

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

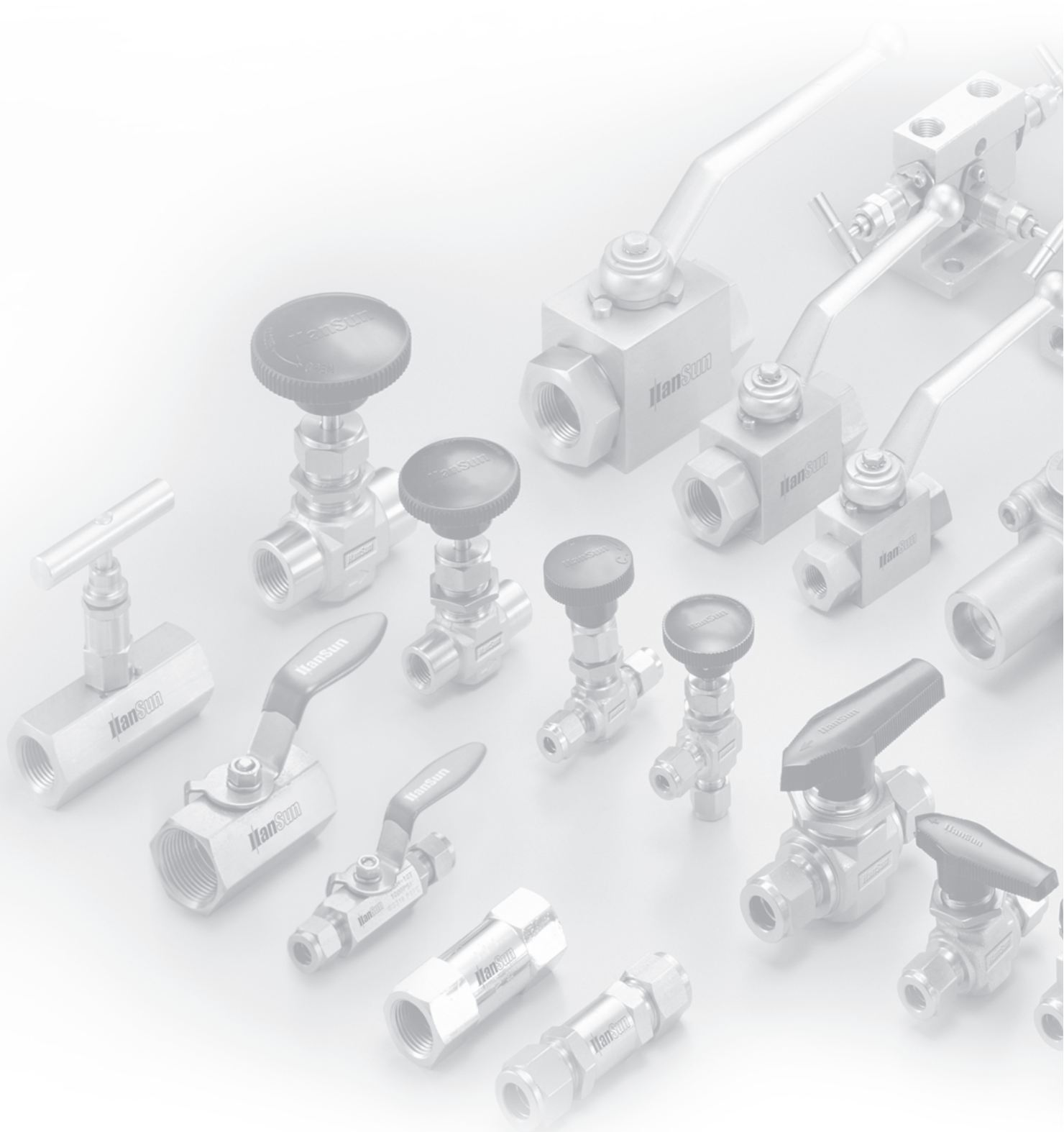
The Best Partner  
for Value Creation

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

**HanSun**

한선엔지니어링(주)  
HANSUN ENGINEERING CO., LTD.







