CHAODA USA

ASME Classes 150 – 1500

API 602 & ASME B16.34
Bolted & Welded Bonnet Design

Forged Steel Gate, Globe & Check Valves

www.chaodausa.com | 832-939-9944 | 12411 Citypark Dr. #100, Missouri City, TX 77489

CHAODA INTRODUCTION

At Chaoda, pioneering design meets efficient manufacturing for top-tier gate, globe, and check valves.

INDUSTRIES WE SERVE

The Chaoda Group is proud to be able to offer a unique combination in the Forged Gate, Globe and Check Valve industry. We have field proven designs, the latest in processing technology, and high efficiency manufacturing **creating a high-quality Gate, Globe and Check Valve.**

We are a fully integrated manufacturer owning all the processes required to produce these valves. From the design, to the closed die forgings, to the machining and processing, to the assembly and testing, we own it and control it. This streamlined, tightly controlled system generates a highly consistent product tailored to your needs at a cost that will not break the budget.

Since 1984, The Chaoda Group has been committed to producing high quality valves for industry at a competitive price. Consistency in ownership has kept this strategy on track and maintained a philosophy of ongoing investment in research and development as well as manufacturing efficiencies. This keeps us ahead of the competition. The result is the ultimate blend of high-quality Forged Gate, Globe and Check Valves.

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Forged Steel Gate, Globe, & Check Valves

YOUR LOW FUGITIVE EMISSIONS PARTNER

The EPA has made selecting the right valve for reducing fugitive emission extremely critical.

LoW Compliant

Chaoda Valve – Your Low Fugitive Emissions Partner

Over the past several years in the United States, the EPA has challenged end users in the refining, chemical and petrochemical industries to continuously lower fugitive emissions from their facilities. As a result of this, the problem of fugitive emissions of Volatile Organic Compounds (VOCs) has grown in importance in refineries, chemical plants, and petrochemical plants in the US and around the world.

When fugitive emissions sources have been analyzed, 60% or more of these fugitive emissions originate from valves, with rising stem valves such as gate valves and globe valves making up most of those emissions. For this reason, it is critical when selecting a valve manufacturer to partner with, to choose one that has demonstrated experience and a commitment to producing a high-quality, low fugitive emission product.

Testing is the Key

Chaoda Valve is proud to have partnered with our valued end users to meet and exceed these fugitive emissions challenges. Chaoda Gate & Globe Valves are designed, manufactured & tested to provide maximum emissions of 100 ppm of VOCs. Chaoda Valve has performed extensive 3rd party testing at reputable US laboratories on our multi-turn valves in accordance with API 624. This test protocol involves applying pressure to the valve filled with methane gas, and performing 310 mechanical cycles and 3 thermal cycles. During this test, leakage of methane from the valve is detected in accordance to EPA Method 21. The maximum allowable leakage for API 624 is 100 ppm of methane. In the tests performed, all Chaoda valves tested resulted in an average leakage of **under 50 ppm**, meeting and exceeding the requirements of this rigorous test.

Chaoda has performed a full range of tests for our product scope.

Certified Low Leaking Valve Technology

As a result, Chaoda Valves are considered to have been tested in accordance to Generally Accepted Good Engineering Practice and are 'Certified Low Leaking Valve Technology' as defined by the EPA. Chaoda can provide 5-year low fugitive emissions warranties in accordance with EPA consent decree requirements to our end users upon request.

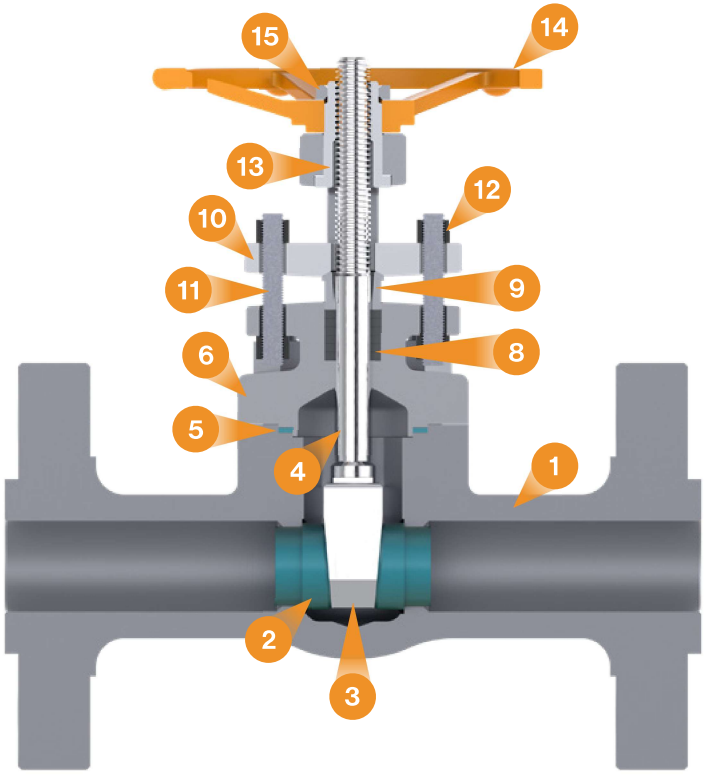
An Ongoing Commitment

Chaoda's commitment to excellence does not stop with the extensive testing we have already performed. Chaoda Valve has long experience with capital projects in regions such as the Middle East, Europe and Southeast Asia which often require production fugitive emissions tests for valves, such as testing per the requirements of ISO 15848 Part 2. Due to this experience, we can perform production fugitive emissions testing on valves per end user requirements to assure the user of excellent fugitive emissions performance.

API 602 GATE VALVE

ASME Class 150, 300, 600, 800 & 1500

Standard Parts and Materials



ITEM	PART NAME	A105 API TRIM 8	LF2 API TRIM 12	F5 API TRIM 5	F316/F316L API TRIM 12	F51 1/2 HARDFACE TRIM
1	Body	ASTM A105N	ASTM A350 LF2 Cl.1	ASTM A182 F5	ASTM A182 F316/F316L	ASTM A182 F51
2	Seat Ring	ASTM A276 410 + HF*	ASTM A276 316 + HF*	ASTM A276 410 + HF*	ASTM A276 316 + HF*	ASTM A276 S31803 + HF*
3	Gate	ASTM A182 F6a	ASTM A182 316	ASTM A182 F6a + HF*	ASTM A182 316	ASTM A182 F51
4	Stem	ASTM A276 410	ASTM A276 316	ASTM A276 410	ASTM A276 316	ASTM A276 S31803
5	Gasket	Spiralwound 304SS + Graphite	Spiralwound 316SS + Graphite	Spiralwound 304SS + Graphite	Spiralwound 316SS + Graphite	Spiralwound S31803 + Graphite
6	Bonnet	ASTM A105N	ASTM A350 LF2 Cl.1	ASTM A182 F5	ASTM A182 F316/F316L	ASTM A182 F51
7	Body Bolt	ASTM A193 B7	ASTM A320 L7	ASTM A193 B16	ASTM A193 B8M	ASTM A193 B8M
8	Packing	Graphite				
9	Gland	ASTM A276 410	ASTM A276 316	ASTM A276 410	ASTM A276 316	ASTM A276 316
10	Gland Flange	ASTM A105N	ASTM A350 LF2 Cl.1	ASTM A182 F5	AST A182 F316/F316L	AST A182 F316/F316L
11	Gland Stud	ASTM A193 B7	ASTM A320 L7	ASTM A193 B16	ASTM A193 B8M	ASTM A193 B8M
12	Gland Nut	ASTM A194 2H	ASTM A194 7	ASTM A194 7	ASTM A194 8M	ASTM A194 8M
13	Stem Nut	ASTM A276 410				
14	Handwheel	ASTM A47 32510				
15	Handwheel Nut	Steel				

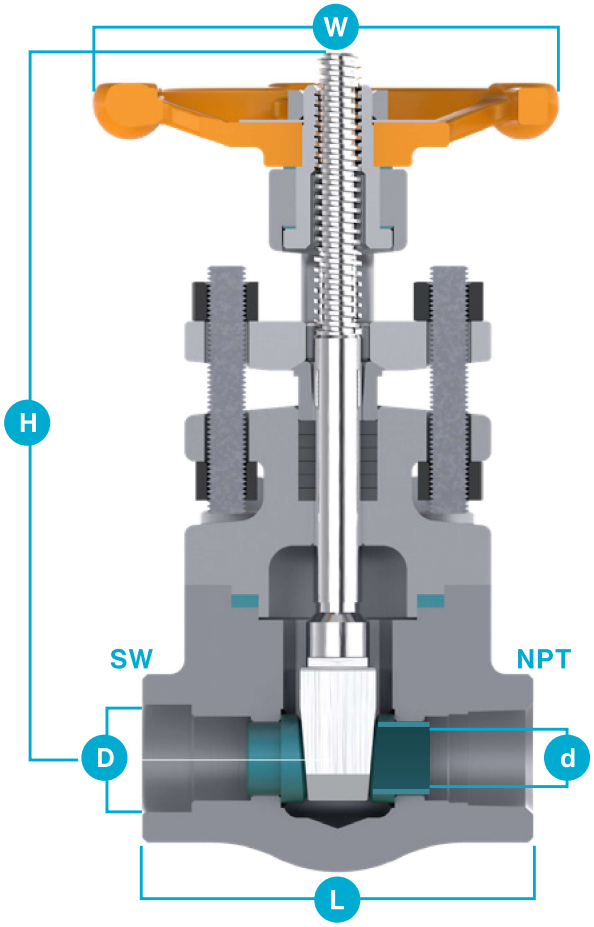
* - HF Denotes CoCr-A hardfacing applied to sealing surface (Stellite® 6 or equivalent)

** - If NACE compliance for exposed service is required, carbon steel valves can be supplied with appropriate bolting (A105 - B7M/2HM, LF2 - L7M/7M)

