

Low Pressure Manual Bellows Valve

STD TYPE



Features

- Minimize the dead space.
- Installation can be made either panel-mount or bottom-mount.
- Handle with open/close indicator is standardized.

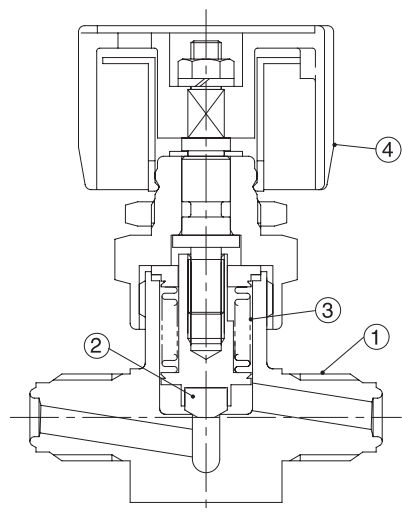
Low Pressure Manual Bellows Valve STD TYPE

Major Specifications

Size	1/4"	3/8", 1/2"	3/4"
Cv Value	0.36	1.1	2.6
Orifice Size	4.5mm	8mm	12mm
Max. Working Pressure (G.)	1MPa		
Max. Working Temp.	PCTFE : -10℃ ~ 80℃ / PI : -10℃ ~ 150℃		
Internal Leakage Allowance (He)			
Test Pressure $\leq 1 \times 10^{-2}$ Torr	$4 \times 10^{-10} \text{ Pa} \cdot \text{m}^3/\text{s}$		
Holding Time ≥ 30 sec.			
External Leakage Allowance (He)			
Test Pressure $\leq 1 \times 10^{-2}$ Torr	$4 \times 10^{-10} \text{ Pa} \cdot \text{m}^3/\text{s}$		
Holding Time ≥ 1 min.			
Particle Inspection (EP only)			
Pressure : 60~80psi N ₂ Gas	No count		
Sample Volume : 1CFM			
0.1 μm and Larger			

Product Grade

GRADE	AP	BA	EP
Inner	Ry $\leq 25 \mu\text{m}$	Ry $\leq 3.0 \mu\text{m}$	Ry $\leq 0.7 \mu\text{m}$
Surface	Cut off Length : 2.5mm	10 μ inch Ra(Avg.)	5 μ inch Ra(Avg.)
Roughness	Measuring Length : 12.5mm	Cut off Length : 0.8mm	Cut off Length : 0.25mm
		Measuring Length : 4mm	Measuring Length : 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish



Material

NO.	NAME	MATERIAL
1	Body	Stainless Steel 316L Single Melt Stainless Steel 316L Double Melt Stainless Steel 304
2	Disk	PCTFE / PI
3	Bellows	Stainless Steel 316L
4	Handle	1/4" ~ 1/2" : HI-100, 3/4" : ALUMINUM

