

SFBV60 Series

High Pressure Forged Ball Valves

Features

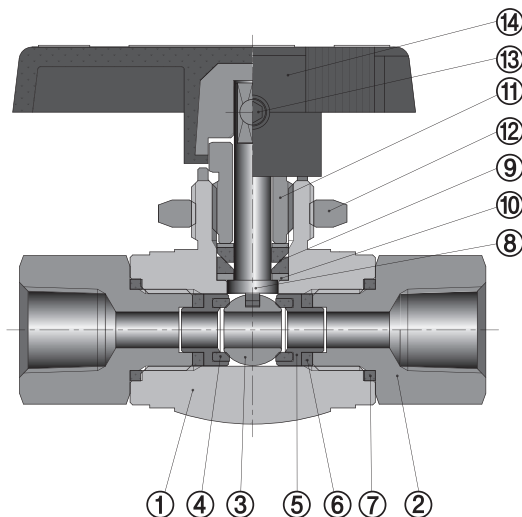
- Pressure rating up to 6000psig (413bar) @ 21°C (70°F).
- Temperature rating from -54°C (-65°F) to 177°C (350°F) with standard PCTFE seat.
- Free floating ball design provides seat wear compensation, therefore ensures leak proof shut-off at high pressure.
- High flow in a compact design.
- Panel mountable as standard.
- Blow out proof design with internally loaded stem.
- Micro-finished ball provides a positive seal.
- Low operating torques and positive handle stops.
- Handle indicates flow direction.
- Straight through flow path for minimum pressure drop.
- Bi-directional flow.
- Chevron packing standard for positive leak tight.
- 90 degree actuation.
- Every valve is 100% factory tested with the Nitrogen @ 1000psi (69bar).
- Variety of end connections include reliable S-LOK tube fittings Male/Female NPT & ISO/BSP threads.



Applications

- Water, Oil, Gas, Petrochemical

Materials of Construction

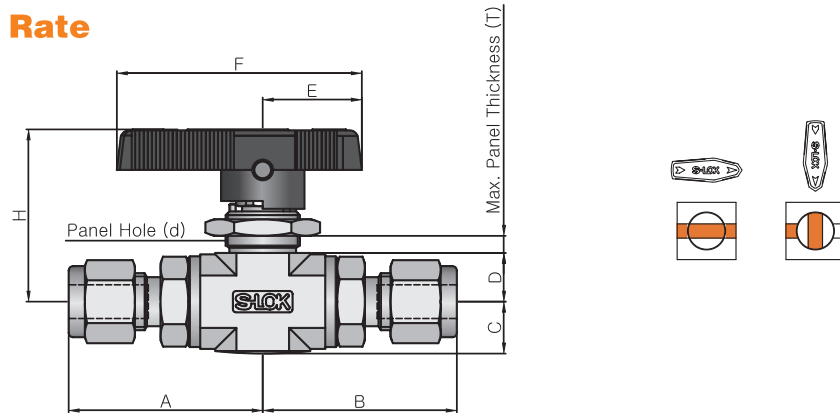


No	Component	Material
1	Body	A182 F316
2	End Connector	SS316 / A479 or A276
3	Ball	SS316 / A479 or A276
4	Seat	PCTFE (Optional PTFE, PEEK)
5	Retainer	SS316 / A479 or A276
6	Retainer Seal	PTFE
7	End Seal	PTFE
8	Stem	SS316 / A479 or A276
9	Stem Packing	PTFE
10	Stem Washer	Stainless Steel
11	Packing Bolt	SS316 / A479 or A276
12	Lock Nut	Stainless Steel
13	Set Screw	Stainless Steel
14	Handle	Black Nylon

- **Note** : Wetted parts lubricant is fluorocarbon based.

Dimensions & Flow Rate

2-Way (Shut-off Valves)

