

Globe Valves

GL1 Series



- ❖ Working pressures Class 1500, Class 2500, Class 4500
- ❖ Working temperature from -20°F to 1250°F (-28°C to 676°C)
- ❖ One-piece forged body
- ❖ 65° Y patterns and non-rotating stem design
- ❖ NPS size from 3/8 to 2

Features

- ❖ Working pressures Class 1500, Class 2500, Class 4500
- ❖ Working temperature from -20°F to 1250°F (-28°C to 676°C)
- ❖ One-piece forged body and bonnet, no joints to leak and no welds to cut for servicing
- ❖ 65° Y patterns design reduces pressure drop
- ❖ One step removal of all working parts for quick and easy maintenance
- ❖ Non rotating stem design ensures low torque and prevents torsional damage of the packing
- ❖ The top- and bottom-guided disc assures perfect seat and disc alignment in spite of side thrust caused by high velocity flow. This prevents stem from scoring and galling and provides longer disc seal and body life
- ❖ Solid Stellite disc, seat ring and backseat provide excellent long service life even in severe services
- ❖ Precision stem and packing chambers to 8 RMS finish
- ❖ Fully enclosed, lubricated stem drive system with needle bearings ensures low operating torque
- ❖ Rugged and knobbed handwheel make sure the grip when wearing gloves

Specifications

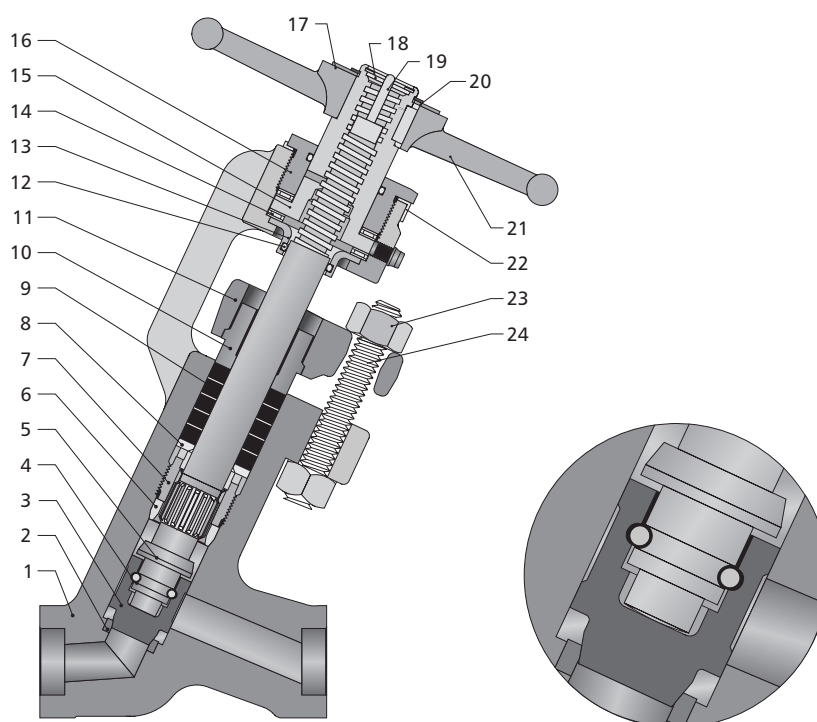
- ❖ Design: ASME B16.34
- ❖ Threaded ends: ASME B1.20.1
- ❖ Butt weld ends: ASME B16.25
- ❖ Socket weld ends: ASME B16.11

Pressure vs. Temperature

Material	A105			F22			F91			316		
Class	1500	2500	4500	1500	2500	4500	1500	2500	4500	1500	2500	4500
Temp. °F	psig											
-20 to 100	3705	6170	11110	3750	6250	11250	3750	6250	11250	3600	6000	10800
200	3375	5625	10120	3750	6250	11250	3750	6250	11250	3095	5160	9290
300	3280	5470	9845	3640	6070	10925	3640	6070	10925	2795	4660	8390
400	3170	5280	9505	3530	5880	10585	3530	5880	10585	2570	4280	7705
500	2995	4990	8980	3325	5540	9965	3325	5540	9965	2390	3980	7165
600	2735	4560	8210	3025	5040	9070	3025	5040	9070	2255	3760	6770
650	2685	4475	8055	2940	4905	8825	2940	4905	8825	2220	3700	6660
700	2665	4440	7990	2840	4730	8515	2840	4730	8515	2170	3620	6515
750	2520	4200	7560	2660	4430	7970	2660	4430	7970	2135	3560	6410
800	2060	3430	6170	2540	4230	7610	2540	4230	7610	2110	3520	6335
850	1340	2230	4010	2435	4060	7305	2435	4060	7305	2090	3480	6265
900	—	—	—	2245	3745	6740	2245	3745	6740	2075	3460	6230
950	—	—	—	1885	3145	5665	1930	3220	5795	1930	3220	5795
1000	—	—	—	1305	2170	3910	1820	3030	5450	1750	2915	5245
1050	—	—	—	875	1455	2625	1800	3000	5400	1720	2865	5155
1100	—	—	—	550	915	1645	1510	2515	4525	1525	2545	4575
1150	—	—	—	—	—	—	1115	1855	3345	1185	1970	3550
1200	—	—	—	—	—	—	720	1200	2160	925	1545	2775
1250	—	—	—	—	—	—	—	—	—	735	1230	2210

