

Check Valve Series

SHCV, SOCV, SOACV, SACV Series



 **SUPERLOK®**

 **BMT Co., Ltd.**
www.superlok.com

HIGH PRESSURE CHECK VALVES

SHCV SERIES



Features

- Pressure rating up to 6,000psig(413bar) at 100 °F (37°C)
- Temperature rating up to 375 °F (190°C) with viton seal standard
- Cracking pressure fixed from 1/3 to 25psig (0.02 to 1.7bar)
- Variety of end connections
- 316 stainless steel body material as standard.
- Each and every valve is tested at the factory.

Technical Data

Series	Orifice (mm)	Working and Back Pressure @70 °F(20 °C)	Flow Coefficient Cv	Nominal Cracking Pressure
SHCV1	4.8	6000psig (413bar)	0.67	1/3, 1, 5, 10, 25 psig (0.02, 0.06, 0.34, 0.68, 1.7 bar)
SHCV2	7.8		1.80	
SHCV3	15.0	5000psig (344bar)	4.70	

Seal Materials

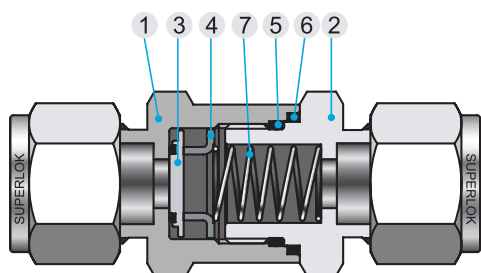
Material	Temperature Rating	Designator
Viton	-10 °F to 375 °F (-23°C to 190 °C)	Standard
NBR	-10 °F to 250 °F (-23°C to 121 °C)	N
Ethylene Propylene	-50 °F to 300 °F (-45°C to 148 °C)	E

To order add the seal material designator to the ordering number.
ex) SHCV1-S8-1P-N

Cracking Pressure and Reseal Pressure at 70 °F (20°C)

Nominal Spring Size psig(bar)	Cracking Pressure Range psig(bar)	Min. Reseal Pressure psig(bar)	Designator
1/3 (0.02)	0~3 (0~0.20)	6 (0.41) back pressure	0.3P
1 (0.068)	0~4 (0~0.27)	5 (0.34) back pressure	1P
5 (0.34)	3~9 (0.20~0.62)	2 (0.13) back pressure	5P
10 (0.68)	7~15 (0.48~1.0)	3 (0.20)	10P
25 (1.7)	20~30 (1.3~2.0)	17 (1.1)	25P

Materials of Construction



No.	Component	Material
1	Inlet Body	SS316
2	Outlet Body	SS316
3	Poppet	Viton-bonded SS316
4	Poppet Stopper	SS316
5	O-Ring	Viton standard
6	Packing	PTFE
7	Spring	SS304

Testing

All valves are factory tested for cracking pressure and reseal performance.



Dimensions, shown on the above table, are measured based on finger-tight. All dimensions are for reference only, subject to change.

Ordering information

$$\frac{\text{SHCV2}}{1} - \frac{\text{S}}{2} - \frac{6}{3} - \frac{1\text{P}}{4} - \frac{\text{SS}}{5}$$

1 : Valve Series 2 : End Connection Type 3 : Connection Size 4 : Cracking Pressure Designator
5 : Body Material Designator [SS : 316 stainless steel(standard), B : Brass]

