



FLEXIBLE IMPELLER PUMP

For pumps built prior to 7-1-93

| MODELS | PRICE CODE NUMBERS | 316 S.S. SHAFT |
|----------|--------------------|----------------------|
| 1 JESSNH | 48-0079 | W/ NEOPRENE IMPELLER |
| 1 JESSVH | 48-0078 | W/ VITON IMPELLER |

Refer To Bulletin P-617 and Parts List P-2075.

! 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 suction and discharge ports. Before starting, turn the pump shaft in the direction of the operating rotation.

DIRECT DRIVE

Clearance should be left between drive shaft and pump shaft when installing coupling. Always mount pump and align drive shaft before tightening the coupling set screw.

SELF-PRIMING

Primes at low or high speeds. Pump will produce suction lifts up to 22 feet (6.7 M) when wetted. **BE SURE SUCTION LINES ARE AIR TIGHT OR PUMP WILL NOT SELF-PRIME.**

RUNNING DRY

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

! 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 30 PSI (2.1 kg/sq cm).

TEMPERATURES

Neoprene impellers are suitable for service from 45° - 180°F (8° - 82°C). Nitrile impellers are suitable for service from 50° - 180°F (10° - 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 excessive downtime.

HEAD CAPACITY TABLE

| PSI (KG/SQ CM) | FT. OF WATER (METERS) | GPM (L/MIN) | HP |
|-------------------|-----------------------------|----------------|-----|
| 4.3 (.30) | 10 (3.0) | 25.5 (96.5) | 3/4 |
| 8.7 (.61) | 20 (6.1) | 24.6 (93.1) | 3/4 |
| 17.3 (1.21) | 40 (12.2) | 23.0 (87.1) | 3/4 |
| 26.0 (1.83) | 60 (18.3) | 21.0 (79.5) | 1 |
| 34.6 (2.43) | 80 (24.4) | 18.0 (68.1) | 1 |

DISASSEMBLY AND ASSEMBLY INSTRUCTIONS TO REPLACE IMPELLER

DISASSEMBLY:

1. Remove wing nuts, washers and end cover.
2. Remove pump head from seal housing. Remove "O"-rings from body grooves.
3. Push impeller from body bore.

ASSEMBLY:

4. Install new impeller in lubricated body bore by grasping hub and with a rotary motion push it into the body bore. Replace "O"-rings in body grooves.
5. Position the body over the through bolts against the seal housing.
6. Install end cover and secure with washers and wing nuts.

TO REPLACE SEAL ASSEMBLY

DISASSEMBLY:

7. Follow Steps 1, 2, and 3.
8. Remove seal housing. Insert screwdriver through seal seat bore and pry seat and grommet from seal housing.
9. Remove seal and seal spring from shaft.

ASSEMBLY:

10. Install seal spring on shaft against shaft washer. Lubricate seal with water and slide on shaft with carbon facing away from spring.
11. Install ceramic seal seat in grommet with grooved face towards grommet. Lubricate outer grommet surface with water and push seal seat assembly into seal housing with ceramic seal facing out of seal seat bore. Assemble seal housing over through bolts so seal and seat faces contact.
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. Use a thin screwdriver blade to pry inner bearing seal from pedestal. Use retaining ring pliers to remove retaining ring.
15. Press on drive end of shaft to remove shaft and bearing assembly from pedestal.
16. Use thin screwdriver blade to pry outer bearing seal from pedestal.
17. Support inner face of one bearing and press shaft through and out of bearing. Reverse shaft, support inner face of second bearing and press shaft through and out of bearing.

ASSEMBLY:

18. Support inner face of ball bearing, press shaft through bearing until shaft shoulder bottoms firmly against bearing inner face. Reverse shaft and repeat procedure to assemble second bearing on shaft.
19. Push shaft and bearing assembly into bearing housing from body end, secure with retaining ring in housing.
20. Press inboard bearing seal in bearing housing with lip facing impeller bore.
21. Press outboard bearing seal in bearing housing with lip facing outwards.
22. Assemble balance of pump parts following Steps 10, 11, and 12.



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