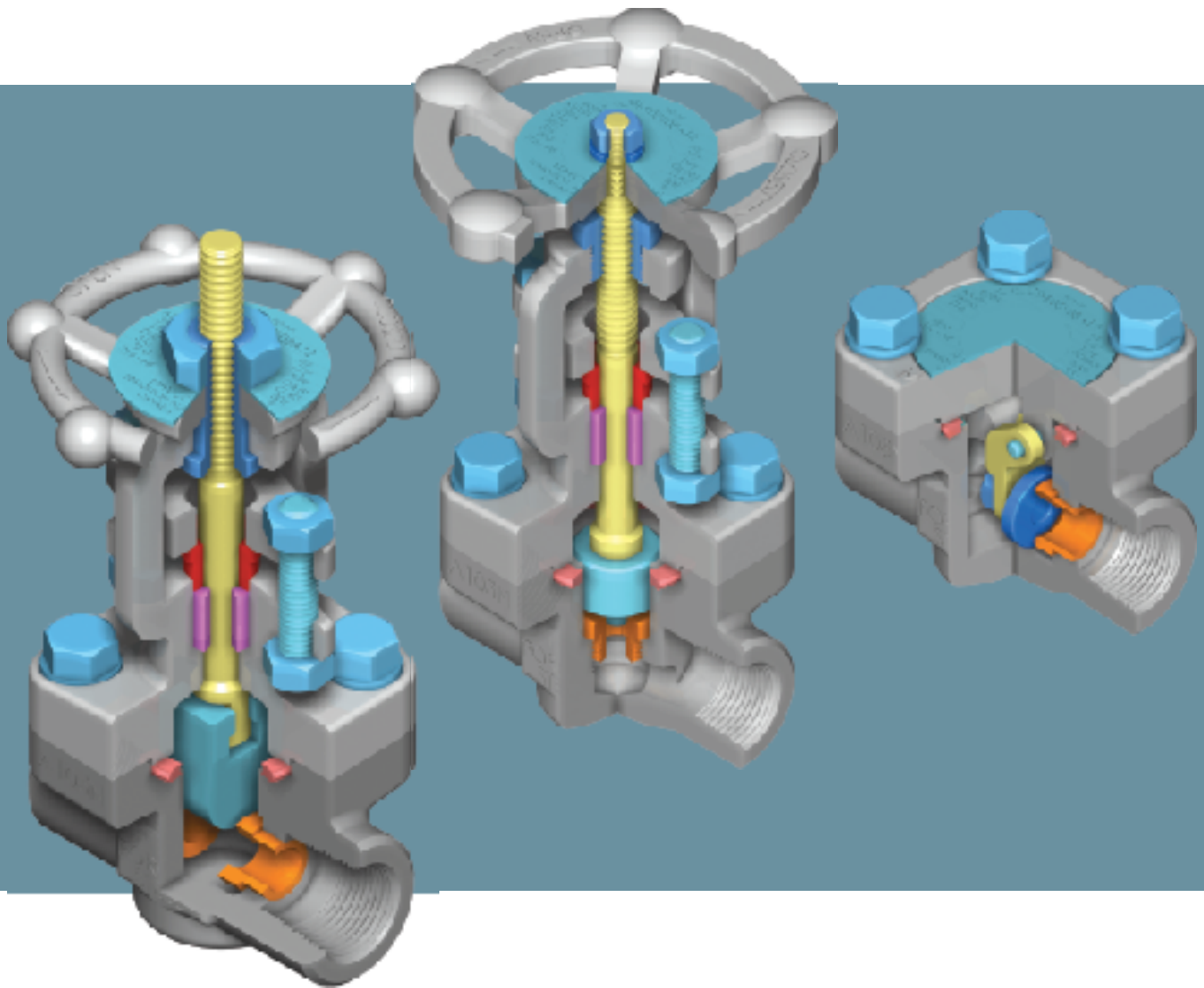


# NAVCO<sup>®</sup> Forged Steel Gate, Globe and Check Valves



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**NAVCO FORGED STEEL  
GATE, GLOBE AND CHECK VALVES**

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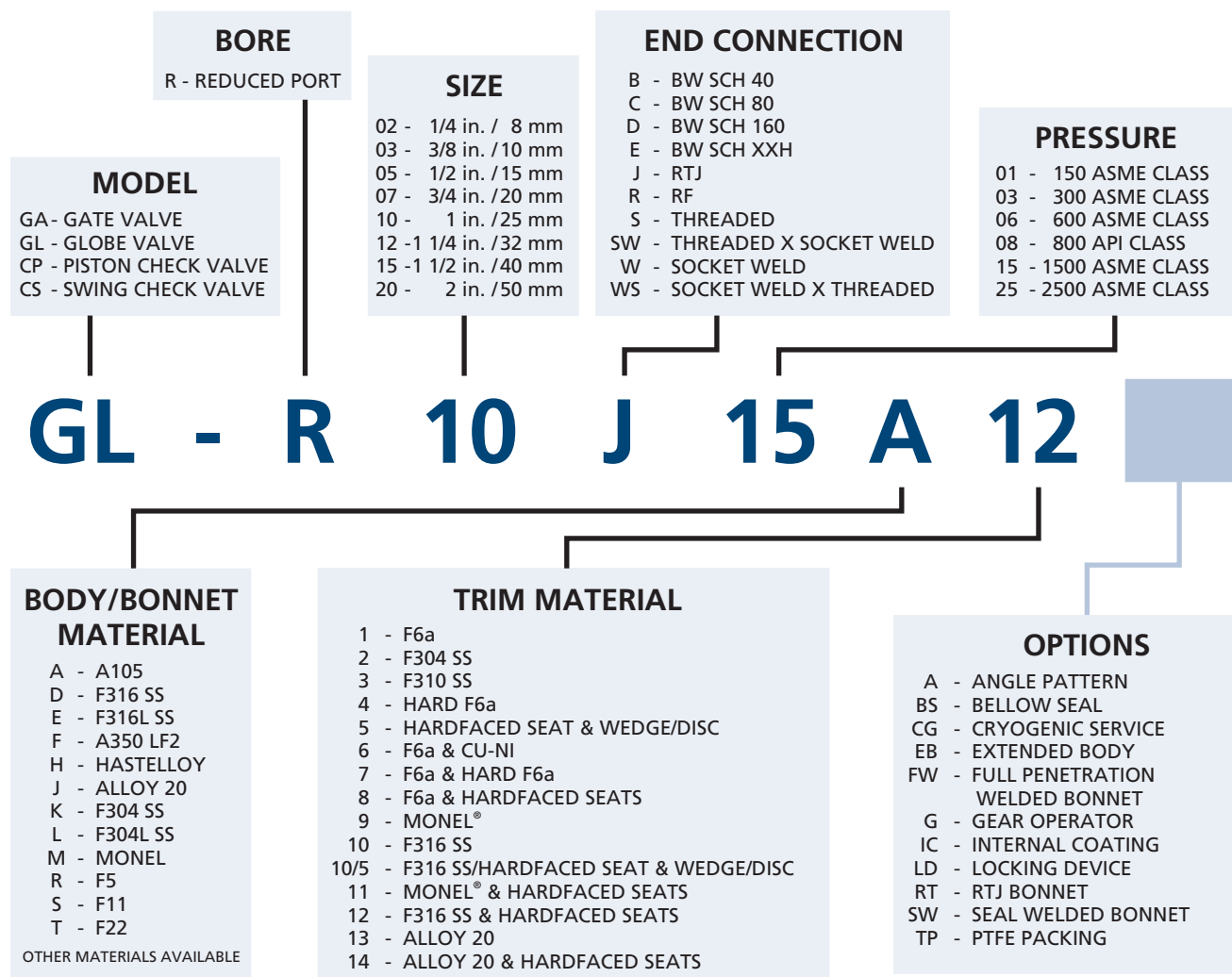
## FORGED STEEL GATE, GLOBE AND CHECK VALVES

### SIZES AVAILABLE in. (mm)

API/ASME CLASS	150	300	600	800	1500	2500
Flanged - Reduce Port	1/2 thru 2 (15 thru 50)	1/2 thru 2 (15 thru 50)	1/2 thru 2 (15 thru 50)	1/2 thru 2 (15 thru 50)	1/2 thru 2 (15 thru 50)	1/2 thru 2 (15 thru 50)
Socket Weld/Threaded - Reduced Port	-	-	-	1/4 thru 2 (8 thru 50)	1/4 thru 2 (8 thru 50)	-

### ORDERING INFORMATION

How to develop figure numbers:



#### Example:

GL-R10J15A12 = 1 in. / 25 mm Globe Valve, Reduced Port, 1500 ASME, RTJ Flanged Connections, A105 Body, 316 Stainless Steel Trim and Hardfaced Seats.

Consult Cameron's Valves & Measurement Sales Department for detailed valve style descriptions, full range of options, materials, actuation packages or for a particular special valve service application.

# FORGED STEEL GATE VALVE - API 602

## SW/NPT - API/ASME CLASS 800/1500

PRESSURE RATINGS		
	ASTM A105/A350 Gr. LF2	ASTM A182 F316
CLASS	PRESSURE	PRESSURE
800	1975 psi @ 100°F	1920 psi @ 100°F
1500	3705 psi @ 100°F	3600 psi @ 100°F

SPECIFICATION	
DESIGN	- API 602, ASME B16.34
SOCKET WELD	- ASME B16.11
THREADED	- ASME B1.20.1
TEST	- API 598

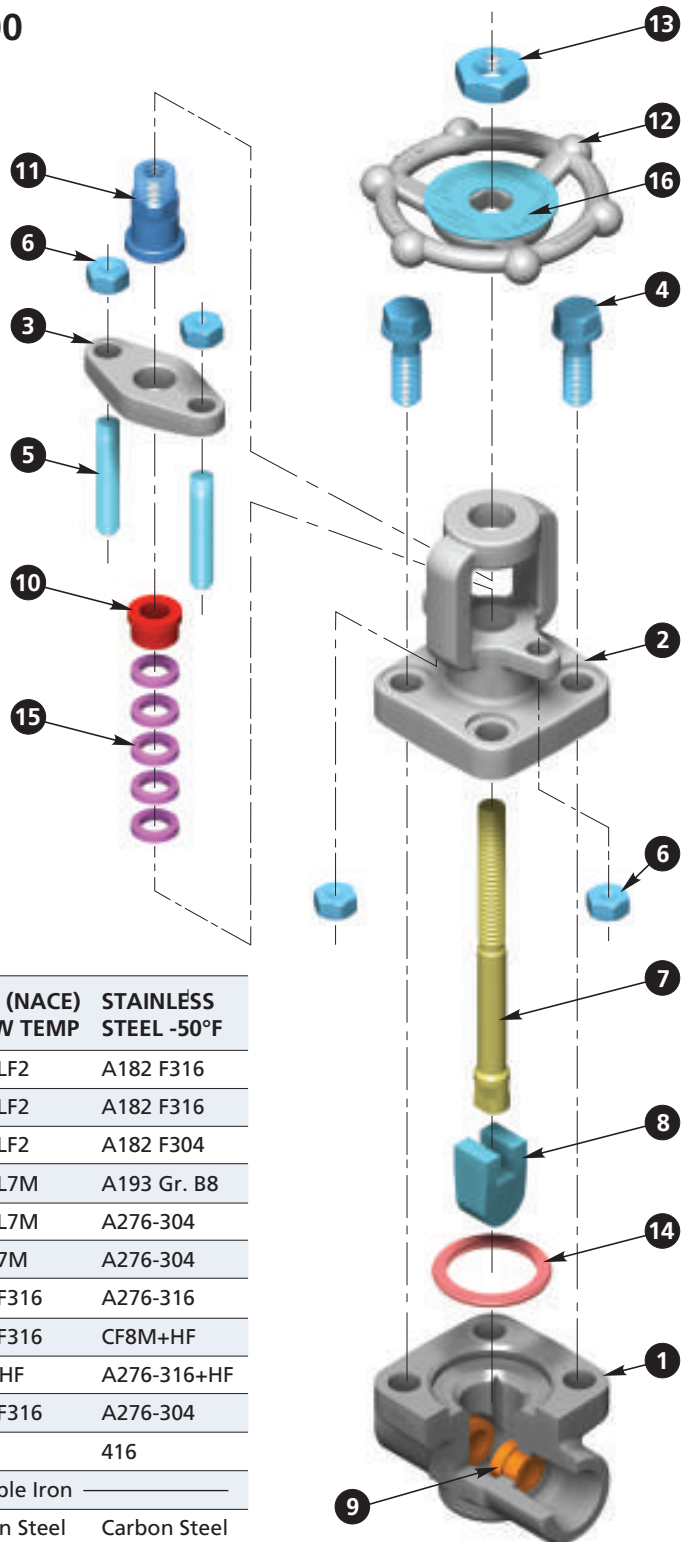
### MATERIALS LIST

ITEM	PART	STANDARD	SOUR (NACE)	SOUR (NACE) & LOW TEMP	STAINLESS STEEL -50°F
1	Body	A105	A105	A350 LF2	A182 F316
2	Bonnet	A105	A105	A350 LF2	A182 F316
3	Gland Flange	A105	A105	A350 LF2	A182 F304
* 4	Body Bolts	A193 B7	A193 B7M	A320 L7M	A193 Gr. B8
**5	Gland Studs	A193 B7	A193 B7M	A320 L7M	A276-304
6	Gland Nuts	A194 2H	A194 2HM	A194 7M	A276-304
7	Stem	A182 F6a	A182 F316	A182 F316	A276-316
8	Gate	A182 F6a	A182 F316	A182 F316	CF8M+HF
9	Seats	F6a+HF	F316+HF	F316+HF	A276-316+HF
10	Gland	A182 F6a	A182 F316	A182 F316	A276-304
11	Yoke Nut	416	416	416	416
12	Handwheel	—————	Carbon Steel/Malleable Iron	—————	—————
13	Handwheel Nut	Carbon Steel	Carbon Steel	Carbon Steel	Carbon Steel
14	Gasket	—————	Stainless Steel Spiral Wound Graphite	—————	—————
15	Stem Packing	—————	Graphite/Graphoil	—————	—————
16	Nameplate	Aluminum	Aluminum	Aluminum	Stainless Steel

\* ASME 1500 valves can be supplied with body studs and nuts.

\*\* Valves may be supplied with eye-bolt design.

Cameron reserves the right to substitute materials listed above with alternate material.



