INSTALLATION, OPERATION AND MAINTENANCE MANUAL

Figure F284-D Anti-Slam Surge Check Valves

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IOM F284D 070822

WARNING: Cancer and Reproductive Harm – www.Prop65Warnings.ca.gov

INSTALLATION, OPERATION and MAINTENANCE
Anti-Slam Surge Check Valves

INTRODUCTION
This manual will provide the information to properly install, operate and maintain the valve to ensure a long service life. GA Industries Surge Check Valves are ruggedly constructed to provide years of trouble-free operation with minimal maintenance.

CAUTION
The valve is NOT recommended for use with compressed air or other gases.

CAUTION
Surge Check Valves are not intended for used with hazardous, flammable, or toxic fluids.

The Shop Order (SO) Number, Figure Number, size and pressure rating are stamped on a nameplate attached to the valve. Please refer to the SO number when ordering parts.

DESCRIPTION OF OPERATION
GA Industries Anti-Slam Surge Check Valves are designed to minimize the surge pressure and valve damage that can result when an air & vacuum valve is suddenly closed by the high velocity incoming water. The surge check valve automatically closes to restrict the discharge area upon excessive air discharge velocity or a sudden transition from air to water. The restricted area slows the incoming water velocity, the air valve is not slammed shut and surges are minimized.

Once the air valve is closed, the surge check reopens to allow unrestricted air inflow.

RECEIVING AND STORAGE
Inspect the valve upon receipt for damage during shipment. Carefully unload all valves to the ground without dropping.

The valves should remain in a clean, dry, and weather protected area until installed. For long term storage (greater than 6 months) the rubber surfaces of the seat should be coated with a non-toxic lubricant such as "SuperLube" made by Synco Chemical. Do not expose the rubber parts to sunlight or ozone.

VALVE CONSTRUCTION
GA Industries Figure F284-D Anti-slam Surge Check Valves have a globe style valve body with integral flanges that are faced and drilled per ANSI Class 125/150.

The valve has a fusion bond epoxy coated ductile iron body, lead free bronze internal metal components and a rubber seat. Refer to Page 4 for details of construction and parts location.

INSTALLATION
GA Industries Figure 284-D Anti-Slam Surge Check Valves are usually supplied as a component of a factory assembly consisting of an air & vacuum valve or combination air valve and a surge check valve.

The Figure 284-D can also be supplied as a separate valve for field installation between the air & vacuum valve or combination air valve and its inlet isolating valve. In this case ensure the valve is installed so that the end of the valve that has the bronze seat with “spokes” is connected to the air valve.

CAUTION
Do not lift the valve by the bronze seat ring spokes

The valve should be installed between standard ANSI Class 125 or 150 flat faced flanges. Full face flange gaskets are recommended.

Remove all packing materials from the valve, including the tabs that retain the seat during shipping.

If ring gaskets are used the bolt material shall be ASTM A307 Grade B (or equivalent). Higher strength bolting should only be used with full-face gaskets.

Lower heavy valves using slings or chains around the valve body. Lubricate the bolts or studs and insert around flange. Lightly tighten bolts until gaps are eliminated. Torque bolts in an alternating pattern in graduated steps. If leakage occurs wait 24 hours and re-torque the bolts but do not compress the gasket more than 50% or exceed bolt maximum torque rating.

If installed outdoors, below ground in a vault or in an unheated area, adequate freeze protection must be provided.

Sizes 10-inch and smaller Figure F284-D Anti-Slam Surge Check Valves have enough clearance to allow it to be bolted to most butterfly valves. Refer to Table 1 on page 4 for clearance dimensions. However, the plug shaft in 12-inch size valves extends past the outlet flange and will interfere with an adjacent butterfly valve's operation.

PREVENTIVE MAINTENANCE

GA Industries Figure 284-D Anti-Slam Surge Check Valves require no scheduled lubrication, adjustment, or preventive maintenance but a periodic visual inspection should be performed.

TROUBLESHOOTING

If the associated air valve slams shut, close one or more of the restriction ports in the Anti-Slam Surge Check Valve disc by installing pipe plug(s).

WARNING

Removing the valve from the line or disassembling the valve while there is pressure in the valve body may result in injury or damage to the valve

DISASSEMBLY

The valve should be removed from the line before disassembly. A skilled technician with proper tools should perform all work. No special tools are required.

Set the valve, with the flow arrow pointing down, on wooden blocks or 2 x 4's under the flange outboard of the bronze seat so that it can drop out of the body. Ensure the surface beneath the valve will not damage the internal components when they drop out of the valve.

Place a metal rod on top of the stem inside the bushing. Hit the top of the rod with a hammer or mallet and the internal components should drop out of the valve body.

Inspect the seating surfaces. Superficial marks, or discoloration on the mating surface of the poppet are normal. The rubber seat is retained in a "dove-tail" groove in the seat and can be pulled out if damaged

Inspect the plug for damage, especially the guiding surfaces to ensure they have not worn unevenly. If they are not round, it can lead to misalignment and sticking so they should be replaced.

REASSEMBLY

Clean all parts especially the seating and sealing surfaces before reassembling valve. Worn parts should be replaced.

Set valve body on a flat surface with the flow arrow pointing down. Install bushing (2) into body (1). Set spring (3) over bushing (2). Install poppet stem in bushing. Lubricate and install new O-ring in dove-tail groove in seat being careful not to damage or cut the O-ring during installation.

Lubricate the O-Ring (6) and install in the groove on the OD of the seat. It is very important to lubricate this O-ring to prevent damage during installation which will cause a leak and not allow the seat to enter the body.

Place the seat into the valve making sure the seat stem enters the poppet and the poppet enters the bushing.

Using two hands, push down on the seat to pop it into the body. Larger valves may require a 2 x 4 to be placed across the seat and hit with a hammer.

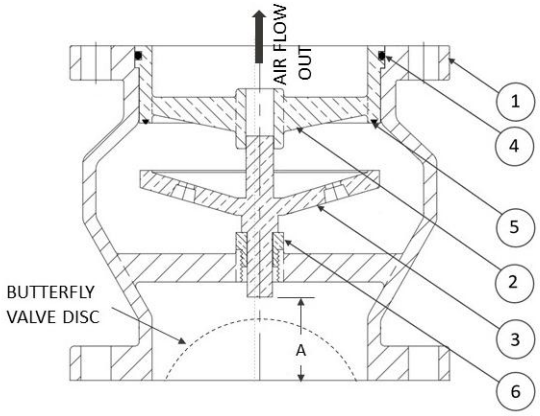
Install valve in line with new gaskets, tighten flange bolts, carefully introduce pressure and check for leaks

REPLACEMENT PARTS
Genuine replacement parts are available from your local VAG/GA Industries representative or from the factory:

VAG USA, LLC
234 Clay Avenue
Mars, PA 16046 USA
Telephone: 724-776-1020
Fax: 724-776-1254
E-mail: quotes-ga@vag-group.com

Please have the nameplate data available when ordering parts.

WARRANTY
The Warranty for GA Industries valves is included in our Terms and Conditions which can be found here: https://gaindustries.com/terms



Anti-Slam Surge Check Valve

Item	Description	Standard Material
1	Body	Ductile Iron
2	Seat	Lead Free Bronze
3	Poppet	Lead Free Bronze
4	Seat O-Ring	EPDM Rubber
5	Seal	EPDM Rubber
6	Bushing	Bronze

Table 1 Butterfly Valve Disc Clearance

Size	A
2½"	1¾"
3"	1¾"
4"	1¾"
6"	2½"
8"	3¼"
10"	4¼"
12"	Not applicable