

Check Valves & Industrial Excess Flow Valves

Check Valve & High Pressure Check Valve Series
Industrial Excess Flow Valves



Check Valves

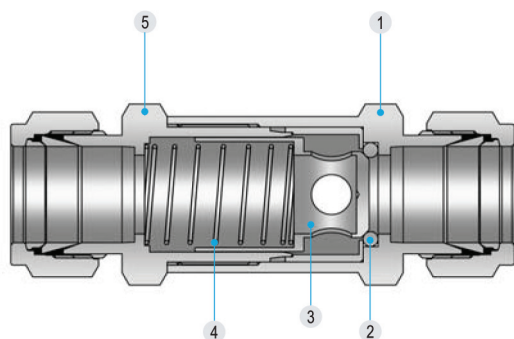
SPCV Series

Features

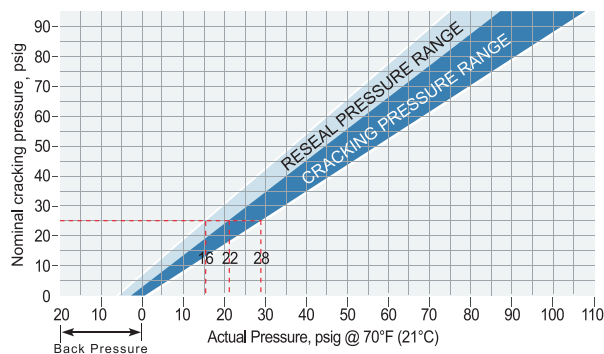
- Fixed cracking pressure.
- Pressure rating up to 3000 psig @70°F(21°C)
- Temperature rating up to 375°F (191°C) with Viton® O-Ring.
- Variety of end connections available.
- Every valve is factory tested.



Materials of Construction



No.	Description	Material
1	Inlet Body	ASTM A276 Type 316
2	O-Ring	Viton
3	Poppet	ASTM A276 Type 316
4	Spring	304 Stainless Steel
5	Outlet Body	ASTM A276 Type 316



O-Rings

O-ring Material	Temperature Rating °F(°C)	Designator
Buna N	-10 to 250 (-23 to 121)	-N
Ethylene Propylene	-70 to 250 (-57 to 121)	-E
Viton (Fluorocarbon)	-10 to 375 (-23 to 191)	Standard
Kalrez	-15 to 500 (-26 to 260)	-K
Neoprene	-35 to 225 (-37 to 107)	-P

To order, insert the seal material designator into the valve ordering number. ex)SPCV-S8-1P-N

Back Pressure

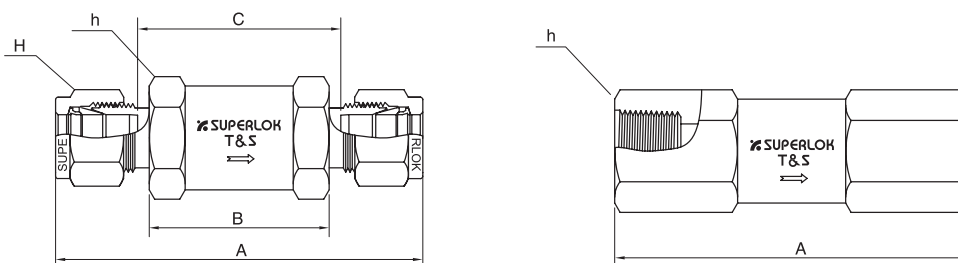
Back pressure may be required to reseat the valves with nominal cracking pressure of 5psi or lower.

Example : For a valve with a spring having a rated cracking pressure of 25 psig (1.72 bar), the actual cracking pressure ranges between 22 and 28 psig (1.52 to 1.93 bar). The re-seal pressure range would be 16 to 22 psig (1.10 to 1.52 bar). Check valves having springs with rated crack pressure of 3 psig (0.21 bar) or less may require up to 4 psig (0.28 bar) back pressure to re-seal bubble-tight.

Testing

Every check valve is factory tested for crack and reseat performance.

Table of Dimensions



Part Number	Cv	End Connection	Dimensions					
			A	B	C	h	H	
SPCV	S2	0.1	1/8 SUPERLOK	57.15	26.6	31.2	15.88	11.11
	F2N	0.47	1/8 Female NPT	50.00	-	-	15.88	-
	S4	0.47	1/4 SUPERLOK	62.16	26.6	31.4	15.88	14.28
	F4N	0.47	1/4 Female NPT	57.10	-	-	19.05	-
	S6	1.5	3/8 SUPERLOK	76.20	37.6	42.4	22.22	17.46
	F6N	1.7	3/8 Female NPT	73.90	-	-	22.22	-
	S8	1.7	1/2 SUPERLOK	86.58	42.9	40.8	25.40	22.22
	F8N	2.6	1/2 Female NPT	90.60	-	-	27.00	-
	S10	2.6	5/8 SUPERLOK	91.68	48.0	42.8	28.50	25.40
	S12	4.5	3/4 SUPERLOK	99.78	56.1	51.1	31.80	28.57
	F12N	4.5	3/4 Female NPT	99.78	-	-	31.80	-
	S16	4.5	1 SUPERLOK	111.22	58.4	48.9	38.10	38.1
	F16N	4.5	1 Female NPT	114.30	-	-	41.27	-

• All dimensions in millimeters unless specified as "inch". Dimension are for reference only, subject to change

Technical Data

Cracking pressure - the differential pressure between inlet and outlet, at which an initial flow is passing through the valve.

