

Globe Valves

SY Series



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FITOK
Valves and Fittings

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Forged Steel Y-pattern Bonnetless Globe Valves

SY Series

- Size: NPS 3/8 ~ NPS 1 (DN 10 ~ DN 25)
- Classes: 2500 and 4500

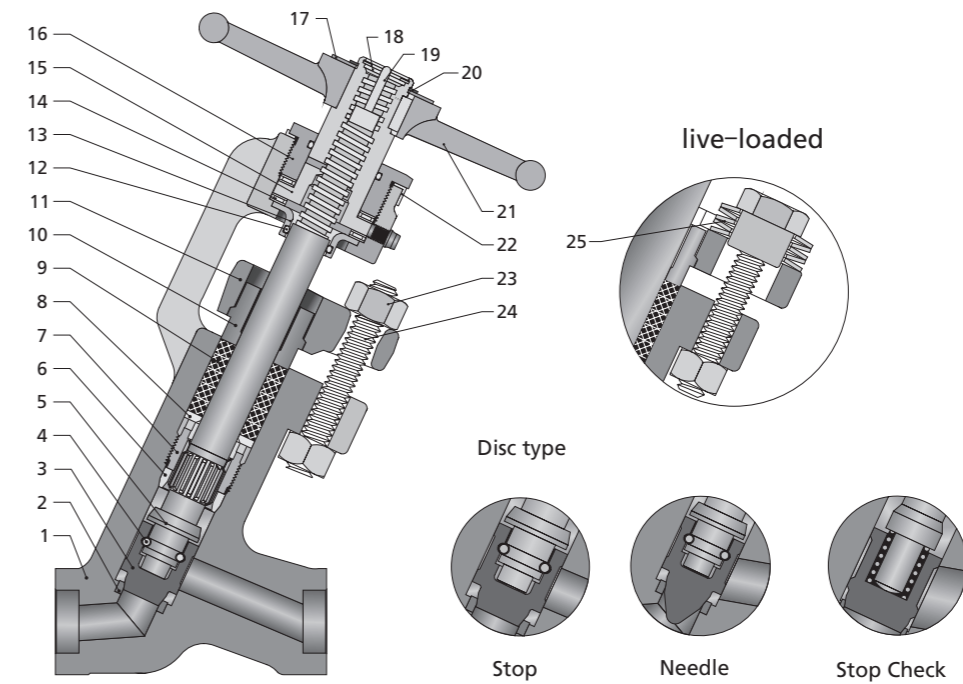
Specifications

- Design: ASME B16.34
- Testing: ASME B16.34 and API 598
- Marking: MSS-SP-25
- Socket weld ends: ASME B16.11
- Butt weld ends: ASME B16.25

Features

- One-piece, forged, bonnetless globe valves eliminate the potential for body-to-bonnet joint leakage, and not require cut or disassemble the bonnet for servicing.
- 65° inclined body reduces pressure drop compared with T-type.
- Splined bushing guides the stem allows quick and easy maintenance by removing all working parts at one time.
- The non-rotating stem hardened and polished to reduce operating torque.
- Linearly instead of helical movement of the non-rotating stem reduces the total friction area between the packing and stem.
- Packing chamber burnished and combination graphite rings individually pre-stressed for tight seal.
- Two-piece gland ensures gland and packing self-aligning.
- Stellite disc, seat and backseat provide excellent long service life even in severe services.
- Fully guided disc assures seat and disc precise alignment in spite of side thrust caused by high velocity flow, and prevents stem from scoring and galling, and provides longer disc seal and body life.
- Double orifice design Protects seating faces because part of the erosive flow energy dissipates through disc.
- Two flat slots design at the internal bottom of the disc prevent the disc from rotating, so avoid high-speed rotating disc and seat contact, damage to disc and seat.
- Backseat bevel on the stem, not on the disc, meet specifications API-602.
- Large clearance between stem and disc allows disc to move freely.
- Dust cover and sleeve protect stem threads from dirt, dust and sand.
- Fully enclosed stem driving lubrication system with two needle roller bearings ensures low operating torque.
- Upper stem position indicates if valve is open or closed.
- Optional live-loading packing, disc springs keep packing tight for long periods of time without maintenance.
- Stop, regulating, and stop check discs are available.
- Handwheel is rugged and knobbed to make sure the grip even when wearing gloves.
- Optional handwheel colors are available.

