

PX Series Pressure Air Release Valve for Extreme Service

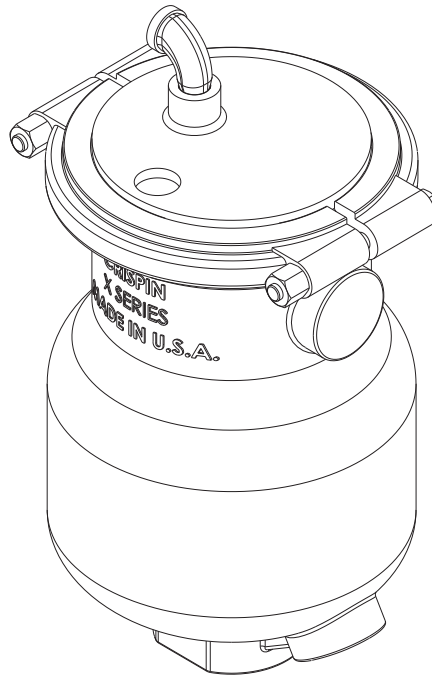


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PX Series: Installation, Operation & Maintenance Manual

INTRODUCTION

The PX Series is part of Crispin Valve's X Series line, which is available in Air & Vacuum, Pressure Air Release and Universal Combinations for Water and Wastewater applications. The valves feature our exclusive Head Exchange System, with its head-fixed stainless steel internals that are replaceable in-line and on-site. To clean, simply loosen the head assembly, which is sealed in place by a sanitary clamp fitting. Pull out the original head, weighing less than 10lbs, and pop in a spare so that the original head can be cleaned at your leisure. All 316 stainless construction makes the X Series impervious to rust, and all Crispin Valves are tested to the latest ANSI/AWWA C512 Standards. This manual will provide you with the information to properly install and maintain the PX Series Pressure Air Release Valves to ensure a long service life. Both are heavy-duty valves designed to stand up to the toughest industrial applications for years of trouble-free operation.



INSTALLATION

Please read this entire IOM Manual prior to proceeding with the installation. The installation of the valve is important for its proper operation. The valve must be installed in the vertical position. Next, lower the valve over the mating nipple or flange. If mounted on a nipple, using Teflon tape, apply tape to the mating pipe nipple. Lightly thread the valve of the pipe nipple until tight. If using a flanged connection, align and apply the flange gasket on the flange, and lower the valve onto the mating flange. Then tighten the flange bolts. If leakage occurs, check the connections and re-tape the threaded connection if necessary.

OPERATION

The Crispin PX Series Pressure Air Release Valves are designed to release accumulating air while the line is in operation and under pressure.

When the line is filled and under pressure, liquid entering the valve raises the float and lever mechanism, carrying with it the pressure plunger in the main valve. When the liquid has raised the float to its limit, the pressure plunger also rests against its seat, which is the main valve. When this occurs, the valve is closed and no liquid can escape.

If the accumulating air rises into the valve while the line is in operation and under pressure, it will displace the liquid at the top of the valve body, and the float will begin to drop as the liquid level drops. As this occurs, the pressure valve will open, permitting escape of the accumulating air, after which the liquid level will rise and the valve will close.

The cycles will repeat automatically as each condition presents itself.



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WARNING! Servicing a PX Series valve while the pipeline is under pressure can cause personal injury and/or equipment damage. Always relieve pipeline pressure or shut off the inlet isolation valve before servicing a PX Series valve.

DISASSEMBLY (See drawing on pg 4)

The valve does not have to be removed from the pipeline for disassembly. All work on the valve should be performed by a skilled mechanic using the proper tools.

1. Remove Flange Clamp (18) by turning Hex Nuts (26) counter clockwise. Remove Flange (2) from Valve Body (3) by lifting straight up.
2. Remove Cap Screws (8) from Flange (2). Inspect the valve linkage assembly for bent parts.
3. Inspect the valve Plunger (12) for wear. If worn, replace and reset.
4. Inspect Flange O-Ring (4). Replace if needed.

REASSEMBLY (See drawing on pg 4)

Prior to reassembly, all parts must be cleaned and gasket surfaces should be cleaned with a stiff wire brush in the direction of the serrations or machine marks. Worn parts, gaskets and seals should be replaced during reassembly.

1. Install the valve internals to the Flange (2) using Cap Screws (8). Be sure to inspect, and if worn, replace the Seat (1).
2. Turn the Flange (2) upside down and move the linkage into the closed position to ensure that the linkage is not toggled or over extended.
3. Apply talcum powder to the Plunger (12). Work the linkage back and forth so that the contact between the Plunger (12) and the Seat (1) is visible. If proper contact is not evident, adjust the valve Plunger (12).
4. Apply the Flange O-Ring (4) to the valve Body (3).
5. Gently lower the Flange (2) onto the valve Body (3). Once they are aligned, use the Flange Clamp (18) around the two parts, and then tighten the Hex Nuts (26) by turning clockwise.

