



OPERATING GUIDE

Crispin Sewer Air Release Valve

OPERATION

The Pressure Sewer Air Release Valve allows air to be released from a system while the system is in operation and under pressure. This is accomplished by the mechanics of the simple or compound lever system inside the valve.

The buoyancy of the float raises the linkage to seal the orifice as the valve body fills upon start-up. While the system is in operation, accumulating air begins to displace the water in the valve body. As the water level drops, the weight of the float as multiplied by the lever system begins to pull the resilient seal away from its seat. This releases a quantity of air that allows more liquid to enter the valve body; in turn, the float raises to again seal the orifice. The valve will continue to function in this fashion as long as air accumulates

The body of the valve is elongated with the float suspended near the inlet. This prevents solids from contaminating the seating area.

MAINTENANCE

The valve should be inspected periodically for leakage, particularly at the seat area. Isolate or remove the valve from the system.

It is not necessary to remove the top flange from the valve to inspect the seat. The seat may be changed by removing the threaded top from the top flange, which exposes the seat. If the seat does require replacement, then the seat gasket should also be replaced.

The top flange must be removed to inspect the valve internally.

The linkage is easily disassembled by removing the pin clips from the bearing pins, then removing the bearing pins.

The valve plunger should be replaced if damaged or when it begins to deteriorate because of age.

The valve plunger is adjusted by removing the top flange, then turning the flange upside-down to expose the lever mechanism. The float is extended away from the valve orifice in order to pull the plunger away from the orifice. A light dusting of powder is spread over the valve seat, and the float is allowed to relax.

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

While extending the float again, observe the powder pattern on the rubber valve, and make appropriate adjustments to permit full face contact of the rubber valve with the valve seat. Then replace the flange being careful not to allow the linkage to toggle over, which would prevent its functioning. This is done by either placing the valve body over the linkage, with the flange inverted and resting on a table, or by holding the linkage closed with a screwdriver while replacing the flange.



Crispin Sewer Air Release Valve (Continued)

HANDLING METHODS

The valves should be handled gently, so that the factory adjustments and clearances of internal linkages are not affected in anyway.

The valves are either strapped to pallets, or shipped in cartons to aid in handling.

STORAGE

The valves should be stored in a dry location with the inlet and outlet protection caps left in place. The location should be such that the valves will not be bumped around or dropped in order to prevent internal damage.

If the system is not started up after valve installation, then the outlets should be protected to prevent debris from entering the valves.

INSTALLATION

The valves should be installed at the high points in the line, in a vertical position, parallel with the center of gravity.

If the valves are to be installed in a manhole, adequate space should be provided so that the backflushing attachments can be maneuvered into their correct locations, and maintenance personnel can service the equipment.

Also, exhaust ventilation to atmosphere, wet well, or any other suitable location should be provided, and be of adequate size to pass the expected volume of valve exhaust air.

The valve should be mounted directly above the main or off to the side of the main, and separated by an isolation valve. When the valves are located a distance from the main, the slope of the inlet piping should be adequate in order to limit solids deposition from obstructing the inlet piping.

Pipe supports should be used whenever possible to anchor and support the valve or combination to help eliminate damage from abuse.

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 of the valve on a continuous upward slope.