

VTE® - PT23/PT23L

INVERTED BUCKET STEAM TRAPS (CAST IRON)



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:

DN 15, 20, 25

CONNECTIONS: Screwed (NPT/BSPT/BSP)

LIMITING CONDITIONS:

PMA: Max. allowable pressure	16 bar(g)
TMA: Max. allowable temp.	220 °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	24 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. 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.

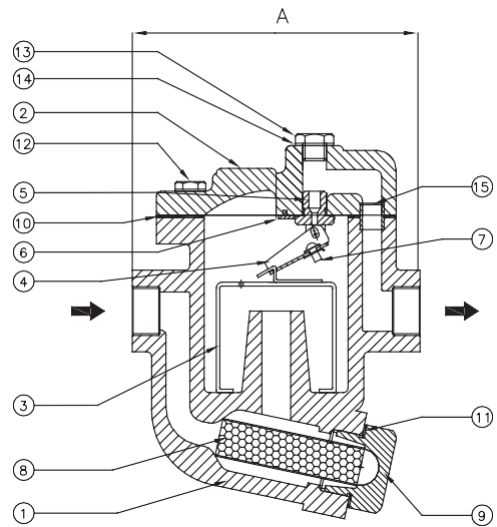
IMPORTANT:

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.

MATERIAL:

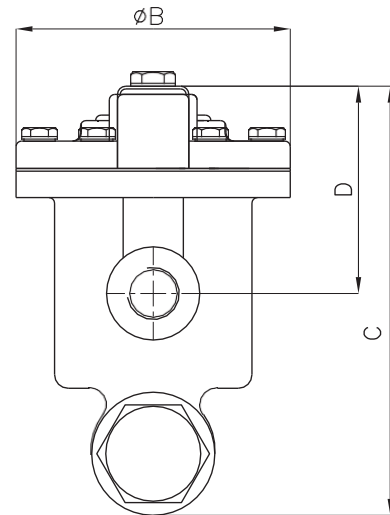
NO.	Part	Material	Qty.
1.	BODY	CAST IRON	01
2.	COVER	CAST IRON	01
3.	BUCKET ASSLY.	AISI 304 WITH CS REINFORCING RING WHERE APPLICABLE	01
4.	LEVER ASSLY.	AISI 304	01
5.	VALVE SEAT (HARDENED)	AISI 410/420	01
6.	BRACKET	AISI 304	01
7.	VALVE PIN (HARDENED)	AISI 410/420	01
8.	STRAINER SCREEN	AISI 304 (Perforated Sheet 0.8)	01
9.	STRAINER CAP	ASTM A743 Gr CA40	01
10.	GASKET (COVER)	NON CAF	01
11.	GASKET (STRAINER)	NON CAF	01
12.	BOLT	HIGH TENSILE	06
13.	PLUG	CARBON STEEL	01
14.	GASKET (PLUG)	COPPER	01
15.	LOCATING TUBE	AISI 304	01



DIMENSIONS:

Nominal in mm

MODEL	SIZE	A	B	C	D	Wt.
PT23	DN15	120	100	156	71	3.20 kg
	DN20	120	100	201	93	3.8 kg
	DN25	180	160	255	137	9.2 kg
PT23L	DN20/ DN25	120	100	156	71	3.70 kg



AVAILABLE SPARES:

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

HOW TO ORDER:

PT23 DN20 BSP ΔP

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

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

Model	Valve Size (mm)	DIFFERENTIAL PRESSURE (bar)												
		0.5	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.5	10.0	11.0	12.5	14.0
DISCHARGE CAPACITY														
PT23-15	2.5	40	80	125	140	180	190	210	225	245	260	280	----	----
PT23L-20	2.8	65	115	180	215	250	265	280	290	300	----	----	----	----
PT23L-25	3.2	110	160	210	250	280	----	----	----	----	----	----	----	----
PT23-20	2.8	65	115	180	215	250	270	290	310	330	360	375	390	
	3.2	120	180	250	290	330	360	380	400	430	----	----	----	----
	4.0	160	225	310	350	410	----	----	----	----	----	----	----	----
PT23-25	2.8	65	125	200	265	310	340	385	420	450	485	500	530	565
	4.0	190	330	490	600	660	725	785	830	860	----	----	----	----
	4.8	265	430	640	800	890	----	----	----	----	----	----	----	----

All Dimensions are in mm, weights in kg.

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. 4 bar(g) II) Back press. 1 bar(g) III) Condensate load 200 kg/hr. IV) Safety factor 2.

Model Selected: PT23-25 • Valve Size : 4.0 mm • Capacity 600 kg/hr @ a diff. press. of 3 bar.

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