



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

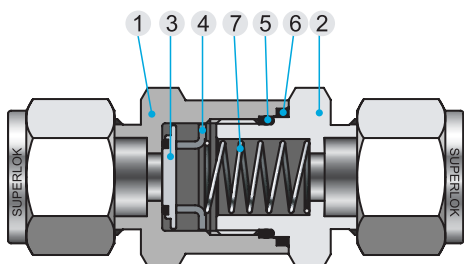
Material	Temperature Rating	Designator
Viton	-10°F to 375°F (-23°C to 190°C)	Standard
NBR	-10°F to 250°F (-23°C to 121°C)	N
Ethylene Propylene	-50°F to 300°F (-45°C to 148°C)	E

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

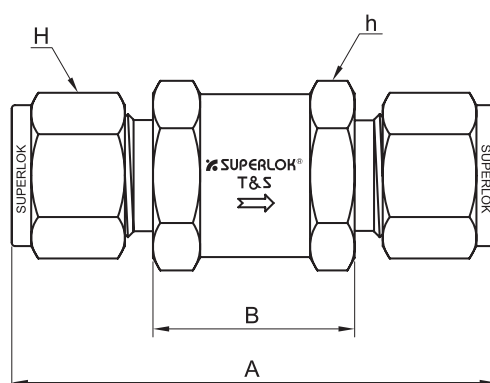
Materials of Construction



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				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				
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	-	-	26.9(1-1/16)	
	F-8N			1/2" FEMALE NPT	4600 (316)	77.0				
	M-6N			3/8" MALE NPT	6000 (413)	59.9				31.2
	M-8N			1/2" MALE NPT		69.3				
	SHCV3			S-12	15	4.7				3/4" SUPERLOK
S-16		1" SUPERLOK	4700 (323)	98.6			45.5	38.1(1-1/2)		
S-22M		22mm SUPERLOK	5000 (344)	88.4				32		
S-25M		25mm SUPERLOK		98.6				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		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

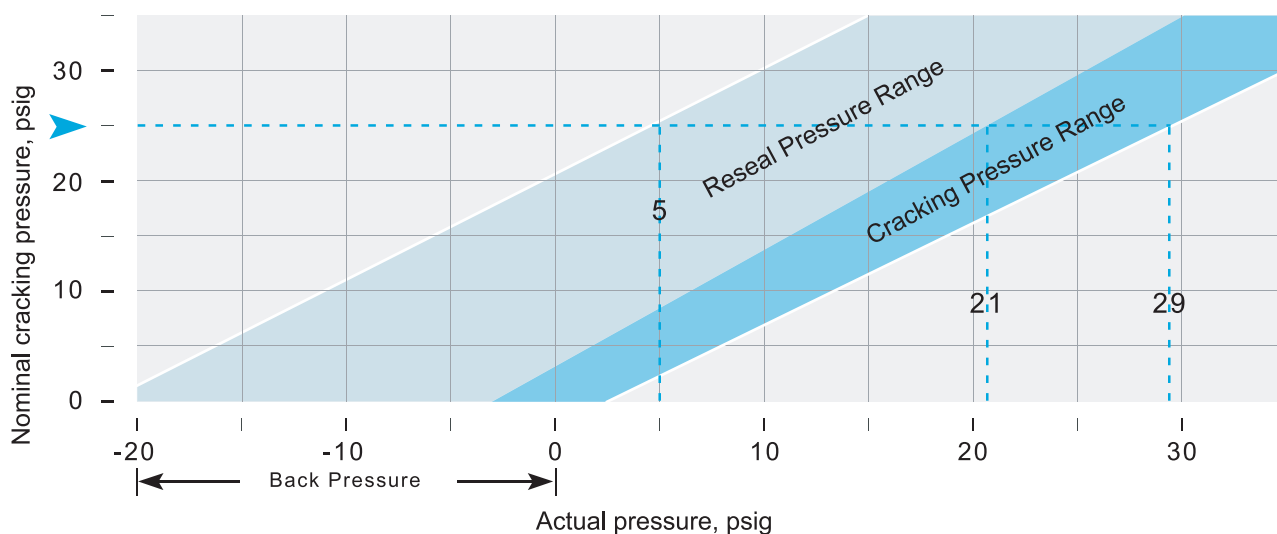
- One-piece Body
- Working pressure up to 3000 psig (206bar)
- Temperature rating up to 375 °F (190°C) with viton seal standard.
- Cracking pressure fixed from 1/3 to 25psig (0.02 to 1.7 bar)
- NPT and ISO pipe end connections
- 316 stainless steel and brass materials
- Each and every valve is tested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

