JABSCO®

# Model: 17640-SERIES



## CENTRIFUGAL PUMPS

### FEATURES

| | |
|---|---|
| **Pump Material:** | Glass Filled Epoxy |
| **Impeller Design:** | Semi-Open, 4½", 4", 3½" diameter |
| **Shaft Seal:** | Balanced Mechanical: Carbon on Ceramic, with Viton* Lip Seal |
| **Suction Port:** | 1½" NPT Internal<br>2" ID Slip-on Hose External |
| **Discharge Port:** | 1" NPT Internal<br>1¾" Slip-on Hose External |
| **Maximum Fluid Temperature:** | 200°F. (93°C) |
| **Motor:** | 1, ¾, or ½ HP<br>NEMA "C" Face, 115/230 VAC.<br>1 phase, 3450 RPM, 60 Hz. Open drip-proof or TEFC, Class "B" insulation, Thermal Overload Protection, Three Prong Plug for 115 VAC Operation. |
| **Weight:** | 20½ lb (9,35 kg ) |

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### STANDARD MODELS

| Impeller Size | Motor HP | Model Number | |
|---|---|---|---|
| | | Open Motor | TEFC Motor |
| 4½" | 1 | 17640-2000 | 17640-2001 |
| 4" | ¾ | 17640-2006 | 17640-2007 |
| 3½" | ½ | 17640-2012 | 17640-2013 |

## APPLICATIONS

These close-coupled centrifugal motor pump units are designed especially for handling a variety of corrosive fluids. Their high quality and rugged construction make them suitable for a wide range of fluid circulation and transfer applications within their hydraulic limitations. No metal parts come into contact with the fluid being pumped. The glass-filled epoxy pump handles corrosive fluids, photo chemicals, plating solutions, liquid fertilizer, caustic solutions, brine solutions and many others. See the "Jabsco Chemical Resistance Table" or consult the factory for complete listing of chemical applications.

**INDUSTRIAL** – fluid transfer, circulation, filtration, drainage, and water supplies (non-sanitary).

**OEM** – cooling or heating circulation equipment, distilled water circulation, laboratory equipment, electroplating filters. water treatment facilities, dispensers, laundry equipment, car washes, etc.

## INSTALLATION

**LOCATION** – Pumps with TEFC motors may be mounted in any position. Pumps with open drip-proof motors should be suitably mounted to prevent moisture from entering motor. Volute may be removed and rotated to any one of eight different port positions to simplify piping. If the pump is to be mounted above the liquid level, provisions must be made to assure that the suction line and pump cavity is flooded before starting pump.

**THIS PUMP WILL NOT SELF PRIME!** To prevent cavitation and obtain maximum service life, it is important that due consideration be given to the pump's NPSH characteristics. Factory application engineering assistance is available.

For inlet pressure over 20 PSI, consult the factory for assistance.

**PLUMBING** – All piping to the pump must be supported independently of the pump. **Use only plastic fittings in the suction and discharge ports. Metal fittings may damage threads in pump ports.**

Keep suction and discharge lines as free of elbows and bends as possible. To assure optimum performance, suction port line should be straight for a minimum length of 12" without elbows or reducers.

Suction line must be airtight to maintain prime. A flap type foot valve at the suction intake or a check valve in the discharge line may be installed to retain liquid in system during shutdown. An auxiliary prime line may be installed by drilling and tapping boss on volute face (see dimensional detail).

(Cont'd.)

## INSTALLATION (Cont'd.)

**FLUSH GLAND PLUMBING:** Film leakage of fluid at the seal serves to lubricate the seal. Flush gland seal housing may be flushed to prevent accumulations of caustic or corrosive fluid crystals. Plumb wash and drain lines with 1/8" - 27 NPT plastic fittings, to both sides of the seal housing flush gland. **Flush pressure should not exceed 5 PSI.**

**WIRING** - Pump motors are factory wired with a 115 Vac three-prong plug. Consult the motor wiring connection diagram below for 230 Vac motor connection.