Reseal pressure - the differential pressure between outlet and inlet, at which no flow is passing through the valve.

Cracking and Reseal Pressure			down stream pressure psi (bar)	
Nominal Cracking Pressure psi (bar)	Cracking Pressure Range psi(bar)	Reseal Pressure psi (bar)		
1/3 (0.02)	up to 3 (0.21)	up to 6 (0.4) downstream pressure	1/8 in	1000 (68.9)
1 (0.07)	up to 4 (0.28)	up to 6 (0.4) downstream pressure	1/4 in	
10 (0.69)	7 to 15 (0.5 to 1.1)	3 (0.21) upstream pressure	3/8 in, 1/2 in	200 (13.7)
25 (1.8)	20 to 30 (1.4 to 2.1)	17 (1.2) upstream pressure	3/4 in, 1 in	

*For cracking pressure of 25psi (1.8bar), downstream pressure is 3000psig (206bar).

Ordering Information

Example :

SPCV - S6 - 10P - B

1
2 3
4
5

1. Valve Series

2. End Connection

3. Connection Size & Type

4. Cracking Pressure(0.3P : 1/3 psi , 1P : 1 psi , 10P : 10 psi , 25P : 25 psi , 100P : 100 psi) 5. Nil : 316 Stainless Steel, B : Brass

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 standard Viton® seal.
- Cracking pressure fixed from 1/3 to 25psig (0.02 to 1.7bar)
- Variety of end connections available.
- 316 stainless steel body material as standard.
- Every valve is factory tested.



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

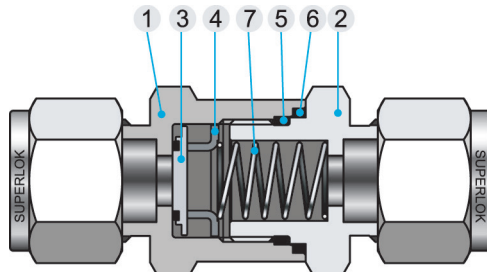
Material	Temperature Rating	Designator
Viton	-10°F to 375°F (-23°C to 190°C)	Standard
NBR	-10°F to 250°F (-23°C to 121°C)	N
Ethylene Propylene	-50°F to 300°F (-45°C to 148°C)	E

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	A276-316
2	Outlet Body	A276-316
3	Poppet	Viton-bonded SS316
4	Poppet Stopper	Stainless Steel 316
5	O-Ring	Viton(Standard)
6	Packing	PTFE
7	Spring	Stainless Steel 304

Testing

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

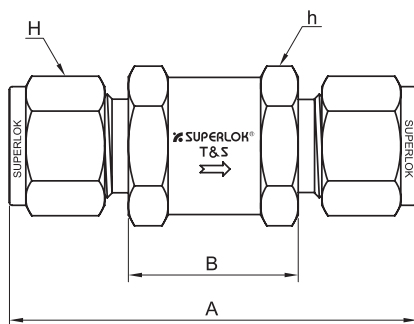


Table of Dimensions

Part Number	Orifice	Cv Max.	End Connection	Pressure Rating psig (bar)	Dimensions mm(in.)					
					A	B	H	h		
SHCV1	S2	4.8	0.67	1/8" SUPERLOK	6000(413)	57.7	26.4	11.1(9/16)	17.5(11/16)	
	S4			1/4" SUPERLOK		61.7		14.3(7/16)		
	S6M			6mm SUPERLOK				14		
	F4N			1/4" FEMALE NPT		54.1	-	-		
	M2N			1/8" MALE NPT		45.5	26.4			
	M4N			1/4" MALE NPT		55.1				
SHCV2	S6	7.8	1.8	3/8" SUPERLOK	6000(413)	69.9	31.2	17.5(11/16)	25.4(1)	
	S8			1/2" SUPERLOK		75.2		22.2(7/8)		
	S8M			8mm SUPERLOK		68.6		16		
	S10M			10mm SUPERLOK		71.1		19		
	S12M			12mm SUPERLOK		75.2	22			
	F6N			3/8" FEMALE NPT		5000(344)	64.8	-	-	26.9(1-1/16)
	F8N			1/2" FEMALE NPT		4600(316)	77.0			
	M6N			3/8" MALE NPT		6000(413)	59.9	31.2		
M8N	1/2" MALE NPT	6000(413)	69.3							
SHCV3	S12	15	4.7	3/4" SUPERLOK	5000(344)	89.4	45.5	28.6(1-1/8)	41.3(1-5/8)	
	S16			1" SUPERLOK	4700(323)	98.6		38.1(1-1/2)		
	S22M			22mm SUPERLOK	5000(344)	88.4	32			
	S25M			25mm SUPERLOK	5000(344)	98.6	40			
	F12N			3/4" FEMALE NPT	4300(296)	82.0	-	-		
	F16N			1" FEMALE NPT	4100(282)	97.3				
	M12N			3/4" MALE NPT	5000(344)	83.6	45.5			
	M16N			1" MALE NPT	5000(344)	93.2	45.7			