Standard Materials of Construction



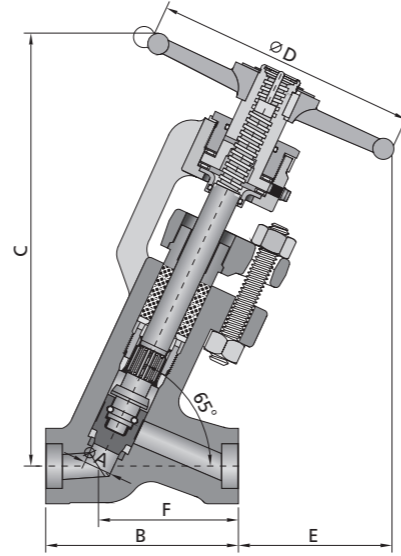
Item	Part	Valve Material					
		A105	F22	F91	F51	F316	F316H
1	Body	A105N	F22/A182	F91/A182	F51/A182	F316/A182	F316H/A182
2	Seat	Stellite 6					
3	Disc	Stellite 6					
4	Holder	316 SS/A580					
5	Stem	410 SS/A276			316 SS/A276		
6	Backseat	Stellite 6					
7	Spline bushing	630 SS					
8	Packing washer	304 SS					
9	Packing	Graphite					
10	Split gland bushing	CA15					
11	Packing flange	A105			F304/A182		
12	O-Ring	Nitrile rubber					
13	Stem protector	Steel			Steel		
14	Thrust bearing	Steel					
15	Stem nut	D-2C/A439					
16	Yoke bushing	1020/A108			1020/A108 (nickel-plated)		
17	Name plate	304 SS					
18	Dust cover	304 SS					
19	Indicator	410 SS/A276			316 SS/A276		
20	Snap ring	Steel					
21	Handwheel	Malleable iron					
22	Tab washer	304 SS					
23	Gland nut	2H			8M		
24	Gland stud	B7			B8M2		
25	Springs	S17700					

Note:
Contact the authorized representative or FITOK Group for valves of other materials.

Dimensions

Size NPS DN	øA in. (mm)		B in. (mm)		C in. (mm)		Weight lb (kg)
	Port		End to End		Center to Top Open		
	2500	4500	2500	4500	2500	4500	
3/8 10	0.559 (14.2)	0.375 (9.5)	4.88 (124)	5.75 (146)	9.63 (245)	11.75 (298)	15 (7)
1/2 15	0.559 (14.2)	0.375 (9.5)	4.88 (124)	5.75 (146)	9.63 (245)	11.75 (298)	15 (7)
3/4 20	0.559 (14.2)	0.559 (14.2)	4.88 (124)	7.00 (178)	9.63 (245)	14.20 (361)	15 (7)
1 25	0.833 (21.2)	0.559 (14.2)	5.75 (146)	7.00 (178)	13.19 (335)	14.20 (361)	33 (15)

Size NPS DN	øD in. (mm)		E in. (mm)		F in. (mm)		Weight lb (kg)
	Handwheel		Clearance Open		Center to End		
	2500	4500	2500	4500	2500	4500	
3/8 10	6.00 (152)	6.00 (152)	3.63 (92)	3.25 (83)	3.20 (81)	4.19 (106)	27 (12.2)
1/2 15	6.00 (152)	6.00 (152)	3.63 (92)	3.25 (83)	3.20 (81)	4.19 (106)	27 (12.2)
3/4 20	6.00 (152)	8.00 (203)	3.63 (92)	6.00 (152)	3.20 (81)	3.88 (99)	56 (25)
1 25	8.00 (203)	8.00 (203)	5.13 (130)	6.00 (152)	4.19 (106)	3.88 (99)	56 (25)



- Sizes and types listed are standard. Other sizes and types are available upon request.
- All dimensions are for reference only and are subject to change. For dimensions not shown above, please contact the authorized representative or FITOK Group.

