# Series P

### **Installation & Maintenance**

### Models:

P-1/15

P-1/6

P-1/4

P-1/2

P-1/2-HP

P-3/4

P-3/4HP

P-1

P-1 1/2

P-2

P-3

P-5

P-7 1/2

### **Materials:**

A - CPVC

B - Polypropylene

C - PVDF



### Introduction

Penguin Pumps are designed to handle a large chemicals without difficulty. Completely constructed of CPVC, polypropylene, or PVDF, where in contact with the solution being pumped, Series P pumps have an upper working temperature of 180/150/280 degrees, respectively, and thus can handle most corrosive, slurries, and abrasive solutions. Series P pumps are easy to install and operate, and are virtually maintenance-free. All pumps have been tested for proper operation before leaving the factory. To obtain optimum service life, please follow all installation and operation instructions.



### Installation & Operation Instructions

Install the pump as close as possible to the reservoir from which the liquid is being pumped. As more energy is necessary to prime the liquid than to discharge the fluid, make the suction as short as possible.

### ELECTRICAL

housings are epoxied standard.

Models P-1/15 and P-1/6 pumps are supplied only in a single An on/off switch is optional only on Models P-1/4 - P-1 1/2 single phase, single voltage, 115V or 230V, 50/60c motor. All other phase. Motors supplied in three phase are dual voltage, 230/460V, models supplied with a single phase are dual voltage, 110/220V 50/60c, which are not wired at the factory. Since direction of rotaor 115/230V motors. The factory wires all dual voltage motors for tion cannot be determined without operating the pump, the pump the lower voltage (110/115V) unless otherwise requested. When head and snap ring must be removed prior to bump starting. changing from 110/115V wiring to 220/230V wiring, follow the motor It is imperative that the motor rotation be checked before operamanufacturer's wiring instructions, which are found in the motor tion. Attach leads to motor and bump start a maximum of only junction box. Be sure to wire the motor for counterclockwise rotation a couple seconds as if you were turning a light switch on/off as as viewed from the suction entrance of the pump. A power cord fast as possible. Do not leave motor running. As viewed from the and plug are supplied for immediate plug-in operation on motors suction entrance of the pump, check for counterclockwise rotawired for the lower voltage. These motors have already been wired tion. If clockwise rotation, change any two leads and again check at the factory for proper rotation. A plug is not supplied on motors rotation. Replace head and snap ring as described in Assembly. wired 220/230V. Epoxied motor housings are not available on Many options are available on the P Series motors including single either voltage motor of the P-1/15 or P-1/6 pumps. All other motor phase-50c, explosion-proof, larger horsepowers to 71/2, and 575V motors. If any of these options are required, please check the mo-

### **PLUMBING**

If a suction line or suction extension is required, enlarge the suction line/extension by one size larger than the suction entrance. Never reduce plumbing on the suction. Avoid 90-degree elbows and never use a 180-degree elbow. Make sure every suction coucheck valve on the discharge of the pump is recommended. In the ment of the solid plumbing if vibrations exists. case of a non-flooded suction, a flapper check valve on the end of

the pump, install a T-connection with a small valve between pump case and check valve. It is advisable to use a discharge valve after the check valve. All plumbing and accessories must be supported pling/connection is airtight. The bottom of the suction extension other than by the pump, in order to prevent possible distortion of should always be at least 2 pipe diameters above the bottom of the the pump case. The use of some hose in the discharge plumbing tank. In either flooded suction or non-flooded suction, the use of a close to the discharge nozzle of the pump will absorb any move-

### LIQUID LEVEL

The correct liquid level is very important. A liquid level which is too CHECK THE LIQUID LEVEL. The correct liquid level is halfway behigh could cause motor damage.

tween the bunghole and the centerline of the discharge nozzle.

### PRIMING

Under flooded conditions, open all the valves in the suction and discharge lines. Wait a few minutes to let entrapped air out. Close all valves on the discharge line. Leave suction valves wide open. A closed suction valve could cause damage to the impeller and the shaft. Start the pump and crack discharge valves open to let out any additional entrapped air. Then open valve to desired flow.

