

Check valve series

SHCV, SOCV, SOACV, SACV Series



HIGH PRESSURE CHECK VALVES

SHCV SERIES



Features

- Pressure rating up to 6,000psig(413bar) at 70 °F (20°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

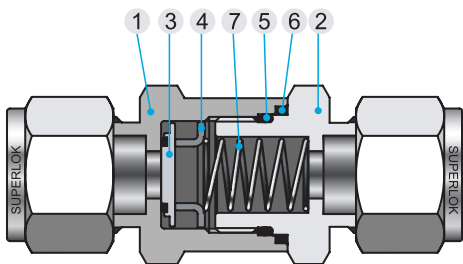
Material	Temperature Rating	Designator
Viton	-10°F to 375°F (-23°C to 190°C)	Standard
NBR	-10°F to 250°F (-23°C to 121°C)	N
Ethylene Propylene	-50°F to 300°F (-45°C to 148°C)	E

To order add the seal material designator to the ordering number.
ex) SHCV1-S-8-1P-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	1/3P
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.

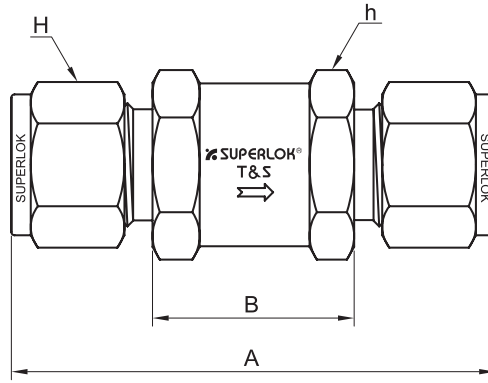


Table of Dimensions

Order Number		Orifice (mm)	Cv Max.	End Connection	Pressure Rating psig (bar)	Dimensions (mm)			
Series	Part No.					A	B	H	h
SHCV1	S-2	4.8	0.67	1/8" SUPERLOK	6000 (413)	57.7	26.4	11.11(7/16)	17.46 (11/16)
	S-4			1/4" SUPERLOK		61.7		14.29(9/16)	
	S-6M			6mm SUPERLOK		61.7		14	
	F-4N			1/4" FEMALE NPT		54.1	-	-	
	M-2N			1/8" MALE NPT		45.5	26.4	-	
	M-4N			1/4" MALE NPT		55.1	26.4	-	
SHCV2	S-6	7.8	1.8	3/8" SUPERLOK	6000 (413)	69.9	31.2	17.46(11/16)	25.4(1)
	S-8			1/2" SUPERLOK		75.2		22.22(7/8)	
	S-8M			8mm SUPERLOK		68.6		16	
	S-10M			10mm SUPERLOK		71.1		19	
	S-12M			12mm SUPERLOK	75.2	22			
	F-6N			3/8" FEMALE NPT	5000 (344)	64.8	-	-	
	F-8N			1/2" FEMALE NPT	4600 (316)	77.0	-	26.9(1-1/16)	
	M-6N			3/8" MALE NPT	6000 (413)	59.9	31.2	-	
M-8N	1/2" MALE NPT	6000 (413)	69.3	31.2	-				
SHCV3	S-12	15	4.7	3/4" SUPERLOK	5000 (344)	89.4	45.2	28.58(1-1/8)	41.28 (1-5/8)
	S-16			1" SUPERLOK	4700 (323)	98.6	45.5	38.1(1-1/2)	
	S-22M			22mm SUPERLOK	5000 (344)	88.4	45.5	32	
	S-25M			25mm SUPERLOK	5000 (344)	98.6	45.5	40	
	F-12N			3/4" FEMALE NPT	4300 (296)	82.0	-	-	
	F-16N			1" FEMALE NPT	4100 (282)	97.3	-	-	
	M-12N			3/4" MALE NPT	5000 (344)	83.6	45.5	-	
	M-16N			1" MALE NPT	5000 (344)	93.2	45.7	-	

