

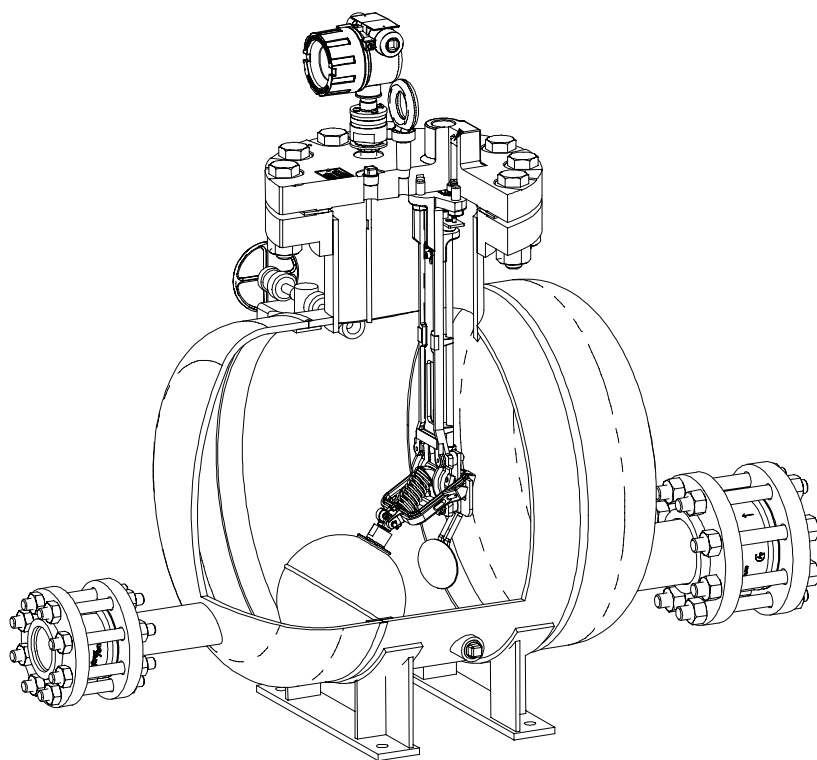


# The Pivotrol® Pump Patented PTF-HP Pressure Powered Pump

## 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.

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



## Accessories

- Reflex type gauge glass -Insulation cover.

## 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 psi g (1.0-1.4 bar g) above pump back pressure.

## Limiting operating conditions

<b>PMO</b>	300 psi g (20.7 bar g)
<b>Maximum operating pressure</b>	
Minimum motive differential required:	5 psi g (0.34 bar g)

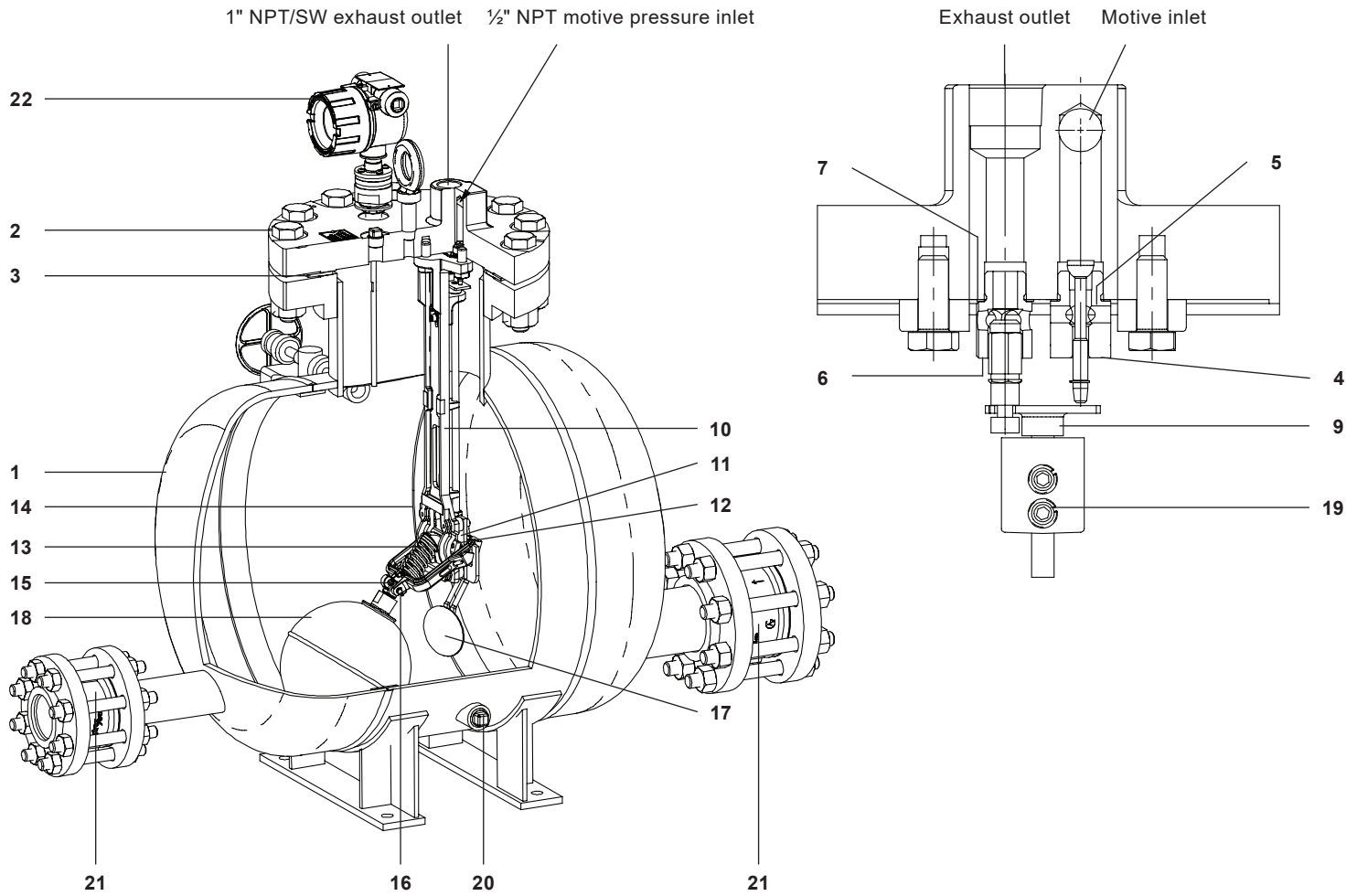
Filling head requirements	Filling height	
	Above pump cover	From base of pump
Standard recommended	12" (305 mm)	42.8" (1087 mm)
Maximum filling head	60" (1524 mm)	90.8" (2306 mm)
Minimum filling head	0" (0 mm)	30.8" (782 mm)
Max Number of Cycles per minute = 6		

