

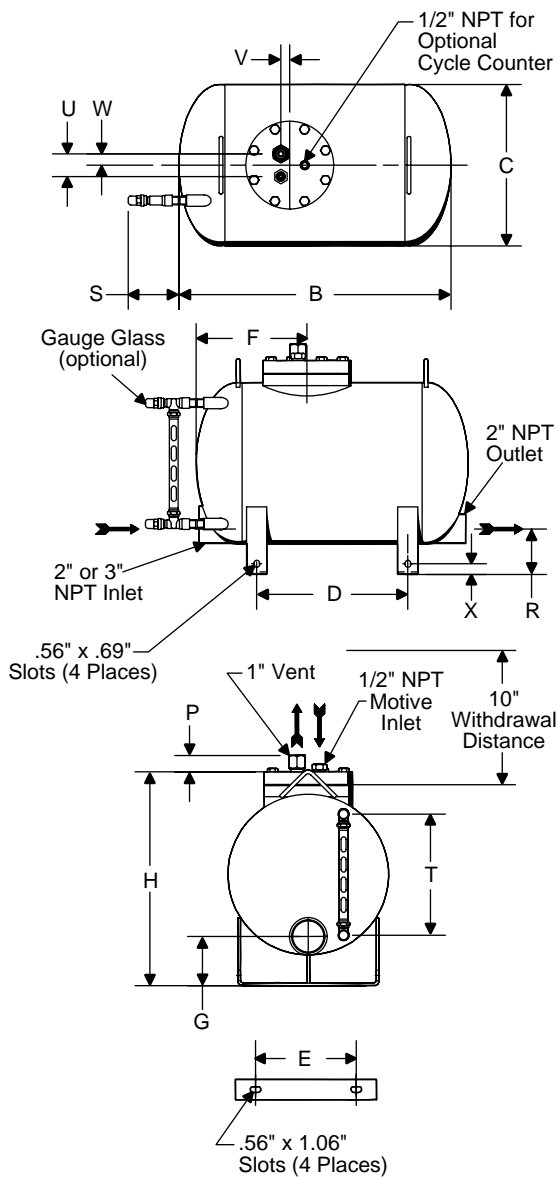


The Armstrong PT-300 Series Horizontal, Low Profile Pump Trap is the low maintenance non-electric solution to move condensate or other liquids from low points, low pressures or vacuum spaces to an area of higher elevation or pressure. Condensate can be returned at temperatures well above the 210°F (99°C) limit of conventional electric condensate pumps without the headaches of leaking seals or cavitation problems.

Features

- Non-electric—Uses inexpensive steam, air or gas to operate the pump trap
- Low profile—For tight space requirements
- High capacity—Provides highest capacity in the industry, moving 12 gallons per pump cycle
- Explosion proof—Intrinsically safe
- ASME code stamped 150/300 carbon steel or stainless steel body vessel
- Low maintenance—No leaking seals, impeller or motor problems
- All stainless steel internals with durable Inconel X-750 springs
- Externally removable/replaceable seats—Valve and seats can be replaced or cleaned without removing pump cap from body

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



PT-300 Pumping Trap Physical Data

| Model Number | PT-308 PT-312 | |
|---|------------------|---------------|
| | in | mm |
| "B" | 27 | 686 |
| "C" | 16 | 406 |
| "D" | 15 | 381 |
| "E" | 13 | 330 |
| "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"

All dimensions and weights are approximate. Use certified print for exact dimensions. Design and materials are subject to change without notice.

PT-300 Series Horizontal Steel, Low Profile Pump Trap



| 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 | Compressed non-asbestos |
| 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 |

*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 | * | * |
| 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 CRE-25. 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 | 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 CRE-25. Discharge per cycle is typically 12 gallons for PT-300 Series.

Condensate Recovery Equipment