



FORGED STEEL VALVES CATALOG



Our Reputation Has Been Forged Over A Solid Half Century



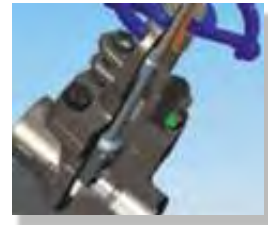
In the Beginning

1956 When he founded his company in the mid 1950s, James Dewolf Smith focused on the production of forged gate, globe and check valves for use primarily in the petrochemical industry. Ten years later he added a forged brass ball valve line to the production stream. By the mid 1970s, Smith was one of the industry's largest producers of industrial gate, globe, check, and ball valves under the 2.5" size. The oil business was booming and producers were ordering valves at a remarkable rate.



The End of an Era

80's By now Tony Smith had taken over his father's business, added exotic stainless and alloy items to the product offerings, and relocated to a brand new production facility. Then U.S. oil production came to a virtual halt. A dramatic downturn in market conditions and increased competition forced Tony to make substantial changes, laying off workers and moving most production offshore. He began producing private label valves and licensed his industrial ball valves to raise cash. Eventually the economy forced Tony to sell to Cornerstone Financial and a chain of corporate owners ensued. Finally Smith's production facilities were moved to Longview, Texas. But the company continued to falter.



New Beginnings

2001 With the turn of the century came new life for Smith. In March of 2000, the CNC Flow Control bought Smith's assets and moved production to Italy. The downward trend was reversed and sales began to climb. In the fall of 2006, production was returned to the USA, this time to Houston, Texas where the owners had just completed a new manufacturing and warehousing facility. Smith is now producing valves at a rate of 20,000 per month and is growing rapidly.



Throughout the company history, one thing has never changed with the Smith brand: product quality. Yes, CNC Flow Control has made substantial investments in technology resulting in improved engineering and manufacturing practices. Yet the time-tested Smith designs and the unique color-coding system remain essentially unchanged. You see, the Smith brand has a reputation to uphold. A reputation for quality that has been forged over a solid half-century. A reputation that will only be enhanced as we move into our second half-century of production.



Coding Information.....2, 3

GATE VALVES

Class 800

Conventional Port..... 0800/08705
 Full Port 0888/58706
 Inside Screw, Conventional Port 0850/08907
 Conventional Port, Butt Weld 0800B9
 Integrally Reinforced Extended Body..... 0874/087515
 Extended Body..... 0811-0814/0876-087916

Class 1500

Conventional Port..... 1500/15708
 Conventional Port, Butt Weld 1500B9
 Full Port..... 1588/1578.....10

Class 2500

Full Port 257811

Class 150, 300, 600, 1500

Conventional Port, Flanged..... 0815/0830/086012
 Full Port, Flanged 5815/5830.....13
 Full Port, Flanged, Butt Weld 0895/0895B.....14

GLOBE VALVES

Class 800

Throttle Valve..... 0G80/0G8718
 Flow Control FG80.....22

Class 1500

Throttle Valve..... G150/G15719

Class 150, 300, 600, 1500

Flanged 0G81/0G83/0G86/G895.....20, 21

Class 1690/2690

Y-Pattern, Non-rotating Stem Y162-Y26235
 Y-Pattern, Rotating Stem Y167-Y26736

CHECK VALVES

Class 800

Ball..... 0B80/SB80.....24
 Piston..... 0C80/SC8025
 Swing..... SW8025
 YPattern, Ball/Piston YB80/YC8027

Class 1500

Ball..... B150/SB15.....26
 Piston..... C150/SC1526

Class 150, 300, 600

Flanged, Piston..... 0C81/SC81, 0C83/SC83,
 0C86/SC8628, 29
 Flanged, Ball..... 0B81/SB81, 0B83/SB83,
 0B86/SB86.....30, 31

SPECIALITY VALVES.....32, 33

Class 1690/2690

Y-Pattern YC16/YC2637

CRYOGENIC VALVES.....38-42

BELLOWS SEAL43

TECHNICAL44-47

Smith Valve Figure Number System

EDC 101, Rev 7

Table 2: Valve Material Option Codes

(PREFIX) + STYLE CODE + MATERIAL SELECTION PER TABLE BELOW + VALVE SIZE + BUTT-WELD END SCHEDULE CODE + BELLOWS MATERIAL CODE - PROCESS CODE (SUFFIX)

C E B 8 0 0 S O G W 1 0 0 S C 8 0 E - N P 0 1 9,10

BODY/BONNET COVER		API Trim #	STEM	TRIM MATERIAL WEDGE/DISC	SEAT	PACKING	SPRING	GASKET	CONNECTIONS	BELLOWS
A	F51	10	316	316	316	A GRAPHITE V-RINGS	A	INCOLOY 825 + GRAPHITE	A BUTTWELD (BW)	A 304
B	F347	11	MONEL	MONEL	HF	B CHESTERTON 1600	B	INCONEL 600/X750 + GRAPHITE	B	B 304L
C	F5	9	MONEL NACE	MONEL NACE	MONEL NACE	C GARLOCK EVSP 9000	C	ALLOY 20 + GRAPHITE	C	C 316
D	F316H	13	INCONEL 625	ALLOY 20	HF	D	316 + GRAPHITE	D	D	D 316L
E	HASTELLOY C276	9	INCONEL 625	ALLOY 20	HF	E	HAST - C276 + GRAPHITE	E	E	E 321
F	F316H	13	INCONEL 625	ALLOY 20	HF	F	316 + GRAPHITE	F	F	F 347
G	F9	13	ALLOY 20	ALLOY 20	HF	G	347H + GRAPHITE	G	G	G INCONEL 625
H	F321	13	ALLOY 20	ALLOY 20	HF	H	316 + GRAPHITE	H	H	H MONEL 400
I	F347H	11	MONEL	MONEL	HF	I	INCONEL X-750	I	I	I
J	F316DC	11	MONEL	MONEL	HF	J	316H	J	J	J
K	F11, CL.2	9	MONEL NACE	MONEL NACE	HF	K	410 NACE	K	K	K
L	F317DC	13	INCONEL 625	ALLOY 20	HF	L	321	L	L	L
M	F22, CL.3	13	INCONEL 625	ALLOY 20	HF	M	304L	M	M	M
N	F22, CL.3	13	INCONEL 625	ALLOY 20	HF	N	304L	N	N	N
O	A105NLC ²	8	410	420	HF	O	GRAPHITE W/BRAIDED ENDS ⁶	O	O	O
P	F91	18	INCOLOY 825	HF	HF	P	302/316 ⁶	P	P	P
Q	MONEL 400	18	ALLOY 20	HF	HF	Q	X750 + THERMICULITE 835	Q	Q	Q
R	F304DC	12	F51	F51	HF	R	SLADE 3300G	R	R	R
S	A105NLC ²	12	F51	F51	HF	S	METAL OCTAGONAL RING	S	S	S
T	LF2, CL.1 ³	5	410	HF	HF	T	316 + TFE	T	T	T
U	LF2, CL.1 ³	5	F53	HF	HF	U	304 + TFE	U	U	U
V	F304H	16	304H	304H	HF	V	304L + GRAPHITE	V	V	V
W	INCOLOY 825	16	316	HF	HF	W	MONEL + TFE	W	W	W
X	F53	16	HAST - C276	HAST - C276	HF	X	304L + GRAPHITE	X	X	X
Y	A105NLC ²	16	304H	HF	HF	Y	MONEL + TFE	Y	Y	Y
Z	***	***	***	***	***	Z	***	Z	Z	Z

*** For materials not listed above: Smith offers all materials of construction listed in ASME B16.34, Figure Number designation shall be assigned during order placement. Refer to Section 6.0 of EDC 101 for Z number details.

NOTES:

- For ASTM material specification, refer to EDC 001 for body/bonnet, EDC 006 for stem, EDC 005 for wedge/disc, EDC 004 for seat, EDC 019 for packing, EDC 011 for spring, EDC 003 for gasket, and EDC 013 for Bellows.
- For A105 Body/Bonnet/Cover use O for Standard service, S for HF acid service, and Y for NACE service.
- For LF2 Body/Bonnet/Cover use T for Standard service, and U for NACE service.
- For all welded valves, use "O" for the gasket code.
- Wedges/discs base material shall be compatible with the pressure/temperature rating and at least equal in corrosion resistance as the body material.
- For spring loaded check valves only, the third digit of the material option code will represent the spring material. The letter "O" may be used for 302 or 316L stainless steel springs. 316L stainless steel springs will only be used if valve body/bonnet or trim is stainless steel.
- HF = Stellite hardfaced overlay. For seats and wedges/discs where weld deposited facings are used, the base material is equal to the stem material or at least equal in corrosion resistance as the body material.
- For Bellows Seal valves only, Bellows material code shall be added to the valve figure number.
- The grouping may be prefixed by "CE" to indicate compliance with the European Commission Pressure Equipment Directive 97/23/EC.
- The grouping may also be suffixed with a process code which will be separated from the rest of the valve figure number by a hyphen (-).



GATE & GLOBE VALVES

Handwheel color indicates
Body-Bonnet Material or Special Packing



BLUE
ASTM A105
Carbon Steel



GREEN
ASTM 182 F9
9 Cr, 1 Mo



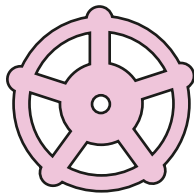
ORANGE
ASTM A350 LF2
Low Temp.



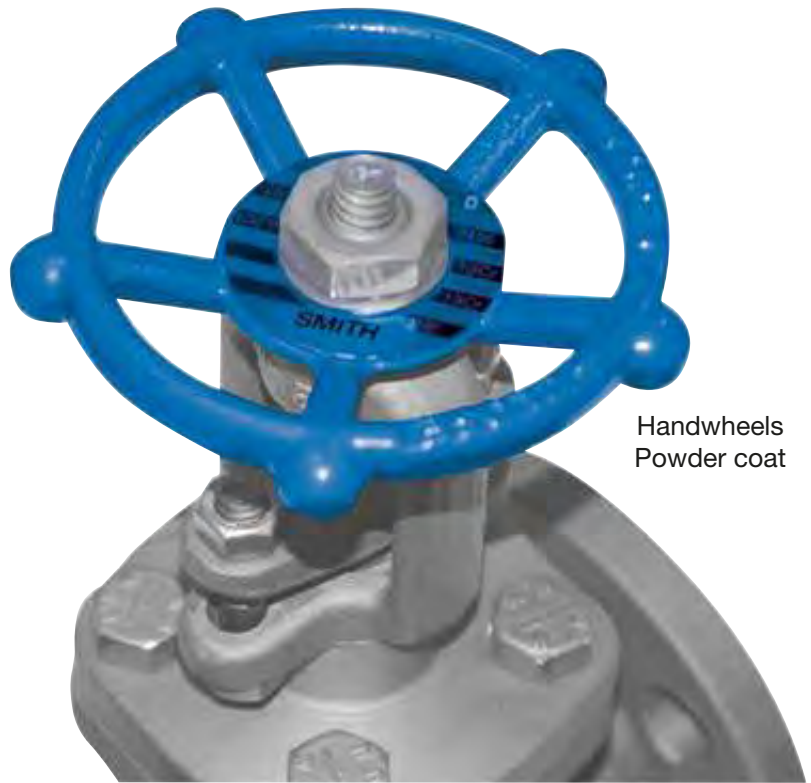
RED
Teflon Packing
Gaskets or Seals
500°F/250°C
Max Temp.



PURPLE
MONEL



PINK
F20 (ALLOY 20)



Handwheels
Powder coat

Nameplate color indicates Trim Material
(Gate, Globe and Check)



SILVER
ASTM A182 F316
ASTM A182 F316L
316 S.S.



YELLOW
ASTM A182 F11
1 1/4 Cr, 1/2 Mo



WHITE
ASTM 182 F5
5 Cr, 1/2 Mo



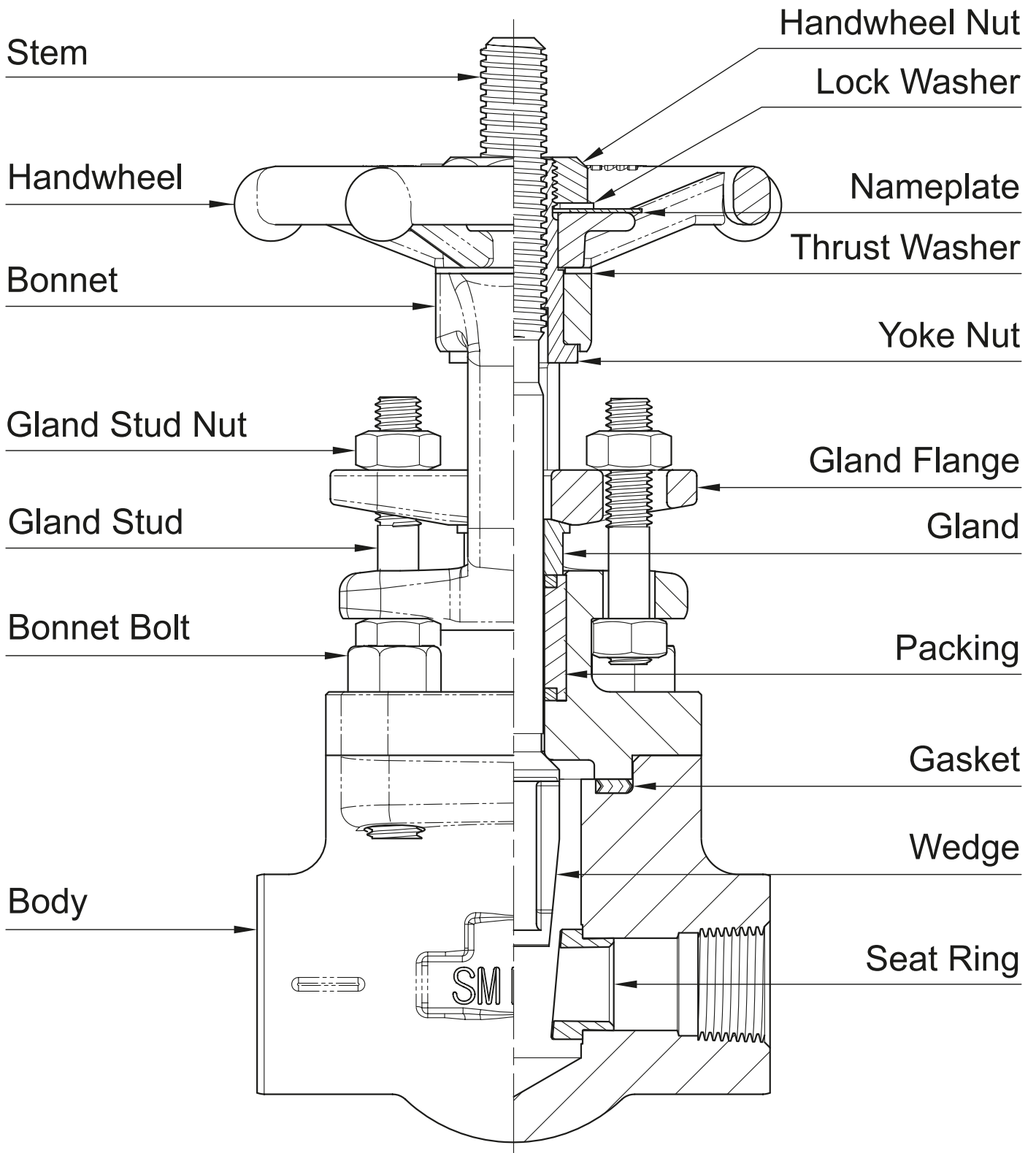
BROWN
ASTM A182 F22
2 1/2 Cr, 1 Mo

Standard 13 Cr Trim, Stem, Wedge Hard-faced Seat Rings	13 Cr Stainless Soft Stem, Wedge, & Seats per NACE	316 Stainless Steel Trim
		END CAPS Socket Weld End Threaded End
Monel Trim	Special Trim	

Name Plates are Stainless Steel



Gate Valves

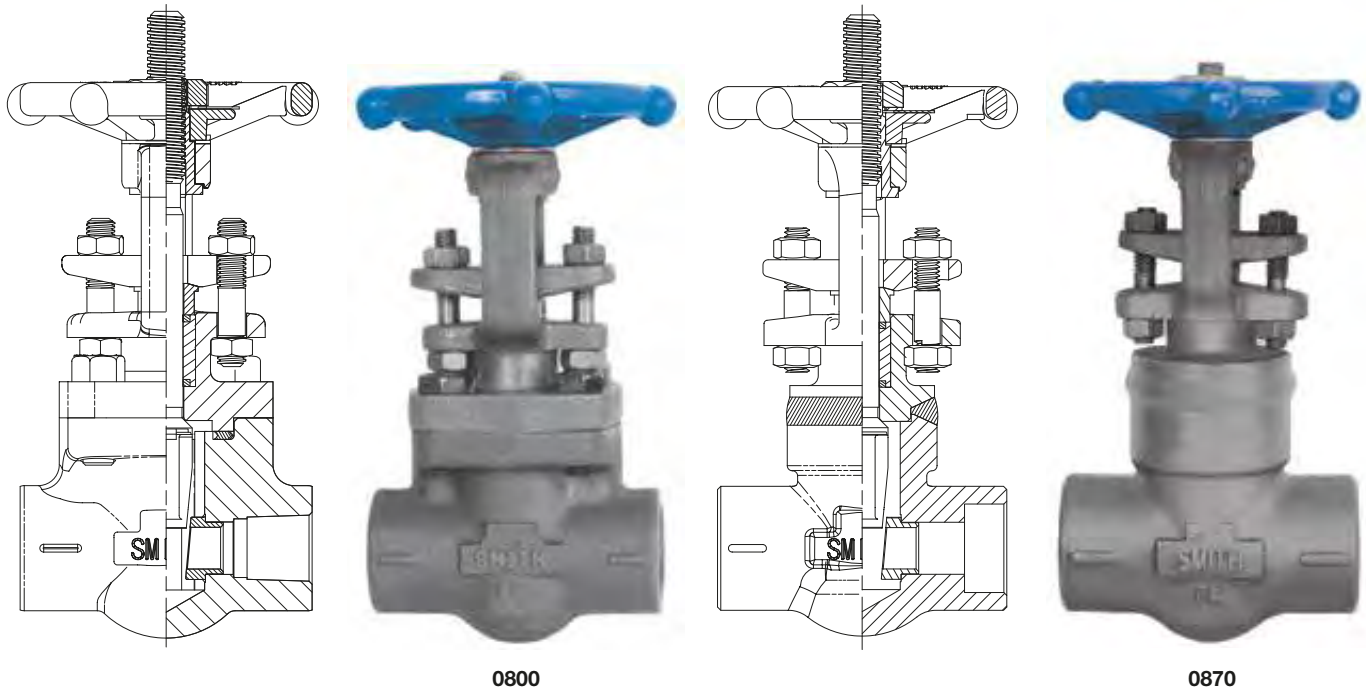




0800-0870 Gate Valves

Forged Steel OS&Y – Conventional Port
Valves comply with applicable portions of API 602 and ASME B16.34

Class 800
1/4" - 2"



0800

0870

CLASS 800 CONVENTIONAL PORT BOLTED BONNET GATE VALVE - THREADED or SOCKET WELD - INCHES (MM)								
VALVE SIZE NPS (DIN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)
1/4 (8)	3.25 (83)	6.31 (160)	4.00 (102)	0.31 (8)	0.39 (10)	0.56 (14)	1/4"-18	3.8 (1.7)
3/8 (10)	3.25 (83)	6.31 (160)	4.00 (102)	0.39 (10)	0.39 (10)	0.69 (18)	3/8"-18	3.8 (1.7)
1/2 (15)	3.25 (83)	6.31 (160)	4.00 (102)	0.39 (10)	0.39 (10)	0.86 (22)	1/2"-14	3.8 (1.7)
3/4 (20)	3.50 (89)	6.50 (165)	4.00 (102)	0.50 (13)	0.51 (13)	1.07 (27)	3/4"-14	4.5 (2.0)
1 (25)	3.88 (98)	7.25 (184)	4.00 (102)	0.75 (19)	0.51 (13)	1.34 (34)	1"-11 1/2	6.3 (2.8)
1 1/4 (32)	4.75 (121)	9.13 (232)	5.50 (140)	1.19 (30)	0.51 (13)	1.68 (43)	1 1/4"-11 1/2	9.5 (4.3)
1 1/2 (40)	4.75 (121)	9.13 (232)	5.50 (140)	1.19 (30)	0.51 (13)	1.92 (49)	1 1/2"-11 1/2	12.0 (5.4)
2 (50)	5.50 (140)	11.06 (281)	6.63 (168)	1.50 (38)	0.63 (16)	2.41 (61)	2"-11 1/2	20.5 (9.3)

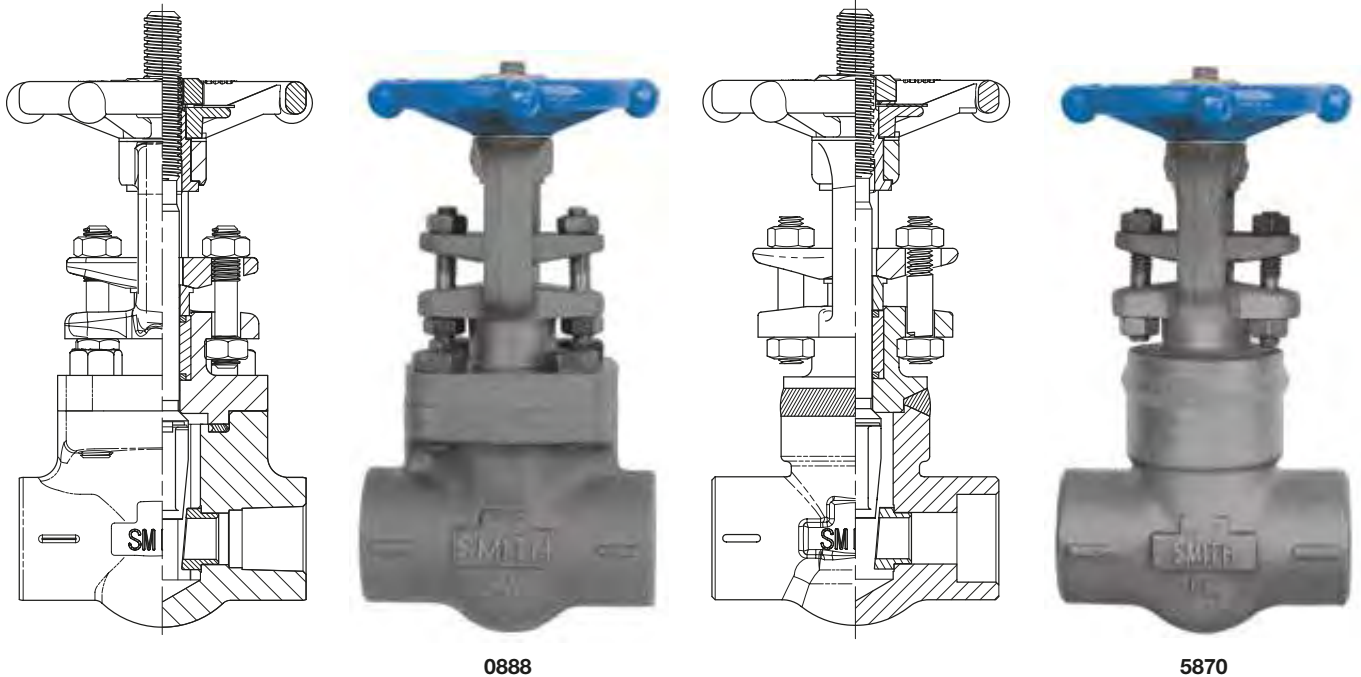
CLASS 800 CONVENTIONAL PORT WELDED BONNET GATE VALVE - THREADED or SOCKET WELD - INCHES (MM)								
VALVE SIZE NPS (DIN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)
1/4 (8)	3.25 (83)	6.19 (157)	4.00 (102)	0.31 (8)	0.39 (10)	0.56 (14)	1/4"-18	3.3 (1.5)
3/8 (10)	3.25 (83)	6.25 (159)	4.00 (102)	0.39 (10)	0.39 (10)	0.69 (18)	3/8"-18	3.3 (1.5)
1/2 (15)	3.25 (83)	6.25 (159)	4.00 (102)	0.39 (10)	0.39 (10)	0.86 (22)	1/2"-14	3.3 (1.5)
3/4 (20)	3.50 (89)	6.50 (165)	4.00 (102)	0.50 (13)	0.51 (13)	1.07 (27)	3/4"-14	3.8 (1.7)
1 (25)	3.88 (98)	7.25 (184)	4.00 (102)	0.75 (19)	0.51 (13)	1.34 (34)	1"-11 1/2	5.3 (2.4)
1 1/4 (32)	4.75 (121)	9.13 (232)	5.50 (140)	1.19 (30)	0.51 (13)	1.68 (43)	1 1/4"-11 1/2	10.3 (4.6)
1 1/2 (40)	4.75 (121)	9.13 (232)	5.50 (140)	1.19 (30)	0.51 (13)	1.92 (49)	1 1/2"-11 1/2	9.8 (4.4)
2 (50)	5.50 (140)	11.00 (279)	6.63 (168)	1.50 (38)	0.63 (16)	2.41 (61)	2"-11 1/2	16.0 (7.3)



0888-5870 Gate Valves

Forged Steel OS&Y – Full Port
Valves comply with applicable portions of API 602 and ASME B16.34

Class 800
1/4" - 2"



0888

5870

CLASS 800 FULL PORT BOLTED BONNET GATE VALVE - THREADED or SOCKET WELD - INCHES (MM)

