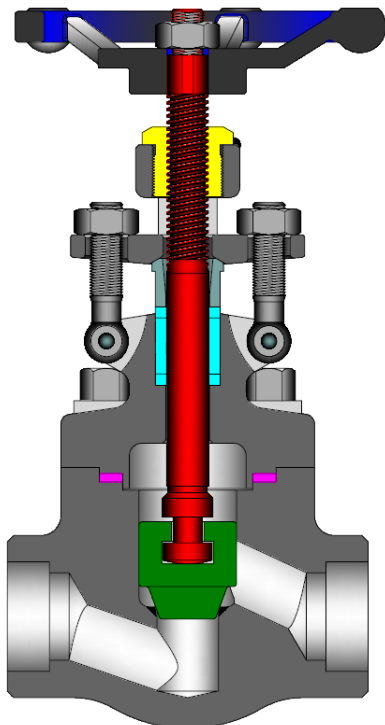


API 602 GLOBE VALVES

FORGED CARBON, STAINLESS STEEL OR ALLOY STEEL

1/4" - 2" (6 - 50 mm), ASME CLASSES 150 - 2680



STANDARD MATERIALS (Other materials available)

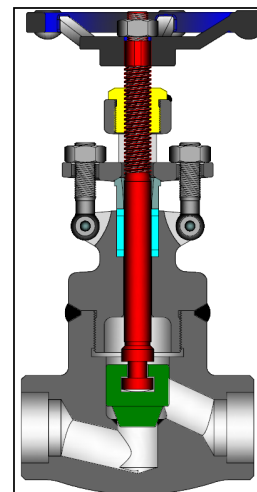
PART	MATERIALS			
Body	A105 +	A182 F11 +	A182 F22 +	A182 F316 (1)
	Stellite 6 Faced	Stellite 6 Faced	Stellite 6 Faced	
Bonnet	A105	A182 F11	A182 F22	A182 F316
Disc	SST 420			A182 F316
Stem	A182 F6a			A182 F316
Gland Flange	A105			A182 F316
Eye Bolt	A193 Gr. B7	A193 Gr. B16		A193 Gr. B8M
Eye Bolt Nut	A194 Gr. 2H	A194 Gr. 7		A194 Gr. 8M
Gland	SST 420			Series 300 SST
Packing	Graphite			PTFE
Gasket (2)	Spiral Wound SST with Graphite			Spiral Wound SST with PTFE
Hand Wheel	Malleable Iron or Steel			
Hand Wheel Nut	Malleable Iron or Steel			
Body / Bonnet Bolting (2)	A193 Gr. B7	A193 Gr. B16		A193 Gr. B8M
Identification Plate	Series 300 SST			

1. Threaded and weld end valve bodies A182 F316L
2. Welded bonnet design also available.

NOTE: See page 43 for flow, safety and maintenance information.

Design Specifications

Item	Applicable Specification
Wall thickness	API 602
Pressure - temperature ratings	ASME B16.34
General valve design	API 602 & B16.34
End to End dimensions	ASME B16.10
Flange design	ASME B16.5
Thread design	ASME B1.20.1
Butt Weld design	ASME B16.25
Socket Weld design	ASME B16.11
Materials	ASTM



Welded Bonnet Design

Class	Bore	Fig. No.
150	Standard	GL01
	Full	GLL1
300	Standard	GL03
	Full	GLL3
600	Standard	GL06
	Full	GLL6
800	Standard	GL08
	Full	GLL8
1500	Standard	GL15
	Full	GLL5
1680	Standard	GL16
2500	Standard	GL25
2690	Standard	GL26

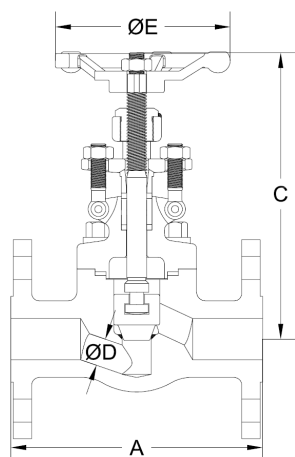
DESIGN FEATURES:

