

# SCH60 Series High Pressure Check Valves

## Poppet

- Provides leak tight shut-off with elastomer seal.

## Springs

- Are available for the cracking pressure in the range from 1/3psi to 25psi.

## Variety of end Connection

- Include S-LOK tube fittings, male and female NPT, ISO threads.

## Poppet Stopper

- Provides minimizes spring stress.

## Indicator Ring

- Is easy identify the cracking pressure.
- Available in replacement.

## O-ring and Back Up Rings

- Are halves for ensures closure to the rated pressure.

## Features

- Pressure rating up to 6000psi (413bar) @70°C(21°C).
- Temperature rating up to 375°F(191°C)with standard Viton O-ring.
- S316 Stainless steel body as standard.
- Suitable for gas and liquids.
- Cracking pressures include : 1/3, 1, 5, 10, 25psi.
- Heat code traceability.
- Every valve is 100% factory tested for cracking and reseal.

## Technical Data

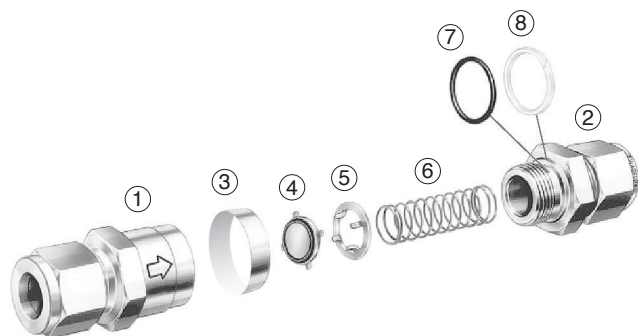
Description	S316		
Series	SCH1	SCH2	SCH3
Flow Coefficient (Cv)	0.67	1.8	4.7
Working Pressure and Back Pressure @ 70°F(21°C)	6000psi(413bar)		5000psi(344bar)
Operating Temperature Range	Viton : -10°F to 375°F (-23°C to 190°C)		
Nominal Cracking Pressure	1/3, 1, 5, 10, 25psig		

## CNG / NGV Certifications

- CNG / NGV Check Valve Series with CNG / NGV Compatible HNBR O-ring are available with CNG / NGV Certifications

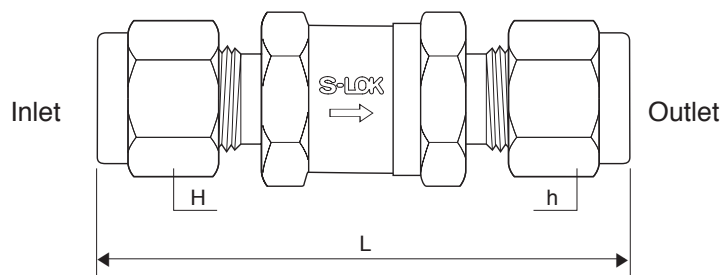
Certificates	ECE R110	ANSI NGV 3.1 - 2012	ISO 15500
Certificate No.	110R-010335	126842AUT16	126842MECH105
Classification	Class 0	Manual valve	Manual valve
Temperature	-40 to 120°C (-40 to 248°F)	-40 to 120°C (-40 to 248°F)	-40 to 120°C (-40 to 248°F)
Working Pressure	260 bar @ 120°C	248 bar @ 120°C	260 bar @ 120°C

## Materials of Construction



Item	Description	A479Valve Body Materials	
		Material Grade	ASTM Specification
1	Body	S316	A479 or A276
2	Connector		
3	Indicator Ring		
4	Poppet	Viton-bonded S316	
5	Poppet Stopper	S316	A313
6	Spring	S302	
7	O-ring	Viton	
8	Back Up Ring	PTFE	

\* Silicone-based Lubricant for poppet. Wetted parts are listed in orange color.



### Ordering Information and Dimensions

Basic Ordering Number		Orifice mm	Cv max.	End Connections			Pressure Rating psig(bar)	Dimensions mm(inch)		
				Size	Inlet	Outlet		L	H	h
SCH1	S-2T	4.8	0.67	1/8"	S-LOK		6000(413)	57.7(2.27)	(7/16)	(11/16)
	S-4T			1/4"	S-LOK			61.7(2.43)	(9/16)	
	S-6M			6mm	S-LOK			54.1(2.13)	14.0	
	F-4N			1/4"	Female NPT			45.5(1.79)		
	M-2N			1/8"	Male NPT			55.1(2.17)		
	M-4N			1/4"	Male NPT					
SCH2	S-6T	7.8	1.8	3/8"	S-LOK		6000(413)	69.9(2.75)	(11/16)	(1)
	S-8T			1/2"	S-LOK			75.2(2.96)	(7/8)	
	S-8M			8mm	S-LOK			68.6(2.70)	16	
	S-10M			10mm	S-LOK			71.1(2.80)	19	
	S-12M			12mm	S-LOK			75.2(2.96)	22	
	F-6N			3/8"	Female NPT		5000(344)	64.8(2.55)		(1-1/16)
	F-8N			1/2"	Female NPT		4600(316)	77.0(3.03)		
	M-6N			3/8"	Male NPT		6000(413)	59.9(2.36)		(1)
	M-8N			1/2"	Male NPT			69.3(2.73)		
	F-8R			1/2"	Female ISO		4600(316)	83.6(3.29)		(1-1/16)
	M-8R			1/2"	Male ISO		6000(413)	69.3(2.73)		(1)
SCH3	S-12T	15.0	4.7	3/4"	S-LOK		5000(344)	89.4(3.52)	(1-1/8)	(1-5/8)
	S-16T			1"	S-LOK			98.6(3.88)	(1-1/2)	
	S-22M			22mm	S-LOK			88.4(3.48)	32	
	S-25M			25mm	S-LOK			98.6(3.88)	40	
	F-12N			3/4"	Female NPT		4300(296)	82.0(3.23)		
	F-16N			1"	Female NPT		4100(282)	97.3(3.83)		
	M-12N			3/4"	Male NPT		5000(344)	83.6(3.29)		
	M-16N			1"	Male NPT			93.2(3.67)		
	F-12R			3/4"	Female ISO		4300(296)	82.0(3.23)		
	F-16R			1"	Female ISO		4100(282)	97.3(3.83)		
	M-12R			3/4"	Male ISO		5000(344)	85.1(3.35)		
	M-16R			1"	Male ISO			93.2(3.67)		