Temperature - Pressure Ratings

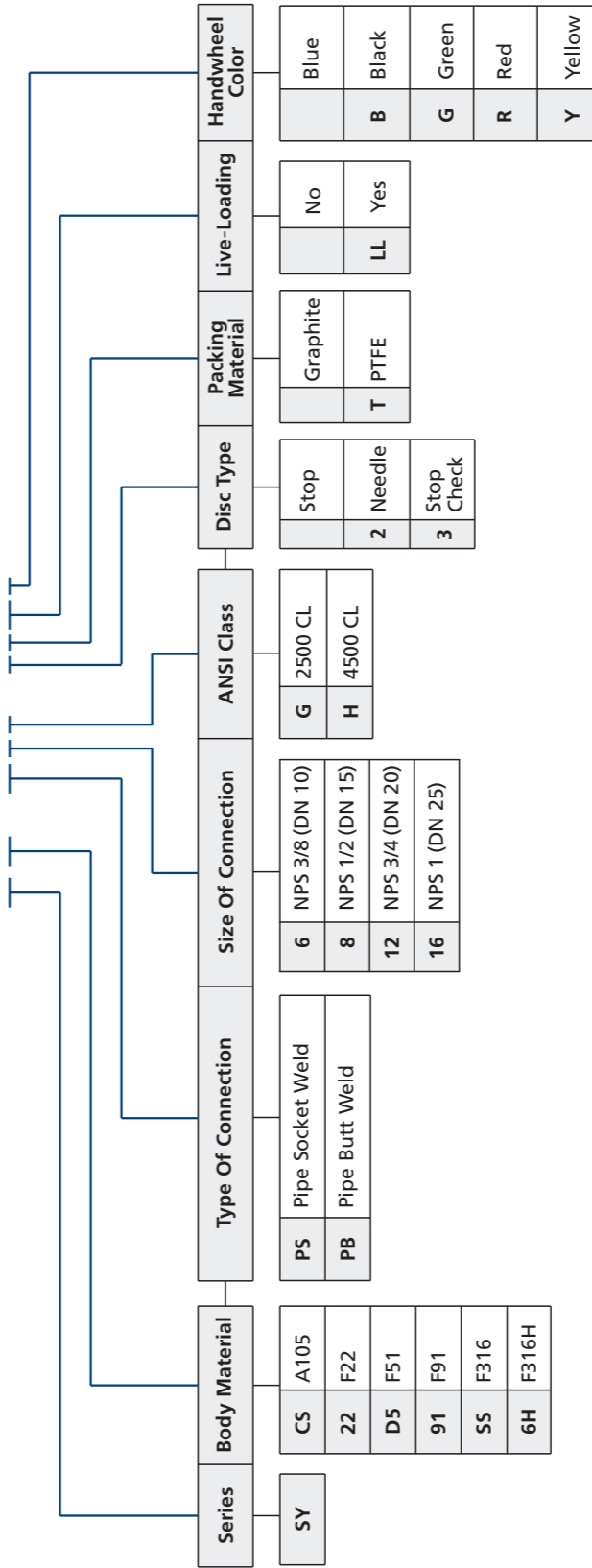
Acc. ANSI B16.34-2013
Working Pressure by Classes, psig

Material	A105		F22		F91		F316/F316H		F51	
	2500	4500	2500	4500	2500	4500	2500	4500	2500	4500
Temp. °F	psig									
-20 to 100	6170	11110	6250	11250	6250	11250	6000	10800	6250	11250
200	5625	10120	6250	11250	6250	11250	5160	9290	6200	11160
300	5450	9815	6070	10925	6070	10925	4660	8390	5560	10010
400	5280	9505	5880	10585	5880	10585	4280	7705	5120	9215
500	5025	9040	5540	9965	5540	9965	3980	7165	4840	8710
600	4730	8515	5040	9070	5040	9070	3760	6770	4640	8350
650	4575	8240	4905	8825	4905	8825	3680	6625	—	—
700	4425	7960	4730	8515	4730	8515	3620	6515	—	—
750	4230	7610	4430	7970	4430	7970	3560	6410	—	—
800	3430	6170	4230	7610	4230	7610	3520	6335	—	—
850	2655	4785	4060	7305	4060	7305	3480	6265	—	—
900	—	—	3745	6740	3745	6740	3460	6230	—	—
950	—	—	3220	5795	3220	5795	3220	5795	—	—
1000	—	—	2230	4010	3030	5450	3030	5450	—	—
1050	—	—	1455	2625	3000	5400	3000	5400	—	—
1100	—	—	915	1645	2515	4525	2545	4575	—	—
1150	—	—	—	—	1855	3345	1970	3550	—	—
1200	—	—	—	—	1200	2160	1545	2775	—	—
1250	—	—	—	—	—	—	1230	2210	—	—

- A105 permissible but not recommended for prolonged usage above about 800°F (425°C).
- Please contact the authorized representative or FITOK Group for Pressure - Temperature ratings of other valve material.

SYSS - PS8G - 2TLLR

Part Number Description



Note: "Part Number Description" is used for composition rules of FITOK product model. Not suitable for specific product part number selection, not random combinations. If in doubt, please contact FITOK group or authorized agent.