



The Pivotrol® Pump Patented PTF TOP Inlet

Description

The Spirax Sarco **Pivotrol® Pump** (patented) is a non electric pump which transfers high temperature condensate, or other liquids from a low point, low pressure or vacuum space to an area of higher pressure or elevation. This self-contained unit including **PowerPivot®** technology (patented) uses steam, compressed air or any other suitable pressurized gas as the pumping force.

The standard Pivotrol® Pump (patented) will handle liquids from 0.9 to 1.0 specific gravity.

Operating Characteristics

| | |
|--|--|
| Pump discharge per cycle – | PTF: 8.4 gal (31.8 l) Nominal |
| Average instantaneous discharge rate – | 90 gpm (5.7 l/s) |
| Average Steam Consumption – | 3 lbs. per 1000 lbs. of liquid pumped |
| Average Air Consumption – | 60 SCFM per 1000 lbs. of liquid pumped |
| Filling head recommended above centerline of inlet check valve is 12" (305mm). | |

**For increased service life –
Operate pump with motive pressure 15-20 psig above pump back pressure.**

Construction Materials

| No. | Part | Material | Spec |
|-----|-----------------------------------|-------------------------------|-------------|
| 1 | Body | PTF-Top Fabricated Steel | ASME coded |
| 2 | Cover | Cast Steel | ASTM 216WCB |
| 3 | Cover Gasket | Grafoil | |
| 4 | Steam Inlet Valve Assembly | Stainless Steel | |
| 5 | Steam Inlet Valve Gasket | Stainless Steel | |
| 6 | Exhaust Valve Assembly | Stainless Steel | |
| 7 | Exhaust Valve Gasket | Stainless Steel | |
| 8 | Baffle | Stainless Steel | |
| 9 | Push Rod Assembly | Stainless Steel | |
| 10 | Mechanism Support | Stainless Steel | |
| 11 | Bushing Mounting Plate (Bushings) | Stainless Steel Carbide | |
| 12 | Spring Anchor | Carbide | |
| 13 | Spring | Inconel | |
| 14 | Float Arm Assembly (Pivots) | Stainless Steel Carbide | |
| 15 | Float Pivot | Stainless Steel | |
| 16 | Pin | Stainless Steel | |
| 17 | Paddle | Stainless Steel | |
| 18 | Float | Stainless Steel | |
| 19 | Screws (typical) | Stainless Steel | |
| 20 | Plugs (typical) | Forged Steel | |
| 21 | Check Valves (SDCV44) | Stainless Steel (TI-7-224-US) | |
| 22 | Cycle Counter | Various (see TI-5-020-US) | |

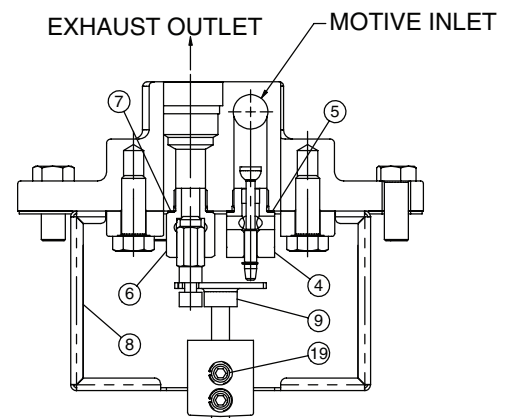
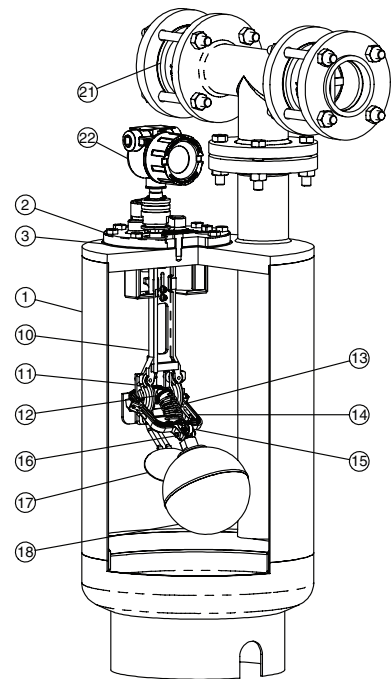
| Model | PTF Top Inlet |
|---------------------|---|
| PMO | 200 psig (13.8 barg) |
| Sizes | 3" x 3" |
| Connections | Cover: NPT Liquid: ANSI 150/NPT |
| Construction | ASME Coded Steel |
| Options | Pump modified to handle liquids down to 0.65 specific gravity |
| Warranty | 3 Million Cycles x 3 Year Warranty Lifetime Warranty on Spring |

Accessories

- Gauge glass with brass cocks.
- Reflex type gauge glass -Insulation cover.

Capacities

For sizing and selection data, see TI-5-030-US



Local regulation may restrict the use of this product below the conditions quoted. Limiting conditions refer to standard connections only.
In the interests of development and improvement of the product, we reserve the right to change the specification.

The Pivotrol® Pump Patented

PTF TOP Inlet

Dimensions (nominal) in inches and millimeters

PTF-Top

| Size | A | B | C | D | E | F | G | H* | I | J | K | Weight Pump |
|-----------------|----|------|-----|-----|------|-----|-----|------|------|------|-----|-------------|
| 3" x 3" PTF-Top | 3 | 32.1 | 5.8 | 0.6 | 40.9 | 12 | 16 | 31.5 | 44.7 | 19.2 | 9.6 | 230 lb |
| | 76 | 815 | 147 | 15 | 1039 | 305 | 406 | 800 | 1135 | 488 | 244 | 104 kg |

* H Dimension is to the centerline of the motive supply inlet.

Limiting Operating Conditions

PMO

Max. Operating Pressure PTF 200 psig (13.8 barg)
 Minimum motive differential required: 5 psig

| Filling Head Requirements | Filling Head Above Check Valve Centerline | Filling Height From Base of Pump |
|---------------------------|---|----------------------------------|
| Max filling head PTF-Top | 39" (199mm) | 78.8" (2002mm) |
| Min filling head PTF-Top | 12" (305mm) | 52.9" (1344mm) |

Max Number of Cycles per minute = 6

Specific gravity of pumped liquid options = 0.9 to 1.0; 0.8 to 0.89; 0.65 to 0.79

Pressure Shell Design Conditions

PMA

Max. allowable pressure PTF: 200 psig/400°F (13.8 barg/343°C)

TMA

Max. allowable temperature PTF: 400°F/200 psig (343°C/13.8 barg)

Sample Specification

The pump shall be Spirax Sarco Pivotrol® Pump (patented) operated by steam, compressed air or other pressurized gas to 200 psig, which does not require any electrical energy. The pump shall have stainless steel, split disc check valves on the inlet and outlet connections. The pump shall contain Spirax Sarco PowerPivot® (patented) inside to ensure longevity and reliability of the pump. The Pivotrol Pump® (patented) shall include an Inconel spring with a lifetime warranty and be supplied with an integral cycle counter to monitor a 3 million cycle x 3 year warranty. When required the pump shall be supplied with a gauge glass and custom designed insulation jacket.

Installation

For generic hook-up sketch, see TI-5-030. Full details are given in IM-5-201-US, which accompanies the product.

Maintenance

Complete installation and maintenance instructions are given in IM-5-201-US, a copy of which is supplied with each pump.