VALVE SIZE NPS (DIN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)
1/4 (8)	3.25 (83)	6.25 (159)	4.00 (102)	0.31 (8)	0.39 (10)	0.56 (14)	1/4"-18	3.8 (1.7)
3/8 (10)	3.25 (83)	6.31 (160)	4.00 (102)	0.39 (10)	0.39 (10)	0.69 (18)	3/8"-18	3.8 (1.7)
1/2 (15)	3.50 (89)	6.50 (165)	4.00 (102)	0.50 (13)	0.39 (10)	0.86 (22)	1/2"-14	4.8 (2.2)
3/4 (20)	3.88 (98)	7.25 (184)	4.00 (102)	0.75 (19)	0.51 (13)	1.07 (27)	3/4"-14	6.3 (2.8)
1 (25)	4.75 (121)	9.13 (232)	4.00 (102)	0.94 (24)	0.51 (13)	1.34 (34)	1"-11 1/2	9.8 (4.4)
1 1/4 (32)	4.75 (121)	9.13 (232)	5.50 (140)	1.19 (30)	0.51 (13)	1.68 (43)	1 1/4"-11 1/2	11.5 (5.2)
1 1/2 (40)	5.50 (140)	11.06 (281)	6.63 (168)	1.50 (38)	0.51 (13)	1.92 (49)	1 1/2"-11 1/2	21.8 (9.9)
2 (50)	5.69 (144)	12.38 (314)	6.63 (168)	2.00 (51)	0.51 (13)	1.92 (49)	1 1/2"-11 1/2	24.0 (10.9)

CLASS 800 FULL PORT WELDED BONNET GATE VALVE - THREADED or SOCKET WELD - INCHES (MM)

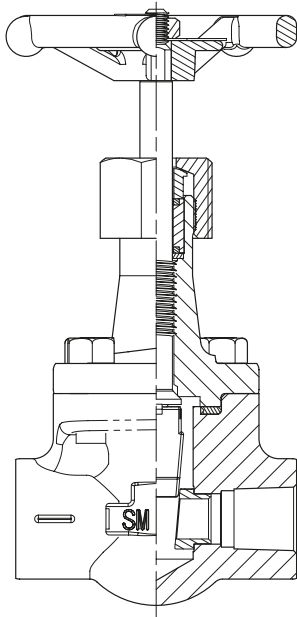
VALVE SIZE NPS (DIN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)
1/4 (8)	3.25 (83)	6.25 (159)	4.00 (102)	0.31 (8)	0.39 (10)	0.56 (14)	1/4"-18	3.3 (1.5)
3/8 (10)	3.25 (83)	6.25 (159)	4.00 (102)	0.39 (10)	0.39 (10)	0.69 (18)	3/8"-18	3.3 (1.5)
1/2 (15)	3.50 (89)	6.50 (165)	4.00 (102)	0.50 (13)	0.39 (10)	0.86 (22)	1/2"-14	4.3 (1.9)
3/4 (20)	3.94 (100)	7.25 (184)	4.00 (102)	0.75 (19)	0.51 (13)	1.07 (27)	3/4"-14	5.8 (2.6)
1 (25)	4.75 (121)	8.94 (227)	5.50 (140)	0.94 (24)	0.51 (13)	1.34 (34)	1"-11 1/2	10.5 (4.8)
1 1/4 (32)	4.75 (121)	9.13 (232)	5.50 (140)	1.19 (30)	0.51 (13)	1.68 (43)	1 1/4"-11 1/2	10.3 (4.6)
1 1/2 (40)	5.50 (140)	11.00 (279)	6.63 (168)	1.50 (38)	0.51 (13)	1.92 (49)	1 1/2"-11 1/2	17.0 (7.7)



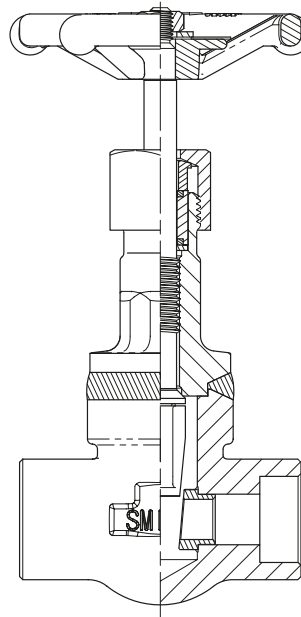
0850-0890 Gate Valves

Forged Steel, Inside Screw – Conventional Port
Valves comply with applicable portions of API 602 and ASME B16.34

Class 800
1/4" - 2"



0850



0890

CLASS 800 INSIDE SCREW RISING STEM BOLTED BONNET GATE VALVE - THREADED or SOCKET WELD - INCHES (MM)

VALVE SIZE NPS (DN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)
1/4 (8)	3.25 (83)	6.13 (156)	4.00 (102)	0.31 (8)	0.39 (10)	0.56 (14)	1/4"-18	3.5 (1.6)
3/8 (10)	3.25 (83)	6.19 (157)	4.00 (102)	0.39 (10)	0.39 (10)	0.69 (18)	3/8"-18	3.5 (1.6)
1/2 (15)	3.25 (83)	6.19 (157)	4.00 (102)	0.39 (10)	0.39 (10)	0.86 (22)	1/2"-14	3.5 (1.6)
3/4 (20)	3.50 (89)	6.38 (162)	4.00 (102)	0.50 (13)	0.51 (13)	1.07 (27)	3/4"-14	4.3 (1.9)
1 (25)	3.88 (98)	7.75 (197)	4.63 (117)	0.75 (19)	0.51 (13)	1.34 (34)	1"-11 1/2	6.0 (2.7)
1 1/4 (32)	4.75 (121)	10.25 (260)	4.63 (117)	1.19 (30)	0.51 (13)	1.68 (43)	1 1/4"-11 1/2	12.3 (5.6)
1 1/2 (40)	4.75 (121)	10.25 (260)	5.50 (140)	1.19 (30)	0.51 (13)	1.92 (49)	1 1/2"-11 1/2	11.8 (5.3)
2 (50)	5.50 (140)	11.75 (298)	5.50 (140)	1.50 (38)	0.63 (16)	2.41 (61)	2"-11 1/2	19.0 (8.6)

CLASS 800 INSIDE SCREW RISING STEM WELDED BONNET GATE VALVE - THREADED or SOCKET WELD - INCHES (MM)

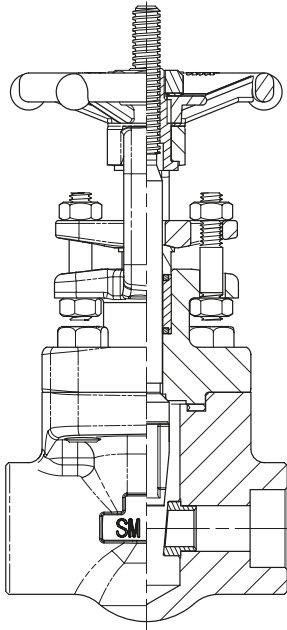
VALVE SIZE NPS (DN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)
1/4 (8)	3.25 (83)	6.13 (156)	4.00 (102)	0.31 (8)	0.39 (10)	0.56 (14)	1/4"-18	3.3 (1.5)
3/8 (10)	3.25 (83)	6.13 (156)	4.00 (102)	0.39 (10)	0.39 (10)	0.69 (18)	3/8"-18	3.0 (1.4)
1/2 (15)	3.25 (83)	6.19 (157)	4.00 (102)	0.39 (10)	0.39 (10)	0.86 (22)	1/2"-14	3.0 (1.4)
3/4 (20)	3.50 (89)	6.19 (157)	4.00 (102)	0.50 (13)	0.51 (13)	1.07 (27)	3/4"-14	3.8 (1.7)
1 (25)	3.88 (98)	7.75 (197)	4.63 (117)	0.75 (19)	0.51 (13)	1.34 (34)	1"-11 1/2	5.5 (2.5)
1 1/4 (32)	4.75 (121)	10.25 (260)	4.63 (117)	1.19 (30)	0.51 (13)	1.68 (43)	1 1/4"-11 1/2	10.3 (4.6)
1 1/2 (40)	4.75 (121)	10.25 (260)	5.50 (140)	1.19 (30)	0.51 (13)	1.92 (49)	1 1/2"-11 1/2	9.8 (4.4)
2 (50)	5.50 (140)	11.75 (298)	5.50 (140)	1.50 (38)	0.63 (16)	2.41 (61)	2"-11 1/2	15.3 (6.9)



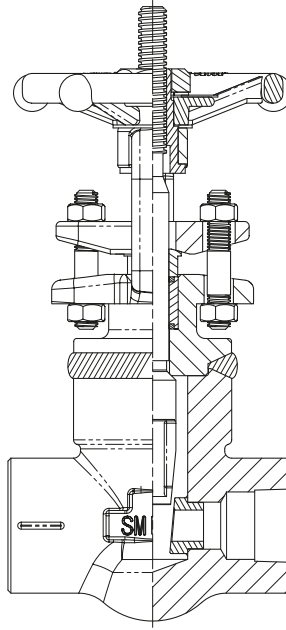
1500-1570 Gate Valves

Forged Steel OS&Y – Conventional Port
Valves comply with applicable portions of API 602 and ASME B16.34

Class 1500
1/4" - 2"



1500



1570

CLASS 1500 CONVENTIONAL PORT BOLTED BONNET GATE VALVE - THREADED or SOCKET WELD - INCHES (MM)								
VALVE SIZE NPS (DIN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)
1/4 (8)	3.50 (89)	6.50 (165)	4.00 (102)	0.31 (8)	0.39 (10)	0.56 (14)	1/4"-18	5.3 (2.4)
3/8 (10)	3.50 (89)	6.50 (165)	4.00 (102)	0.39 (10)	0.39 (10)	0.69 (18)	3/8"-18	5.3 (2.4)
1/2 (15)	3.50 (89)	6.50 (165)	4.00 (102)	0.39 (10)	0.39 (10)	0.86 (22)	1/2"-14	5.0 (2.3)
3/4 (20)	3.88 (98)	7.25 (184)	4.00 (102)	0.50 (13)	0.51 (13)	1.07 (27)	3/4"-14	7.3 (3.3)
1 (25)	4.75 (121)	8.94 (227)	5.50 (140)	0.75 (19)	0.51 (13)	1.34 (34)	1"-11 1/2	14.0 (6.4)
1 1/4 (32)	5.50 (140)	11.00 (279)	6.63 (168)	1.19 (30)	0.51 (13)	1.68 (43)	1 1/4"-11 1/2	23.0 (10.4)
1 1/2 (40)	5.50 (140)	11.00 (279)	6.63 (168)	1.19 (30)	0.51 (13)	1.92 (49)	1 1/2"-11 1/2	22.5 (10.2)
2 (50)	6.25 (159)	11.56 (294)	6.63 (168)	1.50 (38)	0.63 (16)	2.41 (61)	2"-11 1/2	29.5 (13.4)

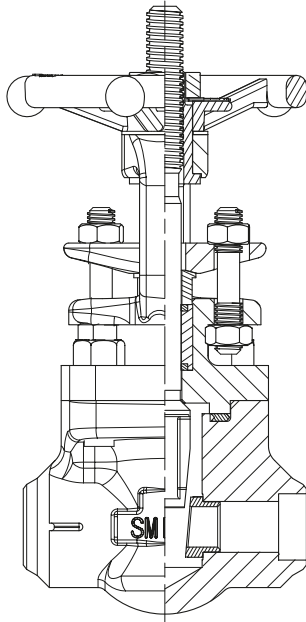
CLASS 1500 CONVENTIONAL PORT WELDED BONNET GATE VALVE - THREADED or SOCKET WELD - INCHES (MM)								
VALVE SIZE NPS (DIN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)
1/4 (8)	3.50 (89)	6.31 (160)	4.00 (102)	0.31 (8)	0.39 (10)	0.56 (14)	1/4"-18	4.8 (2.2)
3/8 (10)	3.50 (89)	6.38 (162)	4.00 (102)	0.39 (10)	0.39 (10)	0.69 (18)	3/8"-18	4.8 (2.2)
1/2 (15)	3.50 (89)	6.38 (162)	4.00 (102)	0.39 (10)	0.39 (10)	0.86 (22)	1/2"-14	4.5 (2.0)
3/4 (20)	3.88 (98)	7.00 (178)	4.00 (102)	0.50 (13)	0.51 (13)	1.07 (27)	3/4"-14	6.0 (2.7)
1 (25)	4.75 (121)	8.75 (222)	5.50 (140)	0.75 (19)	0.51 (13)	1.34 (34)	1"-11 1/2	11.3 (5.1)
1 1/4 (32)	5.50 (140)	10.69 (272)	6.63 (168)	1.19 (30)	0.51 (13)	1.68 (43)	1 1/4"-11 1/2	17.8 (8.1)
1 1/2 (40)	5.50 (140)	10.69 (272)	6.63 (168)	1.19 (30)	0.51 (13)	1.92 (49)	1 1/2"-11 1/2	17.5 (7.9)
2 (50)	6.25 (159)	11.06 (281)	6.63 (168)	1.50 (38)	0.63 (16)	2.41 (61)	2"-11 1/2	24.2 (11.0)



0800B-1500B Gate Valves

Forged Steel OS&Y – Conventional Port
Valves comply with applicable portions of API 602 and ASME B16.34

Class 800
1/2" - 2"



0800B

* Also available in Class 1500, see below for dimensional information

CLASS 800 CONVENTIONAL PORT BOLTED BONNET GATE VALVE - BUTT WELD ENDS-INCHES (MM)					
VALVE SIZE NPS (DIN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	APPROX. WEIGHT LBS (KG)
1/2 (15)	3.25 (83)	6.31 (160)	4.00 (102)	0.31 (8)	3.8 (1.7)
3/4 (20)	3.50 (89)	6.50 (165)	4.00 (102)	0.50 (13)	4.5 (2.0)
1 (25)	3.88 (98)	7.25 (184)	4.00 (102)	0.66 (17)	6.3 (2.8)
1 1/4 (32)	4.75 (121)	9.13 (232)	5.50 (140)	1.19 (30)	9.5 (4.3)
1 1/2 (40)	4.75 (121)	9.13 (232)	5.50 (140)	1.19 (30)	12.0 (5.4)
2 (50)	5.50 (140)	11.06 (281)	6.63 (168)	1.50 (38)	20.5 (9.3)

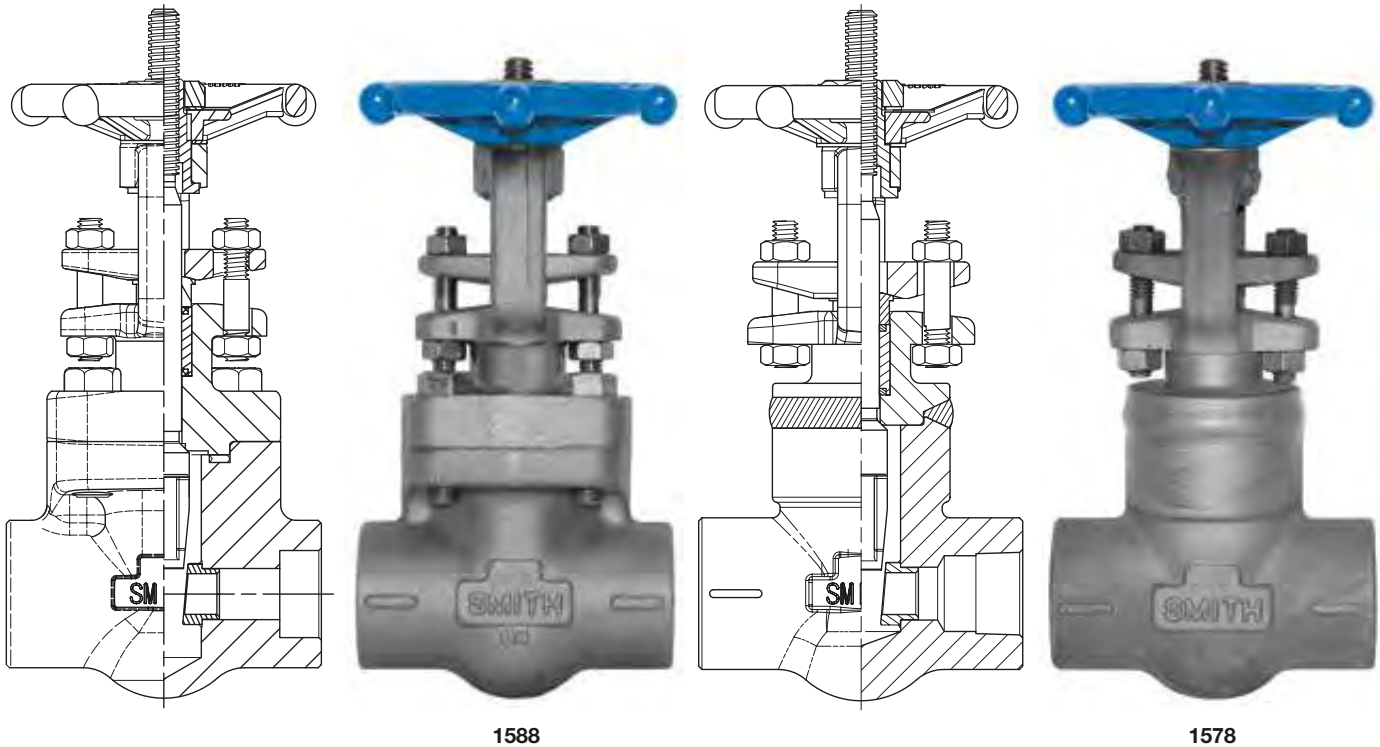
CLASS 1500 CONVENTIONAL PORT BOLTED BONNET GATE VALVE - BUTT WELD ENDS-INCHES (MM)					
VALVE SIZE NPS (DIN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	APPROX. WEIGHT LBS (KG)
1/2 (15)	3.50 (89)	6.50 (165)	4.00 (102)	0.31 (8)	5.0 (2.3)
3/4 (20)	3.88 (98)	7.25 (184)	4.00 (102)	0.50 (13)	7.3 (3.3)
1 (25)	4.75 (121)	8.94 (227)	5.50 (140)	0.66 (17)	14.0 (6.4)
1 1/4 (32)	5.50 (140)	11.00 (279)	6.63 (168)	1.19 (30)	23.0 (10.4)
1 1/2 (40)	5.50 (140)	11.00 (279)	6.63 (168)	1.19 (30)	22.5 (10.2)
2 (50)	6.25 (159)	11.56 (294)	6.63 (168)	1.50 (38)	29.5 (13.4)



1588-1578 Gate Valves

Forged Steel OS&Y – Full Port
Valves comply with applicable portions of API 602 and ASME B16.34

Class 1500
1/4" - 1-1/2"



CLASS 1500 FULL PORT BOLTED BONNET GATE VALVE - THREADED or SOCKET WELD - INCHES (MM)

VALVE SIZE NPS (DIN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)
1/4 (8)	3.50 (89)	6.44 (164)	4.00 (102)	0.31 (8)	0.39 (10)	0.56 (14)	1/4"-18	5.3 (2.4)
3/8 (10)	3.50 (89)	6.50 (165)	4.00 (102)	0.39 (10)	0.39 (10)	0.69 (18)	3/8"-18	5.3 (2.4)
1/2 (15)	3.94 (100)	6.88 (175)	4.00 (102)	0.50 (13)	0.39 (10)	0.86 (22)	1/2"-14	7.5 (3.4)
3/4 (20)	4.75 (121)	8.94 (227)	4.00 (102)	0.75 (19)	0.51 (13)	1.07 (27)	3/4"-14	14.8 (6.7)
1 (25)	4.75 (121)	9.06 (230)	5.50 (140)	0.94 (24)	0.51 (13)	1.34 (34)	1"-11 1/2	23.5 (10.7)
1 1/4 (32)	5.50 (140)	11.00 (279)	6.63 (168)	1.19 (30)	0.51 (13)	1.68 (43)	1 1/4"-11 1/2	23.0 (10.4)
1 1/2 (40)	6.25 (159)	11.56 (294)	6.63 (168)	1.50 (38)	0.51 (13)	1.92 (49)	1 1/2"-11 1/2	30.5 (13.8)

CLASS 1500 FULL PORT WELDED BONNET GATE VALVE - THREADED or SOCKET WELD - INCHES (MM)

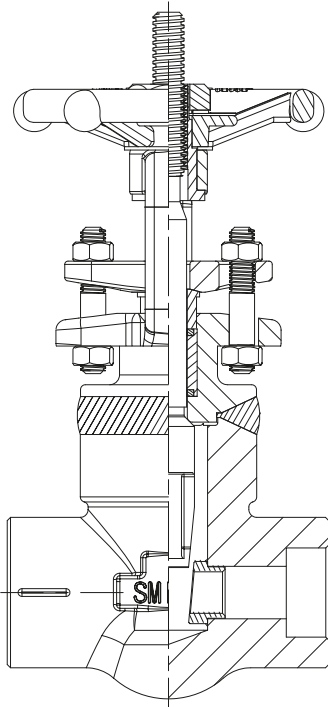
VALVE SIZE NPS (DIN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)
1/4 (8)	3.50 (89)	6.31 (160)	4.00 (102)	0.31 (8)	0.39 (10)	0.56 (14)	1/4"-18	4.8 (2.2)
3/8 (10)	3.50 (89)	6.38 (162)	4.00 (102)	0.39 (10)	0.39 (10)	0.69 (18)	3/8"-18	4.8 (2.2)
1/2 (15)	3.88 (98)	7.00 (178)	4.00 (102)	0.50 (13)	0.39 (10)	0.86 (22)	1/2"-14	6.3 (2.8)
3/4 (20)	4.75 (121)	8.75 (222)	4.00 (102)	0.75 (19)	0.51 (13)	1.07 (27)	3/4"-14	11.5 (5.2)
1 (25)	4.75 (121)	8.94 (227)	5.50 (140)	0.94 (24)	0.51 (13)	1.34 (34)	1"-11 1/2	19.0 (8.6)
1 1/4 (32)	5.50 (140)	10.69 (272)	6.63 (168)	1.19 (30)	0.51 (13)	1.68 (43)	1 1/4"-11 1/2	17.8 (8.1)
1 1/2 (40)	6.25 (159)	11.06 (281)	6.63 (168)	1.50 (38)	0.51 (13)	1.92 (49)	1 1/2"-11 1/2	25.0 (11.3)



2578 Gate Valves

Forged Steel OS&Y – Full Port
Valves comply with applicable portions of API 602 and ASME B16.34

Class 2500
1/2" - 2"



2578

CLASS 2500 FULL PORT WELDED BONNET GATE VALVE - THREADED or SOCKET ENDS - INCHES (MM)

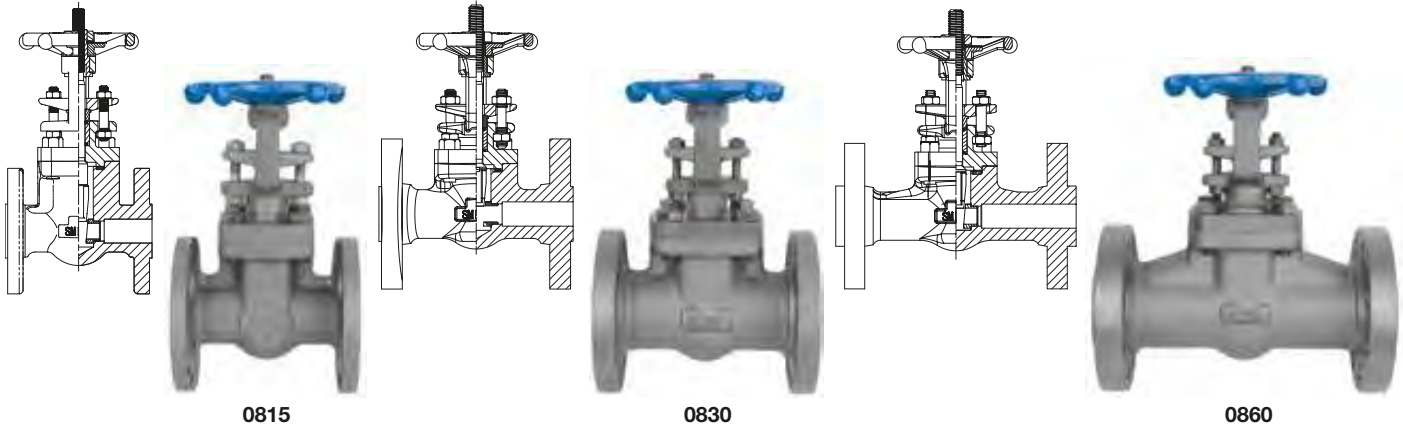
VALVE SIZE NPS (DN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)
1/2 (15)	3.88 (98)	7.26 (184)	4.00 (102)	0.50 (13)	0.39 (10)	0.86 (22)	1/2"-14	6.3 (2.8)
3/4 (20)	4.65 (118)	9.05 (230)	5.50 (140)	0.75 (19)	0.51 (13)	1.07 (27)	3/4"-14	11.3 (5.1)
1 (25)	5.40 (137)	9.44 (240)	5.50 (140)	0.94 (24)	0.51 (13)	1.34 (34)	1"-11 1/2	17.8 (8.1)
1 1/2 (40)	6.15 (156)	12.06 (306)	6.63 (168)	1.50 (38)	0.51 (13)	1.93 (49)	1 1/2"-11 1/2	18.5 (8.4)
2 (50)	6.15 (156)	12.06 (306)	6.63 (168)	1.50 (38)	0.63 (16)	2.42 (61)	2"-11 1/2	18.5 (8.4)



0815-0830-0860 Gate Valves

Forged Steel OS&Y – Conventional Port
Valves comply with applicable portions of API 602 and ASME B16.34

Class 150/300/600
1/2" - 3"



CLASS 150 CONVENTIONAL PORT BOLTED BONNET GATE VALVE - FLANGED ENDS - INCHES (MM)

VALVE SIZE NPS (DN)	FACE TO FACE	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	FLANGE DIAMETER	RAISED DIAMETER	BOLT HOLE	BOLT HOLE DIAMETER	BOLT CIRCLE	APPROX. WEIGHT LBS (KG)
1/2 (15)	4.25 (108)	7.00 (178)	4.00 (102)	0.39 (10)	3.54 (90)	1.38 (35)	4	0.63 (16)	2.38 (60)	6.5 (2.9)
3/4 (20)	4.63 (118)	7.06 (179)	4.00 (102)	0.50 (13)	3.94 (100)	1.69 (43)	4	0.63 (16)	2.75 (70)	9.0 (4.1)
1 (25)	5.00 (127)	7.69 (195)	4.00 (102)	0.75 (19)	4.25 (108)	2.00 (51)	4	0.63 (16)	3.13 (79)	9.8 (4.4)
1 1/2 (40)	6.50 (165)	9.13 (232)	5.50 (140)	1.19 (30)	5.00 (127)	2.88 (73)	4	0.63 (16)	3.88 (98)	18.2 (8.3)
2 (50)	7.00 (178)	11.06 (281)	6.63 (168)	1.50 (38)	6.00 (152)	3.63 (92)	4	0.75 (19)	4.75 (121)	33.5 (15.2)
3 (80)	8.00 (203)	13.69 (348)	7.38 (187)	2.00 (51)	7.50 (191)	5.00 (127)	4	0.75 (19)	6.00 (152)	54.0 (24.5)