Under non-flooded conditions, fill up the pump slowly from the Tconnection and valve. Then close all valves in the discharge line. Start the pump and continue as flooded conditions.

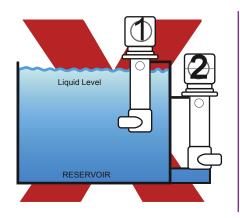
### RECOMMENDATIONS

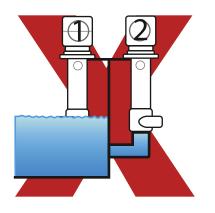
Always make sure there is enough liquid in the reservoir and the overheating of the fluid in the pump and will damage the CPVC closed discharge valve for more than 5 minutes. This will cause

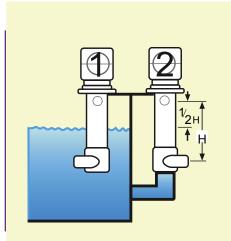
level is high enough, considering the capacity of the pump unit. parts. Temperature in this case will increase up to 220 degrees. If Inadequate liquid will cause vortex in the reservoir. A vortex occurs the pump is being run against a closed discharge valve for a long when air mixes from the surface into the fluid, which can disturb duration of time, install a small bleed line back into the reservoir the flow and also prevents the pump from priming. In cases where before the discharge valve of the pump. If the line is small, there the pump is installed outside the reservoir, do not run against a is a minimum pressure loss. This prevents overheating by recir-