- All dimensions in millimeters unless specified as "inch". Dimension are for reference only, subject to change.
- Dimensions shown on the above table are finger tight measurements.
- ISO Tapered Threads are available upon request.

Ordering information

Example : **SHCV2 - S6 - 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 standard Viton® seal.
- Cracking pressure fixed from 1/3 to 25psig (0.02 to 1.7 bar)
- NPT and ISO pipe end connections available.
- 316 stainless steel and brass materials.
- Every valve is factory tested.

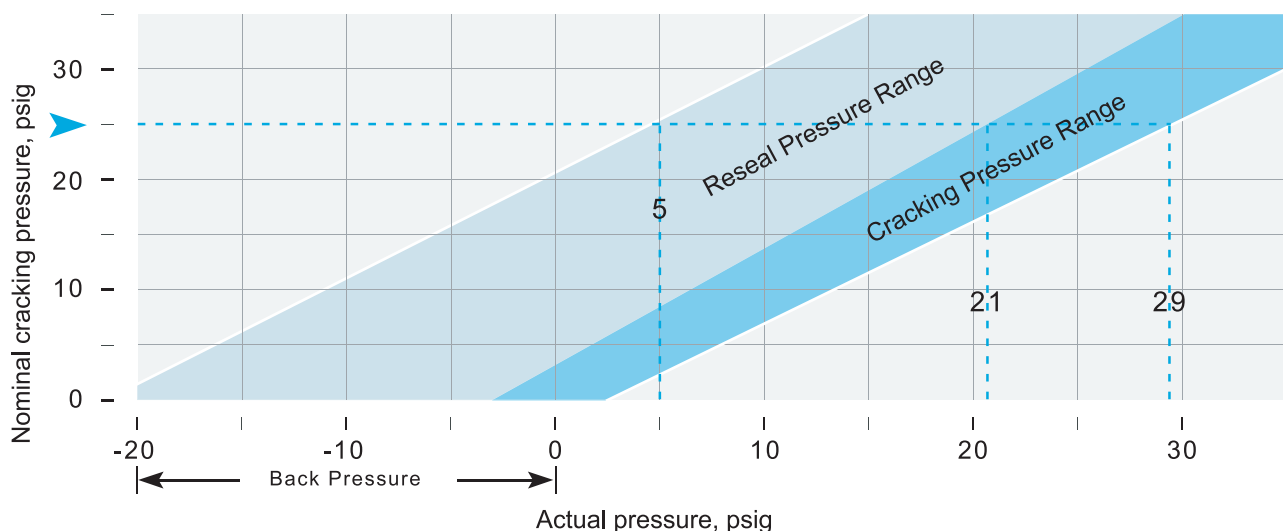


Technical Data

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

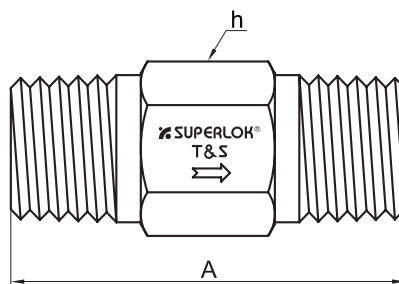
SOCV Series Valves with nominal cracking pressure of 20 psig (1.3 bar) or lower may require back pressure to reseal bubble-tight.



Testing

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

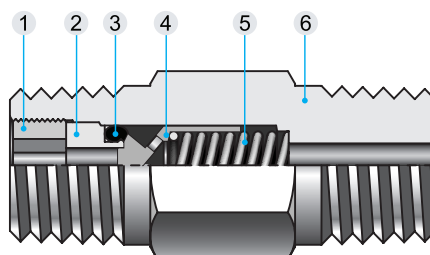
Table of Dimensions



Part Number	End Connection		A	h Hex mm (in.)
	Inlet	Outlet		
SOCV1	M4N	1/4 Male NPT	41.2	14.3 (9/16)
	M4R	1/4 Male ISO		
SOCV2	F4N	1/4 Female NPT	61.2	19.1 (3/4)
	F4R	1/4 Female ISO	64.5	
	M4N-F4N	1/4 Male NPT	44.5	
	F4N-M4N	1/4 Female NPT	58.2	
SOCV3	M8N	1/2 Male NPT	57.9	22.2 (7/8)
SOCV4	F8N	1/2 Female NPT	94.2	26.9 (1-1/16)
	M8N-F8N	1/2 Male NPT	71.9	