CLASS 300 CONVENTIONAL PORT BOLTED BONNET GATE VALVE - FLANGED ENDS - INCHES (MM)

VALVE SIZE NPS (DN)	FACE TO FACE	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	FLANGE DIAMETER	RAISED DIAMETER	BOLT HOLE	BOLT HOLE DIAMETER	BOLT CIRCLE	APPROX. WEIGHT LBS (KG)
1/2 (15)	5.50 (140)	6.25 (159)	4.00 (102)	0.39 (10)	3.75 (95)	1.38 (35)	4	0.63 (16)	2.63 (67)	7.0 (3.2)
3/4 (20)	6.00 (152)	6.38 (162)	4.00 (102)	0.50 (13)	4.63 (118)	1.69 (43)	4	0.75 (19)	3.25 (83)	10.3 (4.6)
1 (25)	6.50 (165)	7.25 (184)	4.00 (102)	0.75 (19)	4.94 (125)	2.00 (51)	4	0.75 (19)	3.50 (89)	12.8 (5.8)
1 1/2 (40)	7.50 (191)	9.13 (232)	5.50 (140)	1.19 (30)	6.13 (156)	2.88 (73)	4	0.88 (22)	4.50 (114)	25.0 (11.3)
2 (50)	8.50 (216)	11.06 (281)	6.63 (168)	1.50 (38)	6.50 (165)	3.63 (92)	8	0.75 (19)	5.00 (127)	35.5 (16.1)
3 (80)	11.13 (283)	13.63 (346)	7.38 (187)	2.00 (51)	8.25 (210)	5.00 (127)	8	0.88 (22)	6.63 (168)	64.5 (29.3)

CLASS 600 CONVENTIONAL PORT BOLTED BONNET GATE VALVE - FLANGED ENDS - INCHES (MM)

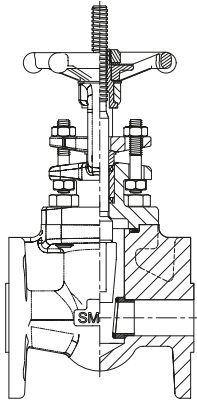
VALVE SIZE NPS (DN)	FACE TO FACE	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	FLANGE DIAMETER	RAISED DIAMETER	BOLT HOLE	BOLT HOLE DIAMETER	BOLT CIRCLE	APPROX. WEIGHT LBS (KG)
1/2 (15)	6.50 (165)	6.25 (159)	4.00 (102)	0.39 (10)	3.75 (95)	1.38 (35)	4	0.63 (16)	2.63 (67)	7.5 (3.4)
3/4 (20)	7.50 (191)	6.44 (164)	4.00 (102)	0.50 (13)	4.63 (118)	1.69 (43)	4	0.75 (19)	3.25 (83)	11.8 (5.3)
1 (25)	8.50 (216)	7.25 (184)	4.00 (102)	0.75 (19)	4.94 (125)	2.00 (51)	4	0.75 (19)	3.50 (89)	15.0 (6.8)
1 1/2 (40)	9.50 (241)	9.13 (232)	5.50 (140)	1.19 (30)	6.13 (156)	2.88 (73)	4	0.88 (22)	4.50 (114)	31.0 (14.1)
2 (50)	11.50 (292)	11.06 (281)	6.63 (168)	1.50 (38)	6.50 (165)	3.63 (92)	8	0.75 (19)	5.00 (127)	44.2 (20.1)



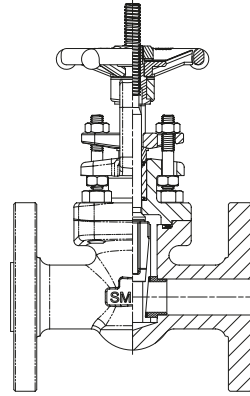
5815-5830 Gate Valves

Forged Steel OS&Y – Full Port
Valves comply with applicable portions of API 602 and ASME B16.34

Class 150/300
3/4" - 1-1/2"



5815



5830

CLASS 150 FULL PORT BOLTED BONNET GATE VALVE - FLANGED ENDS - INCHES (MM)

VALVE SIZE NPS (DIN)	FACE TO FACE	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	FLANGE DIAMETER	RAISED DIAMETER	BOLT HOLE	BOLT HOLE DIAMETER	BOLT CIRCLE	APPROX. WT. LBS (KG)
3/4 (20)	4.63 (118)	7.63 (194)	4.00 (102)	0.75 (19)	3.94 (100)	1.69 (43)	4	0.63 (16)	2.75 (70)	9.1 (4.1)
1 (25)	5.00 (127)	8.87 (225)	4.00 (102)	0.94 (24)	4.33 (110)	2.00 (51)	4	0.63 (16)	3.13 (79)	14.2 (6.4)
1 1/2 (40)	6.50 (165)	11.01 (280)	5.50 (140)	1.50 (38)	5.00 (127)	2.88 (73)	4	0.63 (16)	3.88 (98)	26.8 (12.2)

CLASS 300 FULL PORT BOLTED BONNET GATE VALVE - FLANGED ENDS - INCHES (MM)

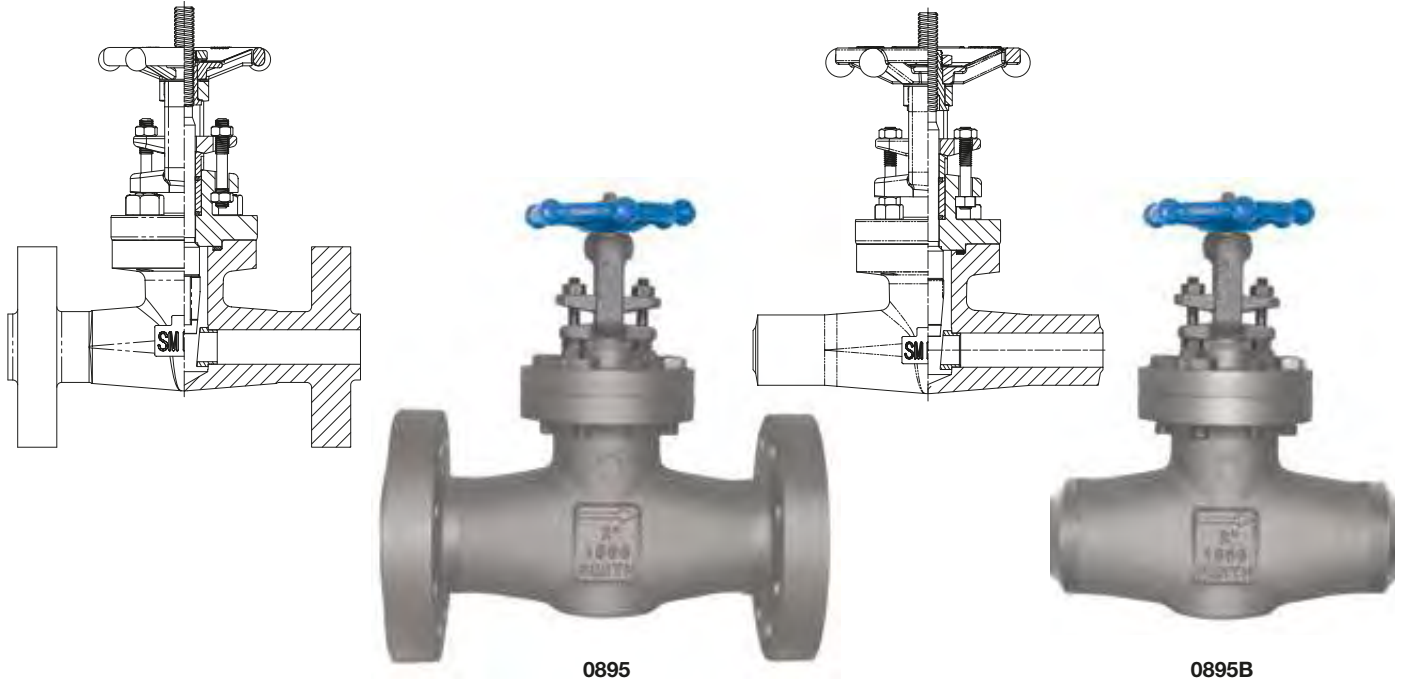
VALVE SIZE NPS (DIN)	FACE TO FACE	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	FLANGE DIAMETER	RAISED DIAMETER	BOLT HOLE	BOLT HOLE DIAMETER	BOLT CIRCLE	APPROX. WT. LBS (KG)
3/4 (20)	6.00 (152)	7.28 (185)	4.00 (102)	0.75 (19)	4.63 (118)	1.69 (43)	4	0.75 (19)	3.25 (83)	11.6 (5.2)
1 (25)	6.50 (165)	9.14 (232)	4.00 (102)	0.94 (24)	4.92 (125)	2.00 (51)	4	0.75 (19)	3.50 (89)	19.5 (8.8)
1 1/2 (40)	7.50 (191)	11.04 (280)	5.50 (140)	1.50 (38)	6.12 (156)	2.88 (73)	4	0.88 (22)	4.50 (114)	30.4 (13.8)



0895-0895B Gate Valves

Forged Steel OS&Y – Full Port
Valves comply with applicable portions of API 602 and ASME B16.34

Class 1500
1/2" - 2"



CLASS 1500 FULL PORT BOLTED BONNET GATE VALVE - FLANGED ENDS - INCHES (MM)

VALVE SIZE NPS (DIN)	FACE TO FACE	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	FLANGE DIAMETER	RAISED DIAMETER	BOLT HOLE	BOLT DIAMETER	BOLT CIRCLE	APPROX. WT. LBS (KG)
1/2 (15)	8.50 (216)	8.18 (208)	4.00 (102)	0.50 (13)	4.75 (121)	1.38 (35)	4	0.88 (22)	3.25 (83)	17.0 (7.7)
3/4 (20)	9.00 (229)	9.47 (241)	5.50 (140)	0.75 (19)	5.13 (130)	1.69 (43)	4	0.88 (22)	3.50 (89)	23.0 (10.4)
1 (25)	10.00 (254)	9.93 (252)	5.50 (140)	0.94 (24)	5.88 (149)	2.00 (51)	4	1.00 (25)	4.00 (102)	34.0 (15.4)
1 1/2 (40)	12.00 (305)	12.82 (326)	6.63 (168)	1.50 (38)	7.00 (178)	2.88 (73)	4	1.13 (29)	4.88 (124)	54.0 (24.5)
2 (50)	14.50 (368)	13.46 (342)	6.63 (168)	2.00 (51)	8.50 (216)	3.63 (92)	8	1.00 (25)	6.50 (165)	97.0 (44.0)

CLASS 1500 FULL PORT BOLTED BONNET GATE VALVE - BUTT WELD - INCHES (MM)

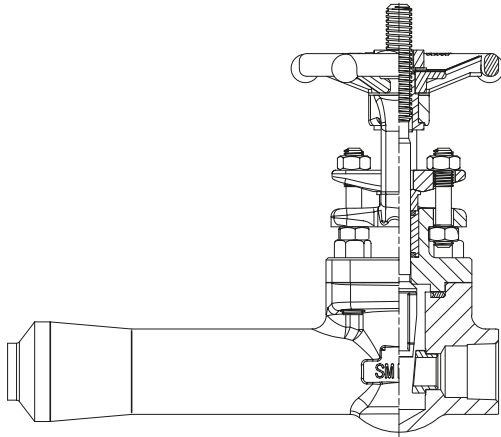
VALVE SIZE NPS (DIN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	APPROX. WEIGHT LBS (KG)
1/2 (15)	8.50 (216)	8.18 (208)	4.00 (102)	0.50 (13)	13.6 (6.2)
3/4 (20)	9.00 (229)	9.47 (241)	4.00 (102)	0.75 (19)	18.4 (8.4)
1 (25)	10.00 (254)	9.93 (252)	5.50 (140)	0.94 (24)	27.4 (12.4)
1 1/2 (40)	12.00 (305)	12.82 (326)	6.63 (168)	1.50 (38)	43.6 (19.8)
2 (50)	14.50 (368)	13.46 (342)	6.63 (168)	2.00 (51)	79.9 (36.2)



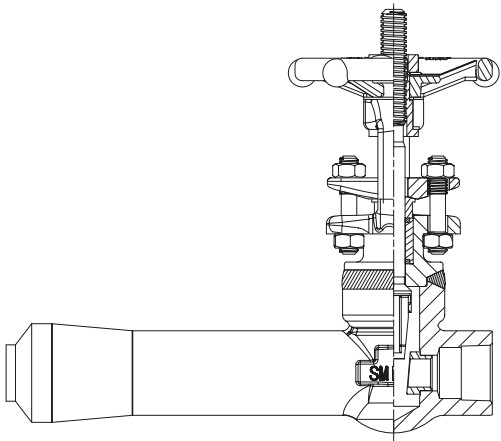
0874-0875 Gate Valves

Forged Steel OS&Y Integrally Reinforced Extended Body – Conventional Port
Valves comply with applicable portions of API 602 and ASME B16.34

Class 800
1/2" - 2"



0874



0875

CLASS 800 BOLTED BONNET INTEGRALLY REINFORCED EXTENDED BODY GATE VALVE - INCHES (MM)

VALVE SIZE NPS (DIN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	CENTER TO END	APPROX. WEIGHT LBS (KG)
1/2 (15)	7.75 (197)	6.00 (152)	4.00 (102)	0.39 (10)	6.13 (156)	5.5 (2.5)
3/4 (20)	8.63 (219)	6.44 (164)	4.00 (102)	0.50 (13)	6.88 (175)	7.0 (3.2)
1 (25)	9.56 (243)	7.25 (184)	4.00 (102)	0.75 (19)	7.63 (194)	10.5 (4.8)
1 1/2 (40)	10.38 (264)	9.13 (232)	5.50 (140)	1.19 (30)	8.00 (203)	16.5 (7.5)
2 (50)	12.00 (305)	11.06 (281)	6.63 (168)	1.50 (38)	9.25 (235)	27.4 (12.4)

CLASS 800 WELDED BONNET INTEGRALLY REINFORCED EXTENDED BODY GATE VALVE - INCHES (MM)

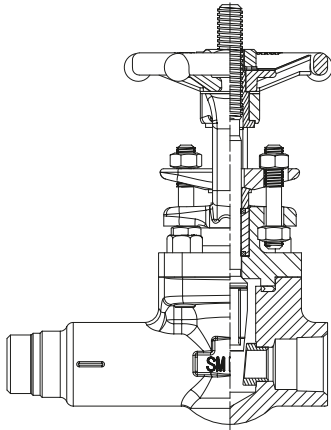
VALVE SIZE NPS (DIN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	CENTER TO END	APPROX. WEIGHT LBS (KG)
1/2 (15)	7.75 (197)	6.00 (152)	4.00 (102)	0.39 (10)	6.13 (156)	5.0 (2.3)
3/4 (20)	8.63 (219)	6.44 (164)	4.00 (102)	0.50 (13)	6.88 (175)	6.5 (2.9)
1 (25)	9.56 (243)	7.25 (184)	4.00 (102)	0.75 (19)	7.63 (194)	9.8 (4.4)
1 1/2 (40)	10.38 (264)	9.13 (232)	5.50 (140)	1.19 (30)	8.00 (203)	14.3 (6.5)
2 (50)	12.00 (305)	11.06 (281)	6.63 (168)	1.50 (38)	9.25 (235)	22.9 (10.4)



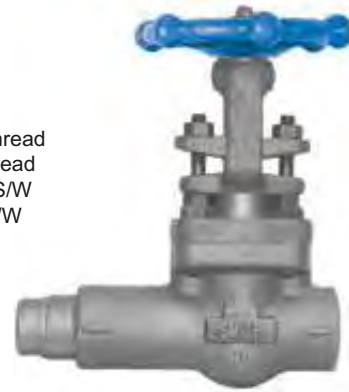
0811-0814/0876-0879 Gate Valves

Forged Steel OS&Y Male End – Conventional Port
Valves comply with applicable portions of API 602 and ASME B16.34

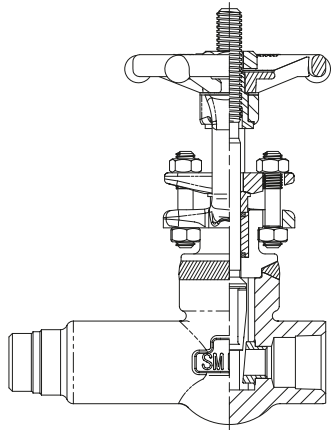
Class 800
1/2" - 2"



0811 Male Thread x Female Thread
0812 Male Plain x Female Thread
0813 Male Thread x Female S/W
0814 Male Plain x Female S/W



0811-0814



0876 Male Thread x Female Thread
0877 Male Plain x Female Thread
0878 Male Thread x Female S/W
0879 Male Plain x Female S/W



0876-0879

CLASS 800 CONVENTIONAL PORT BOLTED BONNET GATE TAKE OFF DESIGN - INCHES (MM)

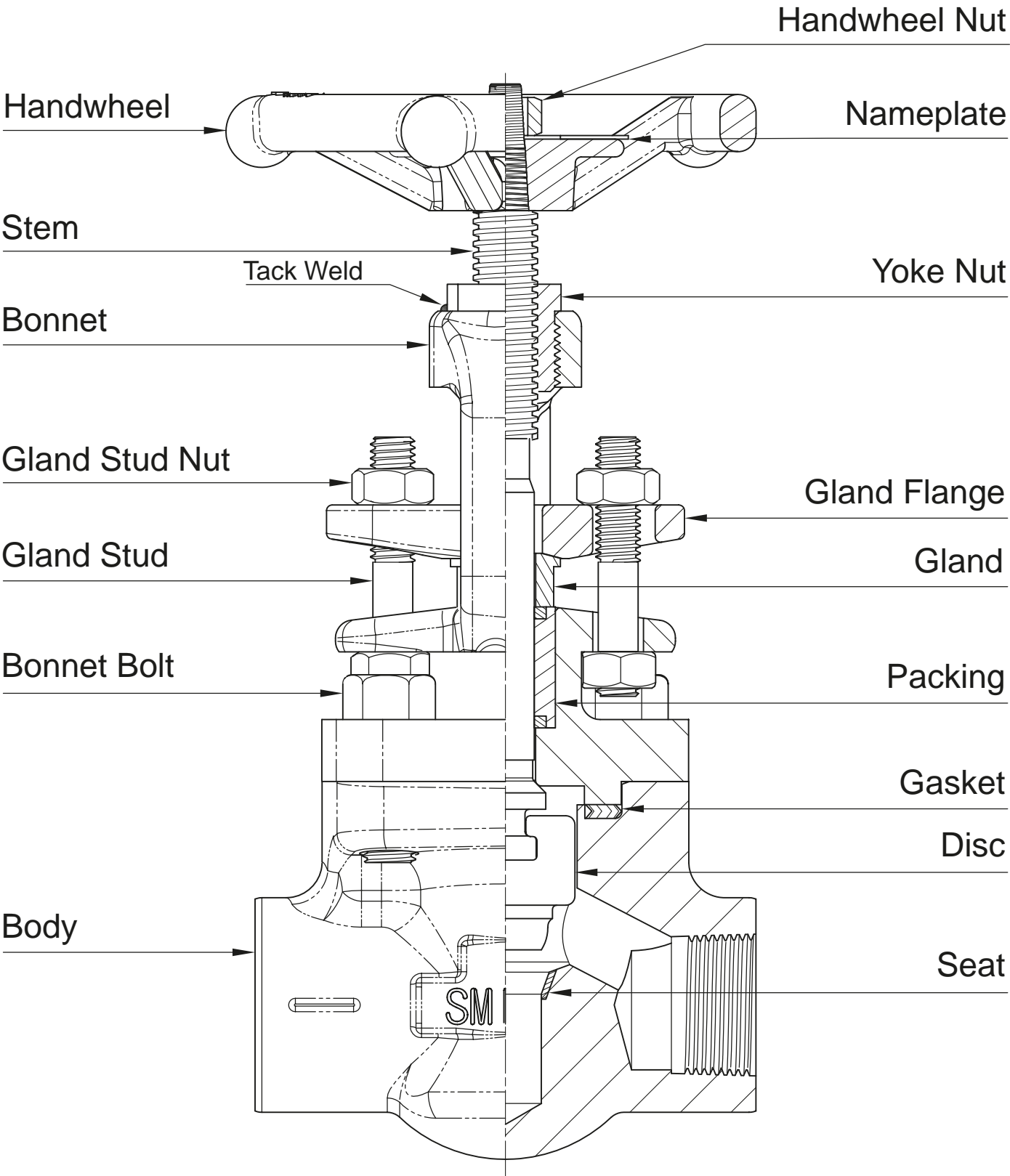
VALVE SIZE NPS (DIN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	CENTER TO END	APPROX. WEIGHT LBS (KG)
1/2 (15)	5.63 (143)	6.25 (159)	4.00 (102)	0.31 (8)	4.00 (102)	4.3 (1.9)
3/4 (20)	5.75 (146)	6.50 (165)	4.00 (102)	0.50 (13)	4.00 (102)	5.0 (2.3)
1 (25)	5.94 (151)	7.25 (184)	4.00 (102)	0.66 (17)	4.00 (102)	6.8 (3.1)
1 1/2 (40)	7.38 (187)	9.13 (232)	5.50 (140)	1.19 (30)	5.00 (127)	10.2 (4.6)
2 (50)	7.88 (200)	11.06 (281)	6.63 (168)	1.50 (38)	5.13 (130)	12.8 (5.8)

CLASS 800 CONVENTIONAL PORT WELDED BONNET GATE TAKE OFF DESIGN - INCHES (MM)

VALVE SIZE NPS (DIN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	CENTER TO END	APPROX. WEIGHT LBS (KG)
1/2 (15)	5.63 (143)	6.19 (157)	4.00 (102)	0.31 (8)	4.00 (102)	3.8 (1.7)
3/4 (20)	5.75 (146)	6.44 (164)	4.00 (102)	0.50 (13)	4.00 (102)	4.2 (1.9)
1 (25)	5.94 (151)	7.19 (183)	4.00 (102)	0.66 (17)	4.00 (102)	5.8 (2.6)
1 1/2 (40)	7.38 (187)	9.13 (232)	5.50 (140)	1.19 (30)	5.00 (127)	10.5 (4.8)
2 (50)	7.88 (200)	11.00 (279)	6.63 (168)	1.50 (38)	5.13 (130)	17.0 (7.7)



Globe Valves

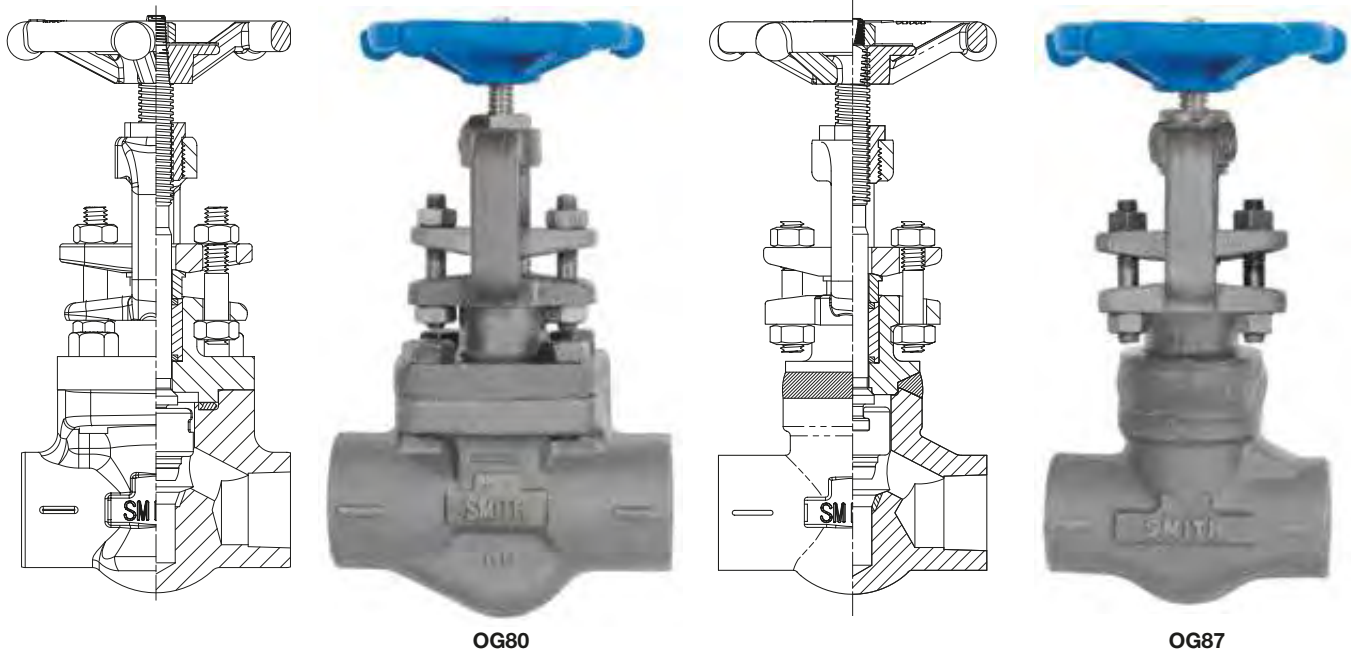




OG80-OG87 Globe Valves

Forged Steel OS&Y
Valves comply with applicable portions of API 602 and ASME B16.34

Class 800
1/4" - 2"



OG80

OG87

CLASS 800 BOLTED BONNET GLOBE VALVE - THREADED or SOCKET WELD - INCHES (MM)

