5	2.0	2.5	3.8	4.0	5.7	6.9	7.9	11.4	16.7	21.0	26.0	32.0	37.0	43.0	53.0	58.0	67.0
45° Ell	.8	1.1	1.4	1.8	2.1	2.6	3.1	4.0	5.1	8.0	10.6	13.5	15.5	18.0	20.0	23.0	25.0	30.0

Note: *Values 10"-24": Approximate values from Nomograph.*

Pressure Drop In Valves & Strainers

Pressure drop calculations can be made for valves and strainers for different fluids, flow rates, and sizes using the CV values and the following equation:

Where:

$$P = \frac{(G)^2\,(Sg)}{(C_v)^2}$$

P = Pressure drop in PSI; feet of water = $\frac{PSI}{.4332}$

G = Gallons per minute

C_v = Gallons per minute water per 1 PSI pressure drop

Sg = Specific gravity of liquid (water = 1)

C_v Valves for Select Spears® Valves and Strainers

Nominal Size ⇨	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	6	8	10	12
True Union 2000 Ball Valve[1]	29	63	120	243	357	599	856	1416	2865	1952	--	--	--
Single Entry Ball Valve[1]	38	76	146	292	412	720	--	1660	3104	--	--	--	--
True Union 2000 Ball Check Valve	6.3	17	25	65	86	130	200	275	500	800	--	--	--
Butterfly Valve (90° - Full Open)	--	--	--	--	81	109	192	345	411	1125	2249	4440	6309
Y-Check Valve	6.7	12.6	22.9	33.8	50.7	79.2	--	235	387	--	--	--	--
Y-Strainer (12 Mesh-Clean)	5.4	7.8	13.9	32.9	41.6	50.0	--	74.6	169.0	--	--	--	--
Basket Strainer (Clean)	4.5	10	15	30	46	72	110	172	270	630	750	893	1063

1- Full Port Ball Valve Cv based on equivalent length of Schedule 80 pipe

Water Velocities

Velocities for water in feet per second at different GPM's and pipe inside diameters can be calculated as follows:

$$V = .3208\,\frac{G}{A}$$

Where:

V = velocity in feet per second

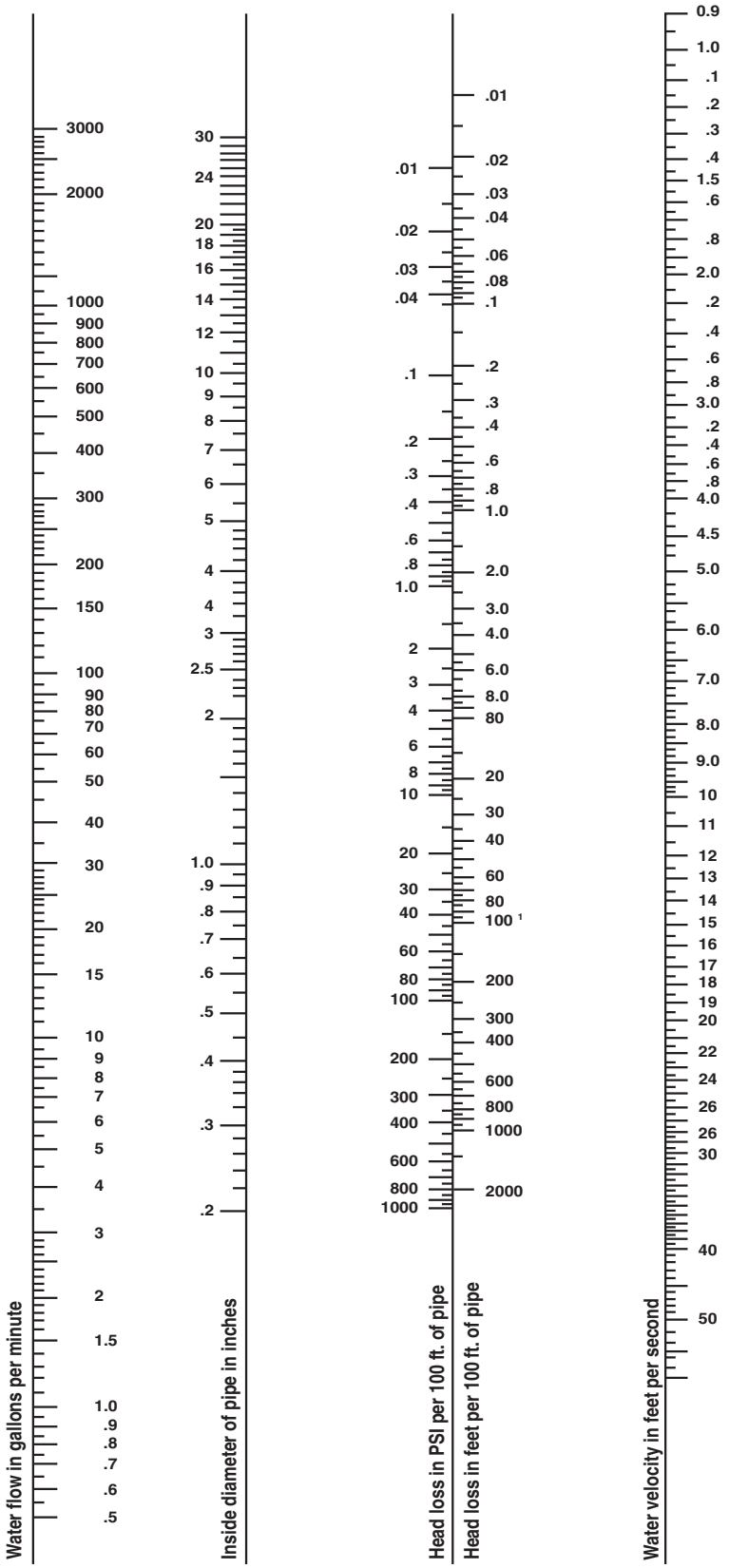
G = gallons per minute

A = inside cross sectional area in square inches

CAUTION: Flow velocities in excess of 5.0 feet per second are not recommended for closed-end systems. Contact Spears® Technical Services for additional information.

Head Loss Characteristics of Water Flow Through Rigid Plastic Pipe – Nomograph

The nomograph provides approximate values for water flow, head loss and water velocity for a wide range of plastic pipe sizes. Two known variables must be used to obtain the other variables by lining up the values on the scales using a ruler or straight edge. Flow velocities in excess of 5.0 feet per second are not recommended.



FLOW VELOCITY & FRICTION LOSS

SCHEDULE 40

Flow Rate (Gallons/ Minute)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Rate (Gallons/ Minute)
GPM	1/8"			1/4" 3/8" 1/2" 3/4"												1"			1-1/4"			GPM
0.25	1.64	6.54	2.83	0.86	1.36	0.59	0.46	0.29	0.12													0.25
0.50	3.27	23.60	10.23	1.72	4.90	2.12	0.91	1.04	0.45													0.50
0.75	4.91	50.00	21.68	2.59	10.38	4.50	1.37	2.20	0.96													0.75
1	6.55	85.18	36.93	3.45	17.68	7.66	1.82	3.75	1.63	1.13	1.16	0.50	0.63	0.28	0.12	0.39	0.09	0.04	0.22	0.02	0.01	1
2	13.09	307.52	133.31	6.90	63.82	27.67	3.65	13.55	5.88	2.25	4.19	1.82	1.26	1.03	0.44	0.77	0.31	0.13	0.44	0.08	0.03	2
5				17.25	348.29	150.98	9.11	73.96	32.06	5.63	22.88	9.92	3.16	5.60	2.43	1.93	1.69	0.73	1.10	0.43	0.19	5
7							12.76	137.93	59.79	7.88	42.66	18.49	4.42	10.44	4.53	2.70	3.14	1.36	1.55	0.81	0.35	7
10										11.26	82.59	35.80	6.31	20.21	8.76	3.86	6.08	2.64	2.21	1.57	0.68	10
15													9.47	42.82	18.56	5.78	12.89	5.59	3.31	3.32	1.44	15
20													12.63	72.95	31.63	7.71	21.96	9.52	4.42	5.65	2.45	20
25																9.64	33.20	14.39	5.52	8.55	3.71	25
30																11.57	46.54	20.17	6.62	11.98	5.19	30
35																			7.73	15.94	6.91	35
40																			8.83	20.41	8.85	40
45																			9.94	25.39	11.00	45
50																			11.04	30.86	13.38	50

GPM	1-1/2"			2" 2-1/2" 3"									4"			5"			6"			GPM
2	0.32	0.04	0.02																			2
5	0.81	0.20	0.09	0.49	0.06	0.03																5
7	1.13	0.38	0.16	0.68	0.11	0.05	0.48	0.05	0.02													7
10	1.62	0.73	0.32	0.97	0.21	0.09	0.68	0.09	0.04	0.44	0.03	0.01										10
15	2.42	1.55	0.67	1.46	0.45	0.20	1.02	0.19	0.08	0.66	0.07	0.03										15
20	3.23	2.64	1.15	1.95	0.77	0.34	1.37	0.33	0.14	0.88	0.11	0.05	0.51	0.03	0.01							20
25	4.04	4.00	1.73	2.44	1.17	0.51	1.71	0.49	0.21	1.10	0.17	0.07	0.64	0.05	0.02							25
30	4.85	5.60	2.43	2.92	1.64	0.71	2.05	0.69	0.30	1.32	0.24	0.10	0.77	0.06	0.03	0.49	0.02	0.01				30
35	5.65	7.45	3.23	3.41	2.18	0.94	2.39	0.92	0.40	1.54	0.32	0.14	0.89	0.08	0.04	0.57	0.03	0.01				35
40	6.46	9.54	4.14	3.90	2.79	1.21	2.73	1.18	0.51	1.76	0.41	0.18	1.02	0.11	0.05	0.65	0.04	0.02				40
45	7.27	11.87	5.15	4.39	3.47	1.51	3.07	1.46	0.63	1.99	0.51	0.22	1.15	0.13	0.06	0.73	0.04	0.02				45
50	8.08	14.43	6.25	4.87	4.22	1.83	3.41	1.78	0.77	2.21	0.61	0.27	1.28	0.16	0.07	0.81	0.05	0.02	0.56	0.02	0.01	50
60	9.69	20.22	8.77	5.85	5.92	2.56	4.10	2.49	1.08	2.65	0.86	0.37	1.53	0.23	0.10	0.97	0.08	0.03	0.67	0.03	0.01	60
70				6.82	7.87	3.41	4.78	3.32	1.44	3.09	1.15	0.50	1.79	0.30	0.13	1.14	0.10	0.04	0.79	0.04	0.02	70
75				7.31	8.94	3.88	5.12	3.77	1.63	3.31	1.30	0.56	1.92	0.34	0.15	1.22	0.11	0.05	0.84	0.05	0.02	75
80				7.80	10.08	4.37	5.46	4.25	1.84	3.53	1.47	0.64	2.04	0.39	0.17	1.30	0.13	0.06	0.90	0.05	0.02	80
90				8.77	12.53	5.43	6.15	5.28	2.29	3.97	1.82	0.79	2.30	0.48	0.21	1.46	0.16	0.07	1.01	0.07	0.03	90
100				9.74	15.23	6.60	6.83	6.42	2.78	4.41	2.22	0.96	2.55	0.59	0.25	1.62	0.19	0.08	1.12	0.08	0.03	100
125				12.18	23.03	9.98	8.54	9.70	4.21	5.52	3.35	1.45	3.19	0.89	0.38	2.03	0.29	0.13	1.40	0.12	0.05	125
150							10.24	13.60	5.90	6.62	4.70	2.04	3.83	1.24	0.54	2.43	0.41	0.18	1.68	0.17	0.07	150
175										7.72	6.25	2.71	4.47	1.65	0.72	2.84	0.55	0.24	1.96	0.22	0.10	175
200										8.82	8.00	3.47	5.11	2.12	0.92	3.25	0.70	0.30	2.25	0.29	0.12	200
250										11.03	12.10	5.24	6.39	3.20	1.39	4.06	1.06	0.46	2.81	0.43	0.19	250
300													7.66	4.49	1.95	4.87	1.49	0.65	3.37	0.61	0.26	300
350													8.94	5.97	2.59	5.68	1.98	0.86	3.93	0.81	0.35	350
400													10.22	7.64	3.31	6.49	2.54	1.10	4.49	1.03	0.45	400
450																7.30	3.15	1.37	5.05	1.29	0.56	450
500																8.11	3.83	1.66	5.61	1.56	0.68	500

NOTE: Spears® recommends that Flow Velocities be maintained at or below 5 feet per second in large diameter piping systems (i.e. 6" diameter and larger) to minimize the potential for hydraulic shock. Refer to Spears® engineering section entitled "Hydraulic Shock" for additional information. Friction loss data based on utilizing mean wall dimensions to determine average ID; actual ID may vary.

FLOW VELOCITY & FRICTION LOSS

SCHEDULE 40

Flow Rate (Gallons/ Minute)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Rate (Gallons/ Minute)
GPM	8"			10"			12"			14"			16"			18"			20"			24"			GPM
100	0.65	0.02	0.01																						100
125	0.81	0.03	0.01																						125
150	0.97	0.04	0.02																						150
175	1.13	0.06	0.03																						175
200	1.29	0.08	0.03	0.82	0.02	0.01																			200
250	1.62	0.11	0.05	1.03	0.04	0.02																			250
300	1.94	0.16	0.07	1.23	0.05	0.02																			300
350	2.27	0.21	0.09	1.44	0.07	0.03	1.01	0.03	0.01																350
400	2.59	0.27	0.12	1.64	0.09	0.04	1.16	0.04	0.02	0.96	0.02	0.01	0.73	0.01	0.01										400
450	2.91	0.34	0.15	1.85	0.11	0.05	1.30	0.05	0.02	1.08	0.03	0.01	0.82	0.02	0.01										450
500	3.24	0.41	0.18	2.05	0.14	0.06	1.44	0.06	0.02	1.19	0.04	0.02	0.91	0.02	0.01										500
750	4.85	0.87	0.38	3.08	0.29	0.12	2.17	0.12	0.05	1.79	0.08	0.03	1.37	0.04	0.02	1.08	0.02	0.01							750
1000	6.47	1.48	0.64	4.10	0.49	0.21	2.89	0.21	0.09	2.39	0.13	0.06	1.83	0.07	0.03	1.45	0.04	0.02	1.16	0.02	0.01				1000
1250				5.13	0.74	0.32	3.61	0.31	0.14	2.99	0.20	0.09	2.29	0.10	0.04	1.81	0.06	0.03	1.45	0.03	0.01				1250
1500				6.15	1.03	0.45	4.33	0.44	0.19	3.58	0.28	0.12	2.74	0.14	0.06	2.17	0.08	0.04	1.74	0.05	0.02	1.21	0.02	0.01	1500
2000							5.78	0.75	0.33	4.78	0.47	0.20	3.66	0.25	0.11	2.89	0.14	0.06	2.32	0.08	0.04	1.61	0.03	0.01	2000
2500							7.22	1.13	0.49	5.97	0.71	0.31	4.57	0.37	0.16	3.61	0.21	0.09	2.91	0.12	0.05	2.01	0.05	0.02	2500
3000										7.17	1.00	0.43	5.49	0.52	0.23	4.34	0.29	0.13	3.49	0.17	0.08	2.41	0.07	0.03	3000
3500													6.40	0.70	0.30	5.06	0.39	0.17	4.07	0.23	0.10	2.81	0.09	0.04	3500
4000																5.78	0.50	0.22	4.65	0.30	0.13	3.21	0.12	0.05	4000
4500																6.50	0.62	0.27	5.23	0.37	0.16	3.62	0.15	0.06	4500
5000																			5.81	0.45	0.19	4.02	0.18	0.08	5000
5500																			6.39	0.53	0.23	4.42	0.22	0.09	5500
6000																			6.97	0.63	0.27	4.82	0.25	0.11	6000
7000																						5.62	0.34	0.15	7000
7500																						6.03	0.39	0.17	7500
8000																						6.43	0.43	0.19	8000
8500																						6.83	0.49	0.21	8500

NOTE: Spears® recommends that Flow Velocities be maintained at or below 5 feet per second in large diameter piping systems (i.e. 6" diameter and larger) to minimize the potential for hydraulic shock. Refer to Spears® engineering section entitled "Hydraulic Shock" for additional information. Friction loss data based on utilizing mean wall dimensions to determine average ID; actual ID may vary.

FLOW VELOCITY & FRICTION LOSS

SCHEDULE 80

Flow Rate (Gallons/ Minute)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Rate (Gallons/ Minute)
GPM	1/8"			1/4" 3/8" 1/2" 3/4"												1"			1-1/4"			GPM
0.25	2.67	21.47	9.31	1.29	3.57	1.55	0.63	0.63	0.27													0.25
0.50	5.35	77.52	33.60	2.59	12.88	5.58	1.25	2.27	0.98													0.50
0.75	8.02	164.25	71.20	3.88	27.29	11.83	1.88	4.80	2.08													0.75
1	10.69	279.84	121.31	5.17	46.49	20.15	2.51	8.18	3.55	1.48	2.24	0.97	0.78	0.48	0.21	0.47	0.14	0.06	0.26	0.03	0.01	1
2	21.39	1010.21	437.93	10.35	167.84	72.76	5.01	29.54	12.81	2.96	8.08	3.50	1.56	1.73	0.75	0.93	0.49	0.21	0.52	0.12	0.05	2
5				25.87	915.95	397.07	12.53	161.23	69.89	7.39	44.12	19.12	3.91	9.45	4.10	2.33	2.67	1.16	1.30	0.64	0.28	5
7							17.54	300.66	130.34	10.35	82.27	35.66	5.48	17.62	7.64	3.26	4.98	2.16	1.81	1.20	0.52	7
10										14.78	159.26	69.04	7.82	34.11	14.79	4.66	9.65	4.18	2.59	2.32	1.00	10
15													11.74	72.27	31.33	6.99	20.44	8.86	3.89	4.91	2.13	15
20													15.65	123.13	53.38	9.33	34.82	15.09	5.18	8.36	3.62	20
25																11.66	52.64	22.82	6.48	12.64	5.48	25
30																13.99	73.78	31.98	7.77	17.71	7.68	30
35																16.32	98.16	42.55	9.07	23.56	10.21	35
40																18.65	125.70	54.49	10.37	30.17	13.08	40
45																			11.66	37.53	16.27	45
50																			12.96	45.62	19.77	50
60																			15.55	63.94	27.72	60
70																			18.14	85.06	36.87	70
75																			19.43	96.66	41.90	75
80																			20.73	108.93	47.22	80

GPM	1-1/2"			2" 2-1/2" 3"									4"			5"			6"			GPM
1	0.19	0.01	0.01	0.11	0.00	0.00	0.08	0.00	0.00	0.05	0.00	0.00										1
2	0.38	0.05	0.02	0.22	0.02	0.01	0.16	0.01	0.00	0.10	0.00	0.00										2
5	0.96	0.29	0.13	0.56	0.08	0.04	0.39	0.03	0.01	0.25	0.01	0.01										5
7	1.34	0.54	0.24	0.78	0.15	0.07	0.55	0.06	0.03	0.35	0.02	0.01										7
10	1.92	1.05	0.46	1.12	0.30	0.13	0.78	0.12	0.05	0.50	0.04	0.02										10
15	2.87	2.23	0.97	1.67	0.63	0.27	1.17	0.26	0.11	0.75	0.09	0.04										15
20	3.83	3.80	1.65	2.23	1.07	0.47	1.56	0.45	0.19	1.00	0.15	0.07	0.57	0.04	0.02							20
25	4.79	5.74	2.49	2.79	1.63	0.70	1.95	0.68	0.29	1.24	0.23	0.10	0.71	0.06	0.03							25
30	5.75	8.04	3.49	3.35	2.28	0.99	2.34	0.95	0.41	1.49	0.32	0.14	0.85	0.08	0.04	0.54	0.03	0.01				30
35	6.71	10.70	4.64	3.91	3.03	1.31	2.73	1.26	0.55	1.74	0.43	0.18	1.00	0.11	0.05	0.63	0.04	0.02				35
40	7.66	13.71	5.94	4.46	3.88	1.68	3.11	1.62	0.70	1.99	0.54	0.24	1.14	0.14	0.06	0.72	0.05	0.02				40
45	8.62	17.05	7.39	5.02	4.83	2.09	3.50	2.01	0.87	2.24	0.68	0.29	1.28	0.17	0.08	0.81	0.06	0.02				45
50	9.58	20.72	8.98	5.58	5.87	2.54	3.89	2.45	1.06	2.49	0.82	0.36	1.42	0.21	0.09	0.90	0.07	0.03	0.63	0.03	0.01	50
60	11.50	29.04	12.59	6.69	8.22	3.56	4.67	3.43	1.49	2.99	1.15	0.50	1.71	0.30	0.13	1.08	0.10	0.04	0.75	0.04	0.02	60
70	13.41	38.64	16.75	7.81	10.94	4.74	5.45	4.56	1.98	3.48	1.54	0.67	1.99	0.39	0.17	1.26	0.13	0.06	0.88	0.05	0.02	70
75	14.37	43.90	19.03	8.37	12.43	5.39	5.84	5.18	2.25	3.73	1.74	0.76	2.14	0.45	0.19	1.35	0.15	0.06	0.94	0.06	0.03	75
80	15.33	49.48	21.45	8.93	14.01	6.07	6.23	5.84	2.53	3.98	1.97	0.85	2.28	0.51	0.22	1.44	0.16	0.07	1.00	0.07	0.03	80
90	17.24	61.54	26.68	10.04	17.42	7.55	7.01	7.26	3.15	4.48	2.45	1.06	2.56	0.63	0.27	1.62	0.20	0.09	1.13	0.09	0.04	90
100	19.16	74.80	32.42	11.16	21.18	9.18	7.79	8.83	3.83	4.98	2.97	1.29	2.85	0.76	0.33	1.80	0.25	0.11	1.25	0.10	0.04	100
125	23.95	113.07	49.02	13.95	32.02	13.88	9.73	13.34	5.78	6.22	4.49	1.95	3.56	1.16	0.50	2.24	0.38	0.16	1.57	0.16	0.07	125
150	28.74	158.49	68.71	16.74	44.88	19.45	11.68	18.70	8.11	7.47	6.30	2.73	4.27	1.62	0.70	2.69	0.53	0.23	1.88	0.22	0.10	150
175				19.53	59.70	25.88	13.63	24.88	10.79	8.71	8.38	3.63	4.98	2.16	0.93	3.14	0.70	0.30	2.19	0.29	0.13	175
200				22.32	76.45	33.14	15.57	31.86	13.81	9.96	10.73	4.65	5.70	2.76	1.20	3.59	0.90	0.39	2.51	0.37	0.16	200
250				27.90	115.58	50.10	19.47	48.17	20.88	12.44	16.22	7.03	7.12	4.17	1.81	4.49	1.36	0.59	3.13	0.57	0.25	250
300							23.36	67.52	29.27	14.93	22.74	9.86	8.55	5.85	2.54	5.39	1.90	0.83	3.76	0.79	0.34	300
350													9.97	7.78	3.37	6.29	2.53	1.10	4.38	1.05	0.46	350
400													11.39	9.96	4.32	7.18	3.24	1.41	5.01	1.35	0.59	400
450													12.82	12.39	5.37	8.08	4.04	1.75	5.64	1.68	0.73	450
500																8.98	4.90	2.13	6.26	2.04	0.89	500

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FLOW VELOCITY & FRICTION LOSS

SCHEDULE 80

Flow Rate (Gallons/ Minute)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Rate (Gallons/ Minute)
GPM	8"			10"				12"			14"			16"			18"			20"				24"		GPM
125	0.89	0.04	0.02																						125
150	1.07	0.06	0.02																						150
175	1.25	0.07	0.03																						175
200	1.43	0.10	0.04	0.91	0.03	0.01																			200
250	1.78	0.14	0.06	1.13	0.05	0.02																			250
300	2.14	0.20	0.09	1.36	0.07	0.03																			300
350	2.50	0.27	0.12	1.59	0.09	0.04	1.12	0.04	0.02																350
400	2.85	0.34	0.15	1.81	0.11	0.05	1.28	0.05	0.02	1.06	0.03	0.01	0.81	0.02	0.01										400
450	3.21	0.43	0.19	2.04	0.14	0.06	1.44	0.06	0.03	1.19	0.04	0.02	0.91	0.02	0.01										450
500	3.57	0.52	0.23	2.27	0.17	0.07	1.60	0.07	0.03	1.33	0.05	0.02	1.01	0.02	0.01										500
750	5.35	1.10	0.48	3.40	0.36	0.16	2.40	0.16	0.07	1.99	0.10	0.04	1.52	0.05	0.02	1.19	0.03	0.01							750
1000	7.13	1.87	0.81	4.53	0.62	0.27	3.20	0.27	0.12	2.65	0.17	0.07	2.02	0.09	0.04	1.59	0.05	0.02	1.29	0.03	0.01				1000
1250				5.66	0.94	0.41	4.00	0.40	0.17	3.31	0.25	0.11	2.53	0.13	0.06	1.99	0.07	0.03	1.61	0.04	0.02				1250
1500				6.80	1.32	0.57	4.80	0.57	0.24	3.98	0.36	0.15	3.03	0.18	0.08	2.39	0.10	0.04	1.93	0.06	0.03	1.34	0.03	0.01	1500
2000							6.40	0.96	0.42	5.30	0.61	0.26	4.04	0.31	0.14	3.18	0.18	0.08	2.57	0.10	0.05	1.78	0.04	0.02	2000
2500										6.63	0.92	0.40	5.05	0.48	0.21	3.98	0.27	0.12	3.22	0.16	0.07	2.23	0.06	0.03	2500
3000										7.95	1.29	0.56	6.06	0.67	0.29	4.78	0.37	0.16	3.86	0.22	0.10	2.67	0.09	0.04	3000
3500													7.07	0.89	0.38	5.57	0.50	0.22	4.50	0.30	0.13	3.12	0.12	0.05	3500
4000																6.37	0.64	0.28	5.15	0.38	0.16	3.56	0.15	0.07	4000
4500																7.16	0.79	0.34	5.79	0.47	0.20	4.01	0.19	0.08	4500
5000																			6.43	0.57	0.25	4.45	0.23	0.10	5000
5500																			7.08	0.68	0.30	4.90	0.28	0.12	5500
6000																			7.72	0.80	0.35	5.34	0.33	0.14	6000
7000																						6.23	0.44	0.19	7000
7500																						6.68	0.49	0.21	7500
8000																						7.12	0.56	0.24	8000
8500																						7.57	0.62	0.27	8500

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Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

FLOW VELOCITY & FRICTION LOSS

SCHEDULE 120

Flow Rate (Gallons/ Minute)	1/2" Flow Velocity (ft/sec.)	1/2" Friction Loss (Ft. Water/ 100ft)	1/2" Friction Loss (psi/ 100ft)	3/4" Flow Velocity (ft/sec.)	3/4" Friction Loss (Ft. Water/ 100ft)	3/4" Friction Loss (psi/ 100ft)	1" Flow Velocity (ft/sec.)	1" Friction Loss (Ft. Water/ 100ft)	1" Friction Loss (psi/ 100ft)	1-1/4" Flow Velocity (ft/sec.)	1-1/4" Friction Loss (Ft. Water/ 100ft)	1-1/4" Friction Loss (psi/ 100ft)	1-1/2" Flow Velocity (ft/sec.)	1-1/2" Friction Loss (Ft. Water/ 100ft)	1-1/2" Friction Loss (psi/ 100ft)	2" Flow Velocity (ft/sec.)	2" Friction Loss (Ft. Water/ 100ft)	2" Friction Loss (psi/ 100ft)	2-1/2" 3" Flow Velocity (ft/sec.)	2-1/2" 3" Friction Loss (Ft. Water/ 100ft)	2-1/2" 3" Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Rate (Gallons/ Minute)
GPM	1/2"			3/4"			1"			1-1/4"			1-1/2"			2"			2-1/2" 3"						GPM
1	1.77	3.50	1.52	0.86	0.60	0.26	0.51	0.17	0.07	0.28	0.04	0.02	0.20	0.02	0.01	0.12	0.00	0.00	0.08	0.00	0.00	0.05	0.00	0.00	1
2	3.54	12.62	5.47	1.72	2.16	0.94	1.03	0.62	0.27	0.56	0.14	0.06	0.40	0.06	0.03	0.24	0.02	0.01	0.16	0.01	0.00	0.11	0.00	0.00	2
5	8.86	68.86	29.85	4.29	11.78	5.11	2.57	3.40	1.47	1.41	0.78	0.34	1.01	0.35	0.15	0.60	0.10	0.04	0.41	0.04	0.02	0.27	0.01	0.01	5
7	12.41	128.41	55.67	6.00	21.97	9.52	3.60	6.33	2.75	1.97	1.46	0.63	1.41	0.65	0.28	0.84	0.18	0.08	0.57	0.07	0.03	0.38	0.03	0.01	7
10	17.72	248.59	107.76	8.58	42.53	18.43	5.15	12.26	5.31	2.82	2.83	1.23	2.02	1.26	0.54	1.20	0.36	0.15	0.82	0.14	0.06	0.54	0.05	0.02	10
15	4"			12.87	90.11	39.06	7.72	25.98	11.26	4.23	6.00	2.60	3.03	2.66	1.15	1.80	0.75	0.33	1.22	0.29	0.13	0.81	0.11	0.05	15
20	0.64	0.05	0.02	17.16	153.52	66.55	10.30	44.25	19.18	5.64	10.23	4.43	4.04	4.54	1.97	2.40	1.28	0.56	1.63	0.50	0.22	1.07	0.18	0.08	20
25	0.80	0.08	0.03				12.87	66.90	29.00	7.05	15.46	6.70	5.04	6.86	2.97	3.00	1.94	0.84	2.04	0.76	0.33	1.34	0.27	0.12	25
30	0.96	0.11	0.05				15.45	93.77	40.65	8.46	21.67	9.39	6.05	9.61	4.17	3.60	2.72	1.18	2.45	1.06	0.46	1.61	0.38	0.17	30
35	1.12	0.14	0.06				18.02	124.75	54.08	9.87	28.83	12.50	7.06	12.79	5.54	4.20	3.61	1.57	2.85	1.41	0.61	1.88	0.51	0.22	35
40	1.28	0.19	0.08				20.60	159.75	69.25	11.28	36.92	16.01	8.07	16.37	7.10	4.80	4.63	2.01	3.26	1.80	0.78	2.15	0.65	0.28	40
45	1.44	0.23	0.10	5"						12.69	45.92	19.91	9.08	20.37	8.83	5.40	5.76	2.50	3.67	2.24	0.97	2.42	0.81	0.35	45
50	1.60	0.28	0.12	0.69	0.04	0.02				14.09	55.82	24.20	10.09	24.75	10.73	6.00	7.00	3.03	4.08	2.73	1.18	2.69	0.99	0.43	50
60	1.92	0.39	0.17	0.83	0.05	0.02				16.91	78.24	33.92	12.11	34.70	15.04	7.20	9.81	4.25	4.89	3.82	1.66	3.22	1.39	0.60	60
70	2.24	0.52	0.23	0.97	0.07	0.03				19.73	104.09	45.12	14.12	46.16	20.01	8.40	13.05	5.66	5.71	5.09	2.21	3.76	1.84	0.80	70
75	2.40	0.59	0.26	1.04	0.08	0.03				21.14	118.27	51.27	15.13	52.45	22.74	9.00	14.82	6.43	6.11	5.78	2.51	4.03	2.10	0.91	75
80	2.56	0.67	0.29	1.11	0.09	0.04				22.55	133.29	57.78	16.14	59.11	25.62	9.60	16.71	7.24	6.52	6.51	2.82	4.30	2.36	1.02	80
90	2.88	0.83	0.36	1.25	0.11	0.05				25.37	165.78	71.87	18.16	73.52	31.87	10.81	20.78	9.01	7.34	8.10	3.51	4.84	2.94	1.27	90
100	3.20	1.01	0.44	1.38	0.13	0.06	6"						20.18	89.36	38.74	12.01	25.26	10.95	8.15	9.85	4.27	5.37	3.57	1.55	100
125	4.00	1.53	0.66	1.73	0.20	0.09	0.99	0.05	0.02				25.22	135.09	58.56	15.01	38.18	16.55	10.19	14.89	6.45	6.72	5.40	2.34	125
150	4.80	2.14	0.93	2.08	0.28	0.12	1.19	0.07	0.03				30.26	189.35	82.08	18.01	53.52	23.20	12.23	20.87	9.05	8.06	7.57	3.28	150
175	5.60	2.85	1.24	2.42	0.37	0.16	1.38	0.10	0.04							21.01	71.20	30.86	14.27	27.76	12.04	9.40	10.07	4.36	175
200	6.40	3.65	1.58	2.77	0.48	0.21	1.58	0.12	0.05							24.01	91.17	39.52	16.30	35.55	15.41	10.75	12.89	5.59	200
250	8.00	5.52	2.39	3.46	0.72	0.31	1.98	0.18	0.08							30.01	137.83	59.75	20.38	53.75	23.30	13.43	19.49	8.45	250
300	9.60	7.74	3.36	4.15	1.01	0.44	2.37	0.26	0.11																300
350	11.20	10.30	4.46	4.84	1.34	0.58	2.77	0.34	0.15																350
400	12.80	13.19	5.72	5.54	1.72	0.74	3.16	0.44	0.19																400
450	14.40	16.40	7.11	6.23	2.14	0.93	3.56	0.55	0.24																450
500				6.92	2.60	1.13	3.95	0.67	0.29																500
750				10.38	5.50	2.38	5.93	1.14	0.61																750
1,000				13.84	9.37	4.06	7.91	2.40	1.04																1,000
1,250							9.88	3.63	1.57																1,250
1,500							11.86	5.09	2.21																1,500
2,000							15.81	8.67	3.76																2,000

NOTE: Spears® recommends that Flow Velocities be maintained at or below 5 feet per second in large diameter piping systems (i.e. 6" diameter and larger) to minimize the potential for hydraulic shock. Refer to Spears® engineering section entitled "Hydraulic Shock" for additional information. Friction loss data based on utilizing mean wall dimensions to determine average ID; actual ID may vary.

FLOW VELOCITY & FRICTION LOSS

SDR 11

Flow Rate (Gallons/ Minute)	Velocity Feet Per Second	Head Loss Feet of Water Per 100 Ft.	Pressure Loss PSI Per 100 Ft.	Velocity Feet Per Second	Head Loss Feet of Water Per 100 Ft.	Pressure Loss PSI Per 100 Ft.	Velocity Feet Per Second	Head Loss Feet of Water Per 100 Ft.	Pressure Loss PSI Per 100 Ft.	Velocity Feet Per Second	Head Loss Feet of Water Per 100 Ft.	Pressure Loss PSI Per 100 Ft.	Velocity Feet Per Second	Head Loss Feet of Water Per 100 Ft.	Pressure Loss PSI Per 100 Ft.	Velocity Feet Per Second	Head Loss Feet of Water Per 100 Ft.	Pressure Loss PSI Per 100 Ft.	Flow Rate (Gallons/ Minute)
GPM	1/2"			3/4"			1"			1-1/4"			1-1/2"			2"			GPM
1	1.71	3.19	1.38	0.80	0.50	0.22	0.48	0.15	0.06										1
2	3.42	11.53	5.00	1.60	1.82	0.79	0.96	0.53	0.23										2
3	5.13	24.43	10.59	2.40	3.85	1.67	1.44	1.12	0.49										3
4	6.83	41.62	18.04	3.20	6.55	2.84	1.93	1.91	0.83										4
5	8.54	62.91	27.27	4.00	9.91	4.29	2.41	2.89	1.25										5
6	10.25	88.18	38.23	4.79	13.89	6.02	2.89	4.05	1.76										6
7	11.96	117.32	50.86	5.59	18.47	8.01	3.37	5.39	2.34										7
8	13.67	150.23	65.13	6.39	23.66	10.26	3.85	6.90	2.99										8
9	15.38	186.85	81.00	7.19	29.42	12.76	4.33	8.58	3.72										9
10	17.08	227.11	98.45	7.99	35.76	15.50	4.82	10.43	4.52	3.23	3.94	1.71	2.31	1.75	0.76	1.35	0.49	0.21	10
15				11.99	75.78	32.85	7.22	22.11	9.58	4.84	8.35	3.62	3.47	3.71	1.61	2.03	1.03	0.45	15
20				15.98	129.11	55.97	9.63	37.67	16.33	6.46	14.23	6.17	4.63	6.33	2.74	2.70	1.76	0.76	20
25							12.04	56.94	24.69	8.07	21.51	9.33	5.78	9.56	4.15	3.38	2.66	1.15	25
30							14.45	79.82	34.60	9.68	30.15	13.07	6.94	13.40	5.81	4.05	3.73	1.62	30
35							16.86	106.19	46.03	11.30	40.11	17.39	8.09	17.83	7.73	4.73	4.96	2.15	35
40										12.91	51.37	22.27	9.25	22.83	9.90	5.40	6.35	2.75	40
45										14.52	63.89	27.70	10.41	28.40	12.31	6.08	7.89	3.42	45
50										16.14	77.66	33.66	11.56	34.52	14.96	6.75	9.60	4.16	50
55										17.75	92.65	40.16	12.72	41.18	17.85	7.43	11.45	4.96	55
60													13.88	48.38	20.97	8.10	13.45	5.83	60
70													16.19	64.37	27.90	9.46	17.89	7.76	70
80																10.61	22.91	9.93	80
90																12.16	28.50	12.35	90
100																13.51	34.64	15.02	100
125																16.89	52.37	22.70	125

NOTE: Spears® recommends that Flow Velocities be maintained at or below 5 feet per second in large diameter piping systems (i.e. 6" diameter and larger) to minimize the potential for hydraulic shock. Refer to Spears® engineering section entitled "Hydraulic Shock" for additional information. Friction loss data based on utilizing mean wall dimensions to determine average ID; actual ID may vary.

FLOW VELOCITY & FRICTION LOSS

SDR 13.5

Flow Rate (Gallons/ Minute)	cubic ft/sec	Velocity (ft/s)	Friction Head Loss (ft water/ 100ft)	Friction Pressure (psi/ 100ft)	Velocity (ft/s)	Friction Head Loss (ft water/ 100ft)	Friction Pressure (psi/ 100ft)	Velocity (ft/s)	Friction Head Loss (ft water/ 100ft)	Friction Pressure (psi/ 100ft)	Velocity (ft/s)	Friction Head Loss (ft water/ 100ft)	Friction Pressure (psi/ 100ft)	Velocity (ft/s)	Friction Head Loss (ft water/ 100ft)	Friction Pressure (psi/ 100ft)	Velocity (ft/s)	Friction Head Loss (ft water/ 100ft)	Friction Pressure (psi/ 100ft)	Velocity (ft/s)	Friction Head Loss (ft water/ 100ft)	Friction Pressure (psi/ 100ft)	Velocity (ft/s)	Friction Head Loss (ft water/ 100ft)	Friction Pressure (psi/ 100ft)	Flow Rate (Gallons/ Minute)
GPM		1/2"			3/4"			1"			1-1/4"			1-1/2"			2"			2-1/2"			3"			GPM
1	0.002	0.85	1.03	0.45	0.54	0.34	0.15																			1
2	0.004	1.69	2.05	0.89	1.07	0.68	0.29	0.68	0.40	0.17	0.42	0.13	0.06	0.32	0.065	0.028	0.20	0.03	0.013							2
5	0.011	4.22	11.58	5.01	2.68	3.82	1.65	1.69	1.24	0.54	1.05	0.39	0.17	0.80	0.20	0.088	0.51	0.075	0.033	0.35	0.038	0.016	0.24	0.02	0.009	5
7	0.016	5.91	21.24	9.20	3.75	7.01	3.03	2.36	2.28	0.99	1.47	0.72	0.31	1.12	0.37	0.16	0.72	0.125	0.054	0.49	0.53	0.023	0.33	0.03	0.012	7
10	0.022	8.44	40.46	17.52	5.35	13.34	5.78	3.37	4.33	1.87	2.10	1.37	0.59	1.60	0.71	0.31	1.02	0.24	0.10	0.70	0.09	0.039	0.47	0.04	0.017	10
15	0.033	4"			8.03	28.27	12.24	5.06	9.18	3.97	3.15	2.91	1.26	2.40	1.50	0.65	1.53	0.50	0.22	1.04	0.20	0.087	0.70	0.08	0.035	15
20	0.045	0.57	0.04	0.017	10.70	48.17	20.86	6.74	15.64	6.77	4.21	4.96	2.91	3.20	2.55	1.10	2.04	0.85	0.37	1.39	0.34	0.15	0.94	0.13	0.056	20
25	0.056	0.71	0.06	0.026	5"			8.43	23.65	10.24	5.26	7.49	3.24	4.00	3.85	1.67	2.55	1.29	0.56	1.74	0.51	0.22	1.17	0.19 0.	082	25
30	0.067	0.85	0.08	0.035	0.56	0.03	0.013	10.11	33.15	14.35	6.31	10.50	4.55	4.80	5.40	2.34	3.05	1.80	0.78	2.09	0.71	0.31	1.41	0.27	0.12	30
35	0.078	0.99	0.11	0.048	0.65	0.04	0.017				7.36	13.97	6.05	5.60	7.19	3.11	3.57	2.40	1.04	2.44	0.95	0.41	1.64	0.36	0.16	35
40	0.089	1.14	0.14	0.060	0.74	0.05	0.022				8.41	17.90	7.75	6.40	9.20	3.98	4.08	3.07	1.33	2.78	1.21	0.52	1.88	0.46	0.20	40
45	0.100	1.28	0.17	0.074	0.84	0.06	0.026	6"			9.46	22.26	9.64	7.20	11.44	4.95	4.59	3.82	1.65	3.13	1.51	0.65	2.11	0.58	0.25	45
50	0.111	1.42	0.21	0.091	0.93	0.07	0.030	0.66	0.03	0.013	10.52	27.05	11.71	8.00	13.91	6.02	5.10	4.64	2.01	3.48	1.83	0.79	2.35	0.70	0.30	50
60	0.134	1.70	0.29	0.13	1.12	0.10	0.043	0.79	0.04	0.017				9.60	19.50	8.44	6.12	6.50	2.81	4.18	2.57	1.11	2.82	0.98	0.42	60
70	0.156	1.99	0.38	0.16	1.30	0.14	0.061	0.92	0.06	0.026							7.14	8.65	3.75	4.87	3.42	1.48	3.29	1.31	0.57	70
75	0.167	2.13	0.44	0.19	1.40	0.16	0.069	0.98	0.07	0.030							7.65	9.83	4.26	5.22	3.88	1.68	3.52	1.49	0.65	75
80	0.178	2.27	0.49	0.21	1.49	0.18	0.078	1.05	0.08	0.035							8.16	11.08	4.80	5.57	4.37	1.89	3.76	1.68	0.73	80
90	0.201	2.56	0.61	0.26	1.67	0.22	0.095	1.18	0.09	0.039							9.18	13.78	5.97	6.27	5.44	2.36	4.23	2.09	0.90	90
100	0.223	2.84	0.74	0.32	1.86	0.27	0.12	1.31	0.11	0.048							10.20	16.75	7.25	6.96	6.61	2.86	4.70	2.54	1.10	100
125	0.279	3.55	1.13	0.49	2.33	0.40	0.18	1.64	0.17	0.074										8.70	10.01	4.33	5.88	3.84	1.66	125
150	0.334	4.26	1.58	0.68	2.79	0.56	0.24	1.97	0.24	0.10										10.44	14.01	6.07	7.04	5.37	2.33	150
175	0.390	4.97	2.10	0.91	3.26	0.75	0.33	2.30	0.32	0.14													8.22	7.15	3.10	175
200	0.446	5.68	2.69	1.16	3.72	0.96	0.42	2.62	0.41	0.18													9.39	9.15	3.96	200
250	0.557	7.10	4.07	1.76	4.66	1.46	0.63	3.28	0.62	0.27													11.74	13.86	6.00	250
300	0.668	8.52	5.69	2.46	5.58	2.03	0.88	3.93	0.87	0.38																300
350	0.780	9.94	7.58	3.29	6.52	2.70	1.17	4.59	1.16	0.50																350
400	0.891	11.36	9.70	4.20	7.44	3.46	1.50	5.24	1.48	0.64																400
450	1.003				8.37	4.31	1.87	5.90	1.84	0.80																450
500	1.114				9.30	5.24	2.27	6.56	2.23	0.97																500
750								9.83	4.73	2.05																750
1000	2.228							13.11	8.06	3.49																1000

NOTE: Spears® recommends that Flow Velocities be maintained at or below 5 feet per second in large diameter piping systems (i.e. 6" diameter and larger) to minimize the potential for hydraulic shock. Refer to Spears® engineering section entitled "Hydraulic Shock" for additional information. Friction loss data based on utilizing mean wall dimensions to determine average ID; actual ID may vary.

FLOW VELOCITY & FRICTION LOSS

SDR 21

Flow Rate (Gallons per Minute)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Rate (Gallons per Minute)
GPM	1/2"			3/4"			1"			1-1/4"			1-1/2"			2"			2-1/2"			3"			GPM
1				0.49	0.16	0.07	0.30	0.05	0.02	0.19	0.01	0.01	0.14	0.01	0.00	0.09	0.00	0.00	0.06	0.00	0.00	0.04	0.00	0.00	1
2				0.99	0.56	0.24	0.60	0.17	0.07	0.37	0.05	0.02	0.28	0.03	0.01	0.18	0.01	0.00	0.12	0.00	0.00	0.08	0.00	0.00	2
5				2.46	3.06	1.33	1.49	0.91	0.39	0.93	0.29	0.12	0.71	0.15	0.06	0.45	0.05	0.02	0.31	0.02	0.01	0.21	0.01	0.00	5
7				3.45	5.71	2.48	2.09	1.69	0.73	1.30	0.53	0.23	0.99	0.27	0.12	0.63	0.09	0.04	0.43	0.04	0.02	0.29	0.01	0.01	7
10				4.93	11.06	4.80	2.99	3.27	1.42	1.86	1.03	0.45	1.41	0.53	0.23	0.90	0.18	0.08	0.61	0.07	0.03	0.41	0.03	0.01	10
15	4"			7.39	23.44	10.16	4.48	6.93	3.00	2.79	2.18	0.95	2.12	1.12	0.49	1.35	0.37	0.16	0.92	0.15	0.06	0.62	0.06	0.02	15
20	0.50	0.03	0.01	9.86	39.94	17.31	5.97	11.81	5.12	3.72	3.72	1.61	2.83	1.91	0.83	1.80	0.64	0.28	1.23	0.25	0.11	0.83	0.10	0.04	20
25	0.62	0.04	0.02	5"			7.47	17.85	7.74	4.65	5.63	2.44	3.53	2.89	1.25	2.25	0.97	0.42	1.53	0.38	0.16	1.03	0.14	0.06	25
30	0.75	0.06	0.03	0.49	0.02	0.01	8.96	25.02	10.85	5.58	7.89	3.42	4.24	4.05	1.75	2.70	1.35	0.59	1.84	0.53	0.23	1.24	0.20	0.09	30
35	0.87	0.08	0.03	0.57	0.03	0.01	10.45	33.28	14.43	6.51	10.49	4.55	4.94	5.38	2.33	3.15	1.80	0.78	2.15	0.71	0.31	1.44	0.27	0.12	35
40	1.00	0.10	0.04	0.65	0.04	0.02				7.43	13.44	5.83	5.65	6.89	2.99	3.60	2.31	1.00	2.45	0.90	0.39	1.65	0.34	0.15	40
45	1.12	0.13	0.05	0.73	0.04	0.02	6"			8.36	16.71	7.25	6.36	8.57	3.72	4.05	2.87	1.24	2.76	1.12	0.49	1.86	0.43	0.19	45
50	1.25	0.15	0.07	0.82	0.05	0.02	0.58	0.02	0.01	9.29	20.31	8.81	7.06	10.42	4.52	4.50	3.49	1.51	3.06	1.37	0.59	2.06	0.52	0.23	50
60	1.50	0.21	0.09	0.98	0.08	0.03	0.69	0.03	0.01				8.48	14.60	6.33	5.41	4.89	2.12	3.68	1.91	0.83	2.48	0.73	0.32	60
70	1.75	0.29	0.12	1.14	0.10	0.04	0.81	0.04	0.02				9.89	19.43	8.42	6.31	6.50	2.82	4.29	2.55	1.10	2.89	0.97	0.42	70
75	1.87	0.32	0.14	1.22	0.12	0.05	0.86	0.05	0.02				10.59	22.08	9.57	6.76	7.39	3.20	4.60	2.89	1.25	3.09	1.10	0.48	75
80	2.00	0.37	0.16	1.31	0.13	0.06	0.92	0.06	0.02							7.21	8.32	3.61	4.90	3.26	1.41	3.30	1.25	0.54	80
90	2.24	0.46	0.20	1.47	0.16	0.07	1.04	0.07	0.03	8"						8.11	10.35	4.49	5.52	4.06	1.76	3.71	1.55	0.67	90
100	2.49	0.55	0.24	1.63	0.20	0.09	1.15	0.08	0.04	0.68	0.02	0.01				9.01	12.58	5.46	6.13	4.93	2.14	4.13	1.88	0.82	100
125	3.12	0.84	0.36	2.04	0.30	0.13	1.44	0.13	0.06	0.85	0.04	0.02							7.66	7.46	3.23	5.16	2.85	1.23	125
150	3.74	1.17	0.51	2.45	0.42	0.18	1.73	0.18	0.08	1.02	0.05	0.02							9.19	10.45	4.53	6.19	3.99	1.73	150
175	4.36	1.56	0.68	2.86	0.56	0.24	2.01	0.24	0.10	1.19	0.07	0.03							10.73	13.90	6.03	7.22	5.31	2.30	175
200	4.99	2.00	0.87	3.26	0.71	0.31	2.30	0.30	0.13	1.36	0.08	0.04										8.25	6.80	2.95	200
250	6.24	3.02	1.31	4.08	1.08	0.47	2.88	0.46	0.20	1.70	0.13	0.06										10.31	10.27	4.45	250
300	7.48	4.23	1.84	4.90	1.51	0.65	3.45	0.65	0.28	2.04	0.18	0.08													300
350	8.73	5.63	2.44	5.71	2.01	0.87	4.03	0.86	0.37	2.38	0.24	0.10													350
400	9.98	7.21	3.13	6.53	2.57	1.12	4.61	1.10	0.48	2.71	0.30	0.13													400
450	11.22	8.97	3.89	7.35	3.20	1.39	5.18	1.37	0.59	3.05	0.38	0.16													450
500				8.16	3.89	1.69	5.76	1.66	0.72	3.39	0.46	0.20													500
750							8.64	3.52	1.53	5.09	0.97	0.42													750
1000										6.79	1.66	0.72													1000
1250										8.48	2.51	1.09													1250

NOTE: Spears® recommends that Flow Velocities be maintained at or below 5 feet per second in large diameter piping systems (i.e. 6" diameter and larger) to minimize the potential for hydraulic shock. Refer to Spears® engineering section entitled "Hydraulic Shock" for additional information. Friction loss data based on utilizing mean wall dimensions to determine average ID; actual ID may vary.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

FLOW VELOCITY & FRICTION LOSS

SDR 26

Flow Rate (Gallons per Minute)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Rate (Gallons per Minute)
GPM	1"			1-1/4"			1-1/2"			2" 2-1/2" 3"									4"			5"			6"			GPM
1	0.30	0.04	0.02	0.18	0.01	0.01	0.14	0.01	0.00	0.09	0.00	0.00	0.06	0.00	0.00	0.04	0.00	0.00											1
2	0.59	0.16	0.07	0.36	0.05	0.02	0.27	0.02	0.01	0.17	0.01	0.00	0.12	0.00	0.00	0.08	0.00	0.00											2
5	1.48	0.88	0.38	0.89	0.26	0.11	0.68	0.13	0.06	0.43	0.04	0.02	0.29	0.02	0.01	0.20	0.01	0.00											5
7	2.07	1.65	0.71	1.25	0.48	0.21	0.95	0.25	0.11	0.61	0.08	0.04	0.41	0.03	0.01	0.28	0.01	0.01											7
10	2.96	3.19	1.38	1.79	0.94	0.41	1.36	0.48	0.21	0.86	0.16	0.07	0.59	0.06	0.03	0.40	0.02	0.01											10
15	4.44	6.76	2.93	2.68	1.98	0.86	2.04	1.02	0.44	1.30	0.34	0.15	0.88	0.13	0.06	0.59	0.05	0.02											15
20	5.91	11.52	4.99	3.57	3.38	1.46	2.72	1.73	0.75	1.73	0.58	0.25	1.18	0.23	0.10	0.79	0.09	0.04	0.48	0.03	0.01								20
25	7.39	17.41	7.55	4.47	5.10	2.21	3.40	2.62	1.14	2.16	0.87	0.38	1.47	0.34	0.15	0.99	0.13	0.06	0.60	0.04	0.02								25
30	8.87	24.40	10.58	5.36	7.15	3.10	4.07	3.67	1.59	2.59	1.23	0.53	1.76	0.48	0.21	1.19	0.18	0.08	0.72	0.05	0.02	0.47	0.02	0.01					30
35	10.35	32.46	14.07	6.25	9.52	4.13	4.75	4.89	2.12	3.03	1.63	0.71	2.06	0.64	0.28	1.39	0.24	0.11	0.84	0.07	0.03	0.55	0.03	0.01					35
40	11.83	41.57	18.02	7.14	12.19	5.28	5.43	6.26	2.71	3.46	2.09	0.90	2.35	0.82	0.35	1.58	0.31	0.14	0.96	0.09	0.04	0.63	0.03	0.01					40
45				8.04	15.16	6.57	6.11	7.78	3.37	3.89	2.60	1.13	2.65	1.02	0.44	1.78	0.39	0.17	1.08	0.11	0.05	0.70	0.04	0.02					45
50				8.93	18.43	7.99	6.79	9.46	4.10	4.32	3.16	1.37	2.94	1.24	0.54	1.98	0.47	0.20	1.19	0.14	0.06	0.78	0.05	0.02	0.55	0.02	0.01	50
60				10.72	25.83	11.20	8.15	13.26	5.75	5.19	4.42	1.92	3.53	1.73	0.75	2.38	0.66	0.29	1.43	0.19	0.08	0.94	0.07	0.03	0.66	0.03	0.01	60
70							9.51	17.64	7.65	6.05	5.88	2.55	4.12	2.30	1.00	2.77	0.88	0.38	1.67	0.26	0.11	1.10	0.09	0.04	0.77	0.04	0.02	70
75							10.19	20.05	8.69	6.49	6.69	2.90	4.41	2.62	1.13	2.97	1.00	0.43	1.79	0.29	0.13	1.17	0.10	0.05	0.83	0.04	0.02	75
80							10.87	22.59	9.79	6.92	7.54	3.27	4.70	2.95	1.28	3.17	1.13	0.49	1.91	0.33	0.14	1.25	0.12	0.05	0.88	0.05	0.02	80
90	8"						12.22	28.10	12.18	7.78	9.37	4.06	5.29	3.67	1.59	3.57	1.40	0.61	2.15	0.41	0.18	1.41	0.15	0.06	0.99	0.06	0.03	90
100	0.65	0.02	0.01				13.58	34.16	14.81	8.65	11.39	4.94	5.88	4.46	1.93	3.96	1.71	0.74	2.39	0.50	0.22	1.56	0.18	0.08	1.10	0.08	0.03	100
125	0.81	0.03	0.01							10.81	17.22	7.47	7.35	6.74	2.92	4.95	2.58	1.12	2.99	0.75	0.33	1.96	0.27	0.12	1.38	0.11	0.05	125
150	0.98	0.04	0.02										8.82	9.45	4.10	5.94	3.62	1.57	3.58	1.06	0.46	2.35	0.38	0.16	1.65	0.16	0.07	150
175	1.14	0.06	0.03	10"									10.29	12.57	5.45	6.93	4.81	2.09	4.18	1.41	0.61	2.74	0.50	0.22	1.93	0.21	0.09	175
200	1.30	0.08	0.03	0.84	0.03	0.01										7.92	6.16	2.67	4.78	1.80	0.78	3.13	0.64	0.28	2.21	0.27	0.12	200
250	1.63	0.11	0.05	1.05	0.04	0.02										9.91	9.31	4.04	5.97	2.72	1.18	3.91	0.97	0.42	2.76	0.42	0.18	250
300	1.95	0.16	0.07	1.26	0.06	0.02	12"									11.89	13.06	5.66	7.17	3.81	1.65	4.69	1.36	0.59	3.31	0.58	0.25	300
350	2.28	0.21	0.09	1.47	0.07	0.03	1.04	0.03	0.01	14"			16"						8.36	5.07	2.20	5.48	1.81	0.79	3.86	0.77	0.34	350
400	2.60	0.27	0.12	1.68	0.09	0.04	1.19	0.04	0.02	0.99	0.03	0.01	0.76	0.01	0.01				9.56	6.50	2.82	6.26	2.32	1.01	4.41	0.99	0.43	400
450	2.93	0.34	0.15	1.88	0.12	0.05	1.34	0.05	0.02	1.11	0.03	0.01	0.85	0.02	0.01				10.75	8.08	3.50	7.04	2.89	1.25	4.96	1.23	0.53	450
500	3.25	0.41	0.18	2.09	0.14	0.06	1.49	0.06	0.03	1.23	0.04	0.02	0.95	0.02	0.01	18"						7.82	3.51	1.52	5.52	1.50	0.65	500
750	4.88	0.88	0.38	3.14	0.30	0.13	2.23	0.13	0.06	1.85	0.08	0.04	1.42	0.04	0.02	1.12	0.02	0.01	20"						8.27	3.17	1.38	750
1000	6.51	1.50	0.65	4.19	0.51	0.22	2.98	0.22	0.10	2.47	0.14	0.06	1.89	0.07	0.03	1.49	0.04	0.02	1.21	0.03	0.01				11.03	5.41	2.34	1000
1250	8.13	2.26	0.98	5.23	0.78	0.34	3.72	0.34	0.15	3.09	0.21	0.09	2.36	0.11	0.05	1.87	0.06	0.03	1.51	0.04	0.02	24"						1250
1500	9.76	3.17	1.38	6.28	1.09	0.47	4.47	0.47	0.21	3.70	0.30	0.13	2.84	0.16	0.07	2.24	0.09	0.04	1.81	0.05	0.02	1.26	0.02	0.01				1500
2000				8.38	1.85	0.80	5.95	0.81	0.35	4.94	0.51	0.22	3.78	0.27	0.12	2.99	0.15	0.07	2.42	0.09	0.04	1.68	0.04	0.02				2000
2500							7.44	1.22	0.53	6.17	0.77	0.34	4.73	0.40	0.18	3.73	0.23	0.10	3.02	0.14	0.06	2.10	0.06	0.02				2500
3000										7.41	1.08	0.47	5.67	0.57	0.25	4.48	0.32	0.14	3.63	0.19	0.08	2.52	0.08	0.03				3000
3500													6.62	0.75	0.33	5.23	0.42	0.18	4.23	0.25	0.11	2.94	0.10	0.05				3500
4000																5.97	0.54	0.24	4.84	0.33	0.14	3.36	0.13	0.06				4000
4500																6.72	0.68	0.29	5.44	0.41	0.18	3.78	0.17	0.07				4500
5000																			6.05	0.49	0.21	4.20	0.20	0.09				5000
5500																			6.65	0.59	0.25	4.62	0.24	0.10				5500
6000																			7.26	0.69	0.30	5.04	0.28	0.12				6000
7000																						5.88	0.38	0.16				7000
7500																						6.30	0.43	0.19				7500
8000																						6.72	0.48	0.21				8000
8500																						7.14	0.54	0.24				8500

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FLOW VELOCITY & FRICTION LOSS

SDR 32.5

Flow Rate (Gallons per Minute)	Flow Velocity (ft/ sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/ sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/ sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/ sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/ sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/ sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/ sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Rate (Gallons per Minute)
GPM		6"			8"			10"			12"			14"			16"			18"			GPM
20	0.21	0.00	0.00	0.13	0.00	0.00	0.08	0.00	0.00	0.06	0.00	0.00	0.05	0.00	0.00	0.04	0.00	0.00	0.03	0.00	0.00	20
40	0.43	0.02	0.01	0.25	0.00	0.00	0.16	0.00	0.00	0.11	0.00	0.00	0.10	0.00	0.00	0.07	0.00	0.00	0.06	0.00	0.00	40
60	0.64	0.02	0.01	0.38	0.00	0.00	0.24	0.00	0.00	0.17	0.00	0.00	0.14	0.00	0.00	0.11	0.00	0.00	0.09	0.00	0.00	60
80	0.85	0.05	0.02	0.50	0.02	0.01	0.32	0.00	0.00	0.23	0.00	0.00	0.19	0.00	0.00	0.15	0.00	0.00	0.12	0.00	0.00	80
100	1.06	0.07	0.03	0.63	0.02	0.01	0.40	0.00	0.00	0.29	0.00	0.00	0.24	0.00	0.00	0.18	0.00	0.00	0.14	0.00	0.00	100
150	1.60	0.14	0.06	0.94	0.05	0.02	0.61	0.02	0.01	0.43	0.00	0.00	0.36	0.00	0.00	0.27	0.00	0.00	0.22	0.00	0.00	150
200	2.13	0.25	0.11	1.26	0.07	0.03	0.81	0.02	0.01	0.57	0.00	0.00	0.48	0.00	0.00	0.36	0.00	0.00	0.29	0.00	0.00	200
250	2.66	0.37	0.16	1.57	0.12	0.05	1.01	0.05	0.02	0.72	0.02	0.01	0.60	0.00	0.00	0.46	0.00	0.00	0.36	0.00	0.00	250
300	3.19	0.53	0.23	1.88	0.14	0.06	1.21	0.05	0.02	0.86	0.02	0.01	0.71	0.02	0.01	0.55	0.00	0.00	0.43	0.00	0.00	300
350	3.72	0.72	0.31	2.20	0.21	0.09	1.41	0.07	0.03	1.01	0.02	0.01	0.83	0.02	0.01	0.64	0.00	0.00	0.50	0.00	0.00	350
400	4.26	0.90	0.39	2.51	0.25	0.11	1.62	0.09	0.04	1.15	0.05	0.02	0.95	0.02	0.01	0.73	0.02	0.01	0.58	0.00	0.00	400
450	4.79	1.13	0.49	2.82	0.32	0.14	1.82	0.12	0.05	1.29	0.05	0.02	1.07	0.02	0.01	0.82	0.02	0.01	0.65	0.00	0.00	450
500	5.32	1.36	0.59	3.14	0.37	0.16	2.02	0.14	0.06	1.44	0.05	0.02	1.19	0.05	0.02	0.91	0.02	0.01	0.72	0.00	0.00	500
550	5.85	1.64	0.71	3.45	0.46	0.20	2.22	0.16	0.07	1.58	0.07	0.03	1.31	0.05	0.02	1.00	0.02	0.01	0.79	0.02	0.01	550
600	6.38	1.91	0.83	3.77	0.53	0.23	2.42	0.18	0.08	1.72	0.07	0.03	1.43	0.05	0.02	1.09	0.02	0.01	0.86	0.02	0.01	600
650	6.91	2.24	0.97	4.08	0.62	0.27	2.63	0.21	0.09	1.87	0.09	0.04	1.55	0.07	0.03	1.19	0.02	0.01	0.94	0.02	0.01	650
700	7.45	2.56	1.11	4.39	0.72	0.31	2.83	0.25	0.11	2.01	0.12	0.05	1.67	0.07	0.03	1.28	0.05	0.02	1.01	0.02	0.01	700
750	7.98	2.91	1.26	4.71	0.81	0.35	3.03	0.28	0.12	2.15	0.12	0.05	1.79	0.07	0.03	1.37	0.05	0.02	1.08	0.02	0.01	750
800	8.51	3.28	1.42	5.02	0.90	0.39	3.23	0.30	0.13	2.30	0.14	0.06	1.91	0.09	0.04	1.46	0.05	0.02	1.15	0.02	0.01	800
850	9.04	3.67	1.59	5.33	1.01	0.44	3.43	0.35	0.15	2.44	0.16	0.07	2.02	0.09	0.04	1.55	0.05	0.02	1.22	0.02	0.01	850
900				5.65	1.13	0.49	3.64	0.39	0.17	2.59	0.16	0.07	2.14	0.12	0.05	1.64	0.05	0.02	1.30	0.02	0.01	900
950				5.96	1.25	0.54	3.84	0.44	0.19	2.73	0.18	0.08	2.26	0.12	0.05	1.73	0.07	0.03	1.37	0.05	0.02	950
1000				6.28	1.36	0.59	4.04	0.46	0.20	2.87	0.21	0.09	2.38	0.14	0.06	1.82	0.07	0.03	1.44	0.05	0.02	1000
1050				6.59	1.50	0.65	4.24	0.51	0.22	3.02	0.23	0.10	2.50	0.14	0.06	1.92	0.07	0.03	`1.51	0.05	0.02	1050
1100				6.90	1.64	0.71	4.45	0.55	0.24	3.16	0.25	0.11	2.62	0.16	0.07	2.01	0.09	0.04	1.59	0.05	0.02	1100
1150							4.65	0.60	0.26	3.30	0.25	0.11	2.74	0.16	0.07	2.10	0.09	0.04	1.66	0.05	0.02	1150
1200							4.85	0.67	0.29	3.45	0.28	0.12	2.86	0.18	0.08	2.19	0.09	0.04	1.73	0.05	0.02	1200
1250							5.05	0.72	0.31	3.59	0.30	0.13	2.98	0.21	0.09	2.28	0.09	0.04	1.80	0.07	0.03	1250
1300							5.25	0.76	0.33	3.73	0.32	0.14	3.10	0.21	0.09	2.37	0.12	0.05	1.87	0.07	0.03	1300
1350							5.46	0.83	0.36	3.88	0.35	0.15	3.22	0.23	0.10	2.46	0.12	0.05	1.95	0.07	0.03	1350
1400							5.66	0.88	0.38	4.02	0.39	0.17	3.33	0.23	0.10	2.55	0.12	0.05	2.02	0.07	0.03	1400
1450							5.86	0.95	0.41	4.17	0.42	0.18	3.45	0.25	0.11	2.64	0.14	0.06	2.09	0.07	0.03	1450
1500							6.06	0.99	0.43	4.31	0.44	0.19	3.57	0.28	0.12	2.74	0.14	0.06	2.16	0.09	0.04	1500
1600							6.47	1.13	0.49	4.60	0.48	0.21	3.81	0.30	0.13	2.92	0.16	0.07	2.31	0.09	0.04	1600
1700							6.87	1.25	0.54	4.88	0.55	0.24	4.05	0.35	0.15	3.10	0.18	0.08	2.45	0.09	0.04	1700
1800										5.17	0.60	0.26	4.29	0.39	0.17	3.28	0.21	0.09	2.59	0.12	0.05	1800
1900										5.46	0.67	0.29	4.53	0.42	0.18	3.47	0.23	0.10	2.74	0.12	0.05	1900
2000										5.74	0.74	0.32	4.76	0.46	0.20	3.65	0.25	0.11	2.88	0.14	0.06	2000
2100										6.03	0.81	0.35	5.00	0.51	0.22	3.83	0.28	0.12	3.03	0.16	0.07	2100
2200										6.32	0.88	0.38	5.24	0.55	0.24	4.01	0.30	0.13	3.17	0.16	0.07	2200
2300										6.61	0.97	0.42	5.48	0.60	0.26	4.20	0.32	0.14	3.31	0.18	0.08	2300
2400										6.89	1.04	0.45	5.72	0.65	0.28	4.38	0.35	0.15	3.46	0.18	0.08	2400
2500										7.18	1.11	0.48	5.95	0.72	0.31	4.56	0.37	0.16	3.60	0.21	0.09	2500
2600										7.47	1.20	0.52	6.19	0.76	0.33	4.74	0.39	0.17	3.75	0.23	0.10	2600
2700										7.76	1.29	0.56	6.43	0.81	0.35	4.92	0.44	0.19	3.89	0.23	0.10	2700
2800										8.04	1.38	0.60	6.67	0.88	0.38	5.11	0.46	0.20	4.04	0.25	0.11	2800
2900										8.33	1.48	0.64	6.91	0.92	0.40	5.29	0.48	0.21	4.18	0.28	0.12	2900
3000										8.62	1.57	0.68	7.15	0.99	0.43	5.47	0.51	0.22	4.32	0.30	0.13	3000
3100										8.90	1.66	0.72	7.38	1.06	0.46	5.65	0.55	0.24	4.47	0.30	0.13	3100
3200										9.19	1.78	0.77	7.62	1.13	0.49	5.84	0.58	0.25	4.61	0.32	0.14	3200
3300													7.86	1.18	0.51	6.02	0.62	0.27	4.76	0.35	0.15	3300
3400													8.10	1.25	0.54	6.20	0.65	0.28	4.90	0.37	0.16	3400
3500													8.34	1.31	0.57	6.38	0.69	0.30	5.04	0.39	0.17	3500
3600													8.57	1.38	0.60	6.57	0.74	0.32	5.19	0.42	0.18	3600
3700													8.81	1.45	0.63	6.75	0.76	0.33	5.33	0.44	0.19	3700
3800																6.93	0.81	0.35	5.48	0.46	0.20	3800
3900																7.11	0.85	0.37	5.62	0.48	0.21	3900
4000																7.30	0.88	0.38	5.76	0.51	0.22	4000
4100																7.48	0.92	0.40	5.91	0.53	0.23	4100
4200																7.66	0.97	0.42	6.05	0.55	0.24	4200
4300																			6.20	0.58	0.25	4300
4400																			6.34	0.60	0.26	4400
4500																			6.49	0.62	0.27	4500
4600																			6.63	0.65	0.28	4600
4700																			6.77	0.67	0.29	4700

NOTE: Spears® recommends that Flow Velocities be maintained at or below 5 feet per second in large diameter piping systems (i.e. 6" diameter and larger) to minimize the potential for hydraulic shock. Refer to Spears® engineering section entitled "Hydraulic Shock" for additional information. Friction loss data based on utilizing mean wall dimensions to determine average ID; actual ID may vary.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

FLOW VELOCITY & FRICTION LOSS

SDR 41										
Flow Rate (Gallons per Minute)	Flow Velocity (ft/ sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/ sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Velocity (ft/ sec.)	Friction Loss (Ft. Water/ 100ft)	Friction Loss (psi/ 100ft)	Flow Rate (Gallons per Minute)
GPM	18"									GPM
750	1.05	0.02	0.01							750
1000	1.40	0.04	0.02	20"						1000
1250	1.75	0.05	0.02	1.42	0.03	0.01	24"			1250
1500	2.10	0.08	0.03	1.70	0.05	0.02	1.18	0.02	0.01	1500
2000	2.81	0.13	0.06	2.27	0.08	0.03	1.58	0.03	0.01	2000
2500	3.51	0.20	0.08	2.84	0.12	0.05	1.97	0.05	0.02	2500
3000	4.21	0.27	0.12	3.41	0.16	0.07	2.37	0.07	0.03	3000
3500	4.91	0.36	0.16	3.98	0.22	0.09	2.76	0.09	0.04	3500
4000	5.61	0.47	0.20	4.55	0.28	0.12	3.16	0.12	0.05	4000
4500	6.31	0.58	0.25	5.11	0.35	0.15	3.55	0.14	0.06	4500
5000				5.68	0.42	0.18	3.95	0.17	0.08	5000
5500				6.25	0.50	0.22	4.34	0.21	0.09	5500
6000				6.82	0.59	0.26	4.73	0.24	0.11	6000
7000							5.52	0.32	0.14	7000
7500							5.92	0.37	0.16	7500
8000							6.31	0.42	0.18	8000
8500							6.71	0.47	0.20	8500

NOTE: Spears® recommends that Flow Velocities be maintained at or below 5 feet per second in large diameter piping systems (i.e. 6" diameter and larger) to minimize the potential for hydraulic shock. Refer to Spears® engineering section entitled "Hydraulic Shock" for additional information. Friction loss data based on utilizing mean wall dimensions to determine average ID; actual ID may vary.

Hydraulic Shock

Hydraulic shock is the rapid increase in pressure due to a shock wave produced by a sudden change in system fluid velocity. If uncontrolled or insufficient pressure rated piping is used, these pressure surges can easily burst pipe and break valves or fittings. The term "water hammer" commonly used is derived from the sounds produced, but it is the hydraulic shock vibrations that can be damaging to piping systems. This is typically the result of sudden starting or stopping of a flowing column of liquid, such as water. Energy from the momentum of water in motion is converted to pressure when the flow is abruptly halted. A shock wave is produced that travels through the piping until it is stopped and bounces back to the original obstruction. This instantaneous shock to the system can lead to excessively high pressures. Hydraulic shock is frequently produced by rapid valve opening and closing, pumps starting and stopping, or even from a high speed wall of water hitting a change of direction fitting, such as an elbow. The effect is greater as piping systems is longer, the velocity change is greater and closing time is shorter.

Evaluating Hydraulic Shock Pressure Surges

An indication of the maximum surge pressure relative to velocity changes is essential in estimating the pressure rating requirements in designing a piping system. The following chart gives the maximum surge pressure at velocities of 1, 5 and 10 feet per second for different sizes of pipe, based on instantaneous valve closure in a PVC system. While listed, 10 feet per second is not recommended and is shown for comparative purposes. Velocity is best held to a maximum of 5 feet per second in plastic systems.

Schedule 40 Pipe Pressure Surge (psi) at Different Velocities

Size ⇨	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	6	8	10	12
1 ft/sec	27.3	24.6	23.8	21.6	20.5	18.8	19.7	18.4	16.9	15.1	14.2	13.5	13.0
5 ft/Sec	136.3	123.2	119.1	108.1	102.6	94.2	98.5	91.8	84.5	75.4	70.8	67.4	65.2
10 ft/sec	272.7	246.3	238.2	216.3	205.1	188.3	196.9	183.5	169.0	150.9	141.6	134.8	130.5

Schedule 80 Pipe Pressure Surge (psi) at Different Velocities

Size ⇨	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	6	8	10	12
1 ft/sec	32.2	29.2	28.0	25.5	24.3	22.6	23.2	21.8	20.3	18.9	17.8	17.3	17.1
5 ft/Sec	161	145.8	139.9	127.7	121.7	113.1	115.8	109.1	101.6	94.4	88.8	86.6	85.5
10 ft/sec	322	291.7	279.9	255.4	243.4	226.2	231.7	218.1	203.1	188.9	177.6	173.1	171.0

SDR Pipe Pressure Surge (psi) at Different Velocities

SDR ⇨	13.5	14	17	18	21	25	26	32.5	41
1 ft/sec	20.2	19.8	17.9	17.4	16.0	14.7	14.4	12.8	11.4
5 ft/Sec	101.0	99.1	89.5	86.9	80.2	---	71.9	64.1	57.0
10 ft/sec	201.9	198.1	179.0	173.8	160.4	146.7	143.7	128.2	113.9

Controlling Hydraulic Shock in System Design & Operation

Since hydraulic shock is a function of speed, mass and time, there are several ways to prevent, minimize or eliminate system damage by limiting or controlling the magnitude of pressure surges.

• **Limit Fluid Velocity –** one of the safest surge control techniques in plastic systems is to limit fluid velocities to a maximum of 5 ft./ second. Attempt to balance system operation flow demands and the magnitude of velocity variations.

• **Control Valve Closing Time –** avoid rapid opening and closing. Pneumatic or electric actuation may be considered for greater control. Use of multi-turn or gear operated valves may also be beneficial in slowing valve opening and closing. When all valves and controls are properly sized and adjusted, surges generated by changes in pump flows and demands can be reduced to non-harmful levels.

• **Control Pump Operation –** operate the system to maintain uniform pump flow rates. Use slow starting pumps where long runs and larger diameters are downstream. Where possible, partially close discharge valves to minimize volume when starting pumps, until lines are completely filled. Air chambers or surge relief tanks in conjunction with pressure regulating and surge relief valves can be used at pumping stations.

• **Check Valves –** installing a check valve in pump discharge lines will aid in keeping the line full. Be careful in selecting check valves. Check valves operate on flow reversal and can be rapid closing. Spring or lever assisted swing check valves can reduce hydraulic shock by avoiding "slamming" the valve closed.

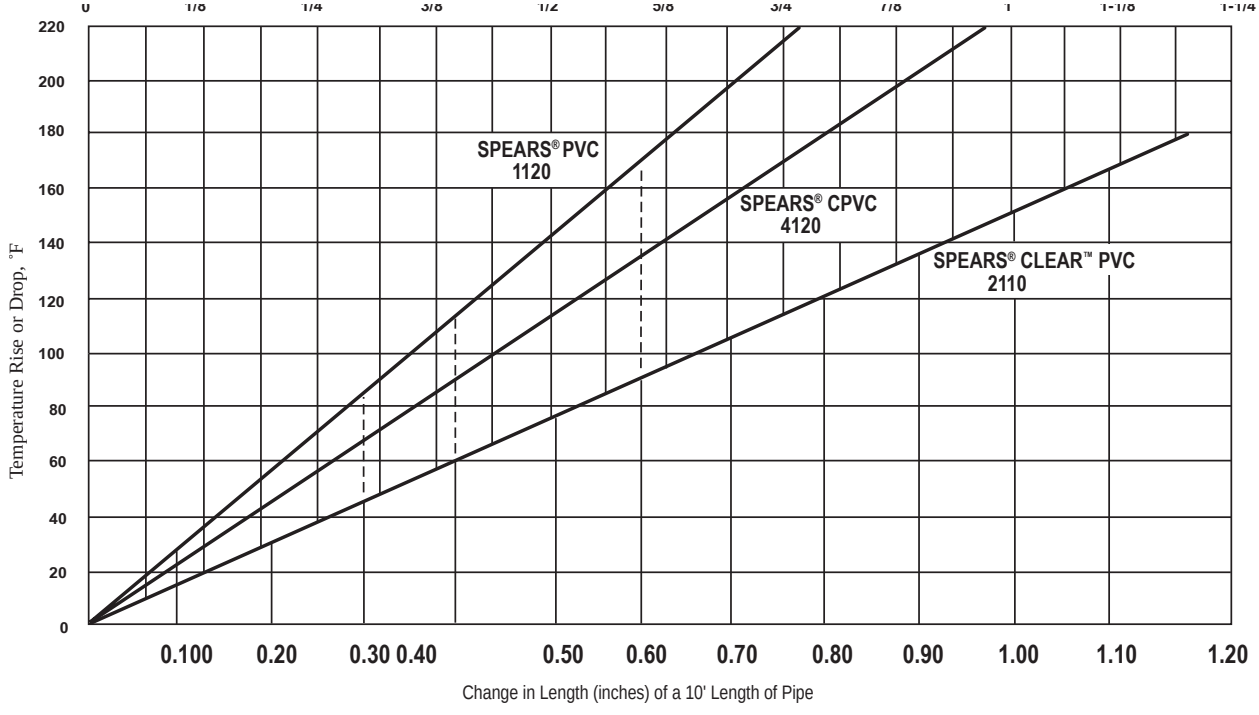
Thermal Expansion & Contraction

Piping systems expand and contract with changes in temperature. Thermoplastic piping expands and contracts more than metallic piping when subjected to temperature changes – as much as ten times that of steel. The effects of thermal expansion and contraction must be considered during the design phase, particularly for systems involving long runs, hot water lines, hot drain lines, and piping systems exposed to environmental temperature extremes. Installation versus working temperature or summer to winter extremes must be considered and addressed with appropriate system design to prevent damage to the piping system.

The degree of movement (change in length) generated as the result of temperature changes, must be calculated based on the type of piping material and the anticipated temperature changes of the system. The rate of expansion does not vary with pipe size. This movement must then be compensated for by the construction of appropriate sized expansion loops, offsets, bends or the installation of expansion joints. This absorbs the stresses generated, minimizing damage to the piping.

The following chart depicts the amount of linear movement (change in length, inches) experienced in a 10 ft length of pipe when exposed to various temperature changes.

Highly important is the change in length of plastic pipe with temperature variation. This fact should always be considered when installing pipe lines and allowances made accordingly.



The data furnished herein is based on information furnished by manufacturers of the raw material. This information may be considered as a basis for recommendation, but not as a guarantee. Materials should be tested under actual service to determine suitability for a particular purpose.

Calculating Linear Movement Caused by Thermal Expansion

The change in length caused by thermal expansion or contraction can be calculated as follows:

$\Delta L = 12\ y\ l\ (\Delta T)$

Where:

ΔL = expansion or contraction in inches
y = Coefficient of linear expansion of piping material selected
l = length of piping run in feet
ΔT = (T1 - T2) temperature change °F

Where:

T1 = maximum system temperature and
T2 = system temperature at installation or minimum system temperature

Coefficient of Linear Expansion (y) of Various Spears® Piping Products (in/in/°F) per ASTM D 696

Pipe Material	y
PVC Pressure Pipe (all schedules & SDR's) and PVC Duct	2.9×10^{-5}
CPVC Schedule 40 & Schedule 80 Pressure Pipe	3.2×10^{-5}
CPVC Duct	3.2×10^{-5}
CTS CPVC Plumbing Pipe	3.2×10^{-5}
Clear PVC Schedule 40 & Schedule 80 Pipe	4.1×10^{-5}
Spears® Low Extractable UPW Pipe	3.9×10^{-5}

Example 1: Calculate the change in length for a 100 foot straight run of 2" Schedule 80 PVC pipe operating at a temperature of 73°F; installed at 32°F.

$\Delta L = 12\ y\ l\ (\Delta T)$

Where:

ΔL = linear expansion or contraction in inches y = 2.9×10^{-5} in/in/°F

l = 100ft

ΔT = 41°F (73°F – 32°F)

ΔL = 12 in/ft x 0.000029 in/in/°F x 100 ft x 41°F

ΔL = 1.43"

In this example the piping would expand approximately 1-1/2" in length over a 100 ft straight run once the operating temperature of 73°F was obtained.

Example 2: 100 foot straight run of 2" Schedule 80 CPVC pipe operating temperature 180°F; installed at 80°F

$\Delta L = 12\ y\ l\ (\Delta T)$

Where:

ΔL = linear expansion or contraction in inches

y = 3.2×10^{-5} in/in/°F

l = 100 ft

ΔT = 100°F (180°F - 80°F)

ΔL = 12 in/ft x 0.000032 in/in/°F x 100ft x 100°F

ΔL = 3.84"

In this example the piping would expand approximately 4" in length over a 100 ft straight run once the operating temperature of 180°F was obtained.

Compensating for Movement Caused by Thermal Expansion/Contraction

Thermal expansion/ contraction are usually absorbed by the system at changes of direction. Long, straight runs are more susceptible to measurable movement with changes in temperature and the installation of an expansion joints, expansion loops or offsets is required. This will allow the system to absorb expansion/contraction forces without damage.

Once the change in length (ΔL) has been determined, the length of an offset, expansion loop, or bend can be calculated as follows:

$$\ell = \sqrt{\frac{3ED\ (\Delta L)}{2S}}$$

Where:

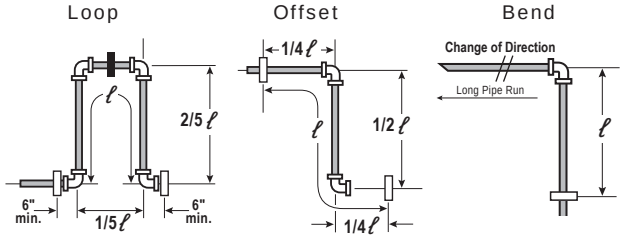
ℓ = Length of expansion loop in inches

E = Modulus of elasticity

D = Average outside diameter of pipe

ΔL = Change in length of pipe due to temperature change

S = Working stress at max. temperature



Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
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Hangers or guides should only be placed in the loop, offset, or change of direction as indicated above, and must not compress or restrict the pipe from axial movement. Piping supports should restrict lateral movement and should direct axial movement into the expansion loop configuration. Do not restrain "change in direction" configurations by butting up against joists, studs, walls or other structures. Use only solvent-cemented connections on straight pipe lengths in combination with 90° elbows to construct the expansion loop, offset or bend. The use of threaded components to construct the loop configuration is not recommended. Expansion loops, offsets, and bends should be installed as nearly as possible at the midpoint between anchors. Concentrated loads such as valves should not be installed in the developed length. Calculated support guide spacing distances for offsets and bends must not exceed recommended hanger support pacing for the maximum anticipated temperature. If that occurs, the distance between anchors will have to be reduced until the support guide spacing distance is equal to or less than the maximum recommended support spacing distance for the appropriate pipe size at the temperature used.

Example: 2" Schedule 80 CPVC pipe operating temperature 180°F; installed at 80°F where ΔL = 3.84"

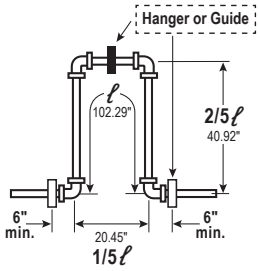
$$\ell = \sqrt{\frac{3ED\,(\Delta L)}{2S}}$$

$$\ell = \sqrt{\frac{3 \times 214{,}000 \times 2.375 \times 3.84}{2 \times 500}}$$

ℓ = 76.51"

2/5 ℓ = 30.60"

1/5 ℓ = 15.30"



Thermal Stress

Compressive stress in piping restrained from expanding can damage the piping system and in some cases damage hangers and supports. The amount of stress generated is dependent on the pipe material's coefficient of thermal expansion and its tensile modulus using the following equation:

S = EyΔT

Where:

S = stress induced in the pipe

E = Modulus of Elasticity at maximum system temperature y = Coefficient of thermal expansion

ΔT = total temperature change of the system

The stress induced must not exceed the pipe material maximum allowable working stress (fiber stress). Increases in temperature will reduce the allowable stress as shown the table.

Example: 100 foot straight run of 2" Schedule 80 CPVC pipe operating temperature 180°F; installed at 80°F:

ΔL = 12 yl (ΔT) Where:

ΔL = linear expansion or contraction in inches

y = 3.2 x 10^{-5} in/in/°F

l = 100ft

ΔT = 100°F (180°F - 80°F)

ΔL = 12 in/ft x 0.000032 in/in/°F x 100 ft x 100°F

ΔL = 3.84"

The piping would expand approximately 4" in length in a 100 ft straight run

The equation for determining induced stress can then be used:

S = EyΔT

Where:

S = stress induced in the pipe

E = Modulus of Elasticity at 180°F = 214,000

y = Coefficient of thermal expansion = 3.2 x 10^{-5} in./in./°F

ΔT = total temperature change of the system = 100°F

S = 214,000 x .000032 x 100

S = 685 psi

From chart, maximum allowable stress for CPVC at 180°F is 500 psi; Stress generated from this expansion in a restrained piping system exceeds the maximum allowable stress and will result in failure of the piping, unless compensation is made for thermal expansion.

Maximum Allowable Working (Fiber) Stress and Tensile Modulus at Various Temperatures

Temp (°F)		Maximum Allowable Working (Fiber) Stress, psi	Tensile Modulus of Elasticity, psi
PVC	73	2,000	400,000
	80	1,760	396,000
	90	1,500	375,000
	100	1,240	354,000
	110	1,020	333,000
	120	800	312,000
	130	620	291,000
	140	440	270,000
CPVC	73	2,000	364,000
	90	1,820	349,000
	100	1,640	339,000
	110	1,500	328,000
	120	1,300	316,000
	140	1,000	290,000
	160	750	262,000
	180	500	214,000
	200	400	135,000

Thrust Blocking

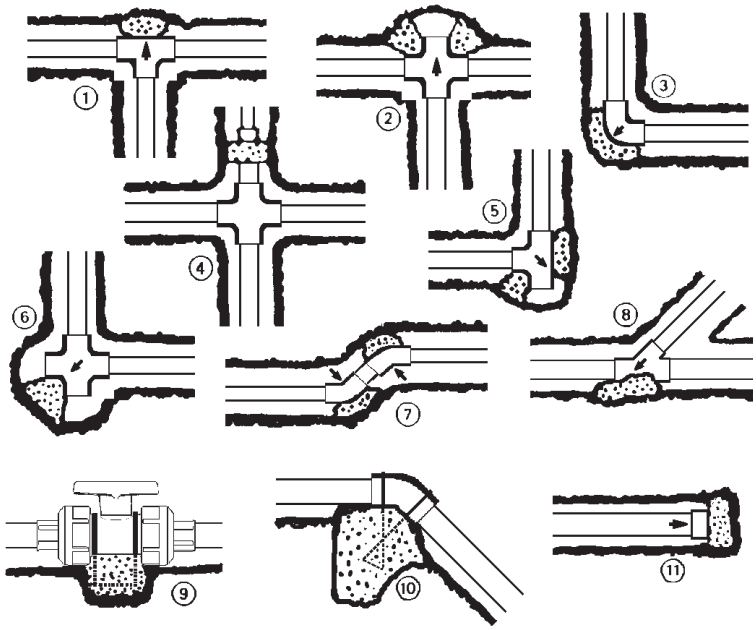
Thrust blocking prevents pipe movement when a pressure system is activated and pressurized. Thrust blocking is required at all points of change of direction in the pipe line. Most blocking is done where a fitting, valve, or hydrant is installed. There may be times when side blocking is necessary because of curvature occurring without the use of fittings. Usually good compacted backfill will provide the necessary anchor for side thrust. Concrete blocking is the most commonly recommended method of blocking. Concrete is placed directly on the fitting against the line of thrust. The concrete must also pour against undisturbed earth. The size of the blocking will vary with the size of pipe, working pressure exerted, type of fitting, degree of flow direction change, and the soil conditions. PVC and CPVC pipe are flexible and may pulsate under pressure variations. This does not harm the pipe or that part which is enclosed in concrete. It may cause wear at the interface of the concrete block and the backfill. For this reason, pipe and fittings should be wrapped with a one mill or heavier plastic sheeting prior to being embedded in concrete to prevent any possible damage.

THRUST BLOCKING – Water under pressure exerts thrust forces in piping systems. Thrust blocking should be provided, as necessary, to prevent movement of pipe or appurtenances in response to thrust.

Types Of Thrust Blocking:

If thrusts due to high pressure are expected, anchor valves as below. At vertical bends anchor to resist outward thrusts.

1. Thru line connection, tee
2. Thru line connection, cross used as tee
3. Direction change, elbow
4. Change line size, reducer
5. Direction change, tee used as elbow
6. Direction change, cross used as elbow
7. Direction change
8. Thru line connection, wye
9. Valve anchor
10. Direction change vertical, bend anchor
11. End Caps (above or below ground)



Thrust Blocking Is Required Wherever The Pipeline:

* Changes direction (e.g., tees, bends, elbows and crosses)
* Changes size at its reducers
* Stops, as at dead ends
* Valves and hydrants, at which thrust develops when closed.

Size And Type Of Thrust Blocking Depends On:

* Maximum system pressure
* Pipe size
* Type and size of fittings or appurtenance
* Line profile (horizontal or vertical bends)
* Soil type

See additional information under Installation Gasketed Pipe

Critical Collapse Pressures

The Critical Collapse Pressure is directly related to the pipe wall thickness and represents the maximum allowable external load. External loads can result from conditions such as buried pipe soil loads; underwater applications; vacuum service; and pipe installed on pump suction lines. The actual external load being applied to the pipe is the difference between the external pressure and the internal pressure. As a result, a pressurized pipe can withstand a greater external load than an empty pipe.

Critical Collapse Pressure Rating of Various PVC and CPVC Pipe & Duct @ 73°F with No Safety Factor in PSI (Inches of Water)

Size(in.)	Duct	SDR 41	SDR 26	SDR 21	SCH 40	SCH 80	SCH 120
2	N/A	17* (470)	74* (2,048)	126* (3,487)	316 (8,746)	939 (25,989)	1309 (36,230)
2-1/2	N/A	17* (470)	74* (2,048)	126* (3,487)	451 (12,483)	975 (26,986)	1309 (36,230)
3	N/A	17* (470)	74* (2,048)	126* (3,487)	307 (8,497)	722 (19,983)	1128 (31,221)
3-1/2	N/A	17* (470)	74* (2,048)	126* (3,487)	217 (6,006)	578 (15,998)	N/A
4	N/A	17* (470)	74* (2,048)	126* (3,487)	190 (5,259)	451 (12,482)	1128 (31,221)
5	N/A	17* (470)	74* (2,048)	126* (3,487)	117 (3,238)	361 (10,000)	N/A
6	N/A (470)	17* (2,048)	74* (3,487)	126* (2,491)	90 (9,493)	343 (19,983)	722
6 x 1/8	5.2 (144)	N/A	N/A	N/A	N/A	N/A	N/A
6 x 3/16	0.7 (426)	N/A	N/A	N/A	N/A	N/A	N/A
8	10.0 (193)	17* (470)	74* (2,048)	126* (3,487)	58 (1,605)	235 (6,504)	N/A
10	5.4 (100)	17* (470)	74* (2,048)	126* (3,487)	49 (1,605)	217 (6,504)	N/A
12	3.0 (60)	17* (470)	74* (2,048)	126* (3,487)	42 (1,162)	199 (5,508)	N/A
14	2.5 (45)	17* (470)	74* (2,048)	126* (3,487)	40 (1,107)	194 (5,369)	N/A
16	1.6 (30)	17* (470)	74* (2,048)	126* (3,487)	40 (1,107)	181 (5,010)	N/A
18	1.0 (26)	17* (470)	74* (2,048)	126* (3,487)	33 (913)	162 (4,484)	N/A
20	1.3 (28)	17* (470)	74* (2,048)	126* (3,487)	28 (775)	157 (4,346)	N/A
24	1.0 (20)	17* (470)	74* (2,048)	126* (3,487)	25 (692)	150 (4,152)	N/A

1 psi = 2.036 inches of mercury

* SDR Pipe carries the same collapse ratings for all sizes due to the wall thickness/O.D. ratio

Standard temperature de-rating factors must be applied for use at elevated temperatures (see following Temperature Limitations section). Multiply the collapse pressure rating @ 73°F from the chart by the appropriate material de-rating factor.

Solvent-cemented connections are preferred over threaded or flanged joining in vacuum applications to reduce potential for leaks.

Temperature Limitations

PVC & CPVC

The maximum operating temperature for PVC pipe is 140°F and the maximum operating temperature for CPVC pipe is 200°F. As temperatures increase, impact strength typically increases while tensile strength and pipe stiffness decrease resulting in reduced applicable pressure ratings. Physical properties of PVC and CPVC pipe are generally specified at 73°F per applicable ASTM material test standards. The maximum allowable pressure at elevated temperatures is determined by multiplying the 73°F pressure rating by the applicable material de-rating factor for the elevated use temperature shown in the following chart:

De-Rating Factors

PVC Pipe		CPVC Pipe	
Temp (°F)	Working De-Rating Factor	Temp (°F)	Working De-Rating Factor
73	1.00	73-80	1.00
80	0.88	90	0.91
90	0.75	100	0.82
100	0.62	110	0.72
110	0.51	120	0.65
120	0.40	130	0.57
130	0.31	140	0.50
140	0.22	150	0.42
---	---	160	0.40
---	---	170	0.29
---	---	180	0.25
---	---	200	0.20

Appropriate temperature de-rating factors must be applied at temperatures other than 73°F based on the material selected.

Multiply the collapse pressure rating of the selected pipe at 73°F, by the appropriate de-rating factor to determine the collapse pressure rating of the pipe at the elevated temperature chosen.

Weatherability

When standard rigid PVC or CPVC pipe is exposed to UV radiation from sunlight the following conditions have been noted:

• A color change, slight increase in tensile strength, slight increase in modulus of tensile elasticity, and a slight decrease in impact strength may occur.

• Material directly exposed to UV radiation results in extremely shallow penetration depths (frequently less than 0.001 inch).

• The effects of UV exposure do not continue when exposure to UV is terminated.

• The effects of UV exposure do not penetrate even thin shields such as paint coatings, or wrapping.

It is recommended that PVC and CPVC piping products exposed to the direct affects of sunlight be painted with a light colored acrylic or latex paint that is chemically compatible with the PVC/CPVC products. Check with paint manufacture for compatibility. Oil-based paints should **NOT** be used.

Additional consideration should be given to the affects of expansion/contraction caused by heat absorption from sunlight in outdoor applications.

Plastic piping systems must be engineered, installed, operated and maintained in accordance with accepted standards and procedures. It is absolutely necessary that all design, installation, operation and maintenance personnel be trained in proper handling, installation requirements and precautions for installation and use of plastic piping systems before starting.

Handling & Storage

Spears® products are packaged and shipped with care to avoid damage. Pipe and fittings should be stored and protected from direct exposure to sunlight. All pipe and accessories should be stored above ground and fully supported so as not to bend or excessively deflect under its own weight. Proper stacking techniques are necessary. Improper stacking can result in instability that may result in pipe damage or personnel injury.

