

W e . s u p p o r t . t h e  
i n n o v a t i o n s . o f . c u s t o m e r s

# Leak - Proof Flow & Control Solution Partner

The Best Partner  
for Value Creation

**S-LOK<sup>®</sup>** Check & Relief Valves

**HanSun**

한선엔지니어링(주)  
HANSUN ENGINEERING CO., LTD.



## SCH60 Series For working pressure up to 6000 psig(413bar)

### Poppet

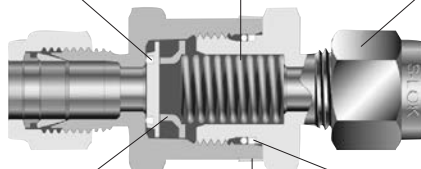
-Provides leak tight shut-off with elastomer seal.

### 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 replasement.

### O-ring and Back Up Rings

-are halves for ensures closure to the rated pressure.

## Features

- Pressure rating up to 6000psi (413bar) @70°F(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

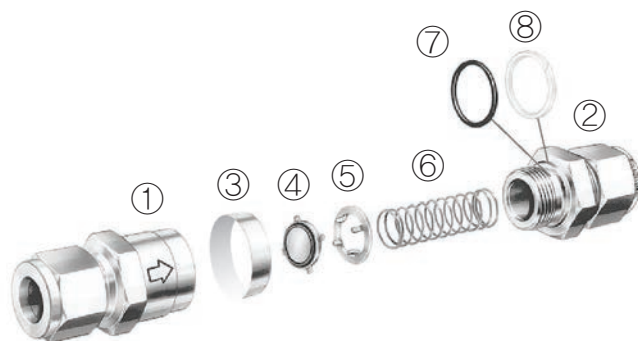
Description	S316		
	SCH1	SCH2	SCH3
Series	SCH1	SCH2	SCH3
Flow Coefficient (Cv)	0.67	1.8	4.7
Working Pressure and Back Pressure @ 70°F(21°C)	6000psi (413bar)		5000psi (344bar)
Operating Temperature Range	Viton : -10°F to 375°F (-23°C to 190°C)		
Nominal Cracking Pressure	1/3, 1, 5, 10, 25psi		

## CNG / NGV Certifications

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

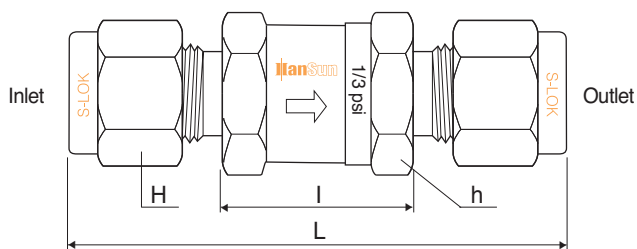
Certificates	ECE R110	ANSI NGV 3.1 - 2012	ISO 15500
Certificate No.	110R-010335	126842AUT16	126842MECH105
Classification	Class 0	Manual valve	Manual valve
Temperature	-40 to 120°C (-40 to 248°F)	-40 to 120°C (-40 to 248°F)	-40 to 120°C (-40 to 248°F)
Working Pressure	260 bar @ 120°C	248 bar @ 120°C	260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

## Materials of Construction



Item	Description	A479 Valve 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	
6	Spring	S302	A313
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	I	H	h
SCH1	4.8	0.67	1/8"	S-LOK	6000(413)	57.7(2.27)	26.4(1.04)	(7/16)	(11/16)	
			1/4"	S-LOK		61.7(2.43)		(9/16)		
			6mm	S-LOK				14.0		
			1/4"	Female NPT		54.1(2.13)	26.4(1.04)			
			1/8"	Male NPT		45.5(1.79)				
			1/4"	Male NPT		55.1(2.17)				
SCH2	7.8	1.8	3/8"	S-LOK	6000(413)	69.9(2.75)	31.2(1.23)	(11/16)	(1)	
			1/2"	S-LOK		75.2(2.96)		(7/8)		
			8mm	S-LOK		68.6(2.70)		16		
			10mm	S-LOK		71.1(2.80)		19		
			12mm	S-LOK		75.2(2.96)		22		
			3/8"	Female NPT		5000(344)		64.8(2.55)		
			1/2"	Female NPT	4600(316)	77.0(3.03)		(1-1/16)		
			3/8"	Male NPT	6000(413)	59.9(2.36)	31.2(1.23)			(1)
			1/2"	Male NPT		69.3(2.73)				
			1/2"	Female ISO	4600(316)	83.6(3.29)		(1-1/16)		
			1/2"	Male ISO	6000(413)	69.3(2.73)	31.2(1.23)			(1)
			SCH3	15.0	4.7	3/4"	S-LOK	5000(344)		89.4(3.52)
1"	S-LOK	98.6(3.88)				(1-1/2)				
22mm	S-LOK	88.4(3.48)				45.5(1.79)	32			
25mm	S-LOK	98.6(3.88)					40			
3/4"	Female NPT	4300(296)				82.0(3.23)	82.0(3.23)			
1"	Female NPT	4100(282)				97.3(3.83)	97.3(3.83)			
3/4"	Male NPT	5000(344)				83.6(3.29)	45.5(1.79)			
1"	Male NPT					93.2(3.67)		45.7(1.80)		
3/4"	Female ISO	4300(296)				90.2(3.55)	90.2(3.55)			
1"	Female ISO	4100(282)				97.3(3.83)	97.3(3.83)			
3/4"	Male ISO	5000(344)				85.1(3.35)	45.5(1.79)			
1"	Male ISO					93.2(3.67)		45.7(1.80)		

### Spring Cracking, Reseal and Back Pressure at @70°F(21°C)

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 (*Kalrez)	KA	-23°C to 315°C (-10°F to 599°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.

\*Kalrez : TM Dupont

### • 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)
Norminal 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	Body, Poppet-Alloy 400 Poppet stopper-S316 Seals-ethylene propylene 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°F(21°C)	Same as standard product. See standard technical data.
Temperature Rating	-50°F to 300°F (-45°C to 148°C)
Norminal 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

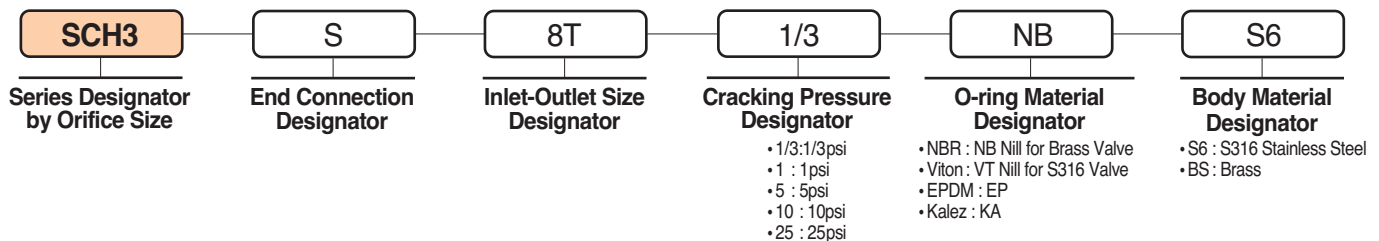
To order, add designator-FF as a suffix to the basic part number with cracking pressure.

Example : SCH1-S-4T-1/3-FF-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) SCH**C**3-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.