

Models 30570-2XXX, 30570-3XXX  
30570-4XXX, 30570-5XXX

## SELF-PRIMING PUMPS

### FEATURES

- Pump Type:** 30570-2XXX Pump Head  
30570-3XXX Pump Head  
30570-4XXX Close Coupled  
30570-5XXX Close Coupled
- Body:** 316 Stainless Steel
- Impeller:** Neoprene or EPDM
- Shaft Seal:** Mechanical; Carbon-on-Ceramic or Tungsten Carbide; Nitrile
- Ports:** 1-1/2" ACME Threads with Bevel Seat or Clamp Type
- Shaft:** 316 Stainless Steel
- Motor:** 230/460 Vac, 3 Phase, 60Hz, 5 HP  
1750 RPM, TEFC, C-Face, 184 TC Frame
- Weight:** 30570-2XXX 30.0 lb (18.6 kg) Approx.  
30570-3XXX 30.0 lb (18.6 kg) Approx.  
30570-4XXX 93.5 lb (42.5 kg) Approx.  
30570-5XXX 93.5 lb (42.5 kg) Approx.



Models 30570-2, 3, 4, 5XXX

### VARIATIONS AVAILABLE

| Model      | Description                           |
|------------|---------------------------------------|
| 30570-2005 | Standard Pressure, Neoprene Impeller, |
| 30570-4005 | Carbon Seal, ACME Ports               |
| 30570-2105 | Standard Pressure, Neoprene Impeller, |
| 30570-4105 | Tungsten Carbide Seal, ACME Ports     |
| 30570-3005 | Standard Pressure, Neoprene Impeller, |
| 30570-5005 | Carbon Seal, Clamp Ports              |
| 30570-3105 | Standard Pressure, Neoprene Impeller, |
| 30570-5105 | Tungsten Carbide Seal, Clamp Ports    |

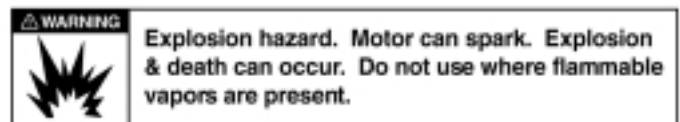
### APPLICATIONS

**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.

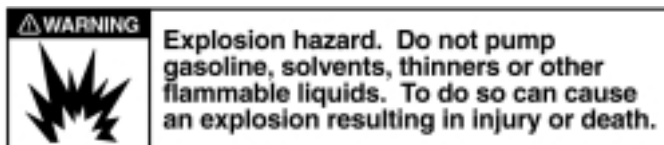
**BEVERAGE:** Circulating and transferring alcohols, beers, brewery slop, cider, distillery wort, extracts, flavors, juice, mash, soft drink syrups, wines.

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



### OPERATING INSTRUCTIONS

- 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.
- MOTOR SELECTION** – Pump Head is designed to fit a 184 TC Frame NEMA C-Face Motor. Motor should be rated 5 horsepower at 1750 RPM with a service factor of one. Due to high bearing loads, motor should be ball bearing equipped with the front bearing locked against axial movement. Motor should be capacitor start and foot mounted.
- 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.
- 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 wet.



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

- DISCHARGE - When transferring liquids further than 25 feet, use one size larger discharge line than discharge port size.
- 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.
- 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.
- PRESSURES – Consult Performance Curves for maximum recommended pressures for pump in continuous operation. If pressures exceed those shown, consult the factory.
- 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).
- IMPELLER TORQUE – The torque required to initiate rotation of a new impeller in a dry pump body is:
  - Standard Pressure Impeller (8981-Series):
    - Forward = 14.5 pounds force – feet
    - Reverse = 43.0 pounds force – feet

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

- 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. HANDLE WITH CARE. DO NOT DROP OR MISHANDLE.
- SPARE PARTS – To avoid costly shutdowns, keep a spare JABSCO impeller, seal and O-ring set on hand.

## SERVICE INSTRUCTIONS

### DISASSEMBLY

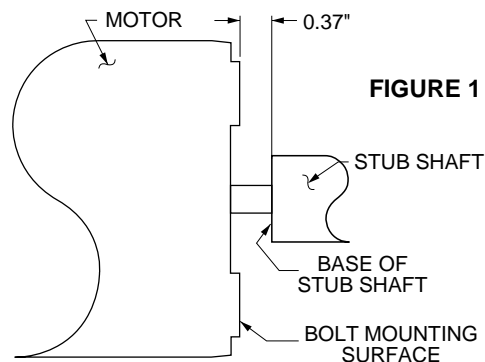
- Remove the four end cover screws. Remove end cover and O-ring.
- Remove the four screws, holding the body to the adapter flange. Slide body, complete with impeller and wearplate, from adapter and shaft.
- Remove mechanical seal by inserting two screwdrivers behind seal collar, and gently lever collar and seal assembly forward on shaft. Use extreme care not

to mar shaft surface. Remove seal seat and rubber cup from recess in wearplate.