• All dimensions in millimeters unless specified as "inch". Dimension 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

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

1
2
3
4
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

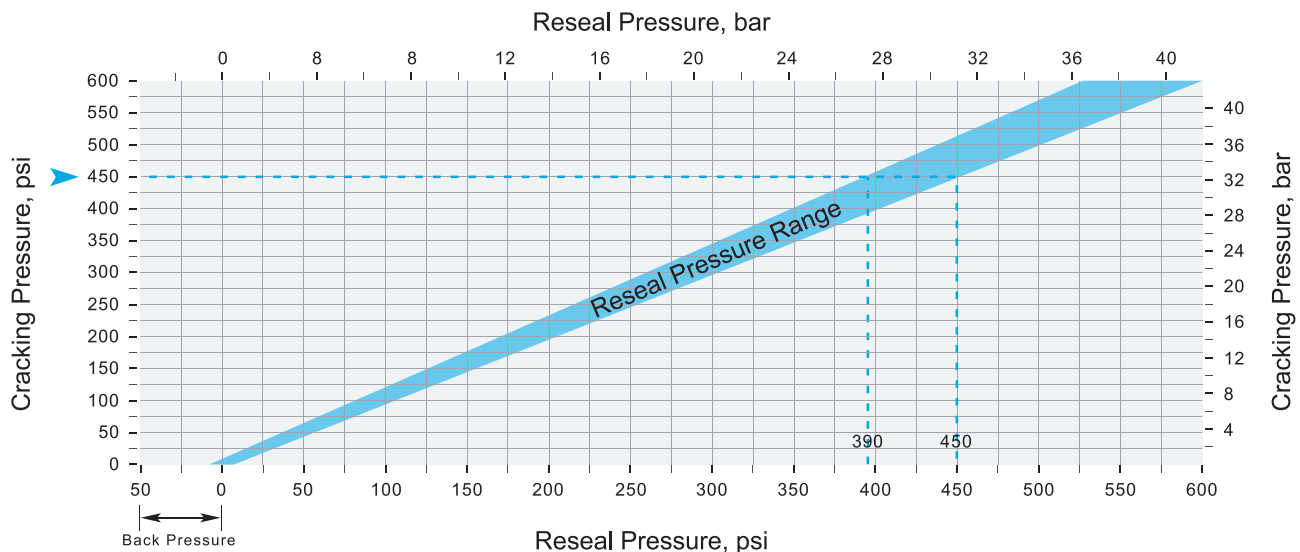
- One-Piece body.
- Working pressure up to 3000psig (206 bar).
- Cracking pressure adjustable from 3 to 600psig (0.2 to 41.3bar).
- NPT and ISO pipe end connections in 1/4 and 1/2 in. sizes.
- 316 stainless steel and brass materials.
- Every valve is factory tested.



Technical Data

No.	Component	Material
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

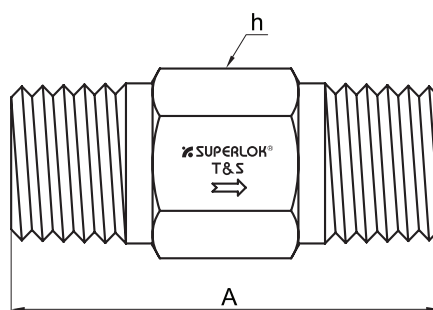
Cracking and Reseal Pressure at 70°F (20°C)



Testing

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

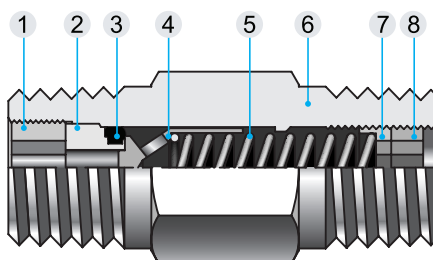
Table of Dimensions



Part Number	End Connection	A	h Hex mm (in.)	
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 in millimeters unless specified as "inch". Dimension 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

Example : **SOACV1 - M4N - 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 Valves

