



Crispin Air and Vacuum Valve

OPERATION

The CRISPIN Air and Vacuum Valve exhausts large quantities of air as the system is filling, and permits air to enter the line when a vacuum is drawn.

The Air and Vacuum Valve permits the passage of a volume of air equal to the volume being displaced in the line as the system is filling. As the liquid enters the valve body, the float begins to rise until it seats itself at the orifice. If a vacuum is drawn due to column separation, a break in the line, etc., the float drops away from the orifice to relieve the vacuum and prevent system damage.

MAINTENANCE

Inspect seating area for leaks while the valve is in service. Replace seat (Part No. 5) when required.

SEAT REPLACEMENT

Isolate or remove the valve from the system. The top (Part No. 1S or Part No. 1P) which secures the Buna-N seat (Part No. 5) in place, may be held fast by either one of the following: an interference pin may be placed through the threads (1/2" thru 4"), or the top is bolted (6" thru 10") to the top flange (Part No. 2).

Remove the interference pin, and begin to remove the top with a pipe wrench by turning the top counter-clockwise. Once the top is removed, the Buna-N Seat will be exposed. It is important that for proper operation of the valve, the Buna-N Seat be replaced every five years under normal operating conditions. It is always best to apply a coating of suitable thread sealer to the threads of the top before screwing the top into the top flange of the valve. Turn the top clockwise until it is snug, then tighten the top one-quarter turn, being careful not to deform the seat.

The top for the Air and Vacuum Valves (6" thru 10") is bolted to the top flange, and the Buna-N Seat is easily removed by unbolting the top, and following the same procedures as stated above. The cover flange for valves sized 12" thru 16" must be removed to expose the seat.

FLOAT REPLACEMENT

Isolate or remove the valve from the system. Remove all the top flange nuts and bolts from the valve. Lift the top flange (Part No. 2) from the body of the valve. Remove the stainless steel float (Part No. 6) from inside the valve and replace. Prior to connecting the top flange to the body, it is important to examine the gasket (Part No. 4) on the valve body. If the gasket shows wear or tear, replace. Reposition the top flange on the valve body, and replace the top flange nuts and bolts.

INSTALLATION

The valve shall be installed at the high points in the line and mounted vertically. The inlet of the valve should be at the same elevation or greater than the elevation at the top of the pipe, with the piping to the inlet on a continuous upward slope. The valve should be protected from freezing. For detailed information on the proper sizing of CRISPIN Air and Vacuum Valves, refer to the CRISPIN Catalog and/or Technical Reference No. 2.



OPERATING GUIDE

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Troubleshooting

AIR AND VACUUM VALVE

Valve Leaking: Seating Problem

- If the valve is four to five years old, then the Buna-N Seat needs replacing.
- If the valve leaks on pressure less than 15 psig, then the seat material is too hard and needs to be replaced with soft seat material.

Valve Leaking: Float Damage

- Review application for proper sizing of Air and Vacuum Valves. Refer to CRISPIN Catalog page 76).
- If valve has been installed on the pump discharge, the deep well top assembly (Part No. 1D) must be applied to the valve to resolve this problem.
- If the valve inlet size is greater than 2", then a surge check valve may be added to the inlet of this valve to alleviate the problem. The damaged float will require replacement.

Valve Leaking:

- Review application of this valve; valves may not be sized properly.
- If problem continues, please consult the factory.

** These valves are intended for use on municipal water systems or approved industrial applications.*