# Check Valves

## SCV, SCP, SCA, SCH SERIES

**SCV30 Series**  5~6

**SCP30 Series**  7

**SCA30 Series**  8

**SCH60 Series**  9~11

# Relief Valves

## SRV SERIES

**SRV 30, 60 Series**  12~14

We · support · the  
innovations · of · customers

# Leak - Proof Flow & Control Solution Partner

The Best Partner  
for Value Creation

**S-LOK®** Check Valves

## Check Valves

---



**SCV30**



**SCP30**

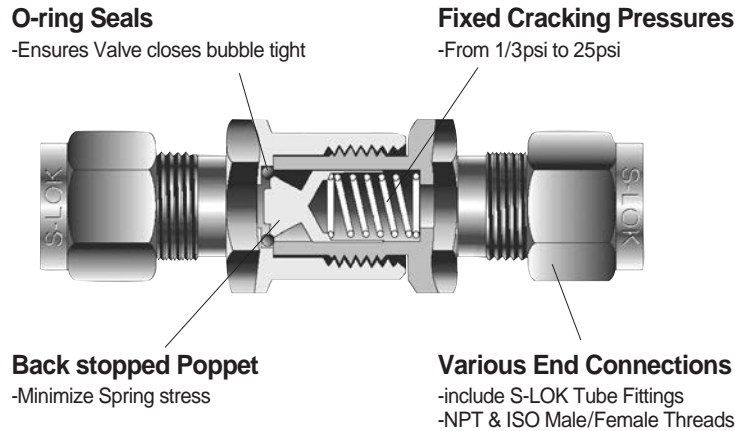


**SCA30**



**SCH60**

# SCV30 Series For working pressure up to 3000 psig(206bar)



## Features

- Pressure rating up to 3,000psig (206bar) @ 70°F (21°C).
- Temperature rating up to 375°F (191°C) with Standard Viton O-ring.
- Choice of materials : Standard S316 and Brass.
- Cracking pressures include : 1/3, 1, 3, 10, 25, 50psi.
- Heat code traceability.
- Every valve is 100% factory tested for cracking and reseal.

## Technical Data

Valve Series	SCV1, SCV2, SCV3	SCV4, SCV5, SCV6
Max. Working Pressure @ 70°F (21°C)	S316 and Brass 3000psi (206bar)	S316: 2000psi(137bar) Brass: 1500psi(103bar)
Operating Temperature Range	Viton : -10°F to 375°F (-23°C to 190°C) Buna-N : -4°F to 221°F (-20°C to 105°C)	
Nominal Cracking Pressure	1/3, 1, 3, 10, 25, 50psi	

## Cracking, Reseal and Back Pressure

### Cracking Pressure

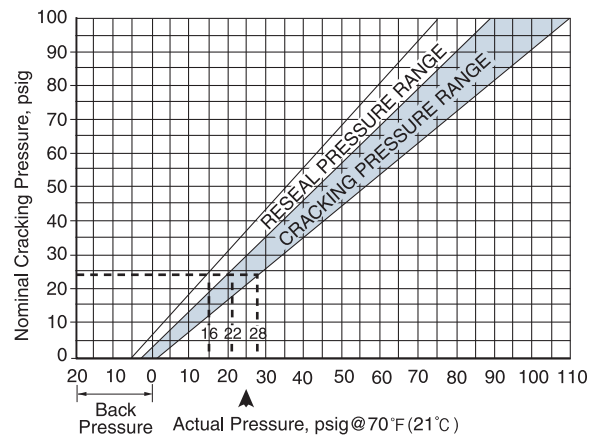
The upstream pressure at which a detectable flow is Measured. The Check valve is actuated when the pressure difference between the inlet and the outlet reaches the range of cracking pressure.

### Reseal Pressure

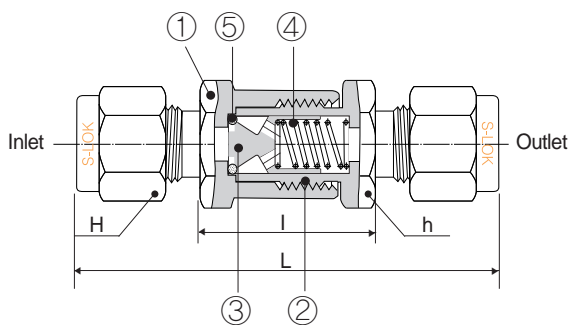
The downstream pressure at which the check valve closes bubble-tight. The Check valves that have higher cracking pressure can be resealed to bubble-tight by the spring force. The reseal pressure is the pressure at the same flow direction, but lower then the cracking pressure.