API 602 GATE VALVE

(FNPT/SW) ASME Class 800 & 1500

Dimensional Information



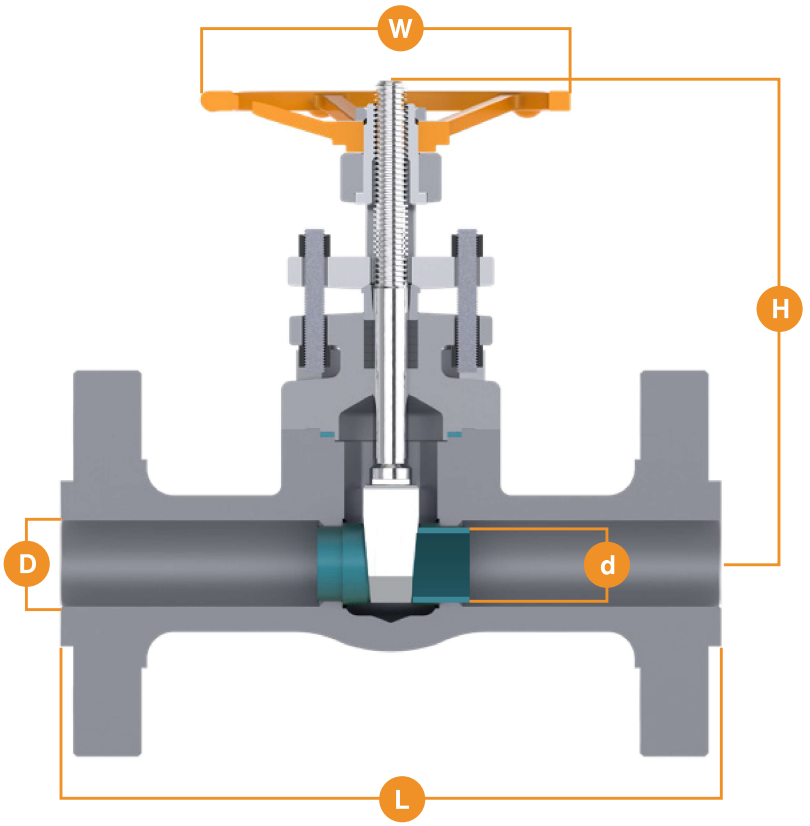
SW END / FNPT END | CL. 800 | INCH (MM)							H (OPEN)	H (CLOSE)	WT LB (KG)
NPS	DN	L	D	d	B1	W			
0.5	15	3.11 (79)	0.86 (21.8)	0.43 (11)	0.39 (10)	3.94 (100)	6.14 (156)	5.59 (142)	4 (2)
0.75	20	3.62 (92)	1.07 (27.1)	0.51 (13)	0.51 (13)	3.94 (100)	6.26 (159)	5.59 (142)	6 (2.5)
1	25	4.37 (111)	1.33 (33.9)	0.67 (17)	0.51 (13)	4.72 (120)	7.44 (189)	6.65 (169)	11 (5)
1.25	32	4.72 (120)	1.68 (42.7)	0.91 (23)	0.51 (13)	6.3 (160)	8.86 (225)	7.87 (200)	13 (6)
1.5	40	4.72 (120)	1.92 (48.8)	1.1 (28)	0.51 (13)	6.3 (160)	9.49 (241)	8.19 (208)	15 (7)
2	50	5.51 (140)	2.41 (61.2)	1.42 (36)	0.63 (16)	7.09 (180)	11.06 (281)	9.49 (241)	24 (11)

SW END / FNPT END | CL. 1500 | INCH (MM)							H (OPEN)	H (CLOSE)	WT LB (KG)
NPS	DN	L	D	d	B1	W			
0.5	15	4.37 (111)	0.86 (21.8)	0.43 (11)	0.39 (10)	4.72 (120)	7.2 (183)	6.61 (168)	9 (4)
0.75	20	4.37 (111)	1.07 (27.1)	0.51 (13)	0.51 (13)	4.72 (120)	7.28 (185)	6.61 (168)	9 (4)
1	25	4.72 (120)	1.33 (33.9)	0.71 (18)	0.51 (13)	6.3 (160)	8.66 (220)	7.83 (199)	15 (7)
1.25	32	4.72 (120)	1.68 (42.7)	0.94 (24)	0.51 (13)	6.3 (160)	9.49 (241)	8.23 (209)	20 (9)
1.5	40	5.51 (140)	1.92 (48.8)	1.14 (29)	0.51 (13)	7.09 (180)	11.14 (283)	9.49 (241)	26 (12)
2	50	7.01 (178)	2.41 (61.2)	1.34 (34)	0.63 (16)	7.87 (200)	12.09 (307)	10.55 (268)	37 (17)

API 602 GATE VALVE

(FLANGED) ASME Class 150, 300, 600 & 1500

Dimensional Information



FLANGED | CL.150 | INCH (MM)					H	W	WT LB (KG)	L (RTJ)
NPS	DN	L (RF)	D	d				
0.5	15	4.3 (108)	0.59 (15)	0.43 (11)	6.14 (156)	3.94 (100)	10 (4.5)	4.7 (119)
0.75	20	4.6 (117)	0.79 (20)	0.51 (13)	6.26 (159)	3.94 (100)	11 (5.2)	5.1 (130)
1	25	5 (127)	0.98 (25)	0.67 (17)	7.44 (189)	4.72 (120)	18 (8.2)	5.5 (140)
1.25	32	5.5 (140)	1.26 (32)	0.91 (23)	8.86 (225)	6.3 (160)	25 (11.5)	6 (153)
1.5	40	6.5 (165)	1.57 (40)	1.1 (28)	9.49 (241)	6.3 (160)	28 (12.5)	7 (178)
2	50	7 (178)	1.97 (50)	1.42 (36)	11.06 (281)	7.09 (180)	45 (20.3)	7.5 (191)

FLANGED | CL.300 | INCH (MM)					H	W	WT LB (KG)	L (RTJ)
NPS	DN	L (RF)	D	d				
0.5	15	5.5 (140)	0.59 (15)	0.43 (11)	6.14 (156)	3.94 (100)	11 (4.8)	5.9 (151)
0.75	20	6 (152)	0.79 (20)	0.51 (13)	6.26 (159)	3.94 (100)	14 (6.2)	6.5 (165)
1	25	6.5 (165)	0.98 (25)	0.67 (17)	7.44 (189)	4.72 (120)	21 (9.3)	7 (178)
1.25	32	7 (178)	1.26 (32)	0.91 (23)	8.86 (225)	6.3 (160)	31 (14)	7.5 (191)
1.5	40	7.5 (190)	1.57 (40)	1.1 (28)	9.49 (241)	6.3 (160)	34 (15.5)	8 (203)
2	50	8.5 (216)	1.97 (50)	1.42 (36)	11.06 (281)	7.09 (180)	52 (23.4)	9.1 (232)

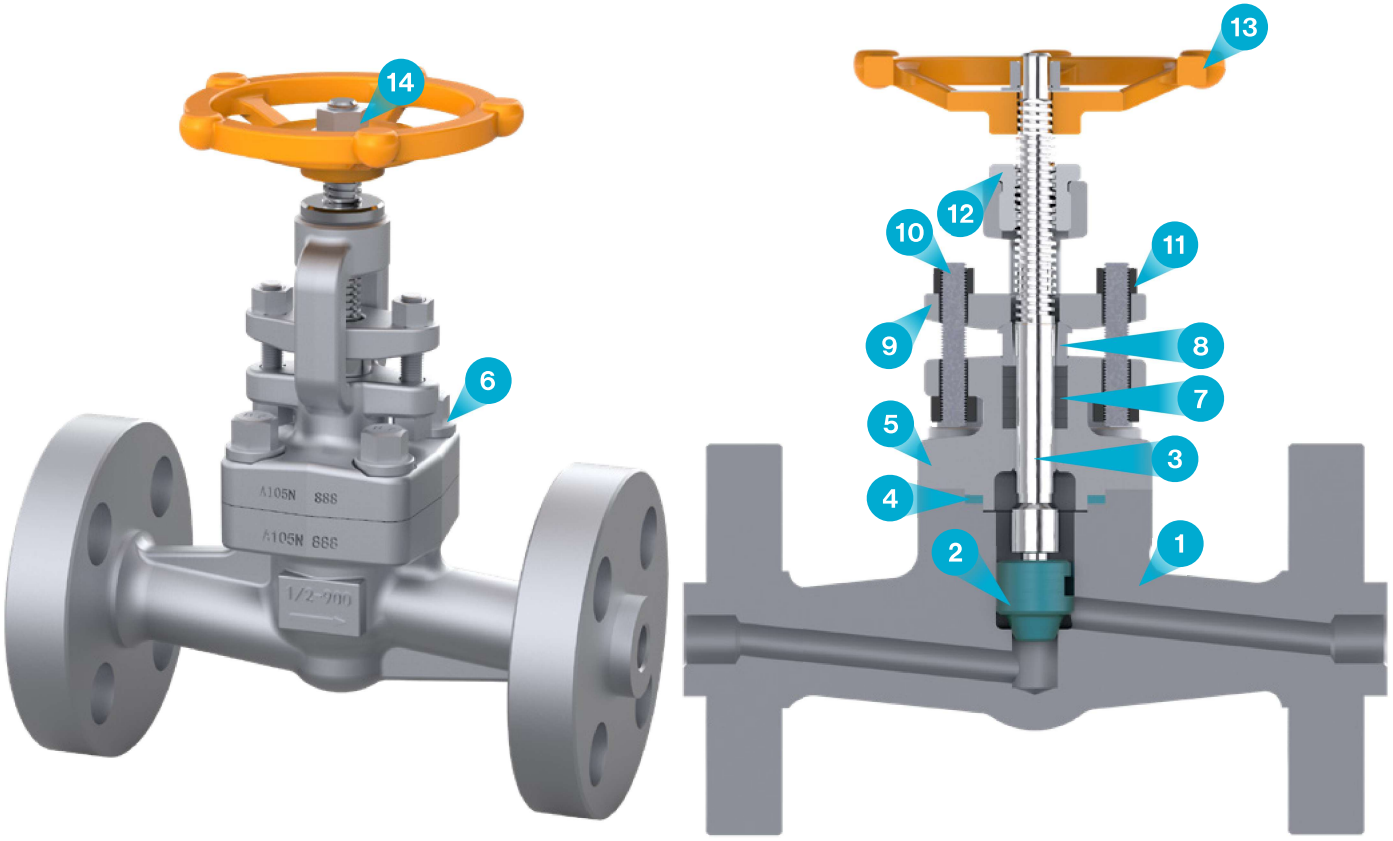
FLANGED | CL.600 | INCH (MM)					H	W	WT LB (KG)	L (RTJ)
NPS	DN	L (RF)	D	d				
0.5	15	6.5 (165)	0.59 (15)	0.43 (11)	6.14 (156)	3.94 (100)	13 (5.9)	6.4 (163)
0.75	20	7.5 (190)	0.79 (20)	0.51 (13)	6.26 (159)	3.94 (100)	16 (7.4)	7.5 (190)
1	25	8.5 (216)	0.98 (25)	0.67 (17)	7.44 (189)	4.72 (120)	24 (10.7)	8.5 (216)
1.25	32	9 (229)	1.26 (32)	0.91 (23)	8.86 (225)	6.3 (160)	36 (16.2)	9 (229)
1.5	40	9.5 (241)	1.57 (40)	1.1 (28)	9.49 (241)	6.3 (160)	39 (17.5)	9.5 (241)
2	50	11.5 (292)	1.97 (50)	1.42 (36)	11.06 (281)	7.09 (180)	62 (28.3)	11.5 (292)