SACV SERIES

Features

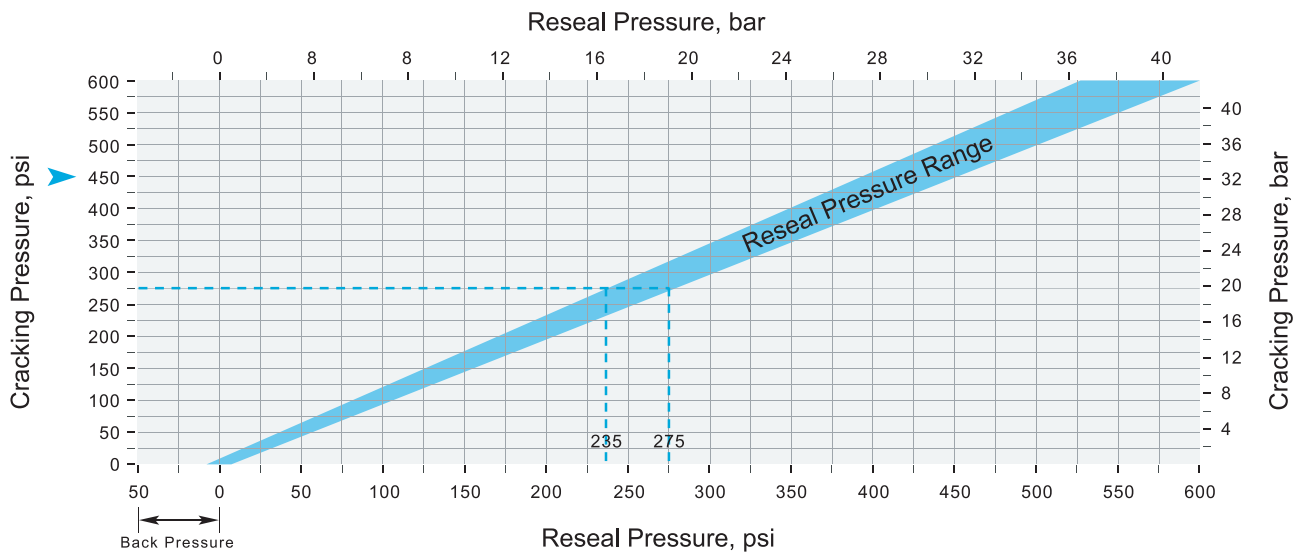
- Working pressures up to 3000 psig (206 bar).
- Temperature range from -10°F to 375°F (-23°C to 191°C) with Viton® seal.
- Cracking pressures adjustable from 3 to 600psi (0.2 to 14.3bar).
- Variety of end connections available.
- 316 stainless steel and brass materials.
- Every valve is factory tested.



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

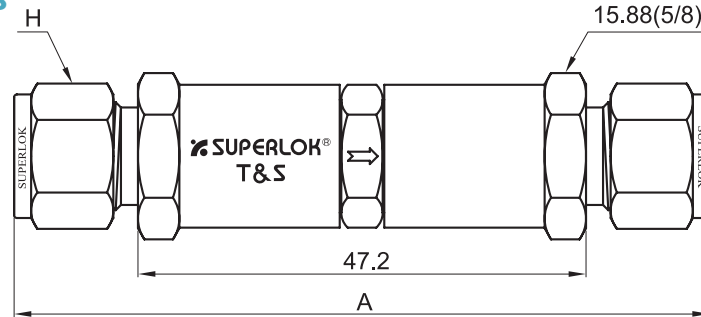
Cracking and Reseal Pressure at 70°F (20°C)



Testing

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

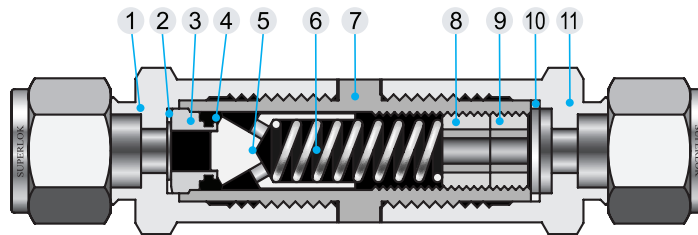
Table of Dimensions



Part Number	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	79.2	14.3 (9/16)

• All dimensions in millimeters unless specified as "inch". Dimension 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

Example : **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)

Industrial Excess Flow Valves

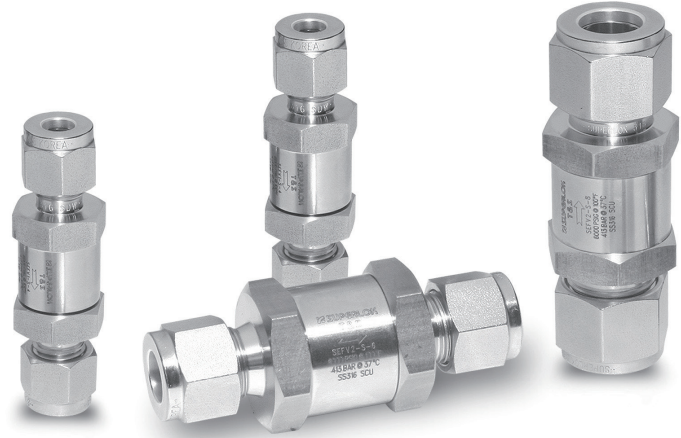
SEFV Series

Introduction

- Excess Flow Valves are designed to limit flow of fluid to a predetermined rate.
- When flow reaches a predetermined rate the poppet will trip, limiting or stopping flow.
- When pressure is equalized across the valve, the poppet will reset to open.

