

One-Way valve

GBO.LOK[®]



One-way valve

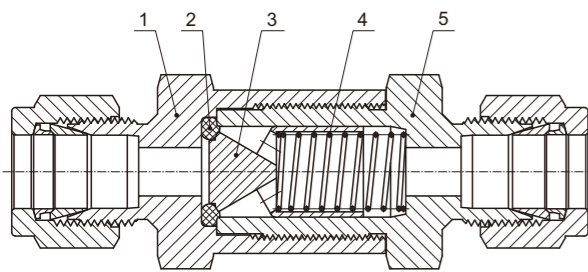
SPCV series

Feature

1. Fixed opening pressure
2. Working pressure can reach: 3000PSI (207bar) @ 70 °F (20° C)
3. Working temperature can reach: 375 °F (190 °C) @ VITON O-ring (standard)
4. Multiple terminal connections available for selection;
5. Each valve undergoes pressure testing before leaving the factory.



Standard structural materials



Number	Component Name	Body Material
		stainless steel
1	inlet valve body	316 stainless steel/A479
2	O-rings	VITON(standard)
3	lift the head	316 stainless steel/A479
4	spring	304 stainless steel
5	export valve body	316 stainless steel/A479

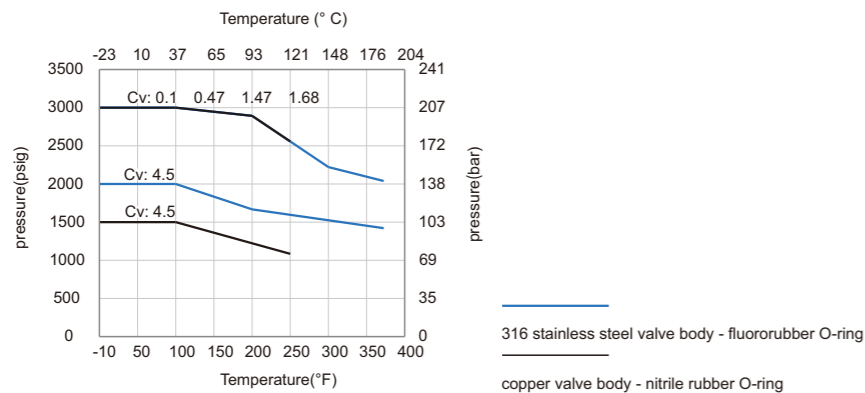
20°C(70°F)opening pressure and resealing pressure

opening pressure psig(bar)	pressure range psig(bar)	resealing pressure psig(bar)
1/3(0.02)	3(0.21)under	6(0.42)under back pressure
1(0.07)	4(0.28)under	6(0.42)under back pressure
10(0.69)	7 to 15(0.48 to 1.0)	3(0.21)or above import pressure
25(1.7)	20 to 30(1.4 to 2.1)	17(1.2)or above import pressure

O-rings

O-rings Material	Temperature Range°F(°C)	Code
nitrile rubber	-10 to 250(-23 to 121)	N
ethylene propylene	-70 to 250(-57 to 121)	E
Fluororubber (fluorocarbon)	-10 to 375(-23 to 190)	standard
Kalrez	-15 to 500(-26 to 260)	K
neoprene	-35 to 225(-37 to 107)	P

Pressure - Temperature Class



back pressure

Valves with a nominal opening pressure of 5 sig or lower may require back pressure to test the resealing pressure.

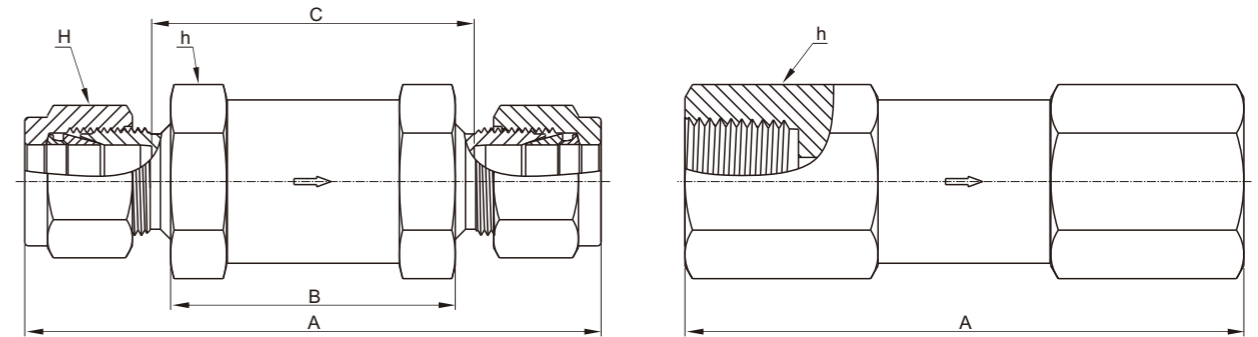
Example:

For valves with a rated opening pressure of 25 PSI, the actual opening pressure is between 22 and 28 PSI, and the resealing pressure range is between 16 and 22 PSI.

For one-way valves with a rated opening pressure of 3psig or lower, a back pressure of up to 4sig may be required to test for resealing airtightness.

