IB18V Series

Vertical Inverted Bucket Steam Traps

Bestobell Steam's IB18V Series vertical style inverted bucket traps are ideal for general condensate removal service and feature a heavy-duty cast iron body. And stainless steel bucket for long-term operation and reliability. For process, heating and dripleg services with pressures to 250 psig (17.2 bar). Available in 1/2" through 2" sizes.

Inverted bucket steam traps operate on the simple principle that steam, a gas, will provide the buoyancy to an inverted bucket in water. The bucket, due to its weight, is submerged within a "prime" of water. The bucket pulls down on a lever system and holds the discharge valve open, allowing flow and discharge of condensate through the trap. When steam enters the trap, it collects in the inverted bucket causing it to become buoyant. The bucket floats upward closing the discharge valve through the linkage arrangement. When condensate again enters the trap, and as the steam under the bucket condenses , the weight of the bucket, multiplied by the linage's leverage, exceeds the differential pressure holding the valve plug to the valve seat, and the bucket sinks. This open the valve to discharge condensate and accumulated non-condensable gases. As the condensate drains and steam enters the trap, the cycle repeats.

- **Easy 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.
- **Hardened stainless steel valve and seat —** for minimal corrosion and increased operating life of the steam trap.

BESTOBELL STEAM
Steam Traps and Steam Specialties

3170 Wasson Road • Cincinnati, Ohio 45209 USA
Phone 513-533-5600 • Fax 513-871-0105
Toll-Free Phone: 800-543-7311
E-Mail: steam@richardsind.com

Bestobell IB18V Series Inverted Bucket Traps

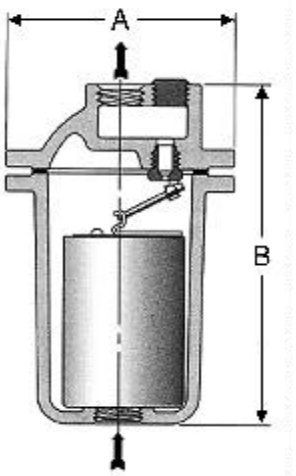
Pressure Ratings

Size	Standard Orifice	Product Designator	Max. ΔP	Max. Allowable Pressure
1/2"	6	IB18V210-6	250	250
	8	IB18V210-8	125	250
3/4"	7	IB18V310-7	250	250
	10	IB18V310-10	125	250
1"	12	IB18V410-12	250	250
	16	IB18V410-16	125	250
1-1/4"	18	IB18V510-18	225	250
	22	IB18V510-22	125	250
1-1/2"	18	IB18V610-18	225	250
	22	IB18V610-22	125	250
2"	24	IB18V710-24	225	250
	32	IB18V710-32	125	250

Dimensions

Model Size	IB18V 1/2"	IB18V 3/4"	IB18V 1"	IB18V 1-1/4"	IB18V 1-1/2"	IB18V 2"
A	4.25 (108)	5.63 (134)	6.88 (187)	9.06 (238)	9.06 (238)	10.25 (286)
B	6.38 (162)	8.00 (203)	10.50 (270)	14.38 (368)	14.38 (368)	16.69 (432)
# Bolts	6	8	8	8	8	12
Weight Lbs (Kg)	9.9 (4.5)	13.5 (6)	32 (14.5)	60 (30)	60 (30)	115 (52)

Note: dimensions shown in ( ) represent mm.



Specifications

Models:

- IB18V: vertical type, bottom inlet, top outlet

Line Sizes: 1/2", 3/4", 1", 1-1/4", 1-1/2", 2"

End Connections: threaded (NPT)

Materials:

- Body & Cover: Cast Iron (ASTM A48, Cl. 30)
- Bucket & Linkage: Stainless Steel
- Valve & Seat: hardened Stainless Steel
- Body/Cover Gasket: Teflon®

Maximum Temperature: 450°F

Discharge Capacities

Capacities shown in blue represent condensate in lbs. per hour; kg/hr shown in ( ). 1 psi = 14.5 bar.

Size	Orifice #	Differential Pressure PSI																		
		1	5	10	15	20	25	30	40	50	60	70	80	100	125	150	180	200	225	250
1/2"	8	130 (59)	220 (100)	340 (154)	390 (177)	460 (209)	490 (223)	510 (232)	590 (268)	650 (295)	700 (318)	750 (341)	800 (364)	860 (391)	950 (432)					
	6	60 (27)	100 (45)	150 (68)	190 (86)	240 (109)	260 (118)	290 (132)	340 (154)	380 (173)	420 (191)	450 (204)	470 (214)	520 (236)	575 (261)	620 (282)	670 (304)	700 (318)	730 (332)	760 (345)
3/4"	10	300 (136)	560 (254)	680 (309)	800 (364)	900 (409)	1000 (454)	1070 (486)	1220 (554)	1320 (600)	1440 (654)	1600 (727)	1650 (750)	1800 (818)	2000 (909)					
	7	130 (59)	240 (109)	340 (154)	370 (168)	420 (191)	470 (214)	520 (236)	590 (268)	650 (295)	700 (318)	760 (345)	810 (368)	900 (409)	1010 (459)	1100 (500)	1165 (529)	1230 (559)	1265 (575)	1300 (591)
1"	16	600 (273)	1100 (500)	1300 (591)	1600 (727)	1800 (818)	1900 (864)	2000 (909)	2300 (1045)	2600 (1182)	2850 (1295)	3050 (1386)	3300 (1500)	3600 (1636)	3900 (1773)					
	12	400 (182)	700 (318)	950 (432)	1100 (500)	1300 (591)	1550 (704)	1700 (773)	1800 (818)	1900 (864)	2030 (923)	2150 (977)	2300 (1045)	2500 (1136)	2600 (1182)	2800 (1273)	3000 (1364)	3200 (1454)	3350 (1523)	3500 (1591)
1-1/4" 1-1/2"	22	1500 (682)	2600 (1182)	3200 (1454)	3900 (1773)	4500 (2045)	5100 (2318)	5400 (2454)	6200 (2818)	6900 (3136)	7500 (3409)	8150 (3704)	8600 (3909)	9600 (4364)	11000 (5000)					
	18	1000 (454)	1900 (864)	2400 (1091)	2800 (1273)	3250 (1477)	3600 (1636)	3800 (1727)	4400 (2000)	4750 (2159)	5300 (2409)	5700 (2591)	6100 (2773)	6600 (3000)	7500 (3409)	8000 (3636)	8600 (3909)	9100 (4136)	9600 (4364)	
2"	32	2600 (1182)	5000 (2273)	6400 (2909)	7800 (3545)	8900 (4045)	9700 (4409)	10500 (5250)	12000 (5454)	13000 (5909)	14400 (6545)	15900 (7227)	16300 (7409)	18000 (8182)	20000 (9091)					
	24	1800 (818)	3400 (1545)	4500 (2045)	5400 (2454)	6100 (2773)	6900 (3136)	7500 (3409)	8500 (3864)	9200 (4182)	9650 (4386)	10500 (4773)	11500 (5227)	12800 (5818)	14200 (6454)	15600 (7091)	16500 (7500)	17500 (7954)	18250 (8273)	19000 (8636)

Notes:

Capacities given are continuous discharge capacities in lbs/hr (kgs/hr) at shown differential pressures. Utilize proper safety factors when selecting application.

Do not use cast iron bodied traps in applications where thermal and hydraulic shock exist. See Delta Element models.