- Standard trim is stellite faced seats integral to the body, 13% chrome disc, and 13% chrome stem (API trim 8). Other trims available on request.
- Wall thickness per heavy wall API 602 requirements.
- Seat faces lapped for smooth finish and superior sealing.
- Swivel disc for optimal seating and longer seat life are non-rotating.
- Stems of hand wheel operated design are rotating / rising design.
- Each valve is shell, seat and backseat pressure tested per industry standard API 598.
- Gland is two piece gland / gland flange design for optimal alignment and uniform packing compression.
- End Flanges have the following raised faces per ASME B16.5:
 - Classes 150-300: 1/16" (2mm)
 - Classes 600: 1/4" (7mm)
- Weld ends are available per ASME B16.25/B16.11 or per customer's specification.
- Other available options as follows:
 - » Alternate valve materials such as chrome and stainless steel alloys
 - » Alternate trim materials
 - » NACE service
 - » Special cleaning for applications such as oxygen or chlorine
 - » Other options available as specified

GLOBE VALVE DIMENSIONS CLASS 150 - 800

SIZE	ASME 150				ASME 300				ASME 600			
	Bolted Bonnet				Bolted Bonnet				Bolted Bonnet			
	Standard Bore				Standard Bore				Standard Bore			
in	A	C	D	E	A	C	D	E	A	C	D	E
mm	FE				FE				FE			
½	4.25	6	0.39	3.9	6	6.2	0.39	3.9	6.5	6.2	0.39	3.9
13	108	153	10	100	152	158	10	100	165	158	10	100
¾	4.62	6.2	0.5	3.9	7	6.2	0.5	3.9	7.5	6.2	0.5	3.9
19	117	158	13	100	178	158	13	100	190	158	13	100
1	5	7.6	0.69	4.9	8	7.6	0.69	4.9	8.5	7.6	0.69	4.9
25	127	192	18	125	203	192	18	125	216	192	18	125
1¼	5.5	8.9	0.91	6.3	8.5	8.9	0.91	6.3	9	5	0.91	6.3
32	140	227	23	160	216	227	23	160	229	127	23	160
1½	6.5	9.4	1.12	6.3	9	9.4	1.12	6.3	9.5	9.4	1.12	6.3
38	165	240	29	160	229	240	29	160	241	240	29	160
2	8	11	1.38	7.1	10.5	11	1.38	7.1	11.5	11	1.38	7.1
50	203	279	35	180	267	279	35	180	292	279	35	180

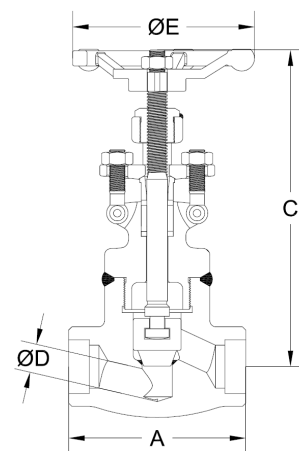
SIZE	ASME 800											
	Bolted Bonnet								Welded Bonnet			
	Standard Bore				Full Bore				Standard Bore			
in	A	C	D	E	A	C	D	E	A	C	D	E
mm	WE				WE				WE			
¼	3.11	6.1	0.26	3.9	-	-	-	-	3.11	6.1	0.26	3.9
6	79	154	7	100	-	-	-	-	79	154	7	100
3/8	3.11	6.1	0.39	3.9	-	-	-	-	3.11	6.1	0.39	3.9
10	79	154	10	100	-	-	-	-	79	154	10	100
½	3.11	6.2	0.39	3.9	3.62	6.2	0.5	6.3	3.11	6.1	0.39	3.9
13	79	158	10	100	92	158	13	160	79	154	10	100
¾	3.62	6.2	0.5	3.9	4.37	7.6	0.69	4.9	3.62	6.2	0.5	3.9
19	92	158	13	100	111	192	18	125	92	158	13	100
1	4.37	7.6	0.69	4.9	4.72	8.9	0.91	6.3	4.37	7.6	0.69	4.9
25	111	192	18	125	120	227	23	160	111	192	18	125
1¼	4.72	8.9	0.91	6.3	5.98	9.4	1.12	6.3	4.72	8.9	0.91	6.3
32	120	227	23	160	152	240	29	160	120	227	23	160
1½	5.98	9.4	1.12	6.3	6.77	11	1.4	7.1	5.98	9.4	1.12	6.3
38	152	240	29	160	172	279	36	180	152	240	29	160
2	6.77	11	1.38	7.1	8.66	12.8	1.85	7.9	6.77	11	1.38	7.1
50	172	279	35	180	220	325	47	200	172	279	35	180



