



## The Pivotrol Pump® Patented PTF-HTF

### Description

The Spirax Sarco **Pivotrol® Pump** (patented), featuring reliable **PowerPivot®** technology (patented) is specifically designed for use on heat transfer fluids in a closed loop system. This self-contained unit uses the pressurized heat transfer fluid vapor phase as the pumping force to transport condensed heat transfer fluid from a low point, or low pressure space to an area of high pressure or elevation.

Model	PTF
<b>PMO</b>	200 psig (13.8 barg)
<b>Sizes</b>	3" x 2"
<b>Connections</b>	Inlet & Outlet: ANSI 300 RF with surface finish 125-250 μ in. serrated concentric or spiral grooves per ANSI B16.5 Motive & Exhaust: SW ANSI B16.11 Drain: (2) ANSI 300 RF with surface finish 125-250 μ in. serrated concentric or spiral grooves per ANSI B16.5
<b>Construction</b>	ASME Coded Steel
<b>Options</b>	Pump modified to handle liquids down to 0.65 specific gravity
<b>Warranty</b>	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 TIS 5.030

### Operating Characteristics

Pump discharge per cycle –  
Average instantaneous discharge rate –

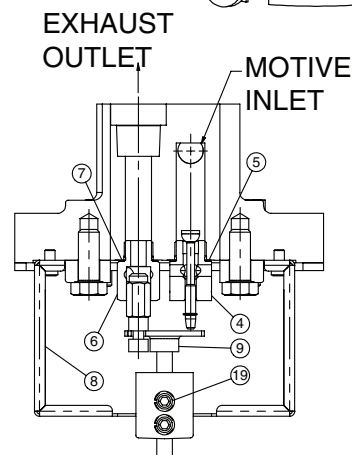
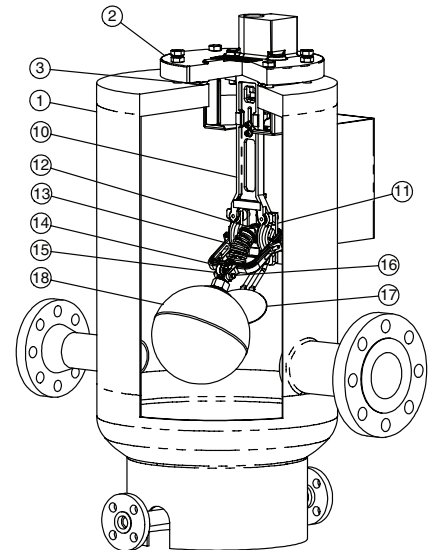
PTF-HTF: 8.4 gal (31.8 l) Nominal  
90 gpm (5.7 l/s)

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-HTF - Fabricated Steel	ASME coded
2	Cover	Cast Steel	ASTM SA216 WCB
3	Cover Gasket	Spiral-Wound Flexitallic Type 'LS'	
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	



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-HTF

**Dimensions** (nominal) in inches and millimeters

A	B	C	D	E	F	G	H	I	J	K	L	M	Weight
34.6	33.4	12.2	11.6	2.0	16.0	15.0	30.0	19.0	9.5	6.1	4.4	.6	210 lb
879	848	310	295	51	406	381	762	483	241	155	112	15	95.3 kg

## Limiting Operating Conditions

### PMO

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

### Filling Head Requirements

**Filling Height**

	Above Pump Cover	From Base of Pump
Standard recommended	PTF-HTF 12" (305mm)	42.8" (1087mm)
Max filling head	PTF-HTF 48" (1219mm)	78.8" (2002mm)
Min filling head	PTF-HTF -1" (-25mm)	29.8" (757mm)

Max Number of Cycles per minute = 6

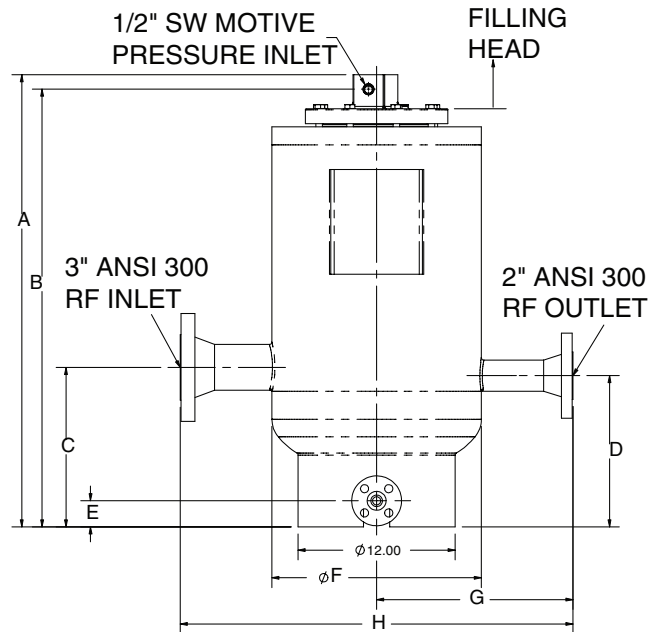
## Pressure Shell Design Conditions

### PMA

Max. allowable pressure PTF-HTF: 200 psig/750°F (13.8 barg/399°C)

### TMA

Max. allowable temperature PTF-HTF: 750°F/200 psig (399°C/13.8 barg)

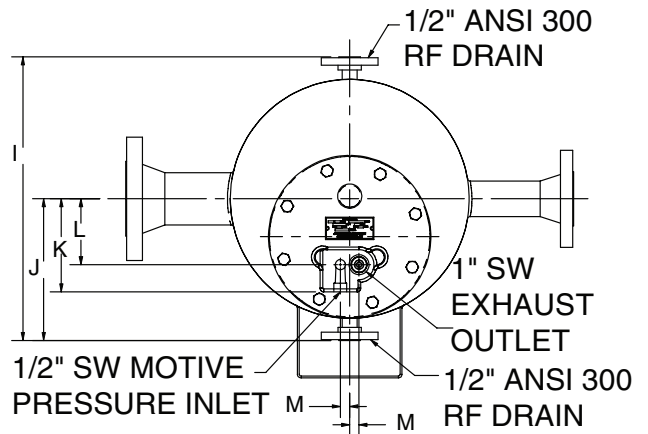


## Check Valves

Two check valves are required, but not supplied with the pump. **Recommended check valves are 2" and 3" Velan Model F00-1114C-02AA ANSI 300 RF flanged cast steel swing type valves.** (All capacity data established with Velan check valves as specified.)

## Sample Specifications

The pump shall be Spirax Sarco PTF-HTF, Pivotrol® Pump (patented) featuring reliable PowerPivot® technology (patented) specifically designed for use on heat transfer fluids in a closed loop system, which does not require any electrical energy. The PTF-HTF, Pivotrol® pump (patented) shall include an Inconel spring with a lifetime warranty and 3 year warranty.



## Installation

For generic hook-up sketch, see TI-5-030-US. Full details are given in IM-5-208-US, which accompanies the product.

## Maintenance

Complete installation and maintenance instructions are given in IM-5-208-US, a copy of which is supplied with each pump.

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Spirax Sarco, Inc., 1150 Northpoint Blvd, Blythewood, SC 29016

Telephone: (803) 714-2000 FAX (803) 714-2222