

Bellows seal globe valve

1/2" -18"

Class 600LB 1500 LB

Body A105, A182 F304 (L) , A182 F316 (L) for 1/2" -2"

Body A216 WCB, A351 CF8M , A351 CF3M for 2 1/2" -18"

Design acc. : BS 5352, MSS-SP-117, ASME B16.34

Face to face (End to end) : ASME B16.10

Flange end : ASME B16.5

BW end :ASME B16.25

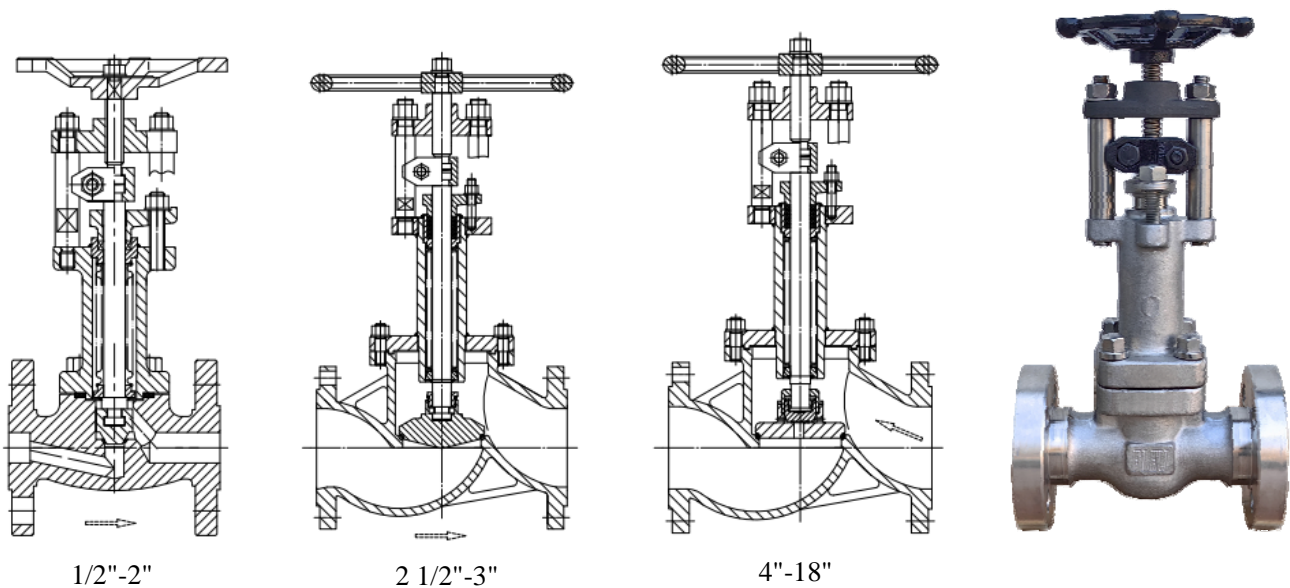
Test acc. : API 598

Witzenmann bellows

Cycles 10 000

Fig. 149 i

Protected Bellows



Design features

- Straight type,seat hardfaced ,conical plug
- Bellows protected in extended bonnet or by protecting plate against direct impingement from product flow
- Multiple walls and hydroformed Witzenmann bellows,and 10 000 cycles opertions guaranteed
- two-piece stem protects the bellows against torque stress
- design eliminates stem bearings along with their mainttenace needs
- Fire safe per EN ISO 10497 applicable
- Fugitive emmissions test per EN ISO 15848 applicable

Applications

Fig.149i is design guarantees reliable and excellent protections against leaks and fugitive emissions.The stem seal requires virtually no maintenance due to leak free weld connections of the bellows with bonnet and stem. The valve is designed for critical service applications involving lethal,toxic,corrsive,inflammable,volatile,radiating,or expensive fluids.

