

PT24/PT24L

INVERTED BUCKET STEAM TRAPS



DESCRIPTION:

Inverted bucket steam trap with all stainless steel internals, for high pressure steam systems.

FEATURES:

The inverted bucket arrangement operates on the density difference between steam and water, giving a cyclic operation for discharge of the accumulated condensate.

High condensate handling capacities even at low pressures, permit the use of small trap sizes to suit many applications.

The valve and valve seat are hardened by a special induction hardening process to withstand continuous, prolonged operation.

Perfect shut-off, no steam loss.

Robust, maintenance-free, fully guaranteed.

SIZES: NPS 1/2, 3/4, 1, 1 1/2, 2

CONNECTIONS:

Socket Weld / Flanged*

*End connection flanges are welded on.

LIMITING CONDITIONS:

	ASTM A216 Gr - WCB	ASTM A217 Gr - WC6
PMA: Max. allowable pressure	900 psig	925 psig
TMA: Max. allowable temp.	800 °F	950 °F
Maximum operating back pressure at the outlet should not exceed 90% of the inlet pressure		
Minimum diff. pressure for satisfactory operation	1.5 psi	1.5 psi
Cold hydro test pressure	1350 psig	1390 psig

INSTALLATION:

The trap must be fitted vertically, with the inlet from the bottom and the outlet at the top. Correct vertical fitment is essential for easy movement of the bucket. Care must be taken to ensure that the trap level is below the level of the equipment to be drained. The bypass arrangement should be above the level of the trap.

Fitment of a strainer before the trap inlet is recommended to prevent entry of dirt/foreign particles into the trap. Full-port isolation valves should be fitted before and after the trap, to be used when the trap has to be opened for maintenance.

MAINTENANCE:

This product has to be removed from the line for maintenance. It is recommended that the trap be opened periodically and the internals inspected for wear, damage and dirt. All worn or damaged parts should be replaced with new spares. A new internal kit comprising of the valve pin, valve seat, bracket and lever should be replaced as a set. The bucket vent hole should be cleaned.

IMPORTANT:

Ensure that the trap is primed by opening the inlet valve only a crack, at commissioning, allowing water to fill the trap before the steam enters. Once steam enters, the inlet valve should be opened fully.

The trap should be installed as close as possible to the equipment to be drained. For new pipelines, ensure that the lines are properly flushed, prior to fitting the trap.

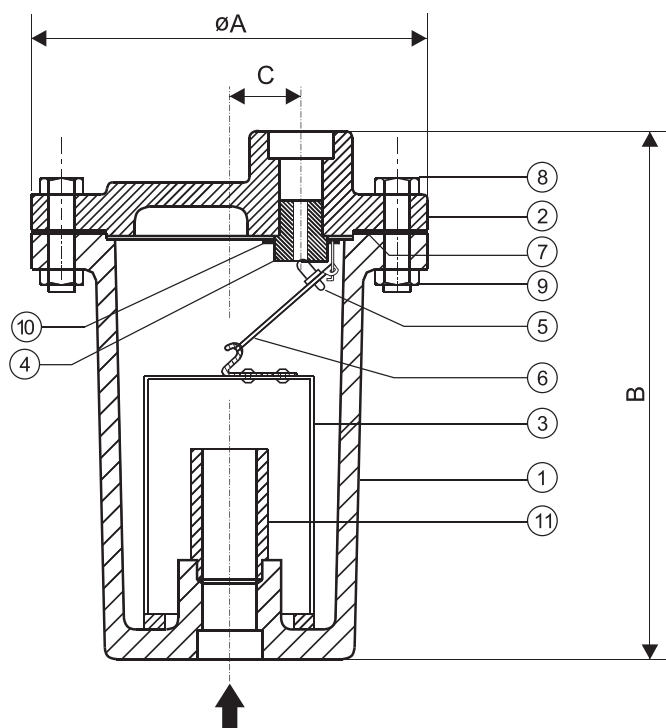
MATERIAL:

NO.	PART	MATERIAL	QTY. (Nos.)
1.	BODY	ASTM A216 Gr. WCB**	01
2.	COVER	ASTM A216 Gr. WCB	01
3.	BUCKET ASSEMBLY	AISI 304 with CS reinforcing ring	01
4.	VALVE SEAT (Hardened)	AISI 410/420	01
5.	VALVE PIN (Hardened)	AISI 410/420	01
6.	LEVER	AISI 304	01
7.	GASKET	CAF/ NON CAF	01
8.	BOLTS	ASTM A193 Gr. B7	*
9.	NUTS	ASTM A194 Gr. 2H	*
10.	BRACKET ASSEMBLY	AISI 304	01
11.	PIPE	CARBON STEEL	01

Note: All internal screws are AISI 304

* Varies with trap size (10 ~ 12)

**ASTM A217 GR-WC6 on request



DIMENSIONS:

Nominal in inches

MODEL	TRAP SIZE	A	B	C	Wt.**
PT24	1/2"	5.43	7.13	0.71	15.4 lbs
	3/4"	7.87	10.43	1.42	40 lbs
	1"	9.37	11.22	1.46	66 lbs
	1-1/2"	12.20	14.92	1.89	121 lbs
	2"	12.20	14.92	1.89	121 lbs
PT24L*	3/4"	5.43	7.13	0.71	15.4 lbs
	1"	7.87	10.43	1.42	40 lbs

Flanged Traps

(Face to Face Dimensions)

MODEL	SIZE	#150	#300	#600
PT24	1/2"	10.24	10.63	11.06
	3/4"	13.78	14.17	14.69
	1"	14.76	15.24	15.75
	1-1/2"	18.98	19.49	20.00
	2"	18.98	19.49	20.00
PT24L*	3/4"	10.24	10.71	11.22
	1"	14.06	14.57	15.08

* Flow Capacity Trap. ** For traps with socket weld ends.

