



TI-P041-01-US
Issue 3

Cast iron Inverted Bucket Steam Traps B Series

Description

The trap contains an inverted bucket mechanism which responds to the difference in density between steam and condensate. The discharge action is cyclic. Condensate is discharged close to steam temperature.

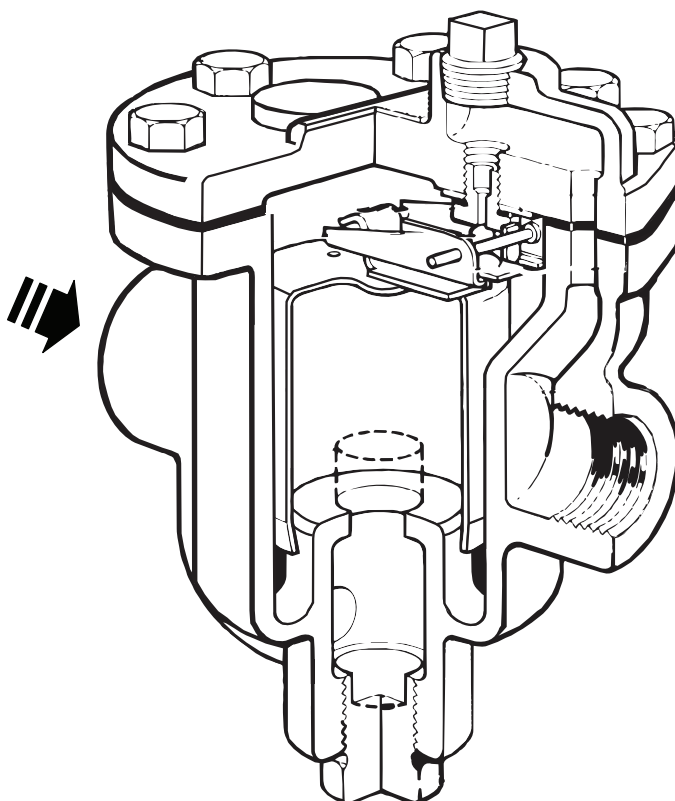
Model	B1H	B2	B3	B4	B5
PMO	250 psi g (see below)				
Sizes	½", ¾"	¾"	1"	1¼"	2"
Connections	NPT				
Construction	Cast iron body, Stainless steel mechanism				
	Stainless steel Bucket				
Options	Bimetal air vent (add '2' to model No. eg. B12HS, B22S, etc.) Integral strainer (add 'S' to model No. eg. B1HS, B2S, etc.) (when bimetal is required, strainer becomes standard)				

