



FORGED GATE VALVES

STANDARD / EXTENDED BODY / BELLOWS SEAL



PIPING SYSTEM PTE LTD

VALVE PART NUMBERING SYSTEM

The ordering code allows you to code the Valve Figure Number of any standard Smith Gate, Globe, or Check Valve. Code letters from the listing below have been assigned for your selection.

The grouping may be prefixed by "CE" to indicate compliance to the European Commission Pressure Equipment Directive 97/23/EC. The grouping may also be suffixed by the following letters to denote the indicated special requirements: X = oxygen cleaned, V = vented seat.

EXAMPLE:

BB, OS&Y, Conv. Port, Gate Valve, A105NLC, 316 SS trim, Grafoil packing, 316 SS with graphite gasket, socket weld ends, 1" size.

Use "O" or "I" for Standard Service
Use "S" for HF Acid Service
Use "U" or "Y" for Nace Service

STYLE CODE* + MATERIAL SELECTION PER TABLE BELOW + PIPE SIZE**

0 8 0 0 O S O G W 1 0 0

* Insert 4 digit Smith number (0888, 1578, 0G80, etc.) as shown on the following pages.

Pipe Size **
025 - (1/4 NPS / 8 DN)
037 - (3/8 NPS / 10 DN)
050 - (1/2 NPS / 15 DN)
075 - (3/4 NPS / 20 DN)
100 - (1 NPS / 25 DN)
125 - (1 1/4 NPS / 32 DN)
150 - (1 1/2 NPS / 40 DN)
200 - (2 NPS / 50 DN)
300 - (3 NPS / 80 DN)

BODY/BONNET/COVER	SHELL	API Trim #	TRIM MATERIAL		PACKING	GASKET		END CONNECTIONS	
			STEM	WEDGE/DISC		A	B	A	B
A	F51	10	316	316	GRAPHITE V-RINGS	A	INCOLOY 825+GRAPHITE	A	BUTTWELD
B	F347	11	MONEL	MONEL	CHESTERTON	B	INCONEL 600/X750 + GRAPHITE	B	
C	F5		KMONEL	MONEL		C		C	
D	F316H	9	MONEL NACE	MONEL NACE		D	INCONEL 600/X750 + TFE	D	
E	HASTELOY - C276		347	347	GARLOCK EVSP	E		E	
F	F20	13	A20	A20		F	A20 + GRAPHITE	F	
G	F9		317L	317L		G	316 + GRAPHITE	G	
H	F321		347H	HF		H	HAST - C276 + GRAPHITE	H	
I	F347H		347H	HF		I	347 + GRAPHITE	I	
J	F316DC		316H	HF		J		J	RING JOINT
K	F11		410 NACE	410 HF NACE		K	317L + GRAPHITE	K	
L	F317L		316	316 + INSERT		L		L	
M			316H	HF	BRAIDED TFE	M	MONEL + GRAPHITE	M	
N	F22		304	304		N		N	
O	A105NLC	8	410	410	GRAPHITE W/BRAIDED ENDS	O	304/316 + GRAPHITE	O	FEMALE ENDS-NPT THD MALE END-SEE FIG. NO. FLANGE ENDS 125-250
P	F91		825	HF		P		P	BSPP THD
Q	Monel 400		347	HF		Q		Q	(BRITISH PARALLEL)
R	F304DC		F51	F51		R		R	
S	A105NLC	12	316	316		S		S	
T	LF2	5	410	HF		T	316 + TFE	T	
U	LF2		KMONEL	MONEL + TFE		U		U	SOCKETWELD X F-NPT
V	F304H		304H	304H	TFE V-RINGS VACUUM	V		V	
W	INCOLOY 825	16	316	HF		W		W	SOCKETWELD
X			HAST - C276	HAST - C276	TFE V-RINGS	X	MONEL + TFE	X	
Y	A105NLC		304H	HF		Y		Y	
Z						Z		Z	



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



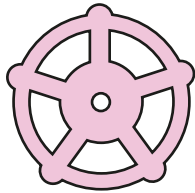
ORANGE
ASTM A350 LF2
Low Temp.



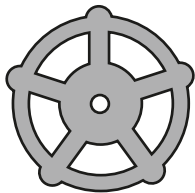
RED
Teflon Packing
Gaskets or Seals
500°F/250°C
Max Temp.



