

All Stainless Steel Mechanism
Carbon Steel Non-Electric Pump
High Capacity

**Series PMPBP
4"
PRESSURE
MOTIVE PUMP**

PRESSURE
MOTIVE PUMPS

Applications

The Pressure Motive Pump (PMPBP) 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)
- Explosive Atmospheres
- Where Electricity is Prohibited (*i.e.*, some underground steam distribution systems, tank farms, etc.)
- Submersible, Hard-To-Get-At Areas

Features

- Compression Springs designed for longer life
- Vent Valve & Gas Supply Valve & Seat are Stainless Steel
- Energy - Saving - up to 25% over conventional pumps
- Handles flashing condensate with out cavitation problems or the need for cooling water
- High capacity for large flows
- All Stainless Steel Internals for better corrosion resistance

How It Works

The Series PMPBP uses a spring-loaded float actuated 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



WATSON McDANIEL COMPANY

975 Madison Ave. Valley Forge Corporate Center Norristown, PA 19403
www.watsonmcdaniel.com 610 666-5711 Fax 610 666-0404

Manufacturers of:

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



ASME Sect VIII Div I
PP-125

(1/01)

Series PMPBP Pressure Motive Pump Specifications

Maximum Operating Conditions

Max. Operating Pressure (PMO).....150 psig
 Max. Operating Temperature (TMO).....366° F

Design Pressure/Temperature Rating

Max. Allowable Pressure (PMA).....150 psig
 Max. Allowable Temperature (TMA).....470° F

Standard class 150
 Optional class 300

Sample Specification

Watson McDaniel Series PMPBP Pressure Motive Pump is operated by 5-150 psig air, gas, or steam. The pump shall operate without electricity to be suitable for an explosive atmosphere. The body is constructed of steel with an ASME stamp for a standard 150 psig pressure rating. The mechanism shall be constructed of all stainless steel with snap action springs operating in compression. The assembly includes an inlet and outlet check valve.

Materials

- 1) Body Carbon Steel
- 2) Cover.....Carbon Steel
- 3) Cover Gasket.....Non Asbestos
- 4) Cover Bolts/nuts..... SA193 B7
 Nuts.....SA194 2H
- 5) Inlet Valve.....S.S.
- 6) Vent Valve.....S.S.
- 7) Mechanism Yoke..... 304 S.S.
- 8) Ball Float 304 S.S.
- 9) Other Internal Comp. S.S.
- 10) Check Valves.S.S. & Steel

