



Silent Check Valve Installation and Maintenance Instructions

1.0 Valve Location and Orientation in Piping

The IFC Silent Check Valve is designed to open fully to allow forward flow and close rapidly prior to flow reversal. These valves are used to prevent reverse flow through pumps or in piping systems. IFC Silent Check Valves are not intended for use with fluids containing suspended solids such as wastewater, or any type of hazardous gas. Check valves should be installed a minimum of 3 pipe diameters from other line elements. i.e. elbows, pumps, valves, etc.

Valves may be installed vertically, horizontally, or at other angles. Install the valve with proper positioning of the flow arrow. Support and align piping and valve. Install lubricated flange bolts and torque using the cross-over flange bolt tightening method.

Cast iron valves must be mounted to ANSI flat faced cast iron or steel flanges, while carbon and stainless steel valves may be mounted between either flat faced or raised face flanges (Note: The use of raised face flanges against cast iron valves may cause external leakage and/or damage to the valve). Gaskets may be full faced or ring type. It is very important to center the valve to the pipe inner diameter to prevent internal leakage.

2.0 Maintenance

IFC Series SC Check Valves normally require no routine maintenance.

3.0 Reconditioning

IMPORTANT! PRIOR TO DISASSEMBLY, VALVE MUST FIRST BE ISOLATED FROM SYSTEM PRESSURE AND FLOW.

When removing the valve from the pipeline, loosen the outlet flange bolting first, then loosen the inlet flange bolting

CAUTION: Protect eyes and other body parts from any residual line pressure that may exist in the pipeline.

The valve may then be removed from the pipeline and inspected for wear. For cast iron valves the valve seat ring is removed by removing the seat retaining screws. The seat ring on steel and stainless steel valves are removed by unthreading the seat ring in the counterclockwise direction. After the seat ring is removed, remove the disc, which will expose the guide bushing and valve spring. The parts that are worn should be replaced. NOTE: For valves supplied with soft seats, carefully inspect the O-Ring condition and dovetail machined groove for damage.

When the valve is to be reassembled, carefully place the disc and seat in the valve body to prevent damage to lapped or soft seat. Reinstall the valve in the line using new flange gaskets, and replace and torque the bolts using the cross-over flange bolt tightening the method.

CAUTION: The valve seating should never be inspected by only removing the valve inlet flange piping, because seat damage or injury could occur.

4.0 Troubleshooting

Presented below are several possible valve installation problems along with possible solutions:

- Valve chatters or vibrates: Verify that the velocity is at least 4 ft/sec. A "clunking" noise may be the result of line cavitations due to high velocities, low downstream pressure, or an upstream expander. It is preferred that 3 pipe diameters of straight pipe are located upstream of the valve.
- Valve leakage: Check the upstream gasket and flange and verify that the flange ID meets the maximum "A" dimension found on page 36. If found to be acceptable, remove the valve from service and inspect valve seating surface.
- Valve does not pass flow: Ensure valve is installed in the correct flow direction. Verify that downstream isolation valve is open and that no blockage exists inside the valve body cavity.
- Valve slams: Remove valve and inspect spring. Heavier springs can be furnished for severe applications. Contact factory.