



BESTOBELLSTEAM

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FTH-10 Series

Installation & Maintenance Instructions for Bestobell Steam FTH-10 Series

Warning: Bestobell Steam products must only be used, installed and repaired in accordance with these Installation & Maintenance Instructions. Observe all applicable public and company codes and regulations. In the event of leakage or other malfunction, call a qualified service person; continued operation may cause system failure or a general hazard. Prior to servicing equipment, disconnect, shut off, drain and/or bypass all pressurized fluids.

Pre-Installation

Prior to installation:

- Blow out piping to remove any scale or dirt.
- Verify that your Bestobell steam trap will meet system conditions by checking the nameplate for operating differential pressure and maximum pressure and temperature limits of the trap body.

Installation and Operation

The ball float is connected by a lever to the valve and seat and, once the condensate reaches a certain level in the trap, the float begins to rise. This opens the orifice and the condensate drains until the float is lowered and the valve seat rests tightly on the seat. The float is positioned above the orifice so the condensate forms a water seal and eliminates the loss of any live steam.

At the top of the trap is a thermostatic air vent that discharges all air and non-condensable gases as soon as they reach the trap. This allows for maximum condensate drainage. The air vent reacts to the system temperature and will close at a temperature a few degrees below saturation point.



Initial Warm-up

As with all steam equipment, it is recommended that the external gasketed joints be retorqued after a warm up/cool-down cycle. Torque the cover bolts in a diagonal sequence. Recommended cover bolt torque values are:

1/2"	25 ft-lbs
3/4"	25 ft-lbs
1"	25 ft-lbs
1-1/2"	60 ft-lbs
2"	125 ft-lbs

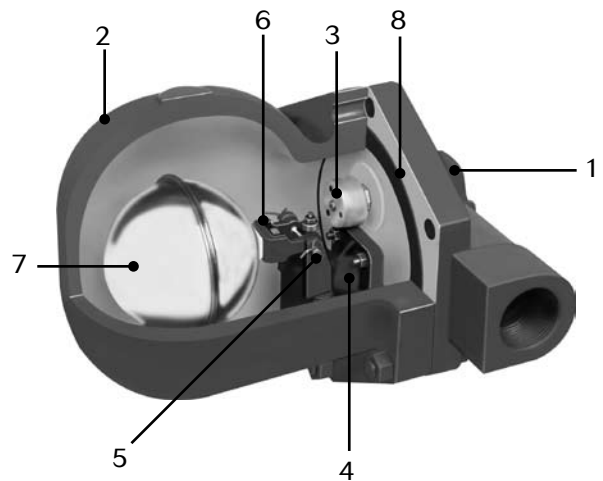
Maintenance

NOTE: Trap users sometimes confuse *flash* steam with *leaking* steam. If the steam blows out continuously, in a *blue* stream, it is *leaking* steam. If steam *floats* out intermittently, each time the trap discharges, in a *whitish* cloud, it is *flash steam*. If traps are found to be leaking steam, the following steps should be taken in the order shown.

Warning: Be sure that there is no pressure in the trap before loosening any fittings or joints. Shut off the steam supply and allow the trap to cool to prevent rupture or distortion of the float. Isolate connection to condensate system as required.

1. Check that steam supply is shut off.
2. Trap does not need to be removed from piping to do maintenance. Some hot condensate may be left in trap, so allow trap to cool or remove Cover Bolts slowly from around the flange. Lift off the body (2) of steam trap, which will expose all internal working components.
3. Wipe or rinse out interior of steam trap cover.
4. Dismantle the valve mechanism by removing the Lever Pin (5) and pulling away the Float/Arm Plug (6). Float can be removed from Lever, if required. Inspect seat (4) and Plug (6) for any scale build-up, worn or pitted seating surfaces. If slight evidence of above conditions exist, then the seating surfaces can be touched up by lapping the Plug to Seat by hand with a very fine grinding compound paste. If the surfaces are badly pitted or worn or do not clean up by above method, replace the Seat and Plug.
5. To remove the Seat (4) on 3/4" and 1" traps, use a 5/8" socket over the Seat. On the 1-1/2" or 2" size, a 1-5/8" socket is required. If the Seat has been removed, inspect its seating surface and clean the old gasket material completely away. Replace Gasket (8) as required.

