

Inverted Bucket Steam Traps

Model: IB18H

CAST IRON HORIZONTAL INVERTED BUCKET STEAM TRAPS

Bestobell's IB18H Series steam traps are horizontal bucket traps featuring a side inlet and side outlet. They are ideal for general purpose steam service and feature a heavy duty cast iron body and stainless steel bucket for long-term operation and reliability. For process, heating and drip leg services with differential pressures to 250 psi (17,2 bar). Available in sizes 1/2" through 2".

Inverted bucket steam traps utilize the difference between the density of gas and liquid. The bucket is submerged, once the trap has been primed after installation. When steam enters the trap, it collects in the inverted bucket causing it to become buoyant, and rise close to the discharge valve. When condensate enters the trap, and the steam condenses within the bucket, the weight of the bucket multiplied by the linkage's leverage, exceeds the differential pressure hold in the valve to the seat and the bucket sinks. This opens the discharge valve to discharge accumulated air, CO₂, other non-condensable gasses, and the condensate. As the condensate drains and steam enters the trap, the cycle repeats with the bucket filling with steam, rising again to close the discharge valve.

- **Easy in-line inspection and maintenance:** simply remove the top for easy access to the trap internals for inspection or repair
- **Unique linkage system** – multiplies the force exerted by the bucket for assisted opening against pressure for maximum flow capacities



ORDERING SCHEMATIC

MODEL					6	7	8
I	B	1	8	H			

6	SIZE
2	1/2"
3	3/4"
4	1"
5	1-1/4"
6	1-1/2"
7	2"
8	2-1/2"

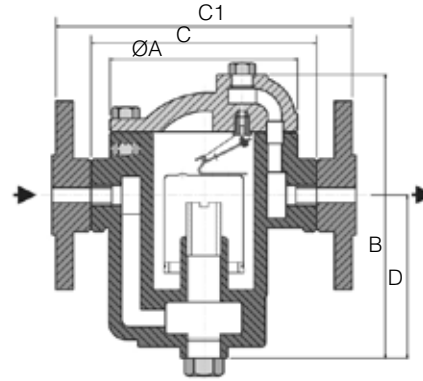
7	CONNECTIONS
10	NPT

8		ORIFICE	
Size	Number	Size	Max ΔP
1/2"	= 6	3/32	150 psi
3/4"	= 6	3/32	250 psi
	= 8	1/8	125 psi
1"	= 7	7/64	250 psi
	= 10	5/32	125 psi
1-1/4"	= 12	3/16	250 psi
	= 16	1/4	125 psi
1-1/2"	= 18	9/32	180 psi
	= 22	11/32	80 psi
2"	= 18	9/32	225 psi
	= 22	11/32	125 psi
2-1/2"	= 24	3/8	250 psi
	= 32	1/2	125 psi

CAST IRON HORIZONTAL INVERTED BUCKET STEAM TRAPS

Model: IB18H: horizontal type, side inlet, side outlet
 Line Sizes: 1/2", 3/4", 1", 1-1/4", 1-1/2", 2", 2-1/2"
 End Connections: Threaded (NPT)

DIMENSIONS



SPECIFICATIONS

Maximum Temperature: 400°F (204°C)
 Maximum Differential Pressure: 1/2": 150 psi (10,3 bar); 3/4" – 2-1/2": 250 psi (17,2 bar)

MATERIALS

Body & Cover: Cast Iron (ASTM A48, Cl. 30)
 Valve Seat: Hardened Stainless Steel
 Bucket & Linkage: Stainless Steel
 Strainer: Stainless Steel 304
 Gasket: Non-Asbestos Fiber

PRESSURE RATINGS

Size	Standard Orifice	Product Designator	Max ΔP	Max Allowable Pressure
1/2"	6	IB18H210-6	150 psi	150 psi
	6	IB18H310-6	250 psi	250 psi
3/4"	8	IB18H310-8	125 psi	125 psi
	10	IB18H410-10	125 psi	125 psi
1"	7	IB18H410-7	250 psi	250 psi
	12	IB18H510-12	250 psi	250 psi
1-1/4"	16	IB18H510-16	125 psi	125 psi
	18	IB18H610-18	180 psi	180 psi
1-1/2"	22	IB18H610-22	80 psi	80 psi
	18	IB18H710-18	225 psi	225 psi
2"	22	IB18H710-22	125 psi	130 psi
	24	IB18H810-24	250 psi	250 psi
2-1/2"	32	IB18H810-32	125 psi	125 psi

