



# 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

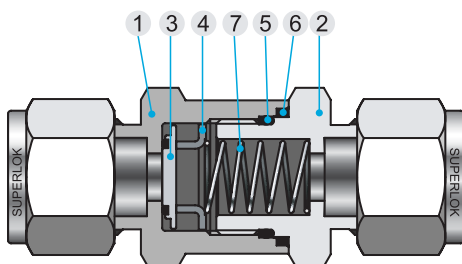
Material	Temperature Rating	Designator
Viton	-10°F to 375°F (-23°C to 190°C)	Standard
NBR	-10°F to 250°F (-23°C to 121°C)	N
Ethylene Propylene	-50°F to 300°F (-45°C to 148°C)	E

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

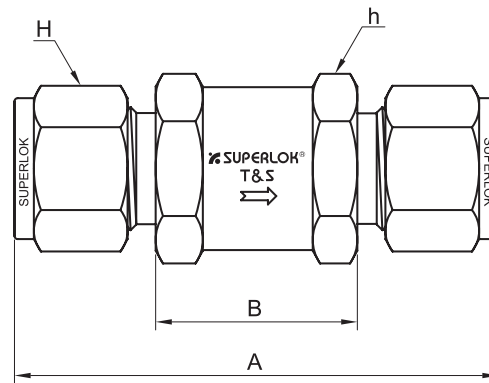
### Materials of Construction



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					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				
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	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		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

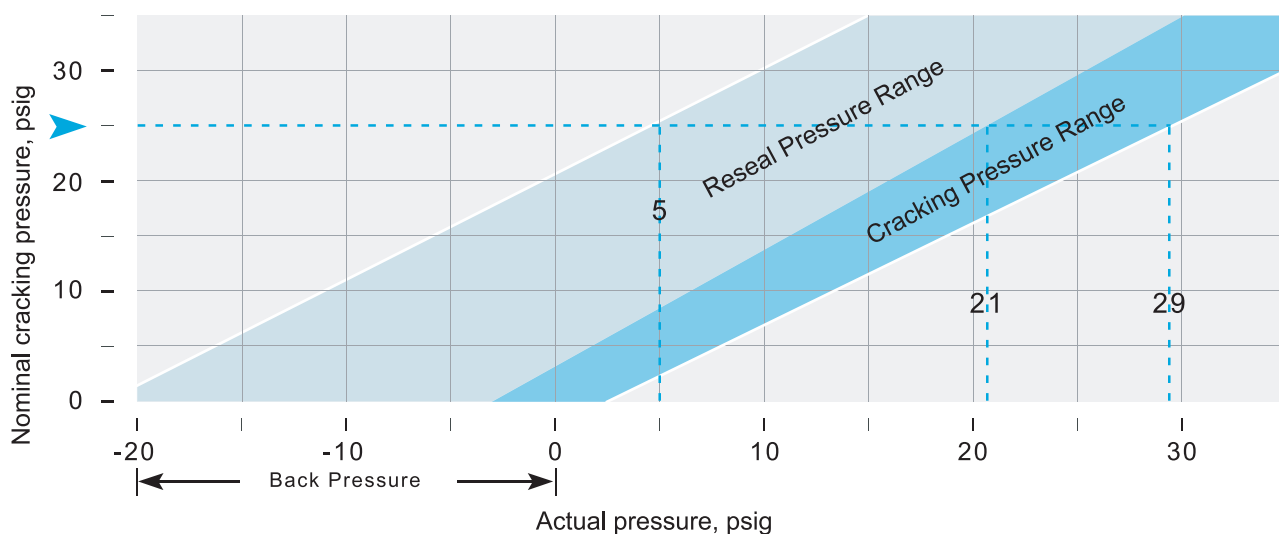
- One-piece Body
- Working pressure up to 3000 psig (206bar)
- Temperature rating up to 375 °F (190°C) with viton seal standard.
- Cracking pressure fixed from 1/3 to 25psig (0.02 to 1.7 bar)
- NPT and ISO pipe end connections
- 316 stainless steel and brass materials
- Each and every valve is tested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

