



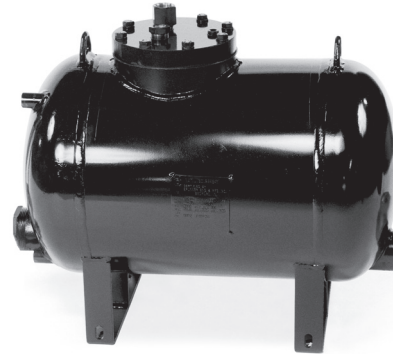
PT-300 Series Horizontal Steel, Low Profile Pump Trap



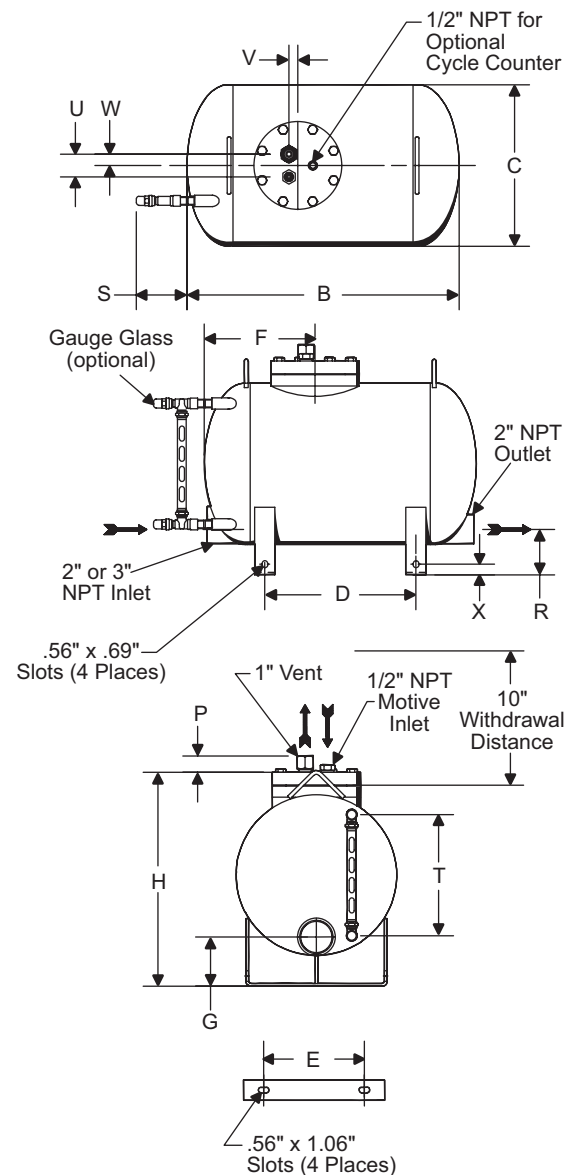
The Armstrong PT-300 Series Horizontal, Low Profile Pump Trap is the low maintenance non-electric solution to move condensate or other liquids or vacuum spaces to an area of higher elevation or pressure. Condensate can be returned at temperatures well above the 200°F (93°C) limit of conventional electric condensate pumps without the headaches of leaking seals or cavitation problems.

Features

- Economical non-electric operation. Uses inexpensive steam, air or inert gas.
- Low-maintenance operation. No leaking seals, impeller or motor problems means lower maintenance. No NPSH issues.
- Space-saving size. Low-profile body fits in tight spaces while allowing minimal fill head.
- Lower installation costs. Single trade required for installation and maintenance.
- Peace of mind. Standard unit is intrinsically safe.
- Durable construction. ASME code-stamped carbon steel body vessel.
- Corrosion resistance. Internals are all stainless steel for corrosion resistance and long life.
- Heavy-duty springs. Springs are made from long-lasting Inconel X-750.
- Efficiency. A closed loop means no motive or flash steam is lost. All valuable Btu's are captured and returned to the system.
- Safety. The pump can be used in flooded pits without fear of electrocution or circuit breaker defaults.
- Externally removable/replaceable seats. Seats can be replaced or cleaned without removing the mechanism assembly.