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

Ordering information

SHCV2 - S - 6 - 1P - SS

1
2
3
4
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

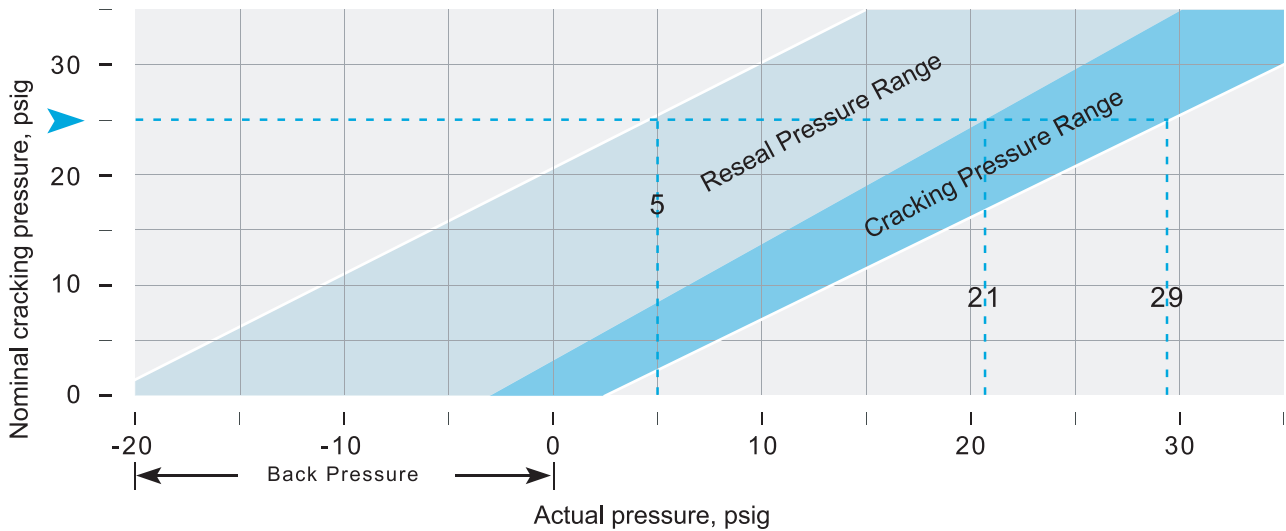
- One-piece Body
- Working pressure up to 3000 psig (206bar)
- Temperature rating up to 375 °F (190°C) with viton seal standard.
- Cracking pressure fixed from 1/3 to 25psig (0.02 to 1.7 bar)
- NPT and ISO pipe end connections
- 316 stainless steel and brass materials
- Each and every valve is tested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

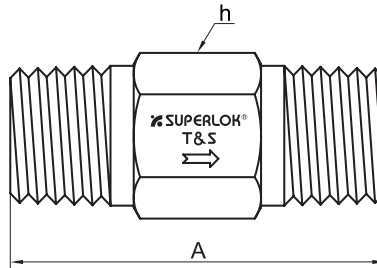
Cracking Pressure and Reseal Pressure

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.
----------------	---

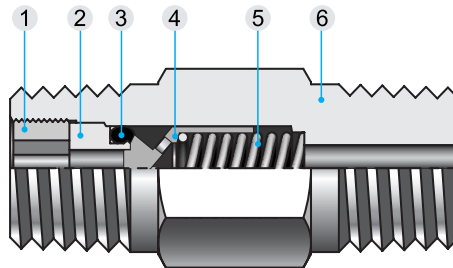
Table of Dimensions



Order Number		End Connection		A	h Hex mm (in.)
Series	Part No.	Inlet	Outlet		
SOCV1	M-4N	1/4 Male NPT	1/4 Male NPT	41.2	14.29 (9/16)
	M-4R	1/4 Male ISO	1/4 Male ISO		
SOCV2	F-4N	1/4 Female NPT	1/4 Female NPT	61.2	19.05 (3/4)
	F-4R	1/4 Female ISO	1/4 Female ISO	64.5	
	MF-4N	1/4 Male NPT	1/4 Female NPT	44.5	
	FM-4N	1/4 Female NPT	1/4 Male NPT	58.2	
SOCV3	M-8N	1/2 Male NPT	1/2 Male NPT	57.9	22.22 (7/8)
SOCV4	F-8N	1/2 Female NPT	1/2 Female NPT	94.2	26.9 (1-1/16)
	MF-8N	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