ONE-PIECE CHECK VALVES

SOCV SERIES



Features

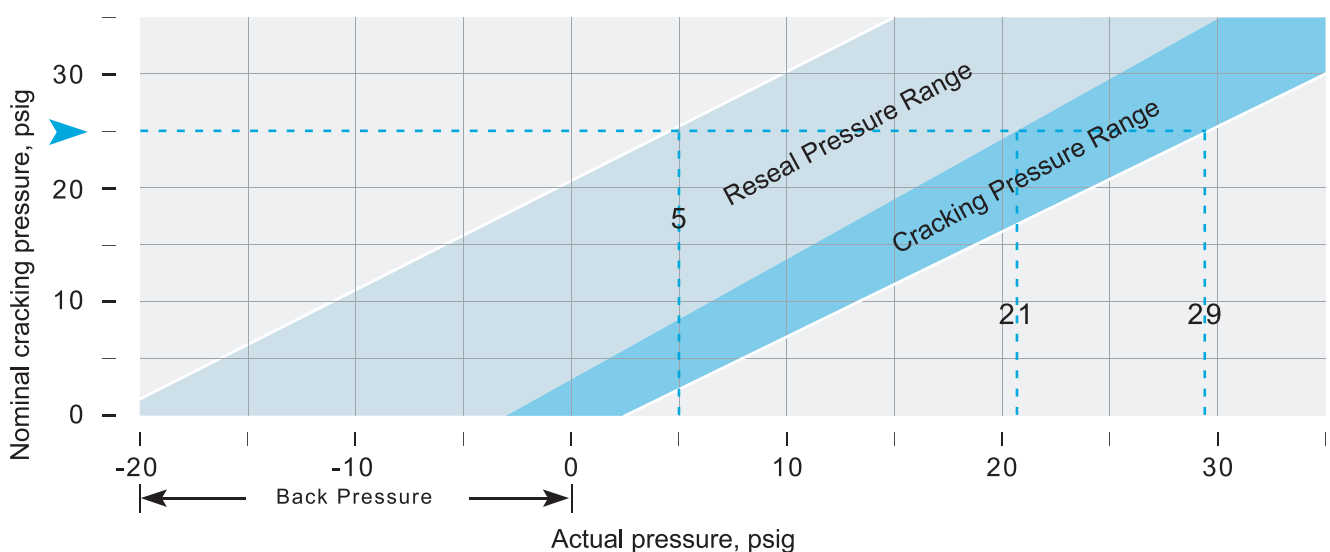
- One-piece Body
- Working pressure up to 3000 psig (206bar)
- Temperature rating up to 375 °F (190°C) with viton seal standard.
- Cracking pressure fixed from 1/3 to 25psig (0.02 to 1.7 bar)
- NPT and ISO pipe end connections
- 316 stainless steel and brass materials
- Each and every valve is tested at the factory.

Technical Data

Nominal Cracking Pressure	1/3, 1, 10 and 25psig (0.02, 0.06, 0.68, 1.7bar)
Maximum Working Pressure at 70 °F (20°C)	3000psig (206bar)
Maximum Back Pressure at 70 °F (20°C)	3000psig (206bar)
Flow Coefficient (Cv)	SOCV1 / SOCV2 : 0.35 SOCV3 / SOCV4 : 1.20
Temperature Rating	VITON O-ring : -10 °F to 375 °F (-23°C to 190°C) NBR O-ring : -10 °F to 250 °F (-23°C to 121°C) (add "N" to the end of ordering number)

Cracking Pressure and Reseal Pressure

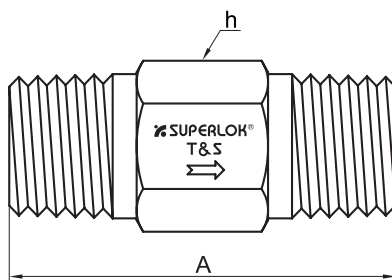
SOCV Series Valves with nominal cracking pressure of 20 psig (1.3 bar) or lower may require back pressure to reseal bubble-tight.



Testing

All valves are factory tested for cracking pressure and reseal performance.

