

SBB

Bellows Valves

Straight-type

The SBB series of pipe size bellows valves have a compact design and are intended for use in high Cv and high durability supply lines.

Features

- We offer not only all purpose butt weld connection but also flange connections and union connectons.
- Achieving reduced weight with forged valve body.
- Adopted a seat structure to reduce gas pooling and particle shedding.
- By setting the air supply inlet on the top of the actuator, there is no concern over piping direction.
- Purge port options available for the Inlet, Outlet, or Both.

Specifications

Size		SBB10 (10A)	SBB15 (15A)	SBB20 (20A)	SBB25 (25A)
Cv		2.1	3.3	4.5	8.0
Wetted Area Volume		2.319in ³ (38cm ³)	3.234in ³ (53cm ³)	5.248in ³ (86cm ³)	3.726in ³ (143cm ³)
Maximum Operating Pressure		Butt weld, OPEN state 142psig (0.98MPa(G))			
Fluide Temperature Range	Manual	-10~100°C			
	Pneumatic	-		-10~80°C	
Atmospheric Temperature		-10°C~60°C			
Leak Rates	Across the Seat He Leak Rates	≤ 1×10 ⁻⁹ sccs (≤ 1×10 ⁻¹⁰ Pa·m ³ /sec)			
	Inboard He Leak Rates	≤ 1×10 ⁻⁹ sccs (≤ 1×10 ⁻¹⁰ Pa·m ³ /sec)			
Actuation Pressure		-	N · C : 72~101psig (0.5~0.7MPa(G))/N · O : 72~87psig (0.5~0.7MPa(G))		
Cycle Life (N2 Charged, Own Test)	Manual		100,000 cycles		50,000 cycles
	Pneumatic	-	10,000 cycles		

Product Grade

Grade		STD	EP
Material		SUS316L	
Surface Roughness	Only Body's Internal Surface	≤ Rz 3.2 μm	≤ Rz 0.7 μm
		No bead cut in wetted area	
Cleaning		Degreasing + Precision cleaning	
Clean Room Environment		Class 100 clean environment	
Packaging		Single bagged package	Double bagged package

Precautions

- ① SBB series may experience shortened bellows life cycle under certain corrosive environment. Also, SBB series is not compatible with liquid use.
- ② These valves are designed to be used under atmospheric pressure. Usage such as under vacuum vessels is not guaranteed.



Product Code Table

Model	Size	Operation	Valve shape	Connection	Bonnet Gasket material	Disk material	Purge port	Grade + Body material
SBB	15	M	S	W	C	T	IP	EP-316L

SBB-type bellows Seal valve

10:10A
15:15A
20:20A
25:25A

M: Manual

Straight

W: Butt weld
U: Union*1
RF: RF flange

PCTFE

PTFE

No cover sheet:
No purge port:
IP: 1st
OP: 2nd
PP: Both

STD-316L : Mechanical Polished + SUS316L
EP-316L : Electro Polished + SUS316L

* 1 The union type consists of interlock and butt weld types. Please ask to the sales representative about handle color.
* Inch size butt weld also available.

Dimensions

Unit: inch (mm)