FLANGED | CL.1500 | INCH (MM)					H	W	WT LB (KG)	L (RTJ)
NPS	DN	L (RF)	D	d				
0.5	15	8.5 (216)	0.59 (15)	0.43 (11)	7.28 (185)	4.72 (120)	15 (6.9)	8.5 (216)
0.75	20	9 (229)	0.79 (20)	0.51 (13)	7.44 (189)	4.72 (120)	25 (11.2)	9 (229)
1	25	10 (254)	0.98 (25)	0.67 (17)	8.86 (225)	6.3 (160)	28 (12.8)	10 (254)
1.25	32	11 (279)	1.26 (32)	0.91 (23)	9.49 (241)	6.3 (160)	36 (16.5)	11 (279)
1.5	40	12 (305)	1.57 (40)	1.1 (28)	11.06 (281)	7.09 (180)	46 (21)	12 (305)
2	50	14.5 (368)	1.97 (50)	1.42 (36)	12.4 (315)	7.87 (200)	64 (28.9)	14.6 (371)

API 602 GLOBE VALVE

ASME Class 150, 300, 600, 800 & 1500

Standard Parts and Materials



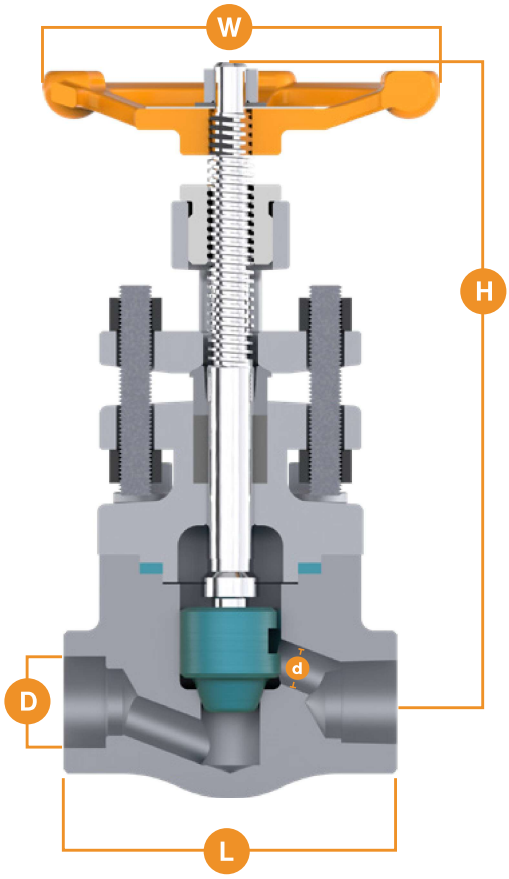
ITEM	PART NAME	A105 API TRIM 8	LF2 API TRIM 12	F5 API TRIM 5	F316/F316L API TRIM 12	F51 1/2 HARDFACE TRIM
1	Body	ASTM A105N + HF*	ASTM A350 LF2 Cl. 1 + HF*	ASTM A182 F5 + HF*	ASTM A182 F316/F316L + HF*	ASTM A182 F51 + HF*
2	Disc	ASTM A182 F6a	ASTM A182 F316	ASTM A182 F6a + HF*	ASTM A182 316	ASTM A182 F51
3	Stem	ASTM A276 410	ASTM A276 316	ASTM A276 410	ASTM A276 316	ASTM A276 S31803
4	Spiral Wound Gasket	SS304 + Graphite	SS316 + Graphite	SS304 + Graphite	SS316 + Graphite	S31803 + Graphite
5	Bonnet	ASTM A105N	ASTM A350 LF2	ASTM A182 F5	ASTM A182 F316/F316L	ASTM A182 F51
6	Body Bolt	ASTM A193 B7	ASTM A320 L7	ASTM A193 B16	ASTM A193 B8M	ASTM A193 B8M
7	Packing	Graphite				
8	Gland	ASTM A276 410	ASTM A276 316	ASTM A276 410	ASTM A276 316	ASTM A276 316
9	Gland Flange	ASTM A105N	ASTM A350 LF2 Cl. 1	ASTM A182 F5	ASTM A182	ASTM A182 F51
10	Gland Eyebolt	ASTM A193 B7	ASTM A320 L7	ASTM A193 B16	ASTM A193 B8M	ASTM A193 B8M
11	Eyebolt Nut	ASTM A194 2H	ASTM A194 7	ASTM A194 7	ASTM A194 8M	ASTM A194 8M
12	Stem Nut	ASTM A276 410				
13	Handwheel	ASTM A47 32510				
14	Handwheel Nut	Steel				

* - HF Denotes CoCr-A hardfacing applied to sealing surface (Stellite® 6 or equivalent)
** - If NACE compliance for exposed service is required, carbon steel valves can be supplied with appropriate bolting (A105 - B7M/2HM, LF2 - L7M/7M)

API 602 GLOBE VALVE

(FNPT/SW) ASME Class 800 & 1500

Dimensional Information



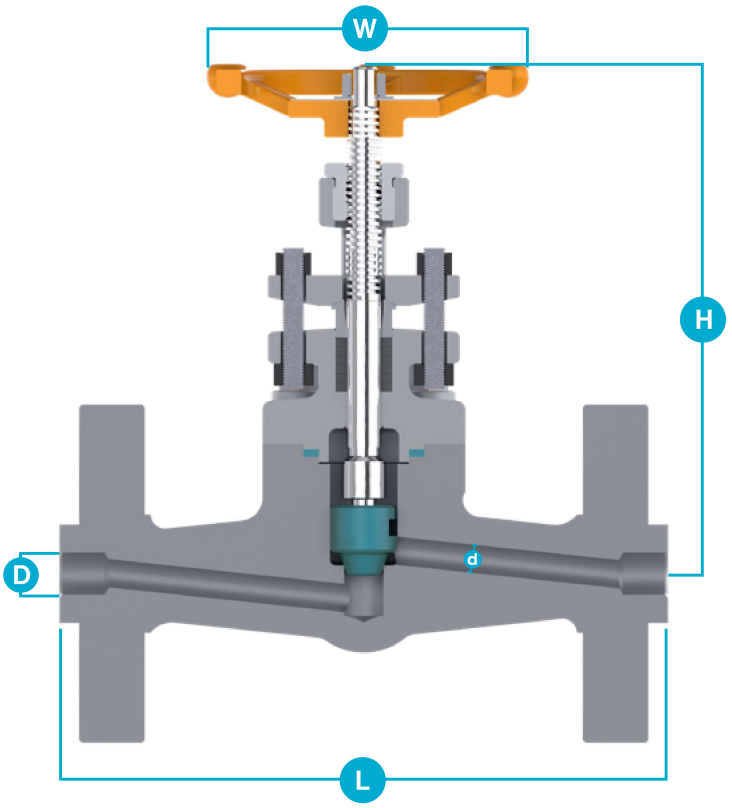
SW END / FNPT END | CL. 800							
NPS	DN	L	d	D	H	W	WT LB *(KG)*
0.5	15	3.11 (79)	0.39 (10)	0.86 (21.8)	6.42 (163)	3.94 (100)	4 (2)
0.75	20	3.62 (92)	0.47 (12)	1.07 (27.1)	6.42 (163)	3.94 (100)	7 (3)
1	25	4.37 (111)	0.71 (18)	1.33 (33.9)	7.68 (195)	4.72 (120)	9 (4)
1.25	32	4.72 (120)	0.91 (23)	1.68 (42.7)	9.53 (242)	6.3 (160)	13 (6)
1.5	40	5.98 (152)	1.1 (28)	1.92 (48.8)	9.76 (248)	6.3 (160)	15 (7)
2	50	6.77 (172)	1.42 (36)	2.41 (61.2)	11.26 (286)	7.09 (180)	24 (11)

SW END / FNPT END | CL. 1500							
NPS	DN	L	d	D	H	W	WT LB *(KG)*
0.5	15	4.37 (111)	0.39 (10)	0.86 (21.8)	7.52 (191)	4.72 (120)	4 (2)
0.75	20	4.37 (111)	0.47 (12)	1.07 (27.1)	7.52 (191)	4.72 (120)	7 (3)
1	25	4.72 (120)	0.71 (18)	1.33 (33.9)	9.33 (237)	6.3 (160)	9 (4)
1.25	32	5.98 (152)	0.91 (23)	1.68 (42.7)	10.16 (258)	6.3 (160)	13 (6)
1.5	40	6.77 (172)	1.1 (28)	1.92 (48.8)	11.22 (285)	7.09 (180)	18 (8)
2	50	8.66 (220)	1.42 (36)	2.41 (61.2)	12.56 (319)	7.87 (200)	29 (13)

API 602 GLOBE VALVE

(FLANGED) ASME Class 150, 300, 600 & 1500

Dimensional Information



FLANGED | CL. 150 | INCH (MM)							
NPS	DN	L (RF)	d	D	H	W	WT LB (KG)
0.5	15	4.25 (108)	0.39 (10)	0.86 (21.8)	6.42 (163)	3.94 (100)	9 (4)
0.75	20	4.61 (117)	0.47 (12)	1.07 (27.1)	6.42 (163)	3.94 (100)	11 (5)
1	25	5 (127)	0.71 (18)	1.33 (33.9)	7.68 (195)	4.72 (120)	13 (6)
1.25	32	5.51 (140)	0.91 (23)	1.68 (42.7)	9.53 (242)	6.3 (160)	20 (9)
1.5	40	6.5 (165)	1.1 (28)	1.92 (48.8)	9.76 (248)	6.3 (160)	24 (11)
2	50	7.99 (203)	1.42 (36)	2.41 (61.2)	11.26 (286)	7.09 (180)	35 (16)

FLANGED | CL. 600 | INCH (MM)							
NPS	DN	L (RF)	d	D	H	W	WT LB (KG)
0.5	15	6.5 (165)	0.39 (10)	0.86 (21.8)	6.42 (163)	3.94 (100)	11 (5)
0.75	20	7.48 (190)	0.47 (12)	1.07 (27.1)	6.42 (163)	3.94 (100)	13 (6)
1	25	8.5 (216)	0.71 (18)	1.33 (33.9)	7.68 (195)	4.72 (120)	18 (8)
1.25	32	9.02 (229)	0.91 (23)	1.68 (42.7)	9.53 (242)	6.3 (160)	26 (12)
1.5	40	9.49 (241)	1.1 (28)	1.92 (48.8)	9.76 (248)	6.3 (160)	33 (15)
2	50	11.5 (292)	1.42 (36)	2.41 (61.2)	11.26 (286)	7.09 (180)	44 (20)