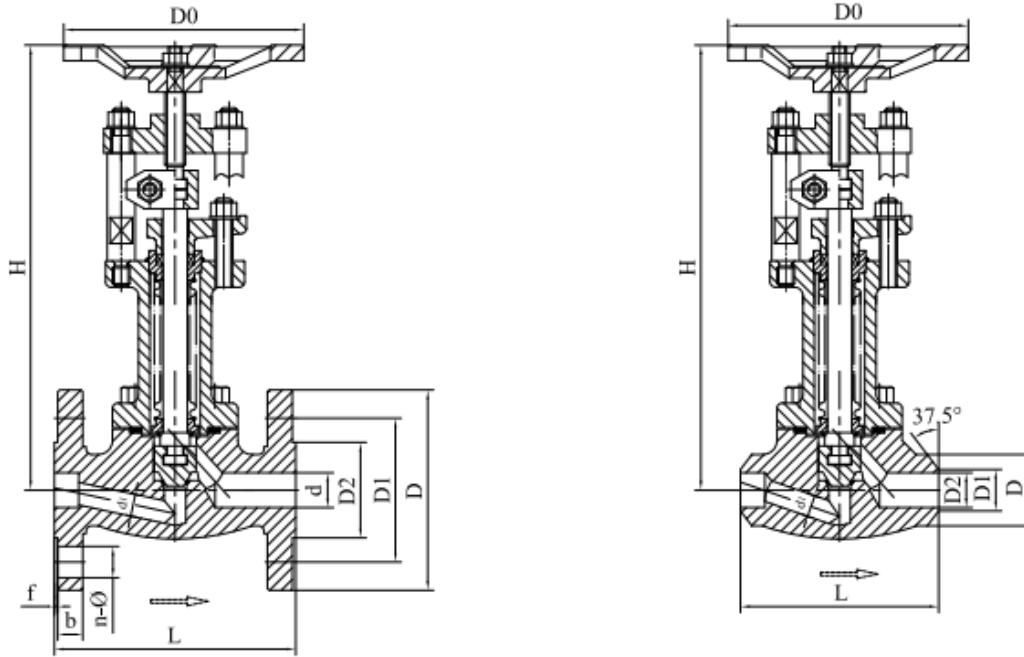
Bellows seal globe valve Class 600LB

Design acc. to BS 5352, MSS-SP-117, ASME B16.34

Flange ends acc. to ASME B16.5, BW ends acc. to ASME B16.25

Standard test acc. to API 598, ISO 5208

FTF (ETE) dimension acc. to ASME B16.10



Material List

Component	C.S.	S.S.
Body / Bonnet	A105	A182 F316(L)
Body seal	ER410	F316(L) / Stellite 21
Disc	A276 420	A276 F316(L)
Disk seal	ER420	Stellite 21/Stellite 6
Lower stem/Upper stem	A276 420	A276 316(L)
Bellows	A276 316Ti	A276 316Ti
Bolts / Nuts	A193 B7 /A197 2H	A193 B8M / A194 8M

Dimension List

Fig.	Material	Class	NPS	L	D FL/BW	D1 FL/ BW	D2 FL/ BW	d	d1*	f	b	n-Ø	H	D0
144.149 i 144.149i-BW	A105	600Lb	1/2	165	95 / 32	66.7 / 22	35 / 17	15	12	7	14.3	4-16	306	148
			3/4	190	120 / 32	82.5 / 28	43 / 22	20	17	7	15.9	4-19	306	148
			1	216	125 / 38	88.9 / 34	51 / 28	25	22	7	17.5	4-19	310	148
234.149 i 234.149i-BW	F316		1 1/4	229	135 / 60	98.4 / 43	64 / 37	32	28	7	20.7	4-19	420	196
			1 1/2	241	155 / 60	114.3 / 49	73 / 43	40	35	7	22.3	4-22	432	196
			2	292	165 / 70	127 / 61	92 / 51	50	44	7	25.4	8-19	432	196

* d1 acc.API602 Minimum Diameter or Equivalent Flow Passageway for Full-bore Valves

