



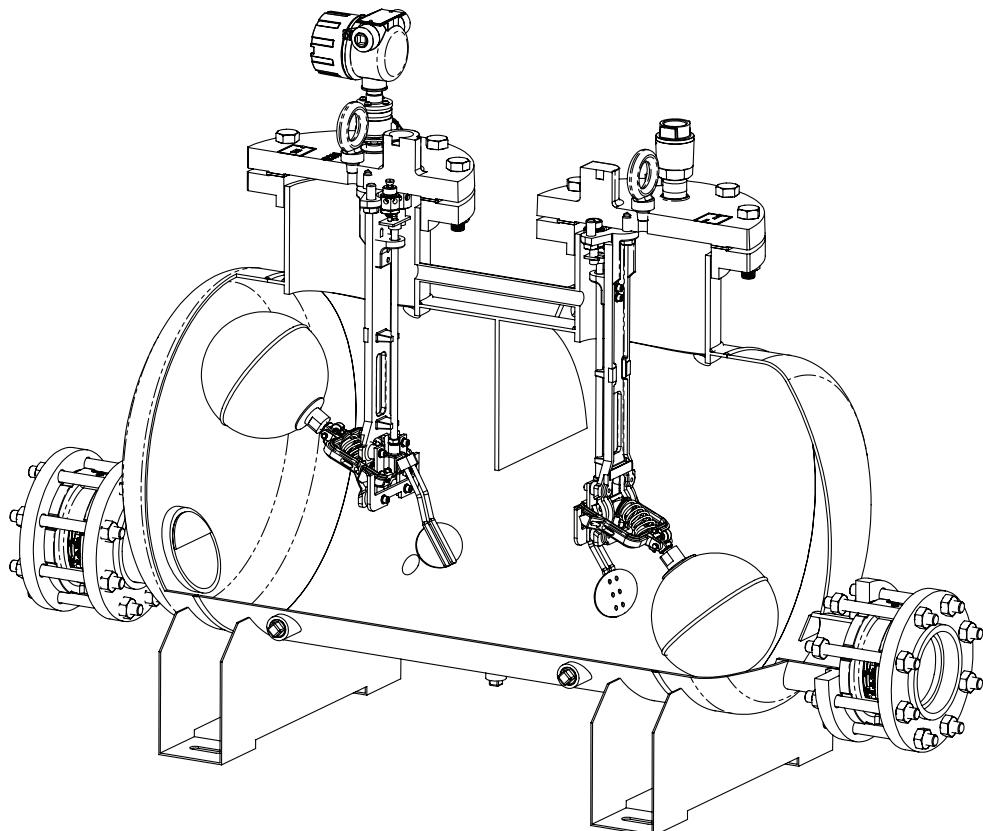
## The Pivotrol® Pump Patented PTF4 (High Capacity) Pressure Powered Pump

### 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® PTF4 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>	PTF4
<b>PMO</b>	200 psi g (13.8 bar g)
<b>Sizes</b>	4" x 4" (DN100 x DN100)
<b>Connections</b>	Inlet and outlet: ANSI 150 flange NPT/SW Motive and 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



## Operating characteristics

Pump discharge per cycle	26.9 gal (101.8l) Nominal
Maximum instantaneous discharge rate	450 gpm (28 l/s)
Steam/Air consumption	See TI-P207-12-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

PMO Maximum operating pressure	200 psi g (13.8 bar g)
Minimum motive differential required:	5 psi g (0.34 bar g)
Maximum back pressure:	75% of motive pressure

Filling head requirements	Filling Head	Filling Height
	Above Pump Cover	From Base of Pump
Standard recommended	36" (914 mm)	69.5" (1765 mm)
Maximum filling head	60" (1524 mm)	92" (2337 mm)
Minimum filling head	-3" (-76 mm)	29.3" (744 mm)
Maximum number of cycles per minute = 6		

Product is safe for use under full vacuum conditions.

