

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:

NPS 1/2, 3/4, 1

CONNECTIONS:

Screwed (NPT/BSPT/BSP)

LIMITING CONDITIONS:

PMA: Max. allowable pressure	250 psig
TMA: Max. allowable temp.	428 °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	375 psig

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.

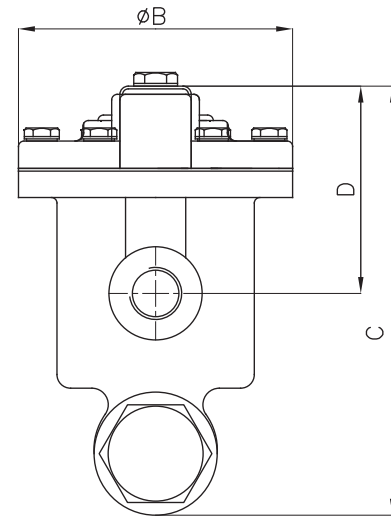
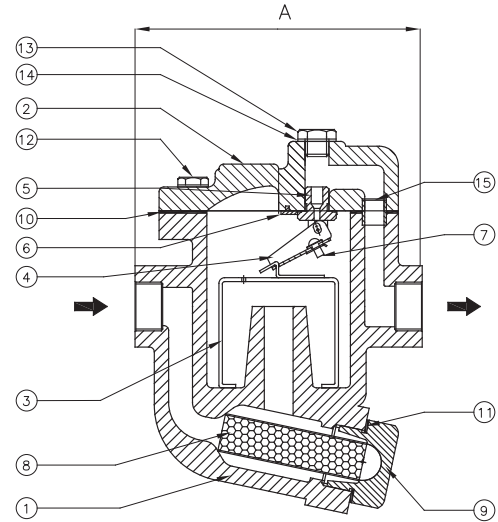
IMPORTANT:

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 REINFORCINGRING WHEREAPPLICABLE	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	
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	STAINLESS STEEL	01



DIMENSIONS: Nominal in inches

MODEL	TRAP SIZE	A	B	C	D	WT.
PT23	1/2"	4.72	3.95	6.15	2.8	7lbs
	3/4"	4.72	3.95	7.91	3.66	8.4lbs
	1"	7.1	6.3	10	5.4	20.25lbs
PT23L	3/4"	4.72	3.95	6.15	2.8	8lbs
	1"					

AVAILABLE SPARES:

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

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Discharge Capacity Chart for Inverted Bucket Traps



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

MODEL	TRAP SIZE	ORIFICE SIZE	DIFFERENTIAL PRESSURE (psi)												
			7	14	30	43	57	70	85	100	125	142	150	175	200
PT23/23L	1/2"	3/32	88	175	275	310	395	420	460	495	540	570	610	-	-
			145	255	395	475	550	585	615	640	660	-	-	-	-
			240	350	460	550	615	-	-	-	-	-	-	-	-
PT23	3/4"	7/64	145	255	395	475	550	595	640	680	725	790	825	860	-
			265	395	550	640	725	795	835	880	945	-	-	-	-
			350	495	685	770	905	-	-	-	-	-	-	-	-
PT23	1"	5/32	420	725	1080	1320	1455	1595	1730	1830	1895	-	-	-	-
			585	945	1410	1760	1960	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-	-	-	-

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 440 lbs/hr. IV) Safety factor 2. Model Selected: PT 23-1" • Orifice Size : 5/32" • Capacity 1320 lbs/hr @ a diff. press. of 43 psi.