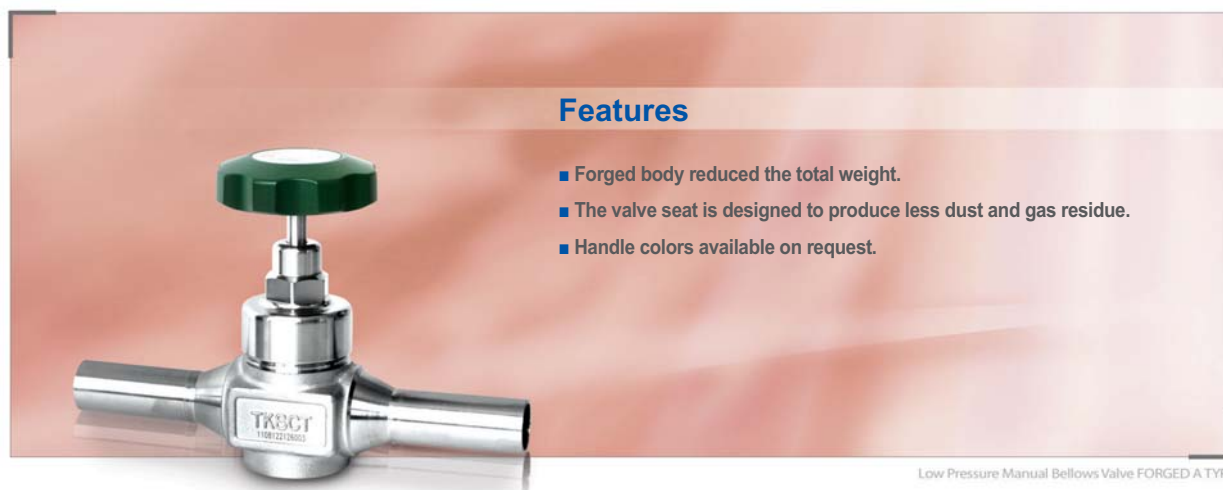
Ordering Number

S	4	BV	VM	X1	P
Material	Size	Product	Connection	Option	Grade

MATERIAL	SIZE	CONNECTION	OPTION	GRADE
S Stainless Steel 316L Single Melt	4 1/4"	VM MFS Male	×259 PI Disk	AP AP Grade
D Stainless Steel 316L Double Melt	6 3/8"	VF MFS Female		BLANK BA Grade
4S Stainless Steel 304	8 1/2"	SW Lok		P EP Grade
	12 3/4"	TW Butt Weld		

MODEL	CONNECTION	SIZE	A	B	C	D	E	F	G	H	J	L
	MFS Male	1/4"	58	14	79	45	23	25	30	2	18.5	
		3/8"	60	16	85	45	23	25	36.5	2	18.5	
		1/2"	60	16	85	45	23	25	36.5	2	18.5	
		3/4"	125	22	124	65	32	33	58	6	24	
	MFS Female	1/4"	70.5	14	79	45	23	25	30	2	18.5	
		3/8"	90	14	85	45	23	25	36.5	2	18.5	
		1/2"	90	14	85	45	23	25	36.5	2	18.5	
		3/4"	115	22	124	65	32	33	58	6	24	
	Lok	1/4"	50	14	79	45	23	25	30	2	18.5	64
		3/8"	63	14	85	45	23	25	36.5	2	18.5	78
		1/2"	63	14	85	45	23	25	36.5	2	18.5	83.5
		3/4"	80	22	124	65	32	33	58	6	24	101
	Butt Weld	1/4"	150	14	85	45	23	25	36.5	2	18.5	
		3/8"	150	14	85	45	23	25	36.5	2	18.5	
		1/2"	150	14	85	45	23	25	36.5	2	18.5	
		3/4"	158	22	124	65	32	33	58	6	24	

Low Pressure Manual Bellows Valve

FORGED A TYPE**Features**

- Forged body reduced the total weight.
- The valve seat is designed to produce less dust and gas residue.
- Handle colors available on request.

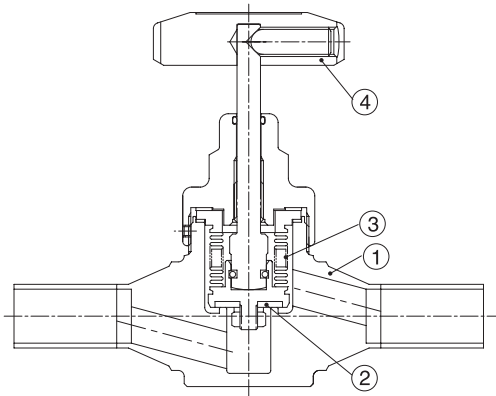
Low Pressure Manual Bellows Valve FORGED A TYPE

Major Specifications

Size	15A	1"	20A	25A
Cv Value	2.9	4.1	4.1	6.9
Orifice Size	15mm	19mm	19mm	25mm
Max. Working Pressure (G.)	1MPa			
Max. Working Temp.	-10℃ ~ 80℃			
Internal Leakage Allowance (He)				
Test Pressure $\leq 1 \times 10^{-2}$ Torr	1×10^{-6} Pa · m ³ /s			
Holding Time ≥ 30 sec.				
External Leakage Allowance (He)				
Test Pressure $\leq 1 \times 10^{-2}$ Torr	1×10^{-6} Pa · m ³ /s			
Holding Time ≥ 1 min.				
Particle Inspection (EP only)				
Pressure : 60~80psi N ₂ Gas	No count			
Sample Volume : 1CFM				
0.1 μm and Larger				

Product Grade

GRADE	AP	BA	EP
Inner	Ry $\leq 25 \mu\text{m}$	Ry $\leq 3.0 \mu\text{m}$	Ry $\leq 0.7 \mu\text{m}$
Surface	Cut off Length : 2.5mm	10 μ inch Ra(Avg.)	5 μ inch Ra(Avg.)
Roughness	Measuring Length : 12.5mm	Cut off Length : 0.8mm	Cut off Length : 0.25mm
		Measuring Length : 4mm	Measuring Length : 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish



Material

NO.	NAME	MATERIAL
1	Body	Stainless Steel 316L Single Melt Stainless Steel 316L Double Melt Stainless Steel 304
2	Disk	PTFE
3	Bellows	Stainless Steel 316L
4	Handle	ALUMINUM

Ordering Number

S	15	ABV	TW	X1	P
Material	Size	Product	Connection	Option	Grade

MATERIAL	SIZE	CONNECTION	GRADE
S Stainless Steel 316L Single Melt	15 15A	TW Butt Weld	AP AP Grade
D Stainless Steel 316L Double Melt	T16 1"	FL Flange(JIS 10K)	BLANK BA Grade
4S Stainless Steel 304	20 20A		P EP Grade
	25 25A		

MODEL	CONNECTION	SIZE	A	B	C	D	E	G	L
	Butt Weld	15A	190	24	131	65	30		
		1"	200	28	143	65	35		
		20A	200	28	143	65	35		
		25A	210	33	161	79	40		

MODEL	CONNECTION	SIZE	A	B	C	D	E	F	G	N-H
	Flange	15A	108	47.5	155	65	95	70	51	4-Ø15
		1"	117	50	165	65	100	75	56	4-Ø15
		20A	117	50	165	65	100	75	56	4-Ø15
		25A	127	62.5	191	79	125	90	67	4-Ø19

Low Pressure Manual Bellows Valve (32A ~ 50A)

CASTING A TYPE

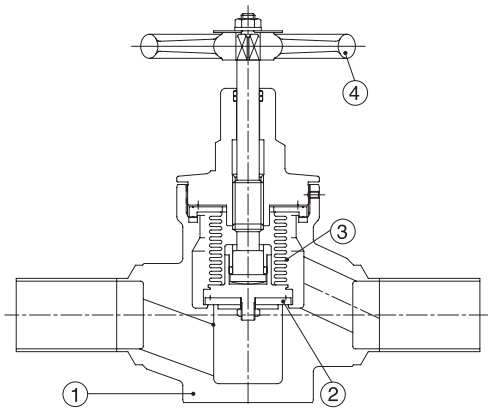
Low Pressure Manual Bellows Valve(32A~50A) CASTING A TYPE

Major Specifications

Size	32A	40A	2"	50A
Cv Value	16	16	16	21
Orifice Size	40mm	40mm	40mm	50mm
Max. Working Pressure (G.)	1MPa			
Max. Working Temp.	-10℃ ~ 80℃			
Internal Leakage Allowance (He)				
Test Pressure $\leq 1 \times 10^{-2}$ Torr	1×10^{-6} Pa · m ³ /s			
Holding Time ≥ 30 sec.				
External Leakage Allowance (He)				
Test Pressure $\leq 1 \times 10^{-2}$ Torr	1×10^{-6} Pa · m ³ /s			
Holding Time ≥ 1 min.				
Particle Inspection (EP only)				
Pressure : 60~80psi N ₂ Gas	No count			
Sample Volume : 1CFM				
0.1 μm and Larger				

Product Grade

GRADE	AP	BA	EP
Inner	Ry $\leq 25\mu\text{m}$	Ry $\leq 3.0\mu\text{m}$	Ry $\leq 0.7\mu\text{m}$
Surface	Cut off Length : 2.5mm	10 μ inch Ra(Avg.)	5 μ inch Ra(Avg.)
Roughness	Measuring Length : 12.5mm	Cut off Length : 0.8mm	Cut off Length : 0.25mm
		Measuring Length : 4mm	Measuring Length : 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish



Material

NO.	NAME	MATERIAL
1	Body	SCS16 SCS13
2	Disk	PTFE
3	Bellows	Stainless Steel 316L
4	Handle	SCS13

Ordering Number

S	32	ABV	TW	X1	P
Material	Size	Product	Connection	Option	Grade

MATERIAL		SIZE		CONNECTION		GRADE	
S	SCS16	32	32A	TW	Butt Weld	AP	AP Grade
4S	SCS13	40	40A	FL	Flange(JIS 10K)	BLANK	BA Grade
		T32	2"			P	EP Grade
		50	50A				

MODEL	CONNECTION	SIZE	A	B	C	D
	Butt Weld	32A	270	51	239	125
		40A	270	51	239	125
		2"	270	51	239	125
		50A	295	61	295	160

MODEL	CONNECTION	SIZE	A	B	C	D	E	F	G	N-H
	Flange	32A	165	67.5	256.0	125	135	100	76	4-Ø19
		40A	165	70.0	258.0	125	140	105	81	4-Ø19
		2"	165	70.0	258.0	125	140	105	81	4-Ø19
		50A	203	77.5	311.5	160	155	120	96	4-Ø19

