Inverted Bucket Steam Traps

Series B BEAR TRAP®

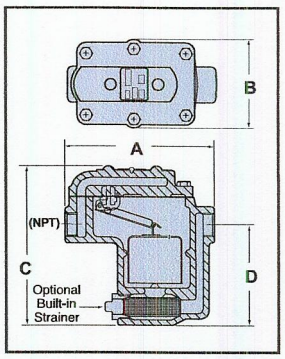
The Series B inverted bucket traps are designed for a wide range of industrial applications including steam mains, laundry and dry cleaning plants, food processing and those that require a lift in the discharge lines.

Series B BEAR TRAP®

Series B1

- Available in sizes ½" and ¾" NPT and BSPT
- Meets Mil specification WW-T-696-E Type I, Style B, Class 1-7
- Removable covers for easy in-line service
- Erosion resistant covers
- Stainless steel internal components
- Resistant to moderate water hammer
- Optional built-in thermic vent for faster heating
- Optional built-in strainer to reduce the number of piping connections
- Maximum capacities to 1700 lbs/hr. (771 kg/hr.)
- Maximum temperature 450°F (230°C)
- Maximum operating pressure 250 psig (17.3 bar)

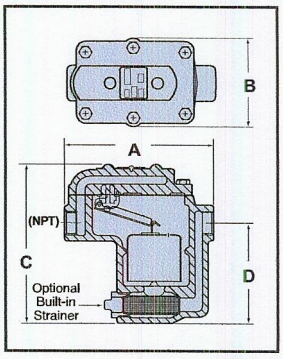
Series B1



Series B2

- ¾" NPT and BSPT
- Meets Mil specification WW-T-696-E Type I, Style B, Class 1-7
- Removable covers for easy in-line service
- Erosion resistant covers
- Stainless steel internal components
- Resistant to moderate water hammer
- Optional built-in thermic vent for faster heating
- Optional built-in strainer to reduce the number of piping connections
- Maximum capacities to 2620 lbs./hr (1188 kg/hr.)
- Maximum temperature 450°F (230°C)
- Maximum operating pressure 250 psig (17.3 bar)

Series B2



Materials of Construction	
Part	**Specifications**
Body and cover	Cast Iron 30,000 psi tensile
Valve Pin and Seat	Stainless Steel (Hardened)
Bucket	Stainless Steel
Lever Assembly	Stainless Steel
Cover Bolts	Grade 5 Steel

Dimensions in. (mm)

Series	Size	A	B	C	D
B1	½, ¾	6 15/16 (177)	3 13/16 (97)	7 1/4 (184)	4 3/8 (111)
B2	¾	6 15/16 (177)	3 13/16 (97)	9 1/16 (230)	6 7/8 (158)

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Series B BEAR TRAP®

How to Select

The trap capacity should be selected based on the minimum differential pressure between the inlet pressure and outlet pressure. The trap seat must be capable of opening against the maximum inlet steam pressure. When the traps are used on applications where the steam is controlled by a modulating temperature regulator, the trap is normally selected to handle the full condensate load including safety factor at 1/2 psi (.034 bar) differential pressure.

Part of the ESP PLUS EQUIPMENT SELECTION PROGRAM

For selection information, please refer to "Selection Guidelines" on page 129.

For computer aided selection of Inverted Bucket Steam Traps, please refer to the "Steam Specialty Component Selectors" on the Hoffman Specialty website, www.hoffmanspecialty.com or, for a stand-alone version of EPS-PLUS, contact your local Hoffman Specialty Representative (see back cover for listing).

Capacities (Gross Ratings)

Series	Orifice Size in. (mm)	Seat Pressure psi (bar)	Differential Pressure psig (bar)																
			1/2 (.035)	1 (0.07)	2 (0.14)	5 (0.35)	10 (0.69)	15 (1.0)	20 (1.4)	30 (2.1)	40 (2.8)	50 (3.5)	60 (4.2)	75 (5.2)	100 (6.9)	125 (8.6)	180 (12.4)	200 (13.8)	250 (17.3)
	Capacities lbs./hr (kg/hr)																		
B1	.250	15	500	650	835	1145	1490	1700											
	(6.4)	(1.0)	(227)	(295)	(379)	(519)	(676)	(771)											
	.187	30	260	345	460	680	905	1060	1200	1440									
	(4.7)	(2.1)	(118)	(156)	(209)	(308)	(411)	(481)	(544)	(653)									
	.156	75	200	255	335	480	605	695	775	900	980	1070	1130	1200					
	(4.0)	(5.2)	(91)	(116)	(152)	(218)	(274)	(315)	(352)	(408)	(445)	(485)	(513)	(544)					
	.125	125	115	150	195	275	355	410	460	530	595	640	690	745	830	920			
	(3.2)	(8.6)	(52)	(68)	(88)	(125)	(161)	(186)	(209)	(240)	(270)	(290)	(313)	(338)	(376)	(417)			
	.094	180	80	105	140	205	275	320	360	425	480	520	560	620	705	780	930		
	(2.4)	(10.4)	(36)	(48)	(64)	(93)	(125)	(145)	(163)	(193)	(218)	(236)	(254)	(281)	(320)	(354)	(422)		
	.070	250	28	40	55	90	125	150	175	215	250	275	305	340	400	450	570	600	700
	(1.8)	(17)	(13)	(18)	(25)	(41)	(57)	(68)	(79)	(98)	(113)	(125)	(138)	(154)	(181)	(204)	(259)	(272)	(318)
B2	.360	15	750	975	1255	1755	2280	2620											
	(9.1)	(1.0)	(340)	(447)	(569)	(796)	(1034)	(1188)											
	.282	30	650	810	1005	1350	1700	1950	2130	2400									
	(7.1)	(2.1)	(295)	(367)	(456)	(612)	(771)	(885)	(966)	(1089)									
	.250	75	490	600	740	980	1220	1340	1440	1600	1760	1910	2030	2170					
	(6.4)	(5.2)	(222)	(272)	(336)	(445)	(553)	(608)	(653)	(726)	(798)	(866)	(921)	(984)					
	.203	125	350	450	580	830	905	920	1020	1180	1310	1430	1540	1680	1920	2100			
	(5.2)	(8.6)	(159)	(204)	(263)	(376)	(411)	(417)	(463)	(535)	(594)	(649)	(699)	(762)	(871)	(953)			
	.156	180	200	255	330	460	580	675	740	840	930	1020	1090	1190	1350	1480	1725		
	(4.0)	(10.4)	(91)	(116)	(150)	(209)	(263)	(306)	(336)	(381)	(422)	(463)	(494)	(540)	(612)	(671)	(782)		
	.141	250	180	235	305	430	540	620	680	780	870	940	1000	1100	1270	1415	1650	1740	1890
	(3.6)	(17)	(82)	(107)	(138)	(195)	(245)	(281)	(308)	(354)	(395)	(426)	(453)	(499)	(576)	(642)	(748)	(789)	(857)

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Inverted Bucket Steam Traps (continued)

Ordering Information (Specify the part number on your order)

Model (A) units are basic.
Model (B) units have a built-in strainer and thermic vent for fast venting.
Model (S) units have a built-in strainer.
Model (T) units have an optional thermic vent built-in for faster venting.