# FORGED STEEL GATE VALVE - API 602

## SW/NPT - ASME CLASS 1500/2500

### RTJ BONNET

PRESSURE RATINGS		
	ASTM A105/A350 Gr. LF2	ASTM A182 F316
CLASS	PRESSURE	PRESSURE
1500	3705 psi @ 100°F	3600 psi @ 100°F
2500	6170 psi @ 100°F	6000 psi @ 100°F

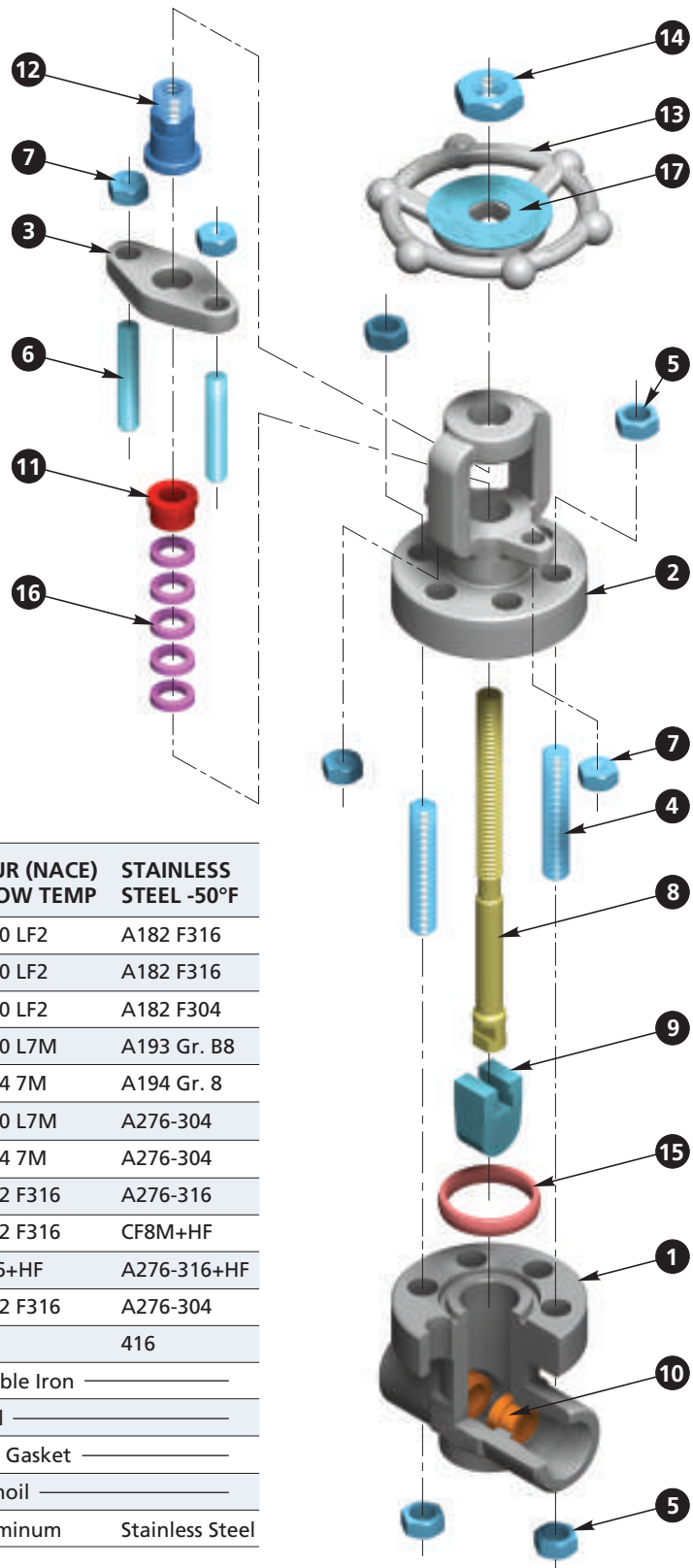
SPECIFICATION	
DESIGN	- API 602, ASME B16.34
SOCKET WELD	- ASME B16.11
THREADED	- ASME B1.20.1
TEST	- API 598

### MATERIALS LIST

ITEM	PART	STANDARD	SOUR (NACE)	SOUR (NACE) & LOW TEMP	STAINLESS STEEL -50°F
1	Body	A105	A105	A350 LF2	A182 F316
2	Bonnet	A105	A105	A350 LF2	A182 F316
3	Gland Flange	A105	A105	A350 LF2	A182 F304
4	Body Studs	A193 B7	A193 B7M	A320 L7M	A193 Gr. B8
5	Body Nuts	A194 2H	A194 2HM	A194 7M	A194 Gr. 8
** 6	Gland Studs	A193 B7	A193 B7M	A320 L7M	A276-304
7	Gland Nuts	A194 2H	A194 2HM	A194 7M	A276-304
8	Stem	A182 F6a	A182 F316	A182 F316	A276-316
9	Gate	A182 F6a	A182 F316	A182 F316	CF8M+HF
10	Seats	F6a+HF	F316+HF	F316+HF	A276-316+HF
11	Gland	A182 F6a	A182 F316	A182 F316	A276-304
12	Yoke Nut	416	416	416	416
13	Handwheel	—————	Carbon Steel/Malleable Iron	—————	—————
14	Handwheel Nut	—————	Carbon Steel	—————	—————
15	Gasket	—————	Stainless Steel Ring Gasket	—————	—————
16	Stem Packing	—————	Graphite/Graphoil	—————	—————
17	Nameplate	Aluminum	Aluminum	Aluminum	Stainless Steel

\*\* Valves may be supplied with eye-bolt design.

Cameron reserves the right to substitute materials listed above with alternate material.

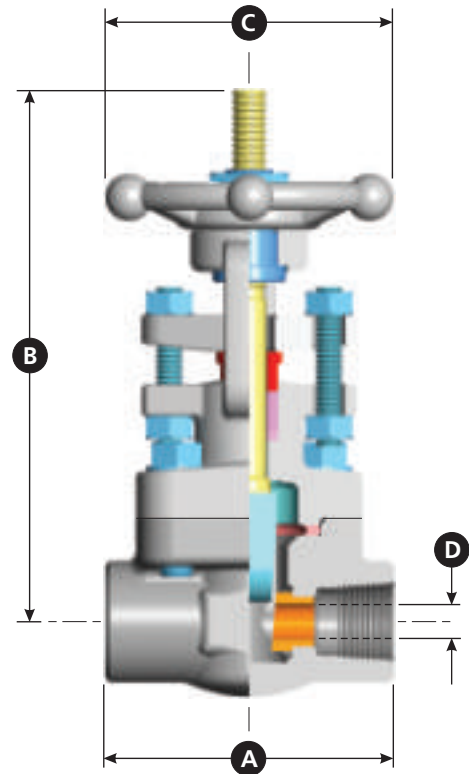


## FORGED STEEL GATE VALVE - API 602 SW/NPT - API/ASME CLASS 800/1500

### DIMENSIONS

SIZE in. (mm)	ASME CLASS	A	B OPEN	C	D	C <sub>v</sub>	WEIGHT lb. (kg)
1/4 (8)	800	3.1 (79)	6.5 (166)	3.9 (100)	0.28 (7)	-	5.1 (2.3)
	1500	3.5 (90)	6.4 (163)	4.3 (110)	0.33 (8)	-	5.1 (2.3)
3/8 (10)	800	3.1 (79)	6.5 (166)	3.9 (100)	0.39 (10)	-	4.9 (2.2)
	1500	3.5 (90)	6.4 (163)	4.3 (110)	0.33 (8)	-	5.1 (2.3)
1/2 (15)	800	3.1 (80)	5.7 (145)	3.5 (90)	0.39 (10)	6.2	3.7 (1.7)
	1500	3.5 (90)	6.4 (163)	4.3 (110)	0.39 (10)	8.8	5.1 (2.3)
3/4 (20)	800	3.5 (90)	6.1 (156)	3.5 (90)	0.55 (14)	10.0	4.6 (2.1)
	1500	4.3 (110)	7.0 (180)	4.3 (110)	0.55 (14)	18.4	8.2 (3.7)
1 (25)	800	4.3 (110)	7.3 (186)	4.3 (110)	0.71 (18)	25.8	7.3 (3.3)
	1500	5.0 (127)	8.3 (212)	4.7 (120)	0.71 (18)	34.0	11.9 (5.4)
1 1/4 (32)	800	5.0 (127)	8.5 (216)	4.7 (120)	0.94 (24)	44.6	11.5 (5.2)
	1500	5.0 (127)	9.6 (245)	5.5 (140)	0.94 (24)	46.6	16.3 (7.4)
1 1/2 (40)	800	5.0 (127)	10.0 (255)	5.5 (140)	1.22 (31)	68.7	15.4 (7.0)
	1500	5.1 (130)	10.4 (266)	5.5 (140)	1.22 (31)	56.6	21.2 (9.6)
2 (50)	800	5.1 (130)	10.7 (273)	5.5 (140)	1.44 (37)	99.0	20.1 (9.1)
	1500	5.9 (150)	12.5 (318)	6.8 (175)	1.44 (37)	78.2	33.3 (15.1)

NOTE: "A" dimension to be within  $\pm 0.06$  in. /1.5 mm.  
"B" dimension for open position.

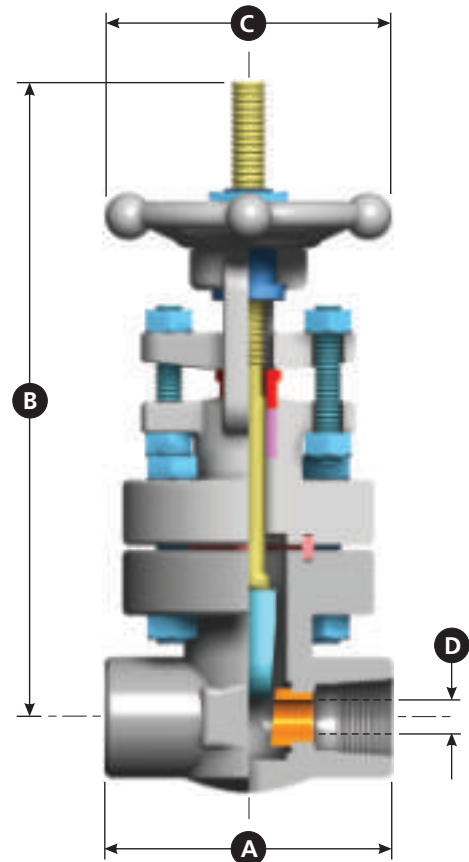


## SW/NPT - ASME CLASS 1500/2500 RTJ BONNET

### DIMENSIONS

SIZE in. (mm)	ASME CLASS	A	B OPEN	C	D	C <sub>v</sub>	WEIGHT lb. (kg)
1/2 (15)	1500	4.3 (110)	8.3 (212)	4.7 (120)	0.45 (11)	8.8	13.0 (5.9)
	2500	4.3 (110)	8.4 (215)	5.5 (140)	0.39 (10)	8.2	13.7 (6.2)
3/4 (20)	1500	4.7 (120)	10.0 (256)	6.8 (175)	0.59 (15)	18.4	18.5 (8.4)
	2500	4.7 (120)	10.2 (260)	8.8 (225)	0.55 (14)	17.8	19.4 (8.8)
1 (25)	1500	5.1 (130)	10.7 (272)	6.8 (175)	0.77 (20)	34.0	21.6 (9.8)
	2500	5.1 (130)	10.8 (276)	8.8 (225)	0.71 (18)	32.0	22.7 (10.3)
1 1/2 (40)	1500	8.2 (210)	16.2 (413)	9.8 (250)	1.26 (32)	56.6	59.1 (26.8)
	2500	8.2 (210)	16.5 (419)	11.8 (300)	1.22 (31)	57.4	61.3 (27.8)
2 (50)	1500	9.4 (240)	16.6 (422)	11.8 (300)	1.57 (40)	78.2	78.0 (35.4)
	2500	9.4 (240)	16.9 (430)	13.7 (350)	1.44 (37)	74.8	81.1 (36.8)

NOTE: "A" dimension to be within  $\pm 0.06$  in. /1.5 mm.  
"B" dimension for open position.



## FORGED STEEL GATE VALVE - API 602 FLANGED - ASME CLASS 150/300/600/1500

PRESSURE RATINGS		
	ASTM A105/A350 Gr. LF2	ASTM A182 F316
CLASS	PRESSURE	PRESSURE
150	285 psi @ 100°F	275 psi @ 100°F
300	740 psi @ 100°F	720 psi @ 100°F
600	1480 psi @ 100°F	1440 psi @ 100°F
1500	3705 psi @ 100°F	3600 psi @ 100°F

SPECIFICATION	
DESIGN	- API 602, ASME B16.34
END TO END	- ASME B16.10
END CONNECTION	- ASME B16.5
TEST	- API 598

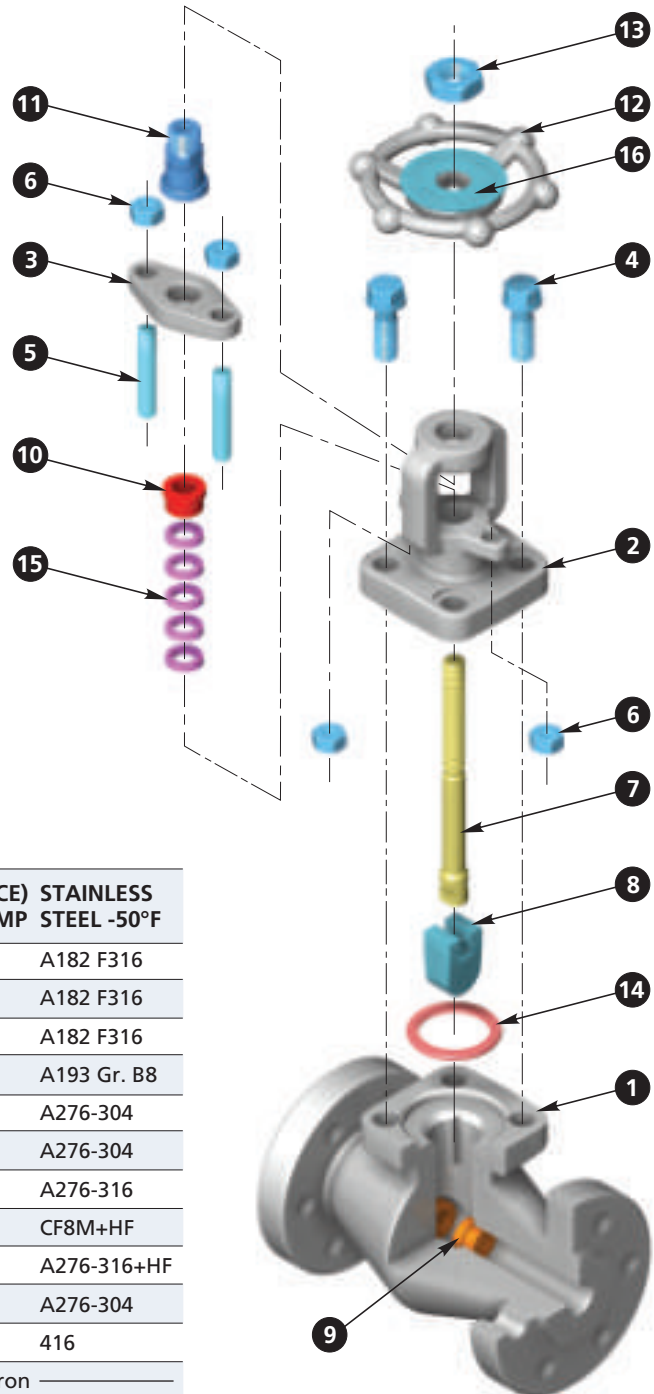
### MATERIALS LIST

ITEM	PART	STANDARD	SOUR (NACE)	SOUR (NACE) & LOW TEMP	STAINLESS STEEL -50°F	
1	Body	A105	A105	A350 LF2	A182 F316	
2	Bonnet	A105	A105	A350 LF2	A182 F316	
3	Gland Flange	A105	A105	A350 LF2	A182 F316	
*	4	Body Bolts	A193 B7	A193 B7M	A320 L7M	A193 Gr. B8
**	5	Gland Studs	A193 B7	A193 B7M	A320 L7M	A276-304
6	Gland Nuts	A194 2H	A194 2HM	A194 7M	A276-304	
7	Stem	A182 F6a	A182 F316	A182 F316	A276-316	
8	Gate	A182 F6a	A182 F316	A182 F316	CF8M+HF	
9	Seats	F6a+HF	F316+HF	F316+HF	A276-316+HF	
10	Gland	A182 F6a	A182 F316	A182 F316	A276-304	
11	Yoke Nut	416	416	416	416	
12	Handwheel	—————	Carbon Steel/Malleable Iron	—————	—————	
13	Handwheel Nut	—————	Carbon Steel	—————	—————	
14	Gasket	—————	Stainless Steel Spiral Wound Graphite	—————	—————	
15	Stem Packing	—————	Graphite/Graphoil	—————	—————	
16	Nameplate	Aluminum	Aluminum	Aluminum	Stainless Steel	

\* ASME 1500 valves can be supplied with body studs and nuts.

\*\* Valves may be supplied with eye-bolt design.

Cameron reserves the right to substitute materials listed above with alternate material.