MAINTENANCE

Although Crispin PX Series Pressure Air Release Valves do not require back flushing, it is recommended that a spare valve head assembly be kept on hand to “swap out” in the field. The head assembly removed from the valve can then be cleaned and put into stock to be used the next time a fresh head assembly is needed. Depending on each specific system, Crispin recommends that head assemblies be changed every 6-12 months. For customers who prefer a backflushing attachment (PX20B Series), instructions follow in the Backflushing section of this manual.

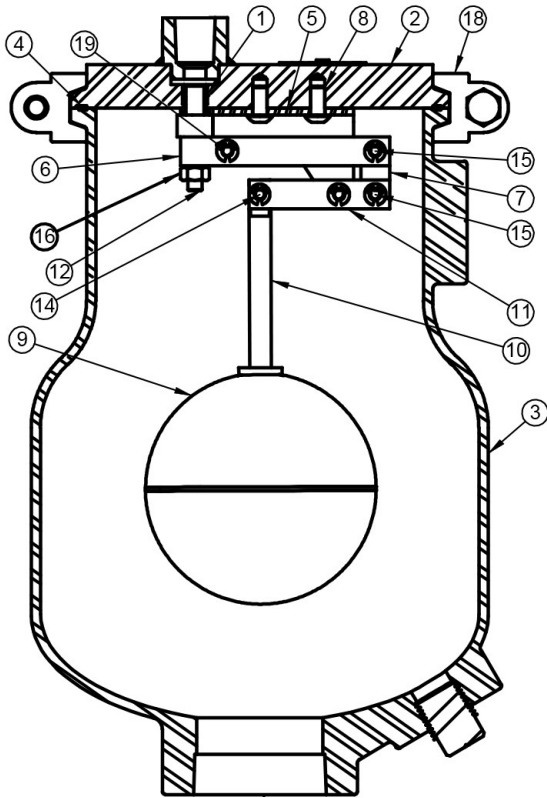
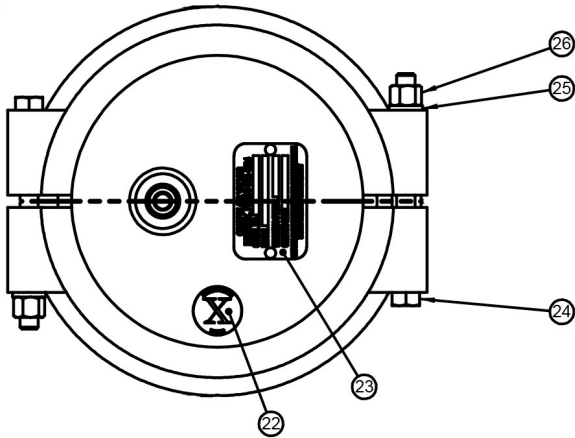
SERVICE

Parts and service are available from your local representative or distributor. Make note of the Valve size, operating pressure and model number as located on the valve tag.



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PARTS LIST

ITEM	DESCRIPTION	MATERIAL	QTY
1	VALVE SEAT	316 Stainless Steel	1
2	FLANGE	316 Stainless Steel	1
3	BODY	316 Stainless Steel	1
4	FLANGE O-RING	Buna-N Rubber	1
5	FULCRUM ASSEMBLY	316 Stainless Steel	1
6	PLUNGER LEVER	316 Stainless Steel	1
7	LINK	316 Stainless Steel	2
8	CAP SCREW	316 Stainless Steel	2
9	FLOAT	316 Stainless Steel	1
10	FLOAT ROD	316 Stainless Steel	1
11	FLOAT LEVER	316 Stainless Steel	1
12	PLUNGER	Buna N/316 SS	1
14	BEARING PIN	316 Stainless Steel	1
15	BEARING PIN	316 Stainless Steel	2
16	PLUNGER NUT	316 Stainless Steel	1
18	FLANGE CLAMP	316 Stainless Steel	2
19	RETAINING RING	PH15-7 MO SS	5
20	PLUG	316 Stainless Steel	1
21	STREET ELBOW	316 Stainless Steel	1
22	GREEN ID DOT	ALUMINUM	1
23	TAG	ALUMINUM	1
24	HEX BOLT	316 Stainless Steel	2
25	LOCKWASHER	316 Stainless Steel	2
26	HEX NUT	316 Stainless Steel	2



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