**Note:** See TI-P207-08-US for cycle counter details.

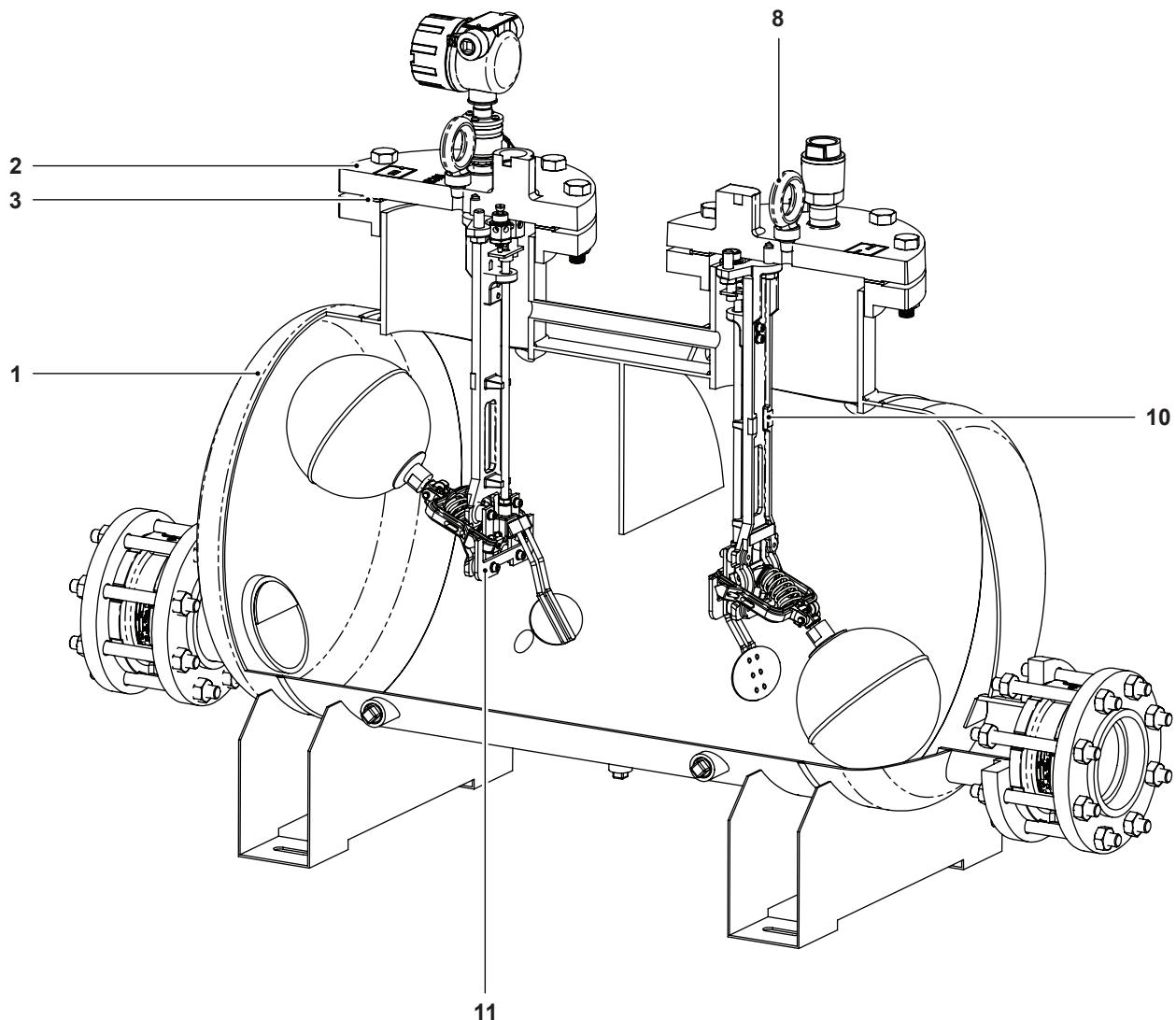
## Pressure shell design conditions

PMA Maximum allowable pressure	200 psi g @ 388 °F	(13.8 bar g @ 198 °C)
TMA Maximum allowable temperature	650 °F @ 124 psi g with reflex gauge glass:	(343 °C @ 8.55 bar g)