# FORGED STEEL GATE VALVE - API 602

## FLANGED - ASME CLASS 1500/2500

### RTJ BONNET

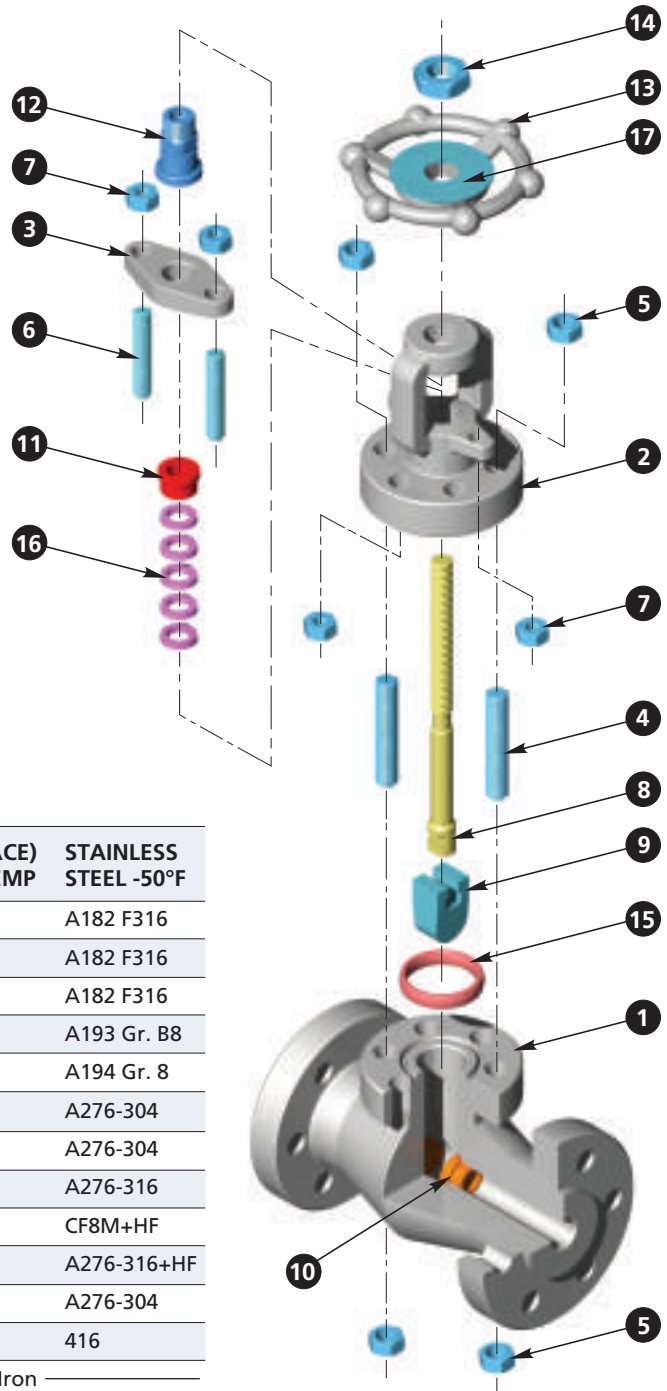
PRESSURE RATINGS		
	ASTM A105/A350 Gr. LF2	ASTM A182 F316
CLASS	PRESSURE	PRESSURE
1500	3705 psi @ 100°F	3600 psi @ 100°F
2500	6170 psi @ 100°F	6000 psi @ 100°F

SPECIFICATION	
DESIGN	- API 602, ASME B16.34
END TO END	- ASME B16.10
END CONNECTION	- ASME B16.5
TEST	- API 598

### MATERIALS LIST

ITEM PART	STANDARD	SOUR (NACE)	SOUR (NACE) & LOW TEMP	STAINLESS STEEL -50°F
1 Body	A105	A105	A350 LF2	A182 F316
2 Bonnet	A105	A105	A350 LF2	A182 F316
3 Gland Flange	A105	A105	A350 LF2	A182 F316
4 Body Studs	A193 B7	A193 B7M	A320 L7M	A193 Gr. B8
5 Body Nuts	A194 2H	A194 2HM	A194 7M	A194 Gr. 8
**6 Gland Studs	A193 B7	A193 B7M	A320 L7M	A276-304
7 Gland Nuts	A194 2H	A194 2HM	A194 7M	A276-304
8 Stem	A182 F6a	A182 F316	A182 F316	A276-316
9 Gate	A182 F6a	A182 F316	A182 F316	CF8M+HF
10 Seats	F6a+HF	F316+HF	F316+HF	A276-316+HF
11 Gland	A182 F6a	A182 F316	A182 F316	A276-304
12 Yoke Nut	416	416	416	416
13 Handwheel		Carbon Steel/Malleable Iron		
14 Handwheel Nut		Carbon Steel		
15 Gasket		Stainless Steel Ring Gasket		
16 Stem Packing		Graphite/Graphoil		
17 Nameplate	Aluminium	Aluminium	Aluminium	Stainless Steel

\*\* Valves may be supplied with eye-bolt design.  
Cameron reserves the right to substitute materials listed above with alternate material.



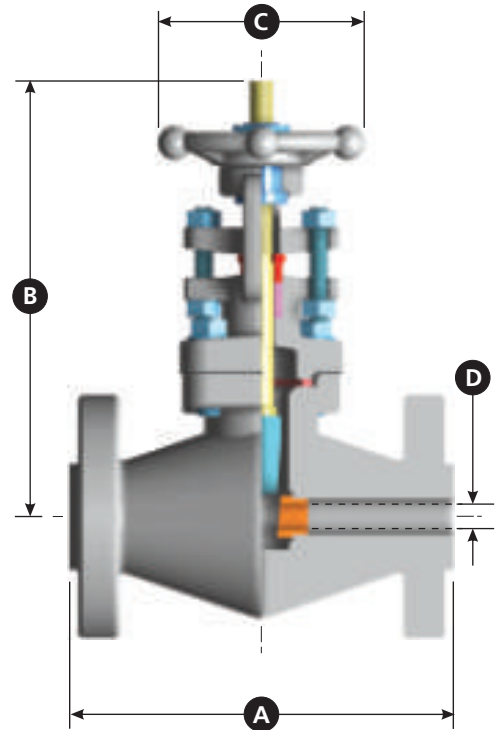


## FORGED STEEL GATE VALVE - API 602 FLANGED - ASME CLASS 150/300/600/1500

### DIMENSIONS

SIZE in. (mm)	ASME CLASS	A		B OPEN	C	D	C <sub>v</sub>	WEIGHT lb. (kg)
		RF	RTJ					
1/2 (15)	150	4.2 (108)	4.6 (119)	7.0 (179)	3.5 (90)	0.39 (10.0)	6.2	7.1 (3.2)
	300	5.5 (140)	5.9 (151)	5.7 (145)	3.5 (90)	0.39 (10.0)	6.2	8.4 (3.8)
	600	6.5 (165)	6.4 (164)	5.7 (145)	3.5 (90)	0.39 (10.0)	6.2	7.7 (3.5)
	1500	8.5 (216)	8.5 (216)	6.4 (163)	4.3 (110)	0.45 (11.5)	9.0	20.0 (9.1)
3/4 (20)	150	4.6 (118)	5.1 (130)	7.3 (186)	3.5 (90)	0.55 (14.0)	10.0	9.0 (4.1)
	300	6.0 (152)	6.5 (165)	6.1 (156)	3.5 (90)	0.55 (14.0)	10.0	11.9 (5.4)
	600	7.5 (191)	7.5 (191)	6.1 (156)	3.5 (90)	0.55 (14.0)	10.0	12.8 (5.8)
	1500	9.0 (229)	9.0 (229)	7.0 (180)	4.3 (110)	0.59 (15.0)	18.6	21.3 (9.7)
1 (25)	150	5.0 (127)	5.5 (140)	8.1 (208)	4.3 (110)	0.71 (18.0)	25.8	12.8 (5.8)
	300	6.5 (165)	7.0 (178)	7.3 (186)	4.3 (110)	0.71 (18.0)	25.8	14.3 (6.5)
	600	8.5 (216)	8.5 (216)	7.3 (186)	4.3 (110)	0.71 (18.0)	25.8	16.3 (7.4)
	1500	10.0 (254)	10.0 (254)	8.3 (212)	4.7 (120)	0.77 (19.5)	34.8	31.3 (14.2)
1 1/2 (40)	150	6.5 (165)	7.0 (178)	10.0 (255)	5.5 (140)	1.22 (31.0)	68.7	22.0 (10.0)
	300	7.5 (191)	7.9 (203)	10.0 (255)	5.5 (140)	1.22 (31.0)	68.7	28.9 (13.1)
	600	9.5 (241)	9.5 (241)	10.0 (255)	5.5 (140)	1.22 (31.0)	68.7	31.5 (14.3)
	1500	12.0 (305)	12.0 (305)	10.4 (266)	5.5 (140)	1.26 (32.0)	58.6	54.2 (24.6)
2 (50)	150	7.0 (178)	7.5 (191)	10.7 (273)	5.5 (140)	1.44 (37.0)	99.0	28.9 (13.1)
	300	8.5 (216)	9.1 (232)	10.7 (273)	5.5 (140)	1.44 (37.0)	99.0	38.1 (17.3)
	600	11.5 (292)	11.6 (295)	10.7 (273)	5.5 (140)	1.44 (37.0)	99.0	41.4 (18.8)
	1500	14.5 (368)	14.6 (372)	12.5 (318)	6.8 (175)	1.57 (40.0)	83.8	89.8 (40.8)

NOTE: "A" dimension to be within  $\pm 0.06$  in. /1.5 mm.  
"B" dimension for open position.

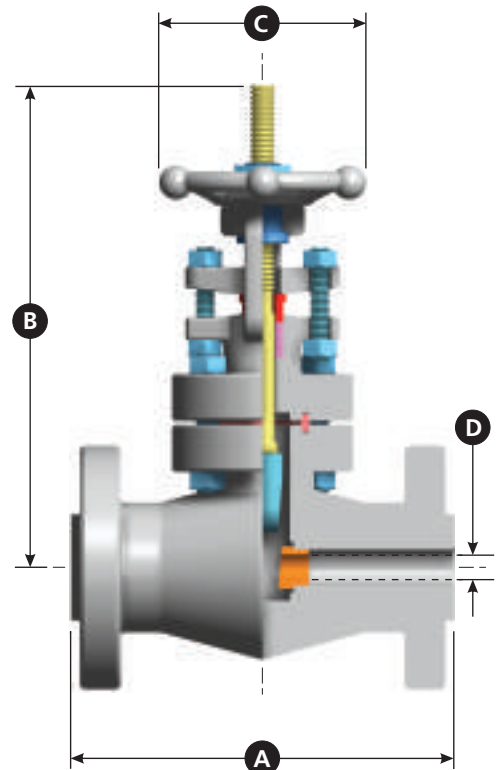


## FLANGED - ASME CLASS 1500/2500 RTJ BONNET

### DIMENSIONS

SIZE in. (mm)	ASME CLASS	A		B OPEN	C	D	C <sub>v</sub>	WEIGHT lb. (kg)
		RF	RTJ					
1/2 (15)	1500	8.5 (216)	8.5 (216)	8.3 (212)	4.7 (120)	0.45 (11.5)	9.0	21.4 (9.7)
	2500	10.3 (263)	10.3 (263)	8.4 (215)	5.5 (140)	0.39 (10.0)	8.2	27.6 (12.5)
3/4 (20)	1500	9.0 (229)	9.0 (229)	10.0 (256)	6.8 (175)	0.59 (15.0)	18.6	34.2 (15.5)
	2500	10.7 (273)	10.7 (273)	10.2 (260)	8.8 (225)	0.51 (13.0)	17.8	37.9 (17.2)
1 (25)	1500	10.0 (254)	10.0 (254)	10.7 (272)	6.8 (175)	0.77 (20.0)	34.8	38.6 (17.5)
	2500	12.1 (308)	12.1 (308)	10.8 (276)	8.8 (225)	0.71 (18.0)	32.0	45.9 (20.8)
1 1/2 (40)	1500	12.0 (305)	12.0 (305)	16.2 (413)	9.8 (250)	1.26 (32.0)	58.6	84.9 (38.5)
	2500	15.1 (384)	15.2 (387)	16.5 (419)	11.8 (300)	1.10 (28.0)	57.4	111.6 (50.6)
2 (50)	1500	14.4 (368)	14.6 (372)	16.6 (422)	11.8 (300)	1.57 (40.0)	83.8	123.5 (56.0)
	2500	17.7 (451)	17.8 (454)	16.9 (430)	13.7 (350)	1.33 (34.0)	74.8	158.3 (71.8)

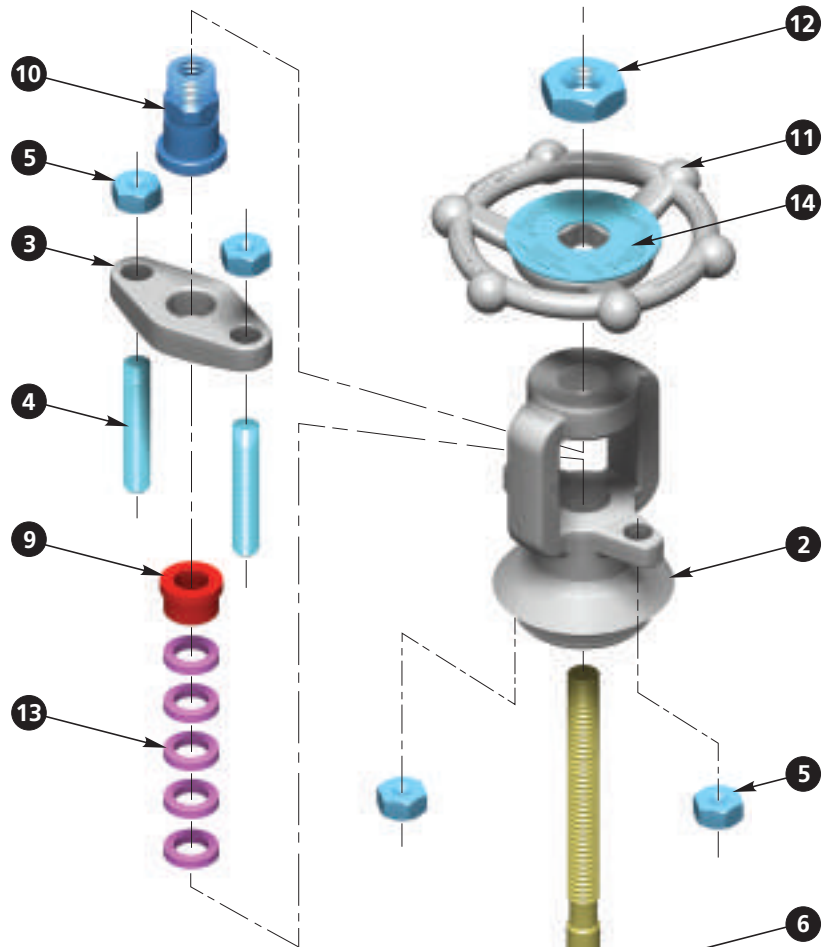
NOTE: "A" dimension to be within  $\pm 0.06$  in. /1.5 mm.  
"B" dimension for open position.



**FORGED STEEL GATE VALVE - API 602  
SW/NPT - API/ASME CLASS 800/1500  
& ASME CLASS 2500  
SEAL WELDED BONNET**

PRESSURE RATINGS ASTM A105/A350 Gr. LF2	
CLASS	PRESSURE
800	1975 psi @ 100°F
1500	3705 psi @ 100°F
2500	6170 psi @ 100°F

SPECIFICATION	
DESIGN	- API 602/ASME B16.34
SOCKET WELD	- ASME B16.11
THREADED	- ASME B1.20.1
TEST	- API 598

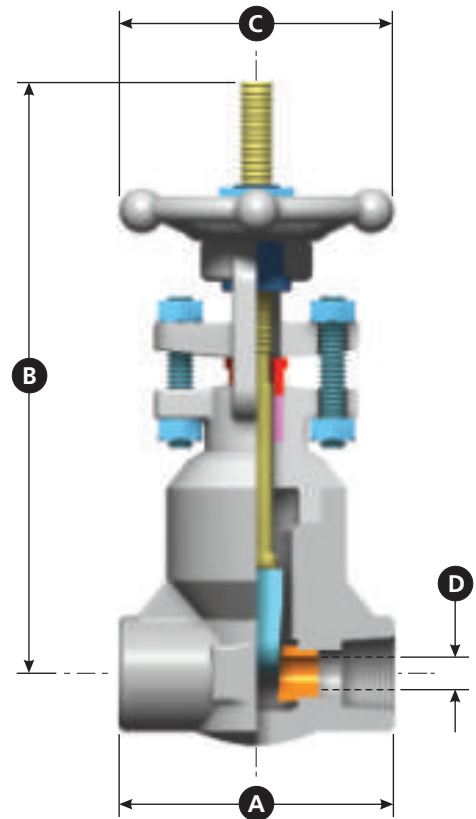


**MATERIALS LIST**

ITEM	PART	STANDARD	SOUR (NACE)	SOUR (NACE) & LOW TEMP
1	Body	A105	A105	A350 LF2
2	Bonnet	A105	A105	A350 LF2
3	Gland Flange	A105	A105	A350 LF2
** 4	Gland Studs	A193 B7	A193 B7M	A320 L7M
5	Gland Nuts	A194 2H	A194 2HM	A194 7M
6	Stem	A182 F6a	A182 F316	A82 F316
7	Gate	F6a+HF	F316+HF	F316+HF
8	Seats	F6a+HF	F316+HF	F316+HF
9	Gland	A182 F6a	A182 F316	A182 F316
10	Yoke Nut	416	416	416
11	Handwheel	—————	Carbon Steel/Malleable Iron	—————
12	Handwheel Nut	Carbon Steel	Carbon Steel	Carbon Steel
13	Stem Packing	—————	Graphite/Graphoil	—————
14	Nameplate	Aluminum	Aluminum	Aluminum

\*\* Valves may be supplied with eye-bolt design.  
Cameron reserves the right to substitute materials listed above with alternate material.

