

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 : DN15, 20, 25, 40, 50

CONNECTIONS: Screwed (NPT, BSPT, BSP) /
Socket weld / Flanged*

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

Non IBR¹/IBR

LIMITING CONDITIONS:

PMA: Max. allowable pressure	25 bar(g)
TMA: Max. allowable temp. (DN15 ~ 25 size) (DN40, 50 size)	426 °C 343 °C
Maximum operating back pressure at the outlet should not exceed 90% of the inlet pressure.	
Minimum diff. pressure for satisfactory operation	0.1 bar
Cold hydro test pressure	50 bar(g)

INSTALLATION:

The trap should be fitted with the inlet and outlet connections horizontally in-line. Correct fitment with body vertical 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.

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.

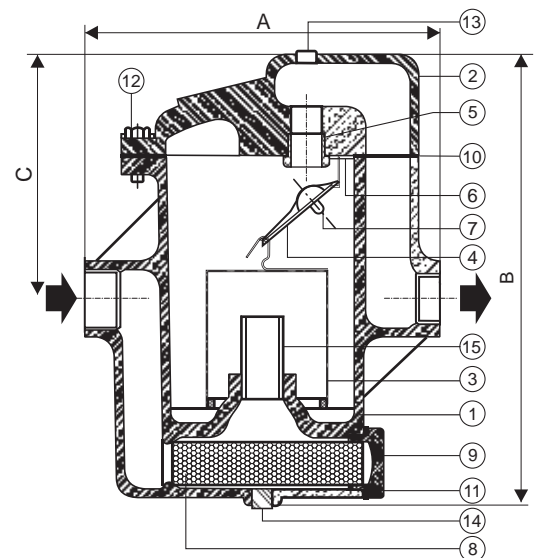
For new pipelines, ensure that the lines are properly flushed, prior to fitting the trap

¹Indian Boiler Regulations

MATERIAL:

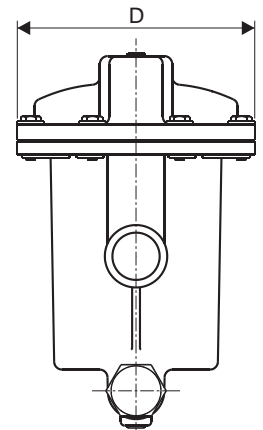
No.	PART	MATERIAL	QTY. (Nos.)
1.	BODY	ASTM A216 Gr. WCB	01
2.	COVER	ASTM A216 Gr. WCB	01
3.	BUCKET ASSEMBLY	AISI 304 with CS reinforcing ring	01
4.	LEVER ASSEMBLY	AISI 304	01
5.	VALVE SEAT (Hardened)	13% CR STEEL / AISI 410/420	01
6.	BRACKET	AISI 304	01
7.	VALVE PIN (Hardened)	13% CR STEEL / AISI 410/420	01
8.	STRAINER SCREEN	AISI 304 (Perforated Sheet)	01
9.	STRAINER CAP	ASTM A216 Gr. WCB	01
10.	GASKET (COVER)	CAF / Non CAF	01
11.	GASKET (STRAINER)	COPPER	01
12.	BOLT	ASTM A193 Gr. B7	★
13 & 14.	PLUG	CARBON STEEL	01 each
15.	PIPE	CARBON STEEL	01

★ Sizes : Upto DN25 - 06 Nos., DN40 & 50 - 08 Nos.


DIMENSIONS - Nominal in mm

MODEL	SIZE	A	B	C	D	Wt.**	E	
							# 150	# 300
PT25-15	DN15	180	219	126	141	08 kg	257	269
PT25-20	DN20	245	295	169	227	19 kg	325	335
PT25-25	DN25	282	330	182	262	31 kg	368	381
PT25-40	DN40	378	470	255	324	60 kg	477	490
PT25-50	DN50	378	470	255	324	60 kg	477	490
PT25-20L★	DN20	180	219	126	141	08 kg	260	270
PT25-25L★	DN25	245	295	169	227	19 kg	331	345

(★ Low capacity trap) ** For traps with screwed / socket weld ends


AVAILABLE SPARES:

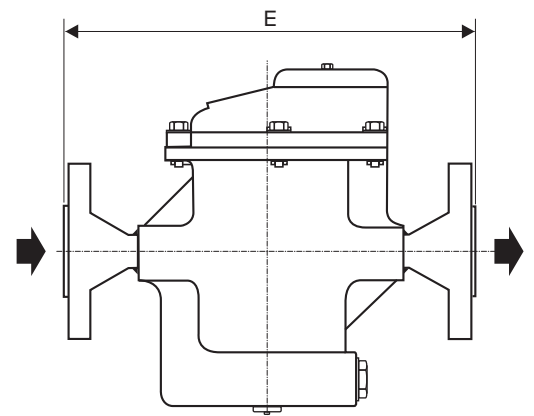
SPARE KIT: Valve Pin, Valve Seat, Bracket & Lever Assly.,
 (Op. diff. press. should be specified)
 Bucket Assly, Gaskets, Strainer Screen

HOW TO ORDER:

PT25-25 DN25 BSP P NIBR

ORDERING INFORMATION:

- 1) Inlet Pressure in bar (g)
- 2) Back Pressure in bar (g)
- 3) Operating Temperature in °C
- 4) Condensate Load in kg/hr
- 5) Size & Model
- 6) End Connections.
- 7) IBR / NIBR



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.