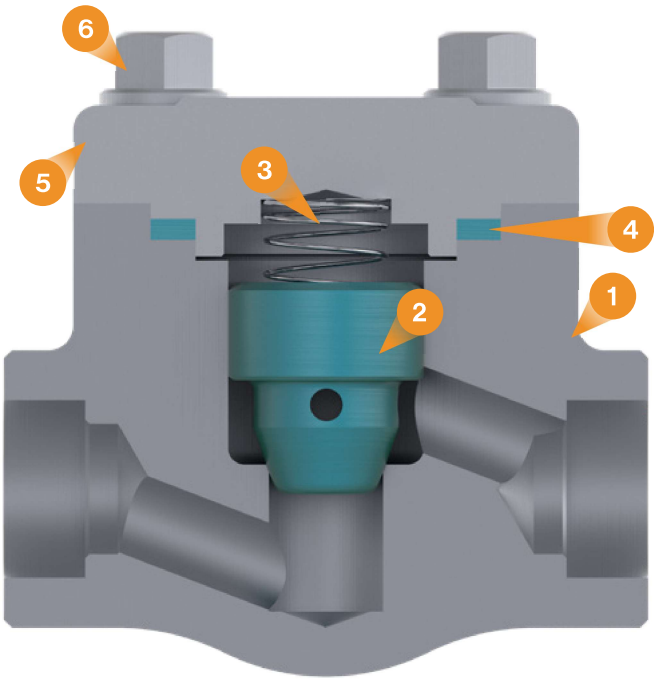
FLANGED | CL. 300 | INCH (MM)							
NPS	DN	L (RF)	d	D	H	W	WT LB (KG)
0.5	15	5.98 (152)	0.39 (10)	0.86 (21.8)	6.42 (163)	3.94 (100)	9 (4)
0.75	20	7.01 (178)	0.47 (12)	1.07 (27.1)	6.42 (163)	3.94 (100)	13 (6)
1	25	7.99 (203)	0.71 (18)	1.33 (33.9)	7.68 (195)	4.72 (120)	18 (8)
1.25	32	8.5 (216)	0.91 (23)	1.68 (42.7)	9.53 (242)	6.3 (160)	24 (11)
1.5	40	9.02 (229)	1.1 (28)	1.92 (48.8)	9.76 (248)	6.3 (160)	31 (14)
2	50	10.51 (267)	1.42 (36)	2.41 (61.2)	11.26 (286)	7.09 (180)	40 (18)

FLANGED | CL. 1500 | INCH (MM)							
NPS	DN	L (RF)	d	D	H	W	WT LB (KG)
0.5	15	8.5 (216)	0.39 (10)	0.86 (21.8)	7.52 (191)	4.72 (120)	18 (8)
0.75	20	9.02 (229)	0.47 (12)	1.07 (27.1)	7.52 (191)	4.72 (120)	20 (9)
1	25	10 (254)	0.71 (18)	1.33 (33.9)	9.33 (237)	6.3 (160)	24 (11)
1.25	32	10.98 (279)	0.91 (23)	1.68 (42.7)	10.16 (258)	6.3 (160)	33 (15)
1.5	40	12.01 (305)	1.1 (28)	1.92 (48.8)	11.22 (285)	7.09 (180)	44 (20)
2	50	14.49 (368)	1.42 (36)	2.41 (61.2)	12.56 (319)	7.87 (200)	68 (31)

API 602 PISTON CHECK VALVE

ASME Class 150, 300, 600, 800, & 1500

Standard Parts and Materials



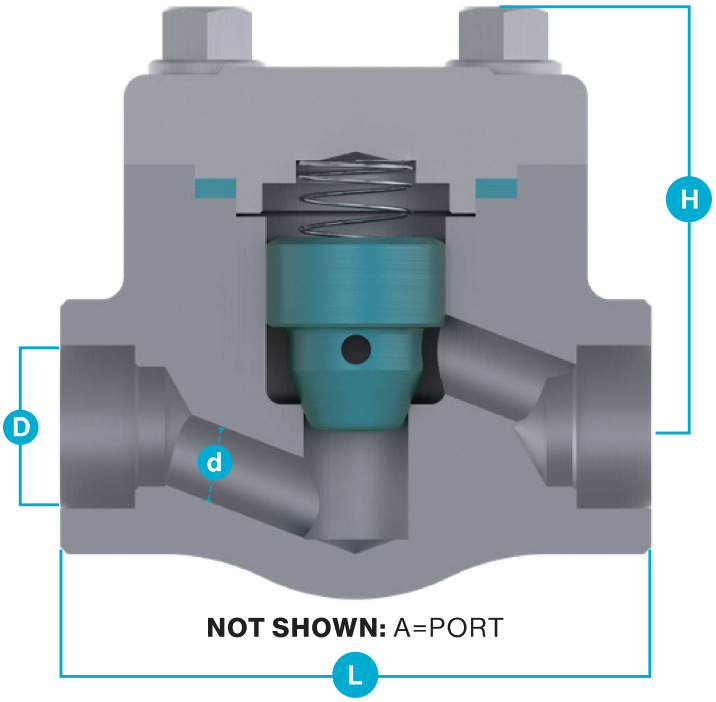
ITEM	PART NAME	A105 API TRIM 8	LF2 API TRIM 12	F5 API TRIM 5	F316/F316L API TRIM 12	F51 1/2 HARDFACE TRIM
1	Body	ASTM A105N + HF*	ASTM A350 LF2 Cl. 1 + HF*	ASTM A182 F5 + HF*	ASTM A182 F316/F316L + HF*	ASTM A182 F51 + HF*
2	Disc	ASTM A276 410	ASTM A276 316	ASTM A276 410 + HF*	ASTM A276 316	ASTM A276 S31803
3	Spring	SS304	SS316	SS304	SS316	S31803
4	Spiral Wound Gasket	SS304 + GRAPHITE	SS316 + GRAPHITE	SS304 + GRAPHITE	SS316 + GRAPHITE	S31803 + GRAPHITE
5	Bonnet	ASTM A105N	ASTM A350 LF2 Cl. 1	ASTM A182 F5	ASTM A182 F316/F316L	ASTM A182 F51
6	Body Bolt	ASTM A193 B7	ASTM A320 L7	ASTM A193 B16	ASTM A193 B8M	ASTM A193 B8M

* - HF Denotes CoCr-A hardfacing applied to sealing surface (Stellite® 6 or equivalent)
** - If NACE compliance for exposed service is required, carbon steel valves can be supplied with appropriate bolting (A105 - B7M/2HM, LF2 - L7M/7M)

API 602 PISTON CHECK VALVE

ASME Class 150, 300, 600, 800, & 1500

Dimensional Information



NOT SHOWN: A=PORT

FLANGED | CL. 150 | INCH (MM)					L (RTJ)	WT LB (KG)
NPS	DN	L	D	H		
0.5	15	4.25 (108)	0.63 (16)	2.36 (60)	4.69 (119)	7 (3)
0.75	20	4.61 (117)	0.75 (19)	2.36 (60)	5.12 (130)	7 (3)
1	25	5 (127)	0.98 (25)	2.91 (74)	5.51 (140)	9 (4)
1.5	40	6.5 (165)	1.5 (38)	3.78 (96)	7.01 (178)	24 (11)
2	50	7.99 (203)	1.93 (49)	4.57 (116)	8.5 (216)	31 (14)

FLANGED | CL. 600 | INCH (MM)					L (RTJ)	WT LB (KG)
NPS	DN	L	D	H		
0.5	15	6.5 (165)	0.63 (16)	2.36 (60)	6.46 (164)	9 (4)
0.75	20	7.48 (190)	0.83 (21)	2.36 (60)	7.48 (190)	9 (4)
1	25	8.5 (216)	1.06 (27)	2.91 (74)	8.5 (216)	15 (7)
1.5	40	9.49 (241)	1.61 (41)	3.78 (96)	9.49 (241)	33 (15)
2	50	11.5 (292)	2.05 (52)	4.57 (116)	11.61 (295)	42 (19)

SW END / FNPT END | CL. 800 | INCH (MM)							WT LB (KG)
NPS	DN	L	d	D	H	A	
0.5	15	3.11 (79)	0.63 (16)	0.86 (21.8)	2.36 (60)	0.39 (10)	3 (1.2)
0.75	20	3.62 (92)	0.83 (21)	1.07 (27.1)	2.36 (60)	0.47 (12)	3 (1.4)
1	25	4.37 (111)	1.06 (27)	1.33 (33.9)	2.91 (74)	0.71 (18)	5 (2.3)
1.25	32	4.72 (120)	1.3 (33)	1.68 (42.7)	3.35 (85)	0.91 (23)	9 (3.9)
1.5	40	5.98 (152)	1.61 (41)	1.92 (48.8)	3.78 (96)	1.1 (28)	12 (5.6)
2	50	6.77 (172)	2.05 (52)	2.41 (61.2)	4.57 (116)	1.42 (36)	20 (8.9)

FLANGED | CL. 300 | INCH (MM)					L (RTJ)	WT LB (KG)
NPS	DN	L	D	H		
0.5	15	5.98 (152)	0.63 (16)	2.36 (60)	5.94 (151)	7 (3)
0.75	20	7.01 (178)	0.83 (21)	2.36 (60)	6.5 (165)	9 (4)
1	25	7.99 (203)	1.06 (27)	2.91 (74)	9.02 (229)	13 (6)
1.5	40	9.02 (229)	1.61 (41)	3.78 (96)	10 (254)	31 (14)
2	50	10.51 (267)	2.05 (52)	4.57 (116)	11.14 (283)	35 (16)

