

SMITH Forged Steel Valves

A Reputation Forged Over A Solid Half Century





SMITH was founded by James Dewolf Smith in 1956 to produce forged gate, globe and check valves for use primarily in the petrochemical industry. By the mid-1970s, the company had become one of the industry's largest producers of industrial gate, globe, check, and ball valves under the 2.5" size. Soon thereafter, exotic stainless and alloy components were added to the product line.

In March of 2000, The Newdell Company bought SMITH and moved production to Italy but six years later operations returned to the United States in Houston, Texas.

In 2011, ERIKS acquired The Newdell Company as part of its strategy to build a comprehensive platform for flow technology in North America. CNC Flow Control was created in 2017 as part of this initiative and SMITH became a product brand under the CNC Flow Control group. Today, SMITH continues its customer-driven focus as a globally approved brand with a proven track record of excellence in quality and service.

"A reputation for quality and service that has been forged over a solid half-century."



Founded in 2017, CNC Flow Control is new only in name. Headquartered in Houston, this single business entity was forged from the unions of The Newdell Company and C&C Industries. Today, CNC Flow Control offers the same trusted brands with an expanded inhouse engineering department and knowledgeable sales staff. From extended long range products to quick delivery of commodity valves, our experienced and diverse team is dedicated to ensuring the best solutions and superior service.



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 FG8022

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 VALVES32, 33

Class 1690/2690

Y-Pattern YC16/YC2637

CRYOGENIC VALVES38-42

BELLOWS SEAL43

TECHNICAL44-47

SMITH Valve Figure Number System

Valve Material Option Codes

(PREFIX) **+** STYLE CODE **+** MATERIAL SELECTION PER TABLE BELOW **+** VALVE SIZE **+** SCHEDULE CODE **+** 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	END CONNECTIONS	BELLOWS
A	A182-F51	10	316	316	316	A	A	A	A	A
B	A182-F347	11	MONEL	MONEL	HF	B	B	B	B	B
C	A182-F5	9	MONEL K500	MONEL	MONEL	C	C	C	C	C
D	A182-F316H	9	MONEL NACE	MONEL NACE	MONEL NACE	D	D	D	D	D
E	B564-N10276	9	MONEL NACE	MONEL NACE	HF	E	E	E	E	E
F	B462-N08020	13	INCONEL 625	HF	HF	F	F	F	F	F
G	A182-F9	13	ALLOY 20	ALLOY 20	ALLOY 20	G	G	G	G	G
H	A182-F321	13	317L	317L	HF	H	H	H	H	H
I	A182-F347H	13	347H	347H	HF	I	I	I	I	I
J	A182-F316DC	13	316H	316H	HF	J	J	J	J	J
K	A182-F11, CL.2	13	410 NACE	420 NACE	HF	K	K	K	K	K
L	A182-F317DC	13	321	HF	HF	L	L	L	L	L
M	B564-N06625	13	316H	HF	HF	M	M	M	M	M
N	A182-F22, CL.3	13	304L	304L	HF	N	N	N	N	N
O	A105 ²	8	410	420	HF	O	O	O	O	O
P	A182-F91	18	INCOLOY 825	HF	HF	P	P	P	P	P
Q	B564-N04400	18	ALLOY 20	HF	HF	Q	Q	Q	Q	Q
R	A182-F304DC	12	F51	F51	HF	R	R	R	R	R
S	A105 ²	5	316	316	HF	S	S	S	S	S
T	A350-LF2, CL.1 ³	5	410	HF	HF	T	T	T	T	T
U	A350-LF2, CL.1 ³	5	F53	HF	HF	U	U	U	U	U
V	A182-F304H	16	304H	304H	HF	V	V	V	V	V
W	B564-N08825	16	316	HF	HF	W	W	W	W	W
X	A182-F53	16	HAST - C276	HAST - C276	HAST - C276	X	X	X	X	X
Y	A105 ²	16	304H	HF	HF	Y	Y	Y	Y	Y
Z	***	16	***	***	HF	Z	Z	Z	Z	Z

*** For materials not listed above: Smith offers all materials of construction listed in Table 1 of the latest edition of 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 packing, EDC 011 for spring, EDC 019 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 A350-LF2, Cl. 1 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 2014/68/EU.
- 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



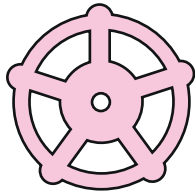
ORANGE
ASTM A350 LF2
Low Temp.



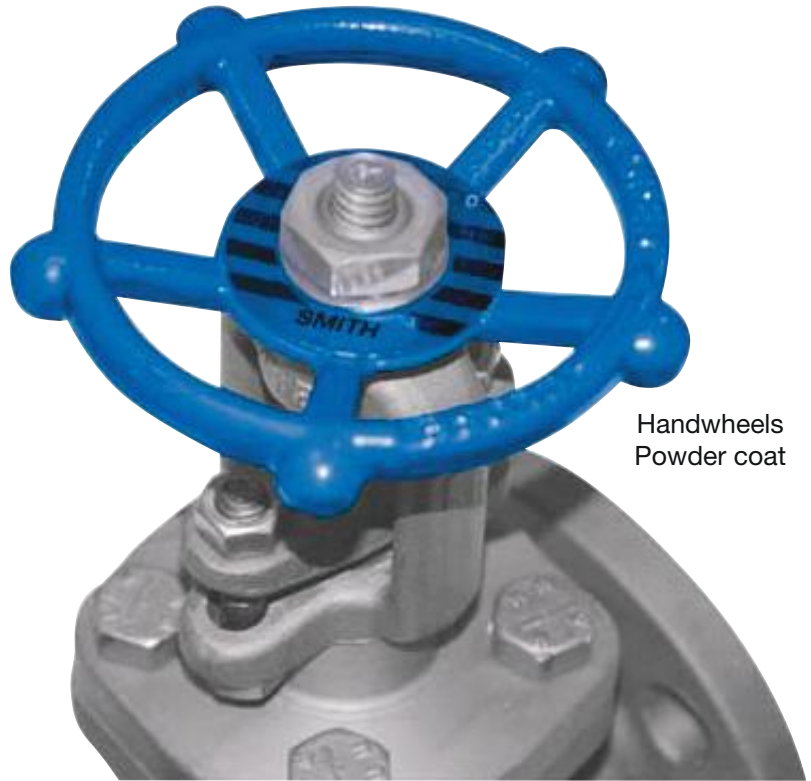
RED
Teflon Packing
Gaskets or Seals
500°F/250°C
Max Temp.



PURPLE
MONEL



PINK
F20 (ALLOY 20)



Handwheels
Powder coat

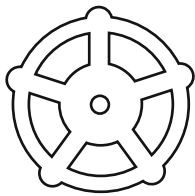
Nameplate color indicates Trim Material
(Gate, Globe and Check)