Use care when transporting and storing the product to prevent damage. Piping products should not be dropped or have objects dropped on them. Do not drag pipe over articles or across the ground and do not subject pipe to external loads or over stacking. If extended storage in direct sunlight is expected, pipe should be covered with an opaque material while permitting adequate air circulation above and around the pipe as required to prevent excessive heat accumulation.

Spears® products should not be stored or installed close to heat-producing sources. PVC storage should not exceed 150°F and CPVC storage should not exceed 210°F. Handling techniques for PVC and CPVC pipe considered acceptable at warm temperatures may be unacceptable at very cold temperatures. When handling pipe in cold weather, consideration must be given to its lower impact strength. In subfreezing temperatures, extra caution in handling must be taken to prevent impact damage.

All pipe should be inspected for any scratches, splits or gouges before use. Damaged sections must be cut out and discarded.

Plastic Piping Tools

Basic tools used with Plastic Piping

Use tools that have been specifically designed for use with thermoplastic pipe and fittings when installing. A variety of tools that are designed for cutting, beveling, and assembling plastic pipe and fittings, are readily available through local wholesale supply houses dealing in plastic pipe and fittings.

⚠ **Warning** Tools normally used with metal piping systems, such as hacksaws, water pump pliers, pipe wrenches, etc., can cause damage to plastic pipe and fittings. Visible and hidden fractures, scoring or gouging of material, and over tightening of plastic threaded connections are some of the common problems resulting from the use of incorrect tools and procedures.

Pipe Cutters

Pipe must be square-cut to allow for the proper joining of pipe end and the fitting socket bottom. Wheel type pipe cutters designed for plastic pipe provides easy and clean cuts on smaller pipe sizes. Care should be used with similar ratchet-type cutters to avoid damage to pipe. A slightly raised edge left on the outside of the pipe end after cutting with either device must be removed.

Pipe Cutters for Large Diameter Pipe

Blade cutters made for use with large diameter plastic pipe are easy to adjust and operate for square, burr-less cuts. Blades with carbide edges will provide longer life. With one style blade cutter, pipe ends may also be beveled for solvent joints while being cut by using an optional bevel tool in place of one cutter blade.

Hand Saws

A miter box or similar guide can be used with a fine-toothed saw blades (16 to 18 teeth per inch) having little or no set (maximum 0.025 inch).

Power Saws

Power saws are quite useful in operations where a large quantity of pipe is being cut. Blades designed for plastic pipe MUST be used. A cutting speed of 6,000 RPM, using ordinary hand pressure is recommended.

Pipe Beveling Tools

Power beveling tools, as well as hand beveling tools designed for use with plastic pipe are available. Pipe ends must be beveled (chamfered) to allow easy insertion of the pipe into the fitting and to help spread solvent cement and to prevent scraping cement from the inside of the fitting socket. A recommended bevel of 1/16" to 3/32" at a 10° to 15° angle can be achieved using a plastic pipe beveling tool, but can also be accomplished using a file designed for use on plastic.

Deburring Tools

Special plastic pipe deburring tools remove burs from pipe ends quickly and efficiently. All burrs must be removed from the inside, as well as the outside, of the pipe ends to properly spread solvent cement when joining pipe and fitting.

Strap Wrenches

Strap wrenches with nylon straps treated for slip resistance and designed for use with plastic pipe provide gripping power for turning without scratching or deforming the pipe.

Chain Vises

Chain vises can be used to hold pipe. Vises made with jaws engineered for use with plastic pipe provide holding power without damage to the pipe.

Pullers & Joining Devices

Pipe and fitting pullers are available for joining large diameter plastic pipe and fittings. These tools are designed to allow the pipe to be inserted to the proper insertion depth, maintain proper alignment during assembly, and hold freshly solvent-cemented connections to prevent the fitting from backing-off until the initial set time is achieved.

Joining Methods –Solvent Cement Welding

Solvent cement welding is the most widely used joining method for PVC and CPVC pipe and fittings. Other methods such as threads, flanges and groove adapters can also be used. These are specifically useful where it is anticipated that the joint will have to be disassembled in the future.

Solvent Cement Safety Precautions

Solvent cement products are flammable and contain chemical solvents. Appropriate safety precautions must be taken BEFORE APPLYING PRIMER AND CEMENT. Read the cement can label!

⚠ **CAUTION**

Virtually all solvent cements and primers for plastic pipe are flammable and should not be used or stored near heat, spark or open flames. Do not smoke during use. Eliminate all ignition sources. Primer and PVC cement should be stored in closed containers in the shade at temperatures between 40°F and 110°F; CPVC cement at temperatures between 40°F and 90°F. Use of a can with applicator attached to its lid is recommended. ***Verify expiration dates stamped on cements and primers prior to use.***

Avoid breathing vapors*. They should be used only with adequate ventilation. Explosion-proof general mechanical ventilation is recommended. In confined or partially enclosed areas, a ventilating device should be used. Containers should be kept tightly closed when not in use, and covered as much as possible when in use.*

Avoid contact with skin and eyes. *May be absorbed through the skin; wearing PVA coated protective gloves and an impervious apron are recommended. May cause eye injury. Use Eye protection and avoid eye contact. In case of contact flush with plenty of water for 15 minutes. If irritation persists, get medical attention. If swallowed, call a physician immediately and follow precautionary statement given on side panel of cement container. Keep out of reach of children.*

Refer to Solvent Cement Material Safety Data Sheet (MSDS)

Use Caution with Welding Torches or other equipment where sparks might be involved at construction sites where plastic pipe has recently been solvent welded. Flammable vapors from cemented joints can stay within a piping system for some time. In all cases, lines should be flushed and purged to remove solvent vapors before welding.

Use Caution with Calcium Hypochlorite. Do not use a dry granular calcium hypochlorite as a disinfecting material for water purification in potable water piping systems. Granules or pellets of calcium hypochlorite (including their vapors) may react violently with solvent cements and primers if a water solution is not used. Chlorinated water solutions are nonvolatile and may be pumped into the piping system. Dry granular calcium hypochlorite should not be stored or used near solvent cements or primers.

Actually, solvent cementing is no more dangerous than putting gasoline in your automobile.

Solvent Cement and Primer Spills

Protect work areas prior to starting by using drop cloths in the event of a spill. Accidental spills should be wiped up immediately before the cement sets. Cement and/or primer spills can cause irreparable damage depending on the type of surface affected. Consult the manufacturer of the affected surface for possible suggestions.

Basic Solvent Cement Joints

The following is a general description of basic techniques used to make solvent cement joints. Adjustments will need to be made to method and tools used according to size of piping, but the same principles apply. Additional guidance can be found in ASTM D 2855, Standard Practice for Making Solvent-Cemented Joints with Poly (Vinyl Chloride) (PVC) Pipe and Fittings. **Important:** Installers should verify that they can make satisfactory joints under varying conditions and should receive training in installation and safety procedures.

To consistently make good joints in PVC and CPVC piping products, the following should be carefully understood:

1. The joining surfaces of pipe and fitting must be softened and made semi-fluid.

2. Sufficient cement must be applied to fill the gap between pipe and fitting.

3. Assembly of pipe and fittings must be made while the surfaces are still wet and fluid.

4. Joint strength develops as the cement dries (cures). In the tight part of the joint (interference area) the surfaces will fuse together, in the loose part the cement will bond to both surfaces.

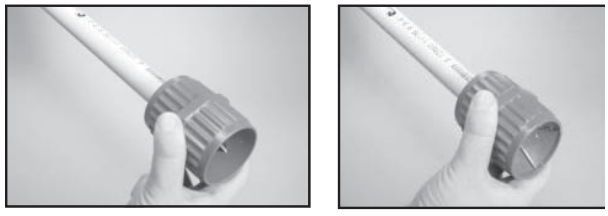
Cutting the Pipe

PVC or CPVC pipe can be cut easily with a ratchet cutter, wheel-type plastic pipe cutter (NOTE: be sure to remove any raised ridge produced by wheel cutters), a power saw, or any other fine-tooth saw. It is important that the cutting tools being used are designed for plastic pipe. To ensure that the pipe is cut square, use a miter box when cutting with a saw. Cutting pipe as square as possible provides the maximum bonding surface area.

Be careful not to split the tube if using a ratchet-type cutter, especially in temperatures below 50°F. If any damage or cracking is evident, cut off at least 2" of the pipe beyond any visible crack.

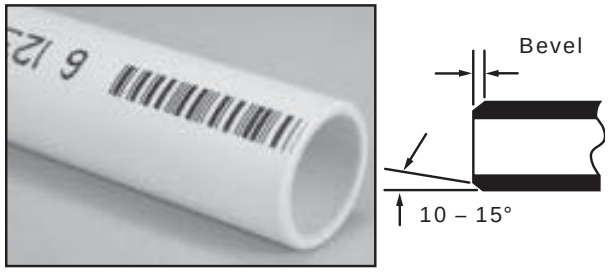
Deburring & Beveling

Burrs and filings can prevent contact between the tube and the fitting during assembly and must be removed from the outside and the inside of the pipe. A deburring/chamfering tool (or file) is suitable for this purpose:



Burrs Being Removed from Outside & Inside

A slight bevel (chamfer) must be placed at the outsided end of the pipe to ease the entry of the tube into the socket and minimize the chance of cement being wiped off the fitting:



Bevel Outside End

Fitting & Joining Preparation

1. Using a clean, dry rag, wipe any loose dirt and moisture from the fitting's socket and pipe end. Moisture can slow the cure time, and at this stage of assembly, excessive moisture can reduce joint strength.

2. Check the dry fit of the pipe and fitting. The pipe should enter the fitting's socket easily 1/4 - 3/4 of the way (interference fit) , or at least have interference between pipe and fitting bottom (net fit). DO NOT use any components that appear irregular or do not fit properly. Contact Spears® regarding any questions about usability.

3. Measure socket depth and mark on pipe for reference during cement application.

4. It is advisable to additionally mark pipe and fitting for alignment orientation position, especially with larger fittings.

Solvent Cementing Assembly

Verify the expiration date located on the solvent cement can. The cement can be used for a period of 2 years from the date stamped on the can. When cementing pipe and fittings in extremely cold temperatures, make sure the cement has not "JELLED." Jelled or expired cement must be discarded in an environmentally friendly fashion, in accordance with local regulations. To prolong the life of solvent cement, keep the containers tightly closed when not in use, and cover the container as much as possible during use. If an unopened solvent cement container is subjected to freezing temperatures, the cement may become extremely thick. Place the closed container in a room temperature area where, after a short time period, the cement will return to a usable condition. DO NOT attempt to heat solvent cement. The cement must be applied when the pipe and fittings are clean and free from any moisture and debris.

Primer Use - Softening of pipe and fitting joining surfaces can be achieved by the cement itself or by using a suitable primer. A primer will usually penetrate and soften the surfaces more quickly than the cement alone. However, special "one-step" cements formulated for use without primers are available. Check local codes (where required) for acceptable applications.

Apply Primer - USING AN APPLICATOR THAT IS AT LEAST 1/2 THE SIZE OF THE PIPE DIAMETER, vigorously scrub joining surface of fitting, of pipe and then again of fitting. Work quickly to apply 2-3 coats in this manner. SOLVENT CEMENT SHOULD THEN BE APPLIED WHILE PRIMER IS STILL WET.

Apply Solvent Cement - USING AN APPLICATOR THAT IS AT LEAST 1/2 THE SIZE OF THE PIPE DIAMETER, WORK THE CEMENT INTO THE JOINING SURFACES USING A CONTINUOUS, CIRCULAR MOTION.

Use sufficient cement, but avoid puddling the cement on or within the fitting and pipe. Puddled cement causes excess softening and damage to the PVC or CPVC material. If interference fit was at the bottom of the socket, use extra cement and make a 2nd application to pipe. WORK QUICKLY SO THAT PIPE AND FITTING CAN BE JOINED WHILE CEMENT IS STILL WET.

Apply the cement in the sequence pictured below:

1. Apply a coat to the pipe to depth of fitting socket
Work the cement into the joining surfaces using a continuous, circular motion.

2. Apply a medium coat to the fitting socket
Avoid puddling the cement in the sockets and avoid getting cement in other sockets or threaded connections.

3. Apply a second coat to the pipe end for sizes 1-1/4 inch and larger joints, or if interference fit was at socket bottom during dry-fit.

Assemble Joint

Immediately insert pipe into the fitting socket while rotating the pipe 1/4 turn. Align the fitting in the proper orientation at this time. Make sure the pipe bottoms out at the fitting's stop. Hold the assembly for at least 30 seconds to ensure initial bonding. Tapered pipe sockets can result in pipe backing out of the joint if not held under constant pressure A bead of cement must be present around the pipe and fitting juncture. If this bead is not continuous around the socket's shoulder, insufficient cement was applied and the joint must be disassembled or cut out and replaced.

Any cement, in excess of the bead, can be wiped off with a dry, clean rag.

Set and Cure Times

SET TIME: The initial set time is the recommended waiting period before handling newly assembled joints. After initial set, the joints will withstand the stresses of normal installation. However, a badly misaligned installation will cause excessive stresses in the joint, pipe and fittings.

CURE TIME: The cure time is the recommended waiting period before pressurizing newly assembled joints.

The following basic guidelines should be used:

• The set and cure times for solvent cement depend on pipe size, temperature, relative humidity, and tightness of fit. Drying time is faster for drier environments, smaller pipe sizes, high temperatures, and tighter fits.

• Special care must be taken when assembling products in low temperatures (below 40°F) or high temperatures (above 80°F).

• Extra set and handling times must be allowed in colder temperatures. When cementing pipe and fittings in cold temperatures, make sure the cement has not "JELLED." Jelled cement must be discarded.

• In higher temperatures, make sure both surfaces to be joined are still wet with cement during assembly.

• The assembly must be allowed an initial set, without any stress on the joint

• Following the initial set period, the assembly can be handled carefully by avoiding stress on the joint.

Average Set Times

Temp. Range	Pipe Sizes 1/2" – 1-1/4"	Pipe Sizes 1-1/2" – 2"	Pipe Sizes 2-1/2" – 8"	Pipe Sizes 10" – 15"	Pipe Sizes 16" – 24"
60° - 100°F	2 Min.	5 Min.	30 Min.	2 Hrs.	4 Hrs.
40° - 60°F	5 Min.	10 Min.	2 Hrs.	8 Hrs.	16 Hrs.
0° - 40°F	10 Min.	15 Min.	12 Hrs.	24 Hrs.	48 Hrs.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Average Cure Times

Relative Humidity 60% or Less*	Pipe Sizes 1/2" – 1-1/4"		Pipe Sizes 1-1/2" – 2"		Pipe Sizes 2-1/2" – 8"		Pipe Sizes 10" – 15"	Pipe Sizes 16" – 24"
Temperature Range During Assembly and Cure Periods	**Up to 160 psi**	**Above 160 to 370 psi**	**Up to 160 psi**	**Above 160 to 315 psi**	**Up to 160 psi**	**Above 160 to 315 psi**	**Up to 100 psi**	**Up to 100 psi**
60° - 100°F	15 Min.	6 Hrs.	30 Min.	12 Hrs.	1-1/2 Hrs.	24 Hrs.	48 Hrs.	72 Hrs
40° - 60°F	20 Min.	12 Hrs.	45 Min.	24 Hrs.	4 Hrs.	48 Hrs.	96 Hrs.	6 Days
0° - 40°F	30 Min.	48 Hrs.	1 Hr.	96 Hrs.	72 Hrs.	8 Days	8 days	14 Days

NOTE **In damp or humid weather allow 50% more cure time. The cure schedules shown are suggested as guides only. They are based on laboratory test data, and should not be taken to be the recommendations of all cement manufacturers. Individual solvent cement manufacturer's recommendations for the particular cement being used should be followed.**

Special Considerations for Working with Solvent Cement Welding

Handling of Cement

Keep cement containers covered while not in use. Cement with the lid left off can become thick and viscous, or gel like. This condition is typically a result of tetrahydrofuran (THF) solvent evaporation and the cement is useless. Do not try to restore the cement by stirring in a thinner. Smaller containers of cement are recommended to be used, especially in warm or hot weather. Prior to opening cans of cement, shake vigorously to properly mix resin and solvents. Solvents contained in PVC and CPVC cements are highly flammable and should not be used near an open flame. The area in which the cement is being used should be well ventilated, and prolonged breathing of the fumes should be avoided, as well as contact with the skin or eyes. Verify the expiration dates stamped on the cements and primers prior to use.

CEMENT AND PRIMER SHELF LIFE

Spears® Products	Shelf Life	Spears® Products	Shelf Life
Primers / Cleaners	3 years	CPVC Solvent Cement	2 years
PVC Solvent Cement	3 years	ABS Solvent Cement	3 years

Hot Weather Use

Problems can be avoided when solvent cementing in 95°F or higher temperatures by taking a few special precautions. Solvent cements evaporate faster at elevated temperatures and can dry out prematurely. This is especially true when there is a hot wind blowing. Dry cement on pipe or fitting socket prior to assembly will not bond. If the pipe has been in direct sunlight for any length of time, surface temperatures may be 20°F to 30°F above air temperature. Solvents attack these hot surfaces faster, deeper and dry out quicker. As a result, it is very important to avoid puddling inside sockets, assemble immediately while wet and to wipe off excess cement at the joint exterior.

Tips for Solvent Cementing in High Temperatures:

1. Store solvent cements in a cool or shaded area prior to use.
2. If possible, store the fittings and pipe, or at least the ends to be solvent welded, in a shady area before cementing.
3. Cool surfaces to be joined by wiping with a damp rag. HOWEVER, be sure that surfaces are dry prior to applying solvent cement.
4. Try to do the solvent cementing in cooler morning hours.
5. Make sure that both surfaces to be joined are still wet with cement when putting them together.

Cold Weather Use

Solvent Cements and primers have excellent cold weather stability and are formulated to have well balanced drying characteristics even in subfreezing temperatures. Good solvent cemented joints can be made in very cold conditions provided proper care and a little common sense are used. In cold weather, solvents penetrate and soften surfaces more slowly than in warm weather. The plastic is also more resistant to solvent penetration, therefore, it becomes more important to pre-soften surfaces. A longer cure time is necessary due to slower evaporation.

Tips for Solvent Cementing in Cold Temperatures:

1. Prefabricate as much of the system as possible in a heated work area.
2. Store cements in a warmer area when not in use and make sure they remain fluid.
3. Take special care to remove moisture, including ice and snow.
4. Use special care to ensure joining surfaces are adequately softened; more than one application may be necessary.
5. Allow a longer cure period before the system is used.

Effects of Tolerances and Fits

PVC pipe and fittings are manufactured to applicable ASTM Standards to produce an interference fit when assembled. However, minimum and maximum allowable tolerances permitted for pipe and fittings can result in variations. For example, fitting with the maximum diameter and the pipe with the minimum diameter, may result in a loose fit. Applying two coats of solvent cement will help assure a good joint. Conversely, if the pipe diameter is on the maximum side and the fitting on the minimum side, the interference may be too great and sanding of the pipe O.D. may be necessary to permit entrance.

Always check dry fits prior to making a joint. If fit is loose, multiple coats and use of an extra heavy bodied cement may be required. Mating components should be checked to assure that tolerances and engagements are compatible (see preceding Basic Solvent Cement Joints instructions). Inspect all pipe and fittings for damage or irregularities. Do not use any components that appear irregular or do not fit properly. Contact the appropriate manufacturer of the product in question to determine usability.

Large Diameter Pipe

Basic Solvent Cement Joint instructions apply to all sizes of pipe, but when making joints larger than 4", the use of two persons is recommended to properly apply cement and immediately assemble the joint while the cemented surfaces are still wet. Alignment of large diameter pipe and fittings during joining is critical since there is a greater potential for movement in the upper portion of a tapered socket that can result in misalignment. Special tools are commercially available for joining large diameter pipe.

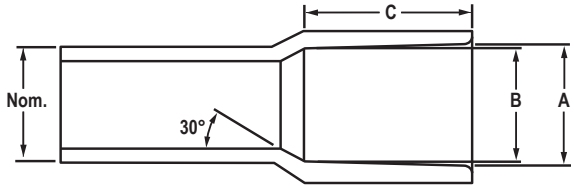
Be sure to use an appropriate size roller applicator with large diameter pipe, along with a heavy or extra heavy bodied cement that is medium to slow setting. These have increased gap filling capability and allow somewhat longer assembly time. However, applications of heavy coats of solvent cement and speed in making the joint is important. Under a damp or wet condition, solvent cement may absorb some moisture. Excessive moisture can slow down the cure and reduce joint strength. Spears® CPVC-24 heavy body or PVC-19 extra-heavy body solvent cements are excellent for joining large diameter pipe (see Solvent Cement Selection Guide in following sections).

Belled End Pipe

Commercially available belled end pipe can be used to eliminate the need for couplings. Where belled end pipe is used, it is suggested that the interior surface of the bell be penetrated exceptionally well with the primer.

NOTE some manufacturers use a silicone release agent on the belling plug, and a residue of this agent can remain inside the bell. Silicone will contaminate the joint and not allow proper solvent cement welding. All silicone residue must be removed in the cleaning process prior to solvent cementing.

Belled-End Pipe Dimensions



Nominal Size (in.)	A		B		C·
	Min.	Max.	Min.	Max·	Min.
1-1/4	1.675	1.680	1.648	1.658	1.870
1-1/2	1.905	1.914	1.880	1.888	2.000
2	2.381	2.393	2.363	2.375	2.250
2-1/2	2.882	2.896	2.861	2.875	2.500
3	3.508	3.524	3.484	3.500	3.250
4	4.509	4.527	4.482	4.500	4.000
5	5.573	5.593	5.543	5.563	4.000
6	6.636	6.658	6.603	6.625	6.000
8	8.640	8.670	8.595	8.625	6.000
10	10.761	10.791	10.722	10.752	8.000
12	12.763	12.793	12.721	12.751	8.500
14	14.030	14.045	13.985	14.000	9.000
16	16.037	16.052	15.985	16.000	10.000
18	18.041	18.056	17.985	18.000	12.000
20	20.045	20.060	19.985	20.000	12.000
24	24.060	24.075	24.000	24.015	14.000

Estimated Quantities of Solvent Cement

A variety of conditions can affect the amount of solvent cement required for making reliable joints. These include pipe size, tolerances, socket depths as well as installation conditions and type of cement used. Fitting sockets are tapered for proper assembly, which produces a slight gap at the socket entrance when installed with pipe. As pipe sizes increase, heavier bodied cements should be used for increase gap filling capabilities. It is best to use liberal amounts of solvent cement since insufficient cement use is one of the most common reasons for joint failure. The following information on cement usage is a recommendation only and other factors or unanticipated conditions may be encountered. Quantities are based on use with average socket lengths of Spears® molded and fabricated fittings.

Standard Pipe Joints

Fitting Size (in.)	Joints per Pint	Joints per Quart	Joints per Gallon
1/2	150	300	1200
3/4	100	200	800
1	63	125	500
1-1/4	70	140	560
1-1/2	45	90	360
2	30	60	240
2-1/2	25	50	200
3	20	40	160
4	15	30	120
6	5	10	40
8	3	5	20
10	---	2-3	4-6
12	---	1-2	2-4

Large Diameter Pipe Joints

Fitting Size (in.)	Quarts per Joint	Joints per Gallon
14	0.75	5.33
16	1.25	3.20
18	1.50	2.67
20	2.00	2.00
24	2.75	1.45

Supplemental Information on Solvent Cementing

Applicators

A wide variety of daubers, brushes, and rollers are available. For proper solvent cement welding of pipe and fittings, the cement applicator must be no less than half the size of the pipe. Sufficient cement cannot be applied using daubers attached to the cement can lid on large diameter products (> 3"dia.) The following chart shows a variety of Spears® applicator sizes for use on different pipe diameters.

SPEARS® APPLICATOR SELECTION GUIDE

For proper solvent cement welding of pipe and fittings, the cement applicator must be no less than half the size of the pipe

DAUBERS	Pipe Diameters						
	1/4"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2
3/8" Dauber	•	•	•				
1/2" Dauber			•	•			
3/4" Dauber					•	•	
1-1/4" Dauber							•

ROLLERS & SWABS	SIZE	FOR PIPE DIAMETERS
3020	3" Roller	3" - 6"
6020	4" Roller	3" - 8"
7020	7" Roller	6" +
5520	4" Roller	6" +
6520	6" Roller	6" +
4020	4" Swab	6" +
5020	4" Swab	3" - 8"
4520	4" Swab	6" +

Cleaners

Cleaners can be used to remove dirt, oil and grease from the bonding surfaces of PVC, CPVC, ABS and Styrene pipe and fittings. Use of a cleaner is recommended before priming of pipe and fittings.

Primers

The use of Primer is necessary to penetrate and dissolve the surface of the pipe and fitting prior to the application of cement. Special "one-step" cements formulated for use without primers are available. Check cement instructions and local codes (where required) for acceptable applications. Primer must be applied to both the pipe and fittings. Apply multiple coats of primer to the fitting socket and to the outside of the pipe ensuring that the entire surface is wet. Solvent cement must be applied immediately after primer while the surfaces are still tacky.

Solvent Cements

Solvent cements are produced for joining a variety of commercially available pipe and fitting materials, including PVC, CPVC and ABS plastics. Solvent cements are typically formulated using tetra hydro furan (THF). When properly applied, this solvent dissolves the mating surfaces of the pipe and fittings. Cyclohexanone is a typical retardant used to slow the rate of solvent evaporation. Immediate joining of the wet mating surfaces in one minute or less is essential to eliminate dry spots that will not bond. The bond interface is strongest at the area of interference fit where the softened semi-fluid surfaces of the pipe and fitting chemically fuse. Plastic resin fillers (dissolved PVC or CPVC) in the cement fill the gaps between pipe and fitting. Cements are available in clear, white, gray and other colors to match the pipe or for specific application. **Inert pigments are used for coloration.** For example, white cements are made from titanium dioxide while gray cements are made from titanium dioxide and carbon black. As the solvent evaporates, pipe and fitting joint "cures", except for some residual solvent that dissipates over time. The resulting fused area is why this method is called "solvent cement welding" although no heat is applied to melt and fuse the bonded areas as in metal welding.

Solvent cements are formulated in regular bodied, medium bodied, heavy bodied, extra heavy bodied and specialty cements. Different types of cements have different set and cure times. Low VOC products - with lesser VOC emissions - will contribute to cleaner air and better workplace conditions. All Spears® solvent cement and primer products are certified as Low VOC.

1. Regular Bodied – Cements for smaller diameters (i.e.<4") and thin-wall classes and Schedule 40 piping with interference fits. Generally referred to as "regular body" such as Spears® PVC-00 and PVC-02 cements, these cements are fast setting.

2. Medium Bodied – Cements for smaller diameters (i.e. <4") for all classes, Schedule 40 and Schedule 80 pipe with interference fits such as Spears® PVC-05 and PVC-21 cements. These cements have better gap filling capability than regular bodied cement and are also considered fast setting

3. Heavy Bodied & Extra Heavy Bodied – Cements for both small and large diameters of heavier-wall Schedule 80 and Schedule 120 products. Heavy-body such as Spears® PVC-11 and CPVC-24 cements are classified as medium setting and extra heavy-body such as Spears® PVC-19 cement is classified as slow setting. These cements are formulated to fill larger gaps, dry slower and typically take longer to dry in order to provide more time to assemble joints.

4. Specialty Cements – Specialty cements formulated for use with specific products and applications, but can also be used with other applications of similar products . Examples include special cements such as Spears® PVC-25 Wet-N-Dry; transition cements such as Spears® MULTIPURPOSE-90 and Spears® ABS TO PVC-94; product specific cements such as Spears® ABS-71 and ABS-73; and one-step specialty cements. One-step cements do not require the use of primer prior to the application of the cement. Examples include Spears® FS-5 one-step cement for use with FlameGuard® CPVC Fire Sprinkler Products, Spears® LW-4 one-step cement for use with **LabWaste™** CPVC Chemical Drainage Systems; Spears® **EverTUFF®** CTS-5 for use with CPVC hot and cold water plumbing systems, and Spears® LX-5 Low Extractable PVC cement for use in high purity applications (i.e. Spears® LOW EXTRACTABLE PVC products). In addition, special application cements such as Spears® CPVC-24 is formulated for improved chemical resistance to caustics and chemical applications with both PVC and CPVC products. In fact, CPVC-24 is one of the most versatile solvent cements on the market today!

Selecting the appropriate solvent cement and primer for the type of products being joined is important. The following selection guide can be used in selecting the right Spears® solvent cement and primer for your application.

Spears® Solvent Cement & Primer Selection Guide

Type	Body	Product	Color	Relative Set	Capacity	Features
PVC	Regular	PVC-00	Clear	Fast	Schedule 40 - 4"	
		PVC-02	Clear	Fast	Schedule 40 - 4"	Dries Clearest, slightly thicker than PVC-00
	Medium	PVC-05	Clear	Fast	All Classes & Schedules - 6" Schedule 80 - 4"	*Industrial Duty* Primerless Capability[1]
		PVC-21	Blue	Fast	Schedule 40 - 6" Schedule 80 - 4"	Primerless Capability[1]
	Heavy	PVC-11	Gray	Medium	All Classes & Schedules - 12"	*Industrial Duty*
		PVC-17	Clear/ Gray	Medium	All Classes & Schedules - 12" Non-pressure - 18"	*Industrial Duty*
	Extra Heavy	PVC-19	White/ Gray	Slow	All Classes & Schedules Requiring High Gap Filling - 30"	*Industrial Duty*
	Specialty Cements	PVC-25	Aqua Blue	Very Fast	All Classes & Schedules - 6" Schedule 80 - 4"	Wet-N-Dry Formulation Primerless Capability[1]
		PVC-26	Blue	Very Fast	All Classes & Schedules - 6" Schedule 80 - 4"	POOL-PRO™ Formulation for Pool & Spa Primerless Capability[1]
		PVC-27	Clear	Very Fast	All Classes & Schedules - 6" Schedule 80 - 4"	Cold-N-Hot Formulation -15°F to 110°F Primerless Capability[1]
		PVC-50	Blue	Very Fast	Schedule 40 - 6" Schedule 80 - 4"	HOT PVC Formulation Primerless Capability[1]
		PVC-95	Clear/ Blue	Fast	All Classes & Schedules - 6" Schedule 80 - 3"	Flexible PVC for Flex-Flex, Flex-Rigid Joints
		LX-5	Clear	Fast	Low Extractable PVC Systems - 6"	One Step[2] Low Extractable, High Purity Cement
CPVC	Heavy	CPVC-24	Gray/ Orange	Medium	All Classes & Schedules PVC or CPVC - All Sizes	**Most Versatile, Chemically Resistant Cement for both CPVC & PVC Systems - including Duct -** *Industrial Duty*
	Specialty Cements	LW-5	Mustard	Medium	LabWaste™ CPVC Drainage Systems - 24"	One Step[2] Cement -Only **LabWaste™** System Chemically Approved Cement
		FS-5	Red	Fast	CPVC Fire Sprinkler Systems - 3"	One-Step[2] Cement for all CPVC Fire Sprinkler Systems - FlameGuard® & Competitors
		CTS-5	Yellow	Fast	CTS CPVC Systems - 2"	One-Step[2] Cement for all CTS CPVC Systems - EverTUFF® & Competitors
ABS	Medium	ABS-71	Yellow/ Milky	Fast	All ABS Classes & Schedules - 8"	
		ABS-73	Black	Fast	All ABS Classes & Schedules - 8"	
Transition & Multipurpose	Medium	ABS TO PVC-94	Green	Fast	All Classes & Schedules - 6" (Except Schedule 80)	For ABS-to-PVC Transition Joints
		MULTIPUPOSE-90	Clear	Fast	All Classes & Schedules - 6" Schedule 80 - 4"	For PVC and CPVC pressure ABS and Styrene low-pressure systems
Primers & Cleaners		Primer-70	Purple/ Clear		All Classes & Schedules PVC & CPVC - 30"	*Industrial Duty*
		Primer-68	Purple/ Clear		All Classes & Schedules PVC & CPVC - 30"	
		Cleaner-65	Clear		All Classes & Schedules -All Sizes	For PVC, CPVC, ABS or Styrene

Notes

1= Primerless Capability indicates a cement can be used without primer in certain applications if local code permits. See specific cement information for further restrictions.

2 = One Step designates a cement specifically designed for use without primer. CTS One Step acceptability depends on local code requirements.

CTS = Copper Tube Size, ASTM D2846 Hot and Cold Water Distribution Systems.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Joining Method - Threaded Connections

Threaded connections require the application of a thread sealant that is compatible with PVC and CPVC material. Spears® recommends the use of Spears® **Blue 75™** Thread Sealant.

CAUTION - Use only thread sealants recommended for PVC or CPVC plastic. Other joint compounds or pastes may contain substances that could cause stress cracks in PVC or CPVC materials.

Apply sealant to the male threads only. Make sure all threads are covered. **DO NOT** clog the waterway with excess sealant. If PTFE tape must be used, Spears® recommends a thickness of at least.0025" that meets or exceeds military specification, MIL-T-27730A. **DO NOT** use a combination of tape and thread sealant on the same joint. Apply PTFE tape in the direction of the threads by starting with the first full thread and continuing over the entire thread length. Make sure all threads are covered. Generally, 2 – 3 wraps are sufficient to produce a watertight connection

DO NOT over-torque any threaded connections. Generally, one to two turns beyond finger-tight are required for a threaded connection. Use a smooth-jawed wrench or strap wrench when installing threaded connections.

Threading Pipe

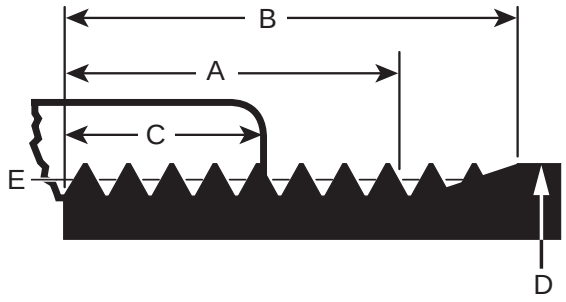
PVC and CPVC pipe can be threaded using either standard hand pipe stocks or power-operated equipment. Since rigid PVC plastic pipe has the same outside diameter as standard steel pipe in comparable sizes, standard steel pipe taps and dies can be used. A cut thread or deep scratch results in a stress concentration point. As a result, only Schedule 80 and Schedule 120 pipe should be threaded. A 50% pressure de-rating is applied to threaded pipe to compensate for this. **DO NOT** thread Schedule 40 pipe. For optimum results in threading, use new taps and dies; but in any case, they should be cleaned and sharpened and in good condition. Power threading machines should be fitted with dies having a 5° negative front rake and ground especially for this type of pipe; tapered guide sleeves are not required. For hand stocks the dies should have a negative front rake of 5° to 10°. Dies which have been designed for use on brass or copper pipes may be used successfully. Carboloy dies give longer service. (Taps should be ground with a 0° to 10° negative rake, depending upon the size and pitch of the thread. Die chasers should have a 33° chamfer on the lead; a 10° front or negative rake; and a 5° rake on the back or relief edge.). Self-opening die heads and collapsible taps, power threading machines and a slight chamfer to lead the tap or dies will speed production; however, taps and dies should not be driven at high speeds or with heavy pressure.

A tapered plug should be inserted into the pipe when threading, to hold the pipe round and to prevent the die from distorting and digging into the pipe wall. This insures uniform thread depth all the way around. Pipe for threading should be held in a suitable pipe vise, but saw-tooth jaws should not be used. Flanges and close nipples should be threaded in jigs or tapping fixtures. To prevent crushing or scoring the pipe, some type of protective wrap, such as canvas, emery paper, or a light metal sleeve should be used; rounding of chuck jaws will also be helpful. Rigid PVC or CPVC plastic pipe should be threaded without use of lubricants. Standard cutting oils can cause stress cracking in plastics and should not be used. Water-soluble oil or plain water is recommended. Degreasing with any solvents is not recommended, nor should solvents be used in any cleanup. Always clear cuttings from the die.

DO NOT OVER THREAD - To obtain a tight, leak proof joint, the thread dimensions shown in the table should be used. If pipe is over threaded, fittings cannot be run on far enough to make a tight seal.

American National Standards Institute Code B1.20.1 covers dimensions and tolerances for tapered pipe threads. **Only Schedule 80 or heavier wall pipe should be threaded.**

Angle between sides of thread is 60 degrees. Taper of thread, on diameter, is 3/4 inch per foot. The basic thread depth is 0.8 x pitch of thread and the crest and root are truncated an amount equal to 0.033 x pitch, excepting 8 threads per inch which have a basic depth of 0.788 x pitch and are truncated 0.045 x pitch at the crest and 0.033 x pitch at the root.



PIPE THREADS

Nominal Size (in.) (Max.) (In.)	Outside Diameter (in.) D	Number of Threads Per Inch	Normal Engagement By Hand (in.) C	Length of Effective Thread (in.) A	Total Length: End of pipe to vanish point (in.) B	Pitch Diameter at end of Internal Thread (in.) E	Depth of Thread (Max.) (in.)
1/8	0.405	27	0.180	0.2639	0.3924	0.37476	0.02963
1/4	0.540	18	0.228	0.4018	0.5946	0.49163	0.04444
3/8	0.675	18	0.240	0.4078	0.6006	0.62701	0.04444
1/2	0.840	14	0.320	0.5337	0.7815	0.77843	0.05714
3/4	1.050	14	0.339	0.5457	0.7935	0.98887	0.05714
1	1.315	11-1/2	0.400	0.6828	0.9845	1.23863	0.06957
1-1/4	1.660	11-1/2	0.420	0.7068	1.0085	1.58338	0.06957
1-1/2	1.900	11-1/2	0.420	0.7235	1.0252	1.82234	0.06957
2	2.375	11-1/2	0.436	0.7565	1.0582	2.29627	0.06957
2-1/2	2.875	8	0.682	1.1375	1.5712	2.76216	0.10000
3	3.500	8	0.766	1.2000	1.6337	3.38850	0.10000
4	4.500	8	0.844	1.3000	1.7337	4.38713	0.10000
5	5.563	8	0.937	1.4063	1.8400	5.44929	0.10000
6	6.625	8	0.958	1.5125	1.9462	6.50597	0.10000

Joining Method - Flanged Connections

PVC and CPVC flanges are available in several designs, including solid one-piece flanges, two piece Van Stone style flanges featuring a moveable ring for bolt alignment, and blind flanges for capping off a piping run. Flanges are available in socket, spigot and threaded configurations and are coupling devices designed for joining IPS (Iron Pipe Size) plastic piping systems where frequent disassembly may be required, can be used as a transitional fitting for joining plastic to metal piping systems, and for connection to other flanged type valves and equipment. A gasket is used between flanges to form a water-tight seal. Proper gasket material should be selected for fluids compatibility. Most plastic flanges carry a maximum working pressure rating of 150 psi non-shock for water at 73°F. Pressure ratings may vary according to size and construction of the flange. Consult flange manufacturer.

Gaskets

Select appropriate size and bolt pattern gasket. Full faced, 1/8" thick elastomer gaskets with a Shore "A" Durometer of approximately 70 are recommended. Verify that the gasket material is suitable for use with the application fluids.

Bolt Patterns & Selection

Most PVC and CPVC flanges are produced with ANSI B16.5 Bolt Patterns for Class 125/150 flanges. Optional Class 300 bolt patterns (NOT a 300 psi rating), certain ANSI/Metric dual pattern flanges, and metric bolt patterns can be produced. Proper bolt size, number and length should be selected for the specific flanges and equipment being assembled. Bolt length requirements will vary according to the flange or equipment manufacturer. Always use 2-wide flat washers for each bolt, one under the bolt head and one under the nut (do not use thin "fender" washers).

Bolt Torque

Threads should be cleaned and well lubricated (WARNING: Use only bolt lubricants compatible with PVC or CPVC material). Actual field conditions may require variations in these recommendations. UNNECESSARY OVER TORQUING WILL DAMAGE THE FLANGE. Torque should always be applied in approximately 5 ft-lb. increments using a 180° opposing sequence.

Flange Make-up

Follow proper solvent cementing and/or threaded component procedures as applicable to join the flange to the pipe. Once a flange is joined to pipe, the method for joining two flanges is as follows:

1. Piping runs joined to the flanges must be installed in a straight line position to the flange to avoid stress at the flange due to misalignment. Piping must also be secured and supported to prevent lateral movement which can create stress and damage the flange.

2. With gasket in place, align the bolt holes of the mating flanges by rotating the ring into position.

3. Insert all bolts, washers (two standard flat washers per bolt), and nuts.

4. Make sure the faces of the mating surfaces are flush against gasket prior to bolting down the flanges.

5. Tighten the nuts by hand until they are snug. Establish uniform pressure over the flange face by tightening the bolts in 5 ft.-lb. increments according to the sequence shown in the following table using a 180° opposing sequence.

6. Care must be taken to avoid "bending" the flange when joining a Spears® flange to a "raised face" flange, or a wafer-style valve. Do not use bolts to bring together improperly mated flanges.

Recommended Flange Bolt Torque for Plastic Flanges

Flange Size (in.)	No. of Bolt Holes	Bolt Dia. (in.)	Min. Bolt Length (in.)[1]	Torque ft.-lb.
1/2	4	1/2	2	12
3/4	4	1/2	2	12
1	4	1/2	2-1/4	12
1-1/4	4	1/2	2-1/4	12
1-1/2	4	1/2	2-1/2	12
2	4	5/8	3	25
2-1/2	4	5/8	3-1/4	25
3	4	5/8	3-1/4	25
4	8	5/8	3-1/2	25
6	8	3/4	4	40
8	8	3/4	4-1/2	40
10	12	7/8	5	64
12	12	7/8	5	95
14	12	1	6	110
16	16	1	6-1/2	110
18	16	1-1/8	6-1/2	110
20[2]	20	1-1/8	5-1/2	110
24[2]	20	1-1/4	5-1/2	110

Note:

1 - Minimum bolt length is based on connecting two (2) Spears® flanges, two flat washers, gasket and nut. Adjustments will need to be made to accommodate valves and other equipment.
2 - Bolt Length for Spears® Fabricated 20 inch & 24 inch Flanges with Plastic Rings

Joining Method – Mechanical Grooved Couplings

In many installations where transition to metal pipe, or where disassembly is a prime factor, metallic grooved style couplings with gasket seal can be used to join PVC and CPVC pipe to alternate IPS size piping materials. In addition to the ease of disassembly, this type of connection also allows for a certain degree of angular adjustment and expansion/contraction. Special rolled-groove pipe can be joined, but easy to use molded Grooved Coupling Adapters then can be solvent cemented to plain end pipe are available for use with metallic grooved couplings.

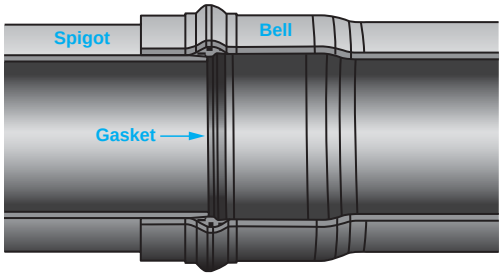
Only flexible style metallic grooved couplings are recommended for use with plastic pipe. Rigid style couplings should not be used as these can provide a compressive/shear load to plastic pipe resulting in failure. Always check the compatibility of the grooved coupling gasket material with the intended application fluids.

NOTE A gasket/joint lubricant is recommended to prevent pinching the gasket and to assist the seating and alignment processes during assembly of grooved couplings. Certain lubricants may contain a petroleum base or other chemicals, which will cause damage to the plastic pipe, gasket and adapter. Always verify the suitability for use of the selected lubricant with the lubricant manufacturer.

Joining Method - Gasketed Pipe

Standards and Specifications

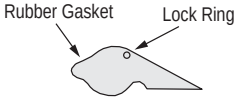
Since integral gasket bells are commercially available on a variety of pipe dimensions, applicable standards are dependent on the pipe dimension chosen. PVC pipe is manufactured from a Type I, Grade I PVC material per ASTM D 1784. Gasket pipe utilizes flexible elastomeric seals for pressure pipe. When properly assembled these joints meet the requirements of push-on joints per ASTM D 3139. The gaskets used should be manufactured in strict compliance with ASTM F477 requirements. SDR Series gasketed pipe is manufactured to ASTM D 2241. PVC Schedule 40, 80 and 120 gasketed pipe is manufactured to ASTM D 1785.



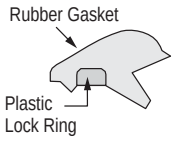
Typical Gasket Joint

Gasket Design

Gasketed pipe utilizes either gaskets that are locked in place at the factory as part of the manufacturing process, or insertable elastomer gaskets. Two styles of factory- installed gaskets are typically used. The Rieber style gasket with internally molded-in metal ring, and the Retained Ring style gasket. This technique also prevents fish mouthing or dislocation of the seal during assembly. The standard gasket material typically used for both factory-installed gasket systems is Styrene Butadiene Rubber (SBR) which offers excellent physical properties and good chemical resistance. Other gasket materials are commercially available to meet demanding chemical resistance requirements.



Rieber gasket – 2" - 8"
Laying length 19'6" ± 2"



Retained Ring gasket – 10" - 24"
Laying length 19' ± 2"

Gasketed pipe offers low assembly force; flexibility to allow for variations in line pressure and changing working conditions; compensation for movement due to thermal expansion and contraction; a certain amount of allowable joint deflection; and positive, leak-free seals for both high- and low-pressure applications as well as vacuum service.

Field Assembly of Gasketed Joint

PVC pipes are assembled in the field by following a few simple steps, as outlined below:

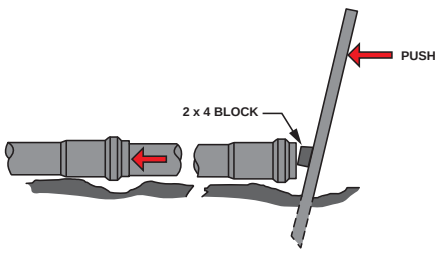
Step 1: Pipe end should have 15° bevel. Field cut pipe must be cut square and a 15° bevel applied to the cut spigot end. Factory pipe ends may have an insertion depth guide mark. If not, or if field cut, measure bell depth and mark on spigot end for insertion reference.

Step 2: Check that gasket is properly positioned in the bell groove. Clean the beveled end of the spigot and the gasket in the bell groove to be sure they are free of any particles or debris

Step 3: Apply a lubricant recommended for PVC to the spigot end. Avoid applying lubricant directly on the gasket in the bell instead of the spigot.

WARNING: Some lubricants, oils or greases may not be compatible with PVC and can cause stress cracking. Verify PVC compatibility with the lubricant manufacturer.

Step 4: Insert and push lubricated spigot past the gasket into the bell until the guide mark on the spigot is meets the end of the bell. It it is usually possible to manually insert the spigot into the bell on pipe sizes 3" and smaller. Mechanical assistance may be needed for insertion on larger sizes. The "bar and block method" can be used, which allows the installer to feel the amount of force being used and whether the joint goes together smoothly.



"Bar and Block" Method for Mechanical Insertion of Spigot Into Bell

Deflection

Gasketed joints permit an angular deflection of 2° at the joint. Adequate deflection can usually be achieved for gentle curves by using the inherent flexibility of the pipe itself, without using joint deflection.

Thrust Blocking Gasket Joints

All gasket-joint piping requires adequate thrust restraints to prevent movement from forces generated by changes in direction, valve operation, dead ends, reduction in pipe size, and other areas where thrusts can be developed. The size and type of thrust restraint depends on the pipe size, type of fitting, soil properties, and water-hammer possibilities. Keeping flow velocities at or below 5 ft/sec will help minimize surge pressures. Fittings and valves used to make vertical changes in direction should be anchored to the thrust restraint to prevent outward and upward thrusts at the fitting junctures. In pressure lines, valves 3" in diameter and larger should be anchored to the thrust restraint to prevent movement when operated. Consideration should also be given for the proper support, anchoring, and thrust restraint for lines installed on slopes.

The size of thrust block required (in square feet) can be determined by dividing the total thrust developed (in psi) by the capacity of the soil (in pounds/square foot).

The most common method of thrust blocking involves the pouring of concrete (to the size of block required) between the pipe fitting and the bearing wall of the trench. Mechanical thrust restraint devices are also used, but must be of design for use with PVC pipe.

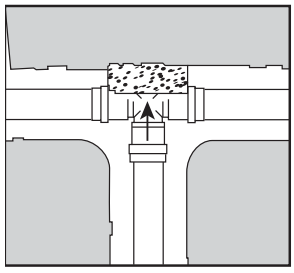
Thrust in lb. @ 100 psi Operating Pressure

Pipe Size (in.)	90° Bend	45° Bend	22.5° Bend	Tee, Cap Plug, 60° Bend
2	645	350	180	455
2-1/2	935	510	260	660
3	1,395	755	385	985
4	2,295	1,245	635	1,620
6	4,950	2.680	1,370	3,500
8	8,375	4,540	2,320	5,930
10	13,040	7,060	3,600	9,230
12	18,340	10,000	5,240	13,000
14	21,780	11,770	6,010	15,400
16	28,440	15,370	7,850	20,110
18	35,990	19,450	9,930	25,450
20	44,430	24,010	12,260	31,420
24	63,970	34,570	17,650	45,240

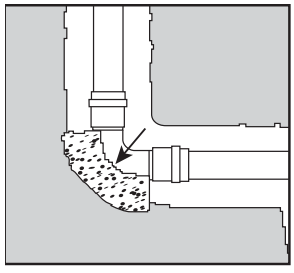
Safe Bearing Capacity

Soil	Capacity (lb./sq. ft.)
Muck, peat, etc.	0
Soft clay	1,000
Sand	2,000
Sand and gravel	3,000
Sand and gravel cemented with clay	4,000
Hard shale	10,000

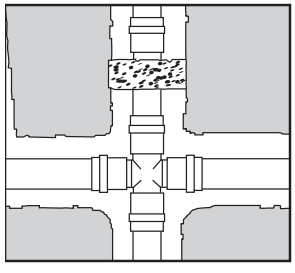
Thrust Blocks



Thru Line connection, tee

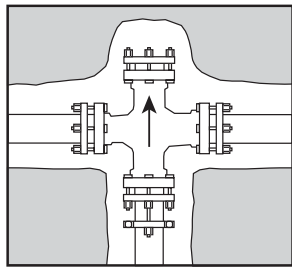


Direction change, elbow

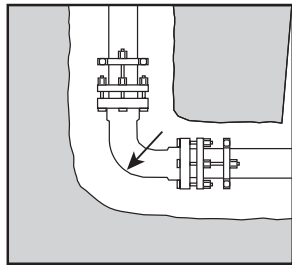


Change line size, reducer

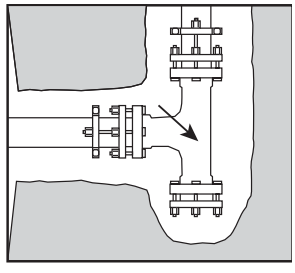
Thrust Retainers



Thru Line connection, cross used as tee



Direction change, elbow



Direction change, tee used as elbow

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Assembly Instructions

Step One: Make certain pipe ends and gasket areas are free of dirt and debris. Support spigot end of pipe above ground to prevent dirt contamination when lubricant is applied.

Step Two: Apply a light coating of recommended lubricant to spigot end and sealing section of gasket.

WARNING – Use only lubricants specifically designated for use with PVC pipe. Certain greases, oils and vegetable oils will cause stress cracking in PVC materials.

Step Three: Align pipe ends. Push spigot end into gasket bell so that the reference mark is even with the entrance of the gasket bell.

Pounds of Force Required to Assemble Gasket Pipe

Rieber		Retaining Ring	
Pipe Size (in.)	ft.-lb.	Pipe Size (in.)	ft.-lb.
2	113	10	250
2-1/2	124	12	300
3	137	14	385
4	157	16	360
6	284	18	450
8	352	20	520
		24	600

Estimated Gasket Pipe Lubricant Use

Nominal Pipe Size (in.)	Avg. Number of Joints Per Pint (1 lb.) Container of lubricant
2	70
2-1/2	60
3	50
4	35
6	20
8	14
10	10
12	7
14	5
16	3
18	2
20	1.5
24	1

Trenching: Initial Backfill

Trench depth is determined by the intended service and local conditions. Gasket pipe should be buried a minimum of 12" below frost line in areas subject to freezing, or a minimum depth of 18" - 24" where there is no frost. Permanent lines subjected to heavy traffic should have a minimum cover of 24". In areas not subject to freezing, a minimum cover of 12" to 18" is usually sufficient for small-diameter piping subjected to light traffic. Bearing stresses must be calculated to determine the amount of cover required. Reference to applicable local, state, or national codes is also recommended.

The trench bottom should be continuous, relatively smooth, and free of rocks and debris. Adequate backfill should be in place immediately after installation, prior to filling or testing the line, to help distribute the effects of expansion/contraction evenly over each pipe length. The initial backfill material should consist of particles of 1/2" in size or less, and properly tamped. Generally a minimum of 6" - 12" of backfill is desirable for the initial phase. Where hardpan, ledge rock, or large boulders are encountered, the trench bottom should be padded with sand or compacted fine-grain soils to provide adequate protection. Joints should be left exposed for visual inspection during testing. Testing should be done before final backfill.

Testing

If separate tests are to be conducted for pressure and leakage, pressure testing should be conducted first.

WARNING: Air must be completely vented from the line prior to pressure testing; entrapped air can generate excessive surge pressures that are potentially damaging and can cause bodily injury or death. Air relief valves should be provided.

Section of pipe should be tested as it is installed to verify proper installation and joint assembly. Make certain the section of piping to be tested is backfilled sufficiently to prevent movement under test pressure. If concrete thrust blocks are utilized, allow sufficient time for concrete to set up prior to testing. Test ends must be capped and braced properly to withstand thrusts developed during testing. The following table provides the water volume requirements of various sizes of schedule and SDR series pipe.

Water Volume Gallons / 100'

Pipe Size (in.)	Sch. 40	Sch. 80	Sch. 120	SDR. 21	SDR. 26	SDR. 41
2	17	15	14	19	20	–
3	38	34	32	41	43	–
4	66	60	54	68	70	–
6	150	135	123	146	152	–
8	260	237	–	248	258	–
10	409	373	–	–	401	–
12	582	528	–	–	565	–
14	703	637	–	–	681	–
16	917	836	–	–	889	–
18	–	1060	–	–	1125	1195
20	–	–	–	–	1390	1475
24	–	–	–	–	2000	2125

Final Backfill

Backfilling should be conducted in layers; each layer must be compacted sufficiently so that lateral soil forces are developed uniformly. Under certain conditions it may be desirable to pressurize line during the backfill operation. Vibratory methods are recommended when compacting sand or gravel. Sand and gravel containing a significant proportion of fine-grained materials (silt, clay, etc.) should be compacted by mechanical tampers. When water flooding is used, sufficient cover must be provided by the initial backfill to ensure complete coverage of the pipe; precautions must be taken to prevent “floating” the pipe in the trench. Additional layers of backfill should not be applied until the water flooded backfill is firm enough to walk on. In all cases, the backfill should be placed and spread in uniform layers to eliminate voids. Large rocks, frozen dirt clods, and other debris larger than 3" should be removed to prevent damage to the pipe. Rolling equipment or heavy tampers should only be used to consolidate the final backfill. Additional information pertaining to underground installation is contained in ASTM D 2774 (Underground Installation of Thermoplastic Pressure Pipe), and ASTM D 2321 (Underground Installation of Flexible Thermoplastic Sewer Pipe).

Transition Joints & Specialty Fittings

PVC and CPVC pipe can be connected to steel, copper, brass, other metals and other plastic materials using a variety of transition fittings including unions, compression fittings, special reinforced adapters, flanged joints and grooved mechanical coupling joints.

Do not use regular PVC or CPVC female threaded fittings for connection to metal male threads. Spears® Special Reinforced (SR) female plastic threaded fittings are excellent for plastic to metal transitions. Unlike conventional plastic female adapters, these fittings incorporate the use of a stainless steel restraining collar located on the exterior of the FIPT threads of the adapter. This design allows direct connection to male metal threads without the need for pressure de-rating normally associated with conventional FIPT adapters, as the radial stress generated by thread engagement is contained. Other PVC/CPVC adapter fittings with brass or steel threads can also be used for transition to metal male threads.

If regular non-reinforced plastic threads must be transitioned to metal threads, the recommended joint is to use male plastic threads into female metal threads.

Underground Installation

Underground piping must be installed in accordance with any applicable codes. Attention should be given to local pipe laying techniques applicable to area subsoil. This may provide insights to particular pipe bedding issues. The following information is applicable to solvent cement joining of PVC and CPVC piping as a general guide. Refer to Gasketed Pipe section for additional information on installation of gasketed pipe.

Inspection: Before installation, PVC and CPVC piping products should be inspected for cuts, scratches, gouges or split ends. Damaged sections found must be cut-out and discarded.

Trenching: The trench should be as narrow as possible while providing adequate width to allow convenient installation. Minimum trench widths may be utilized by joining pipe outside of the trench and lowering it into the trench after adequate joint strength has been achieved. Refer to solvent cement instructions for recommended joint set and cure time.

Trench widths will have to be wider where pipe is joined in the trench or where thermal expansion and contraction is a factor.

Thermoplastic pipe should ALWAYS be installed below the frost level according to local conditions. Pipe for conveying liquids susceptible to freezing should be buried no less than 12" below the maximum frost level. Permanent lines subjected to heavy traffic should have a minimum cover of 24". For light traffic 12" to 18" is normally sufficient for small diameter pipe (typically < 3" diameter). With larger sizes, bearing stresses should be calculated to determine cover required.

When it is installed beneath surfaces that are subject to heavy weight or constant traffic such as roadways and railroad tracks, thermoplastic piping should be run within a metal or concrete casing. Refer to Critical Collapse Pressure Ratings for additional information.

The trench bottom should be continuous, relatively smooth and free of rocks. Where ledge rock, hardpan or boulders are encountered, it is necessary to pad the trench bottom using a minimum of four (4) inches of tamped earth or sand beneath the pipe as a cushion and for protection of the pipe from damage.

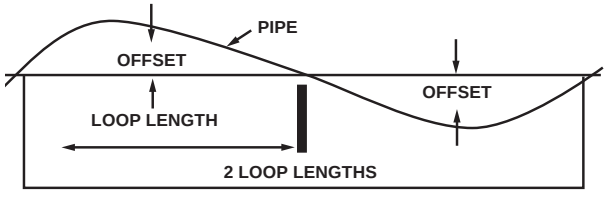
Sufficient cover must be maintained to keep external stress levels below acceptable design stress. Reliability and safety of service is of major importance in determining minimum cover. Local, state and national codes may also govern.

Snaking of Pipe may be used for small diameter piping systems (typically < 3"), but may also apply to larger diameter piping under specific applications and site conditions. Snaking of pipe is used to compensate for thermal expansion and contraction due to temperature changes. Snaking is particularly necessary on piping solvent welded during the late afternoon or a hot summer's day where drying time will extend through the cool of the night where thermal contraction could result in joint pull out. This snaking is also especially necessary with pipe that is laid in and is backfilled with cool earth before the joints are thoroughly dry.

After the pipe has been solvent welded and allowed to set properly, snake the pipe beside the trench during its required cure time. **BE ESPECIALLY CAREFUL NOT TO APPLY ANY STRESS THAT WILL DISTURB THE UNCURED JOINT.**

For Pipe Diameters < 3" diameter

Loop Offset in Inches for Contraction:



Maximum Temperature Variation, °F, Between Time of Solvent Welding and Final Use

Loop Length	10°	20°	30°	40°	50°	60°	70°	80°	90°	100°
LOOP OFFSET										
20	3"	4"	5"	5"	6"	6"	7"	7"	8"	8"
50	7"	9"	11"	13"	14"	16"	17"	18"	19"	20"
100	13"	18"	22"	26"	29"	32"	35"	37"	40"	42"

Expansion and contraction can be excessive in systems operating at near or at the maximum allowable temperature ranges with intermittent flow and buried lines. In these cases the lines should not be snaked. The use of properly installed expansion joints within a suitable concrete enclosure can be used. A section of larger diameter PVC pipe or other suitable sleeve should be used over the carrier pipe to pass through the wall of the concrete to minimize the potential for damage (scratching & scarring) as the result of movement caused by thermal expansion/contraction. Expansion joints should be suitably anchored independently of the carrier line. Axial guides should be used to direct movement into the expansion joint.

Backfilling: Underground pipe should be inspected and tested for leaks prior to backfilling. In hot weather, it is best to backfill early in the morning when the line is fully contracted and there is reduced chance of insufficiently dried joints being subject to contraction stresses.

The pipe should be uniformly and continuously supported over its entire length on firm, stable material. Blocking should not be used to change pipe grade or to intermittently support pipe across excavated sections.

Pipe is installed in a wide range of subsoils that must be stable and applied so as to physically shield the pipe from damage. Follow local pipe laying experience that may indicate particular pipe bedding problems.

Surround the pipe with 6" or 8" of backfill materials free of rocks and having a particle size of 1/2" or less. It should be placed in layers. Each soil layer should be sufficiently compacted to uniformly develop lateral passive soil forces during the backfill operation. It may be advisable to pressurize the pipe to 15 - 25 psi during the backfilling.

Vibratory methods are preferred when compacting sand or gravels. Best results are obtained when the soils are in a nearly saturated condition. Where water flooding is used, the initial backfill should be sufficient to insure complete coverage of the pipe. Additional material should not be added until the water flooded backfill is firm enough to walk on. Care should be taken to avoid floating the pipe.

Sand and gravel containing a significant proportion of fine-grained material, such as silt and clay, should be compacted by hand or, preferably by mechanical tamper.

The remainder of the backfill should be placed and spread in uniform layers to fill the trench completely so that there will be no unfilled spaces under or around rocks or lumps of earth in the backfill. Remove large or sharp rocks, frozen clods and other debris greater than 3" in diameter. Rolling equipment or heavy tampers should only be used to consolidate the final backfill.

Avoid threaded connections in underground applications. Where transition to alternate materials is required the use of a flange component with suitable gasket is recommended. At vertical transitions from below ground systems to connections above ground, follow above ground installation procedures with regard to compensating for thermal expansion/contraction, weatherability, and proper support recommendations. Valves and other concentrated weight loads should be independently supported. Avoid excessive bending of pipe; excessive deflection of pipe and joints can reduce pressure bearing capability and cause failure.

Additional information on underground installations is contained in ASTM D 2774 “Underground Installation of Thermoplastic Pressure Piping”, ASTM F 645, Standard Guide For “Selection Design and Installation of Thermoplastic Water Pressure Piping Systems”, and ASTM D 2321 “Underground Installation of Flexible Thermoplastic Sewer Pipe.”

Above Ground Installation

Thermal Expansion & Contraction

Attention must be given to above ground installations where ambient temperature swings can be cause thermoplastic systems to expand and contract both indoors and out. For example, a system installed in an unheated building during the winter months will expand considerably when temperatures rise. Conversely, systems installed at higher ambient temperatures will contract as temperatures fall. Refer to Thermal Expansion & Contraction section for additional information.

Outdoor Applications & Protection

PVC and CPVC piping system must be protected from freezing. Many standard cold weather piping design and installation practices can be used to protect the system from freezing such as use of pipe insulation, anti-freeze solutions, and heat trace tapes. The suitability and compatibility of these products for use with PVC and CPVC should be verified with product manufacturers prior to use.

Caution should be exercised in installing PVC and CPVC piping products in metal boxes or enclosures exposed to direct sunlight. Such enclosures can act as “ovens” that significantly increase the environmental temperature over ambient air conditions, resulting in product damage and failure.

PVC and CPVC piping exposed to the direct sunlight (UV radiation) should be painted with a reflective, light colored acrylic or latex paint. Avoid dark colors, especially black. Heat absorption can exceed the heat handling capacity of the pipe and fitting material. Compatibility information regarding use with PVC/CPVC products should be confirmed with the paint manufacturer. Oil-based paints should not be used.

Hangers and Supports

Hanger Support Spacing

Support location and spacing depends on the pipe diameter, system operating temperature, and the location of any concentrated stress loads (i.e., valves, flanges, test equipment and any other heavy system components). Hangers must have an adequate load-bearing surface free of any rough or sharp edges that could damage the pipe during use. Hangers also must not restrict linear movement of the system in order to allow thermal expansion and contraction from temperature changes.

Proper support spacing can be calculated similarly to that of metal systems by using simple and continuous beam calculations. This can be achieved using the maximum fiber stress of the material, or deflection based on the long term modulus of the material at the temperature selected as the limiting factors.

Hanger Selection

Hangers designed for metallic pipe can be used if they provide an adequate load-bearing surface, which is smooth and free of rough or sharp edges that could damage the pipe. Improper supports can generate excessive sag resulting in failure. Movement caused by thermal expansion/contraction and pressure fluctuations must be considered. Hangers and supports used must permit axial movement of the system, but not compress the pipe. Supplemental, guides may be required in addition to hangers in order to maintain alignment and direct movement into in-line Expansion Joints.

Placement

Hangers should be installed within two feet of each side of a pipe joint; while changes in direction should be supported as close as possible to the fitting to reduce stress. Heavy system components such as valves, flanged assemblies, tees and other concentrated stress loads must be independently supported. Valves should additionally be adequately braced to prevent movement/stress loads from operational torque. Support of potential solids accumulation loads within the line should also be considered.

Precautions

Protective sleeves or pads used between the pipe and the hanger will distribute stress loads over a greater surface area, especially when using U-bolt or roller type hangers. Protective sleeves or pads should also be used when horizontal pipe is resting on concrete or other abrasive support structures. Do not allow piping to contact abrasive surfaces that could cause damage during axial movement. Avoid contact with heat producing sources. Do not install plastic piping in close proximity to steam lines or other high temperature equipment without providing appropriate protection to prevent damage from distortion or expansion/contraction.

Care should be taken to avoid over tightening of anchors, clamps or other support devices. This can distort or even fracture the piping.

Vertical lines must be supported properly at intervals that will prevent excessive loading on the fitting at the lower end. Hangers and clamps suitable for this purpose include riser clamps or double bolt type clamps installed in such a manner that will allow for movement of the pipe due to thermal expansion and contraction. Clamps and hangers used must not compress, distort, cut or abrade the piping. Common practice is to install clamps just below a coupling so that the shoulder of the coupling rests on the clamp. Fittings can be modified in the field to achieve this by cutting a coupling in two, just above the stop at the socket bottom, and then cutting this piece in half lengthwise to provide two halves which do not contain the stop. The two halves are then solvent cemented to the pipe at the proper location so that the shoulder of the modified coupling rests on the clamp. Riser clamps that utilize compression to support the pipe weight should not be used.

Anchor Guides

Anchors direct movement of the piping by providing restraint at key points such as long straight runs, at changes in direction of the system, and where expansion joints and other methods of thermal compensation are utilized. They may be used to control forces caused by expansion and contraction, generated by pressure surges, vibration, and other transient conditions. Guides are necessary to help direct this movement between anchors by allowing longitudinal movement while restricting lateral movement. Depending on the application and type, guides may or may not act as supports. Support guides should have the same load bearing surface and other requirements of hangers designed for the system. Guides must be rigidly attached to the structure to prevent lateral movement, but should not restrict longitudinal movement of the pipe through the guide. Anchors and guides must be engineered and installed without point loading the system.

Recommended Pipe Support Spacing

The following hanger support spacing recommendations are according to size, schedule, and operating temperatures. Do not clamp supports tightly – this restricts axial movement of the pipe. If short spacing is necessary, continuous supports may be more economical. These are considered conservative in nature and are based on straight runs of un-insulated lines with fluids with a specific gravity of 1.00 or less. These values do not consider concentrated weight loads or aggressive reagents.

PVC PIPE SUPPORT SPACING (ft.)

PIPE SIZE (in.)	SCHEDULE 40					SCHEDULE 80					SCHEDULE 120				
	60°F	80°F	100°F	120°F	140°F	60°F	80°F	100°F	120°F	140°F	60°F	80°F	100°F	120°F	140°F
1/4	4	3-1/2	3-1/2	2	2	4	4	3-1/2	2-1/2	2	---	---	---	---	---
3/8	4	4	3-1/2	2-1/2	2	4-1/2	4-1/2	4	2-1/2	2-1/2	---	---	---	---	---
1/2	4-1/2	4-1/2	4	2-1/2	2-1/2	5	4-1/2	4-1/2	3	2-1/2	5	5	4-1/2	3	2-1/2
3/4	5	1/2	4	2-1/2	2-1/2	5-1/2	5	4-1/2	3	2-1/2	5-1/2	5	4-1/2	3	3
1	5-1/2	5	4-1/2	3	2-1/2	6	5-1/2	5	3-1/2	3	6	5-1/2	5	3-1/2	3
1-1/4	5-1/2	5-1/2	5	3	3	6	6	5-1/2	3-1/2	3	6-1/2	6	5-1/2	3-1/2	3-1/2
1-1/2	6	5-1/2	5	3-1/2	3	6-1/2	6	5-1/2	3-1/2	3-1/2	6-1/2	6-1/2	6	4	3-1/2
2	6	5-1/2	5	3-1/2	3	7	6-1/2	6	4	3-1/2	7-1/2	7	6-1/2	4	3-1/2
2-1/2	7	6-1/2	6	4	3-1/2	7-1/2	7-1/2	6-1/2	4-1/2	4	8	7-1/2	7	7-1/2	4
3	7	7	6	4	3-1/2	8	7-1/2	7	4-1/2	4	8-1/2	8	7-1/2	5	4-1/2
3-1/2	7-1/2	7	6-1/2	4	4	8-1/2	8	7-1/2	5	4-1/2	9	8-1/2	7-1/2	5	4-1/2
4	7-1/2	7	6-1/2	4-1/2	4	9	8-1/2	7-1/2	5	4-1/2	9-1/2	9	8-1/2	5-1/2	5
5	8	7-1/2	7	4-1/2	4	9-1/2	9	8	5-1/2	5	10-1/2	10	9	6	5-1/2
6	8-1/2	8	7-1/2	5	4-1/2	10	9-1/2	9	6	5	11-1/2	10-1/2	9-1/2	6-1/2	6
8	9	8-1/2	8	5	4-1/2	11	10-1/2	9-1/2	6-1/2	5-1/2	---	---	---	---	---
10	10	9	8-1/2	5-1/2	5	12	11	10	7	6	---	---	---	---	---
12	11-1/2	10-1/2	9-1/2	6-1/2	5-1/2	13	12	10-1/2	7-1/2	6-1/2	---	---	---	---	---
14	12	11	10	7	6	13-1/2	13	11	8	7	---	---	---	---	---
16	12-1/2	11-1/2	10-1/2	7-1/2	6-1/2	14	13-1/2	11-1/2	8-1/2	7-1/2	---	---	---	---	---
18	13	12	11	8	7	14-1/2	14	12	11	9	---	---	---	---	---
20	14	12-1/2	11-1/2	10	8-1/2	15-1/2	14-1/2	12-1/2	9-1/2		---	---	---	---	---
24	15	13	12-1/2	11	9-1/2	17	15	14	12-1/2	10-1/2	---	---	---	---	---
	SDR 41					SDR 26									
18	13	12	11	8	7	14-1/2	14	12	9	8	---	---	---	---	---
20	13-1/2	12-1/2	11-1/2	8-1/2	7-1/2	15	14-1/2	12-1/2	9-1/2	8-1/2	---	---	---	---	---
24	14	13	12	9	8	15-1/2	15	13	10	9	---	---	---	---	---

■ NOTE Although support spacing is shown at 140°F for PVC, consideration should be given to the use of CPVC or continuous support above 120°F. The possibility of temperature overrides beyond regular working temperatures and cost may make either of the alternatives more desirable. This chart based on continuous spans and for un-insulated line carrying fluids of specific gravity up to 1.00.

CPVC PIPE SUPPORT SPACING (ft.)

PIPE SIZE (in.)	SCHEDULE 40						SCHEDULE 80					
	73°F	100°F	120°F	140°F	160°F	180°F	73°F	100°F	120°F	140°F	160°F	180°F
1/2	5	4-1/2	4-1/2	4	2-1/2	2-1/2	5-1/2	5	4-1/2	4-1/2	3	2-1/2
3/4	5	5	4-1/2	4	2-1/2	2-1/2	5-1/2	5-1/2	5	4-1/2	3	2-1/2
1	5-1/2	5-1/2	5	4-1/2	3	2-1/2	6	6	5-1/2	5	31/2	3
1-1/4	5-1/2	5-1/2	5-1/2	5	3	3	6-1/2	6	6	5-1/2	31/2	3
1-1/2	6	6	5-1/2	5	3-1/2	3	7	6-1/2	6	5-1/2	31/2	3-1/2
2	6	6	5-1/2	5	3-1/2	3	7	7	6-1/2	6	4	3-1/2
2-1/2	7	7	6-1/2	6	4	3-1/2	8	7-1/2	7-1/2	6-1/2	41/2	4
3	7	7	7	6	4	3-1/2	8	8	7-1/2	7	41/2	4
3-1/2	7-1/2	7-1/2	7	6-1/2	4	4	8-1/2	8-1/2	8	7-1/2	5	4-1/2
4	7-1/2	7-1/2	7	6-1/2	4-1/2	4	8-1/2	9	8-1/2	7-1/2	5	4-1/2
6	8-1/2	8	7-1/2	7	5	4-1/2	10	9-1/2	9	8	51/2	5
8	9-1/2	9	8-1/2	7-1/2	5-1/2	5	11	10-1/2	10	9	6	5-1/2
10	10-1/2	10	9-1/2	8	6	5-1/2	11-1/2	11	10-1/2	9-1/2	61/2	6
12	11-1/2	10-1/2	10	8-1/2	6-1/2	6	12-1/2	12	11-1/2	10-1/2	71/2	6-1/2
14	12	11	10	9	8	6	15	13-1/2	12-1/2	11	91/2	8
16	13	12	11	9-1/2	8-1/2	7	16	15	13-1/2	12	10	8-1/2

■ NOTE This chart based on continuous spans and for un-insulated line carrying fluids of specific gravity up to 1.00.

PVC PIPE SUPPORT SPACING (FT) AT °F (°C)

NOMINAL PIPE SIZE (in.)	SCHEDULE 40					
	20°F (-7°C)	60°F (16°C)	80°F (27°C)	100°F (38°C)	120°F (49°C)	140°F (60°C)
1/4	4.5	4.0	3.5	3.5	2.0	2.0
3/8	4.5	4.0	4.0	3.5	2.5	2.0
1/2	5.0	4.5	4.5	4.0	2.5	2.5
3/4	5.5	5.0	4.5	4.0	2.5	2.5
1	6.0	5.5	5.0	4.5	3.0	2.5
1 1/4	6.0	5.5	5.5	5.0	3.0	3.0
1 1/2	6.5	6.0	5.5	5.0	3.5	3.0
2	6.5	6.0	5.5	5.0	3.5	3.0
2 1/2	7.5	7.0	6.5	6.0	4.0	3.5
3	8.0	7.0	7.0	6.0	4.0	3.5
4	8.5	7.5	7.0	6.5	4.5	4.0
6	9.5	8.5	8.0	7.5	5.0	4.5
8	10.0	9.0	8.5	8.0	5.0	4.5
10	11.0	10.0	9.0	8.5	5.5	5.0
12	12.0	11.5	10.5	9.5	6.5	5.5
14	13.0	12.0	11.0	10.0	7.0	5.0
16	14.0	13.0	12.0	11.0	8.0	6.0

PVC PIPE SUPPORT SPACING (FT) AT °F (°C)

NOMINAL PIPE SIZE (in.)	SCHEDULE 80					
	20°F (-7°C)	60°F (16°C)	80°F (27°C)	100°F (38°C)	120°F (49°C)	140°F (60°C)
1/4	4.5	4.0	4.0	3.5	2.5	2.0
3/8	5.0	4.5	4.0	4.0	2.5	2.5
1/2	5.5	5.0	4.5	4.5	3.0	2.5
3/4	6.0	5.5	5.0	4.5	3.0	2.5
1	6.5	6.0	5.5	5.0	3.5	3.0
1 1/4	7.0	6.0	6.0	5.5	3.5	3.0
1 1/2	7.0	6.5	6.0	5.5	3.5	3.5
2	7.5	7.0	6.5	6.0	4.0	3.5
2 1/2	8.5	7.5	7.5	6.5	4.5	4.0
3	9.0	8.0	7.5	7.0	4.5	4.0
4	10.0	9.0	8.5	7.5	5.0	4.5
6	11.0	10.0	9.5	9.0	6.0	5.0
8	12.5	11.0	10.5	9.5	6.5	5.5
10	13.5	12.0	11.5	10.0	7.0	6.0
12	14.5	13.0	12.0	10.5	7.5	6.5

PVC PIPE SUPPORT SPACING (FT) AT °F (°C)

NOMINAL PIPE SIZE (in.)	SDR 13.5					
	20°F (-7°C)	60°F (16°C)	80°F (27°C)	100°F (38°C)	120°F (49°C)	140°F (60°C)
1/4	4.5	4.0	4.0	3.5	C	C
3/4	5.0	4.5	4.0	3.5	C	C
1	5.5	5.0	4.5	4.0	2.5	C
1 1/4	5.5	5.0	5.0	4.5	2.5	2.5
1 1/2	6.5	6.0	5.5	5.0	3.5	3.0
2	7.0	6.5	6.0	5.5	3.5	3.0
2 1/2	8.0	7.0	7.0	6.0	4.0	3.5
3	8.5	7.5	7.0	6.5	4.0	3.5
4	9.5	8.5	8.0	7.0	5.0	4.5

PVC PIPE SUPPORT SPACING (FT) AT °F (°C)

NOMINAL PIPE SIZE (in.)	SDR-26					
	20°F (-7°C)	60°F (16°C)	80°F (27°C)	100°F (38°C)	120°F (49°C)	140°F (60°C)
1	3.0	2.5	2.5	2.5	C	C
1 1/4	3.0	2.5	2.5	2.5	C	C
1 1/2	3.0	3.0	2.5	2.5	C	C
2	3.0	3.0	2.5	2.5	C	C
2 1/2	3.5	3.5	3.0	2.5	2.0	C
3	5.0	4.0	4.0	3.5	2.5	2.0
4	6.0	5.5	4.5	4.0	3.0	2.0
5	6.0	5.5	5.0	4.5	3.0	2.5
6	6.5	6.0	5.5	5.0	3.5	3.0
8	7.0	6.0	6.0	5.5	3.5	3.0
10	7.5	7.0	6.0	6.0	4.0	3.5
12	8.5	8.0	7.5	6.5	4.5	4.0
14	9.0	8.5	7.5	7.0	5.0	2.5
16	10.0	9.0	8.5	7.5	5.5	4.0
18	11.0	9.5	9.0	8.0	6.0	4.5
20	12.0	10.0	9.5	8.5	6.5	5.0
24	13.0	11.0	10.0	9.0	7.0	5.5

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC PIPE SUPPORT SPACING (FT) AT °F (°C)

NOMINAL PIPE SIZE (in.)	SDR-21					
	20°F (-7°C)	60°F (16°C)	80°F (27°C)	100°F (38°C)	120°F (49°C)	140°F (60°C)
1/4	2.5	2.0	2.0	C	C	C
1	3.0	2.5	2.5	2.0	C	C
1 1/4	3.5	3.0	3.0	2.5	C	C
1 1/2	4.0	3.5	3.0	2.5	2.0	C
2	4.0	3.5	3.0	3.0	2.0	2.0
2 1/2	4.5	4.0	4.0	3.5	2.0	2.0
3	5.0	4.0	3.5	3.5	2.5	2.0
4	8.0	7.0	6.5	6.0	4.0	3.5
5	7.0	6.5	4.0	4.0	2.0	1.5
6	6.0	5.5	5.0	5.0	3.0	2.5
8	6.5	6.0	5.5	5.0	3.5	3.0
10	7.0	6.5	6.0	5.5	3.5	3.0
12	7.5	7.0	6.5	5.5	4.0	3.5

PVC PIPE SUPPORT SPACING (FT) AT °F (°C)

NOMINAL PIPE SIZE (in.)	SDR-41					
	20°F (-7°C)	60°F (16°C)	80°F (27°C)	100°F (38°C)	120°F (49°C)	140°F (60°C)
4	3.5	3.0	2.5	2.5	C	C
6	4.0	3.5	3.0	3.0	2.0	C
8	4.0	3.5	3.5	3.0	2.0	C
10	4.5	4.0	3.5	3.5	2.5	2.0
12	5.0	5.0	4.5	4.0	2.5	2.5
14	5.5	5.0	4.5	4.0	3.0	2.0
16	6.0	5.0	5.0	4.5	3.0	2.5
18	6.5	6.0	5.5	5.0	3.5	2.5
20	7.5	6.0	6.0	5.0	4.0	3.0
24	8.0	6.5	6.5	5.5	4.0	3.0

CPVC PIPE SUPPORT SPACING (FT) AT °F (°C)

NOMINAL PIPE SIZE (in.)	SCHEDULE 40						
	60°F (16°C)	100°F (38°C)	120°F (49°C)	140°F (60°C)	160°F (71°C)	180°F (82°C)	200°F (93°C)
1/4	4.5	4.0	3.5	3.5	2.0	2.0	C
3/8	4.5	4.0	4.0	3.5	2.5	2.0	C
1/2	5.0	4.5	4.5	4.0	2.5	2.5	C
3/4	5.5	5.0	4.5	4.0	2.5	2.5	C
1	6.0	5.5	5.0	4.5	3.0	2.5	C
1 1/4	6.0	5.5	5.5	5.0	3.0	3.0	1.5
1 1/2	6.5	6.0	5.5	5.0	3.5	3.0	1.5
2	6.5	6.0	5.5	5.0	3.5	3.0	1.5
2 1/2	7.5	7.0	6.5	6.0	4.0	3.5	1.5
3	8.0	7.0	7.0	6.0	4.0	3.5	2.0
4	8.5	7.5	7.0	6.5	4.5	4.0	2.0
5	9.5	8.5	8.0	7.5	5.0	4.5	2.0
6	9.5	8.5	8.0	7.5	5.0	4.5	2.0
8	10.0	9.0	8.5	8.0	5.0	4.5	2.0
10	10.5	9.5	9.0	8.5	5.5	5.0	2.0
12	11.0	10.0	9.5	9.0	6.0	5.5	2.5

CPVC PIPE SUPPORT SPACING (FT) AT °F (°C)

NOMINAL PIPE SIZE (in.)	SCHEDULE 80						
	60°F (16°C)	100°F (38°C)	120°F (49°C)	140°F (60°C)	160°F (71°C)	180°F (82°C)	200°F (93°C)
1/4	4.5	4.0	4.0	3.5	2.5	2.0	C
3/8	5.0	4.5	4.5	4.0	2.5	2.5	C
1/2	5.5	5.0	4.5	4.5	3.0	2.5	C
3/4	5.5	5.5	5.0	4.5	3.0	2.5	C
1	6.0	6.0	5.5	5.0	3.5	3.0	1.5
1 1/4	6.5	6.0	6.0	5.5	3.5	3.0	1.5
1 1/2	7.0	6.5	6.0	5.5	3.5	3.5	2.0
2	7.0	7.0	6.5	6.0	4.0	3.5	2.0
2 1/2	8.0	7.5	7.5	6.5	4.5	4.0	2.5
3	8.0	8.0	7.5	7.0	4.5	4.0	2.5
4	8.5	9.0	8.5	7.5	5.0	4.5	2.5
5	10.0	9.5	9.0	8.0	5.5	5.0	3.0
6	10.0	9.5	9.0	8.0	5.5	5.0	3.0
8	11.0	10.5	10.0	9.0	6.0	5.5	3.5
10	11.5	11.0	10.5	9.5	6.5	6.0	4.0
12	12.5	12.0	11.5	10.5	7.5	6.5	4.5

Special Pipe - Spears® PVC Clear

Spears® PVC clear Schedule 40 or Schedule 80 piping provides optimum clarity for critical visual monitoring of processes fluids. Joined using standard solvent cement welding with clear cement, clear systems provide the many benefits of regular PVC, such as excellent corrosion resistance, smooth interior walls, non-contaminating, non-conductive, light weight, good pressure handling capacity, superior impact strength and does not support bacterial growth.

A supplemental line of 1/4" through 12" Spears® PVC clear fittings are available. Socket-style fittings are manufactured in strict dimensional compliance with ASTM D 2466 to Schedule 40 requirements. Spears® Special Reinforced Plastic Thread (SR) female threaded transition fittings, incorporating a stainless steel retaining ring, reduce problems associated with over tightening and provide a strong, leak-tight seal for plastic-to-metal transitions. Specialty transition fittings are manufactured to Schedule 80 dimensions per the applicable requirements of ASTM D 2467. See Spears® Schedule 40 or Schedule 80 fitting weight and dimension publications for available sizes and configurations. Spears® PVC clear can be easily installed with systems of regular PVC pipe, fittings and valves. In addition, an endless selection of fully compatible PVC components and accessories are readily available.

Material

Spears® PVC clear piping is produced from a rigid, lead-free virgin Polyvinyl Chloride (PVC) compound with superior impact resistance and a maximum service temperature of 140°F when appropriate temperature/pressure de-rating factors are applied. Spears® PVC clear materials are certified by the NSF International for use with potable water under ANSI/NSF® Standard 61 and acceptable for food contact under the provisions of Title 21 of the United States FDA Code of Federal Regulations. Spears® PVC clear piping also exhibits excellent flammability characteristics and will not sustain combustion when flame source is removed.

Spears® PVC clear provides the excellent chemical resistance properties of PVC piping. It is resistant to most acids, bases, salts and oxidants. PVC chemical resistance data should be referenced for proper application. Although this material maintains its physical properties when exposed to many substances, exposure to certain chemicals can affect the clarity of the product over time. Certain nitrogen containing organics, bleaches, oxidative agents and acids may result in discoloration. Testing under actual use conditions is recommended. Exposure to sunlight (Ultra Violet Radiation) will also affect clarity. Clear products do not contain UV stabilizers and are not recommended for outdoor use unless adequate protection is applied.

Clear PVC Pipe Physical Properties		
GENERAL	**Value**	**Test Method**
Cell Classification	12454	ASTM D 1784
Maximum Service Temp.	140°F	
Color	Transparent	
Specific Gravity, (g/cu.cm @ 73°F)	1.33	ASTM D 792
Hardness, Shore D	84	ASTM D 2240
Hazen-Williams Factor	C = 150	
MECHANICAL		
Tensile Strength, psi @ 73°F	7,260	ASTM D 638
Tensile Modulus of Elasticity, psi @ 73°F	392,000	ASTM D 638
Flexural Strength, psi @ 75°F	12,000	ASTM D 790
Flexural Modulus, psi @ 75°F	389,000	ASTM D 790
Compressive Strength, psi @ 75°F	8,300	ASTM D 695
Compressive Modulus, psi @ 75°F	307,000	ASTM D 695
Notched Izod Impact - .125" Injection Molded	23 ft-lbs./in.	ASTM D 256
Notched Izod Impact - .125" With Flow-Comp. Molded	8.0 ft-lbs./in.	ASTM D 256
Notched Izod Impact - .125" Cross Flow-Comp. Molded	2.0 ft-lbs./in	ASTM D 256
THERMAL		
Coefficient of Linear Expansion (in/in/°F)	4.1×10^{-5}	ASTM D 696
Heat Distortion Temp., 264 psi, .125 in. Bars	154°F	ASTM D 648
Glass Transition Temp.	176°F	
FIRE PERFORMANCE		
Flammability Rating	V-0	UL-94

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Special Pipe - Spears® PVC Clear

Schedule 40 Dimensions

Nom. Pipe Size (in.)	O.D.	Average I.D.	Min. Wall	Nom. Wt./Ft.	Max. W.P. PSI
1/4	0.540	0.344	0.088	0.086	390
3/8	0.675	0.473	0.091	0.115	310
1/2	0.840	0.602	0.109	0.170	300
3/4	1.050	0.804	0.113	0.226	240
1	1.315	1.029	0.133	0.333	220
1-1/4	1.660	1.360	0.140	0.450	180
1-1/2	1.900	1.590	0.145	0.537	170
2	2.375	2.047	0.154	0.720	140
2-1/2	2.875	2.445	0.203	1.136	150
3	3.500	3.042	0.216	1.488	130
3-1/2	4.000	3.521	0.226	1.789	120
4	4.500	3.998	0.237	2.118	110
6	6.625	6.031	0.280	3.73	90
6-1/2	6.625	6.335	0.110	1.64	45
8	8.625	7.942	0.322	5.619	80
10	10.750	9.976	0.365	7.966	70
12	12.750	11.889	0.406	10.534	70

Schedule 80 Dimensions

Nom. Pipe Size (in.)	O.D.	Average I.D.	Min. Wall	Nom. Wt./Ft.	Max. W.P. PSI
1/4	0.540	0.282	0.119	0.105	570
3/8	0.675	0.403	0.126	0.146	460
1/2	0.840	0.526	0.147	0.213	420
3/4	1.050	0.722	0.154	0.289	340
1	1.315	0.936	0.179	0.424	320
1-1/4	1.660	1.255	0.191	0.586	260
1-1/2	1.900	1.476	0.200	0.711	240
2	2.375	1.913	0.218	0.984	200
3	3.500	2.864	0.300	2.010	190
4	4.500	3.786	0.337	2.938	160
6	6.625	5.709	0.432	5.610	140

De-Rating Factor

Operating Temp (°F)	De-Rating Factor
73	1.00
80	0.88
90	0.75
100	0.62
110	0.51
120	0.40
130	0.31
140	0.22

EX: 4" PVC SCHEDULE 40
CLEAR @ 120°F = ?
110 psi x 0.40 = 44 psi max.
@ 120°F

Critical Collapse Pressure PSI @ 73°F

Pipe Size (in.)	SCH 40	SCH 80
1/4	7,504	22,172
3/8	3,714	11,869
1/2	3,255	9,370
3/4	1,722	4,985
1	1,399	3,841
1-1/4	767	2,158
1-1/2	554	1,599
2	327	1,014
2-1/2	431	1,176
3	279	809
3-1/2	211	632
4	169	521
6	84	333
8	57	-
10	43	-
12	35	-

THE MAXIMUM SERVICE TEMPERATURE FOR PVC CLEAR IS 140°F.

Threading of Schedule 40 PVC Clear pipe is not a recommended practice due to insufficient wall thickness.

Joining Methods

Spears® PVC Clear pipe is easily joined by standard solvent cementing process, threaded connections and flanges. To maintain system clarity, Spears® recommends the use of a clear, medium-bodied, fast-setting cement in conjunction with a clear primer for optimum joint integrity. See Installation section for industrial pressure pipe for guidelines.

Thermal Expansion and Contraction

Standard calculations for thermal expansion and contraction may be applied to Spears® PVC clear. The coefficient of linear expansion for Spears® Clear pipe is 4.1 x 10^{-5} in./in./°F. The rate of expansion or contraction can be calculated as follows:

$\Delta L = 12\ yL\ (\Delta T)$

Where:

ΔL = expansion or contraction in inches

y = 4.1 x 10-5 (coefficient of linear expansion)

L = length of piping run in feet

T = temperature change °F (T max. - T @ installation)

Hangers and Supports

Spears® PVC clear piping should be mounted and supported in the same manner as PVC industrial piping. Support location and spacing are based on the pipe diameter, operating temperature of the system, and the location of any concentrated stress loads (i.e., valves, flanges, and any other heavy system components). As with regular PVC piping, hangers used must have an adequate load-bearing surface free of any rough or sharp edges that could damage the piping during use. They must also not restrict linear movement of the system due to the effects of expansion and contraction; over tightening must be avoided. See Hangers and Supports section for industrial pressure pipe for additional information.

UV Resistant Clear Pipe Dimensions & Pressure Ratings

Thin Walled UVR Pipe

Pipe Size	O.D.	Average I.D.	Min. Wall	Nominal Wt./Ft.	Max. W.P. PSI*
2	2.375	2.173	0.091	0.456	80
3	3.500	3.210	0.135	0.966	80
4	4.500	4.134	0.172	1.569	80
6	6.625	6.251	0.172	2.391	70
8	8.625	8.251	0.172	3.134	53
10	10.750	10.376	0.172	3.923	43
12	12.750	12.376	0.172	4.666	36

De-rating Factors @ Elevated Temperature	
Operating Temp °F	De-rating Factor
73	1.00
80	0.88
90	0.75
100	0.62
110	0.51
120	0.40
130	0.31
140	0.22

Schedule 40 UVR Pipe

Pipe Size	O.D.	Average I.D.	Min. Wall	Nominal Wt./Ft.	Max. W.P. PSI*
1/2	0.840	0.602	0.109	0.170	300
3/4	1.050	0.804	0.113	0.226	240
1	1.315	1.029	0.133	0.333	220
1-1/4	1.660	1.360	0.140	0.450	180
1-1/2	1.900	1.590	0.145	0.537	170
2	2.375	2.047	0.154	0.720	140
2-1/2	2.875	2.445	0.203	1.136	150
3	3.500	3.042	0.216	1.488	130
3-1/2	4.000	3.521	0.226	1.789	120
4	4.500	3.998	0.237	2.118	110
6	6.625	6.031	0.280	3.733	90

Maximum Service Temperature = 140°F

The temperature de-rating factors shown in table at left can be multiplied by the pressure ratings listed for each pipe size to determine the maximum pressure rating of the pipe at the specified elevated Operating temperatures.

*Pressure Rating @ 73 °F

Developed to Promote Algae Growth in Bioreactor, Biofuel, Bioremediation, Research and Aquaculture Applications

Spears® Clear UV Resistant (UVR) PVC piping is suitable for use where exposure to sunlight is desired. The modified clear PVC material allows light in but blocks the harmful wavelengths that damage the plastic pipe

Produced in both Thin Walled UVR pipe down to 0.135" and Schedule 40 UVR pipe to allow rapid growth of algae and provide pressure ratings needed for circulation. Commercial use has found that UV blocking PVC provides excellent Photosynthetically Available Radiation (PAR) for algae growth. Using specialty clear PVC piping is beneficial in construction of photobioreactors since clarity is critical in allowing as optimum light into the process to allow the algae to grow and feed. The Thin Walled version of Spears® Clear Ultraviolet Resistant (UVR) PVC pipe has been found to optimize light transmission while maintaining the necessary rigidity for durable construction. The advantages of Clear UVR PVC include corrosion resistance, durability, non-conductivity, light weight construction and can be easily joined using Spears® PVC Clear solvent cements and primers using standard solvent cement welding practices.

Material

Spears® Clear UV Resistant (UVR) PVC piping material has been specially developed for optimum UV resistance. Independent testing has shown high stability of clarity and color in Spears® Clear UVR piping material from actual one year weather exposure tests in Arizona, Florida, and Ohio.

Spears® Clear UVR chemical resistance is similar to conventional clear PVC, and is generally resistant to most acids, bases, salts, and oxidants. However, exposure to chemicals may result in discoloration over time, especially certain bleaches, oxidizing agents, and nitrogen containing organics. As a result, in service testing under actual conditions is recommended.

THE MAXIMUM SERVICE TEMPERATURE FOR PVC UVR CLEAR IS 140°F

SPEARS® CLEAR UVR PIPE MUST BE PROTECTED FROM FREEZING

Special Pipe - Clear Ultra Violet Resistant (UVR) PVC

PVC Physical Properties

GENERAL	Value	Test Method
Specific Gravity, (g/cu.cm @ 73°F)	1.38	ASTM D792
Cell Classification	11553	ASTM D1784
Maximum Service Temperature	140°F	
Color	Transparent / slight blue tint	
Hardness, Shore D	85	ASTM D2240
Hazen-Williams Factor	C=150	
MECHANICAL		
Tensile Modulus of Elasticity, psi @ 73°F	416,000	ASTM D638
Tensile Strength, psi @ 73°F	8,250	ASTM D638
Flexural Modulus, psi @ 75°F	423,000	ASTM D790
Flexural Strength, psi @ 75°F	13,600	ASTM D790
Izod Impact notched – injection molded, .125 in. bars, 73°F	3.9 ft-lbs./in.	ASTM D256
THERMAL		
Coefficient of Linear Expansion (in/in/°F)	3.9 x 10-5	ASTM D696
Deflection Temperature Under Load, Annealed, 264 psi, .125 in. Bars	142°F	ASTM D648
FLAMMABILITY		
Flame Rating	V-0	UL-94

Joining Methods

Spears® PVC Clear pipe is easily joined by standard solvent cementing process, threaded connections and flanges, To maintain system clarity, Spears® recommends the use of a clear, medium-bodied, fast-setting cement in conjunction with a clear primer for optimum joint integrity. See Installation section for industrial pressure pipe for guidelines. Threading of Thin Walled or Schedule 40 Clear UVR PVC pipe is not a recommended practice due to insufficient wall thickness.