PENNANT

PT-25 Discharge Capacity Chart for Inverted Bucket Traps

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

Model	Orifice Size	DIFFERENTIAL PRESSURE (bar)																						
		0.25	0.5	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0	16.0	17.5	19.0	21.0	23.0	25.0
PT25-15 PT25-20L	2.5	80	100	120	150	180	200	220	230	250	260	270	280	290	300	310	315	330	340	350	370	390	410	430
	2.8	90	120	170	230	260	310	350	390	420	460	480	520	560	580	620	650	680	710	730	750	770	790	810
	3.2	120	150	200	280	340	380	430	480	540	580	620	660	700	740	780	815	850	880	910	930	950	970	990
	4.0	150	220	290	380	450	520	580	650	720	780	840	900	960	1020	1080	1150	1220	1300	1380	1450	1520	1600	1680
	4.8	320	380	460	600	680	750	800	880	950	1025	1075	1175	1250	1300	1400	1500	1600	1700	1850	1950	2000	2100	2200
	6.4	360	470	600	720	800	880	950	1025	1100	1175	1275	1375	1500	1600	1725	1850	1950	2000	2100	2200	2300	2400	2500
PT25-20 PT25-25L	4.0	150	220	290	380	450	520	580	650	720	780	850	940	1000	1080	1150	1250	1350	1430	1500	1550	1600	1680	1800
	4.8	320	350	400	520	620	720	800	880	950	1025	1075	1175	1250	1300	1400	1500	1600	1700	1850	1950	2000	2100	2200
	5.6	340	400	480	650	780	900	1025	1100	1175	1275	1375	1500	1600	1725	1850	1950	2000	2100	2200	2300	2400	2500	2600
	6.4	380	450	600	850	1075	1200	1300	1425	1575	1700	1875	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000	3100
	7.9	500	620	760	1000	1175	1325	1475	1650	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800	2900	3000	3100	3200
	8.7	640	740	900	1150	1325	1500	1700	1900	2100	2300	2500	2700	2900	3100	3300	3500	3700	3900	4100	4300	4500	4700	4900
PT25-25	9.5	950	1150	1300	1600	1900	2100	2300	2500	2700	2900	3100	3300	3500	3700	3900	4100	4300	4500	4700	4900	5100	5300	5500
	12.5	1200	1450	1700	2100	2500	2900	3300	3650	4100	4500	4900	5300	5700	6100	6500	6900	7300	7700	8100	8500	8900	9300	9700
	4.8	320	350	400	520	620	720	800	880	950	1025	1075	1175	1250	1300	1400	1500	1600	1700	1850	1950	2000	2100	2200
	6.4	380	420	650	1000	1200	1400	1600	1800	2000	2150	2300	2500	2650	2800	2950	3100	3300	3450	3700	3900	4100	4300	4500
	7.0	500	640	1000	1400	1750	2000	2250	2500	2650	2800	2900	3050	3250	3400	3600	3800	4000	4200	4400	4600	4800	5000	5200
	7.9	700	900	1150	1700	2100	2500	2750	3000	3300	3600	3800	4000	4200	4400	4600	4800	5000	5200	5400	5600	5800	6000	6200
PT25-40 PT25-50	8.7	850	1100	1500	2000	2500	2900	3200	3500	3700	3900	4100	4300	4500	4700	4900	5100	5300	5500	5700	5900	6100	6300	
	9.5	1000	1200	1600	2200	2800	3300	3650	4100	4500	4900	5300	5700	6100	6500	6900	7300	7700	8100	8500	8900	9300	9700	
	11.2	1200	1500	1900	2500	3250	3800	4400	5000	5600	6200	6800	7400	8000	8600	9200	9800	10400	11000	11600	12200	12800	13400	
	14.3	1500	2100	2850	4100	5000	5800	6600	7400	8200	9000	9800	10600	11400	12200	13000	13800	14600	15400	16200	17000	17800	18600	
	19.0	2300	3400	4000	5500	6500	7500	8500	9500	10500	11500	12500	13500	14500	15500	16500	17500	18500	19500	20500	21500	22500	23500	24500
	9.5	1000	1200	1600	2250	2800	3300	3650	4100	4500	4900	5300	5700	6100	6500	6900	7300	7700	8100	8500	8900	9300	9700	10100
PT25-40 PT25-50	11.0	1200	1500	2050	2750	3450	4000	4700	5200	5800	6200	6800	7300	7800	8000	8500	9000	9300	9700	10000	10300	10600	10900	
	13.0	1600	2100	3000	4150	5000	5800	6600	7200	7900	8700	9300	9800	10200	10500	10800	11100	11400	11700	12000	12300	12600	12900	
	15.0	2600	3400	4600	6300	7700	8600	9200	9900	10600	11300	12000	12700	13400	14100	14800	15500	16200	16900	17600	18300	19000	19700	
	20.5	3600	4600	6400	8100	9100	10000	10900	11800	12700	13600	14500	15400	16300	17200	18100	19000	19900	20800	21700	22600	23500	24400	
	27.5	5000	6300	7800	9000	10000	11000	12000	13000	14000	15000	16000	17000	18000	19000	20000	21000	22000	23000	24000	25000	26000	27000	
	32.0	6400	8500	10000	11500	13000	14500	16000	17500	19000	20500	22000	23500	25000	26500	28000	29500	31000	32500	34000	35500	37000	38500	40000

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. 4 bar(g) II) Back press. 1 bar(g) III) Condensate load 480 kg/hr. IV) Safety factor 2.
- Model Selected: PT25-20 • Orifice size : 6.4mm • Capacity 1075 kg/hr @ a diff. press. of 3 bar.**