### Back Pressure

The Check valves that have cracking pressure 5psig(0.34bar) and lower may not be able to return to the bubble-tight seal. This may require back pressure to press the seal to form a bubble-tight contact in addition to the spring force.



- Note** -When the check valve is not actuated for a period of time, it may require initially crack at higher than the above cracking pressure ranges.  
 -Check valves are designed for directional flow control only. Therefore **HANSUN check valves** should never be used as code Safety relief devices.



### Materials of Construction

Item	Description	Valve Body Materials	
		S316	Brass
1	Body	S316/A479, A276	Brass
2	Connector		Brass
3	Poppet	S316/A479, A276	Brass/B16
4	Spring	S302	
5	O-ring	Viton	

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

### Ordering Information and Dimensions

Basic Ordering Number	Orifice mm(inch)	Cv	End Connections Inlet/Outlet	Dimensions (mm)			
				h	H	L	I
SCV1	4.8 (0.19)	0.16	1/8" S-LOK	15.88(5/8)	11.11(7/16)	55.60(2.19)	25.00(0.98)
			1/8" Male NPT				
			1/8" Female NPT				
			1/4" S-LOK				
			6mm S-LOK				
			1/4" Male NPT   1/4" S-LOK				
			1/4" Male NPT				
SCV2	7.1 (0.28)	1.48	1/4" Female NPT	19.05(3/4)	17.46(11/16)	65.50(2.58)	27.10(1.07)
			3/8" S-LOK				
			10mm S-LOK				
			3/8" Male NPT				
SCV3	10.0 (0.39)	1.7	3/8" Female NPT	22.22(7/8)	22.22(7/8)	80.20(3.16)	36.20(1.43)
			1/2" S-LOK				
			12mm S-LOK				
			1/2" Male NPT				
SCV4	13.5 (0.53)	2.6	1/2" Female NPT	28.58(1-1/8)	25.40( 1 )	91.80(3.61)	48.10(1.89)
			5/8" S-LOK				
SCV5	16.0 (0.63)	5.2	3/4" S-LOK	31.75(1-1/4)	28.58(1-1/8)	110.70(4.35)	67.00(2.64)
			3/4" Male NPT				
			3/4" Female NPT				
SCV6	18.0 (0.71)	8.0	1" S-LOK	34.93(1-3/8)	38.1(1-1/2)	121.10(4.77)	68.40(2.69)
			1" Female NPT				
			1" Male NPT				

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

Ratings based on Viton O-ring in S316 stainless steel valves and NBR O-ring in brass valves.

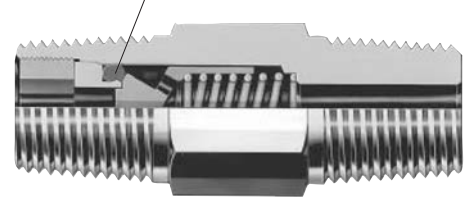
Spring Nominal Cracking Pressure		Cracking Pressure Ranges				Reseal Pressure		Series	SCV1, SCV2, SCV3, SCV4 SCA1, SCA2, SCA3 SCP1, SCP2	SCV5, SCV6	S316 SCH Series			
psig	bar	psig	bar	psig	bar	psig	bar				Working Pressure, psig (bar)			
1/3	0.02	0	0	3	0.21	Up to 6 back pressure	0.41	-10°F to 100°F (-23°C to 37°C)	3000(206)	3000(206)	2000(137)	1500(103)	6000(413)	5000(344)
1	0.07	0	0	4	0.28	Up to 5 back pressure	0.34							
						Up to 4 back pressure	0.28							
3	0.21	2	0.14	7	0.48	Up to 4 back pressure	0.28							
						Up to 4 back pressure	0.28							
10	0.69	7	0.48	15	1.03	3	0.21							
25	1.72	20	1.38	30	2.07	17	1.17	2450(168)	2405(165)	1630(112)	1250(86)	4910(338)	4080(281)	
50	3.45	40	2.76	60	4.14	35	2.41	2325(160)	-	1545(106)	-	4660(321)	3875(267)	
75	5.17	60	4.14	90	6.2	53	3.65	2185(150)	-	1450(99.9)	-	4375(301)	3640(250)	
100	6.89	80	5.51	120	8.27	70	4.82	400°F (204°C)				4280(294)	3560(245)	

# SCP30 Series For working pressure up to 3000 psig(206bar)

## Features

- Pressure rating up to 3,000psig (206bar) @ 70°F (21°C).
- Temperature rating up to 375°F (191°C) with Standard Viton O-ring.
- Choice of materials : Standard S316 and Brass.
- Cracking pressures include : 1/3, 1, 3, 10, 25, 50psi.
- Heat code traceability.
- Every valve is 100% factory tested for cracking and reseal.