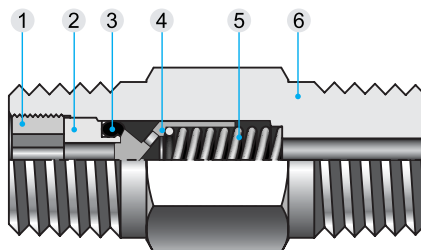
Table of Dimensions



Order Number		End Connection		A	h Hex mm (in.)
Series	Part No.	Inlet	Outlet		
SOCV1	M4N	1/4 Male NPT	1/4 Male NPT	41.2	14.3 (9/16)
	M4R	1/4 Male ISO	1/4 Male ISO		
SOCV2	F4N	1/4 Female NPT	1/4 Female NPT	61.2	19.1 (3/4)
	F4R	1/4 Female ISO	1/4 Female ISO	64.5	
	M4N-F4N	1/4 Male NPT	1/4 Female NPT	44.5	
	F4N-M4N	1/4 Female NPT	1/4 Male NPT	58.2	
SOCV3	M8N	1/2 Male NPT	1/2 Male NPT	57.9	22.2 (7/8)
SOCV4	F8N	1/2 Female NPT	1/2 Female NPT	94.2	26.9 (1-1/16)
	M8N-F8N	1/2 Male NPT	1/2 Female NPT	71.9	

All dimensions are for reference only, subject to change.

Materials of Construction



No.	Component	Valve Body Materials	
		Stainless steel	Brass
1	Insert Lock Screw	316SS / A276	Brass
2	Insert	316SS / A276	Brass
3	O-Ring	VITON	NBR
4	Poppet	316SS / A276	Brass
5	Spring	SS304	
6	Body	316SS / A276	Brass

Ordering information

$$\frac{\text{SOCV1}}{1} - \frac{M}{2} - \frac{4N}{3} - \frac{1P}{4} - \frac{SS}{5}$$

1 : Valve Series 2 : End Connection Type 3 : Connection Size

4 : Cracking Pressure Designator(0.3P : 1/3psig, 1P : 1psig, 10P : 10psig, 25P : 25psig)

5 : Body Material Designator [SS : 316 stainless steel(standard), B : Brass]