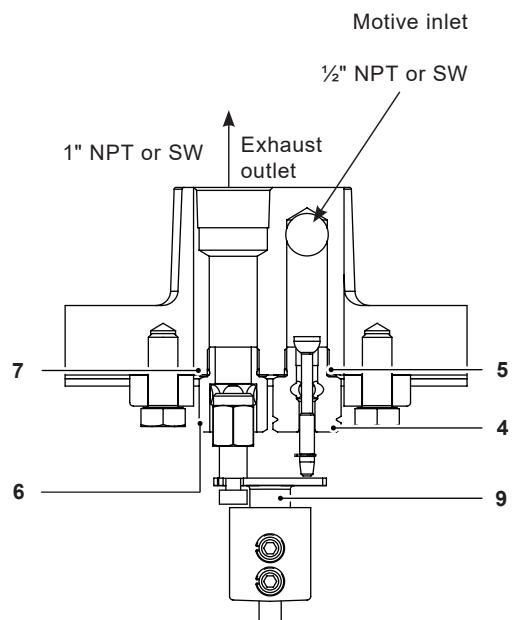
## Capacities

For sizing and selection data, see TI-P207-12-US

## Materials

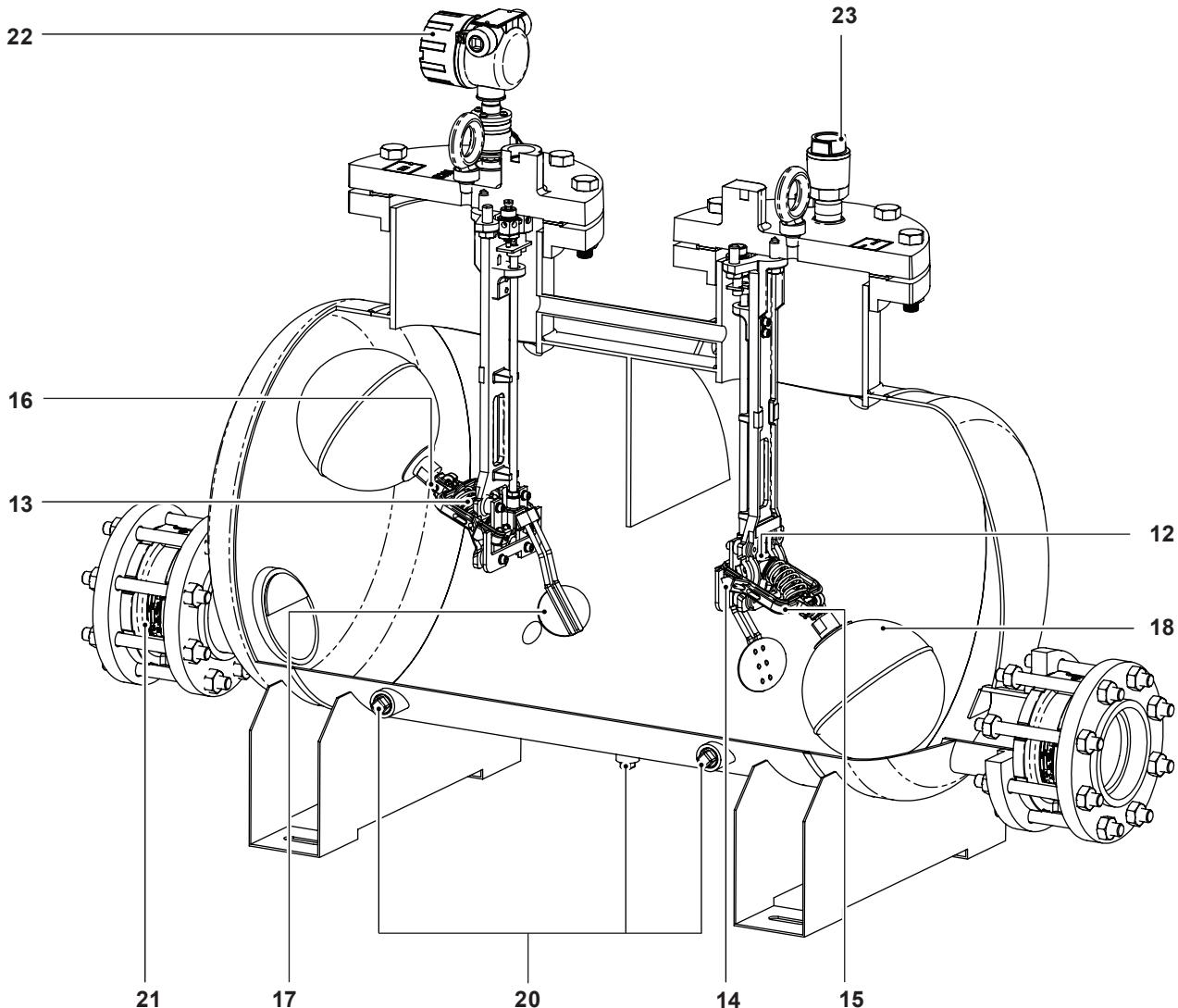


No.	Part	Material
1	Body	Fabricated steel ASME coded
2	Cover	Cast steel ASTM A216 WCB
3	Cover gasket	Spiral wound AISI 304/Graphite
4	Steam inlet valve assembly	Stainless steel
5	Steam inlet valve gasket	Stainless steel
6	Exhaust valve assembly	Stainless steel
7	Exhaust valve gasket	Stainless steel
8	Eye bolt	Stainless steel
9	Push rod assembly	Stainless steel
10	Mechanism support	Stainless steel
11	Bushing mounting plate (Bushings)	Stainless steel Carbide