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



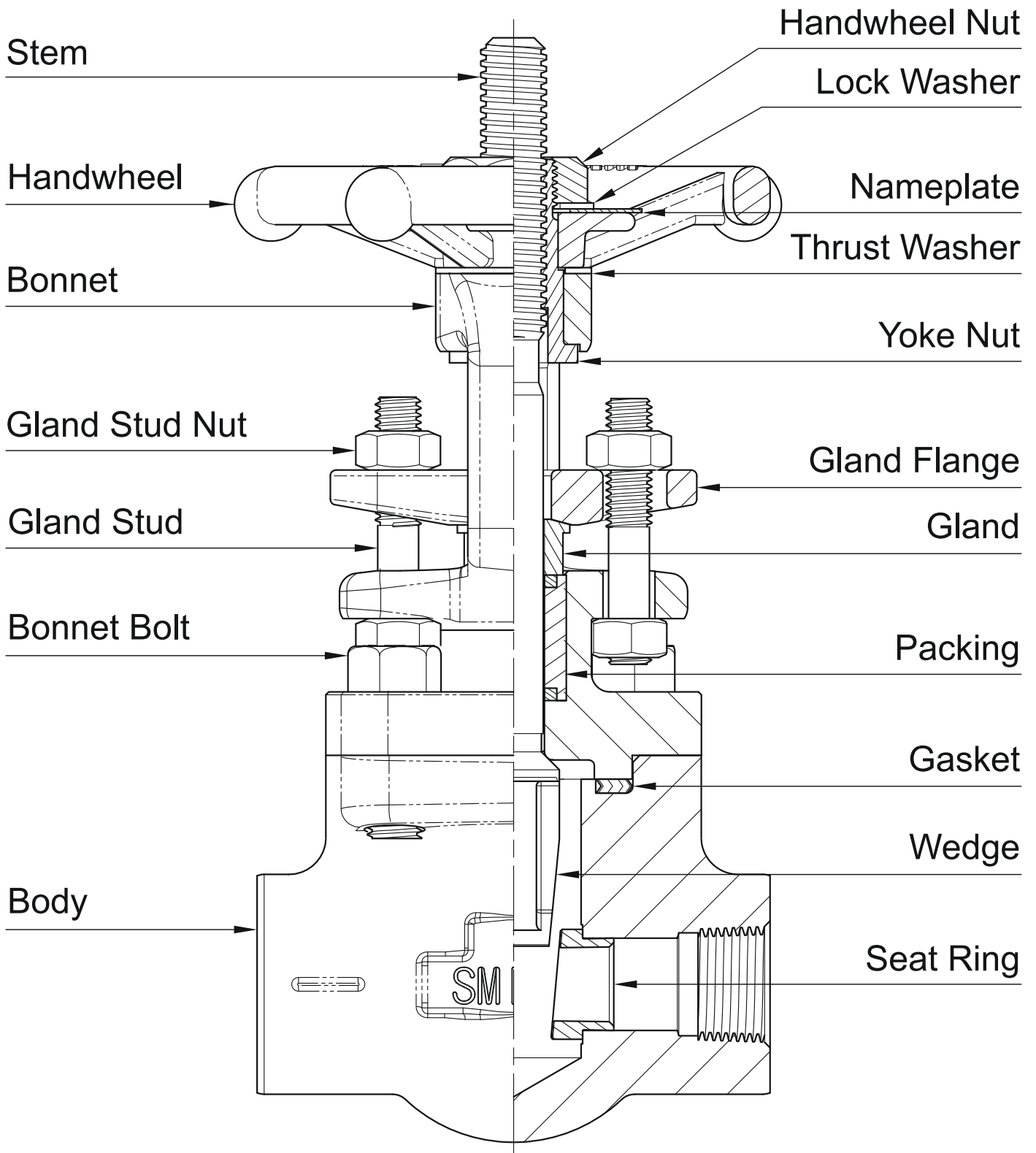
BROWN
ASTM A182 F22
2 1/2 Cr, 1 Mo

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



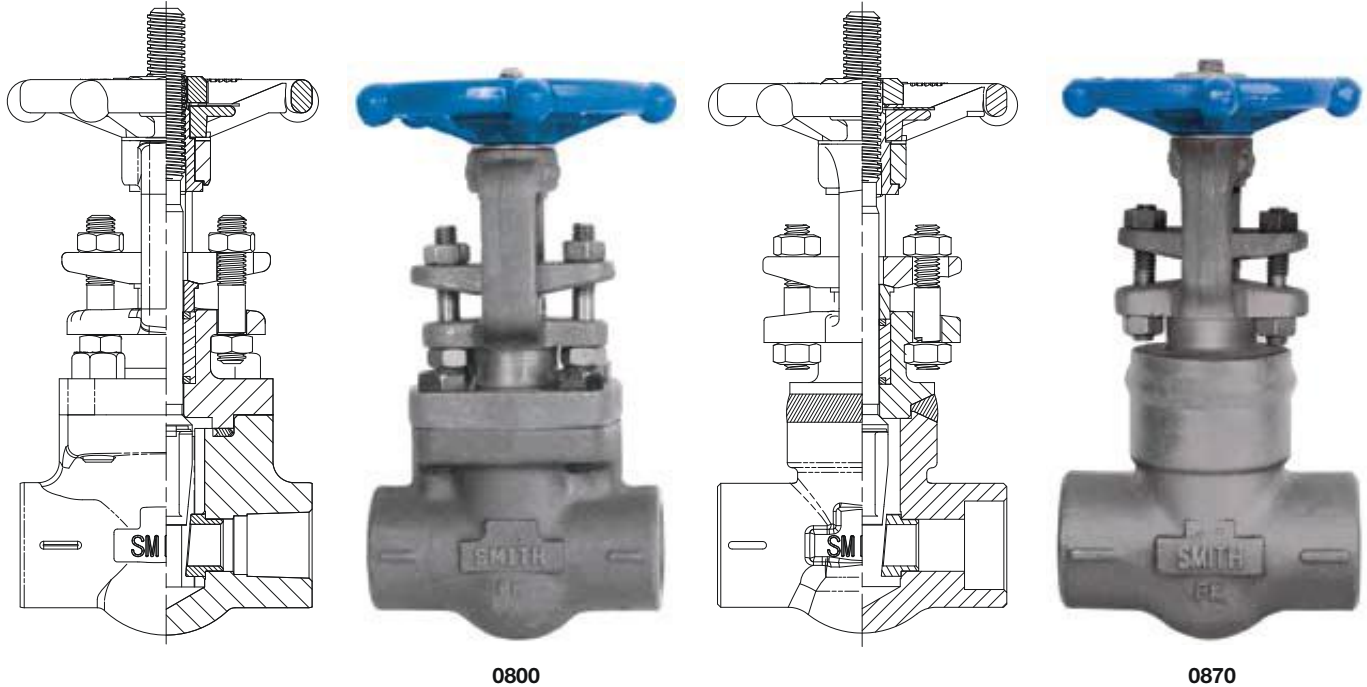
Gate Valves





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

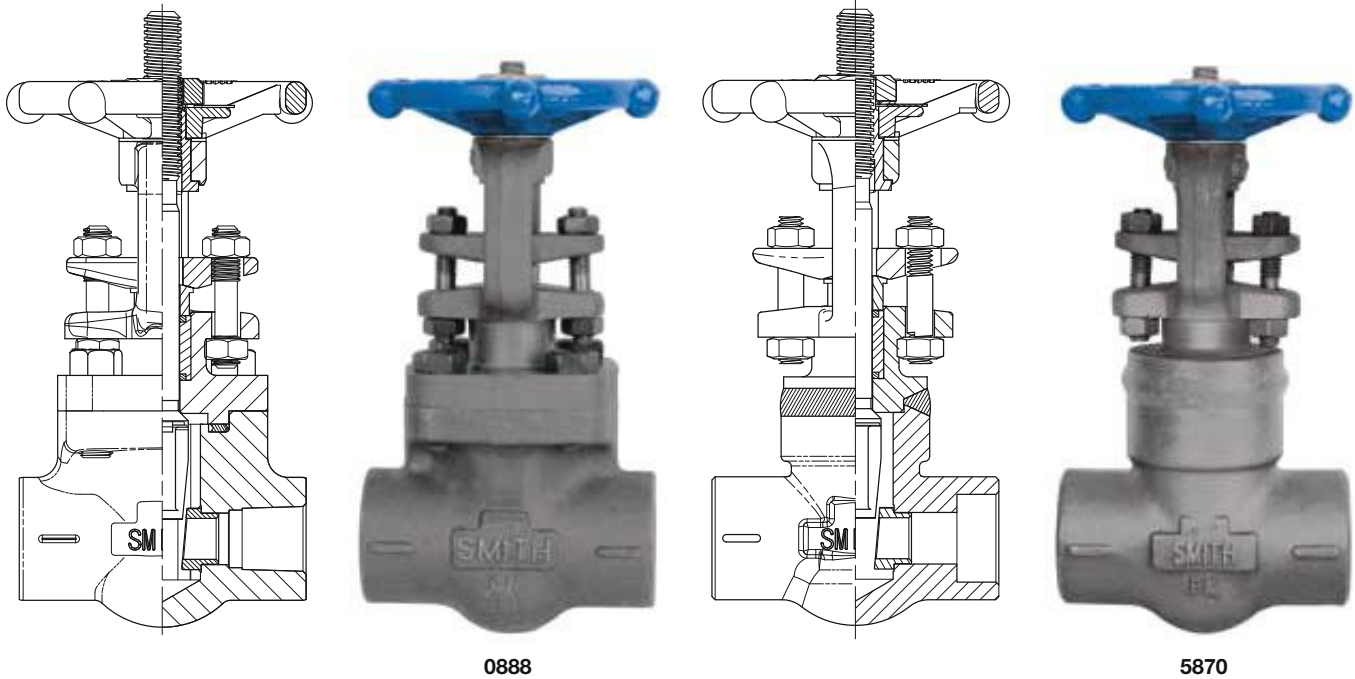
CLASS 800 CONVENTIONAL PORT BOLTED BONNET GATE VALVE - THREADED or SOCKET WELD - INCHES (MM)								
VALVE SIZE NPS (DIN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)
1/4 (8)	3.25 (83)	6.31 (160)	4.00 (102)	0.31 (8)	0.39 (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)



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

Class 800
1/4" - 2"



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)

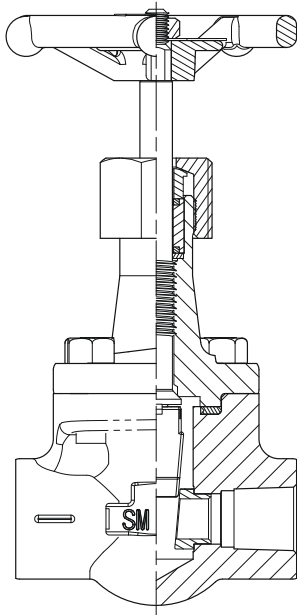
VALVE SIZE NPS (DIN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)
1/4 (8)	3.25 (83)	6.25 (159)	4.00 (102)	0.31 (8)	0.39 (10)	0.56 (14)	1/4"-18	3.3 (1.5)
3/8 (10)	3.25 (83)	6.25 (159)	4.00 (102)	0.39 (10)	0.39 (10)	0.69 (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)



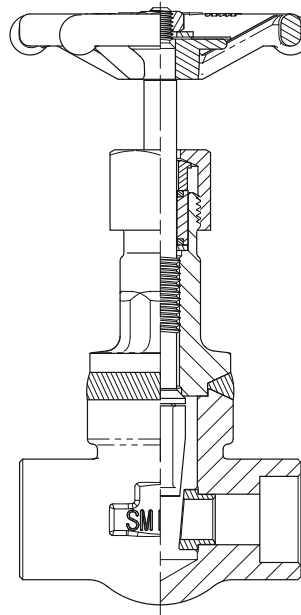
0850-0890 Gate Valves

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)

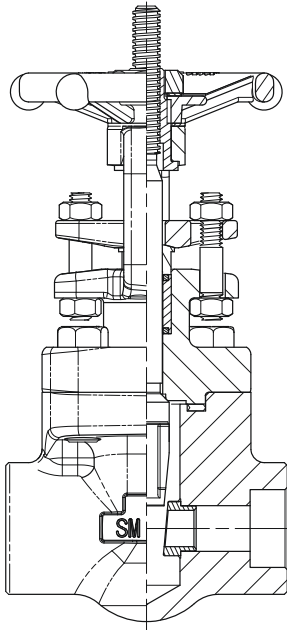
VALVE SIZE NPS (DN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)
1/4 (8)	3.25 (83)	6.13 (156)	4.00 (102)	0.31 (8)	0.39 (10)	0.56 (14)	1/4"-18	3.3 (1.5)
3/8 (10)	3.25 (83)	6.13 (156)	4.00 (102)	0.39 (10)	0.39 (10)	0.69 (18)	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)



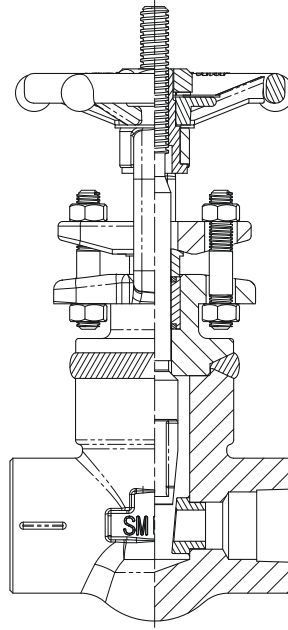
1500-1570 Gate Valves

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)

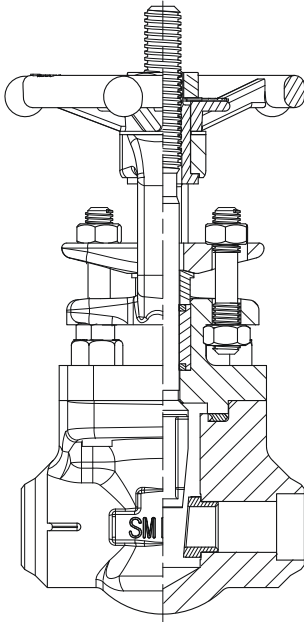
CLASS 1500 CONVENTIONAL PORT WELDED BONNET GATE VALVE - THREADED or SOCKET WELD - INCHES (MM)								
VALVE SIZE NPS (DIN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)
1/4 (8)	3.50 (89)	6.31 (160)	4.00 (102)	0.31 (8)	0.39 (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 (DN)	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)

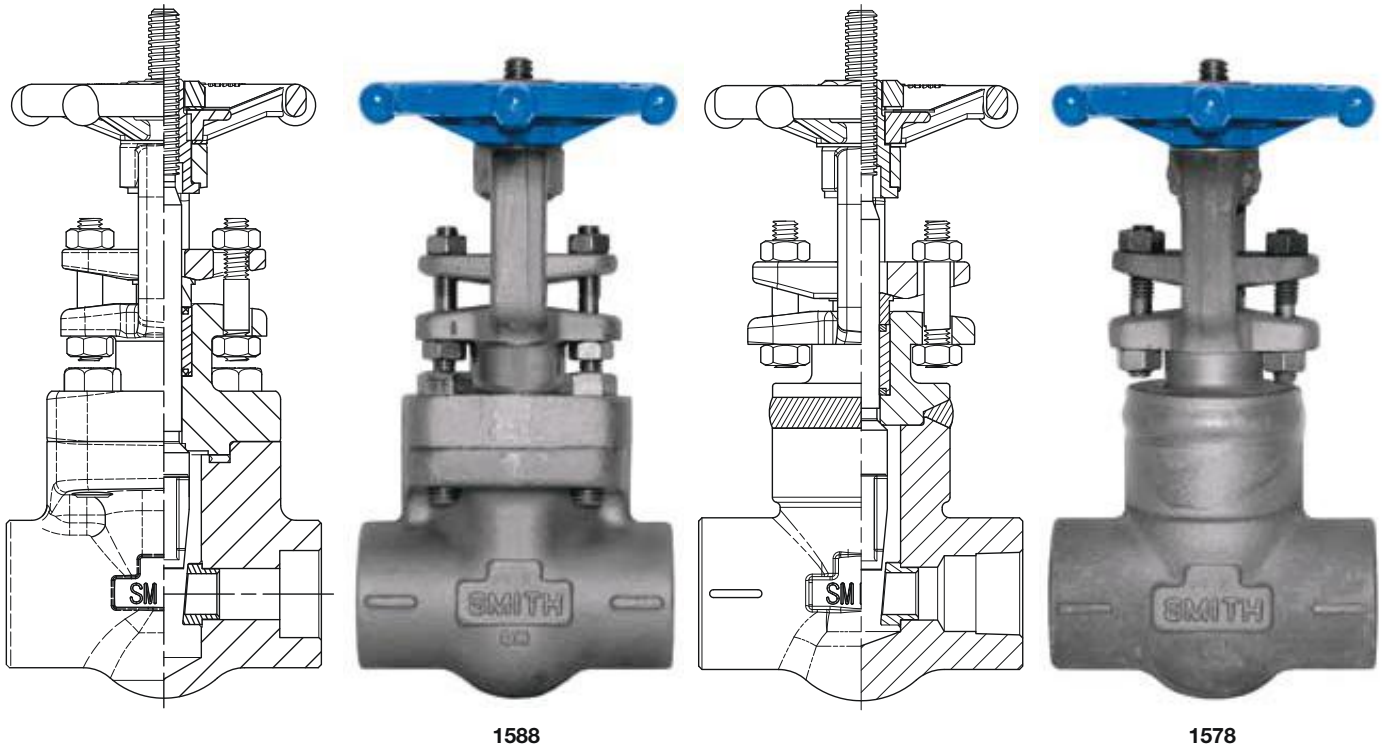
CLASS 1500 CONVENTIONAL PORT BOLTED BONNET GATE VALVE - BUTT WELD ENDS-INCHES (MM)					
VALVE SIZE NPS (DN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	APPROX. WEIGHT LBS (KG)
1/2 (15)	3.50 (89)	6.50 (165)	4.00 (102)	0.31 (8)	5.0 (2.3)
3/4 (20)	3.88 (98)	7.25 (184)	4.00 (102)	0.50 (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)