VALVE SIZE NPS (DIN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WT. LBS (KG)
1/4 (8)	3.25 (83)	6.31 (160)	4.00 (102)	0.25 (6)	0.39 (10)	0.56 (14)	1/4"-18	3.8 (1.7)
3/8 (10)	3.25 (83)	6.31 (160)	4.00 (102)	0.25 (6)	0.39 (10)	0.69 (18)	3/8"-18	3.8 (1.7)
1/2 (15)	3.25 (83)	6.31 (160)	4.00 (102)	0.38 (10)	0.39 (10)	0.86 (22)	1/2"-14	3.8 (1.7)
3/4 (20)	3.50 (89)	6.50 (165)	4.00 (102)	0.50 (13)	0.51 (13)	1.07 (27)	3/4"-14	4.8 (2.2)
1 (25)	4.50 (114)	6.81 (173)	4.00 (102)	0.75 (19)	0.51 (13)	1.34 (34)	1"-11 1/2	6.3 (2.8)
1 1/4 (32)	6.25 (159)	8.13 (206)	4.63 (118)	1.00 (25)	0.51 (13)	1.68 (43)	1 1/4"-11 1/2	12.8 (5.8)
1 1/2 (40)	6.25 (159)	8.13 (206)	4.63 (118)	1.19 (30)	0.51 (13)	1.92 (49)	1 1/2"-11 1/2	12.3 (5.6)
2 (50)	7.25 (184)	9.94 (252)	6.63 (168)	1.44 (37)	0.63 (16)	2.41 (61)	2"-11 1/2	22.5 (10.2)

CLASS 800 WELDED BONNET GLOBE VALVE - THREADED or SOCKET WELD - INCHES (MM)

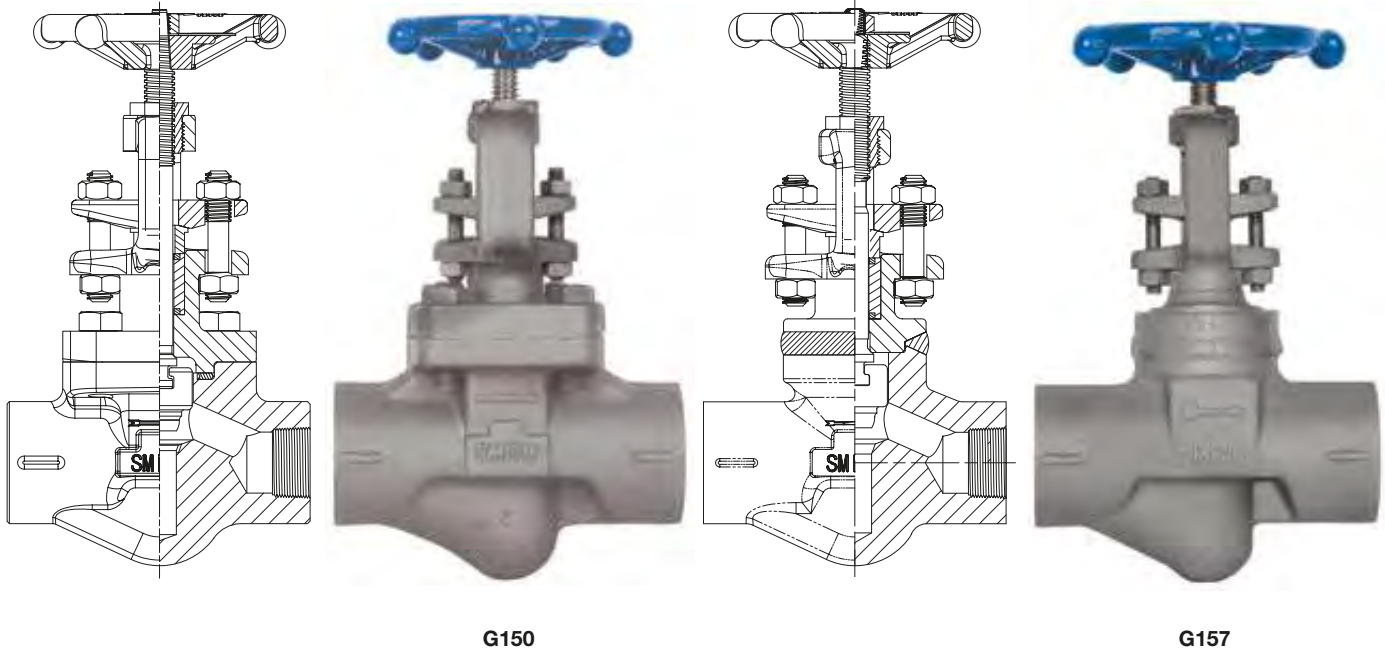
VALVE SIZE NPS (DIN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WT. LBS (KG)
1/4 (8)	3.25 (83)	6.38 (162)	4.00 (102)	0.25 (6)	0.39 (10)	0.56 (14)	1/4"-18	3.5 (1.6)
3/8 (10)	3.25 (83)	6.38 (162)	4.00 (102)	0.25 (6)	0.39 (10)	0.69 (18)	3/8"-18	3.5 (1.6)
1/2 (15)	3.25 (83)	6.38 (162)	4.00 (102)	0.38 (10)	0.39 (10)	0.86 (22)	1/2"-14	3.5 (1.6)
3/4 (20)	3.50 (89)	6.50 (165)	4.00 (102)	0.50 (13)	0.51 (13)	1.07 (27)	3/4"-14	4.5 (2.0)
1 (25)	4.50 (114)	6.81 (173)	4.00 (102)	0.75 (19)	0.51 (13)	1.34 (34)	1"-11 1/2	6.0 (2.7)
1 1/4 (32)	6.25 (159)	8.19 (208)	4.63 (118)	1.00 (25)	0.51 (13)	1.68 (43)	1 1/4"-11 1/2	12.3 (5.6)
1 1/2 (40)	6.25 (159)	8.19 (208)	4.63 (118)	1.19 (30)	0.51 (13)	1.92 (49)	1 1/2"-11 1/2	11.8 (5.3)
2 (50)	7.25 (184)	10.00 (254)	6.63 (168)	1.44 (37)	0.63 (16)	2.41 (61)	2"-11 1/2	22.0 (10.0)



G150-G157 Globe Valves

Forged Steel OS&Y
Valves comply with applicable portions of API 602 and ASME B16.34

Class 1500
1/4" - 2"



G150

G157

CLASS 1500 BOLTED BONNET GLOBE VALVE - THREADED or SOCKET WELD - INCHES (MM)								
VALVE SIZE NPS (DN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)
1/4 (8)	3.50 (89)	6.63 (168)	4.00 (102)	0.25 (6)	0.39 (10)	0.56 (14)	1/4"-18	6.0 (2.7)
3/8 (10)	3.50 (89)	6.63 (168)	4.00 (102)	0.25 (6)	0.39 (10)	0.69 (18)	3/8"-18	6.0 (2.7)
1/2 (15)	3.50 (89)	6.63 (168)	4.00 (102)	0.38 (10)	0.39 (10)	0.86 (22)	1/2"-14	5.8 (2.6)
3/4 (20)	4.50 (114)	6.75 (171)	4.00 (102)	0.50 (13)	0.51 (13)	1.07 (27)	3/4"-14	8.5 (3.9)
1 (25)	6.25 (159)	7.88 (200)	4.63 (118)	0.75 (19)	0.51 (13)	1.34 (34)	1"-11 1/2	14.8 (6.7)
1 1/4 (32)	7.25 (184)	9.94 (252)	6.63 (168)	1.00 (25)	0.51 (13)	1.68 (43)	1 1/4"-11 1/2	27.0 (12.2)
1 1/2 (40)	7.25 (184)	9.94 (252)	6.63 (168)	1.19 (30)	0.51 (13)	1.92 (49)	1 1/2"-11 1/2	27.0 (12.2)
2 (50)	7.25 (184)	10.75 (273)	6.63 (168)	1.44 (37)	0.63 (16)	2.41 (61)	2"-11 1/2	31.0 (14.1)

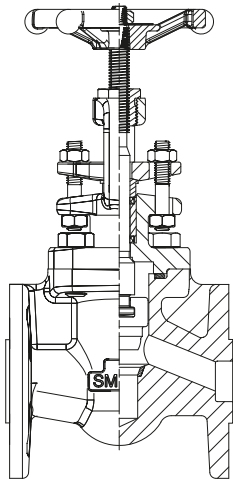
CLASS 1500 WELDED BONNET GLOBE VALVE - THREADED or SOCKET WELD - INCHES (MM)								
VALVE SIZE NPS (DN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)
1/4 (8)	3.50 (89)	6.56 (167)	4.00 (102)	0.25 (6)	0.39 (10)	0.56 (14)	1/4"-18	4.3 (1.9)
3/8 (10)	3.50 (89)	6.56 (167)	4.00 (102)	0.25 (6)	0.39 (10)	0.69 (18)	3/8"-18	4.3 (1.9)
1/2 (15)	3.50 (89)	6.56 (167)	4.00 (102)	0.38 (10)	0.39 (10)	0.86 (22)	1/2"-14	4.0 (1.8)
3/4 (20)	4.50 (114)	6.88 (175)	4.00 (102)	0.50 (13)	0.51 (13)	1.07 (27)	3/4"-14	6.0 (2.7)
1 (25)	6.25 (159)	8.19 (208)	4.63 (118)	0.75 (19)	0.51 (13)	1.34 (34)	1"-11 1/2	12.5 (5.7)
1 1/4 (32)	7.25 (184)	10.31 (262)	6.63 (168)	1.00 (25)	0.51 (13)	1.68 (43)	1 1/4"-11 1/2	19.5 (8.8)
1 1/2 (40)	7.25 (184)	10.31 (262)	6.63 (168)	1.19 (30)	0.51 (13)	1.92 (49)	1 1/2"-11 1/2	19.5 (8.8)
2 (50)	7.25 (184)	10.38 (264)	6.63 (168)	1.44 (37)	0.63 (16)	2.41 (61)	2"-11 1/2	24.0 (10.9)



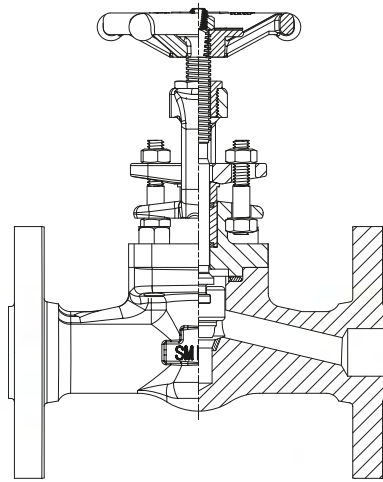
OG81-OG83 Globe Valves

Forged Steel OS&Y
Valves comply with applicable portions of API 602 and ASME B16.34

Class 150/300
1/2" - 2"



OG81



OG83

CLASS 150 BOLTED BONNET GLOBE VALVE - FLANGED ENDS - INCHES (MM)

VALVE SIZE NPS (DIN)	FACE TO FACE	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	FLANGE DIAMETER	RAISED DIAMETER	BOLT HOLE	BOLT HOLE DIAMETER	BOLT CIRCLE	APPROX. WEIGHT LBS (KG)
1/2 (15)	4.25 (108)	5.69 (144)	3.25 (83)	0.38 (10)	3.54 (90)	1.38 (35)	4	0.63 (16)	2.38 (61)	3.7 (1.7)
3/4 (20)	4.63 (118)	5.94 (151)	3.94 (100)	0.50 (13)	3.94 (100)	1.69 (43)	4	0.63 (16)	2.75 (70)	5.3 (2.4)
1 (25)	5.00 (127)	6.75 (171)	3.94 (100)	0.75 (19)	4.25 (108)	2.00 (51)	4	0.63 (16)	3.13 (79)	9.8 (4.4)
1 1/2 (40)	6.50 (165)	8.44 (214)	5.50 (140)	1.19 (30)	5.00 (127)	2.88 (73)	4	0.63 (16)	3.88 (98)	18.5 (8.4)
2 (50)	8.00 (203)	9.69 (246)	6.25 (159)	1.44 (37)	6.00 (152)	3.63 (92)	4	0.75 (19)	4.75 (121)	36.0 (16.3)

CLASS 300 BOLTED BONNET GLOBE VALVE - FLANGED ENDS - INCHES (MM)

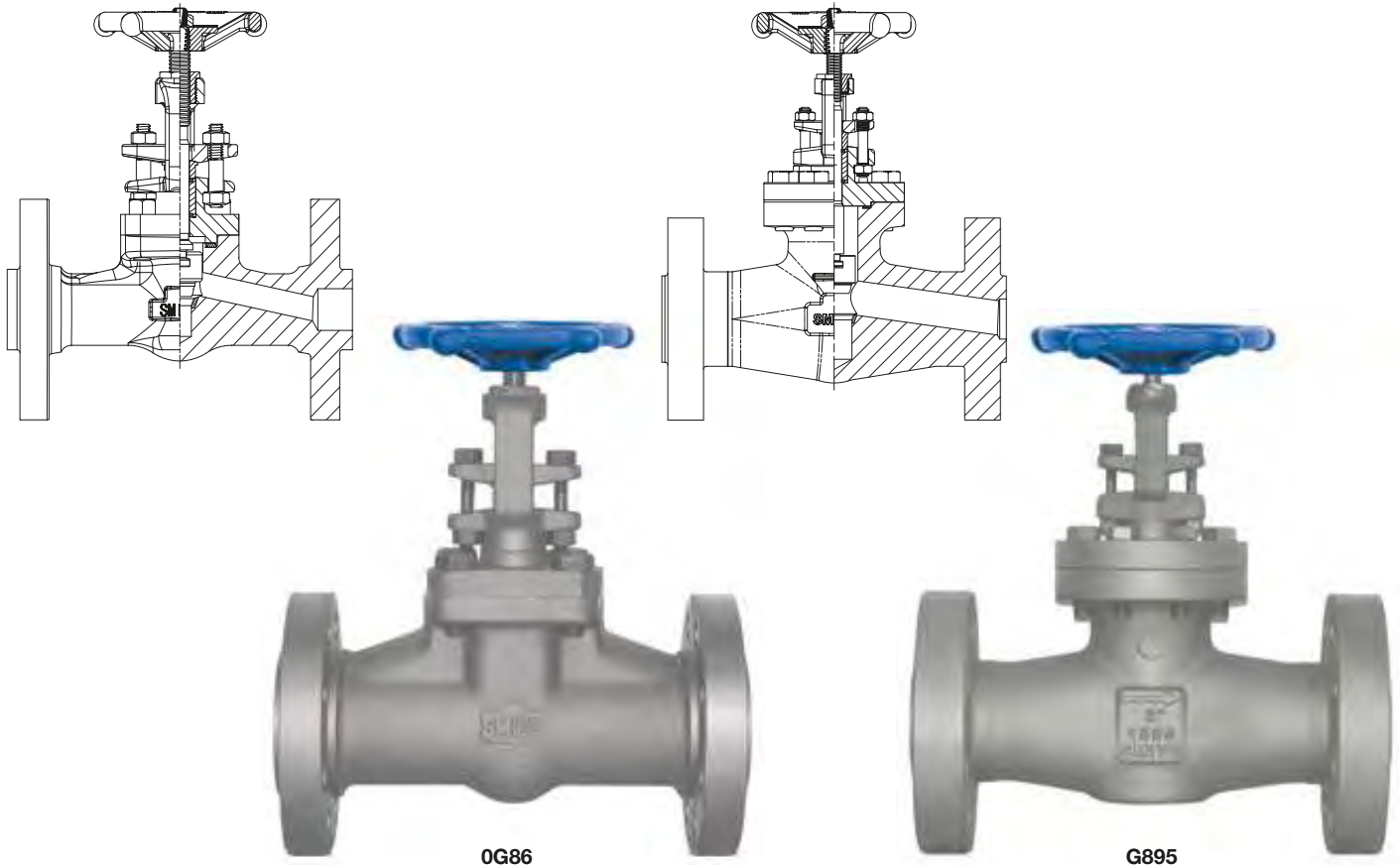
VALVE SIZE NPS (DIN)	FACE TO FACE	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	FLANGE DIAMETER	RAISED DIAMETER	BOLT HOLE	BOLT HOLE DIAMETER	BOLT CIRCLE	APPROX. WEIGHT LBS (KG)
1/2 (15)	6.00 (152)	6.31 (160)	4.00 (102)	0.38 (10)	3.75 (95)	1.38 (35)	4	0.63 (16)	2.63 (67)	7.3 (3.3)
3/4 (20)	7.00 (178)	6.50 (165)	4.00 (102)	0.50 (13)	4.63 (118)	1.69 (43)	4	0.75 (19)	3.25 (83)	11.0 (5.0)
1 (25)	8.00 (203)	7.19 (183)	4.00 (102)	0.75 (19)	4.92 (125)	2.00 (51)	4	0.75 (19)	3.50 (89)	14.5 (6.6)
1 1/2 (40)	9.00 (229)	8.88 (225)	4.63 (118)	1.19 (30)	6.13 (156)	2.88 (73)	4	0.88 (22)	4.50 (114)	31.0 (14.1)
2 (50)	10.50 (267)	10.63 (270)	6.63 (168)	1.44 (37)	6.50 (165)	3.63 (92)	8	0.75 (19)	5.00 (127)	41.2 (18.7)



OG86-G895 Globe Valves

Forged Steel OS&Y
Valves comply with applicable portions of API 602 and ASME B16.34

Class 600/1500
1/2" - 2"



OG86

G895

CLASS 600 BOLTED BONNET GLOBE VALVE - FLANGED ENDS - INCHES (MM)

VALVE SIZE NPS (DIN)	FACE TO FACE	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	FLANGE DIAMETER	RAISED DIAMETER	BOLT HOLE	BOLT HOLE DIAMETER	BOLT CIRCLE	APPROX. WEIGHT LBS (KG)
1/2 (15)	6.50 (165)	6.31 (160)	4.00 (102)	0.38 (10)	3.75 (95)	1.38 (35)	4	0.63 (16)	2.63 (67)	7.8 (3.5)
3/4 (20)	7.50 (191)	6.50 (165)	4.00 (102)	0.50 (13)	4.63 (118)	1.69 (43)	4	0.75 (19)	3.25 (83)	11.8 (5.3)
1 (25)	8.50 (216)	7.19 (183)	4.00 (102)	0.75 (19)	4.94 (125)	2.00 (51)	4	0.75 (19)	3.50 (89)	15.3 (6.9)
1 1/2 (40)	9.50 (241)	8.88 (225)	4.63 (118)	1.19 (30)	6.13 (156)	2.88 (73)	4	0.88 (22)	4.50 (114)	31.8 (14.4)
2 (50)	11.50 (292)	10.63 (270)	6.63 (168)	1.44 (37)	6.50 (165)	3.63 (92)	8	0.75 (19)	5.00 (127)	46.8 (21.2)

CLASS 1500 BOLTED BONNET GLOBE VALVE - FLANGED ENDS - INCHES (MM)

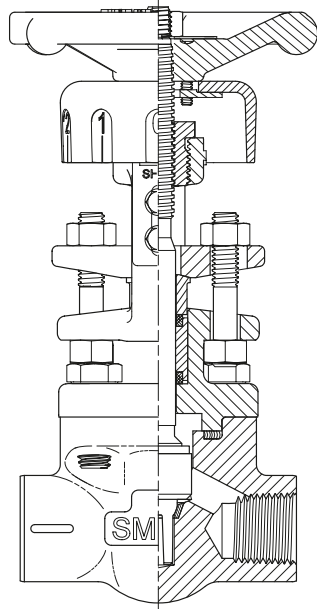
VALVE SIZE NPS (DIN)	FACE TO FACE	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	FLANGE DIAMETER	RAISED DIAMETER	BOLT HOLE	BOLT HOLE DIAMETER	BOLT CIRCLE
1/2 (15)	8.50 (216)	7.98 (203)	4.00 (102)	0.38 (10)	4.75 (121)	1.38 (35)	4	0.88 (22)	3.25 (83)
3/4 (20)	9.00 (229)	8.69 (221)	5.50 (140)	0.50 (13)	5.13 (130)	1.69 (43)	4	0.88 (22)	3.50 (89)
1 (25)	10.00 (254)	10.00 (254)	5.50 (140)	0.75 (19)	5.88 (149)	2.00 (51)	4	1.00 (25)	4.00 (102)
1 1/2 (40)	12.00 (305)	11.89 (302)	6.63 (168)	1.19 (30)	7.00 (178)	2.88 (73)	4	1.13 (29)	4.88 (124)
2 (50)	14.50 (368)	12.98 (330)	6.63 (168)	1.44 (37)	8.50 (216)	3.63 (92)	8	1.00 (25)	6.50 (165)



FG80 Globe Valves

Forged Steel OS&Y
Valves comply with applicable portions of API 602 and ASME B16.34

Class 800
1/2" - 1"

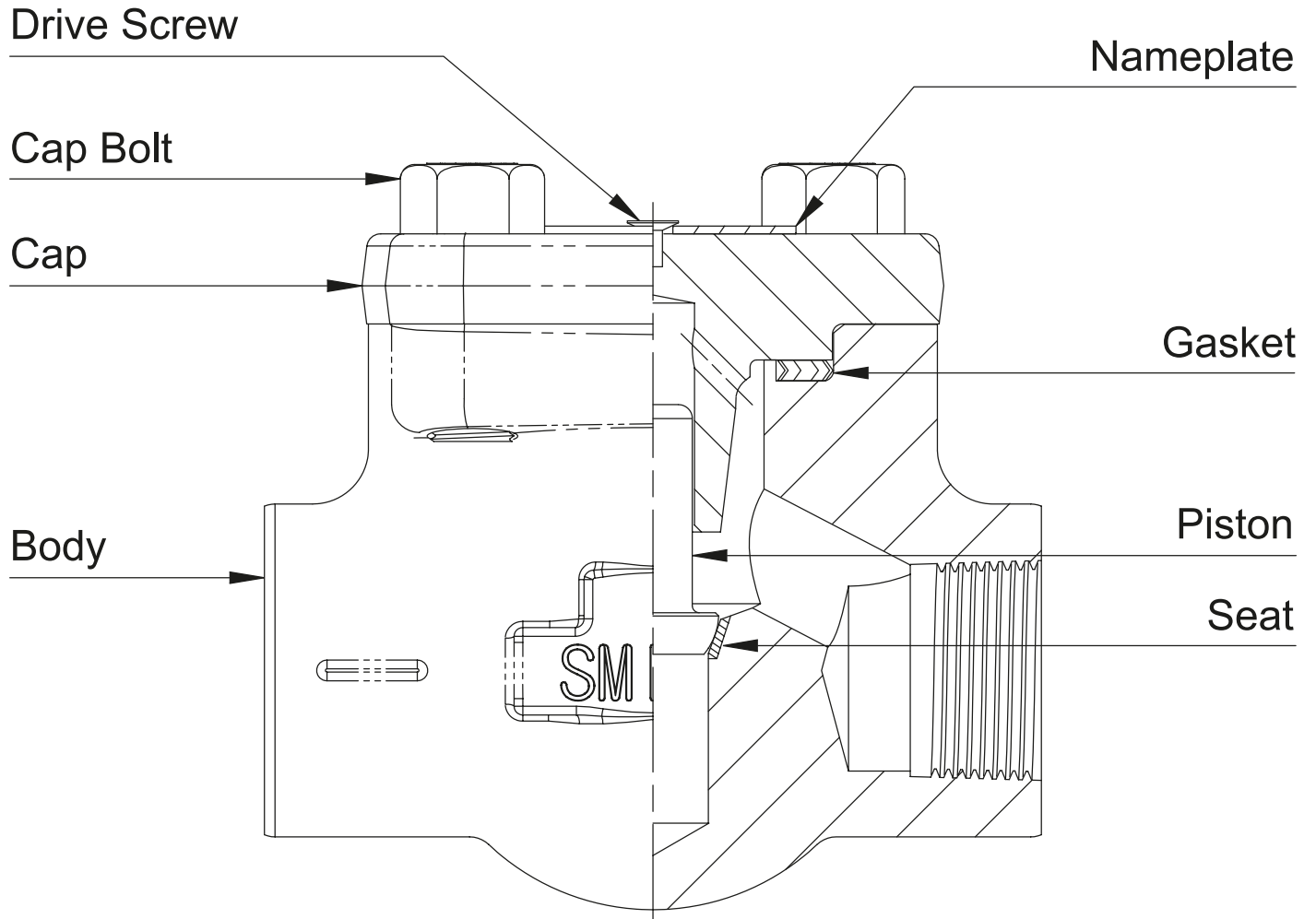


FG80

CLASS 800 FLOW CONTROL GLOBE VALVE - THREADED or SOCKET WELD - INCHES (MM)								
VALVE SIZE NPS (DN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)
1/2 (15)	3.25 (83)	6.50 (165)	4.00 (102)	0.39 (10)	0.39 (10)	0.86 (22)	1/2"-14	4.3 (2.0)
3/4 (20)	3.50 (89)	6.58 (167)	4.00 (102)	0.50 (13)	0.51 (13)	1.07 (27)	3/4"-14	5.3 (2.4)
1 (25)	3.88 (98)	6.71 (170)	4.00 (102)	0.75 (19)	0.51 (13)	1.34 (34)	1"-11 1/2	7.0 (3.2)



Check Valves

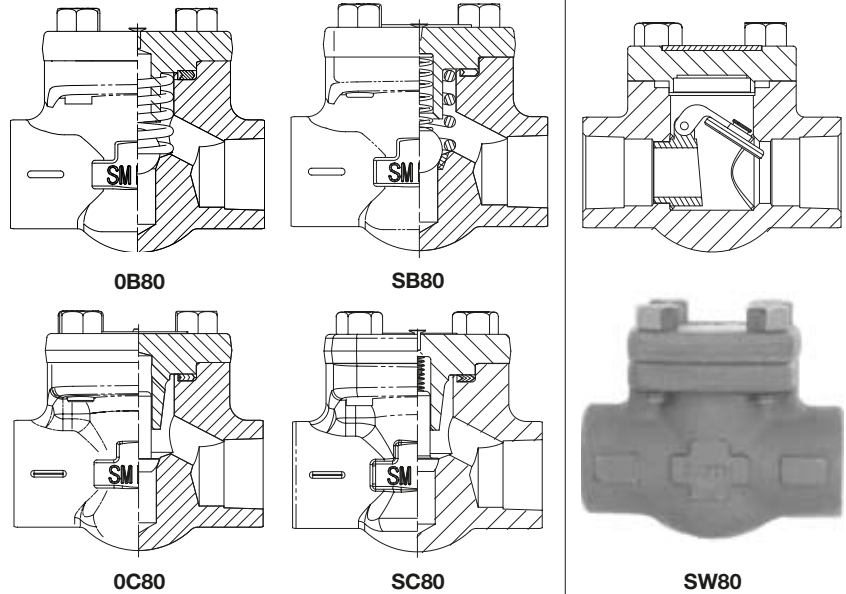




OB80-SB80-OC80-SC80-SW80 Check Valves

Forged Steel, Bolted Cap, Horizontal, Ball, Piston, Swing type
Valves comply with applicable portions of API 602 and ASME B16.34

