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Spence™ Dura-Flo Inverted Bucket Steam Trap Pressure Change Assembly Repair Kit

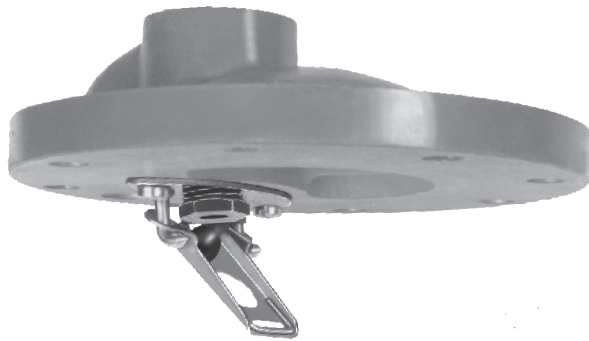


Figure 1. Pressure Change Assembly

Introduction

This installation sheet covers the installation Pressure Change Assembly (PCA) for Dura-Flo inverted bucket steam traps.

Product Description

Pressure Change Assembly is a complete repair kit for the inverted bucket steam trap, see Figures 1 and 2.

Pressure Change Assembly consists of:

1. Valve Lever Assembly
2. Valve Seat
3. Guide Pin Assembly
4. Nameplates
5. Screws

Specifications

Maximum Working Pressure

See Table 1

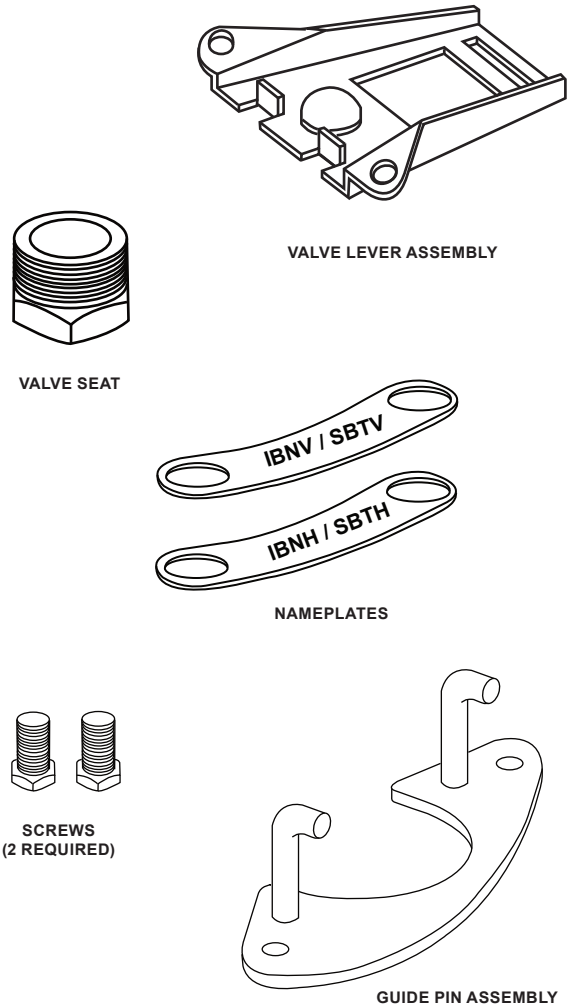


Figure 2. Pressure Change Assembly Parts

Dura-Flo PCA Repair Kits

Table 1. Maximum Working Pressure for Pressure Change Assembly, psig / bar

ORIFICE			STEAM TRAP MODELS						
Markings	In.	mm	80S	81S and 21	82S and 22	83S and 23	84 and 24	85 and 25	86 and 26
6	3/32	2.4	150 / 10.3	250 / 17.2	----	----	----	----	----
7	7/64	2.8	125 / 8.62	200 / 13.8	250 / 17.2	----	----	----	----
8	1/8	3.2	80 / 5.52	125 / 8.62	200 / 13.8	----	----	----	----
10	5/32	4	----	70 / 4.83	125 / 8.62	----	----	----	----
12	3/16	4.8	20 / 1.38	30 / 2.07	70 / 4.83	250 / 17.2	----	----	----
14	7/32	5.6	----	----	----	180 / 12.4	----	----	----
16	1/4	6.4	----	15 / 1.03	30 / 2.07	125 / 8.62	250 / 17.2	----	----
18	9/32	7.1	----	----	----	80 / 5.52	180 / 12.4	225 / 15.5	----
20	5/16	7.9	----	----	15 / 1.03	60 / 4.14	125 / 8.62	180 / 12.4	----
22	11/32	8.7	----	----	----	----	80 / 5.52	130 / 8.96	----
24	3/8	9.5	----	----	----	30 / 2.07	60 / 4.14	100 / 6.89	250 / 17.2
28	7/16	11	----	----	----	----	----	60 / 4.14	180 / 12.4
32	1/2	13	----	----	----	15 / 1.03	30 / 2.07	----	125 / 8.62
36	9/16	14	----	----	----	----	----	30 / 2.07	80 / 5.52
40	5/8	16	----	----	----	----	15 / 1.03	----	60 / 4.14
48	3/4	19	----	----	----	----	----	15 / 1.03	40 / 2.76
56	7/8	22	----	----	----	----	----	----	25 / 1.72
68	1- 1/16	27	----	----	----	----	----	----	15 / 1.03