PURPLE
MONEL



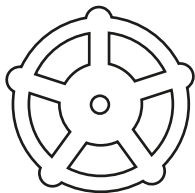
PINK
F20 (ALLOY 20)



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



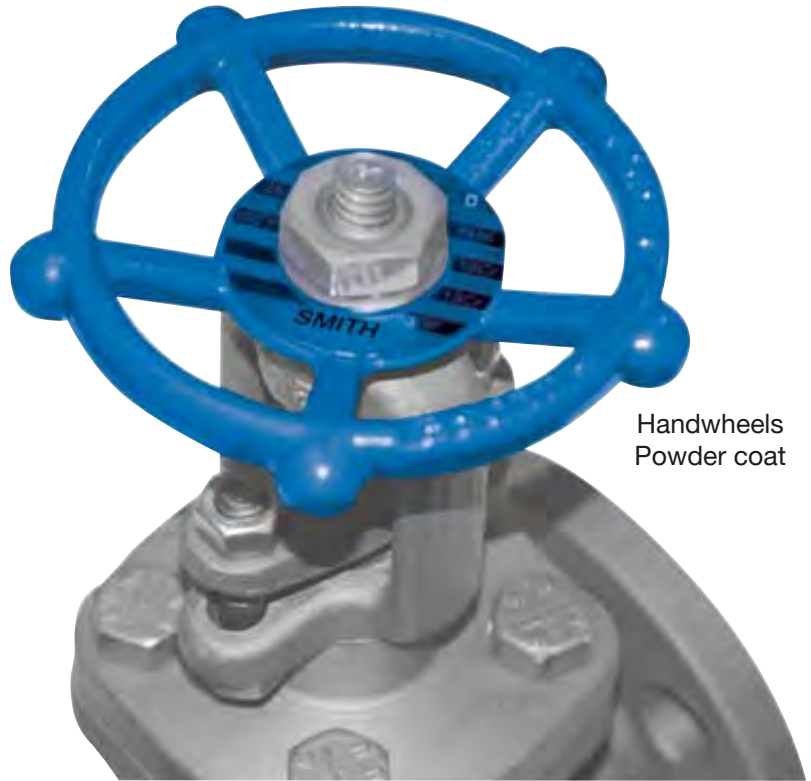
YELLOW
ASTM A182 F11
1 1/4 Cr, 1/2 Mo



WHITE
ASTM 182 F5
5 Cr, 1/2 Mo



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



Handwheels
Powder coat

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



