

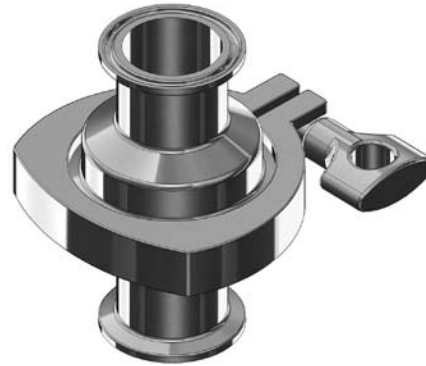
# SVC/SHC Series

## Sanitary Check Valves

The patented SVC/SHC Series are vertical and horizontal check valves designed specifically for use in biopharmaceutical and parenteral drug manufacturing applications. They are the first check valves to follow the valve design guidelines of ASME BPE 2009. Since no spring, hinge, mechanical return mechanism or stem is used, they are crevice free, have no areas for particle entrapment, minimize particulate shedding, and are fully drainable.

### How it Works:

As flow enters the valve, and inlet pressure exceeds the weight of the disc, the disc lifts and allows full flow to pass through the perimeter orifices to the downstream side of the valve. As flow begins to reverse, the differential pressure across the valve drops and the disc returns to the seat, closing the valve.



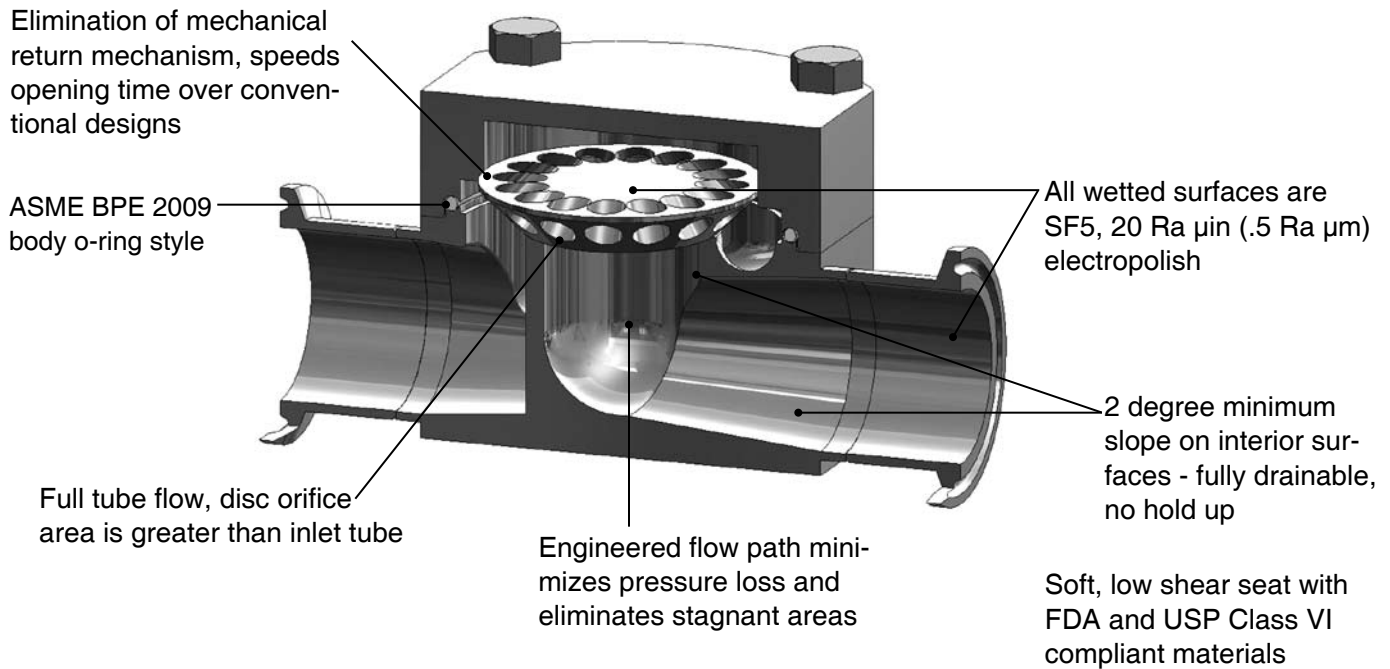
### FEATURES

- Applicable for gas or liquids, and suitable for CIP and SIP. 316L/elastomer disc units are autoclavable
- Elimination of springs or hinges speeds opening time and eliminates particle entrapment areas