Testing

Each one-way valve is tested for its opening pressure and resealing pressure before discharge.



Size table

Model		Cv	Connection Method		size(mm)				
series	specs		import	Export	A	B	C	h	H
SPCV	S2	0.1	1/8" card sleeve connector		57.2	26.6	31.2	15.9	11.1
	F2N	0.47	1/8 NPT female thread		50.0	-	-	15.9	-
	S4	0.47	1/4" card sleeve connector		62.2	26.6	31.4	15.9	14.3
	F4N	0.47	1/4 NPT female thread		57.1	-	-	19.1	-
	S6	1.47	3/8" card sleeve connector		76.2	37.6	42.4	22.2	17.5
	F6N	1.47	3/8 NPT female thread		73.9	-	-	22.2	-
	S8	1.68	1/2" card sleeve connector		86.6	42.9	40.8	25.4	22.2
	F8N	1.68	1/2 NPT female thread		90.6	-	-	27.0	-
	S10	2.6	5/8" card sleeve connector		91.7	48.0	42.8	28.6	25.4
	S12	4.5	3/4" card sleeve connector		99.8	56.1	51.1	31.8	28.6
	F12N	4.5	3/4 NPT female thread		99.8	-	-	31.8	-
	S16	4.5	1" card sleeve connector		111.2	58.4	48.9	38.1	38.1
	F16N	4.5	1" NPT female thread		114.3	-	-	41.3	-

1. The size is the size of the GBO-LOK nut when tightened by hand;
2. The size is for reference only. If there are any changes, the actual product shall prevail.

Ordering Information

Example



1

Valve Series

SPCV

2

End Connection Type

S	M	F
GBO-LOK card sleeve connector	male thread joint	female thread joint

3

End Connection Specs

Tube outer diameter code

code	2	4	6	8	12	16
OD(in.)	1/8	1/4	3/8	1/2	3/4	1"
code	3M	6M	8M	10M	12M	16M
OD(mm)	3	6	8	10	12	16

Pipe thread code

specs(in.)	1/8	1/4	3/8	1/2	3/4	1"	
code	NPT thread	2N	4N	6N	8N	12N	16N
	BSPT thread	2R	4R	6R	8R	12R	16R

4

Open pressure

0.3P	1P	10P	25P
1/3psig	1psig	10psig	25psig

5

Sealing Material

blank	N	E	K	P
fluororubber	nitrile rubber	Ethylene propylene	Kalrez	neoprene

6

Body Material

SS	B
316 stainless steel	brass

High pressure check valve

SHCV series

Feature

1. Working pressure can reach: 414 bar (6000 PSI) @ 70 °F (20° C);
2. Working temperature can reach: 375 °F (190 °C) @ VITON O-ring (standard);
3. Opening pressure: 1/3 PSI to 25 PSI (0.02 bar to 1.7 bar);
4. Multiple terminal connections available for selection;
5. The standard valve body material is 316 stainless steel;
6. Each valve undergoes pressure testing before leaving the factory.



Technical Parameter

One-way valve series	Inside Diameter(mm)	working pressure and back pressure @70°F(20°C)	Discharge Coefficient Cv	Opening Pressure
SHCV1	4.8	6000psig(414bar)	0.67	1/3, 1, 5, 10, 25psig (0.02, 0.06, 0.34, 0.68, 1.7bar)
SHCV2	7.8		1.80	
SHCV3	15.0	5000psig(344bar)	4.70	

Sealing Material

O-rings Material	Temperature Range	code
Fluororubber (fluorocarbon)	-10°F to 375°F(-23°C to 190°C)	standard Material
nitrile rubber	-10°F to 250°F(-23°C to 121°C)	N
Ethylene propylene	-70°F to 250°F(-57°C to 121°C)	E

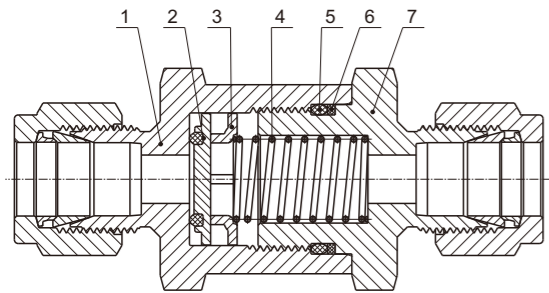
Opening pressure and resealing pressure at 20 ° C (70 ° F)

Opening Pressure psig(bar)	Pressure Range psig(bar)	Min Resealing Pressure psig(bar)	Code
1/3 (0.02)	3 (0.21)under	6 (0.42)under back pressure	0.3P
1 (0.07)	4 (0.28)under	5 (0.34)under back pressure	1P
5 (0.34)	3 to 9 (0.20 to 0.62)	2 (0.13)under back pressure	5P
10 (0.69)	7 to 15 (0.48 to 1.0)	3 (0.21)or above inlet pressure	10P
25 (1.7)	20 to 30 (1.4 to 2.1)	17 (1.2)or above inlet pressure	25P