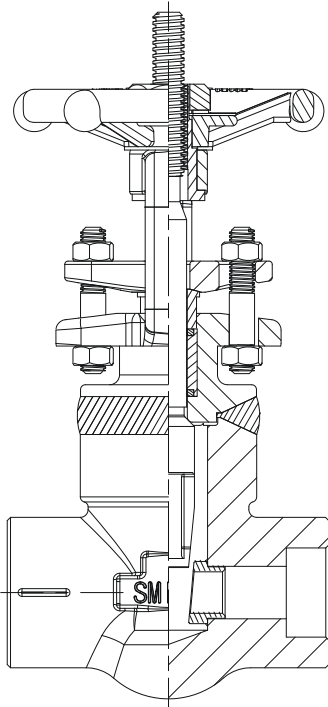
VALVE SIZE NPS (DIN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)
1/4 (8)	3.50 (89)	6.31 (160)	4.00 (102)	0.31 (8)	0.39 (10)	0.56 (14)	1/4"-18	4.8 (2.2)
3/8 (10)	3.50 (89)	6.38 (162)	4.00 (102)	0.39 (10)	0.39 (10)	0.69 (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)

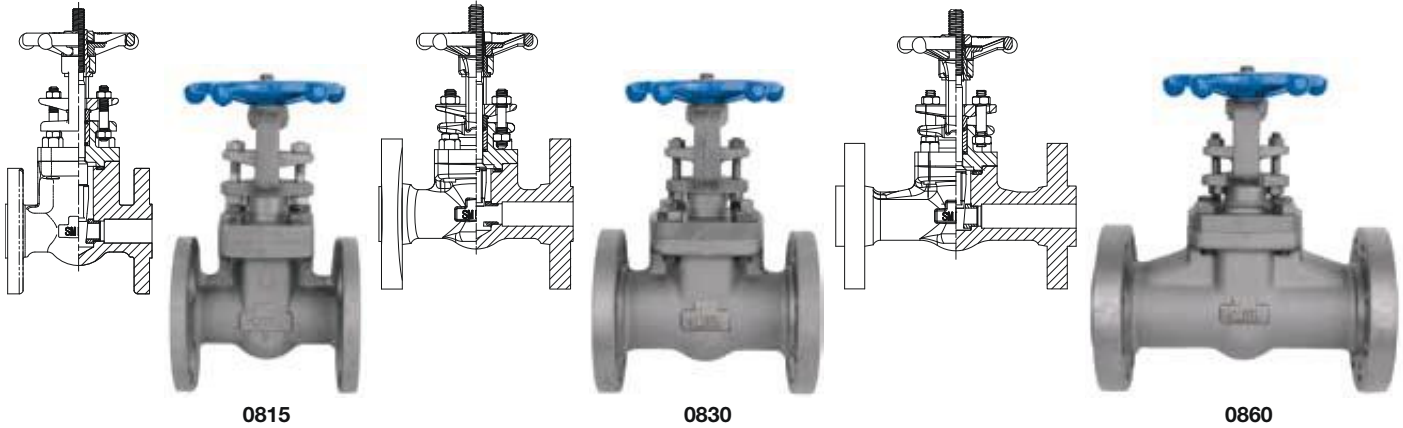
VALVE SIZE NPS (DN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)
1/2 (15)	3.88 (98)	7.26 (184)	4.00 (102)	0.50 (13)	0.39 (10)	0.86 (22)	1/2"-14	6.3 (2.8)
3/4 (20)	4.65 (118)	9.05 (230)	5.50 (140)	0.75 (19)	0.51 (13)	1.07 (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)

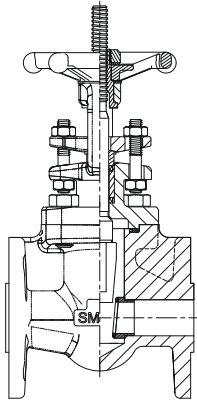
VALVE SIZE NPS (DN)	FACE TO FACE	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	FLANGE DIAMETER	RAISED DIAMETER	BOLT HOLE	BOLT HOLE DIAMETER	BOLT CIRCLE	APPROX. WEIGHT LBS (KG)
1/2 (15)	6.50 (165)	6.25 (159)	4.00 (102)	0.39 (10)	3.75 (95)	1.38 (35)	4	0.63 (16)	2.63 (67)	7.5 (3.4)
3/4 (20)	7.50 (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)



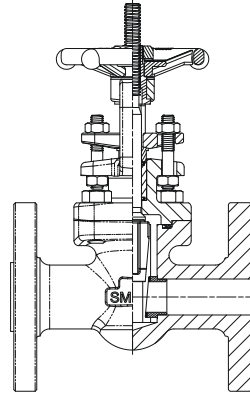
5815-5830 Gate Valves

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)

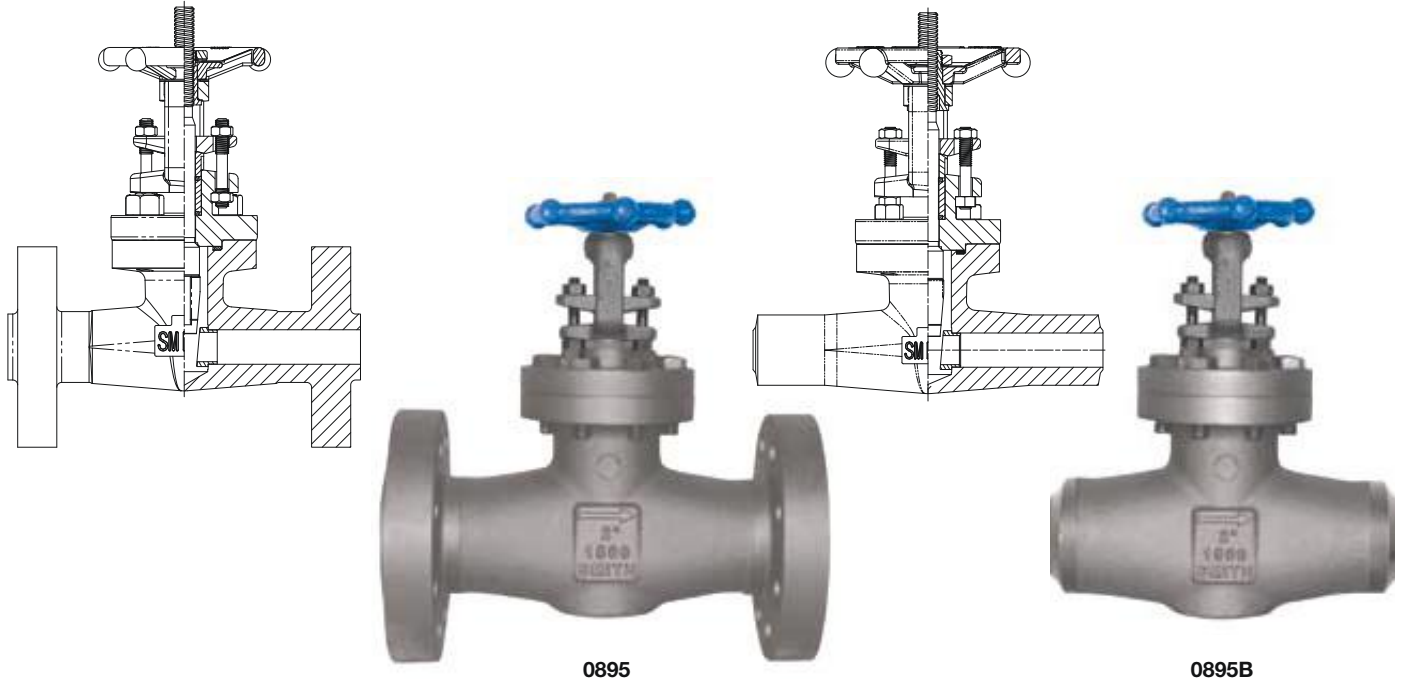
VALVE SIZE NPS (DIN)	FACE TO FACE	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	FLANGE DIAMETER	RAISED DIAMETER	BOLT HOLE	BOLT HOLE DIAMETER	BOLT CIRCLE	APPROX. WT. LBS (KG)
3/4 (20)	6.00 (152)	7.28 (185)	4.00 (102)	0.75 (19)	4.63 (118)	1.69 (43)	4	0.75 (19)	3.25 (83)	11.6 (5.2)
1 (25)	6.50 (165)	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"



0895

0895B

CLASS 1500 FULL 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 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)

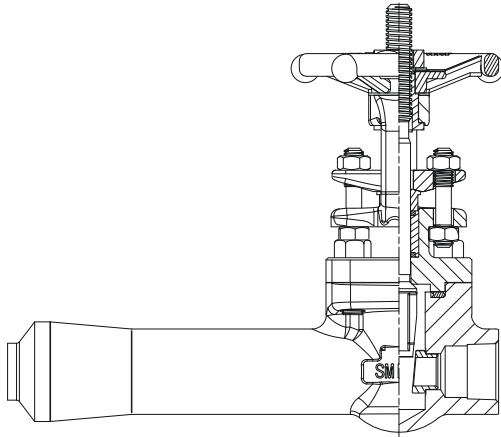
VALVE SIZE NPS (DN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	APPROX. WEIGHT LBS (KG)
1/2 (15)	8.50 (216)	8.18 (208)	4.00 (102)	0.50 (13)	13.6 (6.2)
3/4 (20)	9.00 (229)	9.47 (241)	4.00 (102)	0.75 (19)	18.4 (8.4)
1 (25)	10.00 (254)	9.93 (252)	5.50 (140)	0.94 (24)	27.4 (12.4)
1 1/2 (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)



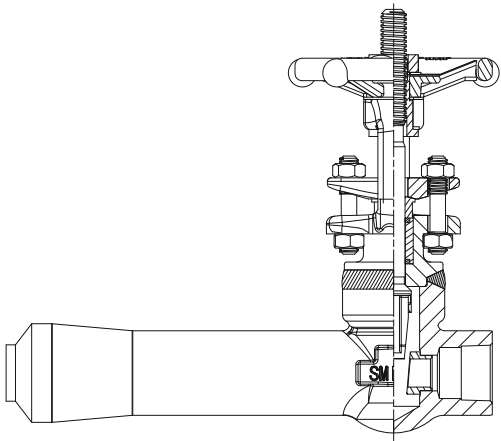
0874-0875 Gate Valves

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)

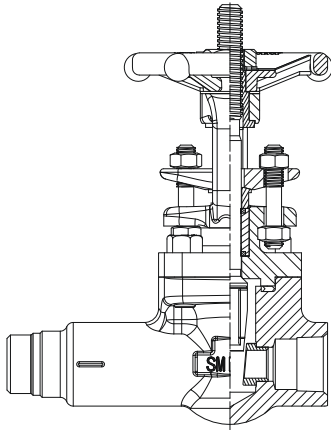
VALVE SIZE NPS (DIN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	CENTER TO END	APPROX. WEIGHT LBS (KG)
1/2 (15)	7.75 (197)	6.00 (152)	4.00 (102)	0.39 (10)	6.13 (156)	5.0 (2.3)
3/4 (20)	8.63 (219)	6.44 (164)	4.00 (102)	0.50 (13)	6.88 (175)	6.5 (2.9)
1 (25)	9.56 (243)	7.25 (184)	4.00 (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

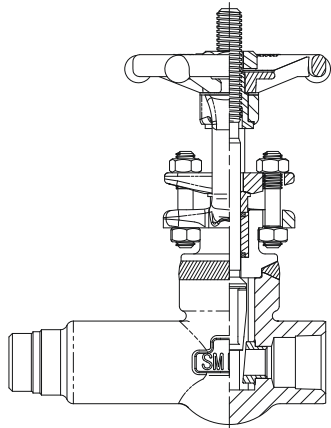
Class 800
1/2" - 2"



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)