Example: Model Number B1030A-2
B1 (Unit size selected from capacity table)
030 (Differential seat pressure rating)
A (Basic Unit)
2 (Connection Size - 1/4 of an inch)

Series B1 Ordering Information

NPT Model Number	BSPT Model Number	Size in.	NPT Part Number	BSPT Part Number	Seat Differential Pressure Rating psi (bar)	Body Design Pressure psi (bar)	Weight lbs. (kg)
B1015A-2	B1015A-2J	½	404300	404600	15 (1.0)	250 (17.3)	11 (5)
B1015S-2	B1015S-2J	½	404301	404601	15 (1.0)	250 (17.3)	11 (5)
B1015T-2	B1015T-2J	½	404302	404602	15 (1.0)	250 (17.3)	11 (5)
B1015B-2	B1015B-2J	½	404303	404603	15 (1.0)	250 (17.3)	11 (5)
B1015A-3	B1015A-3J	¾	404324	404624	15 (1.0)	250 (17.3)	11 (5)
B1015S-3	B1015S-3J	¾	404325	404625	15 (1.0)	250 (17.3)	11 (5)
B1015T-3	B1015T-3J	¾	404326	404626	15 (1.0)	250 (17.3)	11 (5)
B1015B-3	B1015B-3J	¾	404327	404627	15 (1.0)	250 (17.3)	11 (5)
B1030A-2	B1030A-2J	½	404304	404604	30 (2.1)	250 (17.3)	11 (5)
B1030S-2	B1030S-2J	½	404305	404605	30 (2.1)	250 (17.3)	11 (5)
B1030T-2	B1030T-2J	½	404306	404606	30 (2.1)	250 (17.3)	11 (5)
B1030B-2	B1030B-2J	½	404307	404607	30 (2.1)	250 (17.3)	11 (5)
B1030A-3	B1030A-3J	¾	404328	404628	30 (2.1)	250 (17.3)	11 (5)
B1030S-3	B1030S-3J	¾	404329	404629	30 (2.1)	250 (17.3)	11 (5)
B1030T-3	B1030T-3J	¾	404330	404630	30 (2.1)	250 (17.3)	11 (5)
B1030B-3	B1030B-3J	¾	404331	404631	30 (2.1)	250 (17.3)	11 (5)
B1075A-2	B1075A-2J	½	404308	404608	75 (5.2)	250 (17.3)	11 (5)
B1075S-2	B1075S-2J	½	404309	404609	75 (5.2)	250 (17.3)	11 (5)
B1075T-2	B1075T-2J	½	404310	404610	75 (5.2)	250 (17.3)	11 (5)
B1075B-2	B1075B-2J	½	404311	404611	75 (5.2)	250 (17.3)	11 (5)
B1075A-3	B1075A-3J	¾	404332	404632	75 (5.2)	250 (17.3)	11 (5)
B1075S-3	B1075S-3J	¾	404333	404633	75 (5.2)	250 (17.3)	11 (5)
B1075T-3	B1075T-3J	¾	404334	404634	75 (5.2)	250 (17.3)	11 (5)
B1075B-3	B1075B-3J	¾	404335	404635	75 (5.2)	250 (17.3)	11 (5)
B1125A-2	B1125A-2J	½	404312	404612	125 (8.6)	250 (17.3)	11 (5)
B1125S-2	B1125S-2J	½	404313	404613	125 (8.6)	250 (17.3)	11 (5)
B1125T-2	B1125T-2J	½	404314	404614	125 (8.6)	250 (17.3)	11 (5)
B1125B-2	B1125B-2J	½	404315	404615	125 (8.6)	250 (17.3)	11 (5)
B1125A-3	B1125A-3J	¾	404336	404636	125 (8.6)	250 (17.3)	11 (5)
B1125S-3	B1125S-3J	¾	404337	404637	125 (8.6)	250 (17.3)	11 (5)
B1125T-3	B1125T-3J	¾	404338	404638	125 (8.6)	250 (17.3)	11 (5)
B1125B-3	B1125B-3J	¾	404339	404639	125 (8.6)	250 (17.3)	11 (5)

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Series B BEAR TRAP®

Series B1 Ordering Information - continued

NPT Model Number	BSPT Model Number	Size in.	NPT Part Number	BSPT Part Number	Seat Differential Pressure Rating psi (bar)	Body Design Pressure psi (bar)	Weight lbs. (kg)
B1180A-2	B1180A-2J	½	404316	404616	180 (12.4)	250 (17.3)	11 (5)
B1180S-2	B1180S-2J	½	404317	404617	180 (12.4)	250 (17.3)	11 (5)
B1180T-2	B1180T-2J	½	404318	404618	180 (12.4)	250 (17.3)	11 (5)
B1180B-2	B1180B-2J	½	404319	404619	180 (12.4)	250 (17.3)	11 (5)
B1180A-3	B1180A-3J	¾	404340	404640	180 (12.4)	250 (17.3)	11 (5)
B1180S-3	B1180S-3J	¾	404341	404641	180 (12.4)	250 (17.3)	11 (5)
B1180T-3	B1180T-3J	¾	404342	404642	180 (12.4)	250 (17.3)	11 (5)
B1180B-3	B1180B-3J	¾	404343	404643	180 (12.4)	250 (17.3)	11 (5)
B1250A-2	B1250A-2J	½	404320	404620	250 (17.3)	250 (17.3)	11 (5)
B1250S-2	B1250S-2J	½	404321	404621	250 (17.3)	250 (17.3)	11 (5)
B1250T-2	B1250T-2J	½	404322	404622	250 (17.3)	250 (17.3)	11 (5)
B1250B-2	B1250B-2J	½	404323	404623	250 (17.3)	250 (17.3)	11 (5)
B1250A-3	B1250A-3J	¾	404344	404644	250 (17.3)	250 (17.3)	11 (5)
B1250S-3	B1250S-3J	¾	404345	404645	250 (17.3)	250 (17.3)	11 (5)
B1250T-3	B1250T-3J	¾	404346	404646	250 (17.3)	250 (17.3)	11 (5)
B1250B-3	B1250B-3J	¾	404347	404647	250 (17.3)	250 (17.3)	11 (5)

