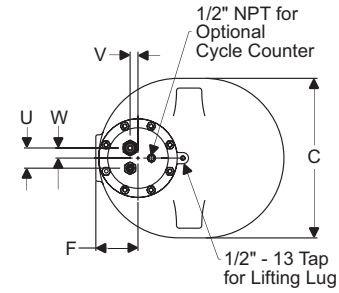
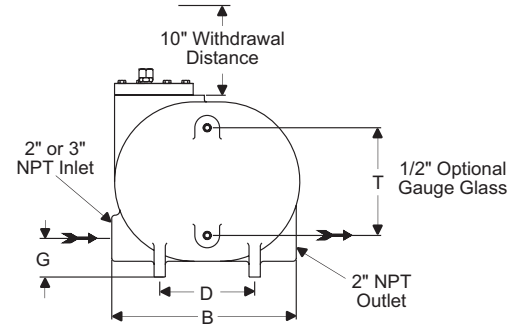
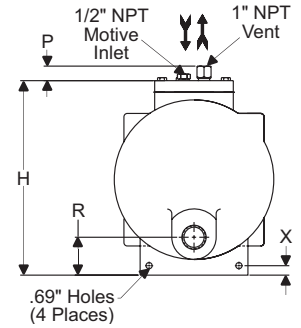
Armstrong® PT-3500 Series Low Profile Pump Trap







The Armstrong PT-3500 Series 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 200°F (93°C) limit of conventional electric 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.
- Cast iron durability. Rugged construction material means long service life.
- 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.

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

For a fully detailed certified drawing, refer to CDF #1041.

PT-3500 Series Pump Trap Physical Data

		PT-3508 and PT-3512	
		in	mm
"B"		20-1/4	514
"C"		17-3/4	451
"D"		10-9/16	268
"F"		4-3/4	120
"G"		4-5/16	110
"H"		21-11/16	550
"P"		1-5/8	41
"R"		4-5/16	110
"T"		12	305
"U"		2-1/4	27
"V"		7/8	22
"W"		1-1/4	32
"X"		1-1/16	27
Weight		**PT-3508**	**PT-3512**
Pump Trap Weight	**lb (kg)**	244 (111)	243 (110)
Bronze Check Valve		16 (7)	29 (13)
Stainless Check Valve		15 (7)	38 (17)

Maximum Operating Pressure: 125 psig (9 bar)
Maximum Allowable Pressure: Cast iron 150 psig @ 450°F (10 bar @ 232°C)

PT-3500 Series Low Profile Pump Trap

PT-3500 Series Low Profile Pump Trap Capacities

Operating Inlet Pressure		Total Lift or Back Pressure		Filling Head 12" (305 mm) Liquid Specific Gravity 0.09 - 1.0							
				PT-3508 2" x 2"				PT-3512 3" x 2"			
				Steam		Air		Steam		Air	
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	6,100	2,767	8,100	3,674	8,300	3,765	10,300	4,627
25	1.7			8,700	3,946	9,300	4,818	12,100	5,489	12,950	5,874
50	3.5			8,900	4,037	9,675	4,389	13,400	6,078	14,000	6,350
75	5			9,200	4,173	9,800	4,452	13,700	6,214	14,300	6,486
100	7			9,400	4,264	*	*	14,000	6,350	*	*
125	8.5			9,900	4,491	*	*	14,400	6,532	*	*
25	1.7	15	1	6,300	2,858	8,200	3,719	8,100	3,674	9,800	4,445
50	3.5			8,200	3,719	10,400	4,717	11,600	5,262	12,600	5,715
75	5			9,200	4,173	11,100	5,035	12,500	5,670	13,300	6,033
100	7			9,600	4,354	*	*	12,600	5,715	*	*
125	8.5			9,800	4,445	*	*	13,400	6,078	*	*
35	2.5	25	1.5	6,100	2,767	7,900	3,583	7,600	3,447	9,900	4,491
50	3.5			7,100	3,221	9,600	4,355	10,000	4,536	10,650	4,831
75	5			8,600	3,901	10,800	4,899	11,200	5,080	12,200	5,534
100	7			8,700	3,946	*	*	11,450	5,194	*	*
125	8.5			9,100	4,128	*	*	11,600	5,262	*	*
50	3.5	40	2.75	5,000	2,268	6,500	2,948	6,200	2,812	8,500	3,856
60	4			5,900	2,676	7,400	3,357	7,700	3,493	9,400	4,264
75	5			6,650	3,016	8,300	3,765	8,700	3,946	10,600	4,800
100	7			7,200	3,266	*	*	9,100	4,128	*	*
125	8.5			7,800	3,538	*	*	9,400	4,264	*	*
75	5	60	4	4,500	2,042	6,300	2,858	5,900	2,676	8,700	3,946
100	7			5,500	2,495	*	*	6,500	2,948	*	*
125	8.5			5,700	2,586	*	*	6,900	3,130	*	*

NOTES: Published capacities based on use of external check valves supplied by Armstrong. Although motive pressures are shown at high pressure differential (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 - 1.0 bar) above discharge (outlet) pressure. This ensures longevity of economical (brass) check valves and reduces both venting time and temperature differential (on steam). Shading indicates sizing example shown on page 220.
*Consult factory.

PT-3500 Capacity Conversion Factors for Other Fill Heads

Fill Head		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
		0	0	6	152	12	305	18	457	24	610	36	914
Model	PT-3508	0.7		0.85		1.0		1.1		1.2		1.35	
	PT-3512	0.7		0.85		1.0		1.04		1.08		1.2	

NOTE: Fill head measured from drain point to top of cap. See figures on page 234.

PT-3500 Series Low Profile Pump Trap Materials

Name of Part	Material
Body	Cast iron - ASTM A48 class 30
Cap	Carbon steel SA-516-70
Cap Gasket	Graphoil
Inlet Valve Assembly	Stainless steel
Vent Valve Assembly	Stainless steel
Valve Assembly Washers	Zinc-plated steel
Plug	Steel
Mechanism Assembly and Float	Stainless steel
Springs	Inconel X-750

PT-3500 Series Low Profile Pump Trap Connection Sizes

Model Number	PT-3508		PT-3512	
	in	mm	in	mm
Inlet Connection	2	50	3	75
Outlet Connection	2	50	2	50
Motive Pressure Connection	1/2	15	1/2	15
Vent Connection	1	25	1	25
Gauge Glass Connection	1/2	15	1/2	15

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