Features

- 2-Piece Body
 - Allows for simple spring and seal maintenance.
- Spring-loaded actuation.
 - The bleed vent allows the valve to automatically reset.
- Automatic reset.
 - Can be assembled in any system or application.
- Variety of end connections available.
 - Can be assembled in any system or application.
- Stainless steel construction.



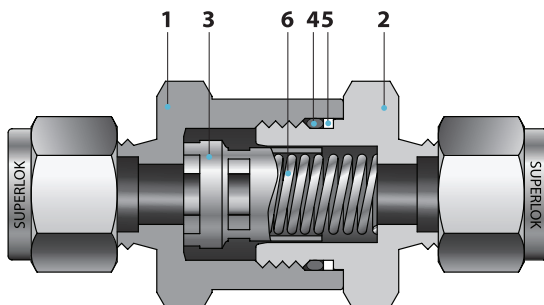
Specifications

Pressure rating	6000psig (413bar) @100°F(38°C)
Temperature rating	-10 to 400°F (-23 to 204 °C)
Body material	316 Stainless Steel
End Connections	1/8" to 1/2" and 6mm to 12mm

Testing

Every Valve is factory tested for proper functionality.

Materials of Construction

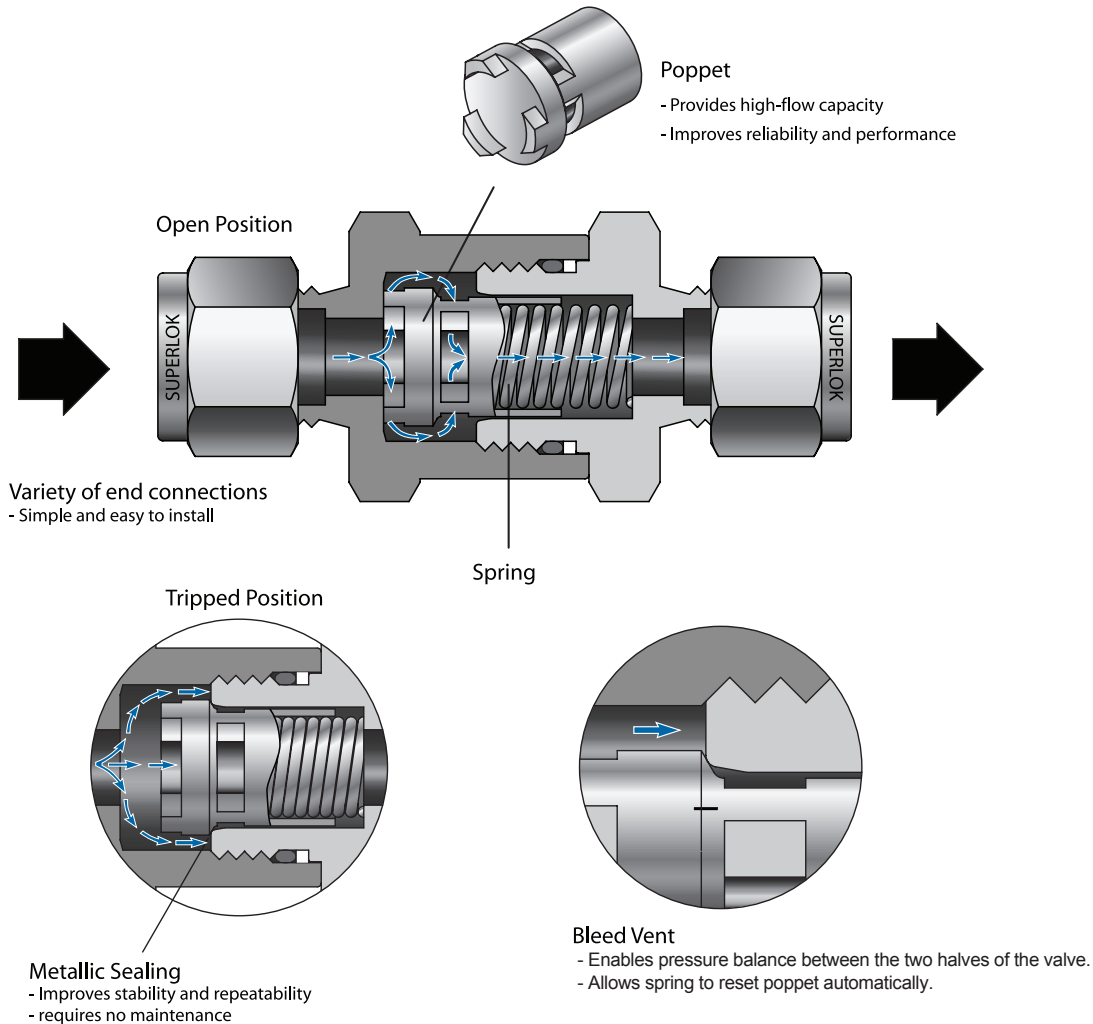


No.	Component	Material Grade / ASTM Specification
		Stainless Steel
*1	INLET BODY	A276-316
*2	OUTLET BODY	A276-316
*3	POPPET	A276-316
*4	O-RING	VITON
5	BACK-UP RING	PTFE
*6	SPRING	Stainless Steel 304