ONE-PIECE ADJUSTABLE CHECK VALVES

SOACV SERIES



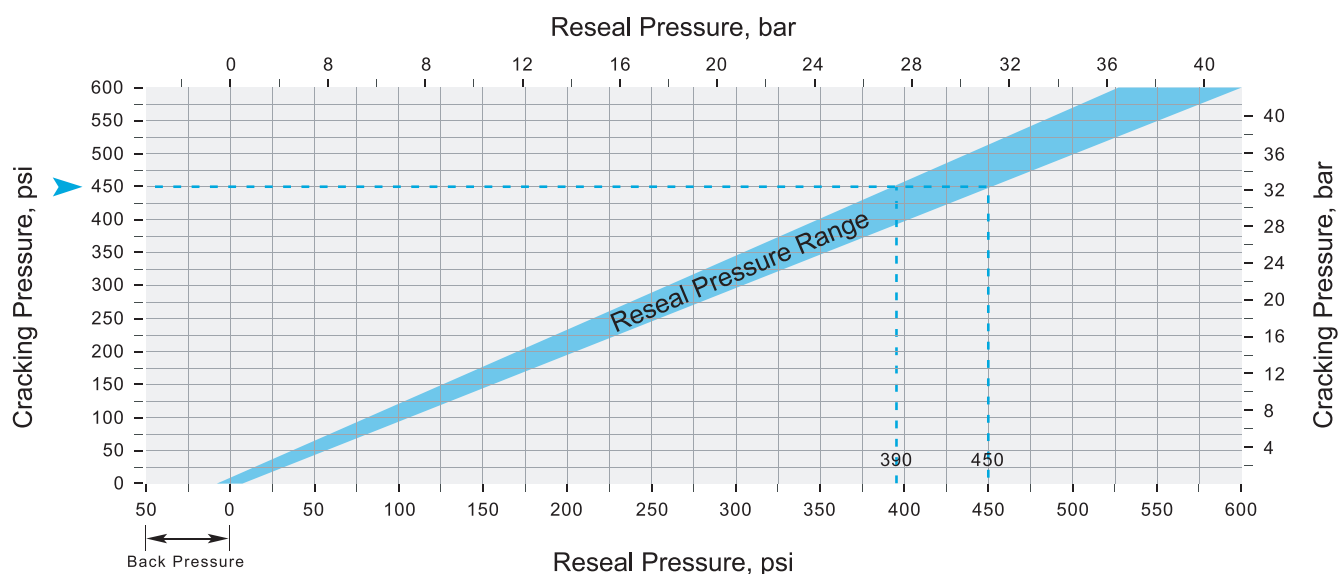
Features

- One-Piece body
- Working pressure up to 3000psig (206 bar)
- Cracking pressure adjustable from 3 to 600psig (0.2 to 41.3bar)
- NPT and ISO pipe end connections in 1/4 and 1/2 in. sizes
- 316 stainless steel and brass materials
- Each and every valve is tested at the factory.

Technical Data

Series	SOACV1 / SOACV2	SOACV3
Cracking Pressure Ranges	3 to 50psi (0.2 to 3.4bar) 50 to 150psi (3.4 to 10.3bar) 150 to 350psi (10.3 to 24.1bar) 350 to 600psi (24.1 to 41.3bar)	
Working and Back Pressure at 70 °F (20°C)	3000psig (206bar)	
Temperature Rating	VITON O-Ring : -10 °F to 375 °F (-23°C to 190°C) NBR O-Ring : -10 °F to 250 °F (-23°C to 121°C)	
Flow Coefficient (Cv)	0.35	1.20

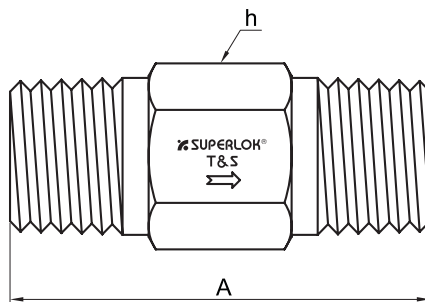
Cracking and Reseal Pressure at 70 °F (20°C)



Testing

All valves are factory tested for cracking pressure and reseal performance.

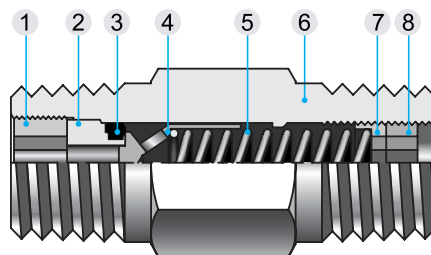
Table of Dimensions



Order Number		End Connections	A(mm)	h HEX mm (in.)
Series	Part No.			
SOACV1	M4N	1/4 Male NPT	41.1	14.3 (9/16)
	M4R	1/4 Male ISO	41.1	14.3 (9/16)
SOACV2	F4N	1/4 Female NPT	75.7	19.1 (3/4)
SOACV3	M8N	1/2 Male NPT	65.0	22.2 (7/8)
	M8R	1/2 Male ISO	65.0	22.2 (7/8)

All dimensions are for reference only, subject to change.

Materials of Construction



No.	Component	Valve Body Materials	
		Stainless steel	Brass
1	Insert Lock Screw	316SS / A276	Brass
2	Insert	316SS / A276	Brass
3	O-Ring	VITON	NBR
4	Poppet	316SS / A276	Brass
5	Spring	SS304	
6	Body	316SS / A276	Brass
7	Adjusting screw	316SS / A276	Brass
8	Locking screw	316SS / A276	Brass

Ordering information

$$\frac{\text{SOACV1}}{1} - \frac{\text{M}}{2} - \frac{\text{4N}}{3} - \frac{\text{A}}{4} - \frac{\text{SS}}{5}$$

1 : Valve Series 2 : End Connection Type 3 : Connection Size

4 : Cracking Pressure Designator (A : 3~50 psi, B : 50~150 psi, C : 150~350 psi, D : 350~600psi)

5 : Body Material Designator [SS : 316 stainless steel(standard), B : Brass]