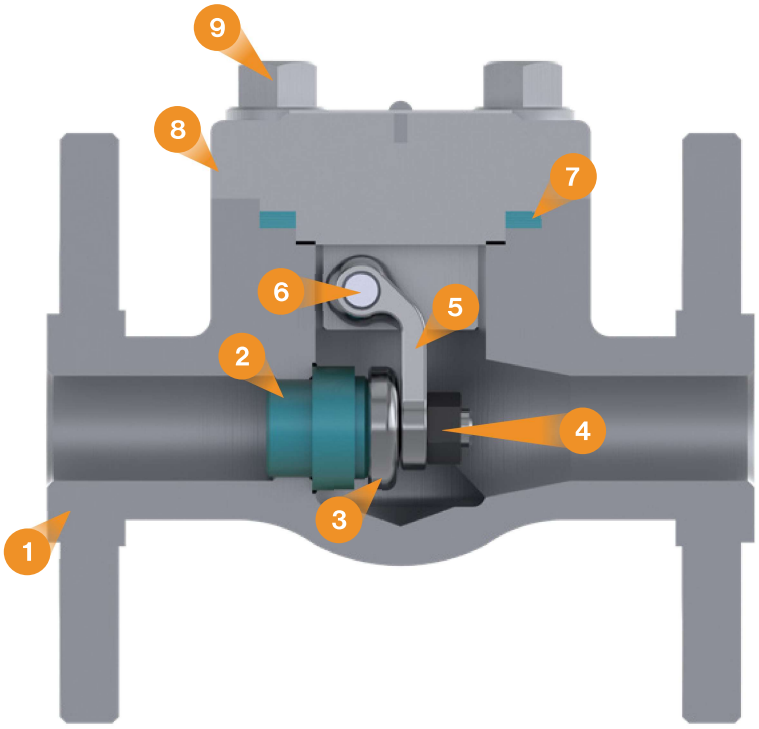
FLANGED | CL. 1500 | INCH (MM)					L (RTJ)	WT LB (KG)
NPS	DN	L	D	H		
0.5	15	8.5 (216)	0.63 (16)	2.91 (74)	8.5 (216)	18 (8)
0.75	20	9.02 (229)	0.83 (21)	2.91 (74)	9.02 (229)	20 (9)
1	25	10 (254)	1.06 (27)	3.35 (85)	10 (254)	24 (11)
1.25	32	10.98 (279)	1.3 (33)	3.78 (96)	10.98 (279)	35 (16)
1.5	40	12.01 (305)	1.61 (41)	4.57 (116)	12.01 (305)	49 (22)
2	50	14.49 (368)	2.05 (52)	5.47 (139)	14.61 (371)	79 (36)

SW END / FNPT END | CL. 1500 | INCH (MM)							WT LB (KG)
NPS	DN	L	d	D	H	A	
0.5	15	4.37 (111)	0.63 (16)	0.86 (21.8)	2.91 (74)	0.39 (10)	7 (3)
0.75	20	4.37 (111)	0.83 (21)	1.07 (27.1)	2.91 (74)	0.47 (12)	7 (3.4)
1	25	4.72 (120)	1.06 (27)	1.33 (33.9)	3.35 (85)	0.71 (18)	11 (4.8)
1.25	32	5.98 (152)	1.3 (33)	1.68 (42.7)	3.78 (96)	0.91 (23)	15 (6.9)
1.5	40	6.77 (172)	1.61 (41)	1.92 (48.8)	4.57 (116)	1.1 (28)	24 (10.7)
2	50	8.66 (220)	2.05 (52)	2.41 (61.2)	5.47 (139)	1.42 (36)	32 (14.6)

API 602 SWING CHECK VALVE

ASME Class 150, 300, 600, 800, & 1500

Standard Parts and Materials



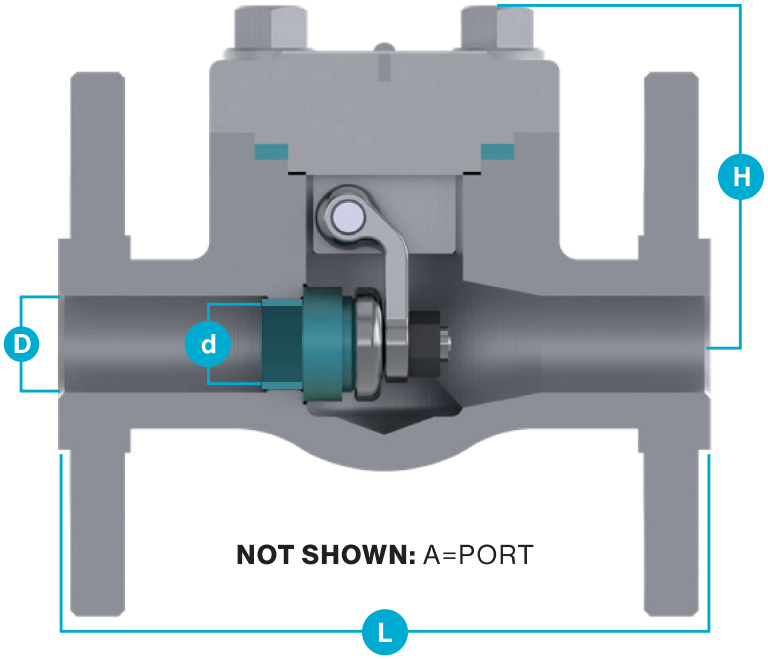
ITEM	PART NAME	A105 API TRIM 8	LF2 API TRIM 12	F5 API TRIM 5	F316/F316L API TRIM 12	F51 1/2 HARDFACE TRIM
1	Body	ASTM A105N	ASTM A350 LF2 Cl. 1	ASTM A182 F5	ASTM A182 F316/F316L	ASTM A182 F51
2	Seat Ring	ASTM A276 410 + HF*	ASTM A276 316 + HF*	ASTM A182 F6a + HF*	ASTM A276 F316 + HF*	ASTM A276 F51 + HF*
3	Disc	ASTM A276 410	ASTM A276 316	ASTM A276 410 + HF*	ASTM A182 F316	ASTM A276 S31803
4	Nut	ASTM A194 B8	ASTM A194 B8	ASTM A194 B8	ASTM A194 B8M	ASTM A194 B8M
5	Arm	ASTM A351 CF8	ASTM A351 CF8M	ASTM A351 CF8	ASTM A351 CF8M	ASTM A995 CD3MN
6	Pin	ASTM A276 410	ASTM A276 316	ASTM A276 410	ASTM A276 316	ASTM A276 S31803
7	Spiral Wound Gasket	SS304 + GRAPHITE	SS316 + GRAPHITE	SS304 + GRAPHITE	SS316 + GRAPHITE	S31803 + GRAPHITE
8	Bonnet	ASTM A105N	ASTM A350 LF2 Cl. 1	ASTM A182 F5	ASTM A182 F316/F316L	ASTM A182 F51
9	Body bolt	ASTM A193 B7	ASTM A320 L7	ASTM A193 B16	ASTM A193 B8M	ASTM A193 B8M

* - HF Denotes CoCr-A hardfacing applied to sealing surface (Stellite® 6 or equivalent)
** - If NACE compliance for exposed service is required, carbon steel valves can be supplied with appropriate bolting (A105 - B7M/2HM, LF2 - L7M/7M)

API 602 SWING CHECK VALVE

ASME Class 150, 300, 600, 800, & 1500

Dimensional Information



FLANGED | CL. 150 | INCH (MM)					L (RTJ)	WT LB (KG)
NPS	DN	d	H	L		
0.5	15	0.71 (18)	2.13 (54)	4.25 (108)	4.69 (119)	7 (3)
0.75	20	0.71 (18)	2.13 (54)	4.61 (117)	5.12 (130)	7 (3)
1	25	0.91 (23)	2.91 (74)	5 (127)	5.51 (140)	9 (4)
1.25	32	1.14 (29)	3.35 (85)	5.51 (140)	5.98 (152)	18 (8)
1.5	40	1.36 (34.5)	3.78 (96)	6.5 (165)	7.01 (178)	22 (10)
2	50	1.69 (43)	4.53 (115)	7.99 (203)	8.5 (216)	29 (13)

FLANGED | CL. 600 | INCH (MM)					L (RTJ)	WT LB (KG)
NPS	DN	d	H	L		
0.5	15	0.71 (18)	2.13 (54)	6.5 (165)	6.46 (164)	9 (4)
0.75	20	0.71 (18)	2.13 (54)	7.48 (190)	7.48 (190)	9 (4)
1	25	0.91 (23)	2.91 (74)	8.5 (216)	8.5 (216)	15 (7)
1.25	32	1.14 (29)	3.35 (85)	9.02 (229)	9.02 (229)	24 (11)
1.5	40	1.36 (34.5)	3.78 (96)	9.49 (241)	9.49 (241)	31 (14)
2	50	1.69 (43)	4.53 (115)	11.5 (292)	11.61 (295)	40 (18)

SW END / FNPT END | CL. 800 | INCH (MM)							WT LB (KG)
NPS	DN	L	d	D	H	A	
0.5	15	3.11 (79)	0.71 (18)	0.86 (21.8)	2.13 (54)	0.43 (11)	2 (1)
0.75	20	3.62 (92)	0.71 (18)	1.07 (27.1)	2.13 (54)	0.51 (13)	2 (1.1)
1	25	4.37 (111)	0.91 (23)	1.33 (33.9)	2.91 (74)	0.67 (17)	4 (1.9)
1.25	32	4.72 (120)	1.14 (29)	1.68 (42.7)	3.35 (85)	0.91 (23)	7 (3.4)
1.5	40	4.72 (120)	1.92 (48.8)	1.92 (48.8)	3.78 (96)	1.1 (28)	10 (4.5)
2	50	5.51 (140)	2.41 (61.2)	2.41 (61.2)	4.53 (115)	1.42 (36)	16 (7.3)

FLANGED | CL. 300 | INCH (MM)					L (RTJ)	WT LB (KG)
NPS	DN	d	H	L		
0.5	15	0.71 (18)	2.13 (54)	5.51 (140)	5.94 (151)	7 (3)
0.75	20	0.71 (18)	2.13 (54)	5.98 (152)	6.5 (165)	9 (4)
1	25	0.91 (23)	2.91 (74)	8.5 (216)	9.02 (229)	13 (6)
1.25	32	1.14 (29)	3.35 (85)	9.02 (229)	9.49 (241)	22 (10)
1.5	40	1.36 (34.5)	3.78 (96)	9.49 (241)	10 (254)	29 (13)
2	50	1.69 (43)	4.53 (115)	10.51 (267)	11.14 (283)	33 (15)

FLANGED | CL. 1500 | INCH (MM)					L (RTJ)	WT LB (KG)
NPS	DN	d	H	L		
0.5	15	0.71 (18)	2.13 (54)	8.5 (216)	8.5 (216)	18 (8)
0.75	20	0.71 (18)	2.91 (74)	9.02 (229)	9.02 (229)	20 (9)
1	25	0.91 (23)	3.35 (85)	10 (254)	10 (254)	24 (11)
1.25	32	1.14 (29)	3.78 (96)	10.98 (279)	10.98 (279)	33 (15)
1.5	40	1.36 (34.5)	4.53 (115)	12.01 (305)	12.01 (305)	44 (20)
2	50	1.69 (43)	5.71 (145)	14.49 (368)	14.61 (371)	75 (34)