### Spring Cracking, Reseal and Back Pressure at @70°F(2°F)

Nominal Spring Cracking Pressure		Applied Working Pressures - psig(bar)				Reseal Pressure	
		Min. Pressure		Max. Pressure			
psi	bar	psi	bar	psi	bar	psi	bar
1/3	0.02	0	0	3	0.21	up to 6	0.41
						Back pressure	
1	0.07	0	0	4	0.28	up to 5	0.34
						Back pressure	
5	0.34	3	0.21	9	0.62	up to 2	0.14
						Back pressure	
10	0.69	7	0.48	15	1.03	3	0.21
25	1.72	20	1.38	30	2.07	17	1.17

## O-Ring Seal Materials

Material	Designator	Temperature Rating°C(°F)	Application
NBR	NB	-20°C to 105°C(-4°F to 221°F)	Petroleum-based hydraulic and lubricating oils, animals and vegetable oils, acetylene, alcohols, air, alkalis, fuel oils and many other media.
FKM (Viton)	VT	-23°C to 190°C(-10°F to 375°F)	High-quality compounds for high temperatures, Synthetic and hydraulic fluids; a wide range of chemicals, heavily oxidizing acids, suitable for vacuum.
EPDM	EP	-45°C to 148°C(-50°F to 300°F)	Chemical resistance : nonflammable hydraulic fluids (Skydrol, Pydraul, Lindol, Cellulube 150, phosphoric esters), pure aniline, fire extinguisher liquids (chlorobromo-methane), acid ;excellent resistance to hot water and steam.
FFKM	KA	-20°C to 275°C(-4°F to 527°F)	Superior compounds for high temperature and most chemicals. This compound combines the chemical properties of PTFE with the mechanical properties of Viton.

\* Viton is standard for S316 valves and NBR is standard for Brass valves.

### Sour Gas Service

- For sour gas application, materials for wetted components are selected according to NACE MR 0175.

Pressure Rating at 70°F(21°C)	SCH1 and SCH2 Series : 5000psig(344bar) SCH3 Series : 4700psig(323bar)
Temperature Rating	-50°F to 300°F(-45°C to 148°C)
Normal Cracking Pressure	1/3, 1, and 5psig(0.02, 0.07, 0.34bar)
End Connections	1/4, 3/8, 1/2, 3/4, and 1" S-LOK Tube Fittings
Material of Construction	Poppet stopper-S316 Spring-Alloy X750 Back up ring-PTFE Indicator ring-stainless steel

To order, add designator-SG as a suffix to the basic part number with cracking pressure.

**Example :** SCH1-S-4T-1/3-SG-S6

### Fluorocarbon-Free Service

- For system where, PTFE and fluorinated compounds can not be tolerated.

Pressure Rating at 70°C(21°C)	Same as standard product. See standard technical data.
Temperature Rating	-50°F to 300°F(-45°C to 148°C)
Normal Cracking Pressure	Same as standard product. See standard technical data.
End Connections	All end connection type and sizes. See table of dimensions.
Material of Construction	Body, Poppet, Poppet stopper-S316 Seals-ethylene propylene Spring-S302 Back up ring-PEEK Indicator Ring-stainless steel Lubricant-hydrocarbon based

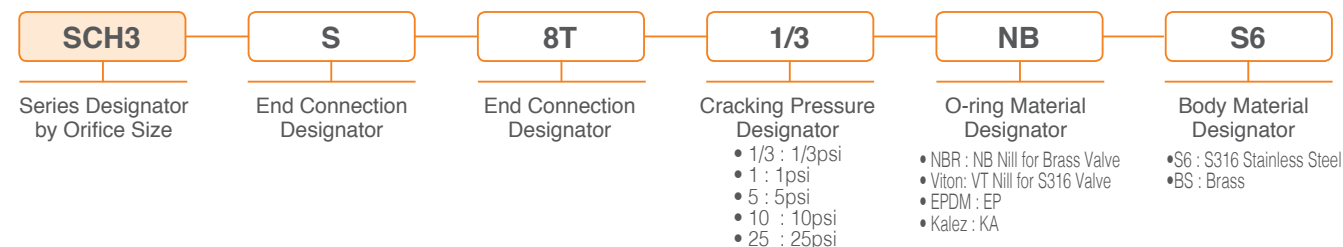
To order, add designator-FF as a suffix to the basic part number with cracking pressure.

**Example :** SCH1-S-4T-1/3-OF-S6

### Testing

- Every valve is factory tested for cracking and reseal performance.

### Ordering Information



### \*CNG / NGV Service

- To order CNG / NGV Service, insert the designator "C" to the valve ordering number.
- O-Ring Material's HNBR standard.  
ex) SCHC3-S-8T-S6

### Safety in Valve Selection

- When selecting a valve, the total system design must be considered to ensure safe, trouble-free performance. Valve function, materials compatibility, adequate ratings, proper installation, operation, and maintenance are the responsibility of the system designer and user.