Typical applications

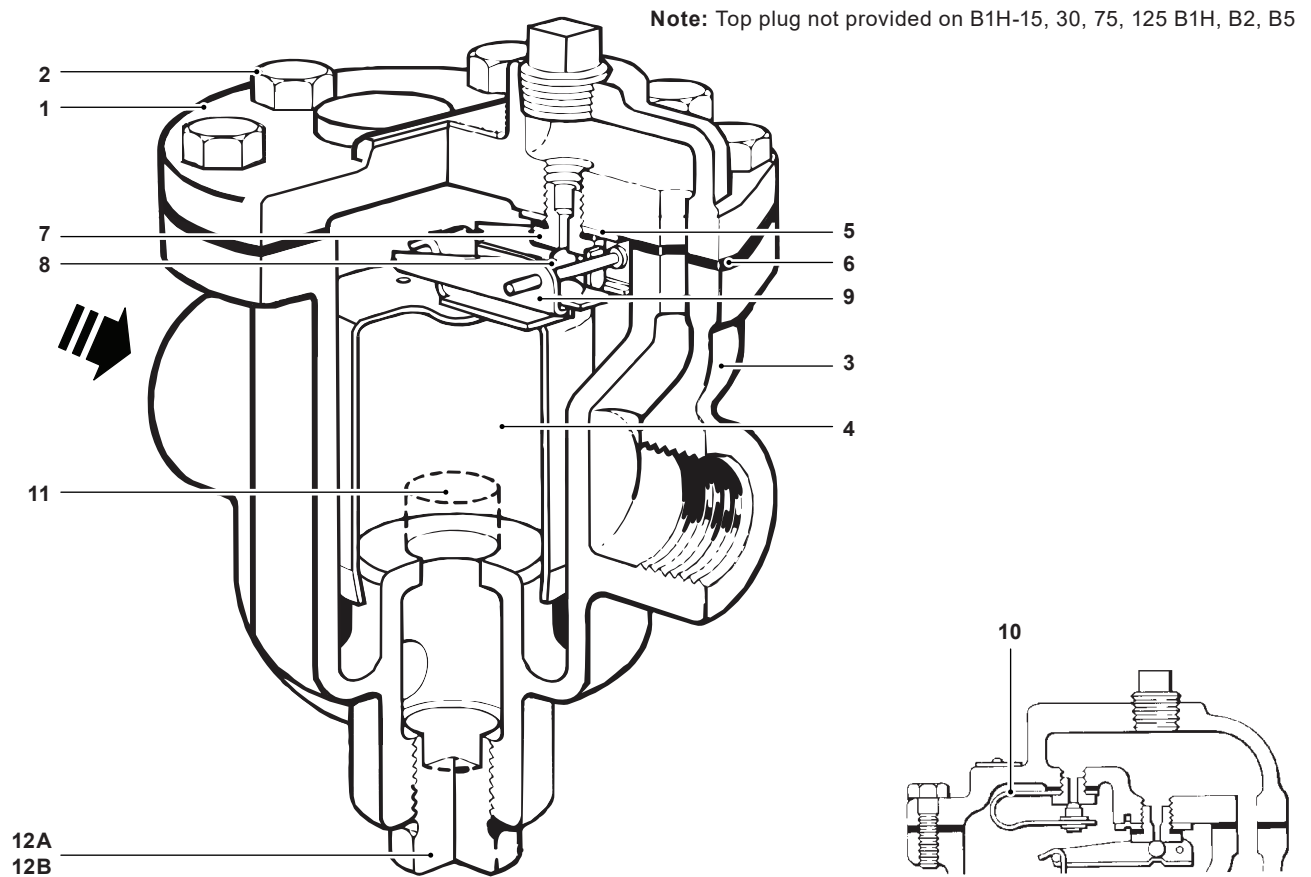
Steam main drip stations, laundry equipment, industrial dryers and storage tanks.

Optional bimetal air vent

The optional bimetal air vent allows rapid air removal on cold start-up. The vent closes at approximately 200 °F (93 °C), and will remain closed during normal operation of the trap.



Materials



No.	Part	Material	
1	Cover	Cast iron	ASTM A126 CL B
2	Cover Screws	Steel	ASTM A 449
3	Body	Cast iron	ASTM A126 CL B
4	Bucket	Stainless steel	
5	Valve Guide Plate (Seat Bracket)		
6	Cover Gasket	Graphite	
7	Valve Seat	Stainless steel (hardened)	
8	Valve Head (Ball)	Stainless steel (hardened)	
9	Valve Lever (Bucket Arm)	Stainless steel	
10	Air Vent (optional)	Stainless steel	
	Strainer Screen (optional)		
11	B1HS	Stainless steel, 20 mesh	
	B2S to B5S	Stainless steel, 1/16" perf.	
12 A	Cap on strainer models B1HS etc.	Brass	
		Steel	
12 B	Plug in standard model BIH, B2, B3, B4, B5		