# Recommended Installation

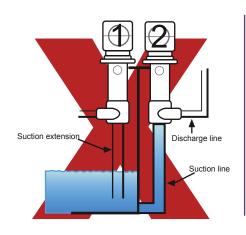
## Liquid Level

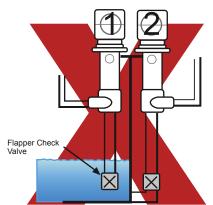


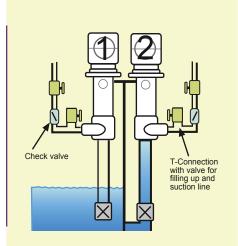


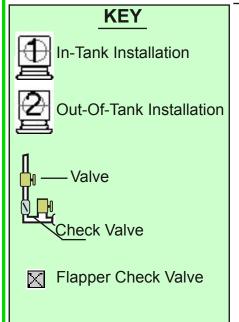


## **Suction Level**

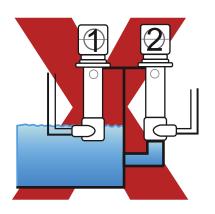


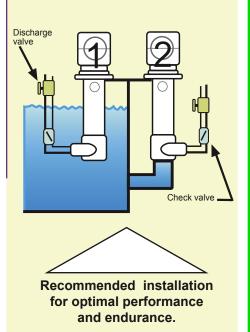


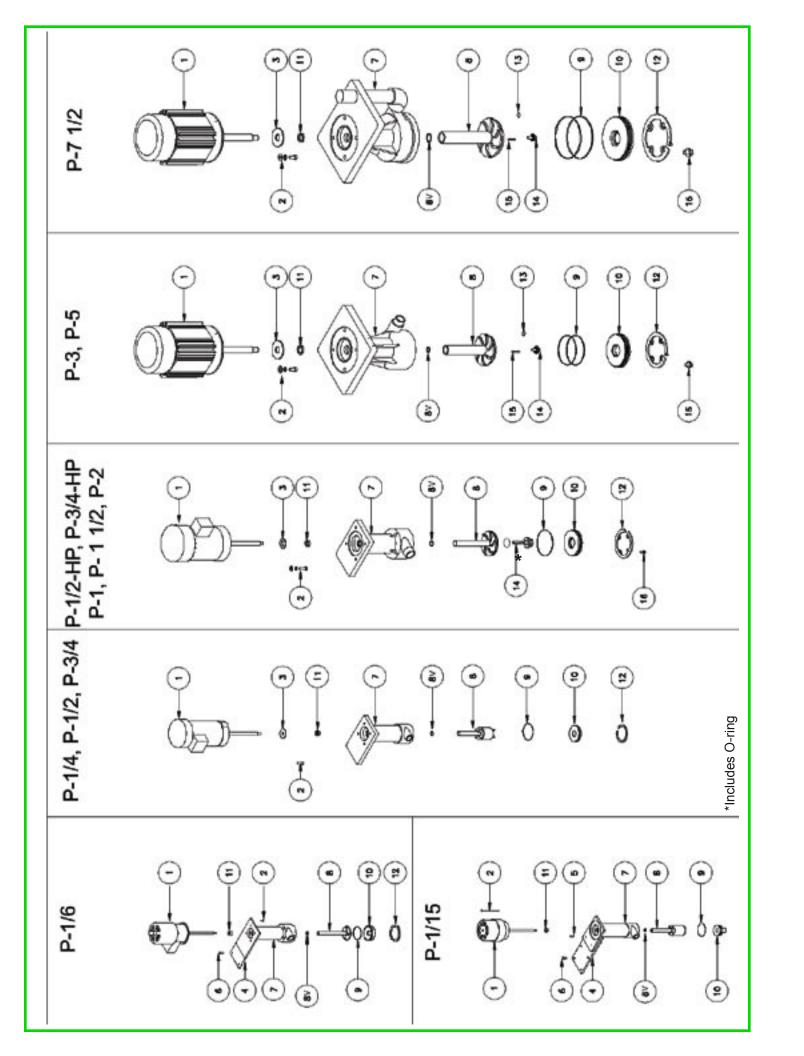




## Suction Head







						Series P S	Series P Spare Parts List	ot.						
4 20 21	Decaription	P-1/15	P-1/6	P-1/4	P-1/2	P-3/4	P-1/2-HP	P-3/4-HP	P-1 Part No	P-1 1/2	P-2	P-3	P-5	P-7 1/2
- E	Motor/Shaft Assiv	בשנואס.	ב מונואס.	- alt 140.	rait NO.	- B	Talino.	T die 10.		Τ	Γ	רמונואס.		all of
	Phase-Voltage-Cyde													
	1 115 50/60	P-115-01	P-160-01											
	1 230 50/60		P-160-21											
	1 110/220 50/60			P-140-0103										
	1 115/230 60				P-120-0103	P-340-0103	P-120-0103	P-340-0103	P-100-0103					
	w/ titanium shaft				P-120-0103-T	. 1		P-340-0103-T	P-100-0103-T					
	1 115/230 50/60				P-120-2103		- 1	P-340-2103	P-100-2103	P-112-2103				
	w/ titanium shaft			- 1	P-120-2103-T	ĻΙ	.	P-340-2103-T	P-100-2103-T	Ηİ				
	3 230/460 50/60			P-140-3103	P-120-3103	P-340-3103	-	P-340-3103	P-100-3103	_	P-200-3103	P-300-3103K	_	P-712-3103K
	w/ titanium shaft			- 1	P-120-3103-T	⅃	₋l	П	P-100-3103-T	_	П	ĻΙ	ΗĪ	P-712-3103K-T
1BS	Bearing Set	P-115-01BS		. <b>.</b> . l .	P-120-01BS	P-120-01BS	P-120-01BS	P-120-01BS	P-120-01BS	P-120-01BS	P-120-01BS	P-300-01BS	P-300-01BS	P-300-01BS
#	External Fan w/Set Screw	P-115-01EF		- 1	P-120-01EF		-	Т	P-120-01EF	_	Т	-	-1	2-300-01EF
년 인	Fan Cover (w/Drip Shield	P-115-01FC		P-140-01FC	P-120-01FC	P-120-01FC	P-120-01FC	P-120-01FC	P-120-01FC	P-120-01FC	P-120-01FC	P-300-01FC	P-300-01FC	P-300-01FC
c	except P-1/15, P-1/6)	147	400 00 43	4007	10000	-	-		10000		- 1	- 1	2000 000	(1)
71 0	Motor Screw/Bolts/Washer Assry	P-115-02(2)	P-160-02 (4)	P-140-05 (4)	P-120-05 (4)	P-120-05 (4)	P-120-05 (4)	P-120-05 (4)	P-120-05 (4)	P-120-05(4)	P-120-05 (4)	P-300-05K (4)	P-300-05K (4)	P-300-05K (4)
2 4	Manufact Program	440	000	P-140-0Z	P-120-02	1	1	Τ	P-120-02		- 1	П	$\neg \vdash$	300-0Z
£	Modifility Blacket- CF VC	¥+0-c11-L	r-100-04A											