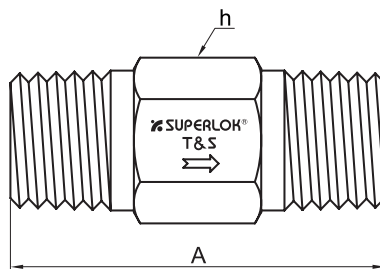
SOCV Series Valves with nominal cracking pressure of 20 psig (1.3 bar) or lower may require back pressure to reseal bubble-tight.



Testing

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

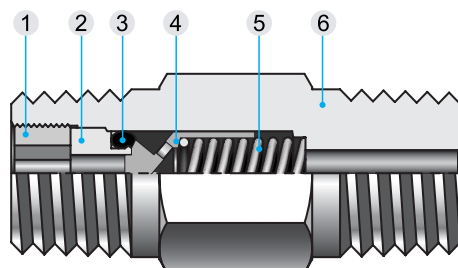
Table of Dimensions



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



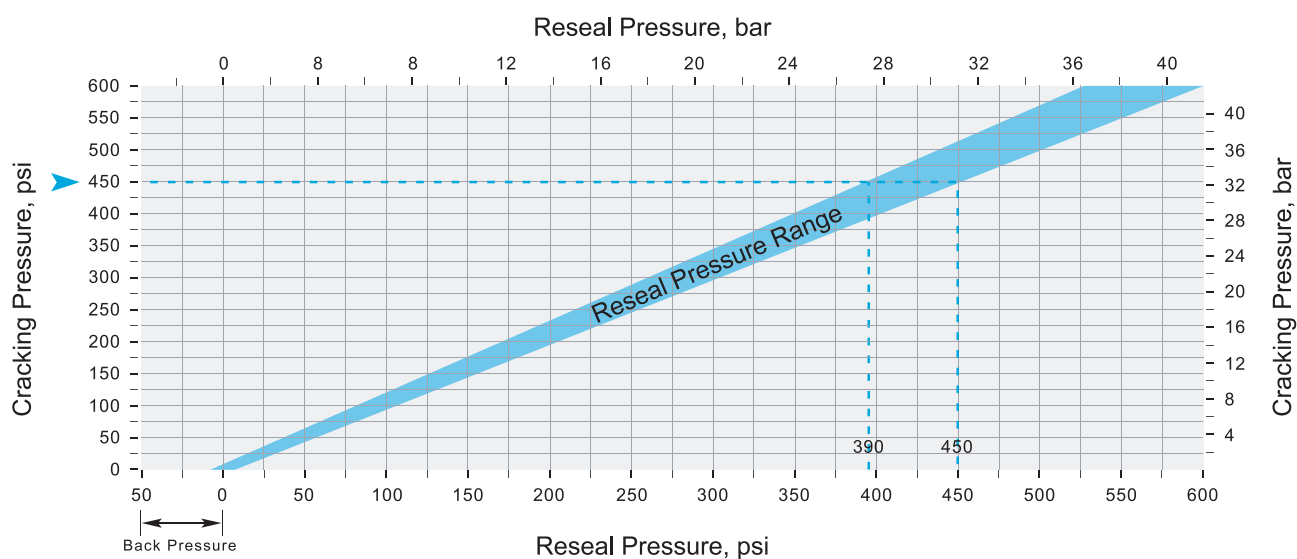
Features

- 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

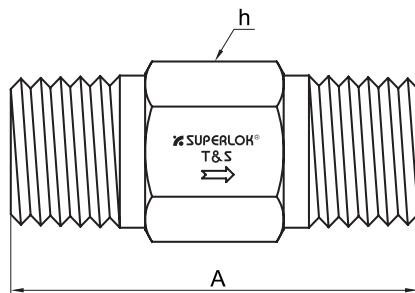
Cracking and Reseal Pressure at 70 °F (20 °C)