- High flow rates with minimal pressure loss compared with mechanical return check valves
- Low particle shedding properties compared with sliding disc type or spring return check valves
- Unique design eliminates dead space and crevices associated with spring check valves
- Self-draining flow path
- Body and disc are mechanically polished and electropolished to SF5, 20 Ra  $\mu\text{m}$  (.5 Ra  $\mu\text{m}$ )
- Sanitary tube weld ends and Tri-clamp ends available
- Positive shutoff without the use of a spring

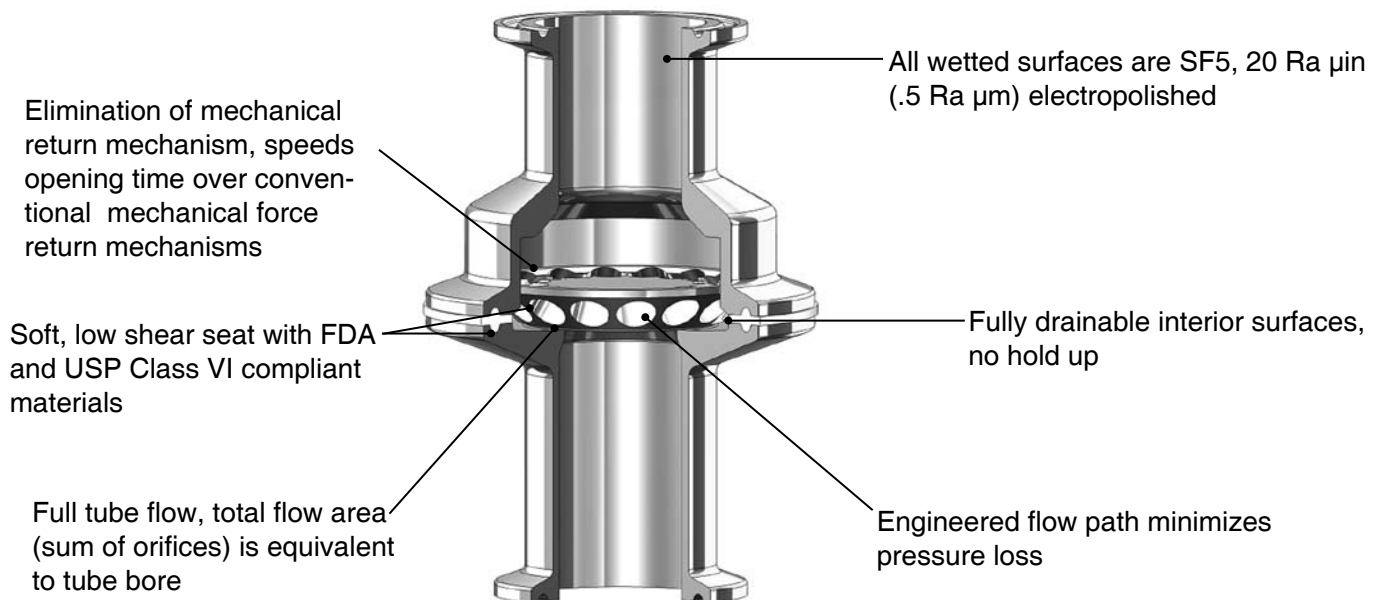
### APPLICATIONS

- WFI, purified water lines on pump outlets
- Condensate drainage from clean steam distribution loops
- Condensate drainage from process systems using clean steam – fermenters, bioreactors, SIP systems and sterilizers
- Guard for sanitary pumps in case of pressure surges
- Sampling systems in WFI and clean water supply systems
- Air pressure supply systems and pressure rinse systems in pharmaceutical piping
- To replace actuated diaphragm valves on some liquid mixing lines
- Gas ( $\text{N}_2$ ) purge/drying lines