**FORGED STEEL GATE VALVE - API 602**  
**SW/NPT - API/ASME CLASS 800/1500**  
**& ASME CLASS 2500**  
**SEAL WELDED BONNET**



**DIMENSIONS**

SIZE in. (mm)	ASME CLASS	A	B OPEN	C	D	C <sub>v</sub>	WEIGHT lb. (kg)
1/4 (8)	800	3.0 (76)	5.7 (145)	4.0 (102)	0.25 (6.4)	-	3.7 (1.7)
	1500	3.4 (86)	6.0 (153)	4.0 (102)	0.25 (6.4)	-	4.9 (2.2)
3/8 (10)	800	3.0 (76)	5.7 (145)	4.0 (102)	0.37 (9.5)	-	3.3 (1.5)
	1500	3.4 (86)	6.0 (153)	4.0 (102)	0.37 (9.5)	-	4.6 (2.1)
1/2 (15)	800	3.0 (76)	5.7 (145)	4.0 (102)	0.37 (9.5)	6.0	3.3 (1.5)
	1500	3.4 (86)	6.0 (153)	4.0 (102)	0.37 (9.5)	6.0	4.4 (2.0)
	2500	4.3 (110)	7.9 (200)	5.5 (140)	0.39 (10.0)	-	5.7 (2.6)
3/4 (20)	800	3.4 (86)	5.9 (151)	4.0 (102)	0.50 (12.7)	11.3	4.4 (2.0)
	1500	4.0 (102)	7.3 (186)	4.5 (114)	0.50 (12.7)	11.3	7.5 (3.4)
	2500	5.0 (127)	8.9 (225)	8.9 (225)	0.55 (14.0)	-	8.8 (4.0)
1 (25)	800	4.0 (102)	7.5 (190)	4.5 (114)	0.71 (18.0)	26.3	6.2 (2.8)
	1500	4.6 (117)	9.4 (238)	5.5 (140)	0.71 (18.0)	26.3	12.8 (5.8)
	2500	5.0 (127)	9.5 (241)	8.9 (225)	0.71 (18.0)	-	13.0 (5.9)
1 1/4 (32)	800	4.6 (117)	9.5 (241)	5.5 (140)	1.22 (31.0)	-	11.5 (5.2)
	1500	5.2 (133)	6.6 (167)	6.5 (165)	1.22 (31.0)	-	19.2 (8.7)
1 1/2 (40)	800	4.6 (117)	9.5 (241)	5.5 (140)	1.22 (31.0)	78.0	11.2 (5.1)
	1500	5.2 (133)	6.6 (167)	6.5 (165)	1.22 (31.0)	78.0	18.7 (8.5)
	2500	5.9 (150)	14.6 (370)	11.8 (300)	1.22 (31.0)	-	22.0 (10.0)
2 (50)	800	5.2 (133)	10.7 (271)	6.5 (165)	1.46 (37.0)	115.0	18.1 (8.2)
	1500	8.3 (210)	12.5 (318)	7.2 (184)	1.46 (37.0)	115.0	25.8 (11.7)
	2500	9.5 (240)	15.7 (400)	13.8 (350)	1.44 (36.5)	-	63.9 (29.0)

NOTE: " A " dimension to be within  $\pm 0.06$  in. /1.5 mm.  
 " B " dimension for open position.

# FORGED STEEL GATE VALVE - API 602

## INTEGRAL REINFORCED EXTENDED BODY (IREB)

### SW/NPT - API CLASS 800

PRESSURE RATINGS ASTM A105/A350 Gr. LF2	
CLASS	PRESSURE
800	1975 psi @ 100°F
SPECIFICATION	
DESIGN	- API 602, ASME B16.34
SOCKET WELD	- ASME B16.11
THREADED	- ASME B1.20.1
TEST	- API 598

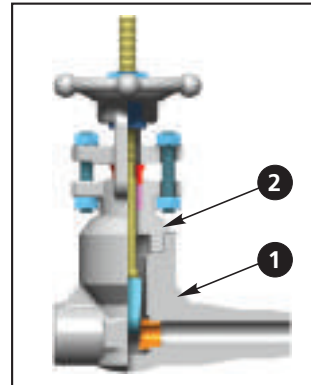
#### MATERIALS LIST

ITEM	PART	STANDARD	SOUR (NACE)	SOUR (NACE) & LOW TEMP
1	Body	A105	A105	A350 LF2
2	Bonnet	A105	A105	A350 LF2
3	Gland Flange	A105	A105	A350 LF2
4	Body Bolts	A193 B7	A193 B7M	A320 L7M
** 5	Gland Studs	A193 B7	A193 B7M	A320 L7M
6	Gland Nuts	A194 2H	A194 2HM	A194 7M
7	Stem	A182 F6a	A182 F316	A182 F316
8	Gate	A182 F6a	A182 F316	A182 F316
9	Seats	F6a+HF	F316+HF	F316+HF
10	Gland	A182 F6a	A182 F316	A182 F316
11	Yoke Nut	416	416	416
12	Handwheel	Carbon Steel	Carbon Steel	Carbon Steel
13	Handwheel Nut	Carbon Steel	Carbon Steel	Carbon Steel
14	Gasket	— Stainless Steel Spiral Wound Graphite —		
15	Stem Packing	— Graphite/Graphoil —		
16	Nameplate	Aluminum	Aluminum	Aluminum

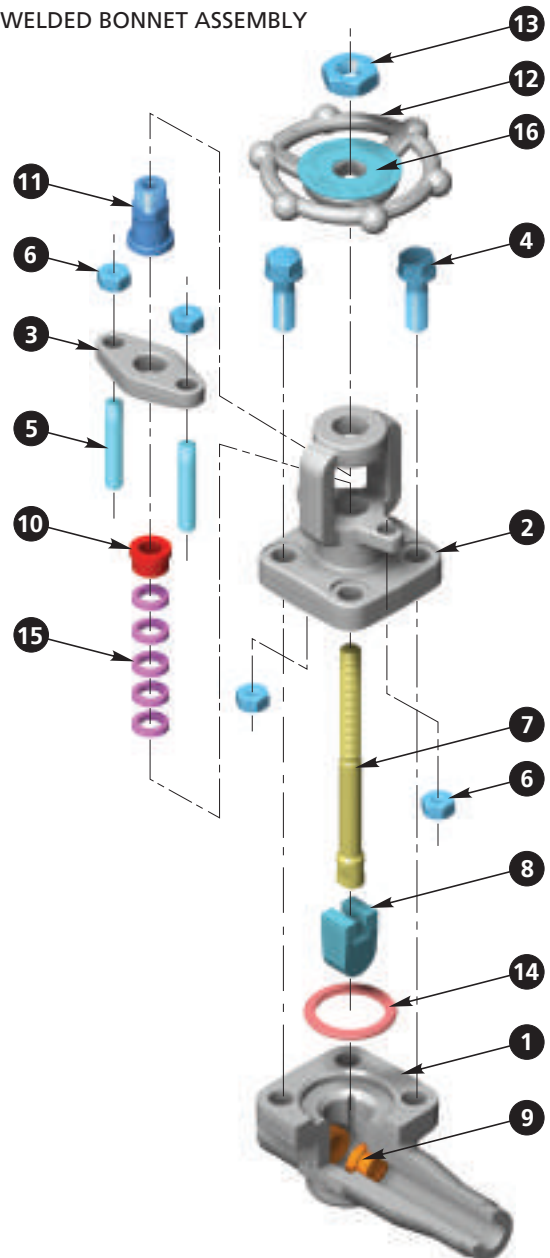
#### MATERIALS LIST - WELDED BONNET ASSEMBLY

ITEM	PART	STANDARD	SOUR (NACE)	SOUR (NACE) & LOW TEMP
1	Body	A105	A105	A350 LF2
2	Bonnet	A105	A105	A350 LF2
3	Gland Flange	A105	A105	A350 LF2
** 5	Gland Studs	A193 B7	A193 B7M	A320 L7M
6	Gland Nuts	A194 2H	A194 2HM	A194 7M
7	Stem	A182 F6a	A182 F316	A82 F316
8	Gate	F6a+HF	F316+HF	F316+HF
9	Seats	F6a+HF	F316+HF	F316+HF
10	Gland	A182 F6a	A182 F316	A182 F316
11	Yoke Nut	416	416	416
12	Handwheel	— Carbon Steel/Malleable Iron —		
13	Handwheel Nut	Carbon Steel	Carbon Steel	Carbon Steel
15	Stem Packing	— Graphite/Graphoil —		
16	Nameplate	Aluminum	Aluminum	Aluminum

\*\* Valves may be supplied with eye-bolt design.  
Cameron reserves the right to substitute materials listed above with alternate material.



WELDED BONNET ASSEMBLY

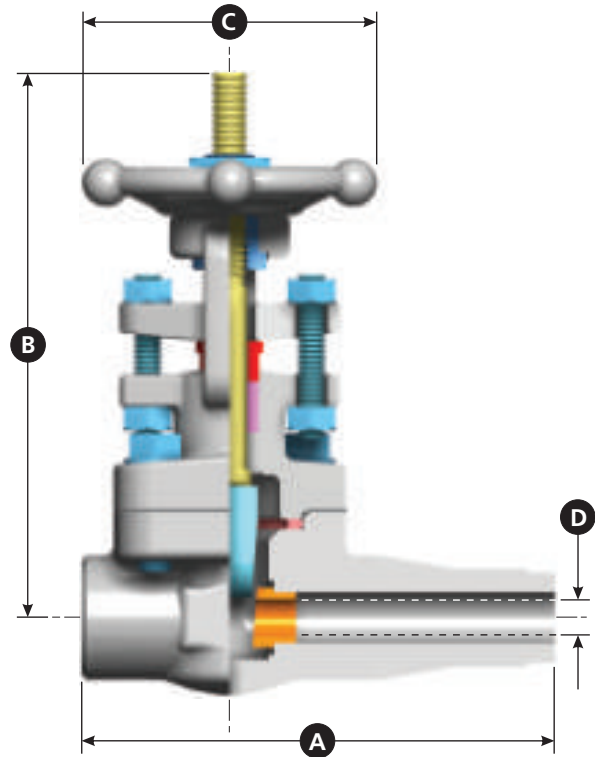


**FORGED STEEL GATE VALVE - API 602  
INTEGRAL REINFORCED EXTENDED BODY (IREB)  
SW/NPT - API CLASS 800**

**DIMENSIONS**

SIZE in. (mm)	ASME CLASS	A	B OPEN	C	D	C <sub>v</sub>	WEIGHT lb. (kg)
1/2 (15)	800	5.7 (145)	5.7 (145)	3.5 (90)	0.39 (10)	6.2	4.2 (1.9)
3/4 (20)	800	6.3 (160)	6.1 (156)	3.5 (90)	0.55 (14)	10.0	5.3 (2.4)
1 (25)	800	7.4 (190)	7.3 (186)	4.3 (110)	0.71 (18)	25.8	8.4 (3.8)
1 1/2 (40)	800	8.8 (225)	10.0 (255)	5.5 (140)	1.22 (31)	68.7	17.0 (7.7)

NOTE: " A " dimension to be within  $\pm 0.06$  in. /1.5 mm.  
" B " dimension for open position.

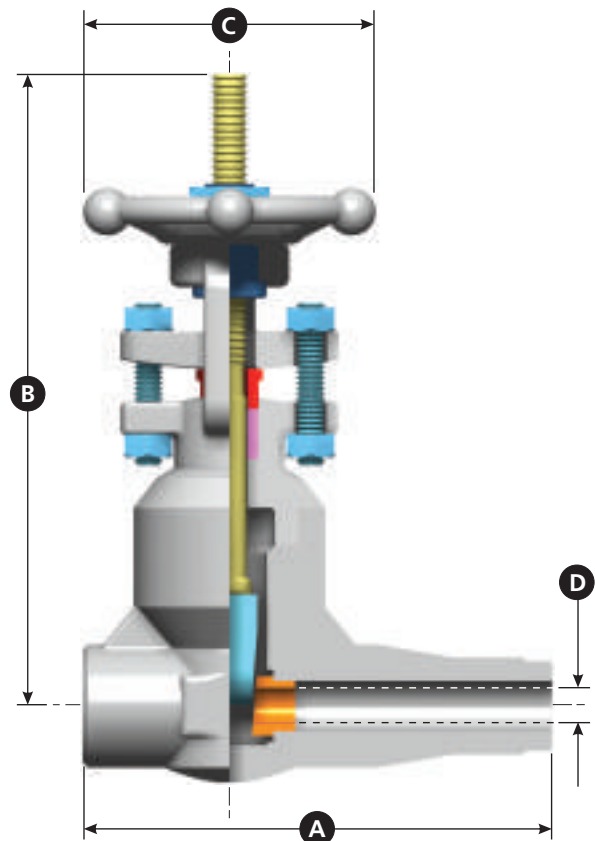


**SEAL WELDED BONNET ASSEMBLY**

**DIMENSIONS**

SIZE in. (mm)	ASME CLASS	A	B OPEN	C	D	C <sub>v</sub>	WEIGHT lb. (kg)
1/2 (15)	800	5.7 (145)	5.9 (150)	3.5 (90)	0.39 (10)	6.2	3.7 (1.7)
3/4 (20)	800	6.3 (160)	6.1 (157)	3.5 (90)	0.55 (14)	10.0	4.6 (2.1)
1 (25)	800	7.4 (190)	7.4 (188)	4.3 (110)	0.71 (18)	25.8	7.3 (3.3)
1 1/2 (40)	800	8.8 (225)	9.7 (248)	5.5 (140)	1.22 (31)	68.7	13.7 (6.2)

NOTE: " A " dimension to be within  $\pm 0.06$  in. /1.5 mm.  
" B " dimension for open position.



# FORGED STEEL GLOBE VALVE

## SW/NPT - API/ASME CLASS 800/1500

PRESSURE RATINGS		
	ASTM A105/A350 Gr. LF2	ASTM A182 F316
CLASS	PRESSURE	PRESSURE
800	1975 psi @ 100°F	1920 psi @ 100°F
1500	3705 psi @ 100°F	3600 psi @ 100°F

SPECIFICATION	
DESIGN	- BS 5352/ASME B16.34
SOCKET WELD	- ASME B16.11
THREADED	- ASME B1.20.1
TEST	- BS 6755 (Pt.1)/API 598

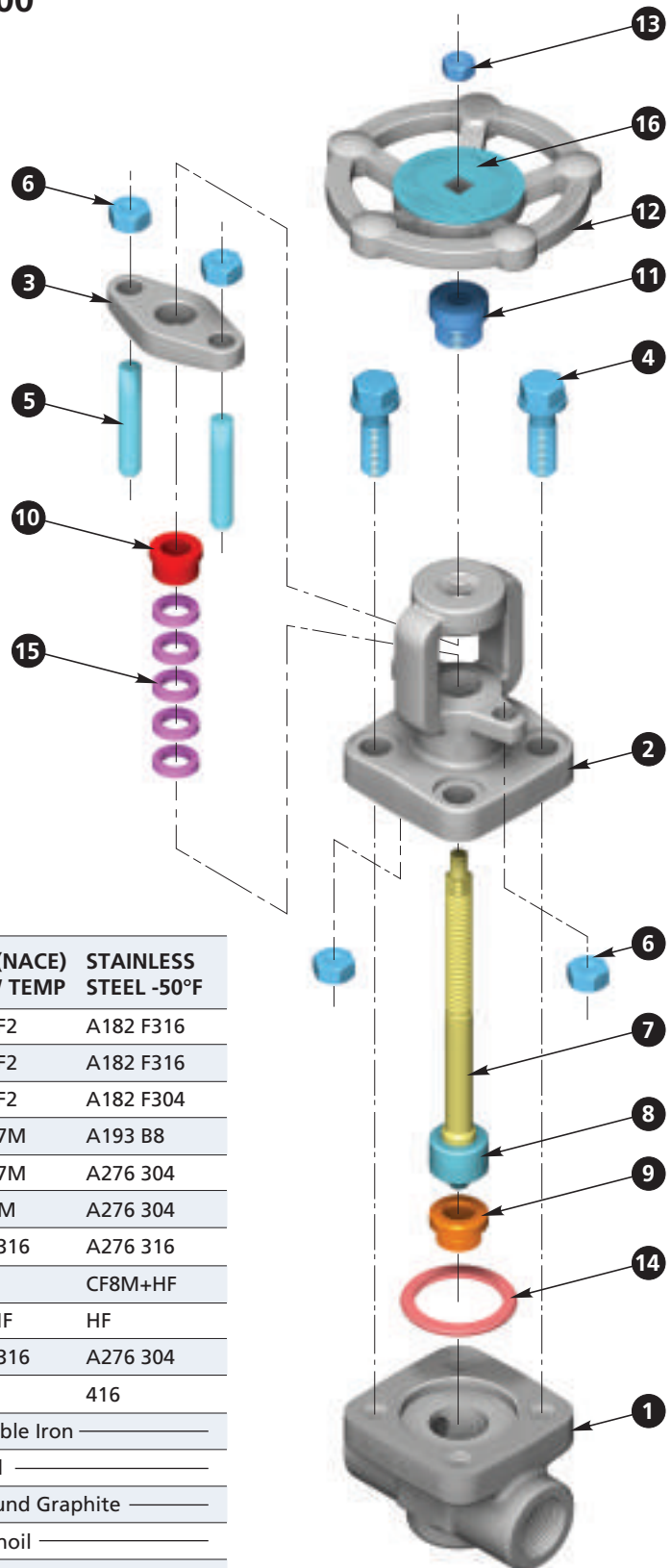
### MATERIALS LIST

ITEM	PART	STANDARD	SOUR (NACE)	SOUR (NACE) & LOW TEMP	STAINLESS STEEL -50°F
1	Body	A105	A105	A350 LF2	A182 F316
2	Bonnet	A105	A105	A350 LF2	A182 F316
3	Gland Flange	A105	A105	A350 LF2	A182 F304
4	Body Bolts	A193 B7	A193 B7M	A320 L7M	A193 B8
**	5 Gland Studs	A193 B7	A193 B7M	A320 L7M	A276 304
6	Gland Nuts	A194 2H	A194 2HM	A194 7M	A276 304
7	Stem	A182 F6a	A182 F316	A182 F316	A276 316
8	Disc	F6a	F316	F316	CF8M+HF
***9	Seat	F6a+HF	F316+HF	F316+HF	HF
10	Gland	A182 F6a	A182 F316	A182 F316	A276 304
11	Yoke Nut	416	416	416	416
12	Handwheel	—————	Carbon Steel/Malleable Iron	—————	—————
13	Handwheel Nut	—————	Carbon Steel	—————	—————
14	Gasket	—————	Stainless Steel Spiral Wound Graphite	—————	—————
15	Stem Packing	—————	Graphite/Graphoil	—————	—————
16	Nameplate	Aluminum	Aluminum	Aluminum	Stainless Steel

\*\* Valves may be supplied with eye-bolt design.