Class 800
1/4" - 2"



OB80 CLASS 800 BOLTED CAP BALL TYPE CHECK VALVE - THREADED or SOCKET WELD - INCHES (MM)

VALVE SIZE NPS (DIN)	END TO END	CENTER TO TOP (OPEN)	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)	CRACKING PRESSURE PSI (BAR)
1/4 (8)	3.25 (83)	2.00 (51)	0.25 (6)	0.39 (10)	0.56 (14)	1/4"-18	2.5 (1.1)	0.2 (0.01)
3/8 (10)	3.25 (83)	2.00 (51)	0.25 (6)	0.39 (10)	0.69 (18)	3/8"-18	2.5 (1.1)	0.2 (0.01)
1/2 (15)	3.25 (83)	2.00 (51)	0.38 (10)	0.39 (10)	0.86 (22)	1/2"-14	2.3 (1.0)	0.2 (0.01)
3/4 (20)	3.50 (89)	2.25 (57)	0.50 (13)	0.51 (13)	1.07 (27)	3/4"-14	3.3 (1.5)	0.3 (0.02)
1 (25)	4.50 (114)	2.25 (57)	0.75 (19)	0.51 (13)	1.34 (34)	1"-11 1/2	5.0 (2.3)	0.3 (0.02)
1 1/4 (32)	6.25 (159)	2.88 (73)	1.00 (25)	0.51 (13)	1.68 (43)	1 1/4"-11 1/2	10.5 (4.8)	0.4 (0.03)
1 1/2 (40)	6.25 (159)	2.88 (73)	1.19 (30)	0.51 (13)	1.92 (49)	1 1/2"-11 1/2	10.0 (4.5)	0.4 (0.03)
2 (50)	7.25 (184)	3.56 (90)	1.44 (37)	0.63 (16)	2.41 (61)	2"-11 1/2	18.2 (8.3)	0.5 (0.03)

SB80 CLASS 800 BOLTED CAP SPRING BALL TYPE CHECK VALVE - THREADED or SOCKET WELD - INCHES (MM)

VALVE SIZE NPS (DIN)	END TO END	CENTER TO TOP (OPEN)	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)	CRACKING PRESSURE PSI (BAR)
1/4 (8)	3.25 (83)	2.00 (51)	0.25 (6)	0.39 (10)	0.56 (14)	1/4"-18	2.5 (1.1)	2.1 (0.14)
3/8 (10)	3.25 (83)	2.00 (51)	0.25 (6)	0.39 (10)	0.69 (18)	3/8"-18	2.5 (1.1)	2.1 (0.14)
1/2 (15)	3.25 (83)	2.00 (51)	0.38 (10)	0.39 (10)	0.86 (22)	1/2"-14	2.3 (1.0)	2.1 (0.14)
3/4 (20)	3.50 (89)	2.25 (57)	0.50 (13)	0.51 (13)	1.07 (27)	3/4"-14	3.3 (1.5)	2.1 (0.14)
1 (25)	4.50 (114)	2.25 (57)	0.75 (19)	0.51 (13)	1.34 (34)	1"-11 1/2	5.0 (2.3)	3.5 (0.24)
1 1/4 (32)	6.25 (159)	2.88 (73)	1.00 (25)	0.51 (13)	1.68 (43)	1 1/4"-11 1/2	10.5 (4.8)	2.7 (0.19)
1 1/2 (40)	6.25 (159)	2.88 (73)	1.19 (30)	0.51 (13)	1.92 (49)	1 1/2"-11 1/2	10.0 (4.5)	2.7 (0.19)
2 (50)	7.25 (184)	3.56 (90)	1.44 (37)	0.63 (16)	2.41 (61)	2"-11 1/2	18.2 (8.3)	6.0 (0.41)



OB80-SB80-OC80-SC80-SW80 Check Valves

Forged Steel, Bolted Cap, Horizontal, Ball, Piston, Swing type
Valves comply with applicable portions of API 602 and ASME B16.34

Class 800
1/4" - 2"

OC80 CLASS 800 BOLTED CAP PISTON TYPE CHECK VALVE - THREADED or SOCKET WELD - INCHES (MM)								
VALVE SIZE NPS (DIN)	END TO END	CENTER TO TOP (OPEN)	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)	CRACKING PRESSURE PSI (BAR)
1/4 (8)	3.25 (83)	2.00 (51)	0.25 (6)	0.39 (10)	0.56 (14)	1/4"-18	2.5 (1.1)	0.3 (0.02)
3/8 (10)	3.25 (83)	2.00 (51)	0.25 (6)	0.39 (10)	0.69 (18)	3/8"-18	2.5 (1.1)	0.3 (0.02)
1/2 (15)	3.25 (83)	2.00 (51)	0.38 (10)	0.39 (10)	0.86 (22)	1/2"-14	2.3 (1.0)	0.3 (0.02)
3/4 (20)	3.50 (89)	2.25 (57)	0.50 (13)	0.51 (13)	1.07 (27)	3/4"-14	3.3 (1.5)	0.3 (0.02)
1 (25)	4.50 (114)	2.25 (57)	0.75 (19)	0.51 (13)	1.34 (34)	1"-11 1/2	5.0 (2.3)	0.3 (0.02)
1 1/4 (32)	6.25 (159)	2.88 (73)	1.00 (25)	0.51 (13)	1.68 (43)	1 1/4"-11 1/2	10.5 (4.8)	0.3 (0.02)
1 1/2 (40)	6.25 (159)	2.88 (73)	1.19 (30)	0.51 (13)	1.92 (49)	1 1/2"-11 1/2	10.0 (4.5)	0.3 (0.02)
2 (50)	7.25 (184)	3.56 (90)	1.44 (37)	0.63 (16)	2.41 (61)	2"-11 1/2	18.2 (8.3)	0.4 (0.03)

SC80 CLASS 800 BOLTED CAP SPRING PISTON TYPE CHECK VALVE - THREADED or SOCKET WELD - INCHES (MM)								
VALVE SIZE NPS (DIN)	END TO END	CENTER TO TOP (OPEN)	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)	CRACKING PRESSURE PSI (BAR)
1/4 (8)	3.25 (83)	2.00 (51)	0.25 (6)	0.39 (10)	0.56 (14)	1/4"-18	2.5 (1.1)	1.8 (0.12)
3/8 (10)	3.25 (83)	2.00 (51)	0.25 (6)	0.39 (10)	0.69 (18)	3/8"-18	2.5 (1.1)	1.8 (0.12)
1/2 (15)	3.25 (83)	2.00 (51)	0.38 (10)	0.39 (10)	0.86 (22)	1/2"-14	2.3 (1.0)	1.8 (0.12)
3/4 (20)	3.50 (89)	2.25 (57)	0.50 (13)	0.51 (13)	1.07 (27)	3/4"-14	3.3 (1.5)	1.0 (0.07)
1 (25)	4.50 (114)	2.25 (57)	0.75 (19)	0.51 (13)	1.34 (34)	1"-11 1/2	5.0 (2.3)	0.6 (0.04)
1 1/4 (32)	6.25 (159)	2.88 (73)	1.00 (25)	0.51 (13)	1.68 (43)	1 1/4"-11 1/2	10.5 (4.8)	0.5 (0.03)
1 1/2 (40)	6.25 (159)	2.88 (73)	1.19 (30)	0.51 (13)	1.92 (49)	1 1/2"-11 1/2	10.0 (4.5)	0.5 (0.03)
2 (50)	7.25 (184)	3.56 (90)	1.44 (37)	0.63 (16)	2.41 (61)	2"-11 1/2	18.2 (8.3)	0.7 (0.05)

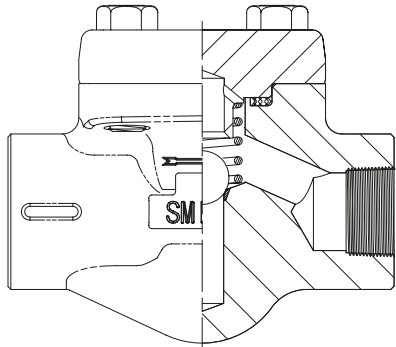
SW80 CLASS 800 BOLTED CAP SWING TYPE CHECK VALVE - THREADED or SOCKET WELD - INCHES (MM)								
VALVE SIZE NPS (DIN)	END TO END	CENTER TO TOP (OPEN)	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)	CRACKING PRESSURE PSI (BAR)
1/2 (15)	2.94 (75)	1.88 (48)	0.39 (10)	0.39 (10)	0.86 (22)	1/2"-14	2.1 (1.0)	0.1 (0.01)
3/4 (20)	3.38 (86)	2.00 (51)	0.50 (13)	0.51 (13)	1.07 (27)	3/4"-14	3.1 (1.4)	0.1 (0.01)
1 (25)	4.00 (102)	2.56 (65)	0.75 (20)	0.51 (13)	1.34 (34)	1"-11 1/2	4.2 (1.9)	0.1 (0.01)
1 1/2 (40)	4.50 (114)	2.94 (75)	1.19 (30)	0.51 (13)	1.92 (49)	1 1/2"-11 1/2	8.6 (3.9)	0.1 (0.01)
2 (50)	5.50 (140)	3.75 (95)	1.50 (38)	0.63 (16)	2.41 (61)	2"-11 1/2	13.2 (6.0)	0.1 (0.01)



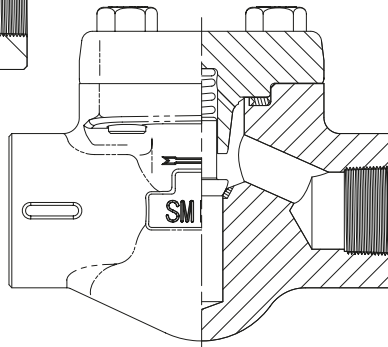
B150-SB15/C150-SC15 Check Valves

Forged Steel, Bolted Cap, Horizontal, Ball and Piston-type
Valves comply with applicable portions of API 602 and ASME B16.34

Class 1500
1/4" - 2"



B150-SB15



C150 - SC15



CLASS 1500 BOLTED CAP BALL TYPE CHECK VALVE - THREADED or SOCKET WELD - INCHES (MM)

VALVE SIZE NPS (DIN)	END TO END	CENTER TO TOP (OPEN)	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)	B150 CRACKING PRESSURE PSI (BAR)	SB15 CRACKING PRESSURE PSI (BAR)
1/4 (8)	3.50 (89)	2.38 (60)	0.25 (6)	0.39 (10)	0.56 (14)	1/4"-18	4.8 (2.2)	0.2 (0.01)	2.1 (0.14)
3/8 (10)	3.50 (89)	2.38 (60)	0.25 (6)	0.39 (10)	0.69 (18)	3/8"-18	4.8 (2.2)	0.2 (0.01)	2.1 (0.14)
1/2 (15)	3.50 (89)	2.38 (60)	0.38 (10)	0.39 (10)	0.86 (22)	1/2"-14	4.5 (2.0)	0.2 (0.01)	2.1 (0.14)
3/4 (20)	4.50 (114)	2.44 (62)	0.50 (13)	0.51 (13)	1.07 (27)	3/4"-14	7.0 (3.2)	0.3 (0.02)	2.1 (0.14)
1 (25)	6.25 (159)	3.13 (79)	0.75 (19)	0.51 (13)	1.34 (34)	1"-11 1/2	12.8 (5.8)	0.3 (0.02)	3.5 (0.24)
1 1/4 (32)	7.25 (184)	3.94 (100)	1.00 (25)	0.51 (13)	1.68 (43)	1 1/4"-11 1/2	22.5 (10.2)	0.4 (0.03)	2.7 (0.19)
1 1/2 (40)	7.25 (184)	3.94 (100)	1.19 (30)	0.51 (13)	1.92 (49)	1 1/2"-11 1/2	22.2 (10.1)	0.4 (0.03)	2.7 (0.19)
2 (50)	7.25 (184)	4.50 (114)	1.44 (37)	0.63 (16)	2.41 (61)	2"-11 1/2	26.5 (12.0)	0.5 (0.03)	6.0 (0.41)

CLASS 1500 BOLTED CAP PISTON TYPE CHECK VALVE - THREADED or SOCKET WELD - INCHES (MM)

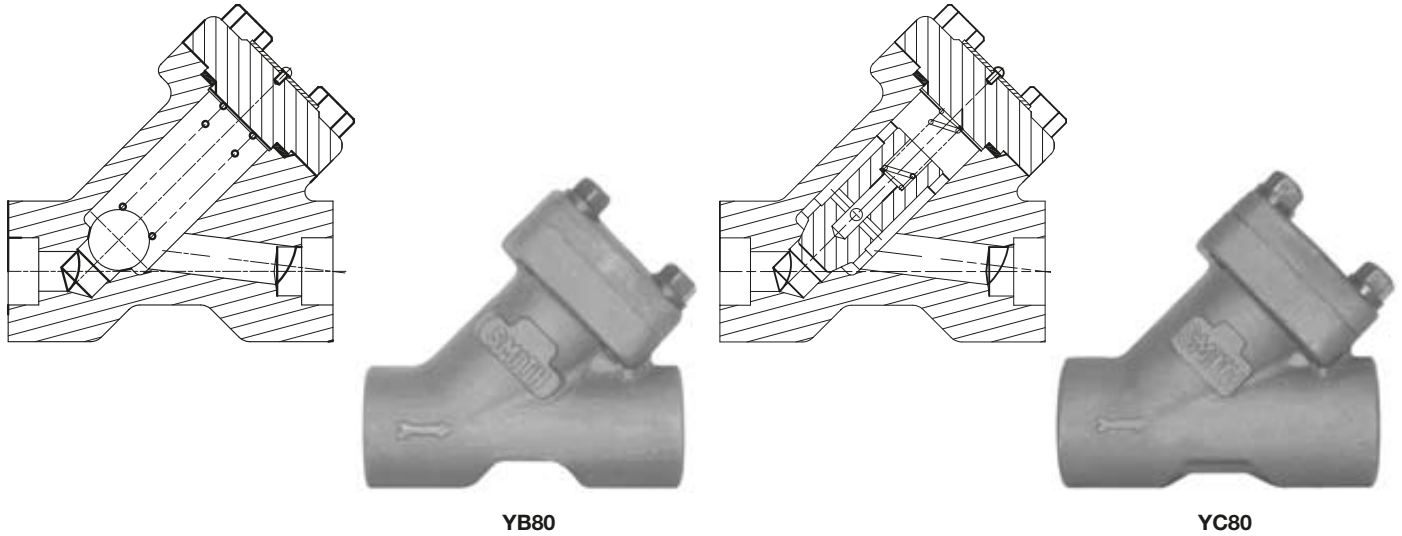
VALVE SIZE NPS (DIN)	END TO END	CENTER TO TOP (OPEN)	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)	C150 CRACKING PRESSURE PSI (BAR)	SC15 CRACKING PRESSURE PSI (BAR)
1/4 (8)	3.50 (89)	2.38 (60)	0.25 (6)	0.39 (10)	0.56 (14)	1/4"-18	4.8 (2.2)	0.3 (0.02)	1.8 (0.12)
3/8 (10)	3.50 (89)	2.38 (60)	0.25 (6)	0.39 (10)	0.69 (18)	3/8"-18	4.8 (2.2)	0.3 (0.02)	1.8 (0.12)
1/2 (15)	3.50 (89)	2.38 (60)	0.38 (10)	0.39 (10)	0.86 (22)	1/2"-14	4.5 (2.0)	0.3 (0.02)	1.8 (0.12)
3/4 (20)	4.50 (114)	2.44 (62)	0.50 (13)	0.51 (13)	1.07 (27)	3/4"-14	7.0 (3.2)	0.3 (0.02)	1.0 (0.07)
1 (25)	6.25 (159)	3.13 (79)	0.75 (19)	0.51 (13)	1.34 (34)	1"-11 1/2	12.8 (5.8)	0.3 (0.02)	0.6 (0.04)
1 1/4 (32)	7.25 (184)	3.94 (100)	1.00 (25)	0.51 (13)	1.68 (43)	1 1/4"-11 1/2	22.5 (10.2)	0.3 (0.02)	0.5 (0.03)
1 1/2 (40)	7.25 (184)	3.94 (100)	1.19 (30)	0.51 (13)	1.92 (49)	1 1/2"-11 1/2	22.2 (10.1)	0.3 (0.02)	0.5 (0.03)
2 (50)	7.25 (184)	4.50 (114)	1.44 (37)	0.63 (16)	2.41 (61)	2"-11 1/2	26.5 (12.0)	0.4 (0.03)	0.7 (0.05)



YB80-YC80 Y-Pattern Check Valves

Forged Steel, Bolted Cap, Y-Pattern, Horizontal, Ball and Piston-type
Valves comply with applicable portions of API 602 and ASME B16.34

Class 800
1/2" - 2"



CLASS 800 Y-PATTERN BALL TYPE CHECK VALVE - THREADED or SOCKET WELD - INCHES (MM)

VALVE SIZE NPS (DIN)	END TO END	CENTER TO TOP	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)	CRACKING PRESSURE PSI (BAR)
1/2 (15)	4.17 (106)	3.46 (88)	0.38 (10)	0.39 (10)	0.86 (22)	1/2"-14	3.9 (1.7)	8.7 (0.60)
3/4 (20)	4.17 (106)	3.46 (88)	0.50 (13)	0.51 (13)	1.07 (27)	3/4"-14	3.9 (1.7)	8.7 (0.60)
1 (25)	4.72 (120)	3.98 (101)	0.69 (18)	0.51 (13)	1.34 (34)	1"-11 1/2	6.2 (2.8)	7.3 (0.50)
1 1/2 (40)	5.98 (152)	4.88 (124)	1.12 (28)	0.51 (13)	1.92 (49)	1 1/2"-11 1/2	11.7 (5.3)	4.4 (0.30)
2 (50)	7.09 (180)	5.59 (142)	1.38 (35)	0.63 (16)	2.41 (61)	2"-11 1/2	18.7 (8.5)	2.9 (0.20)

CLASS 800 Y-PATTERN PISTON TYPE CHECK VALVE - THREADED or SOCKET WELD - INCHES (MM)

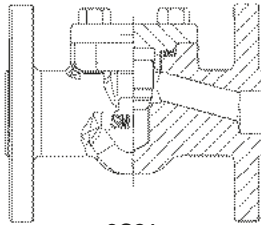
VALVE SIZE NPS (DIN)	END TO END	CENTER TO TOP	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)	CRACKING PRESSURE PSI (BAR)
1/2 (15)	4.17 (106)	3.46 (88)	0.38 (10)	0.39 (10)	0.86 (22)	1/2"-14	3.9 (1.7)	36.3 (2.50)
3/4 (20)	4.17 (106)	3.46 (88)	0.50 (13)	0.51 (13)	1.07 (27)	3/4"-14	3.9 (1.7)	36.3 (2.50)
1 (25)	4.72 (120)	3.98 (101)	0.69 (18)	0.51 (13)	1.34 (34)	1"-11 1/2	6.2 (2.8)	16.0 (1.10)
1 1/2 (40)	5.98 (152)	4.88 (124)	1.12 (28)	0.51 (13)	1.92 (49)	1 1/2"-11 1/2	11.7 (5.3)	14.5 (1.00)
2 (50)	7.09 (180)	5.59 (142)	1.38 (35)	0.63 (16)	2.41 (61)	2"-11 1/2	18.7 (8.5)	16.0 (1.10)



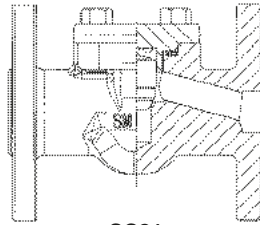
OC81-SC81-OC83-SC83-OC86-SC86 Check Valves

Forged Steel, Bolted Cap, Horizontal, Piston-type
Valves comply with applicable portions of API 602 and ASME B16.34

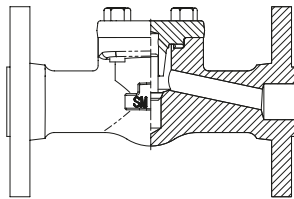
Class 150/300/600
1/2" - 2"



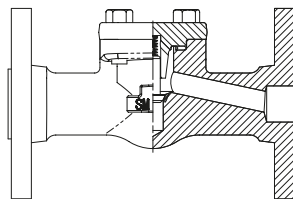
OC81



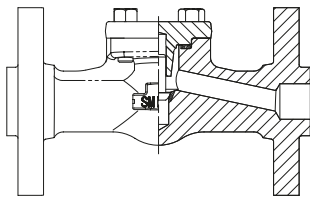
SC81



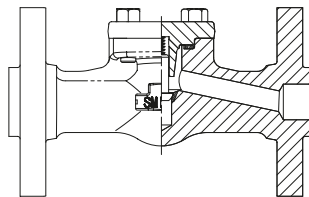
OC83



SC83



OC86



SC86



OC81 CLASS 150 BOLTED CAP PISTON TYPE CHECK VALVE - FLANGED ENDS - INCHES (MM)

VALVE SIZE NPS (DIN)	FACE TO FACE	CENTER TO TOP (OPEN)	PORT DIAMETER	FLANGE DIAMETER	RAISED DIAMETER	BOLT HOLE	BOLT HOLE DIAMETER	BOLT CIRCLE	APPROX. WEIGHT LBS (KG)	CRACKING PRESSURE PSI (BAR)
1/2 (15)	4.25 (108)	1.88 (48)	0.38 (10)	3.54 (90)	1.38 (35)	4	0.63 (16)	2.38 (60)	4.4 (2.0)	0.7 (0.05)
3/4 (20)	4.63 (118)	2.00 (51)	0.50 (13)	3.94 (100)	1.69 (43)	4	0.63 (16)	2.75 (70)	5.5 (2.5)	0.7 (0.05)
1 (25)	5.00 (127)	2.56 (65)	0.69 (17)	4.25 (108)	2.00 (51)	4	0.63 (16)	3.13 (79)	8.8 (4.0)	0.7 (0.05)
1 1/2 (40)	6.50 (165)	2.94 (75)	1.19 (30)	5.00 (127)	2.88 (73)	4	0.63 (16)	3.88 (98)	17.6 (8.0)	0.8 (0.05)
2 (50)	8.00 (203)	3.75 (95)	1.44 (37)	6.00 (152)	3.63 (92)	4	0.75 (19)	4.75 (121)	25.4 (11.5)	0.7 (0.05)

SC81 CLASS 150 BOLTED CAP SPRING PISTON TYPE CHECK VALVE - FLANGED ENDS - INCHES (MM)

VALVE SIZE NPS (DIN)	FACE TO FACE	CENTER TO TOP (OPEN)	PORT DIAMETER	FLANGE DIAMETER	RAISED DIAMETER	BOLT HOLE	BOLT HOLE DIAMETER	BOLT CIRCLE	APPROX. WEIGHT LBS (KG)	CRACKING PRESSURE PSI (BAR)
1/2 (15)	4.25 (108)	1.88 (48)	0.38 (10)	3.54 (90)	1.38 (35)	4	0.63 (16)	2.38 (60)	4.4 (2.0)	1.6 (0.11)
3/4 (20)	4.63 (118)	2.00 (51)	0.50 (13)	3.94 (100)	1.69 (43)	4	0.63 (16)	2.75 (70)	5.5 (2.5)	2.1 (0.15)
1 (25)	5.00 (127)	2.56 (65)	0.69 (17)	4.25 (108)	2.00 (51)	4	0.63 (16)	3.13 (79)	8.8 (4.0)	2.0 (0.13)
1 1/2 (40)	6.50 (165)	2.94 (75)	1.19 (30)	5.00 (127)	2.88 (73)	4	0.63 (16)	3.88 (98)	17.6 (8.0)	2.5 (0.17)
2 (50)	8.00 (203)	3.75 (95)	1.44 (37)	6.00 (152)	3.63 (92)	4	0.75 (19)	4.75 (121)	25.4 (11.5)	2.6 (0.18)



OC81-SC81-OC83-SC83-OC86-SC86 Check Valves

Forged Steel, Bolted Cap, Horizontal, Piston-type
Valves comply with applicable portions of API 602 and ASME B16.34

Class 150/300/600
1/2" - 2"

OC83 CLASS 300 BOLTED CAP PISTON TYPE CHECK VALVE - FLANGED ENDS - INCHES (MM)

VALVE SIZE NPS (DIN)	FACE TO FACE	CENTER TO TOP (OPEN)	PORT DIAMETER	FLANGE DIAMETER	RAISED DIAMETER	BOLT HOLE	BOLT HOLE DIAMETER	BOLT CIRCLE	APPROX. WEIGHT LBS (KG)	CRACKING PRESSURE PSI (BAR)
1/2 (15)	6.00 (152)	2.00 (51)	0.38 (10)	3.75 (95)	1.38 (35)	4	0.63 (16)	2.63 (67)	5.8 (2.6)	0.3 (0.02)
3/4 (20)	7.00 (178)	2.25 (57)	0.50 (13)	4.63 (118)	1.69 (43)	4	0.75 (19)	3.25 (83)	9.5 (4.3)	0.3 (0.02)
1 (25)	8.00 (203)	2.63 (67)	0.75 (19)	4.92 (125)	2.00 (51)	4	0.75 (19)	3.50 (89)	13.3 (6.0)	0.3 (0.02)
1 1/2 (40)	9.00 (229)	3.69 (94)	1.19 (30)	6.13 (156)	2.88 (73)	4	0.88 (22)	4.50 (114)	28.8 (13.0)	0.3 (0.02)
2 (50)	10.50 (267)	4.25 (108)	1.44 (37)	6.50 (165)	3.63 (92)	8	0.75 (19)	5.00 (127)	37.0 (16.8)	0.4 (0.03)

SC83 CLASS 300 BOLTED CAP SPRING PISTON TYPE CHECK VALVE - FLANGED ENDS - INCHES (MM)