Standard 13 Cr Trim,
Stem, Wedge
Hard-faced Seat Rings



13 Cr Stainless
Soft Stem, Wedge, &
Seats per NACE



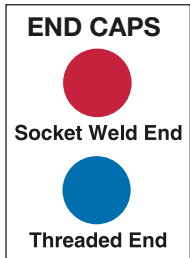
316 Stainless Steel Trim



Monel Trim



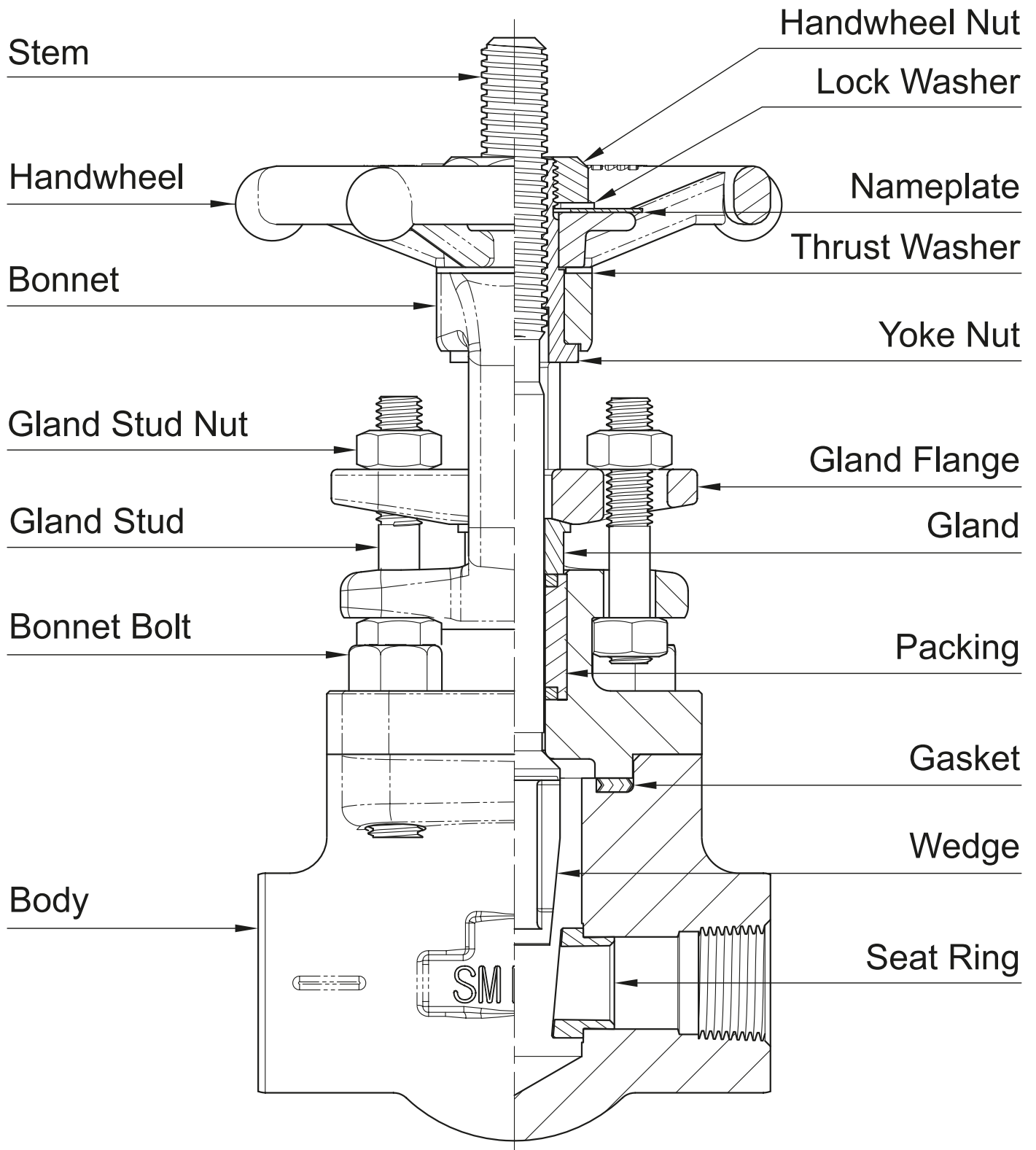
Special Trim



Name Plates are Stainless Steel



Gate Valves





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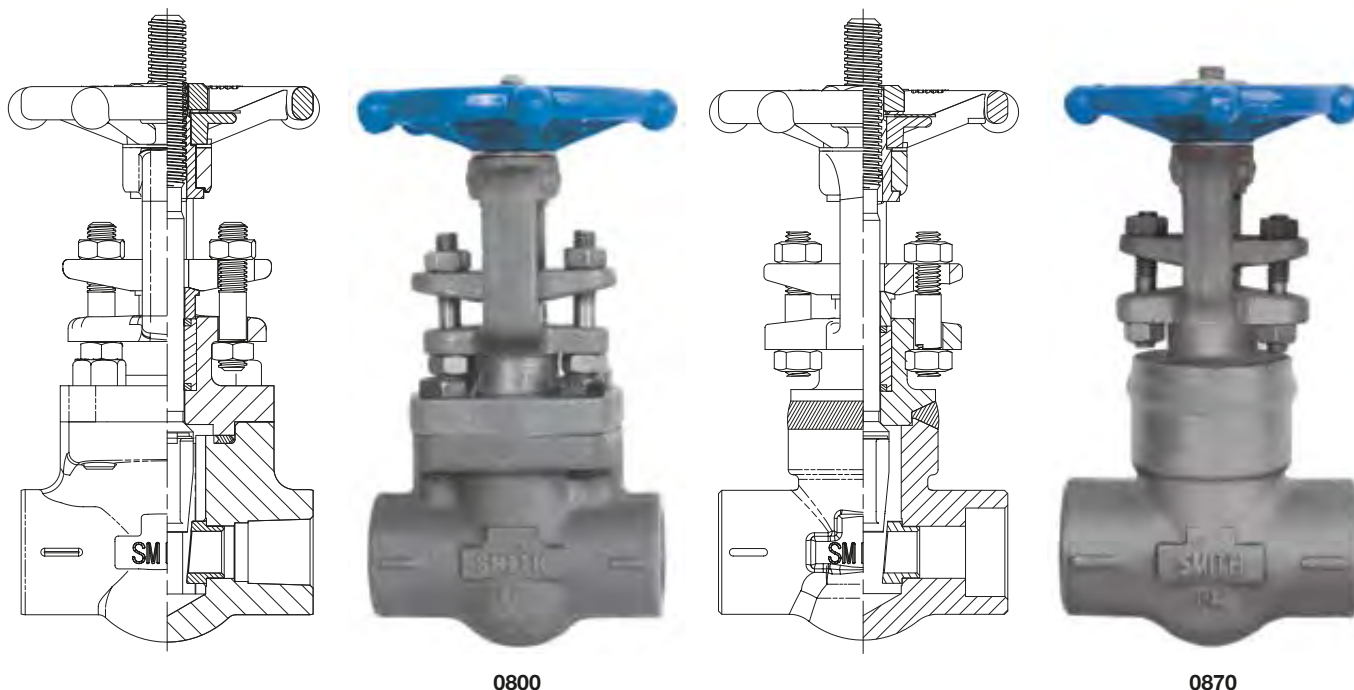
Gate Valves