Installation



WARNING

Personal injury, property damage, equipment damage or leakage due to escaping steam or bursting of pressure containing parts may result if this equipment is over pressured or is installed where service conditions could exceed the limits given in the specifications or where conditions exceed any ratings of the adjacent piping or piping connections. To avoid such injury or damage, provide pressure-relieving or pressure-limiting devices (as required by the appropriate code, regulation, or standard) to prevent service conditions from exceeding those limits.

Identify Orifice Size of Trap and Parts

1. Make sure that your steam trap parts are stamped with the orifice size required for your operating pressure differential (see Table 1).
2. The orifice size (example: 7 is for 7/64 in. / 2.8 mm) is stamped on the valve seat, and guide plate assembly.
3. Parts with different orifice stampings should never be used together.

Ensure Valve and Valve Seat are a Matched Set

1. Valves and seats have been specifically lapped and tested together as a matched set. Sets should be installed together.
2. Do not use a new seat with an old valve.

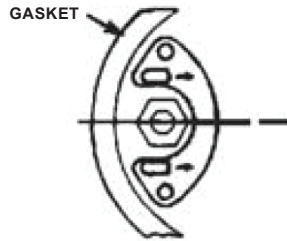


Figure 3. For Types 80S, 81S, 82S, 83S, 21, 22, 23

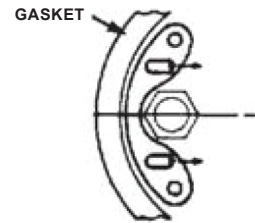


Figure 4. For Types 84, 85, 86, 24, 25, 26

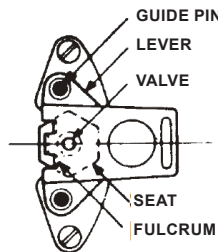


Figure 5. Correctly Aligned Guide Pin and Guide Pin Hole

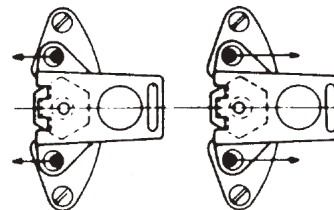


Figure 6. Incorrectly Aligned Guide Pin and Guide Pin Hole

Pressure Change Assembly Replacement

1. Remove trap cap and place in vise with mechanism up.
2. Remove bucket, lever and guide pin assembly by removing the two guide plate screws.
3. Unscrew the valve seat residing in the cover.
4. Remove all dirt, pipe scale, etc. from threaded holes. Make sure the seating area in the trap is clean before screwing the valve seat into position.
5. Screw the new valve seat into position. Do not use pipe dope or lubricant on valve seat threads. The seal is made by metal to metal contact.
6. Mount the guide pin assembly with set of two screws provided for use with Spence traps. The guide pins must always point away from the adjoining gasket surface, see Figures 3 and 4.
7. Attach the valve lever. In some sizes of traps the valve lever must be attached before mounting the guide pin assembly. However, in most traps the lever is attached after the guide pin assembly has been mounted. The lever simply hooks over the guide pins for installation.
8. Check the alignment of guide pins. Hold the lever and valve against the valve seat with the valve contacting its seat and the two fulcrum points resting on the face of the seat. When the lever is held in this position, the guide pins should be central in the guide pin holes, as in Figure 5. When correctly aligned, the lever will move sideways the same distance to the right as to the left. Should the guide pins be out of line for any reason at all, they should be straightened so that they will be central in the guide pin holes as shown in Figure 5. Finally, the ball valve should be in alignment with the orifice to allow complete shut-off.
9. Attach the bucket to the valve lever and remove cap from vise.

Dura-Flo PCA Repair Kits

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