

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 for cracking pressure and reseal performance 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	

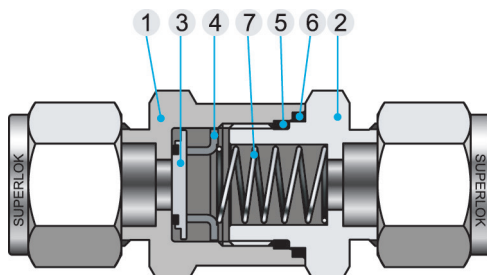
Seal Materials

Material	Temperature Rating	Designator
Viton	-10°F to 375°F (-23°C to 190°C)	(Blank)
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

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

* Wetted components

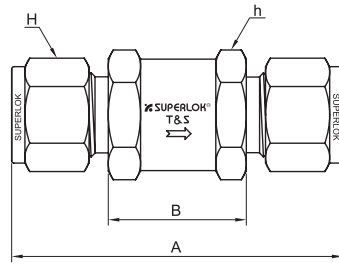


Table of Dimensions

Part No.	Orifice	Cv Max.	End Connection	Pressure Rating psig (bar)	Dimensions mm(in.)			
					A	B	H	h
SHCV1	S2	4.8	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	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	-		
	F8N		1/2" FEMALE NPT	4600(316)	77.0		26.9(1-1/16)	
	M6N		3/8" MALE NPT	6000(413)	59.9	31.2	-	
M8N	1/2" MALE NPT	6000(413)	69.3					
SHCV3	S12	15	3/4" SUPERLOK	5000(344)	89.4	45.2	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	45.5	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	

- Dimensions and Drawings are for reference only and are subject to change without prior notice.
- Unless otherwise specified, all dimensions are in millimeters.
- Sizes, pressure classes, and end connections not listed are available upon request.
- Dimensions shown with SUPERLOK nuts finger-tight, where applicable.

Ordering information

Example : **SHCV2 - S 10M - 1P - E - B**

1
2
3
4
5
6

1. Valve Series

- SHCV1
- SHCV2
- SHCV3

2. End Connection

- S = SUPERLOK Tube Fitting
- M = Male Thread
- F = Female Thread

3. Connection Size

Fractional Tube	1/8"	1/4"	3/8"	1/2"	3/4"	1"	
	2	4	6	8	12	16	
Metric Tube	6mm	8mm	10mm	12mm	16mm	22mm	25mm
	6M	8M	10M	12M	16M	22M	25M
Thread (inch)	1/8	1/4	3/8	1/2	3/4	1	
Screwed NPT	2N	4N	6N	8N	12N	16N	
Screwed BSPT	2R	4R	6R	8R	12R	16R	

4. Cracking Pressure

- 0.3P = 1/3 psi
- 1P = 1 psi
- 5P = 5 psi
- 10P = 10 psi
- 25P = 25 psi

5. Seal Material

- (Blank) = Viton (Standard)
- N = NBR
- E = EPDM

6. Body Material

- (Blank) = 316 Stainless Steel
- B = Brass

※ For special sizes and configurations, please consult BMT (SUPERLOK) sales representative.