- Remove the four screws holding the adapter to the motor and remove the adapter.
- Stub shaft is held in place with set screws and Loctite\* RC/680 retaining compound. Extreme care must be taken not to damage the motor shaft and bearings when removing the stub shaft. Heat shaft joint area to facilitate disassembly of set screws and stub shaft from motor shaft. DO NOT EXCEED 350° F when heating joint area. Once joint area has been heated, remove set screws and slide stub shaft from motor shaft.

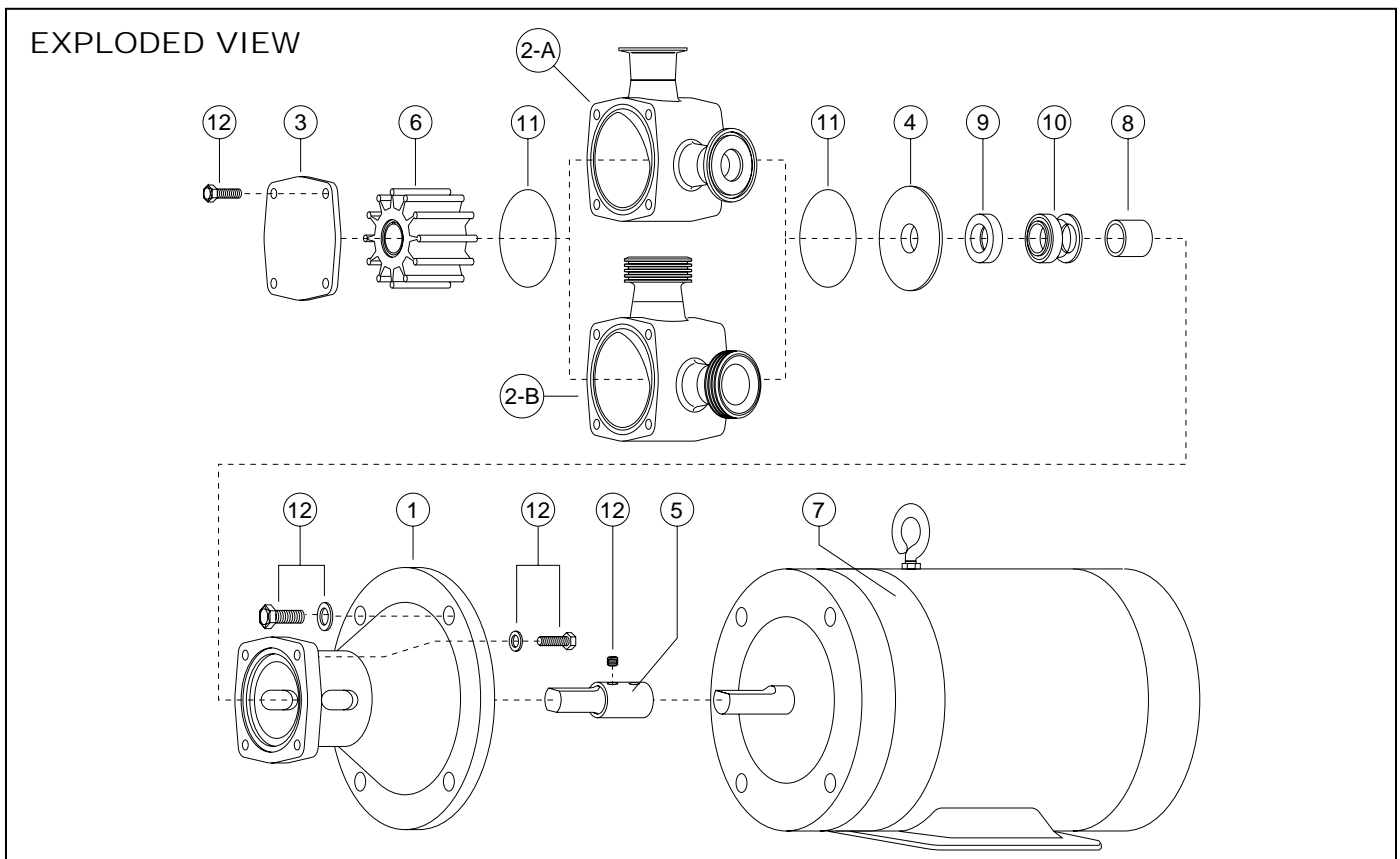
### ASSEMBLY

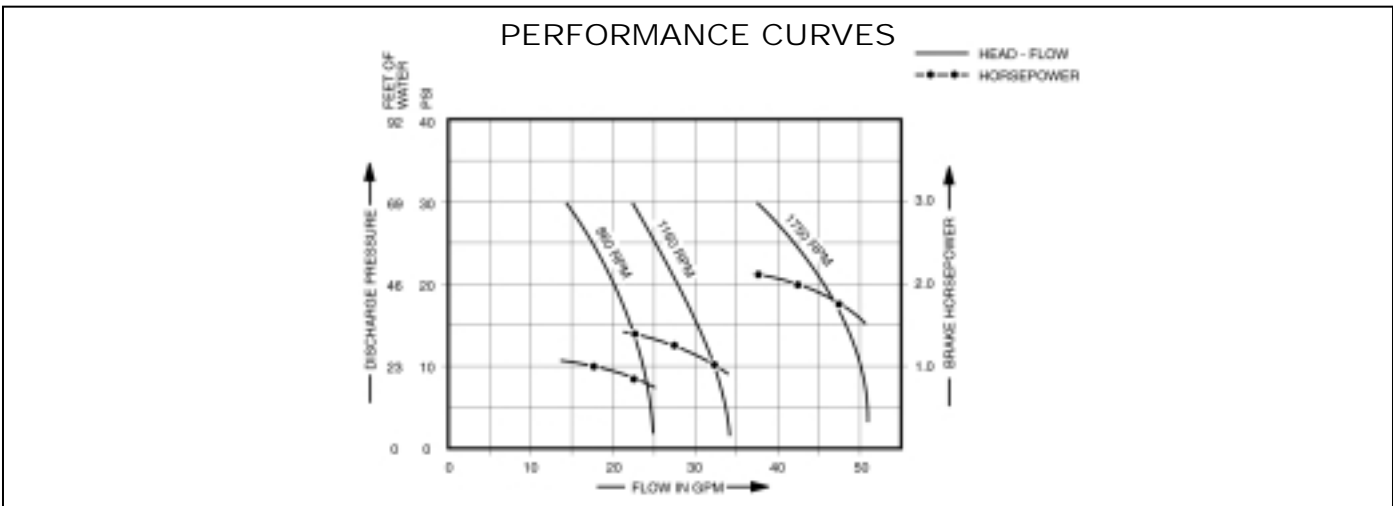
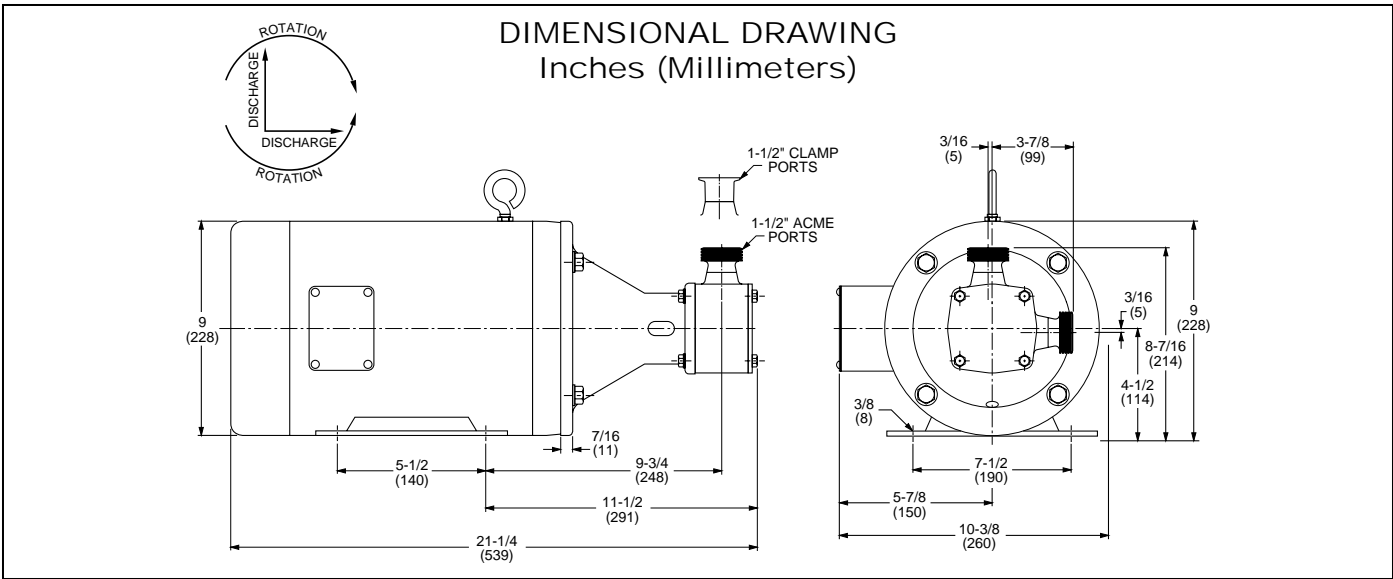
- Liberal apply Loctite RC/680 retaining compound to the motor shaft and slide the stub shaft on, positioning the base of the stub shaft 0.37" from the bolt mounting surface of motor and two of the four set screw holes over the keyway in the motor shaft. For clarification refer to figure 1 below. Loctite aids in preventing fretting and subsequent shaft failure. Wipe off excess Loctite. Apply Loctite to the two dog point (flat point) set screws, position in the set screw holes aligned with the keyway of the motor shaft and torque to 55 - 60 in. – lbs. Apply Loctite to the two cup point set screws and torque to 85 - 90 in. – lbs.
- Replace the adapter on the motor and tighten the four mounting screws to 40 ft. – lbs.
- 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.
- Insert impeller in pump body, fit O-ring in each end of the pump body.
- Slide wearplate and body assembly over shaft, position wearplate in housing. Fit body to pedestal with screws. Torque screws to 60 in. – lbs. NOTE: A gap should be maintained between bearing housing and body. DO NOT overtighten screws.
- Fit end cover and end cover screws. Torque screws to 10 in. – lbs.
- 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.