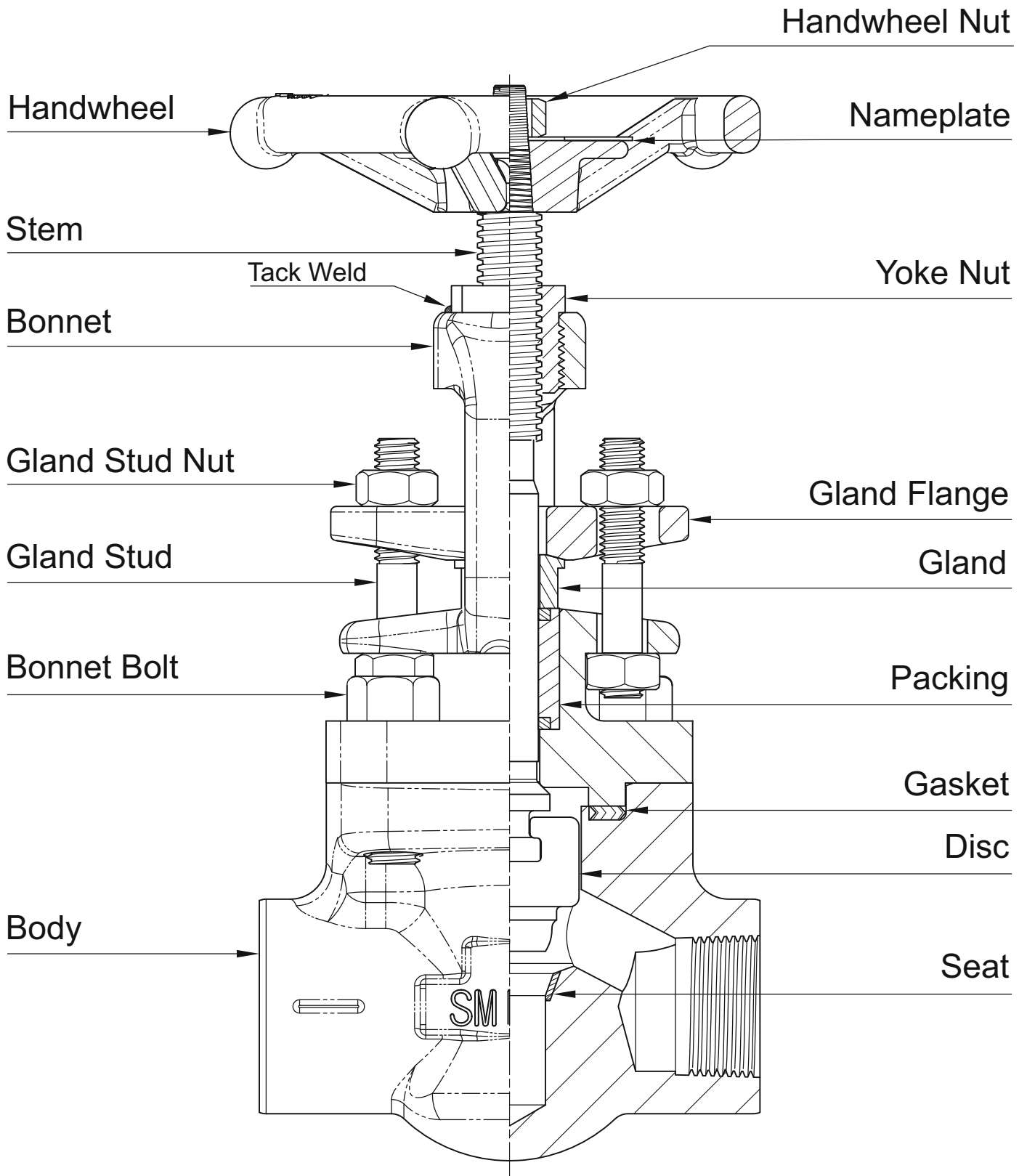
VALVE SIZE NPS (DIN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	CENTER TO END	APPROX. WEIGHT LBS (KG)
1/2 (15)	5.63 (143)	6.25 (159)	4.00 (102)	0.31 (8)	4.00 (102)	4.3 (1.9)
3/4 (20)	5.75 (146)	6.50 (165)	4.00 (102)	0.50 (13)	4.00 (102)	5.0 (2.3)
1 (25)	5.94 (151)	7.25 (184)	4.00 (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

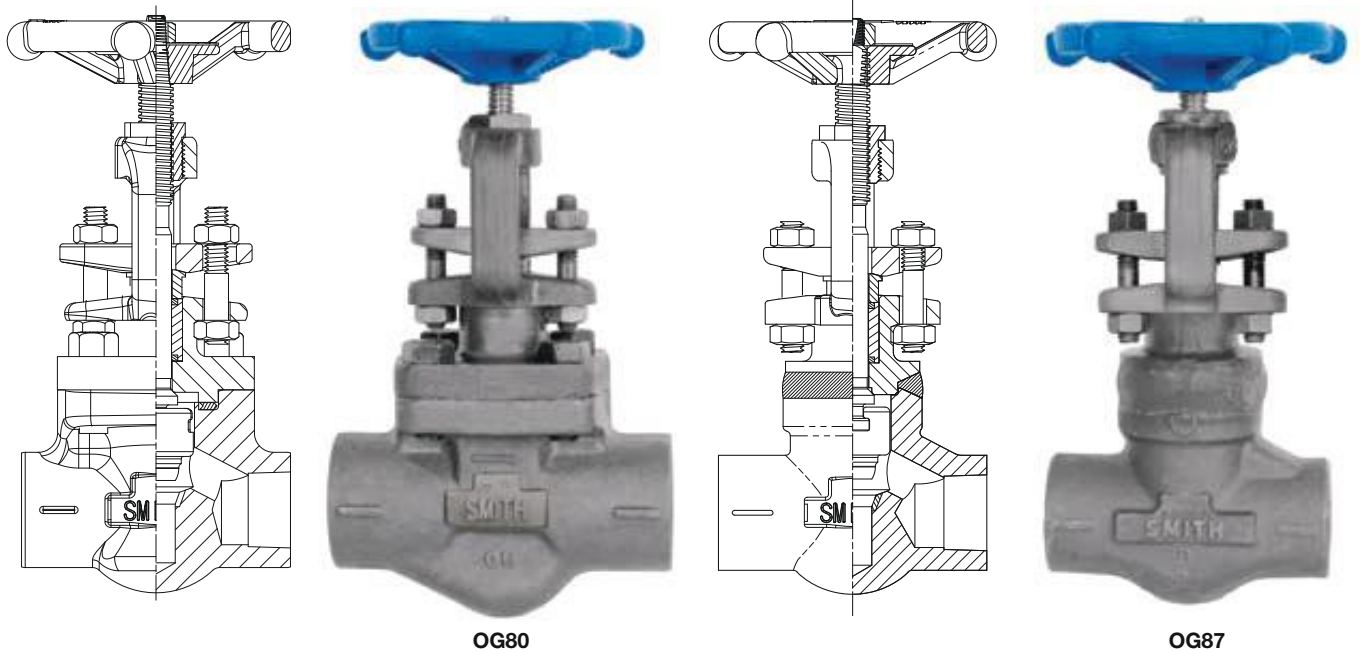




OG80-OG87 Globe Valves

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

Class 800
1/4" - 2"



CLASS 800 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. 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)

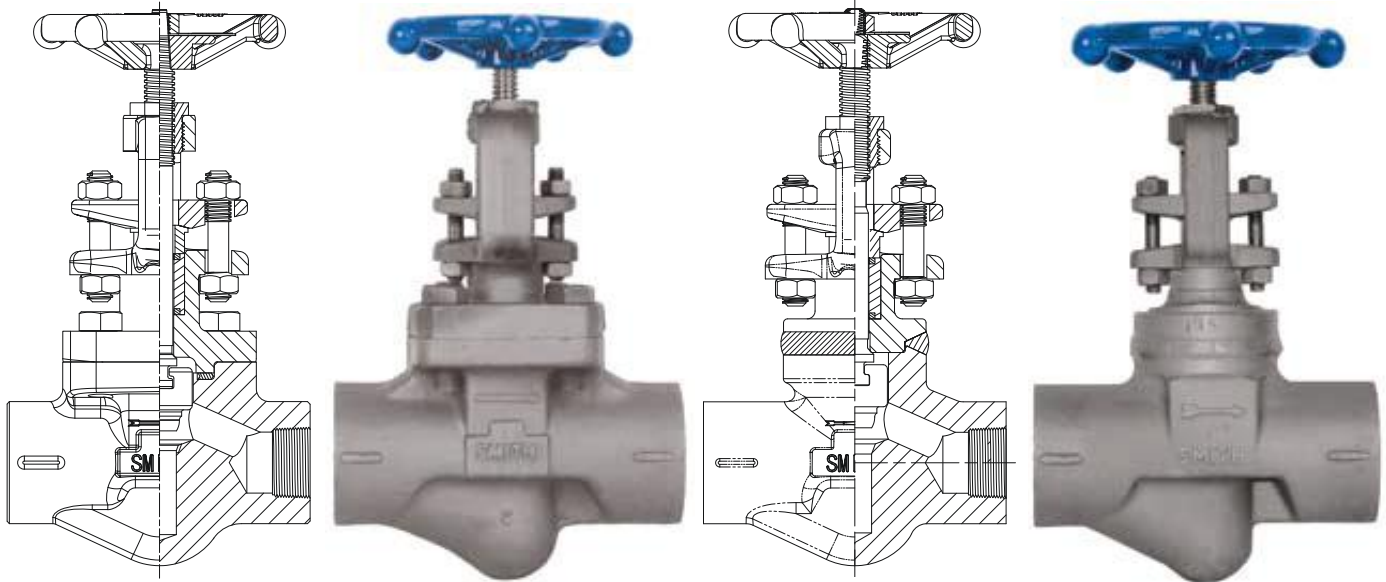
VALVE SIZE NPS (DN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WT. LBS (KG)
1/4 (8)	3.25 (83)	6.38 (162)	4.00 (102)	0.25 (6)	0.39 (10)	0.56 (14)	1/4"-18	3.5 (1.6)
3/8 (10)	3.25 (83)	6.38 (162)	4.00 (102)	0.25 (6)	0.39 (10)	0.69 (18)	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)

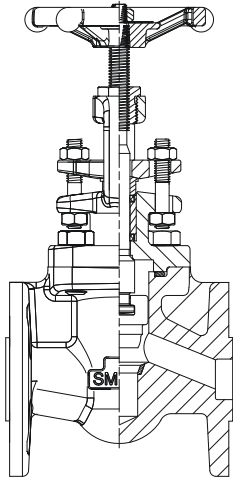
CLASS 1500 WELDED BONNET GLOBE VALVE - THREADED or SOCKET WELD - INCHES (MM)								
VALVE SIZE NPS (DN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)
1/4 (8)	3.50 (89)	6.56 (167)	4.00 (102)	0.25 (6)	0.39 (10)	0.56 (14)	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)



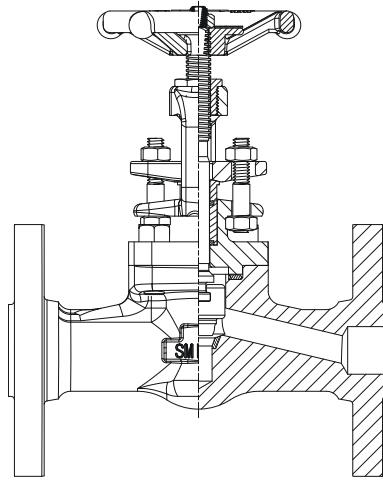
OG81-OG83 Globe Valves

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)

