

## **Jabsco Pumps 30560-0102**

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#### SELF-PRIMING PUMPS

#### **FEATURES**

**Pump Type:** Pedestal Pump Body: 316 Stainless Steel Impeller: Neoprene or EPDM

**Shaft Seal:** Mechanical; Carbon-on-Ceramic

or Tungsten Carbide; Nitrile

1" ACME Threads with Bevel Seat Ports:

or Clamp Type

Shaft: 316 Stainless Steel Weight: 8.5 lb (3.9 kg) Approx.

#### **APPLICATIONS**

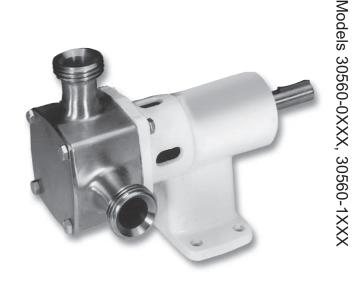
**DAIRY:** Transfer and processing of raw milk, cream, milk whey, buttermilk, condensed milk.

FOODS: Processing of eggs, sugar liquors, brines, catsup, chocolate, glaze, gelatin, honey, jams, jellies, mayonnaise, molasses, mustard, pickle relish, vinegar, water, yeast slurries, syrups, liquids containing solids in suspension such as chopped tomatoes, nuts, peanut butter.

BEVERAGE: Circulating and transferring alcohols, beers, brewery slop, cider, distillery wort, extracts, flavors, juice, mash, soft drink syrups, wines.

PHARMACEUTICAL: Moving medicines, cosmetics, process chemicals, lotions, preparations, filtering solutions, used as a filling line supply pump.

N.B. 3A option to include Elastomers: EPDM and Neoprene. Ports: Tri-Clamp, IDF, 3A and DIN11851.



#### VARIATIONS AVAILABLE

| Model      | Description   |
|------------|---|
| 30560-0005 | Standard Pressure, Neoprene<br>Impeller, Carbon Seal, ACME Ports            |
| 30560-0015 | High Pressure, Neoprene Impeller,<br>Carbon Seal, ACME Ports                |
| 30560-0105 | Standard Pressure, Neoprene Impeller,<br>Tungsten Carbide Seal, ACME Ports  |
| 30560-0115 | High Pressure, Neoprene Impeller,<br>Tungsten Carbide Seal, ACME Ports      |
| 30560-1005 | Standard Pressure, Neoprene<br>Impeller, Carbon Seal, Clamp Ports           |
| 30560-1015 | High Pressure, Neoprene Impeller,<br>Carbon Seal, Clamp Ports               |
| 30560-1105 | Standard Pressure, Neoprene Impeller,<br>Tungsten Carbide Seal, Clamp Ports |
| 30560-1115 | High Pressure, Neoprene Impeller,<br>Tungsten Carbide Seal, Clamp Ports     |



Explosion hazard. Do not pump gasoline, solvents, thinners or other flammable liquids. To do so can cause an explosion resulting in injury or death.

#### OPERATING INSTRUCTIONS

- 1. 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 dimensional drawing.) Pump is normally assembled at factory for clockwise rotation looking at end cover. If counterclockwise rotation is desired, follow steps 1 and 2 of disassembly and step 9 of assembly instructions to change direction of impeller blade deflection under cam.
- 2. **DRIVE** Belt or direct with flexible coupling. Belt Drive: Overtight belt load will reduce pump bearing life.



Injury hazard. Exposed pulleys and belts can cause injury. Install shield around pulleys and belts. Stay clear while machinery is operating.

Direct Drive: Clearance should be left between Pumps 30560-0102 WITH CARE. DO NOT DROP OR drive shaft and pump shaft when installing coupling MISHANDLE.

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Always mount and align pump and 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.

Three phase capacitor start motor is required to overcome starting torque of impeller.