Fully contained O-ring seal  
blow-out proof design



Compact, one-piece body

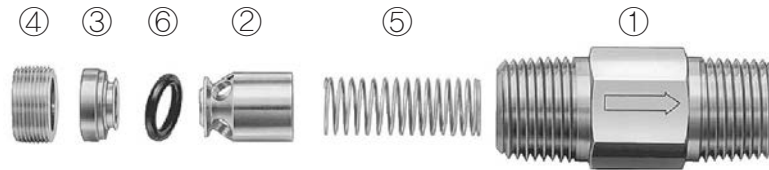
## Technical Data -Spring Cracking, Reseal and Back Pressure @70°F(21°C)

Spring Nominal Cracking Pressure		Applied Working Pressures-psig(bar)				Reseal Pressure	
		Min. Pressure		Max. Pressure			
psig	bar	psig	bar	psig	bar	psig	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	
10	0.69	7	0.48	15	1.03	3	0.21
25	1.72	20	1.38	30	2.07	17	1.17

## Materials of Construction

Item	Description	Valve Body Materials	
		S316	Brass
1	Body	S316 /A276, A479	Brass
2	Poppet		
3	Insert		
4	Locking Screw	S302/A313	
5	Spring	Viton	NBR
6	O-ring		

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

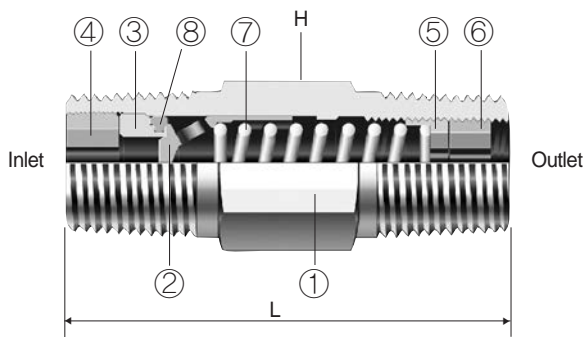


## Ordering Information and Dimensions

Basic Ordering Number	Cv	End Connections			Dimensions mm(inch)	
		Size	Inlet	Outlet	L	H
SCP1	0.35	1/4"	Male NPT		41.1(1.62)	14.28(9/16)
		1/4"	Male ISO			
		1/4"	Female NPT		61.2(2.41)	19.05(3/4)
		1/4"	Female ISO			
		1/4"	Male / female NPT			
		1/4"	Female / male NPT			
SCP2	1.20	1/2"	Male NPT		57.9(2.28)	22.22(7/8)
		1/2"	Female NPT		94.2(3.71)	26.98(1-1/16)
		1/2"	Male / female NPT		71.9(2.83)	

All dimensions shown are for reference only and are subject to change.

## SCA30 Series For working pressure up to 3000 psig(206bar)



### Materials of Construction

Item	Description	Valve Body Materials	
		S316	Brass
1	Body	S316 /A276, A479	Brass
2	Poppet		
3	Insert		
4	Insert Lock Screw		
5	Adjusting Screw		
6	Locing Screw		
7	Spring	S302/A313	
8	O-ring	Viton	NBR

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

### Features

- Pressure rating up to 3,000psig (206bar) @ 70°F (21°C).
- Temperature rating up to 375°F (191°C) with Standard Viton O-ring.
- Choice of materials : Standard S316 and Brass.
- Cracking pressures include : 1/3, 1, 3, 10, 25, 50psi.
- Heat code traceability.
- Every valve is 100% factory tested for cracking and reseal.