SW END / FNPT END | CL. 1500 | INCH (MM)							WT LB (KG)
NPS	DN	L	d	D	H	A	
0.5	15	4.37 (111)	0.71 (18)	0.86 (21.8)	2.13 (54)	0.43 (11)	7 (3)
0.75	20	4.37 (111)	0.71 (18)	1.07 (27.1)	2.91 (74)	0.51 (13)	8 (3.6)
1	25	4.72 (120)	0.91 (23)	1.33 (33.9)	3.35 (85)	0.67 (17)	9 (4.3)
1.25	32	4.72 (120)	1.14 (29)	1.68 (42.7)	3.78 (96)	0.91 (23)	13 (6.1)
1.5	40	5.51 (140)	1.36 (34.5)	1.92 (48.8)	4.53 (115)	1.1 (28)	19 (8.8)
2	50	7.01 (178)	1.69 (43)	2.41 (61.2)	5.71 (145)	1.42 (36)	28 (12.6)

PRESSURE – TEMPERATURE RATINGS *(PSIG)*

ASME B16.34 Valves

The following pressure-temperature ratings are based on ASME B16.34 (2020 Edition) and API 602 (11th Edition). The temperatures shown are that of the pressure-containing shell, which is considered to be the same temperature as that of the fluid flowing within it. Special consideration should be given to items such as trim, bonnet gasket material, and packing to assure that the rating is merited in all respects.

MAXIMUM ALLOWABLE NON-SHOCK PRESSURE (PSIG)								
SERVICE TEMP °F	PRESSURE CLASS	A105 & A350 GR. LF2 GROUP 1.1 (A)	A182 GR. F11 CL. 2 GROUP 1.9 (C), (D)	A182 GR. F5A GROUP 1.13	A182 GR. F9 GROUP 1.14	A182 GR. F316 GROUP 2.2 (G)	A182 GR. F51 GROUP 2.8 (H)	A995 GR. CD3MN GROUP 2.8 (H)
-20 to 100	150	285	290	290	290	275	290	290
	300	740	750	750	750	720	750	750
	600	1,480	1,500	1,500	1,500	1,440	1,500	
	800	1,975	2,000	2,000	2,000	1,920	2,000	1,500
	1500	3,705	3,750	3,750	3,750	3,600	3,750	2,250
200	150	260	260	260	260	235	260	260
	300	680	750	750	750	620	745	745
	600	1,360	1,500	1,500	1,500	1,240	1,490	
	800	1,810	2,000	2,000	2,000	1,655	1,985	1,490
	1500	3,395	3,750	3,750	3,750	3,095	3,720	2,230
300	150	230	230	230	230	215	230	230
	300	655	720	730	730	560	665	665
	600	1,310	1,445	1,455	1,455	1,120	1,335	
	800	1,745	1,925	1,940	1,940	1,495	1,780	1,335
	1500	3,270	3,610	3,640	3,640	2,795	3,335	2,000
400	150	200	200	200	200	195	200	200
	300	635	695	705	705	515	615	
	600	1,265	1,385	1,410	1,410	1,025	1,230	615
	800	1,690	1,850	1,880	1,880	1,370	1,640	1,230
	1500	3,170	3,465	3,530	3,530	2,570	3,070	1,845
500	150	170	170	170	170	170	170	170
	300	605	665	665	665	480	580	
	600	1,205	1,330	1,330	1,330	955	1,160	580
	800	1,610	1,775	1,775	1,775	1,275	1,545	1,160
	1500	3,015	3,325	3,325	3,325	2,390	2,905	1,740
600	150	140	140	140	140	140	140	140
	300	570	605	605	605	450	555	
	600	1,135	1,210	1,210	1,210	900	1,115	555
	800	1,515	1,615	1,615	1,615	1,205	1,485	1,115
	1500	2,840	3,025	3,025	3,025	2,255	2,785	1,670
650	150	125	125	125	125	125	-	-
	300	550	590	590	590	440	-	
	600	1,100	1,175	1,175	1,175	885	-	-
	800	1,465	1,570	1,570	1,570	1,180	1,460	-
	1500	2,745	2,940	2,940	2,940	2,210	2,735	-
700	150	110	110	110	110	110	-	-
	300	530	570	570	570	435	-	-
	600	1,060	1,135	1,135	1,135	870	-	
	800	1,415	1,515	1,515	1,515	1,160	1,445	-
	1500	2,655	2,840	2,840	2,840	2,170	2,710	-
750	150	95	95	95	95	95	-	-
	300	505	530	530	530	425	-	-
	600	1,015	1,065	1,065	1,065	855	-	
	800	1,350	1,420	1,420	1,420	1,140	1,420	-
	1500	2,535	2,660	2,660	2,660	2,135	2,660	-
800	150	80	80	80	80	80	-	-
	300	410	510	510	510	420	-	-
	600	825	1,015	1,015	1,015	845	-	
	800	1,100	1,355	1,355	1,355	1,125	-	-
	1500	2,055	2,540	2,540	2,540	2,110	-	-
850	150	65	65	65	65	65	-	-
	300	320	485	485	485	420	-	-
	600	640	975	975	975	835	-	
	800	850	1,300	1,300	1,300	1,115	-	-
	1500	1,595	2,435	2,435	2,435	2,090	-	-
900	150	50	50	50	50	50	-	-
	300	230	450	375	450	415	-	-
	600	460	900	745	900	830	-	
	800	615	1,200	995	1,200	1,105	-	-
	1500	1,150	2,245	1,870	2,245	2,075	-	-

MAXIMUM ALLOWABLE NON-SHOCK PRESSURE (PSIG)								
SERVICE TEMP °F	PRESSURE CLASS	A105 & A350 GR. LF2 GROUP 1.1 (A)	A182 GR. F11 CL. 2 GROUP 1.9 (C), (D)	A182 GR. F5A GROUP 1.13	A182 GR. F9 GROUP 1.14	A182 GR. F316 GROUP 2.2 (G)	A182 GR. F51 GROUP 2.8 (H)	A995 GR. CD3MN GROUP 2.8 (H)
950	150	35	35	35	35	35	-	-
	300	135	320	275	375	385	-	-
	600	275	640	550	755	775	-	
	800	365	850	735	1,005	1,030	-	-
	1500	685	1,595	1,370	1,885	1,930	-	-
1000	150	20	20	20	20	20	-	-
	300	85	215	200	255	365	-	-
	600	170	430	400	505	725	-	
	800	225	575	530	675	970	-	-
	1500	430	1,080	995	1,270	1,820	-	-
1050	150	-	20 (f)	20 (f)	20 (f)	20 (f)	-	-
	300	-	145	145	170	360	-	-
	600	-	290	290	345	720	-	
	800	-	385	385	460	960	-	-
	1500	-	720	720	855	1,800	-	-
1100	150	-	20 (f)	20 (f)	20 (f)	20 (f)	-	-
	300	-	95	100	115	305	-	-
	600	-	190	200	225	610	-	
	800	-	255	265	300	815	-	-
	1500	-	480	495	565	1,525	-	-
1150	150	-	-	20 (f)	20 (f)	20 (f)	-	-
	300	-	-	60	75	235	-	-
	600	-	-	125	150	475	-	
	800	-	175	165	200	630	-	-
	1500	-	325	310	375	1,185	-	-
1200	150	-	-	15 (f)	20 (f)	20 (f)	-	-
	300	-	-	35	50	185	-	-
	600	-	-	70	105	370	-	
	800	-	110	95	140	495	-	-
	1500	-	205	170	255	925	-	-
1250	150	-	-	-	-	20 (f)	-	-
	300	-	-	-	-	145	-	-
	600	-	-	-	-	295	-	
	800	-	-	-	-	390	-	-
	1500	-	-	-	-	735	-	-
1300	150	-	-	-	-	20 (f)	-	-
	300	-	-	-	-	115	-	-
	600	-	-	-	-	235	-	
	800	-	-	-	-	310	-	-
	1500	-	-	-	-	585	-	-
1350	150	-	-	-	-	20 (f)	-	-
	300	-	-	-	-	95	-	-
	600	-	-	-	-	190	-	
	800	-	-	-	-	255	-	-
	1500	-	-	-	-	480	-	-
1400	150	-	-	-	-	20 (f)	-	-
	300	-	-	-	-	75	-	-
	600	-	-	-	-	150	-	
	800	-	-	-	-	200	-	-
	1500	-	-	-	-	380	-	-
1450	150	-	-	-	-	20 (f)	-	-
	300	-	-	-	-	60	-	-
	600	-	-	-	-	115	-	
	800	-	-	-	-	155	-	-
	1500	-	-	-	-	290	-	-
1500	150	-	-	-	-	15 (f)	-	-
	300	-	-	-	-	40	-	-
	600	-	-	-	-	85	-	
	800	-	-	-	-	110	-	-
	1500	-	-	-	-	205	-	-

ADDITIONAL NOTES FOR BOTH P/T CHARTS (PSIG & BAR)

(a) Upon prolonged exposure to temperatures above 800°F (425°C), the carbide phase of steel may be converted to graphite. Permissible, but not recommended for prolonged use above 800°F (425°C).
(b) Not to be used over 650°F (345°C).
(c) Use normalized and tempered material only.
(d) Not to be used over 1,100°F (595°C).
(e) The deliberate addition of any element not listed in ASTM A217, Table 1 is prohibited, except that calcium (Ca) and manganese (Mn) may be added for deoxidation.
(f) Flanged-end valve ratings terminate at 1,000°F (439°C).
(g) At temperatures above 1,000°F (439°C), use only when the carbon content is 0.04% or higher.
(h) This steel may become brittle after service at moderately elevated temperatures. Not to be used over 600°F (315°C).

