



SELF-PRIMING, FLEXIBLE IMPELLER PUMP and MOTOR UNITS

OPERATION AND
SERVICE GUIDE
O-615B
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MODELS	PRICE CODE NO.
1JEESNIH	48-0085
1JEESVH	48-0086
1JEESNH	48-0087

WARNING: Do not pump solvents, thinners, or gasoline, as explosion may result causing property damage, severe personal injury or death.

Refer to Bulletin P-617 and Parts List P-2080

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 materials 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.**

OPERATING INSTRUCTIONS

1. INSTALLATION

Pedestal mounted 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. See note 9 of assembly instructions.

2. DRIVE

Belt or direct with flexible coupling for pedestal mounted unit. 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.

If pulley or coupling must be pressed on shaft, remove end cover and impeller to support shaft from impeller end during press operation. Do not hammer pulley or coupling on shaft; this may damage bearing or seal.

WARNING: Exposed pulley and belt can cause injury. Install shield around pulleys and belts.

3. SPEEDS

100 RPM to the maximum 1750 RPM. For longer pump life, operate at lowest possible speeds. Lower speeds are required for viscous liquids. Contact the Application Engineering Department for proper speed and HP requirements.

4. SELF-PRIMING

Primes at low or high speeds. For vertical dry suction lift of 10 feet, a minimum of 860 RPM is required. Pump will produce suction lift up to 22 feet when wetted. **BE SURE SUCTION LINES ARE AIRTIGHT OR PUMP WILL NOT SELF-PRIME.**

5. RUNNING DRY

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

6. DISCHARGE

When transferring liquids further than 25 feet, use discharge line one size larger than discharge port size.

7. NOTICE

If corrosive fluids are handled, pump life will be prolonged if flushed with a neutralizing solution after each use or at the end of each work day. An optional tungsten carbide seal is available for pumping liquids that contain abrasives or are highly corrosive. Consult a chemical resistance chart or Application Engineering Department for further information.

8. TEMPERATURE

The operating temperature limits of the pump depend on the impeller compound. The following ranges apply:

Neoprene — 45° to 180°F (7° to 82°C)

Nitrile — 50° to 180°F (10° to 82°C)

Viton — 60° to 180°F (15° to 82°C)

9. SPARE PARTS

To avoid costly shutdown, keep a spare impeller, seal and 'O'-ring set on hand.

SERVICE INSTRUCTIONS

DISASSEMBLY

1. Remove the four end cover screws. Remove end cover and 'O'-ring.
2. Remove the four screws holding the body to the housing flange. Slide body, complete with impeller, from pedestal and shaft.
3. Remove mechanical seal by inserting two screwdrivers behind seal collar and gently lever collar and seal assembly forward on shaft. Use extreme care not to mar shaft surface. Remove seal seat and rubber cup.
4. From the drive end of the bearing housing, pry out bearing seal by inserting a screwdriver blade between OD of the seal and housing. Remove retaining ring. Very carefully withdraw shaft and bearing assembly.
5. Remove inner bearing seal and retaining ring.
6. To remove bearings from shaft, an arbor press is required. If an arbor press is not available, then a bearing extractor may be used. Supporting inner race of bearing, apply a steady pressure on shaft until bearing slides free. Repeat this procedure to remove second bearing.
2. Fit retaining ring and bearing seal into impeller end of bearing housing. Spring on bearing seal to face outwards.
3. Apply bearing grease around and between bearings, filling cavity between bearings two thirds full. Smear grease on shaft where bearing seal locates. Push shaft and bearing assembly into bearing housing.
4. Replace retaining ring and outer bearing seal with spring facing outwards.
5. Replace mechanical seal by sliding spacer onto shaft up to locating shoulder. Then smear shaft with light lubricating oil. Push on seal gently until it engages with spacer. Fit rubber cup and seal seat.
6. Insert impeller in pump body, fit 'O'-ring in each end of the pump body.
7. Slide body assembly over shaft. Fit body to pedestal screws.
8. Fit end cover and end cover screws.
9. Changing pump rotation:
Clockwise Rotation:
Install impeller in pump body with blades bending counterclockwise.
Counterclockwise Rotation:
Install impeller in pump body with blades bending clockwise.

ASSEMBLY

1. To replace bearings on shaft, support ball bearing on its inner race and locate shaft onto bearing. Apply a steady pressure to the shaft until bearing locates against shoulder on shaft. Repeat for second bearing.



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