Forged Steel OS&Y—Conventional Port

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

Class 800

1/4" - 2"



CLASS 800 CONVENTIONAL PORT 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)	6.31 (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 (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)	6.19 (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)



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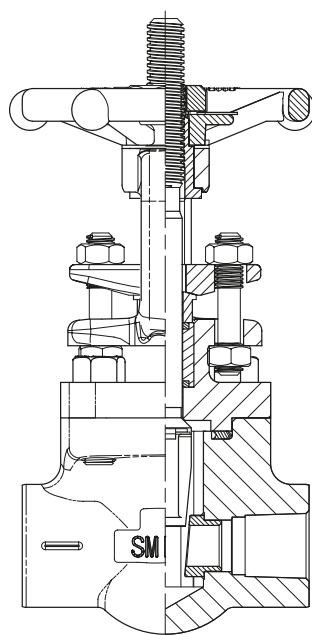
Gate Valves

Forged Steel OS&Y – Full Port

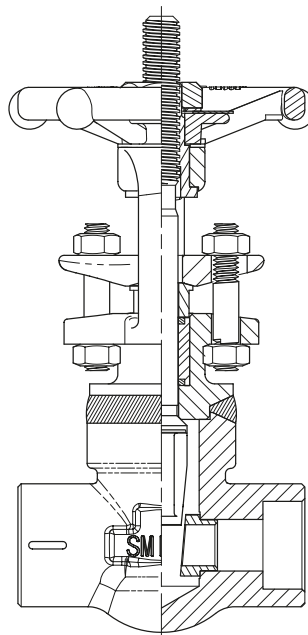
Valves comply with applicable portions of API 602 and ASME B16.34

Class 800

1/4" - 2"



0888



5870



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

VALVE SIZE NPS (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)	6.25 (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 (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)	6.25 (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)



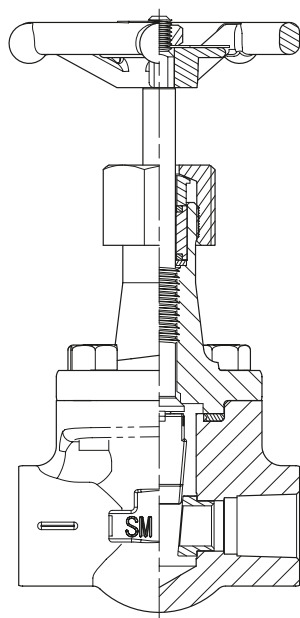
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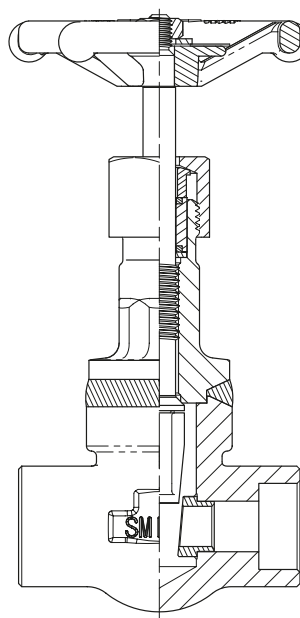
Gate Valves

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)

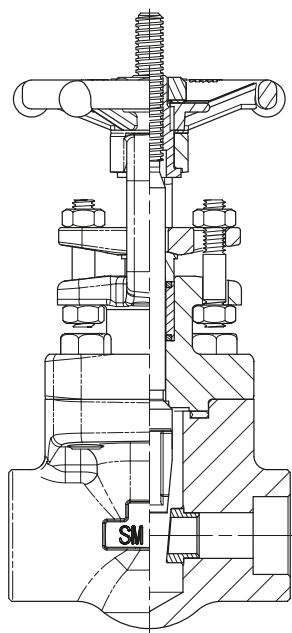


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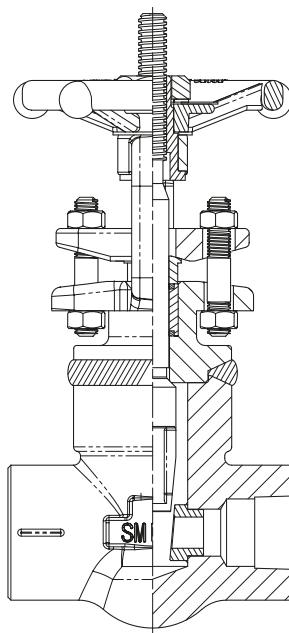
1500-1570 Gate Valves