Testing

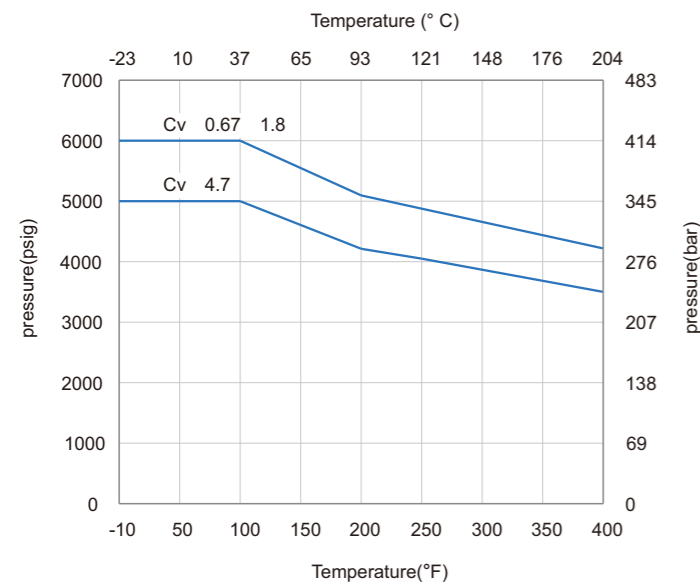
1. Each one-way valve is tested for its opening pressure and resealing pressure before discharge.

Standard structural materials

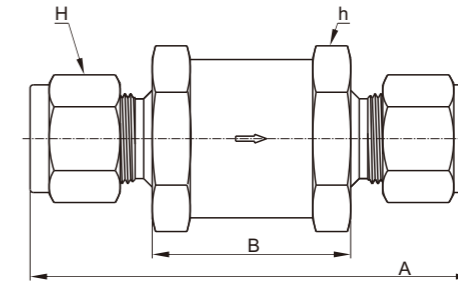


Number	Component Name	Body Material
		stainless steel
1	Inlet valve body	316 stainless steel/A479
2	lift head assembly	fluorocarbon FKM bond 316 stainless steel/A479
3	lift head retaining ring	316 stainless steel/A240
4	spring	304 stainless steel
5	O-rings	VITON(standard)
6	Support Ring	PTFE
7	export valve body	316 stainless steel/A479

Pressure - Temperature Class



316 Stainless Steel Valve Body - Fluororubber O-ring



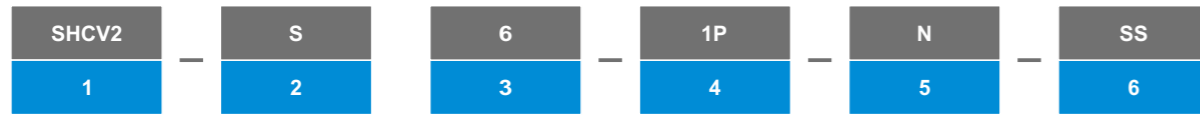
Size Table

series	Model	ID (mm)	Cv	Connection Method		pressure psig(bar)	size(mm)				
				import	Export		A	B	H	h	
SHCV1	S2	4.8	0.67	1/8" card sleeve connector		6000(414)	57.7	26.4	11.1	17.5	
	S4			1/4" card sleeve connector			61.7		14.3		
	S6M			6mm card sleeve connector					14		
	F4N			1/4 NPT female thread			54.1	-	-		
	M2N			1/8 NPT male thread			45.5	26.4	-		
	M4N			1/4 NPT male thread			55.1				
SHCV2	S6	7.8	1.8	3/8" card sleeve connector		6000(414)	69.9	31.2	17.5	25.4	
	S8			1/2" card sleeve connector			75.2		22.2		
	S8M			8mm card sleeve connector			68.6		16		
	S10M			10mm card sleeve connector			71.1	19			
	S12M			12mm card sleeve connector			75.2	22			
	F6N			3/8 NPT female thread			5000(344)	64.8	-		-
	F8N			1/2 NPT female thread			4600(317)	77.0	-		26.9
	M6N			3/8 NPT male thread			6000(414)	59.9	31.2		-
	M8N			1/2 NPT male thread			69.3				25.4
SHCV3	S12	15	4.7	3/4" card sleeve connector		5000(344)	89.4	45.5	28.6	41.3	
	S16			1" card sleeve connector			98.6		38.1		
	S22M			22mm card sleeve connector			88.4		45.5		32
	S25M			25mm card sleeve connector			98.6	40			
	F12N			3/4 NPT female thread			4300(296)	82.0	-		-
	F16N			1" NPT female thread			4100(282)	97.3	-		-
	M12N			3/4 NPT male thread			5000(344)	83.6	45.5		-
	M16N			1" NPT male thread			93.2	45.7			

1. The size is the size of the GBO-LOK nut when tightened by hand;
2. The dimensions are for reference only. If there are any changes, the actual product shall prevail.