PRESSURE – TEMPERATURE RATINGS *(BAR)*

ASME B16.34 Valves

MAXIMUM ALLOWABLE NON-SHOCK PRESSURE (BAR)								
SERVICE TEMP °C	PRESSURE CLASS	A105 & A350 GR. LF2 GROUP 1.1 (A)	A182 GR. F11 CL. 2 GROUP 1.9 (C), (D)	A182 GR. F5A GROUP 1.13	A182 GR. F9 GROUP 1.14	A182 GR. F316 GROUP 2.2 (G)	A182 GR. F51 GROUP 2.8 (H)	A995 GR. CD3MN GROUP 2.8 (H)
-29 to 38	150	19.6	19.8	20.0	20.0	19.0	20.0	20
	300	51.1	51.7	51.7	51.7	49.6	51.7	
	600	102.1	103.4	103.4	103.4	99.3	103.4	51.7
	800	13.62	13.79	13.79	13.79	13.24	13.79	103.4
	1500	255.3	258.6	258.6	258.6	248.2	258.6	155.1
50	150	19.2	19.5	19.5	19.5	18.4	19.5	19.5
	300	50.1	51.7	51.7	51.7	48.1	51.7	
	800	13.37	13.79	13.79	13.79	12.83	13.79	51.7
	600	100.2	103.4	103.4	103.4	96.2	103.4	103.4
	1500	250.6	258.6	258.6	258.6	240.6	258.6	155.1
100	150	17.7	17.7	17.7	17.7	16.2	17.7	17.7
	300	46.6	51.5	51.5	51.5	42.2	50.7	
	600	93.2	103.0	103.0	103.0	84.4	101.3	50.7
	800	12.43	13.73	13.74	13.74	11.25	13.51	101.3
	1500	233.0	257.4	257.6	257.6	211.0	253.3	152
150	150	15.8	15.8	15.8	15.8	14.8	15.8	15.8
	300	45.1	49.7	50.3	50.3	38.5	45.9	
	600	90.2	99.5	100.3	100.3	77.0	91.9	45.9
	800	12.02	13.26	13.38	13.38	10.27	12.25	91.9
	1500	225.4	248.7	250.8	250.8	192.5	229.6	137.8
200	150	13.8	13.8	13.8	13.8	13.7	13.8	13.8
	300	43.8	48.0	48.6	48.6	35.7	42.7	
	600	87.6	95.9	97.2	97.2	71.3	85.3	42.7
	800	11.68	12.79	12.96	12.96	9.51	11.38	85.3
	1500	219.0	239.8	243.4	243.4	178.3	213.3	128
250	150	12.1	12.1	12.1	12.1	12.1	12.1	12.1
	300	41.9	46.3	46.3	46.3	33.4	40.5	40.5
	600	83.9	92.7	92.7	92.7	66.8	80.9	
	800	11.18	12.36	12.36	12.36	8.90	10.79	80.9
	1500	209.7	231.8	231.8	231.8	166.9	202.3	121.4
300	150	10.2	10.2	10.2	10.2	10.2	10.2	10.2
	300	39.8	42.9	42.9	42.9	31.6	38.9	38.9
	600	79.6	85.7	85.7	85.7	63.2	77.7	
	800	10.62	11.43	11.43	11.43	8.43	10.36	77.7
	1500	199.1	214.4	214.4	214.4	158.1	194.3	116.6
325	150	9.3	9.3	9.3	9.3	9.3	9.3	9.3
	300	38.7	41.4	41.4	41.4	30.9	38.2	38.2
	600	77.4	82.6	82.6	82.6	61.8	76.3	
	800	10.32	11.02	11.02	11.02	8.24	10.18	76.3
	1500	193.6	206.6	206.6	206.6	154.4	190.8	114.5
350	150	8.4	8.4	8.4	8.4	8.4	8.4	8.4
	300	37.6	40.3	40.3	40.3	30.3	37.6	37.6
	600	75.1	80.4	80.4	80.4	60.7	75.3	
	800	10.02	10.73	10.73	10.73	8.09	10.04	75.3
	1500	187.8	201.1	201.1	201.1	151.6	188.2	112.9
375	150	7.4	7.4	7.4	7.4	7.4	7.4	7.4
	300	36.4	38.9	38.9	38.9	29.9	37.4	37.4
	600	72.7	77.6	77.6	77.6	59.8	74.7	
	800	9.70	10.35	10.35	10.35	7.97	9.96	74.7
	1500	181.8	194.1	194.1	194.1	149.4	186.8	112.1
400	150	6.5	6.5	6.5	6.5	6.5	6.5	6.5
	300	34.7	36.5	36.5	36.5	29.4	36.5	36.5
	600	69.4	73.3	73.3	73.3	58.9	73.3	
	800	9.26	9.76	9.76	9.76	7.85	9.76	73.3
	1500	173.6	183.1	183.1	183.1	147.2	183.1	109.8
425	150	5.5	5.5	5.5	5.5	5.5	-	-
	300	28.8	35.2	35.2	35.2	29.1	-	-
	600	57.5	70.0	70.0	70.0	58.3	-	
	800	7.67	9.34	9.34	9.34	7.77	-	-
	1500	143.8	175.1	175.1	175.1	145.7	-	-
450	150	4.6	4.6	4.6	4.6	4.6	-	-
	300	23.0	33.7	33.7	33.7	28.8	-	-
	600	46.0	67.7	67.7	67.7	57.7	-	
	800	6.13	9.02	9.02	9.02	7.69	-	-
	1500	115.0	169.0	169.0	169.0	144.2	-	-
475	150	3.7	3.7	3.7	3.7	3.7	-	-
	300	17.4	31.7	27.9	31.7	28.7	-	
	600	34.9	63.4	55.7	63.4	57.3	-	-
	800	4.65	8.45	7.43	8.45	7.64	-	-
	1500	87.2	158.2	139.3	158.2	143.4	-	-

MAXIMUM ALLOWABLE NON-SHOCK PRESSURE (BAR)								
SERVICE TEMP °C	PRESSURE CLASS	A105 & A350 GR. LF2 GROUP 1.1 (A)	A182 GR. F11 CL. 2 GROUP 1.9 (C), (D)	A182 GR. F5A GROUP 1.13	A182 GR. F9 GROUP 1.14	A182 GR. F316 GROUP 2.2 (G)	A182 GR. F51 GROUP 2.8 (H)	A995 GR. CD3MN GROUP 2.8 (H)
500	150	2.8	2.8	2.8	2.8	2.8	-	-
	300	11.8	25.7	21.4	28.2	28.2	-	-
	600	23.5	51.5	42.8	56.5	56.5	-	
	800	3.14	6.86	5.70	7.53	7.53	-	-
	1500	58.8	128.6	106.9	140.9	140.9	-	-
538	150	1.4	1.4	1.4	1.4	1.4	-	-
	300	5.9	14.9	13.7	17.5	25.2	-	-
	600	11.8	29.8	27.4	35.0	50.0	-	
	800	1.57	3.97	3.65	4.67	6.68	-	-
	1500	29.5	74.5	68.6	87.5	125.5	-	-
550	150	-	1.4 (f)	1.4 (f)	1.4 (f)	1.4 (f)	-	-
	300	-	12.7	12.0	15.0	25.0	-	
	600	-	25.4	24.1	30.0	49.8	-	-
	800	-	3.39	3.21	4.00	6.65	-	-
	1500	-	63.5	60.2	75.0	124.9	-	-
575	150	-	1.4 (f)	1.4 (f)	1.4 (f)	1.4 (f)	-	-
	300	-	8.8	8.9	10.5	24.0	-	-
	600	-	17.6	17.8	20.9	47.9	-	
	800	-	1.91	2.17	2.79	6.38	-	-
	1500	-	44.0	44.4	52.3	119.7	-	-
600	150	-	1.4 (f)	1.4 (f)	1.4 (f)	1.4 (f)	-	-
	300	-	6.1	6.2	7.2	19.9	-	-
	600	-	12.2	12.5	14.4	39.8	-	
	800	-	-	1.66	1.91	5.31	-	-
	1500	-	30.5	31.2	35.9	99.5	-	-
625	150	-	1.4 (f)	1.4 (f)	1.4 (f)	1.4 (f)	-	-
	300	-	4.3	4.0	5.0	15.8	-	-
	600	-	8.5	8.0	9.9	31.6	-	
	800	-	-	1.07	1.32	4.21	-	-
	1500	-	21.3	20.0	24.8	79.1	-	-
650	150	-	1.1 (f)	0.9 (f)	1.4 (f)	1.4 (f)	-	-
	300	-	2.8	2.4	3.5	12.7	-	-
	600	-	5.7	4.7	7.1	25.3	-	
	800	-	-	0.63	0.94	3.38	-	-
	1500	-	14.2	11.8	17.7	63.3	-	-
675	150	-	-	-	-	1.4 (f)	-	-
	300	-	-	-	-	10.3	-	-
	600	-	-	-	-	20.6	-	
	800	-	-	-	-	2.75	-	-
	1500	-	-	-	-	51.6	-	-
700	150	-	-	-	-	1.4 (f)	-	-
	300	-	-	-	-	8.4	-	-
	600	-	-	-	-	16.8	-	
	800	-	-	-	-	2.23	-	-
	1500	-	-	-	-	41.9	-	-
725	150	-	-	-	-	1.4 (f)	-	-
	300	-	-	-	-	7.0	-	
	600	-	-	-	-	14.0	-	-
	800	-	-	-	-	1.87	-	-
	1500	-	-	-	-	34.9	-	-
750	150	-	-	-	-	1.4 (f)	-	-
	300	-	-	-	-	5.9	-	-
	600	-	-	-	-	11.7	-	
	800	-	-	-	-	1.56	-	-
	1500	-	-	-	-	29.3	-	-
775	150	-	-	-	-	1.4 (f)	-	-
	300	-	-	-	-	4.6	-	-
	600	-	-	-	-	9.0	-	
	800	-	-	-	-	1.21	-	-
	1500	-	-	-	-	22.8	-	-
800	150	-	-	-	-	1.2 (f)	-	-
	300	-	-	-	-	3.5	-	-
	600	-	-	-	-	7.0	-	
	800	-	-	-	-	0.93	-	-
	1500	-	-	-	-	17.4	-	-
816	150	-	-	-	-	1 (f)	-	-
	300	-	-	-	-	2.8	-	-
	600	-	-	-	-	5.9	-	
	800	-	-	-	-	-	-	-
	1500	-	-	-	-	14.1	-	-