Ľ	Brackat Coraw		D-160.05 (2)											
0 (0	AA)	P-115-06 (2)	P-160-05 (2)	P-140-06 (2)										
)	Screw (A-A/A-S/A-AL)		(=)	(=)										
70	Primp Housing Ass'v-CPV/C	P-115-07A	P-160-07A	P-140-07A	P-120-06A	P-340-06A	P-100-07A	P-100-07A	P-100-07A	P-100-07A	P-200-07A	P-300-06AK	P-300-06AK	P-712_06AK
Z Z	Mounting Bracket - CPVC/A AL)			P-140-07AI	100 071		200			Τ		3	Τ	78.00
H H	Pump Housing Ass'v -Polypro	P-115-07B	P-160-07B	P-140-07B	P-120-06B	P-340-06B	P-100-07B	P-100-07B	P-100-07B	P-100-07B	P-200-07B	P-300-06BK	P-300-06BK	
2 2	Pump Housing Ass'v -PVDF	P-115-07C	P-160-07C	P-140-07C	P-120-06C	P-340-06C	P-100-07C	Γ	P-100-07C	Т	Γ		P-300-06C	P-712-06C
8A	Impeller - CPVC	P-115-08A	P-160-08A	P-140-08A	P-120-07A	P-340-07A	P-120-08AHP	Ī <sub>₽</sub>	P-100-08A	1	┰		P-500-07AK	P-712-07AK
SAK	Impeller - CPVC w/n rt	3					P-120-08AHPK	P-340-08AHPK	P-100-08AK	l۷	P-200-084K		Τ	
8AT	w/ titanium insert											P-300-07AK-T	P-500-07AK-T	P-712-07AK-T
88	Impeller - Polypro	P-115-08B	P-160-08B	P-140-08B	P-120-07B	P-340-07B			P-100-08B		P-200-08B		Т	
8 XX	Impeller - Polypro w/nut								P-100-08BK	P-112-08BK	P-200-08BK			
,       	Impeller - PVDF	P-115-08C	P-160-08C	P-140-08C	P-120-07C	P-340-07C	P-120-08CHP	P-340-08CHP	P-100-08C		P-200-08C	P-300-07CK	P-500-07CK	P-712-07CK
80X	Impeller - PVDF w/nut						I٧	P-340-08CHPK	P-100-08CK	P-112-08CK	P-200-08CK		Г	
8CT	w/ titanium insert											P-300-07CK-T	P-500-07CK-T	P-712-07CK-T
/8	Impeller - O-Ring-Viton	N/A	N/A	ΝΑ	P-120-07V	P-120-07V	P-120-07V	P-120-07V	P-120-07V	Г	P-120-07V	P-300-07V	Т	P-300-07V
36	Head O-Ring - EPR	P-115-09E	P-160-09E	P-140-09E	P-140-09E	P-140-09E	P-100-09E	P-100-09E	P-100-09E	P-100-09E	P-100-09E	P-300-11E (2)	P-300-11E (2)	P-712-11E(2)
8		P-115-09V	P-160-09V	l	P-140-09V	P-140-09V		P-100-09V	P-100-09V		Γ	P-300-11V (2)	Τ	P-712-11V (2)
10A		L	P-160-10A	ı	P-120-09A	P-340-09A	P-100-10A	P-100-10A	P-100-10A	L	P-200-10A	P-300-10A	П	P-712-10A
10B		ı	P-160-10B	P-140-10B	P-120-09B	P-340-09B		Γ	P-100-10B	П		P-300-10B	Γ	P-712-10B
10C	Head - PVDF	ı	P-160-10C	ı	P-120-09C	P-340-09C		Γ	P-100-10C			P-300-10C		P-712-10C
110	Viton	ı	P-115-11V		P-120-11V	P-120-11V	P-120-11V	P-120-11V	P-120-11V		P-120-11V	P-300-13V	Γ	P-300-13V