\*\*\* Valves can be supplied with integral seat.

Cameron reserves the right to substitute materials listed above with alternate material.



# FORGED STEEL GLOBE VALVE

## SW/NPT - ASME CLASS 1500/2500

### RTJ BONNET

PRESSURE RATINGS ASTM A105/A350 Gr. LF2	
CLASS	PRESSURE
1500	3705 psi @ 100°F
2500	6170 psi @ 100°F

SPECIFICATION	
DESIGN	- BS 5352/ASME B16.34
SOCKET WELD	- ASME B16.11
THREADED	- ASME B1.20.1
TEST	- BS 6755 (Pt. 1)/API 598

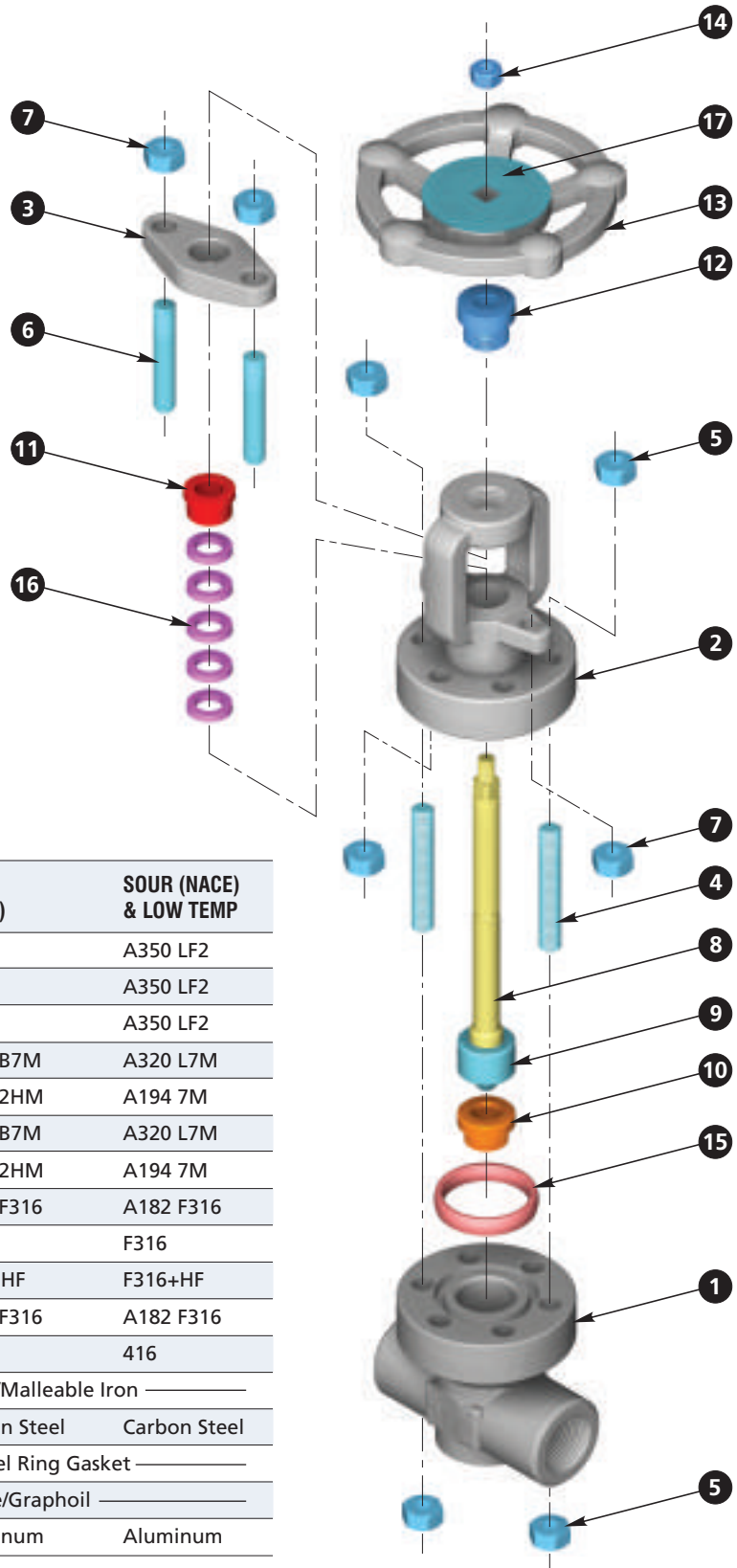
### MATERIALS LIST

ITEM	PART	STANDARD	SOUR (NACE)	SOUR (NACE) & LOW TEMP
1	Body	A105	A105	A350 LF2
2	Bonnet	A105	A105	A350 LF2
3	Gland Flange	A105	A105	A350 LF2
4	Body Studs	A193 B7	A193 B7M	A320 L7M
5	Body Nuts	A194 2H	A194 2HM	A194 7M
**	Gland Studs	A193 B7	A193 B7M	A320 L7M
7	Gland Nuts	A194 2H	A194 2HM	A194 7M
8	Stem	A182 F6a	A182 F316	A182 F316
9	Disc	F6a	F316	F316
***10	Seat	F6a+HF	F316+HF	F316+HF
11	Gland	A182 F6a	A182 F316	A182 F316
12	Yoke Nut	416	416	416
13	Handwheel	Carbon Steel/Malleable Iron		
14	Handwheel Nut	Carbon Steel	Carbon Steel	Carbon Steel
15	Gasket	Stainless Steel Ring Gasket		
16	Stem Packing	Graphite/Graphoil		
17	Nameplate	Aluminum	Aluminum	Aluminum

\*\* Valves may be supplied with eye-bolt design.

\*\*\* Valves can be supplied with integral seat.

Cameron reserves the right to substitute materials listed above with alternate material.

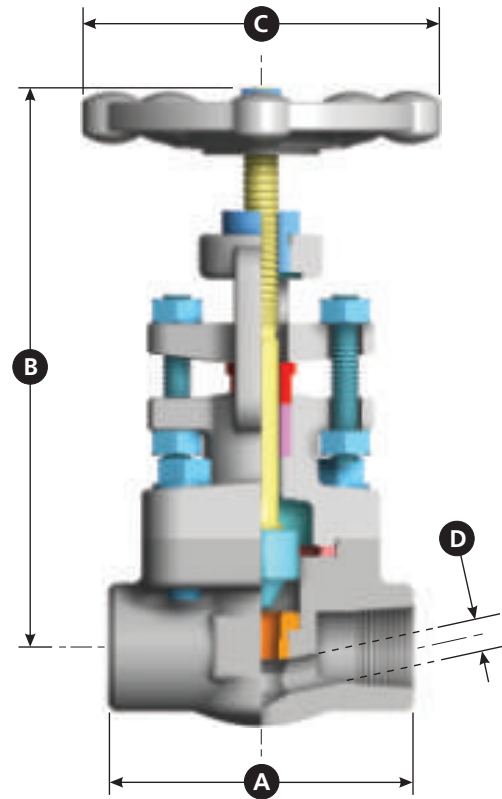


## FORGED STEEL GLOBE VALVE SW/NPT - API/ASME CLASS 800/1500

### DIMENSIONS

SIZE in. (mm)	ASME CLASS	A	B OPEN	C	D	C <sub>v</sub>	WEIGHT lb. (kg)
1/4 (8)	800	3.1 (79)	6.9 (176)	3.9 (100)	0.31 (8)	-	4.85 (2.2)
	1500	3.5 (90)	6.6 (169)	4.3 (110)	0.26 (7)	-	5.3 (2.4)
3/8 (10)	800	3.1 (79)	6.9 (176)	3.9 (100)	0.39 (10)	-	4.63 (2.1)
	1500	3.5 (90)	6.6 (169)	4.3 (110)	0.35 (9)	-	5.3 (2.4)
1/2 (15)	800	3.1 (80)	5.9 (152)	3.5 (90)	0.35 (9)	1.6	3.7 (1.7)
	1500	3.5 (90)	6.6 (169)	4.3 (110)	0.39 (10)	3.2	5.3 (2.4)
3/4 (20)	800	3.5 (90)	6.2 (159)	3.5 (90)	0.49 (13)	3.6	4.4 (2.0)
	1500	4.3 (110)	7.1 (181)	4.3 (110)	0.51 (13)	4.4	8.2 (3.7)
1 (25)	800	4.3 (110)	7.2 (182)	4.3 (110)	0.69 (18)	7.4	7.1 (3.2)
	1500	5.0 (127)	8.2 (210)	4.7 (120)	0.71 (18)	6.8	12.1 (5.5)
1 1/4 (32)	800	5.0 (127)	8.4 (214)	4.7 (120)	0.89 (23)	10.2	11.7 (5.3)
	1500	6.1 (155)	9.6 (246)	5.5 (140)	0.91 (23)	10.2	18.3 (8.3)
1 1/2 (40)	800	6.1 (155)	11.1 (283)	5.5 (140)	1.10 (28)	16.2	17.2 (7.8)
	1500	6.6 (170)	10.0 (255)	5.5 (140)	1.10 (28)	18.0	25.1 (11.4)
2 (50)	800	6.6 (170)	12.0 (306)	5.5 (140)	1.26 (32)	20.0	23.4 (10.6)
	1500	8.2 (210)	12.0 (307)	6.8 (175)	1.34 (34)	26.8	37.0 (16.8)

NOTE: "A" dimension to be within  $\pm 0.06$  in. /1.5 mm.  
"B" dimension for open position.

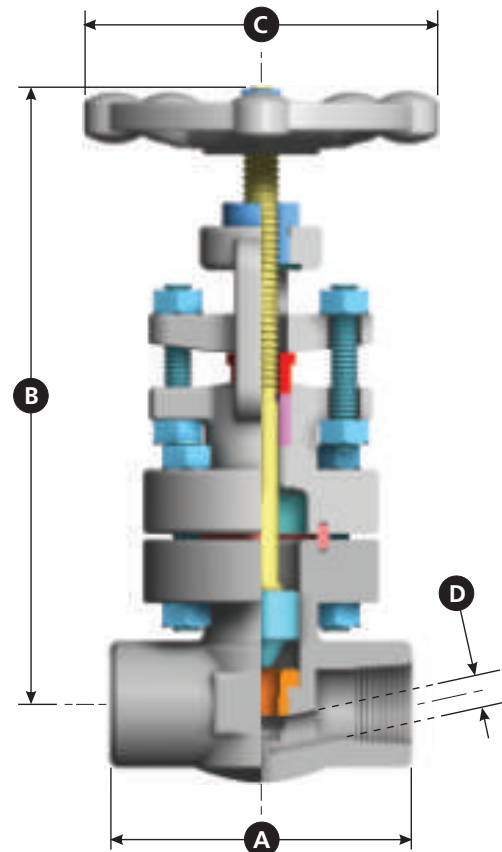


## SW/NPT - ASME CLASS 1500/2500 RTJ BONNET

### DIMENSIONS

SIZE in. (mm)	ASME CLASS	A	B OPEN	C	D	C <sub>v</sub>	WEIGHT lb. (kg)
1/2 (15)	1500	4.3 (110)	8.5 (218)	4.7 (120)	0.43 (11)	3.2	12.3 (5.6)
	2500	4.3 (110)	8.7 (221)	5.5 (140)	0.39 (10)	2.8	13.0 (5.9)
3/4 (20)	1500	4.7 (120)	10.7 (274)	6.8 (175)	0.57 (15)	4.4	17.6 (8.0)
	2500	4.7 (120)	10.9 (278)	8.8 (225)	0.51 (13)	4.0	18.5 (8.4)
1 (25)	1500	5.1 (130)	11.2 (286)	6.8 (175)	0.75 (19)	6.8	20.5 (9.3)
	2500	5.1 (130)	11.4 (290)	8.8 (225)	0.71 (18)	6.4	21.8 (9.9)
1 1/2 (40)	1500	8.2 (210)	16.8 (427)	8.8 (225)	1.22 (31)	18.0	57.8 (26.2)
	2500	8.2 (210)	16.6 (424)	11.8 (300)	1.10 (28)	17.2	60.0 (27.2)
2 (50)	1500	9.4 (240)	17.0 (433)	11.8 (300)	1.48 (38)	26.8	76.1 (34.5)
	2500	9.4 (240)	18.8 (478)	13.7 (350)	1.34 (34)	26.4	78.9 (35.8)

NOTE: "A" dimension to be within  $\pm 0.06$  in. /1.5 mm.  
"B" dimension for open position.