Model	Type	Conne- ction	L	L ₁	L ₂	H	H ₁	A	D	t	C	G	d	F	f	n-φh	B	M ₁
	SBB10MS-UCT	10A union (insertion-type)	3.54 (90.0)	1.18 (30.0)	0.39 (10.0)	4.78 (121.5)	0.79 (20.0)	2.76 (70.0)	-	-	-	-	0.70 (17.8)	-	-	-	1.18 (30.0)	2-M6 Depth 0.39 (10.0)
	SBB15MS-UCT	15A union (insertion-type)	3.94 (100.0)	1.38 (35.0)	0.59 (15.0)	4.94 (125.5)	0.94 (24.0)	2.76 (70.0)	-	-	-	-	0.87 (22.2)	-	-	-	1.18 (30.0)	2-M6 Depth 0.39 (10.0)
	SBB20MS-UCT	20A union (insertion-type)	4.33 (110.0)	1.38 (35.0)	0.59 (15.0)	5.79 (147.0)	1.10 (28.0)	2.76 (70.0)	-	-	-	-	1.09 (27.7)	-	-	-	1.38 (35.0)	2-M6 Depth 0.39 (10.0)
	SBB25MS-UCT	25A union (insertion-type)	4.72 (120.0)	1.38 (35.0)	0.59 (15.0)	6.79 (172.5)	1.30 (33.0)	3.35 (85.0)	-	-	-	-	1.36 (34.5)	-	-	-	1.57 (40.0)	2-M6 Depth 0.39 (10.0)
	SBB10MS-UCT-24	10A union (Butt Weld)	3.54 (90.0)	1.97 (50.0)	-	4.78 (121.5)	0.79 (20.0)	2.76 (70.0)	0.68 (17.3)	-	-	-	-	-	-	-	1.18 (30.0)	2-M6 Depth 0.39 (10.0)
	SBB15MS-UCT-128	15A union (Butt Weld)	3.94 (100.0)	2.05 (52.0)	-	4.94 (125.5)	0.94 (24.0)	2.76 (70.0)	0.85 (21.7)	0.06 (1.65)	-	-	-	-	-	-	1.18 (30.0)	2-M6 Depth 0.39 (10.0)
	SBB20MS-UCT-90	20A union (Butt Weld)	4.33 (110.0)	2.09 (53.0)	-	5.79 (147.0)	1.10 (28.0)	2.76 (70.0)	1.07 (27.2)	0.06 (1.65)	-	-	-	-	-	-	1.38 (35.0)	2-M6 Depth 0.39 (10.0)
	SBB25MS-UCT-99	25A union (Butt Weld)	4.72 (120.0)	2.09 (53.0)	-	6.79 (172.5)	1.30 (33.0)	3.35 (85.0)	1.34 (34.0)	0.06 (1.65)	-	-	-	-	-	-	1.57 (40.0)	2-M6 Depth 0.39 (10.0)

Dimensions

Model	Type	Conne- ction	L	L ₁	L ₂	H	H ₁	A	D	t	C	G	d	F	f	n-φh	B	M ₁
	SBB10MS-RFCT	10ARF Flange	3.94 (100.0)	-	-	4.78 (121.5)	0.79 (20.0)	2.76 (70.0)	3.54 (90.0)	-	2.56 (65.0)	1.81 (46.0)	0.47 (12.0)	0.47 (12.0)	0.04 (1.0)	4-15	1.18 (30.0)	2-M6 Depth 0.39 (10.0)
	SBB15MS-RFCT-133	15ARF Flange	4.25 (108.0)	-	-	4.94 (125.5)	0.94 (24.0)	2.76 (70.0)	3.74 (95.0)	-	2.76 (70.0)	2.01 (51.0)	0.72 (18.4)	0.47 (12.0)	0.04 (1.0)	4-15	1.18 (30.0)	2-M6 Depth 0.39 (10.0)
	SBB20MS-RFCT-94	20ARF Flange	4.61 (117.0)	-	-	5.79 (147.0)	1.10 (28.0)	2.76 (70.0)	3.94 (100.0)	-	2.95 (75.0)	2.20 (56.0)	0.94 (23.9)	0.55 (14.0)	0.04 (1.0)	4-15	1.38 (35.0)	2-M6 Depth 0.39 (10.0)
	SBB25MS-RFCT-96	25ARF Flange	5.00 (127.0)	-	-	6.79 (172.5)	1.30 (33.0)	3.35 (85.0)	4.92 (125.0)	-	3.54 (90.0)	2.64 (67.0)	1.21 (30.7)	0.55 (14.0)	0.04 (1.0)	4-19	1.57 (40.0)	2-M6 Depth 0.39 (10.0)
	SBB10MS-WCT	10A Butt weld	7.48 (190.0)	1.97 (50.0)	-	4.78 (121.5)	0.79 (20.0)	2.76 (70.0)	0.68 (17.3)	0.05 (1.2)	-	-	-	-	-	-	1.18 (30.0)	2-M6 Depth 0.39 (10.0)
	SBB15MS-WCT	15A Butt weld	7.87 (200.0)	1.97 (50.0)	-	4.94 (125.5)	0.94 (24.0)	2.76 (70.0)	0.85 (21.7)	0.06 (1.65)	-	-	-	-	-	-	1.18 (30.0)	2-M6 Depth 0.39 (10.0)
	SBB20MS-WCT	20A Butt weld	8.27 (210.0)	1.97 (50.0)	-	5.79 (147.0)	1.10 (28.0)	2.76 (70.0)	1.07 (27.2)	0.06 (1.65)	-	-	-	-	-	-	1.38 (35.0)	2-M6 Depth 0.39 (10.0)
	SBB25MS-WCT	25A Butt weld	8.66 (220.0)	1.97 (50.0)	-	6.79 (172.5)	1.30 (33.0)	3.35 (85.0)	1.34 (34.0)	0.06 (1.65)	-	-	-	-	-	-	1.57 (40.0)	2-M6 Depth 0.39 (10.0)