VALVE SIZE NPS (DIN)	FACE TO FACE	CENTER TO TOP (OPEN)	PORT DIAMETER	FLANGE DIAMETER	RAISED DIAMETER	BOLT HOLE	BOLT HOLE DIAMETER	BOLT CIRCLE	APPROX. WEIGHT LBS (KG)	CRACKING PRESSURE PSI (BAR)
1/2 (15)	6.00 (152)	2.00 (51)	0.38 (10)	3.75 (95)	1.38 (35)	4	0.63 (16)	2.63 (67)	5.8 (2.6)	1.8 (0.12)
3/4 (20)	7.00 (178)	2.25 (57)	0.50 (13)	4.63 (118)	1.69 (43)	4	0.75 (19)	3.25 (83)	9.5 (4.3)	1.0 (0.07)
1 (25)	8.00 (203)	2.63 (67)	0.75 (19)	4.92 (125)	2.00 (51)	4	0.75 (19)	3.50 (89)	13.3 (6.0)	0.6 (0.04)
1 1/2 (40)	9.00 (229)	3.69 (94)	1.19 (30)	6.13 (156)	2.88 (73)	4	0.88 (22)	4.50 (114)	28.8 (13.0)	0.5 (0.03)
2 (50)	10.50 (267)	4.25 (108)	1.44 (37)	6.50 (165)	3.63 (92)	8	0.75 (19)	5.00 (127)	37.0 (16.8)	0.7 (0.05)

OC86 CLASS 600 BOLTED CAP PISTON TYPE CHECK VALVE - FLANGED ENDS - INCHES (MM)

VALVE SIZE NPS (DIN)	FACE TO FACE	CENTER TO TOP (OPEN)	PORT DIAMETER	FLANGE DIAMETER	RAISED DIAMETER	BOLT HOLE	BOLT HOLE DIAMETER	BOLT CIRCLE	APPROX. WEIGHT LBS (KG)	CRACKING PRESSURE PSI (BAR)
1/2 (15)	6.50 (165)	2.00 (51)	0.38 (10)	3.75 (95)	1.38 (35)	4	0.63 (16)	2.63 (67)	6.3 (2.8)	0.3 (0.02)
3/4 (20)	7.50 (191)	2.25 (57)	0.50 (13)	4.63 (118)	1.69 (43)	4	0.75 (19)	3.25 (83)	10.5 (4.8)	0.3 (0.02)
1 (25)	8.50 (216)	2.63 (67)	0.75 (19)	4.94 (125)	2.00 (51)	4	0.75 (19)	3.50 (89)	13.5 (6.1)	0.3 (0.02)
1 1/2 (40)	9.50 (241)	3.69 (94)	1.19 (30)	6.13 (156)	2.88 (73)	4	0.88 (22)	4.50 (114)	29.5 (13.4)	0.3 (0.02)
2 (50)	11.50 (292)	4.25 (108)	1.44 (37)	6.50 (165)	3.63 (92)	8	0.75 (19)	5.00 (127)	43.5 (19.7)	0.4 (0.03)

SC86 CLASS 600 BOLTED CAP SPRING PISTON TYPE CHECK VALVE - FLANGED ENDS - INCHES (MM)

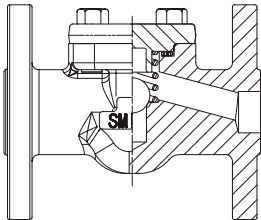
VALVE SIZE NPS (DIN)	FACE TO FACE	CENTER TO TOP (OPEN)	PORT DIAMETER	FLANGE DIAMETER	RAISED DIAMETER	BOLT HOLE	BOLT HOLE DIAMETER	BOLT CIRCLE	APPROX. WEIGHT LBS (KG)	CRACKING PRESSURE PSI (BAR)
1/2 (15)	6.50 (165)	2.00 (51)	0.38 (10)	3.75 (95)	1.38 (35)	4	0.63 (16)	2.63 (67)	6.3 (2.8)	1.8 (0.12)
3/4 (20)	7.50 (191)	2.25 (57)	0.50 (13)	4.63 (118)	1.69 (43)	4	0.75 (19)	3.25 (83)	10.5 (4.8)	1.0 (0.07)
1 (25)	8.50 (216)	2.63 (67)	0.75 (19)	4.92 (125)	2.00 (51)	4	0.75 (19)	3.50 (89)	13.5 (6.1)	0.6 (0.04)
1 1/2 (40)	9.50 (241)	3.69 (94)	1.19 (30)	6.13 (156)	2.88 (73)	4	0.88 (22)	4.50 (114)	29.5 (13.4)	0.5 (0.03)
2 (50)	11.50 (292)	4.25 (108)	1.44 (37)	6.50 (165)	3.63 (92)	8	0.75 (19)	5.00 (127)	43.5 (19.7)	0.7 (0.05)



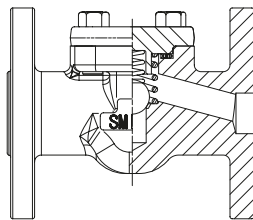
OB81-SB81-OB83-SB83-OB86-SB86 Check Valves

Forged Steel, Bolted Cap, Horizontal, Ball-type
Valves comply with applicable portions of API 602 and ASME B16.34

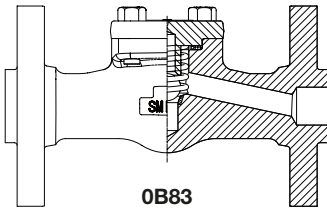
Class 150/300/600
1/2" - 2"



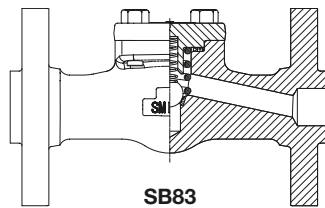
OB81



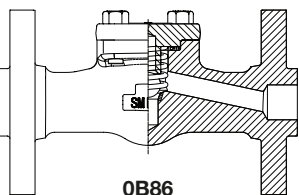
SB81



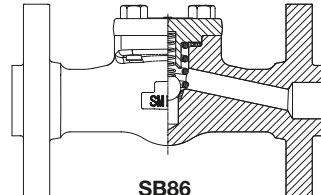
OB83



SB83



OB86



SB86



OB81 CLASS 150 BOLTED CAP BALL TYPE CHECK VALVE - FLANGED ENDS - INCHES (MM)

VALVE SIZE NPS (DIN)	FACE TO FACE	CENTER TO TOP (OPEN)	PORT DIAMETER	FLANGE DIAMETER	RAISED DIAMETER	BOLT HOLE	BOLT HOLE DIAMETER	BOLT CIRCLE	APPROX. WEIGHT LBS (KG)	CRACKING PRESSURE PSI (BAR)
1/2 (15)	4.25 (108)	1.88 (48)	0.38 (10)	3.54 (90)	1.38 (35)	4	0.63 (16)	2.38 (60)	4.4 (2.0)	0.7 (0.05)
3/4 (20)	4.63 (118)	2.00 (51)	0.50 (13)	3.94 (100)	1.69 (43)	4	0.63 (16)	2.75 (70)	5.5 (2.5)	0.7 (0.05)
1 (25)	5.00 (127)	2.56 (65)	0.69 (17)	4.25 (108)	2.00 (51)	4	0.63 (16)	3.13 (79)	8.8 (4.0)	0.7 (0.05)
1 1/2 (40)	6.50 (165)	2.94 (75)	1.19 (30)	5.00 (127)	2.88 (73)	4	0.63 (16)	3.88 (98)	17.6 (8.0)	0.8 (0.05)
2 (50)	8.00 (203)	3.75 (95)	1.44 (37)	6.00 (152)	3.63 (92)	4	0.75 (19)	4.75 (121)	25.4 (11.5)	0.7 (0.05)

SB81 CLASS 150 BOLTED CAP SPRING BALL TYPE CHECK VALVE - FLANGED ENDS - INCHES (MM)

VALVE SIZE NPS (DIN)	FACE TO FACE	CENTER TO TOP (OPEN)	PORT DIAMETER	FLANGE DIAMETER	RAISED DIAMETER	BOLT HOLE	BOLT HOLE DIAMETER	BOLT CIRCLE	APPROX. WEIGHT LBS (KG)	CRACKING PRESSURE PSI (BAR)
1/2 (15)	4.25 (108)	1.88 (48)	0.38 (10)	3.54 (90)	1.38 (35)	4	0.63 (16)	2.38 (60)	4.4 (2.0)	1.6 (0.11)
3/4 (20)	4.63 (118)	2.00 (51)	0.50 (13)	3.94 (100)	1.69 (43)	4	0.63 (16)	2.75 (70)	5.5 (2.5)	2.1 (0.15)
1 (25)	5.00 (127)	2.56 (65)	0.69 (17)	4.25 (108)	2.00 (51)	4	0.63 (16)	3.13 (79)	8.8 (4.0)	2.0 (0.13)
1 1/2 (40)	6.50 (165)	2.94 (75)	1.19 (30)	5.00 (127)	2.88 (73)	4	0.63 (16)	3.88 (98)	17.6 (8.0)	2.5 (0.17)
2 (50)	8.00 (203)	3.75 (95)	1.44 (37)	6.00 (152)	3.63 (92)	4	0.75 (19)	4.75 (121)	25.4 (11.5)	2.6 (0.18)



OB81-SB81-OB83-SB83-OB86-SB86 Check Valves

Forged Steel, Bolted Cap, Horizontal, Ball-type
Valves comply with applicable portions of API 602 and ASME B16.34

Class 150/300/600
1/2" - 2"

OB83 CLASS 300 BOLTED CAP BALL TYPE CHECK VALVE - FLANGED ENDS - INCHES (MM)										
VALVE SIZE NPS (DIN)	FACE TO FACE	CENTER TO TOP (OPEN)	PORT DIAMETER	FLANGE DIAMETER	RAISED DIAMETER	BOLT HOLE	BOLT HOLE DIAMETER	BOLT CIRCLE	APPROX. WEIGHT LBS (KG)	CRACKING PRESSURE PSI (BAR)
1/2 (15)	6.00 (152)	2.00 (51)	0.38 (10)	3.75 (95)	1.38 (35)	4	0.63 (16)	2.63 (67)	5.8 (2.6)	0.2 (0.01)
3/4 (20)	7.00 (178)	2.25 (57)	0.50 (13)	4.63 (118)	1.69 (43)	4	0.75 (19)	3.25 (83)	9.5 (4.3)	0.3 (0.02)
1 (25)	8.00 (203)	2.63 (67)	0.75 (19)	4.92 (125)	2.00 (51)	4	0.75 (19)	3.50 (89)	13.3 (6.0)	0.3 (0.02)
1 1/2 (40)	9.00 (229)	3.69 (94)	1.19 (30)	6.13 (156)	2.88 (73)	4	0.88 (22)	4.50 (114)	28.8 (13.0)	0.4 (0.03)
2 (50)	10.50 (267)	4.25 (108)	1.44 (37)	6.50 (165)	3.63 (92)	8	0.75 (19)	5.00 (127)	37.0 (16.8)	0.5 (0.03)

SB83 CLASS 300 BOLTED CAP SPRING BALL TYPE CHECK VALVE - FLANGED ENDS - INCHES (MM)										
VALVE SIZE NPS (DIN)	FACE TO FACE	CENTER TO TOP (OPEN)	PORT DIAMETER	FLANGE DIAMETER	RAISED DIAMETER	BOLT HOLE	BOLT HOLE DIAMETER	BOLT CIRCLE	APPROX. WEIGHT LBS (KG)	CRACKING PRESSURE PSI (BAR)
1/2 (15)	6.00 (152)	2.00 (51)	0.38 (10)	3.75 (95)	1.38 (35)	4	0.63 (16)	2.63 (67)	5.8 (2.6)	2.1 (0.15)
3/4 (20)	7.00 (178)	2.25 (57)	0.50 (13)	4.63 (118)	1.69 (43)	4	0.75 (19)	3.25 (83)	9.5 (4.3)	2.1 (0.15)
1 (25)	8.00 (203)	2.63 (67)	0.75 (19)	4.92 (125)	2.00 (51)	4	0.75 (19)	3.50 (89)	13.3 (6.0)	3.5 (0.24)
1 1/2 (40)	9.00 (229)	3.69 (94)	1.19 (30)	6.13 (156)	2.88 (73)	4	0.88 (22)	4.50 (114)	28.8 (13.0)	2.7 (0.19)
2 (50)	10.50 (267)	4.25 (108)	1.44 (37)	6.50 (165)	3.63 (92)	8	0.75 (19)	5.00 (127)	37.0 (16.8)	6.0 (0.41)

OB86 CLASS 600 BOLTED CAP BALL TYPE CHECK VALVE - FLANGED ENDS - INCHES (MM)										
VALVE SIZE NPS (DIN)	FACE TO FACE	CENTER TO TOP (OPEN)	PORT DIAMETER	FLANGE DIAMETER	RAISED DIAMETER	BOLT HOLE	BOLT HOLE DIAMETER	BOLT CIRCLE	APPROX. WEIGHT LBS (KG)	CRACKING PRESSURE PSI (BAR)
1/2 (15)	6.50 (165)	2.00 (51)	0.38 (10)	3.75 (95)	1.38 (35)	4	0.63 (16)	2.63 (67)	6.3 (2.8)	0.2 (0.01)
3/4 (20)	7.50 (191)	2.25 (57)	0.50 (13)	4.63 (118)	1.69 (43)	4	0.75 (19)	3.25 (83)	10.5 (4.8)	0.3 (0.02)
1 (25)	8.50 (216)	2.63 (67)	0.75 (19)	4.94 (125)	2.00 (51)	4	0.75 (19)	3.50 (89)	13.5 (6.1)	0.3 (0.02)
1 1/2 (40)	9.50 (241)	3.69 (94)	1.19 (30)	6.13 (156)	2.88 (73)	4	0.88 (22)	4.50 (114)	29.5 (13.4)	0.4 (0.03)
2 (50)	11.50 (292)	4.25 (108)	1.44 (37)	6.50 (165)	3.63 (92)	8	0.75 (19)	5.00 (127)	43.5 (19.7)	0.5 (0.03)

SB86 CLASS 600 BOLTED CAP SPRING BALL TYPE CHECK VALVE - FLANGED ENDS - INCHES (MM)										
VALVE SIZE NPS (DIN)	FACE TO FACE	CENTER TO TOP (OPEN)	PORT DIAMETER	FLANGE DIAMETER	RAISED DIAMETER	BOLT HOLE	BOLT HOLE DIAMETER	BOLT CIRCLE	APPROX. WEIGHT LBS (KG)	CRACKING PRESSURE PSI (BAR)
1/2 (15)	6.50 (165)	2.00 (51)	0.38 (10)	3.75 (95)	1.38 (35)	4	0.63 (16)	2.63 (67)	6.3 (2.8)	2.1 (0.15)
3/4 (20)	7.50 (191)	2.25 (57)	0.50 (13)	4.63 (118)	1.69 (43)	4	0.75 (19)	3.25 (83)	10.5 (4.8)	2.1 (0.15)
1 (25)	8.50 (216)	2.63 (67)	0.75 (19)	4.92 (125)	2.00 (51)	4	0.75 (19)	3.50 (89)	13.5 (6.1)	3.5 (0.24)
1 1/2 (40)	9.50 (241)	3.69 (94)	1.19 (30)	6.13 (156)	2.88 (73)	4	0.88 (22)	4.50 (114)	29.5 (13.4)	2.7 (0.19)
2 (50)	11.50 (292)	4.25 (108)	1.44 (37)	6.50 (165)	3.63 (92)	8	0.75 (19)	5.00 (127)	43.5 (19.7)	6.0 (0.41)

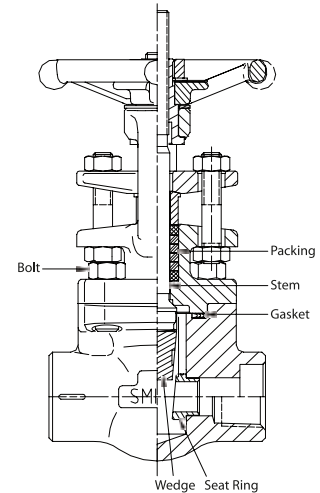


Sour Service Valves

Smith manufactures a complete line of valves in full compliance to NACE Standards. All Body/Bonnet, Packing, and Gasket materials shown on page 2 are acceptable for sour gas service. However, NACE valves have special limitations on bolting and trim materials to ensure their resistance to corrosion by sulfides (“sour gas”) found in processing crude oil.

TRIM MATERIALS			
CODE	STEM	WEDGE/DISC	SEAT
K	410, 22HRC Max	410, 22HRC Max	HF
A	316	316	316 *
S		316	316+HF *
W		STELLITE	
D	MONEL	MONEL, 35HRC Max	MONEL

* Stellite seat in Globe & Check when body not 316 or 316L
 HF = “Hard Faced”, such as Stellite #6.



Customer must specify desired material as there is no single “NACE Valve”.

HF Acid Service Valves

(HF=hydrofluoric acid)

Chlorine valves can be used for Hydrofluoric acid (HF) service. However, some users require the following additional features:

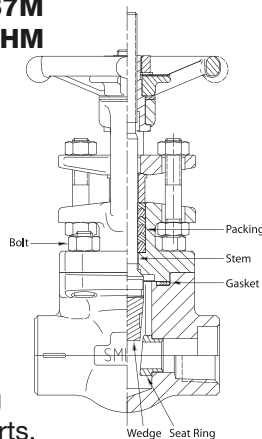
- STEM K-Monel**
- WEDGE or Disc ... Additional side clearance for medial build up**
- STUDS..... ASTM A 193-B7M**
- NUTS..... ASTM A 194-2HM (instead of bolts)**

These valves are coded:

SCOMO/U/W..... Monel trim

Body and Bonnet flange and end connections are painted with “ON GUARD” acid alert system. Teflon soft goods and Double Ball Grease Injectors are available upon request.

Consult factory for valves prohibiting the use of stainless steel external parts.



Chlorine Valves

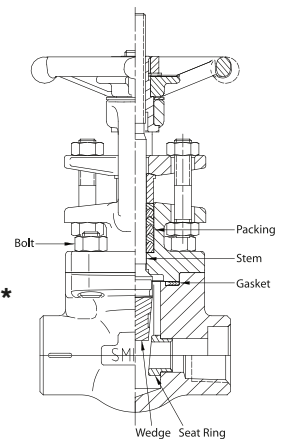
The following combinations are generally used for chlorine service:

- ODXXO/U/W ... Monel trim**
- OQXXO/U/W ... Monel & Teflon trim**

When requested, valves for chlorine service are specially cleaned and packaged.

- PACKING..... Teflon V-ring**
- STEM Monel**
- GASKET Monel & Teflon**
- SEAT RINGS**
- WEDGE or DISC..... Monel or Monel w/Teflon***

*Gate Valve - Teflon in seats
 *Globe Valve – Teflon in Disc



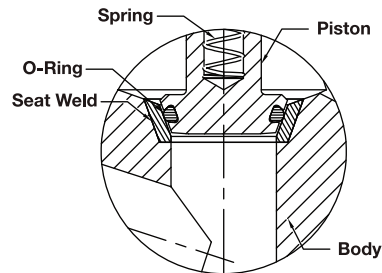
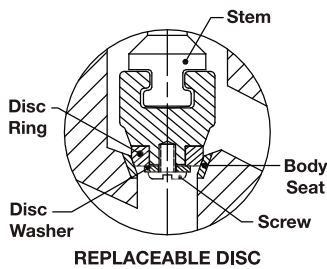
Oxygen Service

For adequate contamination control in oxygen-enriched systems and environments, different cleanliness levels from a simple degreasing wash to the removal of both organic and inorganic contaminants are offered by Smith.

Smith valves can be cleaned to achieve ASTM specifications or other specific industry or customer standards.

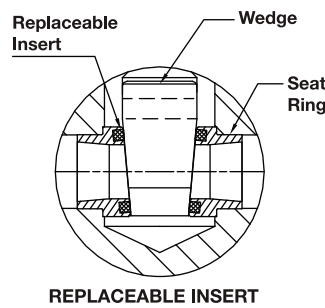
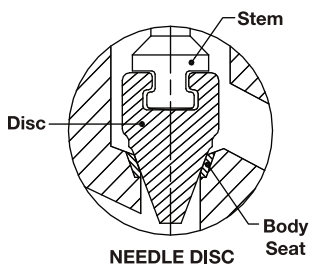
Please, contact your Smith representative.

Gate, Globe, Check Valves



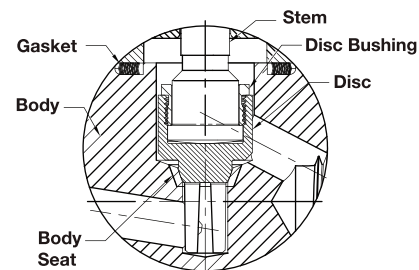
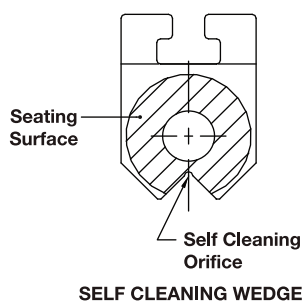
Used for elastomeric or plastic seating (Globe)

Used for elastomeric seating (Check)



Used for metering (Globe)

Used for elastomeric or plastic seating (Gate)

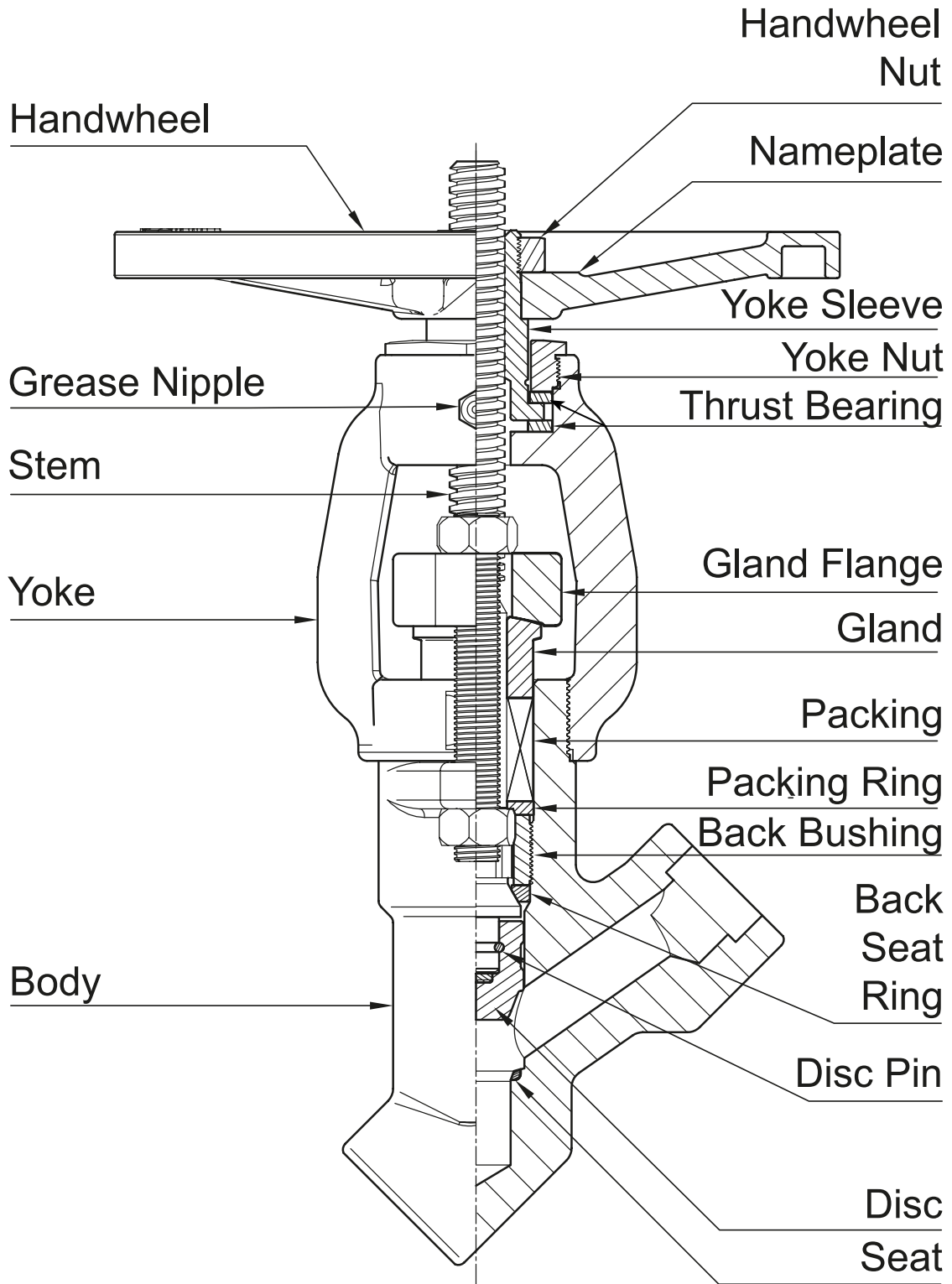


Used as anti-clog and self cleaning (Gate)

Used for flow control (Globe)