### • Spring Cracking Pressure Range Designator

Designator	Cracking Pressure	
	psi	bar
3	3 to 50	0.21 to 3.5
5	50 to 150	3.5 to 10.4
150	150 to 350	10.4 to 24.2
350	350 to 600	24.2 to 41.4

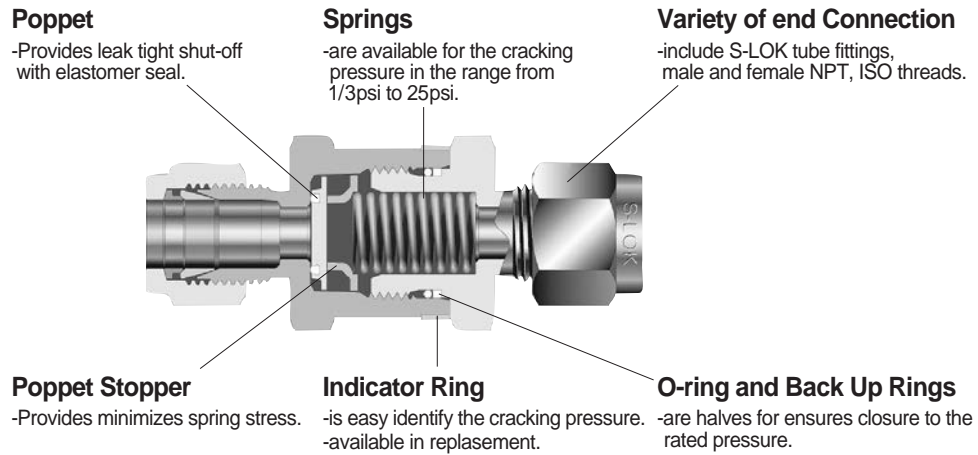
### Ordering Information and Dimensions

Basic Ordering Number		Cv	End Connections			Dimensions mm (inch)	
			Size	Inlet	Outlet	L	H
SCA1	F-4N	0.35	1/4"	Female NPT		75.7(2.98)	3 / 4
	M-4N		Male NPT		41.1(1.62)	9 / 16	
	M-4R		Male BSPT		41.1(1.62)	9 / 16	
SCA2	M-8N	1.20	1/2"	Male NPT		65.0(2.56)	7 / 8
	M-8R		Male BSPT		65.0(2.56)	7 / 8	

To order, add a cracking pressure range designator to the basic ordering number and then specify valve material designator.  
Example : SCA1-M-4N-3-S6



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



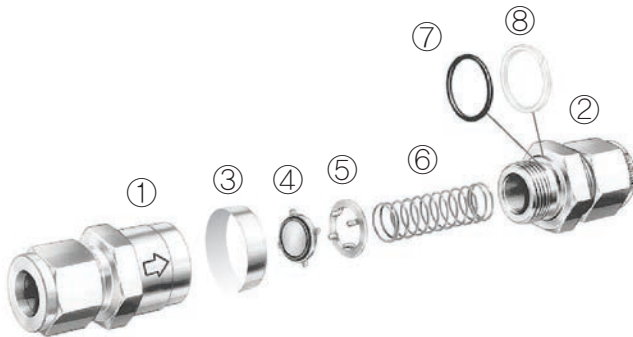
## Features

- 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, 3, 10, 25, 50psi.
- Heat code traceability.
- Every valve is 100% factory tested for cracking and reseal.

## Technical Data

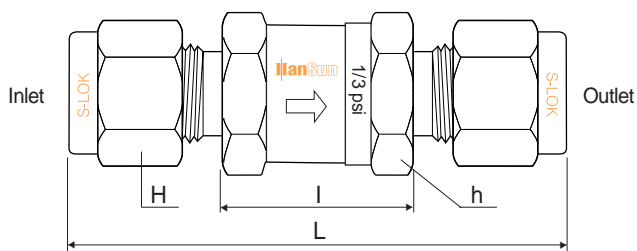
Description	S316		
	SCH1	SCH2	SCH3
Series	SCH1	SCH2	SCH3
Flow Coefficient (Cv)	0.67	1.8	4.7
Working Pressure and Back Pressure @ 70°F(21°C) 70°F(21°C)	6000psi (413bar)		5000psi (344bar)
Operating Temperature Range	Viton : -10°F to 375°F (-23°C to 190°C)		
Nominal Cracking Pressure	1/3, 1, 5, 10, 25psig		

## 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	
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			54.1(2.13)		14.0	
			1/4"	Female NPT			45.5(1.79)			
			1/8"	Male NPT			55.1(2.17)	26.4(1.04)		
			1/4"	Male NPT						
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)	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.
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.
*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)
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	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)
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