API 602 TRIM CHART

For Reference

API TRIM NUMBER	NOMINAL TRIM	WEDGE / DISC SURFACE	SEATING SURFACE	STEM/BACKSEAT
2	304	304SS	304SS	304SS
3	F310	310SS	310SS	310SS
4	Hard F6	13%Cr	13%Cr	410SS
5	Hardfaced	HF (CoCr-A)	HF (CoCr-A)	410SS
5A	Hardfaced	HF (NiCr)	HF (NiCr)	410SS
6	F6 and Cu-Ni	13%Cr	Cu-Ni	410SS
7	F6 and Hard F6	13%Cr	Hard 13%Cr	410SS
8	F6 and Hardfaced	13%Cr	HF (CoCr-A)	410SS
8A	F6 and Hardfaced	13%Cr	HF (NiCr)	410SS
9	Monel®	Monel®	Monel®	Monel®
10	316	316SS	316SS	316SS
11	Monel® and Hardfaced	Monel®	HF (CoCr-A)	Monel®
12	316 and Hardfaced	316SS	HF (CoCr-A)	316SS
13	Alloy 20	Alloy 20	Alloy 20	Alloy 20
14	Alloy 20 and Hardfaced	Alloy 20	HF (CoCr-A)	Alloy 20
15	Hardfaced	HF (CoCr-A)	HF (CoCr-A)	304SS
16	Hardfaced	HF (CoCr-A)	HF (CoCr-A)	316SS
17	Hardfaced	HF (CoCr-A)	HF (CoCr-A)	347SS
18	Hardfaced	HF (CoCr-A)	HF (CoCr-A)	Alloy 20
19	Nickel	Ni Alloy	Ni Alloy	Ni Alloy
19A	Alloy 625	Inconel® 625	Inconel® 625	Inconel® 625
19B	Alloy C276	Hastelloy® C276	Hastelloy® C276	Hastelloy® C276
19C	Alloy 825	Incoloy® 825	Incoloy® 825	Incoloy® 825
20	Nickel and Hardfaced	Ni Alloy	HF (CoCr-A)	Ni Alloy
20A	Alloy 625 and Hardfaced	Inconel® 625	HF (CoCr-A)	Inconel® 625
20B	Alloy C276 and Hardfaced	Hastelloy® C276	HF (CoCr-A)	Hastelloy® C276
20C	Alloy 825 and Hardfaced	Incoloy® 825	HF (CoCr-A)	Incoloy® 825
21	Hardfaced	HF (CoCr-A)	HF (CoCr-A)	Ni Alloy

CHAODA MANUFACTURING FACILITIES

We control all valve production stages, ensuring consistent quality and cost-effective solutions.

Chaoda is a fully integrated manufacturer owning all of the processes required to produce our valves. From the design, to the foundry, to the machining and processing, to the assembly and test, we own it and control it. This streamlined, tightly controlled system generates highly consistent product tailored to your needs at a cost that won't break the budget.

Facility Scope: Machining, Assembly & Test of Gate, Globe & Check Valves
Production Capacity: 15,000 valves per month
Facility Size: 861,112 sq-ft
Number of Employees: 270
On-Site NDE: MT, PT

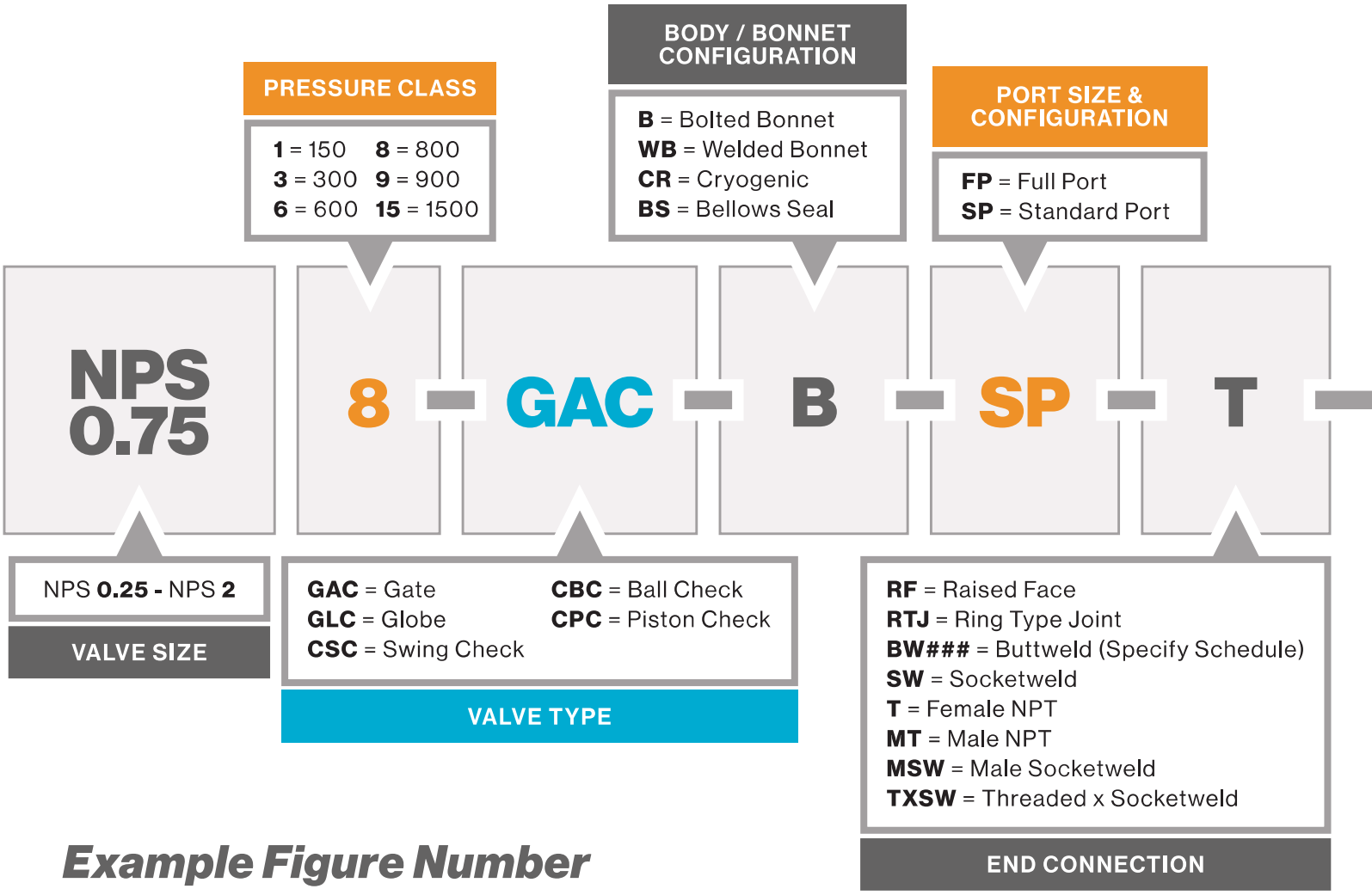
Facility Scope: Production of Closed Die Forgings
Production Capacity: 150 Tons per month
Facility Size: 69,965 sq-ft
Number of Employees: 50

Facility Scope: Distribution, Engineering, Quality Support, and Sales
Facility Size: 30,000 sq-ft
Number of Employees: 20

Chaoda's Western Hemisphere headquarters is located in Texas to serve the specific needs of our valued end users with inventory, technical support and a range of value-added services.

VALVE FIGURE NUMBER SYSTEM

How-To-Order Guide



Example Figure Number

NPS 0.75 8-GAC-B-SP-T-F316-12-G-N-H

EXAMPLE: NPS 0.75 Class 800 Gate Valve Bolted Bonnet Standard Port Female NPT Ends F316 Body API Trim 12 Graphite Packing Nace Compliant Handwheel Operated

This unique Valve Figure Number system is arranged to cover the basic valve design features.

When ordering, please include this basic Figure Number and add any additional design requirements and features in a complete valve description. Valve designs, materials, trims and other features are not limited to those listed here.

*API Trims are as listed in API Standard 602

TRIM MATERIAL*

HF = Body Material + 1/2 HF Trim
FHF = Body Material + Full HF Trim
T2 = API Trim 2
3 = API Trim 3
4 = API Trim 4
5 = API Trim 5
5A = API Trim 5A
6 = API Trim 6
7 = API Trim 7
8 = API Trim 8
8A = API Trim 8A
9 = API Trim 9
10 = API Trim 10
11 = API Trim 11
12 = API Trim 12
13 = API Trim 13
14 = API Trim 14
15 = API Trim 15
16 = API Trim 16
17 = API Trim 17
18 = API Trim 18
19 = API Trim 19
19A = API Trim 19A
19B = API Trim 19B
19C = API Trim 19C
20 = API Trim 20
20A = API Trim 20A
20B = API Trim 20B
20C = API Trim 20C
21 = API Trim 21
X = Special Trim

NACE

N = NACE Compliant
* = Omit If Not Required

F316 – **12** – **G** – **N** – **H**

A105 = Forged A105N
A105 = A105N
LF2 = A350 Gr. LF2 Cl. 1
F11 = A182 Gr. F11 Cl. 2
F22 = A182 Gr. F22 Cl. 3
F5 = A182 Gr. F5a
F9 = A182 Gr. F9
F91 = A182 Gr. F91 Type 1
F304 = A182 Gr. F304
F304L = A182 Gr. F304L
F304H = A182 Gr. F304H
F304/L = A182 Gr. F304/F304L
F316 = A182 Gr. F316
F316L = A182 Gr. F316L
F316H = A182 Gr. F316H
F316/L = A182 Gr. F316/F316L
F317 = A182 Gr. F317
F317L = A182 Gr. F317L
F317/L = A182 Gr. F317/F317L
F321 = A182 Gr. F321
F321H = A182 Gr. F321H
F347 = A182 Gr. F347
F347H = A182 Gr. F347H
F44 = A182 Gr. F44
F51 = A182 Gr. F51
F53 = A182 Gr. F53
F55 = A182 Gr. F55
F60 = A182 Gr. F60
N08020 = B462 Gr. N08020 Alloy 20
N02200 = B564 Gr. N02200 Nickel 200
N04400 = B564 Gr. N04400 Monel
N06600 = B564 Gr. N06600 Inconel 600
N08800 = B462 Gr. N08800 Incoloy 800
N06022 = B564 Gr. N06022 Hastelloy C-22
N06625 = B564 Gr. N06625 Inconel 625
N08825 = B462 Gr. N08825 Incoloy 825
N10665 = B564 Gr. N10665 Hastelloy B-2
N10276 = B564 Gr. N10276 Hastelloy C-276
N08810 = B564 Gr. N08810 Incoloy 800H

BODY MATERIAL

G = Graphite Packing & Gasket
P = PTFE Packing & Gasket

PACKING & GASKET

H = Handwheel Operator
* = Omit If Not Required

OPERATOR

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CHAODA VALVE GROUP CO., LTD.
Jiangbei Street, Oubei
Yongjia, Zhejiang
China

CHAODA GROUP USA CO., LTD
12411 Citypark Dr. #100
Missouri City, TX 77489
T: (832) 939-9944
F: (832) 939-9942
www.chaodausa.com