

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 pressures to 250 psig (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	4	1	7

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
1	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	225 psi
	= 22	11/32*	125 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

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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)

SPECIFICATIONS

Maximum Temperature: 450°F (232°C)
 Maximum Pressure: 1/2": 150 psi (10 bar); 3/4" – 2-1/2": 250 psi (17 bar)

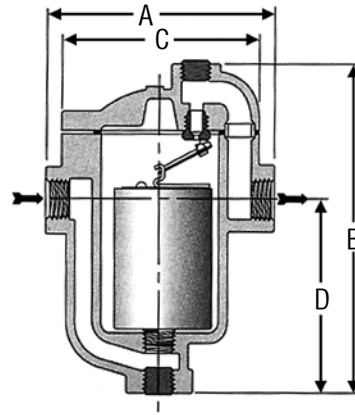
MATERIALS

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	250 psi
	10	IB18H410-10	125 psi	250 psi
1"	7	IB18H410-7	250 psi	250 psi
	12	IB18H510-12	250 psi	250 psi
1-1/4"	16	IB18H510-16	125 psi	250 psi
	18	IB18H610-18	225 psi	250 psi
1-1/2"	22	IB18H610-22	125 psi	250 psi
	18	IB18H710-18	225 psi	250 psi
2"	22	IB18H710-22	125 psi	250 psi
	24	IB18H810-24	250 psi	250 psi
2-1/2"	32	IB18H810-32	125 psi	250 psi

DIMENSIONS



1/2"	A	B	C	D	# Bolts	Weight
inches	5.06	5.94	3.75	3.31	6	5.7
mm	128	150	95	84		2.6
3/4"	A	B	C	D	#Bolts	Weight
inches	5.06	7.00	3.75	4.38	6	6.7
mm	128	178	95	111		3.0
1"	A	B	C	D	#Bolts	Weight
inches	7.00	9.09	5.63	5.00	8	22
mm	178	231	143	127		10
1-1/4"	A	B	C	D	#Bolts	Weight
inches	8.13	12.25	7.00	7.25	6	32
mm	206	311	178	181		14.5
1-1/2", 2"	A	B	C	D	#Bolts	Weight
inches	10.19	16.06	9.06	7.88	8	75
mm	258	408	230	200		34
2-1/2"	A	B	C	D	#Bolts	Weight
inches	13.00	20.69	11.25	11.00	8	125
mm	330	525	285	279		57

CAPACITY CHARTS: DISCHARGE CAPACITIES

Size	Orifice #	Differential Pressure, PSI																		
		1	5	10	15	20	25	40	50	60	70	80	100	125	150	180	200	225	250	
1/2"	3/32	40 (18)	70 (32)	110 (50)	150 (68)	200 (91)	240 (109)	310 (141)	340 (155)	375 (170)	420 (191)	440 (200)	480 (218)	540 (245)	570 (259)					
	3/32	60 (27)	100 (45)	150 (68)	190 (86)	240 (109)	260 (118)	340 (155)	380 (173)	420 (191)	450 (205)	470 (214)	520 (236)	575 (261)	620 (282)	670 (305)	700 (318)	730 (332)	760 (345)	
3/4"	1/8	130 (59)	220 (100)	340 (155)	390 (177)	460 (209)	490 (223)	590 (268)	650 (295)	700 (318)	750 (341)	800 (364)	860 (391)	950 (432)						
	7/64	130 (59)	240 (109)	340 (155)	370 (168)	420 (191)	470 (214)	590 (268)	650 (295)	700 (318)	760 (345)	810 (368)	900 (409)	1010 (459)	1100 (500)	1165 (530)	1230 (559)	1265 (575)	1300 (591)	
1"	5/32	300 (136)	560 (255)	680 (309)	800 (364)	900 (409)	1000 (455)	1220 (555)	1320 (600)	1440 (655)	1600 (727)	1650 (750)	1800 (818)	2000 (909)						
	3/16	400 (182)	700 (318)	950 (432)	1100 (500)	1300 (591)	1550 (705)	1800 (818)	1900 (864)	2030 (923)	2150 (977)	2300 (1045)	2500 (1136)	2600 (1182)	2800 (1273)	3000 (1364)	3200 (1455)	3350 (1523)	3500 (1591)	
1-1/4"	1/4	600 (273)	1100 (500)	1300 (591)	1600 (727)	1800 (818)	1900 (864)	2300 (1045)	2600 (1182)	2850 (1295)	3050 (1386)	3300 (1500)	3600 (1636)	3900 (1773)						
	9/32	1000 (455)	1900 (864)	2400 (1091)	2800 (1273)	3250 (1477)	3600 (1636)	4400 (2000)	4750 (2159)	5300 (2409)	5700 (2591)	6100 (2773)	6600 (3000)	7500 (3409)	8000 (3636)	8600 (3909)	9100 (4136)	9600 (4364)		
1-1/2"	11/32	1500 (682)	2600 (1182)	3200 (1455)	3900 (1773)	4500 (2045)	5100 (2318)	6200 (2818)	6900 (3136)	7500 (3409)	8150 (3705)	8500 (3864)	9600 (4364)	11000 (5000)						
	9/32	1000 (455)	1900 (864)	2400 (1091)	2800 (1273)	3250 (1477)	3600 (1636)	4400 (2000)	4750 (2159)	5300 (2409)	5700 (2591)	6100 (273)	6600 (3000)	7500 (3409)	8000 (3636)	8600 (3909)	9100 (4136)	9600 (4364)		
2"	11/32	1500 (682)	2600 (1182)	3200 (1455)	3900 (1773)	4500 (2045)	5100 (2318)	6200 (2818)	6900 (3136)	7500 (3409)	8150 (3705)	8500 (3684)	9600 (4364)	11000 (5000)						
	3/8	1800 (818)	3400 (1545)	4500 (2045)	5400 (2455)	6100 (2773)	6900 (3136)	8500 (3864)	9200 (4182)	9650 (4386)	10500 (4773)	11500 (5227)	12800 (5818)	14200 (6455)	15600 (7091)	15900 (7227)	17500 (7955)	18250 (8295)	19000 (8636)	
2-1/2"	1/2	2600 (1182)	5000 (2273)	6400 (2727)	7800 (3545)	8900 (4045)	9700 (4409)	12000 (5455)	1300 (5909)	14400 (6565)	15900 (7227)	16300 (7409)	18000 (8182)	20000 (9091)						

Note: Utilize proper safety factors when selecting application. Capacities represent condensate in lbs per hour; kg/hr shown in (). 1 psi = 14.5 bar.