Thermal Expansion and Contraction

Standard calculations for thermal expansion and contraction may be applied to Spears® Clear UVR PVC. The coefficient of linear expansion for Spears® Clear UVR pipe is 3.9 x 10-5 in./in./°F. The rate of expansion or contraction can be calculated as follows:

$\Delta L = 12\ yL\ (\Delta T)$

Where:

ΔL = expansion or contraction in inches

y = 4.1 x 10-5 (coefficient of linear expansion)

L = length of piping run in feet

T = temperature change °F (T max.-T @ installation)

Hangers and Supports

Spears® Clear UVR PVC piping should be mounted and supported in the same manner as PVC industrial piping. However heat deformation and mechanical loads need additional consideration with Clear UVR piping and should not be deflected more than 3% of the outside diameter. Thin Walled pipe must be supported properly to avoid buckling and provide circumferential support to maintain roundness. Support location and spacing are based on the pipe diameter, operating temperature of the system, and the location of any concentrated stress loads (i.e., valves, flanges, and any other heavy system components). Hangers used must have an adequate load-bearing surface free of any rough or sharp edges that could damage the piping during use. They must also not restrict linear movement of the system due to the effects of expansion and contraction; over tightening must be avoided.

Thin Walled UVR Support Spacing

Pipe Size (inches)	Maximum Support Spacing in Feet				
	60°F	80°F	100°F	120°F	140°F
2	4-1/2	4-1/2	4	3-1/2	3
3	5-1/2	5-1/2	5	4-1/2	3-1/2
4	6-1/2	6	5-1/2	5	4
6	6-1/2	6	5-1/2	5	4
8	6	5-1/2	5	4-1/2	4
10	5-1/2	5-1/2	5	4-1/2	3-1/2
12	5	5	4-1/2	4	3-1/2

Schedule 40 UVR Support Spacing

Pipe Size (inches)	Maximum Support Spacing in Feet				
	60°F	80°F	100°F	120°F	140°F
½	4½	4½	4	2½	2½
¾	4½	4½	4	2½	2½
1	5½	5	4½	3	2½
1-1/4	5½	5½	5	3	3
1-1/2	6	5½	5	3½	3
2	6	5½	5	3½	3
2-1/2	7	6½	6	4	3½
3	7	7	6	4	3½
3-1/2	7½	7	6½	4	4
4	7½	7	6½	4½	4
6	8½	8	7½	5	4½

Special Pipe - Spears® Low Extractable PVC Pipe

Developed for Ultra-pure Water

Spears® Low Extractable piping is produced from a non-contaminating PVC material specially developed for ultra-pure water (UPW) systems in semiconductor, electronics, university research laboratories, hospital dialysis, industrial laboratories, Federal and state police forensic laboratories and biotechnology applications. Spears® Low Extractable PVC material has been subjected to independent laboratory leach studies during both static and dynamic exposure to 18.2 meg-ohm deionized water. Tests have shown relatively low TOC, Anion/Cation and trace metal contamination levels in comparison to conventional high purity piping system materials including PVDF and Natural Polypropylenes.

Spears® Low Extractable Piping Systems offer unique advantages for many ultra-pure water applications:

• Complete line of pipe, fittings and valves IPS Sizes 1/2" – 6" diameters

• Strong Schedule 80 dimensions for pressure service

• Advanced Spears® Low Extractable material significantly reduces leachable contamination compared to conventional PVC and other piping materials.

• Exceptionally smooth interior walls minimize particle generation and reduce potential for bacterial growth.

• Fast, reliable installation with simple, inexpensive joining methods

• Proprietary one-step fast-setting joining method reduces TOC contamination and rinses up quickly

• Unique blue translucency enables visual inspection of joint integrity

• Good chemical/corrosion resistance, high-impact strength, low thermal conductivity

• Bagged, sealed and boxed on-line for use in high-purity environments

• High Quality

• Low Maintenance

• Cost Effective

Material

Spears® Low Extractable piping is produced from an innovative PVC compound that has been specifically formulated to reduce leachable contamination when exposed to ultra-pure water environments. Minor ingredients necessary for processing have been scrupulously selected to address their potential for contamination, and are then carefully blended in precise ratios. This results in a much cleaner material than conventional PVC compounds, and compares favorably to alternate materials typically used for UPW piping applications. This has been validated with extensive static and dynamic leach studies during exposure to 18.2 megohm ultra-pure water conducted by a reputable third party.

Spears® Low Extractable material meets the toxicological requirements of NSF International Standard 61 as being safe for use in potable water applications, and also complies with the provisions of Title 21 of the United States FDA Code of Federal Regulations as being safe for use in food contact applications.

Physical Properties

Although the extractable contaminants of Spears® Low Extractable are much lower than common PVC piping, Spears® Low Extractable has physical properties very similar to those of conventional PVC piping. As a result, Spears® Low Extractable products exhibit the well-known physical characteristics and other benefits of conventional PVC piping, such as good chemical and corrosion resistance, low thermal conductivity, high strength-to-weight ratio, good impact resistance, and ease of installation.

Physical Properties	Value	Test Method
Cell Classification	12343	ASTM D 1784
Specific Gravity	1.327	ASTM D 792
	(g/cu.Cm @ 73°F)	
Tensile Strength, @ yield	6720 psi	ASTM D 638
Tensile Modulus of Elasticity	384,200 psi	ASTM D 638
Flexural Strength, @ yield	11,440 psi	ASTM D 790
Flexural Modulus of Elasticity	378,000 psi	ASTM D 790
Izod Impact (avg 2 complete breaks) (avg 3 partial & 2 complete breaks)	 1.3 ft-lbs /inch 10.9 ft-lbs /inch	 ASTM D 256
Coefficient of Linear Expansion	3.89 x 10^{-5} in/in°F	ASTM D 696
Compressive Strength	8732 psi	ASTM D 695
Heat Distortion Temperature	152°F	ASTM D 648
Hardness, Shore D	82.2 ± 3	ASTM D 2240
Maximum Temperature Use	140°F	

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Design and Dimensions

Spears® Low Extractable piping is produced to Schedule 80 dimensions in strict accordance with ASTM D 1785, and exhibits a Type II pressure rating. Spears® Low Extractable fittings are produced to Schedule 80 dimensions per ASTM D 2467. Joining of product produced to the dimensional requirements of these standards ensures that strong connections with good pressure-bearing capability can be made up quickly and consistently using common, inexpensive tools. See Spears® Low Extractable fitting weight & dimension and price list publication for fitting information and selection.

SCHEDULE 80

Nom. Pipe Size (in.)	O.D.	Average I.D.	Min. Wall	Nom. Wt./Ft.	Max. W.P.
1/2	0.840	0.526	0.147	0.213	420
3/4	1.050	0.722	0.154	0.289	340
1	1.315	0.936	0.179	0.424	320
1-1/4	1.660	1.255	0.191	0.586	260
1-1/2	1.900	1.476	0.200	0.711	240
2	2.375	1.913	0.218	0.984	200
3	3.500	2.864	0.300	2.010	190
4	4.500	3.786	0.337	2.938	160
6	6.625	5.709	0.432	5.610	140

The pressure ratings given are for water, non-shock, @ 73°F. The following temperature de-rating factors are to be applied to the working pressure ratings (WP) listed when operating at elevated temperatures.

Multiply the working pressure rating of the selected pipe at 73°F, by the appropriate de-rating factor to determine the maximum working pressure rating of the pipe at the elevated temperature chosen.

De-Rating Factors

Operating Temp (°F)	De-Rating Factor
73	1.00
80	0.88
90	0.75
100	0.62
110	0.51
120	0.40
130	0.31
140	0.22

Processing & Packaging

Correct processing techniques ensure proper dispersion and fusion of the compound, resulting in uniform properties of this special material. Optimizing processing conditions and providing smooth internal surfaces greatly reduces the potential for extractable and particle contaminants.

Spears® Low Extractable pipe and fittings are specially handled to minimize contamination, sealed in anti-static polybags and boxed on-line at time of manufacture.

Solvent Cement Joining

The Spears® Low Extractable system is primarily joined with standard solvent cementing using a special one-step solvent-cement specifically formulated for use with this product in UPW application. When properly used, this system results in very short cure times prior to pressure testing, and produces a solvent-cemented assembly with an exceptionally low percentage of chemical additives, reducing the potential for system contamination. The use of solvent cements and/or primers other than Low Extractable One-Step is not acceptable. Installers must become familiar with solvent cementing procedures prior to assembly. See Installation section for basic guidelines to solvent cement welding. All solvent cemented connections must be allowed to set and cure properly prior to pressure testing or rinsing.

Low Extractable UPW Solvent Cement Set and Cure Times

Set and cure times are a function of pipe size, temperature, pressure, humidity and tightness of fit. The initial set time is the recommended waiting period prior to handling a newly assembled joint. After the initial set time, the joints will withstand the stresses of normal installation. The cure time is the recommended waiting period prior to pressurizing newly assembled joints. Minimum cure time prior to pressure testing is dependent on pipe size, temperature, humidity, tightness of fit and test pressure required. Longer cure times must be allowed when working at higher humidity and colder temperatures. Refer to the following tables for minimum set and cure times.

Initial Set Time

Temp	Pipe Size 1/2" – 1-1/4"	Pipe Size 1-1/2" – 2"	Pipe Size 3" – 6"
60° - 100°F	2 min	3 min	30 min
40° - 60°F	5 min	8 min	2 hrs
0° - 40°F	10 min	15 min	12 hrs

Joint Cure Schedule

Relative Humidity 60% or less*	Pipe Size 1/2" – 1-1/4"		Pipe Size 1-1/2" – 2"		Pipe Size 3" – 6"
Temp Range during assembly and cure periods	up to 160 psi	160 to 370 psi	up to 160 psi	160 to 315 psi	up to 160 psi
60° - 100°F	15 min	6 hrs	25 min	12 hrs	1-1/2 hrs
40° - 60°F	20 min	12 hrs	30 min	24 hrs	4 hrs
0° - 40°F	30 min	48 hrs	45 min	96 hrs	72 hrs

If damp or humid weather allow 50 percent longer cure times.

Additional Joining Methods

Additional joining devices include flanges, unions, and threaded adapters produced from this special material. See Installation section for basic guidelines to flange and threaded joint make up. UPW applications typically require use of PTFE envelope gaskets for flanges and TFE tap sealant on threaded joints.

Hangers and Supports

As with standard PVC piping, support location and spacing is dependent on the pipe diameter, operating temperature of the system, and the location of any concentrated stress loads (i.e., valves, flanges, test equipment and any other heavy system components). Hangers used must have an adequate load-bearing surface free of any rough or sharp edges that could damage the pipe during use, must not restrict linear movement due to thermal expansion and contraction. See Installation section specified spacing and guideline applicable to Schedule 80 PVC pipe.

Thermal Expansion and Contraction

As with all thermoplastic piping materials, consideration must be given during the design of the system to the effects of thermal expansion and contraction. The coefficient of linear expansion for Spears® Low Extractable pipe is 3.89 x 10^{-5} in./in./°F. The rate of expansion or contraction can be calculated as follows:

$\Delta L = 12\ yL\ (T)$

Where:

ΔL = amount of expansion or contraction in inches y = 3.89 x 10^{-5}

L = length of piping run in feet

ΔT = temperature change °F

(T max. - T @ time of installation or lowest system temperature or maximum system temperature, whichever is greater.)

Additional Considerations

Proper system engineering, design, construction practices and operation are the responsibility of the design authority. Consideration must be given to ensure the Spears® Low Extractable system is not exposed to any conditions that will exceed the product limitations regarding temperature, pressure, chemical compatibility, and mechanical strength.

Spears® does not recommend the use of this product for the distribution of compressed air or gases.

Excessive surge pressure must be avoided. The system must be designed to ensure that surge potentials generated by pump operation, entrapped air, flow velocity, and valve closure are kept to a minimum. Spears® does not recommend flow velocities in excess of five feet per second.

Spears® Low Extractable piping systems are not formulated for outdoor use. Prolonged exposure to ultraviolet radiation (UVR) will affect physical properties.

Spears® recommends that newly installed systems be allowed to cure for a minimum period of 24 hours prior to rinsing procedures to reduce the potential for TOC contamination. Rinsing procedures, chemical rinse and other cleanup/disinfection procedures to be used are at the discretion of the system design authority.

Spears® Low Extractable piping is compatible with hydrogen peroxide at concentrations up to 30% at 73°F. Contact Spears® for additional chemical compatibility information concerning the use of Spears® Low Extractable products.

Application Qualification Testing

Static Leach Analysis

Detailed extractable analysis is conducted on piping samples after seven-day static leach utilizing 18.2 megohm ultra-pure water at ambient temperature. Static leach of large pipe samples (120-square-inch wet surface area) is representative of a piping system "off-line" for an extended period of time. Under these conditions the effects of UPW can be extremely aggressive, severely affecting the amount of leachable contaminants present within the piping material.

Pipe Material

Element	DL *(Detection Limit)* ppb	Spears® Low Extractable	High Purity PVDF	High Purity PP	Brand X Clean PVC	Conv. PVC	CPVC
TO C	5	59	90	94	1176	*	50
Fluoride	2	*	77	*	*	*	*
Chloride	0.25	2.33	1.0	0.66	2.45	0.84	49.54
Aluminum	0.05	0.30	2.3	0.68	0.54	3.10	1.16
Barium	0.01	0.04	0.24	0.09	0.01	0.22	0.05
Calcium	3	7	*	12	206	2787	15
Magnesium	0.02	0.81	0.66	1.0	2.15	11.15	2.17
Sodium	0.06	0.83	0.51	0.18	0.49	1.23	23.22
Tin	0.02	0.93	*	*	0.15	0.51	1.19
Zinc	0.06	0.49	0.47	0.96	*	0.51	1.19

*** = Below Detection Limit**

- All samples pre-rinsed identically with UPW prior to test.
- Independent Laboratory Extractable Analysis (Balazs Analytical Laboratory)
- Seven-Day Static Leach @ ambient temperature
- 450mL 18.2 megohm ultra-pure water
- 120-square-inch wet surface contact area
- Based on 1" diameter pipe without solvent-cemented joint
- Concentration units expressed as ug/L of Leachate (ppb)

Dynamic Leach Analysis

Spears® Low Extractable piping has been subjected to on-line dynamic flow analysis with 18.2 megohm UPW to evaluate particles, TOC, resistivity, anions, cations, and trace metals. This testing utilized solvent-cemented flange assemblies (spool piece) to see the effect that the cement had on TOC, resistivity and particle generation in a freshly assembled pipe section. Grab samples were also pulled periodically (at start-up, five minutes, 50 minutes and five hours) to analyze anions, cations and trace metals under flowing conditions. Spears® Low Extractable Flanges were assembled utilizing Low Extractable One-Step Cement and allowed to cure 24 hours prior to testing. Dynamic testing revealed that Spears® Low Extractable piping assemblies did not contribute significantly to particle generation or leachable contamination under flowing conditions throughout the test duration. Additional detailed information is available from Spears®.

Dynamic Test Description

Ambient temperature dynamic leach utilizing 18.2 megohm UPW flowing at 9.35 GPM (turbulent flow). 1" diameter pipe 30" long, solvent-cemented flanges each end (approximately 82-square-inch wet surface contact area). Approximately 1-1/2 grams of Low Extractable solvent cement used in assembly of components. Solvent-cemented assembly was allowed to cure 24 hours prior to start-up. Dynamic test was conducted for a period of five hours.

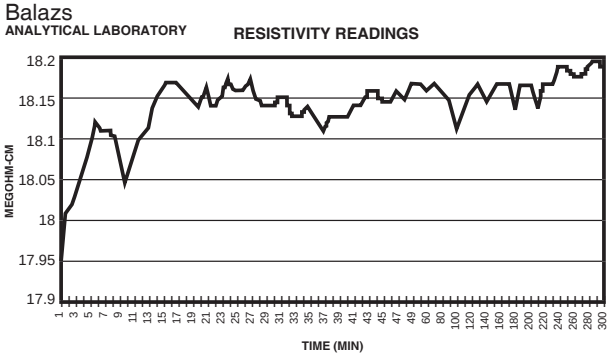
Leachable Contamination

Anions/Cations – IC grab sample analysis revealed low levels of sulfate (0.15 ppb) five minutes into the test, and low levels of ammonium at 50 minutes (0.05 ppb) and five hours (0.07 ppb) into the test. All other IC contaminants were below the limit of detection.

Trace Metals – Of the 68 trace metal contaminants evaluated, all were below the limit of detection with the exception of aluminum, detected at 0.012 ppb at the five-minute interval. This element remained below the limit of detection throughout the remainder of the leach.

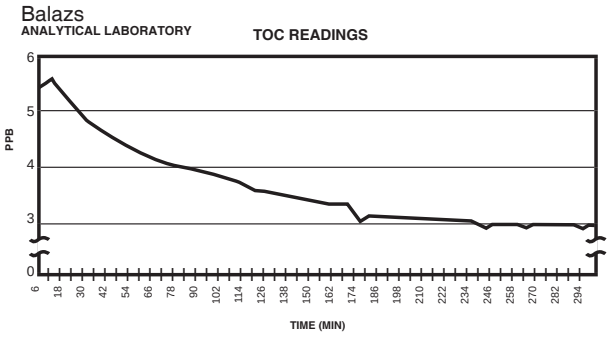
Resistivity

Resistivity measured 17.95 megohms at the start of the leach and rose quickly to 18.12 megohms during the first 6 minutes. Resistivity readings continued to rise until reaching the background level of 18.2 megohms after five hours of leaching.



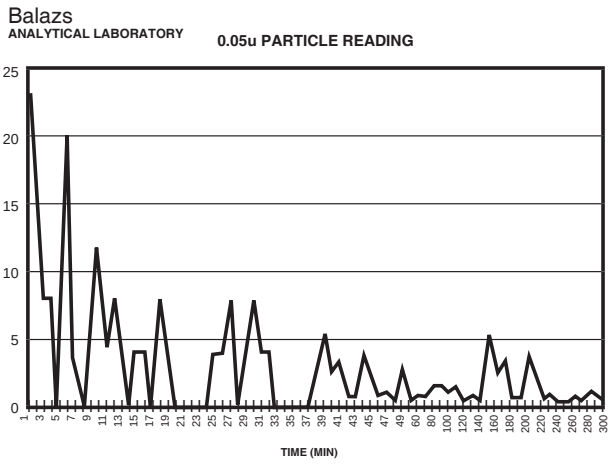
Total Oxidizable Carbon (TOC)

Dynamic testing revealed that after four hours of leaching, TOC readings reached and maintained the background levels throughout the test duration. This data confirmed the fast cure time of Low Extractable One-Step Cement. Conventional solvent cements and primers used for joining typically effect TOC contamination as a result of the leach.



Particles

Dynamic testing revealed that average particle counts decreased rapidly during the first six minutes of the leach. After 12 minutes of leaching the average smallest particles measured (0.05 micron size range) were representative of the background levels.



Surface Analysis

Spears® Low Extractable piping has a non-porous, exceptionally smooth interior surface that greatly reduces the potential for extractable and particle contamination while impeding bacterial growth. Spears® Low Extractable components (pipe and fittings) exhibit an average Roughness Analysis value of: ≤ .25 µm (≤ 10 µ inch) and has been evaluated side-by-side with other common piping materials at various magnifications for surface roughness comparison.

Special Pipe - Spears® LabWaste™

Patented

Spears® **LabWaste™** CPVC Drainage System is a Complete system of pipe, fittings & solvent cement featuring excellent chemical resistance, fire performance properties, light weight and ease of installation. Designed and specifically tested for use in commercial, industrial, and institutional drainage system applications involving corrosive /acid wastes, this unique product developed by Spears® has been awarded a U.S. Patent, No. 7,178,557. Available in nominal 1-1/2" through 24" Iron Pipe Size (IPS) diameters..

IMPORTANT – The information in this section is introductory only. Please refer to Spears® publication, **LabWaste™ CPVC Technical Information & Installation Guide,** for additional details and technical information.

Laboratory Applications

Its broad range of resistance to chemical and corrosive wastes make Spears® **LabWaste™** CPVC systems very well suited for commercial, institutional and academic laboratory drainage installations. These applications are best characterized as the routine disposal of a wide variety of hot and cold chemicals in relatively small quantities accompanied by water for the purpose of dilution and flushing. Due to the interactions potentially encountered in multi-chemical laboratory drainage disposal, Spears® recommends routine flushing of the system with water during disposal as a part of prudent laboratory practices. A properly designed and installed **LabWaste™** CPVC system provides total dilution and disposal need for years of dependable service.

Industrial & Commercial Special Waste Applications

Spears® **LabWaste™** CPVC products can be used in a very broad variety of dedicated waste applications with proper evaluation of waste medium and service conditions. For non-laboratory applications, refer to CPVC pressure system resistance data in this manual for appropriate chemical resistance guidelines. DO NOT follow **LabWaste™** Chemical Resistance Table recommendations for laboratory use in Spears® technical information guide. Please contact Spears® Technical Services for additional information.

Listings & Approvals

Spears® **LabWaste™** CPVC Drainage System is manufactured in strict compliance to ASTM F 2618, is listed by IC-ES-PMG for conformance to both the Uniform Plumbing Code and the International Plumbing for chemical waste systems under PMG-1018, and is certified by NSF International both to IAPMO IGC 210 and for use in corrosive waste systems (NSF®-cw).

Fire Resistance

Material used in Spears® **LabWaste™** CPVC systems has a UL 94 flammability rating of V-0, 5VB. Pipe and fittings have been Listed and rated based on *finished product* tests, as opposed to a material test only, for surface burning characteristics of flame spread and smoke density developed by Underwriters Laboratories of Canada under standard test method CAN/ULC S102.2-M88. Additional test of **LabWaste™** pipe with dry fit caps was conducted by Southwest Research Institute (SwRI) Department of Fire Technology under UL 723/ ASTM E 84 (modified to test finished product). Pipe and fitting components ratings are below the 25 maximum flame spread and 50 maximum smoke density developed typically required for exposed air plenum installation. Check local codes for acceptability. Use of approved plenum wrap or transition connectors to other material may be used if required.

Pipe Dimensions

Spears® **LabWaste™** CPVC Drainage System products produced to ASTM F 2618 have the same dimensional specifications for pipe as for Schedule 40 CPVC through 24" nominal IPS diameters. See corresponding pipe dimensions section in this manual.

Fittings Configurations

Spears® a wide variety of **LabWaste™** CPVC drainage pattern fittings produced to ASTM F 2618. See Spears® publication, **LabWaste™** CPVC Technical Information & Installation Guide for fitting details.

Joining Methods

Solvent Cement Welding

Spears® **LabWaste™** CPVC Drainage System piping is joined using a special one-step solvent cement specifically listed and approved for use in CPVC corrosive waste applications. Follow basic solvent cementing guideline under the Installation section using only **LabWaste™** CPVC one-step solvent cement.

Transitions & Other Connections

Standard threaded and flanged connections can be made using system components. A variety of special connectors are produced for transition to polypropylene, Duriron and glass systems waste piping systems.

Please refer to Spears® publication, **LabWaste™ CPVC Technical Information & Installation Guide,** for Physical Properties, Engineering Data, and **LabWaste™** Chemical Resistance Guide for laboratory applications. **DO NOT** use Chemical Resistance Guide for Pressure Piping contained in this section.

Special Pipe - Spears® FlameGuard®

Spears® **FlameGuard®** CPVC Fire Sprinkler Products are manufactured from high quality, Post-Chlorinated Poly Vinyl Chloride (CPVC), a specialty thermoplastic material tested and approved by certifying agencies for use in CPVC fire sprinkler systems. Spears® FlameGuard® CPVC Fire Sprinkler Products provide unique advantages over traditional metal fire sprinkler systems through superior hydraulics, ease of installation and handling.

IMPORTANT – The information in this section is introductory only. **Spears® publication FG-3, FlameGuard® CPVC Fire Sprinkler Products, must be used and followed.** National Fire Protection Association (NFPA) Standards 13, 13R, and 13D must be referenced for design and installation requirements in conjunction with the FG-3 manual and all local codes. Details of product listings, requirements and limitations are beyond the scope of this publication.

Listings & Approvals

Spears® FlameGuard® CPVC Fire Sprinkler Products are fully tested and approved for use in wet pipe fire sprinkler systems by Underwriters Laboratories Inc., FM Global, and the Loss Prevention Certification Board. Spears® FlameGuard® CPVC Fire Sprinkler Products are approved for use in low pressure dry pipe or pre-action systems by Underwriters Laboratories Inc. and for use in Light Hazard Occupancies (NFPA 13), and Residential Occupancies (NFPA 13R & 13D). The Listing also includes use in Return Air Plenums (NFPA 90A), use in Underground Service Mains (NFPA 24), and use in exposed systems with certain restrictions when installed in accordance with Spears® FG-3 installation instructions. Spears® FlameGuard® CPVC Fire Sprinkler Products are listed by NSF International for use in potable water systems.

Product Ratings

Spears® FlameGuard® CPVC fire sprinkler pipe is produced to SDR 13.5 dimensions in strict accordance with ASTM F 442 and Listed for a rated working pressure of 175 psi @150°

Dimensions

Nom. Pipe Size (in.)	O.D.	Average I.D.	Min. Wall	Nom. Nom. Wt./Ft.
3/4	1.050	0.874	0.078	0.168
1	1.315	1.101	0.097	0.262
1-1/4	1.660	1.394	0.123	0.418
1-1/2	1.900	1.598	0.141	0.548
2	2.375	2.003	0.176	0.859
2-1/2	2.875	2.423	0.213	1.257
3	3.500	2.950	0.259	1.867

Joining Method

Spears® **FlameGuard®** CPVC piping is joined using a special one-step solvent cement specifically listed and approved for use in CPVC fire sprinkler systems. See Spears® FG-3 installation instructions for use, applicable set and cure times and additional information.

Hot & Cold Water Distribution Systems

Spears® **EverTUFF**® Copper Tube Size (CTS) CPVC is a complete hot and cold water plumbing system consisting of pipe, fittings and solvent cement for plumbing applications. Spears® **EverTUFF**® CTS CPVC pipe is easily joined using solvent cement welding, is light weight, thermally efficient and code approved to provide cost-effective long-term system service.

Product Standards

Spears® **EverTUFF**® CTS pipe and fittings are manufactured in strict compliance to ASTM D 2846, Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Hot and Cold-Water Distribution Systems. This standard defines requirements for materials, workmanship, dimensions, tolerances, pressure-bearing capability, and thermocycling resistance. Spears® **EverTUFF**® CTS SDR 11 plumbing pipe and fittings are manufactured to specifications in accordance with this standard. SDR series pipe is based on an outside-diameter-to-wall- thickness ratio. This is a constant regardless of pipe diameter, therefore all sizes of pipe carry the same pressure rating of 100 psi @ 180°F and is suitable for use with commercial hot water.

Performance Testing

Spears® **EverTUFF**® CTS CPVC pipe is tested and independently certified by NSF International to the requirements of ASTM D 2846 under NSF® Standard 14 and for use in potable (drinking) water service under NSF® Standard 61.

Code Approvals

Major building codes have approved the use of CPVC piping as an acceptable material for plumbing systems, provided that the piping conforms to applicable industry standards and has been listed by a third party for conformance to NSF® Standard 14 and/or NSF® Standard 61 requirements. Code bodies that accept the use of CPVC include BOCA National Plumbing Code, National Standard Plumbing Code, SBCCI Standard Plumbing Code, International Plumbing Code, and the Uniform Plumbing Code to name a few. The user should determine approval and installation requirements according to local code having jurisdiction prior to use.

Dimensions

CPVC CTS Series pipe shall be manufactured in strict accordance to the requirements of ASTM D 2846 to SDR 11 dimensions and tolerances. Each production run of pipe manufactured in compliance to this standard, shall also meet or exceed the test requirements for materials, workmanship, burst pressure, flattening resistance, and extrusion quality and dimensions as defined in ASTM D 2846. This pipe shall be produced in CTS diameters (1/2" through 2" sizes) to SDR 11 specifications.

Nominal Pipe Size (in.)	Average O.D.	O.D. TOL	Average I.D.	Min. Wall	Rating @ Wt./ft.	PSI Pressure Rating @	
						73°F	180°F
1/2	0.625	±.003	0.469	0.068	0.090	400	100
3/4	0.875	±.003	0.695	0.080	0.149	400	100
1	1.125	±.003	0.901	0.102	0.240	400	100
1-1/4	1.375	±.003	1.105	0.125	0.353	400	100
1-1/2	1.625	±.004	1.309	0.148	0.489	400	100
2	2.125	±.004	1.716	0.193	0.829	400	100

PIPE SIZES SHOWN ARE MANUFACTURED IN STRICT COMPLIANCE WITH ASTM D 2846 ASTM STANDARD D 1784 MATERIAL EQUIVALENTS: Cell Classification 23447 = PVC Type IV Grade I CPVC = CPVC 4120

Pressure Ratings

The Spears® CPVC system, including the joint, has a continuous rated working pressure of 100 psi at 180°F or 400 psi at 73°F. CPVC systems have the capability to withstand short term temperature/pressure increases above 100 psi at 180°F, as evidenced by their ability to consistently surpass the 48-hour, 150-psi Uniform Building Code test at 210°F. CPVC pipe should not be used where temperatures will consistently exceed 180°F.

Pressure-Temperature De-Rating Factors For CTS CPVC 4120 SDR 11 Piping Systems

°F	Factor	Rating, PSI
73	1.00	400
80	1.00	400
90	0.91	360
100	0.82	325
120	0.65	260
140	0.50	200
160	0.40	160
180	0.25	100

The pressure de-rating factor is the same for all pipe sizes. Example: Determine the maximum allowable operating pressure for a CTS CPVC piping system with an operating temperature of 140°F. Using de-rating factor of 0.50 for 140° from the above chart, the maximum allowable operating pressure = 400 x 0.50 = 200 psi.

Installation

Installation shall be in accordance with the requirements of the local code having jurisdiction, the solvent cement manufacturer recommendations, and Spears® publication CTS-3, CPVC CTS Products Design and Installation Manual.

Joining Methods

Spears® **EverTUFF**® CTS CPVC pipe is easily joined by standard solvent cementing process, threaded connections and flanges Solvent Cement Welding.

Solvent Cement Welding

This is the most common joining method used with CTS CPVC See Installation section for industrial pressure pipe for basic solvent cementing guidelines.

CTS Solvent Cement Selection

Codes require use of solvent cement conforming ASTM F 493 and designated specifically for use with CTS CPVC products in accordance with ASTM D 2846. Spears® **EverTUFF**® CTS-5 CTS CPVC "One-step" (primerless) cements may be used without primer if codes permit, or may be used with a primer where required by code - always CHECK LOCAL CODES.

Set and Cure Times

Pipe and fitting joint assembly must be allowed to set without any stress on the joint for one to five minutes depending on the pipe size and temperature. Following the initial set period, the assembly can be handled carefully.

FOLLOW THE CEMENT MANUFACTURER'S RECOMMENDED CURE TIMES PRIOR TO PRESSURE TESTING – FAILURE TO DO SO WILL RESULT IN JOINT FAILURE.

Minimum Cure Time Prior to Testing at 150 psi with Cold Water (based on use of one-step CPVC cement or two-step cement systems)

Pipe Size (in.)	Ambient Temperature During Cure Time		
	>60°F	40°F - 60°F	<40°F
3/8	1 hr	2 hrs	4 hrs
1/2	1 hr	2 hrs	4 hrs
3/4	1 hr	2 hrs	4 hrs
1	1 hr	2 hrs	4 hrs
1-1/4	2 hrs	4 hrs	8 hrs
1-1/2	2 hrs	4 hrs	8 hrs
2	2 hrs	4 hrs	8 hrs

NOTE Wait 24 hours prior to putting system into hot water service when installed at cure temperatures above 60°F; wait 48 hours prior to putting system into hot water service when installed at cure temperatures below 40°F Solvent Cement Joining

Wall Penetration

Building codes require that a fire-rated wall or floor must be sealed back to its original integrity when penetrated. Several sealants and materials are suitable for use with Spears® **EverTUFF**® CTS CPVC pipe to construct an appropriate UL Classified fire-rated penetration system. When installed properly, these systems will provide a two-hour fire rating. Consult local building code requirements.

NOTE Caution: Certain fire-stopping sealants and components contain stress cracking agents and other chemicals which may cause damage to CPVC piping; contact the appropriate manufacturer for compatibility with CPVC prior to use.

NOTE When installing CPVC in areas where the system must be drained to protect it from freezing, the lines must be sloped to drain.

Underslab Installations

Spears® **EverTUFF**® CTS CPVC products are approved for underslab installations (with joints) in all model-plumbing codes. When performing underslab installations, it is important to support the tube evenly on a smooth surface. The bedding and backfill should be sand or clean soil that is free from sharp rocks and other debris that could damage the pipe.

Underslab installations that contain joints must be pressure tested before pouring the slab. **NOTE:** IAPMO IS 2098, "Installation Standard for CPVC Solvent Cemented Hot and Cold Water Distribution Systems," requires a test at 150 psi for 2 hours. The pipe should be sleeved where it penetrates the slab, along with construction joints within the slab. Spears® **EverTUFF**® CTS pipe is also manufactured in coils for underslab installations to eliminate joints. When turning coiled pipe up through a slab, into walls, etc., make sure the pipe does not kink. Sections of pipe that contain kinks must be cut out and replaced.

Freeze Protection/Sunlight Exposure

CPVC piping must be protected from freezing in all installation locations. Attention shall be paid to local insulating techniques and codes that require a particular method. Use only methods and materials suitable for use with CPVC piping. Where freezing is not an issue, CPVC shall not be installed so as to be subject to direct sunlight after installation and not installed on the surface of a building, unless protected by a covering or a chemically compatible paint, such as water based Latex.

Hose Bibb Installation

Hose bibbs are to be connected only to metal system components which are adequately anchored to the building structure. CPVC plastic systems must terminate in the wall.

Water Heater Connections

Before attempting to use Spears® **EverTUFF**® CTS CPVC in water heater connections, determine if local plumbing codes contain detailed requirements for connections to gas or electric storage-type heaters.

DO NOT use Spears® **EverTUFF**® CTS CPVC products with commercial-type, non-storage water heaters.

For areas where local plumbing codes do not have requirements, the following information can be used as a guide for water heater connections:

- On electric water heaters, CPVC can be joined directly to the heater, using metal-to-CPVC transition fittings.
- On high-efficiency gas water heaters that use plastic vent piping, CPVC can be joined directly to the heater in the same way as an electric water-heater connection.
- On all other gas water heaters, there should be at least 6" of clearance between the exhaust flue and any CPVC tubing. A minimum of 6" metallic pipe should connect directly to the heater so that the CPVC tubing cannot be damaged by the buildup of excessive, radiant heat from the flue.
- A temperature/pressure relief valve should be installed so that the sensing element contacts the water at the top of the heater.

• Spears® **EverTUFF**® CTS CPVC products are approved by all model codes for use as relief-valve drain lines. A metal-to-CPVC transition fitting should be used to connect the tubing to the relief valve, with the tubing continued to the outlet. Both horizontal and vertical pressure relief drain should be supported every 3 feet. For horizontal runs, slope the tubing toward the outlet. Pipe must discharge to the atmosphere at an approved location.

• Instantaneous water heaters (i.e., under sink units) require at least 6" of metallic pipe connected to heater inlet and no CVPC installed down stream.

TRANSITION JOINTS AND FITTINGS

Spears® **EverTUFF**® CTS CPVC pipe can be connected to copper, brass, valves, and other materials using a variety of transition fittings including unions, compression fittings, specially reinforced male and female adapters, flanged joints, grooved joints and other readily available transition fittings.

Do not thread CPVC pipe and do not use regular CPVC female threaded fittings. Regular CPVC male threaded fittings shall only be used on cold water applications. Special reinforced male adapters, female adapters and other fittings with brass threads are recommended for hot water applications and threaded transitions to metal pipe. All approved threaded CPVC joints must be accessible. (See also Water Heater Connections section for additional installation details).

Standard compression fittings with brass ferrules can be used; however, TFE tape must be applied over the brass ferrule to compensate for the dissimilar thermal expansion rates between the brass and CPVC. Caution must be exercised to prevent over tightening of compression fittings. Use extreme care when soldering any metal system to prevent flame contact with or heat distortion in CPVC pipe and fittings .

Assembling Threaded Connections

Threaded connections require the application of a thread sealant that is compatible with CPVC material. Spears® recommends the use of Spears® Blue 75™ Thread Sealant. Apply sealant to the male threads only. Make sure all threads are covered. DO NOT clog the waterway with excess sealant. If TFE tape is used, Spears® recommends a thickness of at least .0025" that meets or exceeds military specification, MIL-T-27730A. DO NOT use a combination of tape and thread sealant on the same joint. Apply TFE tape in the direction of the threads by starting with the first full thread and continuing over the entire thread length. Make sure all threads are covered. Generally, 2 - 3 wraps are sufficient to produce a watertight connection.

DO NOT over-torque any threaded connections. Generally, one to two turns beyond finger-tight are required for a threaded connection. Factory testing has indicated that 10 - 25 ft-lbs of torque is adequate to obtain a leak-free seal. Spears® recommends the use of a strap wrench when installing threaded connections.

Hanger/Support Spacing

Spears® **EverTUFF**® CTS CPVC pipe is rigid, it requires fewer supports than flexible, plastic systems.

Vertical runs should be supported at each level so that the weight of the run is not placed on a fitting or a joint. Horizontal runs require support every 3 feet for 1/2" - 1" diameter pipe and every 4 feet for 1-1/4" and larger diameters. Support spacing should be in accordance with applicable local codes. Horizontal runs must be braced so that the stress loads (caused by bending or snaking) will not be placed on a fitting or a joint. Hanger support spacing information is shown in Table A.

Spears® recommends that hangers, designed for supporting CPVC, be used to support CPVC piping. However, some hangers, designed for steel pipe, may be used if their suitability is clearly established. These hangers must be selected to accommodate the specific pipe size. In addition, they cannot contain rough or sharp edges that contact the pipe, and they must not bind the pipe from axial movement that is caused by expansion and contraction.

Pipe Size (in.)	Maximum Hanger Support Spacing
3/8	3 ft
1/2	3 ft
3/4	3 ft
1	3 ft
1-1/4	4 ft
1-1/2	4 ft
2	4 ft

Thermal Expansion

All piping systems expand and contract with changes in temperature. This issue must be addressed with appropriate system design to prevent damage to the system. Spears® **EverTUFF**® CTS CPVC pipe will expand or contract approximately 3.8 inches per 100 feet of pipe with every 100°F of temperature rise or fall. The effects of expansion/contraction are usually absorbed by the system at changes of direction in the piping. In other words, long, straight runs of piping are more susceptible to experiencing measurable movement with changes in temperature. As with other piping materials, the installation of an expansion loop or offset is required on long, straight runs which will allow the piping system to absorb the forces generated by expansion/contraction without damage. The rate of expansion does not vary with pipe size. The effects of expansion/contraction are more pronounced on hot water lines. See Thermal Expansion & Contraction section under Engineering and Design Data for Industrial Piping in this manual for information on calculating movement and expansion loops.

System Testing

Once the system has been installed and allowed to cure properly the system shall be tested in accordance with applicable code requirements. When testing with water (hydrostatic testing), the system must be slowly filled with water and the air bled from the highest and furthest points in the system before test pressure is applied. Air must be removed from piping systems to prevent it from being locked in the system when pressure is applied. Failure to do so could be harmful to job site personnel should a failure occur. If a leak is found, the affected product must be cut out and discarded. A new section can be installed using couplings or other approved means.

PVC & CPVC Corrosion Resistant Duct

PVC & CPVC DUCT

Spears® PVC and CPVC seamless round extruded duct is available in 6" through 24" diameters with cold-rolled fabricated duct available in 26" through 48". Excellent for industrial and institutional corrosive fume exhaust.

Physical Properties

Spears® PVC and CPVC Duct Systems exhibit high tensile strength, various temperature ranges, low thermal conductivity, good electrical properties and excellent chemical/corrosion resistance to a variety of aggressive substances. Its physical properties allow it to perform great in aggressive environments that are not suitable for other types of materials, plus its lightweight provides construction advantages, ease of fabrication and at a lower cost.

PVC & CPVC Duct Physical Properties

	VALUE		TEST METHOD
GENERAL	**PVC Duct**	**CPVC Duct**	
Cell Classification	12454	23447	ASTM D 1784
Maximum Service Temp.	140°F	200°F	---
Color	Dark Gray	Medium Gray	---
Specific Gravity (g/cu.cm @ 73°F)	1.40 +/-0.02	1.53 +/-0.02	ASTM D 792
Water Absorption % increase 24 hrs @ 25°C	0.05	0.03	ASTM D 570
Hardness: Rockwell	110 - 120	117	ASTM D 785
Poisson's Ratio @ 73°F	0.410	0.386	---
Hazen-Williams Factor	C = 150	C = 150	---
MECHANICAL			
Tensile Strength, psi @ 73°F	7,450	7,600	ASTM D 638
Tensile Modulus of Elasticity, psi @ 73°F	420,000	370,000	ASTM D 638
Flexural Strength, psi @ 73°F	14,450	12,500	ASTM D 790
Flexural Modulus, psi @ 73°F	360,000	360,000	ASTM D 790
Compressive Strength, psi @ 73°F	9,600	10,000	ASTM D 695
Compressive Modulus, psi @ 73°F	---	196,000	ASTM D 695
Izod Impact, notched ft-lb/in @ 73°F	0.75	2.6	ASTM D 256
THERMAL			
Coefficient of Linear Expansion (in/in/°F)	2.9×10^{-5}	3.2×10^{-5}	ASTM D 696
Coefficient of Thermal Conductivity	3.5×10^{-4}	3.27×10^{-4}	ASTM C 177
BTU • inches/hour • $Ft.^2$	1.02	0.95	---
Watt/m/K	0.147	0.137	---
Heat Deflection Temperature Under Load (264psi - annealed)	170	228°	ASTM D 648
ELECTRICAL			
Dielectric Strength, volts/mil	1,413	1,250	ASTM D 149
Dielectric Constant, 60Hz @ 30°F	3.70	3.70	ASTM D 150
Volume Resistivity, ohm/cm @ 95°C	1.2×10^{12}	3.4×10^{15}	ASTM D 257
Power Factor	---	0.007%	ASTM D 150
PVC & CPVC Pipe is non-electrolytic			
FIRE PERFORMANCE			
Flammability Rating	V-0	V-0, 5VB, 5VA	UL-94
Flame Spread Index	<10	<10	ASTM E 162
Flame Spread	---	<25	ASTM E-84/UR 723
	0-25	<25	ULC S102.2
Smoke Generation	---	≤50	ASTM E-84/UR 723
	80-225	<50	ULC S102.2
Flash Ignition Temp.	730°F	900°F	---
Average Time of Burning (sec.)	<5	<5	ASTM D 635
Average Extent of Burning (mm)	<10	<10	ASTM D 635
Burning Rate (in/min)	Self Extinguishing	Self Extinguishing	---
Softening Starts (approx.)	250°F	295°F	---
Material Becomes Viscous	350°F	395°F	---
Material Carbonizes	425°F	450°F	---
Limiting Oxygen Index (LOI)	---	60	ASTM D 2863
Clean Room Materials	---	FPI= 1.20	---
Flammability Test	N/A	SDI= 0.09	FM 4910

PVC & CPVC Corrosion Resistant Duct

Materials

PVC

Spears® PVC duct is extruded seamless round or cold-rolled fabricated from dark-gray-colored Type I, Grade I PVC material having a Cell Classification of 12454 per ASTM D 1784 (PVC 1120), and has a maximum service temperature of 140°F. Spears® PVC duct is chemically resistant to most acids, bases, salts, aliphatic solutions, oxidants, and halogens. Unlike metallic materials, vapor phase or liquid-vapor phase corrosion is generally less aggressive with thermoplastics than the liquid phase corrosion. When in question, testing must be conducted under actual use conditions to verify compatibility. Detailed chemical resistance data should be referenced for proper material selection.

CPVC

Spears® CPVC Duct is extruded seamless round or cold-rolled fabricated from a light-gray-colored CPVC material with a Cell Classification of 23437 per ASTM D 1784 and has a maximum service temperature of 200°F for hot fumes. In addition, CPVC duct also has excellent fire performance properties. It has been subjected to large-scale testing having a flame spread rating of <25, and a smoke development rating of <50 making it ideal for use in critical areas (such as air plenums) where fire performance issues are of a concern. Spears® CPVC Duct is chemically resistant to most acids, bases, salts, aliphatic solutions, oxidants, and halogens. Although the chemical resistance of PVC and CPVC are similar they are not the same. Detailed chemical resistance data should be referenced for proper material selection.

Flammability

Spears® duct has excellent flammability properties and will not independently support combustion - it will not burn unless a flame is constantly applied and will stop burning once the flame is removed. Spears® CPVC duct has improved fire performance properties over PVC with low flame-spread and smoke-generation properties. Refer to the Fire Performance section of the PVC & CPVC Duct Physical Properties table.

Dimensions

Spears® seamless round duct is extruded in Iron Pipe Size (IPS) dimensions with large internal flow areas that can easily be adapted to other common IPS fittings, reducing fabrication and installation time.

PVC Extruded Round Duct Dimensions

Size (in.)	AVG. O.D.	AVG. O.D.TOL.	O of R TOL.	MIN. Wall	AVG. Wall	MAX. Wall	WT(lbs.) Per Ft.
6 x 1/8	6.625	+/- .020	+/- .050	0.105	0.122	0.140	1.530
6	6.625	+/- .020	+/- .050	0.172	0.187	0.202	2.275
7	7.375	+/- .020	+/- .050	0.172	0.187	0.202	2.534
8	8.625	+/- .020	+/- .075	0.172	0.187	0.202	2.982
9	9.375	+/- .025	+/- .075	0.172	0.187	0.202	3.239
10	10.750	+/- .025	+/- .075	0.172	0.187	0.202	3.733
11	11.375	+/- .025	+/- .075	0.172	0.187	0.202	3.944
12	12.750	+/- .025	+/- .075	0.172	0.187	0.202	4.440
14	14.000	+/- .030	+/- .075	0.172	0.187	0.202	4.884
16	16.000	+/- .030	+/- .075	0.172	0.187	0.202	5.586
18	18.000	+/- .040	+/- .080	0.172	0.187	0.202	6.750
20	20.000	+/- .070	+/- .140	0.199	0.219	0.239	8.144
24	24.000	+/- .090	+/- .180	0.230	0.250	0.270	11.163

O of R = Out of Roundness Factor at time of extrusion *I.D. Sizes

CPVC Extruded Round Duct Dimensions

Size (in.)	AVG. O.D.	AVG. O.D.TOL.	O of R TOL.	MIN. Wall	AVG. Wall	MAX. Wall	WT(lbs.) Per Ft.
6	6.625	+/- .020	+/- .050	0.172	0.187	0.202	2.555
8	8.625	+/- .020	+/- .075	0.172	0.187	0.202	3.349
10	10.750	+/- .025	+/- .075	0.172	0.187	0.202	4.192
12	12.750	+/- .025	+/- .075	0.172	0.187	0.202	4.986
14	14.000	+/- .030	+/- .075	0.172	0.187	0.202	5.485
16	16.000	+/- .030	+/- .075	0.172	0.187	0.202	6.273
18	18.000	+/- .040	+/- .080	0.172	0.187	0.202	7.580
20	20.000	+/- .070	+/- .140	0.199	0.219	0.239	9.146
24	24.000	+/- .090	+/- .180	0.230	0.250	0.270	12.536

O of R = Out of Roundness Factor at time of extrusion

Large Diameter Duct

Spears® fabricated round duct (26" & larger diameter) is cold rolled from extruded PVC or CPVC sheet material. The seam is thermal fused utilizing computerized welding. The sheet edges are heated and pressed together pneumatically achieving 100% weld strength using no filler rod. Wall thickness is 3/16" for sizes up to 32" diameter. Above 32" diameter, 1/4" material will be used, unless otherwise specified. Cold rolled duct is produced in 4' lengths. Large duct fittings can be fabricated to order. Contact Spears® with requirements for additional information.

System Components

Fittings fabricated from Spears® duct are available in most configurations. All duct fittings, fume hoods, fume scrubbers, fans, blast gates and other system components should be fabricated from PVC/CPVC sheet or duct of the same wall thickness and from materials that conform to ASTM D 1784.

Storage and Handling

Although Spears® duct is tough and corrosion resistant, it should not be dropped nor have objects dropped on it. Reasonable care and common sense should be used, including during transport and storage to prevent distortion. Duct should not be stored close to heat-producing sources, subjected to external loads (i.e., heavy objects, over strapping, etc.) or over stacked when stored. When stored outdoors, Spears® duct must be covered with an opaque material to reduce the risk of heat absorption and discoloration. Prior to use, inspect duct for scratches, splits or gouges. If found, these sections must be cut out and discarded.

Product Ratings and Capability

Spears® PVC and CPVC duct is excellent for harsh environments and has been used at various negative and positive pressure conditions in diverse laboratory and industrial applications Product ratings will vary according to size and temperature. The ratings in the following tables are based on a 1.5:1 safety factor.

Positive Pressure

PVC and CPVC duct can endure greater levels of positive internal pressure than negative internal pressure. The following tables show the maximum recommended internal positive pressure rating in PSI for PVC and CPVC duct at various temperatures.

Negative Pressure Ratings

PVC MAX. Internal Negative Pressure Rating

Inches of Water @ Various Temperatures °F

Size (in.)	TEMPERATURE °F							
	73	80	90	100	110	120	130	140
6 x 1/8	115	101	86	71	59	46	36	25
6	415	365	311	257	212	166	129	91
7	301	265	226	187	153	120	93	66
8	188	166	141	117	96	75	58	41
9	146	129	110	91	75	59	45	32
10	97	85	73	6	50	39	30	21
11	82	72	61	51	42	33	25	18
12	58	51	44	36	30	23	18	13
14	44	39	33	27	22	18	14	10
16	29	26	22	18	15	12	9	6
18	21	18	16	13	11	8	6	4
20	24	21	18	15	12	10	7	5
24	21	18	16	13	11	8	6	4

PSI = Inches of Water x .0361; Inches of Mercury = Inches of Water x .07355 MAX. Internal Positive Pressure Rating

CPVC MAX. Internal Negative Pressure Rating

Inches of Water @ Various Temperatures °F

Size (in.)	TEMPERATURE °F						
	73	100	120 140 160			180	200
6	426	371	316	263	208	153	98
8	193	168	143	118	93	70	45
10	100	86	73	60	48	35	23
12	60	51	43	36	28	20	13
14	45	38	33	26	21	15	10
16	30	26	21	18	13	10	6
18	26	23	20	16	13	10	6
20	28	25	21	16	13	10	6
24	20	18	15	13	10	6	3

PSI = Inches of Water x .0361; Inches of Mercury = Inches of Water x .07355

Positive Pressure Ratings

PVC MAX. Internal Positive Pressure Rating

PSI @ Various Temperatures °F

Size (in.)	TEMPERATURE °F							
	73	80	90	100	110	120	130	140
6 x 1/8	42	37	31	26	21	17	13	9
6	70	62	52	43	35	28	22	15
7	64	56	48	40	32	25	20	14
8	53	47	40	33	27	21	16	12
9	74	65	55	46	38	29	23	16
10	43	39	32	27	22	17	13	9
11	61	53	46	38	31	24	19	13
12	36	32	27	22	18	14	11	8
14	33	29	25	20	17	13	10	7
16	28	25	21	17	14	11	9	6
18	25	22	19	15	13	10	8	5
20	26	23	20	16	13	10	8	6
24	25	22	19	15	13	10	8	5

CPVC MAX. Internal Positive Pressure Rating

PSI @ Various Temperatures °F

Size (in.)	TEMPERATURE °F						
	73	100	120	140	160	180	200
6	70	56	45	35	26	16	13
8	53	43	33	26	20	13	10
10	43	35	28	21	16	10	8
12	36	30	23	18	15	8	6
14	33	26	21	16	13	8	6
16	28	23	18	13	11	6	5
18	25	20	15	11	10	5	5
20	26	21	16	13	10	6	5
24	25	20	15	11	10	5	5

NOTE: Maximum values stated are for extruded duct pipe only, and incorporate a 1.5:1 safety factor. Consideration should be given to system design, method of fabrication, and joining which may require additional system de-rating. Spears® PVC/CPVC Duct piping are not designed for distribution of compressed air or gases.

Duct System Installation

Joining Techniques

Spears® duct can be easily assembled in the field using standard thermoplastic pipe-joining techniques. The most common methods are solvent-cementing or thermal hot air welding, fusion welding and butt-welding can also be used. Retaining duct and fittings with suitable drilled holes and sheet metal screws may also be used, depending on application requirements.

Solvent Cementing

Typical duct fittings are fabricated from duct and with belled-end sockets that can be joined using solvent-cementing. This is the same basic process used for over 50 years in pressure pipe installation using the application of a primer and solvent cement to join system components. Properly made solvent cement joints are chemically fused together providing a leak-tight seal when cured. A minimum socket depth of 3" (all sizes) is necessary to provide sufficient surface-to-surface contact of the parts being joined. The use of extra-heavy-bodied solvent is recommended to handle the gap-filling required due to larger dimensional tolerances in duct piping. Use extra care when solvent cementing duct diameters 18" and larger to ensure tight fit of mating components. Do not use solvent cement for any type of end-to-end joining. See Installation section for industrial pressure pipe for guidelines on solvent cement welding.

Thermal Welding

Thermal welding requires the use of a hot-air welder and PVC or CPVC welding rod. Clean hot air from the welder preheats the duct material and welding rod while pressure is applied to the weld area as the rod is guided. This results in the surfaces of the parts being thermally fused together at the weld seam. Only welding rod produced from the same material being joined (same Cell Classification) should be used. Due to the significantly different thermal properties of the plastics, hot-air welding of CPVC is generally more difficult than PVC. Only personnel specifically trained in hot-air welding of PVC or CPVC should conduct all welding.

Hangers and Supports

As with all piping systems, proper support spacing is critical to minimize deflection and sagging. Additional support consideration must be given to concentrated loads, additional weight of accumulated solids, and independent support at fans, flexible connections, hoods, scrubbers, tanks, and other system components for potential stresses on the system.

Drains must be installed where accumulation of moisture is expected and at low points in the system (these locations should be specified on system specification drawings). Proper system inspection, cleaning and maintenance should be enforced to prevent the formation of additional weight loads. Refer to the following tables for maximum support spacing of horizontal air-filled duct with an allowable 1/8" deflection at various temperatures.

Hangers and supports shall be securely fastened to the building structure to avoid vibration, and should be installed in such a manner as to prevent conditions of stress on the system (properly aligned). Seismic design and construction practices for hangers and supports shall be followed where applicable.

Hangers selected must have an adequate load-bearing surface free of rough or sharp edges to prevent damage to the duct during use. Use corrosive-resistant material for hangers and hanger hardware that is suitable for the system environment. Hangers must not restrict linear movement due to expansion and contraction. Avoid over tightening to prevent duct deformation and restriction of movement. Refer to the following illustration for examples of typical hangers.

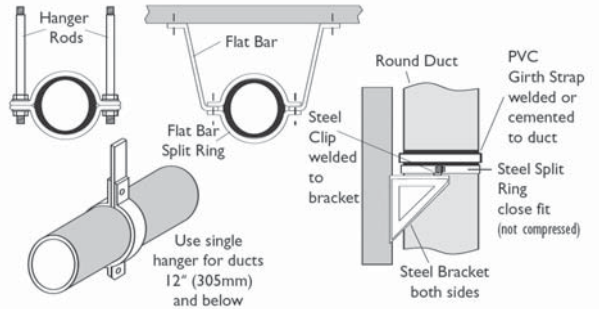
Hanger Support Spacing

PVC Duct Maximum Hanger Support Spacing In Feet

Size (in.)	TEMPERATURE °F							
	73	80	90	100	110	120	130	140
6 x 1/8	9.5	9	9	8.5	8	7.5	7	6.5
6	10	10	9.5	9	8.5	8	7.5	6.5
7	10	10	9.5	9	8.5	8	7.5	7
8	10	10	10	10	9	9	8	7.5
9	10	10	10	10	10	9	8.5	8
10	10	10	10	10	10	10	9	8.5
11	10	10	10	10	10	10	9.5	9
12	12	12	12	12	10	10	10	9.5
14	12	12	12	12	11.5	11.5	11	10
16	12	12	12	12	12	12	11	10
18	12	12	12	12	12	12	11.5	11
20	12	12	12	12	12	12	12	11.5
24	12	12	12	12	12	12	12	12

CPVC Duct Maximum Hanger Support Spacing In Feet

Size (in.)	TEMPERATURE °F						
	73	100	120	140	160	180	200
6	10	10	10	10	10	8	8
8	10	10	10	10	10	8	8
10	10	10	10	10	10	10	10
12	10	10	10	10	10	10	10
14	12	12	12	12	10	10	10
16	12	12	12	12	12	10	10
18	12	12	12	12	12	12	12
20	12	12	12	12	12	12	12
24	12	12	12	12	12	12	12



Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Thermal Expansion and Contraction

The coefficient of linear expansion (y) for Spears® duct can be found in the physical properties table (PVC = 2.9 x 10^{-5} in/in/°F; CPVC = 3.2 x 10^{-5} in/in/°F). As with all piping products, thermal expansion and contraction of the system must be considered and properly addressed during the design and installation of the system. The expansion or contraction rate of Spears® duct can be calculated as follows:

Thermal Expansion and Contraction for PVC Duct

$\Delta L = 12\ yL\ (\Delta T)$

Where:

ΔL = expansion or contraction of duct in inches

y = 2.9 x 10^{-5} in/in/°F (PVC duct material Coefficient of thermal expansion)

L = Length of duct run in feet

ΔT = Temperature change °F (T max. - T in.)

T max. = Maximum change in operating temperature (F)

T in. = temperature at time of installation (F)

Thermal Expansion and Contraction for CPVC Duct

$\Delta L = 12\ yL\ (\Delta T)$

Where:

ΔL = expansion or contraction of duct in inches

y = 3.2 x 10^{-5} in/in/°F (CPVC duct material Coefficient of thermal expansion)

L = Length of duct run in feet

ΔT = Temperature change °F (T max. - T in.)

T max. = Maximum change in operating temperature (F)

T in. = temperature at time of installation (F)

In-line expansion joints, either flexible sleeve type or O-ring piston type are the most common means of accommodating thermal expansion and contraction in duct systems. Using expansion loops and offsets where required can also be used, but require significantly more space.

Other Design Considerations

The duct system must not be exposed to conditions that will exceed product limitations regarding temperature, pressure, chemical compatibility and mechanical strength. Care must be taken to ensure that fume hood design, capture velocities, flow velocities, and flow volumes are adequate to properly convey the corrosive fumes being extracted while maintaining safety to personnel and protection of other equipment from corrosive attack. An optimum velocity for most systems is 1,500 feet per minute (FPM), which allows for future expansion of the system by increasing the fan size. With the exception of some heavy metals extraction, velocities exceeding 3,000 FPM are generally not recommended. This is especially true in system carrying solid particles where excessive static electricity can be generated. Minimum exhaust volume requirements in cubic feet per minute (CFM), must be calculated according to type and concentration of fumes being transported. Sufficient access for inspection and equipment maintenance must be provided. Size transition sections in mains and sub mains should be appropriately tapered for optimum flow conditions. A minimum taper of 5" in length for each 1" change in duct diameter is recommended. Branches should enter the main at the large end at angles no greater than 45° and not directly opposite each other. The designing engineer is responsible for ensuring that the system is in compliance with any applicable pollution control and building codes.

Chemical Resistance Data For Pressure Piping

Chemical Resistance

This section is to provide information on the transport of various chemicals using PVC and CPVC thermoplastic piping materials. This information is compiled from commercially available industry sources. These recommendations are guidelines for use and the final decision regarding material suitability must rest with the end-user.

Please note that Spears® CPVC piping products can be classified into two basic applications, pressure systems and corrosive waste drainage systems. The chemical resistance tables in this section are for Pressure Piping. See chemical resistance tables in **LabWaste™** CPVC Corrosive Waste Drainage Systems section of this catalog for chemical resistance of drainage systems. **IMPORTANT:** Corrosive waste drainage system data should not be used for pressure system or dedicated service applications.

PVC and CPVC thermoplastic piping products are resistant to corrosion typically encountered with metal systems and the effects of galvanic and electrochemical corrosion are non-existent since both of these materials are non-conductors.

Types of Chemical Attack on Plastics

In general, chemicals that affect plastics do so in one of two ways. One effect is chemical solvation or permeation; the other is direct chemical attack. In the case of solvation or permeation, physical properties may be affected, but the polymer molecule structure itself is not chemically changed, degraded or destroyed. In solvation or permeation, gas, vapor or liquid molecules pass through the polymer, typically without damaging the plastic material itself. If the chemical can be removed completely, the plastic is generally restored to its original condition. Direct chemical attack occurs when exposure to a chemical causes a chemical alteration of the polymer molecules. Direct chemical attack may cause profound, irreversible changes that cannot be restored by removal of the chemical.

Other Consideration

While the effect of each individual chemical is specific, some chemicals can be grouped into general categories based on similarities in chemical characteristics. PVC and CPVC are inert to most mineral acids, bases, salts and paraffinic hydrocarbons, and compares favorably to other non-metals in these chemical environments.

Generally, the resistance of a particular plastic to a specific chemical decreases with an increase in concentration. Also, the resistance of a particular plastic to a specific chemical generally decreases as temperature increases, generally decreases with increasing applied stress, and generally decreases where temperature or applied stress are varied or cycled. These effects can be greater overall in combination.

In some cases, combinations of chemicals may have a synergistic effect on a thermoplastic material where the individual chemicals do not. It cannot be assumed that an individual chemical's lack of effect would apply for combinations that include several chemicals. When the possible combined effect of several chemicals is unknown, the material should be tested in the complete chemical mixture(s) in question.

Caution Areas

- Chlorinated and aromatic hydrocarbons, esters, or ketones are not recommended for use with PVC or CPVC thermoplastic piping materials. Although the chemical resistance of PVC and CPVC compounds is similar, they are not always the same.
- Chemical compatibility of a piping system must also take into consideration the compatibility of all system components. This includes elastomers (gaskets, O-rings, etc), valves and valve components, as well as thread pastes, lubricants, cleaning and wetting agents (surfactants).
- Applications involving certain oils, surfactants, and greases may result in environmental stress cracking. Environmental stress cracking occurs when system components are subjected to an incompatible chemical in the presence of stress.
- Certain substances called out on the following pages reference chemicals in a gaseous state. These substances are not recommended for pressure service. They are shown to provide the chemical resistance of PVC and CPVC when coming into contact with these substances. (i.e. exposure to or immersion in these substances).
- PVC Clear piping has the same basic chemical resistance as regular PVC. However certain nitrogen-containing organics, bleaches, oxidizing agents and acids will result in discoloration. Testing under actual use conditions is recommended.
- The following chemical resistance data is based primarily on plastic material test specimens that have been immersed in the chemical, and to a lesser degree, on field-experience. In most cases, detailed information on the test conditions (such as exposure time), and on test results (such as change in weight, change in volume, and change in strength) is not available.

While some chemicals may be acceptable with certain temperature limitations, the use of PVC and CPVC piping with liquid hydrocarbons such as gasoline and jet fuels should be limited to short-term exposure such as secondary containment systems. This piping is not recommended for long-term exposure to liquid hydrocarbons.

PVC and CPVC have also been used successfully in contaminated water recovery systems where very low levels (PPM/PPB range) of certain incompatible substances are present. However, since most remediation projects involve low pressure/vacuum type applications for a limited period of time, the use of PVC and CPVC can be used in these types of applications.

DISCLAIMER OF LIABILITY

There are many variables beyond our control in the application of thermoplastic piping in chemical service. All statements made herein are offered in good faith and believed to be accurate at the time of its preparation, but are offered without any warranty, expressed or implied, by information sources or Spears® Manufacturing Company. Compliance with all applicable federal, state and local laws and regulations remains the responsibility of the user.

Chemical Resistance Data For Pressure Piping

R = Recommended NR = Not Recommended
C = Caution, actual testing suggested; suspect @ certain stress levels ? = Incomplete Data; actual testing required

CHEMICAL REAGENT	PVC Type 1 1120 (12454)		PVC Clear 2110 (12454)		CPVC Type IV, Grade 1 4120 (23447)		
	73°F	140°F	73°F	140°F	73°F	140°F	180°F
Acetaldehyde	NR	NR	NR	NR	NR	NR	NR
Acetamide	NR	NR	NR	NR	NR	NR	NR
Acetic Acid, 10%	R	R	R	R	R	R	R
Acetic Acid, 20%	R	R	R	NR	NR	NR	NR
Acetic Acid, Glacial	R	NR	NR	NR	NR	NR	NR
Acetic Acid, pure	NR	NR	NR	NR	NR	NR	NR
Acetic Anhydride	NR	NR	NR	NR	NR	NR	NR
Acetone, < 5%	?	?	NR	NR	R	R	R
Acetone, > 5%	NR	NR	NR	NR	NR	NR	NR
Acetyl Nitrile	NR	NR	NR	NR	NR	NR	NR
Acetylene	R	R	R	R	C	C	C
Acrylic Acid	NR	NR	NR	NR	NR	NR	NR
Adipic Acid; sat. in water	R	R	R	R	R	R	R
Allyl Alcohol, 96%	R	NR	NR	NR	C	C	C
Allyl Chloride	NR	NR	NR	NR	NR	NR	NR
Alum, all varieties	R	R	R	R	R	R	R
Aluminum Acetate	R	R	R	R	R	R	R
Aluminum Alum	R	R	R	R	R	R	R
Aluminum Chloride	R	R	R	R	R	R	R
Aluminum Fluoride	R	R	R	R	R	R	R
Aluminum HydroxideR		R	R	R	R	R	R
Aluminum Nitrate	R	R	R	R	R	R	R
Aluminum Oxylchloride	R	R	R	R	?	?	?
Aluminum Sulfate	R	R	R	R	R	R	R
Amines	NR	NR	NR	NR	NR	NR	NR
Ammonia (gas;dry)	R	R	R	R	NR	NR	NR
Ammonia (liquid)	NR	NR	NR	NR	NR	NR	NR
Ammonium Acetate	R	R	R	R	R	R	R
Ammonium Alum	R	R	R	R	R	R	R
Ammonium Bisulfate	R	R	?	?	R	R	R
Ammonium Carbonate	R	R	R	R	R	R	R
Ammonium Chloride	R	R	R	R	R	R	R
Ammonium Dichromate	R	?	?	?	R	R	R
Ammonium Fluoride, < 25%	R	NR	NR	NR	R	R	R
Ammonium Fluoride, > 25%	?	NR	NR	NR	R	R	R
Ammonium Hydroxide	R	R	R	R	NR	NR	NR
Ammonium Metaphosphate	R	R	R	R	R	R	R
Ammonium Nitrate	R	R	R	R	R	R	R
Ammonium Persulfate	R	R	R	R	R	?	?
Ammonium Phosphate	R	R	R	R	R	R	C
Ammonium Sulfate	R	R	R	R	R	R	R
Ammonium Sulfide	R	R	R	R	R	R	R
Ammonium Tartrate	R	R	R	R	R	R	R
Ammonium Thiocyanate	R	R	R	R	R	R	R
Amyl Acetate	NR	NR	NR	NR	NR	NR	NR
Amyl Alcohol	R	NR	NR	NR	C	C	NR
Amyl Chloride	NR	NR	NR	NR	NR	NR	NR
Aniline	NR	NR	NR	NR	NR	NR	NR

CHEMICAL REAGENT	PVC Type 1 1120 (12454)		PVC Clear 2110 (12454)		CPVC Type IV, Grade 1 4120 (23447)		
	73°F	140°F	73°F	140°F	73°F	140°F	180°F
Aniline Chlorohydrate	NR	NR	NR	NR	NR	NR	NR
Aniline Hydrochloride	NR	NR	NR	NR	NR	NR	NR
Anthraquinone	?	?	?	?	?	?	?
Anthraquinone Sulfonic Acid	R	R	R	R	?	?	?
Antimony Trichloride	R	R	R	R	R	R	R
Aqua Regia	NR	NR	NR	NR	R	NR	NR
Aromatic Hydrocarbons	NR	NR	NR	NR	NR	NR	NR
Arsenic Acid 80%	R	R	R	R	R	R	R
Arsenic Trioxide (powder)	R	?	?	?	R	NR	NR
Arylsulfonic Acid	R	R	R	NR	?	?	?
Barium Carbonate	R	R	R	R	R	R	R
Barium Chloride	R	R	R	R	R	R	R
Barium Hydroxide 10%	R	R	R	R	R	R	R
Barium Nitrate	R	?	?	?	R	R	R
Barium Sulfate	R	R	R	R	R	R	R
Barium Sulfide	R	R	R	R	R	R	R
Beer	R	R	R	R	R	R	R
Beet Sugar Liquors	R	R	R	R	R	R	R
Benzaldehyde; 10%	R	NR	NR	NR	NR	NR	NR
Benzaldehyde; > 10%	NR	NR	NR	NR	NR	NR	NR
Benzalkonium Chloride	R	?	?	?	NR	NR	NR
Benzene	NR	NR	NR	NR	NR	NR	NR
Benzoic Acid	R	R	R	R	R	C	NR
Benzyl Alcohol	NR	NR	NR	NR	NR	NR	NR
Benzyl Chloride	NR	NR	NR	NR	NR	NR	NR
Bismuth Carbonate	R	R	R	R	R	R	R
Black Liquor	R	R	R	R	R	R	R
Bleach (15% CL)	R	R	R	R	R	R	R
Borax	R	R	R	R	R	R	R
Boric Acid	R	R	R	R	R	R	R
Brine (acid)	R	?	?	?	R	R	R
Bromic Acid	R	R	R	R	R	R	R
Bromine Liquid	NR	NR	NR	NR	NR	NR	NR
Bromine Vapor 25%	R	R	R	R	NR	NR	NR
Bromine Water	R	R	NR	NR	?	?	?
Bromobenzene	NR	NR	NR	NR	NR	NR	NR
Bromotoluene	NR	NR	NR	NR	NR	NR	NR
Butadiene	R	R	NR	NR	C	C	C
Butane	R	R	NR	NR	C	C	C
Butanol: primary	R	R	NR	NR	C	C	C
Butanol: secondary	R	NR	NR	NR	C	C	C
Butyl Acetate	R	NR	NR	NR	NR	NR	NR
Butyl Carbitol	?	?	?	?	NR	NR	NR
Butyl Mercaptan	NR	NR	NR	NR	NR	NR	NR
Butyl Phenol	R	NR	R	NR	NR	NR	NR
Butyl Stearate	R	?	?	?	NR	NR	NR
ButylCellosolve	R	?	?	?	NR	NR	NR
Butyne Diol	R	?	?	?	?	?	?

Chemical Resistance Data For Pressure Piping

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CHEMICAL REAGENT	PVC Type 1 1120 (12454)		PVC Clear 2110 (12454)		CPVC Type IV, Grade 1 4120 (23447)		
	73°F	140°F	73°F	140°F	73°F	140°F	180°F
Butyric Acid < 1%	R	NR	NR	NR	R	R	R
Butyric Acid > 1%	R	NR	NR	NR	NR	NR	NR
Cadmium Acetate	R	R	?	?	R	R	R
Cadmium Chloride	R	R	?	?	R	R	R
Cadmium Cyanide	R	R	R	R	R	R	R
Cadmium Sulfate	?	?	?	?	R	R	R
Caffeine Citrate	R	?	?	?	R	R	R
Calcium Acetate	R	R	R	R	R	R	R
Calcium Bisulfide	R	R	R	R	R	R	R
Calcium Bisulfite	R	R	R	R	R	R	R
Calcium Bisulfite Bleach Liquor	R	?	?	?	R	R	R
Calcium Carbonate	R	R	R	R	R	R	R
Calcium Chlorate	R	R	?	?	R	R	R
Calcium Chloride	R	R	R	R	R	R	R
Calcium Hydroxide	R	R	R	R	R	R	R
Calcium Hypochlorite	R	R	R	R	R	R	R
Calcium Nitrate	R	R	R	R	R	R	R
Calcium Oxide	R	R	?	?	R	R	R
Calcium Sulfate	R	R	R	R	R	R	R
Camphor (crystals)	R	?	?	?	NR	NR	NR
Cane Sugar Liquors	R	R	R	R	R	R	R
Caprolactam	?	?	?	?	NR	NR	NR
Caprolactone	?	?	?	?	NR	NR	NR
Carbitol	R	?	?	?	NR	NR	NR
Carbon Dioxide	R	R	R	R	R	R	R
Carbon Dioxide (aqueous solution)	R	R	?	?	R	R	R
Carbon Disulfide	NR	NR	NR	NR	NR	NR	NR
Carbon Monoxide	R	R	R	R	R	R	R
Carbon Tetrachloride	R	NR	NR	NR	NR	NR	NR
Carbonic Acid	R	R	R	R	R	R	R
Carene 500	R	?	NR	NR	?	?	?
Castor oil	R	R	R	R	C	C	C
Caustic Potash	R	R	R	R	R	R	R
Caustic Soda	R	R	R	R	R	R	R
Cellosolve	R	NR	R	NR	NR	NR	NR
Cellosolve Acetate	R	?	R	?	NR	NR	NR
Chloral Hydrate	R	R	R	R	NR	NR	NR
Chloramine	R	?	?	?	R	R	R
Chloric Acid up to 20%	R	R	R	R	R	R	R
Chloride Water	R	R	R	R	R	R	R
Chlorinated Solvents	NR	NR	NR	NR	NR	NR	NR
Chlorinated Water (Hypochlorite)	R	R	R	R	R	R	R
Chlorine (dry liquid)	NR	NR	NR	NR	NR	NR	NR
Chlorine (liquid under pressure)	NR	NR	NR	NR	NR	NR	NR
Chlorine Dioxide aqueous (sat'd 0.1%)	?	?	?	?	R	?	?

CHEMICAL REAGENT	PVC Type 1 1120 (12454)		PVC Clear 2110 (12454)		CPVC Type IV, Grade 1 4120 (23447)		
	73°F	140°F	73°F	140°F	73°F	140°F	180°F
Chlorine Gas (dry)	NR	NR	NR	NR	NR	NR	NR
Chlorine Gas (wet)	NR	NR	NR	NR	NR	NR	NR
Chlorine Water (sat'd 0.3%)	R	R	R	R	R	R	R
Chlorine(trace in air)	R	?	R	?	R	R	R
Chloroacetic Acid	R	R	R	NR	NR	NR	NR
Chloroacety Chloride	R	?	R	?	NR	NR	NR
Chlorobenzene	NR	NR	NR	NR	NR	NR	NR
Chloroform	NR	NR	NR	NR	NR	NR	NR
Chloropicrin	NR	NR	NR	NR	NR	NR	NR
Chlorosulfonic Acid	R	NR	R	NR	NR	NR	NR
Chlorox Bleach Solution	R	?	?	?	C	C	C
Chrome Alum	R	R	R	R	R	R	R
Chromic Acid 10%	R	R	R	R	R	R	R
Chromic Acid 40%	?	?	?	?	R	R	R
Chromic Acid 50%	NR	NR	NR	NR	?	?	?
Chromic Acid/Sulfuric Acid/ water-50%/15%/35%	R	NR	?	?	?	?	?
Chromic/Nitric Acid (15%/35%)	R	R	?	?	R	C	NR
ChromiumNitrate	R	?	?	?	R	R	R
Citric Acid	R	R	R	R	R	R	R
Citrus Oils	?	?	?	?	NR	NR	NR
Coconut Oil	R	R	?	?	NR	NR	NR
Copper Acetate	R	R	R	R	R	R	R
Copper Carbonate	R	R	R	R	R	R	R
Copper Chloride	R	R	R	R	R	R	R
Copper Cyanide	R	R	R	R	R	R	R
Copper Fluoride	R	R	R	R	R	R	R
Copper Nitrate	R	R	R	R	R	R	R
Copper Sulfate	R	R	R	R	R	R	R
Corn Oil	R	?	R	?	NR	NR	NR
Corn Syrup	R	R	R	R	R	R	R
Cottonseed Oil	R	R	R	R	NR	NR	NR
Creosote	NR	NR	NR	NR	NR	NR	NR
Cresylic Acid,50%	R	R	R	NR	NR	NR	NR
Crotonaldehyde	NR	NR	NR	NR	NR	NR	NR
Crude Oil	R	R	R	NR	NR	NR	NR
Cumene	?	?	?	?	NR	NR	NR
Cupric Fluoride	R	R	R	R	R	R	R
Cupric Sulfate	R	R	R	R	R	R	R
Cuprous Chloride	R	R	R	R	R	R	R
Cyclanones	R	R	?	?	?	?	?
Cyclohexane	NR	NR	NR	NR	NR	NR	NR
Cyclohexanol	NR	NR	NR	NR	NR	NR	NR
Cyclohexanone	NR	NR	NR	NR	NR	NR	NR
D.D.T. (Xylene Base)	NR	NR	NR	NR	NR	NR	NR
Desocyephedrine Hydrochloride	R	?	R	?	?	?	?
Detergents	R	R	R	R	C	C	C
Dextrin	R	R	R	R	R	R	R

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Chemical Resistance Data For Pressure Piping

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CHEMICAL REAGENT	PVC Type 1 1120 (12454)		PVC Clear 2110 (12454)		CPVC Type IV - Grade 1 4120 (23447)		
	73°F	140°F	73°F	140°F	73°F	140°F	180°F
Dextrose	R	R	R	R	R	R	R
Diacetone Alcohol	R	?	?	?	C	?	?
Diazo Salts	R	R	R	R	?	?	?
Dibutoxy Ethyl Phthalate	NR	NR	NR	NR	NR	NR	NR
Dibutyl Phthalate	NR	NR	NR	NR	NR	NR	NR
Dibutyl Sebacate	R	NR	?	?	NR	NR	NR
Dichlorobenzene	NR	NR	NR	NR	NR	NR	NR
Dichloroethylene	NR	NR	NR	NR	NR	NR	NR
Diesel Fuels	R	R	R	R	NR	NR	NR
Diethyl Ether	R	?	R	?	NR	NR	NR
Diethylamine	NR	NR	NR	NR	NR	NR	NR
Diglycolic Acid	R	R	R	R	NR	NR	NR
Dill Oil	?	?	?	?	NR	NR	NR
Dimethyl Hydrazine	NR	NR	NR	NR	NR	NR	NR
Dimethylamine	R	R	NR	NR	NR	NR	NR
Dimethylformamide	NR	NR	NR	NR	NR	NR	NR
Dioctylphthalate	NR	NR	NR	NR	NR	NR	NR
Dioxane (1, 4)	NR	NR	NR	NR	NR	NR	NR
Disodium Phosphate	R	R	R	R	R	R	R
Distilled Water	R	R	R	R	R	R	R
EDTA Tetrasodium	?	?	?	?	R	R	R
Ethyl Ester (ethyl acrylate)	NR	NR	NR	NR	NR	NR	NR
Epsom Salt	R	?	R	?	R	R	R
Esters	NR	NR	NR	NR	NR	NR	NR
Ethanol > 5%	R	R	R	NR	C	C	C
Ethanol up to 5%	R	R	R	NR	R	R	R
Ethers	NR	NR	NR	NR	NR	NR	NR
Ethyl Acetate	NR	NR	NR	NR	NR	NR	NR
Ethyl Acrylate	NR	NR	NR	NR	NR	NR	NR
Ethyl Alcohol	R	R	R	NR	C	C	C
Ethyl Chloride	NR	NR	NR	NR	NR	NR	NR
Ethyl Chloroacetate	NR	NR	NR	NR	NR	NR	NR
Ethyl Ether	NR	NR	NR	NR	NR	NR	NR
Ethylene Bromide	NR	NR	NR	NR	NR	NR	NR
Ethylene Chlorohydrin	NR	NR	NR	NR	NR	NR	NR
Ethylene Diamine	NR	NR	NR	NR	NR	NR	NR
Ethylene Dichloride	NR	NR	NR	NR	NR	NR	NR
Ethylene Glycol	R	R	R	R	C	C	C
Ethylene Oxide	NR	NR	NR	NR	NR	NR	NR
Fatty Acids	R	R	R	R	C	C	C
Ferric Acetate	R	NR	?	?	R	R	R
Ferric Chloride	R	R	R	R	R	R	R
Ferric Hydroxide	R	R	R	R	R	R	R
Ferric Nitrate	R	R	R	R	R	R	R
Ferric Sulfate	R	R	R	R	R	R	R
Ferrous Chloride	R	R	R	R	R	R	R
Ferrous Hydroxide	R	?	R	?	R	R	R
Ferrous Nitrate	R	?	R	?	R	R	R

CHEMICAL REAGENT	PVC Type 1 1120 (12454)		PVC Clear 2110 (12454)		CPVC Type IV Grade 1 4120 (23447)		
	73°F	140°F	73°F	140°F	73°F	140°F	180°F
Ferrous Sulfate	R	R	R	R	R	R	R
Fish Solubles	R	R	R	R	?	?	?
Fluorine Gas	R	NR	NR	NR	NR	NR	NR
Fluorine Gas (wet)	R	NR	R	NR	NR	NR	NR
Fluoroboric Acid	R	R	R	R	?	?	?
Fluorosilisic Acid 25%	R	R	R	R	R	C	C
Formaldehyde	R	R	NR	NR	NR	NR	NR
Formic Acid < 25%	R	NR	R	NR	R	R	R
Formic Acid > 25%	?	?	?	?	C	?	NR
Freon 11	R	R	NR	NR	NR	NR	NR
Freon 113	R	?	R	?	NR	NR	NR
Freon 114	R	?	R	?	NR	NR	NR
Freon 12	R	R	R	R	NR	NR	NR
Freon 21	NR	NR	NR	NR	NR	NR	NR
Freon 22	NR	NR	NR	NR	NR	NR	NR
Fructcose	R	R	R	R	R	R	R
Fruit juices & pulp	R	R	R	R	R	R	R
Furfural	NR	NR	NR	NR	NR	NR	NR
Gallic Acid	R	R	R	R	?	?	?
Gas (Coke Oven)	NR	NR	NR	NR	?	?	?
Gasoline	NR	NR	NR	NR	NR	NR	NR
Gasoline, HighOctane	NR	NR	NR	NR	NR	NR	NR
Gasoline Jet Fuel	NR	NR	NR	NR	NR	NR	NR
Glucose	R	R	R	R	R	R	R
Glycerine	R	R	R	R	R	R	R
Glycol	R	R	R	R	C	C	C
Glycol Ethers	?	?	?	?	NR	NR	NR
Glycolic Acid	R	R	R	R	?	?	?
Grape Sugar	R	R	R	R	R	R	R
Green Liquor	R	R	?	?	R	R	R
Halocarbon Oils	?	?	?	?	NR	NR	NR
Heptane	R	R	R	NR	C	?	?
Hercolyn	R	?	?	?	?	?	?
Hexane	R	NR	NR	NR	C	C	C
Hexanol,Tertiary	R	R	R	NR	C	C	C
Hydrazine	NR	NR	NR	NR	NR	NR	NR
Hydrobromic Acid 20%	R	R	R	R	?	?	?
Hydrochloric Acid 10%	R	R	R	R	R	R	R
Hydrochloric Acid 30%	R	R	R	R	R	R	R
Hydrochloric Acid 36%	R	R	R	R	R	R	C
Hydrochloric Acid Concentrated	R	R	R	NR	?	?	?
Hydrochloric Acid pickling	R	R	R	R	R	R	R
Hydrocyanic Acid	R	R	R	R	?	?	?
Hydrofluoric Acid 3%	R	R	R	R	R	?	?
Hydrofluoric Acid 48%	R	NR	R	NR	NR	NR	NR
Hydrofluoric Acid 50%	R	NR	NR	NR	NR	NR	NR
Hydrofluoric Acid 70%	NR	NR	NR	NR	NR	NR	NR
Hydrofluorsilicic Acid 30%	R	R	R	R	R	?	C

Chemical Resistance Data For Pressure Piping

R = Recommended NR = Not Recommended
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CHEMICAL REAGENT	PVC Type 1 1120 (12454)		PVC Clear 2110 (12454)		CPVC Type IV Grade 1 4120 (23447)		
	73°F	140°F	73°F	140°F	73°F	140°F	180°F
Hydrogen	R	R	R	R	C	C	C
Hydrogen Peroxide 30%	R	R	R	R	R	?	?
Hydrogen Peroxide 90%	R	R	R	R	?	?	?
Hydrogen Phosphide	R	R	NR	NR	?	?	?
Hydrogen Sulfide	R	R	R	R	R	R	R
Hydroquinone	R	R	R	R	R	R	R
Hydroxylamine Sulfate	R	R	R	R	?	?	?
Hypochlorite (Potassium & Sodium)	R	?	R	?	R	R	R
Hypochlorous Acid	R	R	R	R	R	R	R
Iodine	NR	NR	NR	NR	R	R	R
Iodine Solution 10%	NR	NR	NR	NR	?	?	?
Isopropanol	?	?	?	?	C	C	C
Kerosene	R	R	R	R	C	C	C
Ketones	NR	NR	NR	NR	NR	NR	NR
Kraft Liquors	R	R	R	R	R	R	R
Lactic Acid 25%	R	R	R	R	R	R	R
Lactic Acid 80%	R	?	?	?	R	C	C
Lard Oil	R	R	R	R	C	C	C
Lauric Acid	R	R	R	R	C	C	C
Lauryl Chloride	R	?	R	NR	NR	NR	NR
Lead Acetate	R	R	R	R	R	R	R
Lead Chloride	R	R	R	R	R	R	R
Lead Nitrate	R	R	R	R	R	R	R
Lead Sulfate	R	R	R	R	R	R	R
Lemon Oil	?	?	?	?	NR	NR	NR
Limonene	?	?	?	?	NR	NR	NR
Linoleic Acid	R	R	R	R	C	C	C
Linoleic Oil	R	R	R	NR	C	C	C
Linseed Oil	R	R	R	R	NR	NR	NR
Liquors	R	R	?	?	?	?	?
Lithium Bromide	R	R	R	R	R	R	R
Lithium Sulfate	R	R	R	R	R	R	R
Lubricating Oils, ASTM#1	R	R	R	R	?	?	?
Lubricating Oils, ASTM#2	R	R	R	R	?	?	?
Lubricating Oils, ASTM#3	R	R	R	NR	?	?	?
Lux Liquid	R	NR	R	NR	?	?	?
Machine Oil	R	R	R	R	C	C	C
Magnesium Carbonate	R	R	R	R	R	R	R
Magnesium Chloride	R	R	R	R	R	R	R
Magnesium Citrate	R	R	?	?	R	R	R
Magnesium Fluoride R	R	R	R	R	R	R	
Magnesium Hydroxide	R	R	R	R	R	R	R
Magnesium Nitrate	R	R	R	R	R	R	R
Magnesium Oxide	R	R	R	R	R	R	R
Magnesium Salts	R	R	R	R	R	R	R
Magnesium Sulfate	R	R	R	R	R	R	R
Maleic Acid 50%	R	R	R	R	R	R	R
Manganese Chloride	R	R	R	R	R	R	R

CHEMICAL REAGENT	PVC Type 1 1120 (12454)		PVC Clear 2110 (12454)		CPVC Type IV, Grade 1 4120 (23447)		
	73°F	140°F	73°F	140°F	73°F	140°F	180°F
Manganese Sulfate	R	R	R	R	R	R	R
Mercural Ointment Blue 5%	R	?	R	?	?	?	?
Mercuric Chloride	R	R	R	R	R	R	R
Mercuric Cyanide	R	R	R	R	R	R	R
Mercuric Sulfate	R	R	R	R	R	R	R
Mercurous Nitrate	R	R	R	R	R	R	R
Mercury	R	R	R	R	R	R	R
Mercury Ointment Ammoniated	R	?	R	?	?	?	?
Methanol <10%	R	R	R	R	R	R	R
Methanol >10%	R	R	R	R	NR	NR	NR
Methoxyethyl Oleate	R	?	R	?	NR	NR	NR
Methyl Cellosolve	NR	NR	NR	NR	NR	NR	NR
Methyl Chloride	NR	NR	NR	NR	NR	NR	NR
Methyl Ethyl Ketone	NR	NR	NR	NR	NR	NR	NR
Methyl Formate	?	?	?	?	NR	NR	NR
Methyl Iso-Butyl Ketone	NR	NR	NR	NR	NR	NR	NR
Methyl Methacrylate	R	?	R	?	NR	NR	NR
Methyl Salicylate	R	?	R	?	NR	NR	NR
Methyl Sulfate	R	NR	R	NR	?	?	?
Methyl Sulfuric Acid	R	R	R	R	?	?	?
Methylamine	NR	NR	NR	NR	NR	NR	NR
Methylene Bromide	NR	NR	NR	NR	NR	NR	NR
Petroleum Liquifier	R	R	R	R	?	?	?
Petroleum Oils (Sour)	R	NR	R	NR	C	C	C
Phenol	NR	NR	NR	NR	R	R	R
Phenylhydrazine	NR	NR	NR	NR	NR	NR	NR
Phenylhydrazine Hydrochloride	NR	NR	NR	NR	NR	NR	NR
Phosgene, Gas	R	?	R	?	NR	NR	NR
Phosgene, Liquid	NR	NR	NR	NR	NR	NR	NR
Phosphoric Acid, up to 85%	R	R	R	R	R	R	R
Phosphorous Pentoxide	R	NR	R	NR	R	R	R
Phosphorous Trichloride	NR	NR	NR	NR	NR	NR	NR
Phosphorous, (Yellow)	R	NR	R	NR	R	R	R
Photographic Solutions: Dektal Developer	R	R	R	R	?	?	?
Photographic Solutions: DK #3	R	R	R	R	?	?	?
Photographic Solutions: Kodak Fixer	R	R	R	R	?	?	?
Photographic Solutions: Kodak Short Stop	R	R	R	R	?	?	?
Picric Acid	NR	NR	NR	NR	NR	NR	NR
Plating Solutions: Brass	R	R	R	R	R	R	R
Plating Solutions: Cadmium	R	R	R	R	R	R	R
Plating Solutions: Copper	R	R	R	R	R	R	R
Plating Solutions: Gold	R	R	R	R	R	R	R
Plating Solutions: Indium	R	R	R	R	R	R	R
Plating Solutions: Lead	R	R	R	R	R	R	R
Plating Solutions: Nickel	R	R	R	R	R	R	R

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CHEMICAL REAGENT	PVC Type 1 1120 (12454)		PVC Clear 2110 (12454)		CPVC TypeIV Grade 1 4120 (23447)		
	73°F	140°F	73°F	140°F	73°F	140°F	180°F
Plating Solutions: Rhodium	R	R	R	R	R	R	R
Plating Solutions: Silver	R	R	R	R	R	R	R
Plating Solutions: Tin	R	R	R	R	R	R	R
Plating Solutions: Zinc	R	R	R	R	R	R	R
Polyethylene Glycol	?	?	?	?	NR	NR	NR
Potash (Sat.Aq.)	R	R	?	?	R	R	R
Potassium Acetate	R	R	R	R	R	R	R
Potassium Alum	R	R	R	R	R	R	R
Potassium Amyl Xanthate	R	NR	NR	NR	?	?	?
Potassium Bicarbonate	R	R	R	R	R	R	R
Potassium Bichromate	R	R	R	R	R	R	R
Potassium Bisulfate	R	R	R	R	R	R	R
Potassium Borate	R	R	R	R	R	R	R
Potassium Bromate	R	R	R	R	R	R	R
Potassium Bromide	R	R	R	R	R	R	R
Potassium Carbonate	R	R	R	R	R	R	R
Potassium Chlorate	R	R	R	R	R	R	R
Potassium Chloride	R	R	R	R	R	R	R
Potassium Chromate	R	R	R	R	R	R	R
Potassium Cyanate	R	R	R	R	R	R	R
Potassium Cyanide	R	R	R	R	R	R	R
Potassium Dichromate	R	R	R	R	R	R	R
Potassium Ethyl Xanthate	R	NR	NR	NR	?	?	?
Potassium Ferricyanide	R	R	R	R	R	R	R
Potassium Ferrocyanide	R	R	R	R	R	R	R
Potassium Fluoride	R	R	R	R	R	R	R
Potassium Hydroxide	R	R	R	R	R	R	R
Potassium Hypochlorite	R	R	R	R	R	R	R
Potassium Iodide	R	R	R	R	R	R	R
Potassium Nitrate	R	R	R	R	R	R	R
Potassium Perborate	R	R	R	R	R	R	R
Potassium Perchlorate	R	R	R	R	R	R	R
Potassium Permanganate 10%	R	R	R	R	R	R	R
Potassium Permanganate 25%	R	NR	R	NR	R	R	C
Potassium Persulfate	R	R	R	R	R	?	?
Potassium Phosphate	R	R	R	R	R	R	R
Potassium Sulfate	R	R	R	R	R	R	R
Potassium Sulfide	R	R	R	R	R	R	R
Potassium Sulfite	R	R	R	R	R	R	R
Potassium Tripolyphosphate	R	R	R	R	R	R	R
Propane	R	R	R	R	C	C	C
Propane Gas	R	R	R	R	C	C	C
Propanol 0.5%	R	R	R	?	R	?	R
Propanol > 0.5%	R	R	R	NR	C	C	C
Propargyl Alcohol	R	R	R	NR	C	C	C
Propionic Acid 2%	?	?	?	?	R	R	R
Propionic Acid > 2%	?	?	?	?	NR	NR	NR
Propylene Dichloride	NR	NR	NR	NR	NR	NR	NR
Propylene Glycol 25%	?	?	?	?	C	C	C

CHEMICAL REAGENT	PVC Type 1 1120 (12454)		PVC Clear 2110 (12454)		CPVC Type IV Grade 1 4120 (23447)		
	73°F	140°F	73°F	140°F	73°F	140°F	180°F
Propylene Glycol > 25%	?	?	?	?	NR	NR	NR
Propylene Oxide	NR	NR	NR	NR	NR	NR	NR
Pyridine	NR	NR	NR	NR	NR	NR	NR
Pyrogallic Acid	R	NR	R	NR	?	?	?
Rayon Coagulating Bath	R	R	R	R	?	?	?
Refinery Crudes	R	R	?	?	C	C	C
Rochelle Salts	R	R	?	?	R	R	R
Salicylic Acid	R	R	R	R	R	R	R
Santicizer	NR	NR	NR	NR	?	?	?
Sea Water	R	R	R	R	R	R	R
Selenic Acid	R	R	R	?	?	?	?
Sewage	R	R	R	R	R	R	R
Silicic Acid	R	R	R	R	R	?	?
Silicone Oil	?	?	?	?	R	?	?
Silver Chloride	R	R	R	R	R	R	R
Silver Cyanide	R	R	R	R	R	R	R
Silver Nitrate	R	R	R	R	R	R	R
Silver Sulfate	R	R	R	R	R	R	R
Soaps	R	R	R	R	R	R	R
Sodium Acetate	R	R	R	R	R	R	R
Sodium Alum	R	R	R	R	R	R	R
Sodium Arsenate	R	R	R	R	R	?	?
Sodium Benzoate	R	R	R	R	R	R	R
Sodium Bicarbonate	R	R	R	R	R	R	R
Sodium Bichromate	R	R	R	R	R	R	R
Sodium Bisulfate	R	R	R	R	R	R	R
Sodium Bisulfite	R	R	R	R	R	R	R
Sodium Borate	R	R	R	R	R	R	R
Sodium Bromide	R	R	R	R	R	R	R
Sodium Carbonate	R	R	R	R	R	R	R
Sodium Chlorate	R	NR	R	NR	R	R	R
Sodium Chloride	R	R	R	R	R	R	R
Sodium Chlorite	NR	NR	NR	NR	R	R	R
Sodium Chromate	R	R	R	R	R	R	R
Sodium Cyanide	R	R	R	R	R	R	R
Sodium Dichromate	R	R	R	R	R	R	R
Sodium Ferricyanide	R	R	R	R	R	R	R
Sodium Ferrocyanide	R	R	R	R	R	R	R
Sodium Fluoride	R	R	R	R	R	R	R
Sodium Formate	?	?	?	?	R	R	R
Sodium Hydroxide 50%	R	R	R	R	R	R	R
Sodium Hypobromite	R	R	R	R	R	R	R
Sodium Hypochlorite	R	R	R	R	R	R	R
Sodium Iodide	R	R	R	R	R	R	R
Sodium Metaphosphate	R	R	R	R	R	R	R
Sodium Nitrate	R	R	R	R	R	R	R
Sodium Nitrite	R	R	R	R	R	R	R
Sodium Perchlorate	R	R	R	R	R	R	R
Sodium Peroxide	R	R	R	R	R	R	R

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CHEMICAL REAGENT	PVC Type 1 1120 (12454)		PVC Clear 2110 (12454)		CPVC Type IV Grade 1 4120 (23447)		
	73°F	140°F	73°F	140°F	73°F	140°F	180°F
Sodium Silicate	R	NR	R	NR	R	R	R
Sodium Sulfate	R	R	R	R	R	R	R
Sodium Sulfide	R	R	R	R	R	R	R
Sodium Sulfite	R	R	R	R	R	R	R
Sodium Thiosulfate	R	R	R	R	R	R	R
Sodium Tripolyphosphate	?	?	?	?	R	R	R
Sour Crude Oil	R	R	R	R	C	C	C
Soybean Oil	R	R	R	R	NR	NR	NR
Stannic Chloride	R	R	R	R	R	R	R
Stannous Chloride	R	R	R	R	R	R	R
Stannous Sulfate	R	R	R	R	R	R	R
Starch	R	R	R	R	R	R	R
Stearic Acid	R	R	R	R	R	?	?
Stoddards Solvent	NR	NR	NR	NR	C	C	C
Styrene	NR	NR	NR	NR	NR	NR	NR
Succinic Acid	R	R	R	R	R	R	R
Sugar	R	R	R	R	R	R	R
Sulfamic Acid	NR	NR	NR	NR	R	R	R
Sulfite Liquor	R	R	R	R	?	?	?
Sulfur	R	R	R	R	R	?	?
Sulfur Dioxide dry	R	R	R	R	R	R	R
Sulfur Dioxide wet	R	NR	NR	NR	R	R	R
Sulfur Trioxide	R	R	R	R	R	R	R
Sulfuric Acid 70%	R	R	R	R	R	R	R
Sulfuric Acid 80%	R	R	NR	NR	R	R	R
Sulfuric Acid 85%	R	R	NR	NR	R	C	NR
Sulfuric Acid 90%	R	NR	NR	NR	R	C	NR
Sulfuric Acid 98%	?	NR	NR	NR	R	NR	NR
Sulfuric Acid Fuming	NR	NR	NR	NR	NR	NR	NR
Sulfuric Acid Pickling	R	R	?	?	R	R	R
Sulfurous Acid	R	R	R	R	?	?	?
Tall Oil	R	R	R	R	C	C	C
Tan Oil	R	R	R	R	?	?	?
Tannic Acid 30%	R	R	R	R	R	?	?
Tanning Liquors	R	R	R	R	?	?	?
Tartaric Acid	R	R	R	R	R	?	?
Terpenes	?	?	?	?	NR	NR	NR
Terpineol	R	?	R	?	NR	NR	NR
Tetraethyl Lead	R	?	R	NR	?	?	?
Texanol	?	?	?	?	NR	NR	NR
Thionyl Chloride	NR	NR	NR	NR	NR	NR	NR
Thread Cutting Oil	R	?	R	?	C	C	C
Titanium Tetrachloride	R	NR	R	NR	?	?	?
Toluol or Toluene	NR	NR	NR	NR	NR	NR	NR
Transformer Oil	R	R	R	R	C	C	C
Tributyl Citrate	R	?	R	?	NR	NR	NR
Tributyl Phosphate	NR	NR	NR	NR	NR	NR	NR
Trichloroacetic Acid	R	?	R	?	NR	NR	NR
Trichloroethylene	NR	NR	NR	NR	NR	NR	NR

CHEMICAL REAGENT	PVC Type 1 1120 (12454)		PVC Clear 2110 (12454)		CPVC TypeIV Grade 1 4120 (23447)		
	73°F	140°F	73°F	140°F	73°F	140°F	180°F
Triethanolamine	R	NR	R	NR	NR	NR	NR
Trilones	NR	NR	NR	NR	?	?	?
Trimethyl Propane	R	R	R	NR	?	?	?
Trimethylamine	R	NR	R	NR	?	?	?
Trisodium Phosphate	R	R	R	R	R	R	R
Turpentine	R	R	NR	NR	NR	NR	NR
Urea	R	R	R	R	R	R	R
Urine	R	R	R	R	R	R	R
Vaseline	NR	NR	NR	NR	?	?	?
Vegetable Oils	R	?	R	?	NR	NR	NR
Vinegar	R	R	R	R	R	R	R
Vinyl Acetate	NR	NR	NR	NR	NR	NR	NR
Water: Acid Mine	R	R	R	R	R	R	R
Water: Deionized	R	R	R	R	R	R	R
Water: Demineralized	R	R	R	R	R	R	R
Water: Distilled	R	R	R	R	R	R	R
Water: Fresh & Salt	R	R	R	R	R	R	R
Water: Swimming Pool	R	R	R	R	R	R	R
WD-40	?	?	?	?	C	C	C
Whiskey	R	R	R	R	R	R	R
White Liquor	R	R	R	R	R	R	R
Wines	R	R	R	R	R	R	R
Xylene or Xylol	NR	NR	NR	NR	NR	NR	NR
Zinc Acetate	R	R	R	R	R	R	R
Zinc Carbonate	R	R	R	R	R	R	R
Zinc Chloride	R	R	R	R	R	R	R
Zinc Nitrate	R	R	R	R	R	R	R
Zinc Sulfate	R	R	R	R	R	R	R

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Spears® Manufacturing Company
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Industry Standards & Test Methods

Spears'® products are manufactured in strict compliance with applicable industry standards and specifications to ensure strength, durability and safety. Although not inclusive, the following list of internationally recognized standards, specifications, test methods and practices relate to PVC and CPVC thermoplastic piping products and related components.