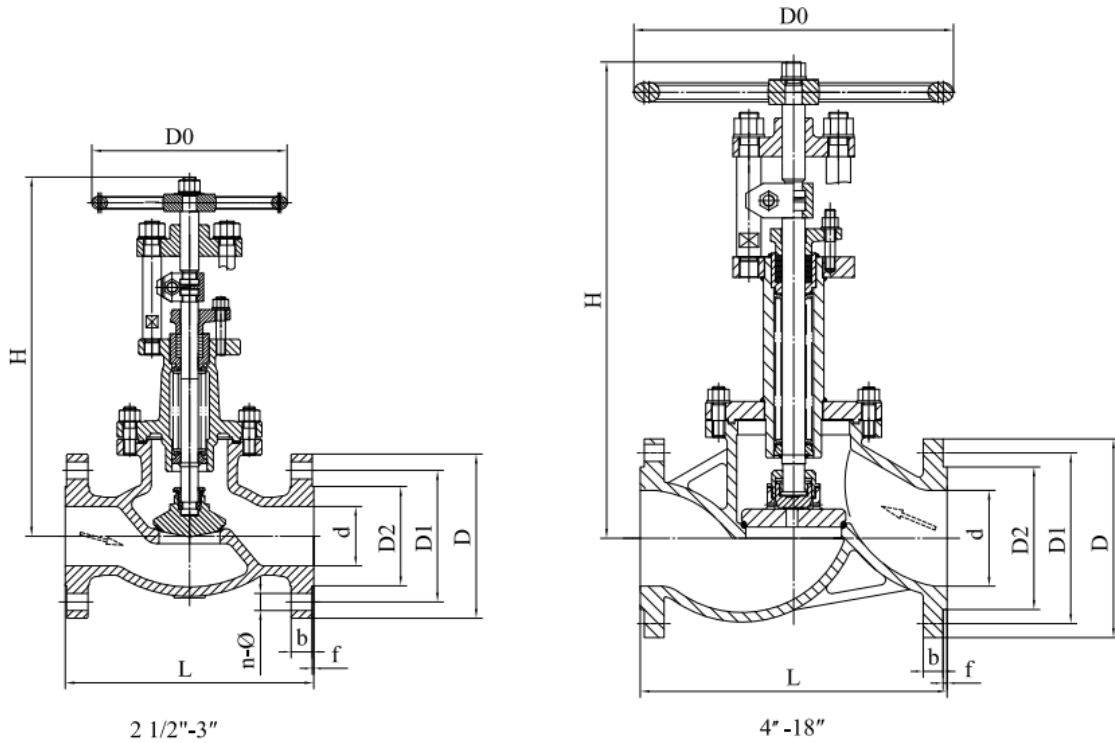
Bellows seal globe valve Class 600LB

Design acc. to BS 5352, MSS-SP-117, ASME B16.34

Flange ends acc. to ASME B16.5

Standard test acc. to API 598 , ISO 5208

FTF dimension acc. to ASME B16.10



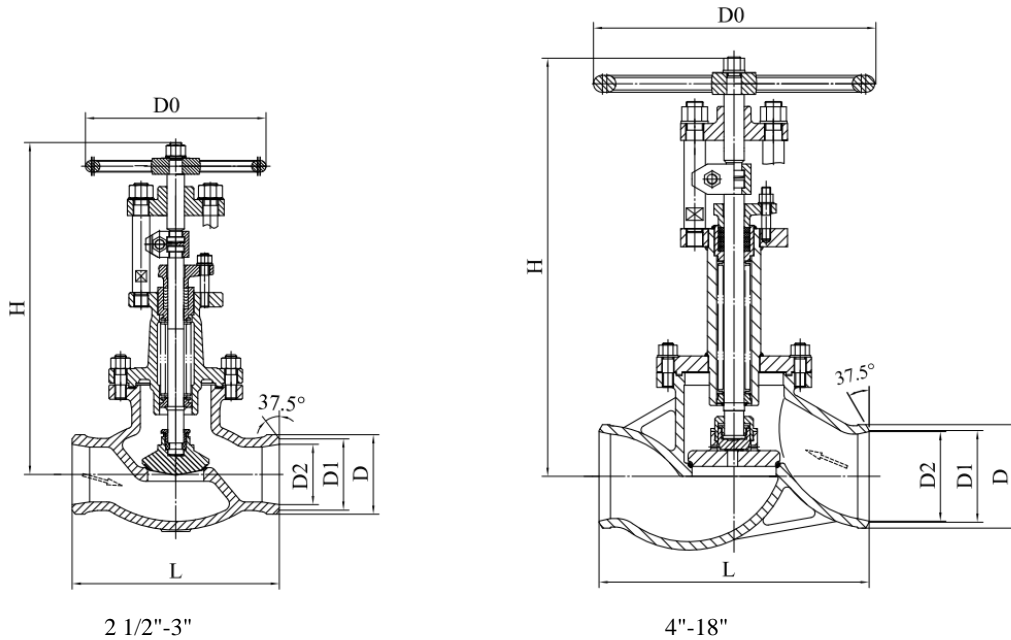
Material List

Component	C.S.	S.S.
Body / Bonnet	A216 WCB	A351 CF8M
Body seal	ER410	CF8M/Stellite 21
Disc	A276 420	A276 F316(L)
Disk seal	ER420	Stellite 21/Stellite 6
Lower stem/Upper stem	A276 420	A276 316(L)
Bellows	A276 316Ti	A276 316Ti
Bolts / Nuts	A193 B7 /A197 2H	A193 B8M / A194 8M

Dimension List

Fig.	Material	Class	NPS	L	D	D1	D2	f	b	N-Ø	H	D0
134.149 i	WCB	600Lb	2 1/2	330	190	149.2	105	7	28.6	8-22	387	200
			3	356	210	168.3	127	7	31.8	8-22	411	250
			4	432	275	215.9	157	7	38.1	8-26	454	250
			5	508	330	266.7	186	7	44.5	8-29	455	355
			6	559	355	292.1	216	7	47.7	12-29	541	355
154.149 i	CF8M	600Lb	8	660	420	349.2	270	7	55.6	12-32	651	450
			10	787	510	431.8	324	7	63.5	16-35	800	450
			12	838	560	489	381	7	66.7	20-35	1231	500