Series B2 Ordering Information

NPT Model Number	BSPT Model Number	Size in.	NPT Part Number	BSPT Part Number	Seat Differential Pressure Rating psi (bar)	Body Design Pressure psi (bar)	Weight lbs. (kg)
B2015A-3	B2015A-3J	¾	404348	404648	15 (1.0)	250 (17.3)	12.5 (5.7)
B2015S-3	B2015S-3J	¾	404349	404649	15 (1.0)	250 (17.3)	12.5 (5.7)
B2015T-3	B2015T-3J	¾	404350	404650	15 (1.0)	250 (17.3)	12.5 (5.7)
B2015B-3	B2015B-3J	¾	404351	404651	15 (1.0)	250 (17.3)	12.5 (5.7)
B2030A-3	B2030A-3J	¾	404352	404652	30 (2.1)	250 (17.3)	12.5 (5.7)
B2030S-3	B2030S-3J	¾	404353	404653	30 (2.1)	250 (17.3)	12.5 (5.7)
B2030T-3	B2030T-3J	¾	404354	404654	30 (2.1)	250 (17.3)	12.5 (5.7)
B2030B-3	B2030B-3J	¾	404355	404655	30 (2.1)	250 (17.3)	12.5 (5.7)
B2075A-3	B2075A-3J	¾	404356	404656	75 (5.2)	250 (17.3)	12.5 (5.7)
B2075S-3	B2075S-3J	¾	404357	404657	75 (5.2)	250 (17.3)	12.5 (5.7)
B2075T-3	B2075T-3J	¾	404358	404658	75 (5.2)	250 (17.3)	12.5 (5.7)
B2075B-3	B2075B-3J	¾	404359	404659	75 (5.2)	250 (17.3)	12.5 (5.7)
B2125A-3	B2125A-3J	¾	404360	404660	125 (8.6)	250 (17.3)	12.5 (5.7)
B2125S-3	B2125S-3J	¾	404361	404661	125 (8.6)	250 (17.3)	12.5 (5.7)
B2125T-3	B2125T-3J	¾	404362	404662	125 (8.6)	250 (17.3)	12.5 (5.7)
B2125B-3	B2125B-3J	¾	404363	404663	125 (8.6)	250 (17.3)	12.5 (5.7)
B2180A-3	B2180A-3J	¾	404364	404664	180 (12.4)	250 (17.3)	12.5 (5.7)
B2180S-3	B2180S-3J	¾	404365	404665	180 (12.4)	250 (17.3)	12.5 (5.7)
B2180T-3	B2180T-3J	¾	404366	404666	180 (12.4)	250 (17.3)	12.5 (5.7)
B2180B-3	B2180B-3J	½	404367	404667	250 (17.3)	250 (17.3)	12.5 (5.7)
B2250A-3	B2250A-3J	¾	404368	404668	250 (17.3)	250 (17.3)	12.5 (5.7)
B2250S-3	B2250S-3J	¾	404369	404669	250 (17.3)	250 (17.3)	12.5 (5.7)
B2250T-3	B2250T-3J	¾	404370	404670	250 (17.3)	250 (17.3)	12.5 (5.7)
B2250B-3	B2250B-3J	¾	404371	404671	250 (17.3)	250 (17.3)	12.5 (5.7)

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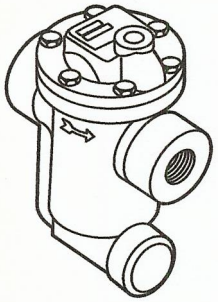
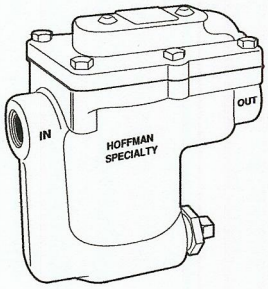
ITT

Hoffman Specialty
Installation & Maintenance
Instructions
HS-208(F)

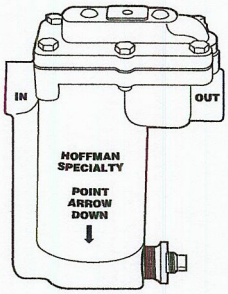
Series B BEAR TRAP® Inverted Bucket Steam Traps



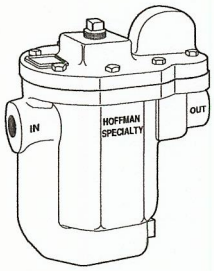
Series B0



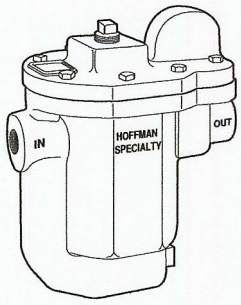
Series B1



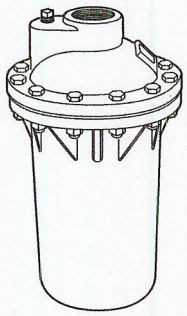
Series B2



Series B3



Series B4



Series B6

Engineered for life

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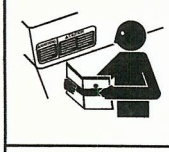

⚠ WARNING

- **Before using product, read and understand instructions.**
- **Save these instructions for future reference.**
- **All work must be performed by qualified personnel trained in the proper application, installation, and maintenance of steam systems in accordance with all applicable codes and ordinances.**
- **To prevent serious burns, wear heat resistant gloves when opening and closing steam valves, or handling hot equipment.**
- **To prevent serious personal injury from steam pipe blow down, connect a temporary pipe between the steampipe opening and a drain, or stand at least 100 ft. (30m) from the pipe opening.**
- **To prevent property damage, personal injury, or death, cap off the gate valves if they are not connected to a drain and when they are not in use for test or pressure relief.**

Failure to follow this warning could cause property damage, personal injury or death.

IMPORTANT: To prevent system damage from water hammer or sudden shock, open supply valves slowly.

If you are uncertain about the product's adaptability for your application, please call the factory or authorized representative before using the product.

The trap seat rating (stamped on the nameplate) must be equal to or greater than the maximum pressure differential across the trap.