Testing

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

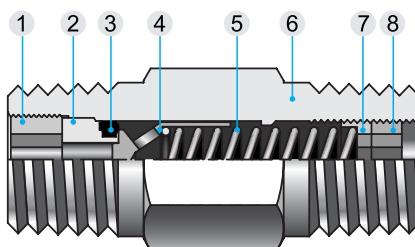
Table of Dimensions



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



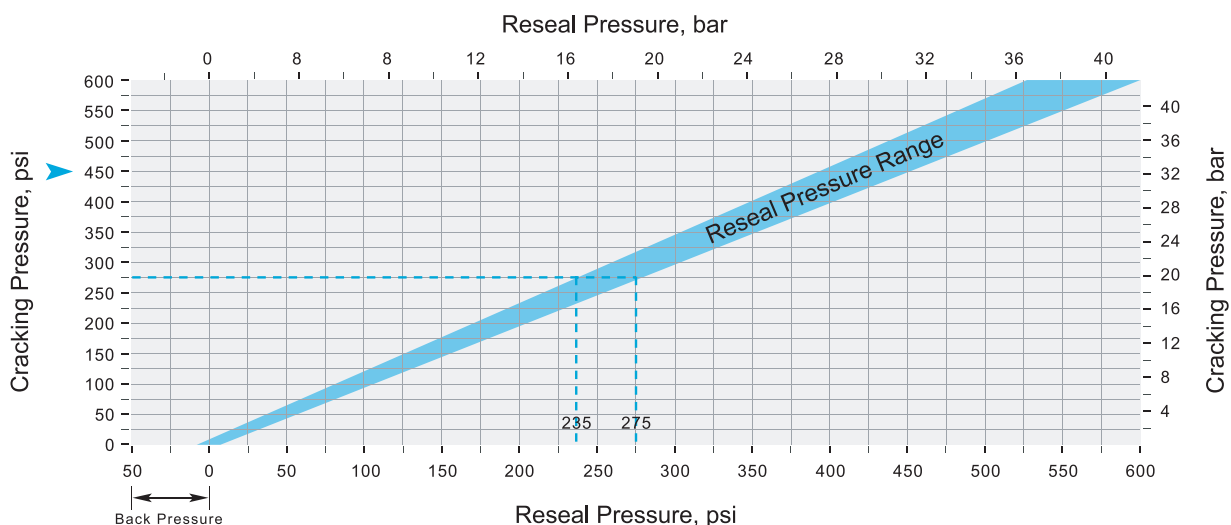
Features

- 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

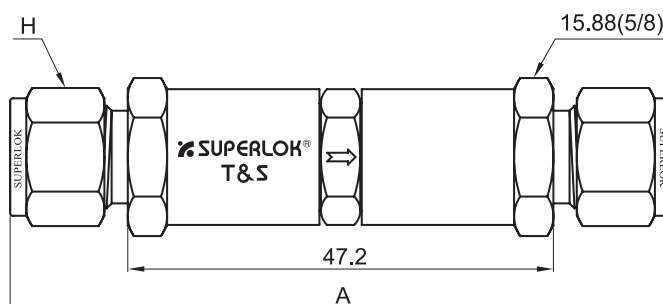
Cracking and Reseal Pressure at 70 °F (20 °C)



Testing

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

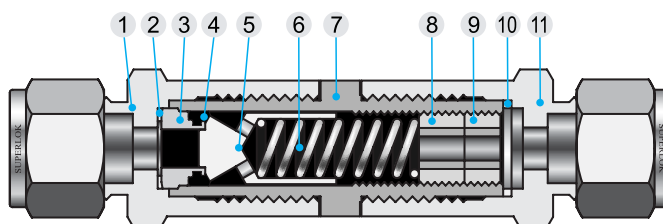
Table of Dimensions



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	14.29 (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

- Master Key Ball Valves
- Master Key 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 Clamp
- 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

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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