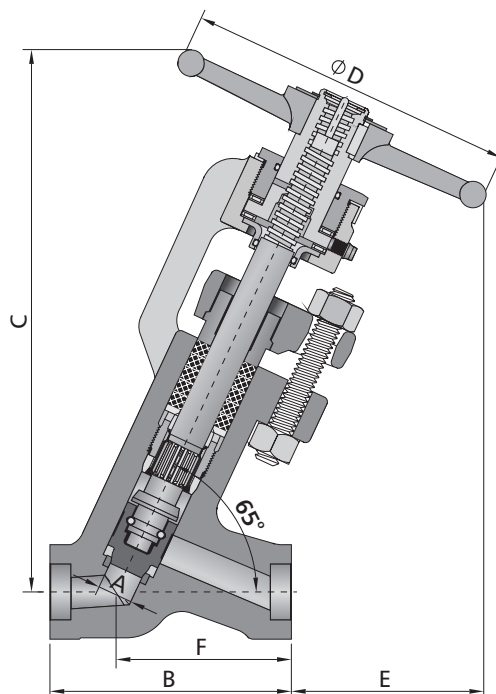
1. A105 permissible but not recommended for prolonged usage above about 800°F (425°C).

Standard Materials of Construction



Component		Valve Material Grade/ASTM Specification			
1	Body	A105N	F22/A182	F91/A182	F316/A182
2	Seat	Stellite			
3	Disc	Stellite			
4	Snap rings	310 S.S.			
5	Stem	410 S.S./A276			316 S.S./A276
6	Back Seal Ring	Stellite			
7	Spline Housing	630 S.S.			
8	Washer	304 S.S.			
9	Packing	Graphite			
10	Draw-in Stud	1018/A108			
11	Packing Flange	A105			F304 /A182
12	O-Ring	Buna N			
13	Grease Retainer	Steel			Steel(nickel plated)
14	Anti Rotation	Steel			
15	Stem Nut	D-2C/A439			
16	Yoke Bushing	1020/A108			1020(nickel plated)
17	Name Plate	304 S.S.			
18	Dust Cap	304 S.S.			
19	Position Indicator	410 S.S./A276			316 SS/A276
20	Circlip	Steel			
21	Handwheel	Malleable Cast-iron			
22	Yoke Bushing	304 S.S.			
23	Gland Nut	2H			8M
24	Gland Bolt	B7			B8M2

Dimensions



NPS DN	A in. mm		B in. mm		C in. mm		D in. mm		E in. mm		F in. mm	
	Port		End to End		Center to top		Handwheel		Clearance Open		Center to End	
	1500 2500	4500	1500 2500	4500	1500 2500	4500	1500 2500	4500	1500 2500	4500	1500 2500	4500
1/2 15	0.559 14.2	0.375 9.5	4.88 124	5.75 146	9.63 245	11.75 298	6.00 152	6.00 152	3.63 92	3.25 83	3.20 81	4.19 106
3/4 20	0.559 14.2	0.559 14.2	4.88 124	7.00 178	9.63 245	14.20 361	6.00 152	8.00 203	3.63 92	6.00 152	3.20 81	3.88 99
1 25	0.833 21.2	0.559 14.2	5.75 146	7.00 178	13.19 335	14.20 361	8.00 203	8.00 203	5.13 130	6.00 152	4.19 106	3.88 99
1 1/4 32	1.125 28.6	0.833 21.2	7.25 184	10.13 257	16.63 422	18.88 480	12.00 305	12.00 305	7.57 192	7.00 178	4.94 125	6.57 167
1 1/2 40	1.125 28.6	1.125 28.6	7.25 184	12.00 305	16.63 422	20.75 527	12.00 305	18.00 457	7.57 192	8.00 203	4.94 125	8.00 203
2 50	1.688 42.9	1.50 38.1	10.13 257	12.00 305	19.86 505	20.75 527	12.00 305	18.00 457	7.50 190	8.00 203	6.57 167	8.00 203
2 1/2 65	1.688 42.9	1.50 38.1	12.00 305	12.00 305	20.69 526	20.75 527	16.00 406	16.00 406	7.25 184	7.25 184	8.00 203	8.00 203
3 80	1.688 42.9	1.50 38.1	12.00 305	12.00 305	20.69 526	20.75 527	16.00 406	16.00 406	7.25 184	7.25 184	8.00 203	8.00 203
4 100	1.688 42.9	1.50 38.1	12.00 305	12.00 305	20.69 526	20.75 527	16.00 406	16.00 406	7.25 184	7.25 184	8.00 203	8.00 203

How to Order

GL1 — PBW8 — CL4500 — 316

Series	Type Of Connection	Size Of Connection	ASME Class	Body Material
GL1	FNPT Female NPT	6 3/8	CL1500 Class 1500	316 316 S.S.
	FBT Female BSPT	8 1/2	CL2500 Class 2500	316L 316L S.S.
	FSW Fractional Tube Socket Weld	12 3/4	CL4500 Class 4500	316H 316H S.S.
	MSW Metric Tube Socket Weld	16 1		304 304 S.S.
	FBW Fractional Tube Butt Weld	20 1 1/4		304L 304L S.S.
	MBW Metric Tube Butt Weld	24 1 1/2		F91 F91
	PSW Pipe Socket Weld	32 2		F92 F92
	PBW Pipe Butt Weld			A105 合金A105
				F11 F11
				F22 F22
				WB36 WB36