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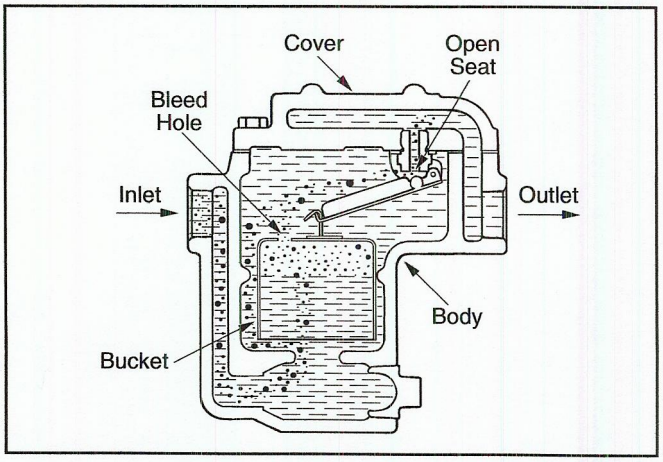
OPERATION

BUCKET TRAP SEAT IS OPEN TO VENT AIR OR DRAIN CONDENSATE

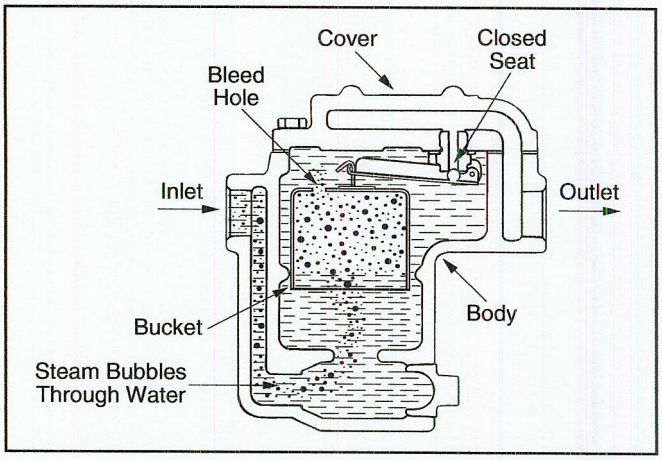
During start-up, air is vented through the bleed hole, at the top of the bucket, into the return line.

Condensate entering the trap will flow around the bucket and drain through the open seat.



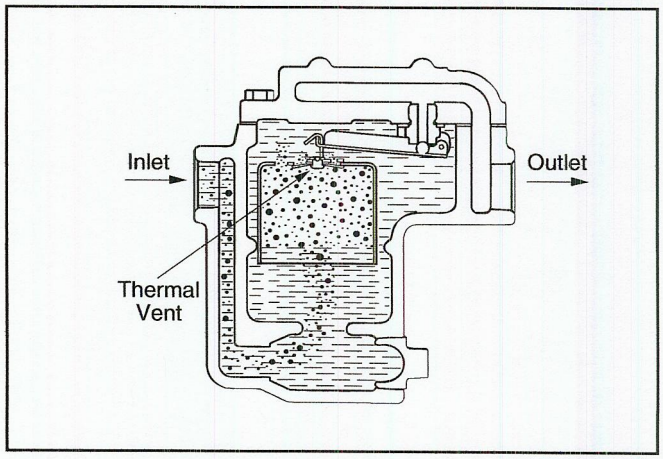
BUCKET TRAP SEAT IS CLOSED TO RETAIN LIVE STEAM

As steam flows into the bucket trap it collects at the top of the bucket. The buoyancy of the steam raises the bucket and closes the seat. The bucket remains full of steam until more condensate enters the trap. The cycle is then repeated.



BUCKET TRAP WITH OPTIONAL THERMAL VENT FOR FASTER AIR VENTING

Models with an optional factory installed thermal vent in the bucket allow faster air venting during start-up.



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INSTALLATION –
Series B0, B1, B2, B3 & B4 Inverted Bucket Traps

1. Determine where to install the trap, based on the following requirements:

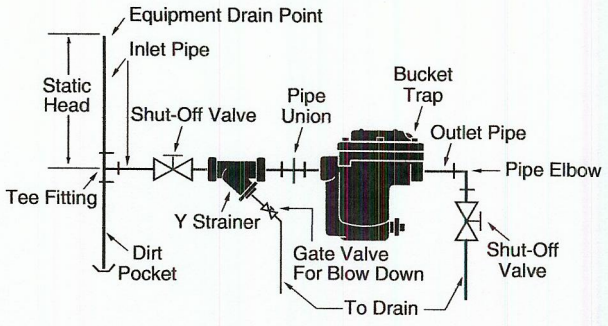
   a. The trap must be located as close as possible and below the equipment to be drained.

   b. The trap must be in a straight run of horizontal pipe and pitched to allow condensate to flow into the trap inlet and away from the trap outlet. Refer to the Typical Piping Diagrams at the right.

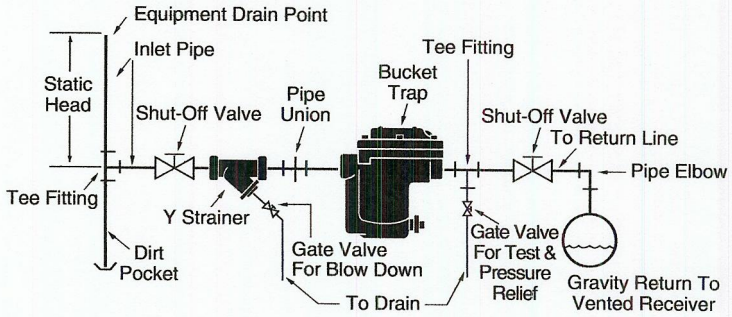
   c. Plenty of space around the trap is needed for servicing, which may include removal of the body or cover.

TYPICAL PIPING DIAGRAMS

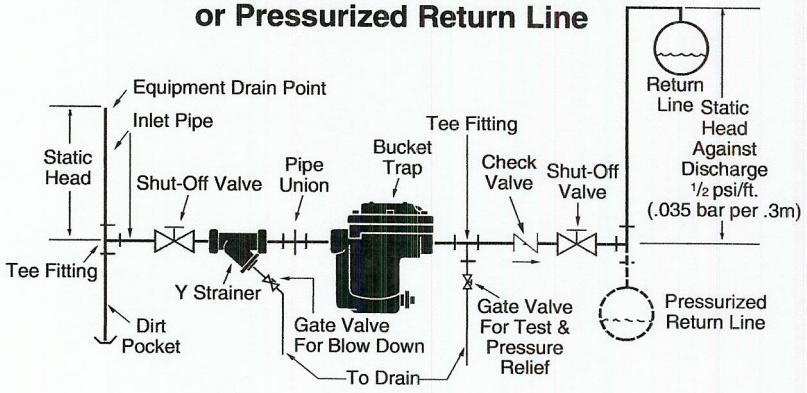
Trap Draining to Open Drain



Trap Draining to Gravity Return Line



Trap Draining to Overhead Return Line or Pressurized Return Line



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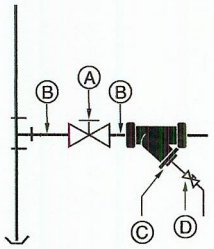
2. Install near trap piping:

a. Install a shut-off valve (A) on the inlet pipe (B).

b. Install a Hoffman Specialty Y Strainer (C) on the inlet pipe (B).

c. Install a gate valve for blow down (D) by connecting it to the Y Strainer drain tapping (C).