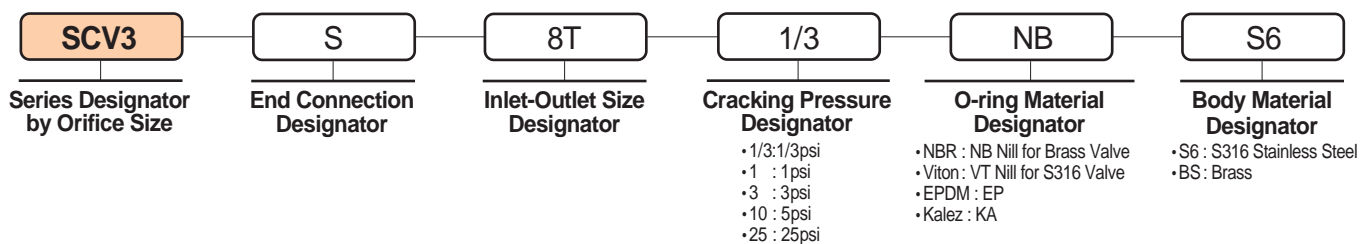
To order, add designator-FF as a suffix to the basic part number with cracking pressure.

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

### • Testing

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

### • Ordering Information



### • 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.

We · support · the  
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®** Relief Valves

## Relief Valves

---

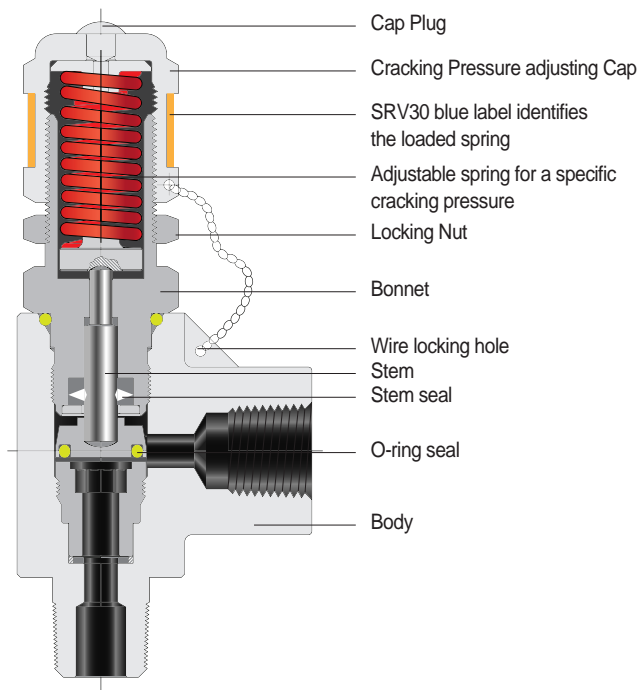


**SRV30, SRV60**

# SRV Series Relief Valves

## Product Information

### Relief Valve SRV30 Series for 300 psig(21 bar)



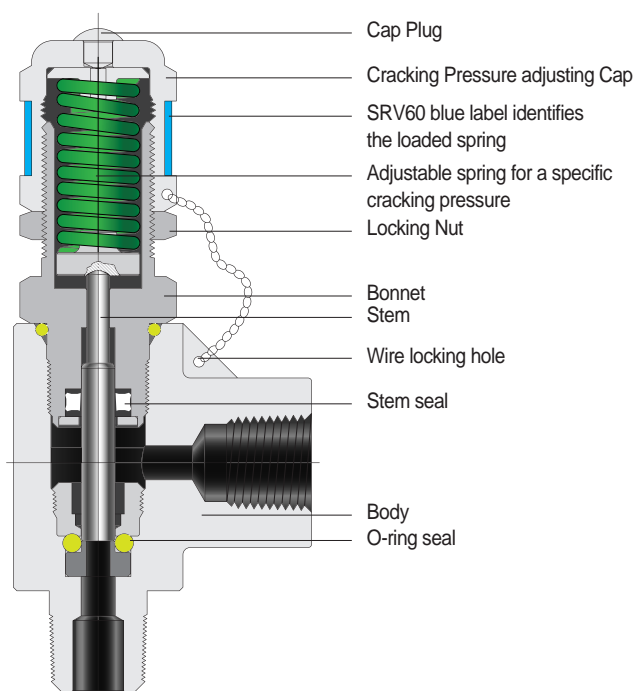
### SRV30 Series Technical Data

- Maximum working pressure : 300 psig (21 bar)
- Cracking pressure range : 10 to 250 psig (0.68 to 17.2 bar)

Spring Designator	Cracking Pressure		Color code
	psig	bar	
L	10 to 250	0.68 to 17.2	Red