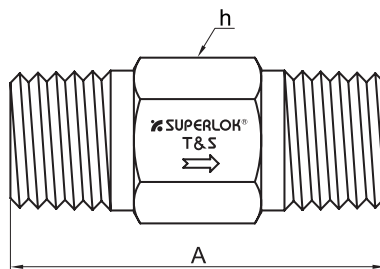
SOCV Series Valves with nominal cracking pressure of 20 psig (1.3 bar) or lower may require back pressure to reseal bubble-tight.



#### Testing

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

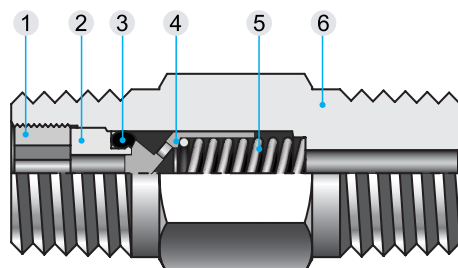
## Table of Dimensions



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



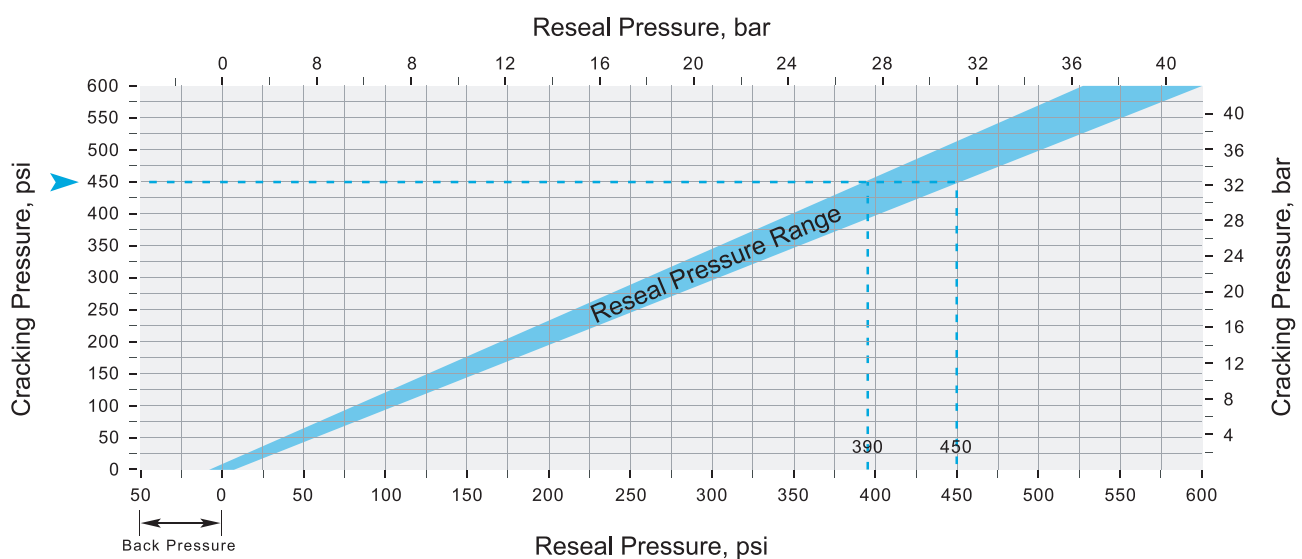
### Features

- 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

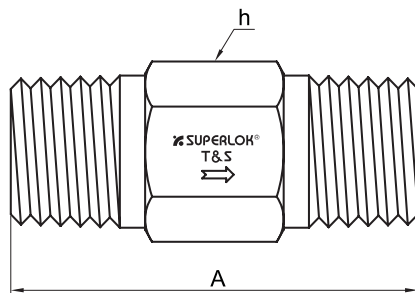
### Cracking and Reseal Pressure at 70 °F (20 °C)