**OPERATION – Pump must be primed before starting.** Continuous dry operation will damage seal. Start flow thru flush gland on models so equipped before starting pump motor.

### MOTOR CONNECTIONS

| LOW VOLTAGE (115V) | HIGH VOLTAGE (230V) |
|---|---|
| L1 —●<br>●<br>●— V (9)<br>L2 —●— Blk (2) | L1 —●<br>●— V (9)<br>●— Blk (2)<br>L2 —● |

## PUMP PERFORMANCE CHARACTERISTICS

### HORSEPOWER ADJUSTMENTS DUE TO CHANGES IN SPECIFIC GRAVITY

The performance curves on this data sheet are based on water at 68°F. The Head Curves may be read directly when the fluid in question has approximately the same viscosity as water. Note, however, that the horsepower requirement curve must be compensated according to the following instructions.

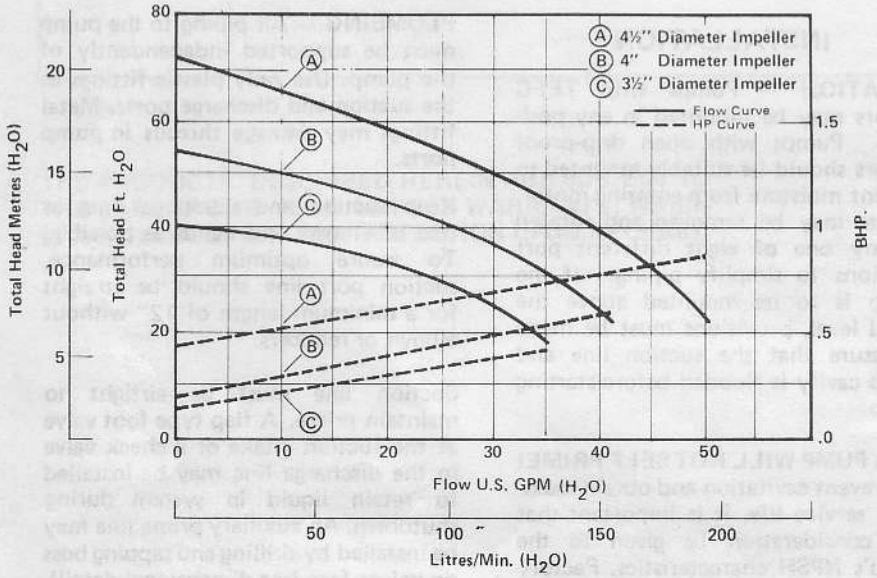
The specific gravity of a liquid other than water must be known to determine the required motor horsepower. The relationship between this power requirement and specific gravity is linear and may be expressed by the following formula:

BHP* x Specific Gravity = Required HP**

* Horsepower read directly from curves below.

** Consult the factory for assistance when the required horsepower to pump the liquid in question exceeds the rated horsepower of the Motor Pump Unit (see table on front page).

### HEAD FLOW CURVES




### GAUGE CORRECTIONS DUE TO CHANGES IN SPECIFIC GRAVITY

Normally gauges are graduated in PSI. With changes in specific gravity, the gauge readings will change. If the discharge pressure is known for a liquid other than water, it must be converted to feet of water before the "water curves" can be used to determine the flow. Use this formula for conversion:

$$\frac{*\text{PSI} \times 2.31}{\text{Specific Gravity}} = \text{Feet of Water}$$

*Pressure measured at pump discharge port in PSI.

The converted head figure may now be applied to the "water curves" in order to determine the flow. Remember, however, the curves indicate total head which means the sum of both inlet and discharge pressure.

**VISCOSITY:** Pump performance is directly affected when handling viscous liquids. A distinct increase in liquid HP, a reduction in Head, and some reduction in capacity will occur with moderate and high viscosity fluids. When accurate information is required, performance tests under actual conditions should be conducted. It is recommended that fluid viscosity be limited to a maximum of 460 SSU or 100 Centipoise. Consult the factory for assistance when more viscous fluids must be handled.

For technical advice or service please take your pump into your local pump service center.
To order pump or parts or for pricing please go to the following links :

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