Ordering Information

Example



1 Valve Series

SHCV1	SHCV2	SHCV3
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2 End Connection Type

S	M	F
GBO-LOKcard sleeve connector	male thread joint	female thread joint

3 End Connection Specs

Tube outer diameter code							Pipe threadcode						
code	2	4	6	8	12	16	specs(in.)	1/8	1/4	3/8	1/2	3/4	1"
OD(in.)	1/8	1/4	3/8	1/2	3/4	1"	NPT thread	2N	4N	6N	8N	12N	16N
code	6M	8M	10M	12M	22M	25M	BSPT thread	2R	4R	6R	8R	12R	16R
OD(mm)	6	8	10	12	22	25							

4 Open Pressure

0.3P	1P	5P	10P	25P
1/3psig	1psig	5psig	10psig	25psig

5 Sealing Material

blank	N	E
fluororubber	nitrile rubber	Ethylene propylene

6 Body Material

SS
316 stainless steel

Integrated one-way valve

SOCV series

Feature

1. Integrated valve body, compact structure;
2. Working pressure can reach: 3000PSI (207bar) @ 70 °F (20° C);
3. Working temperature can reach: 375 °F (190 °C) @ VITON O-ring (standard);
4. Fixed opening pressure: 1/3 PSI to 25 PSI (0.02 bar to 1.7 bar);
5. NPT and ISO taper thread (PT) end connections are available for selection;
6. We can provide 316 stainless steel and brass materials;
7. Each one-way valve undergoes pressure testing before leaving the factory.



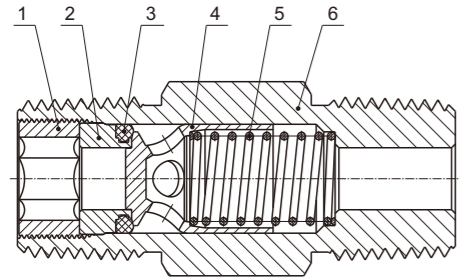
Technical Parameter

Opening Pressure	1/3, 1, 10, 25psig(0.02, 0.06, 0.68, 1.7bar)
Max working pressure@70°F(20°C)	3000psig(206bar)
Max back pressure@70°F(20°C)	3000psig(206bar)
Flow coefficient (Cv)	SOCV1/SOCV2: 0.35 SOCV3/SOCV4: 1.20
Working temperature range	(VITON): -10°F to 375°F(-23°C to 190°C) (NBR): -10°F to 250°F(-23°C to 121°C)

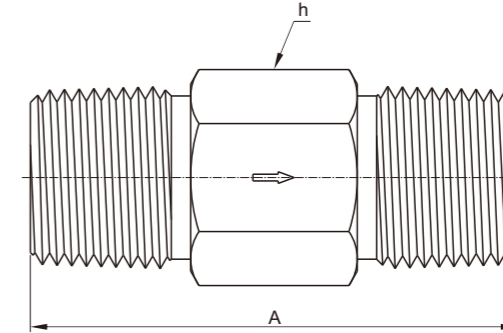
Opening pressure and resealing pressure at 20 ° C (70 ° F)

Opening Pressure psig(bar)	Pressure Range psig(bar)	Min Resealing Pressure psig(bar)	Code
1/3(0.02)	3 (0.21)under	6 (0.42)under back pressure	0.3P
1(0.07)	4 (0.28)under	5 (0.34)under back pressure	1P
10 (0.69)	7 to 13 (0.48 to 0.9)	3 (0.21)under back pressure	10P
25 (1.7)	21 to 29 (1.5 to 2.0)	5 (0.34) or above inlet pressure	25P

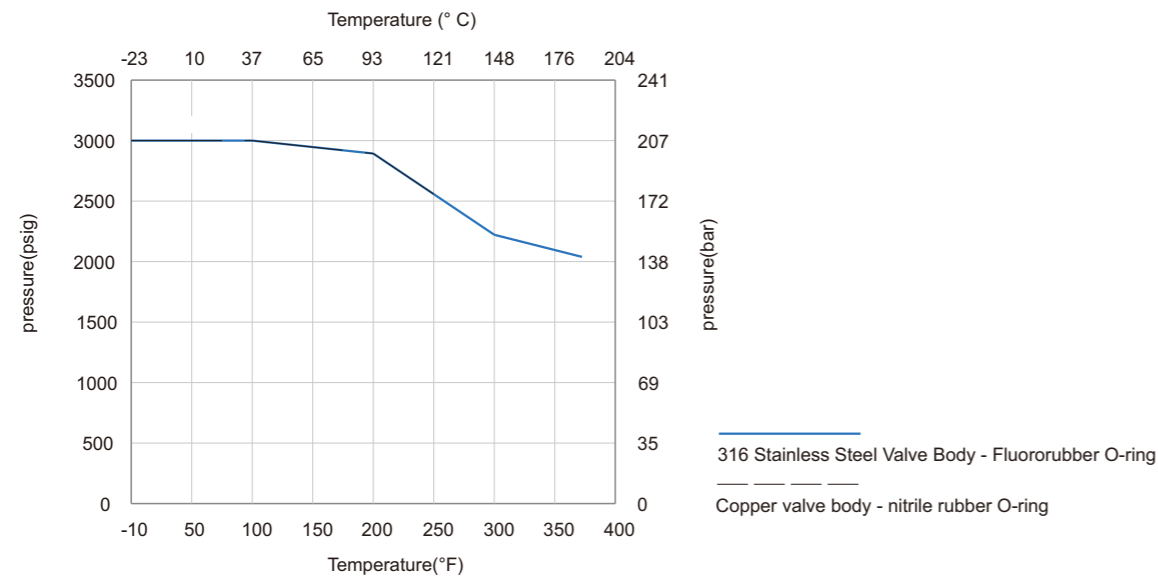
Standard structural materials



Number	Component Name	Body Material	
		stainless steel	brass
1	Insert locking screw	316 stainless steel/A479	brass/B16
2	insert	316 stainless steel/A479	brass/B16
3	O-rings	VITON	NBR
4	lift the head	316 stainless steel/A479	brass/B16
5	spring	304 stainless steel	
6	valve body	316 stainless steel/A479	brass/B16