Bolted Bonnet Flanged Ends Design

WE = Socket Weld / Threaded ends
FE = Flanged Ends

C = Center to top open



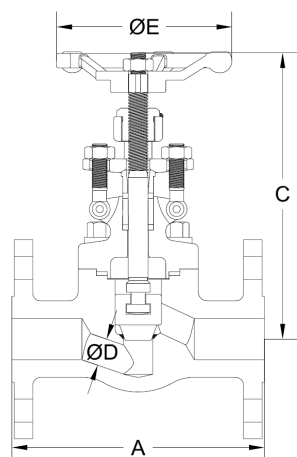
Welded Bonnet Socket Weld Ends Design

ADDITIONAL SIZES, MATERIALS AND CLASSES AVAILABLE UPON REQUEST.

2503 Spring Grove Avenue, Cincinnati, OH 45214 • 800.888.2583 • www.powellvalves.com

GLOBE VALVE DIMENSIONS CLASS 1500 - 2680

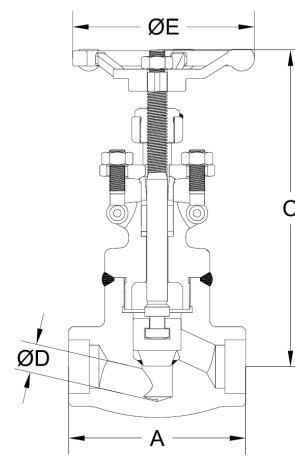
SIZE	ASME 1500 & 1690																
	Bolted Bonnet									Welded Bonnet							
	Standard Bore					Full Bore				Standard Bore				Full Bore			
in	A		C	D	E	A	C	D	E	A	C	D	E	A	C	D	E
mm	FE	WE				WE				WE							
¼	-	3.11	6.9	0.26	3.9	-	-	-	-	3.11	6.2	0.39	3.9	-	-	-	-
6	-	79	175	7	100	-	-	-	-	79	158	10	100	-	-	-	-
3/8	-	3.62	7	0.39	4.9	-	-	-	-	3.62	6.2	0.5	3.9	-	-	-	-
10	-	92	178	10	125	-	-	-	-	92	158	13	100	-	-	-	-
½	8.5	3.62	7.4	0.39	4.9	4.37	7.4	0.5	4.9	4.37	7.4	0.39	4.9	4.37	7.4	0.5	4.9
13	216	92	187	10	125	111	187	13	125	111	187	10	125	111	187	13	125
¾	9	4.37	7.4	0.5	4.9	4.72	8.9	0.69	6.3	4.37	7.4	0.5	4.9	4.72	8.9	0.69	6.3
19	229	111	187	13	125	120	227	18	160	111	187	13	125	120	227	18	160
1	10	4.72	8.9	0.69	6.3	5.98	9.5	0.91	6.3	4.72	8.9	0.69	6.3	5.98	9.5	0.91	6.3
25	254	120	227	18	160	152	242	23	160	120	227	18	160	152	242	23	160
1¼	11	5.98	9.5	0.91	6.3	6.77	10.9	1.12	7.1	5.98	9.5	0.91	6.3	6.77	10.9	1.12	7.1
32	279	152	242	23	160	172	278	29	180	152	242	23	160	172	278	29	180
1½	12	6.77	10.9	1.12	7.1	8.66	12.8	1.38	7.9	6.77	10.9	1.12	7.1	8.66	12.8	1.38	7.9
38	305	172	278	29	180	220	325	35	200	172	278	29	180	220	325	35	200
2	14.5	8.66	12.8	1.38	7.9	9.84	14	1.85	7.9	8.66	12.8	1.38	7.9	9.84	14	1.85	7.9
50	368	220	325	35	200	250	355	47	200	220	325	35	200	250	355	47	200
SIZE	ASME 2500 & 2680																
	Bolted Bonnet									Welded Bonnet							
	Standard Bore									Standard Bore							
in	A		C	D	E	A		C	D	E	A		C	D	E		
mm	WE	WE				WE	WE										
½	5.91		11.5	0.43	6.3	5.91		9.8	0.55	6.3	5.91		9.8	0.55	6.3		
13	150		293	11	160	150		249	14	160	150		249	14	160		
¾	5.91		11.5	0.43	6.3	5.91		9.8	0.55	6.3	5.91		9.8	0.55	6.3		
19	150		293	11	160	150		249	14	160	150		249	14	160		
1	6.69		13.5	0.55	7.9	6.69		11.5	0.75	7.9	6.69		11.5	0.75	7.9		
25	170		344	14	200	170		292	19	200	170		292	19	200		
1¼	7.87		15.1	0.63	9.8	7.87		12.9	0.98	9.8	7.87		12.9	0.98	9.8		
32	200		383	16	250	200		327	25	250	200		327	25	250		
1½	7.87		15.1	0.98	9.8	7.87		12.9	1.1	9.8	7.87		12.9	1.1	9.8		
38	200		383	25	250	200		327	28	250	200		327	28	250		
2	9.84		17.4	1.1	11.8	9.84		15	1.38	11.8	9.84		15	1.38	11.8		
50	250		442	28	300	250		381	35	300	250		381	35	300		



