



DRUM PUMPS


FEATURES

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| Tube: | Stainless Steel and Tefzel |
| Impeller: | Centrifugal Type, Tefzel |
| Shaft: | 316 SS |
| Seal: | Sealless with PTFE Vapor Barrier |
| Port: | 1 inch Dia. Slip-on Hose Discharge |
| Weight: | 7.5 lb (3,4 kg) average for 16410-series |

APPLICATIONS

Designed for emptying containers, carboys, drums, and vats. Easily handles corrosive liquids.

⚠ WARNING **Explosion hazard. When product is used in areas where flammable liquids or vapors are present, appropriate explosion proof motor or air motor must be used. If warning is ignored, explosion causing property damage, severe personal injury or death can occur.**



Refer to paragraph 10 of the Operating Instructions section for further information. Refer to the Chemical Resistance Table in the JABSCO Industrial Catalog (form 43001-0075) for assistance in selecting the most suitable pump material. The catalog is available upon request from ITT Jabsco.

OPERATING INSTRUCTIONS


- General:** When operating the JABSCO drum pump protective clothing, gloves, and safety glasses should be worn. All standard safety practices should be followed.
- Installation:** Pump may be mounted through bung hole in drums, on side of vats and tanks, and through top of carboys. Barrel Adaptors are available to hold pump in stationary or rigid position. Use JABSCO part no. 18753-0080. When inserting drum pump into barrel, vat or drum slowly lower pump into container to avoid spills. Correct pump length should be selected for container with which pump is to be used.
- Drive:** An electric motor (16420-series) and an air motor (16440-0000) are available to drive the drum pump. Both readily fit on the drive end of the pump. Refer to the motor data sheets for details (forms 43000-0468 and 43000-0469).

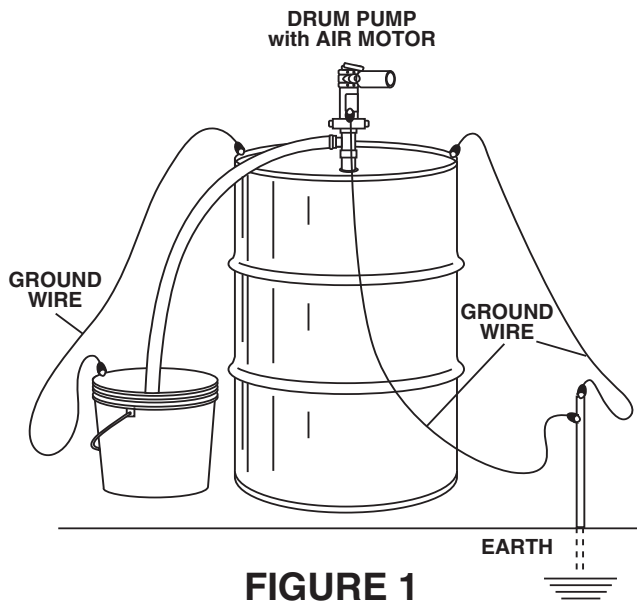
VARIATIONS AVAILABLE

| Model No. | Description |
|------------|--------------------------------------|
| 16410-3270 | 27" (68cm) long, stainless steel |
| -3350 | 35-1/2" (90cm) long, stainless steel |
| -3400 | 40" (102cm) long, stainless steel |
| -3470 | 47" (119cm) long, stainless steel |


- Running Dry:** Unit has been designed for limited run dry capacity. Do not run dry for more than 30 minutes. Lack of liquid will eventually damage bearings and other pump parts.
- Discharge Line:** A 1" dia. barbed hose fitting has been provided on the drum pump. A tightly secured hose clamp must be used to hold the discharge hose on the discharge fitting. It is recommended that smooth bore hose of a material compatible with the fluid pumped be used as a discharge hose. Adequately secure discharge end of hose to prevent hose from whipping when pump is started.
- NOTICE:** When corrosive fluids are handled, pump life will be prolonged if pump is flushed with a neutralizing solution after each work day. For further information, consult JABSCO Chemical Resistance Table (available upon request from ITT JABSCO) or factory.
- Pressures:** The drum pump is designed to operate in containers open to the atmosphere, therefore maximum inlet pressure is atmospheric pressure (0 psig, 0 bar). For higher inlet pressure applications consult factory.
- Temperatures:** Stainless steel pumps are suitable for service 32°–200° F (0°–93° C).

9. **Storage:** When not in use store drum pump on wall bracket with impeller end in down position to allow full drainage. Use JABSCO part no. 16470-0000.
10. **Static Charge:** Certain fluids when pumped create a static electrical charge. Should this static charge discharge across a gap between the pump tube and the fluid container or another object in an area where flammable vapors are present an explosion and death may occur. Grounding wires must be attached as shown in Figure 1. Use JABSCO part no. 16471-000.