Pressure - Temperature Class

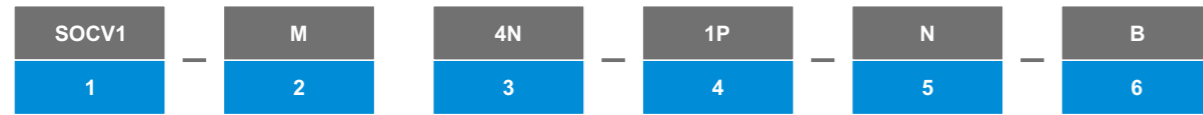


Size Table

Model		Connection Method		size(mm)	
series	specs	import	Export	A	h
SOCV1	M4N	1/4 NPT male thread	1/4 NPT male thread	41.2	14.3
	M4R	1/4 ISO taper male thread	1/4 ISO taper male thread		
SOCV2	F4N	1/4 NPT female thread	1/4 NPT female thread	61.2	19.1
	F4R	1/4 ISO taper female thread	1/4 ISO taper female thread	64.5	
	M4N-F4N	1/4 NPT male thread	1/4 NPT female thread	44.5	
	F4N-M4N	1/4 NPT female thread	1/4 NPT male thread	58.2	
SOCV3	M8N	1/2 NPT male thread	1/2 NPT male thread	57.9	22.2
SOCV4	F8N	1/2 NPT female thread	1/2 NPT female thread	94.2	26.9
	M8N-F8N	1/2 NPT male thread	1/2 NPT female thread	71.9	

Ordering Information

Example



1

Valve Series

SOCV1	SOCV2	SOCV3	SOCV4
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2

End Connection Type

M	F
male thread joint	female thread joint

3

End Connection Specs

Pipe thread code		1/4	1/2
code	NPT thread	4N	8N
	BSPT thread	4R	8R

4

Open Pressure

0.3P	1P	10P	25P
1/3psig	1psig	10psig	25psig

5

Sealing Material

blank	N	E
fluororubber	nitrile rubber	Ethylene propylene

6

Body Material

SS	B
316 stainless steel	brass

Integrated pressure adjustable one-way valve

SOACV series

Feature

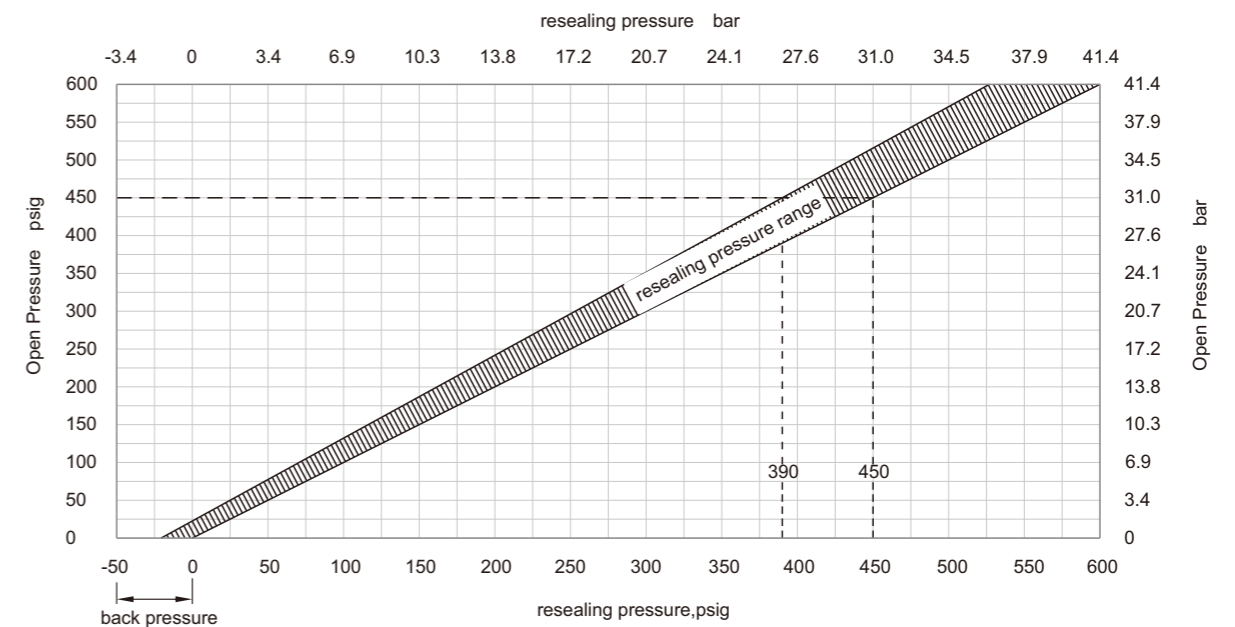
1. Integrated valve body, compact structure;
2. Working pressure can reach: 3000PSI (207bar) @ 70 °F (20° C);
3. Working temperature can reach: 375 °F (190 °C) @ VITON O-ring (standard);
4. Adjustable opening pressure: 3psig to 600psi (0.2bar to 41.4bar);
5. 1/4" and 1/2" NPT thread and ISO taper thread (PT) end connections are available for selection;
6. We can provide 316 stainless steel and brass materials;
7. Each one-way valve undergoes pressure testing before leaving the factory.