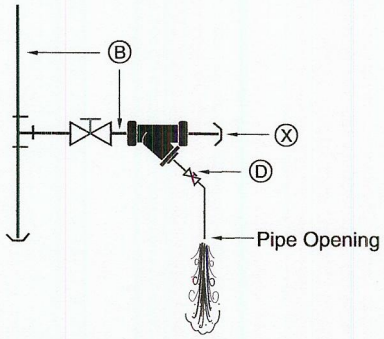


d. Cap off the outlet pipe (X).

e. **Slowly** turn steam on with full pressure for (5) five minutes to blow down the inlet pipe (B).

f. Turn off steam and allow pipe to cool.

g. Remove cap from the outlet pipe (X).



⚠ WARNING

To prevent serious personal injury from steam pipe blow down, connect a temporary pipe between the steam pipe opening and a drain, or stand at least 100 ft. (30m) from the pipe opening.

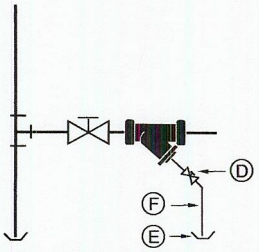
Failure to follow this warning could cause property damage, personal injury, or death.

⚠ CAUTION

To prevent serious burns, the internal pressure of the trap must be 0 psi (0 bar) before servicing.

Failure to follow this caution will cause personal injury.

h. Close the gate valve (D). If it is not connected to a drain, install a cap (E) on the outlet pipe (F).
Note: Remove the cap (E) when the gate valve (D) is used for test or pressure relief. Recap when the test or pressure relief is complete.



⚠ WARNING

To prevent property damage, personal injury, or death, cap off the gate valve if it is not connected to a drain and when it is not in use for test or pressure relief.

Failure to follow this warning could cause property damage, personal injury, or death.

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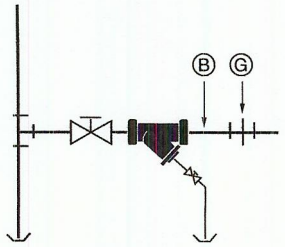
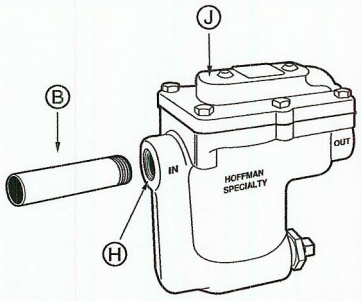
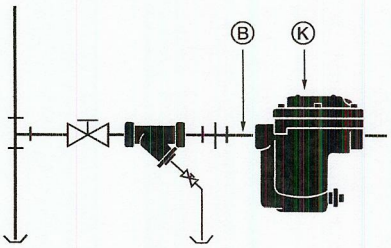
i. Install a pipe union (G) on the inlet pipe (B).



3. Position the bucket trap so that the cover (J) is on top and the inlet pipe (B) will connect with the "IN" tapping on the body (H).

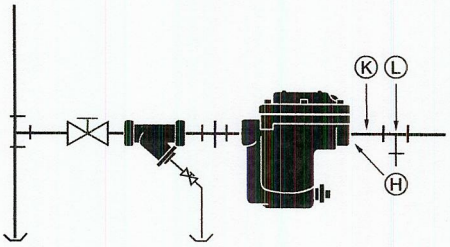


4. Install the bucket trap (K) on the inlet pipe (B) as positioned in Step 8.



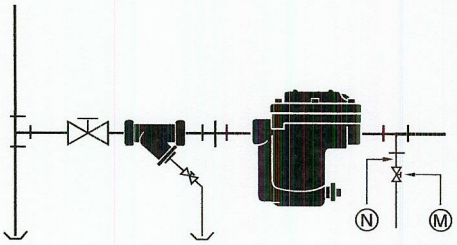
For Applications with a Return Line

5. Install a tee fitting (L) on the return line (K) near the trap outlet (H).



6a. Install a gate valve (M) on the outlet pipe (N) for test or pressure relief.

b. Close the gate valve (M).



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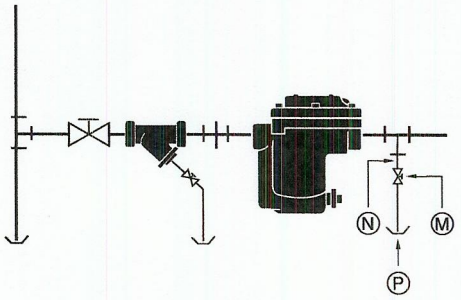
7. If the gate valve (M) is not connected to a drain, install a cap (P) on the outlet pipe (N). **Note:** Remove the cap (P) when the gate valve (M) is used for test or pressure relief. Recap when the test or pressure relief is complete.



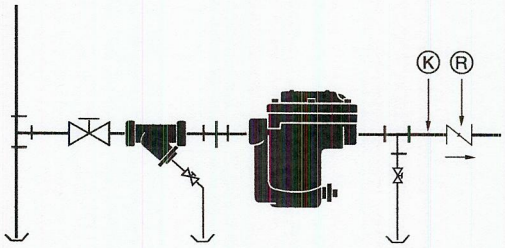
⚠ WARNING

To prevent property damage, personal injury, or death, cap off the gate valve if it is not connected to a drain and when it is not in use for test or pressure relief.

Failure to follow this warning could cause property damage, personal injury, or death.

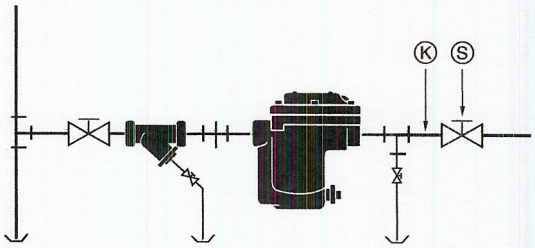
For Applications with a Gravity Return, Pressurized Return or Return Line Above the Trap Discharge

8. Install a check valve (R) on the return line (K).



For All Series B0, B1, B2, B3 & B4 Applications

9. Install a shut-off valve (S) on the return line (K).



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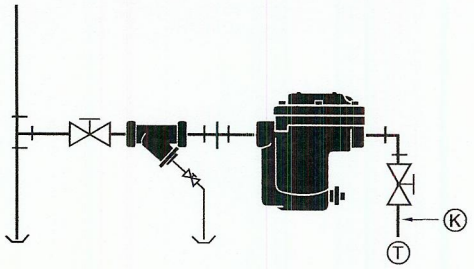
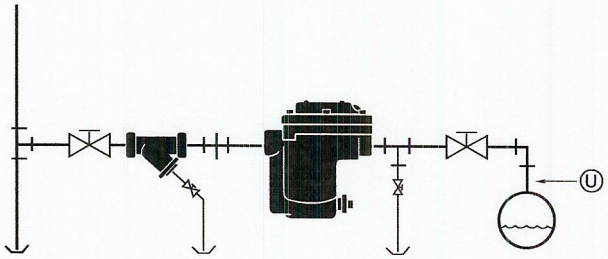
10. Depending on your application, complete one of the following steps:

a. Connect the return line (K) to a drain (T)