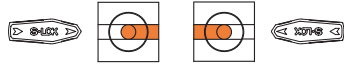


Ordering Number		Orifice		Cv	End Connections		Dimensions (mm)										
		mm	inch		Inlet	Outlet	A	B	C	D	E	F	H	d	T		
SFBV1	S-1T	1.3	0.052	0.06	1/16" S-LOK		33.0										
	S-2T	2.4	0.093	0.21	1/8" S-LOK		34.5										
	F-2N	4.2	0.165	0.93	1/8" Female NPT		27.2	10.0	9.4	19.0	47.0	33.2	16.3	3.3			
	M-2N				1/8" Male NPT		29.9										
	S-4T				1/4" S-LOK		37.6										
	M-4N				1/4" Male NPT		34.3										
S-3M	2.2	0.086	0.18	3mm S-LOK		34.8											
SFBV2	S-2T	2.4	0.093	0.26	1/8" S-LOK		41.9								10.7	11.9	25.6
	S-4T	1/4" S-LOK		44.2													
	MS-4N-4T	4.8	0.189	1.04	1/4" Male NPT	1/4" S-LOK	44.2	41.1									
	FS-4N4T				1/4" Female NPT	1/4" S-LOK	38.4										
	F-4N	1/4" Female NPT		38.4													
	M-4N	1/4" Male NPT		41.1													
	MF-4N	6.4	0.25	2.34	1/4" Male NPT	1/4" Female NPT	38.4	41.1									
	MS-4N6T				1/4" Male NPT	3/8" S-LOK	45.7	41.1									
	FS-4N6T				1/4" Female NPT	3/8" S-LOK	38.4										
	S-6T				3/8" S-LOK		45.7										
	M-6N	3/8" Male NPT		41.1													
	S-6M	4.8	0.189	1.04	6mm S-LOK		44.5										
	S-8M	6.4	0.25	2.34	8mm S-LOK		45.2										
	S-10M				10mm S-LOK		46.0										
SFBV3	F-6N	10.3	0.406	6.42	3/8" Female NPT		49.5	17.5	17.8	38.1	99.0	62.9	22.9	9.7			
	F-8N				1/2" Female NPT		54.6										
	S-8T				1/2" S-LOK		59.4										
	M-8N				1/2" Male NPT		56.4										
	S-12T	3/4" S-LOK		59.2													
	S-12M	9.5	0.375		5.57	12mm S-LOK											
S-16M	10.3	0.406	6.42	16mm S-LOK													

Pressure Drop to Atmosphere (Δp), psi		Cv								
		0.06	0.18	0.21	0.26	0.93	1.04	2.34	5.57	6.42
Air SCFM @70°F(21°C)	10	5.9	17.7	20.7	25.6	91.5	102.4	230.3	548.2	631.9
	50	13.2	39.6	46.2	57.2	204.7	228.9	515.0	1225.9	1413.0
	100	18.7	56.0	65.4	80.9	289.5	323.7	728.3	1733.7	1998.3
Water US GPM @70°F(21°C)	10	0.2	0.6	0.7	0.8	2.9	3.3	7.4	17.6	20.3
	50	0.4	1.3	1.5	1.8	6.6	7.4	16.5	39.4	45.4
	100	0.6	1.8	2.1	2.6	9.3	10.4	23.4	55.7	64.2

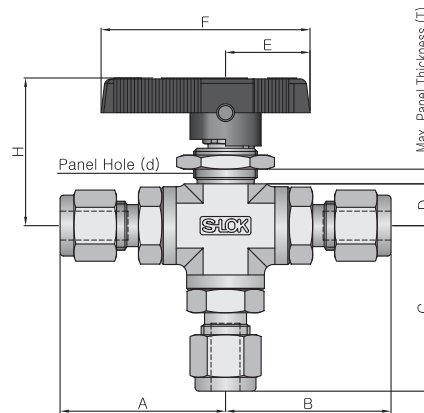
* Flow rate calculated with 1000psig (69 bar) inlet pressure.
 * To determine m³/hr multiply GPM by SCFM by 1.69.

3-Way (Switching Valves)



3-Way ball valve

SFBV 3-way ball valve is designed to switch media through the bottom port and direct it to out of two outlet ports.



Ordering Number		Orifice		Cv	End Connections		Dimensions (mm)							
		mm	inch		Inlet	Outlet	A	B	C	D	E	F	H	d
SFBV1-3B	S-1T	1.3	0.052	0.06	1/16" S-LOK		33.0	33.7	8.5	19.0	47.0	33.2	16.3	3.3
	S-2T	2.4	0.093	0.21	1/8" S-LOK		34.5	36.4						
	F-2N	4.2	0.165	0.63	1/8" Female NPT		27.2	29.9						
	M-2N				1/8" Male NPT		29.9	29.9						
	S-4T				1/4" S-LOK		37.6	37.2						
	M-4N				1/4" Male NPT		34.3	29.9						
S-3M	2.2	0.086	0.18	3mm S-LOK		34.8	36.4							
SFBV2-3B	S-2T	2.4	0.093	0.21	1/8" S-LOK		41.9	45.5	11.9	25.6	78.0	49.6	19.6	6.4
	S-4T	4.8	0.189	0.7	1/4" S-LOK		44.2	47.8						
	F-4N	5.0	0.196	0.87	1/4" Female NPT		38.4	41.9						
	M-4N				1/4" Male NPT		41.1	44.7						
	S-6T				3/8" S-LOK		45.7	49.3						
	M-6N				3/8" Male NPT		41.1	44.7						
	S-6M	4.8	0.189	0.7	6mm S-LOK		44.5	47.8						
	S-8M	5.0	0.196	0.87	8mm S-LOK		45.2	48.5						
S-10M	10mm S-LOK				46.0	49.5								
SFBV3-3B	F-6N	10.3	0.406	3.62	3/8" Female NPT		49.5	58.2	17.8	38.1	99.0	62.9	22.9	9.7
	F-8N				1/2" Female NPT		54.6	63.2						
	S-8T				1/2" S-LOK		59.4	68.1						
	M-8N				1/2" Male NPT		56.4	65.8						
	S-12T	3/4" S-LOK		59.2	68.1									
	S-12M	9.5	0.375	3.46	12mm S-LOK			67.8						
	S-16M	10.3	0.406	3.62	16mm S-LOK		56.9	65.5						

