



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.

Model	PTF Top Inlet
PMO	200 psig (13.8 barg)
Sizes	3" x 3"
Connections	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

Operating Characteristics

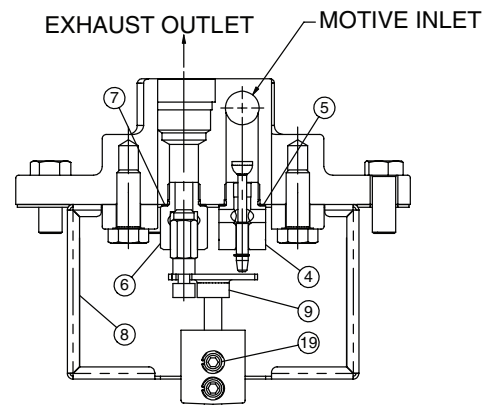
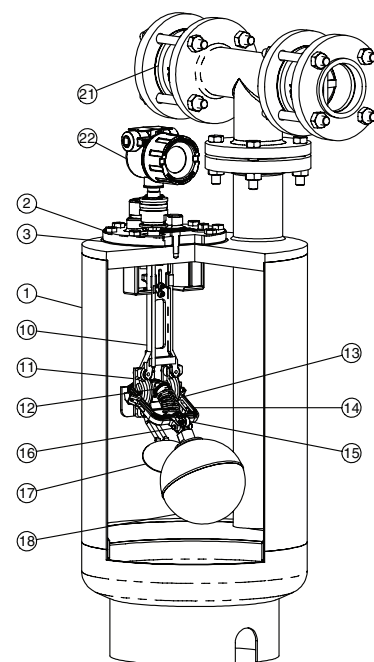
Pump discharge per cycle –	PTF: 8.4 gal (31.8 l) Nominal
Average instantaneous discharge rate –	90 gpm (5.7 l/s)
Average Steam Consumption –	3 lbs. per 1000 lbs. of liquid pumped
Average Air Consumption –	60 SCFM per 1000 lbs. of liquid pumped
Filling head recommended above centerline of inlet check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



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.

TI-5-206-US 01.11

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 Power Pivot® (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.