ASTM STANDARD SPECIFICATIONS

ASTM D 1784	Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds
ASTM D 1785	Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe- Schedules 40- 80 and 120
ASTM D 6263	Standard Specification for Extruded Bars Made From Rigid Poly (Vinyl Chloride) (PVC) and Chlorinated Poly (Vinyl Chloride) (CPVC)
ASTM D 2464	Standard Specification for Threaded Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings- Schedule 80
ASTM D 2467	Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings- Schedule 80
ASTM D 2241	Standard Specification for Poly (Vinyl Chloride) (PVC) Pressure Rated Pipe (SDR Series)
ASTM F 441	Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe- Schedules 40 and 80
ASTM F 442	Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe (SDR-PR)
ASTM D 2672	Standard Specification for Joints for IPS PVC Pipe Using Solvent Cement
ASTM D 2846	Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Hot- and Cold-Water Distribution Systems
ASTM D 2466	Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings- Schedule 40
ASTM D 3139	Standard Specification for Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals
ASTM D 2665	Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Drain-Waste- and Vent Pipe and Fittings
ASTM F 437	Standard Specification for Threaded Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings- Schedule 80
ASTM F 438	Standard Specification for Socket-Type Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings- Schedule 40
ASTM F 439	Standard Specification for Socket-Type Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings- Schedule 80
ASTM F 477	Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe
ASTM F 480	Standard Specification for Thermoplastic Well Casing Pipe and Couplings Made in Standard Dimension Ratios (SDR)- Schedule 40 and Schedule 80
ASTM F 493	Standard Specification for Solvent Cements for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe and Fittings
ASTM F 656	Standard Specification for Primers for Use in Solvent Cement Joints of Poly (Vinyl Chloride) (PVC) Plastic Pipe and Fittings
ASTM F 913	Standard Specification for Thermoplastic Elastomeric Seals (Gaskets) for Joining Plastic Pipe
ASTM D 1866	Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Schedule 40 Drainage and DWV Fabricated Fittings

ASTM STANDARD TEST METHODS

ASTM D 1598	Standard Test Method for Time-to-Failure of Plastic Pipe Under Constant Internal Pressure
ASTM D 1599	Standard Test Method for Resistance to Short-Time Hydraulic Pressure of Plastic Pipe & Fittings
ASTM D 2837	Standard Test Method for Obtaining Hydrostatic Design Basis for Thermoplastic Pipe Materials
ASTM D 2412	Standard Test Method for Determination of External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading
ASTM D 2444	Standard Test Method for Determination of the Impact Resistance of Thermoplastic Pipe and Fittings by Means of a Tup (Falling Weight)
ASTM D 2564	Standard Specification for Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems
ASTM D 2152	Standard Test Method for Adequacy of Fusion by Acetone Immersion
ASTM D 2122	Standard Test Method for Determining Dimensions of Thermoplastic Pipe & Fittings
ASTM F 610	Standard Test Method for Evaluating the Quality of Molded Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings by the Heat Reversion Technique

ASTM STANDARD PRACTICES

ASTM D 2855	Standard Practice for Making Solvent-Cemented Joints with Poly (Vinyl Chloride) (PVC) Pipe and Fittings
ASTM D 2774	Standard Practice for Underground Installation of Thermoplastic Pressure Piping
ASTM D 2321	Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications
ASTM F 402	Standard Practice for Safe Handling of Solvent Cements- Primers- and Cleaners Used for Joining Thermoplastics Pipe and Fittings
ASTM F 690	Standard Practice for Underground Installation of Thermoplastic Pressure Piping Irrigation System
ASTM F 1057	Standard Practice for Evaluating the Quality of Extruded Poly (Vinyl Chloride) (PVC) Pipe by the Heat Reversion Technique
ASTM F 645	Standard Guide for Selection- Design- and Installation of Thermoplastic Water Pressure Systems

CSA STANDARD

CSA B137.3-99	Rigid Polyvinyl Chloride (PVC) Pipe for Pressure Applications

FIRE PERFORMANCE

ULC-S102.2-M88	Standard Method of Test for Surface Burning Characteristics of Flooring- Floor Covering- and Miscellaneous Materials and Assemblies
UL 723	Test for Surface Burning Characteristics of Building Materials
UL1821	Thermoplastic Sprinkler Pipe and Fittings for Fire Protection Service
UL 1887	Standard for Safety for Fire Test of Plastic Sprinkler Pipe for Flame and Smoke Characteristics
UL 94	Test for Flammability of Plastic Materials for Parts in Devices and Appliances
FM1635	Plastic Pipe & Fittings for Automatic Sprinkler Systems
FM4910	Clean Room Materials Flammability Test Protocol
ASTM E 84	Standard Test Method for Surface Burning Characteristics of Building Materials
ASTM D 635	Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Manufacturing in a Horizontal Position
ASTM E 162	Standard Test Method for Surface Flammability of Materials Using a Radiant Heat Energy Source
ASTM D 2863	Standard Test Method for Measuring the Minimum Oxygen Concentration to Support Candle-Like Combustion of Manufacturing (Oxygen Index)

TOXICOLOGY

NSF® Standard 61	Drinking Water System Components - Health Effects
NSF® Standard 14	Manufacturing Piping System Components and Related Materials
United States FDA Code of Federal Regulations	**Title 21**

Industry Piping Formulas

Pressure Rating

$P = \frac{2St}{D-t}$ $S = \frac{P(D-t)}{2t}$

P is the pressure rating in psi.
S is the Hydrostatic Design Basis (usually 4000 psi) divided by the safety factor (which is 2 for the three standards).
DR is the Dimension Ratio for D2241 and C905 but is OD/t for D1785

Where:
P = pressure, psi
S = circumferential stress, psi
D = outside diameter of pipe, inches
d = inside diameter of pipe, inches (average based on mean wall)
t = average wall thickness, inches

Volume capacity-gallons per ft. length = VG = V x 0.004329

Volume capacity-cubic inches per ft. length = V = 0.7854 x d^2 x12

Outside pipe surface, sq. ft per ft. length = AO = $\frac{D^2 \pi}{12}$

Inside pipe surface, sq. ft. per ft. length = $A_i = \frac{d \pi}{12}$

Cross-sectional plastic area, sq. in. = $A = \frac{(D^2 - d^2) \pi}{4}$

Cross sectional flow area, sq. in. = $A_F = \frac{d^2 \pi}{4}$

Weight of PVC pipe, lb. per ft. length = W_{PVC} = .632 x A

Weight of CPVC pipe, lb. per ft. length = W_{CPVC} = .705 x A

Weight of water in pipe, lb. per ft. length = $W_W = 0.433\ A_F$

Weight of water filled pipe, lb. per ft. length = $W_{WFP} = W_{PVC}$ (or W_{CPVC}) + W_W

Radius of gyration, inches = $r_g = \sqrt{\frac{D^2 + d^2}{4}}$

Moment of inertia, inches fourth = $I = Ar_g^2\ .0491\ (D^4 - d^4)$

Section modulus, inches cube = $Z = \frac{2_I}{D} / = 0.0982 \times \frac{(D^4 - d^4)}{D}$

Thermal Expansion and Contraction

$\Delta L = 12\ yL\ (\Delta T)$
Where:
ΔL = expansion or contraction of pipe in inches
y = Coefficient of thermal expansion
(see PVC or CPVC material Thermal properties)
L = Length of pipe run in feet
ΔT = Temperature change °F (Maximum temperature – Temperature @ Installation or maximum system temperature – lowest system temperature, whichever is greater)

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Friction Loss (Hazen-Williams equations)

$$f = .2083 \times (100/C)^{1.852} \times \frac{G^{1.852}}{d^{4.8655}}$$

Where:
f = friction head of feet of water per 100' for the specific pipe size and I.D.
C = a constant for internal pipe roughness (=150 for thermoplastic pipe)
G = flow rate of U.S. gallons per minute
d = inside diameter of pipe in inches

Water Velocities

$$V = .3208 \times \frac{G}{A}$$

Where:
V = velocity in feet per second
G = gallons per minute
A = inside cross sectional area in square inches

Gallons Per Minute Through Pipe

GPM = 0.0408 x Pipe Diameter Inches2 x Feet Per Minute Velocity

Pressure Drop in Valves

$$P = \frac{G^2 \times S_g}{CV^2}$$

Where:
P = Pressure drop in PSI; feet of water = PSI/.4332
G = Gallons per minute
Sg = Specific gravity of liquid
C_V = Gallons per minute per 1 PSI pressure drop (see Valve product Cv from manufacturer)

Water Conversions

1 foot of head = 0.434 PSI
1 gallon = 231 cubic inch = 8.333 pounds
1 pound water = 27.7 cubic inches
1 cubic foot water = 7.5 gallon = 62.5 pounds (salt water = 64.3 pounds)
1 miner's inch = 9 to 12 gallons per minute

$$\text{Horsepower to Raise Water} = \frac{\text{Gallons Per Minute} \times \text{Total Head in Feet}}{3960}$$

Basic Conversions

VOLUME

Convert From	Into	Multiply By
Acre-feet	Cu feet	43560
	Cu meters	1233.482
	Cu yards	1613.33
	Gallons (US)	3.259×10^{5}
Cu Centimeters	Cu feet	3.5315×10^{-5}
	Cu inches	0.06102
	Cu meters	1×10^{-6}
	Cu yards	1.308×10^{-6}
	Gallons (US liq)	0.00026
	Liters	0.00099
	Ounces (US liq)	0.03381
	Pints (US liq)	0.00211
	Quarts (US liq)	0.00106
Cu Feet	Acre-feet	2.296×10^{-5}
	Cu centimeters	28316.8
	Cu inches	1728.0
	Cu meters	0.02832
	Cu yards	0.03704
	Gallons (US liq)	7.48052
	Liters	28.316
	Ounces (US liq)	957.506
	Pints (US liq)	59.8442
	Quarts (US liq)	29.922
Cu Inches	Acre-feet	1.329×10^{-8}
	Cu centimeters	16.3871
	Cu feet	0.000579
	Cu meters	1.639×10^{-5}
	Cu yards	2.143×10^{-5}
	Gallons (US liq)	0.00433
	Liters	0.01639
	Ounces (US liq)	0.55411
	Pints (US liq)	0.03463
	Quarts (US liq)	0.01732
Cu Meters	Acre-feet	0.00081
	Cu centimeters	1 x 106
	Cu feet	35.147
	Cu inches	61023.7
	Cu yards	1.30795
	Gallons (US liq)	264.172
	Liters	999.97
	Pints (US liq)	2113.38
	Quarts (US liq)	1056.69
Cu Yards	Acre-feet	6.198×10^{-4}
	Cu centimeters	764554.9
	Cu feet	27
	Cu inches	46656
	Cu meters	0.76455
	Gallons (US liq)	201.974
	Liters	764.553
	Quarts (US liq)	807.896
Gallons (US liq)	Acre-feet	3.068×10^{-6}
	Cu centimeters	3785.41
	Cu feet	0.13368
	Cu inches	231
	Cu meters	0.00378
	Cu yards	0.00495
	Liters	3.7853
	Ounces (US liq)	128
	Pints (US liq)	8
	Quarts (US liq)	4
Liters	Acre-feet	8.106×10^{-7}
	Cu centimeters	1.000.03
	Cu feet	0.03532

VOLUME - continued

Convert From	Into	Multiply By
	Cu inches	61.002
	Cu meters	0.00100003
	Cu yards	0.00131
	Gallons (US liq)	0.26148
	Ounces (US liq)	33.81497
	Pints (US liq)	2.1134
	Quarts (US liq)	1.0567
Ounces (US liq)	Cu Centimeters	29.5737
	Cu inches	1.80469
	Cu meters	2.957×10^{-5}
	Gallons (US liq)	0.00781
	Liters	0.02957
	Pints (US liq)	0.0625
	Quarts (US liq)	0.0312
Pints (US liq)	Cu Centimeters	473.176
	Cu feet	0.01671
	Cu inches	28.875
	Cu yards	0.000619
	Gallons (US liq)	0.125
	Liters	0.47316
	Quarts (US liq)	0.5

PRESSURE

Convert From	Into	Multiply By
Atmospheres	BAR	1.01325
	Ft H_2O @ 68°F	33.96
	Grams/sq cm	1033.23
	In Hg @ 32°F	29.9213
	In H_2O @ 68°F	407.5
	Kg/sq cm	1.03322
	Kg/sq meter	10332
	kilo Pascals	101.3
	mm Hg @ 32°F	760
	Pounds/sq ft	2116
	Pounds/sq in	14.6960
BAR	Atmospheres	0.98692
	Ft H_2O @ 68°F	33.51
	Grams/sq cm	1019.72
	In Hg @ 32°F	29.530
	In H_2O @ 68°F	407.5
	Kg/sq cm	1.01972
	Kg/sq meter	10197
	kilo Pascals	100
	mm Hg @ 32°F	0.1333
	Pounds/sq ft	2089.0
	Pounds/sq in	14.5038
Ft H_2O @ 68°F	Atmospheres	0.98692
	BAR	2.984×10^{-2}
	In Hg @ 32°F	0.8812
	In H_2O @ 68°F	12
	Kg/sq cm	3.043×10^{-2}
	Kg/sq meter	304.3
	kilo Pascals	2.984
	mm Hg @ 32°F	22.38
	Pounds/sq ft	62.32
	Pounds/sq in	0.4328
Grams/sq cm	Atmospheres	0.00097
	BAR	0.00098
	In Hg @ 32°F	0.02896
	Kg/sq cm	1.01972
	Kg/sq meter	1000
	kilo Pascals	100
	mm Hg @ 32°F	0.73556

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

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Basic Conversions

PRESSURE - continued

Convert From	Into	Multiply By
	Pounds/sq ft	2.0481
	Pounds/sq in	0.01422
In Hg @32°F	Atmospheres	0.03342
	BAR	0.03386
	Ft H_2O @ 68°F	1.135
	Grams/sq cm	34.532
	In H2O @ 68°F	13.62
	Kg/sq cm	3.453×10^{-2}
	Kg/sq meter	345.3
	kilo Pascals	3.386
	mm Hg @ 32°F	25.4
	Pounds/sq ft	70.73
	Pounds/sq in	0.4912
In H_2O @ 68°F	Atmospheres	2.454×10^{-3}
	BAR	2.49×10^{-3}
	Ft H_2O @ 68°F	8.333×10^{-2}
	In Hg @ 32°F	7.343×10^{-2}
	Kg/sq cm	2.53×10^{-3}
	Kg/sq meter	25.38
	kilo Pascals	0.249
	mm Hg @ 32°F	1.865
	Pounds/sq ft	5.197
	Pounds/sq in	3.609×10^{-2}
Kg/sq cm	Atmospheres	0.9678
	BAR	0.98066
	Ft H2O@68°F	32.87
	In Hg @32°F	28.959
	In H2O @ 68°F	394.4
	Kg/sq meter	1×10^{4}
	kilo Pascals	98.07
	mm Hg @32°F	735.6
	Pounds/sq ft	2048
	Pounds/sq in	14.22
Kg/sq meter	Atmospheres	9.678×10^{-5}
	BAR	9.807×10^{-5}
	Ft H2O@68°F	3.287×10^{-3}
	Grams/sq cm	0.1
	In Hg @32°F	0.0029
	In H2O @ 68°F	3.944×10^{-2}
	Kg/sq cm	0.001
	kilo Pascals	9.807×10^{-3}
	mm Hg @32°F	0.07356
	Pounds/sq ft	0.20482
	Pounds/sq in	1.422×10^{-3}
kilo Pascals	Atmospheres	9.869×10^{-3}
	BAR	0.01
	Ft H2O@68°F	0.3351
	In Hg @32°F	0.2953
	In H2O @ 68°F	4.022
	Kg/sq cm	1.02×10^{-2}
	Kg/sq meter	102
	mm Hg @32°F	7.501
	Pounds/sq ft	20.89
	Pounds/sq in	0.145
mm Hg @32°F	Atmospheres	1.316×10^{-3}
	BAR	1.333×10^{-3}
	Ft H2O@68°F	4.468×10^{-2}
	Grams/sq cm	1.3595
	In Hg @32°F	3.937×10^{-2}
	In H2O @ 68°F	0.5362
	Kg/sq cm	1.36 X 10-3
	Kg/sq meter	13.595
	kilo Pascals	0.1333

PRESSURE - continued

Convert From	Into	Multiply By
	Pounds/sq ft	2.7845
	Pounds/sq in	0.0193
Pounds/sq ft	Atmospheres	4.73×10^{-4}
	BAR	4.79×10^{-4}
	Ft H2O@68°F	1.605×10^{-2}
	Grams/sq cm	0.48824
	In Hg @32°F	2.036
	In H2O @ 68°F	0.1926
	Kg/sq cm	4.88×10^{-4}
	Kg/sq meter	4.882
	kilo Pascals	4.79×10^{-2}
	mm Hg @32°F	0.3591
	Pounds/sq in	6.945×10^{-3}
Pounds/sq in	Atmospheres	6.805×10^{-2}
	BAR	6.895×10^{-2}
	Ft H_2O @ 68°F	1.605 X 10-2
	Grams/sq cm	70.307
	In Hg @ 32°F	2.036
	In H_2O @ 68°F	27.73
	Kg/sq cm	7.031×10^{-2}
	Kg/sq meter	703.1
	kilo Pascals	6.895
	mm Hg @ 32°F	51.72
	Pounds/sq ft	144

VELOCITY (Distance-time)

Convert From	Into	Multiply By
Feet/day	Feet/ second	1.157×10^{-5}
	Kilometers/hour	1.27×10^{-5}
	Meters/second	3.528×10^{-6}
	Miles/hour	7.891×10^{-6}
Feet/ second	Feet/ day	8.64×10^{4}
	Kilometers/hour	1.097
	Meters/second	0.3048
	Miles/hour	0.6818
Kilometers/hour	Feet/day	7.874×10^{4}
	Feet/ second	0.9113
	Meters/second	0.2778
	Miles/hour	0.6214
Meters/second	Feet/day	2.835×10^{5}
	Feet/ second	3.281
	Kilometers/hour	3.6
	Miles/hour	2.237
Miles/hour	Feet/day	1.267×10^{5}
	Feet/ second	1.467
	Kilometers/hour	1.609
	Meters/second	0.447

DISCHARGE RATES (Volume-time)

Convert From	Into	Multiply By
Acre-feet/day	Cu feet/second	0.5042
	Cu meters/day	1234
	Gallons/minute	226.3
	Liters/second	14.28
Cu feet/second	Acre-feet/day	1.983
	Cu meters/day	2447
	Gallons/minute	448.8
	Liters/second	28.32
Cu meters/day	Acre-feet/day	6.051×10^{6}
	Cu feet/second	3.051×10^{6}
	Gallons/minute	1.369×10^{9}
	Liters/second	8.64×10^{7}

Basic Conversions

DISCHARGE RATES - continued

Convert From	Into	Multiply By
Gallons/minute	Acre-feet/day	4.419×10^{-3}
	Cu feet/second	2.228×10^{-3}
	Cu meters/day	5.45
	Liters/second	6.309×10^{-2}
Liters/second	Acre-feet/day	7.005×10^{-2}
	Cu feet/second	3.531×10^{-2}
	Cu meters/day	86.4
	Gallons/minute	15.85

TORQUE

Convert From	Into	Multiply By
Foot-pounds	Inch-pounds	12
	KF force-meters	1382.552×10^{-4}
	Newton-meters	1.356
Inch-pounds	Foot-pounds	0.8333
	KF force-meters	11547.344×10^{-6}
	Newton-meters	11559.357×10^{-5}
KF force-meters	Foot-pounds	7.233
	Inch-pounds	86.8
	Newton-meters	9.807
Newton-meters	Foot-pounds	7374.631×10^{-4}
	Inch-pounds	8.651
	KF force-meters	10196.798×10^{-5}

DENSITY

Convert From	Into	Multiply By
Pounds/Cu inch	Pounds/Cu feet	1728
	Pounds/gallon	231
	Grams/Cu cm	27.68
	Grams/liter	2.768×10^{4}
Pounds/Cu feet	Pounds/Cu inch	5.787×10^{-4}
	Pounds/gallon	0.1337
	Grams/Cu cm	1.6×10^{-2}
	Grams/liter	16.02
Pounds/gallon	Pounds/Cu inch	4.33×10^{-3}
	Pounds/Cu feet	7.481
	Grams/Cu cm	0.1198
	Grams/liter	119.8
Grams/Cu cm	Pounds/Cu inch	3.61×10^{-2}
	Pounds/Cu feet	62.43
	Pounds/gallon	8.345
	Grams/liter	1000
Grams/liter	Pounds/Cu inch	3.61×10^{-5}
	Pounds/Cu feet	6.24×10^{-2}
	Pounds/gallon	8.35×10^{-3}
	Grams/Cu cm	0.001

ENERGY

Convert From	Into	Multiply By
British Thermal Unit (BTU)	Foot-pound	777.9
	Horsepower-hr	3.929×10^{-4}
	Joules	1055
	Calorie	252
	Kilowatt-hr	2.93×10^{-4}
Foot-pound	BTU	1.285×10^{-3}
	Horsepower-hr	5.051×10^{-7}
	Joules	1.356
	Calorie	0.3239
	Kilowatt-hr	3.766×10^{-7}
Horsepower-hr	BTU	2545
	Foot-pound	1.98×10^{6}
	Joules	2.685×10^{6}
	Calorie	6.414×10^{5}

ENERGY - continued

Convert From	Into	Multiply By
	Kilowatt-hr	0.7457
Joules	BTU	9.481×10^{-4}
	Foot-pound	0.7376
	Horsepower-hr	3.725×10^{-7}
	Calorie	0.2389
	Kilowatt-hr	2.778×10^{-7}
Calorie	BTU	3.968×10^{-3}
	Foot-pound	3.087
	Horsepower-hr	1.559×10^{-6}
	Joules	4.186
	Kilowatt-hour	1.163×10^{-6}
Kilowatt-hr	BTU	3413
	Foot-pound	2.655×10^{6}
	Horsepower-hr	1.341
	Joules	3.6×10^{6}
	Calorie	8.601×10^{5}

MASS

Convert From	Into	Multiply By
Ounce	Pound	0.0625
	Kilogram	0.02834952
	Short ton	3.125×10^{-5}
	Long ton	2.79×10^{-5}
	Metric ton	2.835×10^{-5}
Pound	Ounce	16
	Kilogram	0.4536
	Short ton	0.0005
	Long ton	0.0004464
	Metric ton	0.0004536
Kilogram	Ounce	35.27396
	Pound	2.20462
	Short ton	0.001102
	Long ton	0.00098
	Metric ton	0.091
Short ton	Ounce	32000
	Pound	2000
	Kilogram	907.18
	Long ton	0.89266
	Metric ton	0.90718
Long ton	Ounce	35840
	Pound	2240
	Kilogram	1016.05
	Short ton	1.12
	Metric ton	1.10605

MASS - continued

Convert From	Into	Multiply By
Metric ton	Ounce	35273.98
	Pound	2204.62
	Kilogram	1000
	Short ton	1.1023
	Long ton	0.98421

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Words, Terms, & Phrases Used in the Plastic Industry

ABRASION RESISTANCE: Ability to withstand the effects of repeated wearing, rubbing, scraping, etc.

ACCEPTANCE TESTING: Testing performed on a product to determine whether or not an individual lot of the product conforms with specified requirements.

ACIDS: One of a class of substances compounded of hydrogen and one or more other elements, capable of uniting with a base to form a salt, and in aqueous solution, turning blue litmus paper red.

ACRYLATE RESINS: A class of thermoplastic resins produced by polymerization of acrylic acid derivatives.

ACRYLONITRILE-BUTADIENE-STYRENE (ABS) PIPE AND FITTING PLASTICS: Plastics containing polymers or blends of polymers containing butadiene, acrylonitrile, and styrene or substituted styrene plus lubricants, stabilizers, and colorants.

ADHESIVE: A substance capable of holding materials together by surface attachment.

AGING: The effect of time on plastics exposed indoors at ordinary conditions of temperature and relatively clean air.

ALKALIES: Compounds capable of neutralizing acids and usually characterized by an acrid taste. Can be mild like baking soda or highly caustic like lye.

ALIPHATIC: Derived from or related to fats and other derivatives of the paraffin hydrocarbons, including unsaturated compounds of the ethylene and acetylene series.

ALKYD RESINS: A class of resins produced by condensation of a polybasic acid or anhydride and a polyhydric alcohol.

ALLYL RESINS: A class of resins produced from an ester or other derivative of allyl alcohol by polymerization.

ANIONS: Atoms or group of atoms carrying a negative charge. The charge results because there are more electrons than protons in the anion. Anions can be a source of micro contamination in high purity water applications.

ANNEAL: To prevent the formation of or remove stresses in plastics parts by controlled cooling from a suitable temperature.

APPARENT DENSITY: The weight per unit volume of a material including voids inherent in the material as tested.

AROMATIC: A large class of cyclic organic compounds derived from, or characterized by the presence of the benzene ring and its homologs.

AUTHORITY HAVING JURISDICTION (AHJ): the individual official, board, department, or agency established and authorized by a state, county, city, or other political subdivision, created by law to administer and enforce specified requirements.

BACKFILL: All material used to fill the trench from bedding to finished surface.

BACKFILL, FINAL: Material used to fill the trench from initial backfill to finished surface.

BACKFILL, INITIAL: Material used to fill the trench from top of bedding to a designated height over the pipe.

BACKFILL, UNCONSOLIDATED: Non-compacted material in place in trench.

BEAM LOADING: The application of a load to a pipe between two points of support, usually expressed in newtons (or pounds force) and the distance between the centers of the supports.

BEDDING, n: Materials placed in the bottom of the trench on top of the foundation soil which provides stable bottom support for buried pipe including the trench bottom groove support angle or select material placed around the pipe, and envelope or filter materials where used during insulation.

BEDDING, v: Placement of support materials for buried pipe.

BELL END: The enlarged portion of a pipe that resembles the socket portion of a fitting and that is intended to be used to make a joint.

BEVELED PIPE: A pipe with an end chamfered to assist in assembly into a socket connection.

BLISTER: Undesirable rounded elevation of the surface of a plastic, whose boundaries may be either more or less sharply defined, somewhat resembling in shape a blister on the human skin. A blister may burst and become flattened.

BOND: To attach by means of an adhesive.

BRITTLE FAILURE: A pipe failure mode which exhibits no visible (to the naked eye) permanent material deformation (stretching, elongation, or necking down) in the area of the break.

BUILDING SANITARY SEWER: That part of the horizontal piping of a sanitary drainage system which extends from the building sanitary drain, receives the discharge of the building sanitary drain, and conveys it to a public sewer, private sewer, individual sewage disposal system, or other point of disposal.

BUILDING STORM SEWER: That part of the horizontal piping of a storm drainage system which extends from the building storm drain, receives the discharge of the building storm drain, and conveys it to a public storm sewer, private storm sewer, or other point of disposal.

BURNED: Showing evidence of thermal decomposition through some discoloration, distortion, or destruction of the surface of the plastic.

CALENDERING: A process by which a heated rubber plastic product is squeezed between heavy rollers into a thin sheet or film. The film may be frictioned into the interstices of cloth, or it may be coated onto cloth or paper.

CAST RESIN: A resinous product prepared by pouring liquid resins into a mold and heat treating the mass to harden it.

CATALYSIS: The acceleration (or retardation) of the speed of a chemical reaction by the presence of a comparatively small amount of a foreign substance called a catalyst.

CATIONS: Atoms or group of atoms carrying a positive charge. The charge results because there are more protons than electrons in the cation. Cations can be a source of micro contamination in high purity water applications.

CELLULOSE: Inert substance, chemically a carbohydrate, which is the chief component of the solid structure of plants, wood, cotton, linen, etc.

CELLULOSE ACETATE: A class of resins made from a cellulose base, either cotton linters or purified wood pulp, by the action of acetic anhydride and acetic acid.

Glossary of Terms

CEMENT: A dispersion of "solution" of unvulcanized rubber or a plastic in a volatile solvent. This meaning is peculiar to the plastics and rubber industries and may or may not be an adhesive composition (See also Solvent Cement).

CHLORINATED POLY VINYL CHLORIDE PLASTICS (CPVC): Plastics based on chlorinated poly (vinyl chloride) in which the chlorinated poly (vinyl chloride) is in the greatest amount by weight.

COALESCENCE: The union or fusing together of fluid globules or particles to form larger drops or a continuous mass.

COEXTRUSION: A process whereby two or more heated or unheated plastic material streams forced through one or more shaping orifice(s) become one continuously formed piece.

COLD FLOW: Change in dimensions or shape of some materials when subjected to external weight or pressure at room temperature.

COMPACTION, SOIL: Act of packing soil with mechanical force to increase its density.

COMPOSITE PIPE: Pipe consisting of two or more different materials arranged with specific functional purpose to serve as pipe.

COMPOUND: A combination of ingredients before being processed or made into a finished product. Sometimes used as a synonym for material, formulation.

CONDENSATION: A chemical reaction in which two or more molecules combine, usually with the separation of water or some other simple substance.

CONDUCTIVITY: Inverse of resistivity, used to assess ionic concentration by measuring conductance of flow of electric current.

CONDUIT: A tubular raceway for carrying electric wires, cables, or other conductors.

COPOLYMER: The product of simultaneous polymerization of two or more polymerizeable chemicals, commonly known as monomers.

CRAZING: Fine cracks at or under the surface of a plastic.

CREEP: The unit elongation of a particular dimension under load for a specific time following the initial elastic elongation caused by load application. It is expressed usually in inches per inch per unit of time.

CROSS LINKING: The formation of a three dimensional polymer by means of interchain reactions resulting in changes in physical properties.

CURE TIME (Solvent Cement): The necessary waiting period before pressurizing newly assembled joints in which the solvents in the cement must evaporate to produce joint strength.

DEGRADATION: A deleterious change in the chemical structure of a plastic.

DEIONIZED RESINS (DI RESINS): Electrically charged synthetic resin beads (typically produced from polystyrene resins) used to remove ionic contaminants as a means of purifying water through the ion exchange process.

DEIONIZED WATER (DI WATER): Water that has been purified by removing dissolved solids through an ion exchange process where ionic contaminants are removed.

DELAMINATION: The separation of the layers of material in a laminate.

DETECTION LIMIT (DL): With regard to micro contaminant analysis, it is the lowest measurable quantity of a particular element that is detectable by the analytical detection method used.

DETERIORATION: A permanent change in the physical properties of a plastic evidenced by impairment of these properties.

DIELECTRIC CONSTANT: Specific inductive capacity. The dielectric constant of a material is the ratio of the capacitance of a condenser having that material as dielectric to the capacity of the same condenser having a vacuum as dielectric.

DIELECTRIC STRENGTH: This is the force required to drive an electric current through a definite thickness of the material; the voltage required to break down a specified thickness of insulation.

DIFFUSION: The migration or wandering of the particles or molecules of a body of fluid matter away from the main body through a medium or into another medium.

DIMENSIONAL STABILITY: Ability of a plastic part to maintain its original proportions under conditions of use.

DIMENSION RATIO (DR): The average specified diameter of a pipe or tubing divided by the minimum specified wall thickness. The DR values shall be rounded to the nearest 0.5 unless otherwise specified (See also Standard Dimensional Ratio).

DUCTILE FAILURE: A pipe failure mode which exhibits material deformation (stretching, elongation, or necking down) in the area of the break.

DUROMETER: Trade name of the Shore Instrument Company for an instrument that measures hardness. The rubber or plastics durometer determines the "hardness" of rubber or plastics by measuring the depth of penetration (without puncturing) of blunt needle compressed on the surface for a short period of time.

DYNAMIC LEACH ANALYSIS: Relates to analytical testing of piping materials that are tested during exposure to UPW under flowing conditions. Under flowing conditions (dynamic), grab samples of high purity water are periodically pulled from the water flowing through the pipe and are subjected to leach analysis to quantify TOC, anions, cations & trace metals and other leachable contaminants that may be present under flowing conditions. Dynamic leach analysis also enables “on-line” testing of other potential contamination by continually monitoring resistivity, particles, and TOC overtime.

ELASTIC LIMIT: The load at which a material will no longer return to its original form when the load is released.

ELASTOMER: The name applied to substances having rubber like properties.

ELECTRICAL PROPERTIES: Primarily the resistance of a plastic to the passage of electricity, e.g. dielectric strength.

ELONGATION: The capacity to take deformation before failure in tension and is expressed as a percentage of the original length.

EMBEDMENT: The placement of materials completely around the pipe to provide support.

EMULSION: A dispersion of one liquid in another possible only when they are mutually insoluble.

ENVIRONMENTAL STRESS CRACKING (ESC): The development of cracks in a material that is subjected to stress or strain in the presence of specific chemicals.

Glossary of Terms

ESTER: A compound formed by the elimination of waste during the reaction between an alcohol and an acid; many esters are liquids. They are frequently used as plasticizers in rubber and plastic compounds.

ETHYL CELLULOSE: A thermoplastic material prepared by the ethylation of cellulose by diethyl sulfate or ethyl halides and alkali.

EXTRUSION: A process in which heated or unheated plastic is forced through a shaping orifice (a die) in one continuously formed shape as film, sheet, rod, or tubing.

EXTENDER: A material added to a plastic composition to reduce its cost.

FABRICATE: Method of forming a plastic into a finished article by machining, drawing, and similar operations.

FILLER: A material added to a plastic composition to impart certain qualities in the finished article.

FITTING: A piping component used to join or terminate sections of pipe or to provide changes of direction or branching in a pipe system.

FLEXURAL STRENGTH: The outer fiber stress, which must be attained in order to produce a given deformation under a beam load.

FORMULATION: A combination of ingredients before being processed or made into a finished product. Sometimes used as a synonym for material, compound.

FUSE: To join two plastic parts by softening the material by heat or solvents.

GATE: In an injection mold, a constriction in the flow channel between the runner and the mold cavity.

GENERIC: Common names for types of plastic materials. They may be either chemical terms or coined names. They contrast with trademarks, which are the property of one company.

GRAVITY FLOW: Liquefied medium conveyance that is induced by a positive elevation head such as a downward pipeline slope or a higher elevation reservoir.

GRAY WATER: The waste water of a system that may be a combination of the liquid and water-carried wastes except human wastes.

HARDNESS: A comparative gauge of resistance to indentation, not of surface hardness or abrasion resistance.

HEAT RESISTANCE: The ability to withstand the effects of exposure to high temperature. Care must be exercised in defining precisely what is meant when this term is used. Descriptions pertaining to heat resistance properties include: boilable, washable, cigarette proof, sterilizable, etc.

HIGH-DENSITY POLYETHYLENE PLASTICS (HDPE): *n*—those linear polyethylene plastics, g.v., having a standard density of 0.941 g/cm^3 or greater.

HOOP STRESS: The circumferential stress imposed on a cylindrical wall by internal pressure loading.

IONIC CONTAMINATION: Electrically charged atoms or groups of atoms that can be a source of micro contamination in high purity water applications. Ionic contaminants are typically removed by the ion exchange (deionization) process (i.e. deionized water).

IMPACT STRENGTH: Resistance or mechanical energy absorbed by a plastic part to such shocks as dropping and hard blows.

IMPERMEABILITY: Permitting no passage into or through a material.

INJECTION MOLDING: Method of forming a plastic to the desired shape by forcing heat softened plastic into a relatively cool cavity where it rapidly solidifies.

KETONES: Compounds containing the carbonyl group (CO) to which is attached two alkyl groups. Ketones, such as methyl ethyl Ketone, are commonly used as solvents for resins and plastics.

LIGHT STABILITY: Ability of a plastic to retain its original color and physical properties upon exposure to sun or artificial light.

LIGHT TRANSMISSION: The amount of light that a plastic will pass.

LONGITUDINAL STRESS: The stress imposed on the long axis of any shape. It can be either a compressive or tensile stress.

LOW-DENSITY POLYETHYLENE PLASTICS (LDPE): *n*—those branched polyethylene plastics, q.v., having a standard density of 0.910 to 0.925 g/cm3.

LUBRICANT: A substance used to decrease the friction between solid faces, and sometimes used to improve processing characteristics of plastic compositions.

MODULUS: The load in pounds per square inch or kilos per square centimeter of initial cross sectional area necessary to produce a stated percentage elongation which is used in the physical testing of plastics.

MOISTURE RESISTANCE: Ability to resist absorption of water.

MONOMER: The simplest repeating structural unit of a polymer; for addition polymers this represents the original unpolymerized compound.

NON FLAMMABLE: Will not support combustion.

NON-PRESSURE RATED PIPE (NPR): Pipe designed for gravity-conveyed medium which must resist only intermittent static pressures and does not have a pressure rating.

NONRIGID PLASTIC: A plastic which has a stiffness or apparent modulus of elasticity of not over 10,000 psi at 23°C which is determined in accordance with the Standard Method of Test for Stiffness in Flexure of Plastics.

NON TOXIC: Non poisonous.

ORANGE PEEL: Uneven surface somewhat resembling an orange peel.

ORGANIC CHEMICAL: Originally applied to chemicals derived from living organisms, as distinguished from "inorganic" chemicals found in minerals and inanimate substances; modern chemists define organic chemicals more exactly as those, which contain the element carbon.

PHENOLIC RESINS: Resins made by reaction of a phenol compound or tar acid with an aldehyde; more commonly applied to thermosetting resins made from pure phenol.

PLASTIC: A material that contains as an essential ingredient an organic substance of large molecular weight, is solid in its finished state, and, at some stage in its manufacture or in its processing into finished articles, can be shaped by flow.

PLASTICITY: A property of plastics and resins which allows the material to be deformed continuously and permanently without rupture upon the application of a force that exceeds the yield value of the material.

Glossary of Terms

PLASTICIZER: A liquid or solid incorporated in natural and synthetic resins and related substances to develop such properties as resiliency, elasticity, and flexibility.

POLYETHYLENES: A class of resins formed by polymerizing ethylene, a gas obtained from petroleum hydrocarbons.

POLYMER: A product resulting from a chemical change involving the successive addition of a large number of relatively small molecules (monomer) to form the polymer, and whose molecular weight is usually a multiple of that of the original substance.

POLYMERIZATION: Chemical change resulting in the formation of a new compound whose molecular weight is usually a multiple of that of the original substance.

POLYPROPYLENE (PP): *n*—a polymer prepared by the polymerization of propylene as the sole monomer.

POLYVINYL CHLORIDE (PVC): Polymerized vinyl chloride, a synthetic resin, which when plasticized or softened with other chemicals has some rubber like properties. It is derived from acetylene and anhydrous hydrochloric acid.

POROSITY: Presence of numerous visible voids.

POWER FACTOR: The ratio of the power in watts delivered in an alternating current circuit (real power) to the volt-ampere input (apparent power). The power factor of insulation indicates the amount of the power input, which is consumed as a result of the impressed voltage forcing a small leakage current through the material.

PRESSURE RATING (PR): The estimated maximum water pressure the pipe is capable of withstanding continuously with a high degree of certainty that failure of the pipe will not occur.

PRIMER: An organic solvent or a blend of solvents, which enhances adhesion, applied to plastic pipe and fittings prior to application of a solvent cement.

QUICK BURST TEST: An internal pressure test designed to produce failure of a piping component over a relatively short period of time, usually measured in seconds. Quick Burst tests are typically specified as a 60 to 70 second test in applicable ASTM Standards for pipe and fittings.

RECYCLED PLASTIC: A thermoplastic material recovered from usually melt processed scrap of varying sources, sometimes completely different in form from their original state.

RESILIENCE: Usually regarded as another name for elasticity. While both terms are fundamentally related, there is a distinction in meaning. Elasticity is a general term used to describe the property of recovering original shape after a deformation. Resilience refers more to the energy of recovery; that is, a body may be elastic but not highly resilient.

RESIN: An organic substance, generally synthetic, which is used as a base material for the manufacture of some plastics.

RESISTIVITY: As related to high purity water systems, it is used to asses ionic contaminant concentrations by measuring opposition to the flow of electric current in the water, and is typically measured in meg-ohms (expressed as meg-ohm resistivity of the water) to quantify the water purity.

REWORK PLASTIC: A thermoplastic plastic from a manufacturer's own production that has been reground or pelletized for reuse by that same manufacturer.

RO WATER (REVERSE OSMOSIS): Water that has been stripped of contaminants (purified) through the reverse osmosis purification process. Reverse osmosis is a filtration process whereby pressurized feed water flows across a membrane. The filtered water is known as permeate because it has penetrated the membrane. The RO process removes most organic compounds, up to 99% of all ions, and is more efficient than many alternate water purification methods.

RIGID PLASTIC: A plastic which has a stiffness or apparent modulus of elasticity greater than 100,000 psi at 23°C when determined in accordance with the Standard Method of Test for Stiffness in Flexure of Plastics.

SIMULATED WEATHERING: The exposure of plastics to cyclic laboratory conditions of high and low temperatures, high and low relative humidities, and ultraviolet radiant energy in an attempt to produce changes in their properties similar to those observed on long time continuous exposure outdoors. The laboratory exposure conditions are usually intensified beyond those encountered in actual outdoor exposure in an attempt to achieve an accelerated effect.

SIMULATED AGING: The exposure of plastics to cyclic laboratory conditions of high and low temperatures, and high and low relative humidities in an attempt to produce changes in their properties similar to those observed on long time continuous exposure to conditions of temperature and relative humidity commonly encountered indoors or to obtain an acceleration of the effects of ordinary indoor exposure. The laboratory exposure conditions are usually intensified beyond those actually encountered in an attempt to achieve an accelerated effect.

SOLVENT: The medium within which a substance is dissolved; most commonly applied to liquids used to bring particular solids into solution, e.g., acetone is a solvent for PVC.

SOLVENT CEMENT: Dissolved plastic resin or compound in a suitable solvent or mixture of solvents. The solvent cement dissolves the surfaces of the pipe and fittings to form a bond (weld) between the mating surfaces provided the proper cement is used for the particular materials and proper techniques are followed.

SOLVENT CLEANER: An organic solvent used to remove foreign matter from the surface of plastic pipe and fittings.

SPECIFIC GRAVITY: Ratio of the mass of a body to the mass of an equal volume of water at 4°C, or some other specified temperature.

SPECIFIC HEAT: Ratio of the thermal capacity of a substance to that of water at 15°C.

STABILIZER: A chemical substance, which is frequently added to plastic compounds to inhibit undesirable changes in the material, such as discoloration due to heat or light.

STANDARD DIMENSION RATIOS (SDR): A specific ratio of the average specified outside diameter to the minimum specified wall thickness (D0/t) for outside diameter-controlled plastic pipe.

STATIC LEACH ANALYSIS: Relates to analytical testing of materials that are tested during exposure to UPW (or other test medium) under static or non-flowing conditions (soak). Test method is used to quantify the degree of micro contaminants that are extracted or "leached" from the material being immersed. Various test methods are utilized to quantify any leachates detected.

STRAIN: The change per unit of length in a linear dimension of a body, that accompanies a stress. Strain is a dimensionless quantity which may be measured conveniently in percent, in inches per inch, in millimeters per millimeter, etc.

Glossary of Terms

STRENGTH: The mechanical properties of a plastic, such as a load or weight carrying ability, and ability to withstand sharp blows. Strength properties include tensile, flexural, and tear strength, toughness, flexibility, etc.

STRESS CRACK: External or internal cracks in a plastic caused by tensile stresses less than that of its short time mechanical strength.

STYRENE PLASTICS: Plastics based on polymers of styrene or copolymers of styrene with other monomers, the styrene being the greatest amount by mass.

SUSTAINED PRESSURE TEST: A constant internal pressure test for an extended period of time. One thousand hours is a commonly used period of time in pipe and fitting tests.

TEAR STRENGTH: Resistance of a material to tearing (strength).

TENSILE STRENGTH: The capacity of a material to resist a force tending to stretch it. Ordinarily the term is used to denote the force required to stretch a material to rupture, and is known variously as “breaking load”, “breaking stress”, “ultimate tensile strength", and sometimes erroneously as “breaking strain”. In plastics testing, it is the load in pounds per square inch or kilos per square centimeter of original cross-sectional area, supported at the moment of rupture by a piece of test sample on being elongated.

THERMAL CONDUCTIVITY: Capacity of a plastic material to conduct heat.

THERMAL EXPANSION: The increase in length of a dimension under the influence of a change in temperature.

THERMOPLASTIC MATERIALS: Plastic materials that repeatedly can be softened by heating and hardened by cooling through a temperature range characteristic of the plastic, and that in the softened state can be shaped by flow into articles by molding or extrusion.

THERMOSET MATERIALS: Plastic materials, which undergo a chemical change and harden permanently when heated in processing. Further heating will not soften these materials.

TOTAL ORGANIC CARBON (TOC): A measurement of total organic carbon (synonymous with total oxidizable carbon and total organic chemicals) that is used to quantify organic contamination present in water. Organic matter plays a major role in water systems, as it affects biogeochemical processes, nutrient cycling, biological availability, chemical transport and interactions. It also has direct implications in the planning of water treatment and equipment. Organic matter content is typically measured as total organic carbon and dissolved organic carbon. Organic matter in water consists of thousands of components, including macroscopic particles, colloids, dissolved macromolecules, and specific compounds. As a result, the concentration of TOC’s present within the water can be of a concern in high purity water as it is a form of micro contamination.

TRANSLUCENT: Permitting the passage of light, but diffusing it so that objects beyond cannot be clearly distinguished.

VINYL CHLORIDE PLASTICS: Plastics based on resins made by the polymerization of vinyl chloride or co polymerization of vinyl chloride with minor amounts (not over 50 per cent) of other unsaturated compounds.

ULTRAPURE WATER (UPW): Water that has been purified by various methods and/or combination of methods (i.e. Reverse Osmosis, deionization etc.). The produced water is extremely pure and contains no to very low concentration of salts, organic/pyrogene components, oxygen, suspended solids and bacteria. Water quality standards are used to define the purity requirements of the UPW based on the intended application. Ultrapure water is a very aggressive cleaning agent and is used in a variety of industries (semiconductor, pharmaceutical, health care, electronics etc.) where maintaining high purity is a requirement.

VINYL PLASTICS: Plastics based on resins made from vinyl monomers, except those specifically covered by other classifications, such as acrylic and styrene plastics. Typical vinyl plastics are polyvinyl chloride, polyvinyl acetate, polyvinyl alcohol, and polyvinyl butyral, and copolymers of vinyl monomers with unsaturated compounds.

VIRGIN PLASTIC: A plastic material in the form of pellets, granules, powder, or liquid that has not been subjected to use or processing other than that required for its initial manufacture.

VISCOSITY: The property of resistance to flow exhibited within the body of a material.

VOLATILE: Property of liquids to pass away by evaporation.

VOLUME RESISTIVITY: The electrical resistance of a 1 centimeter cube of the material expressed in ohm centimeters.

WATER ABSORPTION: The percentages by weight of water absorbed by a sample immersed in water. Dependent upon area exposed.

WATER VAPOR TRANSMISSION: The penetration of a plastic by moisture in the air.

WEATHER RESISTANCE: The ability of a plastic to retain its original physical properties and appearance under prolonged exposure to outdoor weather.

WELDING: The joining of two or more pieces of plastic by fusion of the material in the pieces at adjoining or nearby areas either with or without the addition of plastic from another source.

YIELD POINT: The point at which a material will continue to elongate at no substantial increase in load during a short test period.

YIELD STRESS: The force, which must be applied to a plastic to initiate flow.

Blue 75™ Thread Sealant

PRICING

Blue 75™ Thread Sealant

Formulated, Designed & Tested for Plastic Piping Products

While many thread sealants and pipe joint compounds claim to be suitable for use with plastics, several have been found to produce stress cracking due to chemical incompatibility. Improper application of TFE tape sealants can result in over-stressed threaded connections and potential joint failures. Research has proven Spears® BLUE 75™ thread sealant to be the superior choice for reliable joint make-up of all Spears® thermoplastic piping products.

- Non-Hardening, Lubricating Anti-Seize Formulation
- Safe, Non-Toxic, Lead & Silicone Free
- Non-Corrosive, Non-Conductive
- Convenient Packaging Availability
- Specially Designed for Spears® Threaded Fittings & Valves
- Suitable for Use in Connecting other Metallic Fittings or Valves to PVC or CPVC Fittings or Valves
- NSF® Certified for use with potable water

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Blue 75™ Thread Sealant					
SB75-005	**1/4 Pint**	24	0	895	10.46
SB75-010	**1/2 Pint**	24	0	895	16.66
SB75-020	**Pint**	12	0	895	26.94
SB75-030	**Quart**	12	0	895	48.41

Low VOC Solvent Cements, Primers & Accessories

PRICING

Spears® Low VOC Solvent Cements & Primers & PVC Low VOC Cements

Professional grade solvent cements developed for contractors' essential needs in joining PVC, CPVC and ABS pipe and fittings.

- NSF® Certified & Listed for use in piping applications such as potable water, turf, irrigation, pool & spa, industrial, plumbing, DWV, and/or sewer, plus special applications including fire protection, chemical waste, and ultra-pure water.
- Meets ASTM Standards for solvent cements and primers used for plastic pipe installation.
- Environmentally friendly. LEED® Compliant (Leadership in Energy and Environmental Design). Credit can be gained through the use of Spears® Low VOC products. This program, developed by the US Green Building Council, uses SCAQMD Rule 1168 as a benchmark to qualify one credit toward LEED® certification for green building.

PVC Low VOC Cements

Regular, Medium, heavy and extra heavy bodied cements are specifically formulated for PVC pipe in virtually every schedule and in sizes with interference fit to 30" diameter.

- Low VOC emissions comply with *SCAQMD Rule 1168/316A*
- 3-Year Shelf Life

PVC-00 CLEAR: Regular bodied, fast setting PVC cement for all classes and schedules (except Schedule 80) with interference fit through 4". Excellent for plumbing, DWV, irrigation, electrical conduit, pool & spa and PVC foam core pipe. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.

PVC-00 Clear Regular Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PVC00C-005	**1/4 Pint**	24	0	705	6.55
PVC00C-010	**1/2 Pint**	24	0	705	9.52
PVC00C-020	**Pint**	12	0	705	14.67
PVC00C-030	**Quart**	12	0	705	24.75
PVC00C-040	**Gallon**	6	0	705	80.35

PVC-02 CLEAR: Regular bodied, fast setting PVC cement for all classes and schedules (except Schedule 80) with interference fit through 4" diameter. Goes on clear, dries clearest and is slightly thicker than PVC-00. Excellent for plumbing, DWV, irrigation, electrical conduit, pool & spa and PVC foam core pipe. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.

PVC-02 Clear Regular Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PVC02C-005	**1/4 Pint**	24	0	705	7.27
PVC02C-010	**1/2 Pint**	24	0	705	10.58
PVC02C-020	**Pint**	12	0	705	16.29
PVC02C-030	**Quart**	12	0	705	27.49
PVC02C-040	**Gallon**	6	0	705	89.19

PVC-05 CLEAR: Medium bodied, fast setting, PVC cement for all classes and schedules with interference fit through 6" diameter and Schedule 80 through 4" diameter in industrial, plumbing, DWV, irrigation, electrical conduit, pool & spa and PVC foam core pipe. Can be used without primer on non-pressure systems if local code permits. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.

PVC-05 Clear Medium Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PVC05C-005	**1/4 Pint**	24	0	705	7.39
PVC05C-010	**1/2 Pint**	24	0	705	10.69
PVC05C-020	**Pint**	12	0	705	18.76
PVC05C-030	**Quart**	12	0	705	29.84
PVC05C-040	**Gallon**	6	0	705	101.68

PVC-21 BLUE: Medium bodied, fast setting, high strength PVC cement. It is suitable for use on rigid PVC with interference fit Schedule 40 thru 6" and Schedule 80 thru 4". Can be used without primer on PVC Schedule 40 and SDR pressure water piping systems through 4" if local code permits. Do not use PVC-21 without primer in any other application, schedule, or size such as Schedule 80 industrial applications. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.

PVC-21 Blue Medium Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PVC21B-005	**1/4 Pint**	24	0	705	7.89
PVC21B-010	**1/2 Pint**	24	0	705	12.99
PVC21B-020	**Pint**	12	0	705	22.23
PVC21B-030	**Quart**	12	0	705	37.35
PVC21B-040	**Gallon**	6	0	705	128.39

PVC-25 AQUA BLUE WET-N-DRY: (will fade to CLEAR in sunlight) Medium bodied, very fast setting PVC cement for all classes and schedules with interference fit through 6" diameter and Schedule 80 through 4" diameter. Formulated for wet conditions and quick pressurization. Designed for irrigation, plumbing, and pool & spa applications. Can be used without primer on non-pressure systems if local code permits. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.

PVC-25 Aqua Blue Wet-N-Dry Medium Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PVC25B-005	**1/4 Pint**	24	0	705	7.89
PVC25B-010	**1/2 Pint**	24	0	705	12.82
PVC25B-020	**Pint**	12	0	705	21.83
PVC25B-030	**Quart**	12	0	705	36.56
PVC25B-040	**Gallon**	6	0	705	126.09

PVC-26 BLUE POOL-PRO™: (will fade to CLEAR in sunlight) Medium bodied, very fast setting PVC cement for all classes and schedules with interference fit through 6" diameter and Schedule 80 through 4" diameter. Specially formulated for pool maintenance and repair - wet or quick pressurization conditions. Can be used without primer on non-pressure systems if local code permits. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.

PVC-26 Blue POOL-PRO™ Medium Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PVC26B-005	**1/4 Pint**	24	0	705	7.89
PVC26B-010	**1/2 Pint**	24	0	705	12.82
PVC26B-020	**Pint**	12	0	705	21.83
PVC26B-030	**Quart**	12	0	705	36.56
PVC26B-040	**Gallon**	6	0	705	126.09

PVC-27 CLEAR COLD-N-HOT: Medium bodied, very fast setting, PVC cement for all classes and schedules with interference fit through 6" diameter, Schedule 80 through 4" diameter. Formulated for -15°F to 110°F (-26°C to 43°C) weather conditions. Designed for industrial, plumbing, irrigation, pool & spa, electrical conduit and PVC foam core pipe. Can be used without primer on non-pressure systems if local code permits. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.

PVC-27 Clear Cold-N-Hot Medium Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PVC27C-020	**Pint**	12	0	705	22.79
PVC27C-030	**Quart**	12	0	705	38.36
PVC27C-040	**Gallon**	6	0	705	133.09

PVC-50 HOT BLUE: Medium bodied, very fast setting, high strength PVC cement. Can be used on PVC with interference fit for Schedule 40 thru 6" and Schedule 80 thru 4". Hot Blue premium all-weather formulation is excellent for use in challenging conditions including wet, damp or cold temperatures in irrigation, plumbing DWV, pool & spa, and non-pressure applications. PVC-50 may be used without primer on Schedule 40 pipe and fittings if local code permits. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.

PVC-50 HOT BLUE Medium Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PVC50B-005	**1/4 Pint**	24	0	705	7.12
PVC50B-010	**1/2 Pint**	24	0	705	11.71
PVC50B-020	**Pint**	12	0	705	20.04
PVC50B-030	**Quart**	12	0	705	33.65
PVC50B-040	**Gallon**	6	0	705	115.67

PVC-95 CLEAR/BLUE Flexible: Medium bodied, fast setting PVC cement specially formulated for use on flex-to-flex and flex-to-rigid PVC connections with interference fit through 6" and Schedule 80 through 3". Maintains high-strength, flexible joints. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.

PVC-95 Clear Medium Body Flexible PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PVC95C-005	**1/4 Pint**	24	0	705	8.96
PVC95C-010	**1/2 Pint**	24	0	705	13.33
PVC95C-020	**Pint**	12	0	705	22.79
PVC95C-030	**Quart**	12	0	705	38.46
PVC95C-040	**Gallon**	6	0	705	133.09

PVC-95 Blue Medium Body Flexible PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PVC95B-030	**Quart**	12	0	705	38.36
PVC95B-040	**Gallon**	6	0	705	133.09

PVC-11 GRAY: Heavy bodied, medium setting PVC cement for all classes and schedules with interference fit through 12" diameter. Medium set allows more working time in warm weather and has good gap filling properties. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code, CSA B137.3, B181.2.

PVC-11 Gray Heavy Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PVC11G-010	**1/2 Pint**	24	0	706	17.47
PVC11G-020	**Pint**	12	0	706	23.29
PVC11G-030	**Quart**	12	0	706	39.19
PVC11G-040	**Gallon**	6	0	706	132.53

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

PVC-17 CLEAR/GRAY: Heavy bodied, medium setting PVC cement for all classes and schedules with interference fit through 12" diameter (non-pressure applications only up to 18"). Medium set allows more working time in warm weather and has good gap filling properties. Designed for plumbing, industrial, pool, irrigation and electrical piping systems. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P.Code (Clear/Gray); CSA B137.3, B181.2 (Gray only).

PVC-17 Gray Heavy Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PVC17G-010	**1/2 Pint**	24	0	706	13.11
PVC17G-020	**Pint**	12	0	706	23.01
PVC17G-030	**Quart**	12	0	706	38.85
PVC17G-040	**Gallon**	6	0	706	130.91

PVC-17 Clear Heavy Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PVC17C-010	**1/2 Pint**	24	0	706	13.11
PVC17C-020	**Pint**	12	0	706	23.01
PVC17C-030	**Quart**	12	0	706	38.85
PVC17C-040	**Gallon**	6	0	706	130.91

PVC-19 WHITE/GRAY: Extra heavy bodied, slow setting PVC cement for all classes and schedules with interference fit through 30" diameter. Designed for large size piping systems requiring high gap filling properties such as industrial piping and fitting fabrication in pressure and non-pressure applications. Listings: ASTM D2564, NSF®-PW, DWV, SW, U.P. Code, CSA (Gray Only) B137.3, B181.2.

PVC-19 White Extra-Heavy Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PVC19W-020	**Pint**	12	0	706	35.20
PVC19W-030	**Quart**	12	0	706	46.92
PVC19W-040	**Gallon**	4	0	706	154.71
PVC19W-040-F*	**Gallon**	6	0	706	154.71
PVC19W-050	**5 Gallon**	1	0	706	668.81

* PVC-19 Cement in 1-Gallon size is offered in both round Paint Type can or rectangular F-Type can which has part number ending in "-F"

PVC-19 Gray Extra-Heavy Body PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PVC19G-020	**Pint**	12	0	706	35.20
PVC19G-030	**Quart**	12	0	706	46.92
PVC19G-040	**Gallon**	4	0	706	154.71

PVC-19 Gray Extra-Heavy Body PVC Cement (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PVC19G-040-F*	**Gallon**	6	0	706	154.71
PVC19G-050	**5 Gallon**	1	0	706	668.81

* PVC-19 Cement in 1-Gallon size is offered in both round Paint Type can or rectangular F-Type can which has part number ending in "-F"

CPVC Low VOC Cements

CPVC-24 GRAY/ORANGE: Heavy bodied, medium setting CPVC cement for all classes and schedules with interference fit through 24" diameter. High-strength, chemical-resistant solvent cement for use with CPVC piping systems carrying acids, bases, salts, and sodium hypochlorite. Ideal for use in waste water plants. Recommended for use on PVC industrial piping systems for chemical applications; best choice for both PVC and CPVC fume & air duct systems. Listings: ASTM F493, NSF®-PW, DWV, SW, U.P. Code.

The Most Chemically Resistant Cement Available for Both PVC & CPVC Applications

CPVC-24 Gray Heavy Body CPVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
CPVC24G-005	**1/4 Pint**	24	0	707	9.01
CPVC24G-010	**1/2 Pint**	24	0	707	14.34
CPVC24G-020	**Pint**	12	0	707	26.09
CPVC24G-030	**Quart**	12	0	707	46.08
CPVC24G-040	**Gallon**	6	0	707	159.13

CPVC-24 Orange Heavy Body CPVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
CPVC24O-005	**1/4 Pint**	24	0	707	9.01
CPVC24O-010	**1/2 Pint**	24	0	707	14.34
CPVC24O-020	**Pint**	12	0	707	26.09
CPVC24O-030	**Quart**	12	0	707	46.08
CPVC24O-040	**Gallon**	6	0	707	159.13

CTS-5 EverTUFF® YELLOW: Medium bodied, fast setting cement for copper tube size pipe and fittings with interference fit through 2" diameter. ONE STEP CEMENT - formulated for use without primer if local code permits. Listings: ASTM F493/D2846, NSF®-PW, DWV, SW, U.P. Code, CSA B137.6, B181.2.

Approved for All Copper Tube Size (CTS) Hot & Cold Water Distribution Systems, Including Spears® EverTUFF® and Competitors'

CTS-5 EverTUFF® One-Step CTS CPVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
CTS5-005	**1/4 Pint**	24	0	701	9.01
CTS5-010	**1/2 Pint**	24	0	701	14.34
CTS5-020	**Pint**	12	0	701	23.23
CTS5-030	**Quart**	12	0	701	40.42
CTS5-040	**Gallon**	6	0	701	138.29

FS-5 RED: One-Step (no primer required) CPVC cement specifically formulated and approved for use with Spears® FlameGuard® and other approved CPVC Fire Sprinkler Products with interference fit through 3". See publication FG-3, FlameGuard® Installation Instructions for additional application details. Listings: ASTM F493, NSF®-PW, DWV, SW, U.P. Code, UL®, FM® Approved.

FS-5 FlameGuard® One-Step CPVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
FS5-020	**Pint**	12	0	703	28.25
FS5-030	**Quart**	12	0	703	51.83

LW-5 MUSTARD: One-Step (no primer required) CPVC cement specifically formulated and approved for use with Spears® **LabWaste**™ CPVC Corrosive Waste Drainage System Products with interference fit through 24". See Publication LW-4, Technical Information, for application details. Listings: ASTM F493, NSF®-CW, PW, DWV, SW, U.P. Code, ICC-ES PMG.

The Only Chemically Resistant Cement Approved for Spears® **LabWaste**™

LW-5 LabWaste™ One-Step CPVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
LW5-020	**Pint**	12	0	704	45.51
LW5-030	**Quart**	12	0	704	60.67
LW5-040	**Gallon**	6	0	704	246.82
LW5-050	**5 Gallon**	1	0	704	1234.15

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

ABS Low VOC Cements & ABS to PVC Transition & Multi Purpose Low VOC Cements

ABS cements are specially formulated for rigid ABS pipe and fittings in all classes, schedules and fittings having interference type sockets. These medium-bodied, fast setting cements are used for all classes and schedules with interference fit through 8" diameter in ABS drain, waste and vent systems (DWV), and sewer applications. Do not use primer on ABS pipe and fittings.

- Low VOC emissions comply with *SCAQMD Rule 1168/316A*
- 3-Year Shelf Life

ABS-73 BLACK: Medium bodied, fast setting, high strength ABS solvent cement for all classes and schedules of pipe and fittings with interference fit through 8" diameter. Listings: ASTM D2235, NSF®-DWV, SW, U.P. Code.

ABS-73 Black Medium Body ABS Cement

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
ABS73B-005	**1/4 Pint**	24	0	708	7.27
ABS73B-010	**1/2 Pint**	24	0	708	9.80
ABS73B-020	**Pint**	12	0	708	16.35
ABS73B-030	**Quart**	12	0	708	26.77
ABS73B-040	**Gallon**	6	0	708	89.76

ABS-71 YELLOW/MILKY: Medium bodied, fast setting, high strength ABS solvent cement for all classes and schedules of pipe and fittings with interference fit through 8" diameter. Listings: ASTM D2235, NSF®-DWV, SW, U.P. Code, CSA (Yellow Only) B181.1.

ABS-71 Yellow Medium Body ABS Cement

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
ABS71Y-005	**1/4 Pint**	24	0	708	8.64
ABS71Y-010	**1/2 Pint**	24	0	708	10.33
ABS71Y-020	**Pint**	12	0	708	18.14
ABS71Y-030	**Quart**	12	0	708	30.91
ABS71Y-040	**Gallon**	6	0	708	105.15

ABS-71 Milky Medium Body ABS Cement

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
ABS71M-005	**1/4 Pint**	24	0	708	8.64
ABS71M-010	**1/2 Pint**	24	0	708	10.33
ABS71M-020	**Pint**	24	0	708	18.14
ABS71M-030	**Quart**	24	0	708	30.91
ABS71M-040	**Gallon**	24	0	708	105.15

ABS to PVC Transition & Multi Purpose Low VOC Cements

ABS TO PVC-94 ABS-PVC GREEN: Medium bodied, fast setting transition cement for all classes and schedules with interference fit through 6" diameter (not for Schedule 80). Specifically designed for use on ABS to PVC transition joints in non-pressure systems. Suitable for sewer and DWV applications. Listings: ASTM D3138, NSF®-DWV, SW, U.P. Code.

MP-90 MULTI-PURPOSE CLEAR: Medium bodied, fast setting, multi-purpose cement for all classes and schedules with interference fit through 6" diameter, Schedule 80 through 4" diameter. High-strength cement for PVC and CPVC pressure and on ABS and styrene low-pressure systems.

ABS TO PVC-94 Green Medium Body ABS to PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
TRAN94G-005	**1/4 Pint**	24	0	708	8.96
TRAN94G-010	**1/2 Pint**	24	0	708	13.11
TRAN94G-020	**Pint**	12	0	708	21.34
TRAN94G-030	**Quart**	12	0	708	36.73
TRAN94G-040	**Gallon**	6	0	708	120.66

MP-90 Clear Multi-Purpose Cement

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
MP90C-005	**1/4 Pint**	24	0	708	8.45
MP90C-010	**1/2 Pint**	24	0	708	12.38
MP90C-020	**Pint**	12	0	708	20.77
MP90C-030	**Quart**	12	0	708	34.66

Low Extractable Cement

LX-5 Clear: One-Step (no primer required) PVC cement specifically formulated for use with Spears® Low Extractable PVC piping, with interference fit through 6". Unlike conventional PVC solvent cements, LX-5 contains fewer contaminants and cures quickly to reduce potential for TOC contamination. See publication LX-4, Low-Extractable Ultra Pure Water Systems, for application details.

- 3-Year Shelf Life

LX-5 Low Extractable One-Step PVC Cement

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
LX5C-020	**Pint**	12	0	702	31.92
LX5C-030	**Quart**	12	0	702	51.48

Low VOC Solvent Primers & Cleaners

Primers are used for the surface preparation of plastic pipe and fittings, which is necessary for the proper solvent welding of these materials. Cleaner aids in pre-cleaning to remove oil and grease.

- All Spears® Primers and Cleaners are low VOC products, which are environmentally friendly with lower emissions and reduced odor, surpassing the most stringent regulations and comply with *SCAQMD Rule 1168/316A*.
- Spears® Primers are certified for use with potable water by NSF® International.
- 3-Year Shelf Life

PRIMER-68 PURPLE/CLEAR: Essential for proper softening and preparation of PVC and CPVC pipe and fitting surfaces. Choose from Clear or Purple color which provides positive identification that a primer was used (check local code requirements). Listings: ASTM F656, NSF®-PW, DWV, SW, U.P. Code (Purple Only).

PRIMER-68 Clear Primer

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PRIM68C-005	**1/4 Pint**	24	0	709	7.27
PRIM68C-010	**1/2 Pint**	24	0	709	9.85
PRIM68C-020	**Pint**	12	0	709	18.25
PRIM68C-030	**Quart**	12	0	709	30.46
PRIM68C-040	**Gallon**	6	0	709	91.82

PRIMER-68 Purple Primer

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PRIM68P-005	**1/4 Pint**	24	0	709	7.27
PRIM68P-010	**1/2 Pint**	24	0	709	9.85
PRIM68P-020	**Pint**	12	0	709	18.25
PRIM68P-030	**Quart**	12	0	709	30.46
PRIM68P-040	**Gallon**	6	0	709	91.82

PRIMER-70 INDUSTRIAL GRADE PURPLE/CLEAR: Premium, industrial strength primer essential for proper softening and preparation of PVC and CPVC pipe and fitting surfaces. Specially recommended for use on Schedule 80 (150 psi and higher) and large size pipe. Excellent for cold weather applications. Listings: ASTM F656, NSF®-PW, DWV, SW, U.P. Code (Purple Only).

PRIMER-70 Clear Industrial Strength Primer

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PRIM70C-005	**1/4 Pint**	24	0	709	7.89
PRIM70C-010	**1/2 Pint**	24	0	709	10.75
PRIM70C-020	**Pint**	12	0	709	21.51
PRIM70C-030	**Quart**	12	0	709	34.83
PRIM70C-040	**Gallon**	6	0	709	114.44

PRIMER-70 Purple Industrial Strength Primer

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
PRIM70P-005	**1/4 Pint**	24	0	709	7.89
PRIM70P-010	**1/2 Pint**	24	0	709	10.75
PRIM70P-020	**Pint**	12	0	709	21.51
PRIM70P-030	**Quart**	12	0	709	34.83
PRIM70P-040	**Gallon**	6	0	709	114.44

CLEANER-65 CLEAR CLEANER: Water-thin cleaner recommended for use before priming of pipe and fittings to remove dirt, oil and grease from the bonding surfaces of PVC, CPVC, ABS and Styrene.

CLEANER-65 Clear Cleaner

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
CLEAN65-005	**1/4 Pint**	24	0	709	5.82
CLEAN65-010	**1/2 Pint**	24	0	709	8.67
CLEAN65-020	**Pint**	12	0	709	15.06
CLEAN65-030	**Quart**	12	0	709	22.12
CLEAN65-040	**Gallon**	6	0	709	70.83

Applicators & Accessories

Can-Mate Kit

Includes Plastic Carrier Strap and two (2) Can-Mate 150 adjustable Daubers. Provides convenient carrying of ½ pint, pint or quart cans of cement and primer.

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
CM-KIT	**2 @1-1/4"**	24	0	710	13.78

Can-Mate Daubers

Adjustable Plastic Applicator with Telescoping Stem for use with Standard 1/2 Pint, Pint and Quart Cans.

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
See application footnote below					
CM-50	**1/2"**	50	0	710	5.26
CM-75	**3/4"**	50	0	710	5.26
CM-150	**1-1/4"**	50	0	710	5.26

1/2" Diameter for pipe sizes up to 1"

3/4" Diameter for pipe size to 1-1/2"

1-1/4" Diameter for pipe size 1-1/2" to 3"

Cap Daubers

Fits 1-3/4" Neck Cans. Size by Dauber Diameter and Can Fitment.

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
See application footnotes below					
DQP-50	**1/2" for 1/4 Pint**	50	400	710	1.45
DQP-75	**3/4" for 1/4 Pint**	50	0	710	1.45
DHP-38	**3/8" for 1/2 Pint**	50	400	710	1.23
DHP-50	**1/2" for 1/2 Pint**	50	400	710	1.23
DHP-75	**3/4" for 1/2 Pint**	50	0	710	1.31
DP-62	**5/8" for Pint**	50	0	710	1.45
DP-75	**3/4" for Pint**	50	0	710	1.31
DP-125	**1-1/4" for Pint**	50	0	710	1.58
DQ-62	**5/8" for Quart**	50	0	710	1.45
DQ-75	**3/4" for Quart**	50	0	710	1.23
DQ-125	**1-1/4" for Quart**	50	0	710	1.58

3/8" Diameter for pipe sizes to 3/4"
1/2" Diameter for pipe sizes to 1";
5/8" Diameter for pipe sizes to 1-1/4"
3/4" Diameter for pipe size to 1-1/2"
1-1/4" Diameter for pipe size 1-1/2" to 3"

Small-Cap Swab

Fits 1-3/4" Neck Quart Cans (MT-651). 4" length for pipe size 3" to 8".

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
5020	**4" Length**	24	0	710	14.89

Large-Cap Swab

Fits 2-7/8" Neck Gallon Can (MT-648). For pipe size 6" & larger.

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4020	**4" Length**	24	0	710	21.96

Swab with Heavy Handle

For pipe size 6" & larger

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4520	**4" length**	12	0	710	18.59

Small-Cap Roller

Fits 1-3/4" Neck Quart Cans (MT-651). Replaceable cover. For pipe size 3" to 6".

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
6020	**4" length**	24	0	710	14.93

Can Roller

Fits Paint Type Quart Can (MT-653). For use with pipe sizes 3" to 6".

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
3020	**3" length**	20	0	710	16.03

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

SOLVENT CEMENT & ACCESSORIES

TECHNICAL INFORMATION

Contact Spears® for any information not found.

Spears® Low VOC Solvent Cements, Primers & Accessories

Professional grade solvent cements developed for contractors' essential needs in joining PVC, CPVC and ABS pipe and fittings. Available in 1/4 pints, 1/2 pints, pints, quarts, gallons, and 5 gallons according to cement type. Plus a full assortment of daubers, swabs, rollers, brushes, cans and accessories.

All Low VOC for LEED® Credit

Environmentally friendly. LEED® Compliant (Leadership in Energy and Environmental Design). Credit can be gained through the use of Spears® Low VOC products. This program, developed by the US Green Building Council, uses SCAQMD Rule 1168 as a benchmark to qualify one credit toward LEED® certification for green building.

NSF® Certified & Listed

Listed for use in piping applications such as potable water, turf, irrigation, pool & spa, industrial, plumbing, DWV, and/or sewer plus special applications including fire protection, chemical waste, and ultra-pure water. Certified as applicable to the Uniform Plumbing Code (NSF® U.P.Code) and CSA B181.2 B137.3 requirements – see specific listings.

Certified to ASTM Standards

Certified by NSF International to ASTM D 2564 for PVC Solvent Cements, F 493 for CPVC Solvent Cements, D 2235 for ABS Solvent Cements, D 3138 for ABS To PVC Solvent Cements and F 656 for Primers.

Cements for Specialty Systems

Specialty Cements formulated for special systems such as Copper Tube Size (CTS) Hot & Cold Water Distribution Systems, LabWaste™ CPVC Corrosive Waste Drainage Systems, FlameGuard® CPVC Fire Sprinkler Systems, and Low Extractable PVC Ultra High Purity Water Systems.

Cements for Special Applications

Solvent cements specially formulated for a variety of environmental applications, such as POOL-PRO™ for PVC Pool & Spa applications, Wet-N-Dry for other PVC high moisture conditions, CPVC-24 the most Chemically Resistant cement available for both CPVC & PVC chemical applications, Transition cement for ABS to PVC, Multi-Purpose cement for use on PVC, CPVC, ABS & Styrene, and Hot Blue cement for PVC installation in challenging conditions including wet, damp or cold temperatures requiring rapid set and fast drying.

Progressive Products From Spears® Innovation & Technology

Spears® Solvent Cement & Primer

QUICK VIEW SELECTION GUIIDE

Type	Body	Product	Color	Relative Set	Capacity	Features
PVC	Regular	PVC-00	Clear	Fast	Schedule 40 - 4"	
		PVC-02	Clear	Fast	Schedule 40 - 4"	Dries Clearest, slightly thicker than PVC-00
	Medium	PVC-05	Clear/Gray	Fast	All Classes & Schedule 40 - 6" Schedule 80 - 4"	*Industrial Duty* Primerless Capability[1]
		PVC-21	Blue	Fast	Schedule 40 - 6" Schedule 80 - 4"	Primerless Capability[1]
	Heavy	PVC-11	Gray	Medium	All Classes & Schedules - 12"	*Industrial Duty*
		PVC-17	Clear/ Gray	Medium	All Classes & Schedules - 12" Non-pressure - 18"	*Industrial Duty*
	Extra Heavy	PVC-19	White/ Gray	Slow	All Classes & Schedules Requiring High Gap Filling - 30"	*Industrial Duty*
	Specialty Cements	PVC-25	Aqua Blue	Very Fast	All Classes & Schedule 40 - 6" Schedule 80 - 4"	Wet-N-Dry Formulation Primerless Capability[1]
		PVC-26	Blue	Very Fast	All Classes & Schedule 40 - 6" Schedule 80 - 4"	POOL-PRO™ Formulation for Pool & Spa Primerless Capability.[1] Fades to clears as it cures.
		PVC-27	Clear	Very Fast	All Classes & Schedule 40 - 6" Schedule 80 - 4"	Cold-N-Hot Formulation -15°F to 110°F Primerless Capability[1]
		PVC-37	Blue	Very Fast	All Classes & Schedules - 6" Schedule 80 - 4"	Formulated for Wet Conditions Primerless Capability[1]
		PVC-50	Blue	Very Fast	Schedule 40 - 6" Schedule 80 - 4"	HOT PVC Formulation Primerless Capability[1]
		PVC-95	Clear/ Blue	Fast	All Classes & Schedule 40 - 6" Schedule 80 - 4"	Flexible PVC for Flex-Flex, Flex-Rigid Joints
		LX-5	Clear	Fast	Low Extractable PVC Systems - 6"	One Step[2] Low Extractable, High Purity Cement
CPVC	Heavy	CPVC-24	Gray/ Orange	Medium	All Classes & Schedules PVC or CPVC - All Sizes	**Most Versatile, Chemically Resistant Cement for both CPVC & PVC Systems - including Duct -** *Industrial Duty*
	Specialty Cements	LW-5	Mustard	Medium	LabWaste™ CPVC Drainage Systems - 24"	One Step[2] Cement -Only **LabWaste™** System Chemically Approved Cement
		FS-5	Red	Fast	CPVC Fire Sprinkler Systems - 3"	One-Step[2] Cement for all CPVC Fire Sprinkler Systems
		CTS-5	Yellow	Fast	CTS CPVC Systems - 2"	One-Step[2] Cement for all CTS CPVC Systems
ABS	Medium	ABS-71	Yellow/ Milky	Fast	All ABS Classes & Schedules - 8"	
		ABS-73	Black	Fast	All ABS Classes & Schedules - 8"	
Transition & Multipurpose	Medium	ABS TO PVC-94	Green	Fast	All Classes & Schedules - 6" (Except Schedule 80)	For ABS-to-PVC Transition Joints
		MULTIPURPOSE-90	Clear	Fast	All Classes & Schedules - 6" Schedule 80 - 4"	For PVC and CPVC pressure ABS and Styrene low-pressure systems
Primers & Cleaners		Primer-75	Aqua Blue		All Classes, Schedules & Sizes PVC & CPVC	Formulated for Wet Conditions *Industrial Duty*
		Primer-70	Purple/ Clear		All Classes, Schedules & Sizes PVC & CPVC	*Industrial Duty*
		Primer-68	Purple/ Clear		All Classes, Schedules & Sizes PVC & CPVC	
		Cleaner-65	Clear		All Classes, Schedules & Sizes PVC & CPVC	For PVC, CPVC, ABS or Styrene
		Primer Cleaner-64	Purple		All Classes, Schedules & Sizes PVC & CPVC	

Notes

1= Primerless Capability indicates a cement can be used without primer in certain applications if local code permits. See specific cement information for further restrictions.
2 = One Step designates a cement specifically designed for use without primer. CTS One Step acceptability depends on local code requirements.
CTS = Copper Tube Size, ASTM D2846 Hot and Cold Water Distribution Systems.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg

Low VOC PVC Cements

Regular, Medium, heavy and extra heavy bodied cements are specifically formulated for PVC pipe in virtually every schedule and in sizes with interference fit to 30" diameter.

- Low VOC emissions comply with SCAQMD Rule 1168/316A
- 3-Year Shelf Life

PVC SOLVENT CEMENTS	Std. Pkg.*	Pipe Size	Set Time	Available Color	Industry Listing	Features
PVC-00 CLEAR Regular bodied. Excellent for plumbing, DWV, irrigation, electrical conduit pool & spa and PVC foam core pipe.	1/4 Pint 1/2 Pint Pint Quart Gallon	• 4" – All classes and schedules (except Schedule 80)	Fast	CLEAR	ASTM D2564, NSF®-PW, DWV, SW, U.P. Code	---
PVC-02 CLEAR Regular bodied. Excellent for plumbing, DWV, irrigation, electrical conduit pool & spa and PVC foam core pipe.	1/4 Pint 1/2 Pint Pint Quart Gallon	• 4" – All classes and schedules (except Schedule 80)	Fast	CLEAR	ASTM D2564, NSF®-PW, DWV, SW, U.P. Code	Dries Clearest slightly thicker than PVC-00
PVC-05 CLEAR/GRAY Medium bodied. Designed for Industrial, plumbing, DWV, irrigation, electrical conduit pool & spa and PVC foam core pipe.	1/4 Pint 1/2 Pint Pint Quart Gallon	• 6" – All classes and schedules • 4" – Schedule 80	Fast	CLEAR	ASTM D2564, NSF®-PW, DWV, SW, U.P. Code	**Industrial Duty** Primerless Capability[1]
PVC-21 BLUE Medium bodied. High strength PVC cement suitable for use on rigid PVC.†	1/4 Pint 1/2 Pint Pint Quart Gallon	• 6" – Schedule 40 • 4" – Schedule 80	Fast	BLUE	ASTM D2564, NSF®-PW, DWV, SW, U.P. Code	Primerless Capability[1]
PVC-11 – GRAY Heavy bodied. Medium set allows more working time in warm weather and has good gap filling properties.	1/2 Pint Pint Quart Gallon	• 12" – All classes & Schedules	Medium	GRAY	ASTM D2564, NSF®-PW, DWV, SW, U.P. Code, CSA B137.3, B181.2	**Industrial Duty**
PVC-17 CLEAR/GRAY Heavy bodied. Medium set allows more working time in warm weather and has good gap filling properties. Designed for plumbing, industrial, pool, irrigation and electrical piping systems.	1/2 Pint Pint Quart Gallon	• 12" – All classes & Schedules • 18" – Non-Pressure	Medium	CLEAR/ GRAY	ASTM D2564, NSF®-PW, DWV, SW, U.P. Code (Clear/Gray) CSA B137.3, B181.2 (Gray only)	**Industrial Duty**
PVC-19 WHITE/GRAY Extra Heavy bodied. Designed for large size piping systems requiring high gap filling properties such as industrial piping and fitting fabrication in pressure and non-pressure applications.	Pint Quart Gallon (F-Type & Paint Type) 5 Gallon	• 30" – All classes & Schedules Requiring High Gap Filling	Slow	WHITE/ GRAY	ASTM D2564, NSF®-PW, DWV, SW, U.P. Code CSA B137.3, B181.2 (Gray Only)	**Industrial Duty**

Notes
1 = Primerless Capability indicates a cement can be used without primer in certain applications if local code permits
† = Can be used without primer on PVC Schedule 40 and SDR pressure water piping systems if local code permits. Do not use PVC-21 without primer in any other application, schedule, or size such as Schedule 80 industrial applications.
* = Contact Spears® for special packaging not listed.

Spears® Solvent Cement & Primer

PVC SPECIALTY SOLVENT CEMENTS	Std. Pkg.*	Pipe Size	Set Time	Available Color	Industry Listing	Features
PVC-25 AQUA BLUE WET-N-DRY Medium bodied. Formulated for wet conditions and quick pressurization. Designed for irrigation, plumbing, and pool & spa applications.	1/4 Pint 1/2 Pint Pint Quart Gallon	• 6" – All classes and schedules • 4" – Schedule 80	Very Fast	AQUA BLUE	ASTM D2564, NSF®-PW, DWV, SW, U.P. Code	Wet-N-Dry Formulation Primerless Capability[1]
PVC-26 POOL-PRO™ BLUE Medium bodied. Formulated specifically for wet conditions in pool & spa applications. Fades to clear as it cures.	1/4 Pint 1/2 Pint Pint Quart Gallon	• 6" – All classes and schedules • 4" – Schedule 80	Very Fast	BLUE	ASTM D2564, NSF®-PW, DWV, SW, U.P. Code	Pool & Spa Formulation Primerless Capability[1]
PVC-27 CLEAR COLD-N-HOT Medium Bodied. Designed for industrial, plumbing, irrigation, pool & spa, electrical conduit and PVC foam core pipe.	Pint Quart Gallon	• 6" – All classes and schedules • 4" – Schedule 80	Very Fast	CLEAR	ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.	Cold-N-H Formulation -15°F to 110°F Primerless Capability[1]
PVC-37 EverTUFF® TURF™ BLUE Medium Bodied. Designed with slightly higher viscosity for use with demanding Turf, Agriculture and Well Casing applications. Formulated for wet conditions and quick pressurization. Fades to clear in sunlight.	1/4 Pint 1/2 Pint Pint Quart Gallon	• 6" – All classes and schedules • 4" – Schedule 80	Very Fast	BLUE	ASTM D2564, NSF®-PW, DWV, SW, U.P. Code.	Formulated for Wet Conditions Primerless Capability[1]
PVC-50 HOT BLUE Medium bodied. Excellent for use in challenging conditions including wet damp or cold temperatures in irrigation, plumbing DWV, pool & spa, and non-pressure applications. PVC-50 may be used without primer on Schedule 40 pipe and fittings if local code permits.	1/4 Pint 1/2 Pint Pint Quart Gallon	• 6" – Schedule 40 • 4" – Schedule 80	Very Fast	BLUE	ASTM D2564, NSF®-PW, DWV, SW, U.P. Code	HOT PVC Formulation Primerless Capability[1]
PVC-95 CLEAR/BLUE Flexible Medium Bodied. Specially formulated for use on flex-to-flex and flex-to-rigid PVC connections. Maintains high-strength, flexible joints.	1/4 Pint 1/2 Pint Pint Quart Gallon	• 6" – All classes and schedules • 3" – Schedule 80	Fast	CLEAR/ BLUE	ASTM D2564, NSF®-PW, DWV, SW, U.P. Code	Flexible PVC for Flex-Flex, Flex-Rigid Joints
LX-5 CLEAR Low Extractable One-Step Cement. Specifically formulated for use with Spears® Low Extractable PVC piping. Unlike conventional PVC solvent cements, LX-5 contains fewer contaminants and cures quickly to reduce potential for TOC contamination.	Pint Quart	• 6" – Low Extractable PVC Systems	Fast	CLEAR	ASTM D2564, NSF®-PW, DWV, SW, U.P. Code	One Step[2] Low Extractable, High Purity Cement

Notes
1 = Primerless Capability indicates a cement can be used without primer in certain applications if local code permits
2 = One Step designates a cement specifically designed for use without primer.
* = Contact Spears® for special packaging not listed.

CPVC Low VOC Cements

Heavy bodied cements are specifically formulated for CPVC plastic pipe and fittings including a variety of One-Step (no primer required) CPVC specialty cements. These products are ideal for use in hot/cold water plumbing systems, water treatment and chemical plants, as well as industrial piping systems.

- Low VOC emissions comply with SCAQMD Rule 1168/316A
- 2-Year Shelf Life

CPVC SOLVENT CEMENTS	Std. Pkg.*	Pipe Size	Set Time	Available Color	Industry Listing	Features
CPVC-24 GRAY/ORANGE Heavy bodied. High-strength, chemical-resistant solvent cement for use with CPVC piping systems carrying acids, bases, salts, and sodium hypochlorite. Ideal for use in waste water plants. Recommended for use on PVC industrial piping systems for chemical applications; best choice for both PVC and CPVC fume & air duct systems.	1/4 Pint 1/2 Pint Pint Quart Gallon	• 24" – All classes and schedules PVC or CPVC - All Sizes	Medium	GRAY/ ORANGE	ASTM F493, NSF®-PW, DWV, SW, U.P. Code.	Most Versatile, Chemically Resistant Cement for both CPVC & PVC Systems - including Duct - **Industrial Duty**

NOTES
* = Contact Spears® for special packaging not listed.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg

CPVC SPECIALTY SOLVENT CEMENTS	Std. Pkg.*	Pipe Size	Set Time	Available Color	Industry Listing	Features
LW-5 MUSTARD One-Step CPVC cement specifically formulated and approved for use with Spears® **LabWaste™** CPVC Corrosive Waste Drainage System Products.	Pint Quart Gallon 5 Gallon	• 24" – **LabWaste™** CPVC Drainages Systems	Medium	MUSTARD	ASTM F493, NSF®-CW, PW, DWV, SW, U.P. Code, ICC-ES PMG	One Step[1] Cement - Only **Labwaste™** System Chemically Approved Cement
FS-5 RED One-Step CPVC Cement specifically formulated and approved for use with Spears® FlameGuard® and other approved CPVC Fire Sprinkler Products.	Pint Quart	• 3" – CPVC Fire Sprinkler Systems	Fast	RED	ASTM F493, NSF®-PW, DWV, SW, U.P. Code, UL®, FM® Approved.	One Step[1] Cement for all CPVC Fire Sprinkler Systems
CTS-5 EverTUFF® YELLOW Medium bodied. Cement for copper tube size pipe and fittings.	1/4 Pint 1/2 Pint Pint Quart Gallon	• 4" – All classes and schedules (except Schedule 80)	Fast	YELLOW	ASTM F493/D2846, NSF®-PW, DWV, SW, U.P. Code, CSA B137.6, B181.2	One Step[1] Cement for all CTS CPVC Systems

Notes
1 = One Step designates a cement specifically designed for use without primer. CTS One Step acceptability depends on local code requirements.
CTS = Copper Tube Size, ASTM D2846 Hot and Cold Water Distribution Systems
* = Contact Spears® for special packaging not listed.

ABS Low VOC Cements

ABS cements are specially formulated for rigid ABS pipe and fittings in all classes, schedules and fittings having interference type sockets. These medium-bodied, fast setting cements are used for all classes and schedules with interference fit through 8" diameter in ABS drain, waste and vent systems (DWV), and sewer applications. Do not use primer on ABS pipe and fittings.

- Low VOC emissions comply with SCAQMD Rule 1168/316A
- 3-Year Shelf Life

ABS SOLVENT CEMENTS	Std. Pkg.*	Pipe Size	Set Time	Available Color	Industry Listing	Features
ABS-71 YELLOW/MILKY Medium bodied. ABS solvent cement for all classes and schedules of pipe and fittings.	1/4 Pint 1/2 Pint Pint Quart Gallon	• 8" – All ABS Classes & Schedules	Fast	YELLOW/ MILKY	ASTM D2235, NSF®-DWV, SW, U.P. Code CSA (Yellow Only) B181.1	---
ABS-73 BLACK Medium bodied. ABS solvent cement for all classes and schedules of pipe and fittings.	1/4 Pint 1/2 Pint Pint Quart Gallon	• 8" – All ABS Classes & Schedules	Fast	BLACK	ASTM D2235, NSF®-DWV, SW, U.P. Code	---

Notes
* = Contact Spears® for special packaging not listed.

ABS to PVC Transition & Multi Purpose Low VOC Cements

Designed for joining PVC, ABS, CPVC and Styrene pipe and fittings, involving both similar materials and transition joints between dissimilar plastic materials.

- Low VOC emissions comply with SCAQMD Rule 1168/316A
- 3-Year Shelf Life

TRANSITION & MULTI-PURPOSE SOLVENT CEMENTS	Std. Pkg.*	Pipe Size	Set Time	Available Color	Industry Listing	Features
ABS TO PVC-94 ABS-PVC GREEN Medium bodied. Specifically designed for use on ABS to PVC transition joints in non-pressure systems. Suitable for sewer and DWV applications.	1/4 Pint 1/2 Pint Pint Quart Gallon	• 6" – All Classes & Schedules (Except Schedule 80)	Fast	GREEN	ASTM D3138, NSF®-DWV, SW, U.P. Code	For ABS-to-PVC Transition Joints
MP-90 MULTI-PURPOSE CLEAR Medium bodied. High-strength cement for PVC and CPVC pressure and on ABS and styrene low-pressure systems.	1/2 Pint Pint Quart	• 6" – All Classes & Schedules • 6" – Schedule 80	Fast	CLEAR	Meets ASTM D2564, D2235,& F493,	For PVC and CPVC pressure ABS and Styrene low-pressure systmes

Notes
* = Contact Spears® for special packaging not listed.