- 3. SPEEDS 100 RPM to the maximum shown in the performance curves. For longer pump life, operate at lowest possible speeds. Lower speeds are required for viscous liquids. Consult the factory for proper speeds and horsepower requirements.
- **4. SELF-PRIMING** Primes at low or high speeds. For vertical dry suction lift of 10 feet (neoprene) - 7 feet (EPDM), a minimum of 860 RPM is required. Pump will produce suction lift up to 22 feet when wet.

BE SURE SUCTION LINES ARE AIRTIGHT OR PUMP WILL NOT SELF-PRIME.

- 5. DISCHARGE When transferring liquids further than 25 feet, use one size larger discharge line than discharge port size.
- 6. 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.
- 7. PUMPAGE COMPATIBILITY Consult the Chemical Resistance Guide in the JABSCO Industrial Pump Catalog (available upon request from the factory) for proper body materials and impeller compounds. If corrosive fluids are handled, pump life will be prolonged if pump is flushed with a neutralizing solution after each use or after each work day. A Tungsten Carbide Seal variation is available for pumping liquids that contain abrasives or are highly corrosive.
- 8. PRESSURES Consult Performance Curves for maximum recommended pressures for pump in continuous operation. If pressures exceed those shown, consult the factory.
- 9. **TEMPERATURES** The operating temperature limits of the pump depend on the impeller compound. The following ranges apply:

Neoprene - 45° to 150° F (7° to 65° C) EPDM - 45° to 185° F (7° to 85° C).

10. CLEANING - Before using pump, it should be disassembled and cleaned to remove any dust and dirt resulting from storage or shipping. Wash parts in standard cleaning solutions approved for handling stainless steel. Thoroughly rinse before reassembly.

DO NOT USE IODINE BASED SANITIZERS as the iodine attacks the elastomer materials used in the impeller.

All parts have been expertly machined and polished.

#### N.B Do not clean with Phosporic Acid

**11. IMPELLER TORQUE –** The torque required to initiate rotation of a new impeller in a dry pump body is:

#### Standard Pressure Impeller (14346-Series):

Forward = 1.5 pounds force – feet

Reverse = 4.3 pounds force – feet

High Pressure Impeller (8983-Series):

Forward = 3.0 pounds force – feet

Reverse = 6.0 pounds force - feet

These values may vary slightly due to impeller compounding, blade set, and body material of construction. Consult factory for more information.

12. SPARE PARTS - To avoid costly shutdowns, keep a spare JABSCO impeller, seal and O-ring set on hand.

#### SERVICE INSTRUCTIONS

#### **DISASSEMBLY**

- Remove the four end cover screws. Remove end cover and O-ring.
- 2. Remove the four screws, holding the body to the bearing housing flange. Slide body, complete with impeller and wearplate, from pedestal and shaft assembly.
- 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 from recess in wearplate.
- 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.

#### **ASSEMBLY**

- 1. To replace bearing 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.
- 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 aced with the spring facing outwards

spring facing outwards.

www.PumpAgents.com - Click here for the spring facing outwards.

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 into wearplate.

- 6. Insert impeller in pump body, fit O-ring in each end of the pump body. Fit wearplate to body.
- 7. Slide wearplate and body assembly over shaft, position wearplate in housing. Fit body to pedestal with screws. Torque screws to 10 in. lbs.

NOTE: A gap should be maintained between bearing housing and body. DO NOT overtighten screws.

- 8. Fit end cover and end cover screws. Torque screws to 60 in. lbs.
- 9. Changing Pump Rotation (looking at end cover):

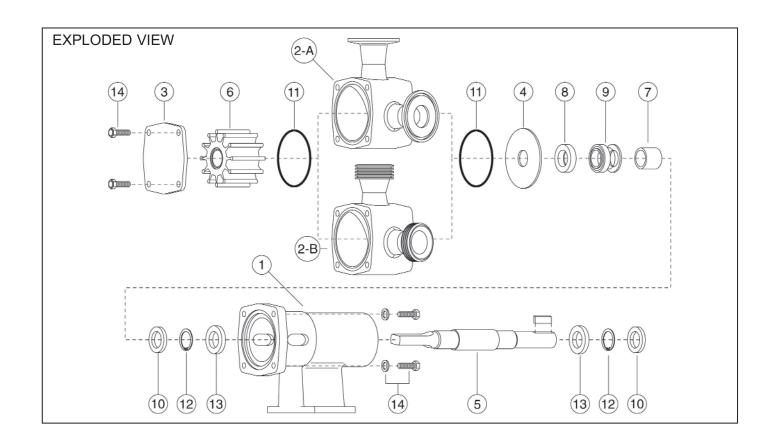
#### Clockwise Rotation:

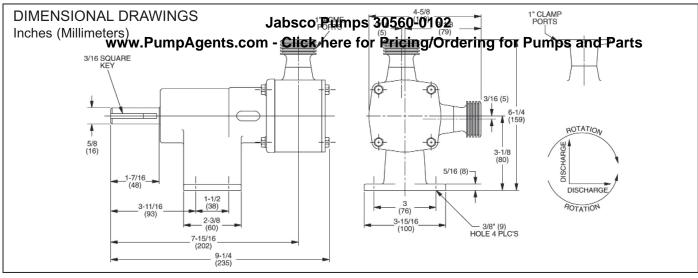
Insert impeller into pump body with blades bending counterclockwise

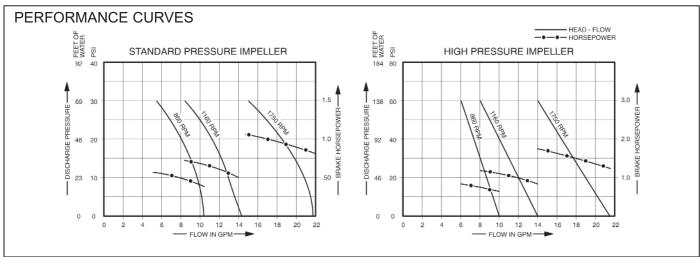
#### Counterclockwise Rotation:

Insert impeller into pump body with blades bending clockwise.

| or P                       | ricing/Ordering for Pumps by Description | and F<br>Qty. | Parts Part<br>Number |  |  |
|----------------------------|--|---------------|----------------------|--|--|
| 1                          | Bearing Housing                          | 1             | 18753-0184           |  |  |
| 2                          | Body:                                    | 1             |                      |  |  |
|                            | 2-A. Clamp Ports                         |               | 18753-0359           |  |  |
|                            | 2-B. ACME Ports                          |               | 18753-0360           |  |  |
| 3                          | End Cover                                | 1             | 18753-0361           |  |  |
| 4                          | Wearplate                                | 1             | 18753-0200           |  |  |
| 5                          | Shaft                                    | 1             | 18753-0205           |  |  |
| 6                          | Impeller:                                | 1             |                      |  |  |
|                            | Standard Pressure - Neopre               | ene           | 8981-0005            |  |  |
|                            | Standard Pressure - EPDM                 |               | 8981-0002            |  |  |
|                            | High Pressure - Neoprene                 |               | 8840-0005            |  |  |
|                            | High Pressure - EPDM                     |               | 8840-0002            |  |  |
|                            | High Pressure - Nitrile                  |               | 8840-0006            |  |  |
| 7                          | Spacer                                   | 1             | 18753-0225           |  |  |
| 8                          | Seal Seat: Ceramic - Nitrile             | 1             | 18753-0235           |  |  |
| 9                          | Seal Mech.:                              | 1             |                      |  |  |
|                            | Ceramic - Nitrile                        |               | 18753-0245           |  |  |
|                            | Tungsten Carbide - Nitrile               |               | 18753-0247           |  |  |
| 10                         | Bearing Seal                             | 2             | 18753-0258           |  |  |
| 11                         | O-Ring: Nitrile                          | 2             | 18753-0263           |  |  |
| 12                         | Retaining Ring                           | 2             | 18753-0270           |  |  |
| 13                         | Bearing                                  | 2             | 18753-0274           |  |  |
| 14                         | Screw Kit:                               | 1             | 18753-0281           |  |  |
|                            | Consists of                              |               |                      |  |  |
| Screw, Hex Hd. M8x20mm (4) |  |               |                      |  |  |
| Screw, Pan Hd. M8x14mm (4) |  |               |                      |  |  |
|                            | Washer, Flat M8 (4)                      |               |                      |  |  |







NOTE: Curves show approximate head flow for new pumps with neoprene impeller pumping water. Capacities should be reduced approximately 20% with high pressure EPDM impeller.

