

AX Series Air & Vacuum Valve for Extreme Service

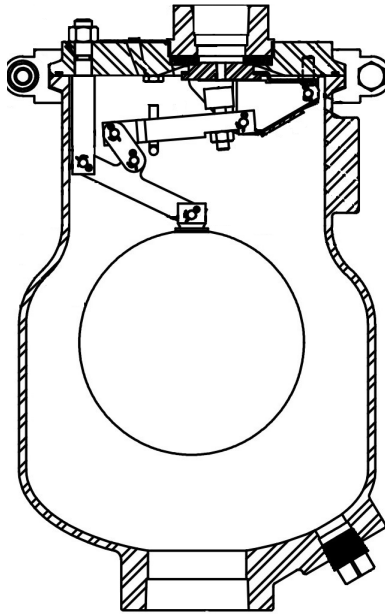


TABLE OF CONTENTS

Introduction.....	page 2
Operation	page 2
Disassembly.....	page 3
Reassembly.....	page 3
Maintenance.....	page 3
Service	page 3
Valve Drawing	page 4



PRODUCT LINE Crispin AX Series Air & Vacuum Valve	DATE 9/13/23	REVISION 0	PAGE 1 of 4
SHEET Installation, Operation & Maintenance Manual	DOC. NO. D-AV-AX-O&M-r0		

AX Series: Installation, Operation & Maintenance Manual

INTRODUCTION

The AX 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 AX Series Air & Vacuum Valve to ensure a long service life. The AX is a heavy-duty valve 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. 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 recheck the flange gasket coverage area, if necessary.

OPERATION

When the line is filled, liquid rises into the valve and air escapes through the large orifice and into the atmosphere. 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 Stainless Steel main valve rests against the seat, and the pressure plunger also rests against the seat, which is the main valve. When this occurs, the valve is closed and no liquid can escape.

Should a pipeline be drained for any reason, or a large break develops within the pipeline, the float will drop all the way down as the liquid level lowers in the valve body. The valve will then be in the full open position, permitting the entrance of air and eliminating the danger of pipeline collapse due to a vacuum. The cycles will repeat automatically as each condition presents itself.



PRODUCT LINE	DATE	REVISION	PAGE
Crispin AX Series Air & Vacuum Valve	9/13/23	0	2 of 4
SHEET	DOC. NO.		
Installation, Operation & Maintenance Manual	D-AV-AX-O&M-r0		

AX Series: Installation, Operation & Maintenance Manual



WARNING! Servicing a AX 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 AX Series valve.

DISASSEMBLY (See drawing on page 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 Top (2) from the Flange (1) by turning counter-clockwise. This gives access to the Valve Seat (3). Inspect the seat and replace if damaged.
2. Remove the Clamp Assembly (11) by turning the nuts counterclockwise. Remove the Flange (1) from Valve Body (8) by lifting straight up.
3. Remove Stand Bolts (6) from the Stand (5). Inspect the items and Float (12) for any bends or damage.
4. Inspect the float Rod Guide (7). Replace if severely worn.
5. Inspect the Flange O-Ring (4). Replace if needed.

REASSEMBLY (See drawing on page 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 Stand (5) using Stand Bolts (6).
2. Install Seat (3) into the Flange (1).
3. Install Top (2) into Flange (1).
4. Install Flange O-Ring (4).
5. Gently lower the Flange (1) on to the Valve Body (8). Once aligned, install the Clamp Assembly (11) by turning the nuts clockwise.

MAINTENANCE

Although Crispin AX Series Air & Vacuum Valve does 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.

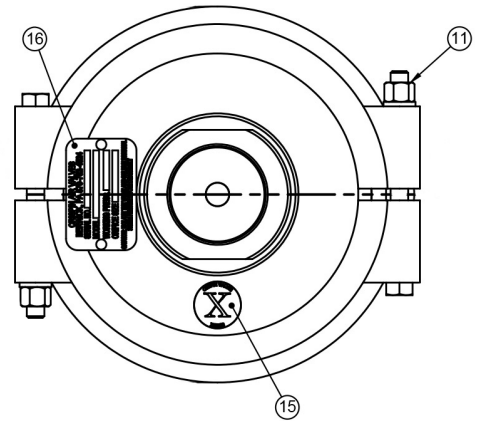
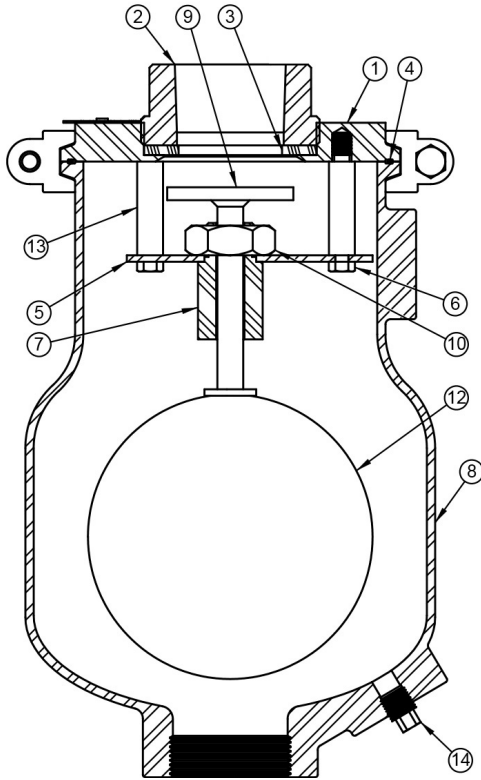
SERVICE

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.



PRODUCT LINE	DATE	REVISION	PAGE
Crispin AX Series Air & Vacuum Valve	9/13/23	0	3 of 4
SHEET	DOC. NO.		
Installation, Operation & Maintenance Manual	D-AV-AX-O&M-r0		

AX Series: Installation, Operation & Maintenance Manual



PARTS LIST

ITEM	DESCRIPTION	MATERIAL	QTY
1	FLANGE	316 Stainless Steel	1
2	TOP	316 Stainless Steel	1
3	SEAT	Buna-N Rubber	1
4	FLANGE O-RING	Buna-N Rubber	1
5	STAND	316 Stainless Steel	1
6	STAND BOLTS	316 Stainless Steel	3
7	ROD GUIDE	Nylatron	1
8	BODY	316 Stainless Steel	1
9	VALVE	316 Stainless Steel	1
10	JAM NUT	316 Stainless Steel	1
11	CLAMP ASSEMBLY	316 Stainless Steel	1
12	FLOAT	316 Stainless Steel	1
13	STAND ROD	316 Stainless Steel	3
14	PLUG	316 Stainless Steel	1
15	RED ID DOT	Aluminum	1
16	BLUE TAG	Aluminum	1



PRODUCT LINE Crispin AX Series Air & Vacuum Valve	DATE 9/13/23	REVISION 0	PAGE 4 of 4
SHEET Installation, Operation & Maintenance Manual	DOC. NO. D-AV-AX-O&M-r0		