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|  | <p>WARNING</p> <p>Potential static electrical charge. Extreme care should be taken when using a drum pump to pump flammable or explosive liquids or in a hazardous environment. Use only a UL rated explosion proof electric motor or an air motor and a metal drum pump tube for this application. The motor, pump tube and container must be equipped with grounding wires. If warning is ignored, explosion causing property damage, severe personal injury or death can occur.</p> |
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11. **Flow Regulation:** In applications such as filling small containers where low flow rates are required to avoid splashing of liquid an adjustable nozzle is available. Use JABSCO part no. 18753-0077.
12. **Dirt and Abrasive Particles:** It is strongly recommended that when pumping any materials containing dirt or abrasive particles a strainer be used. Strainers are available as an option. Use JABSCO part no. 16490-1001 (tefzel).
13. **Performance Limits:** A maximum specific gravity of 1.8 or viscosity of 3500 ssu (750 cp) is the recommended limit for normal use. Contact factory for further information.
14. **Spare Parts:** Use JABSCO service parts for replacement and repair.

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|  | <p>WARNING</p> <p>Chemical hazard. Pumps which have handled corrosive, caustic or toxic fluids should be drained and completely flushed prior to servicing. Failure to do so can cause injury.</p> |
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DISASSEMBLY

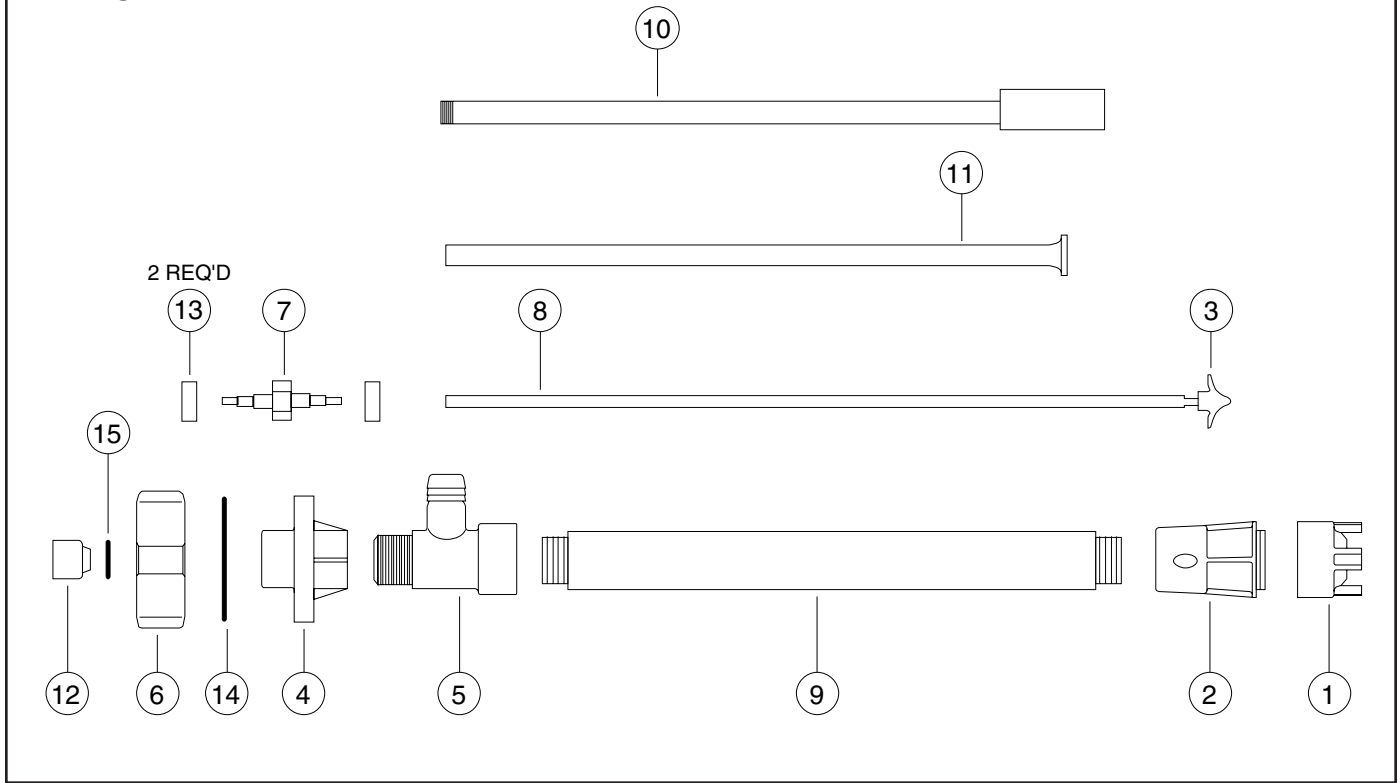
1. Unscrew and remove impeller housing.
2. Holding the shaft at the flat area near the impeller with a 7/32" (6 mm) wrench, (provided with pump), use the four pegs on bottom of the impeller housing as a wrench and unscrew and remove the impeller. This is a right-hand thread connection as are all connections on the JABSCO drum pump.
3. Unscrew and remove the conversion chamber.
4. Unscrew and remove the outer tube.
5. Slide the short inner tube off the shaft and shaft guide.
6. Slide the shaft guide off the shaft.
7. Unscrew and slide the long inner tube off the shaft.
6. Unscrew and remove the inner tube from the discharge port housing.
9. Gently pull the insert tube from the inner tube.
10. Unscrew and remove the discharge port housing.