			14	889	605	527	413	7	69.9	20-39	1450	600
			16	991	685	603.2	470	7	76.2	20-42	1645	600
			18	1020	745	654	533	7	82.6	20-45	1748	850

Bellows seal globe valve Class 600LB
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 BW ends acc. to ASME B16.25
 Standard test acc. to API 598, ISO 5208
 ETE dimension acc. to ASME B16.10



Material List

Component	C.S.	S.S.
Body / Bonnet	A216 WCB	A351 CF8M
Body seal	ER410	CF8M/Stellite 21
Disc	A276 420	A182 F316(L)
Disk seal	ER420	Stellite 21/Stellite 6
Lower stem/Upper stem	A276 420	A276 316(L)
Bellows	A276 316Ti	A276 316Ti
Bolts / Nuts	A193 B7 /A197 2H	A193 B8M / A194 8M

Dimension List

Fig.	Material	Class	NPS	L	D	D1	D2	H	D0
134.149 i-BW	WCB	600Lb	2 1/2	330	92	72	67	495	220
			3	356	106	84	80	548	250
			4	432	122	107	104	626	320
			5	508	157	135	130	710	320
			6	559	184	163	157	855	400
154.149 i-BW	CF8M		8	660	238	211	206	1016	500
			10	787	296	262	260	1240	600
			12	838	345	310	306	1287	600
			14	889	378	344	340	1416	600
			16	991	434	391	384	1548	850
			18	1020	491	433	429	1859	850