Bolted Bonnet Flanged Ends Design

WE = Socket Weld / Threaded ends
FE = Flanged Ends

C = Center to top open



Welded Bonnet Socket Weld Ends Design

ADDITIONAL SIZES, MATERIALS AND CLASSES AVAILABLE UPON REQUEST.

2503 Spring Grove Avenue, Cincinnati, OH 45214 • 800.888.2583 • www.powellvalves.com

API 602 GLOBE VALVES

FORGED CARBON, STAINLESS STEEL OR ALLOY STEEL

1/4" - 2" (6 - 50mm), ASME CLASSES 150 - 2680

SIZE	ASME 150			ASME 300			ASME 600			ASME 800											
	Bolted Bonnet			Bolted Bonnet			Bolted Bonnet			Bolted Bonnet						Welded Bonnet					
	Standard Bore			Standard Bore			Standard Bore			Standard Bore			Full Bore			Standard Bore			Full Bore		
in	WT	LB	CV	WT	LB	CV	WT	LB	CV	WT	LB	CV	WT	LB	CV	WT	LB	CV	WT	LB	CV
mm	FE	KG		FE	KG		FE	KG		FE	KG		WE	KG		WE	KG		WE	KG	
¼	-	-	-	-	-	-	-	-	-	4.6	0.7	-	-	4.4	0.7	-	-	-	-	-	
6	-	-	-	-	-	-	-	-	-	2.1	-	-	-	2	-	-	-	-	-	-	
3/8	-	-	-	-	-	-	-	-	-	4.6	1.5	-	-	4.4	1.5	-	-	-	-	-	
10	-	-	-	-	-	-	-	-	-	2.1	-	-	-	2	-	-	-	-	-	-	
½	9.9	1.5	10.6	1.5	12.3	1.5	4.4	1.5	4.9	2.6	4.2	1.5	4.6	2.6	4.2	1.5	4.6	2.6	4.2	1.5	
13	4.5	-	4.8	-	5.6	-	2	-	2.2	-	1.9	-	2.1	-	1.9	-	2.1	-	1.9	-	
¾	15.2	2.7	17	2.7	17.2	2.7	4.9	2.7	8.4	4.9	4.6	2.7	8.2	4.9	4.6	2.7	8.2	4.9	4.6	2.7	
19	6.9	-	7.7	-	7.8	-	2.2	-	3.8	-	2.1	-	3.7	-	2.1	-	3.7	-	2.1	-	
1	21.6	5.1	24.3	5.1	27.6	5.1	5.5	5.1	12.1	8.9	8.2	5.1	11.9	8.9	8.2	5.1	11.9	8.9	8.2	5.1	
25	9.8	-	11	-	12.5	-	2.5	-	5.5	-	3.7	-	5.4	-	3.7	-	5.4	-	3.7	-	
1¼	29.8	9.1	37	9.1	37.5	9.1	12.1	9.1	15.4	13.7	11.9	9.1	15.2	13.7	11.9	9.1	15.2	13.7	11.9	9.1	
32	13.5	-	16.8	-	17	-	5.5	-	7	-	5.4	-	6.9	-	5.4	-	6.9	-	5.4	-	
1½	43	14	46.5	14	51.8	14	15.4	14	25.4	21.9	15.2	14	25.1	21.9	15.2	14	25.1	21.9	15.2	14	