- Cv= 0.60
- Orifice : 4.8 mm (0.19 in)

### Relief Valve SRV60 Series for 6,000 psig(413 bar)



### SRV60 Series Technical Data

- Maximum working pressure : 6,000 psig (413 bar)
- Orifice size : 3.2 mm (0.13 in)
- Cv= 0.41
- Cracking pressure range :50 to 6000 psig (3.4 to 413 bar)

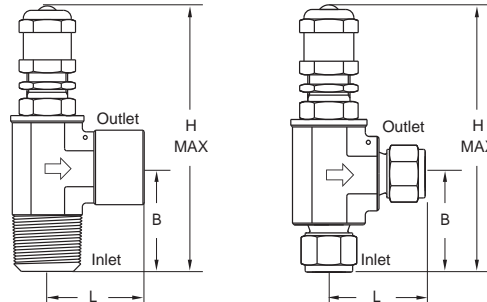
### SRV60 Series Spring Designators

Spring Designator	Cracking Pressure		Color code
	psig	bar	
A	50 to 350	3.4 to 24	White
B	350 to 750	24 to 51.6	Blue
C	750 to 1500	51.6 to 103	Clear
D	1,500 to 2,250	103 to 155	Black
E	2,250 to 3,000	155 to 206	Green
F	3,000 to 4,000	206 to 275	Yellow
G	4,000 to 5,000	275 to 344	Brown
H	5,000 to 6,000	344 to 413	Orange

## Product Information

### Materials of Construction

Cap Plug	Polypropylene
Adjusting Cap	S316 / ASTM A276 or A479
Spring	17-7 PH SS / AMS 5678 D
Locking Nut	S316 ASTM A276 or A479
Bonnet	
Poppet	
Stem & O-ring seal	Standard Viton, optional EPDM and NBR
Body	F316 / ASTM A182



### Ordering Information and Table of Dimensions

Basic Ordering NO.	End Connection		Orifice mm.(in)	Dimensions mm (in.)			
	Inlet	Outlet		H	B	L	
SRV30 and SRV60	S-4T-	1/4 S-LOK	4.8 (0.19)	100 (3.93)	37 (1.45)	39 (1.53)	
	S-6M-	6mm S-LOK			38 (1.49)	40 (1.57)	
	S-8M-	8mm S-LOK					
	S-8T-	1/2 S-LOK			105 (4.13)	44 (1.73)	42 (1.65)
	S-12M-	12mm S-LOK					
	MS-8N8T-	1/2 Male NPT		1/2 S-LOK	98 (3.85)	36 (1.41)	42 (1.65)
	MS-8N12M-	1/2 Male NPT		12mm S-LOK			
	MF-4N-	1/4 Male NPT		1/4 Female NPT	94 (3.70)	32 (1.25)	30 (1.18)
	MF-4R-	1/4 Male ISO 7/1		1/4 Female ISO7/1			
	MF-6N-	3/8 Male NPT		3/8 Female NPT			
	MF-6R-	3/8 Male ISO 7/1		3/8 Female ISO7/1			
	MF-8N-	1/2 Male NPT		1/2 Female NPT			
MF-8R-	1/2 Male ISO 7/1	1/2 Female ISO7/1	98 (3.85)	36 (1.41)			38 (1.49)

All dimensions shown are for reference only and are subject to change. Dimensions with S-lok nuts are in finger-tighten position.

### How to Order

Please select the desired valves basic ordering number, the applicable seal, spring designator and CE certified options from the table below.  
Example : SRV60-S-4T-NBR-A-S6

Seal Material designator	Spring Designator	Body Material
NIL :standard FKM	Refer to spring Designator table1,2	S6:S316
NBR : NBR		
EP : EPDM		