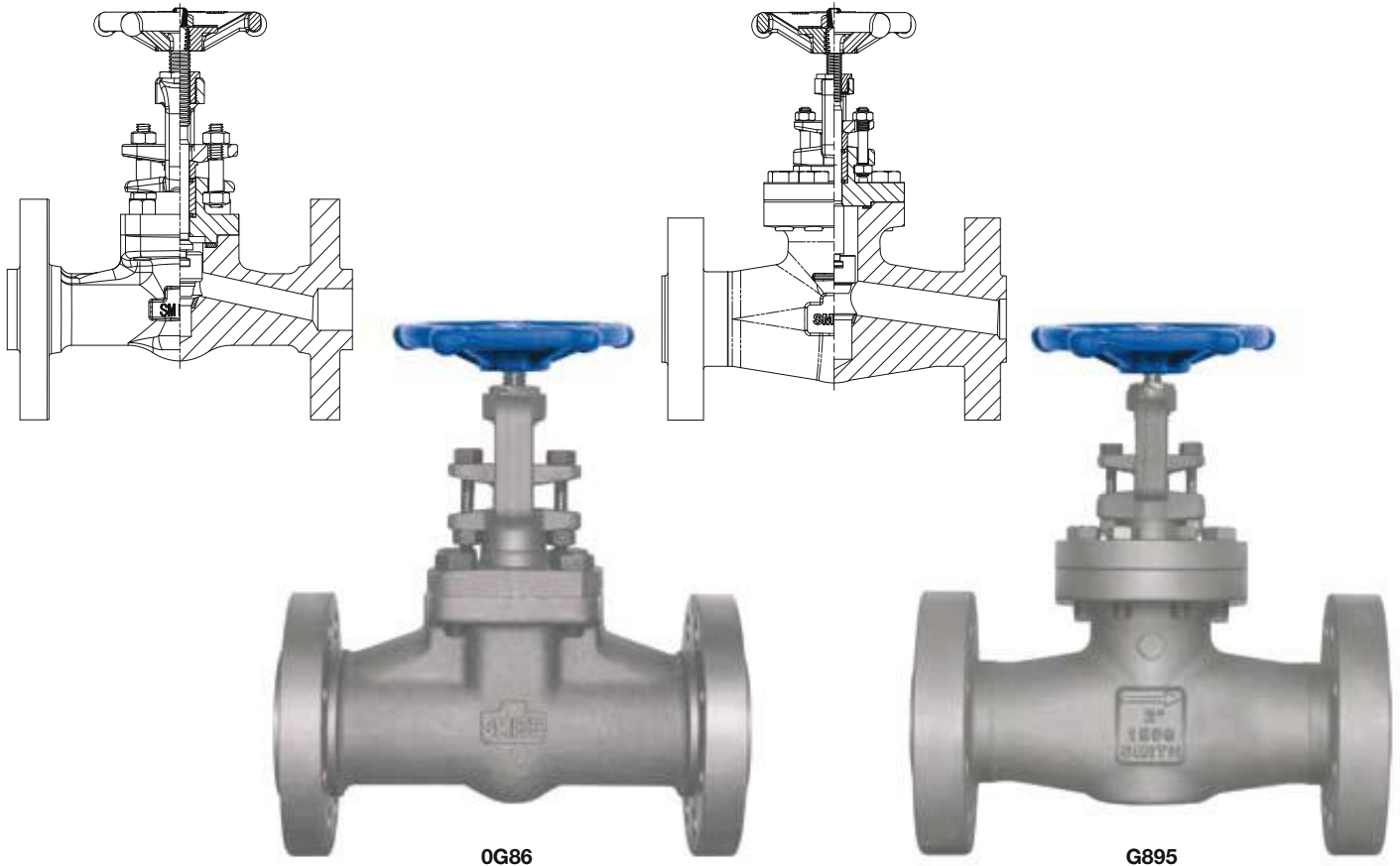
VALVE SIZE NPS (DIN)	FACE TO FACE	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	FLANGE DIAMETER	RAISED DIAMETER	BOLT HOLE	BOLT HOLE DIAMETER	BOLT CIRCLE	APPROX. WEIGHT LBS (KG)
1/2 (15)	6.00 (152)	6.31 (160)	4.00 (102)	0.38 (10)	3.75 (95)	1.38 (35)	4	0.63 (16)	2.63 (67)	7.3 (3.3)
3/4 (20)	7.00 (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)

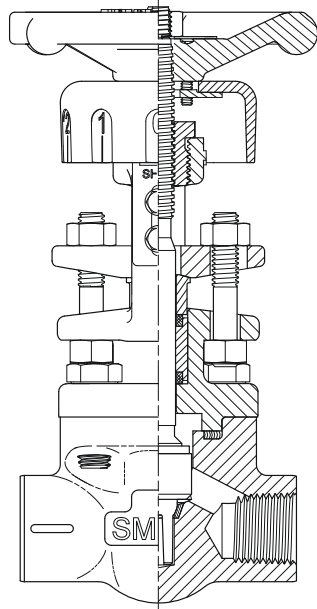
VALVE SIZE NPS (DIN)	FACE TO FACE	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	FLANGE DIAMETER	RAISED DIAMETER	BOLT HOLE	BOLT HOLE DIAMETER	BOLT CIRCLE
1/2 (15)	8.50 (216)	7.98 (203)	4.00 (102)	0.38 (10)	4.75 (121)	1.38 (35)	4	0.88 (22)	3.25 (83)
3/4 (20)	9.00 (229)	8.69 (221)	5.50 (140)	0.50 (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"

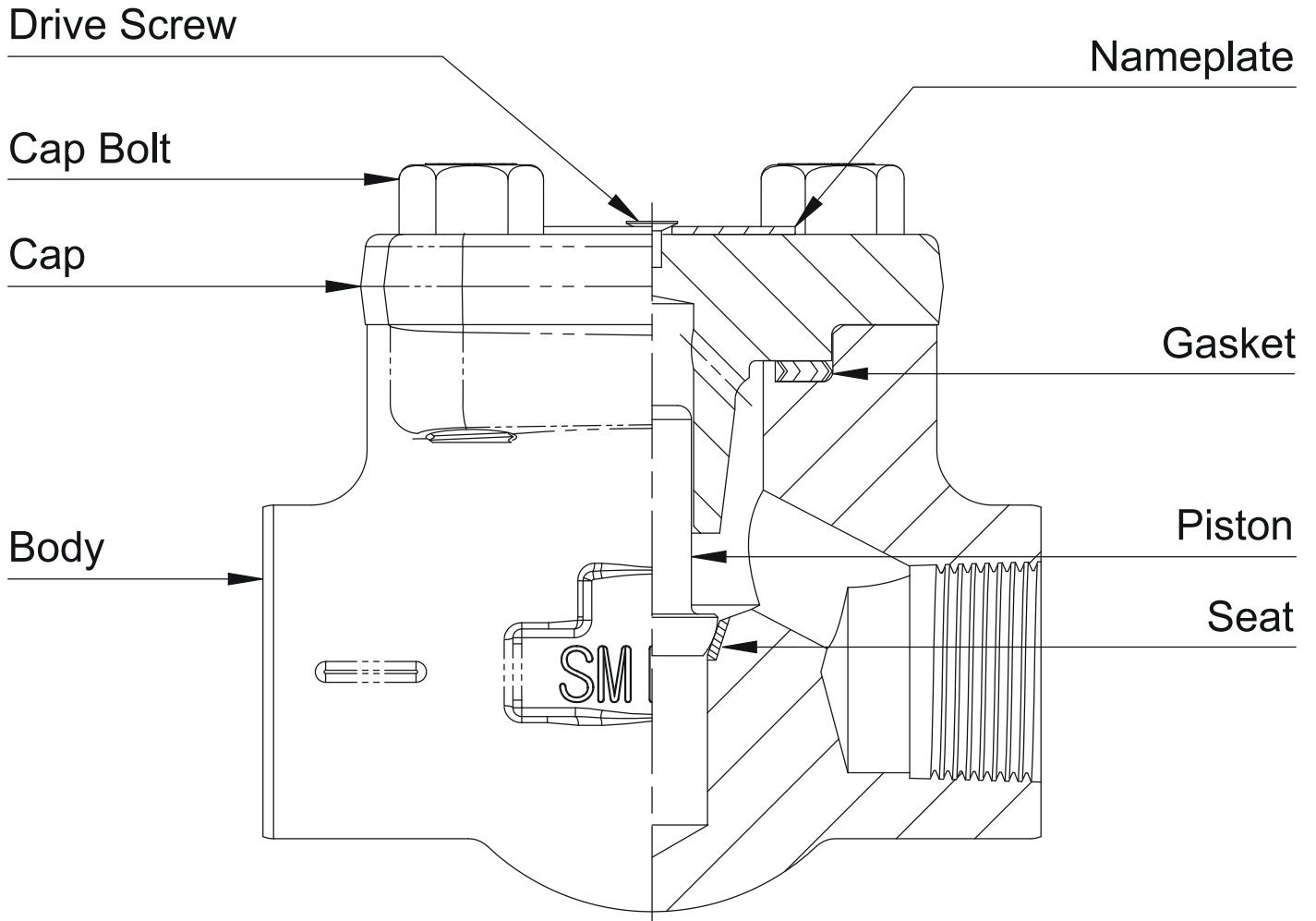


FG80

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

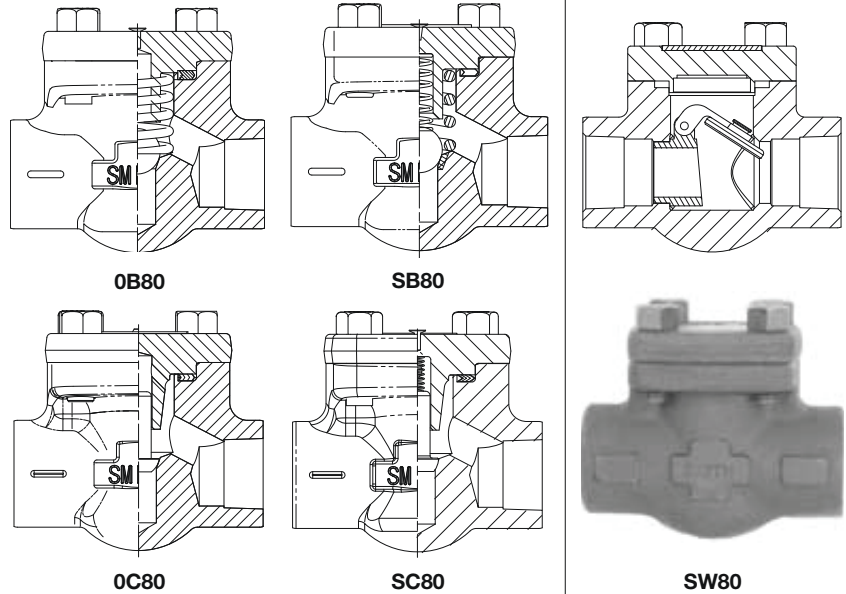




OB80-SB80-OC80-SC80-SW80 Check Valves

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)

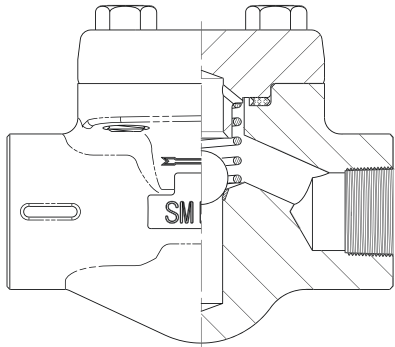
SW80 CLASS 800 BOLTED CAP SWING TYPE CHECK VALVE - THREADED or SOCKET WELD - INCHES (MM)								
VALVE SIZE NPS (DIN)	END TO END	CENTER TO TOP (OPEN)	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)	CRACKING PRESSURE PSI (BAR)
1/2 (15)	3.25 (83)	2.00 (51)	0.38 (10)	0.39 (10)	0.86 (22)	1/2"-14	2.1 (1.0)	0.1 (0.01)
3/4 (20)	3.50 (89)	2.25 (57)	0.50 (13)	0.51 (13)	1.07 (27)	3/4"-14	3.1 (1.4)	0.1 (0.01)
1 (25)	3.88 (98)	2.63 (67)	0.75 (19)	0.51 (13)	1.34 (34)	1"-11 1/2	4.5 (2.0)	0.1 (0.01)
1 1/2 (40)	4.75 (121)	3.75 (95)	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)	4.50 (114)	1.50 (38)	0.63 (16)	2.41 (61)	2"-11 1/2	16.0 (7.3)	0.1 (0.01)



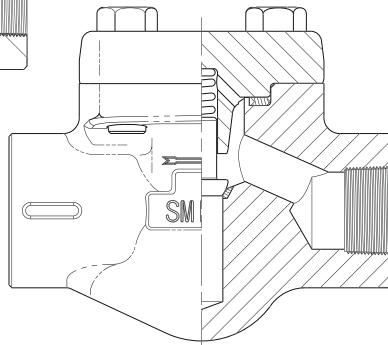
B150-SB15/C150-SC15 Check Valves

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)

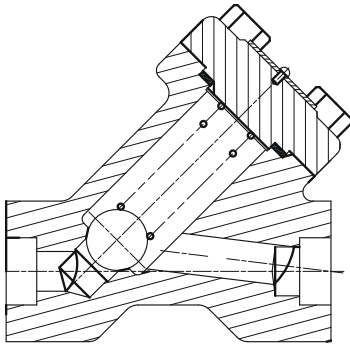
VALVE SIZE NPS (DIN)	END TO END	CENTER TO TOP (OPEN)	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)	C150 CRACKING PRESSURE PSI (BAR)	SC15 CRACKING PRESSURE PSI (BAR)
1/4 (8)	3.50 (89)	2.38 (60)	0.25 (6)	0.39 (10)	0.56 (14)	1/4"-18	4.8 (2.2)	0.3 (0.02)	1.8 (0.12)
3/8 (10)	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)



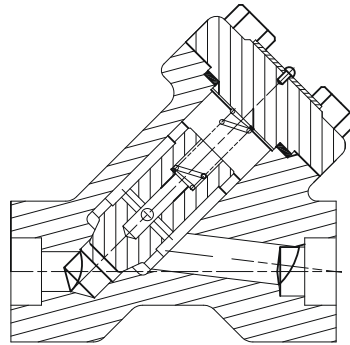
YB80-YC80 Y-Pattern Check Valves

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"



