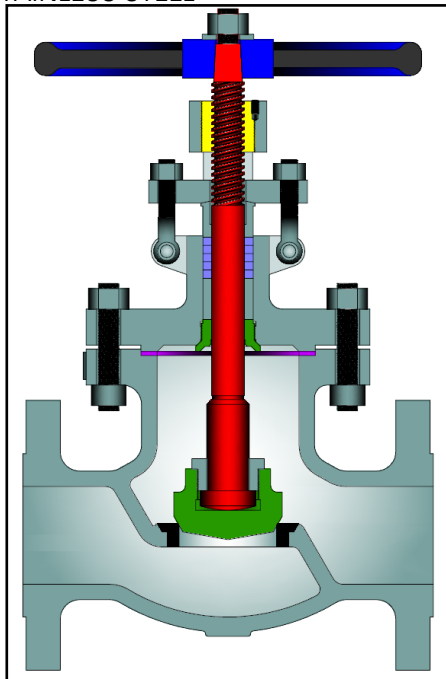


# API 603 GLOBE VALVES

BOLTED BONNET, CLASSES 150 - 600  
 FLANGED AND BUTTWELD ENDS  
 CAST STAINLESS STEEL



Class	Fig. No
150	2475
300	2447 (3)
600	1983 (3)

## DESIGN FEATURES:

- Seat face: Ground and lapped to a smooth finish.
- Body and bonnet joint accurately machined. Gasket materials and details on page 6.
- Swivel disc for optimal seating and longer seat life.
- Stems of hand wheel operated design are rotating / rising design.
- Each valve is shell, seat and backseat pressure tested per industry standard API 598.
- Integral seats are standard. Renewable seat rings available on special order
- Body and bonnet castings are precision machined. One-piece bonnet up to 12" (350 mm) valve size on all classes.
- Gland has two-piece construction for easy alignment.
- Weld ends are available per ASME B16.25 or per customer's specification.
- Flanges:
  - » Classes 150-300: 1/16" raised face.
  - » Class 600: 1/4" raised face.
  - » Finish 125-250 AARH for all valves.
- Threaded and socket weld ends are available on sizes 2" and smaller.
- Each valve has a unique certification number that is traceable to the valve certification sheet which includes MTR data, pressure test, inspection result and certificate of conformance.

## STANDARD MATERIALS (Other materials available)

PART	MATERIALS
Body	A351 Gr. CF8M (2)
Bonnet / Yoke arm	A351 Gr. CF8M
Disc	A276 316
Disc Nut	A276 316
Stem	A276 316
Stem Bushing	A439 D-2 (4)
Gland Flange	A351 Gr. CF8
Eye Bolt	A193 Gr. B8
Eye Bolt Nut	A194 Gr.8
Gland	A276 316
Packing	PTFE
Packing Washer / Packing Spacer	A276 316
Gasket	PTFE
Back Seat Bushing (5)	A276 316
Hand Wheel	A47
Hand Wheel Nut	Steel
Body / Bonnet Stud	A193 Gr. B8
Body / Bonnet Nut	A194 Gr.8
Bonnet / Yoke arm Stud (1)	A193 Gr. B8
Bonnet / Yoke arm Nut (1)	A194 Gr.8
Bearing Cap (1)	Series 300 SST
Cap Screws (1)	
Identification Plate	

1. 14" Valve sizes and up all classes have a two piece yoke.
2. CF3M for weld end bodies.
3. See pages 14-15 for 2" and smaller sizes with threaded or socket weld ends.
4. For valve sizes 2" and smaller, T416 steel is used.
5. Used in valve sizes 2½" and larger.