SOCV1 - **M** - **4N** - **1P** - **SS**

1 2 3 4 5

- 1 : Valve Series 2 : End Connection Type 3 : Connection Size
 4 : Cracking Pressure Designator (1/3P : 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



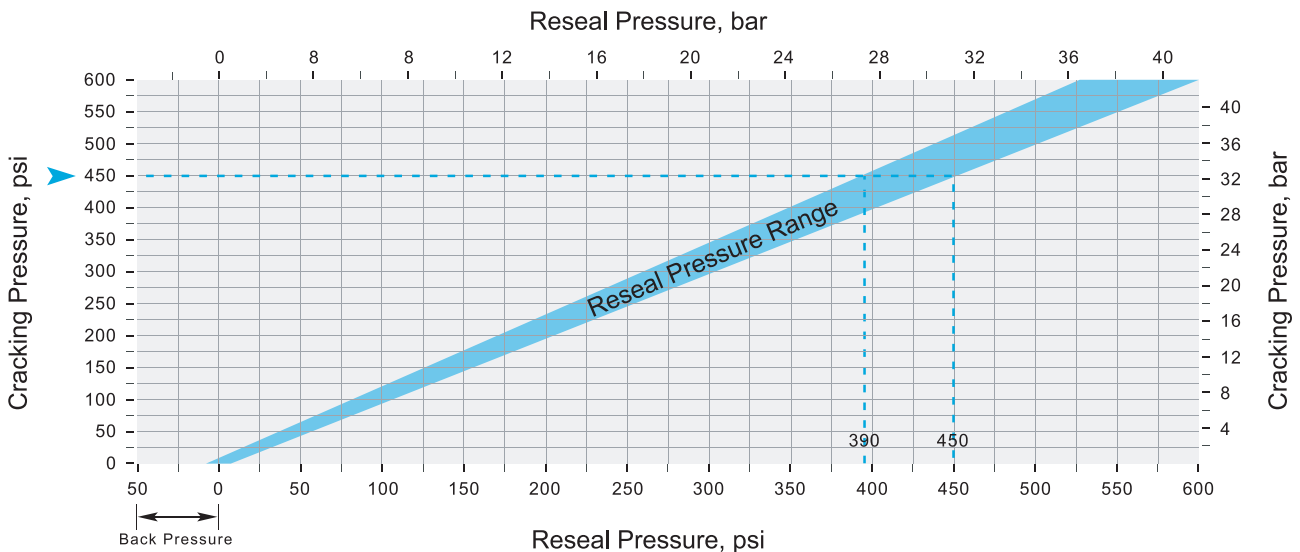
Features

- 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

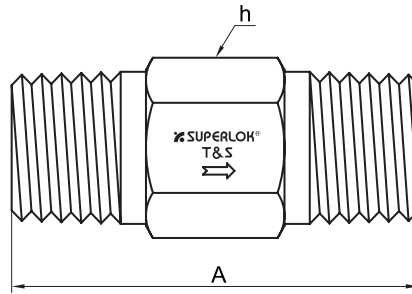
Series	SOACV1 / SOACV2	SOACV3
Cracking Pressure Ranges	3 to 50psi (0.2 to 3.4bar) 50 to 150psi (3.4 to 10.3bar) 150 to 350psi (10.3 to 24.1bar) 350 to 600psi (24.1 to 41.3bar)	
Working and Back Pressure at 70 °F (20 °C)	3000psig (206bar)	
Temperature Rating	VITON O-Ring : -10 °F to 375 °F (-23°C to 190°C)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

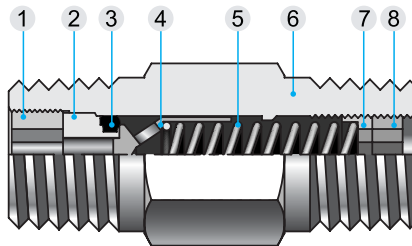
Table of Dimensions



Order Number		End Connections	A(mm)	h HEX mm (in.)
Series	Part No.			
SOACV1	M-4N	1/4 Male NPT	41.1	14.29 (9/16)
	M-4R	1/4 Male ISO	41.1	14.29 (9/16)
SOACV2	F-4N	1/4 Female NPT	75.7	19.05 (3/4)
SOACV3	M-8N	1/2 Male NPT	65.0	22.22 (7/8)
	M-8R	1/2 Male ISO	65.0	22.22 (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