YB80



YC80

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)

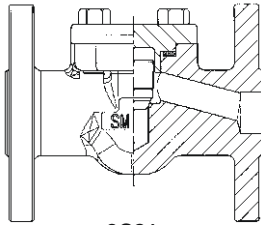
VALVE SIZE NPS (DIN)	END TO END	CENTER TO TOP	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)	CRACKING PRESSURE PSI (BAR)
1/2 (15)	4.17 (106)	3.46 (88)	0.38 (10)	0.39 (10)	0.86 (22)	1/2"-14	3.9 (1.7)	36.3 (2.50)
3/4 (20)	4.17 (106)	3.46 (88)	0.50 (13)	0.51 (13)	1.07 (27)	3/4"-14	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)



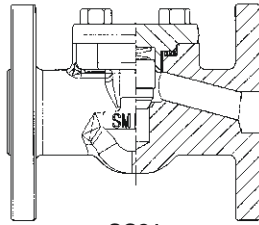
OC81-SC81-OC83-SC83-OC86-SC86 Check Valves

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

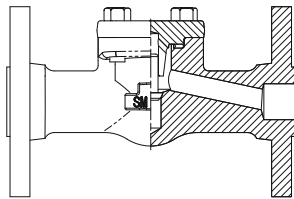
Class 150/300/600
1/2" - 2"



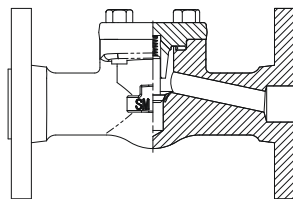
OC81



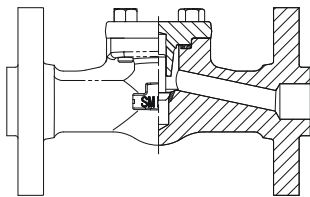
SC81



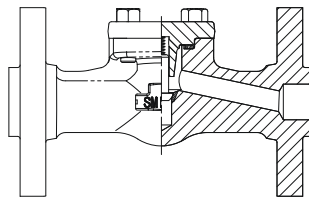
OC83



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)

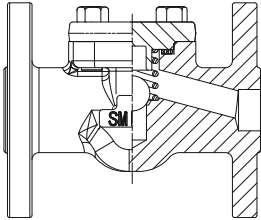
VALVE SIZE NPS (DIN)	FACE TO FACE	CENTER TO TOP (OPEN)	PORT DIAMETER	FLANGE DIAMETER	RAISED DIAMETER	BOLT HOLE	BOLT HOLE DIAMETER	BOLT CIRCLE	APPROX. WEIGHT LBS (KG)	CRACKING PRESSURE PSI (BAR)
1/2 (15)	6.50 (165)	2.00 (51)	0.38 (10)	3.75 (95)	1.38 (35)	4	0.63 (16)	2.63 (67)	6.3 (2.8)	1.8 (0.12)
3/4 (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)



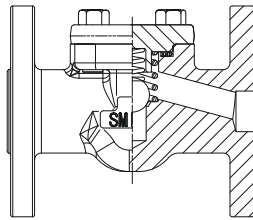
OB81-SB81-OB83-SB83-OB86-SB86 Check Valves

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

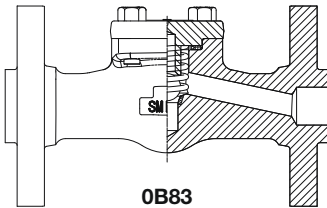
Class 150/300/600
1/2" - 2"



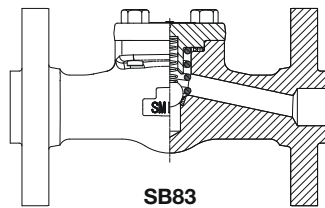
OB81



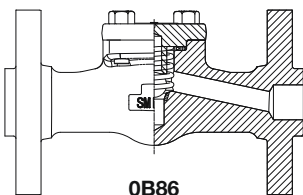
SB81



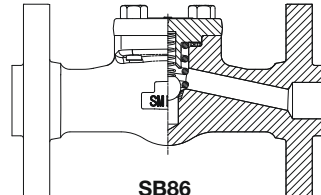
OB83



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)

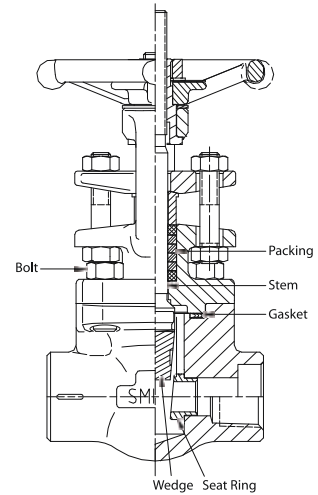


Sour Service Valves

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:

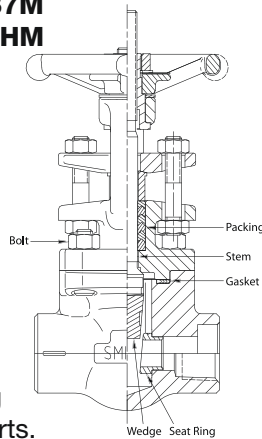
- STEM K-Monel**
- WEDGE or Disc ... Additional side clearance for medial build up**
- STUDS..... ASTM A 193-B7M**
- NUTS..... ASTM A 194-2HM (instead of bolts)**

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

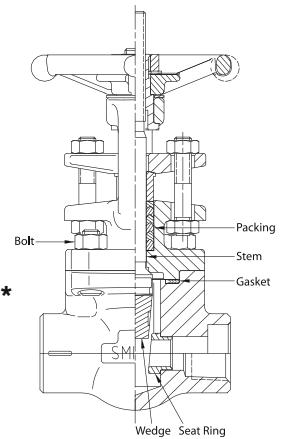
The following combinations are generally used for chlorine service:

- 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



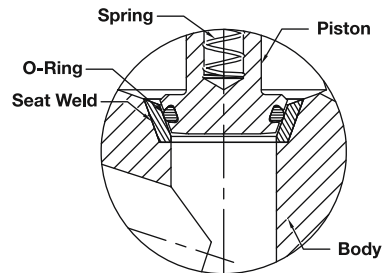
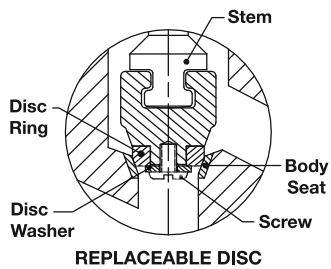
Oxygen Service

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.

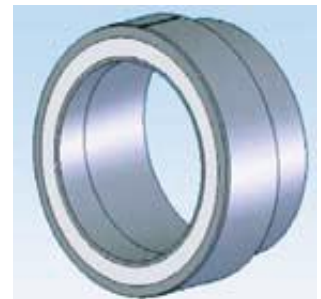
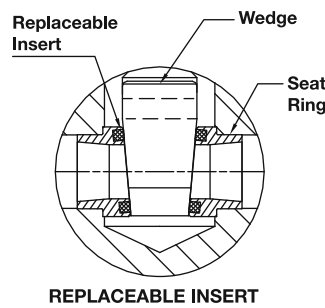
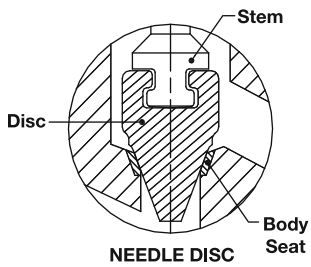
Please, contact your Smith representative.

Gate, Globe, Check Valves



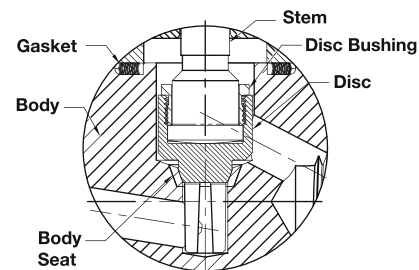
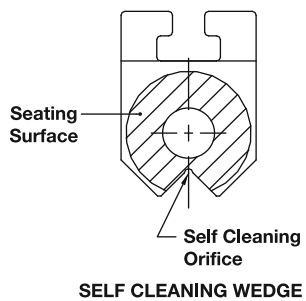
Used for elastomeric or plastic seating (Globe)

Used for elastomeric seating (Check)



Used for metering (Globe)

Used for elastomeric or plastic seating (Gate)

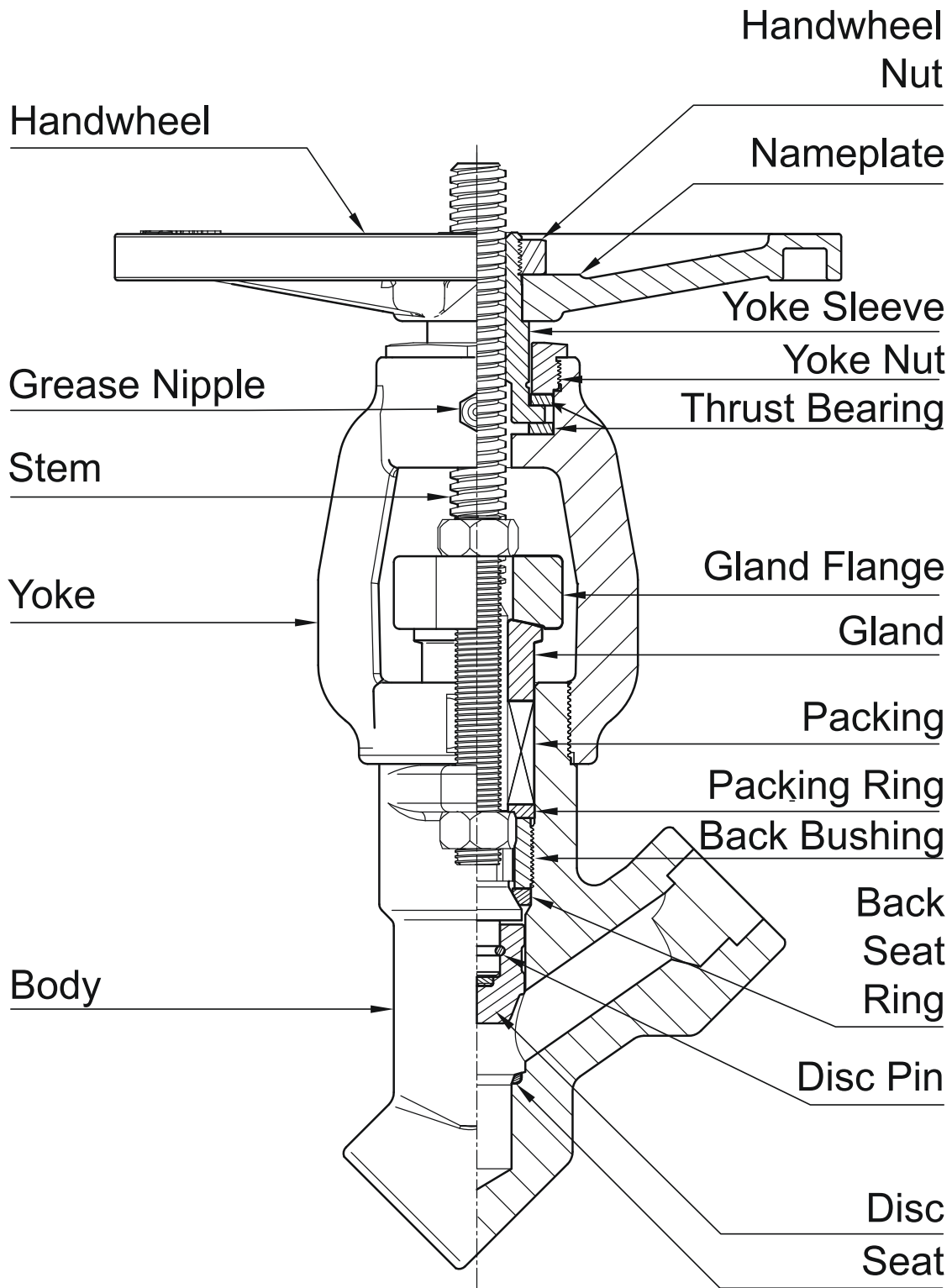


Used as anti-clog and self cleaning (Gate)

Used for flow control (Globe)