### Testing

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

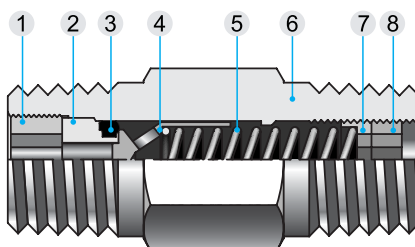
## Table of Dimensions



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



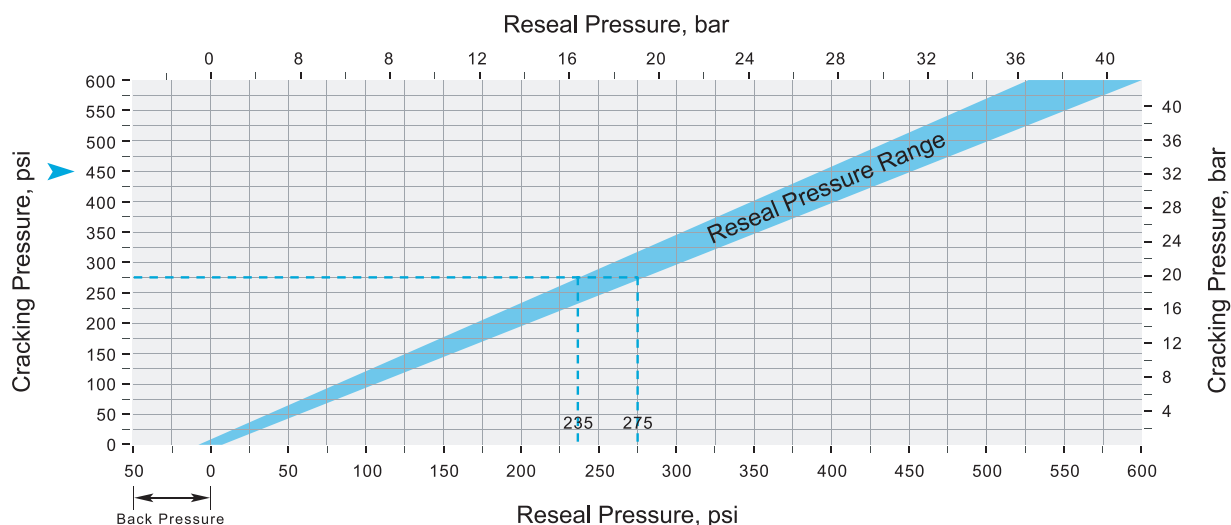
### Features

- 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)

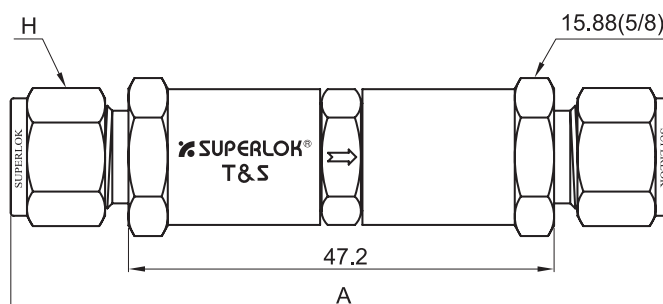


### Testing

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



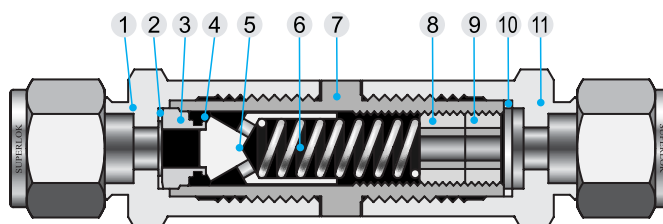
## Table of Dimensions



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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