• Wetted components are marked "*"

Operation

- The poppet is loaded by a spring in the open position during normal system operation.
- If the system becomes unbalanced and the downstream pressure drops, the poppet rapidly moves to the tripped position.
- The poppet will remain in the tripped position until system pressure becomes equal across the bleed vent in the poppet.
- The bleed vent in the poppet will allow the pressure to slowly equalize across the valve if the downstream line is closed or repaired.
- When the system pressure becomes equal, the spring automatically resets the poppet to the open position.



Technical Data

Pressure - Temperature Ratings

- Ratings based on Viton o-rings - other elastomers available upon request.
- 5000 psig (344 bar) for the SEFV series valves with end connections 3/8" female NPT.
- 4600 psig (316 bar) for the SEFV series valves with end connections 1/2" female NPT.

Body Material	316 Stainless Steel
Temperature Rating °F (°C)	Working Pressure, psig (bar)
-10 to 100 (-23 to 27)	6000 (413)
200 (93)	5160 (355)
250 (121)	4910 (338)
300 (148)	4660 (321)
400 (204)	4280 (294)

O-ring Material	Temperature Rating °F (°C)
VITON	-10 to 400 (-23 to 204)
Buna-N	-40 to 250 (-40 to 121)
Ethylene Propylene	-50 to 300 (-45 to 148)
Kalrez	-10 to 400 (-23 to 204)

• Viton O-ring is standard.