AVAILABLE SPARES:

SPARE KIT: (Op. diff. press. should be specified)
Valve Pin, Valve Seat, Bracket, Lever, Bucket, Gasket.

ORDERING INFORMATION:

Refer 'How to Order' page

ACTUAL CONTINUOUS DISCHARGE CAPACITY OF TRAPS IN POUNDS OF HOT CONDENSATE PER HOUR

Model Trap Size		Orifice Size (inch)	DIFFERENTIAL PRESSURE (psi)																							
			4	7	15	30	43	57	71	85	100	115	125	142	154	170	185	199	213	230	250	270	299	327	350	
			DISCHARGE CAPACITY																							
PT24 PT24L	1/2" 3/4"	3/32	200	220	265	330	395	440	485	505	550	575	595	615	640	660	685	695	725	750	770	815	860	905	945	
		7/64	220	265	375	505	575	685	770	860	925	1015	1055	1145	1235	1280	1365	1430	1500	1565	1610	-	-	-	-	
		1/8	275	330	440	615	750	835	945	1055	1190	1280	1365	1455	1540	1630	1720	-	-	-	-	-	-	-	-	
		5/32	330	485	640	835	990	1145	1280	1430	1585	1720	-	-	-	-	-	-	-	-	-	-	-	-	-	
		3/16	705	835	1015	1320	1500	1650	1760	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PT24 PT24L	3/4" 1"	1/4	795	1035	1320	1585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		5/32	375	550	715	925	1055	1210	1375	1595	1870	2035	2315	2590	2920	3140	3360	3525	3700	3900	4055	4230	4360	4515	4625	
		3/16	660	835	1015	1365	1740	2050	2370	2645	2975	3250	3525	3800	4075	4295	4625	4845	5065	5285	5505	-	-	-	-	
		7/32	880	1125	1540	2070	2535	2920	3360	3745	4075	4460	4625	4955	5175	5340	5505	-	-	-	-	-	-	-	-	
		1/4	1100	1410	1940	2645	3195	3745	4295	4845	5065	5285	5505	-	-	-	-	-	-	-	-	-	-	-	-	
PT24	1"	9/32	1365	1850	2535	3370	4205	5065	5285	5725	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		5/16	1980	2645	3305	4515	5285	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		3/8	2865	3415	4185	5505	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		1/2	3965	4680	5285	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		7/32	880	1125	1540	2070	2535	2920	3360	3745	4075	4460	4625	4955	5175	5340	5505	5670	5835	6000	6145	6300	6430	6565	6665	
PT24	1"	1/4	1100	1430	1980	2645	3195	3745	4295	4845	5065	5340	5670	5835	6110	6390	6830	7380	7710	8040	8150	8260	-	-	-	
		9/32	1430	1870	2535	3370	4205	5065	5615	5945	6280	6565	6940	7225	7490	7820	8315	8700	9140	-	-	-	-	-	-	
		11/32	2205	2700	3635	4735	5505	6390	7050	7710	8150	8590	9030	-	-	-	-	-	-	-	-	-	-	-	-	
		3/8	2865	3415	4185	5505	6165	7270	8370	9030	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		7/16	3085	3745	4625	6165	7270	8370	9030	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
PT24	1 1/2" 2"	9/16	4295	5175	6610	9030	9470	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		3/4	5065	7490	8810	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		3/8	2975	3525	4295	5615	6165	7380	8150	8700	9250	9690	10350	11235	12115	13215	14095	14980	15860	16740	17620	18500	19275	20155	20705	
		7/16	3085	3855	4845	6500	7710	8810	10350	11675	12995	14205	15310	16410	17400	18280	19165	20045	20705	21365	22025	-	-	-	-	
		1/2	3415	4515	6390	8810	10575	12335	14095	15420	16960	18720	20045	21145	22245	-	-	-	-	-	-	-	-	-	-	
PT24	1 1/2" 2"	9/16	4625	5725	7710	9910	11895	13875	15860	17400	18720	20045	21145	22245	-	-	-	-	-	-	-	-	-	-	-	
		19/32	5725	7490	10130	13875	16960	18945	20265	21365	22245	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		13/16	7930	10130	14095	17840	20045	21585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		1.3/32	11015	14315	18720	22245	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
		1.1/4	14095	18720	22025	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Guidelines on use of Capacity Chart

- Go to the differential pressure column corresponding to or slightly higher than, but not less than the operating differential pressure at which the trap is to be used.
 - Move vertically downwards and select a suitable model and valve size.
 - The selected capacity should be equal to or higher than the condensate load after including a safety factor of 2 to 3. Oversizing is not recommended.
 - Example - Operating conditions = I) Inlet press. 57 psig II) Back press. 14 psig III) Condensate load 480 lbs/hr. IV) Safety factor 2.
- Model Selected: PT 24-20 • Valve Size : 7/32" • Capacity 2535 lbs/hr. @ a diff. press. of 43 psi.