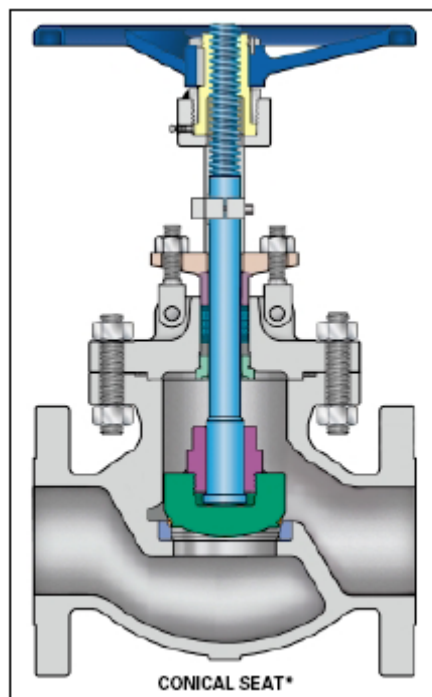




Documentation Package

01.2

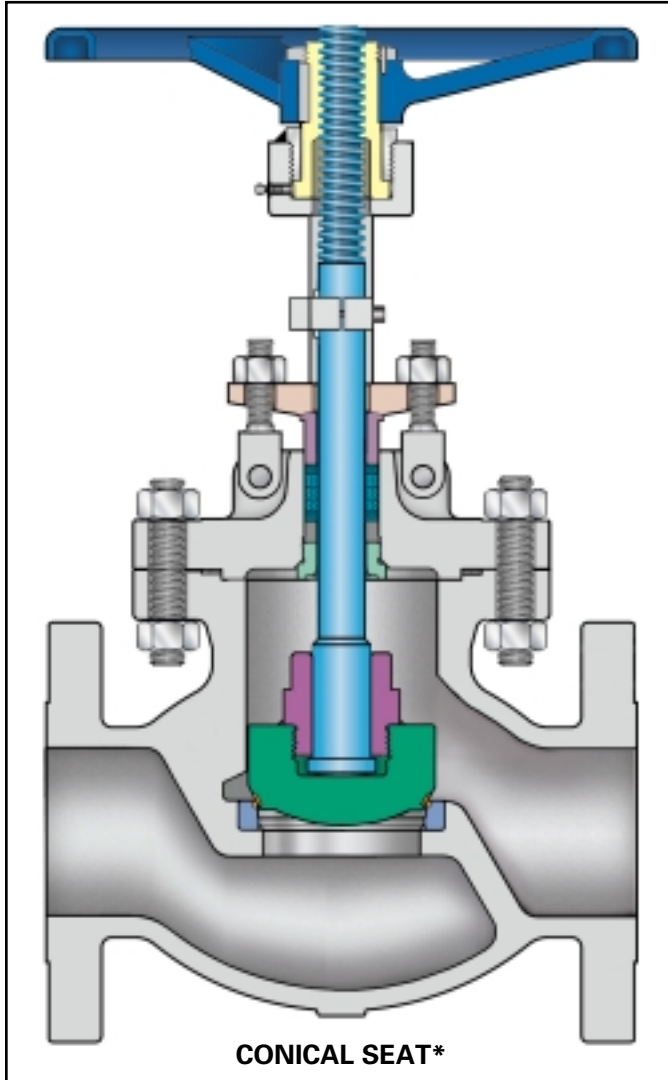
“API 600 Cast Steel Globe and Stop Check Valves”



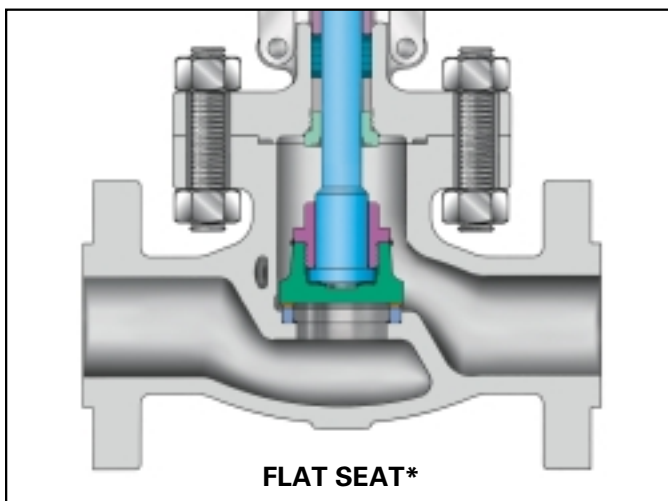


CAST CARBON, STAINLESS OR ALLOY STEEL API 600 BOLTED BONNET GLOBE AND STOP CHECK VALVES, 2–16" (50 – 400 mm) ASME CLASSES 150, 300 AND 600