## FORGED STEEL GLOBE VALVE FLANGED - ASME CLASS 150/300/600/1500

PRESSURE RATINGS ASTM A105/A350 Gr. LF2	
CLASS	PRESSURE
150	285 psi @ 100°F
300	740 psi @ 100°F
600	1480 psi @ 100°F
1500	3705 psi @ 100°F

SPECIFICATION	
DESIGN	- BS 5352/ASME B16.34
END TO END	- ASME B16.10
END CONNECTION	- ASME B16.5
TEST	- BS 6755 (Pt.1)/API 598

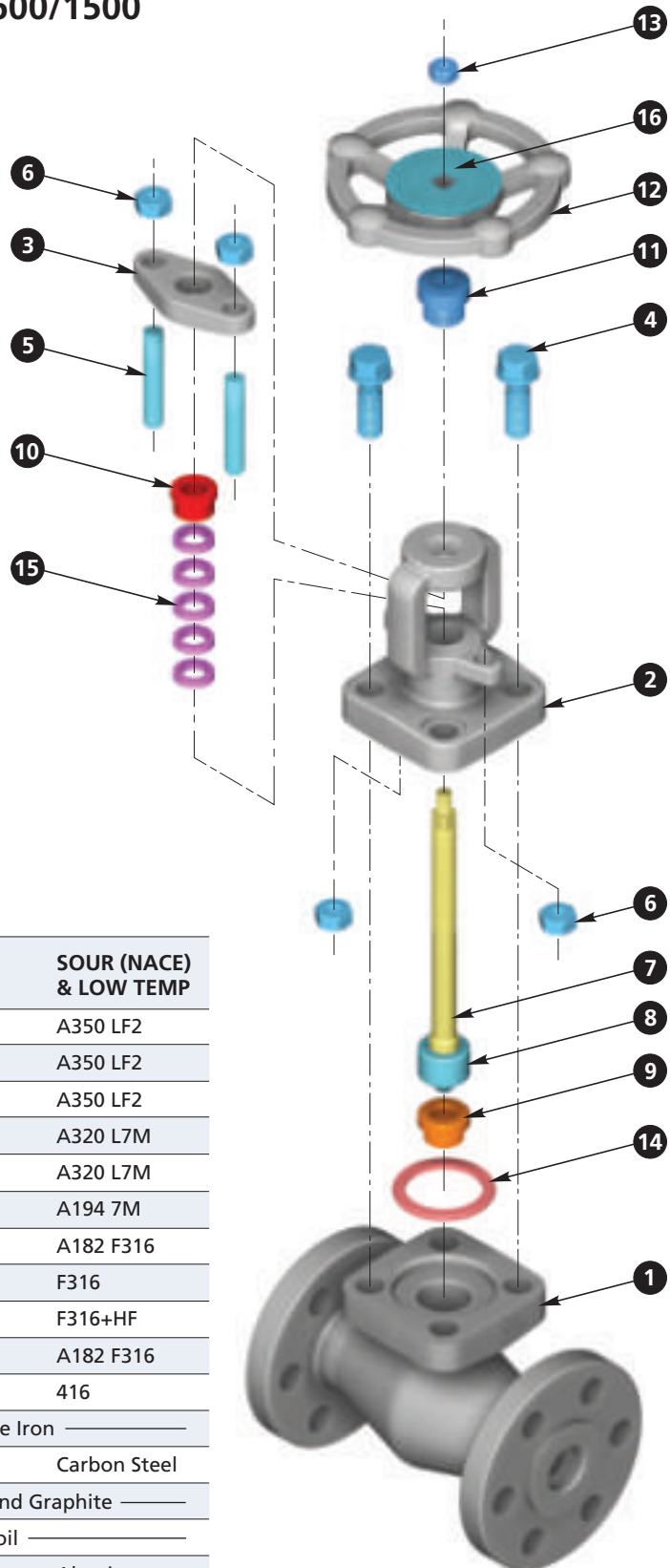
### MATERIALS LIST

ITEM	PART	STANDARD	SOUR (NACE)	SOUR (NACE) & LOW TEMP
1	Body	A105	A105	A350 LF2
2	Bonnet	A105	A105	A350 LF2
3	Gland Flange	A105	A105	A350 LF2
4	Body Bolts	A193 B7	A193 B7M	A320 L7M
** 5	Gland Studs	A193 B7	A193 B7M	A320 L7M
6	Gland Nuts	A194 2H	A194 2HM	A194 7M
7	Stem	A182 F6a	A182 F316	A182 F316
8	Disc	F6a	F316	F316
***9	Seat	F6a+HF	F316+HF	F316+HF
10	Gland	A182 F6a	A182 F316	A182 F316
11	Yoke Nut	416	416	416
12	Handwheel	Carbon Steel/Malleable Iron		
13	Handwheel Nut	Carbon Steel	Carbon Steel	Carbon Steel
14	Gasket	Stainless Steel Spiral Wound Graphite		
15	Stem Packing	Graphite/Graphoil		
16	Nameplate	Aluminum	Aluminum	Aluminum

\*\* Valves may be supplied with eye-bolt design.

\*\*\* Valves can be supplied with integral seat.

Cameron reserves the right to substitute materials listed above with alternate material.



# FORGED STEEL GLOBE VALVE FLANGED - ASME CLASS 1500/2500 RTJ BONNET

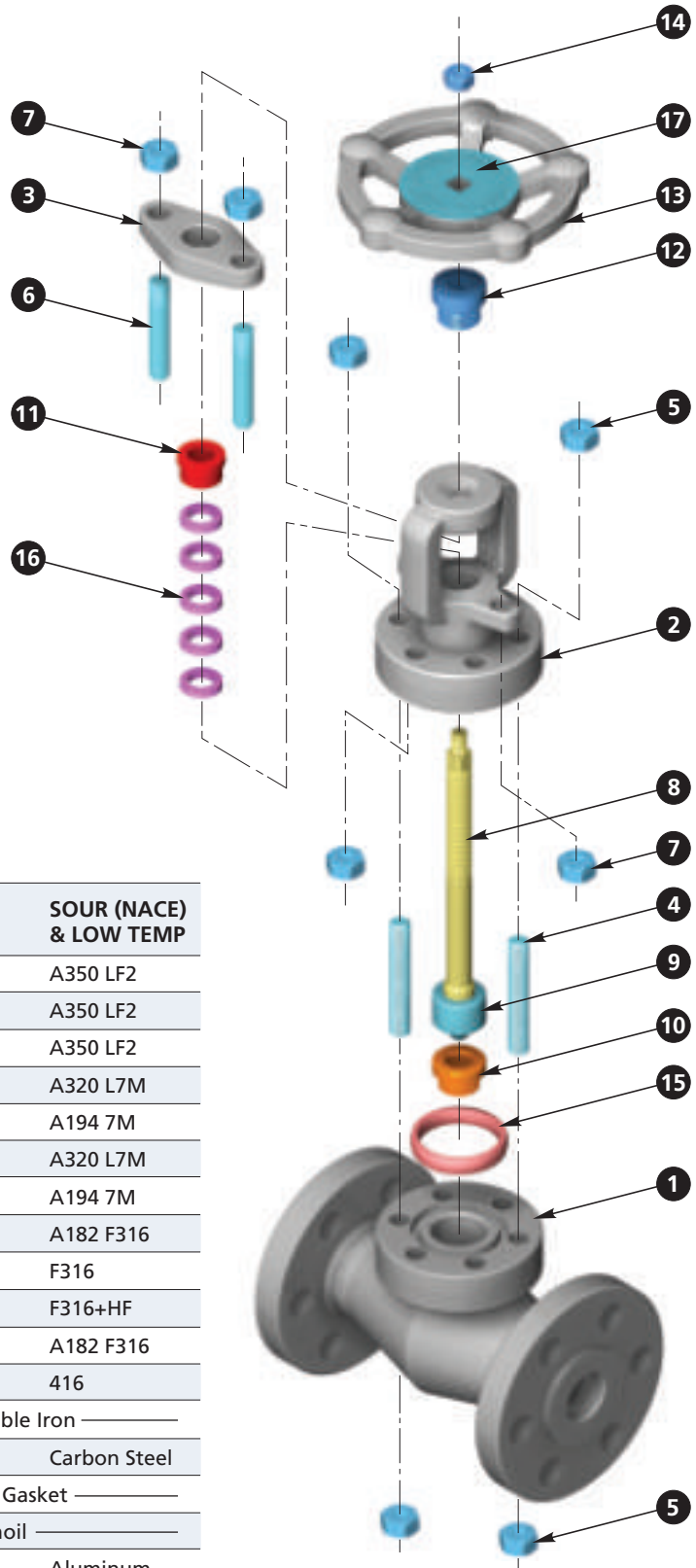
PRESSURE RATINGS ASTM A105/A350 Gr. LF2	
CLASS	PRESSURE
1500	3705 psi @ 100°F
2500	6170 psi @ 100°F

SPECIFICATION	
DESIGN	- BS 5352/ASME B16.34
END TO END	- ASME B16.10
END CONNECTION	- ASME B16.5
TEST	- BS 6755 (Pt.1)/API 598

## MATERIALS LIST

ITEM	PART	STANDARD	SOUR (NACE)	SOUR (NACE) & LOW TEMP
1	Body	A105	A105	A350 LF2
2	Bonnet	A105	A105	A350 LF2
3	Gland Flange	A105	A105	A350 LF2
4	Body Studs	A193 B7	A193 B7M	A320 L7M
5	Body Nuts	A194 2H	A194 2HM	A194 7M
6	Gland Studs	A193 B7	A193 B7M	A320 L7M
7	Gland Nuts	A194 2H	A194 2HM	A194 7M
8	Stem	A182 F6a	A182 F316	A182 F316
9	Disc	F6a	F316	F316
*** 10	Seat	F6a+HF	F316+HF	F316+HF
11	Gland	A182 F6a	A182 F316	A182 F316
12	Yoke Nut	416	416	416
13	Handwheel	—————	Carbon Steel/Malleable Iron	—————
14	Handwheel Nut	Carbon Steel	Carbon Steel	Carbon Steel
15	Gasket	—————	Stainless Steel Ring Gasket	—————
16	Stem Packing	—————	Graphite/Graphoil	—————
17	Nameplate	Aluminum	Aluminum	Aluminum

\*\*\* Valves can be supplied with integral seat.  
Cameron reserves the right to substitute materials listed above with alternate material.

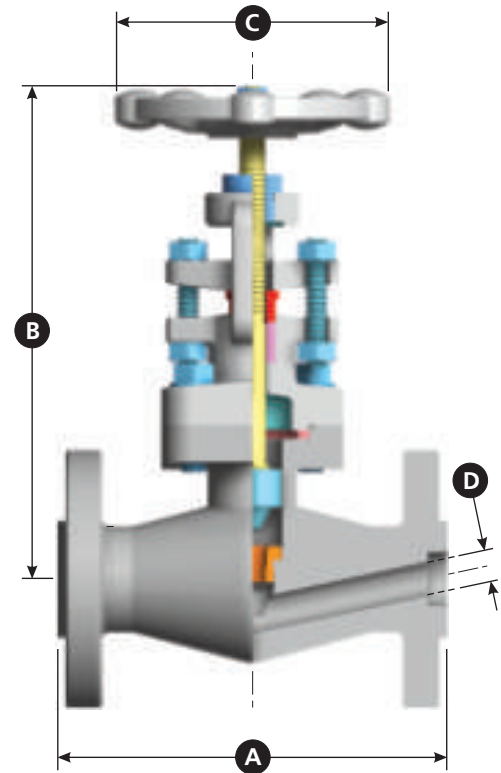


## FORGED STEEL GLOBE VALVE FLANGED - ASME CLASS 150/300/600/1500

### DIMENSIONS

SIZE in. (mm)	ASME CLASS	A		B OPEN	C	D	C <sub>v</sub>	WEIGHT lb. (kg)
		RF	RTJ					
1/2 (15)	150	4.3 (108)	4.7 (119)	7.3 (186)	3.5 (90)	0.35 (9)	1.5	6.8 (3.1)
	300	6.0 (152)	6.5 (164)	5.9 (152)	3.5 (90)	0.35 (9)	1.5	7.5 (3.4)
	600	6.5 (165)	6.5 (164)	5.9 (152)	3.5 (90)	0.35 (9)	1.5	7.9 (3.6)
	1500	8.5 (216)	8.5 (216)	6.6 (169)	4.3 (110)	0.39 (10)	3.4	20.2 (9.2)
3/4 (20)	150	4.6 (118)	5.1 (130)	7.4 (189)	3.5 (90)	0.49 (13)	3.2	8.8 (4.0)
	300	7.0 (178)	7.5 (191)	6.2 (159)	3.5 (90)	0.49 (13)	3.2	10.6 (4.8)
	600	7.5 (191)	7.5 (191)	6.2 (159)	3.5 (90)	0.49 (13)	3.2	11.2 (5.1)
	1500	9.0 (229)	9.0 (229)	7.1 (181)	4.3 (110)	0.51 (13)	4.8	21.3 (9.7)
1 (25)	150	5.0 (127)	5.5 (140)	8.0 (203)	4.3 (110)	0.69 (18)	6.2	12.6 (5.7)
	300	8.0 (203)	8.5 (216)	7.1 (182)	4.3 (110)	0.69 (18)	6.2	15.4 (7.0)
	600	8.5 (216)	8.5 (216)	7.1 (182)	4.3 (110)	0.69 (18)	6.2	17.2 (7.8)
	1500	10.0 (254)	10.0 (254)	8.2 (210)	4.7 (120)	0.71 (18)	7.2	31.5 (14.3)
1 1/2 (40)	150	6.5 (165)	7.0 (178)	11.1 (283)	5.5 (140)	1.10 (28)	19.0	23.4 (10.6)
	300	9.0 (229)	9.5 (241)	11.1 (283)	5.5 (140)	1.10 (28)	19.0	31.3 (14.2)
	600	9.5 (241)	9.5 (241)	11.1 (283)	5.5 (140)	1.10 (28)	19.0	31.3 (14.2)
	1500	12.0 (305)	12.0 (305)	10.0 (255)	5.5 (140)	0.94 (24)	19.6	58.1 (26.4)
2 (50)	150	8.0 (203)	8.5 (216)	12.3 (314)	5.5 (140)	1.26 (32)	21.5	34.0 (15.4)
	300	10.5 (267)	11.1 (283)	12.0 (306)	5.5 (140)	1.26 (32)	21.5	38.4 (17.4)
	600	11.5 (292)	11.6 (295)	12.0 (306)	5.5 (140)	1.26 (32)	21.5	42.8 (19.4)
	1500	14.5 (368)	14.6 (372)	12.1 (307)	6.8 (175)	1.10 (28)	29.4	95.9 (43.5)

NOTE: " A " dimension to be within  $\pm 0.06$  in. /1.5 mm.  
" B " dimension for open position.

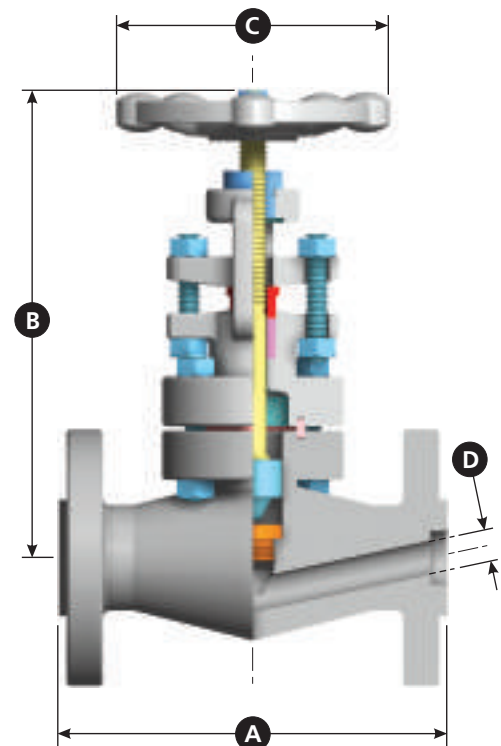


## FLANGED - ASME CLASS 1500/2500 RTJ BONNET

### DIMENSIONS

SIZE in. (mm)	ASME CLASS	A		B OPEN	C	D	C <sub>v</sub>	WEIGHT lb. (kg)
		RF	RTJ					
1/2 (15)	1500	8.5 (216)	8.5 (216)	8.5 (218)	4.7 (120)	0.43 (11)	3.4	20.7 (9.4)
	2500	10.3 (264)	10.3 (264)	8.7 (221)	5.5 (140)	0.39 (10)	2.8	26.9 (12.2)
3/4 (20)	1500	9.0 (229)	9.0 (229)	10.7 (274)	6.8 (175)	0.57 (15)	4.8	33.5 (15.2)
	2500	10.7 (273)	10.7 (273)	10.9 (278)	8.8 (225)	0.51 (13)	4.0	36.8 (16.7)
1 (25)	1500	10.0 (254)	10.0 (254)	11.2 (286)	6.8 (175)	0.75 (19)	7.2	38.1 (17.3)
	2500	12.1 (308)	12.1 (308)	11.4 (290)	8.8 (225)	0.71 (18)	6.4	45.0 (20.4)
1 1/2 (40)	1500	12.0 (305)	12.0 (305)	16.8 (427)	8.8 (225)	1.22 (31)	19.6	83.6 (38.0)
	2500	15.1 (384)	15.2 (387)	16.7 (424)	11.8 (300)	1.10 (28)	17.2	110.2 (50.0)
2 (50)	1500	14.5 (368)	14.6 (372)	17.0 (433)	11.8 (300)	1.48 (38)	29.4	121.7 (55.2)
	2500	17.7 (451)	17.8 (454)	17.0 (433)	13.7 (350)	1.34 (34)	26.4	156.1 (70.8)

NOTE: " A " dimension to be within  $\pm 0.06$  in. /1.5 mm.  
" B " dimension for open position.