12A	Snap Ring - CPVC		P-160-11A	L	P-120-08A	P-120-08A	P-100-11A	P-100-11A	P-100-11A	Γ.	P-100-11A	P-300-12A		P-712-12A
12B	Snan Ring - Polyono		P-160-11B	L	P-120-08B			P-100-11B	P-100-11B	Г	P-100-11B			
12C	Snap Ring - PVDF		P-160-11C	Г	P-120-08C	P-120-08C	P-100-11C	P-100-11C	P-100-11C	Г	l.,		Г	2-712-12C
13V	Impeller Nut O-Ring - Viton									Г		P-300-08VK	P-300-08VK	P-300-08VK
14A	Impeller Nut Ass'y - CPVC						P-100-14A*	P-100-14A*	P-100-14A*	P-100-14A*	P-100-14A*			P-300-09AK
14AT	w/ titanium insert									$\neg$		P-300-09AK-T	P-300-09AK-T	P-300-09AK-T
14C	Impeller Nut Ass'y - PVDF						P-100-14C*	P-100-14C*	P-100-14C*	P-100-14C*	P-100-14C*	P-300-09CK	P-300-09CK	P-300-09CK
14CT	w/ titanium insert											P-300-09CK-T	P-300-09CK-T	P-300-09CK-T
15T	Shaft Key- Titanium									- 1.		P-300-15K	P-300-15K	P-300-15K
	Snap Ring Screw - CPVC						P-100-16A*		.		P-100-16A*	P-300-16A	P-300-16A	P-712-16A
	Snap King Screw - Polypro						P-100-16B"	P-100-16B"	P-100-10B"		- 1	1	T	000
) 1 2 1 1 1 1 1	Snap King Screw - PVDF	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	07.007	40,40	400	0.00	P-100-16C"	P-100-16C	P-100-16C		- 1	١	P-300-16C	P-/ 12-16C
	Pump Head Ass'y - CPVC	F-115-1-A	F-100-13A	F-140-13A	F-120-12A		P-120-13AHPK	P-340-13AHPK	P-100-13A	P-112-13A	P-200-13A	P-300-14AK	P-500-14AK	P-7 12-14AK P-712-14AK
17AT	with reaches y - or yourse.							X = 201-01-0	201-001-			P-300-14AK-T	P-500-14AK-T	P-712-14AK-T
17B	Pump Head Ass'v - Polypro	P-115-12B	P-160-13B	P-140-13B	P-120-12B	P-340-12B	P-120-13BHP	P-340-13BHP	P-100-13B		P-200-13B	P-300-14BK	P-500-14BK	P-712-14BK
17BK	Pump Head Ass'y - Polypro w/nut					Ш	P-120-13BHPK	$  \vee  $	P-100-13BK	P-112-13BK	P-200-13BK		П	2-712-14BK
17BT	w/ titanium					П						<sub>⊢</sub>	P-500-14BK-T	P-712-14BK-T
17C	Pump Head Ass'y - PVDF	P-115-12C	P-160-13C	P-140-13C	P-120-12C	P-340-12C	P-120-13CHP	P-340-13CHP	P-100-13C		P-200-13C		П	P-712-14CK
17CK	Pump Head Ass'y - PVDF w/nut						P-120-13CHPK	P-340-13CHPK	P-100-13CK	P-112-13CK	P-200-13CK	P-300-14CK	T.	P-712-14CK
2	w/ utanium *= Includes O-ring										Ī	P-300-1408-1	P-500-14CK-1	P-712-14CK-1
	= Illciuues O-iiig													