#### PUMP SPEED SELECTION ACCORDING TO PRODUCT VISCOSITY

| Viscosity<br>S.S.U. | Pump Speed (Max. RPM) | Viscosity<br>S.S.U. | Pump Speed<br>(Max. RPM) | Viscosity<br>S.S.U. | Pump Speed<br>(Max. RPM) | Viscosity<br>S.S.U. | Pump Speed<br>(Max. RPM) |
|---------------------|-----------------------|---------------------|--------------------------|---------------------|--------------------------|---------------------|--------------------------|
| 50                  | 1750                  | 700                 | 1680                     | 4,000               | 1400                     | 15,000*             | 787                      |
| 100                 | 1750                  | 800                 | 1645                     | 5,000               | 1312                     | 20,000*             | 700                      |
| 200                 | 1750                  | 900                 | 1610                     | 6,000               | 1225                     | 30,000*             | 612                      |
| 300                 | 1750                  | 1,000               | 1575                     | 7,000               | 1138                     | 40,000*             | 525                      |
| 400                 | 1750                  | 1,500               | 1540                     | 8,000               | 1050                     | 50,000*             | 437                      |
| 500                 | 1750                  | 2,000               | 1505                     | 9,000               | 962                      | 75,000*             | 298                      |
| 600                 | 1715                  | 3,000               | 1450                     | 10,000              | 875                      | 100,000*            | 175                      |

Consult factory for specific performance information. \*Use High Pressure Impeller.





## Hygienic Flexible Impeller Pumps

#### Stainless Steel Pedestal Pumps

#### **APPLICATIONS**

Hygienic flexible impeller pumps are especially useful where self-priming is required and are also very effective in pumping viscous or air-entrained food, cosmetic and pharmaceutical products. At lower speeds, they also handle delicate liquids very well owing to their gentle pumping action. Virtually any liquid with viscousity up to 20,000 cps can be pumped as long as there is chemical compatibility with the pump materials.

#### TECHNICAL DATA

| PUMP MODEL NUMBER              | 30550-0005  | 30560-0005  |
|--------------------------------|---|---|
| FLOW (1750 RPM, 10 Ft. Head)   | 10 GPM  | 20 GPM  |
| PORT SIZE                      | 1"  | 1"  |
| PORT TYPE                      | ACME Threaded   | ACME Threaded   |
| IMPELLER                       | Neoprene  | Neoprene  |
| SEAL SHAFT                     | Mechanical - C/C  | Mechanical - C/C  |
| BODY AND SHAFT MATERIAL        | 316 Stainless Steel   | 316 Stainless Steel   |
| SIZE (Heigth x Width x Length) | 5 <sup>3</sup> / <sub>4</sub> " x 4 <sup>1</sup> / <sub>4</sub> " x 7 <sup>1</sup> / <sub>2</sub> " | 6 <sup>1</sup> / <sub>4</sub> " x 4 <sup>3</sup> / <sub>4</sub> " x 9 <sup>1</sup> / <sub>4</sub> " |
| WEIGTH (Approx.)               | 5.5 lbs.  | 8.5 lbs.  |

#### Variations Available

30550-0015 HP Neoprene Impeller, C/C Seal, ACME Ports 30550-0105 SP Neoprene Impeller, TC/C Seal, ACME Ports 30550-0115 HP Neoprene Impeller, TC/C Seal, ACME Ports 30550-1005 SP Neoprene Impeller, C/C Seal, Clamp Ports 30550-1015 HP Neoprene Impeller, C/C Seal, Clamp Ports 30550-1105 SP Neoprene Impeller,