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 (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)	6.50 (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 (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)	6.31 (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)



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0800B-1500B

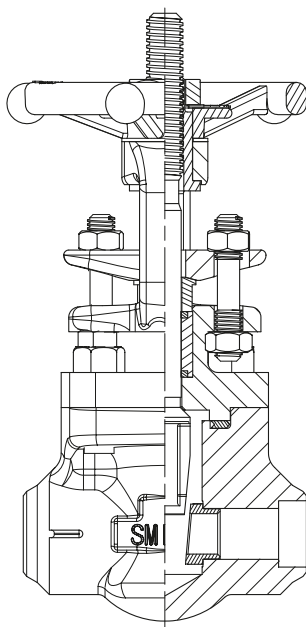
Gate Valves

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)



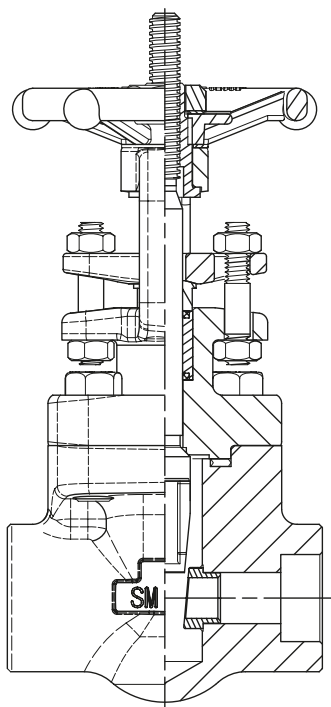
PIPING SYSTEM PTE LTD +86-17600050068 PIPINGSYSTEMPTELTD@163.COM

1588-1578 Gate Valves

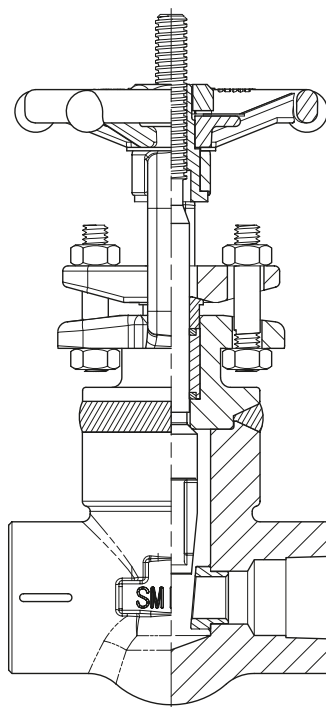
Forged Steel OS&Y – Full Port

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

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



1588



1578

CLASS 1500 FULL PORT 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)	3.50 (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 (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)	6.31 (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)



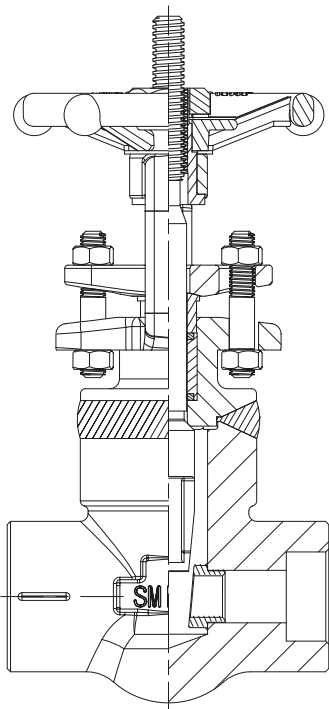


Forged Steel OS&Y – Full Port

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)