Product Code Table

Model SBB	Size 15	Operation C	Valve shape S	Connection W	Bonnet Gasket material C	Disk material T	Purge port IP	Grade + Body material EP-316L
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IBC-type bellows seal valve
 15:15A
 20:20A
 25:25A
 C: Normally closed
 O: Normally open*1
 Straight
 W: Butt Weld
 U: Union*2
 RF: RF Flange
 PCTFE
 PTFE
 No cover sheet:
 No purge port:
 IP: 1st
 OP: 2nd
 PP: Both
 STD-316L : Mechanical Polish + SUS316L
 EP-316L : Electro Polish + SUS316L

* 1 Normally open:25A are available.
 * 2 The union type consists of interlock and butt weld types.

Dimensions

Model	Type	Conne- ction	L	L ₁	L ₂	H	H ₁	A	D	t	C	G	d	F	f	n-φh	P	B	M ₁
	SBB15CS-UCT	15A union (insertion-type)	3.94 (100.0)	1.38 (35.0)	0.59 (15.0)	6.61 (168.0)	0.94 (24.0)	3.74 (95.0)	-	-	-	-	0.87 (22.2)	-	-	-	Rc1/4	1.18 (30.0)	2-M6 Depth 0.39 (10.0)
	SBB20CS-UCT	20A union (insertion-type)	4.33 (110.0)	1.38 (35.0)	0.59 (15.0)	7.17 (182.0)	1.10 (28.0)	3.74 (95.0)	-	-	-	-	1.09 (27.7)	-	-	-	Rc1/4	1.38 (35.0)	2-M6 Depth 0.39 (10.0)
	SBB25CS-UCT	25A union (insertion-type)	4.72 (120.0)	1.38 (35.0)	0.59 (15.0)	8.35 (212.0)	1.30 (33.0)	4.13 (105.0)	-	-	-	-	1.36 (34.5)	-	-	-	Rc1/4	1.57 (40.0)	2-M6 Depth 0.39 (10.0)
	SBB25OS-UCT	25A union (insertion-type)	4.72 (120.0)	1.38 (35.0)	0.59 (15.0)	7.17 (182.0)	1.30 (33.0)	4.13 (105.0)	-	-	-	-	1.36 (34.5)	-	-	-	Rc1/4	1.57 (40.0)	2-M6 Depth 0.39 (10.0)
	SBB15CS-UCT-18	15A union (Butt Weld)	3.94 (100.0)	2.05 (52.0)	-	6.61 (168.0)	0.94 (24.0)	3.74 (95.0)	0.85 (21.7)	0.06 (1.65)	-	-	-	-	-	-	Rc1/4	1.18 (30.0)	2-M6 Depth 0.39 (10.0)
	SBB20CS-UCT-21	20A union (Butt Weld)	4.33 (110.0)	2.09 (53.0)	-	7.17 (182.0)	1.10 (28.0)	3.74 (95.0)	1.07 (27.2)	0.06 (1.65)	-	-	-	-	-	-	Rc1/4	1.38 (35.0)	2-M6 Depth 0.39 (10.0)
	SBB25CS-UCT-14	25A union (Butt Weld)	4.72 (120.0)	2.09 (53.0)	-	8.35 (212.0)	1.30 (33.0)	4.13 (105.0)	1.34 (34.0)	0.06 (1.65)	-	-	-	-	-	-	Rc1/4	1.57 (40.0)	2-M6 Depth 0.39 (10.0)