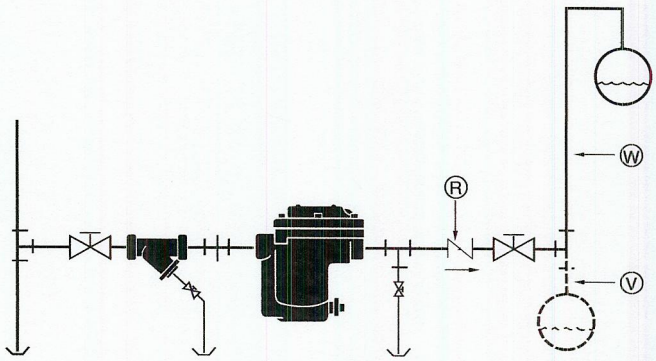
OR

b. Add a gravity return line (U)



OR

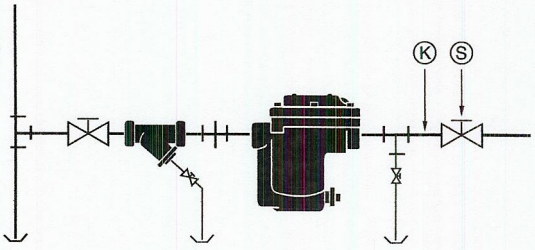
c. Add a pressured return (V) or a return line above the trap discharge (W). A check valve (R) (see Step 8) must be installed for pressurized returns and return lines above trap discharge.



11. Prime the bucket trap as follows while the equipment is operating:

a. Close the shut-off valve (S) on the return line (K) for (1) one minute.

b. **Slowly** open the shut-off valve (S) on the return line (K).



INSTALLATION COMPLETE

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1. Determine where to install the trap, based on the following requirements:

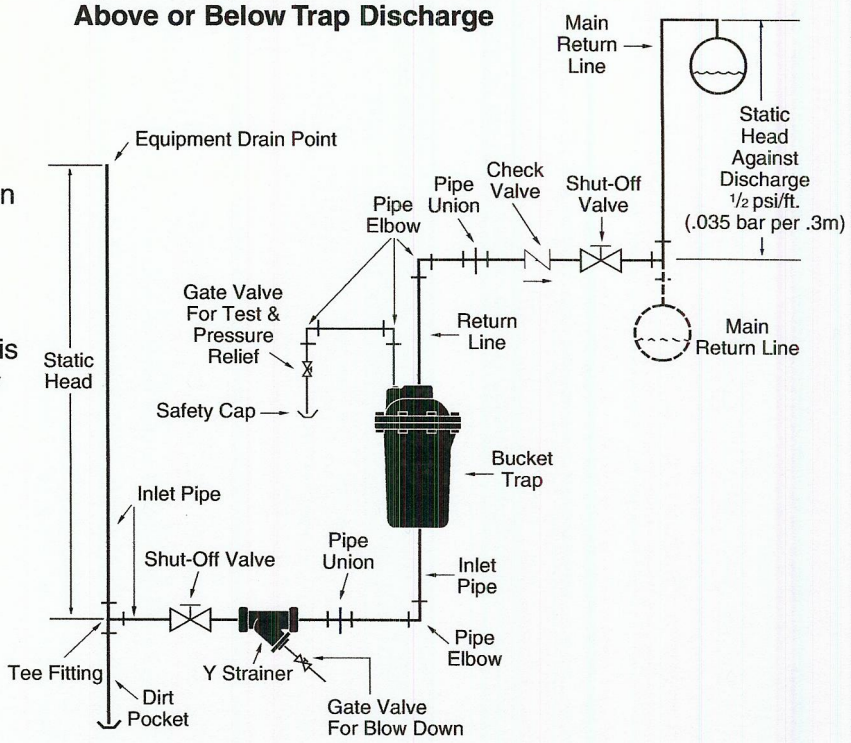
   a. The trap must be located as close as possible and below the equipment to be drained.

   b. The trap must be in a straight run of vertical pipe. Refer to the Typical Piping Diagram at the right.

   c. Plenty of space around the trap is needed for servicing, which may include removal of the body or cover.

TYPICAL PIPING DIAGRAM

Trap Draining to Main Return Line Above or Below Trap Discharge

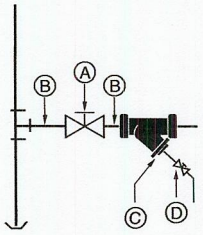


2. Install near trap piping:

   a. Install a shut-off valve (A) on the inlet pipe (B).

   b. Install a Hoffman Specialty Y Strainer (C) on the inlet pipe (B).

   c. Install a gate valve for blow down (D) by connecting it to the Y Strainer drain tapping (C).



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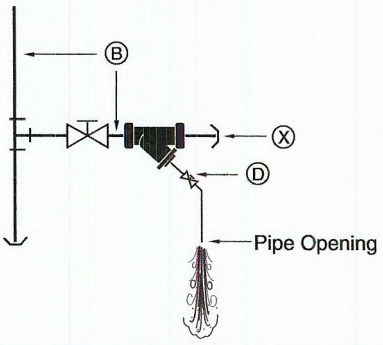
d. Cap off the outlet pipe (X).

e. **Slowly** turn steam on with full pressure for (5) five minutes to blow down the inlet pipe (B).

f. Turn off steam and allow pipe to cool.

g. Remove cap from the outlet pipe (X).



⚠ WARNING

To prevent serious personal injury from steam pipe blow down, connect a temporary pipe between the steam pipe opening and a drain, or stand at least 100 ft. (30m) from the pipe opening.

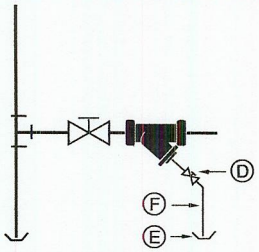
Failure to follow this warning could cause property damage, personal injury, or death.

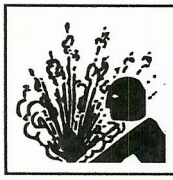
⚠ CAUTION

To prevent serious burns, the internal pressure of the trap must be 0 psi (0 bar) before servicing.

Failure to follow this caution will cause personal injury.

h. Close the gate valve (D). If it is not connected to a drain, install a cap (E) on the outlet pipe (F).
Note: Remove the cap (E) when the gate valve (D) is used for test or pressure relief. Recap when the test or pressure relief is complete.