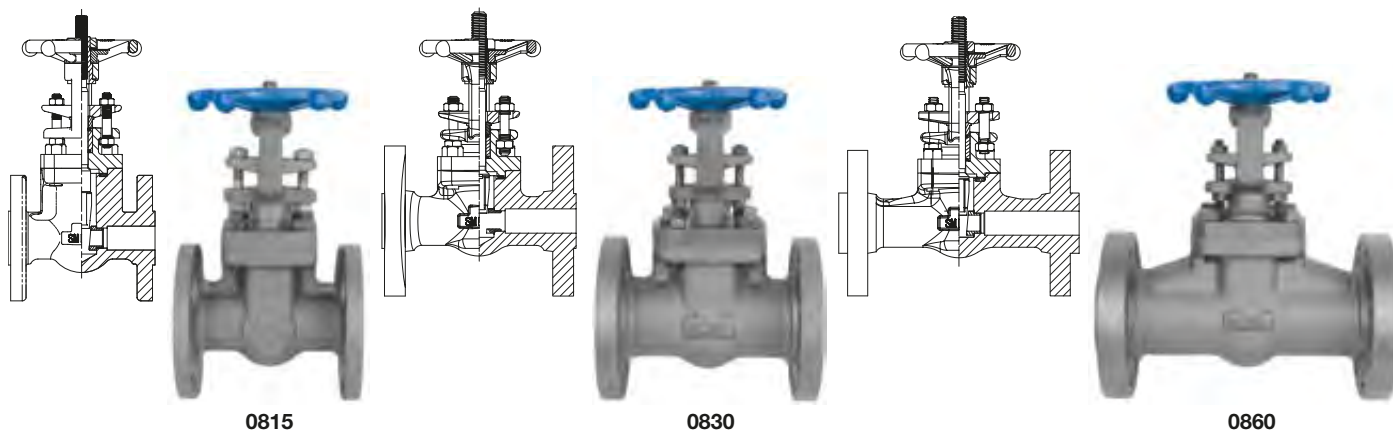


Forged Steel OS&Y – Conventional Port

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 (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)	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 (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)	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 (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)	6.25 (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)

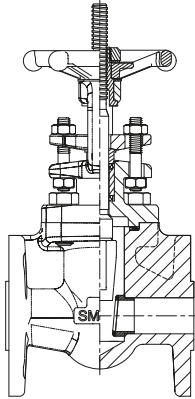


Forged Steel OS&Y – Full Port

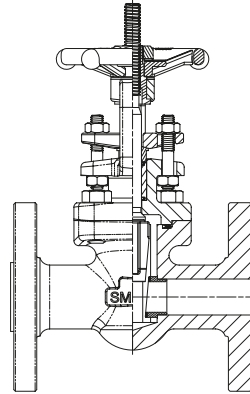
Valves comply with applicable portions of API 602 and ASME B16.34

Class 150/300

3/4" - 1-1/2"



5815



5830



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

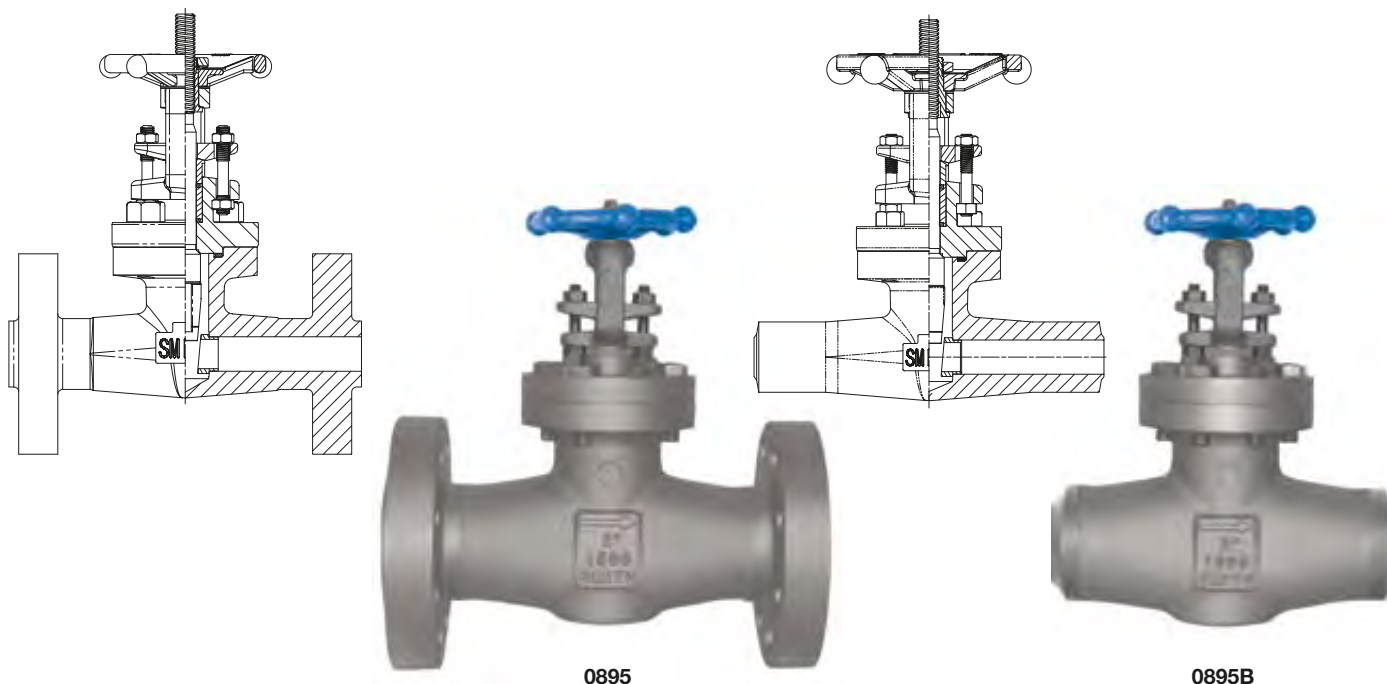
VALVE SIZE NPS (DIN)	FACE TO FACE	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	FLANGE DIAMETER	RAISED DIAMETER	BOLT HOLE	BOLT HOLE DIAMETER	BOLT CIRCLE	APPROX. WT. LBS (KG)
3/4 (20)	4.63 (118)	7.63 (194)	4.00 (102)	0.75 (19)	3.94 (100)	1.69 (43)	4	0.63 (16)	2.75 (70)	9.1 (4.1)
1 (25)	5.00 (127)	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)