11. Remove the retaining ring from the mounting ring.
12. Slip mounting ring from bearing housing.
13. Remove motor coupling from bearing shaft by inserting screwdriver into slot of bearing shaft and rotating coupling counterclockwise.
14. Remove bearing retaining ring from bearing housing.
15. Pull bearing shaft and bearings from bearing housing.
16. Press bearings off shaft.

ASSEMBLY

1. Press bearings on bearing shaft.
2. Insert bearing shaft and bearings into bearing housing.
3. Install bearing retaining into bearing housing.
4. Screw motor coupling onto bearing shaft while holding shaft from rotating with screwdriver in the slot provided. This is a right-hand thread connection as are all connections on the JABSCO drum pump.
5. Slip mounting ring on bearing housing.
6. Insert retaining ring into mounting ring.
7. Screw discharge port housing to bearing housing taking care that lip seal is positioned correctly on bearing shaft, and not damaged during assembly.
8. Install shaft by screwing onto bearing shaft by turning bearing shaft with screwdriver while holding shaft.
9. Slide the long inner tube onto the shaft and screw into the discharge port housing.
10. Slide the shaft guide onto the shaft and up into the inner tube.
11. Slide the short inner tube onto the shaft and onto the shaft guide.
12. Screw outer tube into discharge port housing.
13. Screw the conversion chamber to the outer tube.
14. Install impeller onto shaft and tighten using the four pegs on the impeller housing as a wrench while holding shaft with a 7/32" (6 mm) wrench.
15. Screw impeller housing to conversion chamber. Do not operate pump without impeller housing installed.

