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# SVC & SHC Series

*Installation & Maintenance Instructions for  
SVC & SHC Sanitary Check Valves*

## **Please read these instructions carefully!**

Your Steriflow product will provide you with long, trouble-free service if it is correctly installed and maintained. Spending a few minutes now reading these instructions can save hours of trouble and downtime later. When making repairs, use only genuine Steriflow Valve parts, available for immediate shipment from the factory.

### **Description**

The SVC is a sanitary vertical check valve, while the SHC is a sanitary horizontal check valve. Both models offer a simple design that allows flow of the medium in one direction while preventing back flow of the medium in the opposite direction.

The valves consist of the following components:

1. Body or Inlet Body
2. Valve Disc
3. Cover O-Ring or Body Gasket
4. Cover or Outlet Body
5. Bolts for Horizontal, Tri-Clamp or Vertical

All metal components that are in contact with the medium are made from 316/316L stainless steel.

### **Intended Service**

The SVC/SHC check valves are intended to be used in gas and liquid applications where the medium is chemically compatible with the seals, disc materials and 316/316L SST metal parts. See the product data sheet and your specific model number to determine maximum pressure and temperature ratings for your application.

### **Installation**

As shown in the exploded view drawing, note that the valve does not use a spring. Flow direction must be in the direction of the arrow stamped on the valve body.

### **SVC Check Valve Installation Orientation**

The **SVC with Teflon, PEEK and 316/EPDM** disc must be installed in **vertical upflow lines** (perpendicular to the floor and ceiling) so as to allow gravity to assist in closing the disc.

The **SVC with Polypropylene disc** is designed to work in **vertical downflow process outflow or drain lines** that are perpendicular to the floor and ceiling.

### **SHC Check Valve Installation Orientation**

The SHC check valve (all disc materials) must be installed in horizontal lines with the cover (see parts diagram next page) parallel to the floor and ceiling in order to function properly.

### **Welding Cautions**

When welding the SVC/SHC valves into place, use caution to protect the o-ring seals in the body and disc from the heat during welding. To insure that heat damage to the seals does not occur, disassemble the valve and remove the valve disc and body / cap o-ring. *Please see Replacement of Valve Disc and / or Body / Cap O-Ring to remove these items.*

### **Function**

Upon reaching an inlet pressure of 0.04 psid (2.76 millibar) for the polymer discs or 0.13 psid (8.96 millibar) for the 316 or 316/EPDM discs, the valve will start to open and allow flow to pass through. With increasing pressure, the valve opens completely (approximately .3 psid [20.6 millibar] for the polymer discs and 1.2 psid [82.74 millibar]) and increases the through flow. As the pressure and flow increase, the differential pressure across the valve may change, not necessarily in proportion with the flow increase. The maximum differential pressure across the valve is 3.0 psi (0.2 bar), at full open capacity rating (see SVC/SHC data sheet for Cv/Kv values).

A reduction in the differential pressure will cause the valve disc to move towards the seat, ultimately closing completely once the differential pressure is lower than the values stated above. Upon closing, the medium is prevented from flowing backwards out of the inlet of the valve body.

### **Maintenance**

The valve does not require regular maintenance. Should the disc o-ring become damaged or worn and a leakage exists, the entire valve disc (with injection molded o-ring) should be replaced.

### Replacement of Valve Disc and/or Body/Cap O-Ring

With the pressure of the media relieved or by-passed, loosen and remove the cover bolts or body clamp. Remove cover or top outlet body. Remove valve disc and o-ring or gasket and replace if worn or damaged with a new spare part. Make sure the smaller face of the valve disc is facing the valve seat, which is in the direction of the valve inlet. Replace cover or top outlet body. Insert bolts in cover and cross tighten 1/4 turn past hand-tight.

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### Exploded Views

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