

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	

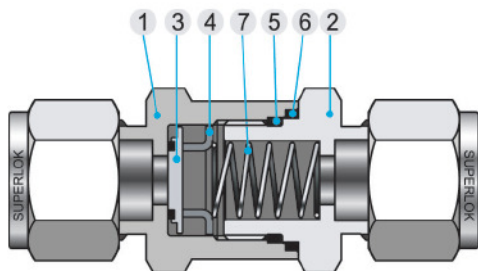
Seal Materials

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

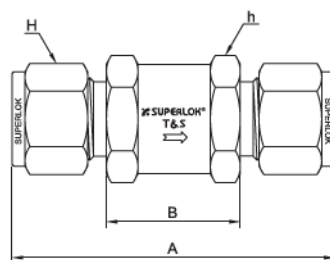


Table of Dimensions

Part No.	Orifice	Cv Max.	End Connection	Pressure Rating psig (bar)	Dimensions mm(in.)					
					A	B	H	h		
SHCV1	S2	4.8	0.67	1/8" SUPERLOK	6000(413)	57.7	26.4	11.1(9/16)	17.5(11/16)	
	S4			14.3(7/16)						
	S6M			14						
	F4N			1/4" FEMALE NPT	54.1	-	-			
	M2N			1/8" MALE NPT						
	M4N			1/4" MALE NPT						
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				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)	-	-	-		
	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	69.3					
	SHCV3			S12	15	4.7	3/4" SUPERLOK	5000(344)		89.4
S16		1" SUPERLOK	4700(323)	38.1(1-1/2)						
S22M		22mm SUPERLOK	5000(344)	88.4			32			
S25M		25mm SUPERLOK	98.6	40						
F12N		3/4" FEMALE NPT	4300(296)	82.0			-	-		
F16N		1" FEMALE NPT	4100(282)							
M12N		3/4" MALE NPT	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

4. Cracking Pressure

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

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	

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.