

GC Series Resilient Seated Globe Check Valve for Clean Water Service

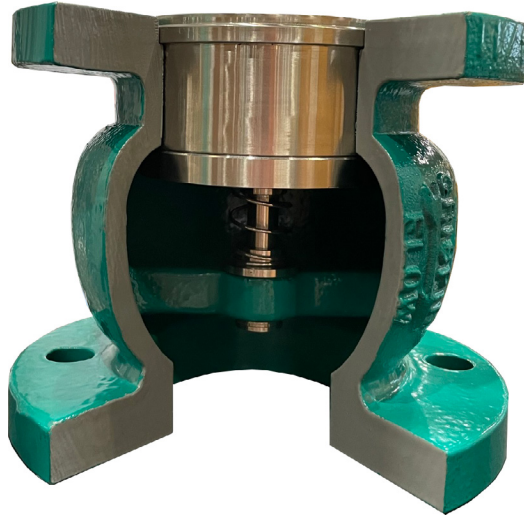


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GC Series: Installation, Operation & Maintenance Manual

INTRODUCTION

GC Series Globe Check Valves are designed to close before the pump stops completely. This prevents flow reversal, which eliminates water hammer and system surges associated with valve closure. Fully automatic, spring-loaded and double-guided, the valve opens as the pump starts, and closes just prior to flow reversal upon pump outage. With a standard ductile iron body and stainless steel seat, disc, bushing and spring, all internal parts of the Globe Check Valve are field replaceable for ease of maintenance. In addition, the GC Series is designed so that a butterfly valve may be used downstream without the use of a space flange or spool piece. This feature is available in sizes through 10". Resilient seats are highly recommended for potable water or drip tight applications

This manual will provide you with the information to properly install and maintain the valve to ensure a long service life. This valve is not intended for fluids containing suspended solids such as wastewater.

INSTALLATION

Please read this entire IOM Manual prior to proceeding with the installation. Valves may be installed vertically, horizontally, or at other angles. Install the valve with proper positioning of the flow arrow. Support and align adjacent piping and the valve. Install lubricated flange bolts, hand tighten then torque the bolts using the cross-over flange bolt tightening method to load the bolts evenly and eliminate concentrated stresses.

Valves must be mounted to ANSI cast iron or steel flanges with conventional flat face or ring gaskets. Proper centering of ring gaskets is important to prevent internal leakage.

Never lift the valve by the stainless steel trim.

OPERATION

Silent Check Valves are typically used downstream of a pump. These valves are designed to close before the pump stops completely. This prevents flow reversal, which eliminates water hammer and system surges associated with valve closure.

DISASSEMBLY (See Fig. 1)

The valve has to be removed from the pipeline for disassembly. All work on the valve should be performed by a skilled mechanic with the proper tools.

1. Remove the flange bolts.
2. Remove the seat screws (6) and slowly lift seat out of the valve body. The spring (4) will come out as well. Inspect the spring for wear. Replace if necessary.
3. Lift out disc (3) and inspect it. Wire brush seating area if needed.
4. Disconnect retaining ring (8) and slide out bushing (5). Replace bushing if worn.

REASSEMBLY (See Fig. 1)

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. Assemble the bushing (5) and snap the retaining ring (8) in place.
2. Slide the disc (3) into place.
3. Drop the spring (4) (see Fig. 1.)
4. Assemble seat (2R) in place and fasten with seat screws (6)
5. Align flange bolt holes with valve. Once aligned, use flange bolts and tighten.



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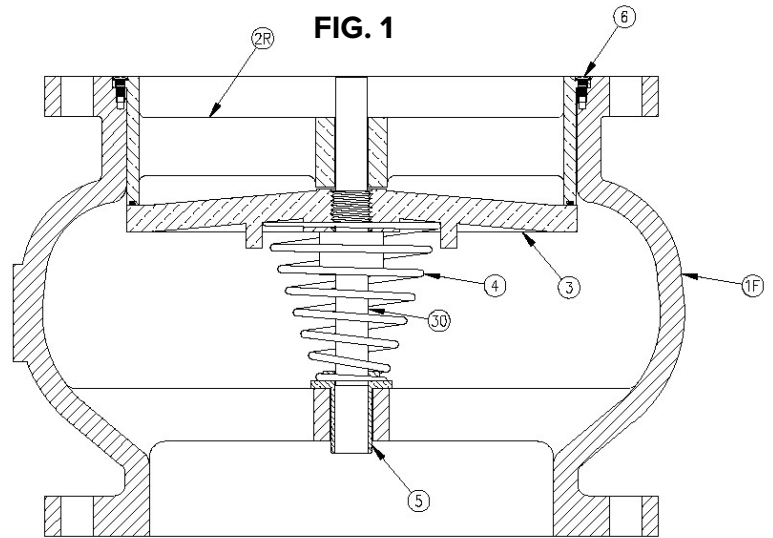
GC Series Standard and Optional Materials List

ITEM	DESCRIPTION	STANDARD MATERIAL	OPTIONAL MATERIAL
1F	BODY	Ductile Iron (ASTM A536 GR65-45-12)	Cast Iron (ASTM A126 Class B)
2R	RESILIENT SEAT	Stainless Steel (ASTM A351 T316)	Bronze (ASTM B62)
3	DISC	Stainless Steel (ASTM A351 T316)	Bronze (ASTM B62)
4	SPRING	Series 300 Stainless Steel	316 Stainless Steel
5	BUSHING	316 SS (ASTM A276 T316)	Bronze (ASTM B62)
6	SCREW	316 Stainless Steel T316	Stainless Steel 18-8
30	SHAFT	316 Stainless Steel	Bronze (ASTM B62)

MAINTENANCE

As long as the valve is used as intended, for potable water service, it should be maintenance free for years. However, a periodic visual and audio inspection should be performed annually. The visual inspection will be for leaks while the audio inspection will assure that the opening and closing of the valve is heard.

If the valve must be serviced, it should be isolated and the line pressure relieved on both sides of the valve. The discharge flange can be loosened first. Then, loosen the inlet flange to relieve the line pressure. After the valve is removed from the line, inspect the internal parts for wear. The valve seat ring (2R) is removed by first removing the retaining screws (6). After the seat ring is removed, slowly remove the disc (3). The valve spring (4) and guide bushing (5) will be exposed.



The parts that are worn should be replaced. Metal to metal seats are a lapped set; therefore, the seat ring and disc should be replaced at the same time.

When the valve is to be reassembled, carefully place the disc and seat in the valve body so as not to destroy the lapped seat.

Reinstall the valve in the line, use new flange gaskets and replace and torque the bolts using the cross-over flange bolt tightening method.

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

NOTE: These valves are intended for use on municipal water systems or approved commercial and/or industrial applications.

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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