Size	A	B	C	C1	D	# Bolts	Weight
1/2"	3.74	6.02	5.04	3.23	7.68	6	14 lb
	95	153	128	82	195		6,5 kg
3/4"	3.74	7.13	5.04	4.33	7.68	6	17 lb
	95	181	128	110	195		7,5 kg
1"	5.63	8.98	6.85	5.20	9.02	8	37 lb
	143	228	174	132	229		17 kg
1-1/4"	7.01	12.4	8.31	7.17	10.3	6	77 lb
	178	314	211	182	261		35 kg
1-1/2"	7.99	13.7	9.13	7.87	11.5	8	106 lb
	203	349	232	200	292		48 kg
2"	9.02	16.3	10.2	8.38	12.8	8	165 lb
	229	413	258	213	324		75 kg
2-1/2"	11.2	20.8	13.1	11.0	18.4	10	309
	285	528	333	279	467		140 kg

CAPACITY CHARTS: DISCHARGE CAPACITIES

Size	Orifice #	Differential Pressure, PSI																		
		1	5	10	15	20	25	30	40	60	70	80	100	125	150	180	200	225	250	
1/2"	3/32	80 (36)	145 (66)	190 (86)	230 (104)	255 (117)	275 (125)	300 (136)	330 (150)	390 (177)	410 (186)	440 (200)	480 (218)	540 (245)	570 (259)					
	3/32	-	155 (70)	205 (93)	240 (109)	270 (122)	290 (131)	315 (143)	360 (163)	410 (186)	450 (205)	470 (214)	520 (236)	575 (261)	620 (282)	670 (305)	700 (318)	730 (332)	760 (345)	
3/4"	1/8	160 (72)	280 (127)	375 (170)	430 (195)	480 (218)	510 (231)	560 (254)	610 (277)	710 (322)	760 (345)	800 (364)	880 (400)	950 (431)						
	7/64	130 (59)	250 (113)	330 (150)	400 (181)	450 (204)	490 (222)	530 (240)	600 (272)	720 (326)	770 (349)	810 (367)	900 (409)	1010 (459)	1100 (500)	1170 (531)	1230 (559)	1280 (580)	1300 (591)	
1"	5/32	325 (147)	600 (272)	780 (309)	900 (408)	1000 (455)	1100 (499)	1180 (535)	1300 (590)	1500 (680)	1570 (712)	1650 (750)	1800 (818)	2000 (909)						
	3/16	380 (172)	700 (318)	930 (422)	1100 (500)	1250 (567)	1350 (612)	1450 (658)	1800 (816)	2050 (930)	2200 (998)	2300 (1045)	2500 (1136)	2600 (1182)	2800 (1273)	3020 (1370)	3200 (1455)	3400 (1542)	3500 (1591)	
1-1/4"	1/4	620 (281)	1150 (521)	1460 (662)	1750 (779)	1950 (884)	2150 (975)	2300 (1045)	2550 (1156)	2950 (1338)	3100 (1406)	3300 (1500)	3600 (1636)	3900 (1773)						
	9/32	950 (431)	1500 (680)	1900 (862)	2250 (1020)	2600 (1179)	2750 (1247)	3000 (1366)	3300 (1496)	3800 (1723)	4250 (1928)	4500 (2041)	4800 (2177)	5500 (2494)	5600 (2540)	5700 (2585)	6000 (2721)			
1-1/2"	11/32	1280 (581)	2300 (1043)	3000 (1361)	3500 (1587)	3800 (1723)	4100 (1860)	4500 (2041)	4950 (2245)	5700 (2585)	6000 (2721)	6400 (2903)								
	9/32	1000 (453)	1900 (864)	2700 (1224)	3100 (1406)	3500 (1587)	3800 (1636)	4200 (1905)	4800 (2177)	5700 (2585)	6000 (2721)	6200 (2812)	7000 (3175)	7700 (3492)	8100 (3674)	8900 (4036)	9200 (4173)	9800 (4445)		
2"	11/32	1600 (725)	2950 (1338)	3800 (1723)	4700 (2131)	5200 (2358)	5800 (2630)	6100 (2767)	6800 (3084)	8000 (3628)	8500 (3855)	9000 (4082)	9800 (4445)	10800 (4898)						
	3/8	2100 (952)	4150 (1882)	5300 (2404)	6200 (2812)	7000 (3175)	7600 (3447)	8200 (3719)	9000 (4082)	10800 (4898)	11500 (5216)	12000 (5443)	13000 (5896)	14200 (6441)	15500 (7030)	17000 (7711)	17700 (8028)	18600 (8436)	19500 (8845)	
2-1/2"	1/2	3300 (1496)	6050 (2744)	7900 (3583)	7800 (3538)	9000 (4082)	10000 (4535)	11000 (4989)	13000 (5897)	14000 (6350)	14500 (6577)	15000 (6797)	16500 (7484)	17500 (7937)	20000 (9071)					

Note: Utilize proper safety factors when selecting application. Capacities represent condensate in lbs per hour; kg/hr shown in (). 1 psi = 14.5 bar.
1 year parts & labor warranty available - consult factory for details