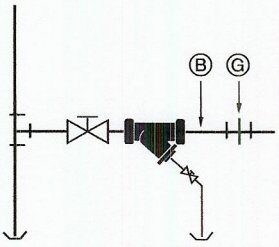


⚠ WARNING

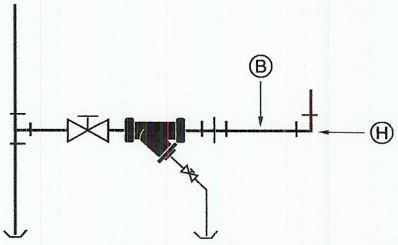
To prevent property damage, personal injury, or death, cap off the gate valve if it is not connected to a drain and when it is not in use for test or pressure relief.

Failure to follow this warning could cause property damage, personal injury, or death.

i. Install a pipe union (G) on the inlet pipe (B).



j. Install a pipe elbow (H) on the inlet pipe (B).



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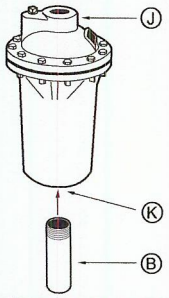
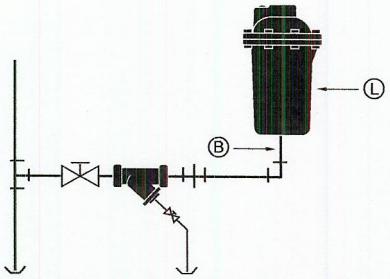
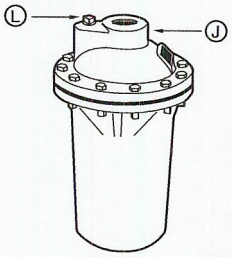
3. Position the bucket trap so that the cover (J) is on top and the inlet pipe (B) will connect with the bottom inlet tapping (K).



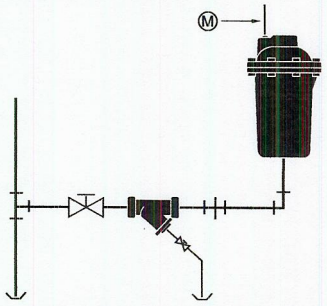
4. Install the bucket trap (L) on the inlet pipe (B) as positioned in Step 9.



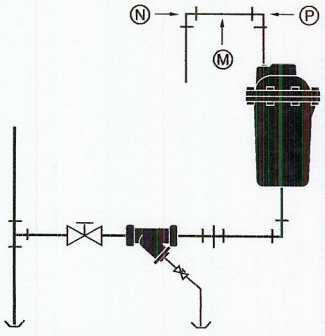
5. Remove the 1/2" (15mm) pipe lug (L) on the trap cover (J).



6. Connect an outlet pipe (M) on the tapping where the pipe lug was removed.



7. Install pipe elbows (N) and (P) on the outlet pipe (M).



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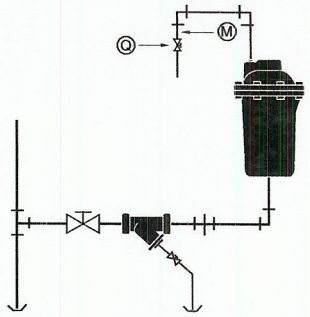
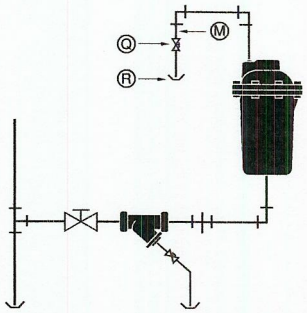
8a. Install a gate valve (Q) on the outlet pipe (M) for test or pressure relief.

b. Close the gate valve (Q).



9. If the gate valve (Q) is not connected to a drain, install a cap (R) on the outlet pipe (M). **Note:** Remove the cap (R) when the gate valve (Q) is used for test or pressure relief. Recap when the test or pressure relief is complete.

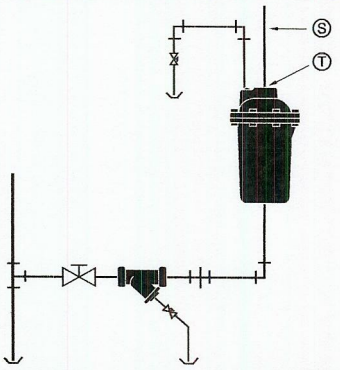


⚠ WARNING

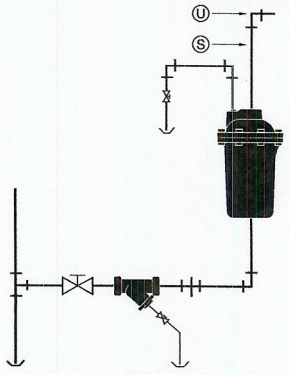
To prevent property damage, personal injury, or death, cap off the gate valve if it is not connected to a drain and when it is not in use for test or pressure relief.

Failure to follow this warning could cause property damage, personal injury, or death.

10. Install a return line (S) in the trap outlet tapping (T).



11. Install a pipe elbow (U) on the return line (S).



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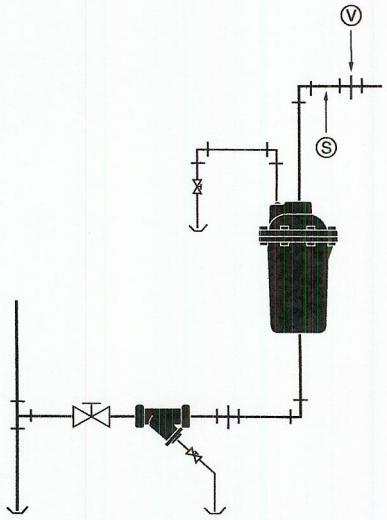
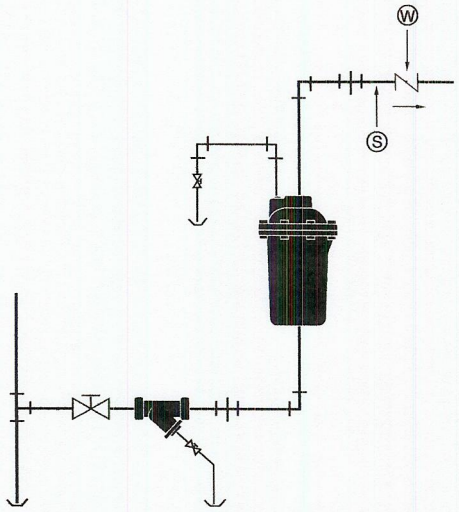
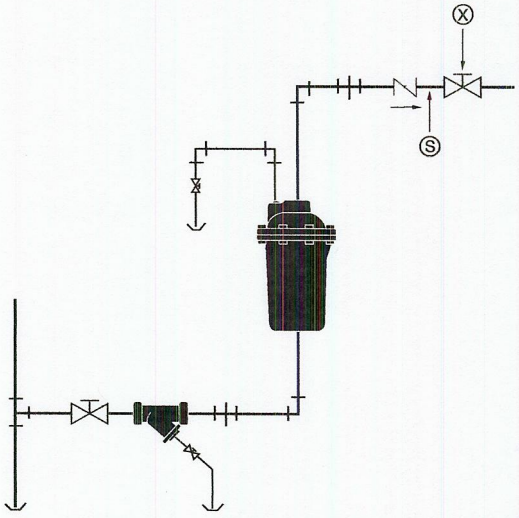
12. Install a pipe union (V) on the return line (S).