38	19.5	-	21.2	-	23.5	-	7	-	11.5	-	6.9	-	11.4	-	6.9	-	11.4	-	6.9	-	
2	61.7	22.4	68	22.4	71.9	22.4	25.4	22.4	26.5	40	25.1	22.4	26.2	40	25.1	22.4	26.2	40	25.1	22.4	
50	28	-	31	-	32.6	-	11.5	-	12	-	11.4	-	11.9	-	11.4	-	11.9	-	11.4	-	
SIZE	ASME 1500 & 1687												ASME 2500 & 2680								
	Bolted Bonnet						Welded Bonnet						Bolted Bonnet				Welded Bonnet				
	Standard Bore			Full Bore			Standard Bore			Full Bore			Standard Bore			Standard Bore					
in	WT	LB	WT	LB	CV	WT	LB	CV	WT	LB	CV	WT	LB	CV	WT	LB	CV	WT	LB	CV	
mm	FE	KG	WE	KG		WE	KG		WE	KG		WE	KG		WE	KG		WE	KG		WE
¼	-	-	6.6	-	0.7	-	-	6.2	-	0.7	-	-	-	-	-	-	-	-	-	-	
6	-	-	3	-	-	-	-	2.8	-	-	-	-	-	-	-	-	-	-	-	-	
3/8	-	-	7.7	-	1.5	-	-	6.6	-	1.5	-	-	-	-	-	-	-	-	-	-	
10	-	-	3.5	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	
½	24.3	7.7	1.5	8.8	1.5	7.3	1.5	8.6	1.5	23.8	1.8	16.1	3	11	3.5	4	6.3	5.1	13.4	5.1	
13	11	3.5	-	4	-	3.3	-	3.9	-	10.8	-	7.3	-	13.2	4	-	6.3	-	3.8	-	
¾	29.1	8.8	2.7	13.9	2.7	8.4	2.7	13.7	2.7	24.3	1.9	18.7	3.1	38.4	13.9	5.1	17.6	5.1	13.4	5.1	
19	13.2	4	-	6.3	-	3.8	-	6.2	-	11	-	8.5	-	25	17.4	6.3	8	-	6.1	-	
1	38.4	13.9	5.1	17.6	5.1	13.4	5.1	17.4	5.1	26.8	3.2	27.6	6	41.9	17.6	9.1	27.6	9.1	17.2	9.1	
25	17.4	6.3	-	8	-	6.1	-	7.9	-	12.1	-	12.5	-	32	19	8	12.5	-	7.8	-	
1¼	41.9	17.6	9.1	27.6	9.1	17.2	9.1	27.3	9.1	47.8	4.3	45.6	10.5	38	24.5	12.5	19.5	-	12.3	-	
32	19	8	-	12.5	-	7.8	-	12.4	-	21.7	-	20.7	-	1½	54	27.6	14	43	14	27.1	
1½	54	27.6	14	43	14	27.1	14	42.8	14	48.5	10.7	46.3	13.5	50	38.8	19.5	20	-	19.3	-	
38	24.5	12.5	-	19.5	-	12.3	-	19.4	-	22	-	21	-	2	85.5	43	22.4	44.1	22.4	42.5	
2	85.5	43	22.4	44.1	22.4	42.5	22.4	43.9	22.4	81.6	14.2	79.4	22.4	50	38.8	19.5	20	-	19.3	-	
50	38.8	19.5	-	20	-	19.3	-	19.9	-	37	-	36	-								

