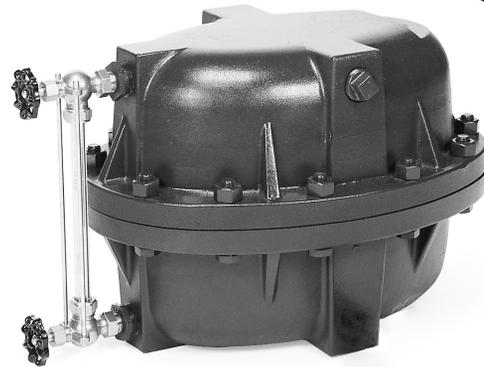
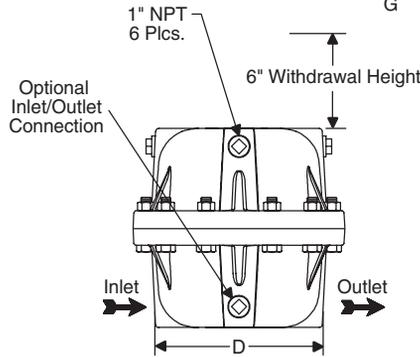
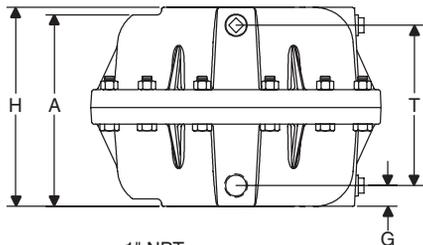
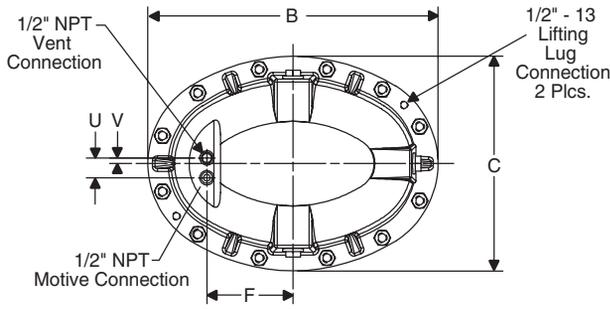




Armstrong® PT-104 Series Mini Pump Trap



Condensate Recovery Equipment



The patented Armstrong PT-104 Mini Pump Trap is the smallest non-electric solution that can move condensate or other liquids from lower to higher points and from lower to higher pressures. Condensate can be returned at temperatures well above the 200°F (93°C) limit of conventional electric centrifugal pumps without the headaches of leaking seals or cavitation problems. The PT-104 Mini Pump Trap is the small solution for a big problem.

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.

For a fully detailed certified drawing, refer to CDF #1028.

PT-104 Mini Pump Trap Physical Data

Symbol	in	mm
"A"	12	305
"B"	18-1/2	470
"C"	13-1/2	343
"D"	10-3/4	272
"F"	5-1/2	140
"G"	1-5/16	33
"H"	12-1/2	317
"U"	1-1/4	32
"V"	3/8	9
"T"	10-1/16	256
Weight lb (kg)	140 (64)	
Bronze Check Valves lb (kg)	4 (2)	
Stainless Steel Check Valve lb (kg)		
Maximum Operating Pressure	100 psig (7 bar)	
Maximum Allowable Pressure (vessel design)	150 psig @ 450°F (10 bar @ 232°C)	

PT-104 Mini Pump Trap Connection Sizes

Connection	Type	in	mm
Inlet	NPT	1	25
Outlet		1	25
Vent		1/2	15
Motive Pressure		1/2	15
Optional Gauge Glass		1	25
Optional Cycle Counter/Pressure Gauge		1	25

PT-104 Mini Pump Trap Materials

Name of Part	Material
Body and Cap	Cast iron ASTM A48 Cl.30
Vent/Inlet Valves	Stainless steel
Mechanism Assembly	Stainless steel
Spring	Inconel X-750
Gasket	Graphoil
Bolts	SA 449
Nuts	ASTM A194 Gr.2H
Plug	Cast iron

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

PT-104 Series Mini Pump Trap

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

Capacity Conversion Factors for Other Filling Heads				
Filling Head				
in	0	6	12	* 24 or greater
mm	0	150	305	* 620 or greater
PT-104 Mini Pump Trap	0.7	1.0	1.2	* Consult factory

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

PT-104 Mini Pump Trap Capacities							
Motive Pressure		Total Lift or Back Pressure		Filling Head 6" (152 mm) Liquid Specific Gravity .09 - 1.0			
				Steam		Air	
psig	bar	psig	bar	lb/hr	kg/hr	lb/hr	kg/hr
15	1.0	5	0.34	1,125	510	2,100	952
25	1.7			1,300	590	2,200	998
50	3.5			1,550	703	2,275	1,032
75	5.0			1,650	748	2,300	1,043
100	7.0			1,400	635	2,350	1,066
25	1.7	15	1.0	650	295	1,900	862
50	3.5			700	363	2,050	930
75	5.0			750	317	2,100	952
100	7.0			800	340	2,150	975
35	2.5			25	1.5	400	181
50	3.5	450	204			1,935	878
75	5.0	500	227			2,050	930
100	7.0	550	249			2,075	941
50	3.5	40	2.75			250	113
75	5.0			300	136	1,850	823
100	7.0			350	159	1,950	884

NOTE: Published capacities are based on the use of external check valves supplied by Armstrong. Fill head measured from drain point to top of pump case. See figures on page 234.

Condensate Recovery Equipment