

# PT25 / PT25L

## INVERTED BUCKET STEAM TRAPS



### DESCRIPTION:

Inverted bucket steam trap with integral strainer and all stainless steel internals. Best suited for equipment drains with medium to heavy condensate loads. Intermittent operation.

### 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 pressure, 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.

### SIZES:

NPS 1/2, 3/4, 1, 1 1/2, 2

### CONNECTIONS:

Screwed (NPT, BSPT, BSP) /  
Socket Weld / Flanged\*

\*End connection flanges of ASTM A105  
forged carbon steel are welded on.

### LIMITING CONDITIONS:

PMA: Max. allowable pressure	355 psig
TMA: Max. allowable temp. (1/2" ~ 1" size)	800 °F
(1 1/2" & 2" size)	650 °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
Cold hydro test pressure	535 psig

### INSTALLATION:

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 can be maintained inline without disturbing the piping connections. Ensure that the trap is isolated - upstream & downstream - before attempting to dismantle it. 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 full 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. The strainer screen should be removed and cleaned regularly.

### IMPORTANT:

Ensure that the trap is primed by opening the inlet valve only a crack at start-up, allowing water to fill the trap before the steam enters. The inlet valve should be opened fully only after the trap is filled with water.

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.	LEVER ASSEMBLY	AISI 304	01
5.	VALVE SEAT (Hardened)	AISI 410/420	01
6.	BRACKET	AISI 304	01
7.	VALVE PIN (Hardened)	AISI 410/420	01
8.	STRAINER SCREEN	AISI 304 (Perforated Sheet 0.8)	01
9.	STRAINER CAP	ASTM A216 Gr. WCB	01
10.	GASKET (COVER)	CAF / Graphite with SS304 Reinforced	01
11.	GASKET (STRAINER)	CAF / Graphite with SS304 Reinforced	01
12.	BOLT	ASTM A193 Gr. B7	*
13 & 14.	PLUG	CARBON STEEL	01 each
15.	PIPE	CARBON STEEL	01

\* Sizes : Upto 1" - 06 Nos., 1½" & 2" - 08 Nos.

**DIMENSIONS:** Nominal in inches

MODEL	SIZE	A	B	C	D	WT. **	E	
							#150	#300
PT25	½"	7.08	8.62	4.96	5.55	17.6 lbs	10.12	10.59
	¾"	9.65	11.61	6.65	8.95	41.8 lbs	12.8	13.19
	1"	11.1	12.99	7.17	10.3	68.2 lbs	14.48	15
	1½"	14.88	18.5	10.04	12.75	132 lbs	18.78	19.3
	2"	14.88	18.5	10.04	12.75	132 lbs	18.78	19.3
PT25L*	¾"	7.08	8.62	4.96	5.55	17.6 lbs	10.23	10.63
	1"	9.65	11.61	6.65	8.95	41.8 lbs	13.03	13.58

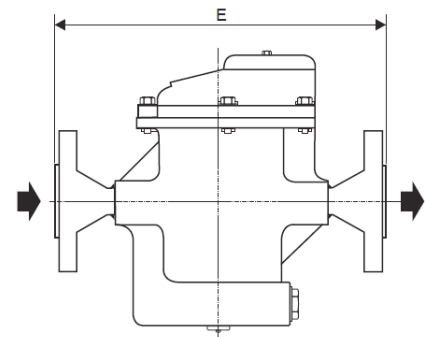
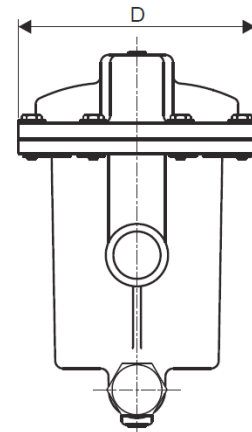
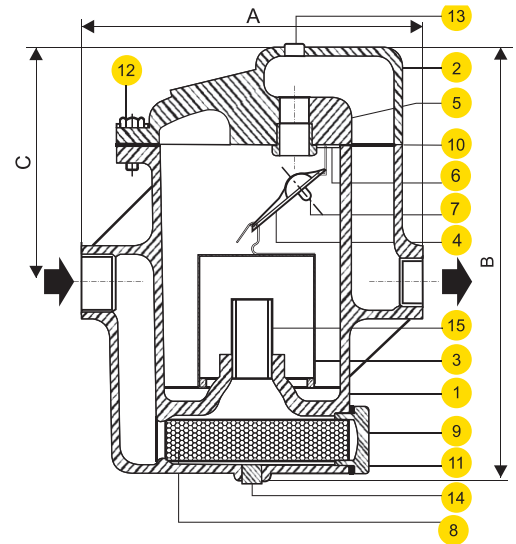
\* Low capacity trap \*\* For traps with screwed/socket weld ends