NOW THE ONLY API 600 GLOBE VALVE WITH NON-ROTATING STEM



CONICAL SEAT*



FLAT SEAT*

DESIGN FEATURES:

- **Non-rotating Stem** with precision Acme threads and burnished finish. Valve suitable for horizontal installation.
- **Universal Trim.** 13 CR stem, 13 CR faced disc and Stellite 6 faced seats API Trim 8 suitable for service up to 850°F.
- **Seat face** Stellite, ground and lapped to a mirror finish. Conical seat machined to 8 RMS.
- **Flat disc.** Floating stem-disc engagement, hardfaced with 13 CR, Stellite 6, SS 316 or Monel, ground and lapped with seat. Disc in SS 316 hardfaced with Stellite 6 also available.
- **Tapered disc.** Disc is guided by the mating surface of the seat, hardfaced with 13 CR, Stellite 6, SS 316 or Monel, ground and lapped with seat. Disc in SS 316 hardfaced with Stellite 6 also available. 2–6" (50–150 mm) valves may have solid CA15 (13 CR) discs.
- **Body and bonnet.** Castings are precision machined. One-piece bonnet for better alignment, fewer parts.
- **Stuffing box** finish to 63 RMS or better.
- **Body and bonnet joint** accurately machined. Fully enclosed gasket. Gasket materials on page 3. Details on page 13.
- **Gland** has two-piece construction for easy alignment.
- **Rotating Stem nut.** Austenitic ductile iron Gr. D-2C, renewable in-line.
- **Torque arm.** To reduce wear on packing rings, to enable better sealing and to reduce torque.
- **Impactor handwheels.** Globe and stop check valves require higher closing torques than gate valves with the same seat diameter and pressure class. The most economical mechanism for tight shutoff is the impactor handwheel. Two lugs cast under the wheel strike simultaneous blows and give 3–10 times the closing force of standard handwheels. Impactor handwheels are supplied at manufacturer's option unless specified by customer (see page 21).
- **Flanges.** Class 150–300: 1/16" raised face. Class 600: 1/4" raised face. Finish 125–250 AARH for all valves.

***NOTE:** Most sizes and pressure classes have conical seats. Choice of flat or conical seat is manufacturer's option unless specified by customer.

For information on BELLOWS SEAL VALVES see VEL-BS catalog.

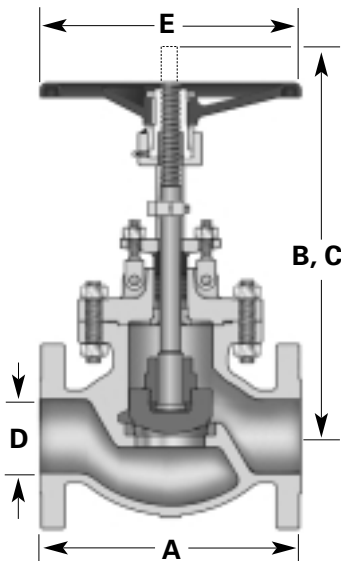
GLOBE VALVE DIMENSIONS (CLASSES 150-600)

SIZE in mm	ASME 150 (PN 20)					ASME 300 (PN 50)					ASME 600 (PN 100)				
	A	B ⁽¹⁾	C ⁽¹⁾	D	E	A	B ⁽¹⁾	C ⁽¹⁾	D	E	A	B ⁽¹⁾	C ⁽¹⁾	D	E
2	8.00	16.85	20.88	2.00	8	10.50	16.85	20.88	2.00	8	11.50	17.10	21.13	2.00	10
50	203	428	530	51	203.2	267	428	530	51	203	292	434	537	51	254
2½	8.50	17.10	21.25	2.50	10	11.50	17.10	21.25	2.50	10	13.00	18.67	22.88	2.50	10
65	216	434	540	64	254	292	434	540	64	254	330	474	581	64	254
3	9.50	18.42	22.75	3.00	10	12.50	18.42	22.75	3.00	10	14.00	20.19	24.13	3.00	14
80	241	468	578	76	254	318	468	578	76	254	356	513	613	76	356
4	11.50	20.88	26.18	4.00	14	14.00	20.88	26.18	4.00	14	17.00	23.88	29.25	4.00	24 ⁽²⁾⁽³⁾
100	292	530	665	102	356	356	530	665	102	356	432	607	743	102	610
6	16.00	25.75	32.00	6.00	24	17.50	26.38	32.88	6.00	24 ⁽²⁾⁽³⁾	22.00	31.22	37.88	6.00	24 ⁽²⁾⁽³⁾
150	406	654	813	152	610	445	670	835	152	610	559	793	962	152	610
8	19.50	30.73	38.38	8.00	24	22.00	32.00	38.88	8.00	24 ⁽²⁾⁽³⁾	26.00	41.75	57.88	7.88	(4)
200	495	780	975	203	610	559	813	988	203	610	660	1060	1470	200	(4)
10	24.50	39.25	46.75	10.00	24 ⁽²⁾⁽³⁾	24.50	42.34	52.18	10.00	24 ⁽²⁾⁽³⁾	31.00	47.16	59.00	9.75	(4)
250	622	997	1187	254	610	622	1075	1325	254	610	787	1198	1499	248	(4)
12	27.50	42.52	53.00	12.00	24 ⁽²⁾⁽³⁾	28.00	46.19	62.75	12.00	(4)	—	—	—	—	—
300	699	1080	1346	305	610	711	1173	1594	305	(4)	—	—	—	—	—
14	31.00	54.21	65.44	13.25	(4)	33.00	54.21	72.00	13.25	(4)	—	—	—	—	—
350	787	1377	1662	337	(4)	838	1377	1829	337	(4)	—	—	—	—	—
16	36.00	59.94	72.63	15.25	(4)	34.00	59.94	76.00	15.25	(4)	Inclined cast classes 900-2500 globe valves also available				
400	914	1522	1845	387	(4)	863	1522	1930	387	(4)					
18	38.50	59.62	75.00	17.50	(4)	38.50	59.62	75.00	17.50	(4)					
450	978	1514	1905	444	(4)	978	1514	1905	444	(4)					