Y-Pattern Valves

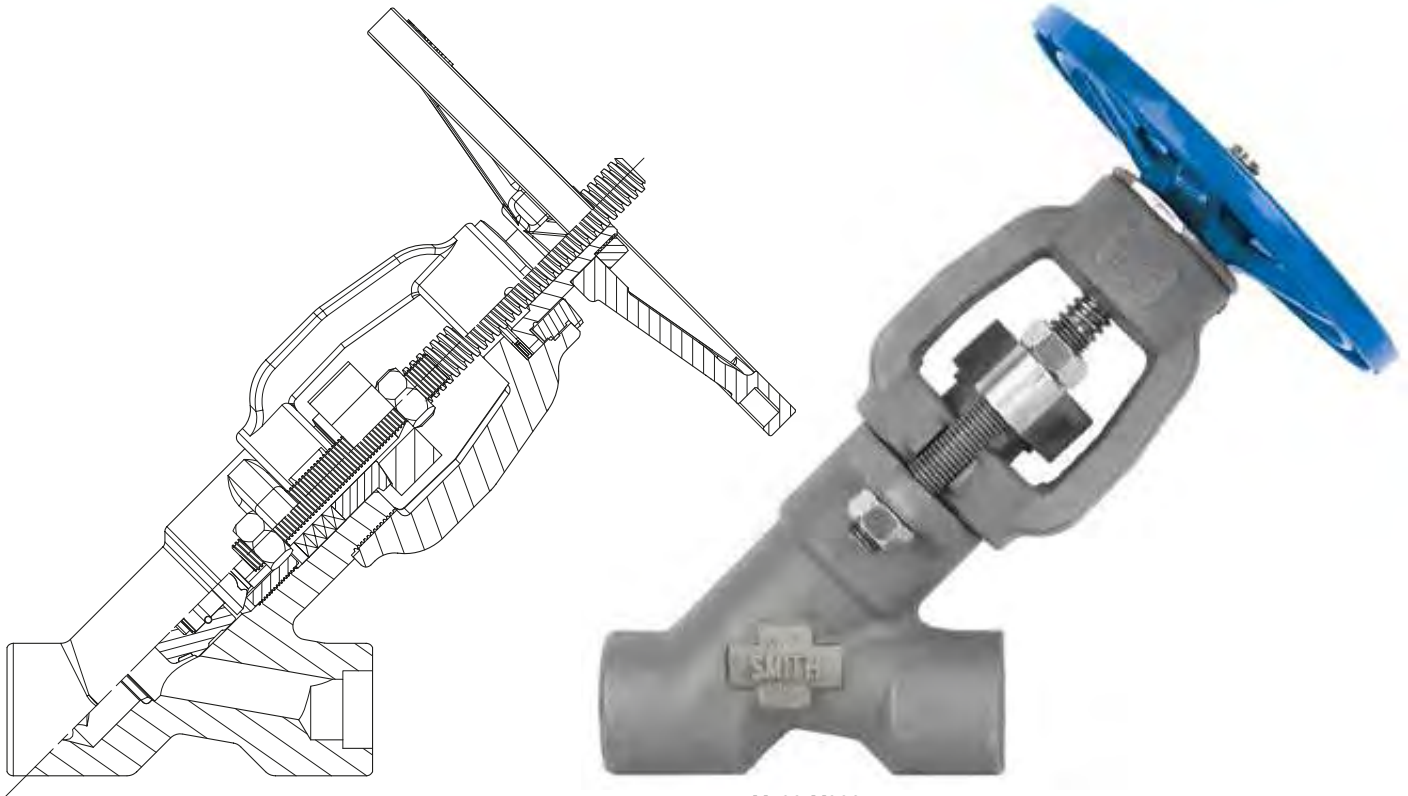




Y162-Y262 Y-Pattern Globe Valves

Forged Steel OS&Y
Valves comply with applicable portions of API 602 and ASME B16.34
Non-Rotating Stem

Class 1690/2690
1/2" - 2"



Y162-Y262

CLASS 1690 BONNETLESS Y-PATTERN GLOBE VALVE - THREADED or SOCKET WELD - INCHES (MM)

VALVE SIZE NPS (DIN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)
1/2 (15)	5.50 (140)	11.31 (287)	9.81 (249)	0.47 (12)	0.39 (10)	0.86 (22)	1/2"-14	22.1 (10.0)
3/4 (20)	5.50 (140)	11.31 (287)	9.81 (249)	0.71 (18)	0.51 (13)	1.07 (27)	3/4"-14	21.7 (9.8)
1 (25)	7.13 (181)	11.88 (302)	9.81 (249)	0.91 (23)	0.51 (13)	1.34 (34)	1"-11 1/2	27.2 (12.4)
1 1/2 (40)	8.25 (210)	17.69 (449)	15.75 (400)	1.38 (35)	0.51 (13)	1.92 (49)	1 1/2"-11 1/2	84.7 (38.4)
2 (50)	10.25 (260)	21.50 (546)	19.69 (500)	1.69 (43)	0.63 (16)	2.41 (61)	2"-11 1/2	138.1 (62.6)

CLASS 2690 BONNETLESS Y-PATTERN GLOBE VALVE - THREADED or SOCKET WELD - INCHES (MM)

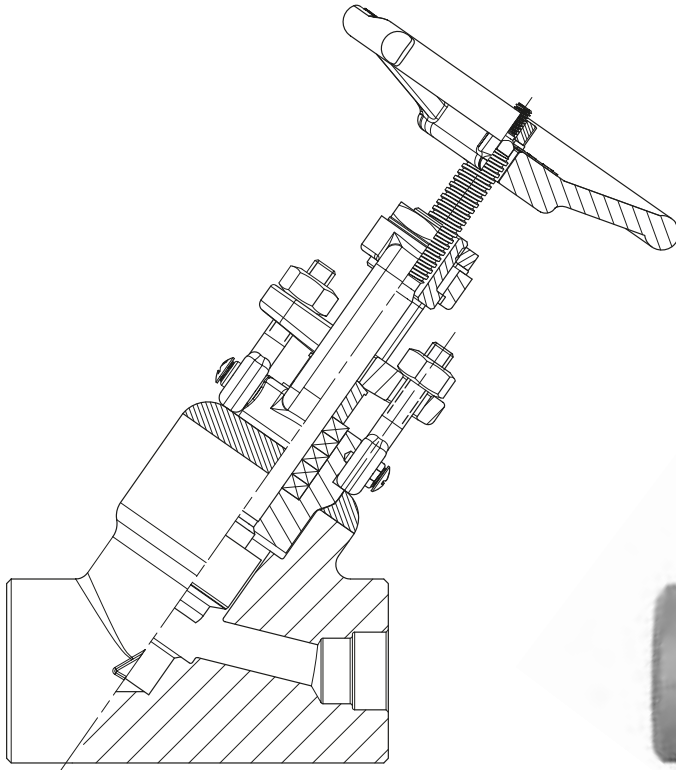
VALVE SIZE NPS (DIN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)
1/2 (15)	5.50 (140)	11.31 (287)	9.81 (249)	0.47 (12)	0.39 (10)	0.86 (22)	1/2"-14	22.1 (10.0)
3/4 (20)	5.50 (140)	11.31 (287)	9.81 (249)	0.71 (18)	0.51 (13)	1.07 (27)	3/4"-14	21.7 (9.8)
1 (25)	7.13 (181)	11.88 (302)	9.81 (249)	0.91 (23)	0.51 (13)	1.34 (34)	1"-11 1/2	27.2 (12.4)
1 1/2 (40)	8.25 (210)	17.69 (449)	15.75 (400)	1.38 (35)	0.51 (13)	1.92 (49)	1 1/2"-11 1/2	84.7 (38.4)
2 (50)	10.25 (260)	21.50 (546)	19.69 (500)	1.69 (43)	0.63 (16)	2.41 (61)	2"-11 1/2	138.1 (62.6)



Y167-Y267 Y-Pattern Globe Valves

Forged Steel OS&Y
Valves comply with applicable portions of API 602 and ASME B16.34
Rotating Stem

Class 1690/2690
1/2" - 2"



Y167-Y267

CLASS 1690 WELDED BONNET Y-PATTERN GLOBE VALVE - THREADED or SOCKET WELD - INCHES (MM)

VALVE SIZE NPS (DN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)
1/2 (15)	4.13 (105)	8.50 (216)	3.94 (100)	0.47 (12)	0.39 (10)	0.86 (22)	1/2"-14	7.7 (3.5)
3/4 (20)	4.75 (121)	10.00 (254)	5.50 (140)	0.56 (14)	0.51 (13)	1.07 (27)	3/4"-14	12.1 (5.5)
1 (25)	6.50 (165)	11.00 (279)	5.50 (140)	0.75 (19)	0.51 (13)	1.34 (34)	1"-11 1/2	24.3 (11.0)
1 1/2 (40)	7.50 (191)	14.94 (379)	6.88 (175)	1.25 (32)	0.51 (13)	1.92 (49)	1 1/2"-11 1/2	36.4 (16.5)
2 (50)	8.69 (221)	17.69 (449)	9.25 (235)	1.56 (40)	0.63 (16)	2.41 (61)	2"-11 1/2	57.3 (26.0)

CLASS 2690 WELDED BONNET Y-PATTERN GLOBE VALVE - THREADED or SOCKET WELD - INCHES (MM)

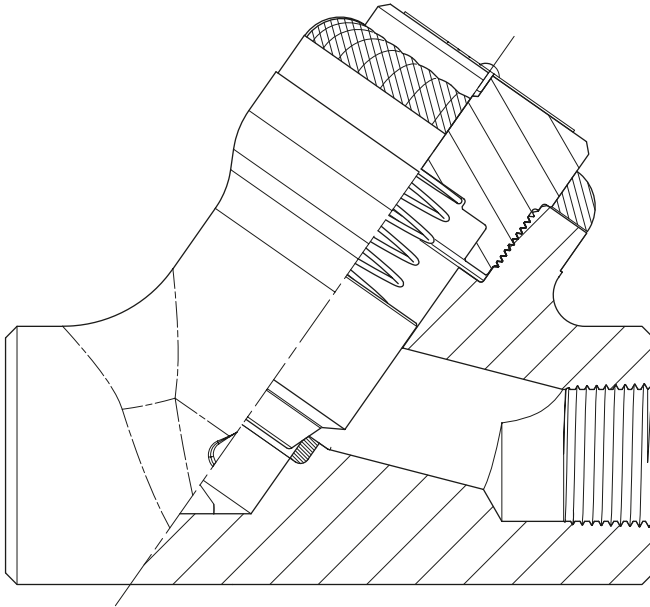
VALVE SIZE NPS (DN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)
1/2 (15)	4.75 (121)	9.44 (240)	5.50 (140)	0.44 (11)	0.39 (10)	0.86 (22)	1/2"-14	11.0 (5.0)
3/4 (20)	6.50 (165)	11.25 (286)	5.50 (140)	0.59 (15)	0.51 (13)	1.07 (27)	3/4"-14	19.8 (9.0)
1 (25)	6.50 (165)	12.19 (310)	5.50 (140)	0.75 (19)	0.51 (13)	1.34 (34)	1"-11 1/2	22.0 (10.0)
1 1/2 (40)	7.50 (191)	14.94 (379)	6.88 (175)	1.13 (29)	0.51 (13)	1.92 (49)	1 1/2"-11 1/2	35.3 (16.0)
2 (50)	8.69 (221)	18.12 (460)	9.25 (235)	1.50 (38)	0.63 (16)	2.41 (61)	2"-11 1/2	55.1 (25.0)



YC16-YC26 Y-Pattern Check Valves

Forged Steel
Valves comply with applicable portions of API 602 and ASME B16.34

Class 1690/2690
1/2" - 2"



YC16-YC26

CLASS 1690 WELDED CAP SPRING TYPE PISTON CHECK - THREADED or SOCKET WELD - INCHES (MM)

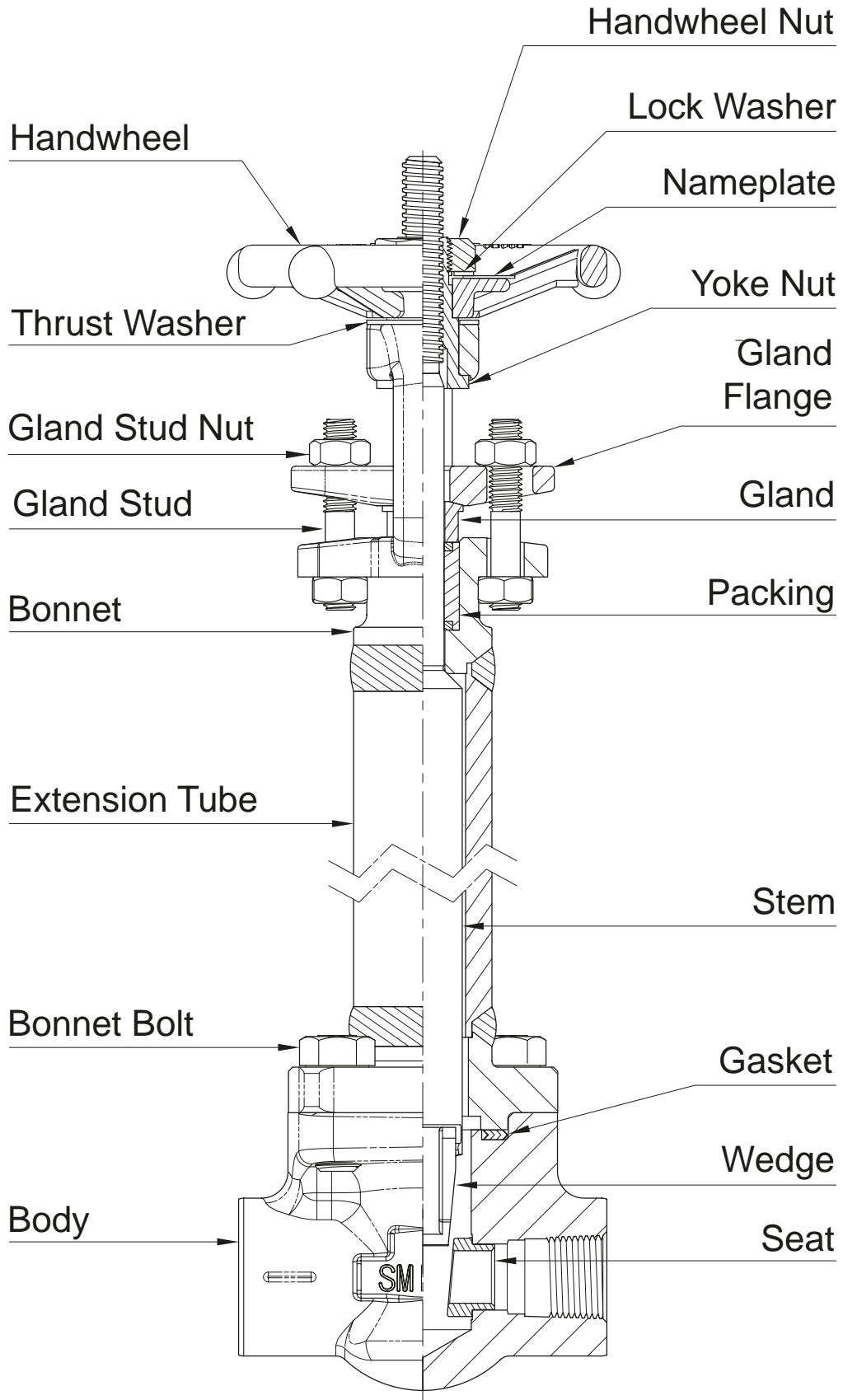
VALVE SIZE NPS (DN)	END TO END	CENTER TO TOP (OPEN)	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)
1/2 (15)	4.75 (121)	3.75 (95)	0.43 (11)	0.39 (10)	0.86 (22)	1/2"-14	8.0 (3.6)
3/4 (20)	6.50 (165)	4.50 (114)	0.57 (15)	0.51 (13)	1.07 (27)	3/4"-14	20.0 (9.1)
1 (25)	6.50 (165)	4.75 (121)	0.75 (19)	0.51 (13)	1.34 (34)	1"-11 1/2	19.4 (8.8)
1 1/2 (40)	7.50 (191)	5.69 (145)	1.10 (28)	0.51 (13)	1.92 (49)	1 1/2"-11 1/2	28.0 (12.7)
2 (50)	8.63 (219)	7.25 (184)	1.50 (38)	0.63 (16)	2.41 (61)	2"-11 1/2	51.0 (23.1)

CLASS 2690 WELDED CAP SPRING TYPE PISTON CHECK - THREADED or SOCKET WELD - INCHES (MM)

VALVE SIZE NPS (DN)	END TO END	CENTER TO TOP (OPEN)	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)
1/2 (15)	4.75 (121)	3.75 (95)	0.43 (11)	0.39 (10)	0.86 (22)	1/2"-14	8.0 (3.6)
3/4 (20)	6.50 (165)	4.50 (114)	0.57 (15)	0.51 (13)	1.07 (27)	3/4"-14	20.0 (9.1)
1 (25)	6.50 (165)	4.75 (121)	0.75 (19)	0.51 (13)	1.34 (34)	1"-11 1/2	19.4 (8.8)
1 1/2 (40)	7.50 (191)	5.69 (145)	1.10 (28)	0.51 (13)	1.92 (49)	1 1/2"-11 1/2	28.0 (12.7)
2 (50)	8.63 (219)	7.25 (184)	1.50 (38)	0.63 (16)	2.41 (61)	2"-11 1/2	51.0 (23.1)



Cryogenic Valves

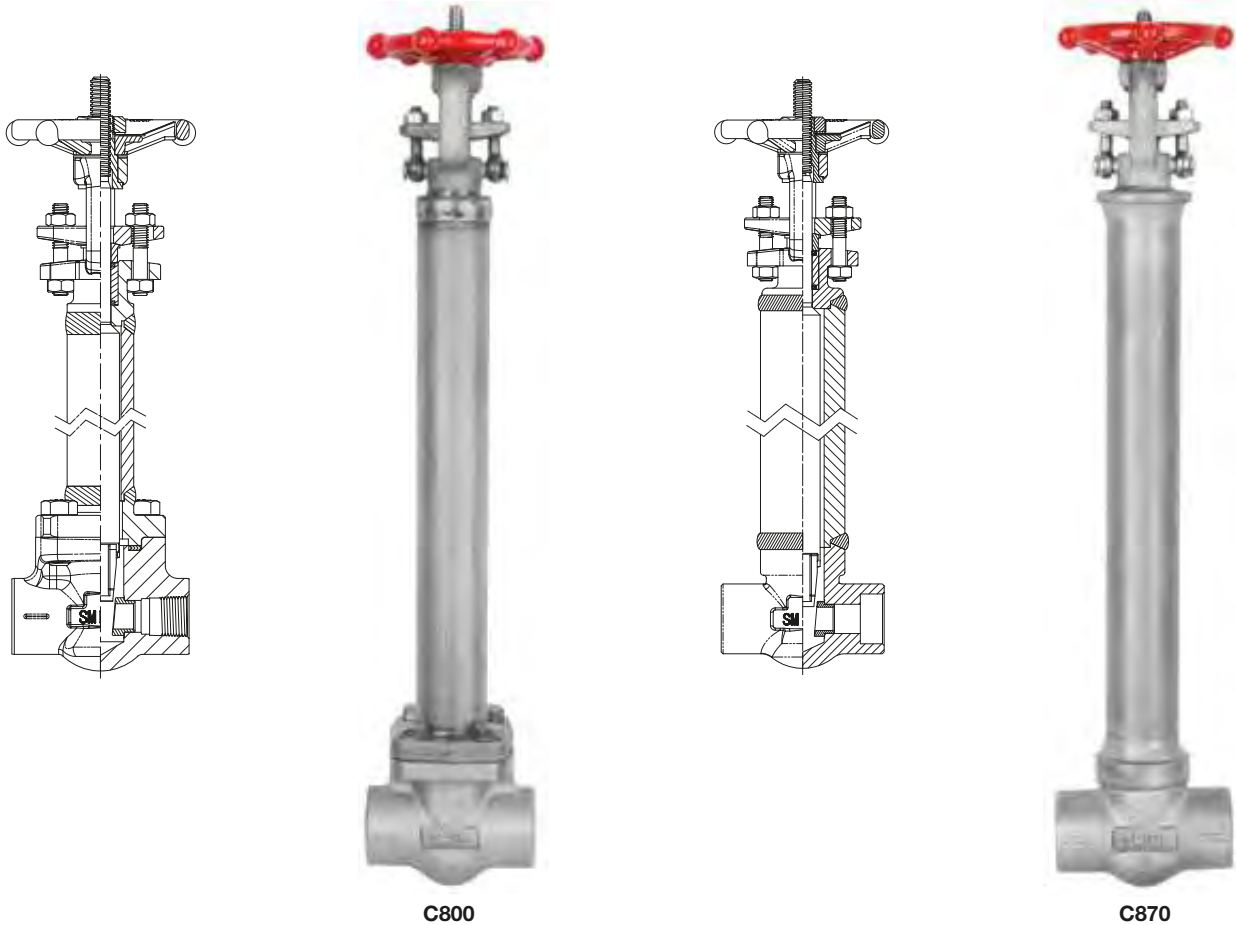




C800-C870 Cryogenic Gate Valves

Forged Steel OS&Y – Conventional Port
Valves comply with applicable portions of API 602 and ASME B16.34

Class 800
1/2" - 2"



C800

C870

CLASS 800 BOLTED BONNET CRYOGENIC GATE VALVE - THREADED or SOCKET WELD - INCHES (MM)

VALVE SIZE NPS (DN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)
1/2 (15)	3.25 (83)	18.25 (464)	4.00 (102)	0.39 (10)	0.39 (10)	0.86 (22)	1/2"-14	8.0 (3.6)
3/4 (20)	3.50 (89)	18.44 (468)	4.00 (102)	0.50 (13)	0.51 (13)	1.07 (27)	3/4"-14	8.7 (3.9)
1 (25)	3.88 (98)	19.81 (503)	4.00 (102)	0.75 (19)	0.51 (13)	1.34 (34)	1"-11 1/2	12.1 (5.5)
1 1/2 (40)	4.75 (121)	21.12 (537)	5.50 (140)	1.19 (30)	0.51 (13)	1.92 (49)	1 1/2"-11 1/2	19.3 (8.8)
2 (50)	5.50 (140)	23.00 (584)	6.63 (168)	1.50 (38)	0.63 (16)	2.41 (61)	2"-11 1/2	30.0 (13.6)

CLASS 800 WELDED BONNET CRYOGENIC GATE VALVE - THREADED or SOCKET WELD - INCHES (MM)

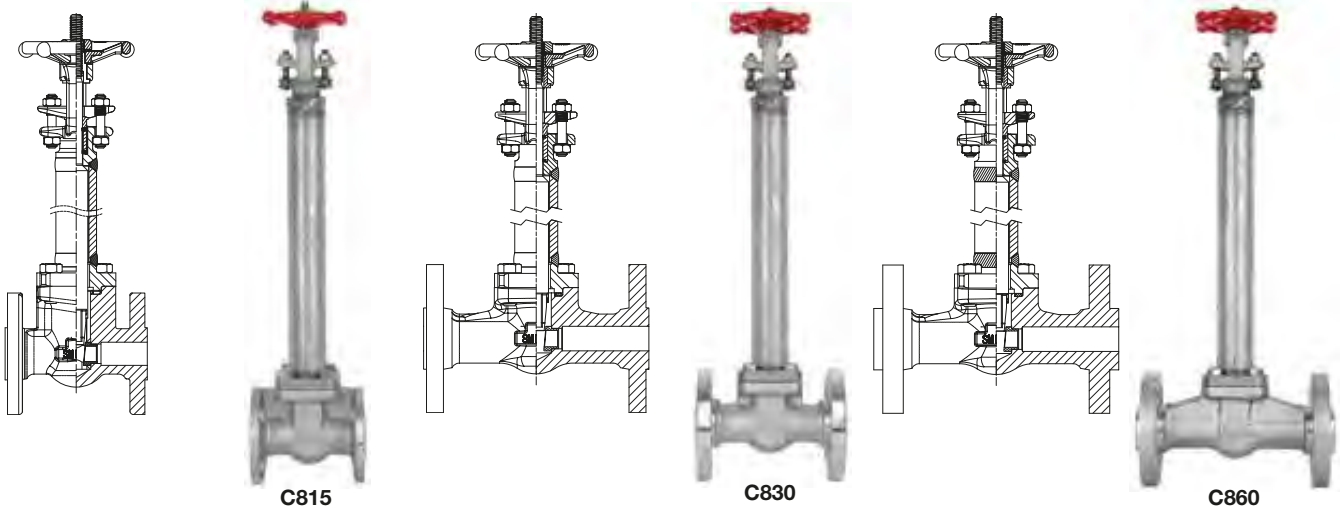
VALVE SIZE NPS (DN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)
1/2 (15)	3.25 (83)	18.25 (464)	4.00 (102)	0.39 (10)	0.39 (10)	0.86 (22)	1/2"-14	10.6 (4.8)
3/4 (20)	3.50 (89)	18.50 (470)	4.00 (102)	0.50 (13)	0.51 (13)	1.07 (27)	3/4"-14	11.8 (5.4)
1 (25)	3.88 (98)	19.19 (487)	4.00 (102)	0.75 (19)	0.51 (13)	1.34 (34)	1"-11 1/2	15.6 (7.1)
1 1/2 (40)	4.75 (121)	21.19 (538)	5.50 (140)	1.19 (30)	0.51 (13)	1.92 (49)	1 1/2"-11 1/2	22.2 (10.1)
2 (50)	5.50 (140)	23.12 (587)	6.63 (168)	1.50 (38)	0.63 (16)	2.41 (61)	2"-11 1/2	32.3 (14.7)



C815-C830-C860 Cryogenic Gate Valves

Forged Steel OS&Y – Conventional Port
Valves comply with applicable portions of API 602 and ASME B16.34

Class 150/300/600
1/2" - 2"



CLASS 150 CONVENTIONAL PORT CRYOGENIC BOLTED BONNET GATE VALVE - FLANGED ENDS - INCHES (MM)

VALVE SIZE NPS (DIN)	FACE TO FACE	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	FLANGE DIAMETER	RAISED DIAMETER	BOLT HOLE	BOLT HOLE DIAMETER	BOLT CIRCLE	APPROX. WEIGHT LBS (KG)
1/2 (15)	4.25 (108)	18.88 (479)	4.00 (102)	0.39 (10)	3.54 (90)	1.38 (35)	4	0.63 (16)	2.38 (60)	10.8 (4.9)
3/4 (20)	4.63 (118)	19.06 (484)	4.00 (102)	0.50 (13)	3.94 (100)	1.69 (43)	4	0.63 (16)	2.75 (70)	13.3 (6.0)
1 (25)	5.00 (127)	20.25 (514)	4.00 (102)	0.75 (19)	4.25 (108)	2.00 (51)	4	0.63 (16)	3.13 (79)	15.2 (6.9)
1 1/2 (40)	6.50 (165)	21.12 (537)	5.50 (140)	1.19 (30)	5.00 (127)	2.88 (73)	4	0.63 (16)	3.88 (98)	25.0 (11.3)
2 (50)	7.00 (178)	23.00 (584)	6.63 (168)	1.50 (38)	6.00 (152)	3.63 (92)	4	0.75 (19)	4.75 (121)	42.2 (19.1)