Low VOC Solvent Primers & Cleaners

Primers are used for the surface preparation of plastic pipe and fittings, which is necessary for the proper solvent welding of these materials. Cleaner aids in pre-cleaning to remove oil and grease.

- All Spears® Primers and Cleaners are low VOC products, which are environmentally friendly with lower emissions and reduced odor, surpassing the most stringent regulations and comply with SCAQMD Rule 1168/316A.
- Spears® Primers are certified for use with potable water by NSF International.
- 3-Year Shelf Life

PRIMERS & CLEANERS	Std. Pkg.*	Available Color	Industry Listing	Features
PRIMER-75 AQUA BLUE WET-N-DRY Fast acting industrial strength primer essential for proper softening and preparation of PVC and CPVC pipe and fitting surfaces. Formulated for wet conditions and quick pressurization in Turf, Agriculture, Pool & Spa applications.	1/4 Pint 1/2 Pint Pint Quart Gallon	AQUA BLUE	ASTM F656, NSF®-PW, DWV, SW	Formulated for Wet Conditions **Industrial Duty**
PRIMER-70 INDUSTRIAL GRADE PURPLE/CLEAR Premium, industrial strength primer essential for proper softening and preparation of PVC and CPVC pipe and fitting surfaces. Specially recommended for use on Schedule 80 (150 psi and higher) and large size pipe. Excellent for cold weather applications.	1/4 Pint 1/2 Pint Pint Quart Gallon	PURPLE/CLEAR	ASTM F656, NSF®-PW, DWV, SW U.P. Code (Purple Only).	**Industrial Duty**
PRIMER-68 PURPLE/CLEAR Essential for proper softening and preparation of PVC and CPVC pipe and fitting surfaces. Choose from Clear or Purple color which provides positive identification that a primer was used (check local code requirements).	1/4 Pint 1/2 Pint Pint Quart Gallon	PURPLE/CLEAR	ASTM F656, NSF®-PW, DWV, SW U.P. Code (Purple Only)..	---
CLEANER-65 CLEAR Water-thin cleaner recommended for use before priming of pipe and fittings to remove dirt oil and grease from the bonding surfaces of PVC, CPVC, ABS and Styrene.	1/4 Pint 1/2 Pint Pint Quart Gallon	CLEAR	---	For PVC, CPVC, ABS or Styrene
PRIMER CLEANER-64 PURPLE Combination of Cleaner for removing grease, oil and dirt from the bonding surfaces & Primer for softening PVC & CPVC pipe and fitting surfaces for solvent cement welding.	1/4 Pint 1/2 Pint Pint Quart Gallon	PURPLE	---	---

Notes
* = Contact Spears® for special packaging not listed.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

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Applicators & Accessories

	Can-Mate Kit: Includes Plastic Carrier Strap and two (2) Can-Mate 150 adjustable Daubers. Provides convenient carrying of 1/2 pint, pint or quart cans of cement and primer.
	Can-Mate Daubers: Adjustable Plastic Applicator with Telescoping Stem for use with Standard 1/2 Pint, Pint and Quart Cans. See application footnotes below.
	Cap Dauber: Fits 1-3/4" Neck Cans. Size by Dauber Diameter and Can Fitment. See application footnotes below.
	Small-Cap Swab: Fits 1-3/4" Neck Quart Cans (MT-651). 4" length for pipe size 3" to 8".
	Large-Cap Swab: Fits 2-7/8" Neck Gallon Can (MT-648). For pipe size 6" & larger.
	Swab with Heavy Handle: For pipe size 6" & larger.
	Small-Cap Roller: Fits 1-3/4" Neck Quart Cans (MT-651). Replaceable Cover. For pipe size 3" to 6".
	Can Roller: Fits Paint Type Quart Can (MT-653). For use with pipe sizes 3" to 6".
	Large-Cap Roller: Fits 2-7/8" Neck Gallon Can (MT-648). Roller for pipe size 6" & larger.
	Roller with Heavy Handle: Replaceable Cover. For pipe size 6" & larger.
	Roller Replacement Covers: Fits Rollers with Heavy Handles #5520, 6020 & #6520. Sold as Pack of 2, full pack only.
	Cap Brushes: For Pint and Quart Cans.
	Acid Brush: Small Utility Brush.
	Standard Empty Cans: 1-3/4" Neck
	Large Mouth Empty Cans: 2-7/8" Neck
	Easy Pour Spout: Fits 1/4 Pint, 1/2 Pint, Pint, Quart, Gallon Can 1-3/4" Neck.
	Paint Type Empty Cans
	Deburring Tool: Cone Type for PVC, CPVC, ABS, PE & PB pipe from 1/2" through 2".

Solvent Cemented Joints - Initial Set Schedule, Cure Schedule and Cement Usage Table

The following are basic guidelines and may require adjustment according to application or installation conditions. Certain specialty cements, such as FlameGuard® FS-5, may have different instructions for specific application conditions. Consult appropriate installation instructions for details.

INITIAL SET SCHEDULE: The Initial set schedule is the necessary waiting period before handling newly assembled joints. After initial set, the joint will withstand the stress of a normal installation. In damp or humid weather allow 50% more set time.

AVERAGE INITIAL SET SCHEDULE FOR SPEARS® PVC/CPVC SOLVENT CEMENTS

Temperature Range	Pipe Sizes 1/2" to 1-1/4"	Pipe Sizes 1-1/2" to 2"	Pipe Sizes 2-1/2" to 8"	Pipe Sizes 10" to 15"	Pipe Sizes 15"+
60°-100°F/16º-38ºC	2 minutes	5 minutes	30 minutes	2 hours	4 hours
40°-60°F/5º-16ºC	5 minutes	10 minutes	2 hours	8 hours	16 hours
0°-40°F/-18º-5ºC	10 minutes	15 minutes	12 hours	24 hours	48 hours

JOINT CURE SCHEDULE: The Joint cure schedule is the necessary waiting period before pressurizing newly assembled joints. Follow the schedule carefully. In damp or humid weather or chemical applications, allow a minimum of 50% more cure time.

AVERAGE JOINT CURE SCHEDULE FOR SPEARS® PVC/CPVC SOLVENT CEMENTS

Relative Humidity 60% or Less	Cure Time Pipe Sizes 1/2" to 1-1/4"		Cure Time Pipe Sizes 1-1/2" to 2"		Cure Time Pipe Sizes 2-1/2" to 8"		Cure Time Pipe Sizes 10" to 15"	Cure Time Pipe Sizes 15"+
Temperature range during assembly and cure periods	Up to 160 psi	Above 160 to 370 psi	Up to 160 psi	Above 160 to 315 psi	Up to 160 psi	Above 160 to 315 psi	Up to 100 psi	Up to 100 psi
60°-100°F/16º-38ºC	15 min	6 hrs	30 min	12 hrs	1-1/2 hrs	24 hrs	48 hrs	72 hrs
40°-60°F/5º-16ºC	20 min	12 hrs	45 min	24 hrs	4 hrs	48 hrs	96 hrs	6 days
0°-40°F/-18º-5ºC	30 min	48 hrs	1 hour	96 hrs	72 hrs	8 days	8 days	14 days

AVERAGE NUMBER OF JOINTS PER QUART OF SPEARS® CEMENT

Pipe Diameter	1/2"	3/4"	1"	1-1/2"	2"	3"	4"	6"	8"	10"	12"	15"	18"	20"	24"
Number of Joints	300	200	125	90	60	40	30	10	5	2-3	1-2	3/4	1/2	7/16	5/16

NOMINAL INCH AND CORRESPONDING NOMINAL MILLIMETER PIPE SIZES

in.	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"
mm.	15	20	25	32	40	50	65	80	100	160	200	250	300	350	400	450	500	600

SPEARS® APPLICATOR SELECTION GUIDE

For proper solvent cement welding of pipe and fittings, the cement applicator must be no less than half the size of the pipe

DAUBERS	Pipe Diameters							
	1/4"	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	3"
3/8" Dauber	•	•	•					
1/2" Dauber			•	•				
5/8" Dauber				•	•			
3/4" Dauber					•	•		
1-1/4" Dauber							•	•

ROLLERS & SWABS	SIZE	FOR PIPE DIAMETERS
3020	3" Roller	3" - 6"
6020	4" Roller	3" - 8"
7020	7" Roller	6" +
5520	4" Roller	6" +
6520	6" Roller	6" +
4020	4" Swab	6" +
5020	4" Swab	3" - 8"
4520	4" Swab	6" +

PRODUCT SHELF LIFE

Spears® Products	Shelf Life	Spears® Products	Shelf Life
Primers / Cleaners	3 years	CPVC Solvent Cement	2 years
PVC Solvent Cement	3 years	ABS Solvent Cement	3 years

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

Formulated, Designed & Tested for Plastic Piping Products

While many thread sealants and pipe joint compounds claim to be suitable for use with plastics, several have been found to produce stress cracking due to chemical incompatibility. Improper application of TFE tape sealants can result in over-stressed threaded connections and potential joint failures. Research has proven Spears® BLUE 75™ thread sealant to be the superior choice for reliable joint make-up of all Spears® thermoplastic piping products.

Non-Hardening, Lubricating Anti-Seize Formulation

Spears® **BLUE 75™** is a special formulation which remains usable to -50° F. Partial containers remain usable for years when properly stored. Wipes clean from hands or tools with a dry rag for up to 15 minutes after applications. Anti-seize properties allow easy assembly and positive seal without over tightening.

Safe, nontoxic, Lead & Silicone Free

Spears® **BLUE 75™** is NSF® tested and Certified safe for use with potable water. Will not transfer taste or odor to the sealed system.

Non-Corrosive, Non-Conductive

Promotes the advantages found with the use of thermoplastic piping components for a broad range of applications, easy maintenance and long system life.

Convenient Packaging Availability

Spears® **BLUE 75™** is available in 1/4 pint, 1/2 pint, 1 pint and 1 quart metal cans with brush top applicators.

Specially Designed for Spears® Threaded Fittings & Valves

Spears® **BLUE 75™** is recommended for use with all Spears® thermoplastic piping system components, including PVC and CPVC products, CPVC fire sprinkler products, CPVC CTS (Copper-Tube-Size) products and Spears® plastic-to-metal transition products.

Suitable for Sealing Threads in Metals, ABS, PVC, CPVC & Nylon Piping Systems

While specially designed for Spears® products, Spears® **BLUE 75™** is suitable for use in metal and plastic systems properly designed for handling a wide variety of liquids and gases (not recommended for use in oxygen handling systems).

Basic Specifications

Color	Light blue
Consistency	Grit-Free, crushable paste
Potable Water Approval	National Sanitation Foundation (NSF®)
U.S. Federal Specif cations	Meets and Exceeds: TT-5-1732
Shelf Life	Indefinite when properly stored in closed container

General Instructions

Store and apply between 20°F (-7°C) and 140°F (60°C): remains usable to -50°F (-45°C). Stir before using.

1. Threads should be properly formed or cut with a good die and free of all oils, dirt, moisture, etc.

2. Apply Spears® **BLUE 75™** freely to male threads with brush applicator. Brush well into threads to ensure a leak-free joint.

3. Assemble joint in usual manner. Take care not to over tighten. System may be placed into service immediately.

Caution: Do not take internally.
Do not burn - fumes may be harmful.
Wash hands and exposed areas after handling.

FIRST AID

Eyes: Flush 15 minutes with clean water.

Skin: Wash with soap and water.

Ingestion: Only if conscious, give large amounts of water and induce vomiting. Obtain medical attention.

User shall determine the suitability of the product for its intended use and all risk and liability in connection therein. Manufacturer is not responsible for consequential damages.

FlameGuard® CPVC Fire Sprinkler Piping Products

PRICING

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

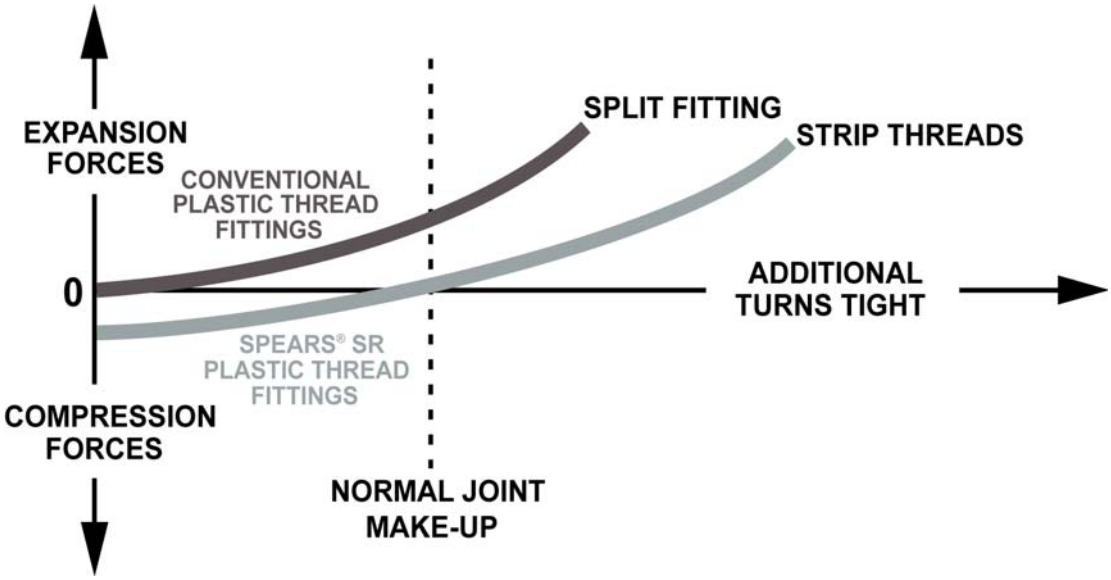
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

SPEARS® Patented SR Design Sprinkler Head Adapters

SPEARS® Patented Special Reinforced (SR) plastic female thread design is one of the most significant advancements in the use of CPVC Fire Sprinkler System threaded fittings. Not just an added ring, this unique precompression design compensates for expansion forces generated from tapered pipe thread joint make-up. Radial stress is no longer a problem in normal installations and easily managed in severe over-tightening situations.

Contains and Compensates for Radial Stress...

Radial stress, generated by tightening of tapered pipe threads, exerts tremendous expansion force on female plastic thread fittings. When subjected to over-tightening - even accidentally - these forces can literally split the fitting. Spears® patented SR Adapter design not only alleviates this problem by containing expansion forces with its special reinforced collar, but additionally compensates for expansion stress through thermoplastic material compression. Stresses are equalized at normal joint make-up. The following graph illustrates this effect in a comparison of conventional plastic female thread fittings with Spears® SR adapters when taken to failure.



Another Quality SPEARS® Product Designed for Performance, Customer Satisfaction and Service.

FlameGuard® CPVC Fire Sprinkler Piping Products

FlameGuard® CPVC Fire Sprinkler Pipe

SDR 13.5 10' Lengths, Price Per Foot

List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
CP-007-10	3/4	260	0	071	1.94
CP-010-10	1	170	0	071	2.99
CP-012-10	1-1/4	90	0	071	4.68
CP-015-10	1-1/2	70	0	071	6.47
CP-020-10	2	50	0	071	9.67
CP-025-10	2-1/2	40	0	071	14.76
CP-030-10	3	30	0	071	22.43

FlameGuard® CPVC Fire Sprinkler Pipe

SDR 13.5, 15' Lengths, Price Per Foot

List Price Per Foot

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
CP-007	3/4	390	0	071	1.94
CP-010	1	255	0	071	2.99
CP-012	1-1/4	135	0	071	4.68
CP-015	1-1/2	105	0	071	6.47
CP-020	2	75	0	071	9.67
CP-025	2-1/2	60	0	071	14.76
CP-030	3	45	0	071	22.43

Tee

Socket x Socket x Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4201-007	3/4	20	220	070	3.97
4201-010	1	15	120	070	8.04
4201-012	1-1/4	10	0	070	12.01
4201-015	1-1/2	10	0	070	17.67
4201-020	2	10	0	070	26.09
4201-025	2-1/2	10	0	070	42.50
4201-030	3	5	0	070	66.60

Reducing Tee

Socket x Socket x Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4201-102	3/4X1	20	0	070	6.79
4201-125	1X3/4X3/4	15	150	070	6.79
4201-126	1X3/4X1	15	0	070	6.79
4201-131	1X3/4	20	0	070	6.79
4201-157	1-1/4X1X3/4	15	0	070	12.53
4201-158	1-1/4X1X1	15	0	070	12.53
4201-159	1-1/4X1X1-1/4	15	0	070	12.53
4201-167	1-1/4X3/4	15	0	070	12.53
4201-168	1-1/4X1	15	0	070	12.53
4201-169	1-1/4X1-1/2	10	0	070	15.13
4201-201	1-1/2X1-1/4X3/4	10	0	070	15.13
4201-202	1-1/2X1-1/4X1	10	0	070	15.13
4201-210	1-1/2X3/4	15	0	070	15.13
4201-211	1-1/2X1	10	0	070	15.13
4201-212	1-1/2X1-1/4	10	0	070	15.13
4201-213	1-1/2X2	10	0	070	24.01
4201-248	2X3/4	10	0	070	24.01
4201-249	2X1	10	0	070	24.01
4201-250	2X1-1/4	10	0	070	24.01
4201-251	2X1-1/2	10	0	070	24.01
4201-289	2-1/2X1	10	0	070	33.01
4201-290	2-1/2X1-1/4	10	0	070	33.01
4201-291	2-1/2X1-1/2	10	0	070	33.01
4201-292[1]	2-1/2X2	10	0	070	33.01
4201-335	3X1	5	0	070	38.10
4201-336[1]	3X1-1/4	5	0	070	38.10
4201-337[1]	3X1-1/2	5	0	070	38.10

Reducing Tee (continued)

Socket x Socket x Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4201-338	3X2	5	0	070	38.10
4201-339	3X2-1/2	6	0	070	38.10

[1]Outlet sized with Bushing

TorqueSafe™ Sprinkler Head Tee - Gasket Sealed Brass Thread Insert Style

Socket x Socket x Gasket FIPT With Elastomer Seal - Use NO Thread Sealant

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4202-101 G	3/4X1/2	50	0	076	14.71
4202-124 G	1X3/4X1/2	50	0	076	15.88
4202-130 G	1X1/2	50	0	076	15.88
4202-166 G	1-1/4X1/2	15	0	076	26.48
4202-209 G	1-1/2X1/2	10	0	076	34.88
4202-247 G	2X1/2	10	0	076	49.19

FIPT With Elastomer Seal - Use NO Thread Sealant. Not intended to convey or dispense water for human consumption through drinking or cooking

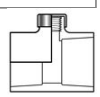
Sprinkler Head Tee - Brass Thread Insert Style

Socket x Socket x FIPT

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4202-101	3/4X1/2	50	0	076	14.71
4202-124	1X3/4X1/2	50	0	076	15.88
4202-130	1X1/2	50	0	076	15.88
4202-010	1	10	40	076	40.84
4202-156	1-1/4X1X1/2	15	0	076	26.48
4202-166	1-1/4X1/2	15	0	076	26.48
4202-199	1-1/2X1-1/4X1/2	10	0	076	34.88
4202-209	1-1/2X1/2	10	0	076	34.88
4202-237	2X1-1/2X1/2	10	0	076	49.19
4202-247	2X1/2	10	0	076	49.19

Not intended to convey or dispense water for human consumption through drinking or cooking

Sprinkler Head Tee - Special Reinforced Plastic Thread Style



Socket x Socket x SR FIPT - Stainless Steel Collar

NSF Certified Lead-Free

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4202-010SR	1	15	0	076	21.70
4202-101SR	3/4X1/2	50	0	076	7.83
4202-124SR	1X3/4X1/2	50	0	076	8.46
4202-130SR	1X1/2	50	0	076	8.46
4202-156SR	1-1/4X1X1/2	15	0	076	14.10
4202-166SR	1-1/4X1/2	15	0	076	14.10
4202-168SR	1-1/4X1	15	0	076	30.30
4202-199SR	1-1/2X1-1/4X1/2	10	0	076	18.55
4202-209SR	1-1/2X1/2	25	0	076	18.55
4202-211SR	1-1/2X1-1/2X1	10	0	076	18.55
4202-237SR	2X1-1/2X1/2	10	0	076	26.18
4202-247SR	2X1/2	10	0	076	26.18
4202-287SR	2-1/2X1/2	10	0	076	35.88

TorqueSafe™ Sprinkler Head Tee - Gasket Sealed Brass Thread Insert Style

Socket x Gasket FIPT x Socket With Elastomer Seal - Use NO Thread Sealant

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4203-122 G	1X1/2X1	50	0	076	26.09

FIPT With Elastomer Seal - Use NO Thread Sealant

Not intended to convey or dispense water for human consumption through drinking or cooking

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

FlameGuard® CPVC Fire Sprinkler Piping Products

Sprinkler Head Tee - Brass Thread Insert Style

Socket x FIPT x Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4203-122	1X1/2X1	50	0	076	26.09

Not intended to convey or dispense water for human consumption through drinking or cooking

Sprinkler Head Tee - Special Reinforced Plastic Thread Style

Socket x SR FIPT x Socket - Stainless Steel Collar

NSF Certified Lead-Free

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4203-122SR	1X1/2X1	50	0	076	9.09

Street Tee

Spigot x Socket x Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4244-007	3/4	15	105	070	7.07
4244-010	1	15	0	070	9.44
4244-012	1-1/4	10	0	070	17.15
4244-015	1-1/2	10	0	070	20.76
4244-020	2	10	0	070	30.68

90° Ell

Socket x Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4206-007	3/4	30	300	070	2.93
4206-010	1	20	200	070	6.50
4206-012	1-1/4	10	100	070	8.30
4206-015	1-1/2	10	0	070	11.59
4206-020	2	25	0	070	14.33
4206-025	2-1/2	5	0	070	27.66
4206-030	3	5	0	070	37.72

90° Reducing Ell

Socket x Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4206-131	1X3/4	20	240	070	5.76

SofTorque™ SR 90° Sprinkler Head Elbow - Gasket Sealed Special Reinforced Plastic Thread Style

Soc x SR FIPT - Stainless Steel Collar With Elastomer Seal - Use NO Thread Sealant

NSF Certified Lead-Free

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4207-130GSR	1X1/2	20	80	076	7.28
4207-166GSR	1-1/4X1/2	15	60	076	9.24

TorqueSafe™ 90° Sprinkler Head Elbow - Gasket Sealed Brass Thread Insert Style

Socket x Gasket FIPT With Elastomer Seal - Use NO Thread Sealant

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4207-101 G	3/4X1/2	20	120	076	9.72
4207-130 G	1X1/2	15	90	076	13.66
4207-166 G	1-1/4X1/2	10	60	076	19.02

FIPT With Elastomer Seal - Use NO Thread Sealant. Not intended to convey or dispense water for human consumption through drinking or cooking

Sprinkler Head 90° Ell - Brass Thread Insert Style

Socket x FIPT

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4207-101	3/4X1/2	20	120	076	9.72
4207-130	1X1/2	15	90	076	13.66
4207-131	1X3/4	25	0	076	16.53
4207-166	1-1/4X1/2	10	60	076	19.02

Sprinkler Head 90° Ell - Brass Thread Insert Style (continued)

Socket x FIPT

Not intended to convey or dispense water for human consumption through drinking or cooking

Sprinkler Head 90° Ell - Special Reinforced Plastic Thread Style

Socket x SR FIPT - Stainless Steel Collar

NSF Certified Lead-Free

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4207-101SR	3/4X1/2	20	180	076	5.16
4207-130SR	1X1/2	10	150	076	7.28
4207-131SR	1X3/4	50	0	076	8.80
4207-166SR	1-1/4X1/2	25	0	076	9.24

90° Street Ell

Spigot x Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4209-007	3/4	50	0	070	6.35
4209-010	1	50	0	070	9.38
4209-012	1-1/4	25	0	070	15.44
4209-015	1-1/2	10	0	070	18.80
4209-020	2	25	0	070	27.68

Side Outlet Ell

Socket x Socket x Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4213-007	3/4	50	0	070	9.52
4213-010	1	25	0	070	12.98

22-1/2° Ell

Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4216-007	3/4	20	360	070	4.74
4216-010	1	20	240	070	6.13
4216-012	1-1/4	20	0	070	8.29
4216-015	1-1/2	20	0	070	11.39
4216-020	2	20	0	070	14.10
4216-025	2-1/2	5	0	070	28.96
4216-030	3	5	0	070	36.71

22-1/2° Street Ell

Spigot x Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4242-007	3/4	50	0	070	4.98
4242-010	1	50	0	070	6.41
4242-012	1-1/4	20	0	070	8.72
4242-015	1-1/2	25	0	070	11.97
4242-020	2	20	0	070	14.82
4242-025	2-1/2	5	0	070	20.78
4242-030	3	5	0	070	29.76

45° Ell

Socket x Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4217-007	3/4	20	360	070	3.97
4217-010	1	15	240	070	4.71
4217-012	1-1/4	10	120	070	6.90
4217-015	1-1/2	10	0	070	9.50
4217-020	2	10	0	070	11.95
4217-025	2-1/2	5	0	070	21.29
4217-030	3	5	0	070	30.79

FlameGuard® CPVC Fire Sprinkler Piping Products

45° Street Ell
Spigot x Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4227-010	1	50	0	070	4.71
4227-012	1-1/4	25	0	070	6.90
4227-015	1-1/2	25	0	070	8.54
4227-020	2	20	0	070	11.95

Cross
Socket x Socket x Socket x Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4220-007	3/4	20	0	070	6.26
4220-010	1	15	0	070	7.82
4220-012	1-1/4	10	0	070	10.89
4220-015	1-1/2	10	0	070	14.87
4220-020	2	8	0	070	24.22
4220-025	2-1/2	5	0	070	53.23
4220-030	3	5	0	070	78.07

Reducing Cross
Socket x Socket x Socket x Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4220-131	1X3/4	20	0	070	8.45
4220-167	1-1/4X3/4	25	0	070	13.04
4220-210	1-1/2X3/4	15	0	070	18.20
4220-248	2X3/4	10	0	070	23.88
4220-289	2-1/2X1	15	0	070	33.67

Coupling
Socket x Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4229-007	3/4	25	500	070	2.85
4229-010	1	25	250	070	3.65
4229-012	1-1/4	10	160	070	5.48
4229-015	1-1/2	10	100	070	7.82
4229-020	2	20	0	070	10.54
4229-025	2-1/2	10	0	070	16.05
4229-030	3	5	0	070	20.88

Reducer Coupling
Socket x Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4229-131	1X3/4	15	270	070	3.65
4229-167	1-1/4X3/4	25	0	070	5.67
4229-168	1-1/4X1	10	140	070	5.48
4229-210	1-1/2X3/4	25	0	070	8.45
4229-211	1-1/2X1	10	70	070	8.21
4229-212	1-1/2X1-1/4	10	120	070	7.82
4229-248	2X3/4	10	80	070	11.01
4229-249	2X1	10	60	070	11.01
4229-250	2X1-1/4	10	60	070	10.73
4229-251	2X1-1/2	10	100	070	10.54
4229-291	2-1/2X1-1/2	10	0	070	16.22
4229-292	2-1/2X2	10	0	070	16.63
4229-337	3X1-1/2	5	0	070	41.91
4229-339	3X2-1/2	10	0	070	49.38

Grooved Coupling Adapter
Groove x Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4233-012	1-1/4	10	40	076	109.72
4233-015	1-1/2	10	40	076	116.29
4233-020	2	8	32	076	134.68
4233-025	2-1/2	5	0	076	172.76
4233-030	3	5	0	076	192.05

Grooved Coupling Adapter (continued)
Groove x Socket

Not intended to convey or dispense water for human consumption through drinking or cooking

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each

SofTorque™ SR Female Sprinkler Head Adapter - Gasket Sealed Special Reinforced Plastic Thread Style
Soc x SR FIPT - Stainless Steel Collar With Elastomer Seal - Use NO Thread Sealant

NSF Certified Lead-Free

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4235-101GSR	3/4X1/2	50	0	076	5.62
4235-130GSR	1X1/2	50	0	076	11.02

TorqueSafe™ Female Sprinkler Head Adapter - Gasket Sealed Brass Thread Insert Style
Socket x Gasket FIPT

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4235-101 G	3/4X1/2	50	0	076	10.60
4235-130GS	1X1/2	50	0	076	11.31
4235-131 G	1X3/4	50	0	076	17.87

FIPT With Elastomer Seal - Use NO Thread Sealant. Not intended to convey or dispense water for human consumption through drinking or cooking

Female Adapter - Brass Thread Insert Style
Socket x FIPT

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4235-007	3/4	15	90	076	19.39
4235-010	1	15	90	076	34.03
4235-012	1-1/4	15	60	076	55.48
4235-015	1-1/2	10	40	076	74.01
4235-020	2	8	32	076	92.76

Not intended to convey or dispense water for human consumption through drinking or cooking

Female Sprinkler Head Adapter - Brass Thread Insert Style
Socket x FIPT

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4235-101	3/4X1/2	50	0	076	10.60
4235-130	1X1/2	50	0	076	11.31
4235-131	1X3/4	50	0	076	17.87

Not intended to convey or dispense water for human consumption through drinking or cooking

Female Sprinkler Head Adapter - Special Reinforced Plastic Thread Style
Socket x SR FIPT - Stainless Steel Collar

NSF Certified Lead-Free

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4235-101SR	3/4X1/2	50	200	076	5.62
4235-130SR	1X1/2	50	0	076	6.01
4235-131SR	1X3/4	50	0	076	9.52

Female Sprinkler Head Adapter - Special Reinforced Plastic Thread Style with Socket Body Wrench Flats
Socket x SR FIPT - Stainless Steel Collar

NSF Certified Lead-Free

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
W4235-101SR	3/4X1/2	50	0	076	6.41
W4235-130SR	1X1/2	50	0	076	6.86

Female Sprinkler Head Adapter - Special Reinforced Plastic Thread with Metal Thread Start
Socket x SR FIPT - Zinc Collar

NSF Certified Lead-Free

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
Z4235-101SR	3/4X1/2	50	200	076	5.62

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

FlameGuard® CPVC Fire Sprinkler Piping Products

Female Sprinkler Head Adapter - Brass Thread Insert Style with Long Body

Socket x FIPT

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
L4235-130	1X1/2	50	0	076	16.03

Not intended to convey or dispense water for human consumption through drinking or cooking

Female Sprinkler Head Adapter - Brass Thread Insert Style with Positioning Ring

Socket x FIPT

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
R4235-101	3/4X1/2	50	0	076	10.60

Not intended to convey or dispense water for human consumption through drinking or cooking

Female Sprinkler Head Adapter - Special Reinforced Plastic Thread Style with Positioning Ring

Socket x SR FIPT - Stainless Steel Collar

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
R4235-101SR	3/4X1/2	25	300	076	6.35

Female Adapter - Special Reinforced Plastic Thread Style

Socket x SR FIPT - Stainless Steel Collar

NSF Certified Lead-Free

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4235-007SR	3/4	25	300	076	9.20
4235-010SR	1	25	200	076	16.18
4235-012SR	1-1/4	10	60	076	26.34

Male Adapter

MIPT x Socket

NSF Certified Lead-Free

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4236-007	3/4	40	160	076	43.64
4236-010	1	10	60	076	66.72
4236-012	1-1/4	10	60	076	79.79
4236-015	1-1/2	10	40	076	144.81
4236-020	2	8	32	076	192.70

TorqueSafe™ Female Spigot Sprinkler Head Adapters - Gasket Sealed Brass Thread Insert Style

Spigot x Gasket FIPT With Elastomer Seal - Use NO Thread Sealant

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4238-101 G	3/4X1/2	50	200	076	10.60
4238-130 G	1X1/2	50	0	076	11.31

FIPT With Elastomer Seal - Use NO Thread Sealant. Not intended to convey or dispense water for human consumption through drinking or cooking

TorqueSafe™ Bushing - Gasket Sealed Brass Thread Insert Style

Spigot x Gasket FIPT With Elastomer Seal - Use NO Thread Sealant

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4238-130BR G	1X1/2	50	200	076	14.64

FIPT With Elastomer Seal - Use NO Thread Sealant. Not intended to convey or dispense water for human consumption through drinking or cooking

Bushing - with Brass Thread Insert

Spigot x FIPT

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4238-130BR	1X1/2	50	200	076	14.64

Not intended to convey or dispense water for human consumption through drinking or cooking

Spigot Female Sprinkler Head Adapters - Brass Thread Insert Style

Spigot x FIPT

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4238-101	3/4X1/2	50	200	076	10.60
4238-130	1X1/2	50	0	076	11.31

Not intended to convey or dispense water for human consumption through drinking or cooking

SofTorque™ Spigot Female Adapter - Gasket Sealed Special Reinforced Plastic Thread Style

Spigot x SR FIPT - Stainless Steel Collar With Elastomer Seal - Use NO Thread Sealant

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4278-130GSR	1X1/2	50	0	076	17.20
4278-101GSR	3/4X1/2	50	0	076	9.66

Spigot Female Adapter - Brass Thread Insert Style

Spigot x FIPT

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4278-007	3/4	25	150	076	18.14
4278-010	1	15	90	076	32.31

Not intended to convey or dispense water for human consumption through drinking or cooking

Spigot Female Adapter - Special Reinforced Plastic Thread Style

Spigot x SR FIPT - Stainless Steel Collar

NSF Certified Lead-Free

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4278-007SR	3/4	25	300	076	9.66
4278-010SR	1	50	0	076	17.20

Replacement Gaskets for all TorqueSafe™ Gasket Seaked Head Adapters

Pack of 25 EPDM Gaskets

For Use in 1/2" or 3/4" Gasket Sealed Threads

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
RGSK-005	1/2	1	100	299	10.62
RGSK-007	3/4	50	4000	299	14.84

Spigot Female Sprinkler Head Adapters - Special Reinforced Plastic Threaded Style

Spigot x SR FIPT - Stainless Steel Collar

NSF Certified Lead-Free

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4238-101SR	3/4X1/2	50	400	076	5.62
4238-130SR	1X1/2	50	0	076	6.09

Adjustable Sprinkler Head Adapters - Special Reinforced Plastic Thread Style

Socket x SR FIPT - Stainless Steel Collar

NSF Certified Lead-Free

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
42001SR	3/4X1/2	12	0	076	14.35
42011SR	1X1/2	12	0	076	14.35

Adjustable Sprinkler Head Adapters - Special Reinforced Plastic Thread Style

Spigot x SR FIPT - Stainless Steel Collar

NSF Certified Lead-Free

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
42004SR	3/4X1/2	12	0	076	14.35
42014SR	1X1/2	12	0	076	14.35

Reducer Bushing - Flush Style

Spigot x Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4237-131	1X3/4	50	700	070	2.21

FlameGuard® CPVC Fire Sprinkler Piping Products

Reducer Bushing - Flush Style (continued)

Spigot x Socket

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4237-167	**1-1/4X3/4**	25	200	070	3.48
4237-168	**1-1/4X1**	25	350	070	3.48
4237-210	**1-1/2X3/4**	25	125	070	3.91
4237-211	**1-1/2X1**	25	150	070	3.91
4237-212	**1-1/2X1-1/4**	25	300	070	3.91
4237-248	**2X3/4**	10	160	070	5.74
4237-249	**2X1**	10	160	070	5.74
4237-250	**2X1-1/4**	10	160	070	5.74
4237-251	**2X1-1/2**	10	160	070	5.74
4237-290	**2-1/2X1-1/4**	10	40	070	9.94
4237-291	**2-1/2X1-1/2**	10	0	070	9.94
4237-292	**2-1/2X2**	15	0	070	9.94
4237-338	**3X2**	10	0	070	14.87
4237-339	**3X2-1/2**	10	0	070	14.87

Transition Bushing

IPS Spigot x CTS Socket

4240-101	**3/4X1/2**	50	300	035	9.21
4240-130	**1X1/2**	50	300	035	11.76

Cap

Socket

4247-007	**3/4**	25	400	070	1.72
4247-010	**1**	25	450	070	2.49
4247-012	**1-1/4**	10	60	070	3.91
4247-015	**1-1/2**	10	160	070	5.44
4247-020	**2**	10	60	070	8.28
4247-025	**2-1/2**	5	40	070	11.74
4247-030	**3**	5	0	070	19.21

Test Plug - O-ring Sealed

MIPT – For Pressure Testing Only. NOT for use with TorqueSafe™ or Z4235 Series Adapters

FTP-005	**1/2**	50	400	079	1.78
DO NOT use with Tape or Paste thread sealants					

Test Plug Replacement O-ring

Buna-N, For O-ring Sealed Test Plug Only

B-116	**116**	100	0	901	.12
For Use With FTP-005 Test Plug					

Test Plug for TorqueSafe™ Gasket Sealed Head Adapters

MIPT – For Pressure Testing Only. Use ONLY with Gasket Sealed Head Adapters

FTP-005GS	**1/2**	50	400	079	1.78

Test Plug - White PVC

MIPT - For Pressure Testing Only

4250-005	**1/2**	50	400	070	1.87
Requires use of a thread sealant					

Flange

Socket - 4 Bolt Holes - 175 lb.

4251-007	**3/4**	25	0	070	6.16
4251-010	**1**	15	0	070	8.18
4251-012	**1-1/4**	15	0	070	10.54
4251-015	**1-1/2**	15	0	070	12.21

Flange (continued)

Socket - 4 Bolt Holes - 175 lb.

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
4251-020	**2**	10	0	070	18.67
4251-025	**2-1/2**	10	0	070	31.59

Blind Flange

4 Bolt Holes - 175 lb.

4253-007	**3/4**	25	0	070	6.16
4253-010	**1**	15	0	070	8.76
4253-012	**1-1/4**	15	0	070	11.19
4253-015	**1-1/2**	15	0	070	12.57
4253-020	**2**	10	0	070	20.59
4253-025	**2-1/2**	10	0	070	33.10
4253-030	**3**	10	0	070	36.35

Flange - Van Stone Style

Socket - 4 Bolt Holes - 175 lb.

4254-030	**3**	10	0	070	38.82

Flange - Van Stone Style

Spigot - 4 Bolt Holes - 175 lb.

4256-007	**3/4**	25	0	070	6.35
4256-010	**1**	15	0	070	8.96
4256-012	**1-1/4**	15	0	070	11.46
4256-015	**1-1/2**	15	0	070	12.86
4256-020	**2**	10	0	070	20.98
4256-025	**2-1/2**	10	0	070	33.55
4256-030	**3**	10	0	070	39.15

Union

Socket x Socket

175 psi @ 73°F (23°C)

4257-007	**3/4**	10	80	070	7.94
4257-010	**1**	10	40	070	14.39
4257-012	**1-1/4**	5	20	070	18.84
4257-015	**1-1/2**	5	0	070	22.33
4257-020	**2**	5	0	070	36.69

Transition Union - Metal Thread Insert Style

Socket x FIPT

175 psi @ 73°F (23°C)

4259-010BR	**1**	10	0	076	50.01
4259-012BR	**1-1/4**	5	20	076	73.33
4259-015BR	**1-1/2**	5	0	076	104.20
4259-020BR	**2**	5	0	076	153.66
Not intended to convey or dispense water for human consumption through drinking or cooking					

Short Repair Couplings

Spigot x Socket

175 psi @ 73°F (23°C)

SH118-07CO	**3/4**	30	0	025	13.56
SH118-10CO	**1**	35	0	025	21.98

Blue 75™ Thread Sealant

SB75-005	**1/4 Pint**	24	0	895	10.46
SB75-010	**1/2 Pint**	24	0	895	16.66

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

FlameGuard® CPVC Fire Sprinkler Piping Products & Spears® Sprinkler Head Adapter Removal Kit

FlameGuard® CPVC Fire Sprinkler Piping Products

Blue 75™ Thread Sealant (continued)

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
SB75-020	**Pint**	12	0	895	26.94
SB75-030	**Quart**	12	0	895	48.41

FS5 One-Step Cement

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
FS5-020	**Pint**	12	0	703	28.25
FS5-030	**Quart**	12	0	703	51.83

Empty Cans

With Cap/Lid order Daubers separately

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
MT-654*	**Pint**	192	0	710	5.50
MT-651*	**Quart**	100	0	710	7.14
MT-653**	**Quart**	12	0	710	8.36

* 1-3/4 Screw Neck
**TT Paint Type

Brush

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
KD-110	**4-1/2" Length**	25	0	710	9.59
KD-112	**5-1/2" length**	25	0	710	9.59

1" Brush w/1-3/4" Screw Cap, for pipe size 3/4" - 2"

Roller

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
3020	**3" length**	20	0	710	16.03

Fits Paint Type Quart Can (MT-653). For use with pipe sizes 3"

Dauber

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DP-75	**3/4" for Pint**	50	0	710	1.31
DP-125	**1-1/4" for Pint**	50	0	710	1.58
DQ-125	**1-1/4" for Quart**	50	0	710	1.58

* 3/4" Diameter fits Pint Cans, for pipe size 3/4"
** 1-1/2" Diameter fits Pint Cans, for pipe size 1-1/2"
***1-1/2" Diameter fits Quart Cans, for pipe size 1-1/2"

Can-Mate Dauber

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
CM-75	**3/4"**	50	0	710	5.26
CM-150	**1-1/4"**	50	0	710	5.26

3/4" Diameter fits Pint or Quart Cans, for pipe sizes 3/4" - 1-1/4"
1-1/4" Diameter fits Pint or Quart Cans, for pipe sizes 1-1/2" - 3"

Deburring Tool

Cone Type for pipe 3/4" - 2"

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
DEB-2	**1/2 to 2 Pipe**	1	6	710	97.71

Spears® Sprinkler Head Adapter Removal Kit

Occasionally a Sprinkler Head Adapter may need to be removed for relocation, extension or repair. Kit includes Cutter, Deburring Tool and Wrench. Cutter provides easy cutting of pipe from the inside (using a power drill) to remove adapters without disturbing ceiling or side wall. Deburring Tool allows removal of burrs in cut pipe. Wrench is designed to hold Spears® TorqueSafe™ Head Adapter brass insert from rotating to aid in sprinkler head removal from adapter, if required.

Complete Kit

Inside Pipe Cutter, Deburring Tool and Wrench

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
SHRK-005	**3/4" & 1" Pipe**	1	24	299	537.82

Inside Pipe Cutter Only

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
GSC-005	**3/4" & 1" Pipe**	80	0	299	316.05

Deburring Tool Only

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
GSB-005	**3/4" & 1" Pipe**	25	0	299	364.63

Wrench Only

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
GSW-005	**For 1/2" Outlet**	50	0	299	131.16

FlameGuard® CPVC Drain & Check Valves For NFPA 13D Applications Only

Application: FlameGuard® CPVC Orange Check Valves and PVC/CPVC True Union Drain Valves are for use in configuring CPVC Fire Sprinkler System connection to water supply (riser/drain assembly) in NFPA 13D installations only. These valves are not UL Listed and NOT for use in any other locations within the fire sprinkler system.

Part Number	Size	Std Pk	Mstr Ctn	Prod Code	Price Each
True Union Industrial Drain Valve With Locking Handle					
Socket x Socket					
CPVC Gray Valve with, CPVC Orange End Connector					
1822-007CFG	**3/4**	1	18	004	82.65
1822-010CFG	**1**	1	12	004	98.40
1822-012CFG	**1-1/4**	1	8	004	156.43
1822-015CFG	**1-1/2**	1	8	004	165.21
1822-020CFG	**2**	1	4	004	220.95
Not UL Listed					
True Union Standard Drain Valves PVC Valve with CPVC End Connector					
Socket x Socket					
PVC Gray Valve with CPVC Orange End Connector					
3622-007FG	**3/4**	1	18	004	47.03
3622-010FG	**1**	1	12	004	56.02
Not UL Listed					
CPVC Check Valves					
Socket x Socket					
S1520-10CO	**1**	20	0	004	32.12
S1520-12CO	**1-1/4**	12	0	004	35.89
S1520-15CO	**1-1/2**	12	0	004	40.36
Not UL Listed					
CPVC Special Reinforced Thread Inlet Check Valves					
SR Fipt x Socket					
S1520-10FSRSCO	**1**	20	0	004	34.78
S1520-12FSRSCO	**1-1/4**	12	0	004	40.16
S1520-15FSRSCO	**1-1/2**	12	0	004	47.64
Not UL Listed					

General Installation Information: Socket end connections should be installed using Spears® FS-5 One-Step Cement for use with Spears® CPVC Fire Sprinkler Products. Threaded connections should be made using Spears® **BLUE 75™** Thread Sealant tested for compatibility with CPVC materials. PVC True Union Drain Valves are to be installed with system connection to Valve CPVC End Connector. Swing check valves are designed for horizontal installations, but may be installed in up-flow only vertical position. Check valves MUST be installed with the valve's FLOW arrow pointing in the direction of the flow. Do not install valve upside down.

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

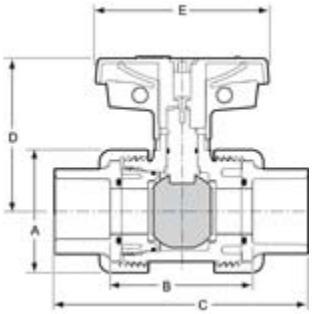
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

FlameGuard® CPVC Drain & Check Valves For NFPA 13D Applications Only

Specifications

True Union Industrial Drain Valve:

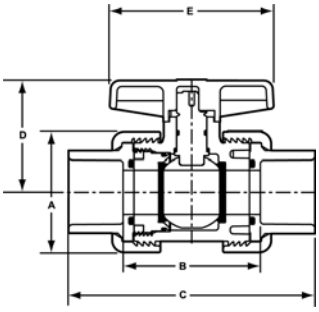
Nominal Size Range	3/4", 1", 1-1/4", 1-1/2", 2",
Type	1/4-Turn Ball Valve, True Union Style with Locking Handle
Material	CPVC Gray w/CPVC Orange End Connector
Seats	PTFE
Seals	EPDM
Handle	Polypropylene, Red
End Connections	Socket x Socket



Socket x Socket Part Number	Nominal Size	Dimension Reference (inches, ± 1/16)				
		A	B	C	D	E
1822-007CFG	3/4	2-1/4	2-3/4	4-3/4	2-7/8	3-3/8
1822-010CFG	1	2-1/2	2-7/8	5-1/8	3-1/8	3-7/16
1822-012CFG	1-1/4	3-1/16	3-1/4	5-3/4	3-5/8	3-7/8
1822-015CFG	1-1/2	3-1/2	3-1/2	6-1/4	4	4-3/16
1822-020CFG	2	4-1/4	4-3/4	7-3/4	4-1/2	5-1/8

True Union Standard Drain Valve:

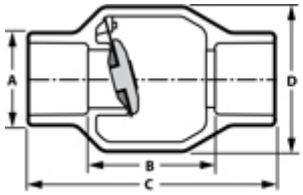
Nominal Size Range	3/4", 1"
Type	1/4-Turn Ball Valve, True Union Style
Material	PVC w/CPVC Orange End Connector
Seats	PTFE/HDPE
Seals	EPDM
Handle	Polypropylene, Red
End Connections	Socket x Socket

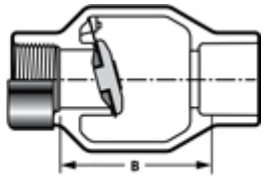


Socket x Socket Part Number	Nominal Size	Dimension Reference (inches, ± 1/16)				
		A	B	C	D	E
3622-007FG	3/4	2-1/4	2-3/4	4-3/4	2	3
3622-010FG	1	2-1/2	2-7/8	5-1/8	2-5/16	3-7/16

Check Valve:

Nominal Size Range	1", 1-1/4", 1-1/2"
Type	Swing Check, Maintenance-free Sealed Unit
Material	CPVC, Orange
Seat	EPDM
End Connections	Socket x Socket Special Reinforced (SR) Female Plastic Thread Inlet x Socket





Socket x Socket Part Number	SR Thread x Socket Part Number	Nominal Size	Dimension Reference (inches, ± 1/16)					C_V (GPM)
			A	B		C	D	
				Socket	SR Thread			
S1520-10CO	S1520-10FSRSCO	1	1-11/16	2-5/16	2-15/16	4-9/16	2-5/8	33
S1520-12CO	S1520-12FSRSCO	1-1/4	2-1/16	2-15/16	3-5/8	5-1/2	3-3/8	42
S1520-15CO	S1520-15FSRSCO	1-1/2	2-7/16	3	3-11/16	5-5/8	3-3/8	89

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

FlameGuard®
CPVC FIRE SPRINKLER PIPING PRODUCTS

TECHNICAL INFORMATION
WEIGHTS & DIMENSIONS

Contact Spears® for any information not found.

FlameGuard® System Overview

Complete System of Pipe, Fittings & Solvent Cement
Corrosion Resistant • Superior Flow • Ease of Installation

Spears® **FlameGuard®** CPVC Fire Sprinkler Products provide a cost effective alternative to metal systems with advantages of high corrosion resistance, improved system hydraulics, ease of installation and quick assembly with readily available tools. CPVC Fire Sprinkler Systems are based on proven products that have been in continuous service for over 40 years. Spears® **FlameGuard®** products are approved by UL®, FM® Global, LPCB and Certified by NSF International for potable water use. Check local codes for restrictions and limitations.

Corrosion Resistant CPVC Material Does Not Sustain Biological Growth

Unlike metal systems, **FlameGuard®** CPVC products never rust, scale or pit and do not sustain biological growth - a cause of Microbiologically Influenced Corrosion (MIC) which can destroy metal fire sprinkler systems from the inside out.

Superior Flow Characteristics for Lower Friction Losses

The smooth-wall interior surfaces of **FlameGuard®** CPVC systems result in reduced friction loss over metal systems. The design flow characteristics remain constant throughout the life of the product because there is no interior corrosion in the system due to microbiological activity.

Pressure Rated to 175 psi (1200kpa) @ 150°F (65°C)

FlameGuard® CPVC Products are produced in combinations of Schedule 40 and Schedule 80 Fitting configurations conforming to ASTM F 438 or F 439 standards and **FlameGuard®** SDR 13.5 CPVC Fire Sprinkler Pipe conforming to ASTM F 442 standards. UL® Rated working pressure is 175 psi (1200kpa) @ 150°F (65°C) (LPCB rated to 120°F) (49°C).

Easy Installation for Lower Costs

FlameGuard® CPVC system installations significantly reduce costs over conventional metal piping by virtually eliminating prefabrication. Systems can be fully installed on site using solvent cement joining methods.

UL® Listed for U.S. and Canada in NFPA 13, 13R & 13D Systems

FlameGuard® CPVC Fire Sprinkler Products are UL® listed for U.S. and Canada applications for Light Hazard occupancies as defined in NFPA 13, Residential occupancies up to and including 4-stories as defined in NFPA 13R, and Residential occupancies for one and two family dwellings and manufactured homes as defined in NFPA 13D. Consult Spears® **FlameGuard®** CPVC Fire Sprinkler Products Installation Instructions and NFPA Standards for additional applications including air plenum, system risers, concealed, exposed, underground, combustable attic, garage, basement and low pressure dry piping installations.

Full Limited Lifetime Warranty

FlameGuard® CPVC Fire Sprinkler Products carry a limited lifetime warranty against defects in material or workmanship. Consult Spears® warranty for additional details.

Spears® FlameGuard® . . . The Leader in Innovative CPVC Fire Sprinkler System Products

Pioneer in Molded-in Metal Insert Head Adapters

Spears® pioneered the development of the **FlameGuard®** molded-in-place metal thread insert for connection of sprinkler heads to CPVC fire sprinkler systems, plus Metal FIPT threaded female adapters for metal-to-plastic transitions.

Developed the Special Reinforced (SR) Head Adapters

Spears® **FlameGuard®** continuous improvement program developed the technology to produce a superior patented plastic threaded fitting - the Special Reinforced (SR) Design. This unique design incorporates a patented thermoplastic compression process that equalizes stresses generated by tapered thread joint make-up. All CPVC plastic body and threads provide a more uniform construction and improved corrosion resistance.

Now, the Revolutionary TorqueSafe™ Gasket Sealed Head Adapter

• Requires NO Thread Sealants • Eliminates Stress
• Prevents Over Tightening • Provides Easy Frame Alignment

Spears® revolutionary design features a special molded-in-place Brass Thread Insert fitted with an elastomer gasket seal at the base of the threads. The gasket seal allows a modified thread design that eliminates radial stress and associated problems typical with tapered thread joint make up. The insert is designed to rotate for easy sprinkler frame alignment without over tightening. Patent Pending.

Full Assortment of Specialty Products & Fitting Configurations

Spears® **FlameGuard®** provides the specialty fittings needed in today's fire sprinkler systems. Like the adjustable drop nipple for fine-tuning to finished ceiling height, and ringed head adapter for ease of locating during installation. Plus, Spears® **FlameGuard®** line offers a full assortment of CPVC fire sprinkler fitting configurations including Tees, Elbows, Flanges, Couplings, Caps, Male Adapters, Grooved Coupling Adapters and Unions, sizes 3/4" through 3"; with new 3/4" and 1" Repair Couplings.

Complete Size Range of CPVC Pipe

Spears® **FlameGuard®** CPVC Fire Sprinkler Pipe is available in sizes 3/4" to 3". Conforms to ASTM F 442 standard for SDR 13.5 CPVC pipe.

Spears® Solvent Cements & Thread Sealant

FlameGuard® products should be installed using Spears® FS-5 One-Step Solvent Cement. For threaded joints, use Spears® BLUE 75™ Thread Sealant that has been tested for compatibility with **FlameGuard®** CPVC Fire Sprinkler Products. Spears® **TorqueSafe™** Gasket Sealed Adapter requires no sealant. Consult sprinkler head manufacturer prior to use.

FlameGuard® Product Weights & Dimensions

The information contained in this section is based on current information and Product design at the time of publication and is subject to change without notification. Our ongoing commitment to product improvement may result in some variation. No representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or results to be obtained therefrom. For verification of technical data or additional information not contained herein, please contact Spears® Technical Services Department [West Coast: (818) 364-1611—East Coast: (678) 985-1263].

General Information

RECOMMENDATIONS FOR INSTALLERS AND USERS:

Plastic piping systems should be **ENGINEERED, INSTALLED** and **OPERATED** in accordance with **ESTABLISHED DESIGN AND ENGINEERING STANDARDS AND PROCEDURES** for plastic piping systems. Suitability for the intended service application should be determined by the installer and/or user prior to installation of a plastic piping system. All Installation and maintenance personnel should be trained in the proper handling and installation requirements and precautions of plastic piping systems. **PRIOR TO ASSEMBLY, all piping system components should be inspected for damage or irregularities. Mating components should be checked to assure that tolerances and engagements are compatible. Do not use any co mponents that appear irregular or do not fit properly. Contact the appropriate manufacturer of the component product in question to dete rmine usability. Consult all applicable codes and regulations for compliance prior to installation.**

Installation must be made in accordance with Spears® Manufacturing Company
FlameGuard® CPVC Fire Sprinkler Piping Products Installation Instructions - FG-3

NOTE — Individual or group instruction in correct solvent welding procedures is available by contacting your local distributor or your servicing Spears® Regional Distribution Center.

SOLVENT CEMENT CONNECTIONS— Spears® Manufacturing Company recommends the use of Spears® FS-5 One Step solvent cement for joining Spears® products. Use of solvent cementing products not approved for CPVC fire sprinkler systems, or failure to follow installation instructions will automatically void the warranty.

THREADED CONNECTION — Spears® Manufacturing Company recommends the use of Spears® **BLUE 75™** Thread Sealant. This product has been tested by Spears® and the sealant manufacturer for compatibility with the Spears® CPVC fire sprinkler products. Consult the sprinkler head manufacturer before using this product. **WARNING: OTHER PIPE JOINT COMPOUNDS OR PASTES MAY CONTAIN SUBSTANCES THAT COULD CAUSE STRESS CRACKING IN THE CPVC OR OTHER FITTING COMPONENTS.** Care must be taken to avoid over torquing - generally 1 to 2 turns beyond finger tight is all that is required to make up a threaded connection. Factory testing has indicated 10-25 ft. lbs. of torque is adequate to obtain a leak free seal.

GASKET SEALED THREAD CONNECTIONS — This type of connection can only be made with Spears® TorqueSafe™ style Gasket Sealed Female Sprinkler Adapters. DO NOT USE ANY TYPE OF THREAD SEALANT WHEN INSTALLING THIS TYPE OF ADAPTER. Tape or paste may impair proper sealing and function. Testing has shown that hand tight until snug is all that is needed to seal this special connection.

Installation Training Available - Contact Spears® Technical Services for Details

FlameGuard® Products must be installed in accordance with Spears® CPVC Fire Sprinkler Piping Products Installation Instructions, National Fire Protection Association Standards 13, 13R, 13D, and in accordance with local codes. Code requirements and field conditions may differ. It is the responsibility of the installing contractor to insure that the product is suitable to meet these requirements.

Dimension Reference

G = (LAYING LENGTH) Intersection of center lines to bottom of socket/thread; 90° elbows, tees, crosses; ± 1/32 inch.

H = Intersection of center lines to face of fitting; 90° elbows tees, crosses; ± 1/32 inch.

J = Intersection of center lines to bottom of socket/thread; 45° elbows; ± 1/32 inch

L = Overall length of fittings; ± 1/16 inch.

M = Outside diameter of socket/thread hub; ± 1/16 inch.

N = Socket bottom to socket bottom; couplings; ± 1/16 inch.

Q = Width of flats; ±1/16 inch.

W = Height of cap; ± 1/16 inch.

CPVC FIRE SPRINKLER PIPE SDR 13.5 (ASTM F 442)

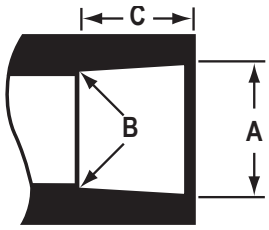
Part Number	Nominal Size		Average O.D.		Average I.D.		Approx. Weight Lbs./Ft.
	Inches	(mm)	Inches	(mm)	Inches	(mm)	
CP-007	3/4	(19.1)	1.050	(26.7)	.874	(22.5)	.181
CP-010	1	(25.4)	1.315	(33.4)	1.101	(28.2)	.280
CP-012	1-1/4	(31.8)	1.660	(42.2)	1.394	(35.6)	.418
CP-015	1-1/2	(38.1)	1.900	(48.3)	1.598	(40.7)	.550
CP-020	2	(50.8)	2.375	(60.3)	2.003	(50.9)	.872
CP-025	2-1/2	(63.5)	2.875	(73.0)	2.423	(61.5)	1.260
CP-030	3	(76.2)	3.500	(88.9)	2.950	(75.0)	1.900

"Lead Free" low lead certification – unless other wise specified, all Spears® FlameGuard® fittings specified here-in are certified by NSF International to ANSI/NSF® Standard 61, Annex G and is in compliance with California's Health & Safety Code Section 116825 (commonly known as AB1953) and Vermont Act 193. Weighted average lead content <=0.25%. Spears® PVC and CPVC Pipe, Fittings and Valves have always been lead-free and Certified by NSF International for use in potable water systems. Spears® offers a wide range of lead-free specialty fittings and transition adapters for plumbing applications. However, certain brass threaded adapter fittings for applications that are not intended to convey water for human consumption through drinking or cooking are still produced and available.

FlameGuard® Product Weights & Dimensions

SOCKET DIMENSIONS

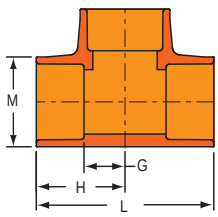
SCH 40 - ASTM F438
SCH 80 - ASTM F439



Size	Socket Entrance A	Socket Bottom B	Tolerance	SCH 40 Minimum Socket Length C	SCH 80 Minimum Socket Length C
3/4	1.058	1.046	± .004	.719	1.000
1	1.325	1.130	± .005	.875	1.125
1-1/4	1.670	1.655	± .005	.938	1.250
1-1/2	1.912	1.894	± .006	1.094	1.375
2	2.387	2.369	± .005	1.156	1.500
2-1/2	2.889	2.868	± .007	1.750	1.750
3	3.516	3.492	± .008	1.875	1.875

TEE

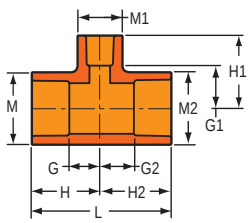
Socket x Socket x Socket



Part Number	Size	G	H	L	M	Approx. Wt. (Lbs.)
4201-007	3/4	9/16	1-1/2	2-31/32	1-5/16	.11
4201-010	1	7/8	1-13/16	3-5/8	1-5/8	.20
4201-012	1-1/4	15/32	2-3/32	4-7/32	2	.29
4201-015	1-1/2	1-5/32	2-9/16	5-3/32	2-11/32	.54
4201-020	2	1-13/32	2-15/16	5-7/8	2-7/8	.86
4201-025	2-1/2	1-23/32	3-1/2	7	3-15/32	1.62
4201-030	3	2-1/16	3-31/32	7-15/16	4-5/32	2.53

REDUCING TEE

Socket x Socket x Socket

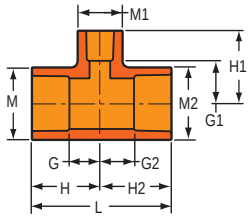


Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4201-102	3/4x3/4x1	3/4	3/4	3/4	1-11/16	1-25/32	1-11/16	3-13/32	1-5/16	1-21/32	1-5/16	.13
4201-125	1x3/4x3/4	3/4	7/8	21/32	1-25/32	1-25/32	1-21/32	3-13/32	1-19/32	1-5/16	1-5/16	.16
4201-126	1x3/4x1	23/32	23/32	3/4	1-27/32	1-27/32	1-3/4	3-19/32	1-5/8	1-5/8	1-5/16	.17
4201-131	1x1x3/4	11/16	13/16	11/16	1-13/16	1-13/16	1-13/16	3-5/8	1-5/8	1-5/16	1-5/8	.17
4201-157	1-1/4x1x3/4	11/16	1-1/32	11/16	1-15/16	2-1/32	1-13/16	3-25/32	2-3/32	1-13/32	1-23/32	.32

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

REDUCING TEE (continued)

Socket x Socket x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4201-158	1-1/4x1x1	27/32	29/32	25/32	2-1/16	2-1/32	1-29/32	3-15/16	1-31/32	1-5/8	1-5/8	.24
4201-159	1-1/4x1x1-1/4	31/32	31/32	31/32	2-7/32	2-7/32	2-3/32	4-11/32	2-1/8	2-1/8	1-23/32	.36
4201-167	1-1/4x1-1/4x3/4	21/32	1	21/32	1-29/32	2	1-29/32	3-13/16	2	1-5/16	2	.22
4201-168	1-1/4x1-1/4x1	13/16	1	13/16	2-1/16	2-1/8	2-1/16	4-1/8	1-31/32	1-21/32	1-31/32	.24
4201-169	1-1/4x1-1/4x1-1/2	1-1/8	15/16	1-1/8	2-3/8	2-11/32	2-3/8	4-3/4	2-3/32	2-11/32	2-3/32	.51
4201-201	1-1/2x1-1/4x3/4	11/16	1	1/4	2-1/16	2	1-15/16	4	2-5/16	1-3/8	2-1/16	.41
4201-202	1-1/2x1-1/4x1	27/32	1-1/32	1	2-7/32	2-5/32	2-1/4	4-15/32	2-5/16	1-11/16	2-1/16	.42
4201-210	1-1/2x1-1/2x3/4	11/16	1-1/32	11/16	2-1/16	2-1/32	2-1/16	4-5/32	2-11/32	1-13/32	2-11/32	.39
4201-211	1-1/2x1-1/2x1	13/16	1-3/32	13/16	2-3/16	2-1/4	2-3/16	4-3/8	2-11/32	1-3/4	2-11/32	.41
4201-212	1-1/2x1-1/2x1-1/4	1	1-1/8	1	2-3/8	2-11/32	2-3/8	4-13/16	2-11/32	2-3/32	2-11/32	.48
4201-213	1-1/2x1-1/2x2	1-5/16	1-1/8	1-5/16	2-11/16	2-21/32	2-11/16	5-3/8	2-11/32	2-27/32	2-11/32	.72
4201-248	2x2x3/4	11/16	1-13/32	11/16	2-7/32	2-7/16	2-7/32	4-7/16	2-27/32	1-3/8	2-27/32	.52
4201-249	2x2x1	27/32	1-13/32	27/32	2-11/32	2-9/16	2-11/32	4-23/32	2-7/8	1-3/4	2-7/8	.58
4201-250	2x2x1-1/4	1-1/32	1-11/32	1-1/32	2-9/16	2-19/32	2-9/16	5-3/32	2-7/8	2-1/8	2-7/8	.63
4201-251	2x2x1-1/2	1-5/32	1-7/16	1-5/32	2-11/16	2-13/32	2-11/16	5-3/8	2-7/8	2-13/32	2-7/8	.79
4201-289	2-1/2x2-1/2x1	27/32	1-23/32	27/32	2-5/8	2-27/32	2-5/8	5-1/4	3-17/32	1-23/32	3-17/32	1.01
4201-290	2-1/2x2-1/2x1-1/4	1-3/32	1-23/32	1-1/32	2-13/16	2-31/32	2-13/16	5-21/32	3-9/16	2-3/32	3-9/16	1.13
4201-291	2-1/2x2-1/2x1-1/2	1-3/16	1/2	1-3/16	2-15/16	1-7/8	2-15/16	5-7/8	3-15/32	2-11/32	3-15/32	1.26
4201-292	2-1/2x2-1/2x2	1-13/32	1-5/8	1-13/32	3-3/16	3-1/8	3-3/16	6-3/8	3-1/2	2-7/8	3-1/2	1.37
4201-335	3x3x1	7/8	1-15/16	7/8	2-3/4	3-1/16	2-3/4	5-15/32	4-3/16	1-23/32	4-3/16	1.26
4201-336*	3x3x1-1/4	1-3/8	1-3/4	1-3/8	3-5/16	3-1/2	3-5/16	6-5/8	4-1/8	2-7/8	4-1/8	1.94
4201-337	3x3x1-1/2	1-5/32	2-1/16	1-5/32	3-1/32	3-7/16	3-1/32	6-3/32	4-3/16	2-3/8	4-3/16	1.46
4201-338	3x3x2	1-7/16	1-13/16	1-7/16	3-5/16	3-5/16	3-5/16	6-19/32	4-3/16	2-7/8	4-3/16	1.69
4201-339	3x3x2-1/2	1-3/4	1-31/32	1-3/4	3-5/8	3-23/32	3-5/8	7-1/4	4-3/16	3-17/32	4-3/16	2.11

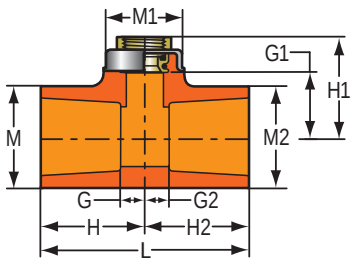
* Branch Outlet Sized with Bushing

TorqueSafe™ SPRINKLER HEAD TEE

Gasket Sealed Brass Thread Insert Style

Socket x Socket x Gasket FIPT

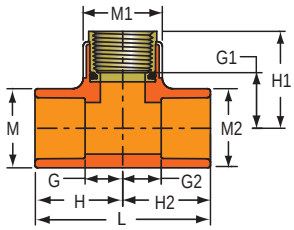
With Elastomer Seal - Use NO Thread Sealant



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4202-101 G	3/4x3/4x1/2	7/16	1-3/16	7/16	1-7/16	1-7/16	1-17/32	2-29/32	1-3/8	1-3/8	1-3/8	.22
4202-124 G	1x3/4x1/2	7/16	1-11/32	9/16	1-9/16	1-11/16	1-9/16	3-1/8	1-11/16	1-3/8	1-3/8	.26
4202-130 G	1x1x1/2	7/16	1-11/32	7/16	1-9/16	1-11/16	1-9/16	3-1/8	1-23/32	1-3/8	1-23/32	.28
4202-166 G	1-1/4x1-1/4x1/2	7/16	1-5/8	7/16	1-11/16	1-15/16	1-11/16	3-3/8	2-1/16	1-3/8	2-1/16	.34
4202-209 G	1-1/2x1-1/2x1/2	1/2	1-13/16	1/2	1-7/8	2-3/32	1-7/8	3-3/4	2-11/32	1-3/8	2-11/32	.41
4202-247 G	2x2x1/2	1/2	2-1/16	1/2	2	2-11/32	2	4-1/32	2-27/32	1-3/8	2-27/32	.54

Not intended to convey or dispense water for human consumption through drinking or cooking

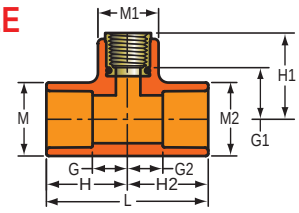
SPRINKLER HEAD TEE
Brass Thread Insert Style
Socket x Socket x Fipt



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4202-010	1x1x1	21/31	1-3/16	21/31	1-25/32	1-29/32	1-25/32	3-19/32	1-23/32	1-23/32	1-23/32	.37

Not intended to convey or dispense water for human consumption through drinking or cooking

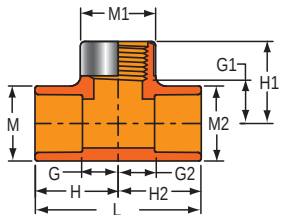
SPRINKLER REDUCING HEAD TEE
Brass Thread Insert Style
Socket x Socket x Fipt



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4202-101	3/4x3/4x1/2	7/16	1-1/16	7/16	1-15/32	1-5/8	1-15/32	2-29/32	1-13/32	1-3/16	1-13/32	.20
4202-124	1x3/4x1/2	7/16	1-11/32	9/16	1-9/16	1-11/16	1-9/16	3-1/8	1-11/16	1-3/8	1-3/8	.26
4202-130	1x1x1/2	7/16	1-7/32	7/16	1-9/16	1-25/32	1-9/16	3-1/8	1-3/4	1-3/16	1-3/4	.26
4202-156	1-1/4x1x1/2	7/16	1-7/16	9/16	1-11/16	2-1/32	1-11/16	3-3/8	2-3/32	1-3/16	1-23/32	.30
4202-166	1-1/4x1-1/4x1/2	7/16	1-1/2	7/16	1-11/16	2-1/16	1-11/16	3-13/32	2-3/32	1-3/16	2-3/32	.32
4202-199	1-1/2x1-1/4x1/2	1/2	1-5/8	9/16	1-7/8	2-3/16	1-13/16	3-11/16	2-11/32	1-3/16	2-1/16	.37
4202-209	1-1/2x1-1/2x1/2	1/2	1-23/32	1/2	1-7/8	2-3/32	1-7/8	3-3/4	2-5/16	1-17/32	2-5/16	.45
4202-237	2x1-1/2x1/2	1/2	1-27/32	17/32	2	2-7/16	1-29/32	3-15/16	2-7/8	1-3/16	2-11/32	.47
4202-247	2x2x1/2	1/2	1-31/32	1/2	2	2-3/8	2	4-1/32	2-27/32	1-17/32	2-27/32	.58

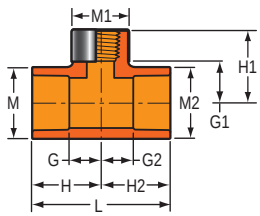
Not intended to convey or dispense water for human consumption through drinking or cooking

SPRINKLER HEAD TEE
Special Reinforced
Plastic Thread Style
Socket x Socket x SR Fipt



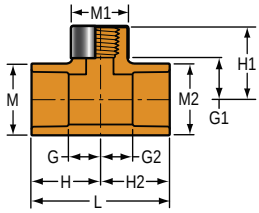
Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4202-010SR	1x1x1	21/32	3/4	21/32	1-25/32	1-5/8	1-25/32	3-19/32	1-23/32	1-11/16	1-23/32	.26

SPRINKLER REDUCING HEAD TEE
Special Reinforced
Plastic Thread Style
Socket x Socket x SR Fipt



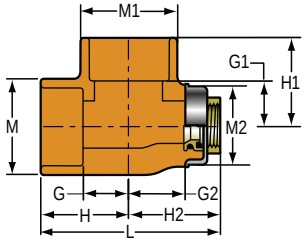
Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4202-101SR	3/4x3/4x1/2	19/32	25/32	19/32	1-19/32	1-7/16	1-19/32	3-7/32	1-13/32	1-3/16	1-13/32	.15
4202-124SR	1x3/4x1/2	7/16	29/32	9/16	1-19/32	1-5/8	1-9/16	3-5/32	1-23/32	1-3/16	1-17/32	.19

SPRINKLER REDUCING HEAD TEE
Special Reinforced (continued)
Plastic Thread Style
Socket x Socket x SR Fipt



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4202-130SR	1x1x1/2	7/16	29/32	7/16	1-9/16	1-5/8	1-9/16	3-1/8	1-23/32	1-3/16	1-23/32	.20
4202-156SR	1-1/4x1x1/2	15/32	1-5/32	19/32	1-23/32	1-7/8	1-23/32	3-13/32	2-3/32	1-3/16	1-23/32	.26
4202-166SR	1-1/4x1-1/4x1/2	7/16	1-1/8	7/16	1-11/16	1-27/32	1-11/16	3-3/8	2-3/32	1-3/16	2-3/32	.26
4202-168SR	1-1/4x1-1/4x1	27/32	1-1/32	27/32	2-3/32	1-29/32	2-3/32	4-7/32	2-3/32	1-11/16	2-3/32	.34
4202-199SR	1-1/2x1-1/4x1/2	9/16	1-9/32	17/32	1-15/16	2	1-25/32	3-23/32	2-11/32	1-3/16	2-3/32	.33
4202-209SR	1-1/2x1-1/2x1/2	1/2	1-1/4	1/2	1-7/8	1-31/32	1-7/8	3-3/4	2-11/32	1-3/16	2-11/32	.35
4202-211SR	1-1/2x1-1/2x1	27/32	1-7/32	27/32	2-7/32	2-1/8	2-7/32	4-15/32	2-11/32	1-23/32	2-11/32	.44
4202-237SR	2x1-1/2x1/2	23/32	1-9/16	3/8	2-7/32	2-9/32	1-3/4	3-31/32	2-7/8	1-3/16	2-11/32	.45
4202-247SR	2x2x1/2	1/2	31/32	1/2	2	1-11/16	19/32	4	2-7/8	1-3/16	2-7/8	.48
4202-287SR	2-1/2x2-1/2x1/2	17/32	1-3/4	17/32	2-9/32	2-1/2	2-9/32	4-19/32	3-1/2	1-7/32	3-1/2	.78

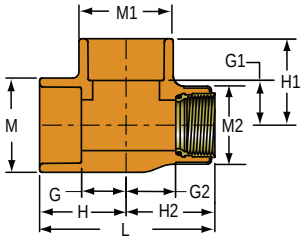
TORQUESAFE™
SPRINKLER HEAD TEE
Gasket Sealed
Brass Thread Insert Style
Socket x Gasket FIPT x Socket
With Elastomer Seal - Use NO Thread Sealant



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4203-122 G	1x1/2x1	19/32	13/16	1-13/32	1-19/32	1-27/32	1-3/4	3-11/32	1-5/8	1-5/8	1-3/8	.25

Not intended to convey or dispense water for human consumption through drinking or cooking

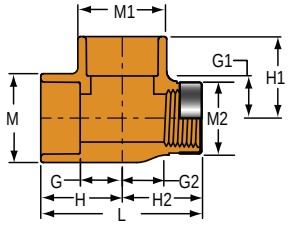
SPRINKLER HEAD TEE
Brass Thread Insert Style
Socket x Fipt x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4203-122	1x1/2x1	23/32	3/4	1-1/4	1-5/8	1-5/8	1-15/16	3-1/2	1-23/32	1-23/32	1-3/16	.25

Not intended to convey or dispense water for human consumption through drinking or cooking

SPRINKLER HEAD TEE
Special Reinforced
Plastic Thread Style
Socket x SR Fipt x Socket

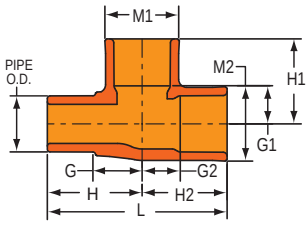


Part Number	Size	G	G1	G2	H	H1	H2	L	M	M1	M2	Approx. Wt. (Lbs.)
4203-122SR	1x1/2x1	27/32	23/32	1-3/32	1-23/32	1-5/8	1-25/32	3-13/32	1-3/4	1-3/4	1-3/16	.21

FlameGuard® Product Weights & Dimensions

STREET TEE

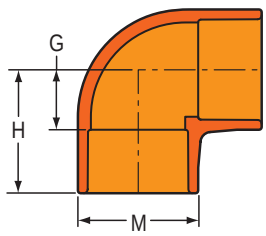
Spigot x Socket x Socket



Part Number	Size	G	G1	G2	H	H1	H2	L	M1	M2	Approx. Wt. (Lbs.)
4244-007	3/4	13/16	27/32	27/32	1-13/16	1-7/8	1-7/8	3-5/8	1-13/32	1-13/32	.16
4244-010	1	1-5/32	1-1/32	1-1/32	2-1/8	1-29/32	1-29/32	4-3/16	1-3/4	1-3/4	.27
4244-012	1-1/4	1-1/4	1	1	2-7/16	2-9/32	2-9/32	4-27/32	2-3/32	2-3/32	.42
4244-015	1-1/2	1-13/16	1-1/8	1-1/8	2-7/8	2-9/16	2-9/16	5-11/32	2-11/32	2-11/32	.56
4244-020	2	1-23/32	1-7/16	1-13/32	3-1/4	2-15/16	2-15/16	6-5/32	2-7/8	2-7/8	.84

90° ELBOW

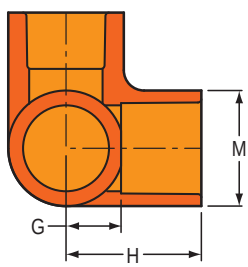
Socket x Socket



Part Number	Size	G	H	M	Approx. Wt. (Lbs.)
4206-007	3/4	9/16	1-1/2	1-5/16	.07
4206-010	1	3/4	1-5/8	1-5/8	.11
4206-012	1-1/4	7/8	2-5/32	2	.21
4206-015	1-1/2	1-5/32	2-17/32	2-3/8	.41
4206-020	2	1-13/32	2-29/32	2-7/8	.62
4206-025	2-1/2	1-15/32	3-3/8	3-1/2	1.15
4206-030	3	1-29/32	3-23/32	4-3/16	1.80

SIDE OUTLET ELBOW

Socket x Socket x Socket



Part Number	Size	G	H	M	Approx. Wt. (Lbs.)
4213-007	3/4	27/32	1-19/32	1-5/16	.09
4213-010	1	13/16	1-7/8	1-5/8	.18

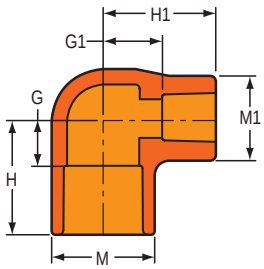
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

FlameGuard® Product Weights & Dimensions

REDUCING 90° ELBOW

Socket x Socket



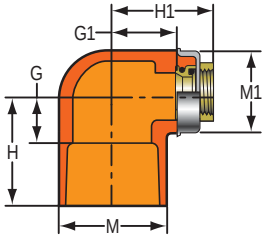
Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
4206-131	1x3/4	21/32	13/16	1-25/32	1-13/16	1-19/32	1-5/16	.11

TorqueSafe™ 90° SPRINKLER HEAD ELBOW

Gasket Sealed Brass Thread Insert Style

Socket x Gasket FIPT

With Elastomer Seal - Use NO Thread Sealant



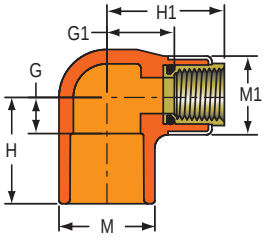
Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
4207-101 G	3/4x1/2	9/16	1-7/32	1-13/32	1-17/32	1-13/32	1-3/8	.19
4207-130 G	1x1/2	15/32	1-13/32	1-9/16	1-11/16	1-23/32	1-3/8	.23
4207-166 G	1-1/4x1/2	15/32	1-19/32	1-15/16	1-11/16	2-3/32	1-3/8	.25

Not intended to convey or dispense water for human consumption through drinking or cooking

SPRINKLER HEAD 90° ELBOW

Brass Thread Insert Style

Socket x Fipt



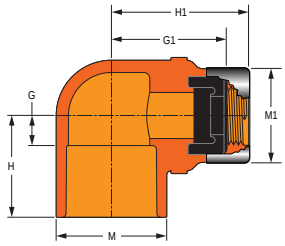
Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
4207-101	3/4x1/2	1/2	1-3/32	1-1/2	1-5/8	1-13/32	1-3/16	.17
4207-130	1x1/2	15/32	1-19/32	1-1/4	1-25/32	1-23/32	1-3/16	.20
4207-131	1x3/4	17/32	1-11/32	1-21/32	1-31/32	1-23/32	1-3/8	.25
4207-166	1-1/4x1/2	15/32	1-17/32	1-11/16	1-15/16	2-3/32	1-17/32	.33

Not intended to convey or dispense water for human consumption through drinking or cooking

SofTorque™ SR 90° ELBOW SPRINKLER HEAD ADAPTER
Gasket Sealed Special Reinforced Plastic Thread Style

Socket x SR Fipt

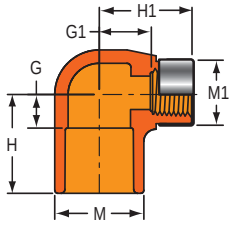
With Elastomer Seal - Use NO Thread Sealant



Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
4207-130GSR	1x1/2	7/16	1-11/16	1-1/2	2	1-21/32	1-3/8	.19
4207-166GSR	1-1/4x1/2	7/16	1-7/8	1-11/16	2-7/32	2	1-3/8	.22

SPRINKLER HEAD 90° ELBOW
Special Reinforced Plastic Thread Style

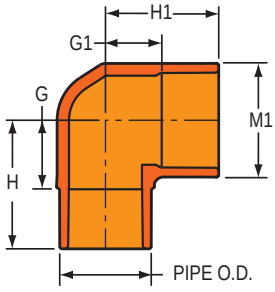
Socket x SR Fipt



Part Number	Size	G	G1	H	H1	M	M1	Approx. Wt. (Lbs.)
4207-101SR	3/4x1/2	11/32	13/16	1-15/32	1-1/2	1-13/32	1-3/16	.14
4207-130SR	1x1/2	7/16	7/8	1-9/16	1-5/8	1-23/32	1-3/8	.20
4207-131SR	1x3/4	1/2	7/8	1-5/8	1-9/16	1-23/32	1-3/8	.16
4207-166SR	1-1/4x1/2	13/32	1-1/32	1-21/32	1-23/32	2-3/32	1-7/32	.19

90° STREET ELBOW

Spigot x Socket



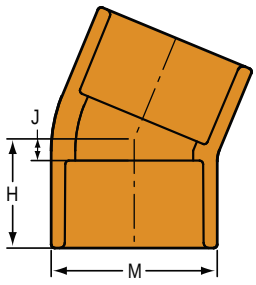
Part Number	Size	G	G1	H	H1	M1	Approx. Wt. (Lbs.)
4209-007	3/4	29/32	19/32	1-15/16	1-11/16	1-13/32	.12
4209-010	1	1-9/32	23/32	2-13/32	1-27/32	1-3/4	.21
4209-012	1-1/4	1-9/16	27/32	2-13/16	2-3/32	2-3/32	.32
4209-015	1-1/2	1-15/32	1-3/16	2-27/32	2-9/16	2-11/32	.42
4209-020	2	1-23/32	1-3/8	3-7/32	2-15/16	2-27/32	.65

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas
Spears® Manufacturing Company
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

FlameGuard® Product Weights & Dimensions

22-1/2° ELBOW

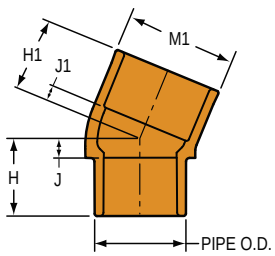
Socket x Socket



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
4216-007	3/4	1-3/16	7/32	1-13/32	.09
4216-010	1	1-3/8	9/32	1-25/32	.14
4216-012	1-1/4	1-1/2	5/16	2-3/32	.20
4216-015	1-1/2	1-7/16	13/32	1-3/8	.19
4216-020	2	1-7/8	3/8	2-27/32	.43
4216-030	3	2-3/8	1/2	4-5/32	1.00

22-1/2° STREET ELBOW

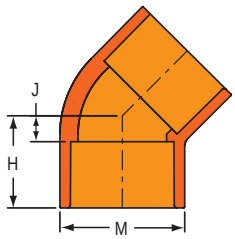
Spigot x Socket



Part Number	Size	H	H1	J	J1	M1	Approx. Wt. (Lbs.)
4242-007	3/4	1-1/4	1-1/2	1/4	1/2	1-3/8	.08
4242-010	1	1-7/16	1-11/32	5/16	7/32	1-23/32	.14
4242-012	1-1/4	1-9/16	1-25/32	17/32	11/16	2-1/16	.21
4242-015	1-1/2	1-13/32	1-23/32	1/2	11/32	2-11/32	.28
4242-020	2	1-29/32	2-1/8	7/32	5/8	2-7/8	.42
4242-025	2-1/2	2-7/32	2-7/32	15/32	15/32	3-1/2	.68
4242-030	3	2-13/32	2-13/32	9/16	17/32	4-5/32	.99

45° ELBOW

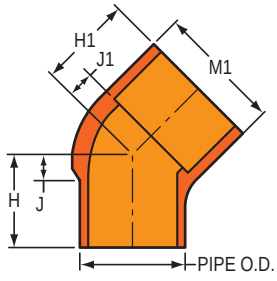
Socket x Socket



Part Number	Size	H	J	M	Approx. Wt. (Lbs.)
4217-007	3/4	1-11/32	13/32	1-5/16	.07
4217-010	1	1-13/32	3/8	1-5/8	.11
4217-012	1-1/4	1-5/8	3/8	2-1/8	.24
4217-015	1-1/2	1-13/16	7/16	2-13/32	.32
4217-020	2	2-1/8	5/8	2-7/8	.46
4217-025	2-1/2	2-17/32	3/4	3-1/2	.88
4217-030	3	2-29/32	29/32	4-5/32	1.16

45° STREET ELBOW

Spigot x Socket

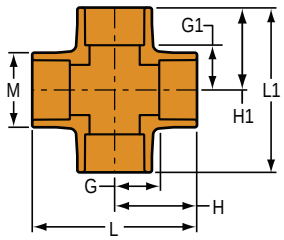


Part Number	Size	H	H1	J	J1	M1	Approx. Wt. (Lbs.)
4227-010	1	1-1/2	1-3/8	1/2	11/32	1-5/8	.10
4227-012	1-1/4	1-25/32	1-9/16	9/16	11/32	1-31/32	.15
4227-015	1-1/2	2-1/32	2-1/8	19/32	25/32	2-11/32	.29
4227-020	2	2-5/16	1-15/16	25/32	13/32	2-7/8	.44

FlameGuard® Product Weights & Dimensions

CROSS

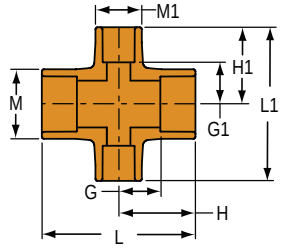
Socket x Socket x Socket x Socket



Part Number	Size	G	G1	H	H1	L	L1	M	Approx. Wt. (Lbs.)
4220-007	3/4	5/8	5/8	1-21/32	1-21/32	3-5/16	3-5/16	1-13/32	.22
4220-010	1	3/4	3/4	1-5/8	1-5/8	3-1/4	3-1/4	1-23/32	.23
4220-012	1-1/4	1-1/8	1-1/8	2-3/8	2-3/8	4-3/4	4-3/4	2-3/32	.63
4220-015	1-1/2	1-7/32	1-7/32	2-5/8	2-5/8	5-7/32	5-7/32	2-3/8	.80
4220-020	2	1-1/2	1-1/2	3	3	6	6	3	1.36
4220-025	2-1/2	1-11/16	1-11/16	3-7/16	3-7/16	6-7/8	6-7/8	3-17/32	2.16
4220-030	3	2-3/32	2-3/32	3-31/32	3-31/32	7-15/16	7-15/16	4-7/16	3.37

REDUCING CROSS

Socket x Socket x Socket x Socket

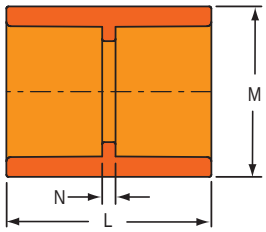


Part Number	Size	G	G1	H	H1	L	L1	M	M1	Approx. Wt. (Lbs.)
4220-131	1x3/4	23/32	5/8	1-5/8	1-5/8	3-1/4	3-1/4	1-7/8	1-1/2	.31
4220-167	1-1/4x3/4	1-1/16	23/32	2-1/16	1-31/32	4-3/32	3-31/32	2-1/16	1-13/32	.35
4220-210	1-1/2x3/4	11/16	1-5/32	2-3/32	2-3/16	4-3/16	4-11/32	2-3/8	1-13/32	.42
4220-248	2x3/4	11/16	1-7/16	2-7/32	2-7/16	4-13/32	4-7/8	2-29/32	1-13/32	.56
4220-289	2-1/2x1	29/32	1-3/4	2-11/16	2-7/8	5-11/32	5-3/4	3-1/2	1-3/4	.98

FlameGuard® Product Weights & Dimensions

COUPLING

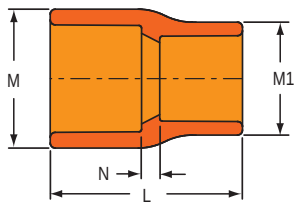
Socket x Socket



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
4229-007	3/4	2-1/8	1-5/16	3/16	.05
4229-010	1	2-3/16	1-5/8	3/32	.08
4229-012	1-1/4	2-19/32	2	3/32	.13
4229-015	1-1/2	2-7/8	2-11/32	3/32	.22
4229-020	2	3-1/8	2-27/32	3/32	.32
4229-025	2-1/2	3-11/16	3-15/32	3/16	.48
4229-030	3	4	4-3/16	1/4	.89

REDUCER COUPLING

Socket x Socket



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
4229-131	1x3/4	2-3/8	1-23/32	1-13/32	7/32	.10
4229-167	1-1/4x3/4	2-19/32	2-3/32	1-5/8	11/32	.17
4229-168	1-1/4x1	2-11/16	2-3/32	1-23/32	5/16	.18
4229-210	1-1/2x3/4	2-13/16	2-11/32	1-13/32	15/32	.19
4229-211	1-1/2x1	2-7/8	2-11/32	1-15/16	3/8	.24
4229-212	1-1/2x1-1/4	2-13/16	2-13/32	2-1/8	5/32	.23
4229-248	2x3/4	3-3/16	2-7/8	1-7/16	23/32	.32
4229-249	2x1	3-1/8	2-7/8	1-23/32	1/2	.31
4229-250	2x1-1/4	3-3/16	2-7/8	2-1/8	17/32	.33
4229-251	2x1-1/2	3-3/16	2-27/32	2-11/32	9/32	.31
4229-291	2-1/2x1-1/2	3-23/32	3-15/32	2-11/32	21/32	.51
4229-292	2-1/2x2	3-21/32	3-1/2	2-7/8	13/32	.52
4229-337	3x1-1/2	3-1/2	4-3/16	2-3/8	7/32	.71
4229-339	3x2-1/2	3-27/32	4-3/16	3-1/2	3/16	.80

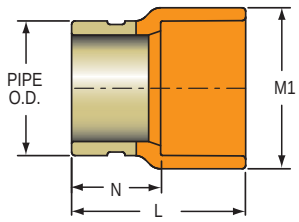
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

FlameGuard® Product Weights & Dimensions

GROOVED COUPLING ADAPTER

Groove x Socket



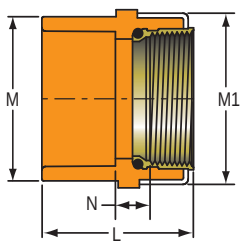
Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
4233-012	1-1/4	3-5/8	2-3/32	2-11/32	.72
4233-015	1-1/2	3-3/4	2-11/32	2-11/32	.83
4233-020	2	3-27/32	2-27/32	2-11/32	1.27
4233-025	2-1/2	4-3/16	3-15/32	2-7/16	2.02
4233-030	3	4-5/32	4-1/8	2-7/16	2.79

Not intended to convey or dispense water for human consumption through drinking or cooking

FEMALE ADAPTER

Brass Thread Insert Style

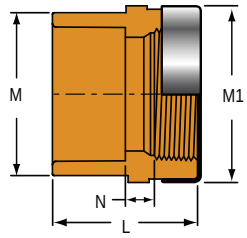
Socket x Fipt



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
4235-007	3/4	2	1-13/32	1-3/8	5/16	.23
4235-010	1	2-3/16	1-3/4	1-11/16	11/32	.25
4235-012	1-1/4	2-3/8	2-3/32	2-1/16	3/8	.36
4235-015	1-1/2	2-17/32	2-11/32	2-7/16	3/8	.49
4235-020	2	2-25/32	2-27/32	3-3/16	7/16	1.05

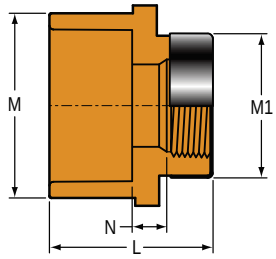
Not intended to convey or dispense water for human consumption through drinking or cooking

FEMALE ADAPTER
Special Reinforced Plastic Thread Style
Socket x SR Fipt



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
4235-007SR	3/4	1-7/8	1-13/32	1-3/8	3/32	.08
4235-010SR	1	2-5/32	1-23/32	1-7/8	3/32	.22
4235-012SR	1-1/4	2-5/16	2-1/8	2-1/16	3/16	.20

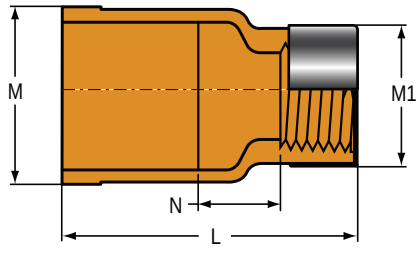
FEMALE SPRINKLER HEAD ADAPTER
Special Reinforced Plastic Thread Style
Socket x SR Fipt



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
4235-101SR	3/4x1/2	1-29/32	1-13/32	1-3/16	1/8	.08
4235-130SR	1x1/2	1-15/16	1-23/32	1-3/8	3/32	.16
4235-131SR	1x3/4	2-3/32	1-3/4	1-3/8	1/4	.13

FEMALE SPRINKLER HEAD ADAPTER
Special Reinforced Plastic Thread Style with Socket Wrench Flats
Socket x SR Fipt

M = Flat-to-Flat Dimension



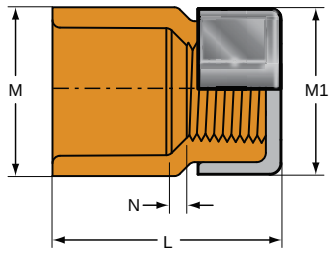
Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
W4235-101SR	3/4x1/2	2-9/32	1-13/32	1-3/16	17/32	.09
W4235-130SR	1x1/2	2-9/32	1-3/4	1-3/16	13/32	.12

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

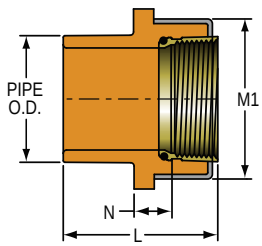
FlameGuard® Product Weights & Dimensions

FEMALE SPRINKLER HEAD ADAPTER
Special Reinforced Plastic Thread w/Metal Thread Start
Socket x SR Fipt



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
Z4235-101SR	3/4x1/2	1-7/8	1-3/8	1-7/16	3/16	.08

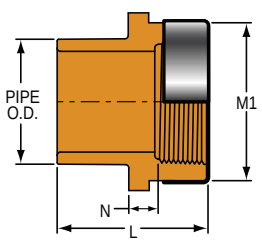
SPIGOT FEMALE ADAPTER
Brass Thread Insert Style
Spigot x Fipt



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
4278-007	3/4	2-5/32	1-3/8	17/32	.15
4278-010	1	2-9/32	1-11/16	7/16	.22

Not intended to convey or dispense water for human consumption through drinking or cooking

SPIGOT FEMALE ADAPTER
Special Reinforced Plastic Thread Style
Spigot x SR Fipt

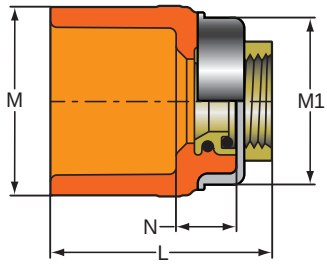


Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
4278-007SR	3/4	1-15/16	1-3/8	11/32	.08
4278-010SR	1	2-1/4	1-23/32	13/32	.13

TorqueSafe™ FEMALE SPRINKLER HEAD ADAPTER
Gasket Sealed Brass Thread Insert Style

Socket x Gasket Fipt

With Elastomer Seal - Use NO Thread Sealant

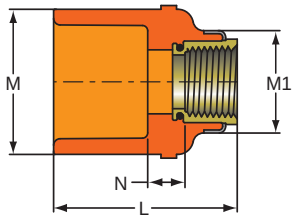


Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
4235-101 G	3/4x1/2	1-7/8	1-13/32	1-3/8	17/32	.15
4235-130GS	1x1/2	2-1/32	1-11/16	1-3/8	17/32	.17
4235-131 G	1x3/4	2	1-11/16	1-9/16	9/16	.18

Not intended to convey or dispense water for human consumption through drinking or cooking

FEMALE SPRINKLER HEAD ADAPTER
Brass Thread Insert Style

Socket x Fipt



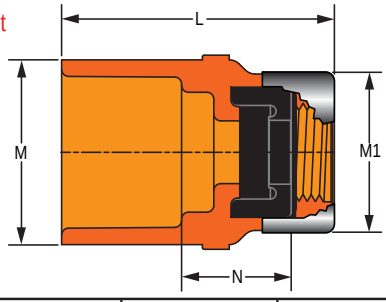
Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
4235-101	3/4x1/2	1-7/8	1-13/32	1-17/32	15/32	.19
4235-130	1x1/2	2-11/32	1-11/16	1-3/16	5/8	.16
4235-131	1x3/4	2-5/16	1-11/16	1-3/8	17/32	.18

Not intended to convey or dispense water for human consumption through drinking or cooking

SofTorque™ SR FEMALE SPRINKLER HEAD ADAPTER
Gasket Sealed Special Reinforced Plastic Thread Style

Socket x SR Fipt

With Elastomer Seal - Use NO Thread Sealant



Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
4235-101GSR	3/4x1/2	2-5/16	1-5/16	1-3/8	31/32	.11
4235-130GSR	1x1/2	2-13/32	1-19/32	1-3/8	31/32	.13

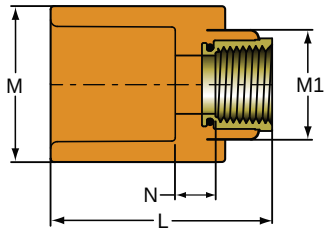
Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

FlameGuard® Product Weights & Dimensions

FEMALE SPRINKLER HEAD ADAPTER
Brass Thread Insert Style with Long Body

Socket x Fipt

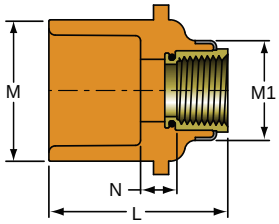


Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
L4235-130	1x1/2	2-3/16	1-23/32	1-7/32	1/2	.19

Not intended to convey or dispense water for human consumption through drinking or cooking

FEMALE SPRINKLER HEAD ADAPTER
Brass Thread Insert Style with Positioning Ring

Socket x Fipt

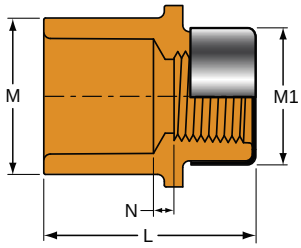


Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
R4235-101	3/4x1/2	2-1/32	1-7/16	1-3/16	15/32	.15

Not intended to convey or dispense water for human consumption through drinking or cooking

FEMALE SPRINKLER HEAD ADAPTER
Special Reinforced Plastic Thread Style with Positioning Ring

Socket x SR Fipt

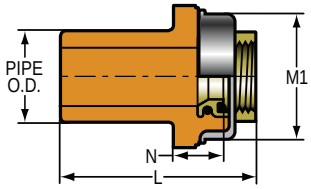


Part Number	Size	L	M	M1	N	Approx. Wt. (Lbs.)
R4235-101SR	3/4x1/2	1-15/16	1-7/16	1-7/32	7/32	.09

TorqueSafe™ FEMALE SPIGOT SPRINKLER HEAD ADAPTER
Gasket Sealed Brass Thread Insert Style

Spigot x Gasket Fipt

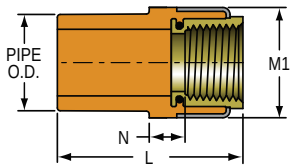
With Elastomer Seal - Use NO Thread Sealant



Part Number	Size	L	M	N	Approx. Wt. (Lbs.)
4238-101 G	3/4x1/2	1-15/16	1-3/8	17/32	.14
4238-130 G	1x1/2	2-1/16	1-3/8	19/32	.15

Not intended to convey or dispense water for human consumption through drinking or cooking

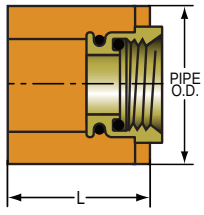
SPIGOT FEMALE SPRINKLER HEAD ADAPTER
Brass Thread Insert Style
Spigot x Fipt



Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
4238-101	3/4x1/2	2-5/32	1-7/32	19/32	.12
4238-130	1x1/2	2-1/4	1-3/16	11/32	.19

Not intended to convey or dispense water for human consumption through drinking or cooking

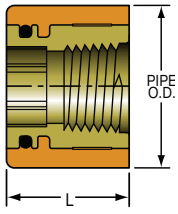
TORQUESAFE™ BUSHING - GASKET SEALED
Brass Thread Insert Style
Spigot x Gasket FIPT
With Elastomer Seal - Use NO Thread Sealant



Part Number	Size	L	Approx. Wt. (Lbs.)
4238-130BR G	1x1/2	1-7/32	.10

Not intended to convey or dispense water for human consumption through drinking or cooking

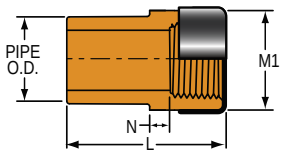
BUSHING with BRASS THREAD INSERT
Spigot x Fipt



Part Number	Size	L	Approx. Wt. (Lbs.)
4238-130BR	1x1/2	1	.13

Not intended to convey or dispense water for human consumption through drinking or cooking

SPIGOT FEMALE SPRINKLER HEAD ADAPTER
Special Reinforced Plastic Thread Style
Spigot x SR Fipt



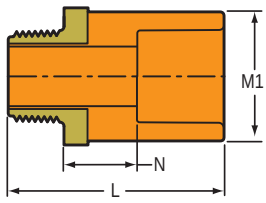
Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
4238-101SR	3/4x1/2	1-29/32	1-7/32	1/8	.07
4238-130SR	1x1/2	2-1/32	1-7/32	7/32	.09

FlameGuard® Product Weights & Dimensions

MALE ADAPTER

With CPVC Lined Thread Brass Insert

Mipt x Socket

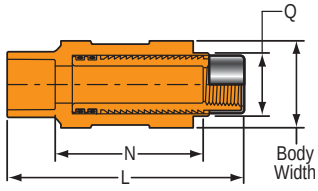


Part Number	Size	L	M1	N	Approx. Wt. (Lbs.)
4236-007	3/4	2-17/32	1-13/32	13/16	.26
4236-010	1	2-15/16	1-23/32	29/32	.43
4236-012	1-1/4	3-1/8	2-3/32	31/32	.66
4236-015	1-1/2	3-9/32	2-11/32	31/32	.80
4236-020	2	3-7/16	2-27/32	31/32	1.00

ADJUSTABLE SPRINKLER HEAD ADAPTER

Special Reinforced Plastic Thread Style

Socket x SR Fipt

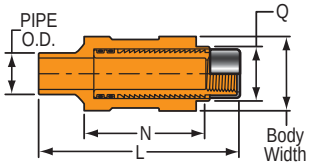


Part Number	Size	L		N		Q (Wrench Flats)	Body Width	Approx. Wt. (Lbs.)
		Min	Max	Min	Max			
42001SR	3/4x1/2	6-5/8	8-11/32	4-7/8	6-19/32	1-1/4	2-3/16	.66
42011SR	1x1/2	6-23/32	8-7/16	4-27/32	6-9/16	1-1/4	2-3/16	.69

ADJUSTABLE SPRINKLER HEAD ADAPTER

Special Reinforced Plastic Thread Style

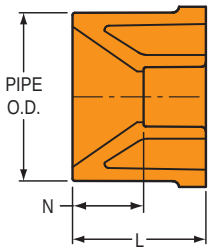
Spigot x SR Fipt



Part Number	Size	L		N		Q (Wrench Flats)	Body Width	Approx. Wt. (Lbs.)
		Min	Max	Min	Max			
42004SR	3/4x1/2	6-23/32	8-11/32	4-29/32	6-17/32	1-1/4	2-3/16	.66
42014SR	1x1/2	6-3/4	8-13/32	4-29/32	6-9/16	1-1/4	2-3/16	.67

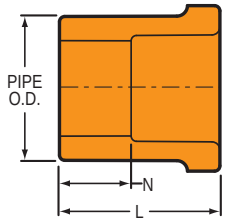
FlameGuard® Product Weights & Dimensions

REDUCER BUSHING
Flush Style
Spigot x Socket



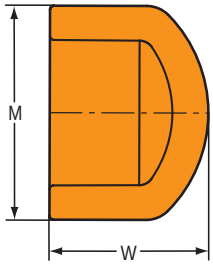
Part Number	Size	L	N	Approx. Wt. (Lbs.)
4237-131	1x3/4	1-1/4	1/4	.04
4237-167	1-1/4x3/4	1-7/16	7/16	.10
4237-168	1-1/4x1	1-13/32	9/32	.06
4237-210	1-1/2x3/4	1-5/8	5/8	.19
4237-211	1-1/2x1	1-17/32	13/32	.13
4237-212	1-1/2x1-1/4	1-9/16	5/16	.07
4237-248	2x3/4	1-29/32	29/32	.28
4237-249	2x1	1-23/32	9/16	.23
4237-250	2x1-1/4	1-11/16	7/16	.21
4237-251	2x1-1/2	1-11/16	5/16	.15
4237-290	2-1/2x1-1/4	2-5/32	7/8	.41
4237-291	2-1/2x1-1/2	2-5/32	3/4	.39
4237-292	2-1/2x2	2-9/32	3/4	.28
4237-338	3x2	2-7/32	11/16	.63
4237-339	3x2-1/2	2-5/16	1/4	.42

TRANSITION BUSHING
IPS Spigot x CTS Socket



Part Number	Size	L	N	Approx. Wt. (Lbs.)
4240-101	3/4x1/2	1-1/8	5/8	.03
4240-130	1x1/2	1-1/4	23/32	.05

CAP
Socket



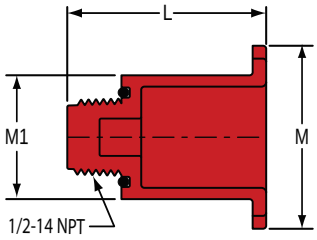
Part Number	Size	M	W	Approx. Wt. (Lbs.)
4247-007	3/4	1-3/8	1-13/32	.05
4247-010	1	1-5/8	1-9/16	.06
4247-012	1-1/4	2-3/32	1-27/32	.13
4247-015	1-1/2	2-11/32	2	.17
4247-020	2	2-27/32	2-9/32	.39
4247-025	2-1/2	3-17/32	2-5/8	.50
4247-030	3	4-3/8	3	.92

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

TEST PLUG - O-ring Sealed

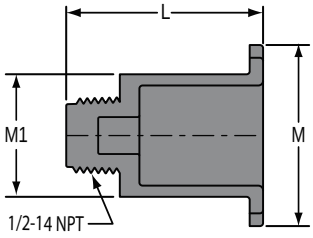
Mipt - For Pressure Testing Only.
Not For use with Z4235 Series Adapters



Part Number	Size	L	M	M1	Approx. Wt. (Lbs.)
FTP-005	1/2	1-27/32	1-15/16	1-7/32	.03

TEST PLUG for TorqueSafe™ Gasket Sealed Head Adapters

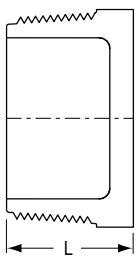
Mipt - For Pressure Testing Only.
Use ONLY with Gasket Sealed Head Adapters



Part Number	Size	L	M	M1	Approx. Wt. (Lbs.)
FTP-005GS	1/2	1-25/32	2-1/32	1-1/4	.05

TEST PLUG

(PVC White) Not UL Listed
Mipt - For Pressure Testing Only.