Condensate Recovery Equipment



| PT-300 Pumping Trap Physical Data | | |
|---|------------------|---------------|
| Model Number | PT-308 PT-312 | |
| | in | mm |
| "B" | 27 | 686 |
| "C" | 16 | 406 |
| "D" | 15 | 381 |
| "E" | 10 | 254 |
| "F" | 11 | 279 |
| "G" | 5-7/16 | 138 |
| "H" | 21-3/16 | 538 |
| "P" | 1-5/8 | 41 |
| "R" | 4-13/16 | 122 |
| "S" | 5-1/32 | 128 |
| "T" | 12 | 305 |
| "U" | 2-1/4 | 57 |
| "V" | 7/8 | 22 |
| "W" | 1-1/4 | 32 |
| "X" | 1-1/16 | 27 |
| Face to Face | 27-1/2* | 698 |
| Weight lb (kg) | 154 (70) | |
| Number of Body/Cap Bolts | 8 | |
| Check Valve Conn. in (mm) | 2 (50) | 3 (75) |
| Bronze Check Valves lb (kg) | 16 (7) | 29 (13) |
| Stainless Steel Check Valves lb (kg) | 15 (7) | 38 (17) |

Maximum Allowable Pressure (Vessel Design): 150 psig @ 650°F (10 bar @ 343°C)
 Maximum Operating Pressure: 125 psig (9 bar)
 *Tolerance +/- 1/2"

For a fully detailed certified drawing, refer to CDF #1001.

PT-300 Series Horizontal Steel, Low Profile Pump Trap



Condensate Recovery Equipment

| PT-300 Pumping Trap Materials | |
|-------------------------------|--|
| Name of Part | Series PT-300* |
| Body and Cap | Fabricated steel 150 psi ASME Sec. VIII design "U" stamped |
| Cap Gasket | Graphoil |
| Bolts | SA-449 steel |
| Nuts | None |
| Inlet Valve Assembly | Stainless steel |
| Vent Valve Assembly | Stainless steel |
| Valve Assembly Washers | Zinc plated steel |
| Plug | Steel |
| Mechanism Assembly | Stainless steel |
| Springs | Inconel X-750 |

NOTES: Optional flanged or socketweld connections available. Consult factory.
*Series PT-300 is available in all stainless steel. Consult factory.

| PT-300 Pumping Trap Connection Sizes | | | | |
|--------------------------------------|------------------|----|--------|----|
| Model | Horizontal Steel | | | |
| | PT-308 | | PT-312 | |
| | in | mm | in | mm |
| Inlet Connection | 2 | 50 | 3 | 80 |
| Outlet Connection | 2 | 50 | 2 | 50 |
| Motive Pressure Connection | 1/2 | 15 | 1/2 | 15 |
| Vent Connection | 1 | 25 | 1 | 25 |
| Optional Gauge Glass Connection | 1/2 | 15 | 1/2 | 15 |