Pressure Drop to Atmosphere (Δp), psi		Cv										
		0.06	0.18	0.21	0.63	0.7	0.87	0.93	2.34	3.46	3.62	6.42
Air SCFM @ 70°F (21°C)	10	5.9	17.7	20.7	62.0	68.9	85.6	91.5	230.3	340.6	356.3	631.9
	50	13.2	39.6	46.2	138.7	154.1	191.5	204.7	515.0	761.5	796.7	1413.0
	100	18.7	56.0	65.4	196.1	217.9	270.8	289.5	728.3	1077.0	1126.8	1998.3
Water US GPM @ 70°F (21°C)	10	0.2	0.6	0.7	2.0	2.2	2.8	2.9	7.4	10.9	11.4	20.3
	50	0.4	1.3	1.5	4.5	4.9	6.2	6.6	16.5	24.5	25.6	45.4
	100	0.6	1.8	2.1	6.3	7.0	8.7	9.3	23.4	34.6	36.2	64.2

* Flow rate calculated with 1000psig (69 bar) inlet pressure.

* To determine m³/hr multiply GPM by 0.227 SCFM by 1.69.

Technical Data

Pressure and Temperature Rating

Seat Material	Pressure Rating @ 21°C (70°F)	Temperature Range	Pressure Rating @ Max. Temperature
PCTFE	6000psig (413 bar)	-54 to 177°C (-65 to 350°F)	1000psig (69 bar) @ 177°C (350°F)
PEEK	6000psig (413 bar)	-54 to 232°C (-65 to 450°F)	700psig (48 bar) @ 232°C (450°F)
PTFE	1500psig (103 bar)	-54 to 177°C (-65 to 350°F)	250psig (17.2 bar) @ 177°C (350°F)

* Pressure Rating with 3-way side ports of as inlet : 150psig (10bar)

CNG / NGV Certifications (SFBVC Series)

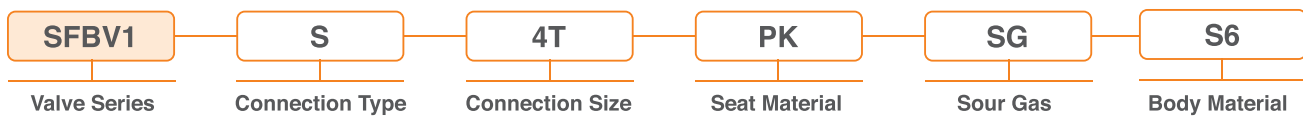
- SFBVC Series valve provides leak tight integrity in both low and high pressure systems in CNG & NGV applications.
- Valves with PEEK seat, HNBR O-ring and add Disc Spring are compatible with CNG fluid.

Certificates	ECE R110	ANSI NGV3.1-2012	ISO 15500
CERT. No.	E4-110R-010333	126840AUT14	12684MECH103
Classification	Class 0	P36	Manual Valve
Temperature Range	-40 to 120°C (-40 to 248°F)	-40 to 120°C (-40 to 248°F)	-40 to 120°C (-40 to 248°F)
Pressure Rating	260 bar	248 bar	260 bar

Testing

- Every valve is tested for bubble-tight leakage at both seat and stem packing with nitrogen at 1000psig (69bar).
- Seats have a maximum allowable leak rate of 0.1(SCCM).
- Optional tests are available upon request.

Ordering Information



- SFBV** : 2-Way Straight
- SFBV-3B** : 3-Way Switching
- SFBVC** : CNG / NGV Service

- Nil** : PCTFE (Standard)
- PK** : PEEK
- TE** : PTFE

- Nil** : Standard
- SG** : Sour Gas Service

- S6** : 316 Stainless Steel
- BS** : Brass