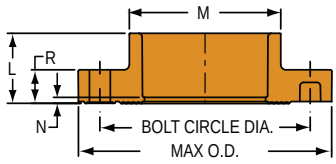
Part Number	Size	L	Approx. Wt. (Lbs.)
4250-005	1/2	27/32	.02

FlameGuard® Product Weights & Dimensions

FLANGE - ONE PIECE

4 Bolt Holes, 175 psi

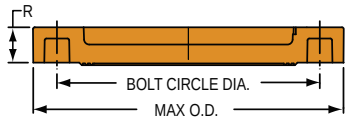
Socket



Part Number	Size	L	M	N	R	No. of Bolt Holes	Bolt Circle Dia.	Bolt Size	Min. Bolt Length	Max. O.D.	Approx. Wt. (Lbs.)
4251-007	3/4	1-5/32	1-1/2	1/8	17/32	4	2-3/4	1/2	2	3-29/32	.31
4251-010	1	1-5/16	1-13/16	1/8	11/16	4	3-1/8	1/2	2-1/4	4-9/32	.35
4251-012	1-1/4	1-13/32	2-7/32	5/32	11/16	4	3-1/2	1/2	2-1/4	4-5/8	.44
4251-015	1-1/2	1-19/32	2-1/2	3/16	23/32	4	3-27/32	1/2	2-1/2	5-1/16	.61
4251-020	2	1-27/32	3	5/16	27/32	4	4-3/4	5/8	3	5-31/32	.95
4251-025	2-1/2	2-7/32	3-1/2	7/16	1-1/32	4	5-1/2	5/8	3-1/4	7	1.50

BLIND FLANGE

4 Bolt Holes, 175 psi

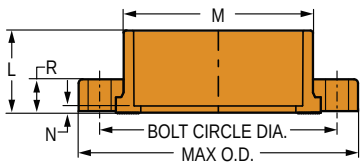


Part Number	Size	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max. O.D.	Approx. Wt. (Lbs.)
4253-007	3/4	17/32	2-3/4	4	1/2	2	3-27/32	.30
4253-010	1	23/32	3-1/8	4	1/2	2-1/4	4-1/4	.35
4253-012	1-1/4	21/32	3-1/2	4	1/2	2-1/4	4-5/8	.40
4253-015	1-1/2	23/32	3-27/32	4	1/2	2-1/2	5-1/16	.52
4253-020	2	27/32	4-3/4	4	5/8	3	5-31/32	.86
4253-025	2-1/2	1-1/32	5-1/2	4	5/8	3-1/4	6-15/16	1.70
4253-030	3	1-5/16	6	4	5/8	3-1/4	7-5/8	1.72

FLANGE - TWO PIECE

Van Stone Style, 4 Bolt Holes, 175 psi

Socket



Part Number	Size	L	M	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max. O.D.	Approx. Wt. (Lbs.)
4254-030	3	2-1/8	4-1/4	9/32	1-1/32	6	4	5/8	3-1/4	7-15/32	1.75

Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

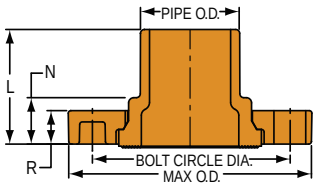
Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

FlameGuard® Product Weights & Dimensions

FLANGE - TWO PIECE

Van Stone Style, 4 Bolt Holes, 175 psi

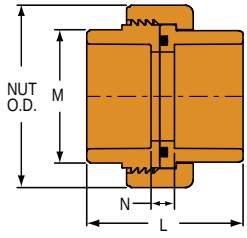
Spigot



Part Number	Size	L	N	R	Bolt Circle Dia.	No. of Bolt Holes	Bolt Size	Min. Bolt Length	Max. O.D.	Approx. Wt. (Lbs.)
4256-007	3/4	1-15/16	13/16	17/32	2-3/4	4	1/2	2	3-27/32	.30
4256-010	1	2-7/32	1-1/32	11/16	3-1/8	4	1/2	2-1/4	4-1/4	.41
4256-012	1-1/4	2-3/8	1	11/16	3-1/2	4	1/2	2-1/4	4-5/8	.50
4256-015	1-1/2	2-7/16	1-3/32	23/32	3-7/8	4	1/2	2-1/2	4-31/32	.65
4256-020	2	2-3/4	1-5/32	25/32	4-3/4	4	5/8	3	5-15/16	1.00
4256-025	2-1/2	3-1/16	1-9/32	1-1/32	5-1/2	4	5/8	3-1/4	6-15/16	1.62
4256-030	3	3-3/8	1-13/32	1-1/32	6	4	5/8	3-1/4	7-9/16	1.76

UNION

Socket x Socket



175 psi

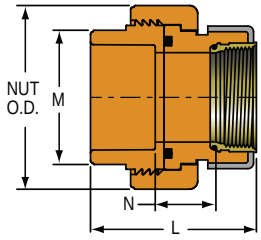
Part Number	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
4257-007	3/4	2-3/8	1-17/32	3/8	2-1/2	.38
4257-010	1	2-9/16	1-27/32	3/8	2-7/8	.41
4257-012	1-1/4	2-27/32	2-7/32	11/32	3-5/16	.52
4257-015	1-1/2	3-1/8	2-1/2	3/8	3-17/32	.63
4257-020	2	3-5/8	3-1/32	9/16	4-3/16	1.09

TRANSITION UNION

Brass Thread Insert Style

175 psi

Socket x Fipt



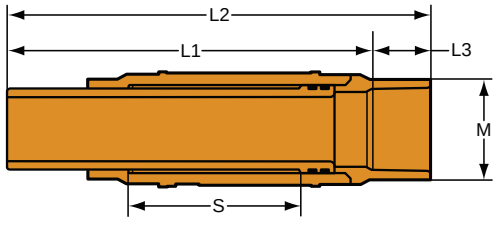
Part Number	Size	L	M	N	Nut O.D.	Approx. Wt. (Lbs.)
4259-010BR	1	2-13/16	1-7/8	1-1/32	2-7/8	.52
4259-012BR	1-1/4	3	2-3/16	1-1/8	3-9/32	.98
4259-015BR	1-1/2	3-3/4	2-1/2	1-9/16	3-17/32	.93
4259-020BR	2	3-5/8	2-7/8	1-1/4	4-5/16	1.64

Not intended to convey or dispense water for human consumption through drinking or cooking

SHORT REPAIR COUPLING

Spigot x Socket

175 psi



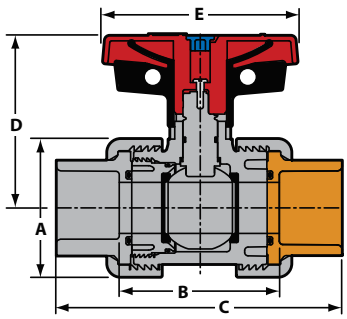
Part Number	Size	L1	L2	L3	M	S	Approx. Wt. (Lbs.)
SH118-07CO	3/4	4-13/16	5-17/32	3/4	1-3/4	2-3/16	.31
SH118-10CO	1	4-3/4	5-5/8	31/32	2-1/16	2-5/32	.40

FlameGuard® CPVC Drain & Swing Check Valves for NFPA 13D Applications Only

Application: FlameGuard® CPVC Orange Swing Check Valves and PVC/CPVC True Union Drain Valves are for use in configuring CPVC Fire Sprinkler System connection to water supply (riser/drain assembly) in NFPA 13D installations only. These valves are not UL Listed and NOT for use in any other locations within the fire sprinkler system.

TRUE UNION INDUSTRIAL DRAIN VALVES
CPVC Gray Valve with CPVC Orange End Connector

Socket x Socket

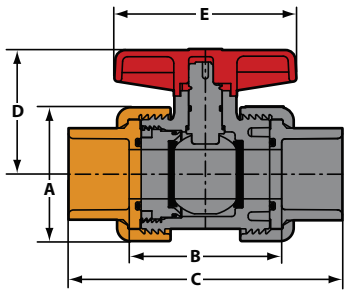


Part Number	Size	A	B	C	D	E
1822-007CFG	3/4	2-1/4	2-3/4	4-3/4	2-7/8	3-3/8
1822-010CFG	1	2-1/2	2-7/8	5-1/8	3-1/8	3-7/16
1822-012CFG	1-1/4	3-1/16	3-1/4	5-3/4	3-5/8	3-7/8
1822-015CFG	1-1/2	3-1/2	3-1/2	6-1/4	4	4-3/16
1822-020CFG	2	4-1/4	4-3/4	7-3/4	4-1/2	5-1/8

Not UL Listed

TRUE UNION DRAIN VALVES
PVC Valve with CPVC End Connector

Socket x Socket



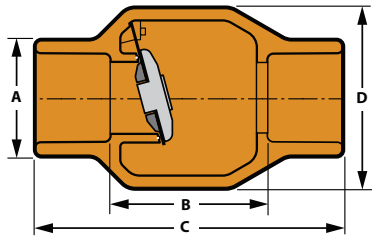
Part Number	Size	A	B	C	D	E
3622-007FG	3/4	2-1/4	2-3/4	4-3/4	2	3
3622-010FG	1	2-1/2	2-7/8	5-1/8	2-5/16	3-7/16

Not UL Listed

FlameGuard® CPVC True Union Drain & Swing Check Valves for NFPA 13D Applications Only

CPVC SWING CHECK VALVES

Socket x Socket

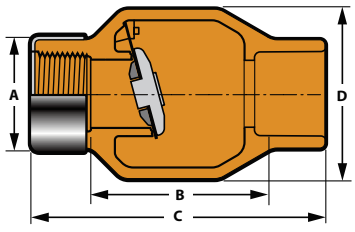


Part Number	Size	A	B	C	D	Approx. Wt. (Lbs)
S1520-10CO	1	1-11/16	2-5/16	4-9/16	2-5/8	.33
S1520-12CO	1-1/4	2-1/16	2-15/16	5-1/2	3-3/8	.42
S1520-15CO	1-1/2	2-7/16	3	5-5/8	3-3/8	.89

Not UL Listed

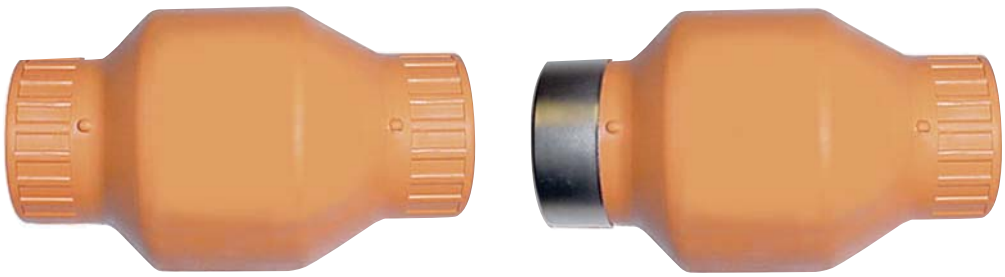
CPVC SPECIAL REINFORCED THREAD INLET SWING CHECK VALVES

SR Fipt x Socket



Part Number	Size	A	B	C	D	Approx. Wt. (Lbs)
S1520-10FSRSCO	1	1-11/16	2-15/16	4-9/16	2-5/8	.33
S1520-12FSRSCO	1-1/4	2-1/16	3-5/8	5-1/2	3-3/8	.42
S1520-15FSRSCO	1-1/2	2-7/16	3-11/16	5-5/8	3-3/8	.89

Not UL Listed



Suitable for low pressure air handling 5 psi, not for distribution of compressed air or gas

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

FlameGuard® TorqueSafe™ Gasket Sealed Sprinkler Head Adapters w/Brass Thread Inserts

The CPVC Fire Sprinkler Head Adapter You've Been Waiting For...

- **Eliminates Radial Stress**
- **Requires NO Thread Sealants**
- **Eliminates Sealant Incompatibility**
- **Prevents Over Tightening**
- **Provides Easy Frame Alignment**
- **UL® Listed for U.S. and Canada**
- **FM® Approved**

Spears® **TorqueSafe™** revolutionary design features a special molded-in-place Brass Thread Insert fitted with an elastomer gasket seal at the base of the threads. The gasket seal allows a modified thread design that eliminates radial stress and associated problems typical with tapered thread joint make up. The insert is designed to rotate during head installation for easy sprinkler frame alignment without over tightening!

No Sealant = No More Problem!

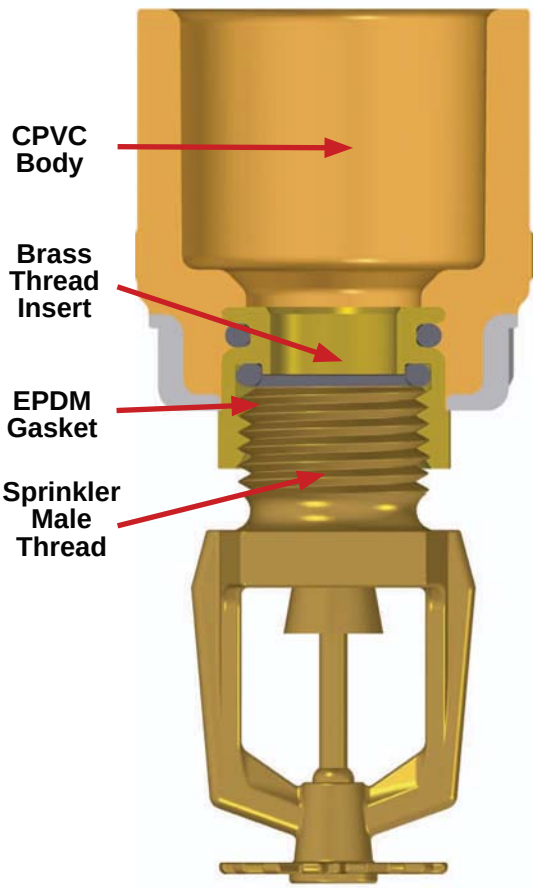
Using incompatible thread pastes and pipe dopes is the major cause of environmental stress cracking in plastics. Tape sealants are far too frequently improperly or excessively applied. These problems are fully eliminated!

NO-Stress Thread Design

The modified straight thread design is Engineered to provide a tight joint at full engagement without radial stress from tapered thread expansion. An internal gasket retaining lip serves as a positive stop against over tightening. No stress assures years of long, trouble free service.

Gasket Sealing

An EPDM gasket has been Engineered for sealing against the sprinkler head. The NPT male thread starts on all sprinkler heads provide a uniform surface for positive, reliable seal. Hundreds of tests have been performed using virtually all brands of heads and even rough, galvanized pipe nipples without any damage or loss of sealing.

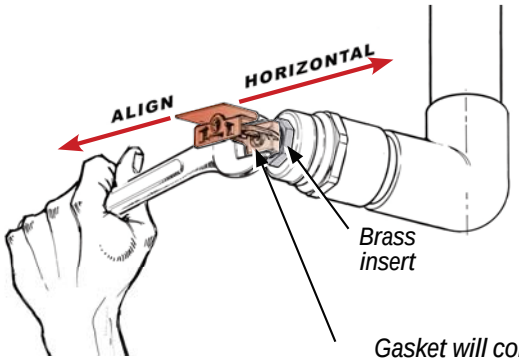


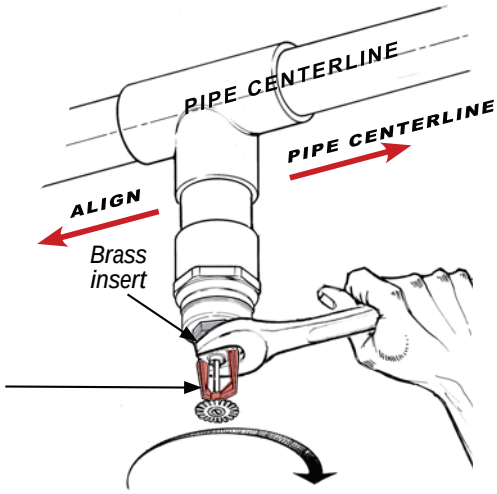
Patent Pending

Simply Hand Install Head & Align

Wrench Alignment

If necessary for alignment, rotate sprinkler head clockwise until frame is properly aligned. Gasket will compress or brass will rotate with sprinkler head until aligned. **Caution: DO NOT use back-up wrench on brass insert hex.**





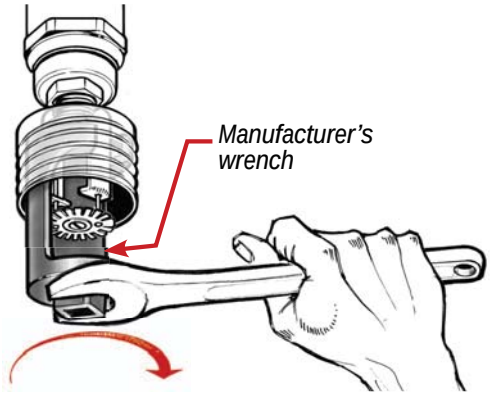
DO NOT Reverse or Back up Threaded Assembly. If over-adjusted continue to rotate clockwise until properly aligned.

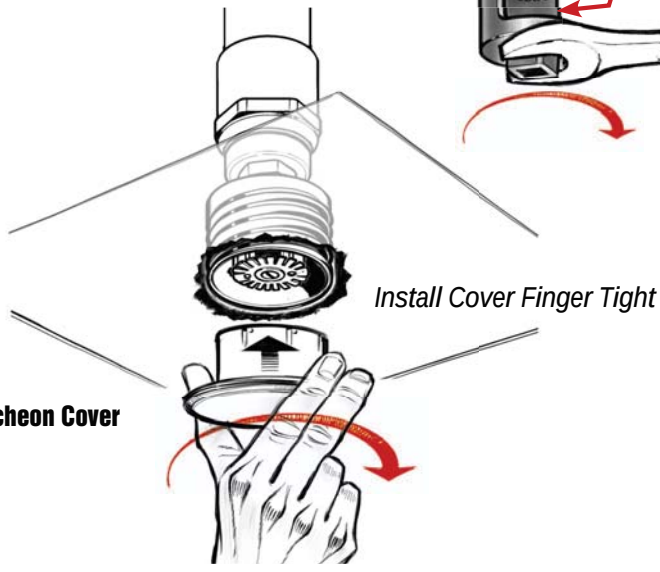
Installing Concealed Sprinkler Escutcheons

Follow these steps to assure extra firm seating of Head

1. Install Sprinkler Head/Escutcheon.

2. Tighten Sprinkler Head/Escutcheon with manufacturer's wrench until snug.





3. Install Escutcheon Cover

FlameGuard® SofTorque™ SR One-Piece Gasket Sealed, Special Reinforced Sprinkler Head Adapter

Introducing SofTorque™ SR. . .

The Ultimate CPVC Fire Sprinkler Head Adapter!

Patented

Spears® Combines Patented Special Reinforced (SR) Plastic Thread & Gasket Sealed Technology. . .

- **Unitized One-Piece Design**
- **NO Lead – NSF® Certified**
- **NO Radial Stress**
- **NO Paste or Tape Sealants**
- **NO Leaks**
- **NO Over Tightening**
- **Provides Easy Frame Alignment**
- **Suitable For Multipurpose Systems**
- **FM® Approved**
- **Easiest Installation, Finger Tight Plus 1-Turn Then Align Sprinkler Head!**

Spears® new SofTorque™ **SR** design features a special formed-in-place elastomer gasket seal at the base of Special Reinforced (SR) plastic threads. The thread design and gasket seal eliminate radial stress typical in tapered thread joint make up, plus gasket compresses to allow sprinkler frame alignment without over tightening! Special SR design provides additional strength and thread reinforcement. **Available in size 1" Socket x 1/2" SR FIPT, Spears® Part Number 4235-130GSR**

Unitized Construction

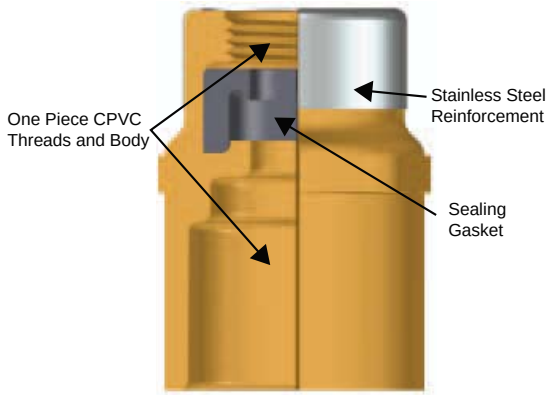
One-Piece all CPVC construction eliminates potential for problems from conventional 2-piece construction designs. No metal water contact eliminates corrosion.

NO Lead – NSF® Certif ed

All plastic construction is NSF® Standard 61 Annex G, Certified Lead Free in compliance with US Safe Drinking Water Act (SDWA)

Special Gasket Sealing & Alignment Feature

EPDM gasket has been Engineered not only for proper sealing, but provides proportional compression as threads are tightened for sprinkler head frame or sidewall deflector alignment.



No Sealant = No More Problem!

Eliminates problems from incompatible thread pastes and pipe dopes or improperly applied thread tape.

Reinforced No Stress Thread Design

Spears® patented Special Reinforced (SR) thread design eliminates radial stress and reinforces against splitting plastic threads. No stress assures years of long, trouble free service.

FlameGuard® Installation Training

Spears® produces fittings under the FlameGuard® trade name; cross-listed and suitable for use with other manufacturers' CPVC fire sprinkler products. From the beginning, Spears® has adamantly insisted that installing contractors be adequately trained in the proper installation of these products and in new products developed. To that end, Spears® personnel have conducted thousands of classes for sprinkler fitters across the country, and around the globe. Installers are issued training ID cards recognizing their participation and successful completion of these classes. Authorities Having Jurisdiction (AHJ's) have come to acknowledge the value of this training and frequently require that installers be able to verify their training by producing these cards on jobsites. Some manufacturers have taken a similar approach to Spears® and conducted suitable in-depth training classes; others have been less diligent.

Spears® continues to offer "on demand" training to installers. Technical representatives are available to schedule training classes at contractors' shops, or other suitable facilities. A phone call or email to Spears®, or to one of our distributors, is all that's needed. A typical class will include a limited number of installers, often from a single company, and requires 2 to 3 hours to complete. "Hands-on" participation and testing are required for completion. While there are no recognized industry requirements, Spears® has always recommended "refresher" training every two years to review possible changes in codes, new products, methods, etc.

Each manufacturer is responsible for the products they produce, in terms of their warranties, compatibility, recommended practices, etc. However, Spears® FlameGuard® fittings, pipe and solvent cement are additionally "cross-listed" for use with other manufacturers' pipe, fittings, and cements as long as their products are UL® Listed, FM Global Approved and NSF® Certified. These products can be mixed and used interchangeably according to product listing limitations, without any warranty issues. As a result, **Spears® installation training is also compatible with all other manufacturers' products that are made to the same ASTM standards and subject to the same listings and approvals as FlameGuard®**. We have never seen an instance where an AHJ has disagreed with this position.

Most current CPVC fire sprinkler product manufacturers have now come to recognize the importance of proper training for installers as provided by Spears®.

FlameGuard® Jobsite Notice Document (For Contractors' Use)

NOTICE

This building contains a CPVC f re sprinkler system. This CPVC f re sprinkler system is a Life Safety Assembly and must be treated carefully. Please read the following before any activity which could contact this system:

CPVC piping components may be damaged by certain substances and construction practices.

• **DO NOT** stack, support, hang equipment, or hang flexible wire/cable, especially communications cable, or other material on the fire sprinkler system.

• **ONLY** system compatible materials including, but not limited to solvent cements, caulks, sealants, cutting oils and thread pastes as noted by the CPVC fire sprinkler piping system manufacturer's installation instructions should be used in contact with this system.

• **DO NOT** expose CPVC products to incompatible substances, such as cutting oils, non-water based paints, packing oils, traditional pipe thread paste and dope, fungicides, termiticides, insecticides, detergents, building caulks, adhesive tape, solder flux, flexible wire/cable (with special consideration for communications cabling), and non-approved spray foam insulation materials.

• **DO NOT** expose CPVC products to edible oils, solvents, or glycol-based anti-freeze fluids.

• **DO NOT** expose CPVC products to open flame, solder, and soldering flux.

• **DO NOT** drop, distort, or impact CPVC products or allow objects to be dropped on them.

• **DO NOT** handle CPVC products with gloves contaminated with oils (hydrocarbons) or other incompatible materials.

Failure to follow this notice may cause cracks or fractures to develop in CPVC products resulting in property damage due to leaks or f ooding. The presence of any visible cracks may require partial or full system replacement. For additional information contact the general contractor or the f re sprinkler system installer.

FOR ADDITIONAL INFORMATION CONTACT
SPEARS® MANUFACTURING COMPANY AT 1-800-862-1499

Important Information with Regards to Your CPVC Fire Sprinkler System

CONGRATULATIONS. Your building structure contains a state-of-the-art Life Safety System. Your CPVC fire sprinkler system will enhance the safety and security of your building when properly cared for. CPVC Fire Sprinkler Products resist attack from a wide range of chemicals that are corrosive to metallic piping. As with any piping material, there are however, certain chemicals that can be detrimental to CPVC. Occasionally some of these chemicals may be found in some construction products, site preparations and building maintenance. There are certain things that you need to be mindful of in caring for or working around your CPVC fire sprinkler system.

Keep your system clear from contact with the following products and chemicals unless product labels state materials are compatible with CPVC:

NOTICE

Ordinary considerations	Property maintenance services
Cleaning Products Detergents Oils/Lubricants/Greases Rubbery Materials	Fungicides Mold Remediation Chemicals Termiticides / Insecticides
For hired contractors & do-it-yourselfers	
Corrosion Inhibitors Glycol-based antifreezes Solder Flux Thread Sealants Flexible Cable / Wiring (especially communications cabling) Caulks/Mastics Adhesive Vinyl / Electrical Tape Non-Approved Spray Foam Insulation Non-Water Based Paint Paint Thinners Wood Finishes/Varnishes	

You should also avoid the following:

- Sitting, standing, hanging, leaning, or resting anything on the pipe, fittings, and sprinkler heads
- Grounding electrical wiring to the pipe or fittings
- Ambient temperatures below 40°F/4°C where your fire sprinkler system is located. (Unless an approved compatible antifreeze or insulation method is installed.)
- Hot work around the pipe, i.e. blow torches, soldering, etc.

Be certain that this document is reviewed and understood by anyone working on or around your CPVC life safety system. If you have any questions or need assistance on chemical compatibility with your CPVC f re sprinkler system, contact the manufacturer listed on the pipe.

Proper care will help your CPVC f re sprinkler system provide protection for years to come.

AAV-015 967
AAV-015C 1080
AB-1 1376
ABS71M-005 1372
ABS71M-010 1372
ABS71M-020 1372
ABS71M-030 1372
ABS71M-040 1372
ABS71Y-005 1372
ABS71Y-010 1372
ABS71Y-020 1372
ABS71Y-030 1372
ABS71Y-040 1372
ABS73B-005 1372
ABS73B-010 1372
ABS73B-020 1372
ABS73B-030 1372
ABS73B-040 1372
AMB2-005 649
AMB2-007 649
AMB2-010 649
AMB2-012 650
AMB2-015 650
AMB2-020 650
AMB2-030 650
AMB2-040 650
AMB2-060 650
AMB3-005 649
AMB3-007 649
AMB3-010 649
AMB3-012 650
AMB3-015 650
AMB3-020 650
AMB3-030 650
AMB3-040 650
AMB4-005 649
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YS2AP8-030CL 930
YS2AP8-040 930

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

YS2AP8-040CL	930	YS2BS8-012CLSR	931	YS22P8-020CL	928	YS3AP8-015CL	930	YS3BS8-010CLSR	931	YS32P8-010CL	928
YS2AS8-005	929	YS2BS8-012CSR	932	YS22P8-030	927	YS3AP8-020	930	YS3BS8-010CSR	932	YS32P8-012	927
YS2AS8-005C	931	YS2BS8-012SR	930	YS22P8-030CL	928	YS3AP8-020CL	930	YS3BS8-010SR	930	YS32P8-012CL	928
YS2AS8-005CL	930	YS2BS8-015	930	YS22P8-040	927	YS3AP8-030	930	YS3BS8-012	930	YS32P8-015	927
YS2AS8-007	929	YS2BS8-015C	931	YS22P8-040CL	928	YS3AP8-030CL	930	YS3BS8-012C	931	YS32P8-015CL	928
YS2AS8-007C	931	YS2BS8-015CL	931	YS22S8-005	927	YS3AP8-040	930	YS3BS8-012CL	931	YS32P8-020	927
YS2AS8-007CL	930	YS2BS8-015CLSR	931	YS22S8-005C	929	YS3AP8-040CL	930	YS3BS8-012CLSR	931	YS32P8-020CL	928
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YS2AS8-040	930	YS2BS8-040C	931	YS22S8-020CL	928	YS3AS8-020	930	YS3BS8-030C	931	YS32S8-012CL	928
YS2AS8-040C	931	YS2BS8-040CL	931	YS22S8-030	927	YS3AS8-020C	931	YS3BS8-030CL	931	YS32S8-015	927
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YS2BC8-007CSR	932	YS21C8-007CSR	929	YS22S8-040CL	928	YS3AS8-040	930	YS3BS8-040C	931	YS32S8-020CL	928
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YS2BP8-030CL	931	YS21S8-020CLSR	928	YS23S8-015C	929	YS3BP8-015SR	930	YS31S8-012CLSR	928	YS33S8-010C	929
YS2BP8-030CLSR	931	YS21S8-020CSR	929	YS23S8-015CL	929	YS3BP8-020	930	YS31S8-012CSR	929	YS33S8-010CL	928
YS2BP8-030SR	930	YS21S8-020SR	927	YS23S8-020	928	YS3BP8-020CL	931	YS31S8-012SR	927	YS33S8-012	928
YS2BP8-040	930	YS21S8-030CLSR	928	YS23S8-020C	929	YS3BP8-020CLSR	931	YS31S8-015CLSR	928	YS33S8-012C	929
YS2BP8-040CL	931	YS21S8-030CSR	929	YS23S8-020CL	929	YS3BP8-020SR	930	YS31S8-015CSR	929	YS33S8-012CL	928
YS2BP8-040CLSR	931	YS21S8-030SR	928	YS23S8-030	928	YS3BP8-030	930	YS31S8-015SR	927	YS33S8-015	928
YS2BP8-040SR	930	YS21S8-040CLSR	928	YS23S8-030C	929	YS3BP8-030CL	931	YS31S8-020CLSR	928	YS33S8-015C	929
YS2BS8-005	930	YS21S8-040CSR	929	YS23S8-030CL	929	YS3BP8-030CLSR	931	YS31S8-020CSR	929	YS33S8-015CL	929
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YS2BS8-005CL	931	YS22C8-005C	929	YS23S8-040C	929	YS3BP8-040	930	YS31S8-030CLSR	928	YS33S8-020C	929
YS2BS8-005CLSR	931	YS22C8-007C	929	YS23S8-040CL	929	YS3BP8-040CL	931	YS31S8-030CSR	929	YS33S8-020CL	929
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YS2BS8-007	930	YS22C8-015C	929	YS3AC8-010C	931	YS3BS8-005	930	YS31S8-040CSR	929	YS33S8-030CL	929
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1823-080C 622

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1823V-005	623	1829-020BL	1050	182901M-020	629	1832-080	621	1834-007	1255	183901-020	629
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1823V-007	623	1829V-005	623	182901M-025	629	1832R-005	632	1834-010	1255	183901-020C	629
1823V-007C	624	1829V-005C	623	182901M-025C	630	1832R-005C	632	1834-010C	1256	183901-101	629
1823V-010	623	1829V-007	623	182901M-032	629	1832R-007	632	1834-012	1255	183901-101BL	1050
1823V-010C	624	1829V-007C	623	182901M-032C	630	1832R-007C	632	1834-012C	1256	183901-101C	629
1823V-012	623	1829V-010	623	182901M-040	629	1832R-010	632	1834-015	1255	183901-130	629
1823V-012C	624	1829V-010C	623	182901M-040C	630	1832R-010C	632	1834-015C	1256	183901-130BL	1050
1823V-015	623	1829V-012	623	182901M-050	630	1832R-012	632	1834-020	1255	183901-130C	629
1823V-015C	624	1829V-012C	624	182901M-050C	630	1832R-012C	632	1834-020C	1256	183901-131	629
1823V-020	623	1829V-015	623	182901M-063	630	1832R-015	632	1835-005	1255	183901-131BL	1050
1823V-020C	624	1829V-015C	624	182901M-063C	630	1832R-015C	632	1835-005C	1256	183901-131C	629
1823V-025	623	1829V-020	623	1830-005	651	1832R-020	632	1835-007	1255	183901-166	629
1823V-025C	624	1829V-020C	624	1830-005C	652	1832R-020C	632	1835-007C	1256	183901-166BL	1050
1823V-030	623	182901-005	629	1830-007	652	1832R-025	632	1835-010	1255	183901-166C	629
1823V-030C	624	182901-005BL	1050	1830-007C	652	1832R-025C	632	1835-010C	1256	183901-167	629
1823V-040	623	182901-005C	629	1830-010	652	1832R-030	632	1835-012	1255	183901-167BL	1050
1823V-040C	624	182901-007	629	1830-010C	652	1832R-030C	632	1835-012C	1256	183901-167C	629
1823V-060	623	182901-007BL	1050	1830-012	652	1832R-040	632	1835-015	1255	183901-168	629
1823V-060C	624	182901-007C	629	1830-012C	652	1832R-040C	632	1835-015C	1256	183901-168BL	1050
18236-060	622	182901-010	629	1830-015	652	1832RS-005	633	1835-020	1255	183901-168C	629
18236-060C	623	182901-010BL	1050	1830-015C	652	1832RS-005C	633	1835-020C	1256	183901-209	629
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1824-007	1255	182901-015BL	1050	1830-025	652	1832RS-010	633	1837-007	621	183901-210	629
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1824-010	1255	182901-020BL	1050	1830-030	652	1832RS-012	633	1837-010	621	183901-210C	629
1824-010C	1256	182901-020C	629	1830-030C	652	1832RS-012C	633	1837-010C	622	183901-211	629
1824-012	1255	182901-101	629	1830-040	652	1832RS-015	633	1837-012	621	183901-211BL	1050
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1824-015	1255	182901-101C	629	1830-060	652	1832RS-020	633	1837-015	621	183901-247	629
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1827-010	621	182901-210BL	1050	1831-030	621	1833-007	621	1838-015	1256	183901-337C	629
1827-010C	622	182901-210C	629	1831-030C	622	1833-007C	622	1838-015C	1256	183901-338	629
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1827-015	621	182901-211C	629	1831-040	621	1833-012	621	1839-005	621	183901-417	629
1827-015C	622	182901-247	629	1831-040C	622	1833-012C	622	1839-005BL	1050	183901-417BL	1050
1827-020	621	182901-247BL	1050	1831-040CSR	622	1833-015	621	1839-005C	622	183901-417C	629
1827-020C	622	182901-247C	629	1831-040SR	621	1833-015C	622	1839-007	621	183901-419	629
1827-025	621	182901-248	629	1831-060	621	1833-020	621	1839-007BL	1050	183901-419BL	1050
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1827-030	621	182901-248C	629	1831-060CSR	622	1833-025	621	1839-010	621	183901-420	629
1827-030C	622	182901-249	629	1831-060SR	621	1833-025C	622	1839-010BL	1050	183901-420BL	1050
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1828-007	1255	182901-333BL	1050	1831V-012CSR	624	1833-080	622	1839-015C	622	183901-578C	629
1828-007C	1256	182901-333C	629	1831V-012SR	623	1833-080C	622	1839-020	621	183901M-020	629
1828-010	1255	182901-335	629	1831V-015CSR	624	1833V-005	623	1839-020BL	1050	183901M-020C	630
1828-010C	1256	182901-335BL	1050	1831V-015SR	623	1833V-005C	624	1839-020C	622	183901M-025	629
1828-012	1255	182901-335C	629	1831V-020CSR	624	1833V-007	623	1839V-005	623	183901M-025C	630
1828-012C	1256	182901-337	629	1831V-020SR	623	1833V-007C	624	1839V-005C	623	183901M-032	629
1828-015	1255	182901-337BL	1050	1831V-025CSR	624	1833V-010	623	1839V-007	623	183901M-032C	630
1828-015C	1256	182901-337C	629	1831V-025SR	623	1833V-010C	624	1839V-007C	623	183901M-040	629
1828-020	1256	182901-338	629	1831V-030CSR	624	1833V-012	623	1839V-010	623	183901M-040C	630
1828-020C	1256	182901-338BL	1050	1831V-030SR	623	1833V-012C	624	1839V-010C	623	183901M-050	630
1829-005	621	182901-338C	629	1831V-040CSR	624	1833V-015	623	1839V-012	623	183901M-050C	630
1829-005BL	1050	182901-417	629	1831V-040SR	623	1833V-015C	624	1839V-012C	624	183901M-063	630
1829-005C	622	182901-417BL	1050	18316-060	622	1833V-020	623	1839V-015	623	183901M-063C	630
1829-007	621	182901-417C	629	18316-060C	622	1833V-020C	624	1839V-015C	624	1879-005	275
1829-007BL	1050	182901-419	629	18316-060CSR	623	1833V-025	623	1839V-020	623	1879-015	275
1829-007C	622	182901-419BL	1050	18316-060SR	622	1833V-025C	624	1839V-020C	624	1879-020	275
1829-010	621	182901-419C	629	1832-025	621	1833V-030	623	183901-005	629	1879-025	275
1829-010BL	1050	182901-420	629	1832-025C	622	1833V-030C	624	183901-005BL	1050	1879-030	275
1829-010C	622	182901-420BL	1050	1832-030	621	1833V-040	623	183901-005C	629	1879-035	275
1829-012	621	182901-420C	629	1832-030BL	1050	1833V-040C	624	183901-007	629	1879-040	275
1829-012BL	1050	182901-528	629	1832-030C	622	1833V-060	623	183901-007BL	1050	1879-045	275
1829-012C	622	182901-528BL	1050	1832-040	621	1833V-060C	624	183901-007C	629	1879-050	275
1829-015	621	182901-528C	629	1832-040BL	1050	18336-060	622	183901-010	629	1879-055	275
1829-015BL	1050	182901-578	629	1832-040C	622	18336-060C	623	183901-010BL	1050	1879-060	275
1829-015C	622	182901-578BL	1050	1832-060	621	1834-005	1255	183901-010C	629	1879-070	275
1829-020	621	182901-578C	629	1832-060C	622	1834-005C	1256	183901-015BL	1050	1879-080	275

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1879-090	275	1881-045	276	1882-190	276	1884-050C	284	1885-220C	285	1887-080C	285
1879-100	275	1881-045C	283	1882-190C	283	1884-055	277	1885-240	278	1887-090	278
1879-110	275	1881-050	276	1882-200	276	1884-055C	284	1885-240C	285	1887-090C	285
1879-120	275	1881-050C	283	1882-200C	283	1884-060	277	1885-300	278	1887-100	278
1879-130	275	1881-055	276	1882-220	276	1884-060C	284	1885-300C	285	1887-100C	285
1879-140	275	1881-055C	283	1882-220C	283	1884-070	277	1885-360	278	1887-110	278
1879-150	275	1881-060	276	1882-240	276	1884-070C	284	1885-360C	285	1887-110C	285
1879-160	275	1881-060C	283	1882-240C	283	1884-080	277	1885-420	278	1887-120	278
1879-170	275	1881-070	276	1882-300	276	1884-080C	284	1885-420C	285	1887-120C	285
1879-180	275	1881-070C	283	1882-300C	283	1884-090	277	1885-480	278	1887-130	278
1879-190	275	1881-080	276	1882-360	276	1884-090C	284	1885-480C	285	1887-130C	285
1879-200	275	1881-080C	283	1882-360C	283	1884-100	277	1886-005	278	1887-140	278
1879-220	275	1881-090	276	1882-420	276	1884-100C	284	1886-005C	285	1887-140C	285
1879-240	275	1881-090C	283	1882-420C	284	1884-110	277	1886-020	278	1887-150	278
1879-300	275	1881-100	276	1882-480	276	1884-110C	284	1886-020C	285	1887-150C	285
1879-360	275	1881-100C	283	1882-480C	284	1884-120	277	1886-025	278	1887-160	278
1879-420	275	1881-110	276	1883-005	276	1884-120C	284	1886-025C	285	1887-160C	285
1879-480	275	1881-110C	283	1883-005C	284	1884-130	277	1886-030	278	1887-170	278
1880-005	275	1881-120	276	1883-015	276	1884-130C	284	1886-030C	285	1887-170C	285
1880-005C	282	1881-120C	283	1883-015C	284	1884-140	277	1886-035	278	1887-180	278
1880-015	275	1881-130	276	1883-020	276	1884-140C	284	1886-035C	285	1887-180C	286
1880-015C	282	1881-130C	283	1883-020C	284	1884-150	277	1886-040	278	1887-190	278
1880-020	275	1881-140	276	1883-025	276	1884-150C	284	1886-040C	285	1887-190C	286
1880-020C	282	1881-140C	283	1883-025C	284	1884-160	277	1886-045	278	1887-200	278
1880-025	275	1881-150	276	1883-030	276	1884-160C	284	1886-045C	285	1887-200C	286
1880-025C	282	1881-150C	283	1883-030C	284	1884-170	277	1886-050	278	1887-220	278
1880-030	275	1881-160	276	1883-035	276	1884-170C	284	1886-050C	285	1887-220C	286
1880-030C	282	1881-160C	283	1883-035C	284	1884-180	277	1886-055	278	1887-240	278
1880-035	275	1881-170	276	1883-040	276	1884-180C	284	1886-055C	285	1887-240C	286
1880-035C	282	1881-170C	283	1883-040C	284	1884-190	277	1886-060	278	1887-300	278
1880-040	275	1881-180	276	1883-045	276	1884-190C	284	1886-060C	285	1887-300C	286
1880-040C	282	1881-180C	283	1883-045C	284	1884-200	277	1886-070	278	1887-360	278
1880-045	275	1881-190	276	1883-050	276	1884-200C	284	1886-070C	285	1887-360C	286
1880-045C	282	1881-190C	283	1883-050C	284	1884-220	277	1886-080	278	1887-420	278
1880-050	275	1881-200	276	1883-055	276	1884-220C	284	1886-080C	285	1887-420C	286
1880-050C	282	1881-200C	283	1883-055C	284	1884-240	277	1886-090	278	1887-480	278
1880-055	275	1881-220	276	1883-060	276	1884-240C	284	1886-090C	285	1887-480C	286
1880-055C	282	1881-220C	283	1883-060C	284	1884-300	277	1886-100	278	1888-005	278
1880-060	275	1881-240	276	1883-070	276	1884-300C	284	1886-100C	285	1888-005C	286
1880-060C	282	1881-240C	283	1883-070C	284	1884-360	277	1886-110	278	1888-025	278
1880-070	275	1881-300	276	1883-080	277	1884-360C	284	1886-110C	285	1888-030	278
1880-070C	282	1881-300C	283	1883-080C	284	1884-420	277	1886-120	278	1888-030C	286
1880-080	275	1881-360	276	1883-090	277	1884-420C	284	1886-120C	285	1888-035	278
1880-080C	282	1881-360C	283	1883-090C	284	1884-480	277	1886-130	278	1888-035C	286
1880-090	275	1881-420	276	1883-100	277	1884-480C	284	1886-130C	285	1888-040	279
1880-090C	282	1881-420C	283	1883-100C	284	1885-005	277	1886-140	278	1888-040C	286
1880-100	275	1881-480	276	1883-110	277	1885-005C	284	1886-140C	285	1888-045	279
1880-100C	282	1881-480C	283	1883-110C	284	1885-020	277	1886-150	278	1888-045C	286
1880-110	275	1882-005	276	1883-120	277	1885-020C	284	1886-150C	285	1888-050	279
1880-110C	282	1882-005C	283	1883-120C	284	1885-025	277	1886-160	278	1888-050C	286
1880-120	275	1882-015	276	1883-130	277	1885-025C	284	1886-160C	285	1888-055	279
1880-120C	282	1882-015C	283	1883-130C	284	1885-030	277	1886-170	278	1888-055C	286
1880-130	275	1882-020	276	1883-140	277	1885-030C	284	1886-170C	285	1888-060	279
1880-130C	282	1882-020C	283	1883-140C	284	1885-035	277	1886-180	278	1888-060C	286
1880-140	275	1882-025	276	1883-150	277	1885-035C	284	1886-180C	285	1888-070	279
1880-140C	282	1882-025C	283	1883-150C	284	1885-040	277	1886-190	278	1888-070C	286
1880-150	275	1882-030	276	1883-160	277	1885-040C	284	1886-190C	285	1888-080	279
1880-150C	283	1882-030C	283	1883-160C	284	1885-045	277	1886-200	278	1888-080C	286
1880-160	275	1882-035	276	1883-170	277	1885-045C	284	1886-200C	285	1888-090	279
1880-160C	283	1882-035C	283	1883-170C	284	1885-050	277	1886-220	278	1888-090C	286
1880-170	275	1882-040	276	1883-180	277	1885-050C	284	1886-220C	285	1888-100	279
1880-170C	283	1882-040C	283	1883-180C	284	1885-055	277	1886-240	278	1888-100C	286
1880-180	275	1882-045	276	1883-190	277	1885-055C	284	1886-240C	285	1888-110	279
1880-180C	283	1882-045C	283	1883-190C	284	1885-060	277	1886-300	278	1888-110C	286
1880-190	275	1882-050	276	1883-200	277	1885-060C	285	1886-300C	285	1888-120	279
1880-190C	283	1882-050C	283	1883-200C	284	1885-070	277	1886-360	278	1888-120C	286
1880-200	275	1882-055	276	1883-220	277	1885-070C	285	1886-360C	285	1888-130	279
1880-200C	283	1882-055C	283	1883-220C	284	1885-080	277	1886-420	278	1888-130C	286
1880-220	275	1882-060	276	1883-240	277	1885-080C	285	1886-420C	285	1888-140	279
1880-220C	283	1882-060C	283	1883-240C	284	1885-090	277	1886-480	278	1888-140C	286
1880-240	275	1882-070	276	1883-300	277	1885-090C	285	1886-480C	285	1888-150	279
1880-240C	283	1882-070C	283	1883-300C	284	1885-100	277	1887-005	278	1888-150C	286
1880-300	275	1882-080	276	1883-360	277	1885-100C	285	1887-005C	285	1888-160	279
1880-300C	283	1882-080C	283	1883-360C	284	1885-110	277	1887-020	278	1888-160C	286
1880-360	275	1882-090	276	1883-420	277	1885-110C	285	1887-020C	285	1888-170	279
1880-360C	283	1882-090C	283	1883-420C	284	1885-120	277	1887-025	278	1888-170C	286
1880-420	275	1882-100	276	1883-480	277	1885-120C	285	1887-025C	285	1888-180	279
1880-420C	283	1882-100C	283	1883-480C	284	1885-130	277	1887-030	278	1888-180C	286
1880-480	275	1882-110	276	1884-005	277	1885-130C	285	1887-030C	285	1888-190	279
1880-480C	283	1882-110C	283	1884-005C	284	1885-140	277	1887-035	278	1888-190C	286
1881-005	275	1882-120	276	1884-015	277	1885-140C	285	1887-035C	285	1888-200	279
1881-005C	283	1882-120C	283	1884-020	277	1885-150	277	1887-040	278	1888-200C	286
1881-015	275	1882-130	276	1884-020C	284	1885-150C	285	1887-040C	285	1888-220	279
1881-015C	283	1882-130C	283	1884-025	277	1885-160	277	1887-045	278	1888-220C	286
1881-020	276	1882-140	276	1884-025C	284	1885-160C	285	1887-045C	285	1888-240	279
1881-020C	283	1882-140C	283	1884-030	277	1885-170	277	1887-050	278	1888-240C	286
1881-025	276	1882-150	276	1884-030C	284	1885-170C	285	1887-050C	285	1888-300	279
1881-025C	283	1882-150C	283	1884-035	277	1885-180	277	1887-055	278	1888-300C	286
1881-030	276	1882-160	276	1884-035C	284	1885-180C	285	1887-055C	285	1888-360	279
1881-030C	283	1882-160C	283	1884-040	277	1885-190	278	1887-060	278	1888-360C	286
1881-035	276	1882-170	276	1884-040C	284	1885-190C	285	1887-060C	285	1888-420	279
1881-035C	283	1882-170C	283	1884-045	277	1885-200	278	1887-070	278	1888-420C	286
1881-040	276	1882-180	276	1884-045C	284	1885-200C	285	1887-070C	285	1888-480	279
1881-040C	283	1882-180C	283	1884-050	277	1885-220	278	1887-080	278	1888-480C	286

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1889-005	279	1890-170C	287	1893-130	280	1895-100C	288	2012-030	675	2024-012	1267
1889-005C	286	1890-180	280	1893-130C	287	1895-110	281	2012-030C	675	2024-012C	1268
1889-030	279	1890-180C	287	1893-140	280	1895-110C	288	2012-040	675	2024-015	1267
1889-030C	286	1890-190	280	1893-140C	287	1895-120	281	2012-040C	675	2024-015C	1268
1889-035	279	1890-190C	287	1893-150	280	1895-120C	288	2013-005	675	2024-020	1267
1889-035C	286	1890-200	280	1893-150C	287	1895-130	281	2013-005C	676	2024-020C	1268
1889-040	279	1890-200C	287	1893-160	280	1895-130C	288	2013-007	675	2025-005	1267
1889-040C	286	1890-220	280	1893-160C	287	1895-140	281	2013-007C	676	2025-005C	1268
1889-045	279	1890-220C	287	1893-170	280	1895-140C	288	2013-010	675	2025-007	1267
1889-045C	286	1890-240	280	1893-170C	287	1895-150	281	2013-010C	676	2025-007C	1268
1889-050	279	1890-240C	287	1893-180	280	1895-150C	288	2013-012	675	2025-010	1267
1889-050C	286	1890-300	280	1893-180C	287	1895-160	281	2013-012C	676	2025-010C	1268
1889-055	279	1890-300C	287	1893-190	280	1895-160C	288	2013-015	675	2025-012	1267
1889-055C	286	1890-360	280	1893-190C	287	1895-170	281	2013-015C	676	2025-012C	1268
1889-060	279	1890-360C	287	1893-200	280	1895-170C	288	2013-020	675	2025-015	1267
1889-060C	286	1890-420	280	1893-200C	287	1895-180	281	2013-020C	676	2025-015C	1268
1889-070	279	1890-420C	287	1893-220	280	1895-180C	288	2013-025	675	2025-020	1267
1889-070C	286	1890-480	280	1893-220C	287	1895-190	281	2013-025C	676	2025-020C	1268
1889-080	279	1890-480C	287	1893-240	280	1895-190C	288	2013-030	675	2031-005	675
1889-080C	286	1892-005	280	1893-240C	287	1895-200	281	2013-030C	676	2031-005C	675
1889-090	279	1892-005C	287	1893-300	280	1895-200C	288	2013-040	675	2031-007	675
1889-090C	286	1892-030C	287	1893-300C	287	1895-220	281	2013-040C	676	2031-007C	675
1889-100	279	1892-040	280	1893-360	280	1895-220C	288	2014-005	1267	2031-010	675
1889-100C	286	1892-040C	287	1893-360C	287	1895-240	281	2014-007	1267	2031-010C	675
1889-110	279	1892-045	280	1893-420	280	1895-240C	288	2014-010	1267	2031-012	675
1889-110C	286	1892-045C	287	1893-420C	287	1895-300	281	2014-012	1267	2031-012C	675
1889-120	279	1892-050	280	1893-480	280	1895-300C	288	2014-015	1267	2031-015	675
1889-120C	286	1892-050C	287	1893-480C	288	1895-360	281	2014-020	1267	2031-015C	675
1889-130	279	1892-055	280	1894-005	280	1895-360C	288	2015-005	1267	2031-020	675
1889-130C	286	1892-055C	287	1894-005C	288	1895-420	281	2015-007	1267	2031-020C	675
1889-140	279	1892-060	280	1894-020	280	1895-420C	288	2015-010	1267	2031-025	675
1889-140C	286	1892-060C	287	1894-045	280	1895-480	281	2015-012	1267	2031-025C	675
1889-150	279	1892-070	280	1894-045C	288	1895-480C	288	2015-015	1267	2031-030CSR	675
1889-150C	286	1892-070C	287	1894-050	280	1922-005	643	2015-020	1267	2031-030SR	675
1889-160	279	1892-080	280	1894-050C	288		1013	2021-005	675	2031-040CSR	675
1889-160C	286	1892-080C	287	1894-055	280	1922-007	643	2021-005C	675	2031-040SR	675
1889-170	279	1892-090	280	1894-055C	288		1013	2021-007	675	2032-005	675
1889-170C	286	1892-090C	287	1894-060	280	1922-010	643	2021-007C	675	2032-005C	675
1889-180	279	1892-100	280	1894-060C	288		1013	2021-010	675	2032-007	675
1889-180C	286	1892-100C	287	1894-070	280	1922-012	643	2021-010C	675	2032-007C	675
1889-190	279	1892-110	280	1894-070C	288		1013	2021-012	675	2032-010	675
1889-190C	286	1892-110C	287	1894-080	280	1922-015	643	2021-012C	675	2032-010C	675
1889-200	279	1892-120	280	1894-080C	288		1013	2021-015	675	2032-012	675
1889-200C	286	1892-120C	287	1894-090	280	1922-020	643	2021-015C	675	2032-012C	675
1889-220	279	1892-130	280	1894-090C	288		1013	2021-020	675	2032-015	675
1889-220C	286	1892-130C	287	1894-100	280	2E-005	316, 477	2021-020C	675	2032-015C	675
1889-240	279	1892-140	280	1894-100C	288	2E-007	316, 477	2021-025	675	2032-020	675
1889-240C	286	1892-140C	287	1894-110	280	2E-010	316, 477	2021-025C	675	2032-020C	675
1889-300	279	1892-150	280	1894-110C	288	2E-015	316, 477	2021-030CSR	675	2032-025	675
1889-300C	286	1892-150C	287	1894-120	281	2E-020	316, 477	2021-030SR	675	2032-025C	675
1889-360	279	1892-160	280	1894-120C	288	2E-030	316, 477	2021-040CSR	675	2032-030	675
1889-360C	286	1892-160C	287	1894-130	281	2E-040	316, 477	2021-040SR	675	2032-030C	675
1889-420	279	1892-170	280	1894-130C	288	2E-060	316, 477	2022-005	675	2032-040	675
1889-420C	286	1892-170C	287	1894-140	281	2N-005	316, 477	2022-005C	675	2032-040C	675
1889-480	279	1892-180	280	1894-140C	288	2N-007	316, 477	2022-007	675	2033-005	675
1889-480C	286	1892-180C	287	1894-150	281	2N-010	316, 477	2022-007C	675	2033-005C	676
1890-005	279	1892-190	280	1894-150C	288	2N-015	316, 477	2022-010	675	2033-007	675
1890-005C	286	1892-190C	287	1894-160	281	2N-020	316, 477	2022-010C	675	2033-007C	676
1890-025	279	1892-200	280	1894-160C	288	2N-030	316, 477	2022-012	675	2033-010	675
1890-030	279	1892-200C	287	1894-170	281	2N-040	316, 477	2022-012C	675	2033-010C	676
1890-030C	286	1892-220	280	1894-170C	288	2N-060	315, 477	2022-015	675	2033-012	675
1890-035	279	1892-220C	287	1894-180	281	2V-060	316, 477	2022-015C	675	2033-012C	676
1890-035C	286	1892-240	280	1894-180C	288	2011-005	675	2022-020	675	2033-015	675
1890-040	279	1892-240C	287	1894-190	281	2011-005C	675	2022-020C	675	2033-015C	676
1890-040C	286	1892-300	280	1894-190C	288	2011-007	675	2022-025	675	2033-020	675
1890-045	279	1892-300C	287	1894-200	281	2011-007C	675	2022-025C	675	2033-020C	676
1890-045C	286	1892-360	280	1894-200C	288	2011-010	675	2022-030	675	2033-025	675
1890-050	279	1892-360C	287	1894-220	281	2011-010C	675	2022-030C	675	2033-025C	676
1890-050C	286	1892-420	280	1894-220C	288	2011-012	675	2022-040	675	2033-030	675
1890-055	279	1892-420C	287	1894-240	281	2011-012C	675	2022-040C	675	2033-030C	676
1890-055C	286	1892-480	280	1894-240C	288	2011-015	675	2023-005	675	2033-040	675
1890-060	279	1892-480C	287	1894-300	281	2011-015C	675	2023-005C	676	2033-040C	676
1890-060C	287	1893-005	280	1894-300C	288	2011-020	675	2023-007	675	2034-005	1267
1890-070	279	1893-005C	287	1894-360	281	2011-020C	675	2023-007C	676	2034-005C	1268
1890-070C	287	1893-045	280	1894-360C	288	2011-025	675	2023-010	675	2034-007	1267
1890-080	279	1893-045C	287	1894-420	281	2011-025C	675	2023-010C	676	2034-007C	1268
1890-080C	287	1893-050	280	1894-420C	288	2011-030CSR	675	2023-012	675	2034-010	1267
1890-090	279	1893-050C	287	1894-480	281	2011-030SR	675	2023-012C	676	2034-010C	1268
1890-090C	287	1893-055	280	1894-480C	288	2011-040CSR	675	2023-015	675	2034-012	1267
1890-100	279	1893-055C	287	1895-005	281	2011-040SR	675	2023-015C	676	2034-012C	1268
1890-100C	287	1893-060	280	1895-005C	288	2012-005	675	2023-020	675	2034-015	1267
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1890-110C	287	1893-070	280	1895-050C	288	2012-007	675	2023-025	675	2034-020	1267
1890-120	279	1893-070C	287	1895-055	281	2012-007C	675	2023-025C	676	2034-020C	1268
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1890-130	279	1893-080C	287	1895-060	281	2012-010C	675	2023-030C	676	2035-005C	1268
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2876-818	173	2881-58232	172	2882-813	172	2885-72634	178	290-100191	186	290-100451	187
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2876-820	173	2881-58532	172	2882-814	172	2885-78634	178	290-100193	186	290-100452	187
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2876-822	173	2881-62432	172	2883-52842	172	2885-81634	178	290-100210	186	290-100453	187
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	1202		1200		1196		1197		1206		1207
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	1201		1208		1203		1205		1204		1206
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Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

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320-103293	208	330-100093	207	330-100474	205	330-100877	203	330-101887	211	330-102515	200
	1222		1221		1219		1217		1225		1214
320-103294	208	330-100113	203	330-100475	205	330-100878	203	330-101892	211	330-102516	200
	1222		1217		1219		1217		1225		1214
320-103295	208	330-100114	203	330-100476	205	330-100879	203	330-101893	211	330-102517	200
	1222		1217		1219		1217		1225		1214
320-103296	208	330-100115	203	330-100477	205	330-100880	203	330-101894	211	330-102518	200
	1222		1217		1219		1217		1225		1214
320-103297	208	330-100116	203	330-100545	205	330-100881	203	330-101895	211	330-102519	200
	1222		1217		1219		1217		1225		1214
320-103298	208	330-100117	203	330-100546	205	330-100899	203	330-101899	211	330-102520	200
	1222		1217		1219		1217		1225		1214
320-103299	208	330-100185	204	330-100547	205	330-100900	203	330-101900	211	330-103058	201
	1222		1218		1219		1217		1225		1215
320-103300	208	330-100186	204	330-100548	205	330-100901	203	330-101901	211	330-103061	201
	1222		1218		1219		1217		1225		1215
320-103301	208	330-100187	204	330-100549	205	330-100902	203	330-101902	211	330-103062	201

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	1215		1222		1216		1197		1199		1198
330-103065	201	330-103301	208	330-202234	202	3301-150232P	183	3301-6662P	183	3301-790232P	183
	1215		1222		1216		1197		1197		1197
330-103066	201	330-103302	208	330-202235	202	3301-180P	182	3301-666232P	183	3301-792P	182
	1215		1222		1216		1196		1197		1196
330-103067	201	330-103303	208	330-202237	202	3301-1802P	183	3301-668P	182	3301-792PXI	185
	1215		1222		1216		1197		1196		1199
330-103070	201	330-103304	208	330-202239	202	3301-180232P	183	3301-668PXI	185	3301-7922P	184
	1215		1222		1216		1197		1199		1198
330-103071	201	330-103997	209	330-202240	202	3301-210P	182	3301-6682P	183	3301-792232P	183
	1215		1223		1216		1196		1197		1197
330-103072	201	330-104000	209	330-202362	202	3301-2102P	184	3301-668232P	183	3301-795P	182
	1215		1223		1216		1198		1197		1196
330-103073	201	330-104001	209	330-202364	202	3301-210232P	183	3301-670P	182	3301-7952P	184
	1215		1223		1216		1197		1196		1198
330-103076	201	330-104004	209	330-202365	202	3301-240P	182	3301-670PXI	185	3301-795232P	183
	1215		1223		1216		1196		1199		1197
330-103077	201	330-104005	209	330-202367	202	3301-2402P	184	3301-6702P	183	3301-841P	182
	1215		1223		1216		1198		1197		1196
330-103078	201	330-104006	209	330-202369	202	3301-240232P	183	3301-670232P	183	3301-843P	182
	1215		1223		1216		1197		1197		1196
330-103079	201	330-104009	209	330-202370	202	3301-270P	182	3301-721P	182	3301-844P	182
	1215		1223		1216		1196		1196		1196
330-103080	201	330-104010	209	330-202372	202	3301-2702P	184	3301-723P	182	3301-8442P	184
	1215		1223		1216		1198		1196		1198
330-103170	201	330-104011	209	330-202374	202	3301-270232P	183	3301-724P	182	3301-844232P	183
	1215		1223		1216		1197		1196		1197
330-103173	201	330-104012	209	330-202375	202	3301-528P	182	3301-7242P	183	3301-846P	182
	1215		1223		1216		1196		1197		1196
330-103174	201	330-104015	209	330-202377	202	3301-530P	182	3301-724232P	183	3301-846PXI	185
	1215		1223		1216		1196		1197		1199
330-103177	201	330-104016	209	330-202379	202	3301-532P	182	3301-726P	182	3301-8462P	184
	1215		1223		1216		1196		1196		1198
330-103178	201	330-104017	209	330-202380	202	3301-5322P	183	3301-726PXI	185	3301-846232P	183
	1215		1223		1216		1197		1199		1197
330-103179	201	330-104018	209	330-202432	203	3301-532232P	182	3301-7262P	183	3301-848P	182
	1215		1223		1217		1196		1197		1196
330-103182	201	330-104019	209	330-202434	203	3301-578P	182	3301-726232P	183	3301-848PXI	185
	1215		1223		1217		1196		1197		1199
330-103183	201	330-107540	210	330-202435	203	3301-580P	182	3301-728P	182	3301-8482P	184
	1215		1224		1217		1196		1196		1198
330-103184	201	330-107541	210	330-202437	203	3301-582P	182	3301-728PXI	185	3301-848232P	183
	1215		1224		1217		1196		1199		1197
330-103185	201	330-107542	210	330-202439	203	3301-5822P	183	3301-7282P	183	3301-850P	182
	1215		1224		1217		1197		1197		1196
330-103188	201	330-107543	210	330-202440	203	3301-582232P	183	3301-728232P	183	3301-850PXI	185
	1215		1224		1217		1197		1197		1199
330-103189	201	330-107565	210	330-202442	203	3301-585P	182	3301-730P	182	3301-8502P	184
	1215		1224		1217		1196		1196		1198
330-103190	201	330-107566	210	330-202444	203	3301-585PXI	185	3301-730PXI	185	3301-850232P	183
	1215		1224		1217		1199		1199		1197
330-103191	201	330-107567	210	330-202445	203	3301-5852P	183	3301-7302P	183	3301-852P	182
	1215		1224		1217		1197		1197		1196
330-103192	201	330-107568	210	330-202447	203	3301-585232P	183	3301-730232P	183	3301-852PXI	185
	1215		1224		1217		1197		1197		1199
330-103280	208	330-107569	210	330-202449	203	3301-621P	182	3301-732P	182	3301-8522P	184
	1222		1224		1217		1196		1196		1198
330-103281	208	330-202152	202	330-202450	203	3301-623P	182	3301-732PXI	185	3301-852232P	183
	1222		1216		1217		1196		1199		1197
330-103283	208	330-202154	202	3301-060P	182	3301-624P	182	3301-7322P	183	3301-855P	182
	1222		1216		1196		1196		1197		1196
330-103284	208	330-202155	202	3301-060PXI	185	3301-6242P	183	3301-732232P	183	3301-8552P	184
	1222		1216		1199		1197		1197		1198
330-103285	208	330-202157	202	3301-0602P	183	3301-624232P	183	3301-781P	182	3301-855232P	183
	1222		1216		1197		1197		1196		1197
330-103286	208	330-202159	202	3301-060232P	182	3301-626P	182	3301-783P	182	3301-858P	182
	1222		1216		1196		1196		1196		1196
330-103287	208	330-202160	202	3301-080P	182	3301-626PXI	185	3301-784P	182	3301-8582P	184
	1222		1216		1196		1199		1196		1198
330-103288	208	330-202162	202	3301-080PXI	185	3301-6262P	183	3301-7842P	183	3301-858232P	183
	1222		1216		1199		1197		1197		1197
330-103289	208	330-202164	202	3301-0802P	183	3301-626232P	183	3301-784232P	183	3301-901P	182
	1222		1216		1197		1197		1197		1196
330-103290	208	330-202165	202	3301-080232P	182	3301-628P	182	3301-786P	182	3301-903P	182
	1222		1216		1196		1196		1196		1196
330-103291	208	330-202167	202	3301-100P	182	3301-628PXI	185	3301-786PXI	185	3301-904P	182
	1222		1216		1196		1199		1199		1196
330-103292	208	330-202169	202	3301-100PXI	185	3301-6282P	183	3301-7862P	183	3301-906P	182
	1222		1216		1199		1197		1197		1196
330-103293	208	330-202170	202	3301-1002P	183	3301-628232P	183	3301-786232P	183	3301-906PXI	185
	1222		1216		1197		1197		1197		1199
330-103294	208	330-202222	202	3301-100232P	183	3301-661P	182	3301-788P	182	3301-9062P	184
	1222		1216		1197		1196		1196		1198
330-103295	208	330-202224	202	3301-120P	182	3301-663P	182	3301-788PXI	185	3301-906232P	183
	1222		1216		1196		1196		1199		1197
330-103296	208	330-202225	202	3301-120PXI	185	3301-664P	182	3301-7882P	183	3301-908P	182
	1222		1216		1199		1196		1197		1196
330-103297	208	330-202227	202	3301-1202P	183	3301-6642P	183	3301-788232P	183	3301-908PXI	185
	1222		1216		1197		1197		1197		1199
330-103298	208	330-202229	202	3301-120232P	183	3301-664232P	183	3301-790P	182	3301-9082P	184
	1222		1216		1197		1197		1196		1198
330-103299	208	330-202230	202	3301-150P	182	3301-666P	182	3301-790PXI	185	3301-908232P	183
	1222		1216		1196		1196		1199		1197
330-103300	208	330-202232	202	3301-1502P	183	3301-666PXI	185	3301-7902P	184	3301-910P	182

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	1196		1198		1200		1201		1202		1208				
3301-910PXI	185	3302-621P	184	3311-06023P	186	3315-2402P	187	3317-180P	188	3320-1002P	193				
	1199		1198		1200		1201		1202		1207				
3301-9102P	184	3302-623P	184	3311-080P	186	3315-24023P	187	3317-1802P	188	3320-120P	192				
	1198		1198		1200		1201		1202		1206				
3301-910232P	183	3302-624P	184	3311-0802P	186	3315-270P	187	3317-18023P	188	3320-120PXI	194				
	1197		1198		1200		1201		1202		1208				
3301-912P	182	3302-661P	184	3311-08023P	186	3315-2702P	187	3317-210P	188	3320-1202P	193				
	1196		1198		1200		1201		1202		1207				
3301-912PXI	185	3302-663P	184	3311-100P	186	3315-27023P	187	3317-2102P	188	3320-150P	193				
	1199		1198		1200		1201		1202		1207				
3301-9122P	184	3302-664P	184	3311-1002P	186	3316-060P	187	3317-21023P	188	3320-1502P	193				
	1198		1198		1200		1201		1202		1207				
3301-912232P	183	3302-721P	184	3311-10023P	186	3316-0602P	187	3317-240P	188	3320-180P	193				
	1197		1198		1200		1201		1202		1207				
3301-915P	182	3302-72113P	184	3311-120P	186	3316-06023P	187	3317-2402P	188	3320-1802P	194				
	1196		1198		1200		1201		1202		1208				
3301-9152P	184	3302-7212P	185	3311-1202P	186	3316-080P	187	3317-24023P	188	3320-210P	193				
	1198		1199		1200		1201		1202		1207				
3301-915232P	183	3302-72123P	184	3311-12023P	186	3316-0802P	187	3317-270P	188	3320-2102P	194				
	1197		1198		1200		1201		1202		1208				
3301-918P	182	3302-723P	184	3311-150P	186	3316-08023P	187	3317-2702P	188	3320-240P	193				
	1196		1198		1200		1201		1202		1207				
3301-9182P	184	3302-72313P	184	3311-1502P	186	3316-100P	187	3317-27023P	188	3320-2402P	194				
	1198		1198		1200		1201		1202		1208				
3301-918232P	183	3302-7232P	185	3311-15023P	186	3316-1002P	187	3318-060P	186	3320-270P	193				
	1197		1199		1200		1201		1200		1207				
3301-921P	182	3302-72323P	184	3311-180P	186	3316-10023P	187	3318-0602P	187	3320-2702P	194				
	1196		1198		1200		1201		1201		1208				
3301-9212P	184	3302-724P	184	3311-1802P	186	3316-120P	187	3318-06023P	186	3320-528P	192				
	1198		1198		1200		1201		1200		1206				
3301-921232P	183	3302-72413P	184	3311-18023P	186	3316-1202P	187	3318-080P	186	3320-530P	192				
	1197		1198		1200		1201		1200		1206				
3301-934P	182	3302-7242P	185	3311-210P	186	3316-12023P	187	3318-0802P	187	3320-532P	192				
	1196		1199		1200		1201		1201		1206				
3301-936P	182	3302-72423P	185	3311-2102P	186	3316-150P	187	3318-08023P	186	3320-5322P	193				
	1196		1199		1200		1201		1200		1207				
3301-9362P	184	3306-060P	185	3311-21023P	186	3316-1502P	187	3318-100P	186	3320-578P	192				
	1198		1199		1200		1201		1200		1206				
3301-936232P	183	3306-0602P	186	3311-240P	186	3316-15023P	187	3318-1002P	187	3320-580P	192				
	1197		1200		1200		1201		1201		1206				
3301-938P	182	3306-06023P	185	3311-2402P	186	3316-180P	187	3318-10023P	186	3320-582P	192				
	1196		1199		1200		1201		1200		1206				
3301-9382P	184	3306-080P	185	3311-24023P	186	3316-1802P	187	3318-120P	186	3320-5822P	193				
	1198		1199		1200		1201		1200		1207				
3301-938232P	183	3306-0802P	186	3311-270P	186	3316-18023P	187	3318-1202P	187	3320-585P	192				
	1197		1200		1200		1201		1201		1206				
3301-940P	182	3306-08023P	185	3311-2702P	186	3316-210P	187	3318-12023P	186	3320-585PXI	194				
	1196		1199		1200		1201		1200		1208				
3301-9402P	184	3306-100P	185	3311-27023P	186	3316-2102P	187	3318-150P	186	3320-5852P	193				
	1198		1199		1200		1201		1200		1207				
3301-940232P	183	3306-1002P	186	3315-060P	187	3316-21023P	187	3318-1502P	187	3320-621P	192				
	1197		1200		1201		1201		1201		1206				
3301-942P	182	3306-10023P	185	3315-0602P	187	3316-240P	187	3318-15023P	186	3320-623P	192				
	1196		1199		1201		1201		1200		1206				
3301-9422P	184	3306-120P	185	3315-06023P	187	3316-2402P	187	3318-180P	186	3320-624P	192				
	1198		1199		1201		1201		1200		1206				
3301-942232P	183	3306-1202P	186	3315-080P	187	3316-24023P	187	3318-1802P	187	3320-6242P	193				
	1197		1200		1201		1201		1201		1207				
3301-945P	182	3306-12023P	185	3315-0802P	187	3316-270P	187	3318-18023P	186	3320-626P	192				
	1196		1199		1201		1201		1200		1206				
3301-9452P	184	3306-150P	185	3315-08023P	187	3316-2702P	187	3318-210P	186	3320-626PXI	194				
	1198		1199		1201		1201		1200		1208				
3301-945232P	183	3306-1502P	186	3315-100P	187	3316-27023P	187	3318-2102P	187	3320-6262P	193				
	1197		1200		1201		1201		1201		1207				
3301-948P	182	3306-15023P	185	3315-1002P	187	3317-060P	187	3318-21023P	186	3320-628P	192				
	1196		1199		1201		1201		1200		1206				
3301-9482P	184	3306-180P	185	3315-10023P	187	3317-0602P	188	3318-240P	186	3320-628PXI	194				
	1198		1199		1201		1202		1200		1208				
3301-948232P	183	3306-1802P	186	3315-120P	187	3317-06023P	188	3318-2402P	187	3320-6282P	193				
	1197		1200		1201		1202		1201		1207				
3301-951P	182	3306-18023P	185	3315-1202P	187	3317-080P	187	3318-24023P	186	3320-661P	193				
	1196		1199		1201		1201		1200		1207				
3301-9512P	184	3306-210P	185	3315-12023P	187	3317-0802P	188	3318-270P	186	3320-663P	193				
	1198		1199		1201		1202		1200		1207				
3301-951232P	183	3306-2102P	186	3315-150P	187	3317-08023P	188	3318-2702P	187	3320-664P	193				
	1197		1200		1201		1202		1201		1207				
3301-954P	182	3306-21023P	185	3315-1502P	187	3317-100P	187	3318-27023P	186	3320-6642P	193				
	1196		1199		1201		1201		1200		1207				
3301-9542P	184	3306-240P	185	3315-15023P	187	3317-1002P	188	3320-060P	192	3320-666P	193				
	1198		1199		1201		1202		1206		1207				
3301-954232P	183	3306-2402P	186	3315-180P	187	3317-10023P	188	3320-060PXI	194	3320-666PXI	194				
	1197		1200		1201		1202		1208		1208				
3302-528P	184	3306-24023P	185	3315-1802P	187	3317-120P	187	3320-0602P	193	3320-6662P	193				
	1198		1199		1201		1201		1207		1207				
3302-530P	184	3306-270P	185	3315-18023P	187	3317-1202P	188	3320-080P	192	3320-668P	193				
	1198		1199		1201		1202		1206		1207				
3302-532P	184	3306-2702P	186	3315-210P	187	3317-12023P	188	3320-080PXI	194	3320-668PXI	194				
	1198		1200		1201		1202		1208		1208				
3302-578P	184	3306-27023P	185	3315-2102P	187	3317-150P	188	3320-0802P	193	3320-6682P	193				
	1198		1199		1201		1202		1207		1207				
3302-580P	184	3311-060P	186	3315-21023P	187	3317-1502P	188	3320-100P	192	3320-670P	193				
	1198		1200		1201		1202		1206		1207				
3302-582P	184	3311-0602P	186	3315-240P	187	3317-15023P	188	3320-100PXI	194	3320-670PXI	194				

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	1208		1208		1207		1203		1204		1205
3320-6702P	193	3320-8502P	194	3320-9542P	194	3329-080P	189	3329-62832P	191	3329-78823P	190
	1207		1208		1208		1203		1205		1204
3320-721P	193	3320-852P	193	3324-060P	188	3329-0802P	189	3329-664P	189	3329-78832P	191
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3320-723P	193	3320-852PXI	194	3324-0602P	188	3329-08023P	189	3329-6642P	191	3329-790P	190
	1207		1208		1202		1203		1205		1204
3320-724P	193	3320-8522P	194	3324-06023P	188	3329-100P	189	3329-66423P	190	3329-7902P	191
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	1207		1207		1202		1203		1205		1204
3320-726P	193	3320-8552P	194	3324-0802P	188	3329-10023P	189	3329-666P	189	3329-79032P	191
	1207		1208		1202		1203		1203		1205
3320-726PXI	194	3320-858P	193	3324-08023P	188	3329-120P	189	3329-6662P	191	3329-792P	190
	1208		1207		1202		1203		1205		1204
3320-7262P	193	3320-8582P	194	3324-100P	188	3329-1202P	189	3329-66623P	190	3329-7922P	192
	1207		1208		1202		1203		1204		1206
3320-728P	193	3320-901P	193	3324-1002P	188	3329-12023P	189	3329-66632P	191	3329-79223P	190
	1207		1207		1202		1203		1205		1204
3320-728PXI	194	3320-903P	193	3324-10023P	188	3329-150P	189	3329-668P	189	3329-79232P	191
	1208		1207		1202		1203		1203		1205
3320-7282P	193	3320-904P	193	3324-120P	188	3329-1502P	189	3329-6682P	191	3329-795P	190
	1207		1207		1202		1203		1205		1204
3320-730P	193	3320-9042P	194	3324-1202P	188	3329-15023P	189	3329-66823P	190	3329-7952P	192
	1207		1208		1202		1203		1204		1206
3320-730PXI	194	3320-906P	193	3324-12023P	188	3329-180P	189	3329-66832P	191	3329-79523P	190
	1208		1207		1202		1203		1205		1204
3320-7302P	193	3320-906PXI	194	3324-150P	188	3329-1802P	189	3329-670P	189	3329-79532P	191
	1207		1208		1202		1203		1203		1205
3320-732P	193	3320-9062P	194	3324-1502P	188	3329-18023P	189	3329-6702P	191	3329-844P	190
	1207		1208		1202		1203		1205		1204
3320-732PXI	194	3320-908P	193	3324-15023P	188	3329-210P	189	3329-67023P	190	3329-846P	190
	1208		1207		1202		1203		1204		1204
3320-7322P	194	3320-908PXI	194	3324-180P	188	3329-2102P	189	3329-67032P	191	3329-8462P	192
	1208		1208		1202		1203		1205		1206
3320-781P	193	3320-9082P	194	3324-1802P	188	3329-21023P	189	3329-724P	190	3329-84623P	190
	1207		1208		1202		1203		1204		1204
3320-783P	193	3320-910P	193	3324-18023P	188	3329-240P	189	3329-7242P	191	3329-84632P	191
	1207		1207		1202		1203		1205		1205
3320-784P	193	3320-910PXI	194	3324-210P	188	3329-2402P	189	3329-72423P	190	3329-848P	190
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	1208		1208		1202		1203		1205		1206
3320-786P	193	3320-912P	193	3324-21023P	188	3329-270P	189	3329-726P	190	3329-84823P	190
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3320-786PXI	194	3320-912PXI	194	3324-240P	188	3329-2702P	189	3329-7262P	191	3329-84832P	191
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3320-7862P	194	3320-9122P	194	3324-2402P	188	3329-27023P	189	3329-72623P	190	3329-850P	190
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	1208		1208		1222		1205		1204		1204
3320-792P	193	3320-934P	193	3328-060P	189	3329-58223P	190	3329-7302P	191	3329-85232P	191
	1207		1207		1203		1204		1205		1205
3320-792PXI	194	3320-9342P	194	3328-080	208	3329-58232P	191	3329-73023P	190	3329-855P	190
	1208		1208		1222		1205		1204		1204
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3320-843P	193	3320-940P	193	3328-120P	189	3329-624P	189	3329-73232P	191	3329-8582P	192
	1207		1207		1203		1203		1205		1206
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3320-8442P	194	3320-942P	193	3328-150P	189	3329-62423P	190	3329-7842P	191	3329-85832P	191
	1208		1207		1203		1204		1205		1205
3320-846P	193	3320-9422P	194	3328-160	208	3329-62432P	191	3329-78423P	190	3329-906P	190
	1207		1208		1222		1205		1204		1204
3320-846PXI	194	3320-945P	193	3328-180P	189	3329-626P	189	3329-78432P	191	3329-9062P	192
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3320-8462P	194	3320-9452P	194	3328-210P	189	3329-6262P	191	3329-786P	190	3329-90623P	190
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3320-848P	193	3320-948P	193	3328-240P	189	3329-62623P	190	3329-7862P	191	3329-90632P	191
	1207		1207		1203		1204		1205		1205
3320-848PXI	194	3320-9482P	194	3328-270P	189	3329-62632P	191	3329-78623P	190	3329-908P	190
	1208		1208		1203		1205		1204		1204
3320-8482P	194	3320-951P	193	3329-060P	189	3329-628P	189	3329-78632P	191	3329-9082P	192
	1208		1207		1203		1203		1205		1206
3320-850P	193	3320-9512P	194	3329-0602P	189	3329-6282P	191	3329-788P	190	3329-90823P	190
	1207		1208		1203		1205		1204		1204
3320-850PXI	194	3320-954P	193	3329-06023P	189	3329-62823P	190	3329-7882P	191	3329-90832P	191