### SHC SERIES – FEATURES & BENEFITS



### SVC SERIES – FEATURES & BENEFITS



### SPECIFICATION

Steriflow Sanitary Check Valve, Model SVC for Vertical installation, Model SHC for Horizontal Installation. Body and end shall be constructed of bar stock material ASTM A479 316L (DIN 1.4435), Hastelloy® C-276, AL6XN®, or other acceptable materials with all internal surfaces to ASME BPE 2009 SF5, 20 Ra µin (0.5 Ra µm) electropolished or better. Check valve shall use no internal springs or be guided, or slide in the wet (horizontal or vertical) by any means, to prevent particulate generation. Disc shall be constructed of ASTM A479 316L, or other acceptable material with an EPDM seal, Teflon® or PEEK. All materials must be FDA and USP Class VI. Vertical and horizontal valves shall be of be completely drainable with no flat horizontal interior body wetted surfaces. Body sealing methods shall be bolted, or clamped and acceptable by ASME BPE 2009. All gasket materials, o-rings and seals shall be FDA/USP Class VI compliant. Valve body shall be marked as per ASME BPE 2009.

**SPECIFICATIONS**

**Sizes**

- SVC: 1/2" – 2" (DN15 – DN50)
- SHC: 1/2" – 2" (DN15 – DN50)

**End Connections**

- Standard: Tube Weld Ends, Tri-clamp (ASME BPE, DIN, ISO)

**Materials of Construction**

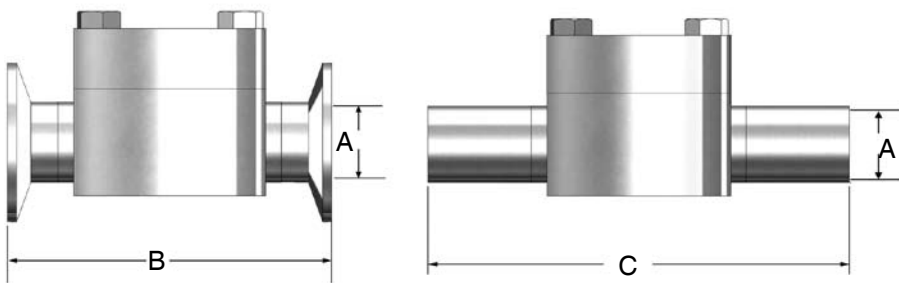
- Body: ASTM A479 316L, DIN 1.4435
- Disc: ASTM A479 316L, (DIN 1.4435)/EPDM, solid Teflon, or PEEK (All FDA and USP Class VI)
- SHC Body O-Ring: EPDM, Silicon, Viton (All FDA and USP Class VI)
- SVC Body Gasket: Silverback®, Tuf-Steel®, Elastopure® EPDM, TFE/Viton, TFE/EPDM, Viton-600S (All FDA and USP Class VI)

**Pressure/Temperature Rating**

- Max Pressure: 232 psi (16 bar)
- Max Temperature:
  - Continuous: 275°F (135°C)
  - Intermittent: 310°F (155°C)

