



# SELF-PRIMING PUMP & MOTOR UNIT

MODELS	PRICE CODE NUMBERS	EPOXY PLASTIC BODY
3/8 JENH	48-0073A	W/ NEOPRENE IMPELLER
3/8 JEVH	48-0074A	W/ VITON IMPELLER

Refer To Bulletin P-617 and  
Parts List P-2025.

## ⚠ SAFETY PRECAUTIONS BEFORE STARTING PUMP:

1. Read operating instructions and instructions supplied with chemicals to be used.
2. **Refer to a chemical resistance data chart for compatibility of material in pump with solution to be used.**
3. Note temperature and pressure limitations.
4. **Personnel operating pump should always wear suitable protective clothing: face mask or goggles, apron and gloves.**
5. All piping must be supported and aligned independently of the pump.
6. Always close valves slowly to avoid hydraulic shock.
7. Ensure that all fittings and connections are properly tightened.

## ⚠ BEFORE CHANGING APPLICATION OR PERFORMING MAINTENANCE:

1. **Wear protective clothing as described in Item 4 above.**
2. Flush pump thoroughly with a neutralizing solution to prevent possible harm to personnel.
3. Verify compatibility of materials as stated in Item 2 of SAFETY PRECAUTIONS above.

## INSTALLATION

Pump may be mounted in any position. The rotation of the pump shaft determines the location of the pump's intake and discharge ports. Refer to end cover. Before starting, turn the pump shaft in the direction of the operating rotation.

## DRIVE

Belt or direct with flexible coupling for foot mounted unit. Clearance should be left between drive shaft when installing coupling. Always mount pump and align drive shaft before tightening the coupling set screw. Close coupled for motor pump unit.

## SPEEDS

500 RPM to the maximum 1750 RPM. For longer pump life, operate at lowest possible speeds.

## SELF-PRIMING

Primes at low or high speeds. A minimum of 1200 RPM is required for a vertical dry suction lift of 15 feet for the Neoprene or Viton impellers. The pump will produce suction lifts up to 22 feet when wetted. **BE SURE SUCTION LINES ARE AIR TIGHT OR THE PUMP WILL NOT SELF-PRIME.** The suction line should be as short as possible.

## RUNNING DRY

Unit depends on liquid pumped for lubrication. **DO NOT RUN DRY FOR MORE THAN 30 SECONDS.** Lack of liquid will damage the impeller and other pump parts.

## DISCHARGE LINE

When transferring liquids further than 25 feet, the discharge line should be increased to 1/2" nominal I.D.

## ⚠ CAUTION

If corrosive fluids are handled, pump life will be prolonged if flushed with water after each use or after each work day.

## PRESSURES

For continuous operation, pressure should not exceed 21 PSI for Neoprene and 18 PSI for Viton impellers.

## TEMPERATURES

Neoprene impellers are suitable for service from 45° - 180°F (8° - 82°C). Viton impellers are suitable for service from 60° - 180°F (15° - 82°C).

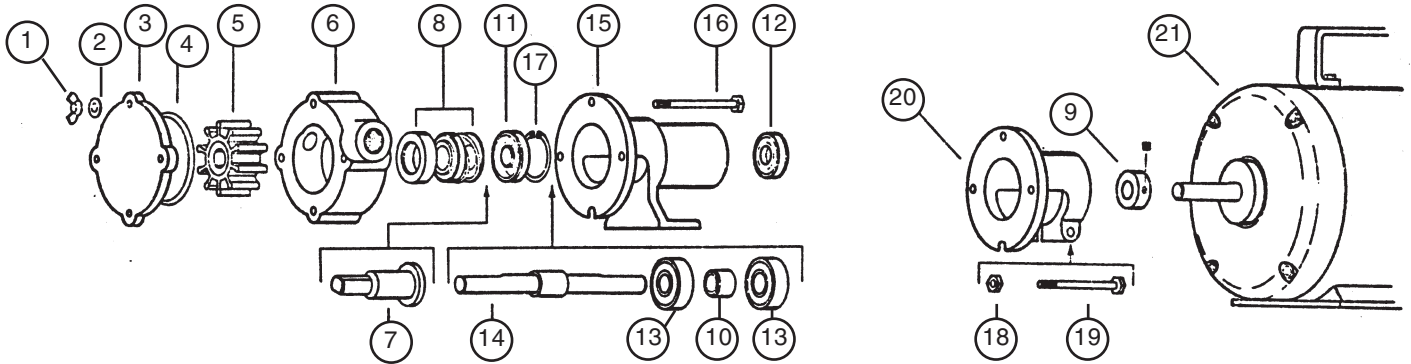
## SPARE PARTS

A spare impeller and seal should be kept on hand to eliminate downtime.