Y-Pattern Valves

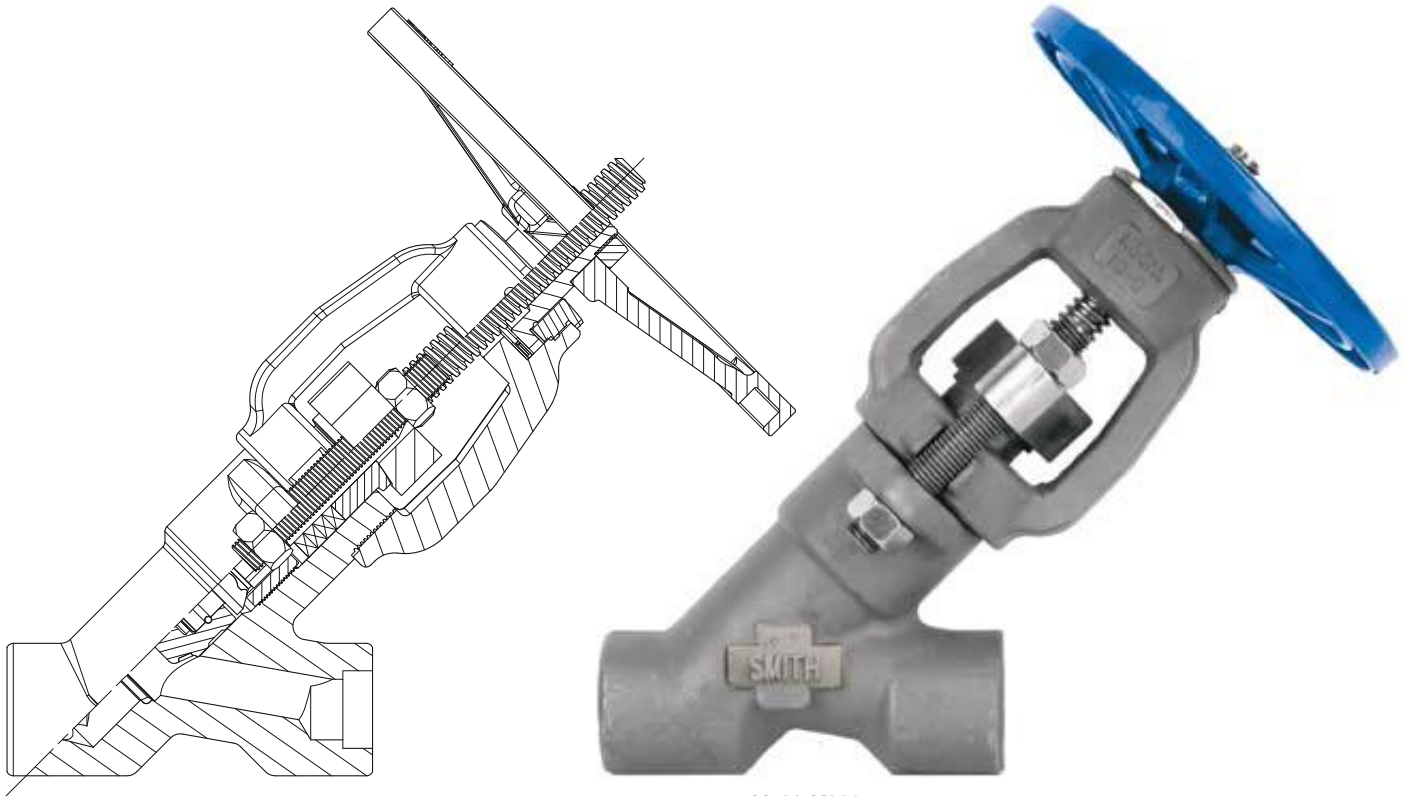




Y162-Y262 Y-Pattern Globe Valves

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)

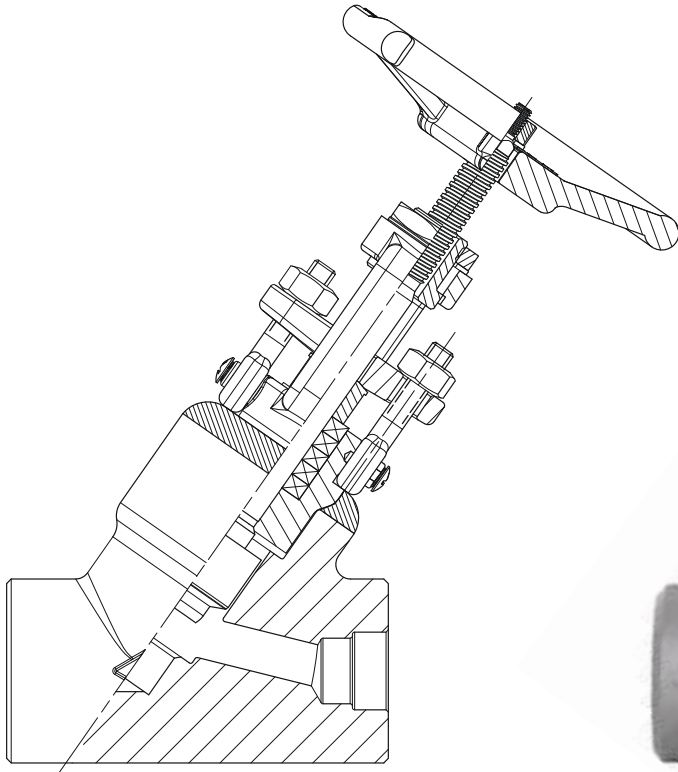
VALVE SIZE NPS (DIN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)
1/2 (15)	5.50 (140)	11.31 (287)	9.81 (249)	0.47 (12)	0.39 (10)	0.86 (22)	1/2"-14	22.1 (10.0)
3/4 (20)	5.50 (140)	11.31 (287)	9.81 (249)	0.71 (18)	0.51 (13)	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)

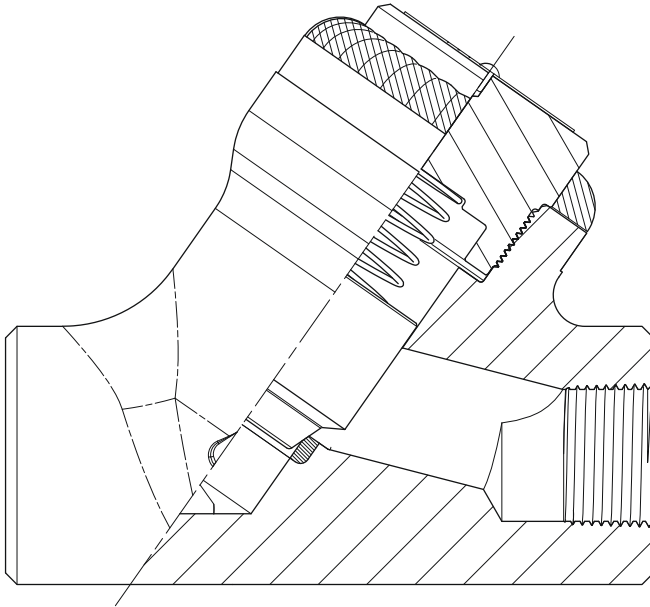
VALVE SIZE NPS (DN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)
1/2 (15)	4.75 (121)	9.44 (240)	5.50 (140)	0.44 (11)	0.39 (10)	0.86 (22)	1/2"-14	11.0 (5.0)
3/4 (20)	6.50 (165)	11.25 (286)	5.50 (140)	0.59 (15)	0.51 (13)	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)

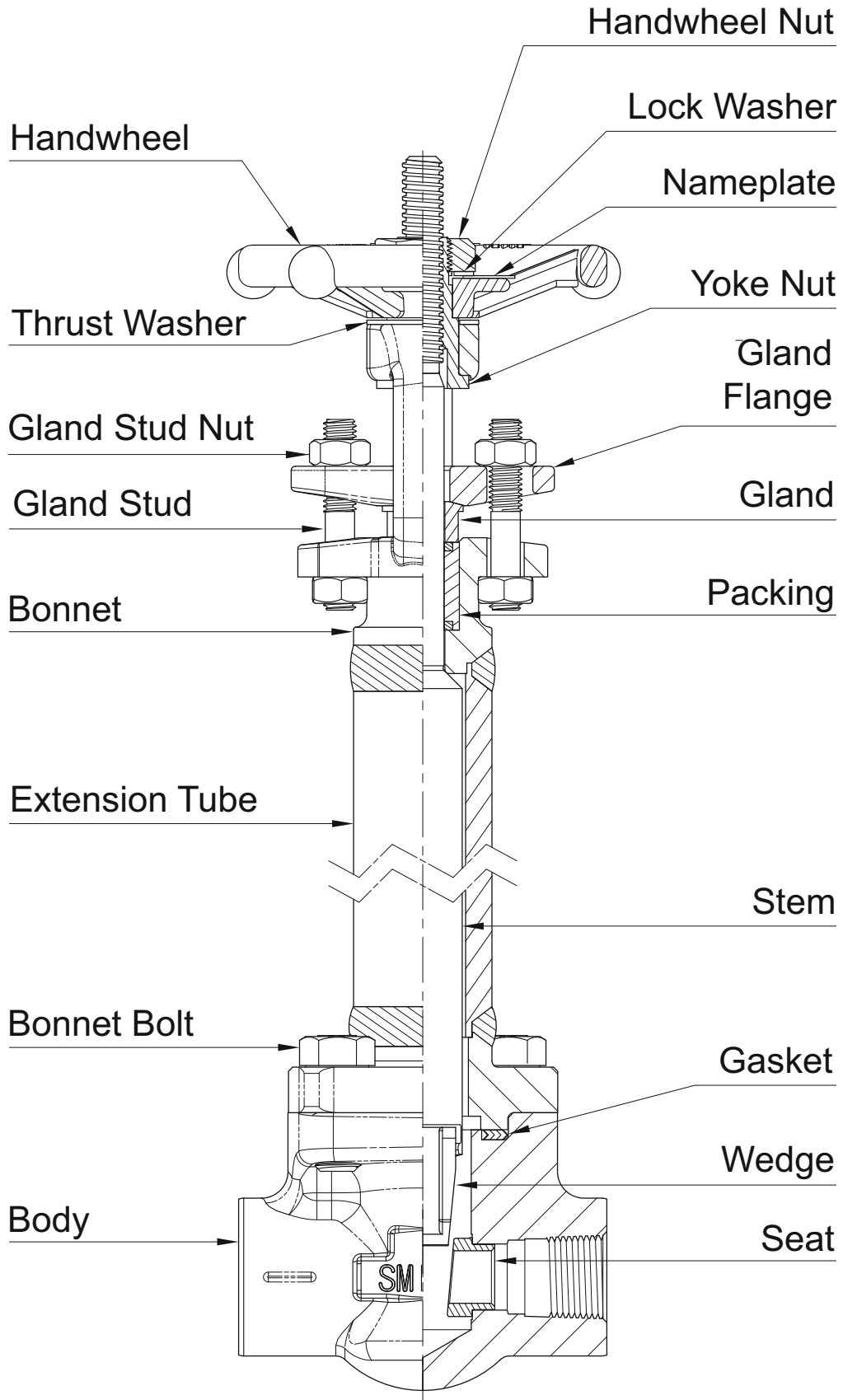
VALVE SIZE NPS (DN)	END TO END	CENTER TO TOP (OPEN)	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)
1/2 (15)	4.75 (121)	3.75 (95)	0.43 (11)	0.39 (10)	0.86 (22)	1/2"-14	8.0 (3.6)
3/4 (20)	6.50 (165)	4.50 (114)	0.57 (15)	0.51 (13)	1.07 (27)	3/4"-14	20.0 (9.1)
1 (25)	6.50 (165)	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