CLASSES 900-1500

SIZE in mm	ASME 900 (PN 150)					ASME 1500 (PN 250)				
	A	B ⁽¹⁾	C ⁽¹⁾	D	E	A	B ⁽¹⁾	C ⁽¹⁾	D	E
2	14.50	19.75	25.00	1.88	18	14.50	19.75	25.00	1.88	18
50	368	502	635	48	457	368	502	635	48	457
3	15.00	24.09	30.50	2.88	14 ⁽²⁾⁽³⁾	18.50	24.09	30.50	2.75	14 ⁽²⁾⁽³⁾
80	381	612	775	73	356	470	612	775	70	356
4	18.00	27.50	35.38	3.88	18 ⁽²⁾⁽³⁾	21.50	27.50	35.38	3.63	18 ⁽²⁾⁽³⁾
100	457	699	899	99	457	546	699	899	92	457

- (1) Height does not include actuators. (2) Impactor handwheel. (3) Gear actuator is optional. (4) Gear actuator.



Forged globe valves
classes 900-2500 also
available.

See page 32 & 33 for valve
weights and CVs.

B = Center-to-Top, Open
C = Dismantling Height

CLASS	FIGURE NUMBERS		
	GLOBE	STOP CHECK	NEEDLE
150	0074C	0084C	0094C
300	1074C	1084C	1094C
600	2074C	2084C	2094C
900	7074C	7084C	7094C
1500	3074C	3084C	3094C

STANDARD MATERIALS

PART	MATERIALS			
Body ⁽¹⁾	WCB	WC6	WC9	CF8M
Bonnet ⁽¹⁾	WCB	WC6	WC9	CF8M
Seat ⁽¹⁾⁽²⁾	Stellite 6 faced Carbon steel	Stellite 6 faced F11	Stellite 6 faced F22	Stellite 6 F316
Disc	CA 15 or 13 CR faced A105	CA 15 or 13 CR faced F11	CA 15 or 13 CR faced F22	CF8M or F316
Disc nut	Carbon steel	SS 304 or 316		
Stem ⁽¹⁾⁽³⁾	SS 410			SS 316 or 630
Backseat ⁽¹⁾⁽³⁾	SS 410			SS 316
Packing ring ⁽¹⁾	Graphite			
Gland stud	Gr. B or B7 ⁽⁴⁾			F316, B8M or 630 ⁽⁵⁾
Gland nut	Gr. 2H			Gr. 8M
Packing flange	Carbon steel			SS
Gland bushing	Carbon steel			SS
Bonnet stud	B7	B16		B8M or 630
Bonnet nut	Gr. 2H	Gr. 4		Gr. 8M
Hinge pin	Steel			SS
Gasket ⁽¹⁾	Spiral wound stainless steel/graphite			
Torque arm	Carbon steel			
Yoke bushing	Carbon steel			Stainless steel
Stem nut	A 439 Austenitic ductile iron Gr. D-2C			
Handwheel nut	Malleable iron or steel			
Handwheel ⁽¹⁾	Malleable iron or steel			

- (1) Other materials available. (2) Stellite. (3) Hardened. (4) For eye bolts Gr. B, for studs B7 is used. (5) For eye bolts F316, for studs B8M or 630 is used.

DESIGN SPECIFICATIONS

ITEM	APPLICABLE SPECIFICATION
Wall thickness and general valve design	API 600, BS 1873
Pressure-temperature rating	ASME B16.34
Face-to-face dimensions for butt weld and flanged valves	ASME B16.10
Flange design	ASME B16.5
Butt welding design	ASME B16.25
Materials	ASTM