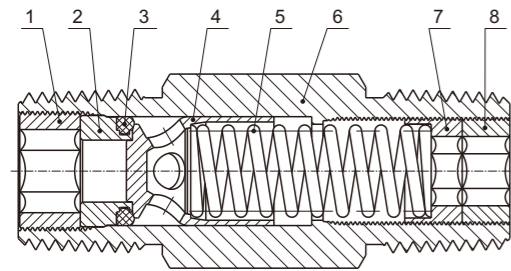
Technical Parameter

Valve Specs	SOACV1/SOACV2	SOACV3
Opening Pressure	3psig to 50psig (0.2bar to 3.4bar) 50psig to 150psig (3.4bar to 10.3bar) 150psig to 350psig (10.3bar to 24.1bar) 350psig to 600psig (24.1bar to 41.3bar)	
Max working pressure@70°F(20°C)	3000psig(206bar)	
Max back pressure@70°F(20°C)		
Working temperature range	(VITON): -10°F to 375°F(-23°C to 190°C) (NBR): -10°F to 250°F(-23°C to 121°C)	
Flow coefficient (Cv)	0.35	1.20

Opening pressure and resealing pressure at 20 °C (70 ° F)

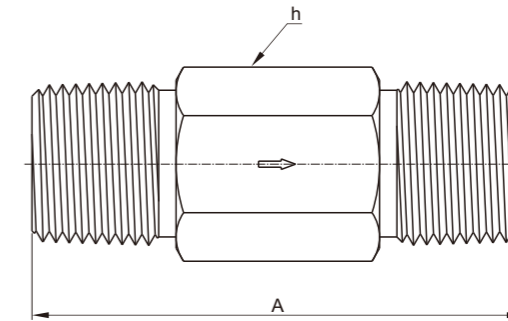
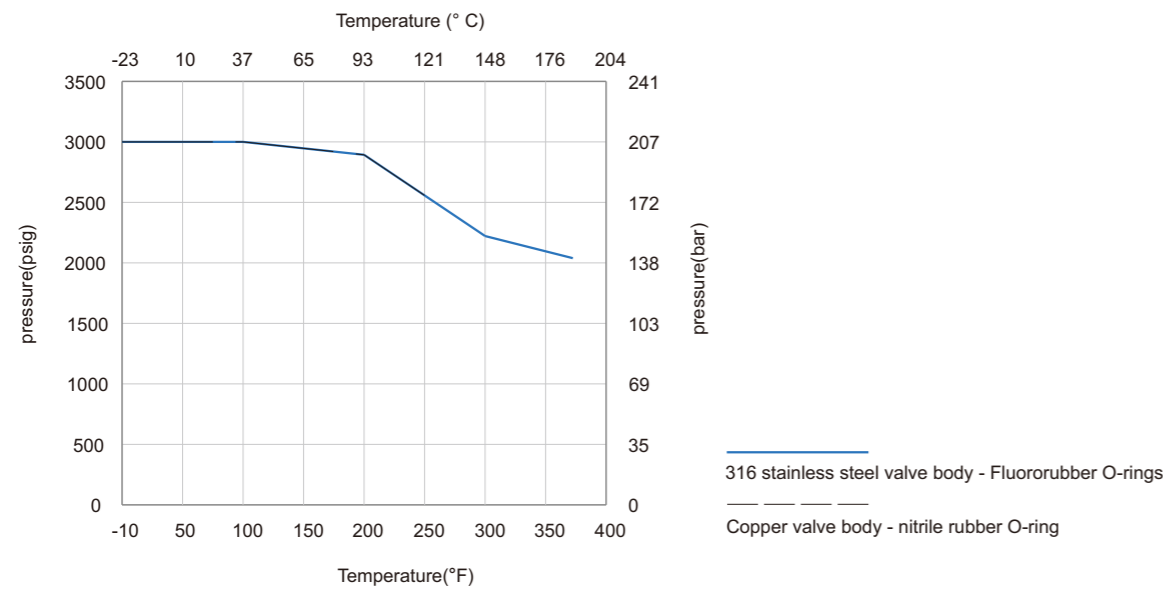


Standard structural materials



Number	Component Name	Body Material	
		stainless steel	brass
1	Insert locking screw	316 stainless steel/A479	brass/B16
2	insert	316 stainless steel/A479	brass/B16
3	O-rings	VITON	NBR
4	lift the head	316 stainless steel/A479	brass/B16
5	spring	304 stainless steel	
6	valve body	316 stainless steel/A479	brass/B16
7	regulating screw	316 stainless steel/A479	brass/B16
8	locking screws	316 stainless steel/A479	brass/B16