SOACV1 - M - 4N - 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]

ADJUSTABLE CHECK VALVE

SACV SERIES



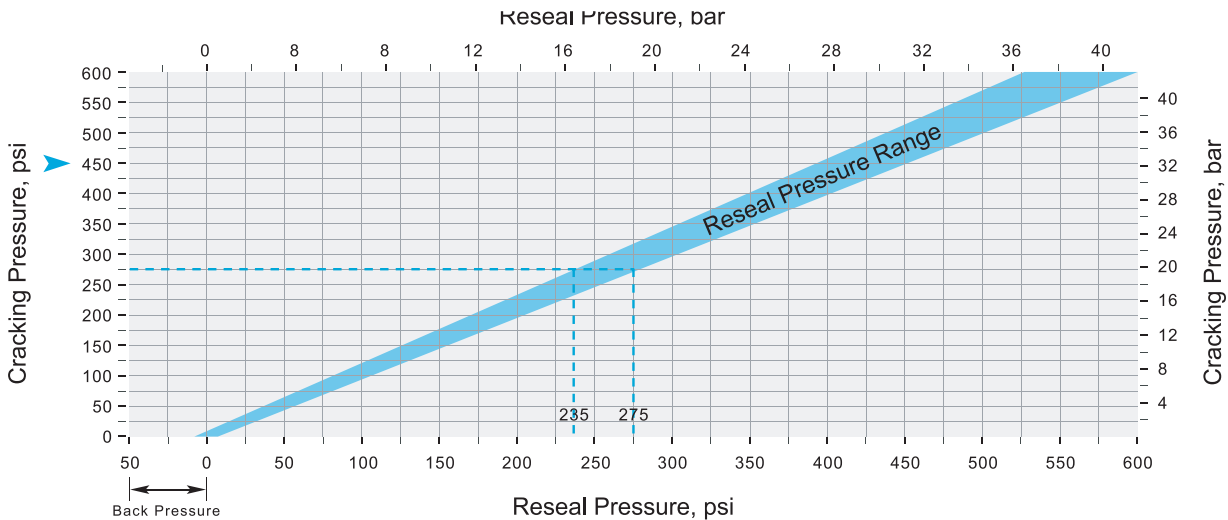
Features

- 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

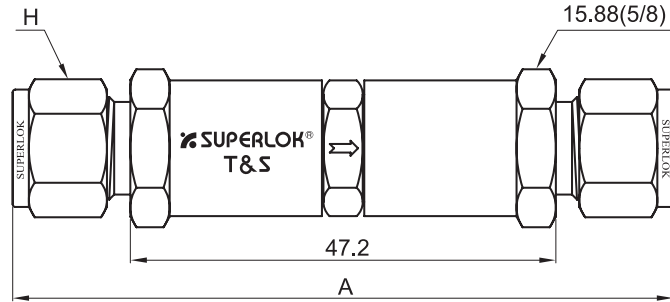
Cracking and Reseal Pressure at 70°F (20°C)



Testing

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

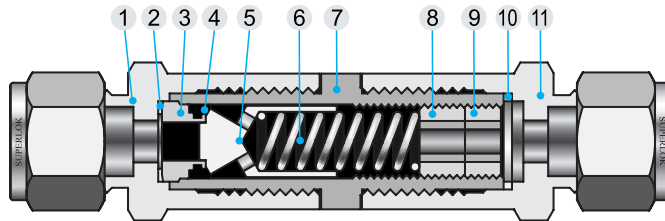
Table of Dimensions



Part No.	End Connections		A (mm)	H mm(in.)
	Inlet	Outlet		
SACV	S-4	1/4" SUPERLOK	82.0	14.29 (9/16)
	S-6M	6mm SUPERLOK		14
	S-8M	8mm SUPERLOK	84.3	16
	M4N-S4	1/4 Male NPT	1/4" SUPERLOK	79.2

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		316SS / A276
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]