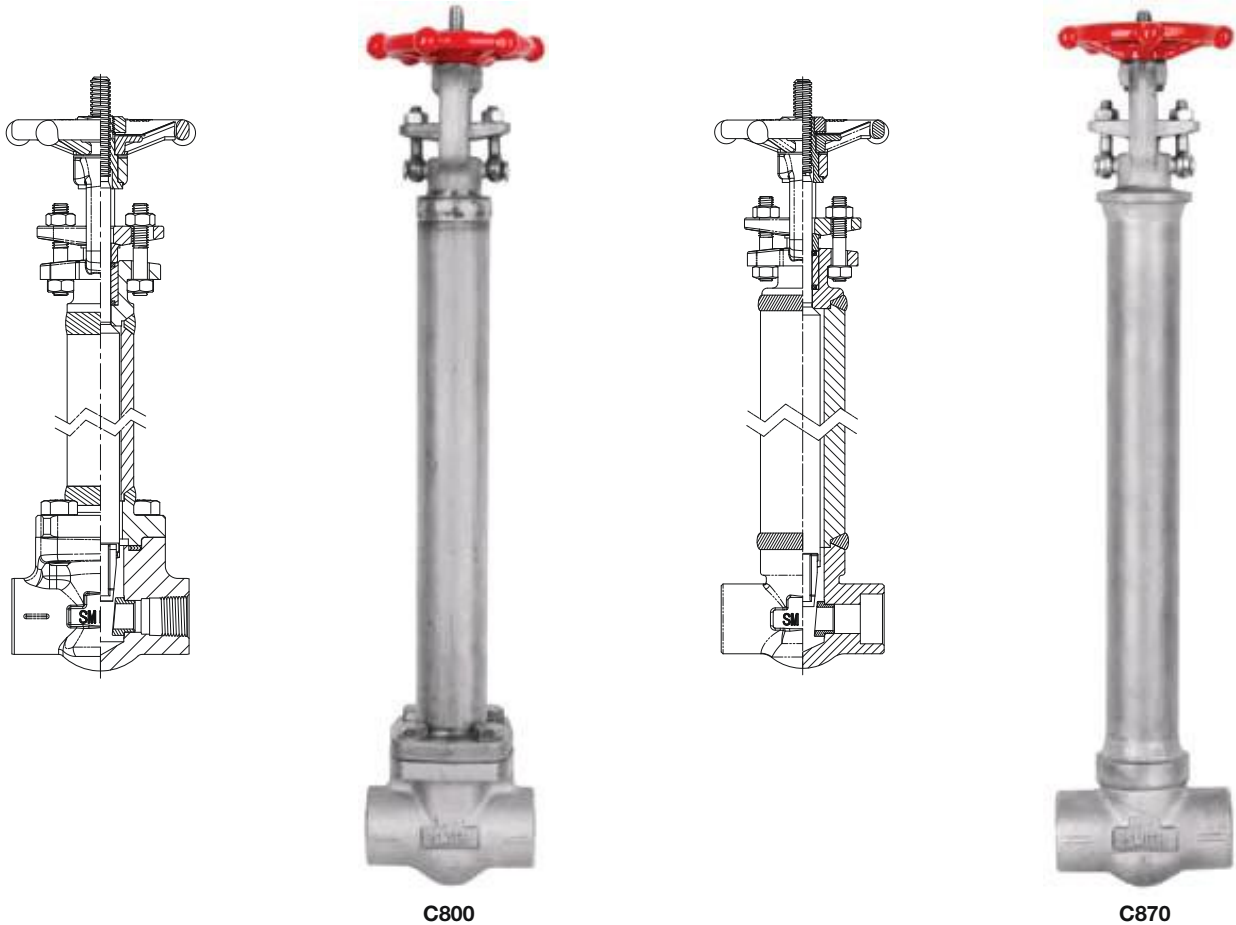




C800-C870 Cryogenic Gate Valves

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)

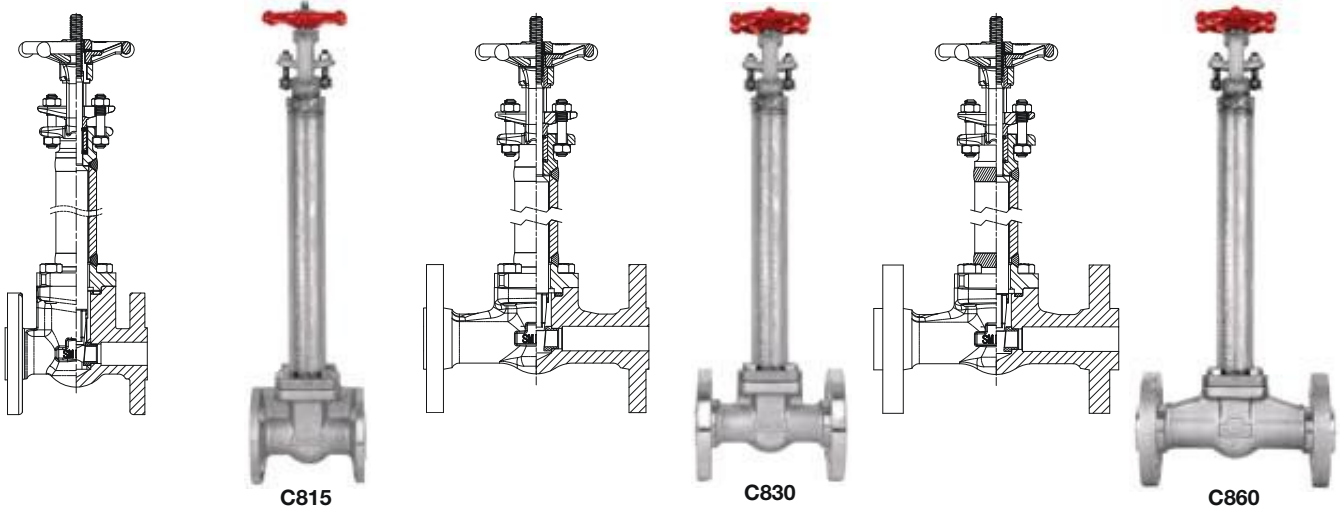
VALVE SIZE NPS (DN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX. WEIGHT LBS (KG)
1/2 (15)	3.25 (83)	18.25 (464)	4.00 (102)	0.39 (10)	0.39 (10)	0.86 (22)	1/2"-14	10.6 (4.8)
3/4 (20)	3.50 (89)	18.50 (470)	4.00 (102)	0.50 (13)	0.51 (13)	1.07 (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)

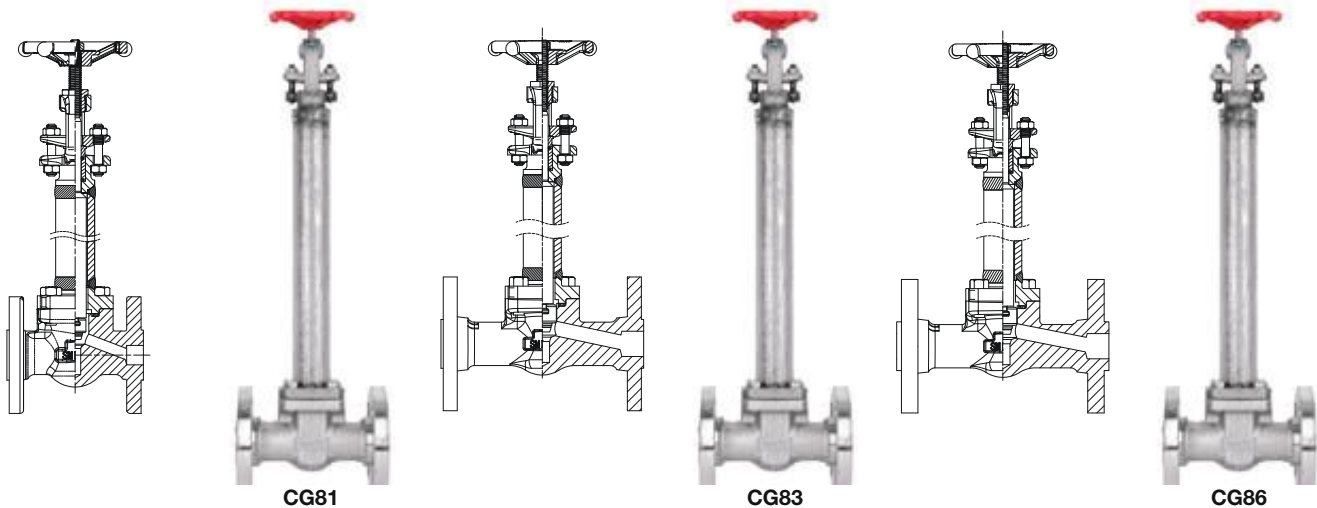
VALVE SIZE NPS (DIN)	FACE TO FACE	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	FLANGE DIAMETER	RAISED DIAMETER	BOLT HOLE	BOLT HOLE DIAMETER	BOLT CIRCLE	APPROX. WEIGHT LBS (KG)
1/2 (15)	6.50 (165)	18.19 (462)	4.00 (102)	0.39 (10)	3.75 (95)	1.38 (35)	4	0.63 (16)	2.63 (67)	11.8 (5.4)
3/4 (20)	7.50 (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)

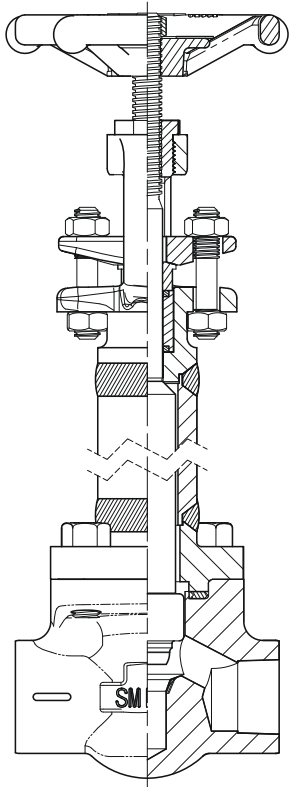
VALVE SIZE NPS (DIN)	FACE TO FACE	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	FLANGE DIAMETER	RAISED DIAMETER	BOLT HOLE	BOLT HOLE DIAMETER	BOLT CIRCLE	APPROX. WT LBS (KG)
1/2 (15)	6.50 (165)	18.19 (462)	4.00 (102)	0.39 (10)	3.75 (95)	1.38 (35)	4	0.63 (16)	2.63 (67)	11.8 (5.4)
3/4 (20)	7.50 (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)



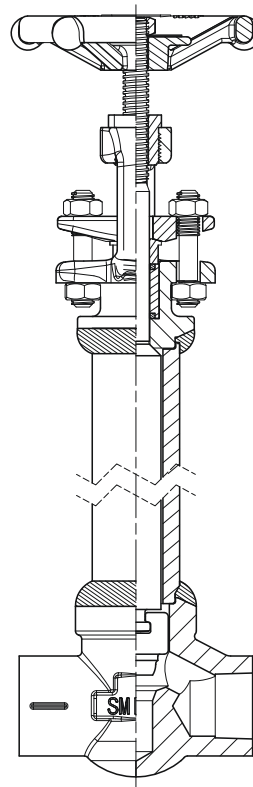
CG80-CG87 Cryogenic Globe Valves

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)

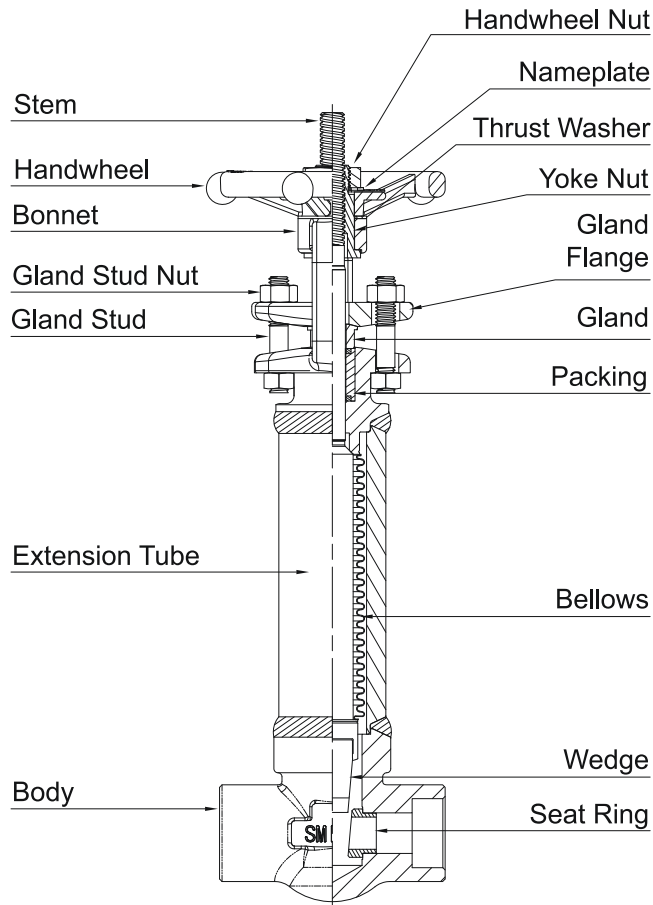
VALVE SIZE NPS (DIN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	SOCKET DEPTH	SOCKET DIAMETER	NPT THRD	APPROX.WEIGHT LBS (KG)
1/2 (15)	3.25 (83)	18.38 (467)	4.00 (102)	0.38 (10)	0.39 (10)	0.86 (22)	1/2"-14	10.9 (4.9)
3/4 (20)	3.50 (89)	18.56 (472)	4.00 (102)	0.50 (13)	0.51 (13)	1.07 (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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