

Check Valve Series



SHCV, SOCV, SOACV, SACV Series





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HIGH PRESSURE CHECK VALVES



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 at the factory.

Technical Data

| Series | Orifice (mm) | Working and Back Pressure @70 ℉(20 ℃) | Flow Coefficient Cv | Nominal Cracking Pressure |
|--------|--------------|---|------------------------|-----------------------------------|
| SHCV1 | 4.8 | 6000 pairs (412 bar) | 0.67 | 1/2 1 5 10 25 paig |
| SHCV2 | 7.8 | 6000psig (413bar) | 1.80 | 1/3, 1, 5, 10, 25 psig |
| SHCV3 | 15.0 | 5000psig (344bar) | 4.70 | (0.02, 0.06, 0.34, 0.68, 1.7 bar) |

Seal Materials —

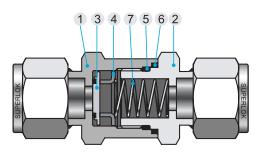
| Material | Temperature Rating | Designator | |
|--------------------|-------------------------------------|------------|--|
| Viton | -10 °F to 375 °F (-23 °C to 190 °C) | Standard | |
| NBR | -10 °F to 250 °F (-23 °C to 121 °C) | N | |
| Ethylene Propylene | -50 °F to 300 °F (-45 °C to 148 °C) | E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

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 -

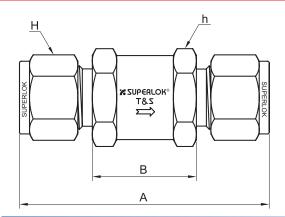


| No. | Component | Material | | | |
|-----|----------------|--------------------|--|--|--|
| 1 | Inlet Body | SS316 | | | |
| 2 | Outlet Body | SS316 | | | |
| 3 | Poppet | Viton-bonded SS316 | | | |
| 4 | Poppet Stopper | SS316 | | | |
| 5 | O-Ring | Viton standard | | | |
| 6 | Packing | PTFE | | | |
| 7 | Spring | SS304 | | | |

Testing

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

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| Order Number | | Orifice | Cv Max. | End Connection | Pressure Rating | Dimensions (mm) | | | |
|--------------|----------|---------|---------|-----------------|------------------------|-----------------|------|-------------|--------------|
| Series | Part No. | (mm) | GV Wax. | End Connection | psig (bar) | Α | В | Н | h |
| SHCV1 | S2 | 4.8 | 0.67 | 1/8 " SUPERLOK | 6000 (413) | 57.7 | 26.4 | 11.1(9/16) | |
| | S4 | | | 1/4" SUPERLOK | | 61.7 | | 14.3(7/16) | |
| | S6M | | | 6mm SUPERLOK | | | | 14 | 17.5 |
| | F4N | | | 1/4" FEMALE NPT | | 54.1 | - | | (11/16) |
| | M2N | | | 1/8″ MALE NPT | | 45.5 | 26.4 | - | |
| | M4N | | | 1/4" MALE NPT | | 55.1 | | | |
| | S6 | | 1.8 | 3/8" SUPERLOK | 6000 (413) | 69.9 | 31.2 | 17.5(11/16) | |
| | S8 | 7.8 | | 1/2" SUPERLOK | | 75.2 | | 22.2(7/8) | |
| | S8M | | | 8mm SUPERLOK | | 68.6 | | 16 | 05 4(4) |
| | S10M | | | 10mm SUPERLOK | | 71.1 | | 19 | 25.4(1) |
| SHCV2 | 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 | 31.2 | | |
| | S12 | 15 4. | 4.7 | 3/4 " SUPERLOK | 5000 (344) | 89.4 | 45.2 | 28.6(1-1/8) | |
| | S16 | | | 1" SUPERLOK | 4700 (323) | 98.6 | 45.5 | 38.1(1-1/2) | |
| | S22M | | | 22mm SUPERLOK | 5000 (344) | 88.4 | | 32 | |
| | S25M | | | 25mm SUPERLOK | | 98.6 | | 40 | 41.3 |
| SHCV3 | F12N | | 4.7 | 3/4" FEMALE NPT | 4300 (296) | 82.0 | | | (1-5/8) |
| | F16N | | | 1 " FEMALE NPT | 4100 (282) | 97.3 | - | | |
| | M12N | | | 3/4″ MALE NPT | 5000 (344) | 83.6 | 45.5 | - | |
| | M16N | | | 1" MALE NPT | | 93.2 | 45.7 | 45.7 | |

Table of Dimensions -

Dimensions, shown on the above table, are measured based on finger-tight. All dimensions are for reference only, subject to change.

Ordering information -



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]