CLASS 300 CONVENTIONAL PORT CRYOGENIC BOLTED BONNET GATE VALVE - FLANGED ENDS - INCHES (MM)

VALVE SIZE NPS (DIN)	FACE TO FACE	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	FLANGE DIAMETER	RAISED DIAMETER	BOLT HOLE	BOLT HOLE DIAMETER	BOLT CIRCLE	APPROX. WEIGHT LBS (KG)
1/2 (15)	5.50 (140)	18.19 (462)	4.00 (102)	0.39 (10)	3.75 (95)	1.38 (35)	4	0.63 (16)	2.63 (67)	11.3 (5.1)
3/4 (20)	6.00 (152)	18.38 (467)	4.00 (102)	0.50 (13)	4.63 (118)	1.69 (43)	4	0.75 (19)	3.25 (83)	14.5 (6.6)
1 (25)	6.50 (165)	19.81 (503)	4.00 (102)	0.75 (19)	4.94 (125)	2.00 (51)	4	0.75 (19)	3.50 (89)	18.2 (8.3)
1 1/2 (40)	7.50 (191)	21.13 (537)	5.50 (140)	1.19 (30)	6.13 (156)	2.88 (73)	4	0.88 (22)	4.50 (114)	31.3 (14.2)
2 (50)	8.50 (216)	23.00 (584)	6.63 (168)	1.50 (38)	6.50 (165)	3.63 (92)	8	0.75 (19)	5.00 (127)	44.2 (20.1)

CLASS 600 CONVENTIONAL PORT CRYOGENIC BOLTED BONNET GATE VALVE - FLANGED ENDS - INCHES (MM)

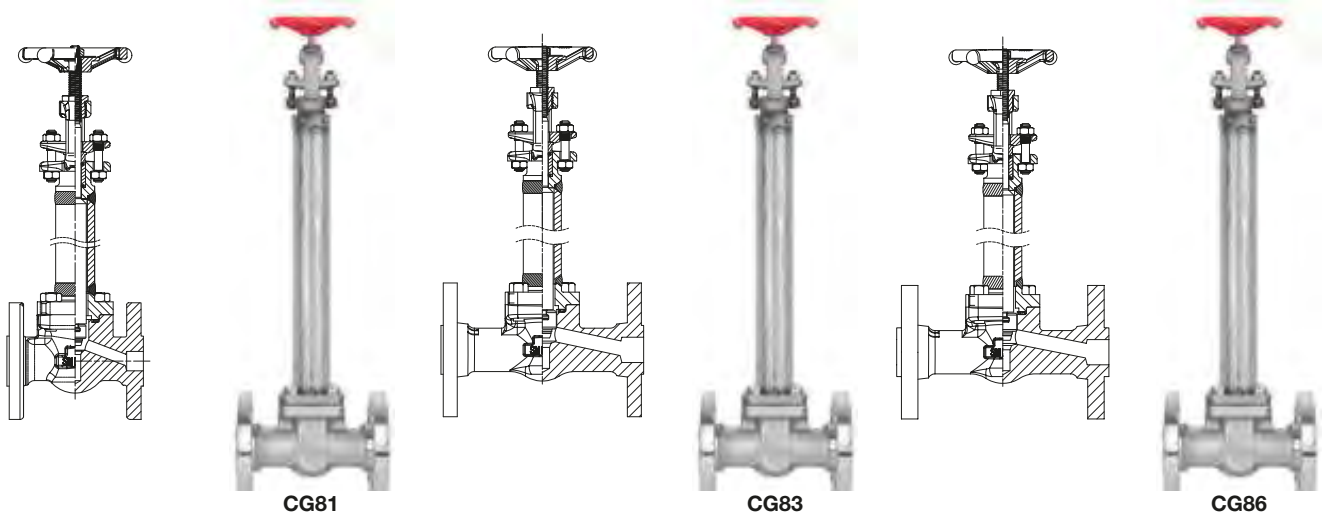
VALVE SIZE NPS (DIN)	FACE TO FACE	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	FLANGE DIAMETER	RAISED DIAMETER	BOLT HOLE	BOLT HOLE DIAMETER	BOLT CIRCLE	APPROX. WEIGHT LBS (KG)
1/2 (15)	6.50 (165)	18.19 (462)	4.00 (102)	0.39 (10)	3.75 (95)	1.38 (35)	4	0.63 (16)	2.63 (67)	11.8 (5.4)
3/4 (20)	7.50 (191)	18.38 (467)	4.00 (102)	0.50 (13)	4.63 (118)	1.69 (43)	4	0.75 (19)	3.25 (83)	16.0 (7.3)
1 (25)	8.50 (216)	19.81 (503)	4.00 (102)	0.75 (19)	4.94 (125)	2.00 (51)	4	0.75 (19)	3.50 (89)	20.5 (9.3)
1 1/2 (40)	9.50 (241)	21.12 (537)	5.50 (140)	1.19 (30)	6.13 (156)	2.88 (73)	4	0.88 (22)	4.50 (114)	37.2 (16.9)
2 (50)	11.50 (292)	23.00 (584)	6.63 (168)	1.50 (38)	6.50 (165)	3.63 (92)	8	0.75 (19)	5.00 (127)	53.9 (24.4)



CG81-CG83-CG86 Cryogenic Globe Valves

Forged Steel OS&Y
Valves comply with applicable portions of API 602 and ASME B16.34

Class 150/300/600
1/2" - 2"



CLASS 150 CRYOGENIC BOLTED BONNET GLOBE VALVE - FLANGED ENDS - INCHES (MM)

VALVE SIZE NPS (DIN)	FACE TO FACE	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	FLANGE DIAMETER	RAISED DIAMETER	BOLT HOLE	BOLT HOLE DIAMETER	BOLT CIRCLE	APPROX. WT LBS (KG)
1/2 (15)	4.25 (108)	18.31 (465)	4.00 (102)	0.38 (10)	3.54 (90)	1.38 (35)	4	0.63 (16)	2.38 (60)	10.8 (4.9)
3/4 (20)	4.63 (118)	18.50 (470)	4.00 (102)	0.50 (13)	3.94 (100)	1.69 (43)	4	0.63 (16)	2.75 (70)	13.3 (6.0)
1 (25)	5.00 (127)	18.75 (476)	4.00 (102)	0.75 (19)	4.33 (110)	2.00 (51)	4	0.63 (16)	3.13 (79)	15.2 (6.9)
1 1/2 (40)	6.50 (165)	20.13 (511)	5.50 (140)	1.19 (30)	5.00 (127)	2.88 (73)	4	0.63 (16)	3.88 (98)	25.0 (11.3)
2 (50)	8.00 (203)	21.94 (557)	6.63 (168)	1.44 (37)	6.00 (152)	3.63 (92)	4	0.75 (19)	4.75 (121)	42.2 (19.1)

CLASS 300 CRYOGENIC BOLTED BONNET GLOBE VALVE - FLANGED ENDS - INCHES (MM)

VALVE SIZE NPS (DIN)	FACE TO FACE	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	FLANGE DIAMETER	RAISED DIAMETER	BOLT HOLE	BOLT HOLE DIAMETER	BOLT CIRCLE	APPROX. WT LBS (KG)
1/2 (15)	6.00 (152)	18.31 (465)	4.00 (102)	0.38 (10)	3.75 (95)	1.38 (35)	4	0.63 (16)	2.63 (67)	11.3 (5.1)
3/4 (20)	7.00 (178)	18.50 (470)	4.00 (102)	0.50 (13)	4.63 (118)	1.69 (43)	4	0.75 (19)	3.25 (83)	14.5 (6.6)
1 (25)	8.00 (203)	19.13 (486)	4.00 (102)	0.75 (19)	4.94 (125)	2.00 (51)	4	0.75 (19)	3.50 (89)	18.2 (8.3)
1 1/2 (40)	9.02 (229)	21.00 (533)	4.63 (118)	1.19 (30)	6.13 (156)	2.88 (73)	4	0.88 (22)	4.50 (114)	31.3 (14.2)
2 (50)	10.51 (267)	22.63 (575)	6.63 (168)	1.44 (37)	6.50 (165)	3.63 (92)	8	0.75 (19)	5.00 (127)	44.2 (20.1)

CLASS 600 CRYOGENIC BOLTED BONNET GLOBE VALVE - FLANGED ENDS - INCHES (MM)

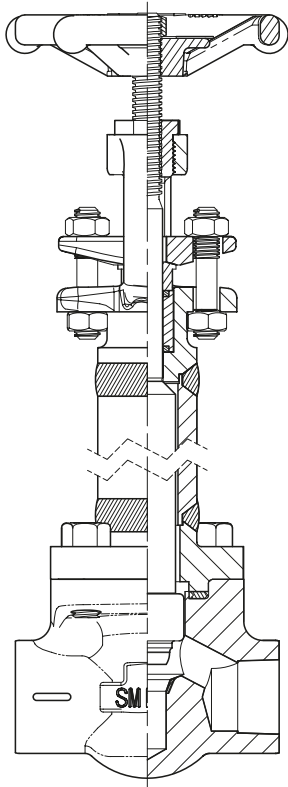
VALVE SIZE NPS (DIN)	FACE TO FACE	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	FLANGE DIAMETER	RAISED DIAMETER	BOLT HOLE	BOLT HOLE DIAMETER	BOLT CIRCLE	APPROX. WT LBS (KG)
1/2 (15)	6.50 (165)	18.19 (462)	4.00 (102)	0.39 (10)	3.75 (95)	1.38 (35)	4	0.63 (16)	2.63 (67)	11.8 (5.4)
3/4 (20)	7.50 (191)	18.38 (467)	4.00 (102)	0.50 (13)	4.63 (118)	1.69 (43)	4	0.75 (19)	3.25 (83)	16.0 (7.3)
1 (25)	8.50 (216)	19.81 (503)	4.00 (102)	0.75 (19)	4.94 (125)	2.00 (51)	4	0.75 (19)	3.50 (89)	20.5 (9.3)
1 1/2 (40)	9.50 (241)	21.13 (537)	5.50 (140)	1.19 (30)	6.13 (156)	2.88 (73)	4	0.88 (22)	4.50 (114)	37.2 (16.9)
2 (50)	11.50 (292)	23.00 (584)	6.63 (168)	1.44 (37)	6.50 (165)	3.63 (92)	8	0.75 (19)	5.00 (127)	53.9 (24.4)



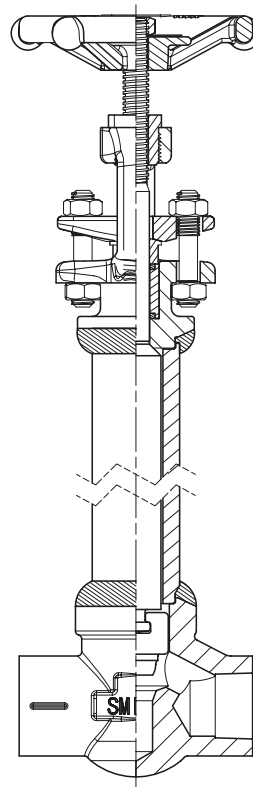
CG80-CG87 Cryogenic Globe Valves

Forged Steel OS&Y
Valves comply with applicable portions of API 602 and ASME B16.34

Class 800
1/2" - 2"



CG80



CG87

CLASS 800 BOLTED BONNET CRYOGENIC GLOBE VALVE - THREADED or SOCKET WELD - INCHES (MM)

VALVE SIZE NPS (DIN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX.WEIGHT LBS (KG)
1/2 (15)	3.25 (83)	18.31 (465)	4.00 (102)	0.38 (10)	0.39 (10)	0.86 (22)	1/2"-14	8.0 (3.6)
3/4 (20)	3.50 (89)	18.50 (470)	4.00 (102)	0.50 (13)	0.51 (13)	1.07 (27)	3/4"-14	8.9 (4.0)
1 (25)	4.50 (114)	18.75 (476)	4.00 (102)	0.75 (19)	0.51 (13)	1.34 (34)	1"-11 1/2	12.1 (5.5)
1 1/2 (40)	6.25 (159)	20.13 (511)	5.50 (140)	1.19 (30)	0.51 (13)	1.92 (49)	1 1/2"-11 1/2	19.5 (8.8)
2 (50)	7.25 (184)	21.94 (557)	6.63 (168)	1.44 (37)	0.63 (16)	2.41 (61)	2"-11 1/2	32.0 (14.5)

CLASS 800 WELDED BONNET CRYOGENIC GLOBE VALVE - THREADED or SOCKET WELD - INCHES (MM)

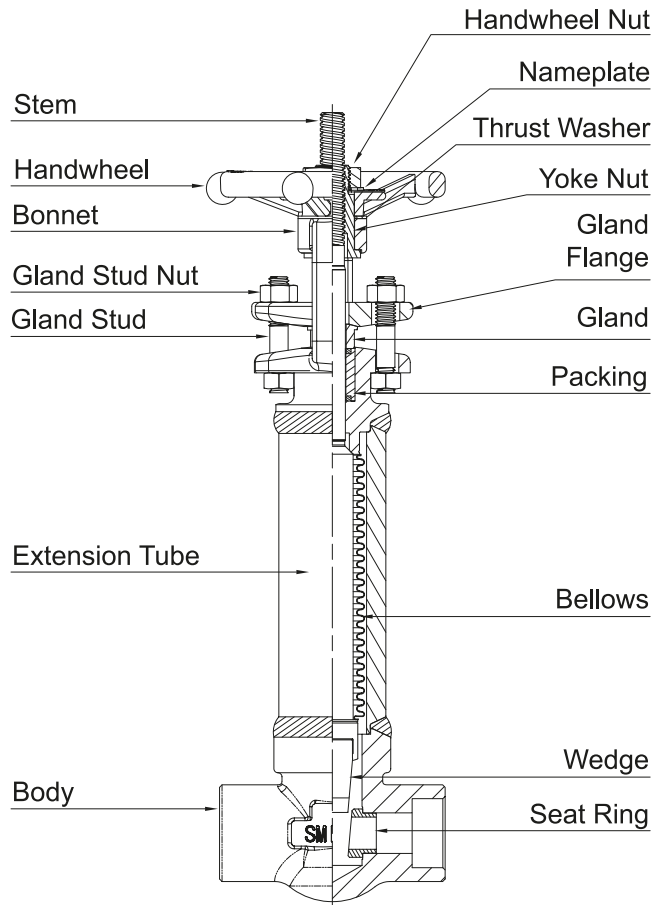
VALVE SIZE NPS (DIN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX.WEIGHT LBS (KG)
1/2 (15)	3.25 (83)	18.38 (467)	4.00 (102)	0.38 (10)	0.39 (10)	0.86 (22)	1/2"-14	10.9 (4.9)
3/4 (20)	3.50 (89)	18.56 (472)	4.00 (102)	0.50 (13)	0.51 (13)	1.07 (27)	3/4"-14	12.6 (5.7)
1 (25)	4.50 (114)	18.81 (478)	4.00 (102)	0.75 (19)	0.51 (13)	1.34 (34)	1"-11 1/2	16.4 (7.4)
1 1/2 (40)	6.25 (159)	20.06 (510)	5.50 (140)	1.19 (30)	0.51 (13)	1.92 (49)	1 1/2"-11 1/2	24.2 (11.0)
2 (50)	7.25 (184)	22.12 (562)	6.63 (168)	1.44 (37)	0.63 (16)	2.41 (61)	2"-11 1/2	38.3 (17.4)



B870 Bellows Seal Gate Valves

Forged Steel OS&Y – Conventional Port
Valves comply with applicable portions of **API 602** and **ASME B16.34**

Class 800
1/2" - 2"



B870

CLASS 800 CONVENTIONAL PORT WELDED BONNET BELLOWS GATE - THREADED or SOCKET WELD - INCHES (MM)

VALVE SIZE NPS (DN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)
1/2 (15)	3.25 (83)	10.38 (264)	4.00 (102)	0.39 (10)	0.39 (10)	0.86 (22)	1/2"-14	8.1 (3.7)
3/4 (20)	3.50 (89)	10.24 (260)	4.00 (102)	0.50 (13)	0.51 (13)	1.07 (27)	3/4"-14	8.8 (4.0)
1 (25)	3.88 (98)	11.97 (304)	4.00 (102)	0.75 (19)	0.51 (13)	1.34 (34)	1"-11 1/2	12.0 (5.4)
1 1/2 (40)	4.75 (121)	15.04 (382)	5.50 (140)	1.19 (30)	0.51 (13)	1.92 (49)	1 1/2"-11 1/2	18.3 (8.3)
2 (50)	5.50 (140)	18.75 (476)	6.63 (168)	1.50 (38)	0.63 (16)	2.41 (61)	2"-11 1/2	29.2 (13.2)



Flow Coefficient

NPS	DN	Conventional Port Gate	Full Port Gate	Globe	Piston Check	Ball Check	Swing Check
1/4	8	1.7	1.7	1	0.9	0.8	---
3/8	10	4.2	5.7	1.2	1	0.9	---
1/2	15	5.7	8.2	1.5	1.3	1.2	11
3/4	20	8.2	22	2.4	2.1	1.9	17.6
1	25	26	34	5.6	5	4.4	31.4
1 1/4	32	37	60	15	---	---	---
1 1/2	40	60	92	21	12.6	10.5	57.6
2	50	92	200	29	17.4	14.5	80.1
3	80	200	---	---	---	---	---

Cv - Flow Coefficient = Index of Flow Capacity equivalent to the gallons per minute of water at standard temperature (60°F = 16°C) which will flow through a valve or fitting at a pressure differential across the valve of 1 psi.

FLOW COEFFICIENT, FLOW RATE, PRESSURE DROP EQUATIONS

TYPE OF FLUID	Cv	Flow Rate	Pressure Drop
INCOMPRESSIBLE	$C_v = Q \cdot \sqrt{\frac{G_f}{DP}}$	$Q = C_v \cdot \sqrt{\frac{DP}{G_f}}$	$DP = G_f \cdot \left(\frac{Q}{C_v}\right)^2$
COMPRESSIBLE	$C_v = \frac{q}{1,360 \cdot Y} \cdot \sqrt{\frac{T_1 \cdot G_g}{DP \cdot P_1}}$	$q = 1,360 \cdot Y \cdot C_v \cdot \sqrt{\frac{DP \cdot P_1}{T_1 \cdot G_g}}$	$DP = \frac{T_1 \cdot G_g}{P_1} \cdot \left(\frac{q}{1,360 \cdot C_v \cdot Y}\right)^2$

NOMENCLATURE

- Cv = Valve flow coefficient, dimensionless**
- Q = Volumetric flow rate, gpm**
- q = Volumetric flow rate, scfh**
- Gf = Liquid specific gravity at upstream conditions [ratio of density of liquid at flowing temperature to density of water at 15.6°C (60°F)], dimensionless**
- Gg = Gas specific gravity (ratio of flowing gas to density of air with both at standard conditions, which is equal to the ratio of the molecular weight of gas to the molecular weight of air), dimensionless**
- DP = Pressure differential, psi**
- T1 = Absolute upstream temperatures (in °R)**
- P1 = Upstream absolute static pressure, psia**
- P2 = Downstream absolute static pressure, psia**
- Y = Expansion factor, ratio of flow coefficient for a gas to that for a liquid at the same Reynolds Number, dimensionless**
(Y = 0.667 when P2 <= 0.5 times P1 for choked or critical flow, Y = 1.000 when P2 > 0.5 times P1 for very low pressure differential)

Disclaimer

The above sizing equations are provided as courtesy and are derived from ISA-75.01 and ISA-75.02. They have been simplified to include a piping geometry factor of 1.0. Refer back to ISA-75 in case actual application differ from the assumptions taken in the herein.



GATE VALVES

Item	Description	Carbon Steel API Trim 8	Carbon Steel API Trim 12	Alloy Steel API Trim 8	Stainless Steel API Trim 12
1	Body	A105	A105	A182 F9	A182 F316
2	Bonnet	A105	A105	A182 F9	A182 F316
3	Seat	A276 410+HF	A276 316+HF	A276 410+HF	A276 316+HF
4	Wedge	A743 CA40	A351 CF8M	A743 CA40	A351 CF8M
5	Stem	A276 410	A276 316	A276 410	A276 316
6	Gasket	316/Graphite	316/Graphite	Inconel 600/Graphite	316/Graphite
7	Bonnet Bolts	A193 B7	A193 B7	A193 B16	A193 B8M-CI. 2/B8MA-CI. 1A
8	Packing	Grafoil/Braided End Ring	Grafoil/Braided End Ring	Grafoil/Braided End Ring	Grafoil/Braided End Ring
9	Gland	B783 F-0008-30	B783 F-0008-30	B783 F-0008-30	B783 SS-316N2-33
10	Gland Flange	A105	A105	A105	A182 F316
11	Gland Stud	A193 B7	A193 B7	A193 B7H	A193 B8
12	Gland Nut	A194 2H	A194 2H	A194 2H	A194 8
14	Yoke Nut	A582 416	A582 416	A582 416	A582 416
15	Thrust Washer	A276 410	A276 410	A276 410	A276 410
16	Handwheel	Malleable Iron	Malleable Iron	Malleable Iron	Malleable Iron
17	Nameplate	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
18	Lock Washer	Steel	Steel	Steel	Steel
19	Handwheel Nut	Steel	Steel	Steel	Steel
20	Packing Ring	Steel	Steel	Steel	Steel

GLOBE VALVES

Item	Description	Carbon Steel API Trim 8	Carbon Steel API Trim 12	Alloy Steel API Trim 8	Stainless Steel API Trim 12
1	Body	A105	A105	A182 F9	A182 F316
2	Bonnet	A105	A105	A182 F9	A182 F316
3	Seat	Int. + HF	Int. + HF	Int. + HF	Int. + HF
4	Disc	A743 CA40	A351 CF8M	A743 CA40	A351 CF8M
5	Stem	A276 410	A276 316	A276 410	A276 316
6	Gasket	316/Graphite	316/Graphite	Inconel 600/Graphite	316/Graphite
7	Bonnet Bolts	A193 B7	A193 B7	A193 B7	A193 B8M-CI. 2/B8MA-CI. 1A
8	Packing	Grafoil/Braided End Ring	Grafoil/Braided End Ring	Grafoil/Braided End Ring	Grafoil/Braided End Ring
9	Gland	B783 F-0008-30	B783 F-0008-30	B783 F-0008-30	B783 SS-316N2-33
10	Gland Flange	A105	A105	A105	A182 F316
11	Gland Stud	A193 B7	A193 B7	A193 B16	A193 B8
12	Gland Nut	A194 2H	A194 2H	A194 2H	A194 8
14	Yoke Nut	A582 416	A582 416	A582 416	A582 416
16	Handwheel	Malleable Iron	Malleable Iron	Malleable Iron	Malleable Iron
17	Nameplate	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
19	Handwheel Nut	Steel	Steel	Steel	Steel

PISTON CHECK

Item	Description	Carbon Steel API Trim 8	Carbon Steel API Trim 12	Alloy Steel API Trim 8	Stainless Steel API Trim 12
1	Body	A105	A105	A182 F9	A182 F316
2	Cap	A105	A105	A182 F9	A182 F316
3	Seat	Int. + HF	Int. + HF	Int. + HF	Int. + HF
4	Piston	A276 420	A276 316	A276 420	A276 316
6	Gasket	316/Graphite	316/Graphite	Inconel 600/Graphite	316/Graphite
7	Cap Bolts	A193 B7	A193 B7	A193 B7	A193 B8M-CI. 2/B8MA-CI. 1A
17	Nameplate	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
23	Drive Screws	Steel	Steel	Steel	Steel



SPRING PISTON CHECK

Item	Description	Carbon Steel API Trim 8	Carbon Steel API Trim 12	Alloy Steel API Trim 8	Stainless Steel API Trim 12
1	Body	A105	A105	A182 F9	A182 F316
2	Cap	A105	A105	A182 F9	A182 F316
3	Seat	Int. + HF	Int. + HF	Int. + HF	Int. + HF
4	Piston	A276 420	A276 316	A276 420	A276 316
6	Gasket	316/Graphite	316/Graphite	Inconel 600/Graphite	316/Graphite
7	Cap Bolts	A193 B7	A193 B7	A193 B16	A193 B8M-CI. 2/B8MA-CI. 1A
17	Nameplate	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
22	Spring	AISI 302	AISI 316	AISI 302	AISI 316
23	Drive Screws	Steel	Steel	Steel	Steel

BALL CHECK

Item	Description	Carbon Steel API Trim 8	Carbon Steel API Trim 12	Alloy Steel API Trim 8	Stainless Steel API Trim 12
1	Body	A105	A105	A182 F9	A182 F316
2	Cap	A105	A105	A182 F9	A182 F316
3	Seat	Int. + HF	Int. + HF	Int. + HF	Int. + HF
4	Ball	A276 440C	A276 316	A276 440C	A276 316
6	Gasket	316/Graphite	316/Graphite	Inconel 600/Graphite	316/Graphite
7	Cap Bolts	A193 B7	A193 B7	A193 B16	A193 B8M-CI. 2/B8MA-CI. 1A
17	Nameplate	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
21	Cage	AISI 302	AISI 316	AISI 302	AISI 316
23	Drive Screws	Steel	Steel	Steel	Steel

SPRING BALL CHECK

Item	Description	Carbon Steel API Trim 8	Carbon Steel API Trim 12	Alloy Steel API Trim 8	Stainless Steel API Trim 12
1	Body	A105	A105	A182 F9	A182 F316
2	Cap	A105	A105	A182 F9	A182 F316
3	Seat	Int. + HF	Int. + HF	Int. + HF	Int. + HF
4	Ball	A276 440C	A276 316	A276 440C	A276 316
6	Gasket	316/Graphite	316/Graphite	Inconel 600/Graphite	316/Graphite
7	Cap Bolts	A193 B7	A193 B7	A193 B16	A193 B8M-CI. 2/B8MA-CI. 1A
17	Nameplate	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
21	Cage	AISI 302	AISI 316	AISI 302	AISI 316
22	Spring	AISI 302	AISI 316	AISI 302	AISI 316
23	Drive Screws	Steel	Steel	Steel	Steel

This is not a complete list. Construction materials will vary between sizes and pressure classes and may be changed without notice.

On occasion B7M bolting may be substituted for B7 bolting.

This list is to be used for general purposes only.

For a complete, accurate and itemized description of a particular valve, contact a Smith sales representative.





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CAT.2009, REV JUNE 2017