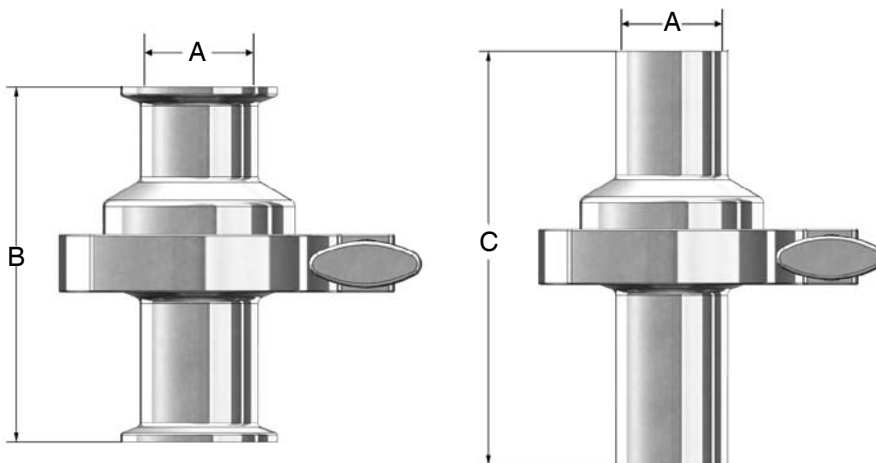
**Applications:** Bio or parenteral process, WFI, Clean Gases, Low Pressure Steam, Clean Condensate, CIP Fluids

**SHC SERIES DIMENSIONS**



Valve Size	Dimensions (inches)		
	A	B	C
1/2"	0.37	4.00	5.50
3/4"	0.62	4.00	5.50
1"	0.87	4.00	5.50
1-1/2"	1.37	5.50	6.36
2"	1.87	6.30	7.00

**SVC SERIES DIMENSIONS**



Valve Size	Dimensions (inches)		
	A	B	C
1/2"	0.37	3.25	4.75
3/4"	0.62	3.25	4.75
1"	0.87	3.25	4.75
1-1/2"	1.37	4.50	5.50
2"	1.87	4.50	5.50

## SHC (HORIZONTAL) SERIES ORDERING SCHEMATIC

Model	—	Size	—	Body Mat'l	/	1	2	3	4	5	6

Model Number	
SHC	Standard

Size	
050	1/2" (DN15)
075	3/4" (DN20)
100	1" (DN25)
150	1-1/2" (DN40)
200	2" (DN50)

Body Material	
6L	ASTM A479, 316L
SA	AL6XN SST
HC	Hastelloy C

Body	
1 & 2	
TC	Tri-Clamp
TE	Tube End

Disc	
3 & 4	
TF	Teflon (FDA and USP Class VI)
S6	316L SST
SE	316L/EPDM (FDA and USP Class VI)
PK	PEEK (FDA and USP Class VI)
ZZ	Non-Standard

O-Ring	
5 & 6	
EP	EPDM
SL	Silicone
VT	Viton
ZZ	Non-Standard

## SVC (VERTICAL) SERIES ORDERING SCHEMATIC

Model	—	Size	—	Body Mat'l	/	1	2	3	4	5	6

Model Number	
SVC	Standard

Size	
050	1/2" (DN15)
075	3/4" (DN20)
100	1" (DN25)
150	1-1/2" (DN40)
200	2" (DN50)

Body Material	
6L	ASTM A479, 316L
SA	AL6XN SST
HC	Hastelloy C

Inlet Body	
1 & 2	
TC	Tri-Clamp to ASME BPE
TE	Tube End to ASME BPE
TA	Tube End to DIN 11866 Row A
TB	Tube End to DIN 11866 Row B (ISO)

Outlet Body	
3 & 4	
TC	Tri-Clamp to ASME BPE
TE	Tube End to ASME BPE
TA	Tube End to DIN 11866 Row A
TB	Tube End to DIN 11866 Row B (ISO)

Disc	
5 & 6	
TF	Teflon (FDA and USP Class VI)
S6	316L SST
SE	316L/EPDM (FDA and USP Class VI)
PK	PEEK (FDA and USP Class VI)
ZZ	Non-Standard

Gasket	
7 & 8	
01	Silverback (FDA and USP Class VI)
02	TFE/Viton (FDA and USP Class VI)
03	TFE/EPDM (FDA and USP Class VI)
04	Viton-600S (FDA and USP Class VI)
05	TUF-Steel (FDA and USP Class VI)
06	Elasto-Pure EPDM (FDA and USP Class VI)
ZZ	Non-Standard

Tri-Clamp	
9 & 10	
2P	2-Piece
3P	3-Piece
BC	Bolted Clamp
ZZ	Non-Standard