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	1205		1205		1218		1220		1221		1214
3329-910P	190	3329-95132P	191	340-100213	204	340-100593	206	340-101383	207	340-102445	200
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3329-9102P	192	3329-954P	190	340-100233	204	340-100594	206	340-101385	207	340-102447	200
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3329-91023P	190	3329-9542P	192	340-100234	204	340-100595	206	340-101388	207	340-102448	200
	1204		1206		1218		1220		1221		1214
3329-91032P	191	3329-95423P	191	340-100235	204	340-100657	206	340-101392	207	340-102449	200
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3329-912P	190	3329-95432P	191	340-100236	204	340-100658	206	340-101456	208	340-102450	200
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3329-9122P	192	334-007	1252	340-100237	204	340-100659	206	340-101458	208	340-102499	200
	1206	334-010	1252		1218		1220		1222		1214
3329-91223P	190	3340-585	209	340-100305	204	340-100660	206	340-101461	208	340-102500	200
	1204		1223		1218		1220		1222		1214
3329-91232P	191	335-010	1252	340-100306	204	340-100661	206	340-101465	208	340-102501	200
	1205	335-010G	1252		1218		1220		1222		1214
3329-915P	190	335-012	1252	340-100307	204	340-100679	206	340-102356	199	340-102502	200
	1204	335-012G	1252		1218		1220		1213		1214
3329-9152P	192	335-015	1252	340-100308	204	340-100680	206	340-102357	199	340-102503	200
	1206	335-015G	1252		1218		1220		1213		1214
3329-91523P	191	335-020	1252	340-100309	204	340-100681	206	340-102358	199	340-102504	200
	1205	335-020G	1252		1218		1220		1213		1214
3329-91532P	191	335-025G	1252	340-100329	204	340-100682	206	340-102359	199	340-102505	200
	1205	336-005	1252		1218		1220		1213		1214
3329-918P	190	336-007	1252	340-100330	204	340-100683	206	340-102361	199	340-102506	200
	1204	336-010	1252		1218		1220		1213		1214
3329-9182P	192	336-010G	1252	340-100331	204	340-100702	206	340-102362	199	340-102507	200
	1206	336-012	1252		1218		1220		1213		1214
3329-91823P	191	336-012G	1252	340-100332	204	340-100703	206	340-102363	199	340-102508	200
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3329-91832P	191	336-015G	1252	340-100333	204	340-100704	206	340-102364	199	340-102509	200
	1205	336-020	1252		1218		1220		1213		1214
3329-921P	190	336-020G	1252	340-100353	205	340-100705	206	340-102365	199	340-102510	200
	1204	336-025G	1252		1219		1220		1213		1214
3329-9212P	192	336-030	1252	340-100354	205	340-100767	206	340-102366	199	340-102511	200
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3329-92123P	191	336-040G	1252	340-100355	205	340-100768	206	340-102367	199	340-102512	200
	1205	336-131	1252		1219		1220		1213		1214
3329-92132P	191	340-100002	207	340-100356	205	340-100769	206	340-102368	199	340-102513	200
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3329-936P	190	340-100003	207	340-100357	205	340-100770	206	340-102369	199	340-102514	200
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3329-9362P	192	340-100004	207	340-100425	205	340-100771	206	340-102370	199	340-102515	200
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3329-93632P	191	340-100067	207	340-100427	205	340-100790	206	340-102373	199	340-102517	200
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3329-938P	190	340-100068	207	340-100428	205	340-100791	206	340-102374	199	340-102518	200
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3329-9382P	192	340-100069	207	340-100429	205	340-100792	206	340-102375	199	340-102519	200
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3329-93823P	191	340-100070	207	340-100449	205	340-100793	206	340-102377	199	340-102520	200
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3329-93832P	191	340-100071	207	340-100450	205	340-100812	203	340-102378	199	340-103058	201
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3329-940P	190	340-100089	207	340-100451	205	340-100813	203	340-102379	199	340-103061	201
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3329-9402P	192	340-100090	207	340-100452	205	340-100814	203	340-102380	199	340-103062	201
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3329-94032P	191	340-100092	207	340-100473	205	340-100878	203	340-102427	199	340-103066	201
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3329-942P	190	340-100093	207	340-100474	205	340-100879	203	340-102428	199	340-103067	201
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3329-9422P	192	340-100113	203	340-100475	205	340-100880	203	340-102429	199	340-103070	201
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3329-94223P	191	340-100114	203	340-100476	205	340-100881	203	340-102431	199	340-103071	201
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3329-94232P	191	340-100115	203	340-100477	205	340-100899	203	340-102432	199	340-103072	201
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3329-945P	190	340-100116	203	340-100545	205	340-100900	203	340-102433	199	340-103073	201
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3329-9452P	192	340-100117	203	340-100546	205	340-100901	203	340-102434	199	340-103076	201
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3329-94523P	191	340-100185	204	340-100547	205	340-100902	203	340-102435	199	340-103077	201
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3329-94532P	191	340-100186	204	340-100548	205	340-100926	207	340-102436	199	340-103078	201
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3329-948P	190	340-100187	204	340-100549	205	340-100928	207	340-102437	199	340-103079	201
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3329-9482P	192	340-100188	204	340-100569	205	340-100931	207	340-102438	199	340-103080	201
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3329-94823P	191	340-100189	204	340-100570	205	340-100935	207	340-102439	199	340-103170	201
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3329-94832P	191	340-100209	204	340-100571	205	340-101310	207	340-102440	199	340-103173	201
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3329-951P	190	340-100210	204	340-100572	205	340-101312	207	340-102442	200	340-103174	201
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3329-9512P	192	340-100211	204	340-100573	205	340-101315	207	340-102443	200	340-103177	201
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3329-95123P	191	340-100212	204	340-100592	206	340-101319	207	340-102444	200	340-103178	201

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	1215		1223		1218		1220		1213		1214
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340-103182	201	3428-040	208	350-100330	204	350-100683	206	350-102361	199	350-102509	200
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340-103183	201	3428-060	208	350-100331	204	350-100702	206	350-102362	199	350-102510	200
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340-103184	201	3428-080	208	350-100332	204	350-100703	206	350-102363	199	350-102511	200
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340-103185	201	3428-100	208	350-100333	204	350-100704	206	350-102364	199	350-102512	200
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340-103190	201	3428-160	208	350-100355	205	350-100768	206	350-102367	199	350-102515	200
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340-103284	208	350-100005	207	350-100426	205	350-100789	206	350-102372	199	350-102519	200
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	1222		1212	3622RS-010C	635	3629-020	630	3633-020	631		1227
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	1227	3706-140	961, 971		1228	3718-240	971	3720-696	974		1232
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3775-240	976	3775-906	964, 976	3776-762	976		1234	3790-080	978	3790-814	978
	1233		1233		1233	3777-664	963, 977		1235		1235
3775-578	975	3775-908	976	3776-764	976		1234	3790-100	978	3790-816	978
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3775-580	964, 975	3775-910	976	3776-784	976		1234	3790-120	978	3790-818	978
	1232		1233		1233	3777-668	963, 977		1235		1235
3775-582	975	3775-912	976	3776-786	965, 976		1234	3790-140	961, 978	3790-820	978
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3775-585	975	3775-914	976	3776-788	976		1234	3790-160	978	3790-822	978
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3775-621	964, 975	3775-916	976	3776-790	976		1234	3790-180	978	3790-824	978
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3775-623	964, 975	3775-918	976	3776-792	976		1234	3790-200	978	3790-826	978
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3775-624	975	3775-920	976	3776-794	976		1234	3790-240	978	3790-828	978
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3775-626	964, 975	3776-060	976	3776-796	976		1234	3790-528	961	3790-904	978
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3775-628	975	3776-080	965, 976	3776-814	976		1234	3790-532	978	3790-906	978
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3775-661	964, 975	3776-100	965, 976	3776-816	965, 976		1234	3790-578	961, 978	3790-908	978
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3775-663	964, 975	3776-120	965, 976	3776-818	976		1234	3790-580	961, 978	3790-910	978
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	1232		1233		1233	3777-753	977		1235		1235
3775-666	964, 975	3776-160	976	3776-822	976		1234	3790-585	961, 978	3790-914	978
						3777-754	977				

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	1235	3901-530	970		1227	3906-200	971		1228	3920-080	974
3790-918	978		1227		1240		1228		1241		1231
	1235		1240	3901-784	970		1241	3916-040	971		1244
3790-920	978	3901-532	970		1227	3906-240	971		1228	3920-100	974
	1235		1227		1240		1228		1241		1231
3791-060	962		1240	3901-786	970		1241	3916-060	971		1244
3791-080	962	3901-578	970		1227	3909-040	972		1228	3920-120	974
3791-100	962		1227		1240		1229		1241		1231
3791-120	962		1240	3901-788	970		1242	3916-080	971		1244
3791-140	962	3901-580	970		1227	3909-060	972		1228	3920-140	974
3791-528	962		1227		1240		1229		1241		1231
3791-530	962		1240	3901-790	970		1242	3916-100	971		1244
3791-532	962	3901-582	970		1227	3909-080	972		1228	3920-160	974
3791-578	962		1227		1240		1229		1241		1231
3791-580	962		1240	3901-792	970		1242	3916-120	971		1244
3791-582	962	3901-585	970		1227	3909-100	972		1228	3920-180	974
3791-585	962		1227		1240		1229		1241		1231
3791-621	962		1240	3901-794	970		1242	3916-140	971		1244
3791-623	962	3901-621	970		1227	3909-120	972		1228	3920-200	974
3791-624	962		1227		1240		1229		1241		1231
3791-626	962		1240	3901-796	970		1242	3916-160	971		1244
3791-628	962	3901-623	970		1227	3909-140	972		1228	3920-240	975
3791-661	962		1227		1240		1229		1241		1232
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3791-664	962	3901-624	970		1227	3909-160	972		1228	3920-420	974
3791-666	962		1227		1240		1229		1241		1231
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3791-670	962	3901-626	970		1227	3909-180	972		1228	3920-422	974
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3791-700	962	3901-661	970		1227	3909-240	972		1229	3920-530	974
3791-702	962		1227		1240		1229	3917-060	972		1231
3792-060	964		1240	3901-822	970		1242		1229		1244
3792-080	964	3901-663	970		1227	3911-040	971		1242	3920-532	974
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3792-670	964	3901-694	970		1227	3911-180	971		1242	3920-624	974
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	1227	3901-756	970		1228	3915-140	971		1241	3920-670	974
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3901-528	970			3906-180	971						

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3920-698	974		1245	3928-240	972		1243	3929-790	973		1241
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3920-702	974		1245	3929-100	972		1243	3929-792	973		1245
	1231	3920-920	975		1229	3929-666E	973		1230	3947-140	979
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3920-751	974		1245	3929-120	972		1243	3929-792E	974		1245
	1231	3924-060	972		1229	3929-668	973		1231	3947-160	979
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3920-792	974		1242	3929-530E	973		1243	3929-906	973	3963-532C	483
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	1232	3927-200	972		1230	3929-758E	973		1230	3963-623	323, 980
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3920-820	975		1242	3929-582	973		1243	3929-918	973	3963-623C	483
	1232	3927-240	972		1230	3929-760	973		1230	3963-624	323, 980
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3920-822	975		1242	3929-582E	973		1243	3929-920	973	3963-624C	483
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3920-824	975		1242	3929-585	973		1243	3942-060	971	3963-626C	483
	1232	3928-060	972		1230	3929-762	973		1228	3963-628	323, 980
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3920-828	975		1242	3929-624	973		1243	3942-100	971	3963-661C	483
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3920-906	975		1242	3929-626	973		1243	3942-140	971	3963-664C	483
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3920-912	975			3929-628E	973			3942-200	971		

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3963-670C	483		1238	3965-670C	483	3965-826	323, 982		1232		1233
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3963-693	323, 981		1238	3965-691C	483	3965-828	323, 982	3975-702	975	3976-621	976
	1238	3963-826C	483	3965-693	323, 982		1239		1232		1233
3963-693C	483	3963-828	323, 981		1239	3965-828C	483	3975-751	975	3976-623	976
3963-694	323, 981		1238	3965-693C	483	3965-901	323, 982		1232		1233
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	1238	3965-628C	483	3965-814	323, 982		1232		1233		1233
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	1234		1234		1235		1235	401-130G	40	401-428	3
3976-914	977	3977-790	977	3990-621	978	3990-916	978	401-131	2	401-486	3
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	1234		1234		1235		1235	401-133	2	401-490	3
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3977-060	977	3977-814	977	3990-628	978	401-003L	46	401-157	2	401-528	3
	1234		1234		1235	401-005	2	401-158	2	401-529	3
3977-080	977	3977-816	977	3990-661	978	401-005B	44	401-160F	2	401-530	3
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3977-180	977	3977-826	977	3990-670	978	401-010B	44	401-170	2	401-583	3
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3977-200	977	3977-828	977	3990-691	978	401-010L	46	401-199	2	401-585G	40
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3977-240	977	3977-904	977	3990-693	978	401-010TC	145	401-201	2	401-621	3
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3977-702	977	3990-100	978	3990-818	978	401-060G	40	401-336	3	401-760F	3
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3977-751	977	3990-120	978	3990-820	978	401-074	2	401-337G	40	401-764F	3
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3977-758	977	3990-200	978	3990-828	978	401-100F	2	401-415	3	401-792F	3
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3977-764	977	3990-578	978	3990-908	978	401-120F	2	401-420G	40	401-816F	3
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3977-784	977	3990-580	978	3990-910	978	401-122	2	401-422	3	401-820F	3
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3977-786	977	3990-582	978	3990-912	978	401-125	2	401-422T	144	401-824F	3
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3977-788	977	3990-585	978	3990-914	978	401-130	2	401-426	3	401-828F	3

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401-901F	3	402-288	4	406-010UV	38	407-007B	44	410-010B	45	41102A123-120	850
401-903F	3	402-288SR	4, 596	406-012	5	407-007G	41	410-012	6	41102A126-060	850
401-904F	3	402-289	4	406-012B	44	407-007SR	5, 596	410-012B	45	41102A126-080	850
401-906F	3	402-289SR	4, 596	406-012G	41	407-007UV	38	410-015	6	41102A126-100	850
401-908F	3	402-290	4	406-012L	46	407-010	5	410-015B	45	41102H101-015	851
401-910F	3	402-290SR	4, 596	406-012S	5	407-010B	44	410-020	6	41102H101-020	851
401-912F	3	402-291	4	406-012T	144	407-010G	41	410-020B	45	41102H101-025	851
401-914F	3	402-291SR	4, 596	406-012TC	145	407-010SR	5, 596	410-030	6	41102H101-030	851
401-916F	3	402-292	4	406-012UV	38	407-012	5	410-101	6	41102H101-040	851
401-918F	3	402-292SR	4, 596	406-015	5	407-012B	44	410-102	6	41102H101-060	851
401-920F	3	402-333	4	406-015B	44	407-012G	41	4101-005	1011	41102H101-080	851
402-003	2	402-333SR	4, 596	406-015G	41	407-012SR	5, 596	4101-007	1011	41102H101-100	851
402-005	2	402-334	4	406-015L	46	407-015	5	4101-010	1011	41102H101-120	851
402-005G	40	402-334SR	4, 596	406-015S	5	407-015B	44	4101-012	1011	41102J101-015	851
402-005SR	2, 596	402-335	4	406-015T	144	407-015G	41	4101-015	1011	41102J101-020	851
402-005UV	38	402-335SR	4, 596	406-015TC	145	407-020	5	4101-020	1011	41102J101-025	851
402-007	2	402-336	4	406-015UV	38	407-020B	44	4106-005	1011	41102J101-030	851
402-007G	40	402-336SR	4, 596	406-020	5	407-020G	41	4106-007	1011	41102J101-040	851
402-007UV	38	402-337	4	406-020B	44	407-025	5	4106-010	1011	41102J101-060	851
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402-131	4		1375	406-045F	5	408-010G	41	411-020	8	41103J101-100	852
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402-167UV	38	405-010B	44	406-100	5	409-007L	46	411-180F	8	41111H101-020	854
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	1392	427-025L	47	429-040T	144	429-533F	11	43BD-140C	1143	4301-756	1139
4238-130	608	427-030	7, 27	429-040TC	145	429-533FE	12	43BD-160	1140	4301-756C	1142
	1392	427-030L	47	429-040UV	39	429-534F	11	43BD-160C	1143	4301-758	1139
4238-130 G	1392	427-040	7, 27	429-045F	10	429-578F	11	43BD-180	1140	4301-758C	1142
4238-130BR	608	427-040L	47	429-050	10	429-578FE	12	43BD-180C	1143	4301-760	1139
	1392	427-050	7, 27	429-050G	42	429-580F	11	43BD-200	1140	4301-760C	1142
4238-130BR G	1392	427-060	7, 27	429-060	10	429-580FE	12	43BD-200C	1143	4301-762	1139
4238-130SR	607	427-080	7, 27	429-060G	42	429-582	11	43BD-240	1140	4301-762C	1142
	1392	427-100	7, 27	429-060L	47	429-582FE	12	43BD-240C	1143	4301-764	1139
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4259-012BR	1393	429-020TC	145	429-422FE	12	429-908F	11	4301-666C	1142	43065-060C	1142
4259-015BR	1393	429-020UV	39	429-422G	42	429-910F	11	4301-668	1139	43065-080	1139
4259-020BR	1393	429-025	10	429-460F	11	429-912F	11	4301-668C	1142	43065-080C	1142
427-005	7, 27	429-025G	42	429-486F	11	429-914F	11	4301-670	1139	43065-100	1139
427-005L	47	429-025L	47	429-487F	11	429-916F	11	4301-670C	1142	43065-100C	1142
427-007	7, 27	429-025T	144	429-488F	11	429-918F	11	4301-694	1139	43065-120	1139
427-007L	47	429-025TC	145	429-490F	11	429-920F	11	4301-694C	1142	43065-120C	1142
427-010	7, 27	429-025UV	39	429-490FE	12	429GR-020	27	4301-696	1139	43065-140	1139
427-010L	47	429-030	10	429-491F	11	43BD-060	1140	4301-696C	1142	43065-140C	1142
427-012	7, 27	429-030G	42	429-528F	11	43BD-060C	1143	4301-698	1139	43065-160	1139
427-012L	47	429-030L	47	429-528FE	12	43BD-080	1140	4301-698C	1142	43065-160C	1142
427-015	7, 27	429-030T	144	429-529FE	12	43BD-080C	1143	4301-700	1139	43065-180	1139
427-015L	47	429-030TC	145	429-530F	11	43BD-100	1140	4301-700C	1142	43065-180C	1142
427-020	7, 27	429-030UV	39	429-530FE	12	43BD-100C	1143	4301-702	1139	43065-200	1139

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43065-200C	1142	4320-756	1140	4329-670	1140	4347-060A	1141	435-020SR	12, 596	4353S-100C	1145
43065-240	1139	4320-756C	1143	4329-670C	1144	4347-060AC	1144	435-020SRL	47	4353S-120	1141
43065-240C	1142	4320-758	1140	4329-694	1140	4347-060B	1141	435-020SRT	144	4353S-120C	1145
431-060	12	4320-758C	1143	4329-694C	1144	4347-060BC	1144	435-020SRTC	145	4353S-140	1141
431-080	12	4320-760	1140	4329-696	1140	4347-060C	1144	435-025	12	4353S-140C	1145
431-100F	12	4320-760C	1143	4329-696C	1144	4347-080	1141	435-025G	42	4353S-160	1141
431-120F	12	4320-762	1140	4329-698	1140	4347-080A	1141	435-025SR	12, 596	4353S-160C	1145
4317-060	1139	4320-762C	1143	4329-698C	1144	4347-080AC	1144	435-025SRL	47	4353S-180	1141
4317-060C	1143	4320-764	1140	4329-700	1140	4347-080B	1141	435-025SRT	144	4353S-180C	1145
4317-080	1139	4320-764C	1143	4329-700C	1144	4347-080BC	1144	435-025SRTC	145	4353S-200	1141
4317-080C	1143	4320-784	1140	4329-702	1140	4347-080C	1144	435-030	12	4353S-200C	1145
4317-100	1139	4320-784C	1143	4329-702C	1144	4347-100	1141	435-030G	42	4353S-240	1141
4317-100C	1143	4320-786	1140	4329-754	1140	4347-100A	1141	435-030SR	12, 596	4353S-240C	1145
4317-120	1139	4320-786C	1143	4329-754C	1144	4347-100AC	1144	435-030SRL	47	436-003	13
4317-120C	1143	4320-788	1140	4329-756	1140	4347-100B	1141	435-030SRT	144	436-003L	47
4317-140	1139	4320-788C	1143	4329-756C	1144	4347-100BC	1144	435-030SRTC	145	436-005	13
4317-140C	1143	4320-790	1140	4329-758	1140	4347-100C	1144	435-040	12	436-005B	45
4317-160	1139	4320-790C	1143	4329-758C	1144	4347-120	1141	435-040G	42	436-005G	42
4317-160C	1143	4320-792	1140	4329-760	1140	4347-120A	1141	435-040SR	12, 596	436-005L	47
4317-180	1139	4320-792C	1143	4329-760C	1144	4347-120AC	1144	435-040SRL	47	436-005UV	39
4317-180C	1143	4320-794	1140	4329-762	1140	4347-120B	1141	435-040SRT	144	436-007	13
4317-200	1139	4320-794C	1143	4329-762C	1144	4347-120BC	1144	435-040SRTC	145	436-007B	45
4317-200C	1143	4320-796	1140	4329-764	1140	4347-120C	1144	435-050	12	436-007G	42
4317-240	1139	4320-796C	1143	4329-764C	1144	4347-140	1141	435-050G	42	436-007L	47
4317-240C	1143	4320-814	1140	4329-784	1140	4347-140A	1141	435-060	12	436-007UV	39
43173-060	1139	4320-814C	1143	4329-784C	1144	4347-140AC	1144	435-060G	42	436-010	13
43173-060C	1143	4320-816	1140	4329-786	1140	4347-140B	1141	435-072	13	436-010B	45
43173-080	1139	4320-816C	1143	4329-786C	1144	4347-140BC	1144	435-072SR	13, 596	436-010G	42
43173-080C	1143	4320-818	1140	4329-788	1140	4347-140C	1144	435-073	13	436-010L	47
43173-100	1139	4320-818C	1143	4329-788C	1144	4347-160	1141	435-073G	42	436-010T	145
43173-100C	1143	4320-820	1140	4329-790	1140	4347-160A	1141	435-074	13	436-010TC	145
43173-120	1139	4320-820C	1143	4329-790C	1144	4347-160AC	1144	435-074SR	13, 596	436-010UV	39
43173-120C	1143	4320-822	1140	4329-792	1140	4347-160B	1141	435-080	12	436-012	13
43173-140	1139	4320-822C	1143	4329-792C	1144	4347-160BC	1144	435-100F	12	436-012B	45
43173-140C	1143	4320-824	1140	4329-794	1140	4347-160C	1144	435-101	13	436-012G	42
43173-160	1139	4320-824C	1143	4329-794C	1144	4347-180	1141	435-101G	42	436-012L	47
43173-160C	1143	4320-826	1140	4329-796	1140	4347-180A	1141	435-101SR	13, 596	436-012T	145
43173-180	1139	4320-826C	1143	4329-796C	1144	4347-180AC	1144	435-102	13	436-012TC	145
43173-180C	1143	4320-828	1140	4329-814	1140	4347-180B	1141	435-102SR	13, 596	436-012UV	39
43173-200	1139	4320-828C	1143	4329-814C	1144	4347-180BC	1144	435-120F	12	436-015	13
43173-200C	1143	4320-904	1140	4329-816	1140	4347-180C	1144	435-130	13	436-015B	45
43173-240	1139	4320-904C	1143	4329-816C	1144	4347-200	1141	435-130SR	13, 596	436-015G	42
43173-240C	1143	4320-906	1140	4329-818	1140	4347-200A	1141	435-131	13	436-015L	47
432-007525	28	4320-906C	1143	4329-818C	1144	4347-200AC	1144	435-131G	42	436-015T	145
4320-060	1140	4320-908	1140	4329-820	1140	4347-200B	1141	435-131SR	13, 596	436-015TC	145
4320-060C	1143	4320-908C	1143	4329-820C	1144	4347-200BC	1144	435-133	13	436-015UV	39
4320-080	1140	4320-910	1140	4329-822	1140	4347-200C	1144	435-168	13	436-020	13
4320-080C	1143	4320-910C	1143	4329-822C	1144	4347-240	1141	435-247	13	436-020B	45
4320-100	1140	4320-912	1140	4329-824	1140	4347-240A	1141	435-460F	13	436-020G	42
4320-100C	1143	4320-912C	1143	4329-824C	1144	4347-240AC	1144	435-532	13	436-020L	47
4320-120	1140	4320-914	1140	4329-826	1140	4347-240B	1141	435-578F	13	436-020T	145
4320-120C	1143	4320-914C	1143	4329-826C	1144	4347-240BC	1144	435-582F	13	436-020TC	145
4320-140	1140	4320-916	1140	4329-828	1141	4347-240C	1144	435-628F	13	436-020UV	39
4320-140C	1143	4320-916C	1143	4329-828C	1144	435-002SR	12, 596	4351S-060	1141	436-025	13
4320-160	1140	4320-918	1140	4329-904	1141	435-002SRL	47	4351S-060C	1144	436-025G	42
4320-160C	1143	4320-918C	1143	4329-904C	1144	435-003	12	4351S-080	1141	436-025L	47
4320-180	1140	4320-920	1140	4329-906	1141	435-003SR	12, 596	4351S-080C	1144	436-025T	145
4320-180C	1143	4320-920C	1143	4329-906C	1144	435-003SRL	47	4351S-100	1141	436-025TC	145
4320-200	1140	4329-060	1140	4329-908	1141	435-005	12	4351S-100C	1144	436-025UV	39
4320-200C	1143	4329-060C	1143	4329-908C	1144	435-005B	45	4351S-120	1141	436-030	13
4320-240	1140	4329-080	1140	4329-910	1141	435-005G	42	4351S-120C	1144	436-030B	45
4320-240C	1143	4329-080C	1143	4329-910C	1144	435-005SR	12, 596	4351S-140	1141	436-030G	42
4320-532	1140	4329-100	1140	4329-912	1141	435-005SRL	47	4351S-140C	1144	436-030L	47
4320-532C	1143	4329-100C	1143	4329-912C	1144	435-005UV	39	4351S-160	1141	436-030T	145
4320-582	1140	4329-120	1140	4329-914	1141	435-007	12	4351S-160C	1144	436-030TC	145
4320-582C	1143	4329-120C	1143	4329-914C	1144	435-007B	45	4351S-180	1141	436-030UV	39
4320-585	1140	4329-140	1140	4329-916	1141	435-007G	42	4351S-180C	1144	436-040	13
4320-585C	1143	4329-140C	1143	4329-916C	1144	435-007SR	12, 596	4351S-200	1141	436-040G	42
4320-624	1140	4329-160	1140	4329-918	1141	435-007SRL	47	4351S-200C	1144	436-040L	47
4320-624C	1143	4329-160C	1143	4329-918C	1144	435-007UV	39	4351S-240	1141	436-040T	145
4320-626	1140	4329-180	1140	4329-920	1141	435-010	12	4351S-240C	1144	436-040TC	145
4320-626C	1143	4329-180C	1143	4329-920C	1144	435-010B	45	4353-060	1141	436-050	13
4320-628	1140	4329-200	1140	4329S-060	1141	435-010G	42	4353-060C	1144	436-050G	42
4320-628C	1143	4329-200C	1143	4329S-060C	1144	435-010SR	12, 596	4353-080	1141	436-053	13
4320-664	1140	4329-240	1140	4329S-080	1141	435-010SRL	47	4353-080C	1144	436-060	13
4320-664C	1143	4329-240C	1143	4329S-080C	1144	435-010SRT	144	4353-100	1141	436-060G	42
4320-666	1140	4329-532	1140	4329S-100	1141	435-010SRTC	145	4353-100C	1144	436-073	13
4320-666C	1143	4329-532C	1144	4329S-100C	1144	435-012	12	4353-120	1141	436-074	13
4320-668	1140	4329-582	1140	4329S-120	1141	435-012B	45	4353-120C	1144	436-074G	42
4320-668C	1143	4329-582C	1144	4329S-120C	1144	435-012G	42	4353-140	1141	436-074UV	39
4320-670	1140	4329-585	1140	4329S-140	1141	435-012SR	12, 596	4353-140C	1144	436-075	13
4320-670C	1143	4329-585C	1144	4329S-140C	1144	435-012SRL	47	4353-160	1141	436-080	13
4320-694	1140	4329-624	1140	4329S-160	1141	435-012SRT	144	4353-160C	1144	436-100F	13
4320-694C	1143	4329-624C	1144	4329S-160C	1144	435-012SRTC	145	4353-180	1141	436-101	13
4320-696	1140	4329-626	1140	4329S-180	1141	435-015	12	4353-180C	1144	436-101B	45
4320-696C	1143	4329-626C	1144	4329S-180C	1144	435-015B	45	4353-200	1141	436-101G	42
4320-698	1140	4329-628	1140	4329S-200	1141	435-015G	42	4353-200C	1144	436-102	13
4320-698C	1143	4329-628C	1144	4329S-200C	1144	435-015SR	12, 596	4353-240	1141	436-120F	13
4320-700	1140	4329-664	1140	4329S-240	1141	435-015SRL	47	4353-240C	1144	436-131	13
4320-700C	1143	4329-664C	1144	4329S-240C	1144	435-015SRT	144	4353S-060	1141	436-132	13
4320-702	1140	4329-666	1140	434-005	14	435-015SRTC	145	4353S-060C	1145	436-133	13
4320-702C	1143	4329-666C	1144	434-007	14	435-020	12	4353S-080	1141	436-168	13
4320-754	1140	4329-668	1140	434-010	14	435-020B	45	4353S-080C	1145	436-169	13
4320-754C	1143	4329-668C	1144	4347-060	1141	435-020G	42	4353S-100	1141	436-212	13

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436-213	13	437-337UV	39	4375-200C	1145	438-072	15	439-098	14	4423CB-012P	615, 664
436-251	13	437-338	14	4375-240	1141	438-072B	45	439-099	14	4423CB-015	664
436-251B	45	437-338G	43	4375-240C	1145	438-072G	43	439-101	14	4423CB-015C	664
436-252	13	437-338L	47	4375-532	1141	438-073	15	439-101G	43	4423CB-015P	615, 664
436-253	13	437-338T	145	4375-532C	1145	438-073G	43	439-128	14	4423CB-020	664
436-294	13	437-338TC	145	4375-582	1141	438-098	15	439-130	14	4423CB-020C	664
436-296	13	437-338UV	39	4375-582C	1145	438-098G	43	439-130G	43	4423CB-020P	615, 664
436-342	13	437-339	14	4375-585	1141	438-101	15	439-131	14	4423CB-025	664
436-492F	13	437-339G	43	4375-585C	1145	438-101G	43	439-131G	43	4423CB-025C	664
436-535F	13	437-339L	47	4375-624	1141	438-127	15	439-166	14	4423CB-025P	615, 664
436-537F	13	437-339UV	39	4375-624C	1145	438-128	15	439-166G	43	4423CB-030	664
437-072	14	437-420	14	4375-626	1141	438-128SR	15, 596	439-167	14	4423CB-030C	664
437-073	14	437-420G	43	4375-626C	1145	438-129	15	439-167G	43	4423CB-030P	615, 664
437-101	14	437-421	14	4375-628	1142	438-130	15	439-168	14	4423CB-040	664
437-101G	43	437-421G	43	4375-628C	1145	438-130G	43	439-168G	43	4423CB-040C	664
437-101L	47	437-422	14	4375-664	1142	438-130UV	39	439-209	14	4423CB-040P	615, 665
437-101UV	39	437-422G	43	4375-664C	1145	438-131	15	439-209SR	15, 597	4423CB-060	664
437-130	14	437-422L	47	4375-666	1142	438-131G	43	439-210	14	4423CB-060C	664
437-130G	43	437-422T	145	4375-666C	1145	438-131UV	39	439-210G	43	4423CB-060P	615, 665
437-130UV	39	437-422TC	145	4375-668	1142	438-166	15	439-211	14	4423CB-080	664
437-131	14	437-422UV	39	4375-668C	1145	438-166G	43	439-211G	43	4423CB-080C	664
437-131G	43	437-486	14	4375-670	1142	438-166SR	15, 596	439-212	14	4423CB-080P	615, 665
437-131L	47	437-488	14	4375-670C	1145	438-167	15	439-212G	43	4423I-007	664
437-131UV	39	437-490	14	4375-694	1142	438-167G	43	439-247	14	4423I-007C	664
437-166	14	437-490G	43	4375-694C	1145	438-168	15	439-248	14	4423I-007P	615, 664
437-166G	43	437-528	14	4375-696	1142	438-168G	43	439-248SR	15, 597	4423I-010	664
437-167	14	437-530	14	4375-696C	1145	438-206	15	439-249	14	4423I-010C	664
437-167G	43	437-532	14	4375-698	1142	438-207	15	439-249G	43	4423I-010P	615, 664
437-167UV	39	437-532G	43	4375-698C	1145	438-207SR	15, 596	439-249SR	15, 597	4423I-012	664
437-168	14	437-532L	47	4375-700	1142	438-209	15	439-250	14	4423I-012C	664
437-168G	43	437-534	14	4375-700C	1145	438-209G	43	439-250G	43	4423I-012P	615, 664
437-168L	47	437-534G	43	4375-702	1142	438-209SR	15, 596	439-251	14	4423I-015	664
437-168UV	39	437-578	14	4375-702C	1145	438-210	15	439-251G	43	4423I-015C	664
437-209	14	437-580	14	4375-754	1142	438-210G	43	439-292	14	4423I-015P	615, 664
437-209G	43	437-582	14	4375-754C	1145	438-210SR	15, 596	439-337	14	4423I-020	664
437-210	14	437-582G	43	4375-756	1142	438-211	15	439-338	14	4423I-020C	664
437-210G	43	437-583	14	4375-756C	1145	438-211G	43	439-339	14	4423I-020P	615, 664
437-210UV	39	437-585	14	4375-758	1142	438-212	15	439-420	14	4423I-025	664
437-211	14	437-585G	43	4375-758C	1145	438-212G	43	439-420SR	15	4423I-025C	664
437-211G	43	437-585L	47	4375-760	1142	438-245	15	439-422	14	4423I-025P	615, 664
437-211L	47	437-623	14	4375-760C	1145	438-247	15	442-005	7, 27	4423I-030	664
437-211UV	39	437-624	14	4375-762	1142	438-247G	43	442-007	7, 27	4423I-030C	664
437-212	14	437-626	14	4375-762C	1145	438-247SR	15, 596	442-010	7, 27	4423I-030P	615, 664
437-212G	43	437-628	14	4375-764	1142	438-248	15	442-012	7, 27	4423I-040	664
437-212L	47	437-664	14	4375-764C	1145	438-248G	43	442-015	7, 27	4423I-040C	664
437-212UV	39	437-666	14	4375-784	1142	438-248SR	15, 596	442-020	7, 27	4423I-040P	615, 664
437-247	14	437-666F	14	4375-784C	1145	438-249	15	442-025	7	4423I-060	664
437-247G	43	437-668	14	4375-786	1142	438-249G	43	442-025F	7, 27	4423I-060C	664
437-248	14	437-670	15	4375-786C	1145	438-249SR	15, 596	442-030	7, 27	4423I-060P	615, 664
437-248G	43	437-696F	15	4375-788	1142	438-250	15	442-040	7, 27	4423I-080	664
437-249	14	437-698F	15	4375-788C	1145	438-250G	43	442-060	7, 27	4423I-080C	664
437-249G	43	437-700F	15	4375-790	1142	438-251	15	442-060F	7, 27	4423I-080P	615, 664
437-249UV	39	437-702F	15	4375-790C	1145	438-251G	43	442-080	7, 27	4433-007	663
437-250	14	437-756F	15	4375-792	1142	438-287	15	442-080F	7, 27	4433-007C	663
437-250G	43	437-758F	15	4375-792C	1145	438-288	15	442-100F	7, 27	4433-007P	615, 663
437-250T	145	437-760F	15	4375-794	1142	438-289	15	442-120F	7, 27	4433-010	663
437-250TC	145	437-762F	15	4375-794C	1145	438-290	15	4423-007	663	4433-010C	663
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444-010	2	449-007	16	4521-030C	655	4528-010C	1267	4533-015C	655	457-012G	43
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447-003	15	449-020	16	4521-060SR	654	4529-007	654	4533-060C	655	458-005G	43
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447-003L	47	449-025	16	4522-025C	655	4529-007C	654	4533-080C	655	458-007G	43
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447-020B	45	450-010	16	4523-020C	655	4530-015C	652	4535-015C	1267	459-015SR	17, 597
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463-333	18	466E-250	20	466SE-337	21	467E-421SR	22	467SE-523SR	22	468E-528	24
463-335	18	466E-251	20	466SE-338	21	467E-422SR	22		1165	468E-529	24
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463-415	18	466E-335	20	466SE-418	21	467E-526SR	22	467SE-526SR	22	468E-574	24
463-416	18	466E-336	20	466SE-419	21	467E-527SR	22	467SE-527SR	22	468E-575	24
463-417	18	466E-337	20	466SE-420	21	467E-528SR	22	467SE-528SR	22	468E-576	24
463-418	18	466E-338	20	466SE-421	21	467E-529SR	22	467SE-529SR	22	468E-577	24
463-419	18	466E-415	20	466SE-422	21	467E-530SR	22	467SE-530SR	22	468E-578	24
463-420	18	466E-416	20	466SE-523	21	467E-532SR	22	467SE-532SR	22	468E-579	24
463-485	18	466E-417	20	466SE-524	21	467E-573SR	22	467SE-573SR	22	468E-580	24
463-486	18	466E-418	20	466SE-525	21	467E-574SR	22		1165	468E-582	24
463-523	18	466E-419	20	466SE-526	21	467E-575SR	22	467SE-574SR	22	468E-585	24
463-525	18	466E-420	20	466SE-527	21	467E-576SR	22		1165	468E-624	24
463-526	18	466E-421	20	466SE-528	21	467E-577SR	22	467SE-575SR	22	468E-626	24
463-527	18	466E-422	20	466SE-529	21	467E-578SR	22	467SE-576SR	22	468E-664	24
463-528	18	466E-523	20	466SE-530	21	467E-579SR	22	467SE-577SR	22	468E-666	24
463-530	18	466E-524	20	466SE-532	21	467E-580SR	22	467SE-578SR	22	468S-247	23
463-532	18	466E-525	20	466SE-573	21	467E-582SR	22	467SE-579SR	22	468S-248	23
463-573	18	466E-526	20	466SE-574	21	467E-585SR	22	467SE-580SR	23	468S-249	23
463-575	18	466E-527	20	466SE-575	21	467E-624SR	22	467SE-582SR	23	468S-250	23
463-576	18	466E-528	21	466SE-576	21	467E-626SR	22	467SE-585SR	23	468S-251	23
463-577	18	466E-529	21	466SE-577	21	467E-664SR	22	467SE-624SR	23	468S-291	23
463-578	18	466E-530	21	466SE-578	21	467E-666SR	22	467SE-626SR	23	468S-333	23
463-580	18	466E-532	21	466SE-579	21	467S-247SR	21	467SE-666SR	23	468S-334	23
463-582	18	466E-573	21	466SE-580	21	467S-248SR	21	468-247	23	468S-335	23
463-624	18	466E-574	21	466SE-582	21	467S-249SR	21	468-248	23	468S-336	23
464-005	18	466E-575	21	466SE-585	21	467S-250SR	21	468-249	23	468S-337	23
464-007	18	466E-576	21	466SE-624	21	467S-251SR	21	468-250	23	468S-338	23
464-010	18	466E-577	21	466SE-626	21	467S-291SR	21	468-251	23	468S-415	23
464-071	18	466E-578	21	466SE-664	21	467S-333SR	22	468-291	23	468S-416	23
464-097	18	466E-579	21	466SE-666	21	467S-334SR	22	468-333	23	468S-417	23
464-101	18	466E-580	21	467-247SR	21	467S-335SR	22	468-334	23	468S-418	23
464-130	18	466E-582	21	467-248SR	21	467S-336SR	22	468-335	23	468S-419	23
464-131	18	466E-585	21	467-249SR	21	467S-337SR	22	468-336	23	468S-420	23
464-210	18	466E-624	21	467-250SR	21	467S-338SR	22	468-337	23	468S-421	23
464-288	18	466E-626	21	467-251SR	21	467S-415SR	22	468-338	23	468S-422	23
464-337	18	466E-664	21	467-291SR	21	467S-416SR	22	468-415	23	468S-523	23
464-419	18	466E-666	21	467-333SR	21	467S-417SR	22	468-416	23	468S-524	23
464-486	18	466S-247	20	467-334SR	21	467S-418SR	22	468-417	23	468S-525	23
464-527	18	466S-248	20	467-335SR	21	467S-419SR	22	468-418	23	468S-526	23
464-532	18	466S-249	20	467-336SR	21	467S-420SR	22	468-419	23	468S-527	23
464-577	18	466S-250	20	467-337SR	21	467S-421SR	22	468-420	23	468S-528	23
464-582	18	466S-251	20	467-338SR	21	467S-422SR	22	468-421	23	468S-529	23
464-624	18	466S-291	20	467-415SR	21	467S-523SR	22	468-422	23	468S-530	23
466-247	20	466S-333	20	467-416SR	21	467S-524SR	22	468-523	23	468S-532	23
466-248	20	466S-334	20	467-417SR	21	467S-525SR	22	468-524	23	468S-573	23
466-249	20	466S-335	20	467-418SR	21	467S-526SR	22	468-525	23	468S-574	23
466-250	20	466S-336	20	467-419SR	21	467S-527SR	22	468-526	23	468S-575	23
466-251	20	466S-337	20	467-420SR	21	467S-528SR	22	468-527	23	468S-576	23
466-291	20	466S-338	20	467-421SR	21	467S-529SR	22	468-528	23	468S-577	23
466-333	20	466S-415	20	467-422SR	21	467S-530SR	22	468-529	23	468S-578	23
466-334	20	466S-416	20	467-523SR	21	467S-532SR	22	468-530	23	468S-579	23
466-335	20	466S-417	20	467-524SR	21	467S-573SR	22	468-532	23	468S-580	23
466-336	20	466S-418	20	467-525SR	21	467S-574SR	22	468-573	23	468S-582	23
466-337	20	466S-419	20	467-526SR	21	467S-575SR	22	468-574	23	468S-585	23
466-338	20	466S-420	20	467-527SR	21	467S-576SR	22	468-575	23	468S-624	23
466-415	20	466S-421	20	467-528SR	21	467S-577SR	22	468-576	23	468S-626	23
466-416	20	466S-422	20	467-529SR	21	467S-578SR	22	468-577	23	468S-664	23
466-417	20	466S-523	20	467-530SR	21	467S-579SR	22	468-578	23	468S-666	23

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468SE-247	24	469E-336SR	25	469SE-421SR	25	4721T1-030SR	627	4723L2-005C	627	4724T1-010	1263
468SE-248	24	469E-337SR	25	469SE-422SR	25	4721T1-040CSR	628	4723L2-007	626	4724T1-010C	1265
468SE-249	24	469E-338SR	25	469SE-523SR	25	4721T1-040SR	627	4723L2-007C	627	4724T1-012	1263
468SE-250	24	469E-415SR	25	469SE-524SR	25	4722L1-005	626	4723L2-010	626	4724T1-012C	1265
468SE-251	24	469E-416SR	25	469SE-525SR	25	4722L1-005C	627	4723L2-010C	627	4724T1-015	1263
468SE-291	24	469E-417SR	25	469SE-526SR	25	4722L1-007	626	4723L2-012	626	4724T1-015C	1265
468SE-333	24	469E-418SR	25	469SE-527SR	25	4722L1-007C	627	4723L2-012C	628	4724T1-020	1263
468SE-334	24	469E-419SR	25	469SE-528SR	25	4722L1-010	626	4723L2-015	627	4724T1-020C	1265
468SE-335	24	469E-420SR	25	469SE-529SR	25	4722L1-010C	627	4723L2-015C	628	4725L1-005	1261
468SE-336	24	469E-421SR	25	469SE-530SR	25	4722L1-012	626	4723L2-020	627	4725L1-005C	1263
468SE-337	24	469E-422SR	25	469SE-532SR	25	4722L1-012C	628	4723L2-020C	628	4725L1-007	1261
468SE-338	24	469E-523SR	25	469SE-573SR	26	4722L1-015	627	4723L2-025	627	4725L1-007C	1263
468SE-415	24	469E-524SR	25	469SE-574SR	26	4722L1-015C	628	4723L2-025C	628	4725L1-010	1261
468SE-416	24	469E-525SR	25	469SE-575SR	26	4722L1-020	627	4723L2-030	627	4725L1-012	1261
468SE-417	24	469E-526SR	25	469SE-576SR	26	4722L1-020C	628	4723L2-030C	628	4725L1-012C	1263
468SE-418	24	469E-527SR	25	469SE-577SR	26	4722L1-025	627	4723L2-040	627	4725L1-015	1261
468SE-419	24	469E-528SR	25	469SE-578SR	26	4722L1-025C	628	4723L2-040C	628	4725L1-015C	1263
468SE-420	24	469E-529SR	25	469SE-579SR	26	4722L1-030	627	4723L3-005	626	4725L1-020	1261
468SE-421	24	469E-530SR	25	469SE-580SR	26	4722L1-030C	628	4723L3-005C	627	4725L1-020C	1263
468SE-422	24	469E-532SR	25	469SE-582SR	26	4722L1-040	627	4723L3-007	626	4725L2-005	1262
468SE-523	24	469E-573SR	25	469SE-585SR	26	4722L1-040C	628	4723L3-007C	627	4725L2-005C	1264
468SE-524	24	469E-574SR	25	469SE-624SR	26	4722L2-005	626	4723L3-010	626	4725L2-007	1262
468SE-525	24	469E-575SR	25	469SE-626SR	26	4722L2-005C	627	4723L3-010C	627	4725L2-007C	1264
468SE-526	24	469E-576SR	25	469SE-664SR	26	4722L2-007	626	4723L3-012	626	4725L2-010	1262
468SE-527	24	469E-577SR	25	469SE-666SR	26	4722L2-007C	627	4723L3-012C	628	4725L2-010C	1264
468SE-528	24	469E-578SR	25	4721L1-005CSR	627	4722L2-010	626	4723L3-015	627	4725L2-012	1262
468SE-529	24	469E-579SR	25	4721L1-005SR	626	4722L2-010C	627	4723L3-015C	628	4725L2-012C	1264
468SE-530	24	469E-580SR	25	4721L1-007CSR	627	4722L2-012	626	4723L3-020	627	4725L2-015	1262
468SE-532	24	469E-582SR	25	4721L1-007SR	626	4722L2-012C	628	4723L3-020C	628	4725L2-015C	1264
468SE-573	24	469E-585SR	25	4721L1-010CSR	627	4722L2-015	627	4723L3-025	627	4725L2-020	1262
468SE-574	24	469E-624SR	25	4721L1-010SR	626	4722L2-015C	628	4723L3-025C	628	4725L2-020C	1264
468SE-575	24	469E-626SR	25	4721L1-012CSR	628	4722L2-020	627	4723L3-030	627	4725L3-005	1262
468SE-576	24	469E-666SR	25	4721L1-012SR	626	4722L2-020C	628	4723L3-030C	628	4725L3-005C	1265
468SE-577	24	469S-247SR	25	4721L1-015CSR	628	4722L2-025	627	4723L3-040	627	4725L3-007	1262
468SE-578	24	469S-248SR	25	4721L1-015SR	627	4722L2-025C	628	4723L3-040C	628	4725L3-007C	1265
468SE-579	24	469S-249SR	25	4721L1-020CSR	628	4722L2-030	627	4723T1-005	626	4725L3-010	1262
468SE-580	24	469S-250SR	25	4721L1-020SR	627	4722L2-030C	628	4723T1-005C	627	4725L3-010C	1265
468SE-582	24	469S-251SR	25	4721L1-025CSR	628	4722L2-040	627	4723T1-007	626	4725L3-012	1262
468SE-585	24	469S-291SR	25	4721L1-025SR	627	4722L2-040C	628	4723T1-007C	627	4725L3-012C	1265
468SE-624	24	469S-333SR	25	4721L1-030CSR	628	4722L3-005	626	4723T1-010	626	4725L3-015	1262
468SE-626	24	469S-334SR	25	4721L1-030SR	627	4722L3-005C	627	4723T1-010C	627	4725L3-015C	1265
468SE-664	24	469S-335SR	25	4721L1-040CSR	628	4722L3-007	626	4723T1-012	626	4725L3-020	1262
468SE-666	24	469S-336SR	25	4721L1-040SR	627	4722L3-007C	627	4723T1-012C	628	4725L3-020C	1265
469-247SR	24	469S-337SR	25	4721L2-005CSR	627	4722L3-010	626	4723T1-015	627	4725T1-005	1263
469-248SR	24	469S-338SR	25	4721L2-005SR	626	4722L3-010C	627	4723T1-015C	628	4725T1-005C	1265
469-249SR	24	469S-415SR	25	4721L2-007CSR	627	4722L3-012	626	4723T1-020	627	4725T1-007	1263
469-250SR	24	469S-416SR	25	4721L2-007SR	626	4722L3-012C	628	4723T1-020C	628	4725T1-007C	1265
469-251SR	24	469S-417SR	25	4721L2-010CSR	627	4722L3-015	627	4723T1-025	627	4725T1-010	1263
469-291SR	24	469S-418SR	25	4721L2-010SR	626	4722L3-015C	628	4723T1-025C	628	4725T1-010C	1265
469-333SR	24	469S-419SR	25	4721L2-012CSR	628	4722L3-020	627	4723T1-030	627	4725T1-012	1263
469-334SR	24	469S-420SR	25	4721L2-012SR	626	4722L3-020C	628	4723T1-030C	628	4725T1-012C	1265
469-335SR	24	469S-421SR	25	4721L2-015CSR	628	4722L3-025	627	4723T1-040	627	4725T1-015	1263
469-336SR	24	469S-422SR	25	4721L2-015SR	627	4722L3-025C	628	4723T1-040C	628	4725T1-015C	1265
469-337SR	24	469S-523SR	25	4721L2-020CSR	628	4722L3-030	627	4724L1-005	1261	4725T1-020	1263
469-338SR	24	469S-524SR	25	4721L2-020SR	627	4722L3-030C	628	4724L1-005C	1263	4725T1-020C	1265
469-415SR	24	469S-525SR	25	4721L2-025CSR	628	4722L3-040	627	4724L1-007	1261	4727L1-005	626
469-416SR	24	469S-526SR	25	4721L2-025SR	627	4722L3-040C	628	4724L1-007C	1263	4727L1-005C	627
469-417SR	24	469S-527SR	25	4721L2-030CSR	628	4722T1-005	626	4724L1-010	1261	4727L1-007	626
469-418SR	24	469S-528SR	25	4721L2-030SR	627	4722T1-005C	627	4724L1-010C	1263	4727L1-007C	627
469-419SR	24	469S-529SR	25	4721L2-040CSR	628	4722T1-007	626		1263	4727L1-010	626
469-420SR	24	469S-530SR	25	4721L2-040SR	627	4722T1-007C	627	4724L1-012	1261	4727L1-010C	627
469-421SR	24	469S-532SR	25	4721L3-005CSR	627	4722T1-010	626	4724L1-012C	1263	4727L1-012	626
469-422SR	24	469S-573SR	25	4721L3-005SR	626	4722T1-010C	627	4724L1-015	1261	4727L1-012C	628
469-523SR	24	469S-574SR	25	4721L3-007CSR	627	4722T1-012	626	4724L1-015C	1263	4727L1-015	627
469-524SR	24	469S-575SR	25	4721L3-007SR	626	4722T1-012C	628	4724L1-020	1261	4727L1-015C	628
469-525SR	24	469S-576SR	25	4721L3-010CSR	627	4722T1-015	627	4724L1-020C	1263	4727L1-020	627
469-526SR	24	469S-577SR	25	4721L3-010SR	626	4722T1-015C	628	4724L2-005	1261	4727L1-020C	628
469-527SR	24	469S-578SR	25	4721L3-012CSR	628	4722T1-020	627	4724L2-005C	1264	4727L1-025	627
469-528SR	24	469S-579SR	25	4721L3-012SR	626	4722T1-020C	628	4724L2-007	1261	4727L1-025C	628
469-529SR	24	469S-580SR	25	4721L3-015CSR	628	4722T1-025	627	4724L2-007C	1264	4727L1-030	627
469-530SR	24	469S-582SR	25	4721L3-015SR	627	4722T1-025C	628	4724L2-010	1261	4727L1-030C	628
469-532SR	24	469S-585SR	25	4721L3-020CSR	628	4722T1-030	627	4724L2-010C	1264	4727L1-040	627
469-573SR	24	469S-624SR	25	4721L3-020SR	627	4722T1-030C	628	4724L2-012	1261	4727L1-040C	628
469-574SR	24	469S-626SR	25	4721L3-025CSR	628	4722T1-040	627	4724L2-012C	1264	4727L2-005	626
469-575SR	24	469S-664SR	25	4721L3-025SR	627	4722T1-040C	628	4724L2-015	1261	4727L2-005C	627
469-576SR	24	469S-666SR	25	4721L3-030CSR	628	4723L1-005	626	4724L2-015C	1264	4727L2-007	626
469-577SR	24	469SE-247SR	25	4721L3-030SR	627	4723L1-005C	627	4724L2-020	1261	4727L2-007C	627
469-578SR	24	469SE-248SR	25	4721L3-040CSR	628	4723L1-007	626	4724L2-020C	1264	4727L2-010	626
469-579SR	24	469SE-249SR	25	4721L3-040SR	627	4723L1-007C	627	4724L3-005	1262	4727L2-010C	627
469-580SR	24	469SE-250SR	25	4721T1-005CSR	627	4723L1-010	626	4724L3-005C	1264	4727L2-012	626
469-582SR	24	469SE-251SR	25	4721T1-005SR	626	4723L1-010C	627	4724L3-007	1262	4727L2-012C	628
469-585SR	24	469SE-291SR	25	4721T1-007CSR	627	4723L1-012	626	4724L3-007C	1264	4727L2-015	627
469-624SR	24	469SE-333SR	25	4721T1-007SR	626	4723L1-012C	628	4724L3-010	1262	4727L2-015C	628
469-626SR	24	469SE-334SR	25	4721T1-010CSR	627	4723L1-015	627	4724L3-010C	1264	4727L2-020	627
469-666SR	24	469SE-335SR	25	4721T1-010SR	626	4723L1-015C	628	4724L3-012	1262	4727L2-020C	628
469E-247SR	25	469SE-336SR	25	4721T1-012CSR	628	4723L1-020	627	4724L3-012C	1264	4727L2-025	627
469E-248SR	25	469SE-337SR	25	4721T1-012SR	626	4723L1-020C	628	4724L3-015	1262	4727L2-025C	628
469E-249SR	25	469SE-338SR	25	4721T1-015CSR	628	4723L1-025	627	4724L3-015C	1264	4727L2-030	627
469E-250SR	25	469SE-415SR	25	4721T1-015SR	627	4723L1-025C	628	4724L3-020	1262	4727L2-030C	628
469E-251SR	25	469SE-416SR	25	4721T1-020CSR	628	4723L1-030	627	4724L3-020C	1264	4727L2-040	627
469E-291SR	25	469SE-417SR	25	4721T1-020SR	627	4723L1-030C	628	4724T1-005	1263	4727L2-040C	628
469E-333SR	25	469SE-418SR	25	4721T1-025CSR	628	4723L1-040	627	4724T1-005C	1265	4727L3-005	626
469E-334SR	25	469SE-419SR	25	4721T1-025SR	627	4723L1-040C	628	4724T1-007	1263	4727L3-005C	627
469E-335SR	25	469SE-420SR	25	4721T1-030CSR	628	4723L2-005	626	4724T1-007C	1265	4727L3-007	626

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4727L3-007C	627	4731L1-010CSR	627	4732L2-015	627	4733L3-025	627	4735L2-020	1262	4737T1-030	627
4727L3-010	626	4731L1-010SR	626	4732L2-015C	628	4733L3-025C	628	4735L2-020C	1264	4737T1-030C	628
4727L3-010C	627	4731L1-012CSR	628	4732L2-020	627	4733L3-030	627	4735L3-005	1262	4737T1-040	627
4727L3-012	626	4731L1-012SR	626	4732L2-020C	628	4733L3-030C	628	4735L3-005C	1265	4737T1-040C	628
4727L3-012C	628	4731L1-015CSR	628	4732L2-025	627	4733L3-040	627	4735L3-007	1262	4738L1-005	1261
4727L3-015	627	4731L1-015SR	627	4732L2-025C	628	4733L3-040C	628	4735L3-007C	1265	4738L1-005C	1264
4727L3-015C	628	4731L1-020CSR	628	4732L2-030	627	4733T1-005	626	4735L3-010	1262	4738L1-007	1261
4727L3-020	627	4731L1-020SR	627	4732L2-030C	628	4733T1-005C	627	4735L3-010C	1265	4738L1-007C	1264
4727L3-020C	628	4731L1-025CSR	628	4732L2-040	627	4733T1-007	626	4735L3-012	1262	4738L1-010	1261
4727L3-025	627	4731L1-025SR	627	4732L2-040C	628	4733T1-007C	627	4735L3-012C	1265	4738L1-010C	1264
4727L3-025C	628	4731L1-030CSR	628	4732L3-005	626	4733T1-010	626	4735L3-015	1262	4738L1-012	1261
4727L3-030	627	4731L1-030SR	627	4732L3-005C	627	4733T1-010C	627	4735L3-015C	1265	4738L1-012C	1264
4727L3-030C	628	4731L1-040CSR	628	4732L3-007	626	4733T1-012	626	4735L3-020	1262	4738L1-015	1261
4727L3-040	627	4731L1-040SR	627	4732L3-007C	627	4733T1-012C	628	4735L3-020C	1265	4738L1-015C	1264
4727L3-040C	628	4731L2-005CSR	627	4732L3-010	626	4733T1-015	627	4735T1-005	1263	4738L1-020	1261
4727T1-005	626	4731L2-005SR	626	4732L3-010C	627	4733T1-015C	628	4735T1-005C	1265	4738L1-020C	1264
4727T1-005C	627	4731L2-007CSR	627	4732L3-012	626	4733T1-020	627	4735T1-007	1263	4738L2-005	1262
4727T1-007	626	4731L2-007SR	626	4732L3-012C	628	4733T1-020C	628	4735T1-007C	1265	4738L2-005C	1264
4727T1-007C	627	4731L2-010CSR	627	4732L3-015	627	4733T1-025	627	4735T1-010	1263	4738L2-007	1262
4727T1-010	626	4731L2-010SR	626	4732L3-015C	628	4733T1-025C	628	4735T1-010C	1265	4738L2-007C	1264
4727T1-010C	627	4731L2-012CSR	628	4732L3-020	627	4733T1-030	627	4735T1-012	1263	4738L2-010	1262
4727T1-012	626	4731L2-012SR	626	4732L3-020C	628	4733T1-030C	628	4735T1-012C	1265	4738L2-010C	1264
4727T1-012C	628	4731L2-015CSR	628	4732L3-025	627	4733T1-040	627	4735T1-015	1263	4738L2-012	1262
4727T1-015	627	4731L2-015SR	627	4732L3-025C	628	4733T1-040C	628	4735T1-015C	1265	4738L2-012C	1264
4727T1-015C	628	4731L2-020CSR	628	4732L3-030	627	4734L1-005	1261	4735T1-020	1263	4738L2-015	1262
4727T1-020	627	4731L2-020SR	627	4732L3-030C	628	4734L1-005C	1263	4735T1-020C	1265	4738L2-015C	1264
4727T1-020C	628	4731L2-025CSR	628	4732L3-040	627	4734L1-007	1261	4737L1-005	626	4738L2-020	1262
4727T1-025	627	4731L2-025SR	627	4732L3-040C	628	4734L1-007C	1263	4737L1-005C	627	4738L2-020C	1264
4727T1-025C	628	4731L2-030CSR	628	4732T1-005	626	4734L1-010	1261	4737L1-007	626	4738L3-005	1262
4727T1-030	627	4731L2-030SR	627	4732T1-005C	627	4734L1-010C	1263	4737L1-007C	627	4738L3-005C	1265
4727T1-030C	628	4731L2-040CSR	628	4732T1-007	626	4734L1-012	1261	4737L1-010	626	4738L3-007	1262
4727T1-040	627	4731L2-040SR	627	4732T1-007C	627	4734L1-012C	1263	4737L1-010C	627	4738L3-007C	1265
4727T1-040C	628	4731L3-005CSR	627	4732T1-010	626	4734L1-015	1261	4737L1-012	626	4738L3-010	1262
4728L1-005	1261	4731L3-005SR	626	4732T1-010C	627	4734L1-015C	1263	4737L1-012C	628	4738L3-010C	1265
4728L1-005C	1264	4731L3-007CSR	627	4732T1-012	626	4734L1-020	1261	4737L1-015	627	4738L3-012	1262
4728L1-007	1261	4731L3-007SR	626	4732T1-012C	628	4734L1-020C	1263	4737L1-015C	628	4738L3-012C	1265
4728L1-007C	1264	4731L3-010CSR	627	4732T1-015	627	4734L2-005	1261	4737L1-020	627	4738L3-015	1262
4728L1-010	1261	4731L3-010SR	626	4732T1-015C	628	4734L2-005C	1264	4737L1-020C	628	4738L3-015C	1265
4728L1-010C	1264	4731L3-012CSR	628	4732T1-020	627	4734L2-007	1261	4737L1-025	627	4738L3-020	1262
4728L1-012	1261	4731L3-012SR	626	4732T1-020C	628	4734L2-007C	1264	4737L1-025C	628	4738L3-020C	1265
4728L1-012C	1264	4731L3-015CSR	628	4732T1-025	627	4734L2-010	1261	4737L1-030	627	4738T1-005	1263
4728L1-015	1261	4731L3-015SR	627	4732T1-025C	628	4734L2-010C	1264	4737L1-030C	628	4738T1-005C	1265
4728L1-015C	1264	4731L3-020CSR	628	4732T1-030	627	4734L2-012	1261	4737L1-040	627	4738T1-007	1263
4728L1-020	1261	4731L3-020SR	627	4732T1-030C	628	4734L2-012C	1264	4737L1-040C	628	4738T1-007C	1265
4728L1-020C	1264	4731L3-025CSR	628	4732T1-040	627	4734L2-015	1261	4737L2-005	626	4738T1-010	1263
4728L2-005	1262	4731L3-025SR	627	4732T1-040C	628	4734L2-015C	1264	4737L2-005C	627	4738T1-010C	1265
4728L2-005C	1264	4731L3-030CSR	628	4733L1-005	626	4734L2-020	1261	4737L2-007	626	4738T1-012	1263
4728L2-007	1262	4731L3-030SR	627	4733L1-005C	627	4734L2-020C	1264	4737L2-007C	627	4738T1-012C	1265
4728L2-007C	1264	4731L3-040CSR	628	4733L1-007	626	4734L3-005	1262	4737L2-010	626	4738T1-015	1263
4728L2-010	1262	4731L3-040SR	627	4733L1-007C	627	4734L3-005C	1264	4737L2-010C	627	4738T1-015C	1265
4728L2-010C	1264	4731T1-005CSR	627	4733L1-010	626	4734L3-007	1262	4737L2-012	626	4738T1-020	1263
4728L2-012	1262	4731T1-005SR	626	4733L1-010C	627	4734L3-007C	1264	4737L2-012C	628	4738T1-020C	1265
4728L2-012C	1264	4731T1-007CSR	627	4733L1-012	626	4734L3-010	1262	4737L2-015	627	474-005	13, 251
4728L2-015	1262	4731T1-007SR	626	4733L1-012C	628	4734L3-010C	1264	4737L2-015C	628	474-005G	251
4728L2-015C	1264	4731T1-010CSR	627	4733L1-015	627	4734L3-012	1262	4737L2-020	627	474-007	13, 251
4728L2-020	1262	4731T1-010SR	626	4733L1-015C	628	4734L3-012C	1264	4737L2-020C	628	474-007G	251
4728L2-020C	1264	4731T1-012CSR	628	4733L1-020	627	4734L3-015	1262	4737L2-025	627	474-010	13, 251
4728L3-005	1262	4731T1-012SR	626	4733L1-020C	628	4734L3-015C	1264	4737L2-025C	628	474-010G	251
4728L3-005C	1265	4731T1-015CSR	628	4733L1-025	627	4734L3-020	1262	4737L2-030	627	474-012	13, 251
4728L3-007	1262	4731T1-015SR	627	4733L1-025C	628	4734L3-020C	1264	4737L2-030C	628	474-012G	251
4728L3-007C	1265	4731T1-020CSR	628	4733L1-030	627	4734T1-005	1263	4737L2-040	627	474-015	13, 251
4728L3-010	1262	4731T1-020SR	627	4733L1-030C	628	4734T1-005C	1265	4737L2-040C	628	474-015G	251
4728L3-010C	1265	4731T1-025CSR	628	4733L1-040	627	4734T1-007	1263	4737L3-005	626	474-020	13, 251
4728L3-012	1262	4731T1-025SR	627	4733L1-040C	628	4734T1-007C	1265	4737L3-005C	627	474-020G	251
4728L3-012C	1265	4731T1-030CSR	628	4733L2-005	626	4734T1-010	1263	4737L3-007	626	474-030	13, 251
4728L3-015	1262	4731T1-030SR	627	4733L2-005C	627	4734T1-010C	1265	4737L3-007C	627	474-040	13, 251
4728L3-015C	1265	4731T1-040CSR	628	4733L2-007	626	4734T1-012	1263	4737L3-010	626	474-060F	13
4728L3-020	1262	4731T1-040SR	627	4733L2-007C	627	4734T1-012C	1265	4737L3-010C	627	474-080F	13
4728L3-020C	1265	4732L1-005	626	4733L2-010	626	4734T1-015	1263	4737L3-012	626	475-005	8
4728T1-005	1263	4732L1-005C	627	4733L2-010C	627	4734T1-015C	1265	4737L3-012C	628	475-007	8
4728T1-005C	1265	4732L1-007	626	4733L2-012	626	4734T1-020	1263	4737L3-015	627	475-010	8
4728T1-007	1263	4732L1-007C	627	4733L2-012C	628	4734T1-020C	1265	4737L3-015C	628	475-012	8
4728T1-007C	1265	4732L1-010	626	4733L2-015	627	4735L1-005	1261	4737L3-020	627	475-015	8
4728T1-010	1263	4732L1-010C	627	4733L2-015C	628	4735L1-005C	1263	4737L3-020C	628	475-015L	47
4728T1-010C	1265	4732L1-012	626	4733L2-020	627	4735L1-007	1261	4737L3-025	627	475-020	8
4728T1-012	1263	4732L1-012C	628	4733L2-020C	628	4735L1-007C	1263	4737L3-025C	628	475-020L	47
4728T1-012C	1265	4732L1-015	627	4733L2-025	627	4735L1-010	1261	4737L3-030	627	475-020120	27
4728T1-015	1263	4732L1-015C	628	4733L2-025C	628	4735L1-010C	1263	4737L3-030C	628	475-025	8
4728T1-015C	1265	4732L1-020	627	4733L2-030	627	4735L1-012	1261	4737L3-040	627	475-030	8
4728T1-020	1263	4732L1-020C	628	4733L2-030C	628	4735L1-012C	1263	4737L3-040C	628	475-030L	47
4728T1-020C	1265	4732L1-025	627	4733L2-040	627	4735L1-015	1261	4737T1-005	626	475-040	8
473-1	28	4732L1-025C	628	4733L2-040C	628	4735L1-015C	1263	4737T1-005C	627	475-040L	47
473-2	28	4732L1-030	627	4733L3-005	626	4735L1-020	1261	4737T1-007	626	475-050F	8
473-210	27	4732L1-030C	628	4733L3-005C	627	4735L1-020C	1263	4737T1-007C	627	475-060	8
473-210-1/4	27	4732L1-040	627	4733L3-007	626	4735L2-005	1262	4737T1-010	626	475-060L	47
473-210-3/8	27	4732L1-040C	628	4733L3-007C	627	4735L2-005C	1264	4737T1-010C	627	475-080	8
473-3	28	4732L2-005	626	4733L3-010	626	4735L2-007	1262	4737T1-012	626	475-100	8
473-825	28	4732L2-005C	627	4733L3-010C	627	4735L2-007C	1264	4737T1-012C	628	475-100F	8
473-825-1/4	28	4732L2-007	626	4733L3-012	626	4735L2-010	1262	4737T1-015	627	475-100G	41
473-825-3/8	28	4732L2-007C	627	4733L3-012C	628	4735L2-010C	1264	4737T1-015C	628	475-101	8
4731L1-005CSR	627	4732L2-010	626	4733L3-015	627	4735L2-012	1262	4737T1-020	627	475-120	8
4731L1-005SR	626	4732L2-010C	627	4733L3-015C	628	4735L2-012C	1264	4737T1-020C	628	475-120F	8
4731L1-007CSR	627	4732L2-012	626	4733L3-020	627	4735L2-015	1262	4737T1-025	627	475-120G	41
4731L1-007SR	626	4732L2-012C	628	4733L3-020C	628	4735L2-015C	1264	4737T1-025C	628	475-130	8

Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

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475-140F	8	475-912F	9	4808-020BSR	612	497-012G	43	5022L1-040	625	5025T1-007	1259
475-160F	8	475-914F	9	4808-020SR	612	497-015	16	5022L1-040C	626	5025T1-007C	1260
475-166	8	475-916F	9	4819-005BSR	613	497-015G	43	5022T1-005	625	5025T1-010	1259
475-167	8	475-918F	9	4819-005SR	612	497-020	16	5022T1-005C	626	5025T1-010C	1260
475-168	8	475-920F	9	4819-007BSR	613	497-020G	43	5022T1-007	625	5025T1-012	1259
475-180F	8	476-010	4, 162	4819-007SR	612	497-025	16	5022T1-007C	626	5025T1-012C	1260
475-200F	8	476-020F	9	4819-010BSR	613	497-030	16	5022T1-010	625	5025T1-015	1259
475-209	8	476-030F	9	4819-010SR	612	497-040	16	5022T1-010C	626	5025T1-015C	1260
475-210	8	476-040F	9	4819-015BSR	613	497-060	16	5022T1-012	625	5025T1-020	1259
475-211	8	476-060F	9	4819-015SR	612	498-005	17	5022T1-012C	626	5025T1-020C	1260
475-21131T	27	476-080F	9	4819-020BSR	613	498-005G	43	5022T1-015	625	5027L1-005	625
475-212	8	476-100F	9	4819-020SR	612	498-007	17	5022T1-015C	626	5027L1-005C	626
475-240F	8	476-120F	9	4830-005BSR	613	498-007G	43	5022T1-020	625	5027L1-007	625
475-247	8	476-338	9	4830-005SR	612	498-010	17	5022T1-020C	626	5027L1-007C	626
475-248	8	476-420F	9	4830-007BSR	613	498-010G	43	5022T1-025	625	5027L1-010	625
475-249	8	476-421F	9	4830-007SR	612	498-012	17	5022T1-025C	626	5027L1-010C	626
475-250	8	476-422F	9	4830-010BSR	613	498-012G	43	5022T1-030	625	5027L1-012	625
475-251	8	476-528F	9	4830-010SR	612	498-015	17	5022T1-030C	626	5027L1-012C	626
475-292	8	476-529F	9	4830-015BSR	613	498-015G	43	5022T1-040	625	5027L1-015	625
475-334	8	476-530F	9	4830-015SR	612	498-020	17	5022T1-040C	626	5027L1-015C	626
475-335	8	476-532F	9	4830-020BSR	613	498-020G	43	5023L1-005	625	5027L1-020	625
475-336	8	476-578F	9	4830-020SR	612	498-025	17	5023L1-005C	626	5027L1-020C	626
475-337	8	476-579F	9	4839-101	612	498-030	17	5023L1-007	625	5027L1-025	625
475-338	8	476-580F	9	4839-101B	613	498-040	17	5023L1-007C	626	5027L1-025C	626
475-339	8	476-582F	9	4839-130	612	498-060	17	5023L1-010	625	5027L1-030	625
475-420	8	476-585F	9	4839-130B	613	499-002SR	17, 597	5023L1-010C	626	5027L1-030C	626
475-421	8	476-621F	9	4839-131	612	499-003SR	17, 597	5023L1-012	625	5027L1-040	625
475-422	8	476-622F	9	4839-131B	613	499-005SR	17, 597	5023L1-012C	626	5027L1-040C	626
475-488F	8	476-623F	9	4839-211	612	499-007SR	17, 597	5023L1-015	625	5027T1-005	625
475-490F	8	476-624F	9	4839-211B	613	499-010BR	17, 597	5023L1-015C	626	5027T1-005C	626
475-528	8	476-626F	9	4839-249	612	499-010SR	17, 597	5023L1-020	625	5027T1-007	625
475-529	8	476-628F	9	4839-249B	613	499-012BR	17, 597	5023L1-020C	626	5027T1-007C	626
475-530	8	476-661F	9	4839-251	612	499-012SR	17, 597	5023L1-025	625	5027T1-010	625
475-532	8	476-662F	9	4839-251B	613	499-015BR	17, 597	5023L1-025C	626	5027T1-010C	626
475-532L	47	476-663F	9	4848-005BSR	613	499-015SR	17, 597	5023L1-030	625	5027T1-012	625
475-578F	8	476-664F	9	4848-005SR	612	499-020BR	17, 597	5023L1-030C	626	5027T1-012C	626
475-579F	8	476-666F	9	4848-007BSR	613	499-020SR	17, 597	5023L1-040	625	5027T1-015	625
475-580F	8	476-668F	9	4848-007SR	612	499-030SR	17, 597	5023L1-040C	626	5027T1-015C	626
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475-623F	8	478-005SR	13, 596	4848-020BSR	613	5021L1-005CSR	626	5023T1-010	625	5027T1-030	625
475-624F	8	478-007	12	4848-020SR	612	5021L1-005SR	625	5023T1-010C	626	5027T1-030C	626
475-626	8	478-007G	42	4852-005BSR	613	5021L1-007CSR	626	5023T1-012	625	5027T1-040	625
475-626F	8	478-007SR	13, 596	4852-005SR	612	5021L1-007SR	625	5023T1-012C	626	5027T1-040C	626
475-628	8	478-010	12	4852-007BSR	613	5021L1-010CSR	626	5023T1-015	625	5028L1-005	1258
475-628F	8	478-010G	42	4852-007SR	612	5021L1-010SR	625	5023T1-015C	626	5028L1-005C	1260
475-661F	8	478-010SR	13, 596	4852-010BSR	613	5021L1-012CSR	626	5023T1-020	625	5028L1-007	1258
475-663F	8	478-012	12	4852-010SR	612	5021L1-012SR	625	5023T1-020C	626	5028L1-007C	1260
475-664F	8	478-012G	42	4852-015BSR	613	5021L1-015CSR	626	5023T1-025	625	5028L1-010	1258
475-666F	8	478-012SR	13, 596	4852-015SR	612	5021L1-015SR	625	5023T1-025C	626	5028L1-010C	1260
475-668F	8	478-015	12	4852-020BSR	613	5021L1-020CSR	626	5023T1-030	625	5028L1-012	1258
475-670F	8	478-015G	42	4852-020SR	612	5021L1-020SR	625	5023T1-030C	626	5028L1-012C	1260
475-691F	8	478-015SR	13, 596	4853-005	612	5021L1-025CSR	626	5023T1-040	625	5028L1-015	1258
475-693F	8	478-020	12	4853-005B	613	5021L1-025SR	625	5023T1-040C	626	5028L1-015C	1260
475-694F	8	478-020G	42	4853-007	612	5021L1-030CSR	626	5024L1-005	1258	5028L1-020	1258
475-696F	8	478-020SR	13, 596	4853-007B	613	5021L1-030SR	625	5024L1-005C	1259	5028L1-020C	1260
475-698F	8	478-030	12	4853-010	612	5021L1-040CSR	626	5024L1-007	1258	5028T1-005	1259
475-700F	8	478-030G	42	4853-010B	613	5021L1-040SR	625	5024L1-007C	1259	5028T1-005C	1260
475-702F	8	478-030SR	13, 596	4853-015	612	5021T1-005CSR	626	5024L1-010	1258	5028T1-007	1259
475-751F	8	478-040	12	4853-015B	613	5021T1-005SR	625	5024L1-010C	1259	5028T1-007C	1260
475-753F	8	478-040G	42	4853-020	612	5021T1-007CSR	626	5024L1-012	1258	5028T1-010	1259
475-754F	8	478-040SR	13, 596	4853-020B	613	5021T1-007SR	625	5024L1-012C	1259	5028T1-010C	1260
475-756F	8	478-072SR	13, 596	4858-005BSR	613	5021T1-010CSR	626	5024L1-015	1258	5028T1-012	1259
475-758F	8	478-098SR	13, 596	4858-005SR	612	5021T1-010SR	625	5024L1-015C	1259	5028T1-012C	1260
475-760F	8	478-128SR	13, 596	4858-007BSR	613	5021T1-012CSR	626	5024L1-020	1258	5028T1-015	1259
475-762F	8	479-005N	12	4858-007SR	612	5021T1-012SR	625	5024L1-020C	1259	5028T1-015C	1260
475-764F	8	479-007	12	4858-010BSR	613	5021T1-015CSR	626	5024T1-005	1259	5028T1-020	1259
475-781F	8	479-010	12	4858-010SR	612	5021T1-015SR	625	5024T1-005C	1260	5028T1-020C	1260
475-783F	9	479-015	12	4858-015BSR	613	5021T1-020CSR	626	5024T1-007	1259	5031L1-005CSR	626
475-784F	9	479-020	12	4858-015SR	612	5021T1-020SR	625	5024T1-007C	1260	5031L1-005SR	625
475-786F	9	479-025	12	4858-020BSR	613	5021T1-025CSR	626	5024T1-010	1259	5031L1-007CSR	626
475-788F	9	479-030	12	4858-020SR	612	5021T1-025SR	625	5024T1-010C	1260	5031L1-007SR	625
475-790F	9	479-040	12	4898-005BSR	613	5021T1-030CSR	626	5024T1-012	1259	5031L1-010CSR	626
475-792F	9	479-050F	12	4898-005SR	612	5021T1-030SR	625	5024T1-012C	1260	5031L1-010SR	625
475-794F	9	4805-005BSR	612	4898-007BSR	613	5021T1-040CSR	626	5024T1-015	1259	5031L1-012CSR	626
475-796F	9	4805-005SR	612	4898-007SR	612	5021T1-040SR	625	5024T1-015C	1260	5031L1-012SR	625
475-811F	9	4805-007BSR	612	4898-010BSR	613	5022L1-005	625	5024T1-020	1259	5031L1-015CSR	626
475-813F	9	4805-007SR	612	4898-010SR	612	5022L1-005C	626	5024T1-020C	1260	5031L1-015SR	625
475-814F	9	4805-010BSR	612	4898-015BSR	613	5022L1-007	625	5025L1-005	1258	5031L1-020CSR	626
475-816F	9	4805-010SR	612	4898-015SR	612	5022L1-007C	626	5025L1-005C	1259	5031L1-020SR	625
475-818F	9	4805-015BSR	612	4898-020BSR	613	5022L1-010	625	5025L1-007	1258	5031L1-025CSR	626
475-820F	9	4805-015SR	612	4898-020SR	612	5022L1-010C	626	5025L1-007C	1259	5031L1-025SR	625
475-822F	9	4805-020BSR	612	491-060	289	5022L1-012	625	5025L1-010	1258	5031L1-030CSR	626
475-824F	9	4805-020SR	612	492-060	289	5022L1-012C	626	5025L1-010C	1259	5031L1-030SR	625
475-826F	9	4808-005BSR	612	493-060	289	5022L1-015	625	5025L1-012	1258	5031L1-040CSR	626
475-828F	9	4808-005SR	612	497-005	16	5022L1-015C	626	5025L1-012C	1259	5031L1-040SR	625
475-901F	9	4808-007BSR	612	497-005G	43	5022L1-020	625	5025L1-015	1258	5031T1-005CSR	626
475-903F	9	4808-007SR	612	497-007	16	5022L1-020C	626	5025L1-015C	1259	5031T1-005SR	625
475-904F	9	4808-010BSR	612	497-007G	43	5022L1-025	625	5025L1-020	1258	5031T1-007CSR	626
475-906F	9	4808-010SR	612	497-010	16	5022L1-025C	626	5025L1-020C	1259	5031T1-007SR	625
475-908F	9	4808-015BSR	612	497-010G	43	5022L1-030	625	5025T1-005	1259	5031T1-010CSR	626

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5031T1-012CSR	626	5034L1-020	1258	5038T1-015	1259	51122H101-030	857	51221J101-100	857	51321H101-025	857
5031T1-012SR	625	5034L1-020C	1259	5038T1-015C	1260	51122H101-040	857	51221J101-120	857	51321H101-030	857
5031T1-015CSR	626	5034T1-005	1259	5038T1-020	1259	51122H101-060	857	51222A112-015	856	51321H101-040	857
5031T1-015SR	625	5034T1-005C	1260	5038T1-020C	1260	51122H101-080	857	51222A112-020	856	51321H101-060	857
5031T1-020CSR	626	5034T1-007	1259	51111A112-015	856	51122H101-100	858	51222A112-025	856	51321H101-080	857
5031T1-020SR	625	5034T1-007C	1260	51111A112-020	856	51122H101-120	858	51222A112-030	856	51321H101-100	857
5031T1-025CSR	626	5034T1-010	1259	51111A112-025	856	51122J101-015	857	51222A112-040	856	51321H101-120	857
5031T1-025SR	625	5034T1-010C	1260	51111A112-030	856	51122J101-020	857	51222A123-120	856	51321J101-015	857
5031T1-030CSR	626	5034T1-012	1259	51111A112-040	856	51122J101-025	857	51222A126-060	856	51321J101-020	857
5031T1-030SR	625	5034T1-012C	1260	51111A123-120	856	51122J101-030	857	51222A126-080	856	51321J101-025	857
5031T1-040CSR	626	5034T1-015	1259	51111A126-060	856, 856	51122J101-040	857	51222A126-100	856	51321J101-030	857
5031T1-040SR	625	5034T1-015C	1260	51111A126-080	856, 856	51122J101-060	857	51222H101-015	857	51321J101-040	857
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5032L1-012	625	5035L1-010	1258	51111H101-060	857	51211A112-030	856	51222H101-100	858	51322A112-025	856
5032L1-012C	626	5035L1-010C	1260	51111H101-080	857	51211A112-040	856	51222H101-120	858	51322A112-030	856
5032L1-015	625	5035L1-012	1258	51111H101-100	857	51211A123-120	856	51222J101-015	857	51322A112-040	856
5032L1-015C	626	5035L1-012C	1260	51111H101-120	857	51211A126-060	856	51222J101-020	857	51322A123-120	856
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5032T1-030	625	5037L1-012	625	51112H101-040	858	51212A112-025	856	51311H101-080	857	5210-010C	677
5032T1-030C	626	5037L1-012C	626	51112H101-060	858	51212A112-030	856	51311H101-100	857	5210-020	677
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5032T1-040C	626	5037L1-015C	626	51112H101-100	858	51212A123-120	856	51311J101-015	857	5211-005CSR	676
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5033L1-012C	626	5037L1-040C	626	51112J101-080	858	51212H101-040	858	51311J101-120	857	5211-015CSR	677
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5033L1-015C	626	5037T1-005C	626	51112J101-120	858	51212H101-080	858	51312A112-020	856	5211-020CSR	677
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5033L1-020C	626	5037T1-007C	626	51121A112-020	856	51212H101-120	858	51312A112-030	856	5212-005	676
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5033L1-030	625	5037T1-012	625	51121A112-040	856	51212J101-025	858	51312A126-060	856	5212-007C	676
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5033T1-020C	626	5038L1-007C	1260	51121J101-040	857	51221A126-100	856	51312J101-030	858	5213-012	676
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5033T1-030	625	5038L1-012	1259	51121J101-100	857	51221H101-025	857	51312J101-080	858	5213-015C	677
5033T1-030C	626	5038L1-012C	1260	51121J101-120	857	51221H101-030	857	51312J101-100	858	5213-020	676
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5033T1-040C	626	5038L1-015C	1260	51122A112-020	856	51221H101-060	857	51321A112-015	856	5220-010	677
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Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

5907-01200	150	6033-030C	694	6632-012	638	721301K-015C	680	721311K-030	679	721321K-100	680
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5907-01500	150	6033-060	694	6632-015C	638	721301K-025	680	721311K-040C	680	721321K-120C	680
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601-280	1251	6631-005C	638	721301G-020	680	721311G-020C	681	721321G-100C	681	722301G-060	681
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6013-030	694	6631-007C	638	721301G-025	680	721311G-025C	681	721321G-120C	681	722301G-080	681
6013-040	694	6631-010	638	721301G-025C	681	721311G-030	680	721321K-015	680	722301G-080C	681
6013-060	694	6631-010C	638	721301G-030	680	721311G-030C	681	721321K-015C	680	722301G-100	681
6020	1375	6631-012	638	721301G-030C	681	721311G-040	680	721321K-020	680	722301G-100C	681
6023-025	694	6631-012C	638	721301G-040	680	721311G-040C	681	721321K-020C	680	722301G-120	681
6023-025C	694	6631-015	638	721301G-040C	681	721311G-060	680	721321K-025	680	722301G-120C	681
6023-030	694	6631-015C	638	721301G-060	681	721311G-060C	681	721321K-025C	680	722301K-015	680
6023-030C	694	6631-020	638	721301G-060C	681	721311G-080	680	721321K-030	680	722301K-015C	680
6023-040	694	6631-020C	638	721301G-080	681	721311G-080C	681	721321K-030C	680	722301K-020	680
6023-040C	694	6632-005	638	721301G-080C	681	721311K-015	679	721321K-040	680	722301K-020C	680
6023-060	694	6632-005C	638	721301G-100	681	721311K-015C	680	721321K-040C	680	722301K-025	680
6023-060C	694	6632-007	638	721301G-100C	681	721311K-020	679	721321K-060	680	722301K-025C	680
6033-025	694	6632-007C	638	721301G-120	681	721311K-020C	680	721321K-060C	680	722301K-030	680
6033-025C	694	6632-010	638	721301G-120C	681	721311K-025	679	721321K-080	680	722301K-030C	680
6033-030	694	6632-010C	638	721301K-015	680	721311K-025C	680	721321K-080C	680	722301K-040	680

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722301K-040C	680	722311L-015	682	722321K-100C	680	723301K-060	680	723311L-015C	683	723321K-120	680
722301K-060	680	722311L-015C	683	722321K-120	680	723301K-060C	680	723311L-020	682	723321K-120C	680
722301K-060C	680	722311L-020	682	722321K-120C	680	723301K-080	680	723311L-020C	683	723321L-015	682
722301K-080	680	722311L-020C	683	722321L-015	682	723301K-080C	680	723311L-025	682	723321L-015C	683
722301K-080C	680	722311L-025	682	722321L-015C	683	723301K-100	680	723311L-025C	683	723321L-020	682
722301K-100	680	722311L-025C	683	722321L-020	682	723301K-100C	680	723311L-030	682	723321L-020C	683
722301K-100C	680	722311L-030	682	722321L-020C	683	723301K-120	680	723311L-030C	683	723321L-025	682
722301K-120	680	722311L-030C	683	722321L-025	682	723301K-120C	680	723311L-040	682	723321L-025C	683
722301K-120C	680	722311L-040	682	722321L-025C	683	723301L-015	683	723311L-040C	683	723321L-030	682
722301L-015	683	722311L-040C	683	722321L-030	682	723301L-015C	683	723311L-060	682	723321L-030C	683
722301L-015C	683	722311L-060	682	722321L-030C	683	723301L-020	683	723311L-060C	683	723321L-040	682
722301L-020	683	722311L-060C	683	722321L-040	682	723301L-020C	683	723311L-080	682	723321L-040C	683
722301L-020C	683	722311L-080	682	722321L-040C	683	723301L-025	683	723311L-080C	683	723321L-060	682
722301L-025	683	722311L-080C	683	722321L-060	682	723301L-025C	683	723311Z-015	681	723321L-060C	683
722301L-025C	683	722311Z-015	681	722321L-060C	683	723301L-030	683	723311Z-015C	682	723321L-080	682
722301L-030	683	722311Z-015C	682	722321L-080	682	723301L-030C	683	723311Z-020	681	723321L-080C	683
722301L-030C	683	722311Z-020	681	722321L-080C	683	723301L-040	683	723311Z-020C	682	723321L-100	683
722301L-040	683	722311Z-020C	682	722321L-100	683	723301L-040C	683	723311Z-025	681	723321L-100C	683
722301L-040C	683	722311Z-025	681	722321L-100C	683	723301L-060	683	723311Z-025C	682	723321L-120	683
722301L-060	683	722311Z-025C	682	722321L-120	683	723301L-060C	683	723311Z-030	681	723321L-120C	683
722301L-060C	683	722311Z-030	681	722321L-120C	683	723301L-080	683	723311Z-030C	682	723321Z-015	682
722301L-080	683	722311Z-030C	682	722321Z-015	682	723301L-080C	683	723311Z-040	681	723321Z-015C	682
722301L-080C	683	722311Z-040	681	722321Z-015C	682	723301L-100	683	723311Z-040C	682	723321Z-020	682
722301L-100	683	722311Z-040C	682	722321Z-020	682	723301L-100C	683	723311Z-060	681	723321Z-020C	682
722301L-100C	683	722311Z-060	681	722321Z-020C	682	723301L-120	683	723311Z-060C	682	723321Z-025	682
722301L-120	683	722311Z-060C	682	722321Z-025	682	723301L-120C	683	723311Z-080	681	723321Z-025C	682
722301L-120C	683	722311Z-080	681	722321Z-025C	682	723301Z-015	682	723311Z-080C	682	723321Z-030	682
722301Z-015	682	722311Z-080C	682	722321Z-030	682	723301Z-015C	682	723321-015	678	723321Z-030C	682
722301Z-015C	682	722321-015	678	722321Z-030C	682	723301Z-020	682	723321-015C	679	723321Z-040	682
722301Z-020	682	722321-015C	679	722321Z-040	682	723301Z-020C	682	723321-020	678	723321Z-040C	682
722301Z-020C	682	722321-020	678	722321Z-040C	682	723301Z-025	682	723321-020C	679	723321Z-060	682
722301Z-025	682	722321-020C	679	722321Z-060	682	723301Z-025C	682	723321-020P	616, 683	723321Z-060C	682
722301Z-025C	682	722321-020P	616, 683	722321Z-060C	682	723301Z-030	682	723321-025	678	723321Z-080	682
722301Z-030	682	722321-025	678	722321Z-080	682	723301Z-030C	682	723321-025C	679	723321Z-080C	682
722301Z-030C	682	722321-025C	679	722321Z-080C	682	723301Z-040	682	723321-025P	616, 683	723321Z-100	682
722301Z-040	682	722321-025P	616, 683	722321Z-100	682	723301Z-040C	682	723321-030	678	723321Z-100C	682
722301Z-040C	682	722321-030	678	722321Z-100C	682	723301Z-060	682	723321-030C	679	723321Z-120	682
722301Z-060	682	722321-030C	679	722321Z-120	682	723301Z-060C	682	723321-030P	616, 683	723321Z-120C	682
722301Z-060C	682	722321-030P	616, 683	722321Z-120C	682	723301Z-080	682	723321-040	678	751301-020	685
722301Z-080	682	722321-040	678	723301-015	679	723301Z-080C	682	723321-040C	679	751301-025	685
722301Z-080C	682	722321-040C	679	723301-015C	679	723301Z-100	682	723321-040P	616, 683	751301-030	685
722301Z-100	682	722321-040P	616, 683	723301-015P	616, 683	723301Z-100C	682	723321-060	678	751301-040	685
722301Z-100C	682	722321-060	678	723301-020	679	723301Z-120	682	723321-060C	679	751301-060	685
722301Z-120	682	722321-060C	679	723301-020C	679	723301Z-120C	682	723321-060P	616, 683	751301-080	685
722301Z-120C	682	722321-060P	616, 683	723301-020P	616, 683	723311-015	678	723321-080	678	751301-100	685
722311-015	678	722321-080	678	723301-025	679	723311-015C	679	723321-080C	679	751301-120	685
722311-015C	679	722321-080C	679	723301-025C	679	723311-015P	616, 683	723321-080P	616, 683	751311-020	685
722311-015P	616, 683	722321-080P	616, 683	723301-025P	616, 683	723311-020	678	723321-100	678	751311-025	685
722311-020	678	722321-100	678	723301-030	679	723311-020C	679	723321-100C	679	751311-030	685
722311-020C	679	722321-100C	679	723301-030C	679	723311-020P	616, 683	723321-100P	616, 683	751311-040	685
722311-020P	616, 683	722321-100P	616, 683	723301-030P	616, 683	723311-025	678	723321-120	679	751311-060	685
722311-025	678	722321-120	679	723301-040	679	723311-025C	679	723321-120C	679	751311-080	685
722311-025C	679	722321-120C	679	723301-040C	679	723311-025P	616, 683	723321-120P	616, 683	751321-020	685
722311-025P	616, 683	722321-120P	616, 683	723301-040P	616, 684	723311-030	678	723321-140	684	751321-025	685
722311-030	678	722321-140	684	723301-060	679	723311-030C	679	723321-140C	684	751321-030	685
722311-030C	679	722321-140C	684	723301-060C	679	723311-030P	616, 683	723321-140P	616, 684	751321-040	685
722311-030P	616, 683	722321-140P	616, 684	723301-060P	616, 684	723311-040	678	723321-160P	616, 684	751321-060	685
722311-040	678	722321-160P	616, 684	723301-080	679	723311-040C	679	723321-180P	616, 684	751321-080	685
722311-040C	679	722321-180P	616, 684	723301-080C	679	723311-040P	616, 683	723321-200P	616, 684	751321-100	685
722311-040P	616, 683	722321-200P	616, 684	723301-080P	616, 684	723311-060	678	723321-240P	616, 684	751321-120	685
722311-060	678	722321-240P	616, 684	723301-100	679	723311-060C	679	723321G-015	680	752301-020	685
722311-060C	679	722321G-015	680	723301-100C	679	723311-060P	616, 683	723321G-015C	681	752301-020C	685
722311-060P	616, 683	722321G-015C	681	723301-100P	616, 684	723311-080	678	723321G-020	680	752301-025	685
722311-080	678	722321G-020	680	723301-120	679	723311-080C	679	723321G-020C	681	752301-025C	685
722311-080C	679	722321G-020C	681	723301-120C	679	723311-080P	616, 683	723321G-025	680	752301-030	685
722311-080P	616, 683	722321G-025	680	723301-120P	616, 684	723311G-015	680	723321G-025C	681	752301-030C	685
722311G-015	680	722321G-025C	681	723301G-015	680	723311G-015C	681	723321G-030	680	752301-040	685
722311G-015C	681	722321G-030	680	723301G-015C	681	723311G-020	680	723321G-030C	681	752301-040C	685
722311G-020	680	722321G-030C	681	723301G-020	680	723311G-020C	681	723321G-040	680	752301-060	685
722311G-020C	681	722321G-040	680	723301G-020C	681	723311G-025	680	723321G-040C	681	752301-060C	685
722311G-025	680	722321G-040C	681	723301G-025	680	723311G-025C	681	723321G-060	680	752301-080	685
722311G-025C	681	722321G-060	680	723301G-025C	681	723311G-030	680	723321G-060C	681	752301-080C	685
722311G-030	680	722321G-060C	681	723301G-030	680	723311G-030C	681	723321G-080	680	752301-100	685
722311G-030C	681	722321G-080	680	723301G-030C	681	723311G-040	680	723321G-080C	681	752301-100C	685
722311G-040	680	722321G-080C	681	723301G-040	680	723311G-040C	681	723321G-100	680	752301-120	685
722311G-040C	681	722321G-100	680	723301G-040C	681	723311G-060	680	723321G-100C	681	752301-120C	685
722311G-060	680	722321G-100C	681	723301G-060	681	723311G-060C	681	723321G-120	680	752311-020	685
722311G-060C	681	722321G-120	680	723301G-060C	681	723311G-080	680	723321G-120C	681	752311-020C	685
722311G-080	680	722321G-120C	681	723301G-080	681	723311G-080C	681	723321K-015	680	752311-025	685
722311G-080C	681	722321K-015	680	723301G-080C	681	723311K-015	679	723321K-015C	680	752311-025C	685
722311K-015	679	722321K-015C	680	723301G-100	681	723311K-015C	680	723321K-020	680	752311-030	685
722311K-015C	680	722321K-020	680	723301G-100C	681	723311K-020	679	723321K-020C	680	752311-030C	685
722311K-020	679	722321K-020C	680	723301G-120	681	723311K-020C	680	723321K-025	680	752311-040	685
722311K-020C	680	722321K-025	680	723301G-120C	681	723311K-025	679	723321K-025C	680	752311-040C	685
722311K-025	679	722321K-025C	680	723301K-015	680	723311K-025C	680	723321K-030	680	752311-060	685
722311K-025C	680	722321K-030	680	723301K-015C	680	723311K-030	679	723321K-030C	680	752311-060C	685
722311K-030	679	722321K-030C	680	723301K-020	680	723311K-030C	680	723321K-040	680	752311-080	685
722311K-030C	680	722321K-040	680	723301K-020C	680	723311K-040	679	723321K-040C	680	752311-080C	685
722311K-040	679	722321K-040C	680	723301K-025	680	723311K-040C	680	723321K-060	680	752321-020	685
722311K-040C	680	722321K-060	680	723301K-025C	680	723311K-060	680	723321K-060C	680	752321-020C	685
722311K-060	680	722321K-060C	680	723301K-030	680	723311K-060C	680	723321K-080	680	752321-025	685
722311K-060C	680	722321K-080	680	723301K-030C	680	723311K-080	680	723321K-080C	680	752321-025C	685
722311K-080	680	722321K-080C	680	723301K-040	680	723311K-080C	680	723321K-100	680	752321-030	685
722311K-080C	680	722321K-100	680	723301K-040C	680	723311L-015	682	723321K-100C	680	752321-030C	685