ADJUSTABLE CHECK VALVE

SACV SERIES

Features

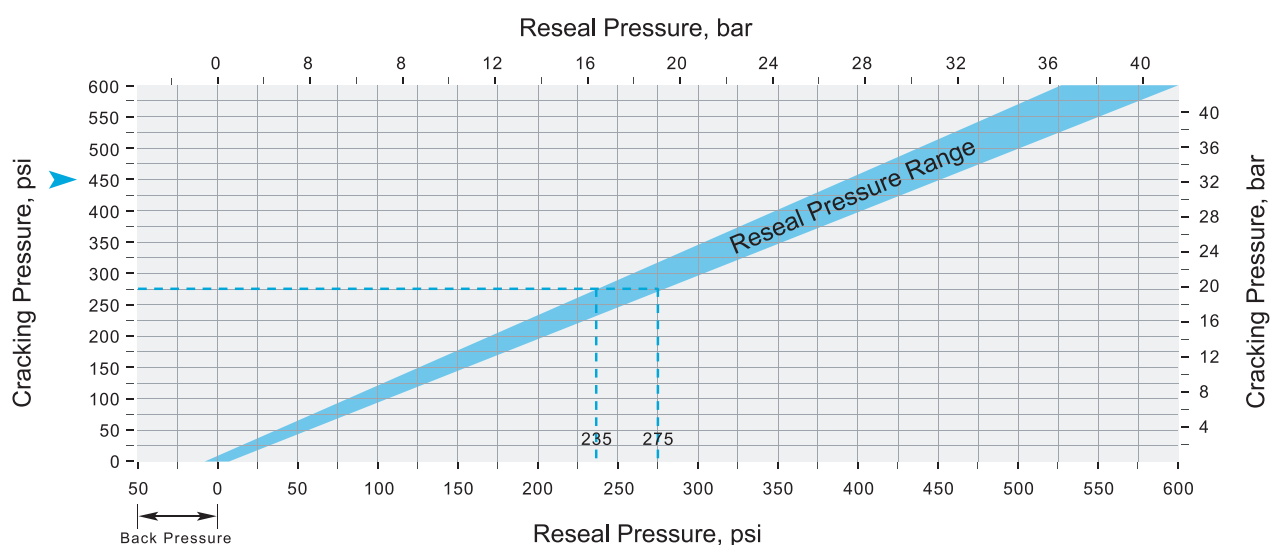
- Working pressures up to 3000 psig (206 bar)
- Temperature range from -10°F to 375°F (-23°C to 191°C) with Viton Seal
- Cracking pressures adjustable from 3 to 600psi (0.2 to 14.3bar)
- Variety of end connections
- 316 stainless steel and brass materials
- Each and every valve is tested at the factory.



Technical Data

Series	SACV
Cracking Pressure Ranges	3 to 50psi (0.2 to 3.4bar) 50 to 150psi (3.4 to 10.3bar) 150 to 350psi (10.3 to 24.1bar) 350 to 600psi (24.1 to 41.3bar)
Working and Back Pressure at 70°F (20°C)	3000psig (206bar)
Temperature Rating	VITON O-Ring : -10°F to 375°F (-23°C to 190°C) NBR O-Ring :-10°F to 250°F (-23°C to 121°C)
Flow Coefficient (Cv)	0.37

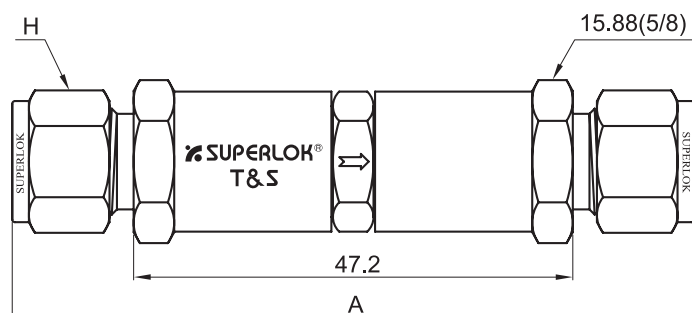
Cracking and Reseal Pressure at 70°F (20°C)



Testing

All valves are factory tested for cracking pressure and reseal performance.