13. Install a check valve (W) on the return line (S).



14. Install a shut-off valve (X) on the return line (S).



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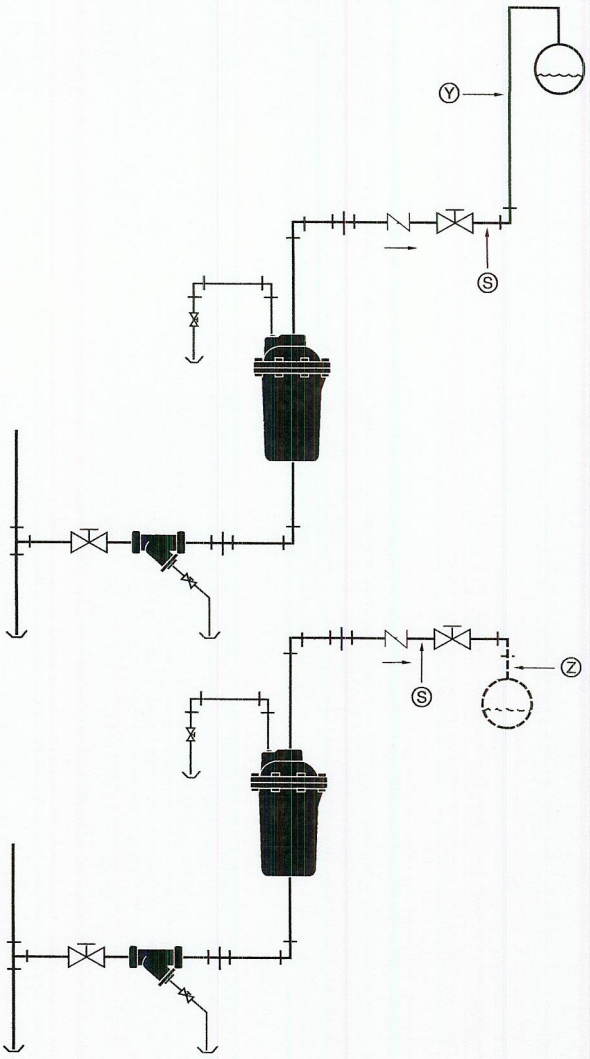
15. Depending on your application, install a pipe elbow to the trap return line (S) and connect it to:

a. A main return above the trap discharge (Y).

OR

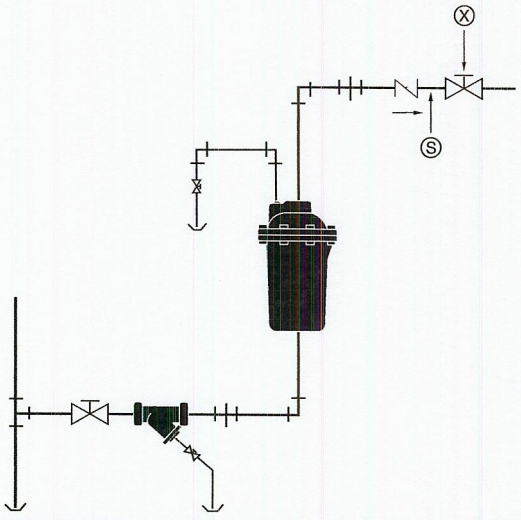
b. A main return below the trap discharge (Z).



16. Prime the bucket trap as follows once the equipment is operating:

a. Close the shut-off valve (X) on the return line (S) for (1) one minute.

b. Slowly open the shut-off valve (X) on the return line (S).



INSTALLATION COMPLETE

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MAINTENANCE

When checked regularly and properly maintained, the Series B Inverted Bucket Steam Traps will provide optimum performance and long life.

SCHEDULE:

- **Initially, every 2-3 days after start-up until system is clean.**
- **Every 6 months thereafter.**

⚠ CAUTION

To prevent serious burns, the internal pressure of the trap must be 0 psi (0 bar) before servicing.

Failure to follow this caution will cause personal injury.

1. Inspect joints for leaks. Stop all leaks by tightening bolts and replacing gaskets, if necessary.
2. Clean strainers by opening the blow down valve and allowing full steam pressure to flow out for (2) two minutes. Then, close the valve.
3. Test traps by following the "Troubleshooting" procedure.

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ITT

Hoffman Specialty

TROUBLESHOOTING

We recommend trap replacement when parts no longer operate properly. A new trap is more economical than repairing or replacing parts and it will provide greater reliability. If you choose to repair the trap, order Hoffman Specialty replacement parts and follow the Repair Procedure provided.

Problem:

1. **Improper Heating**

a. **Cause:** The bucket bleed hole is plugged, trapping air in the top of the bucket.

Test: Using a stethoscope, listen for a gurgling sound in the trap. No gurgling indicates the condensate is not draining.

Solution: Disassemble the trap and unclog the bucket bleed hole.

b. **Cause:** The steam pressure is higher than the bucket trap's seat rating pressure which prevents the trap from opening.

Test: Check the seat pressure rating on the bucket trap nameplate with the available steam pressure to the equipment being drained.

Solution: Install a new Hoffman Specialty Inverted Bucket Bear Trap® with the proper pressure range.
Note: The trap must be selected for the maximum differential pressure that will be encountered. A high pressure seat may be used at lower differential pressures, but the capacity rating will be less than an identical size trap with a low pressure rated seat.

c. **Cause:** Full capacity drainage is prevented by worn linkage.

Test: Disassemble the trap and inspect for worn parts.

Solution: Install a new Hoffman Specialty Inverted Bucket Bear Trap®.

Problem:

2. **Energy Wasted**

a. **Cause:** A worn pin and seat or dirt deposited on the seat prevents tight closure.

Test: Using a stethoscope, listen for a low pitch whistle sound. A low pitch whistle sound indicates the trap is open and blowing live steam.

Solution: Disassemble the trap and inspect for dirt or worn parts. Clean if dirty or install a new Hoffman Specialty Inverted Bucket Bear Trap® if worn.

b. **Cause:** The trap does not close because the linkage detached from the bucket assembly.

Test: Using a stethoscope, listen for a low pitch whistle. A low pitch whistle indicates the trap is open and blowing live steam.

Solution: Disassemble the trap and inspect for worn parts. If worn, install a new Hoffman Specialty Inverted Bucket Bear Trap®.

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