### **Maintenance Instructions**

NOTE: This manual covers several different configurations of P-Series pumps. Be sure to select the appropriate model number for your pump.

**MODEL: P-1/15** 

### **DISASSEMBLY**

- Insert a screwdriver through the center hole at the end of the housing to remove the head. Pull with a rocking motion to remove. Head O-ring can easily be replaced.
- Unscrew the three (3) fan cover screws and remove the fan cover. With the pump in a horizontal position, hold the fan with one hand or insert a screwdriver in the center motor slot and unscrew the impeller counterclockwise using fingers or the handle end of a pair of pliers.
- 3. Placing the pump vertical with the motor on top, carefully bend down one fan blade in order to expose the motor screw. Remove motor screw. Rotate the fan 180 degrees to expose second motor screw and remove. Motor and housing are now separated. Do not try to remove shaft as this is an integral piece with the motor rotor. Lip seal can be replaced.

### **ASSEMBLY**

- (New Motor) Remove fan cover and bend down one fan blade. (See Disassembly). Remove existing motor screws from new motor and exchange with screws from motor being replaced.
- With the housing in a vertical position, mounting bracket on top, place motor shaft into housing. The cord should be 180 degrees from the outlet. Screw the motor screws into the holes at the top of the pump housing. The motor screws should not be overtightened.
- Insert the impeller into the housing. With one hand on the fan and the other on the impeller, turn the impeller clockwise with fingers or handle end of a pair of pliers until impeller bottoms out.
- 4. Place the pump upright resting on the motor. Look down into the housing and, while rotating the impeller, check to see that the impeller is centered. The impeller must not be touching the side of the housing. If the impeller is not centered, hold the motor with one hand and tap the housing with the mallet in the direction necessary to clear the housing.
- 5. Finish screwing the two motor screws. Bend fan blade back to normal position. Replace the fan cover. Insert the three (3) fan cover screws and tighten. Spin the impeller to check that the fan is not rubbing against the cover and fan blade is properly in place. (Do not operate pump until motor fan and pump impeller have been checked for position.)
- Wet head and head O-ring. Be sure head O-ring is properly in place. Place head and head O-ring into housing. The threaded nipple should be tapped with a mallet until bottoming out in the housing.

MODEL: P-1/6 P-1/4 P-1/2 P-3/4

### **DISASSEMBLY**

- 1. Remove the front snap ring at the end of the housing using a screwdriver or a pair of pliers.
- Insert appropriate threaded pipe through the center hole at the end of the housing to remove the head. Pull with a rocking motion to remove. Head O-ring can easily be replaced.
- 3. Take the plug out from the back of the fan cover or drip shield. Insert a screwdriver in the slot of the motor shaft and unscrew the impeller counterclockwise using fingers or the handle end of a pair of pliers.
- 4. Remove the four (4) motor bolts located beneath the motor bracket. Motor and housing are now separated. Do not try to remove shaft as this is an integral piece with the motor rotor. Slinger and lip seal can be replaced.

### **ASSEMBLY**

- With the motor in a vertical position, shaft upwards, place housing over shaft, lining up motor bolt holes in mounting bracket with holes in the motor. Be sure the slinger is properly placed. Conduit box should be 180 degrees from the outlet. Screw the motor bolts into the holes beneath the mounting bracket in a diagonal sequence. Be sure motor screws are tight.
- Insert the impeller into the housing. With one hand holding a screwdriver in the slot of the motor shaft and the other on the impeller, turn the impeller clockwise with fingers or handle end of a pair of pliers until impeller bottoms out.
- Place the pump upright resting on the motor. Look down into the housing and while rotating the impeller, check to see that the impeller is centered. The impeller must not be touching the side of the housing.
- 4. Replace plug in the back of the fan cover or drip shield.
- 5. Wet head and head O-ring. Be sure head O-ring is properly in place. Insert appropriate threaded pipe into head and replace into housing. The threaded pipe should be tapped with a mallet, pushing the head into the housing until it bottoms out. On Models P-1/2 and P-3/4, push the head into the housing until snap ring groove is exposed. Remove pipe

### **Maintenance Instructions**

**NOTE:** This manual covers several different configurations of P-Series pumps. Be sure to select the appropriate model number for your pump.