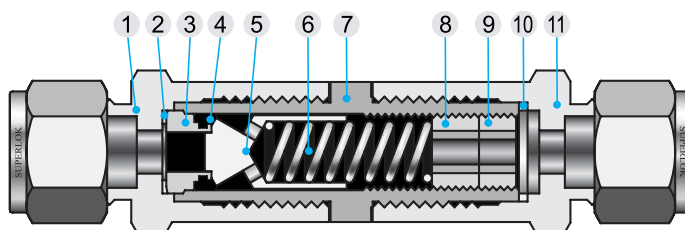
Table of Dimensions



Part No.		End Connections		A (mm)	H mm(in.)
		Inlet	Outlet		
SACV	S4	1/4" SUPERLOK		82.0	14.3 (9/16)
	S6M	6mm SUPERLOK			14
	S8M	8mm SUPERLOK		84.3	16
	M4N-S4	1/4 Male NPT	1/4" SUPERLOK	79.2	14.3 (9/16)

All dimensions are for reference only, subject to change.

Materials of Construction



No.	Component	Valve Body Materials	
		Stainless steel	Brass
1	Inlet body	316SS / A276	Brass
2	Inlet gasket	PTFE - coated 316SS	
3	Insert	316SS / A276	Brass
4	O-Ring	VITON	NBR
5	Poppet	316SS / A276	Brass
6	Spring	SS304	
7	Center body	316SS / A276	Brass
8	Adjust screw		316SS / A276
9	Locking screw		
10	Outlet gasket	PTFE - coated 316SS	
11	Outlet Body	316SS / A276	Brass

Ordering information

SACV
-
S
4
A
-
SS

1

2

3

4

5

1 : Valve Series

2 : End Connection Type

3 : Connection Size

4 : Cracking Pressure Designator (A : 3~50 psi, B : 50~150 psi, C : 150~350 psi, D : 350~600psi)

5 : Body Material Designator (SS : 316 stainless steel(standard), B : Brass)

Valve Series

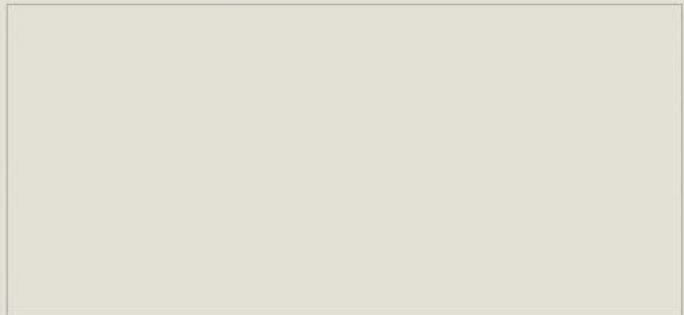
- Key Operation Ball Valves
- Key Operation Needle Valves
- Ball Valves
- Integral Bonnet Needle Valves
- Union Bonnet Needle Valves
- Check Valves
- High Pressure Check Valves
- High Pressure Needle Valves
- Plug Valves
- Manifold Valves
- Vacuum Clamps
- Water Regulators
- Flexible Hoses
- Double Block & Bleed Valves
- Swing-Out Ball Valves
- Toggle Valves
- Bleed & Purge Valves
- Quick Connectors
- High Pressure Ball Valves
- Hydraulic Ball Valves
- Trunnion Ball Valves
- Rising Plug Valves
- Relief Valves
- Cryogenic Needle Valves
- Cryogenic Ball Valves
- Micron in-Line Filters
- Gauge Root Valves
- Hydraulic Flange and Components

Fitting Series

Tube Fittings (Compression Type)
Instrument Thread Fittings
Forged Fittings
Bite Type Tube Fittings (DIN2353)
Bite Type Tube Fittings (JIS B2351)
37 Flared Tube Fittings (SAE J514)
O-Ring Face Seal Fittings
Hose Connectors & Push-On Hose Fittings

Electric

MCPD(Molded Case Power Distributor)



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