



The Pivotrol® Pump Patented PTF-HP Pressure Powered Pump

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® PTF-HP Pump (patented) will handle liquids from 0.88 to 1.0 specific gravity.** Suitable for use in hazardous environments and volatile fluid pumping applications. See IM-5-201-US for full details.

Model	PTF-HP
PMO	300 psig (20.7 barg)
Sizes	3" x 2" (DN80 x DN50)
Connections	Inlet & Outlet: ANSI 300 flange NPT/SW Motive & Exhaust: NPT/SW
Construction	Fabricated Steel Body ASME Code Stamped Stainless Steel Internals
Warranty	3 Million Cycles or 5 Year Warranty, whichever number is achieved first. Lifetime Warranty on Spring
Options	Gauge glass assembly reflex

Accessories

- Reflex type gauge glass - Insulation cover.

Capacities

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

Compliance

The product fully complies with the requirements of the European Pressure Equipment Directive 2014/68/EU and carries the **CE** mark when so required (must be specified at time of order). **CE** marked products are not ATEX approved, therefore are not suitable in hazardous environments or volatile fluid pumping applications in the EU.

Operating Characteristics

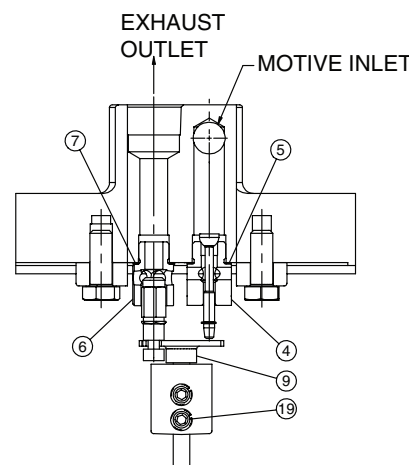
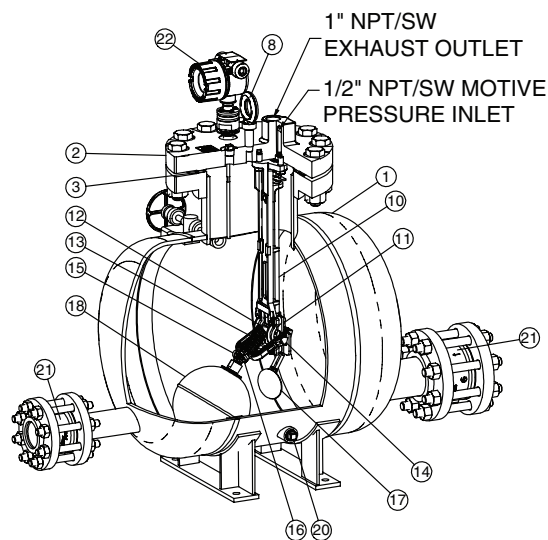
Pump discharge per cycle – 16 gal (60.6 l) Nominal
Maximum instantaneous discharge rate – 192 gpm (12.1 l/s)
Steam/Air Consumption – See TI-5-030-US

For increased service life –

Operate pump with motive pressure 15-20 psig (1.0-1.4 barg) above pump back pressure.

Construction Materials

No.	Part	Material	Spec
1	Body	Fabricated Steel	ASME coded
2	Cover	Cast Steel	ASTM A216 WCB
3	Cover Gasket	Spiral Wound	AISI 304/Graphite
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	Eye Bolt	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	Stainless Steel	
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.

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The Pivotrol® Pump Patented PTF-HP Pressure Powered Pump

Dimensions (nominal) in inches and millimeters

A	B*	C	D	E	F	G	H	I	J	K	L	M	N	P	Q	Weight
32.8	32.1	6.0	6.8	0.6	2.8	4.0	45.1	22.1	14.5	18.7	9.0	4.5	5.8	20.0	30.8	472 lb
833	792	153	173	15	71	102	1141	559	368	475	229	114	147	508	782	214 kg

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

Reflex Gauge Glass weight = 23 lb (10.4 kg)
Cover and Mechanism Assembly weight = 101 lb (46 kg)

Limiting Operating Conditions

PMO
Max. Operating Pressure 300 psig (20.7 barg)

Minimum motive differential required: 5 psig (0.34 barg)

Filling Head Requirements	Filling Head	Filling Height
	Above Pump Cover	From Base of Pump
Standard recommended	12" (305mm)	42.8" (1087mm)
Max filling head	60" (1524mm)	90.8" (2306mm)
Min filling head	0" (0mm)	30.8" (782mm)

Max Number of Cycles per minute = 6

Note: See TI-5-020-US for cycle counter details.