## Design Specifications

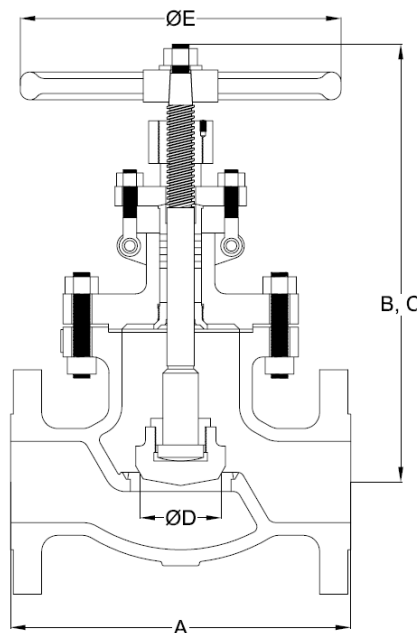
Item	Applicable Specification
Wall thickness	API 603 & B16.34
Pressure - temperature ratings	ASME B16.34
General valve design	B16.34
End to End dimensions	ASME B16.10
Flange design	ASME B16.5
Butt Weld design	ASME B16.25
Materials	ASTM

- Heavier walled API 600 design available.
- Other available options as follows:
  - » Alternate valve materials such as chrome and stainless steel alloys
  - » Alternate trim materials
  - » Bypass, drain and other auxiliary connections
  - » Gear, motor, and cylinder actuators available
  - » NACE service
  - » Special cleaning for applications such as oxygen or chlorine
  - » Other options available as specified

# GLOBE VALVE DIMENSIONS (CLASSES 150 - 600)

SIZE	ASME 150					ASME 300					ASME 600				
	A	B	C	D	E	A	B	C	D	E	A	B (1)	C (1)	D	E
	FE/WE					FE/WE					FE/WE				
½	4.25	6.3	6.8	0.50	3.0	6.0	6.3	6.8	0.50	3.0	6.50	7.5	8.1	0.50	3.0
13	108	160	171	13	76	152	160	171	13	76	165	191	206	13	76
¾	4.63	6.8	7.3	0.75	3.5	7.0	6.8	7.3	0.75	3.5	7.50	8.9	9.5	0.75	3.5
20	117	173	186	19	89	178	173	186	19	89	191	225	241	19	89
1	5.00	7.7	8.2	1.00	4.0	8.0	7.7	8.2	1.00	4.0	8.50	9.9	10.5	1.00	5.0
25	127	196	208	25	102	203	196	208	25	102	216	251	267	25	127
1½	6.50	9.0	9.9	1.50	5.0	9.0	9.0	9.9	1.50	5.0	9.50	10.9	11.6	1.50	7.0
38	165	229	251	38	127	229	229	251	38	127	241	277	295	38	178
2	8.00	9.9	10.9	2.00	6.0	10.5	9.9	10.9	2.00	6.0	11.50	12.5	13.3	2.00	8.0
50	203	251	276	51	152	267	251	276	51	152	292	318	338	51	203
2½	8.50	14.9	16.4	2.50	9.8	11.5	16.7	18.2	2.50	9.8	13.00	16.4	17.6	2.50	11.81
65	216	378	416	64	250	292	423	461	64	250	330	416	448	64	300
3	9.50	14.1	15.4	3.00	11.8	12.5	14.1	15.4	3.00	11.8	14.00	17.2	18.7	3.00	13.8
80	241	357	390	76	300	318	357	390	76	300	355	438	475	76	350
4	11.50	16.5	18.0	4.00	11.8	14.0	16.7	18.0	4.00	13.8	17.00	20.2	21.7	4.00	17.7
100	292	419	457	102	300	356	423	458	102	350	431	514	552	102	450
6	16.00	17.6	19.7	6.00	15.8	17.5	21.0	23.2	6.00	17.7	22.00	25.7	27.9	6.00	23.6
150	406	446	499	152	400	445	534	589	152	450	558	653	709	152	600
8	19.50	20.1	22.6	8.00	17.7	22.0	23.9	26.3	8.00	21.7	26.00	29.1	31.6	7.88	27.7
200	495	511	574	203	450	559	606	669	203	550	660	739	803	200	700
10	24.50	23.9	26.9	10.00	21.7	24.5	26.7	29.7	10.00	23.6	31.00	41.3 (1)		9.75	27.7
250	622	606	682	254	550	622	677	753	254	600	787	1049 (1)		248	700
12	27.50	27.1	30.6	12.00	23.6	28.0	30.6	34.2	12.00	27.6	33.00	47.8 (1)		11.75	31.5
300	699	688	778	305	600	711	778	868	305	700	838	1215 (1)		298	800

(1) Gear operators standard for 10" and up for class 600. Height is to top of actuator.