### MODEL: P-1/2-HP, P-3/4-HP, P-1, P-1 1/2, P-2

### DISASSEMBLY

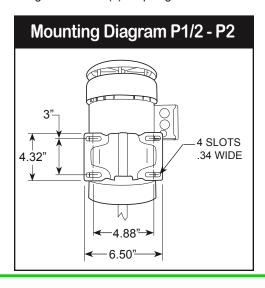
- Remove the four (4) snap ring screws, being careful not to lose the O-rings. Remove the snap ring using a screw driver or a pair of pliers.
- Insert the appropriate threaded pipe through the center hole at the end of the housing to remove the head. Pull with a rock ing motion to remove. Head O-ring can easily be replaced.
- 3. Take the plug out from the back of the fan cover or drip shield. Remove impeller nut assembly using a 7/16" wrench. Insert a screw driver in the slot of the motor shaft and unscrew the impeller counterclockwise using fingers or the handle end of a pair of pliers.
- Remove the four (4) motor bolts located beneath the motor bracket. Motor and housing are now separated. Do not try to remove the shaft as this is an integral piece with the motor ro tor. Slinger and lip seal can be replaced.

### **ASSEMBLY**

- 1. With the motor in a vertical position, shaft upwards, place housing over the shaft, lining up motor bolt holes in the mounting bracket with holes in the motor. Be sure the slinger is properly in place. Conduit box should be 180° from the outlet. Screw the motor bolts into the holes beneath the mounting bracket in a diagonal sequence. Be sure motor screws are tight.
- Insert the impeller into the housing. With one hand holding a screwdriver in the slot of the motor shaft and the other hand on the impeller, turn the impeller clockwise with fingers or the hankle end of a pair of pliers until the impeller bottoms out.
- Attach impeller nut assembly to shaft with impeller nut O-ring using a 7/16" wrench.
- Place the pump upright resting on the motor. Look down into the housing and while rotating the impeller, check to see that the impeller is centered.

The impeller must not be touching the side of the housing.

5. Replace plug in the back of the fan cover or drip shield. Wet head and head O-ring. Be sure head O-ring is properly in place. Insert the appropriate threaded pipe into head and replace in housing. The threaded pipe should be tapped with a mallet, pushing the head into the housing until the snap ring grove is exposed. Remove pipe and replace snap ring. Line up through holes in the snap ring with the threaded holes in the head by rotating the snap rings counter cloclwise. Insert and tighten the four (4) snap ring screws.



### MODEL: P3, P5, P7-1/2

### DISASSEMBLY

- 1. Remove the four (4) snap ring screws. Now the snap ring can be removed using a screwdriver or a pair of pliers.
- Insert a 2 inch threaded pipe through the center hole at the end of the housing to remove the head. Pull with a rocking motion to remove. Head O-rings can easily be replaced.
- Unscrew the fan cover screws and remove the fan cover and drip shield. Place the screwdriver between fan blades and unscrew the impeller nut using a <sup>3</sup>/4 inch open wrench in a counterclockwise rotation. Impeller nut O-ring can be replaced.
- 4. With the pump in a vertical position, impeller up, place a screwdriver through the discharge port wedging between the impeller top and the housing. Carefully lift the impeller and remove. If impeller does not remove easily, proceed to step 5.
- 5. Remove the four (4) motor bolts located beneath the motor bracket. Motor and housing are now separated. Do not try to remove shaft as this is an integral piece with the motor rotor. Slinger and lip seal can be replaced. Using a rubber mallet hit the pump bracket lightly, top side facing motor, until the impeller and keyway pop loose.

### **ASSEMBLY**

- With the motor in a vertical position, shaft upwards, place housing over shaft, lining up motor bolt holes in the mounting bracket with holes in the motor. Be sure the slinger is properly in place. Screw the motor bolts into the holes beneath the mounting bracket in a diagonal sequence. Be sure motor screws are tight.
- Insert the impeller into the housing until it bottoms out. Do not hammer the impeller and sleeve down on the shaft. Line up the keyway and insert key by lightly tapping it with a hammer. Screw the impeller nut clockwise holding impeller. Be sure impeller nut O-ring is properly in place. After handtight, turn with wrench 180 degrees.