30550-1115 HP Neoprene Impeller, TC/C Seal, Clamp Ports

TC/C Seal, Clamp Ports

.75

#### Variations Available

30560-0015 HP Neoprene Impeller, C/C Seal, ACME Ports 30560-0105 SP Neoprene Impeller, TC/C Seal, ACME Ports

30560-0115 HP Neoprene Impeller, TC/C Seal, ACME Ports

30560-1005 SP Neoprene Impeller, C/C Seal, Clamp Ports 30560-1015 HP Neoprene Impeller,

C/C Seal, Clamp Ports 30560-1105 SP Neoprene Impeller, TC/C Seal, Clamp Ports

30560-1115 HP Neoprene Impeller. TC/C Seal, Clamp Ports

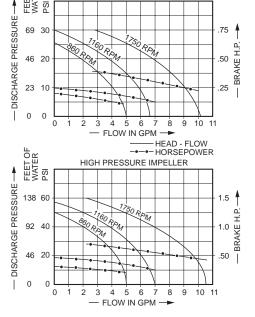
#### Head vs. Flow Chart

FEET OF WATER PSI

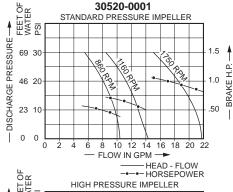
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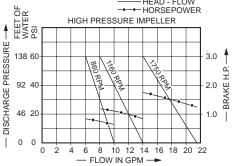
#### 30550-0005 30510-0001

STANDARD PRESSURE IMPELLER



#### 30560-0005





#### **FEATURES**

Hygienic flexible impeller pumps have the design features and materials suitable for pumping food products. cosmetics and pharmaceuticals.

#### Examples include:

- Gentle, low-shear action for delicate products.
- Type 316 stainless steel body, cover and shaft.
- All materials per FDA standards.
- 3A and USDA listed.
- Sanitary design external shaft mechanical seal.
- Either sanitary clamp or ACME bevel seat ports.
- Body may be rotated 360° to facilitate piping.
- Sanitary neoprene impellers in Standard Pressure (SP) and High Pressure (HP) are standard.
- Stanitary EPDM impellers in SP and HP for elevated temperature applications are available as options.



30550-0005



30560-0005

Performance curves show approximate flow in U.S. Gallons Per Minute for a new pump with a Neoprene Impeller. For Metric conversion of performance and dimensions, refer to Engineering Data. Use only capacitor-start motors with flexible impeller pumps

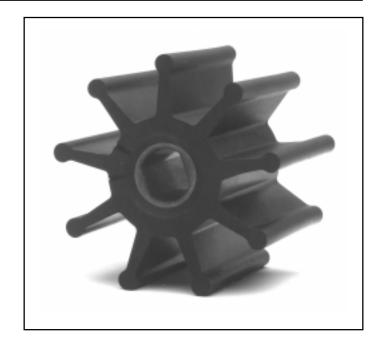


## Flexible Impeller Pump Accessories

#### **EPDM Impellers**

# This new impeller compound allows the extension of flexible impeller pump applications to 185° F.

Designed with a double flat drive to fit the industrial stainless steel, epoxy and hygienic pumps. Available in four sizes and in standard (SP) and high pressure (HP) ratings. Refer to the Flexible Impeller Reference Guide for more information.



#### Impeller Pullers

# These tools provide an easy way of removing flexible impellers from a pump's impeller bore.

Simply tighten the tool's grip fingers into the rubber hub of the impeller and turn the extraction screw clockwise to pull the impeller out of the pump.

The small puller is suitable for impellers with overall diameters from 2-1/4" to 2-9/16" (silhouettes K, L, M, W, X and Y). The large puller is suitable for impellers with overall diameters from 3-1/16" to 5" (silhouettes O, Q, R, U and Z).

Small Puller - 50070-0040 Large Puller - 50070-0200