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

Class 1500
1/2" - 2"



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

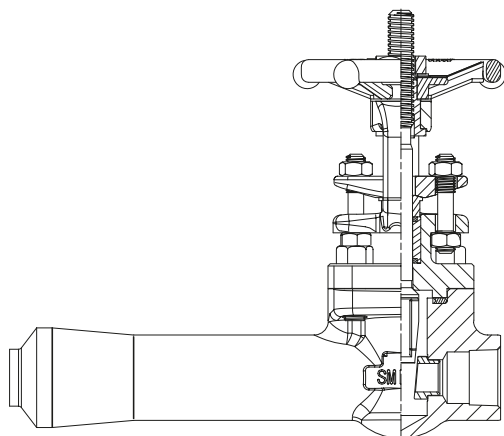
VALVE SIZE NPS (DIN)	FACE TO FACE	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	FLANGE DIAMETER	RAISED DIAMETER	BOLT HOLE	BOLT HOLE DIAMETER	BOLT CIRCLE	APPROX. WT. LBS (KG)
1/2 (15)	8.50 (216)	8.18 (208)	4.00 (102)	0.50 (13)	4.75 (121)	1.38 (35)	4	0.88 (22)	3.25 (83)	17.0 (7.7)
3/4 (20)	9.00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

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

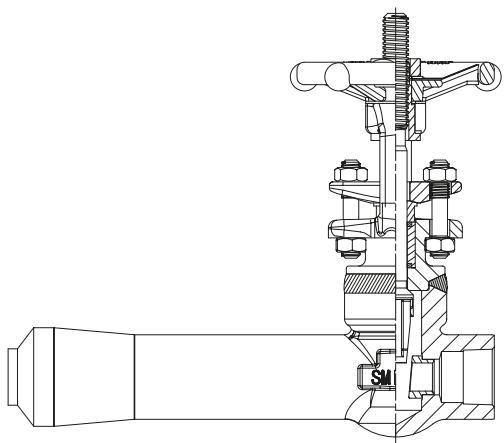
VALVE SIZE NPS (DIN)	END TO END	CENTER TO TOP (OPEN)	HANDWHEEL DIAMETER	PORT DIAMETER	APPROX. WEIGHT LBS (KG)
1/2 (15)	8.50 (216)	8.18 (208)	4.00 (102)	0.50 (13)	13.6 (6.2)
3/4 (20)	9.00 (229)	9.47 (241)	4.00 (102)	0.75 (19)	18.4 (8.4)
1 (25)	10.00 (254)	9.93 (252)	5.50 (140)	0.94 (24)	27.4 (12.4)
1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

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)

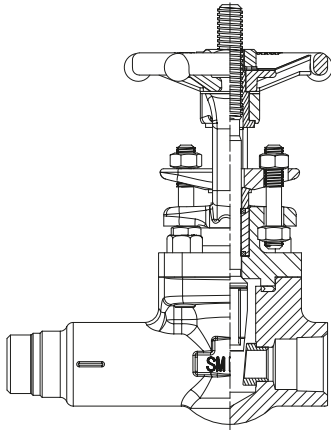


Forged Steel OS&Y Male End – Conventional Port

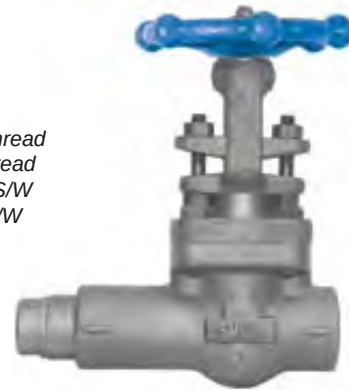
Valves comply with applicable portions of API 602 and ASME B16.34