PARTS LIST

| Key | Description   | Qty.<br>Req. | Model                  | Model                  | Model                  | Model                  |
|-----|---|--------------|------------------------|------------------------|------------------------|------------------------|
|     |   |              | 30570-2XXX<br>Part No. | 30570-3XXX<br>Part No. | 30570-4XXX<br>Part No. | 30570-5XXX<br>Part No. |
| 1   | Adapter   | 1            | 18753-0217             | 18753-0217             | 18753-0217             | 18753-0217             |
| 2   | Body:   | 1            |                        |                        |                        |                        |
|     | 2-A. Clamp Ports  |              |                        | 18753-0365             |                        | 18753-0365             |
|     | 2-B. ACME Ports   |              | 18753-0366             |                        | 18753-0366             |                        |
| 3   | End Cover   | 1            | 18753-0367             | 18753-0367             | 18753-0367             | 18753-0367             |
| 4   | Wearplate   | 1            | 18753-0201             | 18753-0201             | 18753-0201             | 18753-0201             |
| 5   | Shaft   | 1            | 18753-0213             | 18753-0213             | 18753-0213             | 18753-0213             |
| 6   | Impeller:   | 1            |                        |                        |                        |                        |
|     | Standard Pressure – Neoprene                                      |              | 14346-0005             | 14346-0005             | 14346-0005             | 14346-0005             |
|     | Standard Pressure – EPDM  |              | 14346-0002             | 14346-0002             | 14346-0002             | 14346-0002             |
| 7   | Motor: 1-1/2 HP, 115/230 Vac, 1 Ph,<br>60 Hz, TEFC, H145 TC Frame | 1            |                        |                        | 18753-0220             | 18753-0220             |
| 8   | Spacer  | 1            | 18753-0228             | 18753-0228             | 18753-0228             | 18753-0228             |
| 9   | Seal Seat: Ceramic – Nitrile                                      | 1            | 18753-0237             | 18753-0237             | 18753-0237             | 18753-0237             |
| 10  | Seal Mech.:   | 1            |                        |                        |                        |                        |
|     | Carbon – Nitrile  |              | 18753-0249             | 18753-0249             | 18753-0249             | 18753-0249             |
|     | Tungsten Carbide – Nitrile  |              | 18753-0251             | 18753-0251             | 18753-0251             | 18753-0251             |
| 11  | O-Ring: Nitrile   | 2            | 18753-0265             | 18753-0265             | 18753-0265             | 18753-0265             |
| 12  | Screw Kit:  | 1            | 18753-0286             | 18753-0286             | 18753-0286             | 18753-0286             |
|     | Consists of   |              |                        |                        |                        |                        |
|     | Screw, Hex Hd. 3/8-16x1"  | (4)          |                        |                        |                        |                        |
|     | Screw, Hex Hd. M6x16mm  | (4)          |                        |                        |                        |                        |
|     | Screw, Hex Hd. M6x10mm  | (4)          |                        |                        |                        |                        |
|     | Set Screw Dog Pt 1/4-20x1/2                                       | (2)          |                        |                        |                        |                        |
|     | Set Screw, Cup Pt. 1/4-20x3/8                                     | (2)          |                        |                        |                        |                        |
|     | Washer, Flat 3/8  | (4)          |                        |                        |                        |                        |
|     | Washer, Flat M6   | (4)          |                        |                        |                        |                        |





NOTE: Curves show approximate head flow for new pumps with neoprene pumping water.

#### PUMP SPEED SELECTION ACCORDING TO PRODUCT VISCOSITY

| 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) | 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.

## Jabsco



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

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