#### DO NOT OVERTIGHTEN.

- 3. Replace the fan cover and drip shield. Insert the fan cover screws and tighten. Be sure fan is not rubbing against fan cover.
- 4. Place the pump upright resting on the motor. Look down into the housing and, while rotating the impeller, check to see that the impeller is centered. The impeller must not be touching the side of the housing.
- 5. Wet head and head O-rings. Be sure head O-rings are properly in place. Insert 2 inch threaded pipe into the head and replace in housing. The threaded pipe should be tapped with a mallet, pushing the head into the housing until the snap ring groove

Mounting Diagram P3 - P7 1/2

7-3/8"
(ref) 4-1/2"

15/16"

3/8"

3"

3"

is exposed. Remove pipe and replace snap ring. Line up through holes in snap ring with the threaded holes in the head by rotating the snap ring counterclockwise. Insert and tighten the four (4) snap ring screws.

## Look!

Model D05PPSP

## Penguin Pumps extended products

#### Air Operated Double Diaphragm Series D

Flows to 155 gpm

These new pumps are designed to reduce downtime by ensuring continuous, reliable pump performance. In addition to eleminating freezing and stalling, they are selfpriming, and can handle infinite variable flows up to 90% solids, and are capable of operating as low as one stroke per minute. Bulletin 217

**High Flow Vertical Pump** 

Corrosion-resistant CPVC construc-

tion. No metal contact. No pump

bearings, bushings or seals. Self

priming when immersed. Runs dry

without damage. Temperatures to

Series P-HF

Flows to 400 gpm



Model M-3/4B



### **Sealless Magnetic Drive Pumps** Series M & MT

CPVC 2-stage and 3-stage **Horizontal Diffuser Pumps** 

Pressure to 150 TDH in feet

A multi-stage pump in plastic. Designed for higher pressure applica-

tions, where a metal pump is not

acceptable. CPVC construction and optional titanium shaft allows for

temperatures to 180°F. Multi-stage

pumps are available in 2-stage and

3-stage in 1 1/2hp, 2 hp, and 3hp.

Series HD offers increased efficien-

cy with smaller pump cases.

Series HD

Flows to 104 gpm

Flows to 250 gpm

Bulletin 206

Corrosion resistant, leakproof, sealless magnetic drive pumps with flows to 200 gpm. Series M constructed of polypropylene and/or ryton with optional 316SS, Kynar or Hastelloy construction. Series MT pumps are constructed of polypropylene or PVDF and can handle caustics to 220°F. Compatible with a wide range of acids and alkalies. Bulletin 203/213



#### **316SS Series PSS**

180°F.

Bulletin 201

These 316 stainless steel vertical pumps utilize a replaceable coupled shaft using multiple set screws to minimize shaft deflection and misalignment associated problems. While allowing the use of standard MEMA motors, which are readily available at most local motor suppliers, thus saving prolonged downtime and money.



#### Polypropylene Horizontal **Centrifugal Pumps** Series HOM

Flows to 132 gpm

These glass fiber reinforced polypropylene pumps with a simple energy-saving volute design offer easy maintenance and high operational efficiency. Ideal for many OEM and chemical processing applications. A completely metalless diplo seal provides reliability and easy installation. The V-clamp with knob allows for easy assembly and dissasembly. Bulletin 209



Model HN-5S

Model HV-3/4DV

#### **CPVC Horizontal Centrifugal Pumps** Series HV & HN

**Bulletin 214** 

Flows to 181 gpm

True volute design featuring the latest hydraulic technology -- energy efficiency, high flow and high pressure. CPVC construction where in contact with solution. No metal contact. All models available with double mechanical seal and water flush. Temperatures to 180°F. Optional priming chambers available for Series HV. Bulletin 202/210



Model HSC-1/2SV

### **Centrifugal Pump** Flows to 140 gpm

**Series HSC** 

316 Stainless Steel

Corrosion resistant, stainless steel pumps ideal for many OEM and chemical processing applications. They feature high operational efficiency and easy maintenance, and are available with a single mechanical seal or double mechanical seal with water flush. Multi-stage model also available for high pressures to 140 TDH.

A Division of Penguin Pumps Inc. 7932 Ajay Drive Sun Valley, CA 91352 U.S.A. 877-773-6484 • Office: 818-504-2391 • Fax: 818-768-7590 e-mail: info@filterpump.com • website: www.filterpump.com