FE = Flanged Ends

WE = Socket Weld / Threaded Ends

WT = Weight

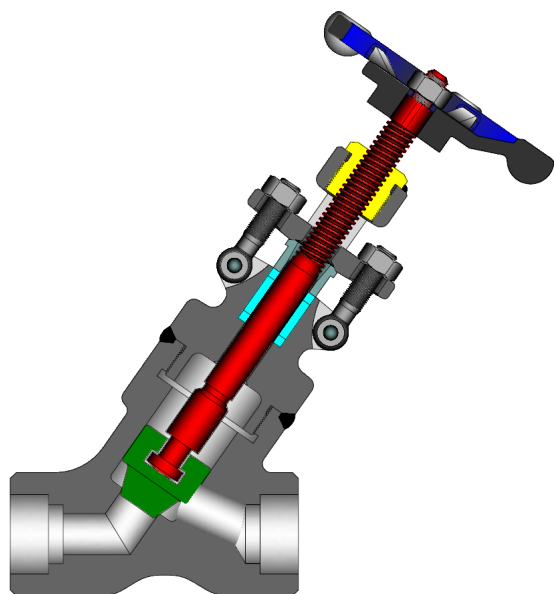
CV = Flow Coefficient

API 602 Y-PATTERN GLOBE VALVES

FORGED CARBON, STAINLESS STEEL OR ALLOY STEEL

1/4" - 2" (6 - 50 mm)

ASME CLASSES 800 - 2680



STANDARD MATERIALS (Other materials available)

PART	MATERIALS			
Body	A105 + Stellite 6 Faced	A182 F11 + Stellite 6 Faced	A182 F22 + Stellite 6 Faced	A182 F316 (1)
Bonnet	A105	A182 F11	A182 F22	A182 F316
Disc	SST 420			A182 F316
Stem	A182 F6a			A182 F316
Gland Flange	A105			A182 F316
Eye Bolt	A193 Gr. B7	A193 Gr. B16		A193 Gr. B8M
Eye Bolt Nut	A194 Gr. 2H	A194 Gr. 7		A194 Gr. 8M
Gland	SST 420			Series 300 SST
Packing	Graphite			PTFE
Hand Wheel	Malleable Iron or Steel			
Hand Wheel Nut	Malleable Iron or Steel			
Identification Plate	Series 300 SST			

1. Threaded and weld end valve bodies A182 F316L

Class	Bore	Fig. No.
800	Standard	GY08
	Full	GYL8
1500	Standard	GY15
	Full	GYL5
1680	Standard	GY16
2500	Standard	GY25
2690	Standard	GY26

Design Specifications

Item	Applicable Specification
Wall thickness	API 602
Pressure - temperature ratings	ASME B16.34
General valve design	API 602 & B16.34
End to End dimensions	ASME B16.10
Flange design	ASME B16.5
Thread design	ASME B1.20.1
Butt Weld design	ASME B16.25
Socket Weld design	ASME B16.11
Materials	ASTM

DESIGN FEATURES:

- Standard trim is stellite faced seat integral to the body, 13% chrome disc, and 13% chrome stem (API trim 8). Other trims available on request.
- Wall thickness per heavy wall API 602 requirements.
- Seat faces lapped for smooth finish and superior sealing.
- Swivel disc for optimal seating and longer seat life are non-rotating.
- Stems of hand wheel operated design are rotating / rising design.
- Each valve is shell, seat and backseat pressure tested per industry standard API 598.
- Gland is two piece gland / gland flange design for optimal alignment and uniform packing compression.

- End Flanges have the following raised faces per ASME B16.5:
Classes 150-300: 1/16" (2mm)
Classes 600: 1/4" (7mm)
- Weld ends are available per ASME B16.25/B16.11 or per customer's specification.
- Other available options as follows:
 - Alternate valve materials such as chrome and stainless steel alloys
 - Alternate trim materials.
 - NACE service.
 - Special cleaning for applications such as oxygen or chlorine.
 - Other options available as specified.

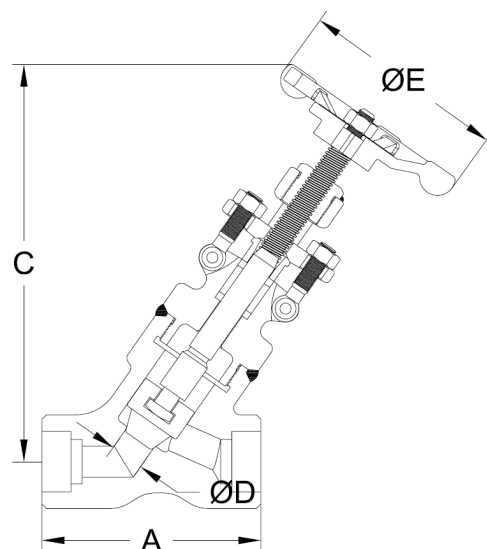
NOTE: See page 43 for flow, safety and maintenance information.