Pressure - Temperature Class

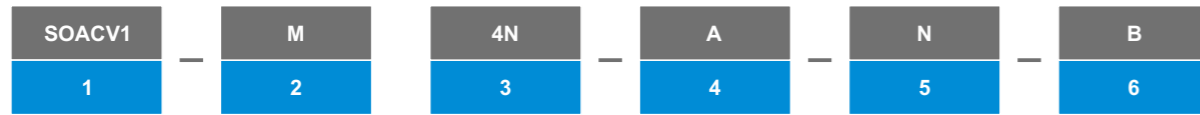


Size Table

Model		Connection Method		size(mm)	
series	specs	import	Export	A	h
SOACV1	M4N	1/4 NPT male thread	1/4 NPT male thread	41.1	14.3
	M4R	1/4 ISO taper male thread	1/4 ISO taper male thread	41.1	14.3
SOACV2	F4N	1/4 NPT female thread	1/4 NPT female thread	75.7	19.1
SOACV3	M8N	1/2 NPT male thread	1/2 NPT male thread	65.0	22.2
	M8R	1/2 ISO taper male thread	1/2 ISO taper male thread	65.0	22.2

Ordering Information

Example



1 Valve Series

SOACV1	SOACV2	SOACV3
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2 End Connection Type

M	F
male thread joint	female thread joint

3 End Connection Specs

Pipe thread code		1/4	1/2
code	NPT thread	4N	8N
	BSPT thread	4R	8R

4 Open Pressure

A	B	C	D
3psig to 50psig	50psig to 150psig	150psig to 350psig	350psig to 600psig

5 Sealing Material

blank	N	E
fluororubber	nitrile rubber	Ethylene propylene

6 Body Material

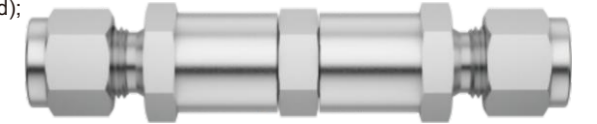
SS	B
316 stainless steel	brass

Pressure adjustable one-way valve

SACV series

Feature

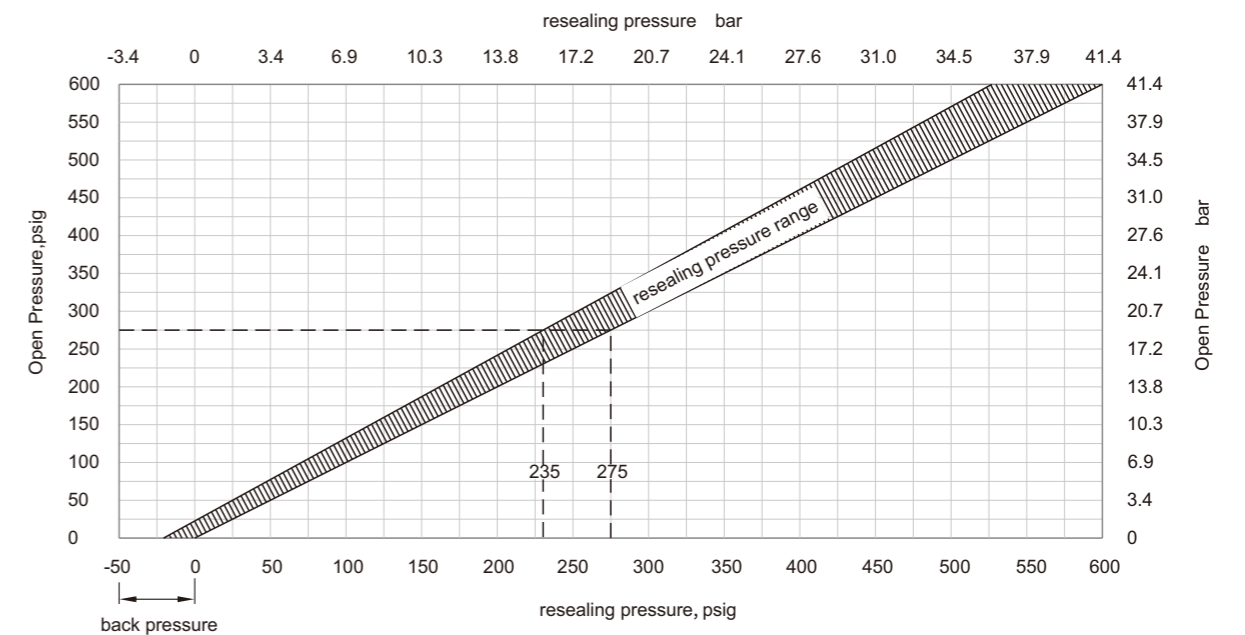
1. Working pressure can reach: 3000PSI (207bar) @ 70 °F (20 °C);
2. Working temperature can reach: 375 °F (190 °C) @ VITON O-ring (standard);
3. Adjustable opening pressure: 3psig to 600psi (0.2bar to 41.4bar);
4. Multiple types of terminations are available for selection;
5. We can provide 316 stainless steel and brass materials;
6. Each one-way valve undergoes pressure testing before leaving the factory.