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

## Pressure shell design conditions

PMA	Maximum allowable pressure	300 psi g @ 650 °F	(20.7 bar g @ 343 °C)
		650 °F @ 300 psi g	(343 °C @ 20.7 bar g)
TMA	Maximum allowable temperature	with Reflex Gauge Glass:	600 °F @ 300 psi g
			(315 °C @ 20.7 bar g)

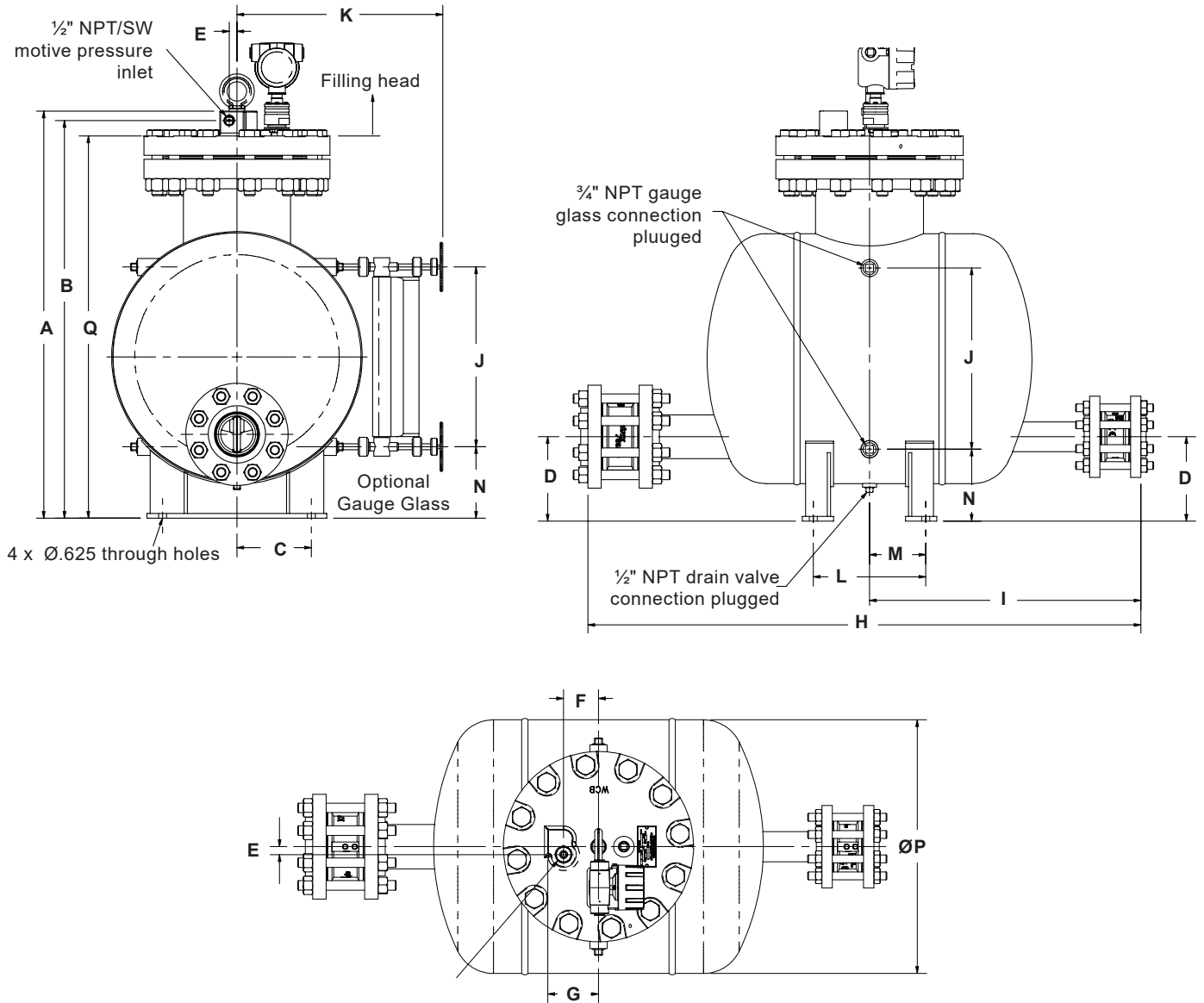
## Materials



No.	Part	Material
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

No.	Part	Material
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)

**Dimensions/weights (approximate) in inches (mm) and lbs (kg)**



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)

## Capacities

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

## Sample specification

The pump shall be Spirax Sarco Pivotrol® Pump (patented) PTF-HP, operated by steam, compressed air or other pressurized gas to 300 psi g (20.7 bar g), 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, whichever 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.