Y-PATTERN GLOBE VALVE DIMENSIONS

CLASS 800 - 2680

SIZE	ASME 800							
	Bolted Bonnet				Welded Bonnet			
	Standard Bore				Standard Bore			
in	A	C	D	E	A	C	D	E
mm	WE				WE			
½	4.17	6.7	0.39	3.9	4.17	6.5	0.39	3.9
13	106	170	10	100	106	166	10	100
¾	4.17	6.7	0.5	3.9	4.17	6.5	0.5	3.9
19	106	170	13	100	106	166	13	100
1	4.72	8	0.69	4.9	4.72	7.8	0.69	4.9
25	120	202	18	125	120	197	18	125
1¼	5.98	9.8	0.91	6.3	5.98	9.6	0.91	6.3
32	152	249	23	160	152	243	23	160
1½	5.98	9.8	1.12	6.3	5.98	9.6	1.12	6.3
38	152	249	29	160	152	243	29	160
2	7.09	11.1	1.38	7.1	7.09	10.7	1.38	7.1
50	180	281	35	180	180	272	35	180

SIZE	ASME 1500 & 1690								ASME 2500 & 2680			
	Bolted Bonnet				Welded Bonnet				Welded Bonnet			
	Standard Bore				Standard Bore				Standard Bore			
in	A	C	D	E	A	C	D	E	A	C	D	E
mm	WE				WE				WE			
½	4.72	7.9	0.39	4.9	4.72	7.6	0.39	4.9	5.98	9.6	0.43	6.3
13	120	200	10	125	120	192	10	125	152	243	11	160
¾	4.72	7.9	0.5	4.9	4.72	7.6	0.5	4.9	5.98	9.6	0.55	6.3
19	120	200	13	125	120	192	13	125	152	243	14	160
1	5.98	9.8	0.69	6.3	5.98	9.4	0.69	6.3	7.09	11.4	0.75	7.9
25	152	250	18	160	152	240	18	160	180	290	19	200
1¼	5.98	9.8	0.91	6.3	5.98	9.4	0.91	6.3	7.87	13.2	0.98	9.8
32	152	250	23	160	152	240	23	160	200	335	25	250
1½	7.09	11.1	1.12	7.1	7.09	10.7	1.12	7.1	7.87	13.2	1.1	9.8
38	180	283	29	180	180	273	29	180	200	335	28	250
2	7.87	12.8	1.38	7.9	7.87	12.4	1.38	7.9	9.06	15.4	1.38	11.8
50	200	324	35	200	200	316	35	200	230	390	35	300



WE = Socket Weld / Threaded Ends

C = Center to top open

ADDITIONAL SIZES, MATERIALS AND CLASSES AVAILABLE UPON REQUEST.

API 602 Y-PATTERN GLOBE VALVES

FORGED CARBON, STAINLESS STEEL OR ALLOY STEEL

1/4" - 2" (6 - 50mm), ASME CLASSES 800 - 2680

SIZE	ASME 800						ASME 1500 & 1687						ASME 2500 & 2680		
	Bolted Bonnet			Welded Bonnet			Bolted Bonnet			Welded Bonnet			Welded Bonnet		
	Standard Bore			Standard Bore			Standard Bore			Standard Bore			Standard Bore		
in	WT	LB	CV	WT	LB	CV	WT	LB	CV	WT	LB	CV	WT	LB	CV
mm	WE	KG		WE	KG		WE	KG		WE	KG		WE	KG	
½	4.4		3.3	3.3		3.3	9.3		3.3	7.7		3.3	9.9		4
13	2			1.5			4.2			3.5			4.5		
¾	4.9		5.9	4.4		5.9	9.3		5.9	7.7		5.9	15.7		6.8
19	2.2			2			4.2			3.5			7.1		
1	9.3		11.2	8.4		11.2	12.1		11.2	11		11.2	24.3		13.3
25	4.2			3.8			5.5			5			11		
1¼	12.1		20	11		20	20.7		20	19.8		20	37.7		23.1
32	5.5			5			9.4			9			17.1		
1½	20.7		30	19.8		30	28.7		30	23.1		30	37.7		30
38	9.4			9			13			10.5			17.1		
2	28.7		49	28.7		49	36.4		49	32		49	55.1		49
50	13			13			16.5			14.5			25		

FE = Flanged Ends

WE = Socket Weld / Threaded Ends

WT = Weight

CV = Flow Coefficient