Capacities

See TI-P041-02-US

Pressure shell design conditions

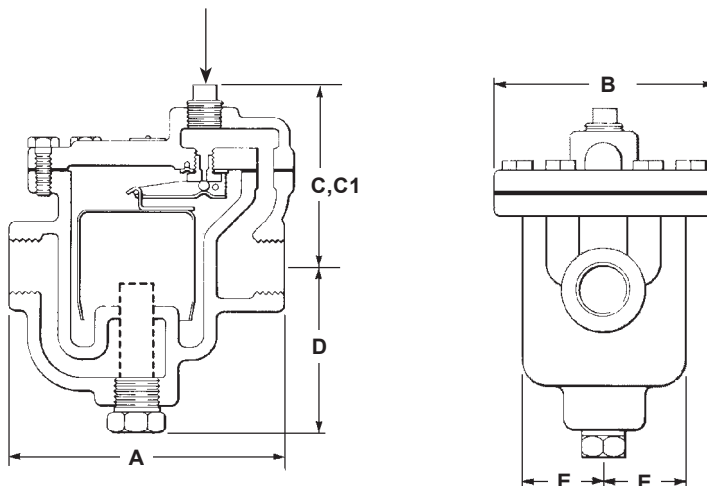
PMA	Maximum allowable pressure	250 psi g/up to 450 °F	(17 bar g/up to 232 °C)
TMA	Maximum allowable temperature	450 °F/0-250 psi g	(232 °C/0-17 bar g)

Limiting operating conditions

		15 psi g	(1 bar g)
		30 psi g	(2 bar g)
PMO	Maximum operating pressure	75 psi g	(5 bar g)
Determined by orifice selected. See Capacity and Selection Data on TI-P041-02-US		125 psi g	(9 bar g)
		180 psi g	(12 bar g)
		250 psi g	(17 bar g)
Maximum operating temperature (at all operating pressures)		450 °F	(232 °C)

Dimensions/weights (approximate) in inches (mm) and lbs (kg)

Top plug not provided on B1H-15, 30, 75, 125, B12HS, B2, B22S, B5, B52S.



Size	Type	A	B	C	C1*	D	E	Weight
1/2", 3/4"	B1H	5 (127)	4 (102)	3.3 (84)	3.8 (97)	3 (76)	1.4 (36)	6.2 lb (2.8 kg)
3/4"	B2	6.6 (168)	5.3 (135)	3.5 (89)	4.0 (102)	4.1 (104)	1.9 (48)	12.5 lb (5.7 kg)
1"	B3	7.9 (201)	5.9 (150)	4.4 (112)	4.4 (112)	4.8 (122)	2.2 (56)	19.5 lb (8.8 kg)
1-1/4"	B4	9.3 (236)	7 (178)	5.6 (142)	5.4 (137)	7.4 (188)	2.3 (58)	40 lb (18.1 kg)
2"	B5	11.2 (284)	8.8 (224)	6.3 (160)	6.6 (168)	10.7 (272)	3.4 (86)	75 lb (34 kg)

*C1 Dimension for traps supplied with bi-metal air vents (B12HS, B22S, B32S, B42S, B52S)

Sample specification

Steam traps shall be of the mechanical inverted bucket type with cast iron bodies, screwed NPT horizontal connections and stainless steel valve head, seat and bucket. An internal bi-metal air vent and/or strainer screen shall be available as options.

Installation

A pipeline strainer should be installed ahead of any trap to protect the head and seat from dirt and scale. Suitable full-port isolation valves should be placed around trap to permit servicing. The trap should be installed below the equipment drainage connection in a horizontal position so that the bucket will rise and fall vertically. For superheated steam applications, a check valve should be installed at the trap inlet.

Maintenance

This product can be maintained without disturbing the piping connections. Complete isolation of the trap from both supply and return line is required before any servicing is performed.

The trap should be disassembled periodically for inspection and cleaning of the valve head and seat, and operating mechanism. The bucket vent hole must be clear. The optional strainer screen should be removed and cleaned.

Worn or damaged parts should be replaced using a complete mechanism assembly kit.

Complete installation and maintenance instructions are given in IMI 2.400, which accompanies the product.

Spare parts

Cover Gasket (set of 3)	1
Air Vent Assembly	3
Complete Mechanism (specify pressure range)	4
Bucket (Stainless steel)	5
Strainer (Stainless steel)	6