FE = Flanged  
 WE = Butt weld  
 B = Center to top closed  
 C = Center to top open

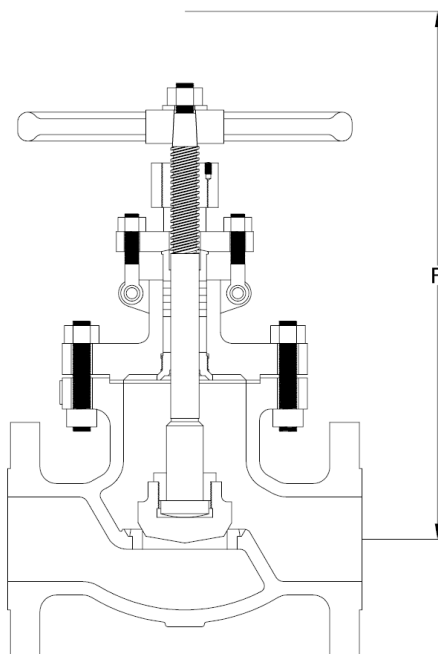
# API 603 WALL GLOBE VALVES

BOLTED BONNET, ASME CLASSES 150 - 600

FLANGED AND BUTTWELD ENDS

CAST STAINLESS STEEL

SIZE	ASME 150							ASME 300							ASME 600						
	F	in	WT	lb	WT	lb	C <sub>v</sub>	F	in	WT	lb	WT	lb	C <sub>v</sub>	F	in	WT	lb	WT	lb	C <sub>v</sub>
		mm	mm	FE	kg	WE			kg	mm	FE	kg	WE			kg	mm	FE	kg	WE	
½	7.9		5.0		3.5		2.5	7.9		6.5		3.8		2.5	9.0		8.1		3.8		2.5
13	201		2.3		1.6			201		2.9		1.7			229		3.7		1.7		
¾	8.5		6.5		4.5		5.8	8.5		11.3		4.6		5.8	10.6		12.8		4.8		5.8
20	216		2.9		2.0			216		5.1		2.1			269		5.8		2.2		
1	9.6		9.3		6.7		10.7	9.6		13.1		7.1		10.7	11.9		16.5		7.4		10.7
25	244		4.2		3.0			244		5.9		3.2			302		7.5		3.4		
1½	11.5		20.0		13.7		25	11.5		25.3		19.1		25	13.9		35.8		21.0		25
38	292		9.1		6.2			292		11.4		8.7			353		16.2		9.5		
2	13.1		29.5		19.8		50	13.1		34.1		25.8		50	16.3		58.0		40.0		50
50	333		13.4		9			333		15.5		11.7			414		26.3		18.1		
2½	16.0		46		38		75	16.3		71		57		75	20.1		148		126		75
65	406		21		17			414		32		26			510		67		57		
3	18.0		87		71		110	18.0		117		95		110	25.5		174		143		110
80	456		40		32			456		53		43			647		79		65		
4	21.3		135		108		200	20.7		165		132		200	25.0		315		251		200
100	541		61		49			525		75		60			635		143		114		
6	25.3		227		183		480	27.2		342		273		480	32.3		677		573		480
150	643		103		83			692		155		124			822		307		260		
8	26.7		375		300		880	30.6		644		516		880	36.5		1096		942		850
200	678		170		136			776		292		234			928		497		427		
10	31.5		706		565		1370	34.4		1064		851		1370	41.7		1574		1334		1300
250	801		320		256			873		483		386			1059		714		605		
12	37.6		1056		849		2050	40.1		1361		1089		2050	54.8		2000		1702		2000
300	956		479		385			1018		617		494			1391		907		772		



**FE** = Flanged ends

**WE** = Weld ends

**F** = Dismantling Dimension

**WT** = Weight

**C<sub>v</sub>** = Flow coefficient