6. Inspect the Float mechanism linkage points for wear, especially at pivot points and Lever Pin (5). Replace if worn.
7. Inspect Float ball (7) for corrosion pitting, splits or pinholes. Replace if there is any evidence that the Float may leak. Replace if the Float is dented or crushed.
8. Inspect the Air Vent (3) for fatigue corrosion or fatigue. The Air Vent (3) can be removed by unthreading the entire sealed assembly from the trap cover with a box wrench and should be replaced if there are any doubts about its condition.
9. After cleaning all gasket surfaces, reassemble trap in reverse order. Lubricate the lever pivot points with small amounts of graphite paste. An anti-seize compound on all threads will aid in the disassembly of the trap at a later date.
10. Before putting cover and attached mechanisms back into trap body, make sure linkage moves smoothly and freely. Also check that the Valve Plug (6) seats properly on Seat (4).
11. Replace Cover assembly into trap body using a new Body Gasket (8). Tighten bolts evenly, then test for any leaks. See recommended cover torques.



Item	Part Name	Material	Qty
1	Cover	Ductile Iron	1
2	Body	Ductile Iron	1
3	Air Vent	304	1
4	Seat	410	1
5	Lever Pin	304	1
6	Float Arm/Plug	304	1
7	Ball Float	304	1
8	Gasket	Non-asbestos Fiber	1

Discharge Capacities

Capacities shown in blue represent condensate in lbs. per hour; kg/hr shown in ().

Diff. Pressure	With 4.5 Orifice				With 10 Orifice				With 14 Orifice			
	1/2"-3/4"	1"	1-1/2"	2"	1/2"-3/4"	1"	1-1/2"	2"	1/2"-3/4"	1"	1-1/2"	2"
1 (0,07)	250 (114)	900 (409)	2300 (1045)	7400 (3364)	135 (61)	385 (175)	1500 (682)	3900 (1773)	85 (39)	270 (123)	1100 (500)	1850 (841)
5 (0,34)	400 (182)	1550 (705)	4200 (1909)	13500 (6136)	210 (95)	660 (300)	2800 (1273)	7300 (3318)	150 (68)	470 (214)	1800 (818)	3500 (1591)
10 (0,69)	520 (236)	2100 (955)	6000 (2727)	19800 (9000)	280 (127)	910 (414)	3900 (1773)	10000 (4545)	195 (89)	640 (291)	2600 (1182)	5000 (2273)
15 (1,03)	600 (273)	2500 (1136)	7500 (3409)	24000 (10909)	330 (150)	1100 (500)	4800 (2182)	12300 (5591)	240 (109)	750 (341)	3200 (1455)	5900 (2682)
20 (1,38)	700 (318)	3000 (1364)	8800 (4000)	28000 (12727)	380 (173)	1300 (591)	5600 (3545)	14500 (6591)	280 (127)	910 (414)	3600 (1636)	6800 (3091)
30 (2,07)	830 (377)	3650 (1659)	10500 (4773)	34000 (15455)	420 (191)	1500 (682)	7000 (3182)	17500 (7955)	310 (141)	1100 (500)	4200 (1909)	8400 (3818)
40 (2,76)	950 (432)	4000 (1818)	12500 (5682)	40000 (18182)	480 (218)	1750 (795)	8000 (3636)	20000 (9091)	355 (161)	1300 (591)	5000 (2273)	9600 (4364)
50 (3,45)	1000 (455)	4500 (2045)	13500 (6136)	45000 (20455)	520 (236)	1850 (841)	9000 (4091)	22500 (10227)	390 (177)	1400 (636)	5450 (2477)	10500 (4773)
65 (4,48)	1150 (523)	5100 (2318)	1500 (6818)	50500 (22955)	580 (264)	2050 (932)	10000 (4545)	26000 (11818)	430 (195)	1600 (727)	6000 (2727)	12000 (5455)
80 (5,52)					630 (286)	2250 (1023)	11500 (5227)	29000 (13182)	480 (218)	1750 (795)	6900 (3136)	13500 (6136)
100 (6,9)					700 (318)	2700 (1227)	13000 (5909)	32000 (14545)	515 (234)	1850 (841)	7800 (3545)	15000 (6818)
125 (8,6)					750 (341)	2900 (1318)	14200 (6455)	35000 (15909)	545 (248)	2100 (955)	8600 (3909)	16500 (7500)
145 (10,0)					800 (364)	3100 (1409)	15000 (6818)	40000 (18182)	600 (273)	2200 (1000)	9000 (4091)	17500 (7955)
180 (12,4)									660 (300)	2600 (1182)	9650 (4386)	19000 (8636)
200 (13,8)									700 (318)	2750 (1250)	10000 (4545)	20000 (9091)