EXPLODED VIEW



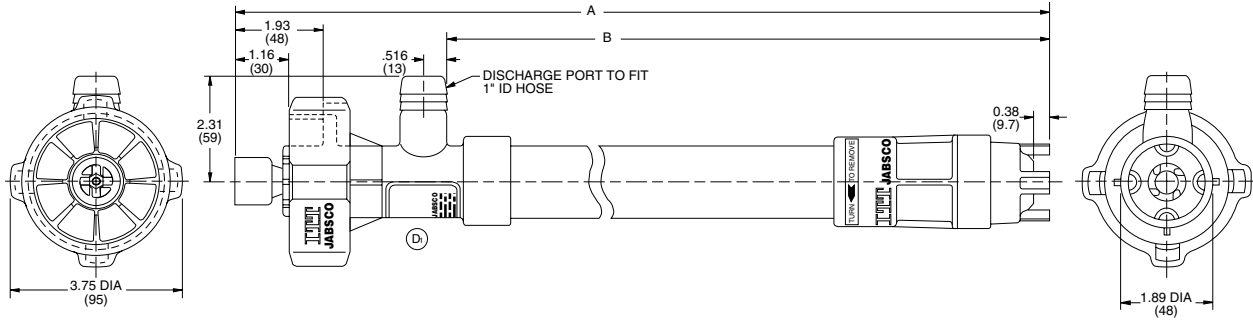
PARTS LIST

| Key | Description | Quantity Required | 16410-3270 | Model 16410-3350 | Model 16410-3400 | Model 16410-347 |
|-----|-------------------------|-------------------|------------|------------------|------------------|-----------------|
| 1 | Impeller Housing | 1 | 16406-0001 | 16406-0001 | 16406-0001 | 16406-0001 |
| 2 | Conversion Chamber | 1 | 16407-1011 | 16407-1011 | 16407-1011 | 16407-1011 |
| 3 | Impeller | 1 | 16508-1000 | 16508-1000 | 16508-1000 | 16508-1000 |
| 4 | Bearing Housing | 1 | 16403-0010 | 16403-0010 | 16403-0010 | 16403-0010 |
| 5 | Discharge Port Housing* | 1 | 16503-0001 | 16503-0001 | 16503-0001 | 16503-0001 |
| 6 | Mounting Ring | 1 | 16409-0000 | 16409-0000 | 16409-0000 | 16409-0000 |
| 7 | Bearing Shaft** | 1 | 16468-0000 | 16468-0000 | 16468-0000 | 16468-0000 |
| 8 | Shaft | 1 | 16418-1006 | 16418-1007 | 16418-1011 | 16418-1008 |
| 9 | Outer Tube | 1 | 16461-0000 | 16461-0001 | 16461-0003 | 16461-0002 |
| 10 | Inner Tube | 1 | 16462-1000 | 16462-1001 | 16462-1003 | 16462-1002 |
| 11 | Insert Tube | 1 | 16463-0000 | 16463-0001 | 16463-0003 | 16463-0002 |
| 12 | Drive Coupling | 1 | 18753-0445 | 18753-0445 | 18753-0445 | 18753-0445 |
| 13 | Bearing** | 2 | 18753-0182 | 18753-0182 | 18753-0182 | 18753-0182 |
| 14 | Retaining Ring | 1 | 91701-4447 | 91701-4447 | 91701-4447 | 91701-4447 |
| 15 | Retaining Ring | 1 | 91701-4434 | 91701-4434 | 91701-4434 | 91701-4434 |

* Vapor Barrier is available as a kit, part no. 18753-0436.

** Shaft/Bearing Assembly is available as a kit, part no/ 18753-0316

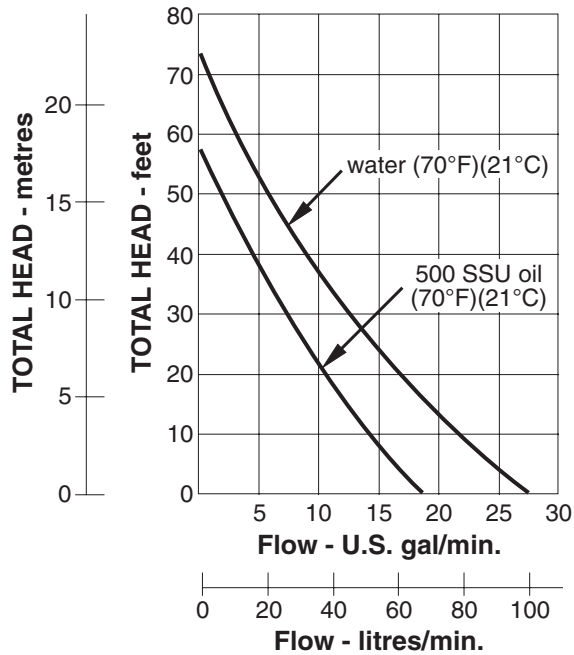
DIMENSION DRAWING INCHES (MILLIMETRES)



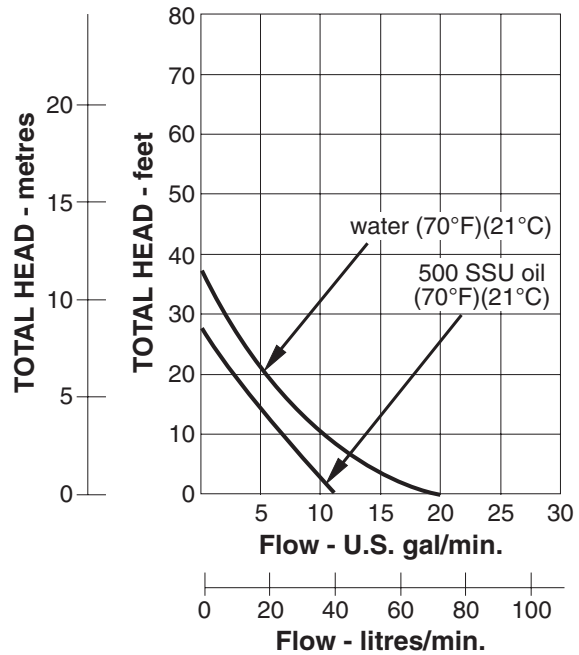
DIMENSIONS A & B

| Model | 16410-3270 | 16410-3350 | 16410-3400 | 16410-3470 |
|-------|----------------|----------------|----------------|-----------------|
| A | 31-19/32 (802) | 40-3/32 (1018) | 44-7/32 (1123) | 51-19/32 (1310) |
| B | 27 (686) | 35-1/2 (902) | 39-5/8 (1006) | 47 (1194) |

PERFORMANCE TABLES



Pump tube with electric motor.



Pump tube with air motor operating at 80 psi (5.5 bar) inlet air pressure to motor.

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THE PRODUCTS DESCRIBED HEREIN ARE SUBJECT TO THE JABSCO ONE YEAR LIMITED WARRANTY, WHICH IS AVAILABLE FOR YOUR INSPECTION UPON REQUEST.