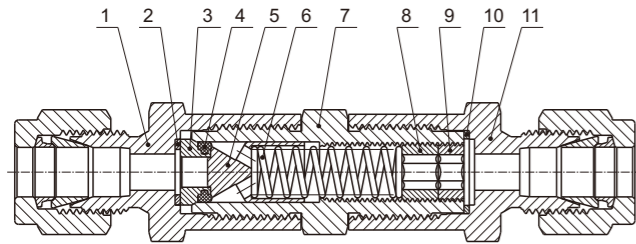
Technical Parameter

Valve Specs	SACV
Opening Pressure	3psig to 50psig (0.2bar to 3.4bar) 50psig to 150psig (3.4bar to 10.3bar) 150psig to 350psig (10.3bar to 24.1bar) 350psig to 600psig (24.1bar to 41.3bar)
Max working pressure@70°F(20°C)	3000psig(206bar)
Max back pressure@70°F(20°C)	
Working temperature range	(VITON): -10°F to 375°F(-23°C to 190°C) (NBR): -10°F to 250°F(-23°C to 121°C)
Flow coefficient (Cv)	0.37

Opening pressure and resealing pressure at 20 °C (70 °F)

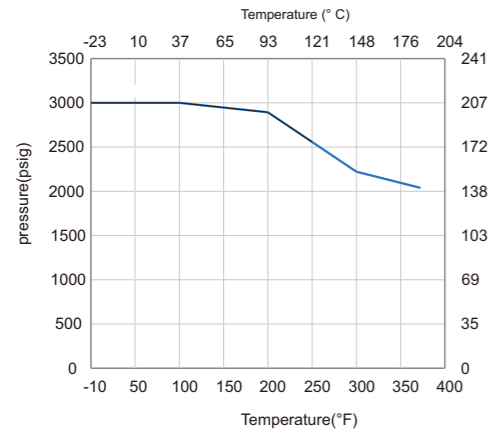


Standard structural materials

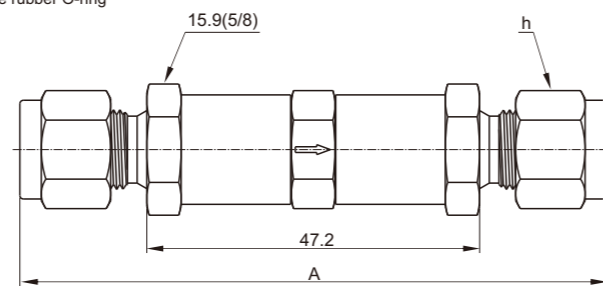


Number	Component Name	Body Material	
		stainless steel	brass
1	Inlet valve body	316 stainless steel/A479	brass/B16
2	entrance gasket	316 stainless steel coated with PTFE spray coating	
3	insert	316 stainless steel/A479	brass/B16
4	O-rings	VITON	NBR
5	Lift the head	316 stainless steel/A479	brass/B16
6	spring	304 stainless steel	
7	valve body	316 stainless steel/A479	brass/B16
8	regulating screw	316 stainless steel/A276	
9	locking screws	316 stainless steel/A276	
10	export gasket	316 stainless steel coated with PTFE spray coating	
11	export valve body	316 stainless steel/A479	brass/B16

Pressure - Temperature Class



316 stainless steel valve body - Fluororubber O-rings
 Brass valve body - Nitrile rubber O-ring



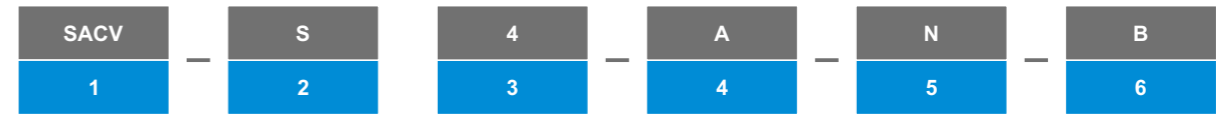
Size Table

Model		Connection Method		size(mm)	
series	specs	import	Export	A	h
SACV	S4	1/4" card sleeve connector	1/4" card sleeve connector	82.0	14.3
	S6M	6mm card sleeve connector	6mm card sleeve connector		14
	S8M	8mm card sleeve connector	8mm card sleeve connector	84.3	16
	M4N-S4	1/4 NPT male thread	1/4" card sleeve connector	79.2	14.3

The size is for reference only. If there are any changes, the actual product shall prevail.

Ordering Information

Example



1 Valve Series

SACV

2 End Connection Type

S	M
GBO-LOK card sleeve connector	male thread joint

3 End Connection Specs

Tube outer diameter code

code	4	/
OD(in.)	1/4	/
code	6M	8M
OD(mm)	6	8

Pipe threadcode

specs(in.)	1/4
NPT threadcode	4N

4 Open Pressure

A	B	C	D
3psig to 50psig	50psig to 150psig	150psig to 350psig	350psig to 600psig

5 Sealing Material

blank	N
fluororubber	nitrile rubber

6 Body Material

SS	B
316 stainless steel	brass