	SBB25OS-UCT-04	25A union (Butt Weld)	4.72 (120.0)	2.09 (53.0)	-	7.17 (182.0)	1.30 (33.0)	4.13 (105.0)	1.34 (34.0)	0.06 (1.65)	-	-	-	-	-	-	Rc1/4	1.57 (40.0)	2-M6 Depth 0.39 (10.0)
	SBB15CS-RFCT	15A RF Flange	4.25 (108.0)	-	-	6.61 (168.0)	0.94 (24.0)	3.74 (95.0)	3.74 (95.0)	-	2.76 (70.0)	2.01 (51.0)	0.72 (18.4)	0.47 (12.0)	0.04 (1.0)	4-15	Rc1/4	1.18 (30.0)	2-M6 Depth 0.39 (10.0)
	SBB20CS-RFCT	20A RF Flange	4.61 (117.0)	-	-	7.17 (182.0)	1.10 (28.0)	3.74 (95.0)	3.94 (100.0)	-	2.95 (75.0)	2.20 (56.0)	0.94 (23.9)	0.55 (14.0)	0.04 (1.0)	4-15	Rc1/4	1.38 (35.0)	2-M6 Depth 0.39 (10.0)
	SBB25CS-RFCT	25A RF Flange	5.00 (127.0)	-	-	8.35 (212.0)	1.30 (33.0)	4.13 (105.0)	4.92 (125.0)	-	3.54 (90.0)	2.64 (67.0)	1.21 (30.7)	0.55 (14.0)	0.04 (1.0)	4-19	Rc1/4	1.57 (40.0)	2-M6 Depth 0.39 (10.0)
	SBB25OS-RFCT	25A RF Flange	5.00 (127.0)	-	-	7.17 (182.0)	1.30 (33.0)	4.13 (105.0)	4.92 (125.0)	-	3.54 (90.0)	2.64 (67.0)	1.21 (30.7)	0.55 (14.0)	0.04 (1.0)	4-19	Rc1/4	1.57 (40.0)	2-M6 Depth 0.39 (10.0)
	SBB25OS-WCT	25A Butt weld	8.66 (220.0)	1.97 (50.0)	-	7.17 (182.0)	1.30 (33.0)	4.13 (105.0)	1.34 (34.0)	0.06 (1.65)	-	-	-	-	-	-	Rc1/4	1.57 (40.0)	2-M6 Depth 0.39 (10.0)
	SBB15CS-WCT	15A Butt weld	7.87 (200.0)	1.97 (50.0)	-	6.61 (168.0)	0.94 (24.0)	3.74 (95.0)	0.85 (21.7)	0.06 (1.65)	-	-	-	-	-	-	Rc1/4	1.18 (30.0)	2-M6 Depth 0.39 (10.0)
	SBB20CS-WCT	20A Butt weld	8.3 (210.0)	1.97 (50.0)	-	7.17 (182.0)	1.10 (28.0)	3.74 (95.0)	1.07 (27.2)	0.06 (1.65)	-	-	-	-	-	-	Rc1/4	1.38 (35.0)	2-M6 Depth 0.39 (10.0)
	SBB25CS-WCT	25A Butt weld	8.66 (220.0)	1.97 (50.0)	-	8.35 (212.0)	1.30 (33.0)	4.13 (105.0)	1.34 (34.0)	0.06 (1.65)	-	-	-	-	-	-	Rc1/4	1.57 (40.0)	2-M6 Depth 0.39 (10.0)
	SBB25OS-WCT	25A Butt weld	8.66 (220.0)	1.97 (50.0)	-	7.17 (182.0)	1.30 (33.0)	4.13 (105.0)	1.34 (34.0)	0.06 (1.65)	-	-	-	-	-	-	Rc1/4	1.57 (40.0)	2-M6 Depth 0.39 (10.0)