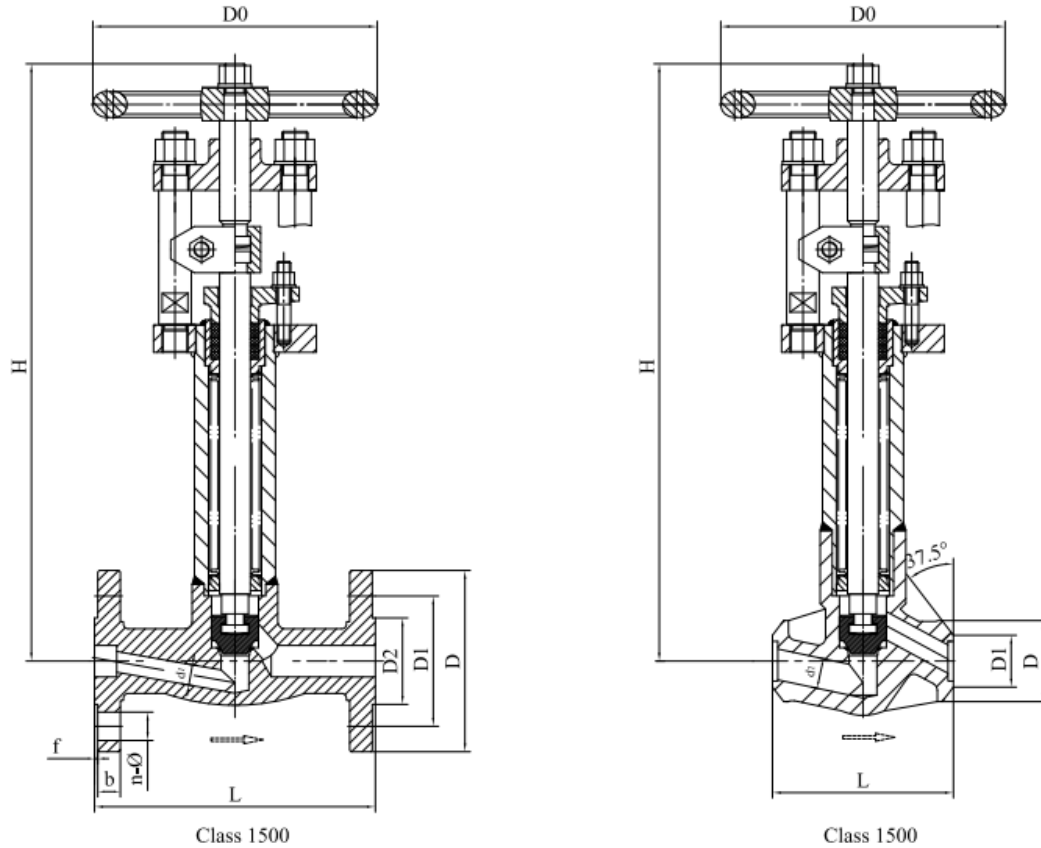
Bellows seal globe valve Class 1500LB

Design acc. to BS 5352, MSS-SP-117, ASME B16.34

Flange ends acc. to ASME B16.5, BW ends acc. to ASME B16.25

Standard test acc. to API 598, ISO 5208

FTF (ETE) dimension acc. to ASME B16.10



Material List

Component	C.S.	S.S.
Body / Bonnet	A105	A182 F316(L)
Body seal	ER410	F316(L) / Stellite 21
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Dimension List

Fig.	Material	Class	NPS	L	D FL / BW	D1 FL / BW	D2	d1*	f	b	n-Ø	H	D0
147.149 i 147.149 i-BW 237.149 i 237.149 i-BW	A105 F316	1500Lb	1/2	216	120 / 40	82.6 / 15	35	9	7	22.3	4-22	442	220
			3/4	229	130 / 44	88.9 / 19	43	14	7	25.4	4-22	442	220
			1	254	150 / 50	101.6 / 24	51	19	7	28.6	4-26	448	220
			1 1/4	279	160 / 60	111 / 32	64	25	7	28.6	4-26	680	320
			1 1/2	305	180 / 60	123.8 / 37	73	26	7	31.8	4-29	680	320
			2	368	215 / 70	165 / 46	92	34	7	38.1	8-26	688	320