SEFV Series

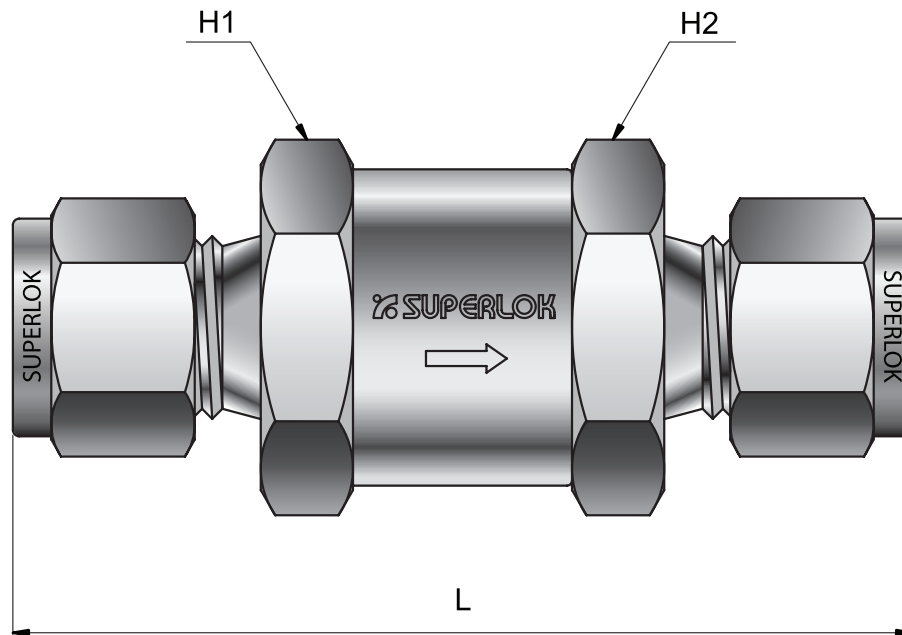


Table of Dimensions

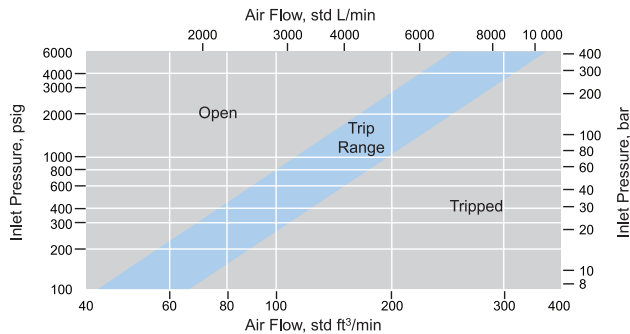
Part Number	End Connections		Dimensions, Inch (mm)			
	INLET	OUTLET	L	H1	H2	
SEFV1	S4	1/4" SUPERLOK	2.43 (61.7)	11/16 (17.4)		
	S6M	6mm SUPERLOK	2.43 (61.7)			
	F2N	1/8" Female NPT	1.87 (47.5)			
	F4N	1/4" Female NPT	2.12 (53.8)			
	M2N	1/8" Male NPT	1.79 (45.5)			
	M4N	1/4" Male NPT	2.17 (55.1)			
	M4N-S4	1/4" Male NPT	1/4" SUPERLOK			2.30 (58.4)
	M4N-F4N	1/4" Male NPT	1/4" Female NPT			2.13 (54.1)
SEFV2	S6	3/8" SUPERLOK	2.75 (69.9)	1 (25.4)		
	S8	1/2" SUPERLOK	2.97 (75.4)			
	S8M	8mm SUPERLOK	2.70 (68.6)			
	S10M	10mm SUPERLOK	2.80 (71.1)			
	S12M	12mm SUPERLOK	2.96 (75.2)			
	F6N	3/8" Female NPT	2.55 (64.8)	1-1/16 (27.0)		
	F8N	1/2" Female NPT	3.03 (77.0)			
	M6N	3/8" Male NPT	2.36 (59.9)	1 (25.4)		
	M8N	1/2" Male NPT	2.73 (69.3)			
	M8N-S6	3/8" Male NPT	3/8" SUPERLOK			2.56 (65.0)
	M8N-S8	1/2" Male NPT	1/2" SUPERLOK			2.85 (72.4)
	M6N-F6N	3/8" Male NPT	3/8" Female NPT			2.46 (62.5)
	M8N-F8N	1/2" Male NPT	1/2" Female NPT	2.89 (73.4)	1 (25.4)	1-1/16 (27.0)

- All dimensions in millimeters unless specified as "inch". Dimension are for reference only, subject to change.
- Dimensions based on SUPERLOK nuts finger-tight.
- ISO Tapered Threads are available upon request

Flow Data at 70°F (20°C)

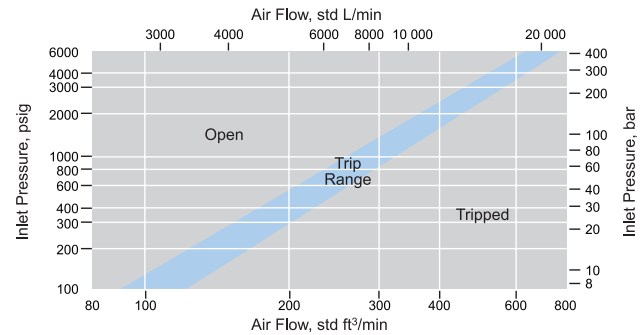
Air Flow - SEFV1 Series

Connection Sizes : 1/8", 1/4", 6mm



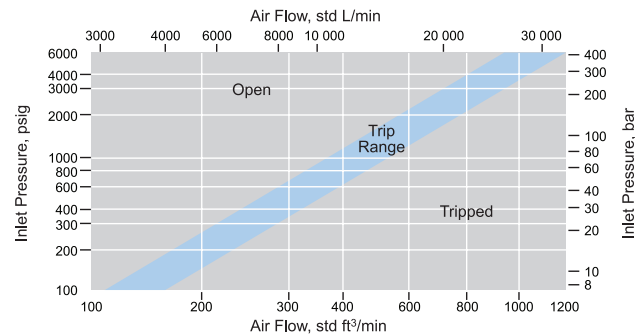
Air Flow - SEFV2 Series

Connection Sizes : 3/8", 8mm, 10mm



Air Flow - SEFV2 Series

Connection Sizes : 1/2", 12mm



Water Flow - SEFV1, SEF2 Series

Series	Connection Size	Cv	Trip Range U.S. gal/min (L/min)
SEFV1	1/8", 1/4", 6mm	0.5	3.9 to 5.8 (14.7 to 21.9)
SEFV2	3/8", 8mm, 10mm	1.1	8.2 to 10.0 (31.0 to 37.9)
	1/2", 12mm		11.2 to 14.9 (42.4 to 56.4)

Ordering Information

Example : **SEFV1** - **M4N** - **S4** - **EP** - **SS**

1
2 3
2 3
4
5

1. Valve Series

SEFV1
SEFV2

2. Port Type (Inlet x Outlet)

S : SUPERLOK Tube Fitting
M : Male Pipe Thread
F : Female Pipe Thread

3. Port Size

Pipe Thread Designation

Size (inch)	1/8	1/4	3/8	1/2
Screwed BSPT	2R	4R	6R	8R
Screwed NPT	2N	4N	6N	8N

Tube O.D Designation

Tube O.D (inch)	1/4	3/8	1/2	-
Designation	4	6	8	-
Tube O.D (mm)	6	8	10	12
Designation	6M	8M	10M	12M

4. O-ring Material

Nil : Viton (Standard)
N : Buna N
EP : Ethylene propylene (EPDM)
KAL : Kalrez

5. Body Material

SS : 316 Stainless Steel