Pressure Shell Design Conditions

PMA
Max. Allowable Pressure 300 psig @ 650°F (20.7 barg @ 343°C)

TMA
Max. Allowable Temperature 650°F @ 300 psig (343°C @ 20.7 barg) with Reflex Gauge Glass:
600°F @ 300 psig (315°C @ 20.7 barg)

Sample Specification

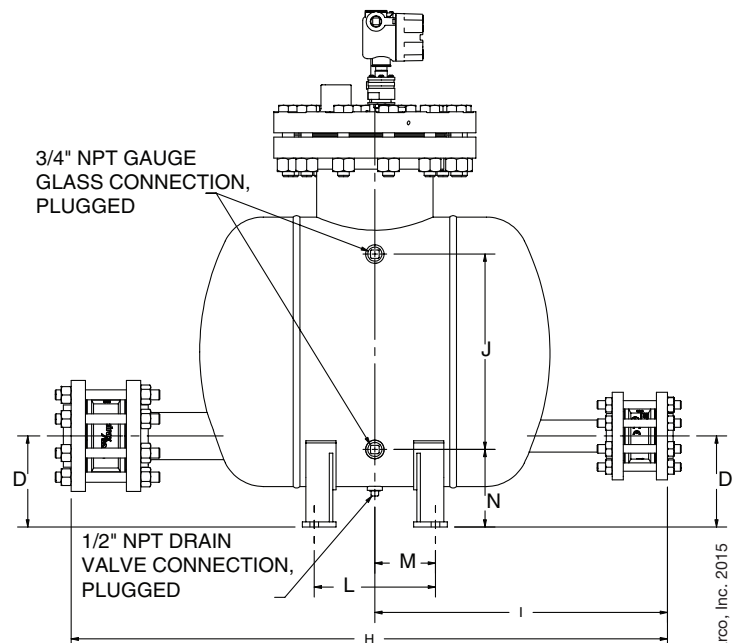
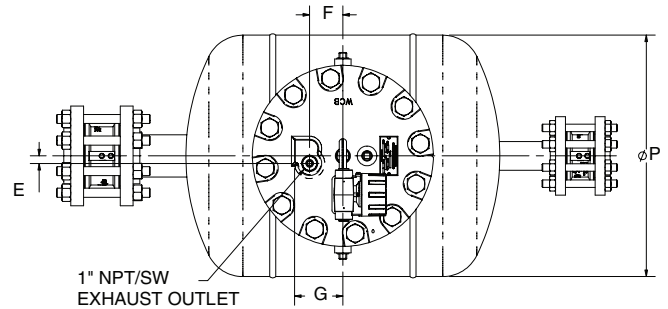
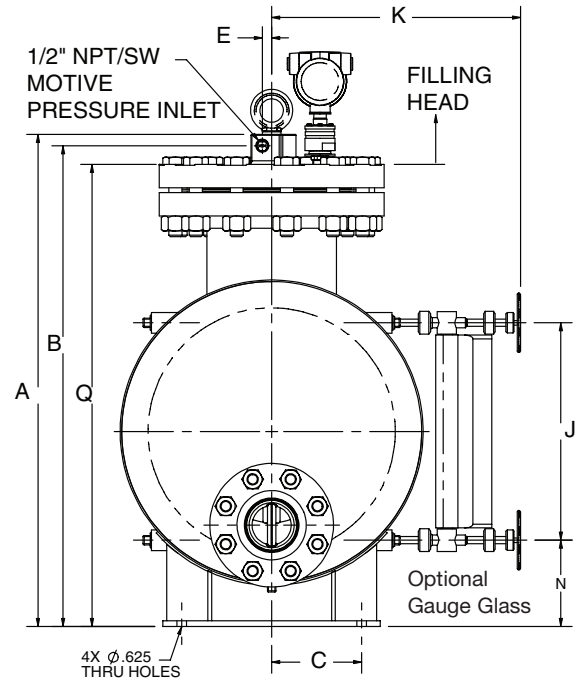
The pump shall be Spirax Sarco Pivotrol® Pump (patented) PTF-HP, operated by steam, compressed air or other pressurized gas to 300 psig (20.7 barg), which does not require any electrical energy, and is capable of pumping liquids down to 0.88 specific gravity. The pump shall have stainless steel, split disc check valves on the inlet and outlet connections. The pump shall contain Spirax Sarco PowerPivot® (patented) technology 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 or 5 year warranty, which ever number is achieved first. When required the pump shall be supplied with a reflex gauge glass.

Installation

Full details are provided in IM-5-201-US which accompanies the product.

Maintenance

Complete installation and maintenance instructions are given in IM-5-201-US, which accompanies the product.



Condensate Recovery
Non-Electric Pumps

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