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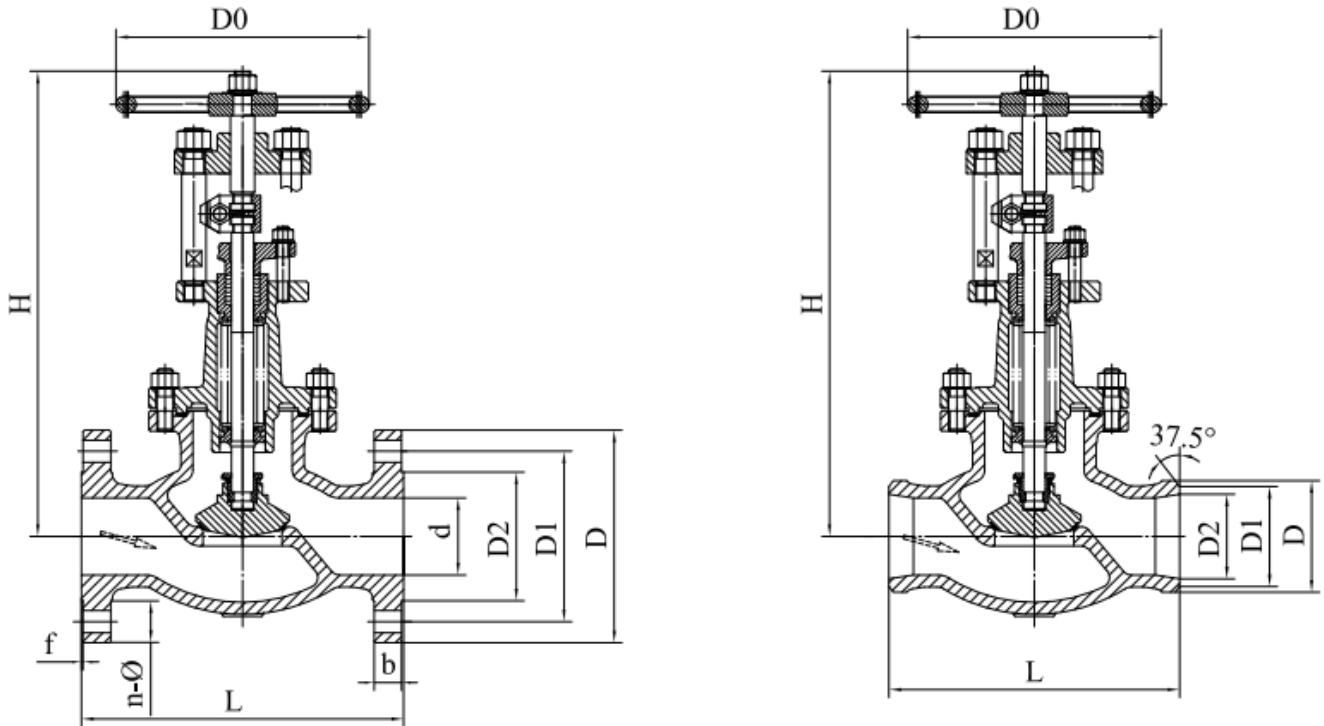
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Dimension List

Fig.	Material	Class	NPS	L	D FL / BW	D1 FL / BW	D2 FL / BW	d	f	b	n-Ø	H	D0
137.149 i	WCB	1500Lb	2 1/2	419	245 / 100	190.5 / 58	105 / 54	52	7	41.3	8-30	820	400
137.149 i-BW			3	470	265 / 120	203 / 72	127 / 67	65	7	47.7	8-33	1092	500
157.149 i	CF8M	1500Lb	3	470	265 / 120	203 / 72	127 / 67	65	7	47.7	8-33	1092	500
157.149 i-BW			4	546	310 / 140	241.5 / 92	157 / 87	85	7	54	8-36	1305	500