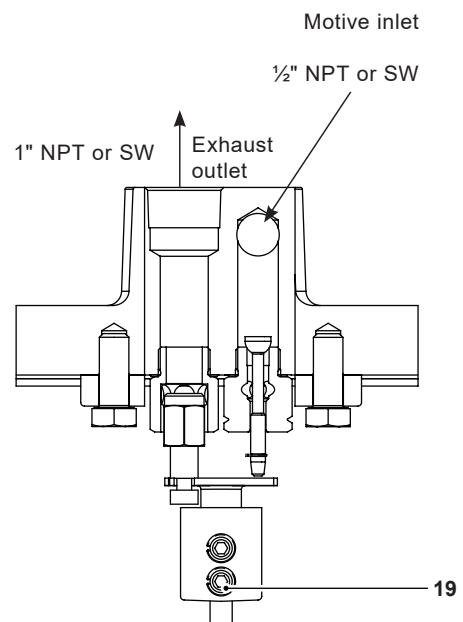


Materials continued on next page

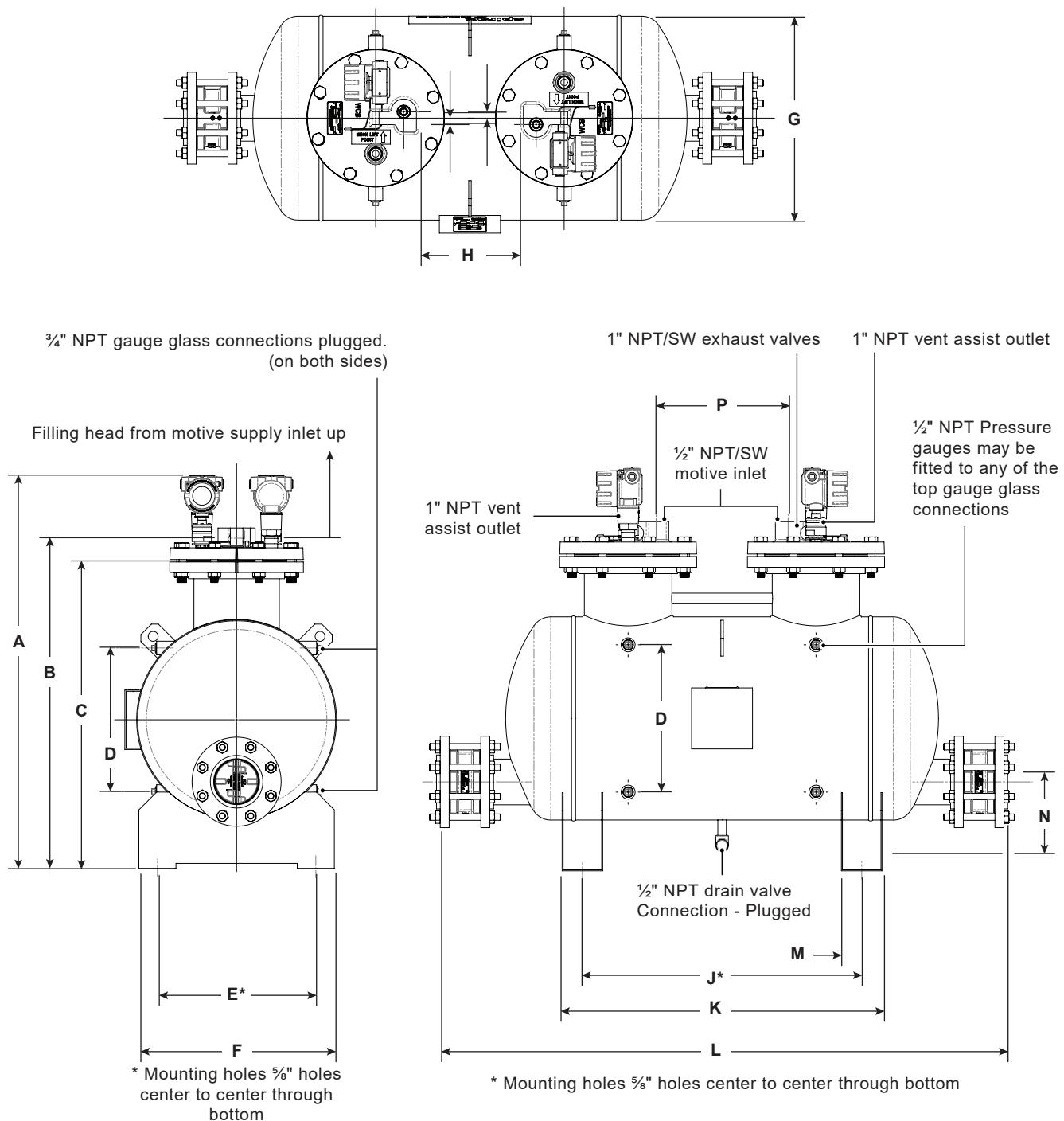
## Materials



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 stainless steel
21	Check valves (SDCV44)	Stainless steel (see TI-P154-10-US)
22	Cycle counter	Various (see TI-P207-08-US)
23	Vent assist valve	Stainless steel



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



<b>A</b> (Ref Only)	<b>B*</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>	<b>H</b>	<b>I</b>	<b>J</b>	<b>K</b>	<b>L</b>	<b>M</b>	<b>N</b>	<b>P</b>	<b>Weight</b>
39.5 (1002)	33.5 (851)	32.0 (813)	14.5 (368)	16.0 (406)	19.8 (503)	20.0 (508)	10.5 (267)	0.6 (15)	27.5 (699)	31.5 (800)	56.2 (1427)	4.0 (102)	8.8 (224)	13.0 (330)	550 lb (249 kg)

\*B Dimensions is to the centerline of the motive supply inlet.

Reflex Gauge Glass weight = 23 lb (10.4 kg) (Each)

Cover and Mechanism Assembly weight = 65 lb (29.5 kg) (Each)

## **Sample specification**

The pump shall be Spirax Sarco Pivotrol® Pump (patented) PTF4, operated by steam, compressed air or other pressurized gas to 200 psi g (13.8 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 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 given in IM-5-211-US, which accompanies the product.

## **Maintenance**

Complete installation and maintenance instructions are given in IM-5-211-US, which accompanies the product.