Low Pressure Manual Bellows Valve (65A ~ 500A)

CASTING A TYPE

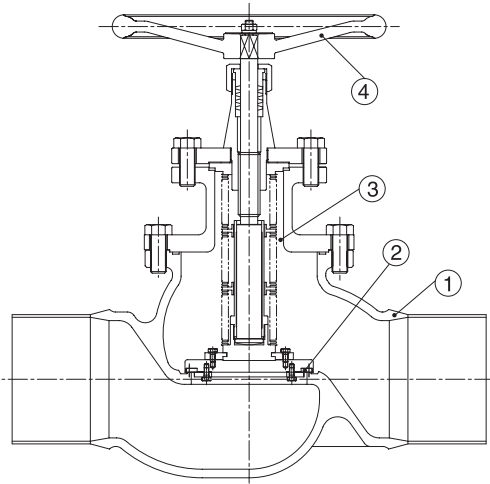
Low Pressure Manual Bellows Valve(65A~500A) CASTING A TYPE

Major Specifications

Size	65A	80A	100A	125A	150A	200A	250A	300A	350A	400A	450A	500A
Cv Value	81	132	200	302	434	772	1200	1600	2000	2650	3100	3400
Orifice Size	65	80	100	124	148	200	250	300	350	400	440	490
Max. Working Pressure (G.)	1MPa											
Max. Working Temp.	-10℃ ~ 80℃											
Internal Leakage Allowance (He)												
Test Pressure $\leq 1 \times 10^{-2}$ Torr	$1 \times 10^{-6} \text{ Pa} \cdot \text{m}^3/\text{s}$											
Holding Time ≥ 30 sec.												
External Leakage Allowance (He)												
Test Pressure $\leq 1 \times 10^{-2}$ Torr	$1 \times 10^{-6} \text{ Pa} \cdot \text{m}^3/\text{s}$											
Holding Time ≥ 1 min.												
Particle Inspection (EP only)												
Pressure : 60~80psi N ₂ Gas	No count											
Sample Volume : 1CFM												
0.1 μm and Larger												

Product Grade

GRADE	AP	BA	EP
Inner	$Ry \leq 25 \mu\text{m}$	$Ry \leq 3.0 \mu\text{m}$	$Ry \leq 0.7 \mu\text{m}$
Surface	Cut off Length : 2.5mm	10 μ inch Ra(Avg.)	5 μ inch Ra(Avg.)
Roughness	Measuring Length : 12.5mm	Cut off Length : 0.8mm	Cut off Length : 0.25mm
		Measuring Length : 4mm	Measuring Length : 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish



Material

NO.	NAME	MATERIAL
1	Body	SCS16 SCS13
2	Disk	PTFE
3	Bellows	Stainless Steel 316L
4	Handle	SCS13

Ordering Number

S	65	ABV	TW	X1	P
Material	Size	Product	Connection	Option	Grade

MATERIAL		SIZE		CONNECTION		GRADE	
S	SCS16	65	65A	TW	Butt Weld	AP	AP Grade
4S	SCS13	80	80A	FL	Flange(JIS 10K)	BLANK	BA Grade
		100	100A			P	EP Grade
		125	125A				
		150	150A				
		200	200A				
		250	250A				
		300	300A				
		350	350A				
		400	400A				
		450	450A				
		500	500A				

MODEL	CONNECTION	SIZE	A	B	C	D
	Butt Weld	65A	416	68	347	160
		80A	441	80	381	200
		100A	492	94	476	200
		125A	556	111	616	300
		150A	606	126	632	300
		200A	795	157	847	400
		250A	1022	190	1085	450
		300A	1100	216	1228	500
		350A	1187	241	1286	710
		400A	1314	268	1318	710
		450A	1200	305	1454	800
MODEL	CONNECTION	SIZE	A	B	C	D
	Flange	65A	216	87.5	367	160
		80A	241	92.5	394	200
		100A	292	105	487	200
		125A	356	125	630	300
		150A	406	140	646	300
		200A	495	165	855	400
		250A	622	200	1095	450
		300A	698	222.5	1235	500
		350A	787	245	1290	710
		400A	914	280	1330	710
		450A	1040	310	1579	800
		500A	1040	338	1630	800

NOTE : When order for 50A Size, part no. must be 50 ABV-TW-X388 / 50ABV-FL-X388