

All Stainless Steel Mechanism Stainless Steel Non-Electric Pump

Series PMPSS PRESSURE MOTIVE PUMP

PRESSURE
MOTIVE PUMPS

Applications

The Pressure Motive Pump (PMPSS) is recommended when liquids must be moved to a higher elevation, higher pressure, or great distances. Typical applications are:

- Condensate from Vacuum or Low Pressure Systems
- Condensate Systems with High Back Pressure
- Any Steam Condensing Equipment (i.e., Heat Exchangers, Condensers, Turbines)
- Remote Installation (i.e., Tank Farms)
- Where Electricity is Prohibited (i.e., some underground steam distribution systems, tank farms, etc.)
- Submersible, Hard-To-Get-At Areas

Features

- Dual Compression Spring design for longer life
- Vent Valve & Gas Supply Valve & Seat are Hardened Stainless Steel and lapped-in for tight shut off
- Energy - Saving - up to 25% over conventional pumps
- Handles flashing condensate without cavitation problems or the need for cooling water
- 304L Stainless Steel pump housing with ASME code stamp
- All Stainless Steel Internals for better corrosion resistance
- Lifetime warranty on springs

How It Works

The Series PMPSS uses a spring-loaded mechanism inside a pump body to control liquid removal. When the pump is starting to fill through the inlet check valve the float is in the low level position which opens the vent valve at the top and closes the motive gas (steam or air) supply valve.

When the spring-loaded mechanism reaches the trip point and snaps over the center, the vent valve closes and the gas supply valve opens simultaneously. As the liquid in the body is pumped out through the outlet check valve, the float starts to drop. When the float reaches the switch point, the mechanism snaps over the center, the gas supply valve closes, and the vent valve opens, allowing the filling process to repeat.



Watson McDaniel reserves the right to change the designs and/or materials of its products without notice



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Manufacturers of:

**PRESSURE & TEMPERATURE REGULATORS - RELIEF VALVES - STEAM TRAPS - CLEAN STEAM PRODUCTS
LIQUID DRAINERS - PRESSURE PUMPS - EJECTORS - SPECIALTY PRODUCTS**



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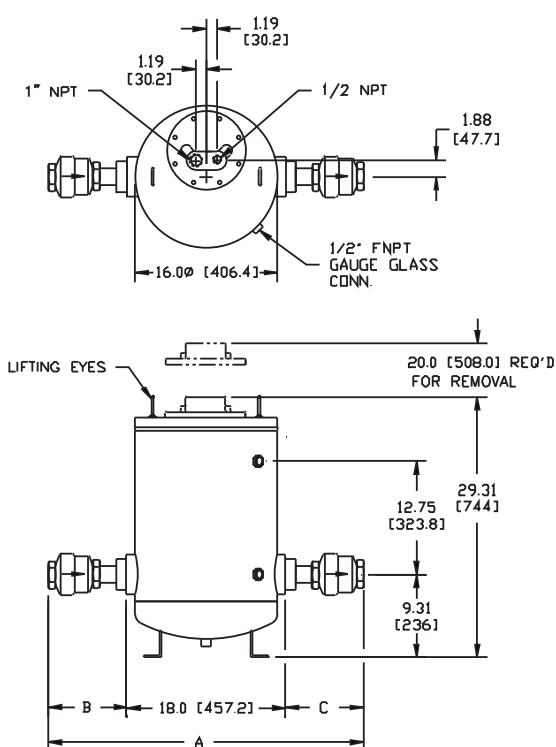
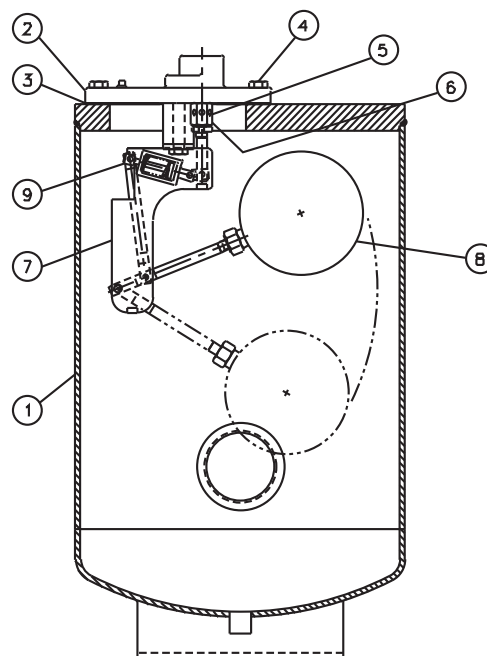
Series PMPSS Pressure Motive Pump Specifications

Materials

- 1) Body 304L SS
- 2) Cover.....304L SS
- 3) Cover Gasket.....Non Asbestos
- 4) Cover Bolts.....Steel
- 5) Inlet Valve.....17-4 PH S.S.
- 6) Vent Valve.....17-4 PH S.S.
- 7) Mechanism Yoke..... 304 S.S.
- 8) Ball Float 304 S.S.
- 9) Springs.Inconel
- 10) Other Internal Comp.S.S.
- 11) Check Valves.S.S.

Sample Specifications:

The non-electric pressure powered pump shall be Watson McDaniel PMPSS stainless steel unit. The pump shall be intrinsically safe and capable of operating with a maximum motive pressure of 150 psig provided by steam, air or other gas supply without use of external seals or packing. The pump body shall be fabricated 304L stainless steel with a 1/8" corrosion allowance and receive the ASME "UM" Stamp with a design pressure and temperature rating of 150 psig (PMA) at 470F (TMA) when equipped with threaded stainless steel check valves. The pump mechanism shall be float operated with the patent pending "snap assure" action feature constructed of stainless steel materials with all load bearing wear points hardened for extended service life. The mechanism shall feature two Inconel springs in a compression application with a lifetime warranty along with a hardened motive supply valve and seat to a Rockwell nominal value of 40C. Check valves can be supplied in a stainless steel wafer and threaded style or threaded bronze.



Design Pressure/Temperature Rating

Max. Allowable Pressure (PMA)
 PMPSS - S.S. Checks.....150 psig
 Max. Allowable Temperature (TMA)
 PMPSS - S.S. Checks.....470° F

Max. Operating Conditions

Max. Operating Pressure (PMO)
 PMPSS - S.S. Checks.....150 psig
 Max. Operating Temperature (TMO)
 PMPSS - S.S. Checks.....366° F

Dimensions & Weights (in/mm & lbs/kg)

PMPSS Size	A	B	C	Weight
1" x 1"	30.3/770	6.1/155	6.1/155	175 (79)
1 1/2" x 1"	31.7/805	7.6/193	6.1/155	180 (82)
2" x 1"	32.0/813	7.9/201	6.1/155	185 (84)
2" x 1 1/2"	33.5/851	7.9/201	7.6/193	190 (86)
2" x 2"	33.8/859	7.9/201	7.9/201	195 (89)
3" x 2"	35.2/894	9.2/234	7.9/201	200 (91)