Class 800

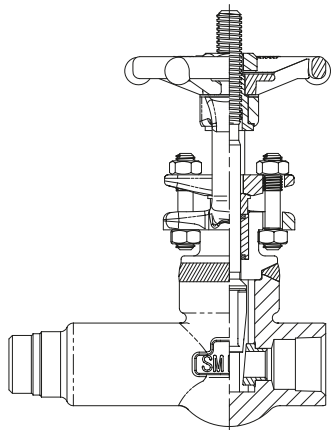
1/2" - 2"



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)



MATERIAL	CARBON STEEL						ALLOY STEEL						316 STAINLESS				MATERIAL
	A105 & A350-LF2						A182-F11 Class 2		A182-F5		A182-F9		A182-F316		A182-F316L		
	(Note 2)						(Note 3)										
CLASS	150	300	600	800	900	1500	800	1500	800	1500	800	1500	800	1500	800	1500	CLASS
TEMP.																	TEMP.
-20 to 100 °F	285	740	1,480	1,973	2,220	3,705	2,000	3,750	2,000	3,750	2,000	3,750	1,920	3,600	1,600	3,000	-31 to 38 °C
200 °F	260	680	1,360	1,810	2,035	3,395	2,000	3,750	1,963	3,680	2,000	3,750	1,653	3,095	1,363	2,555	93 °C
300 °F	230	655	1,310	1,747	1,965	3,270	1,925	3,610	1,867	3,495	1,942	3,640	1,493	2,795	1,217	2,280	149 °C
400 °F	200	635	1,265	1,688	1,900	3,170	1,848	3,465	1,782	3,345	1,880	3,530	1,368	2,570	1,120	2,100	204 °C
500 °F	170	605	1,205	1,608	1,810	3,015	1,773	3,325	1,723	3,230	1,773	3,325	1,275	2,390	1,048	1,970	260 °C
600 °F	140	570	1,135	1,515	1,705	2,840	1,613	3,025	1,613	3,025	1,613	3,025	1,203	2,255	992	1,860	316 °C
650 °F	125	550	1,100	1,467	1,650	2,745	1,568	2,940	1,568	2,940	1,568	2,940	1,178	2,210	973	1,825	343 °C
700 °F	110	530	1,060	1,413	1,590	2,665	1,515	2,840	1,515	2,840	1,515	2,840	1,160	2,170	960	1,800	371 °C
750 °F	95	505	1,015	1,352	1,520	2,535	1,418	2,660	1,418	2,660	1,418	2,660	1,138	2,135	942	1,765	399 °C
800 °F	80	410	825	1,098	1,235	2,055	1,355	2,540	1,355	2,540	1,355	2,540	1,125	2,110	920	1,730	427 °C
850 °F	65	320	640	850	955	1,595	1,298	2,435	1,298	2,435	1,298	2,435	1,115	2,090	902	1,690	454 °C
900 °F	50	230	460	613	690	1,150	1,200	2,245	995	1,870	1,200	2,245	1,107	2,075			482 °C
950 °F	35	135	275	365	410	685	850	1,595	733	1,370	1,005	1,885	1,032	1,930			510 °C
1000 °F	20	85	170	227	255	430	577	1,080	530	995	675	1,270	968	1,820			538 °C
1050 °F							383	720	383	720	458	855	960	1,800			566 °C
1100 °F							257	480	257	480	302	565	813	1,525			593 °C
1150 °F							173	325	165	310	200	375	632	1,185			621 °C
1200 °F							110	205	93	170	138	255	493	925			649 °C
1250 °F													392	735			677 °C
1300 °F													312	585			704 °C
1350 °F																	732 °C
1400 °F													257	480			760 °C
1450 °F													155	290			788 °C
1500 °F													112	205			816 °C

Notes:

1. Data in Table are maximum fluid pressures at temperatures shown in side columns per ASME B16.34 - 2004. User should be aware of specification changes.
2. Permissible, but not recommended, for prolonged use above 800°F / 427°C.
3. Permissible, but not recommended, for prolonged use above 1100°F / 593°C.
4. For other materials, refer to ASME B16.34.



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.