| PT-300 Pumping Trap Capacities | | | | | | | | | | | |
|--------------------------------|-----|-----------------------------|-------|--------------------------------|-------|------------|-------|--------------------------------|-------|------------|-------|
| Motive Pressure | | Total Lift or Back Pressure | | PT-308 (12" Fill Head) 2" x 2" | | | | PT-312 (12" Fill Head) 3" x 2" | | | |
| | | | | Steam Motive | | Air Motive | | Steam Motive | | Air Motive | |
| psig | bar | psig | bar | lb/hr | kg/hr | lb/hr | kg/hr | lb/hr | kg/hr | lb/hr | kg/hr |
| 15 | 1.0 | 5.0 | 34 | 6,900 | 3,130 | 9,200 | 4,173 | 9,000 | 4,082 | 12,300 | 5,579 |
| 25 | 1.7 | | | 10,200 | 4,622 | 10,900 | 4,944 | 13,200 | 5,987 | 14,200 | 6,441 |
| 50 | 3.5 | | | 10,600 | 4,808 | 11,100 | 5,035 | 15,100 | 6,849 | 15,800 | 7,167 |
| 75 | 5 | | | 10,800 | 4,898 | 11,300 | 5,126 | 15,300 | 6,940 | 16,100 | 7,303 |
| 100 | 7 | | | 11,200 | 5,080 | * | * | 15,500 | 7,031 | * | * |
| 125 | 8.5 | 11,600 | 5,261 | * | * | 16,600 | 7,530 | * | * | | |
| 25 | 1.7 | 15 | 1 | 7,000 | 3,175 | 10,100 | 4,581 | 9,000 | 4,082 | 11,200 | 5,080 |
| 50 | 3.5 | | | 9,600 | 4,354 | 10,900 | 4,944 | 12,800 | 5,806 | 13,800 | 6,260 |
| 75 | 5 | | | 10,750 | 4,876 | 11,100 | 5,035 | 14,200 | 6,441 | 15,000 | 6,804 |
| 100 | 7 | | | 10,900 | 4,944 | * | * | 14,300 | 6,486 | * | * |
| 125 | 8.5 | | | 11,300 | 5,125 | * | * | 15,100 | 6,849 | * | * |
| 35 | 2.5 | 25 | 1.5 | 7,100 | 3,221 | 9,200 | 4,173 | 8,100 | 3,674 | 11,500 | 5,216 |
| 50 | 3.5 | | | 8,300 | 3,765 | 10,200 | 4,627 | 10,200 | 4,627 | 12,750 | 5,783 |
| 75 | 5 | | | 10,100 | 4,581 | 11,000 | 4,989 | 12,500 | 5,670 | 13,500 | 6,123 |
| 100 | 7 | | | 10,200 | 4,627 | * | * | 12,700 | 5,761 | * | * |
| 125 | 8.5 | | | 10,300 | 4,672 | * | * | 13,000 | 5,897 | * | * |
| 50 | 3.5 | 40 | 3 | 5,700 | 2,585 | 7,600 | 3,447 | 6,600 | 2,994 | 9,800 | 4,445 |
| 60 | 4 | | | 6,600 | 2,994 | 8,800 | 3,992 | 8,400 | 3,810 | 10,500 | 4,763 |
| 75 | 5 | | | 7,600 | 3,447 | 10,100 | 4,581 | 9,800 | 4,445 | 12,700 | 5,761 |
| 100 | 7 | | | 8,400 | 3,810 | * | * | 10,100 | 4,581 | * | * |
| 125 | 8.5 | | | 9,400 | 4,264 | * | * | 10,300 | 4,672 | * | * |
| 70 | 4.5 | 60 | 4 | 4,500 | 2,041 | 7,000 | 3,175 | 6,000 | 2,722 | 10,200 | 4,627 |
| 75 | 5 | | | 4,700 | 2,132 | 7,100 | 3,221 | 6,400 | 2,903 | 10,400 | 4,717 |
| 100 | 7 | | | 6,400 | 2,903 | * | * | 7,100 | 3,221 | * | * |
| 100 | 7 | | | 6,400 | 2,903 | * | * | 7,100 | 3,221 | * | * |
| 125 | 8.5 | | | 6,600 | 2,994 | * | * | 7,400 | 3,357 | * | * |

NOTES: Published capacities are based on the use of external check valves supplied by Armstrong. Fill head measured from drain point to top of pump cap. See figures on page 228. Although motive pressures are shown at high pressure differentials (difference between motive inlet pressure and total lift or back pressure), it is preferable to use a motive pressure of 10 - 15 psig (0.65 - 1 bar) above discharge (outlet) pressure. This ensures longevity of economical (brass) check valves and reduces both venting time and temperature differential (on steam). If a higher differential is used, stainless steel check valves are recommended.
*Consult factory.

| PT-300 Capacity Conversion Factors for Other Fill Heads | | | | | | | | | | | | |
|---|--------|-----|------|-----|------|-----|----|-----|----|-----|----|--|
| Fill Head | in | | mm | | in | | mm | | in | | mm | |
| | 0 | 0 | 6 | 152 | 12 | 305 | 24 | 610 | 36 | 914 | | |
| Model | PT-308 | 0.7 | 0.85 | 1.0 | 1.2 | 1.3 | | | | | | |
| | PT-312 | 0.7 | 0.85 | 1.0 | 1.08 | 1.2 | | | | | | |

NOTES: Fill head is measured from drain point to top of cap. See figures on page 228.

Options

Use of external check valves required for operation of pumping trap.

- Inlet Swing Check Valve
NPT Bronze ASTM B 62
Teflon® Disc
Class 150 (Minimum)
- Outlet
Stainless Steel Check Valve
Class 150 (Minimum)
- In-line Check Valves
Stainless Steel Non-Slam Check Valves
- Bronze Gauge Glass Assembly
- Steel Gauge Glass Assembly
- Removable Insulation Jacket
- Digital Cycle Counter

Designs, materials, weights and performance ratings are approximate and subject to change without notice. Visit www.armstronginternational.com for up-to-date information.