**FORGED STEEL GLOBE VALVE**  
**SW/NPT - API/ASME CLASS 800/1500**  
**& ASME CLASS 2500**  
**SEAL WELDED BONNET**

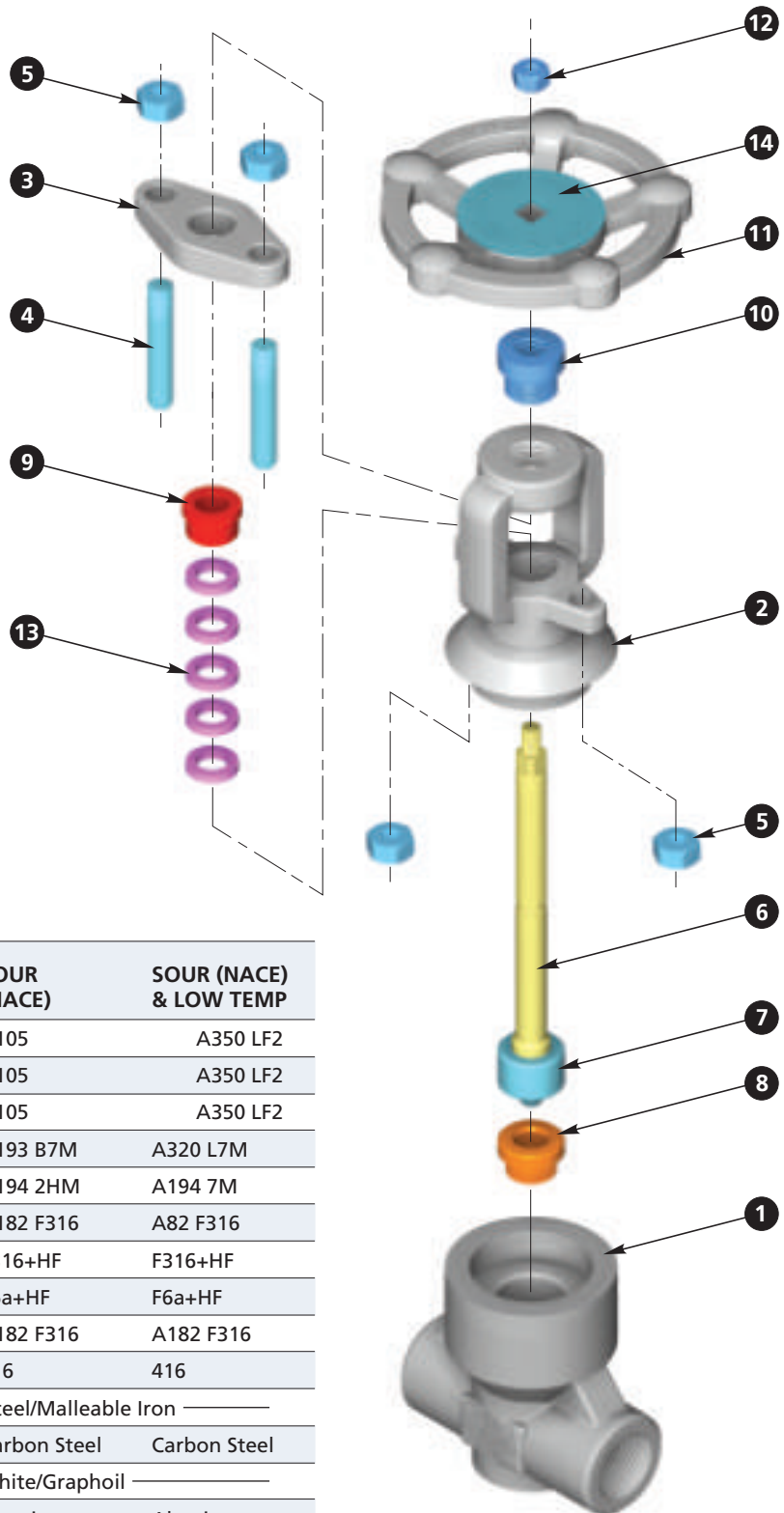
PRESSURE RATINGS ASTM A105/A350 Gr. LF2	
CLASS	PRESSURE
800	1975 psi @ 100°F
1500	3705 psi @ 100°F
2500	6170 psi @ 100°F

SPECIFICATION	
DESIGN	- BS 5352/ASME B16.34
SOCKET WELD	- ASME B16.11
THREADED	- ASME B1.20.1
TEST	- BS 6755 (Pt.1)/API 598

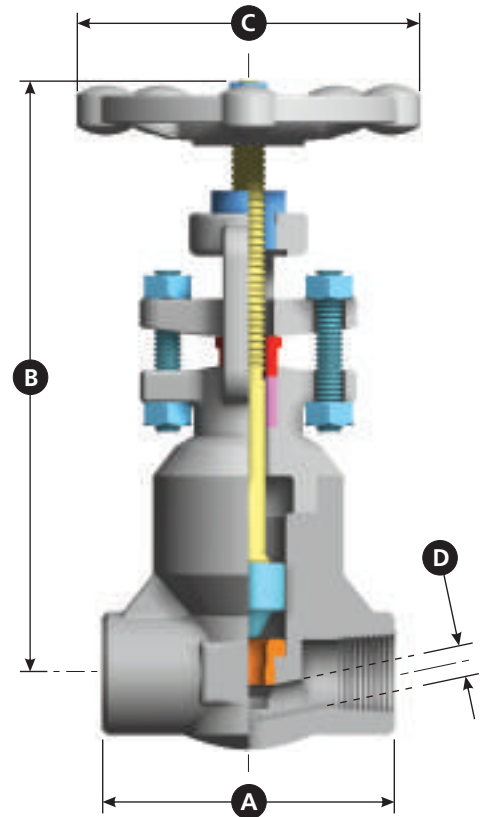
**MATERIALS LIST**

ITEM	PART	STANDARD	SOUR (NACE)	SOUR (NACE) & LOW TEMP
1	Body	A105	A105	A350 LF2
2	Bonnet	A105	A105	A350 LF2
3	Gland Flange	A105	A105	A350 LF2
** 4	Gland Studs	A193 B7	A193 B7M	A320 L7M
5	Gland Nuts	A194 2H	A194 2HM	A194 7M
6	Stem	A182 F6a	A182 F316	A82 F316
7	Disc	F6a+HF	F316+HF	F316+HF
8	Seat	F6a+HF	F6a+HF	F6a+HF
9	Gland	A182 F6a	A182 F316	A182 F316
10	Yoke Nut	416	416	416
11	Handwheel	Carbon Steel/Malleable Iron		
12	Handwheel Nut	Carbon Steel	Carbon Steel	Carbon Steel
13	Stem Packing	Graphite/Graphoil		
14	Nameplate	Aluminum	Aluminum	Aluminum

\*\* Valves may be supplied with eye-bolt design.  
 Cameron reserves the right to substitute materials listed above with alternate material.



**FORGED STEEL GLOBE VALVE  
SW/NPT - API/ASME CLASS 800/1500  
& ASME CLASS 2500  
SEAL WELDED BONNET**



**DIMENSIONS**

SIZE in. (mm)	ASME CLASS	A	B OPEN	C	D	C <sub>v</sub>	WEIGHT lb. (kg)
1/4 (8)	800	3.0 (76)	5.7 (146)	4.0 (102)	0.25 (6.4)	-	4.4 (2.0)
	1500	3.4 (86)	6.0 (152)	4.0 (102)	0.25 (6.4)	-	4.9 (2.2)
3/8 (10)	800	3.0 (76)	5.7 (146)	4.0 (102)	0.37 (9.5)	-	4.0 (1.8)
	1500	3.4 (86)	6.0 (152)	4.0 (102)	0.37 (9.5)	-	4.6 (2.1)
1/2 (15)	800	3.0 (76)	5.7 (146)	4.0 (102)	0.37 (9.5)	2.0	4.0 (1.8)
	1500	3.4 (86)	6.0 (152)	4.0 (102)	0.37 (9.5)	2.0	4.4 (2.0)
	2500	4.3 (110)	8.2 (209)	5.5 (140)	0.39 (10.0)	2.8	5.5 (2.5)
3/4 (20)	800	3.4 (86)	6.0 (152)	4.0 (102)	0.50 (12.7)	3.0	4.6 (2.1)
	1500	4.0 (102)	7.4 (188)	4.5 (114)	0.50 (12.7)	3.0	7.5 (3.4)
	2500	5.0 (127)	9.4 (238)	8.9 (225)	0.51 (13.0)	4.0	9.0 (4.1)
1 (25)	800	4.0 (102)	7.4 (188)	4.5 (114)	0.69 (17.5)	5.5	6.4 (2.9)
	1500	6.0 (152)	8.6 (219)	5.5 (140)	0.69 (17.5)	5.5	14.3 (6.5)
	2500	6.1 (155)	10.1 (257)	8.9 (225)	0.71 (18.0)	6.4	13.7 (6.2)
1 1/4 (32)	800	6.0 (152)	8.6 (219)	5.5 (140)	0.89 (22.5)	-	14.1 (6.4)
	1500	6.8 (172)	10.2 (260)	6.5 (165)	0.89 (22.5)	-	21.4 (9.7)
1 1/2 (40)	800	6.0 (152)	8.6 (219)	5.5 (140)	1.16 (29.5)	17.0	13.7 (6.2)
	1500	6.8 (172)	10.2 (260)	6.5 (165)	1.16 (29.5)	17.0	20.9 (9.5)
	2500	8.3 (210)	14.3 (364)	11.8 (300)	1.10 (28.0)	17.2	26.0 (11.8)
2 (50)	800	6.8 (172)	10.2 (260)	6.5 (165)	1.38 (35.0)	21.0	21.4 (9.7)
	1500	8.3 (210)	12.8 (324)	7.2 (184)	1.38 (35.0)	21.0	30.9 (14.0)
	2500	9.5 (240)	16.0 (407)	13.8 (350)	1.34 (34.0)	26.4	61.7 (28.0)

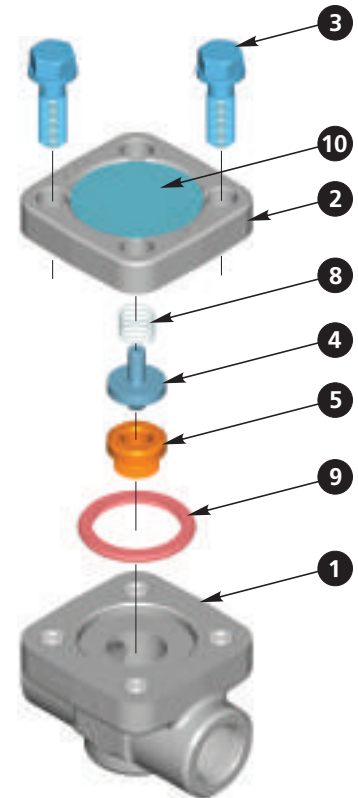
NOTE: " A " dimension to be within  $\pm 0.06$  in. /1.5 mm.  
" B " dimension for open position.

# FORGED STEEL CHECK VALVE

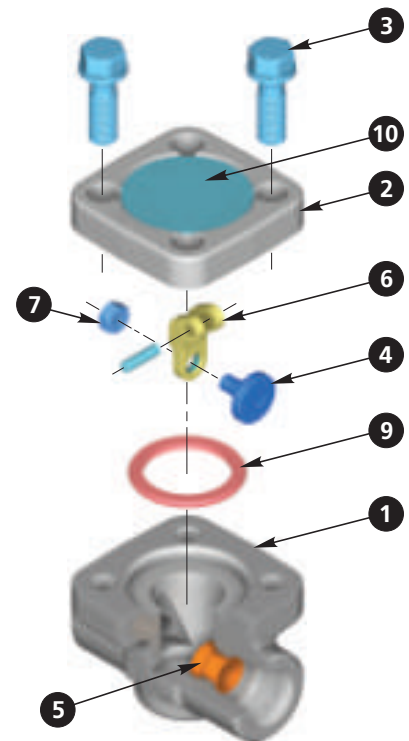
## SW/NPT - API/ASME CLASS 800/1500

PRESSURE RATINGS		
ASTM A105/A350 Gr. LF2		ASTM A182 F316
CLASS	PRESSURE	PRESSURE
800	1975 psi @ 100°F	1920 psi @ 100°F
1500	3705 psi @ 100°F	3600 psi @ 100°F

SPECIFICATION	
DESIGN	- BS 5352/ASME B16.34
SOCKET WELD	- ASME B16.11
THREADED	- ASME B1.20.1
TEST	- BS 6755 (Pt.1)/API 598



PISTON



SWING

### MATERIALS LIST

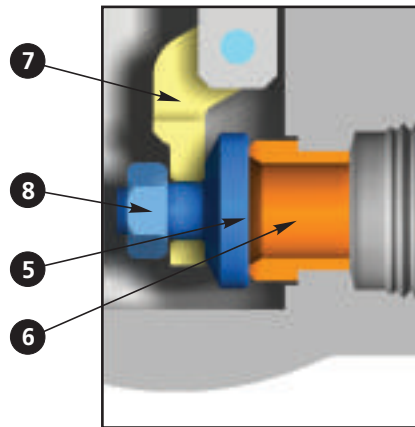
ITEM	PISTON	SWING	STANDARD	SOUR (NACE)	SOUR (NACE) & LOW TEMP	STAINLESS STEEL -50°F
1	Body	Body	A105	A105	A350 LF2	A182 F316
2	Cap	Cap	A105	A105	A350 LF2	A182 F316
3	Body Bolts	Body Bolts	A193 B7	A193 B7M	A320 L7M	A193 Gr. B8
4	Piston	Disc	A182 F6a	A182 F316	A182 F316	A182 F316+HF
5	Seat	Seat	F6a+HF	F316+HF	F316+HF	F316+HF
6	-	Swing Arm	A182 F6a	A182 F316	A182 F316	A182 F316
7	-	Disc Nut	316	316	316	316
8	Spring	-	Stainless Steel			
9	Gasket	Gasket	Stainless Steel Spiral Wound Graphite			
10	Nameplate	Nameplate	Aluminum	Aluminum	Aluminum	Stainless Steel

Cameron reserves the right to substitute materials listed above with alternate material.

# FORGED STEEL CHECK VALVE

## SW/NPT - ASME CLASS 1500/2500

### RTJ BONNET



SWING

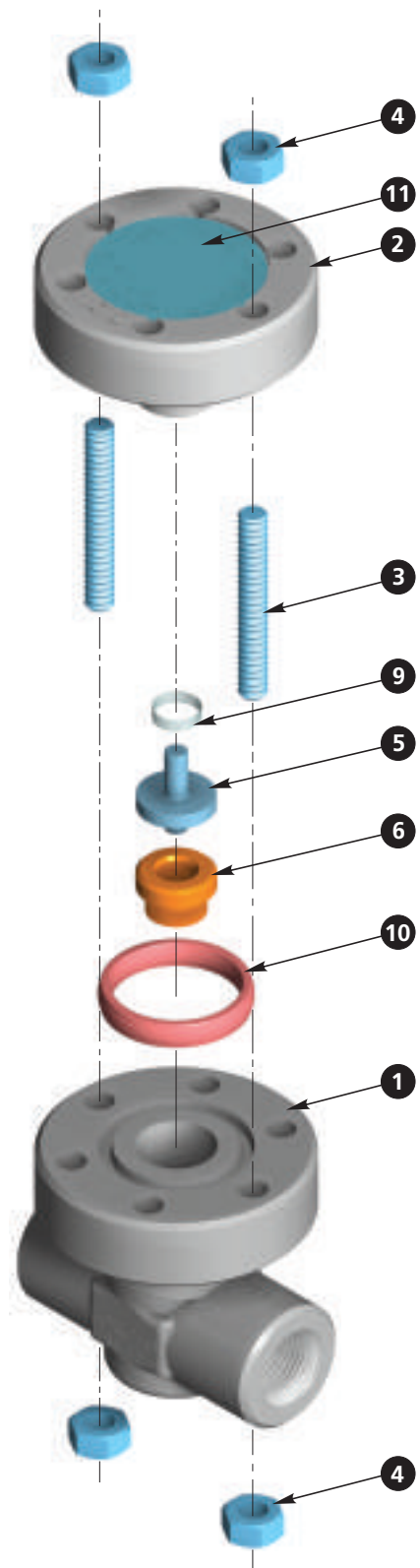
PRESSURE RATINGS	
ASTM A105/A350 Gr. LF2	
CLASS	PRESSURE
1500	3705 psi @ 100°F
2500	6170 psi @ 100°F

SPECIFICATION	
DESIGN	- BS 5352/ASME B16.34
SOCKET WELD	- ASME B16.11
THREADED	- ASME B1.20.1
TEST	- BS 6755 (Pt.1)/API 598

### MATERIALS LIST

ITEM	PISTON	SWING	STANDARD	SOUR (NACE)	SOUR (NACE) & LOW TEMP
1	Body	Body	A105	A105	A350 LF2
2	Cap	Cap	A105	A105	A350 LF2
3	Body Studs	Body Studs	A193 B7	A193 B7M	A320 L7M
4	Body Nuts	Body Nuts	A194 2H	A194 2HM	A194 7M
5	Piston	Disc	A182 F6a	A182 F316	A182 F316
6	Seat	Seat	F6a+HF	F316+HF	F316+HF
7	-	Swing Arm	A182 F6a	A182 F316	A182 F316
8	-	Disc Nut	316	316	316
9	Spring	-	Stainless Steel	Stainless Steel	Stainless Steel
10	Gasket	Gasket	Stainless Steel Ring Gasket		
11	Nameplate	Nameplate	Aluminium	Aluminium	Aluminium

Cameron reserves the right to substitute materials listed above with alternate material.