HEAD CAPACITY TABLE

TOTAL HEAD				500 RPM			1160 RPM			1750 RPM		
PSI	KGS/ CM <sup>2</sup>	FT. OF WATER	METERS OF WATER	GPM	L/MIN.	HP	GPM	L/MIN.	HP	GPM	L/MIN.	HP
4.3	0.3	10	3.0	1.4	5.3	1/6	3.6	13.6	1/6	5.5	20.8	1/4
8.7	0.6	20	6.1	1.2	4.5	1/6	3.4	12.9	1/6	5.2	20.1	1/4
13.0	0.9	30	9.1	1.0	3.8	1/6	3.2	12.1	1/6	5.0	18.9	1/4
17.3	1.2	40	12.1	.7	2.6	1/6	2.9	11.0	1/6	4.7	17.8	1/4
21.6	1.5	50	15.2				2.4	9.1	1/4	4.2	15.9	1/4

NOTE: Table shows approximate head-flow for new pumps in U.S. Gallons per minute for Neoprene impellers. Flow will be reduced approximately 10% with Viton impellers.



**DISASSEMBLY AND ASSEMBLY INSTRUCTIONS  
TO REPLACE IMPELLER**

**DISASSEMBLY:**

1. Remove end cover wing nuts, end cover and "O"-ring.
2. Remove pump head from bearing housing (Key 15) or adaptor (Key 20).
3. Grasp the hub of the impeller with water pump type pliers. With a rotary twist motion, withdraw the impeller from body bore.

**ASSEMBLY:**

4. Install new impeller in lubricated body bore (Key 6) by grasping the hub and with a rotary motion push it into the body bore.
5. Install pump head on the bearing housing (Key 15) or adaptor (Key 20) locating drive flats in the impeller. Insert drive.
6. Install "O"-ring in end cover and secure to pump head with bolts, washers and wing nuts.

**TO REPLACE SEAL ASSEMBLY**

**DISASSEMBLY:**

7. Follow Steps 1, 2, and 3.
8. Remove seal seat and grommet from body seal bore (Key 6). Lubricate with water to facilitate seal removal. Insert screwdriver beneath seal seat and pry out of body seal bore.
9. Remove drive sleeve (Key 7) from shaft. Remove seal face and seal spring from drive sleeve.

**ASSEMBLY:**

10. Install seal spring on drive sleeve (Key 7). Lubricate carbon face seal with water and slide on drive sleeve with carbon facing away from spring.
11. Install ceramic seal seat in grommet with grooved face towards grommet. Lubricate outer surface of seal seat assembly with water and push assembly into body seal bore with ceramic seat facing out of bore.
12. Assemble impeller, body and end cover as in Steps 4, 5, and 6.

**TO SERVICE BEARING HOUSING**

**DISASSEMBLY:**

13. Follow Steps 1, 2, 3, 8, and 9.
14. Remove from pedestal (Key 15) inboard bearing lip seal (Key 11) with hooked wire or screwdriver, and retaining ring (Key 17) using retaining ring pliers.
15. Remove shaft and bearing assembly from the body end of the pedestal (Key 15) by pressing on drive end of shaft.
16. Press outboard bearing lip seal (Key 12) out of pedestal (Key 15).
17. Remove bearing (Key 13) and spacer (Key 10) from shaft by supporting inboard bearing and pressing shaft through bearings. Press on driver end of shaft.

**ASSEMBLY:**

18. To install inboard bearing, support inner race of bearing and press shaft, driver end first, into bearing until it bottoms firmly against shaft shoulder. Slide bearing spacer (Key 10) over shaft against inboard bearing.
19. To install outboard bearing, support inner race of bearing and press shaft, driver end first, into bearing until it bottoms against bearing spacer (Key 10).
20. Push shaft and bearing assembly, driver end first, into bearing housing (Key 15) from body end side and secure with retaining ring (Key 17) in housing.
21. Install inboard bearing seal (Key 11) in bearing housing (Key 15) with lip facing impeller bore.
22. Install outboard bearing seal (Key 12) in bearing housing (Key 15) with lip facing driver end of shaft.
23. Follow Steps 10, 11, and 12.

**NOTE: WHEN SERVICING, SEAL COLLAR (KEY 9) INSTALLED ON MOTOR SHAFT IS TO BE SECURED ON ASSEMBLY WITH SET SCREW (LENGTH TO BE 15/32" FROM FACE OF REGISTER SHOULDER TO NEAREST FACE OF COLLAR).**



**SERFILCO, LTD.**

2900 MacArthur Blvd. 847-509-2900  
 Northbrook, IL 60062-2005 U.S.A. 800-323-5431  
 e-mail: sales@serfilco.com FAX: 847-559-1995  
 www.serfilco.com