**AVAILABLE SPARES:**

SPARE KIT: Valve Pin, Valve Seat, Bracket & Lever Assly.,  
(Op. diff. press. should be specified)  
Bucket Assly, Gaskets, Strainer Screen

**ORDERING INFORMATION:**

Refer 'How to Order' page



Local regulations may restrict the use of this product below the conditions quoted. Limiting conditions refer to standard connections only. In the interest of development and improvement of the product, we reserve the right to change the specifications without prior notice.

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	128	142	156	170	185	199	213	230	250	270	299	327	350		
		<b>DISCHARGE CAPACITY</b>																								
PT25 1/2"	3/32	175	220	265	330	395	440	485	505	550	575	598	615	640	660	685	695	725	750	770	815	860	905	960		
	7/64	200	265	375	505	575	685	770	860	925	1015	1055	1145	1235	1280	1365	1430	1500	1565	-	-	-	-	-		
	1/8	265	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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
PT25 3/4"	1/4	795	1035	1320	1585	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	5/32	330	485	640	835	990	1145	1280	1430	1585	1720	1870	2070	2205	2380	2535	2755	2975	3150	3305	3415	3525	3700	3965		
	3/16	705	770	880	1145	1365	1585	1760	1940	2095	2260	2370	2590	2755	2865	3085	3305	3525	3745	4075	-	-	-	-		
	7/32	750	880	1055	1430	1720	1980	2260	2425	2590	2810	3030	3305	3525	3800	4075	4295	-	-	-	-	-	-	-		
	1/4	835	990	1320	1870	2370	2645	2865	3140	3470	3745	4130	4405	4625	-	-	-	-	-	-	-	-	-	-		
PT25L 1"	5/16	1100	1365	1675	2205	2590	2920	3250	3635	3965	4185	-	-	-	-	-	-	-	-	-	-	-	-	-		
	11/32	1410	1630	1980	2535	2920	3305	3745	4185	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	3/8	2095	2535	2865	3525	4185	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	1/2	2645	3195	3745	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	3/16	705	770	880	1145	1365	1585	1760	1940	2095	2260	2370	2590	2755	2865	3085	3305	3525	3745	4075	4405	4845	5175	5505		
PT25 1"	1/4	835	925	1430	2205	2645	3085	3525	3965	4405	4735	5065	5505	5835	6165	6500	6830	7270	7600	8150	-	-	-	-		
	9/32	1100	1410	2205	3085	3855	4405	4955	5505	5835	6165	6390	6720	7160	7490	7930	8370	8810	-	-	-	-	-			
	5/16	1540	1980	2535	3745	4625	5505	6055	6610	7270	7930	8370	8811	9250	9690	-	-	-	-	-	-	-	-	-		
	11/32	1870	2425	3305	4405	5505	6390	7050	7710	8150	8590	9030	-	-	-	-	-	-	-	-	-	-	-	-		
	3/8	2205	2645	3525	4955	6155	7270	8040	8480	9030	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
PT25 1 1/2"	7/16	2645	3305	4185	5505	7160	8370	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	9/16	3305	4625	6280	9030	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	3/4	5065	7490	8810	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
	3/8	2205	2645	3525	4955	6155	7270	8040	8480	9030	9690	10350	11235	12115	13215	14095	14980	15860	16720	17620	18720	19825	21585	23790		
	7/16	2645	3305	4515	6055	7600	8810	10350	11455	12775	13655	14980	16080	17180	17620	18720	19825	20485	21365	22025	-	-	-	-		
PT25 2"	33/64	3525	4625	6610	9140	11015	12775	14535	15860	17400	19165	20485	21585	22465	23130	-	-	-	-	-	-	-	-	-		
	19/32	5725	7490	10130	13875	16960	18945	20265	21805	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	13/16	7930	10130	14095	17840	20045	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	1.3/32	11015	13875	17180	19825	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	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 orifice 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 1056 lbs/hr. IV) Safety factor 2. Model S elected: PT 25-20 • Orifice Size : 1/4" • Capacity 2370 lbs/hr @ a diff. press. of 43 psi.