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752321-040	685	801-040BL	1052	801-337	295	801-621C	460	801-786CF	460	802-101CSR	461, 602
752321-040C	685	801-040C	459	801-337C	459	801-621CF	460	801-786F	295	802-101SR	296, 598
752321-060	685	801-050	294	801-338	295	801-621F	295	801-788CF	460	802-128CSR	461, 602
752321-060C	685	801-050C	459	801-338BL	1052	801-622CF	460	801-788F	295	802-128SR	296, 598
752321-080	685	801-050F	294	801-338C	460	801-622F	295	801-790CF	460	802-130	295
752321-080C	685	801-060	294	801-339	295	801-623	295	801-790F	295	802-130C	460
752321-100	685	801-060BL	1052	801-339C	460	801-623C	460	801-792CF	460	802-130CSR	461, 602
752321-100C	685	801-060C	459	801-415C	460	801-623CF	460	801-792F	295	802-130SR	296, 598
752321-120	685	801-080	294	801-416	295	801-623F	295	801-794CF	460	802-131	295
752321-120C	685	801-080C	459	801-416C	460	801-624	295	801-794F	295	802-131C	460
753301-020	685	801-080F	294	801-417	295	801-624C	460	801-796CF	460	802-131CSR	461, 602
753301-020C	685	801-100	294	801-417C	460	801-624CF	460	801-796F	295	802-131SR	296, 598
753301-025	685	801-100C	459	801-418	295	801-624F	295	801-814CF	460	802-164CSR	461, 602
753301-025C	685	801-100CF	459	801-418C	460	801-625F	295	801-814F	295	802-164SR	296, 598
753301-030	685	801-100F	294	801-419	295	801-626	295	801-816CF	460	802-166	296
753301-030C	685	801-101	294	801-419C	460	801-626C	460	801-816F	295	802-166C	460
753301-040	685	801-101C	459	801-420	295	801-626CF	460	801-818CF	460	802-166CSR	461, 602
753301-040C	685	801-120	294	801-420C	460	801-626F	295	801-818F	295	802-166SR	296, 598
753301-060	685	801-120C	459	801-421	295	801-628	295	801-820CF	460	802-167	296
753301-060C	685	801-120CF	459	801-421C	460	801-628C	460	801-820F	295	802-167C	460
753301-080	685	801-120F	294	801-422	295	801-628CF	460	801-822CF	460	802-168	296
753301-080C	685	801-130	294	801-422BL	1052	801-628F	295	801-822F	295	802-168C	460
753301-100	685	801-130C	459	801-422C	460	801-632F	295	801-824CF	460	802-168CSR	461, 602
753301-100C	685	801-131	294	801-426	295	801-661CF	460	801-824F	295	802-168SR	296, 598
753301-120	685	801-131BL	1052	801-426C	460	801-661F	295	801-826CF	460	802-207CSR	461, 602
753301-120C	685	801-131C	459	801-482	295	801-662CF	460	801-826F	295	802-207SR	296, 598
753311-020	685	801-140	294	801-482F	295	801-662F	295	801-828CF	460	802-209	296
753311-020C	685	801-140C	459	801-484	295	801-663CF	460	801-828F	295	802-209C	460
753311-025	685	801-140CF	459	801-484C	460	801-663F	295	801-904CF	460	802-210	296
753311-025C	685	801-140F	294	801-484F	295	801-664	295	801-904F	295	802-210C	460
753311-030	685	801-157	294	801-486	295	801-664C	460	801-906CF	460	802-211	296
753311-030C	685	801-158	294	801-486C	460	801-664CF	460	801-906F	295	802-211C	460
753311-040	685	801-158C	459	801-486F	295	801-664F	295	801-908CF	460	802-211CSR	461, 602
753311-040C	685	801-159	294	801-487	295	801-665F	295	801-908F	295	802-211SR	296, 598
753311-060	685	801-159C	459	801-487F	295	801-666	295	801-910CF	460	802-212	296
753311-060C	685	801-160CF	459	801-488	295	801-666C	460	801-910F	295	802-212C	460
753311-080	685	801-160F	294	801-488C	460	801-666CF	460	801-912CF	460	802-212CSR	461, 602
753311-080C	685	801-166	294	801-488F	295	801-666F	295	801-912F	295	802-212SR	296, 598
753321-020	685	801-166C	459	801-490	295	801-668	295	801-914CF	460	802-245CSR	461, 602
753321-020C	685	801-167	294	801-490C	460	801-668C	460	801-914F	295	802-245SR	296, 598
753321-025	685	801-167C	459	801-490F	295	801-668CF	460	801-916CF	460	802-247	296
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866-416C	484	866S-420	325	866SV-524	324	866V-528	324	867-573CSR	486		1165
866-417	324	866S-420C	485	866SV-524C	484	866V-528C	484	867-573SR	326	867S-525CSR	486
866-417C	484	866S-421	325	866SV-525	324	866V-529	324	867-574CSR	486	867S-525SR	326
866-418	324	866S-421C	485	866SV-525C	484	866V-529C	484	867-574SR	326	867S-526CSR	486
866-418C	484	866S-422	325	866SV-526	324	866V-530	324	867-575CSR	486	867S-526SR	326
866-419	324	866S-422C	485	866SV-526C	484	866V-530C	484	867-575SR	326	867S-527CSR	486
866-419C	484	866S-523	325	866SV-527	324	866V-532	324	867-576CSR	486	867S-527SR	326
866-420	324	866S-523C	485	866SV-527C	484	866V-532C	484	867-576SR	326	867S-528CSR	486
866-420C	484	866S-524	325	866SV-528	324	866V-573	324	867-577CSR	486	867S-528SR	326
866-421	324	866S-524C	485	866SV-528C	484	866V-573C	484	867-577SR	326	867S-529CSR	486
866-421C	484	866S-525	325	866SV-529	324	866V-574	324	867-578CSR	486	867S-529SR	326
866-422	324	866S-525C	485	866SV-529C	484	866V-574C	484	867-578SR	326	867S-530CSR	486
866-422C	484	866S-526	325	866SV-530	324	866V-575	324	867-579CSR	486	867S-530SR	326
866-523	324	866S-526C	485	866SV-530C	484	866V-575C	484	867-579SR	326	867S-532CSR	486
866-523C	484	866S-527	325	866SV-532	324	866V-576	324	867-580CSR	486	867S-532SR	326
866-524	324	866S-527C	485	866SV-532C	484	866V-576C	484	867-580SR	326	867S-571CSR	486
866-524C	484	866S-528	325	866SV-573	324	866V-577	324	867-582CSR	486	867S-571SR	327
866-525	324	866S-528C	485	866SV-573C	484	866V-577C	484	867-582SR	326	867S-573CSR	487
866-525C	484	866S-529	325	866SV-574	324	866V-578	324	867-585CSR	486		1165
866-526	324	866S-529C	485	866SV-574C	484	866V-578C	484	867-585SR	326	867S-573SR	327
866-526C	484	866S-530	325	866SV-575	324	866V-579	324	867-624CSR	486		1165
866-527	324	866S-530C	485	866SV-575C	484	866V-579C	484	867-624SR	326	867S-574CSR	487
866-527C	484	866S-532	325	866SV-576	324	866V-580	324	867-626CSR	486		1165
866-528	324	866S-532C	485	866SV-576C	484	866V-580C	484	867-626SR	326	867S-574SR	327
866-528C	484	866S-573	325	866SV-577	324	866V-582	324	867-664CSR	486		1165
866-529	324	866S-573C	485	866SV-577C	484	866V-582C	484	867-664SR	326	867S-575CSR	487
866-529C	484	866S-574	325	866SV-578	324	866V-585	324	867-666CSR	486	867S-575SR	327
866-530	324	866S-574C	485	866SV-578C	484	866V-585C	484	867-666SR	326	867S-576CSR	487
866-530C	484	866S-575	325	866SV-579	324	866V-624	324	867S-245CSR	486	867S-576SR	327
866-532	325	866S-575C	485	866SV-579C	484	866V-624C	484	867S-245SR	326	867S-577CSR	487
866-532C	485	866S-576	325	866SV-580	324	866V-626	324	867S-247CSR	486	867S-577SR	327
866-573	325	866S-576C	485	866SV-580C	484	866V-626C	484		1165	867S-578CSR	487
866-573C	485	866S-577	325	866SV-582	324	866V-664	324	867S-247SR	326	867S-578SR	327
866-574	325	866S-577C	485	866SV-582C	484	866V-664C	484		1165	867S-579CSR	487
866-574C	485	866S-578	325	866SV-585	324	866V-666	324	867S-248CSR	486	867S-579SR	327
866-575	325	866S-578C	485	866SV-585C	484	866V-666C	484		1165	867S-580CSR	487
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869-250CSR	489	869S-334CSR	489	869SV-338CSR	489	869V-418CSR	488	871-012	315	875-166C	464
869-250SR	329	869S-334SR	329	869SV-338SR	329	869V-418SR	328	871-012C	477	875-167	300
869-251CSR	489	869S-335CSR	489	869SV-415CSR	489	869V-419CSR	488	871-015	315	875-167C	464
869-251SR	329	869S-335SR	329	869SV-415SR	329	869V-419SR	328	871-015C	477	875-168	300
869-291CSR	489	869S-336CSR	489	869SV-416CSR	489	869V-420CSR	488	871-020	315	875-168C	464
869-291SR	329	869S-336SR	329	869SV-416SR	329	869V-420SR	328	871-020C	477	875-180CF	464
869-333CSR	489	869S-337CSR	489	869SV-417CSR	489	869V-421CSR	488	871-030	315	875-180F	299
869-333SR	329	869S-337SR	329	869SV-417SR	329	869V-421SR	328	871-030C	477	875-200F	299
869-334CSR	489	869S-338CSR	489	869SV-418CSR	489	869V-422CSR	488	871-040	315	875-209	300
869-334SR	329	869S-338SR	329	869SV-418SR	329	869V-422SR	328	871-040C	477	875-209C	464
869-335CSR	489	869S-415CSR	489	869SV-419CSR	489	869V-523CSR	488	871E-005	315	875-210	300
869-335SR	329	869S-415SR	329	869SV-419SR	329	869V-523SR	328	871E-007	315	875-210C	464
869-336CSR	489	869S-416CSR	489	869SV-420CSR	489	869V-524CSR	488	871E-010	315	875-211	300
869-336SR	329	869S-416SR	329	869SV-420SR	329	869V-524SR	328	871E-012	315	875-211C	464
869-337CSR	489	869S-417CSR	489	869SV-421CSR	489	869V-525CSR	488	871E-015	315	875-212	300
869-337SR	329	869S-417SR	329	869SV-421SR	329	869V-525SR	328	871E-020	315	875-212C	464
869-338CSR	489	869S-418CSR	489	869SV-422CSR	489	869V-526CSR	488	871E-030	315	875-240F	300
869-338SR	329	869S-418SR	329	869SV-422SR	329	869V-526SR	328	871E-040	315	875-247	300
869-415CSR	489	869S-419CSR	489	869SV-523CSR	489	869V-527CSR	488	872-005	315	875-247C	464
869-415SR	329	869S-419SR	329	869SV-523SR	329	869V-527SR	328	872-005C	477	875-248	300
869-416CSR	489	869S-420CSR	489	869SV-524CSR	489	869V-528CSR	488	872-007	315	875-248C	464
869-416SR	329	869S-420SR	329	869SV-524SR	329	869V-528SR	328	872-007C	477	875-249	300
869-417CSR	489	869S-421CSR	489	869SV-525CSR	489	869V-529CSR	488	872-010	315	875-249C	464
869-417SR	329	869S-421SR	329	869SV-525SR	329	869V-529SR	328	872-010C	477	875-250	300
869-418CSR	489	869S-422CSR	489	869SV-526CSR	489	869V-530CSR	488	872-012	315	875-250C	464
869-418SR	329	869S-422SR	329	869SV-526SR	329	869V-530SR	328	872-012C	477	875-251	300
869-419CSR	489	869S-523CSR	489	869SV-527CSR	489	869V-532CSR	488	872-015	315	875-251C	464
869-419SR	329	869S-523SR	330	869SV-527SR	329	869V-532SR	328	872-015C	477	875-292	300
869-420CSR	489	869S-524CSR	489	869SV-528CSR	489	869V-573CSR	488	872-020	315	875-335	300
869-420SR	329	869S-524SR	330	869SV-528SR	329	869V-573SR	328	872-020C	477	875-335C	464
869-421CSR	489	869S-525CSR	489	869SV-529CSR	489	869V-574CSR	488	872-030	315	875-336	300
869-421SR	329	869S-525SR	330	869SV-529SR	329	869V-574SR	328	872-030C	477	875-336C	464
869-422CSR	489	869S-526CSR	489	869SV-530CSR	489	869V-575CSR	488	872-040	315	875-337	300
869-422SR	329	869S-526SR	330	869SV-530SR	329	869V-575SR	328	872-040C	477	875-337C	464
869-523CSR	489	869S-527CSR	490	869SV-532CSR	489	869V-576CSR	488	872E-005	315	875-338	300
869-523SR	329	869S-527SR	330	869SV-532SR	329	869V-576SR	328	872E-007	315	875-338C	464
869-524CSR	489	869S-528CSR	490	869SV-573CSR	489	869V-577CSR	488	872E-010	315	875-339	300
869-524SR	329	869S-528SR	330	869SV-573SR	329	869V-577SR	328	872E-012	315	875-339C	464
869-525CSR	489	869S-529CSR	490	869SV-574CSR	489	869V-578CSR	488	872E-015	315	875-420	300
869-525SR	329	869S-529SR	330	869SV-574SR	329	869V-578SR	328	872E-020	315	875-420C	464
869-526CSR	489	869S-530CSR	490	869SV-575CSR	489	869V-579CSR	488	872E-030	315	875-420F	300
869-526SR	329	869S-530SR	330	869SV-575SR	329	869V-579SR	328	872E-040	315	875-421	300
869-527CSR	489	869S-532CSR	490	869SV-576CSR	489	869V-580CSR	488	8721-005	642	875-421F	300
869-527SR	329	869S-532SR	330	869SV-576SR	329	869V-580SR	328	8721-007	642	875-422	300
869-528CSR	489	869S-573CSR	490	869SV-577CSR	489	869V-582CSR	488	8721-010	642	875-422C	464
869-528SR	329	869S-573SR	330	869SV-577SR	329	869V-582SR	328	8721-012	642	875-525	300
869-529CSR	489	869S-574CSR	490	869SV-578CSR	489	869V-585CSR	488	8721-015	642	875-528	300
869-529SR	329	869S-574SR	330	869SV-578SR	329	869V-585SR	328	8721-020	642	875-528C	464
869-530CSR	489	869S-575CSR	490	869SV-579CSR	489	869V-624CSR	488	8722-005	642	875-528CF	464
869-530SR	329	869S-575SR	330	869SV-579SR	329	869V-624SR	329	8722-007	642	875-528F	300
869-532CSR	489	869S-576CSR	490	869SV-580CSR	489	869V-626CSR	488	8722-010	642	875-530	300
869-532SR	329	869S-576SR	330	869SV-580SR	329	869V-626SR	329	8722-012	642	875-530C	464
869-573CSR	489	869S-577CSR	490	869SV-582CSR	489	869V-664CSR	488	8722-015	642	875-530CF	464
869-573SR	329	869S-577SR	330	869SV-582SR	329	869V-664SR	329	8722-020	642	875-530F	300
869-574CSR	489	869S-578CSR	490	869SV-585CSR	489	869V-666CSR	488	875-005	299	875-532	300
869-574SR	329	869S-578SR	330	869SV-585SR	329	869V-666SR	329	875-005C	464	875-532C	464
869-575CSR	489	869S-579CSR	490	869SV-624CSR	489	8697-020	311	875-007	299	875-578	300
869-575SR	329	869S-579SR	330	869SV-624SR	329		1253	875-007C	464	875-578C	464
869-576CSR	489	869S-580CSR	490	869SV-626CSR	489	8697-025	311	875-010	299	875-578CF	464
869-576SR	329	869S-580SR	330	869SV-626SR	329		1253	875-010C	464	875-578F	300
869-577CSR	489	869S-582CSR	490	869SV-664CSR	489	8697-032	311	875-012	299	875-579CF	464
869-577SR	329	869S-582SR	330	869SV-664SR	329		1253	875-012C	464	875-579F	300
869-578CSR	489	869S-585CSR	490	869SV-666CSR	489	8697-040	311	875-015	299	875-580	300
869-578SR	329	869S-585SR	330	869SV-666SR	329		1253	875-015C	464	875-580C	464
869-579CSR	489	869S-624CSR	490	869V-247CSR	488	8697-050	311	875-020	299	875-580CF	464
869-579SR	329	869S-624SR	330	869V-247SR	328		1253	875-020C	464	875-580F	300
869-580CSR	489	869S-626CSR	490	869V-248CSR	488	8697-063	311	875-025	299	875-582	300
869-580SR	329	869S-626SR	330	869V-248SR	328		1253	875-025C	464	875-582C	464
869-582CSR	489	869S-664CSR	490	869V-249CSR	488	8697-090	311	875-030	299	875-582CF	464
869-582SR	329	869S-664SR	330	869V-249SR	328		1253	875-030C	464	875-582F	300
869-585CSR	489	869S-666CSR	490	869V-250CSR	488	8697-110	311	875-040	299	875-585	300
869-585SR	329	869S-666SR	330	869V-250SR	328		1253	875-040C	464	875-585C	464
869-624CSR	489	869SV-247CSR	489	869V-251CSR	488	8698-020	311	875-050F	299	875-585CF	464
869-624SR	329	869SV-247SR	329	869V-251SR	328		1253	875-060	299	875-585F	300
869-626CSR	489	869SV-248CSR	489	869V-291CSR	488	8698-025	311	875-060C	464	875-621CF	464
869-626SR	329	869SV-248SR	329	869V-291SR	328		1253	875-080	299	875-621F	300
869-664CSR	489	869SV-249CSR	489	869V-333CSR	488	8698-032	311	875-080C	464	875-622F	300
869-664SR	329	869SV-249SR	329	869V-333SR	328		1253	875-080CF	464	875-623CF	464
869-666CSR	489	869SV-250CSR	489	869V-334CSR	488	8698-040	311	875-080F	299	875-623F	300
869-666SR	329	869SV-250SR	329	869V-334SR	328		1253	875-100CF	464	875-624CF	464
869S-247CSR	489	869SV-251CSR	489	869V-335CSR	488	8698-050	311	875-100F	299	875-624F	300
869S-247SR	329	869SV-251SR	329	869V-335SR	328		1253	875-101	300	875-625F	300
869S-248CSR	489	869SV-291CSR	489	869V-336CSR	488	8698-063	311	875-101C	464	875-626	300
869S-248SR	329	869SV-291SR	329	869V-336SR	328		1253	875-120CF	464	875-626C	464
869S-249CSR	489	869SV-333CSR	489	869V-337CSR	488	8698-090	311	875-120F	299	875-626CF	464
869S-249SR	329	869SV-333SR	329	869V-337SR	328		1253	875-130	300	875-626F	300
869S-250CSR	489	869SV-334CSR	489	869V-338CSR	488	8698-110	311	875-130C	464	875-628	300
869S-250SR	329	869SV-334SR	329	869V-338SR	328		1253	875-131	300	875-628C	464
869S-251CSR	489	869SV-335CSR	489	869V-415CSR	488	871-005	315	875-131C	464	875-628CF	464
869S-251SR	329	869SV-335SR	329	869V-415SR	328	871-005C	477	875-140CF	464	875-628F	300
869S-291CSR	489	869SV-336CSR	489	869V-416CSR	488	871-007	315	875-140F	299	875-661CF	464
869S-291SR	329	869SV-336SR	329	869V-416SR	328	871-007C	477	875-160CF	464	875-661F	300
869S-333CSR	489	869SV-337CSR	489	869V-417CSR	488	871-010	315	875-160F	299	875-662F	300

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Due to Material Cost Variations, Prices Subject to Change. Check On-line Catalog @ www.spearsmfg.com

91151A101-015	861	91231J850-010	865	91252H850-005	867	93122K850-015	866	93152J100-010	873	93232H100-005	872
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91231H850-015	864	91252A101-010	862	93122J850-005	866	93152H100-015	873	93231K850-010	865	93251J100-005	871
91231H850-020	864	91252A101-012	862	93122J850-007	866	93152H100-020	873	93231K850-012	865	93251J100-007	872
91231J100-005	870	91252A101-015	862	93122J850-010	866	93152H850-005	867	93231K850-015	865	93251J100-010	872
91231J100-007	870	91252A101-020	862	93122J850-012	866	93152H850-007	867	93231K850-020	865	93251J100-012	872
91231J100-010	870	91252H100-005	874	93122J850-015	866	93152H850-010	867	93232A101-005	861	93251J100-015	872
91231J100-012	871	91252H100-007	874	93122J850-020	866	93152H850-012	867	93232A101-007	861	93251J100-020	872
91231J100-015	871	91252H100-010	874	93122K850-005	866	93152H850-015	867	93232A101-010	861	93251J850-005	866
91231J100-020	871	91252H100-012	874	93122K850-007	866	93152H850-020	867	93232A101-012	861	93251J850-007	866
91231J850-005	864	91252H100-015	874	93122K850-010	866	93152J100-005	873	93232A101-015	862	93251J850-010	866
91231J850-007	864	91252H100-020	874	93122K850-012	866	93152J100-007	873	93232A101-020	862	93251J850-012	866

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93251J850-015	866	94021H850-010	864	94032A101-005	861	94052J100-015	873	95022J850-007	866	95032J100-020	873
93251J850-020	866	94021H850-012	864	94032A101-007	861	94052J100-020	873	95022J850-010	866	95032J100-025	873
93251K850-005	866	94021H850-015	864	94032A101-010	861	94052J850-005	867	95022J850-012	866	95032J100-030	873
93251K850-007	866	94021H850-020	864	94032A101-012	861	94052J850-007	867	95022J850-015	866	95032J100-040	873
93251K850-010	866	94021J100-005	870	94032A101-015	862	94052J850-010	867	95022J850-020	866	95032J850-005	867
93251K850-012	866	94021J100-007	870	94032A101-020	862	94052J850-012	867	95022K850-005	866	95032J850-007	867
93251K850-015	866	94021J100-010	870	94032H100-005	872	94052J850-015	867	95022K850-007	866	95032J850-010	867
93251K850-020	866	94021J100-012	870	94032H100-007	872	94052J850-020	867	95022K850-010	866	95032J850-012	867
93252A101-005	862	94021J100-015	870	94032H100-010	872	94052K850-005	867	95022K850-012	866	95032J850-015	867
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93252A101-010	862	94021J850-005	864	94032H100-015	873	94052K850-010	867	95022K850-020	866	95032K850-005	867
93252A101-012	862	94021J850-007	864	94032H100-020	873	94052K850-012	867	95023A101-025	863	95032K850-007	867
93252A101-015	862	94021J850-010	864	94032H850-005	866	94052K850-015	867	95023A101-030	863	95032K850-010	867
93252A101-020	862	94021J850-012	864	94032H850-007	866	94052K850-020	867	95023A101-040	863	95032K850-012	867
93252H100-005	874	94021J850-015	864	94032H850-010	866	95021A101-005	861	95023H100-025	875	95032K850-015	867
93252H100-007	874	94021J850-020	864	94032H850-012	866	95021A101-007	861	95023H100-030	875	95032K850-020	867
93252H100-010	874	94021K850-005	864	94032H850-015	867	95021A101-010	861	95023H100-040	875	95033A101-025	863
93252H100-012	874	94021K850-007	864	94032H850-020	867	95021A101-012	861	95023J100-025	875	95033A101-030	863
93252H100-015	874	94021K850-010	864	94032J100-005	872	95021A101-015	861	95023J100-030	875	95033A101-040	863
93252H100-020	874	94021K850-012	864	94032J100-007	872	95021A101-020	861	95023J100-040	875	95033H100-025	875
93252H850-005	867	94021K850-015	864	94032J100-010	873	95021A101-025	861	95031A101-005	861	95033H100-030	875
93252H850-007	867	94021K850-020	864	94032J100-012	873	95021A101-030	861	95031A101-007	861	95033H100-040	875
93252H850-010	868	94022A101-005	861	94032J100-015	873	95021A101-040	861	95031A101-010	861	95033J100-025	875
93252H850-012	868	94022A101-007	861	94032J100-020	873	95021H100-005	870	95031A101-012	861	95033J100-030	875
93252H850-015	868	94022A101-010	861	94032J850-005	867	95021H100-007	870	95031A101-015	861	95033J100-040	875
93252H850-020	868	94022A101-012	861	94032J850-007	867	95021H100-010	870	95031A101-020	861	95051A101-005	861
93252J100-005	874	94022A101-015	862	94032J850-010	867	95021H100-012	870	95031A101-025	861	95051A101-007	861
93252J100-007	874	94022A101-020	862	94032J850-012	867	95021H100-015	870	95031A101-030	861	95051A101-010	861
93252J100-010	874	94022H100-005	872	94032J850-015	867	95021H100-020	870	95031A101-040	861	95051A101-012	861
93252J100-012	874	94022H100-007	872	94032J850-020	867	95021H100-025	870	95031H100-005	870	95051A101-015	861
93252J100-015	874	94022H100-010	872	94032K850-005	867	95021H100-030	870	95031H100-007	870	95051A101-020	861
93252J100-020	874	94022H100-012	872	94032K850-007	867	95021H100-040	870	95031H100-010	870	95051A101-025	861
93252J850-005	868	94022H100-015	872	94032K850-010	867	95021H850-005	864	95031H100-012	870	95051A101-030	861
93252J850-007	868	94022H100-020	872	94032K850-012	867	95021H850-007	864	95031H100-015	871	95051A101-040	861
93252J850-010	868	94022H850-005	866	94032K850-015	867	95021H850-010	864	95031H100-020	871	95051H100-005	871
93252J850-012	868	94022H850-007	866	94032K850-020	867	95021H850-012	864	95031H100-025	871	95051H100-007	871
93252J850-015	868	94022H850-010	866	94051A101-005	861	95021H850-015	864	95031H100-030	871	95051H100-010	871
93252J850-020	868	94022H850-012	866	94051A101-007	861	95021H850-020	864	95031H100-040	871	95051H100-012	871
93252K850-005	868	94022H850-015	866	94051A101-010	861	95021J100-005	870	95031H850-005	864	95051H100-015	871
93252K850-007	868	94022H850-020	866	94051A101-012	861	95021J100-007	870	95031H850-007	864	95051H100-020	871
93252K850-010	868	94022J100-005	872	94051A101-015	861	95021J100-010	870	95031H850-010	864	95051H100-025	871
93252K850-012	868	94022J100-007	872	94051A101-020	861	95021J100-012	870	95031H850-012	864	95051H100-030	871
93252K850-015	868	94022J100-010	872	94051H100-005	871	95021J100-015	870	95031H850-015	864	95051H100-040	871
93252K850-020	868	94022J100-012	872	94051H100-007	871	95021J100-020	870	95031H850-020	864	95051H850-005	865
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93253A101-007	863	94022J100-020	872	94051H100-012	871	95021J100-030	870	95031J100-007	870	95051H850-010	865
93253A101-010	863	94022J850-005	866	94051H100-015	871	95021J100-040	870	95031J100-010	870	95051H850-012	865
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93253A101-020	863	94022J850-012	866	94051H850-007	865	95021J850-007	864	95031J100-020	871	95051J100-005	871
93253H100-005	875	94022J850-015	866	94051H850-010	865	95021J850-010	864	95031J100-025	871	95051J100-007	871
93253H100-007	875	94022J850-020	866	94051H850-012	865	95021J850-012	864	95031J100-030	871	95051J100-010	871
93253H100-010	875	94022K850-005	866	94051H850-015	865	95021J850-015	864	95031J100-040	871	95051J100-012	871
93253H100-012	875	94022K850-007	866	94051H850-020	865	95021J850-020	864	95031J850-005	864	95051J100-015	871
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93253H850-005	869	94022K850-015	866	94051J100-010	871	95021K850-010	864	95031J850-012	865	95051J100-030	871
93253H850-007	869	94022K850-020	866	94051J100-012	871	95021K850-012	864	95031J850-015	865	95051J100-040	871
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93253H850-012	869	94031A101-007	861	94051J100-020	871	95021K850-020	864	95031K850-005	865	95051J850-007	865
93253H850-015	869	94031A101-010	861	94051J850-005	865	95022A101-005	861	95031K850-007	865	95051J850-010	865
93253H850-020	869	94031A101-012	861	94051J850-007	865	95022A101-007	861	95031K850-010	865	95051J850-012	865
93253J100-005	875	94031A101-015	861	94051J850-010	865	95022A101-010	861	95031K850-012	865	95051J850-015	865
93253J100-007	875	94031A101-020	861	94051J850-012	865	95022A101-012	861	95031K850-015	865	95051J850-020	865
93253J100-010	875	94031H100-005	870	94051J850-015	865	95022A101-015	862	95031K850-020	865	95051K850-005	865
93253J100-012	875	94031H100-007	870	94051J850-020	865	95022A101-020	862	95032A101-005	861	95051K850-007	865
93253J100-015	875	94031H100-010	870	94051K850-005	865	95022A101-025	862	95032A101-007	861	95051K850-010	865
93253J100-020	875	94031H100-012	870	94051K850-007	865	95022A101-030	862	95032A101-010	861	95051K850-012	865
93253J850-005	869	94031H100-015	871	94051K850-010	865	95022A101-040	862	95032A101-012	861	95051K850-015	865
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93253J850-012	869	94031H850-007	864	94051K850-020	865	95022H100-010	872	95032A101-025	862	95052A101-007	862
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93253J850-020	869	94031H850-012	864	94052A101-007	862	95022H100-015	872	95032A101-040	862	95052A101-012	862
93253K850-005	869	94031H850-015	864	94052A101-010	862	95022H100-020	872	95032H100-005	872	95052A101-015	862
93253K850-007	869	94031H850-020	864	94052A101-012	862	95022H100-025	872	95032H100-007	872	95052A101-020	862
93253K850-010	869	94031J100-005	870	94052A101-015	862	95022H100-030	872	95032H100-010	872	95052A101-025	862
93253K850-012	869	94031J100-007	870	94052A101-020	862	95022H100-040	872	95032H100-012	873	95052A101-030	862
93253K850-015	869	94031J100-010	870	94052H100-005	873	95022H850-005	866	95032H100-015	873	95052A101-040	862
93253K850-020	869	94031J100-012	871	94052H100-007	873	95022H850-007	866	95032H100-020	873	95052H100-005	873
94021A101-005	861	94031J100-015	871	94052H100-010	873	95022H850-010	866	95032H100-025	873	95052H100-007	873
94021A101-007	861	94031J100-020	871	94052H100-012	873	95022H850-012	866	95032H100-030	873	95052H100-010	873
94021A101-010	861	94031J850-005	864	94052H100-015	873	95022H850-015	866	95032H100-040	873	95052H100-012	873
94021A101-012	861	94031J850-007	864	94052H100-020	873	95022H850-020	866	95032H850-005	866	95052H100-015	873
94021A101-015	861	94031J850-010	865	94052H850-005	867	95022J100-005	872	95032H850-007	866	95052H100-020	873
94021A101-020	861	94031J850-012	865	94052H850-007	867	95022J100-007	872	95032H850-010	866	95052H100-025	873
94021H100-005	870	94031J850-015	865	94052H850-010	867	95022J100-010	872	95032H850-012	866	95052H100-030	873
94021H100-007	870	94031J850-020	865	94052H850-012	867	95022J100-012	872	95032H850-015	867	95052H100-040	873
94021H100-010	870	94031K850-005	865	94052H850-015	867	95022J100-015	872	95032H850-020	867	95052H850-005	867
94021H100-012	870	94031K850-007	865	94052H850-020	867	95022J100-020	872	95032J100-005	872	95052H850-007	867
94021H100-015	870	94031K850-010	865	94052J100-005	873	95022J100-025	872	95032J100-007	872	95052H850-010	867
94021H100-020	870	94031K850-012	865	94052J100-007	873	95022J100-030	872	95032J100-010	873	95052H850-012	867
94021H850-005	864	94031K850-015	865	94052J100-010	873	95022J100-040	872	95032J100-012	873	95052H850-015	867
94021H850-007	864	94031K850-020	865	94052J100-012	873	95022J850-005	866	95032J100-015	873	95052H850-020	867

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95052J100-005	873
95052J100-007	873
95052J100-010	873
95052J100-012	873
95052J100-015	873
95052J100-020	873
95052J100-025	873
95052J100-030	873
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95052J850-005	867
95052J850-007	867
95052J850-010	867
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95052K850-005	867
95052K850-007	867
95052K850-010	867
95052K850-012	867
95052K850-015	867
95052K850-020	867
95053A101-025	863
95053A101-030	863
95053A101-040	863
95053H100-025	875
95053H100-030	875
95053H100-040	875
95053J100-025	875
95053J100-030	875
95053J100-040	875

Appendix A - Basic Abbreviations Used in this Catalog

Standard Abbreviations

CI	=	Cast Iron Pipe Size
CTS	=	Copper Tube Size
DWV	=	Drain, Waste & Vent
Fipt		
FPT	=	Female Iron Pipe Thread
GSK		
Gasket	=	Elastomer Gasket Sealed Connection
Grv		
Groove	=	Grooved End for Mechanical Coupling
IPS	=	Iron Pipe Size
INS		
Insert	=	Barbed Insert End
Mipt,		
MPT	=	Male Iron Pipe Thread
NPT	=	National Pipe Thread (alternate to above)
PIP	=	Plastic Irrigation Pipe
PSI	=	Pounds Per Square Inch
PSM	=	Plastic Sewer Main
SDR	=	Standard Dimension Ratio (pipe)
Soc		
Socket	=	Solvent Weld Socket
SPG		
Spig		
Spigot	=	Spigot End (pipe O.D. size)
SR Fipt	=	Special Reinforced Plastic Female Iron Pipe Thread

DWV Specific Abbreviations

H		
HUB	=	Solvent Weld Socket
SPG	=	Spigot End (pipe O.D. size)
S&D	=	Sewer & Drain Pipe Size
SLIP	=	Trap End for Receiving Drain Tail Piece

Metric Specific Abbreviations

BAR	=	4.5 psi
BSP	=	British Standard Pipe
Class 10	=	Pressure Rating 10 BAR at 23°C (145 psi at 73°F)
Class 12	=	Pressure Rating 12 BAR at 23°C (174 psi at 73°F)
d	=	Pipe O.D. in millimeters
DN	=	Diameter Nominal for Metric Fittings
Din	=	Deutsche Industrial Norm (German Standards)
JIS	=	Japanese Industrial Standard
MIPT	=	Male Iron Pipe Thread
NPR	=	Not Pressure Rated
PN7	=	Pressure Rating 7 BAR at 23°C (100 psi at 73°F)
PN16	=	Pressure Rating 16 BAR at 23°C (232 psi at 73°F)
SRBSP	=	Special Reinforced BSP Thread
FBSP	=	Female BSP Thread
MBSP	=	Male BSP Thread
mm	=	millimeter

Packaging Codes

MC (or Mstr Ctn)	= Master Carton (standard master quantity)
SP (or Std Pk)	= Standard Pack (standard box quantity)

Appendix B - Applicable Industry Standards & Test Methods

Standards provide greater assurance of product performance and consistency, and are available to assist design engineers in system specification. The most frequently referenced industry standards for plastic piping systems are ASTM Standard Specifications and Practices. Along with ASTM Standards, additional product specifications and certifications form the basis of product conformance to which Spears® products are manufactured. Although not inclusive, the following list of internationally recognized standards, specifications, test methods and practices relate to PVC and CPVC thermoplastic piping products and related components.

ASTM STANDARD SPECIFICATIONS

ASTM D1784	Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) Compounds and Chlorinated Poly (Vinyl Chloride) (CPVC) Compounds
ASTM D1785	Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80 and 120
ASTM D2241	Standard Specification for Poly (Vinyl Chloride) (PVC) Pressure Rated Pipe (SDR Series)
ASTM D2466	Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40
ASTM D2464	Standard Specification for Threaded Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80
ASTM D2467	Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80
ASTM D2665	Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings
ASTM D2672	Standard Specification for Joints for IPS PVC Pipe Using Solvent Cement
ASTM D2846	Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Hot- and Cold-Water Distribution Systems
ASTM D3139	Standard Specification for Joints for Plastic Pressure Pipes Using Flexible Elastomeric Seals
ASTM D3311	Standard Specification for Drain, Waste, and Vent (DWV) Plastic Fittings Patterns
ASTM F438	Standard Specification for Socket-Type Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 40
ASTM F439	Standard Specification for Socket-Type Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80
ASTM F441	Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe, Schedules 40 and 80
ASTM F442	Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe (SDR-PR)
ASTM F437	Standard Specification for Threaded Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80
ASTM F477	Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe
ASTM F493	Standard Specification for Solvent Cements for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe and Fittings
ASTM F656	Standard Specification for Primers for Use in Solvent Cement Joints of Poly (Vinyl Chloride) (PVC) Plastic Pipe and Fittings
ASTM F913	Standard Specification for Thermoplastic Elastomeric Seals (Gaskets) for Joining Plastic Pipe
ASTM F1498	Standard Specification for Taper Pipe Threads 60° for Thermoplastic Pipe and Fittings
ASTM F1866	Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Schedule 40 Drainage and DWV Fabricated Fittings
ASTM F2618	Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Pipe and Fittings for Chemical Waste Drainage Systems

ASTM STANDARD TEST METHODS

ASTM D1598	Standard Test Method for Time-to-Failure of Plastic Pipe Under Constant Internal Pressure
ASTM D1599	Standard Test Method for Resistance to Short-Time Hydraulic Pressure of Plastic Pipe & Fittings
ASTM D2122	Standard Test Method for Determining Dimensions of Thermoplastic Pipe & Fittings
ASTM D2152	Standard Test Method for Adequacy of Fusion by Acetone Immersion
ASTM D2412	Standard Test Method for Determination of External Loading Characteristics of Plastic Pipe by Parallel-Plate Loading
ASTM D2444	Standard Test Method for Determination of the Impact Resistance of Thermoplastic Pipe and Fittings by Means of a Tup
ASTM D2564	Standard Specification for Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems
ASTM D2837	Standard Test Method for Obtaining Hydrostatic Design Basis for Thermoplastic Pipe Materials
ASTM F610	Standard Test Method for Evaluating the Quality of Molded Poly (Vinyl Chloride) (PVC) Plastic Pipe Fittings by the Heat Reversion Technique

ASTM STANDARD PRACTICES

ASTM D2321	Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications
ASTM D2774	Standard Practice for Underground Installation of Thermoplastic Pressure Piping
ASTM D2855	Standard Practice for Making Solvent-Cemented Joints with Poly (Vinyl Chloride) (PVC) Pipe and Fittings
ASTM F402	Standard Practice for Safe Handling of Solvent Cements, Primers, and Cleaners Used for Joining Thermoplastics Pipe and Fittings
ASTM F645	Standard Guide for Selection, Design, and Installation of Thermoplastic Water Pressure Systems
ASTM F690	Standard Practice for Underground Installation of Thermoplastic Pressure Piping Irrigation Systems
ASTM F1057	Standard Practice for Evaluating the Quality of Extruded Poly (Vinyl Chloride) (PVC) Pipe by the Heat Reversion Technique

Appendix C - Product Approvals & Certifications

NSF International — NSF® is an internationally recognized independent third party product testing laboratory and certification organization. NSF® provides a variety of product certifications. Although not inclusive, the following list those most applicable to Spears® products (see listings at www.nsf.org).

NSF®/ANSI Standard 14 — Plastics Piping System Components and Related Materials. NSF®-14 is a consensus standard that enables comprehensive assessment of plumbing system products, materials, and ingredients. The assessment is for health effects, quality control, quality assurance, marking, material property requirements, long-term strength evaluation, and short-term product performance evaluation to various standards such as ASME, ASTM, ASSE, etc. NSF®-14 Certified products have designated end use.

End Use Certification Marks — The following are typical certification marks applicable to various Spears® products:

NSF®-pw — The product is manufactured for potable water application. It meets all applicable performance standards for a pressure rated application as required in NSF®/ANSI Standard 14, and complies with NSF®/ANSI Standard 61 for health effects.

NSF®-dwv — The product complies with the applicable performance standards as required by NSF®/ANSI Standard 14 for drain, waste, and vent applications. No health effects evaluation is required.

NSF®-cw — The product meets the applicable performance standard as required by NSF®/ANSI Standard 14 for corrosive waste applications. No health effects evaluation is required.

NSF®-61 — Products certified to NSF®/ANSI Standard 61. They are evaluated for health effects only. They are not evaluated for the performance requirements of NSF®/ANSI Standard 14.

NSF®-(end use) SE — Certified Special Engineered (SE) products shall bear a Mark which indicates the end use application. The SE Mark is used for products for which there is not a recognized national performance standard.

Canadian Certification Mark — cNSF Mark demonstrates compliance to a Canadian Standard, while the cNSFus Mark indicates compliance to both Canadian and U.S. requirements. Inspectors and safety code officials in Canada look for product certification by an SCC-accredited certifier.

Uniform Plumbing Code Certification — NSF® U.P.Code Mark demonstrates product compliance with the Uniform Plumbing Code. While the U.P.Code Mark is not mandatory to demonstrate product code compliance, the code marking is more readily identifiable by inspectors in the field.

NSF®/ANSI Standard 61 — Drinking Water System Components – Health Effects. NSF®- 61 is a consensus standard promulgated by NSF International. This standard enables in-depth assessment of a variety of drinking water system products and materials for health effects. This standard is used to evaluate a product for health effect concerns only. NSF®/ANSI Standard 61 is narrow in its scope when compared to NSF®/ANSI Standard 14 in respect to quality and performance. NSF® conducts its own testing, review, and facility inspections when certifying products like PE and PEX. NSF®/ANSI Standard 14 addresses health and performance, NSF®/ANSI Standard 61 only addresses health effect concerns.

NSF®-61 Annex G — Weighted Average Lead Content Evaluation Procedure to a 0.25% Lead Requirement. Certified product meets various states' low lead requirement, such as California's Health & Safety Code (Section 116875) commonly known as AB1953.

ICC-ES-PMG — The ICC-ES Plumbing, Mechanical and Fuel Gas (PMG) Listing Program provides independent third party approval where there is a nationally recognized standard for the product, but the codes do not cover in enough detail permitted uses of the product. Currently Spears® LabWaste™ CPVC Corrosive Waste Drainage System pipe and fittings are certified by ICC-ES-PMG for conformance to both the International Plumbing Code and the Uniform Plumbing Code under PMG-1018 (see listing at www.icc-es-pmg.org).

Underwriters Laboratories (UL) is a global independent third party product testing and certification organization. Currently, UL certifies Spears® FlameGuard® CPVC Fire Sprinkler Products to both UL 1821 for US markets and to ULC/ORD-C199P for Canadian markets, under the c-UL-us mark. UL is an NFPA recognized certification listing organization for CPVC Fire Sprinkler Products (see certifications at www.ul.com).

FM Global — FM Approvals (formerly Factory Mutual Research) offers worldwide certification and testing services of industrial and commercial loss prevention products as an independent third party product testing and certification organization. Currently, FM certifies Spears® FlameGuard® CPVC Fire Sprinkler Products to FM 1635, Plastic Pipe & Fittings for Automatic Sprinkler Systems. FM is an NFPA recognized certification listing organization for CPVC Fire Sprinkler Products (see Approval Guide at www.fmglobal.com).

Loss Prevention Certification Board (LPCB) is an independent, third-party approvals division of the BRE Global organization, that assesses and certifies fire and security systems and services against standards, such as BS, EN and LPS, developed in cooperation with manufacturers and insurers. Currently, LPCB certifies Spears® FlameGuard® CPVC Fire Sprinkler Products to LPS 1260, Plastic Pipe and Fittings for Use in Automatic Sprinkler Systems. LPCB is also the UKAS Certified Registrar of Spears® ISO 9001 Quality Management System. Approved manufacturers are listed in the LPCB Red Book (see www.redbooklive.com).

American Bureau of Shipping (ABS) is a member of the International Association of Classification Societies (IACS) responsible for verifying that marine vessels and offshore structures comply with Rules that the society has established for design, construction and periodic survey. Classification and product use are specified under a Type Approval. Currently Spears® CPVC pipe, fittings and LabWaste™ pipe and fittings are specified under ABS Type Approval Certificate No. 10-HS539421-1-PDA; and Spears® CPVC Valves are specified under ABS Type Approval Certificate No. 12-HS938098-PDA (see Type Approval at www.eagle.org)

Appendix D - Recommendations for Installers & Users

Plastic piping systems should be ENGINEERED, INSTALLED, and OPERATED in accordance with ESTABLISHED DESIGN AND ENGINEERING STANDARDS AND PROCEDURES for plastic piping systems. Suitability for the intended service application should be determined by the installer and/or user prior to installation of a plastic piping system. PRIOR TO ASSEMBLY, all piping system components should be inspected for damage or irregularities. Mating components should be checked to assure that tolerances and engagements are compatible. Do not use any components that appear irregular or do not fit properly. Contact the appropriate manufacturer of the component product in question to determine usability. Consult all applicable codes and regulations for compliance prior to installation.

SOLVENT WELD CONNECTIONS - Use a quality grade of primer and solvent cement formulated for the type of connection, with the CORRECT SIZE APPLICATOR. Read and follow all of the solvent cement MANUFACTURER'S APPLICATION AND CURE TIME INSTRUCTIONS THOROUGHLY.

BEFORE APPLYING PRIMER AND CEMENT, appropriate safety precautions should be taken. Primer and Cement should be stored in the shade between 40°F and 110°F. Eliminate all ignition sources. Avoid breathing of vapors. Use only with adequate ventilation; explosion-proof general mechanical ventilation or local exhaust is recommended to maintain vapor concentrations below recommended exposure limits. In confined or partially enclosed areas, a NIOSH-approved organic vapor cartridge respirator with full face-piece is recommended. Containers should be kept tightly closed when not in use, and covered as much as possible when in use. Avoid frequent contact with skin; wearing PVA coated protective gloves and impervious apron are recommended. Avoid any contact with eyes; splash proof chemical goggles are recommended.

THREADED CONNECTIONS - Use a quality grade thread sealant. **WARNING:** SOME PIPE JOINT COMPOUNDS OR PTFE PASTES MAY CONTAIN SUBSTANCES THAT COULD CAUSE STRESS CRACKING TO PLASTIC. Spears® Manufacturing Company recommends the use of Spears® **BLUE 75™** Thread Sealant which has been tested for compatibility with Spears® products. Please follow the sealant manufacturers' application/installation instructions. Choice of an appropriate thread sealant other than those listed above is at the discretion of the installer. 1 to 2 turns beyond FINGER TIGHT is generally all that is required to make a sound plastic threaded connection. Unnecessary OVER TIGHTENING will cause DAMAGE TO BOTH PIPE AND FITTING.
NOTE: DO NOT use any thread sealants on Spears® Gasket Sealed Threaded connections.

IMPORTANT

WATER HAMMER - Spears® Manufacturing Company recommends that all PVC and CPVC plastic piping systems be designed and constructed to AVOID EXCESSIVE WATER HAMMER. Water hammer can cause damage, and failure to pipe, valves, and fittings within the piping system. PLEASE NOTE - When temperatures rise above 73°F, the tensile strength of thermoplastics decreases, thereby derating the pipe or fitting Maximum Internal Pressure. When temperatures fall below 73°F, the tensile strength of thermoplastics increases, however, the impact strength decreases. Maximum operating temperatures for PVC piping systems should not exceed 140°F. Maximum operating temperatures for CPVC pressure piping systems should not exceed 200°F. Special drainage systems such as Spears® LabWaste™ CPVC Corrosive Waste Drainage System may be used intermittently to 230° F for intermittent non-pressure laboratory drainage application - see LabWaste™ technical information. Spears® Manufacturing Company will not accept responsibility for damage or impairment of its products, or other consequential or incidental damages caused by misapplication, incorrect assembly, and/or exposure to harmful substances or conditions.

NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GASES

WARNING: DO NOT USE ANY PVC OR CPVC THERMOPLASTIC PIPING PRODUCT OR SYSTEM, FOR DISTRIBUTION OR STORAGE OF COMPRESSED AIR OR GASES. THESE PRACTICES MAY RESULT IN EXPLOSIVE FRAGMENTATION OF SYSTEM PIPING AND COMPONENTS CAUSING SERIOUS OR FATAL BODILY INJURY. PVC and CPVC products MAY be used in certain low pressure (i.e. 3-5 psi) air handling applications of oil-free, compatible clean air. Contact Spears® Technical Services with application specifics for additional information.

Not all of the products listed in this price schedule are carried in Spears® Regional Distribution Center inventories. When ordering, please check with your servicing Regional Distribution Center for availability. ALL ORDERS FOR NON-STOCKED products are NON-CANCELABLE and NON-RETURNABLE.

PRODUCTS IN THIS CATALOG ARE ONLY TO BE USED FOR THEIR INTENDED PURPOSE.

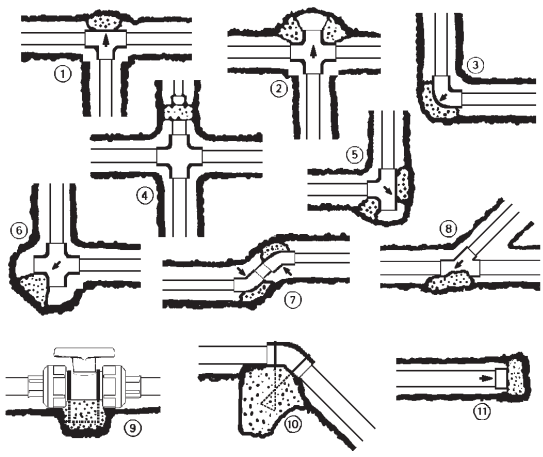
Appendix D - Recommendations for Installers & Users

THRUST BLOCKING — Water under pressure exerts thrust forces in piping systems. Thrust blocking should be provided, as necessary, to prevent movement of pipe or appurtenances in response to thrust.

Types Of Thrust Blocking:

If thrusts due to high pressure are expected, anchor valves as below. At vertical bends anchor to resist outward thrusts.

1. Thru line connection, tee
2. Thru line connection, cross used as tee
3. Direction change, elbow
4. Change line size, reducer
5. Direction change, tee used as elbow
6. Direction change, cross used as elbow
7. Direction change
8. Thru line connection, wye
9. Valve anchor
10. Direction change vertical, bend anchor
11. End Caps (above or below ground)



Thrust Blocking Is Required Wherever The Pipeline:

* Changes direction (e.g., tees, bends, elbows and crosses)
* Changes size at its reducers
* Stops, as at dead ends
* Valves and hydrants, at which thrust develops when closed.

Size And Type Of Thrust Blocking Depends On:

* Maximum system pressure
* Pipe size
* Type and size of fittings or appurtenance
* Line profile (horizontal or vertical bends)
* Soil type

Appendix E - Special Information on Fabricated Fittings

Except for fittings produced to ASTM F1866, Spears® Fabricated Fittings conform to Spears® Manufacturing Company Special Engineering Specifications.

Not all of the Fabricated Fittings listed in this price schedule are carried in Spears® Distribution Center inventories. When ordering Fabricated Fittings, please check your servicing Distribution Center for availability. ALL ORDERS FOR NON-STOCKED Fabricated Fittings are NON-CANCELABLE and NON-RETURNABLE.

18" and larger Fabricated Fittings are available upon request. Please contact your servicing Spears® Regional Distribution Center for pricing and availability.

All 15" Fabricated Fittings shown as Class 63 are PIP O.D. Reducing fittings are 15" PIP O.D. x specified IPS size. Plastic Irrigation Pipe (PIP) and Iron Pipe Size (IPS) are not the same.

Pipe Dimension Reference Chart

Pipe Type O.D. Size SDR		LH PIP 91	80 PIP 51	100 PIP 41	125 PIP 32.5	CL 63 IPS 64	CL 100 IPS 41	SEWER PSM 35	CL 125 IPS 32.5	CL 160 IPS 26	CL 200 IPS 21	40 DWV IPS —	80 DWV IPS —	SCH 40 IPS —	SCH 80 IPS —	C-900 CI DR 18
4"	O.D.	4.130	4.130	4.130	4.130	4.500	4.500	4.215	4.500	4.500	4.500	4.500	4.500	4.500	4.500	4.800
	I.D.	4.000	3.968	3.928	3.876	4.360	4.280	3.89	4.224	4.154	4.072	3.998	3.786	3.998	3.786	4.22
	Wall	.065	.081	.101	.127	.070	.110	0.125	.138	.173	.214	.237	.337	.237	.337	.267
	PSI	43	80	100	125	63	100	117.5	125	160	200	100	100	220	320	150
6"	O.D.	6.140	6.140	6.140	6.140	6.625	6.625	6.275	6.625	6.625	6.625	6.625	6.625	6.625	6.625	6.900
	I.D.	6.000	5.898	5.840	5.762	6.417	6.301	5.742	6.217	6.115	5.993	6.031	5.709	6.031	5.709	6.08
	Wall	.070	.121	.150	.189	.104	.162	0.18	.204	.255	.316	.280	.432	.280	.432	.383
	PSI	43	80	100	125	63	100	117.5	125	160	200	100	100	180	280	150
8"	O.D.	8.160	8.160	8.160	8.160	8.625	8.625	8.4	8.625	8.625	8.625	8.625	8.625	8.625	8.625	9.050
	I.D.	7.984	7.840	7.762	7.658	8.355	8.205	7.665	8.095	7.961	7.805	7.943	7.565	7.943	7.565	7.97
	Wall	.088	.160	.199	.251	.135	.210	.024	.265	.332	.410	.322	.500	.322	.500	.503
	PSI	43	80	100	125	63	100	117.5	125	160	200	100	100	160	250	150
10"	O.D.	10.200	10.200	10.200	10.200	10.750	10.750	10.5	10.750	10.750	10.750	10.750	10.750	10.750	10.750	11.100
	I.D.	9.980	9.800	9.702	9.572	10.414	10.226	9.563	10.088	9.924	9.748	9.976	9.492	9.976	9.492	9.78
	Wall	.110	.200	.249	.314	.168	.262	0.3	.331	.413	.511	.365	.593	.365	.593	.617
	PSI	43	80	100	125	63	100	117.5	125	160	200	100	100	140	230	150
12"	O.D.	12.240	12.240	12.240	12.240	12.750	12.750	12.5	12.750	12.750	12.750	12.750	12.750	12.750	12.750	13.200
	I.D.	11.975	11.760	11.642	11.486	12.352	12.128	11.361	11.966	11.770	11.538	11.890	11.294	11.890	11.294	11.63
	Wall	.132	.240	.299	.377	.199	.311	0.36	.392	.490	.606	.406	.687	.406	.687	.733
	PSI	43	80	100	125	63	100	117.5	125	160	200	100	100	130	230	150
14"	O.D.	14.280	14.280	14.280	14.280	*	*	*	*	14	*	14.000	14.000	14.000	14.000	15.3
	I.D.	14.000	13.720	13.584	13.402					12.86		13.072	12.410	13.072	12.410	13.48
	Wall	.140	.280	.348	.439					0.538		.438	.750	.438	.750	0.85
	PSI	43	80	100	125					160		100	100	130	220	235
15"	O.D.	15.300	15.300	15.300	15.300	*	*	15.3	*	*	*	*	*	*	*	*
	I.D.	14.970	14.700	14.550	14.358			13.898								
	Wall	.165	.300	.375	.471			0.44								
	PSI	43	80	100	125			117.5								
16"	O.D.	*	*	*	*	*	*	*	*	16	*	16.000	16.000	16.000	16.000	17.4
	I.D.									14.696		14.940	14.214	14.940	14.214	15.33
	Wall									0.615		.500	.843	.500	.843	0.967
	PSI									160		100	100	130	220	235
18"	O.D.	18.360	18.701	18.701	18.701	*	18.000	18.701	*	18.000	*	18	18.000	18	18.000	19.5
	I.D.	17.964	17.967	17.789	17.551		17.122	17.629		16.616		16.808	16.014	16.808	16.014	17.83
	Wall	.198	.367	.456	.575		.439	0.536		.692		0.562	.937	0.582	.937	1.083
	PSI	43	80	100	125		100	117.5		160		100	100	120	220	235
20"	O.D.	20.400	*	*	*	*	20.000	*	*	20.000	*	20	20	20	20	21.6
	I.D.	19.962					19.026			18.462		18.863	17.814	18.863	17.614	19.03
	Wall	.219					.487			.769		0.533	1.031	0.533	1.031	1.2
	PSI	43					100			160		100	100	120	220	235
21"	O.D.	*	22.047	22.047	22.047	*	*	22.047	*	*	*	*	*	*	*	*
	I.D.		21.183	20.971	20.691			20.783								
	Wall		.432	.538	.678			0.632								
	PSI		80	100	125			117.5								
24"	O.D.	*	24.803	24.803	24.803	*	24.000	24.8	*	24	*	24	24	24	24	25.800
	I.D.		23.831	23.593	23.277		22.748	23.381		22.043		22.54	21.418	22.54	21.418	23.73
	Wall		.486	.605	.763		.585	0.711		0.923		0.687	1.218	0.687	1.218	1.200
	PSI		80	100	125		100	117.5		160		100	100	120	210	235

* Information Not Available

Appendix E - Special Information on Fabricated Fittings

GASKET INSTALLATION PROCEDURES

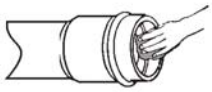


Figure 1

Figure 2

Figure 3

1. Gasket area and pipe or spigot end should be clean and free of dirt and debris. **DO NOT** attempt to remove the formed-in gasket — *Figure 1.*
2. Lubricate the entire sealing surface of the gasket and the pipe or spigot end with a light coating of a suitable lubricant. Make sure the pipe or spigot end has a proper bevel to insure ease of installation — *Figure 2*.
3. Push the pipe or spigot end into the gasket bell while maintaining a straight alignment. The proper insertion depth is equal to the total gasket bell length minus one-half inch (1/2") **—** *Figure 3*.

Appendix F - Product Codes

Description	Product Code	
PVC & CPVC Miscellaneous Specialty Valves	004	
PVC Schedule 40 Black Fittings	011	
PVC Schedule 40 White Pool & Spa Specialty	015	
Isolation Joint Specialties	016	
Flange Gasket/Bolt Kits	017	
Irrigation Manifolds	019	
Irrigation Specialty Products	020	
Dri-Splice Sealant	022	
Compression Couplings 1/2" - 6"	024	
Expansion-Repair Couplings 1/2" - 4"	025	
PVC Utility Swing & Spring Check Valves thru 8"	026	
PVC Schedule 40 Tank Adapters 1/2" thru 2-1/2"	029	
Swing Joint Riser Assemblies – Accessories	030	
PVC EverTUFF® TURF™ Fittings Class 315	031	
CPVC EverTUFF® TURF™ Fittings Class 315	032	
CPVC CTS Hot/Cold Water Pipe 1/2" - 2"	034	
CPVC CTS Tan Fittings 1/2" - 2"	035	
PVC Schedule 40 & 80 Clear Pipe	038	
PVC Schedule 40 & 80 Clear Molded Fittings	039	
PVC Schedule 40 White Molded Fittings thru 8"	040	
PVC Schedule 40 White Molded Fittings 10" & Larger	041	
UVR Tan Schedule 40 Molded Fittings	042	
PVC Gray Schedule 40 Molded Fittings Thru 8"	043	
PVC Gray Schedule 40 Fittings 10" & Larger	044	
PVC Gray Schedule 40 Fabricated Fittings	045	
PVC White Schedule 40 Molded Reinforced Fittings	046	
PVC White Schedule 40 Fabricated Fittings	047	
PVC Hot-Tap Saddles thru 1" - 6"	049	
CPVC Hot-Tap Saddles thru 1" - 6"	050	
PVC DWV Schedule 40 Molded thru 8"	051	
PVC DWV Schedule 40 Molded 10" & Larger	052	
Backwater Valve PVC 2" - 6"	055	
PP Natural Schedule 80 SR Threaded Fittings thru 2"	060	
PP Black Schedule 80 SR Threaded Fittings thru 2"	061	
Schedule 80 Low-Extractable Pipe 1/2" - 6"	064	
Schedule 80 Low-Extractable Fittings 1/2" - 6"	065	
Low-Extractable Clear Valves 1/2" - 4"	066	
FlameGuard® CPVC Fittings 3/4" - 3"	070	
FlameGuard® CPVC Pipe 3/4" - 3"	071	
FlameGuard® CPVC Molded w/Brass Inserts	076	
FlameGuard® CPVC Custom Fittings	079	
PVC Gray Schedule 80 Molded Fittings thru 8"	080	
PVC Gray Schedule 80 Molded Fittings 10" & Larger	081	
PVC Gray Schedule 80 Molded Fittings 14" & Larger	082	

Description	Product Code	
PVC Gray Schedule 80 Fabricated Pressure Fittings	083	
PVC Schedule 80 Fabricated Pressure Custom Fittings	084	
PVC & CPVC Expansion Joints	085	
PVC Gray Schedule 80 Molded Reinforced Fittings	086	
CPVC Gray Schedule 80 Molded Fittings thru 8"	090	
CPVC Gray Schedule 80 Molded Fittings 10" and Larger	091	
CPVC Gray Schedule 80 Molded Fittings 14" and Larger	095	
CPVC Gray Schedule 80 Molded Reinforced Fittings	096	
CPVC Schedule 80 Fabricated Fittings	097	
CPVC Schedule 80 Fabricated Custom Fittings	098	
CPVC Sch 80 Non Pressure Rated	099	
PVC Gray Tank Adapters	100	
CPVC Gray Tank Adapters	101	
PVC Gray Y-Strainers 1/2" - 4"	102	
PVC Clear Y-Strainers 1/2" - 4"	103	
CPVC Gray Y-Strainers 1/2" - 4"	104	
PVC Swing Check Valves 3/4" - 2"	108	
CPVC Swing Check Valves 3/4"- 2"	109	
PVC Swing Check Valves 2-1/2" and Larger	110	
CPVC Swing Check Valves 2-1/2" and Larger	111	
PP Swing Check Valves 2-1/2" and Larger	112	
PP Swing Check Valves 3/4" - 2"	113	
PE Schedule 80 & Poly Cut-Off Nipples	120	
CPVC Gray Schedule 80 Nipples	121	
PE Four-In-One Cut-Off Nipples	123	
PVC Gray Molded Insert Fittings 3/8" - 4"	140	
PVC Gray Reinforced Insert Fittings 1/2" - 1"	142	
CPVC Molded Insert Fittings 3/4" - 2"	143	
LabWaste™ CPVC Pipe 8" - 12"	157	
LabWaste™ Pipe 14" & Larger	158	
LabWaste™ Fittings 8" & Larger	159	
LabWaste™ CPVC Fittings thru 6"	160	
LabWaste™ Pipe CPVC 1-1/2" - 6"	161	
PVC Drain & Accessories	168	
LabWaste™ CPVC Drain & Accessories	169	
LabWaste™ Tools	170	
LabWaste™ Mechanical Couplings	171	
PVC Metric Molded Standard Fittings	190	
PVC Metric Molded 280mm & Larger	191	
CPVC Metric Molded Standard Fittings	192	
PVC Imperial (BSP) Molded Fittings - White	195	
PVC Imperial (BSP) Molded Fittings - Gray	196	
PVC Gray Transition Unions	197	
PVC Gate Valves thru 2"	200	

Appendix F - Product Codes

Description	Product Code	
PVC Gate Valves 2-1/2" & Larger	201	
CPVC Gate Valves thru 2"	202	
CPVC Gate Valves 2-1/2" & Larger	203	
PVC Ball Valves Thru 2"	204	
PVC Metric Gate Valves thru 63mm	208	
CPVC Metric Gate Valves thru 63mm	209	
PVC Compact Ball Valves thru 2"	210	
PVC Compact Ball Valves 3" - 6"	211	
CPVC Compact Ball Valves thru 2"	212	
CPVC Compact Ball Valves 3" - 6"	213	
PVC Utility Ball Valves 2-1/2" - 6"	214	
PVC Utility Ball Valves thru 2"	215	
CPVC Utility Ball Valves thru 2"	216	
CPVC CTS Valves 1/2" - 2"	217	
PVC Lab & Needle Valves 1/4" - 1/2"	218	
CPVC & PP Lab & Needle Valves 1/4" - 1/2"	219	
PVC Compact Ball Valves thru 4"	220	
PVC Compact Ball Valves 6" (Venturied)	221	
CPVC Compact Ball Valves thru 4"	222	
CPVC Compact Ball Valves 6" (Venturied)	223	
PVC Metric True Union Ball Check Valves thru 110mm	228	
CPVC Metric True Union Ball Check Valves thru 110mm	229	
PVC True Union Ball Valves thru 4"	230	
PVC True Union Ball Valves thru 6" (Venturied)	231	
CPVC True Union Ball Valves thru 4"	232	
CPVC True Union Ball Valves thru 6" (Venturied)	233	
PVC Metric True Union Ball Valves thru 110mm	238	
CPVC Metric True Union Ball Valves 110mm	239	
PVC Single Entry Ball Valves thru 4"	240	
PVC Butterfly Valves thru 12"	250	
PVC Butterfly Valves 14" & Larger	251	
CPVC Butterfly Valves thru 12"	252	
CPVC Butterfly Valves 14" & Larger	253	
High Purity Butterfly Valves	254	
PP Butterfly Valves thru 12"	256	
PP Butterfly Valves 14" and Larger	257	
PVC Butterfly Pool Valves thru 8" Manual	260	
PVC Butterfly Pool Valves thru 12" Gear Operated	261	
PVC Tee Valves	263	
CPVC Tee Valves	264	
PVC Diaphragm Valves thru 2"	270	
PVC Diaphragm Valves 2-1/2" and Larger	271	
CPVC Diaphragm Valves thru 2"	272	
CPVC Diaphragm Valves 2-1/2" and Larger	273	

Description	Product Code	
PVC Metric Diaphragm Valves thru 63mm	274	
CPVC Metric Diaphragm Valves thru 63mm	276	
PP Diaphragm Valves thru 2"	280	
PP Diaphragm Valves 2-1/2" and Larger	281	
PVC Air Admittance Valve	285	
CPVC Air Admittance Valve	286	
PVC Butterfly Check Valves 2" and Larger	289	
CPVC Butterfly Check Valves 2" and Larger	290	
PVC Tee Filters & Basket Strainers	295	
CPVC Tee Filters	296	
CPVC Basket Strainers	297	
Actuation, Accessories, Components	298	
Valves, Accessories, Repair Kits, Components	299	
Low Head (SDR91) Fabricated Fittings	300	
Low Head Fabricated Risers & Accessories	301	
PVC Low Head (SDR91) Custom Fittings	309	
80# PIP (SDR51) Fabricated Fittings	310	
PVC 80# PIP (SDR51) Fabricated Custom Fittings	319	
100# PIP (SDR41) Fabricated Fittings	320	
PVC 100# PIP (SDR41) Fabricated Custom Fittings	329	
125# PIP x PIP (SDR 32.5) Fabricated Fittings	330	
PVC 125# PIP x PIP (SDR32.5) Fabricated Fittings	339	
Class 63 IPS (SDR64) Fabricated Fittings	340	
Class 100 IPS (SDR41) Fabricated Fittings	350	
Class 125 IPS (SD432.5) Fabricated Fittings	360	
PVC Class 125 Molded Fittings 10" & Larger	361	
PVC Class 125 IPS (SDR32.5) Fabricated Custom Fittings	369	
Class 160 IPS (SDR26) Fabricated Fittings	370	
Class 200 IPS (SDR26) Fabricated Fittings	380	
Schedule 40 DWV/Low Pressure Fabricated Fittings	390	
PVC Schedule 40 Fabricated Pipe Extenders	392	
PVC Schedule 80 Fabricated Pipe Extenders	394	
PVC Schedule 40 DWV/Low Pressure Custom Fittings	399	
Schedule 80 DWV/Low Pressure Fabricated Fittings	400	
PVC Fabricated Duct Fittings	430	
CPVC Fabricated Duct Fittings	432	
PVC Fabricated Duct Cold Rolled Pipe	434	
CPVC Fabricated Cold Rolled Pipe	435	
Double Containment Pressure	470	
Electro Actuated Compact 2000 Ball Valves PVC thru 2"	496	
Electro Actuated Compact 2000 Ball Valves CPVC thru 2"	498	
Electro Actuated True Union 2000 Standard & Industrial Ball Valves PVC thru 6"	500	
Electro Actuated True Union 2000 Standard & Industrial Ball Valves CPVC thru 6"	502	
Premium Actuated Standard Butterfly Valve - Electric PVC thru 12"	510	

Appendix F - Product Codes

Description	Product Code	
Premium Actuated Standard Butterfly Valve - Electric CPVC thru 12"	512	
Premium Actuated Standard Butterfly Valve - Electric PP thru 24"	514	
Premium Actuated Diaphragm Valves - Electric PVC thru 8"	520	
Premium Actuated Diaphragm Valves - Electric CPVC thru 4"	522	
Premium Actuated Diaphragm Valves - Electric PP thru 4"	524	
Premium Actuated True Union 2000 Industrial Ball Valves - Pneumatic PVC thru 6"	530	
Premium Actuated True Union 2000 Industrial Ball Valves - Pneumatic CPVC thru 6"	532	
Premium Actuated Standard Butterfly Valves - Pneumatic PVC thru 12"	540	
Premium Actuated Standard Butterfly Valves - Pneumatic CPVC thru 12"	542	
Premium Actuated Standard Butterfly Valves - Pneumatic PP thru 24"	544	
Premium Actuated Diaphragm Valves - Pneumatic PVC thru 8"	550	
Premium Actuated Diaphragm Valves - Pneumatic CPVC thru 4"	552	
Premium Actuated Diaphragm Valves - Pneumatic PP thru 4"	554	
PVC True Union 2000 Industrial Ball Check Valves 6"	558	
CPVC True Union 2000 Industrial Ball Check Valves 6"	559	
PVC True Union 2000 Industrial Ball Valves 1/2" thru 2"	600	
PVC True Union 2000 Industrial Ball Valves 2-1/2" thru 4"	601	
CPVC True Union 2000 Industrial Ball Valves 1/2" thru 2"	602	
CPVC True Union 2000 Industrial Ball Valves 2-1/2" thru 4"	603	
PVC True Union 2000 Industrial Ball Check Valves 1/2" thru 2"	604	
PVC True Union 2000 Industrial Ball Check Valves 2-1/2" thru 4"	605	
CPVC True Union 2000 Industrial Ball Check Valves 1/2" thru 2"	606	
CPVC True Union 2000 Industrial Ball Check Valves 2-1/2" thru 4"	607	
PVC True Union 2000 Standard Ball Valves 1-1/2" thru 2"	608	
PVC True Union 2000 Standard Ball Valves 2-1/2" thru 4"	609	
CPVC True Union 2000 Standard Ball Valves 1/2" thru 2"	610	
CPVC True Union 2000 Standard Ball Valves 2-1/2" thru 4"	611	
PVC True Union 2000 Industrial Ball Valves 6"	612	
CPVC True Union 2000 Industrial Ball Valves 6"	613	
PVC Horizontal & Vertical 3-Way Diverter Ball Valves 1/2" - 4"	615	

Description	Product Code	
CPVC Horizontal & Vertical 3-Way Diverter Ball Valves 1/2" - 4"	617	
PVC Globe Standard & Wye Valves 1/2" - 4"	620	
PVC Clear Globe Wye Valves 1/2" - 4"	621	
CPVC Globe Standard & Wye Valves 1/2" - 4"	622	
Low-Extractable Gauge Guards	623	
PVC Gauge Guards	624	
CPVC Gauge Guards	625	
PP Gauge Guards	626	
PVC Wye Check Valves 1/2" - 4"	627	
PVC Clear Wye Check Valves 1/2" - 4"	628	
CPVC Wye Check Valves 1/2" - 4"	629	
CTS Cement	701	
Low-Extractable Cement	702	
Fire Sprinkler Cement	703	
LabWaste™ Cement	704	
PVC Regular/Medium Cement	705	
PVC Heavy/X-Heavy Cement	706	
Gray/CPVC Cement	707	
ABS Cement	708	
Primers & Cleaners	709	
Cements & Primers Accessories	710	
PVC Clear Pipe Distribution – Sales	742	
PVC Pipe Distribution – Sales	744	
CPVC Pipe Distribution – Sales	745	
PVC Duct Pipe Distribution – Sales	748	
CPVC Duct Pipe Distribution – Sales	749	
PVC White Repair Extender Fittings	894	
Blue 75™ Thread Sealant	895	
PVC Duct Distribution – Sales	948	
CPVC Duct Distribution – Sales	949	

Appendix G - Terms & Conditions

TERMS AND CONDITIONS. Unless accepted in writing by the corporate home office of the Company, no term or condition (including but not limited to all terms and conditions set forth in any offer, purchase order, confirmation or other document) other than the terms and conditions set forth in this Invoice shall be binding upon Company. All other terms and conditions are hereby explicitly rejected and acceptance is limited to the terms and conditions herein stated. All conflicts with the terms and conditions herein shall be resolved in favor of this Invoice. Upon acceptance of the subject goods and services, Customer thereby acknowledges and agrees that the prices and charges set forth in this Invoice for the goods and services are the reasonable value for such goods and services and the other terms and conditions herein set forth are consistent with the parties' prior course of dealing, prior course of performance and/or usage of trade. If any term or condition herein is not acceptable, Customer shall give Company written notice thereof within ten (10) business days after receipt of the respective goods and services and if not, Customer shall be deemed to have unconditionally accepted the respective goods and services upon and subject to the terms and conditions hereof.

PRICING POLICY. Spears® maintains a policy to try and provide stable pricing for its products which can reasonably be relied upon by customers and end users. Irrespective of such policy, unforeseen events could occur which may necessitate immediate price increases without notice and/or cause interruption of Spears®' ability to furnish products on a timely basis. Unforeseen events may be destructive acts of nature, labor disruptions, raw material or power shortages. In the event of the situations described, Spears® cannot be held liable for effecting immediate price increases or for costs incurred due to delays in delivery of products.

SPECIAL ORDERS. Orders for non-current products or exceptional runs of current products are custom orders, and as such, cannot be canceled or returned by Customer except upon Company's prior written approval. Company reserves the right to charge back Customer all costs incurred in the cancellation or return of such custom orders, including without limitations the charges applicable to returned goods.

CUSTOM PRODUCTS. Orders for custom-made products are accepted only under the following conditions:

A. Determination of the custom products' suitability for the user's intended application is the sole responsibility of the purchaser or end user.

B. Spears® warranty for custom products is strictly limited to workmanship. Buyout components, devices, raw materials, etc. are covered by the warranties of those manufacturers.

C. Products made on a custom basis are non-returnable once produced and shipped. Customers will be charged for all expenses incurred up to the time of notification to Spears® to cancel a custom product order.

D. Prior to production of custom products, the following documents must be submitted to Spears®:
   - Customer's signed acceptance of Spears® part drawing submittal;
   - Customer's purchase order acknowledging acceptance of Spears® custom product conditions and any other conditions as may be set forth in the Spears® custom product quotation.

PACKAGING. Spears® standard method of packaging will apply for all orders shipping via normal surface means at no additional charge.

SPECIAL PACKAGING. Packaging charges will be invoiced on orders for
- Custom Products;
- Any packaging requirement specifications submitted to Spears® that exceed Spears® standard methods of packaging.

MINIMUM INVOICE. $50.00 Net

SALES TAX. Spears® is required to charge applicable national, state, and local tax on all purchased items for which a U.S. sales tax exemption certificate for the Purchaser is not on file. When ordering, please indicate clearly which items are tax exempt and provide the required valid resale certificate and/or number.

TERMS OF PAYMENT. Terms of payment are 2% 35 days, net 45 days from date of invoice, past due at 46 days on open accounts unless otherwise agreed in writing. Company's monthly cut-off is the 25th, and as such, all invoices dated after the 25th will be considered the next month's business. Freight charges are net and not subject to any volume adjustment. THERE IS NO 2% CASH

Appendix G - Terms & Conditions

REBATE ON C.O.D. OR C.I.A. ORDERS. Company reserves the right to levy a late charge on any past due balances equal to the lower of one point five percent (1.5%) per month or the highest rate permitted by law. Customer agrees to pay all costs of collection incurred by Company, including all reasonable attorney's fees and costs but in no event less than Seven Hundred Fifty Dollars ($750) and costs, regardless of whether formal legal action is instituted. Customer agrees to honor and to pay this Invoice according to the terms of payment contained herein. All payments must be made in U.S. legal currency and by readily available funds. In the event shipment is made hereunder in multiple lots, payment for each lot received shall be made in accordance therewith. Furthermore, Customer agrees not to debit or offset against any amount due Customer from Company on account of any claim or defense that Customer now has or may have in the future against Company. In the event Customer's account is assigned to a collection agency or commercial lender, Customer also agrees not to assert any such claims or defenses against its account with such collection agency or commercial lender.

FREIGHT AND DELIVERY. All orders are FOB point of shipment. Title of goods and risk of loss passes to Customer when order is picked up by freight carrier. Company shall determine the type of container and arrange for suitable packing of the goods for transport and delivery. Company will attempt to expedite all back-ordered items. All back-ordered items will be subject to product availability and Company does not assume any liability for any damage or additional cost resulting from non-delivery or late delivery.

FREIGHT TERMS:

Prepaid and Allowed: Pipe Excluded. (Freight Charges Borne by Spears ®). Freight charges will be prepaid and allowed on customer orders for Spears® products when the following conditions are met (see exclusions):

A. Shipment is to a single destination from the designated Spears® servicing Regional Distribution Center.

B. Shipment is by surface means via a freight carrier selected by Spears®

C. $2,000.00 USD net order value is met for shipments within the Continental USA.

D. $2,500.00 USD net order value is required for exclusive orders of PVC-DWV Molded Fittings. (Mixed orders of PVC-DWV and other Spears® products qualify for $2,000.00 prepaid and freight-allowed.)

E. $2,500.00 USD net order value is met for shipments to Alaska, Hawaii & Canada.

F. $3,000.00 USD net order value is required for exclusive orders of PVC-DWV Molded Fittings to Alaska, Hawaii & Canada. (Mixed orders of PVC-DWV and other Spears® products qualify for the $2,500.00 net order value for freight prepaid and allowed.)

Prepaid and Allowed – Pipe Included (SEE ADDITIONAL CONDITIONS BELOW*):

A. Pipe Only, $6,000.00 Continental US; $7,000.00 Canada.

B. Pipe, with qualified Spears® product, $5,000.00 Continental US; $6,000.00 Canada.

C. Alaska & Hawaii – No Prepaid and Allowed Shipments.

***Pipe Shipments.** In order to contain shipping costs, the following conditions have been implemented:

A. Pipe orders for 10,000 pounds or more will generally be shipped on flatbed trailers at Spears®' discretion and expense.

B. Orders for smaller quantities of pipe, which qualify for Full Freight Allowed shipment, will generally be shipped in closed containers.

C. Customers may request flatbed delivery of any shipment of pipe. However, despite an order qualifying for FFA under our normal terms, any increase in shipping cost over the cost of a closed truck will be invoiced to the customer. If requested, customer will be advised of this cost prior to shipment. It should also be noted that, due to limited availability of flatbed trailers in some areas, delays in shipping and delivery may occur.

Exclusions. The following products do not qualify for freight allowance regardless of net order value amount or if included in an order with other Spears® products. Actual freight charges will be billed on orders for these products. Upon request, a freight charge estimate will be provided on inquiries or orders for these products.

- Fabricated Duct Fittings and Duct Pipe
- Custom Fabricated Manifolds

- Custom Molded & Fabricated Fittings
- Custom Manual & Actuated Valves
- Large Quantities Fabricated Fittings
- Neutralization Tanks

Prepaid and Charged Back (Charges Borne by Customer). All orders not meeting the requirements for freight charges being allowed will be invoiced with the carrier's actual freight charges.
Exceptions to this policy are noted below and will be invoiced the actual freight charges incurred:

A. All orders shipping to Alaska or Hawaii with a net value less than $2,500.00. ($3,000.00 for PVC-DVW exclusive orders.)

B. All orders shipped to Hawaii via customer's requested carrier.

C. Customer-requested special freight regardless of order's net value (Air Freight, Bus, etc.).

D. Original orders and backorders regardless of net value that are shipped at the customer's request from a Spears® warehouse other than the designated servicing warehouse.

E. All C.O.D. shipments not meeting minimum for full freight allowance.

Freight Collect:

A. All orders shipping to CANADA with a net value of less than $2,500.00 USD. ($3,000.00 for PVC-DWV exclusive orders.)

B. As requested by the customer.

C. Customer-requested routings for shipment of goods via a non-contracted freight carrier (not normally used by Spears® Manufacturing Company) regardless of value.

Freight carrier fees and small package carrier fees on all C.O.D. shipments must be paid by the customer upon delivery of the order. FREIGHT TERMS FOR ORDERS SHIPPPED OUTSIDE THE CONTINENTAL USA, OTHER THAN THOSE LOCATIONS NOTED ABOVE, WILL BE QUOTED ON A "PER ORDER BASIS".

INSPECTION AND REJECTION. Customer shall inspect all goods promptly upon delivery. If Customer does not object in writing, stating all its reasons, to the goods as delivered and/or the services provided within ten (10) days of delivery, Customer shall be deemed to have irrevocably accepted the goods and services as satisfactory and in full compliance with its requirements, and to have waived all objections thereto which may be patently observable by a thorough and reasonable inspection. In the event Customer timely rejects any of the goods or is otherwise entitled to reject any of the goods, Customer agrees to and shall hold such rejected goods, free of charge, at Customer's place of business until Company has been notified in writing of the rejection and has had a reasonable opportunity to arrange for suitable transportation. Customer shall, under no circumstance, be entitled to resell, destroy, or discard any rejected goods without the prior written consent of Company.

CARRIER CLAIMS. Company will not be liable for any damage, loss or delay caused by any freight carrier. Claims for damaged goods, suspected damages, container shortages or pilferage within the container on delivery must be so noted on the carrier's delivery receipt and the carrier's claims representative should be notified immediately. Upon receipt of this Invoice, Customer shall make timely payment to Company notwithstanding any claims due to any carrier's responsibility. Claims proven to be the responsibility of Company shall be resolved as expeditiously as possible through replacement or credit of goods involved.

RETURNED GOODS. See Distributor Program Sheet for details.

FORCE MAJEURE. Spears® shall not be liable for any delay in or impairment of performance resulting in whole or in part from Acts of God, severe weather conditions, labor disruptions, governmental decrees or controls, insurrections, war risks, shortages, inability to procure or ship product or obtain permits and licenses, supplies or raw materials, or any other circumstances or causes beyond the control of Spears® in the conduct of its business.

RECOMMENDATIONS FOR INSTALLERS AND USERS. PLASTIC PIPING SYSTEMS SHOULD BE ENGINEERED, INSTALLED, AND OPERATED IN ACCORDANCE WITH INDUSTRY ESTABLISHED DESIGN AND ENGINEERING STANDARDS AND PROCEDURES. SUITABILITY FOR THE INTENDED SERVICE APPLICATION SHOULD BE DETERMINED PRIOR TO INSTALLA-

TION. WITH RESPECT TO SOLVENT WELD CONNECTIONS, USE A QUALITY GRADE OF PRIMER AND SOLVENT CEMENT FORMULATED FOR THE TYPE OF CONNECTION, WITH THE CORRECT SIZE APPLICATOR. READ AND FOLLOW ALL OF THE SOLVENT CEMENT MANUFACTURER'S APPLICATION INSTRUCTIONS. WITH RESPECT TO THREADED CONNECTIONS, COMPANY RECOMMENDS THE USE OF SPEARS® BLUE 75™ THREAD SEALANT. CHOICE OF OTHER THREAD SEALANT IS AT THE DISCRETION OF THE INSTALLER. THE MANUFACTURER'S LITERATURE FOR THESE PRODUCTS SHOULD BE REVIEWED FOR PROPER SELECTION AND APPLICATION PROCEDURES. WARNING: SOME PIPE JOINT COMPOUNDS OR PTFE PASTES MAY CONTAIN SUBSTANCES, WHICH COULD CAUSE STRESS CRACKING TO PLASTIC. ONE (1) OR TWO (2) TURNS BEYOND FINGER TIGHT IS GENERALLY ALL THAT IS REQUIRED TO MAKE A SOUND PLASTIC THREADED CONNECTION. UNNECESSARY OVER TIGHTENING WILL CAUSE DAMAGE TO BOTH PIPE AND FITTING. **CUSTOMER SHALL BE SOLELY RESPONSIBLE FOR INFORMING ALL INSTALLERS AND OTHER END USERS OF THE FOREGOING AND ALL OTHER PRECAUTIONARY INSTRUCTIONS AND DISCLOSURES.**

LIMITED WARRANTY. Except as otherwise mandated by law or herein provided, Spears® Manufacturing Company ("Company") warrants Standard Catalog Products ("Products") which have been directly manufactured by them to be free from defects in material and workmanship for as long as the original intended end user of the Products ("End User") retains ownership and possession of the Products and complies with this Warranty ("Warranty Period"). Each other person or entity acquiring or employing the Products, including buyers, contractors and installers ("Buyer") and End Users ("Buyer/End User") agrees that this Warranty shall be effective only during the Warranty Period so long as the Products are used solely for the normal purposes for which they are intended and in conformance with industry established standards, engineering, installation, operating, and maintenance specifications, recommendations and instructions including explicit instructions by the Company; the Products are properly installed, operated and used, and have not been modified; and all the other terms of this Warranty are complied with. Any violation thereof shall void this Warranty and relieve Company from all obligations arising from this Warranty and the Products.

Upon receipt or discovery of any Products that appear questionable or defective each Buyer/End User shall promptly inspect and return any such Product to the Company at 15853 Olden Street, Sylmar, California 91342, accompanied by a letter stating the nature of any problems. If the Products are determined by Company to be defective in materials or workmanship directly provided by Company, Company, at its sole option, may either repair or replace the defective Products, or reimburse applicable Buyer/End User for the cost of such Products. The applicable Buyer/End User shall bear all applicable shipping costs. THIS SHALL BE BUYERS/END USERS' SOLE REMEDY. EACH BUYER/END USER AGREES THAT COMPANY WILL NOT BE RESPONSIBLE FOR ANY OTHER OBLIGATIONS RELATING TO THE PRODUCTS, INCLUDING ANY OTHER MATERIALS OR LABOR COSTS, LOSS OF USE OR ANY OTHER ITEM OR FOR ANY DELAYS IN COMPLYING WITH THIS WARRANTY BEYOND COMPANY'S REASONABLE CONTROL.

COMPANY SHALL NOT BE LIABLE FOR, DOES NOT ASSUME, AND EXPRESSLY DISCLAIMS, ANY LIABILITY, RESPONSIBILITY AND DAMAGES: DUE TO ANY BUYER/END USER'S FAILURE TO COMPLY WITH THIS WARRANTY, INCLUDING IMPROPER INSTALLATION, USE OR OPERATION; USE WITH PRODUCTS FROM OTHER MANUFACTURERS THAT DO NOT MEET ASTM OR OTHER APPLICABLE PRODUCT STANDARDS; IMPROPER CONTROL OF SYSTEM HYDRAULICS, IMPROPER WINTERIZATION PROCEDURES, IMPROPER VOLTAGE SUPPLY, CONTACT WITH INCOMPATIBLE MATERIALS OR CHEMICALS, EXCAVATION/DIGGING, EXCESSIVE WEIGHT, AND VANDALISM; DUE TO REASONABLE WEAR AND TEAR AND DUE TO ANY ACTS OF NATURE, INCLUDING LIGHTNING, EARTHQUAKES, GROUND MOVEMENT, FROST HEAVE, OR FLOODS.

COMPANY EXTENDS ONLY THIS WARRANTY AND EXPLICITLY DISCLAIMS ALL OTHER WARRANTIES, WHETHER IMPLIED OR OTHERWISE EXPRESSED, WHETHER ORAL, STATUTORY OR OTHERWISE, INCLUDING ANY IMPLIED WARRANTIES OR AFFIRMATIONS FOR SUITABILITY, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. NO AFFIRMATION BY COMPANY OR ANY OF ITS REPRESENTATIVES, BY WORDS, CONDUCT OR OTHERWISE, SHALL CONSTITUTE A WARRANTY. THIS WARRANTY MAY NOT BE TRANSFERRED, EXTENDED, ALTERED OR OTHERWISE MODIFIED IN ANY MANNER, EXCEPT BY WRITTEN AGREEMENT SIGNED BY COMPANY.

BY ITS ACCEPTANCE OF THE PRODUCTS, EACH BUYER/END USER EXPRESSL Y WAIVES ALL OTHER LIABILITY OR OBLIGATION OF ANY KIND OR CHARACTER OF COMP ANY, INCLUDING LIABILITY PREDICATED UPON CONTRACT,

TORT, STRICT LIABILITY OR OTHER LEGAL OR EQUITABLE GROUNDS, AND ALL, IF ANY, DAMAGES AND LOSSES AS A RESULT THEREOF, INCLUDING ALL, IF ANY, COMPENSATORY, GENERAL, SPECIAL, CONSEQUENTIAL, INCIDENTAL, OR PUNITIVE DAMAGES. WITH RESPECT TO SUCH WAIVERS, EACH BUYER/END USER EXPLICITLY WAIVES CALIFORNIA CIVIL CODE §1542 WHICH ST ATES "A GENERAL RELEASE DOES NOT EXTEND T O CLAIMS WHICH THE CREDITOR DOES NOT KNOW OR SUSPECT T O EXIST IN HIS FAVOR AT THE TIME OF EXECUTING THIS RELEASE, WHICH IF KNOWN BY HIM MUST HAVE MATERIALLY ADVERSELY AFFECTED HIS SETTLEMENT WITH DEBTOR" AND ALL OTHER SIMILAR STATUTORY, COMMON AND CASE LAW RIGHTS, DEFENSES AND LIMITATIONS.

Having previously independently inspected the Products, or a sample, as fully as desired, or having the opportunity to and having not done so, upon acceptance of delivery of the Products, and except as otherwise herein explicitly provided, each Buyer/End User by acceptance or use of the Products accepts them in their "AS IS" and "WITH ALL FAULTS" condition without any other warranty, expressed, implied or otherwise, and accepts and assumes the entire risk and cost of all servicing, remediation and consequences thereof. This Warranty shall be governed by California law and any unenforceable provisions severed without affecting the remaining provisions. As used herein, "including" includes "without limitation."

MATERIALS OF TRADE. Purchaser represents that it is purchasing goods as its "materials of trade" as defined in the Hazardous Materials Regulations in Title 49 of the Code of Federal Regulations. It further represents that the goods shall be used in direct support of its business, which is not transportation, and that such goods shall not be resold or transported in a vehicle other than the one owned by itself unless it has properly packaged, documented and declared such shipment to the carrier.

INTERPRETATION. Except as otherwise explicitly provided herein, this Invoice shall constitute the entire and final understanding of the parties, and shall supersede all prior understanding, as to the subject matter herein stated. Each party hereby acknowledges that there is no other, and that it is not relying on any other, statement, representation or agreement with respect to this Invoice not herein stated or referred to. This Invoice may be modified or amended only in writing signed by the party against whom enforcement of the amendment or modification is sought. This Invoice shall be interpreted under and governed by the laws of California, except as preempted or otherwise controlled by applicable Federal law in which case such Federal law shall apply. Time is of the essence to this Invoice, and unless stated otherwise, the reasonable time required during which to perform any act shall be thirty (30) days after demand. Except as herein explicitly otherwise provided, this Invoice shall not be varied, supplemented, qualified or interpreted by any prior or subsequent oral understanding, course of dealing or performance between the parties, or by any usage of trade. No party shall be entitled to any advantage due to another party's legal representation or preparation of this Invoice. As used herein, certain capitalized words shall have the meaning as herein provided. Any conflict between said capitalized words and any other meaning shall be resolved as herein provided. To the extent that any provision of this Invoice is declared unenforceable, ambiguous, severable or contradictory, and to the extent it is commercially reasonable, said provision and this Invoice shall be deemed amended with such terms and conditions as to effect and enforce the intention, terms and conditions of this Invoice.

REMEDIES. Except as herein otherwise provided, all remedies provided for herein or by law or equity shall be cumulative and non-exclusive and the exercise of one shall not be deemed a waiver of any other remedy. Notwithstanding anything to the contrary, before any default or breach can be declared hereunder against any party and to the extent written demand has not been so made, at least a ten (10) business day prior notice and opportunity to cure demand shall be made of such a party. Further, provided that in the case of a non-monetary default or where such cure reasonably requires additional time to cure, if such a party promptly commences within the notice period and thereafter diligently pursues the same, such party shall be entitled to complete such cure. Except for any monetary obligations, neither Buyer nor Company shall be considered in default in the performance of its obligations herein to the extent that performance of such is delayed or prevented due to causes beyond the control of said party, including but not limited to acts of God, war, revolution, civil commotion, blockade or embargo, any law, order, regulation or ordinance of any government, fires, floods, unavoidable casualties, strikes, and labor disputes; provided that within ten (10) business days of such cause, party required to perform hereunder provides the other party with written notice of such cause and the estimated time of the delay or in the case performance is prevented, the termination of this Invoice or the respective part thereof. **THE PARTIES AGREE AND ACKNOWLEDGE THAT ANY PROVISION OF THIS INVOICE WHICH SHALLSEEK TO LIMIT ANY PARTY'S RIGHT TO ANY REMEDY OR RECOVERY SHALL BE INTERPRETED TO THE EXTENT NECESSARY AND MADE ENFORCEABLE AS EITHER A LIMITATION OF REMEDIES OR LIQUIDATED DAMAGES. EACH PARTY ACKNOWLEDGES**

THAT, AS APPLICABLE, IT WOULD BE IMPRACTICAL OR EXTREMELY DIFFICULT TO FIX THE ACTUAL DAMAGES IN THE EVENT OF LIQUIDATED DAMAGES AND THAT SUCH LIMITATIONS OR LIQUIDATED DAMAGES PROVISIONS HAVE BEEN REASONABLY DETERMINED AND UNDER THE CIRCUMSTANCES ARE FAIR AND EQUITABLE TO EACH PARTY.

WAIVER. The failure of either party to assert a right hereunder or to insist upon compliance with any term or condition will not constitute a waiver of that right or excuse any subsequent nonperformance of any such term or condition by the other party.

JURISDICTION AND LITIGATION. The parties agree that any disputes concerning this Invoice and all goods and services covered by this Invoice shall be litigated only within the County of Los Angeles, California which the parties agree for jurisdictional purposes is the place where this Invoice has been entered into and where it will be substantially performed. All causes of action related to this Invoice and the covered goods and services shall be commenced within two (2) years of the date of the respective shipment or providing to Customer or are all hereby waived.

NOTICES. All notices, demands, acknowledgements, approvals, waivers, responses and any other instruments of any kind (collectively "Notices"), which any party may be required, or desires, to be provided, or served on any party shall be written, dated, state its purpose and the time during which to respond, and served on the respective parties at the addresses set forth in this Invoice, or as may otherwise be subsequently directed in writing. Service shall be deemed made if personally at the time of such service; if by certified or registered mail within seventy-two (72) hours after deposit in the United States mail, postage prepaid and properly addressed, and if by telegraph, telefacsimile, telex or other carrier service (such as Federal Express, DHL, etc.) at the time the machine or agency confirms delivery, provided that within three (3) business days thereafter the original thereof shall have been sent by certified mail (as herein provided) to the party to whom such Notice was directed.

For additional information, contact Spears® Manufacturing Company Regional Distribution Center.
Possession of these Terms & Conditions shall not be construed as an offer to sell Spears® products.

Limited Lifetime Warranty

Except as otherwise specified for certain products, mandated by law or herein provided, Spears® Manufacturing Company ("Company") warrants Standard Catalog Products ("Products") which have been directly manufactured by them to be free from defects in material and workmanship for as long as the original intended end user of the Products ("End User") retains ownership and possession of the Products and complies with this Warranty ("Warranty Period"). Each other person or entity acquiring or employing the Products, including buyers, contractors and installers ("Buyer") and End Users ("Buyer/End User") agrees that this Warranty shall be effective only during the Warranty Period so long as the Products are used solely for the normal purposes for which they are intended and in conformance with industry established standards, engineering, installation, operating, and maintenance specifications, recommendations and instructions including explicit instructions by the Company; the Products are properly installed, operated and used, and have not been modified; and all the other terms of this Warranty are complied with. Any violation thereof shall void this Warranty and relieve Company from all obligations arising from this Warranty and the Products.

Upon receipt or discovery of any Products that appear questionable or defective each Buyer/End User shall promptly inspect and return any such Product to the Company at 15853 Olden Street, Sylmar, California 91342, accompanied by a letter stating the nature of any problems. If the Products are determined by Company to be defective in materials or workmanship directly provided by Company, Company, at its sole option, may either repair or replace the defective Products, or reimburse applicable Buyer/End User for the cost of such Products. The applicable Buyer/End User shall bear all applicable shipping costs. THIS SHALL BE BUYERS/END USERS' SOLE REMEDY. EACH BUYER/END USER AGREES THAT COMPANY WILL NOT BE RESPONSIBLE FOR ANY OTHER OBLIGATIONS RELATING TO THE PRODUCTS, INCLUDING ANY OTHER MATERIALS OR LABOR COSTS, LOSS OF USE OR ANY OTHER ITEM OR FOR ANY DELAYS IN COMPLYING WITH THIS WARRANTY BEYOND COMPANY'S REASONABLE CONTROL.

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