Factory pressure set valve

•To order, specify the set pressure in the valve ordering number

Example : SRV60-S-4T-EP-60-S6 Valve without spring installed

•To order, do not specify spring designator on the ordering number

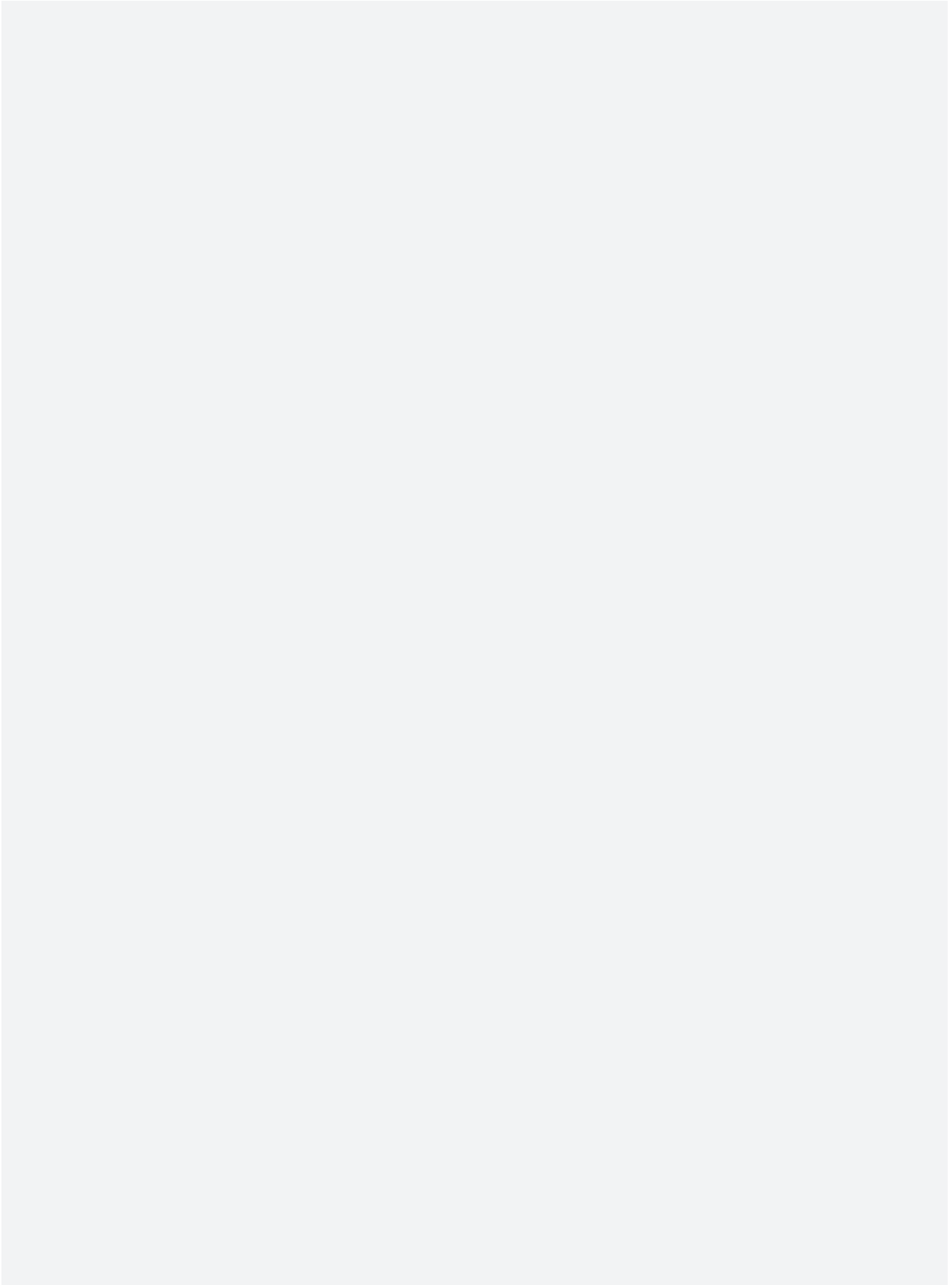
Example : SRV60-S-8T-NBR-S6

NOTE : the valve with no spring installed with the label stated

"NO SPRING INSTALLED" on the adjusting cap

### Safe Valve Selection

The selection of a valve for any application to system design must be considered to ensure performance. Valve function, valve rating material compatibility, proper installation, operation and maintenance remain the sole responsibility of the system designer and the user, S-LOK accepts no liability for any selection, installation, operation or maintenance.





27 Noksansandan361-ro, Gangseo-gu  
(Songjeong-dong), Busan, Korea

Tel : +82-51-899-6700, Fax : +82-51-899-6799

E-Mail : [overseas@ehansun.co.kr](mailto:overseas@ehansun.co.kr)

[sales@ehansun.co.kr](mailto:sales@ehansun.co.kr)

Website : [www.ehansun.co.kr](http://www.ehansun.co.kr), [www.slok.co.kr](http://www.slok.co.kr)