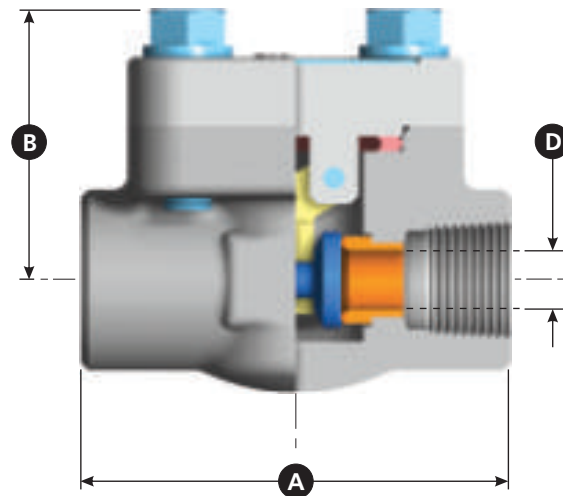
PISTON

**FORGED STEEL CHECK VALVE**  
**SW/NPT - API/ASME CLASS 800/1500**  
**PISTON AND SWING CHECK**  
**BOLTED BONNET**

**DIMENSIONS**

SIZE in. (mm)	ASME CLASS	A	B	D	C <sub>v</sub> Piston/Swing	WEIGHT lb. (kg)
1/4 (8)	800	3.1 (79)	2.4 (61)	0.28 (7.0)	-	3.3 (1.5)
	1500	3.5 (90)	2.2 (56)	0.26 (6.5)	-	4.9 (2.2)
3/8 (10)	800	3.1 (79)	2.4 (61)	0.28 (7.0)	-	3.1 (1.4)
	1500	3.5 (90)	2.2 (56)	0.35 (9.0)	-	4.9 (2.2)
1/2 (15)	800	3.1 (80)	1.9 (50)	0.35 (9.0)	1.2/3.4	2.4 (1.1)
	1500	3.5 (90)	2.2 (56)	0.39 (10.0)	2.6/4.4	4.9 (2.2)
3/4 (20)	800	3.5 (90)	2.2 (56)	0.49 (12.0)	3.2/7.0	4.0 (1.8)
	1500	4.3 (110)	2.9 (74)	0.51 (13.0)	4.2/9.8	6.6 (3.0)
1 (25)	800	4.3 (110)	2.9 (74)	0.69 (18.0)	5.8/14.2	5.7 (2.6)
	1500	5.0 (127)	3.1 (79)	0.71 (18.0)	6.0/17.2	9.0 (4.1)
1 1/4 (32)	800	5.0 (127)	3.1 (79)	0.89 (23.0)	9.6/20.4	7.9 (3.6)
	1500	6.1 (155)	3.9 (100)	0.91 (23.0)	9.8/27.4	13.7 (6.2)
1 1/2 (40)	800	6.1 (155)	3.9 (100)	1.10 (28.0)	13.0/30.2	12.1 (5.5)
	1500	6.6 (170)	4.2 (109)	1.10 (28.0)	17.8/52.0	20.7 (9.4)
2 (50)	800	5.5 (170)	4.2 (109)	1.26 (32.0)	17.0/56.2	18.5 (8.4)
	1500	8.2 (210)	5.3 (135)	1.34 (34.0)	22.0/76.4	29.3 (13.3)

NOTE: " A " dimension to be within  $\pm 0.06$  in. /1.5 mm.



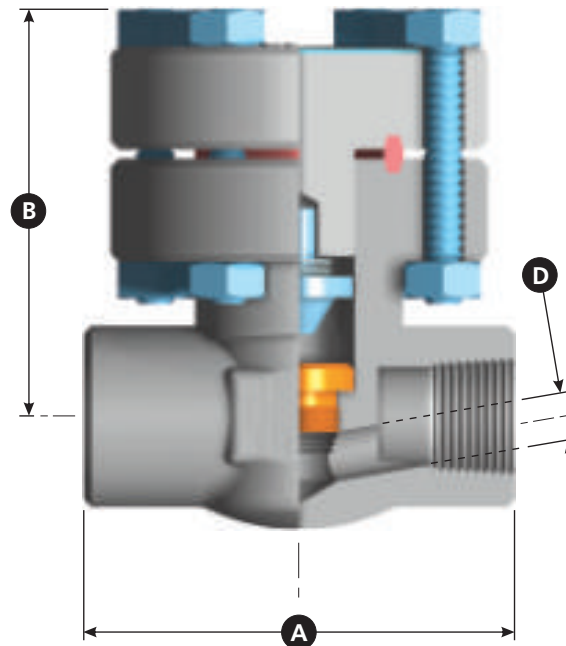
SWING

**SW/NPT - ASME CLASS 1500/2500**  
**PISTON AND SWING CHECK**  
**RTJ BONNET**

**DIMENSIONS**

SIZE in. (mm)	ASME CLASS	A	B	D	C <sub>v</sub> Piston/Swing	WEIGHT lb. (kg)
1/2 (15)	1500	4.3 (110)	3.6 (93)	0.43 (11)	2.8/4.6	8.4 (3.8)
	2500	4.3 (110)	3.7 (96)	0.39 (10)	2.4/4.0	3.1 (1.4)
3/4 (20)	1500	4.7 (120)	4.2 (109)	0.57 (14)	4.6/10.2	13.0 (5.9)
	2500	4.7 (120)	4.0 (103)	0.51 (13)	3.6/6.2	13.9 (6.3)
1 (25)	1500	5.1 (130)	4.8 (122)	0.75 (19)	6.2/17.6	15.0 (6.8)
	2500	5.1 (130)	4.9 (126)	0.71 (18)	5.8/11.2	16.1 (7.3)
1 1/2 (40)	1500	8.2 (210)	6.2 (158)	1.22 (31)	19.4/56.4	41.4 (18.8)
	2500	8.2 (210)	6.4 (164)	1.10 (28)	15.8/48.4	43.2 (19.6)
2 (50)	1500	9.4 (240)	6.7 (171)	1.48 (38)	24.8/81.8	52.2 (23.7)
	2500	9.4 (240)	7.1 (181)	1.34 (34)	24.0/70.0	54.7 (24.8)

NOTE: " A " dimension to be within  $\pm 0.06$  in. /1.5 mm.



PISTON



## FORGED STEEL CHECK VALVE FLANGED - ASME CLASS 150/300/600/1500

PRESSURE RATINGS		
	ASTM A105/A350 Gr. LF2	ASTM A182 F316
CLASS	PRESSURE	PRESSURE
150	285 psi @ 100°F	275 psi @ 100°F
300	740 psi @ 100°F	720 psi @ 100°F
600	1480 psi @ 100°F	1440 psi @ 100°F
1500	3705 psi @ 100°F	3600 psi @ 100°F

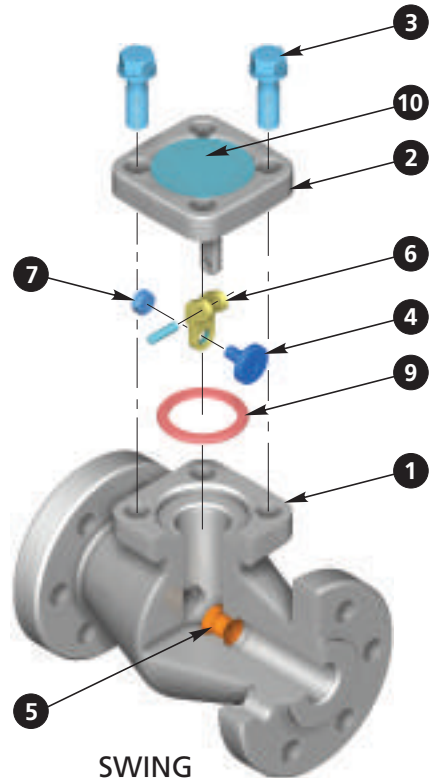
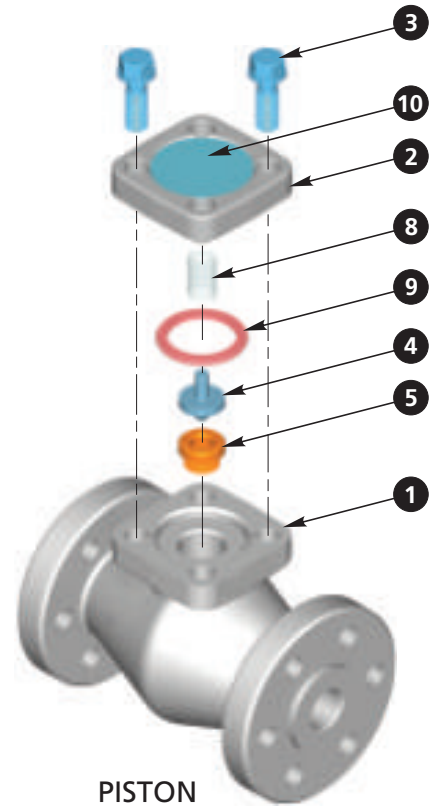
SPECIFICATION	
DESIGN	- BS 5352/ASME B16.34
END TO END	- ASME B16.10
END CONNECTION	- ASME B16.5
TEST	- BS 6755 (Pt.1)/API 598

### MATERIALS LIST

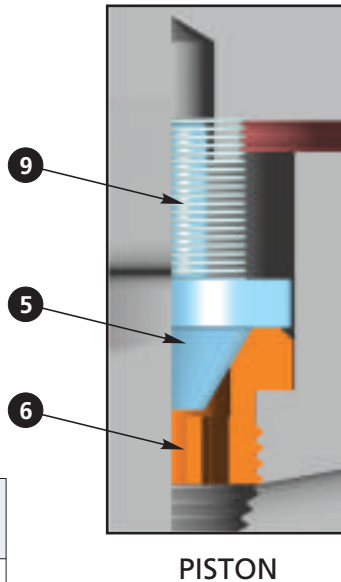
ITEM	PISTON	SWING	STANDARD	SOUR (NACE)	SOUR (NACE) & LOW TEMP	STAINLESS STEEL -50°F
1	Body	Body	A105	A105	A350 LF2	A182 F316
2	Cap	Cap	A105	A105	A350 LF2	A182 F316
3	Body Bolts	Body Bolts	A193 B7	A193 B7M	A320 L7M	A193 B8
4	Piston	Disc	A182 F6a	A182 F316	A182 F316	A276 316+HF
***5	Seat	Seat	F6a+HF	F316+HF	F316+HF	HF
6	-	Swing Arm	A182 F6a	A182 F316	A182 F316	A182 F316
7	-	Disc Nut	316	316	316	316
8	Spring	-	Stainless Steel			
9	Gasket	Gasket	Stainless Steel Spiral Wound Graphite			
10	Nameplate	Nameplate	Aluminum	Aluminum	Aluminum	316

\*\*\* Valves can be supplied with integral seat.

Cameron reserves the right to substitute materials listed above with alternate material.



**FORGED STEEL CHECK VALVE  
FLANGED - ASME CLASS 1500/2500  
RTJ BONNET**



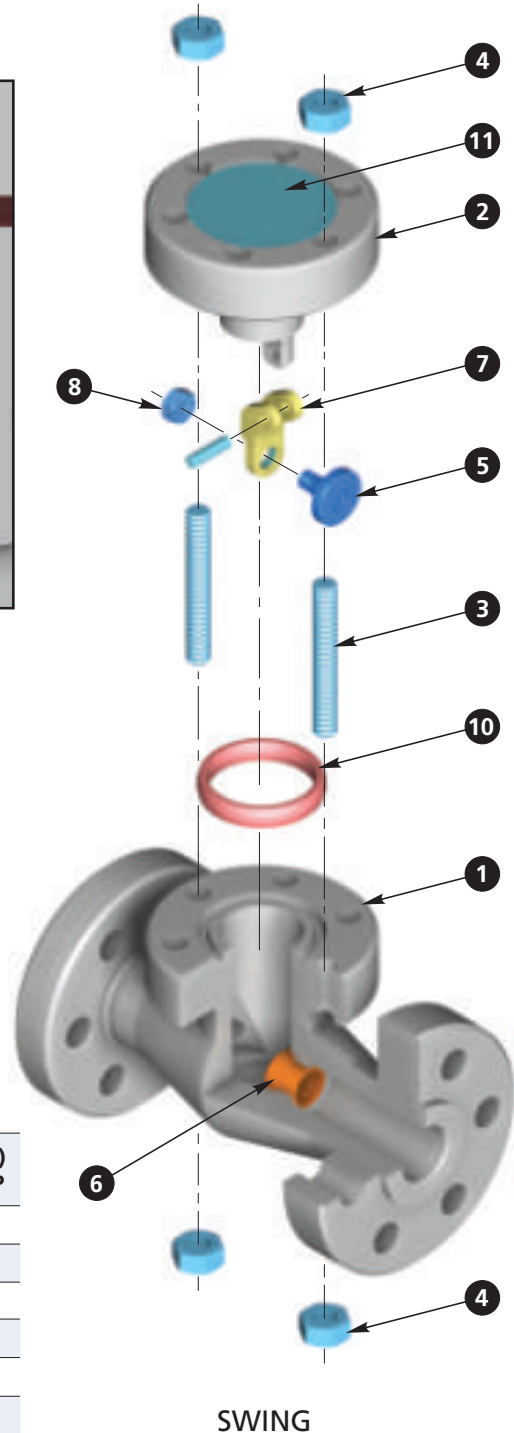
PRESSURE RATINGS ASTM A105/A350 Gr. LF2	
CLASS	PRESSURE
1500	3705 psi @ 100°F
2500	6170 psi @ 100°F

SPECIFICATION	
DESIGN	- BS 5352/ASME B16.34
END TO END	- ASME B16.10
END CONNECTION	- ASME B16.5
TEST	- BS 6755 (Pt.1)/API 598

**MATERIALS LIST**

ITEM	PISTON	SWING	STANDARD	SOUR (NACE)	SOUR (NACE) & LOW TEMP
1	Body	Body	A105	A105	A350 LF2
2	Cap	Cap	A105	A105	A350 LF2
3	Body Studs	Body Studs	A193 B7	A193 B7M	A320 L7M
4	Body Nuts	Body Nuts	A194 2H	A194 2HM	A194 7M
5	Piston	Disc	A182 F6a	A182 F316	A182 F316
6	Seat	Seat	F6a+HF	F316+HF	F316+HF
7	-	Swing Arm	A182 F6a	A182 F316	A182 F316
8	-	Disc Nut	316	316	316
9	Spring	-	Stainless Steel	Stainless Steel	Stainless Steel
10	Gasket	Gasket	Stainless Steel Ring Gasket		
11	Nameplate	Nameplate	Aluminum	Aluminum	Aluminum

Cameron reserves the right to substitute materials listed above with alternate material.

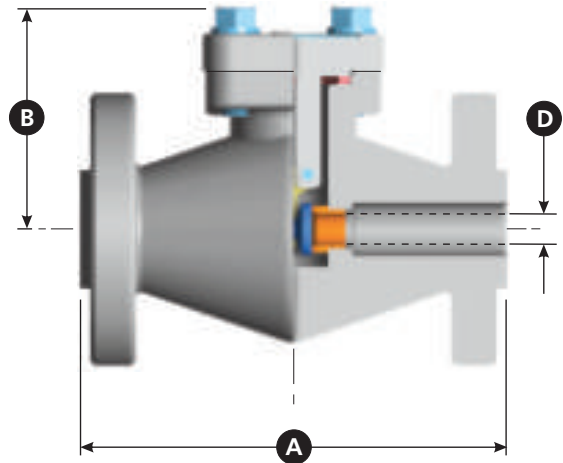


## FORGED STEEL CHECK VALVE FLANGED - ASME CLASS 150/300/600/1500 PISTON AND SWING CHECK

### DIMENSIONS

SIZE in. (mm)	ASME CLASS	A		B	D	C <sub>v</sub> Piston/Swing	WEIGHT lb. (kg)
		RF	RTJ				
1/2 (15)	150	4.2 (108)	4.6 (119)	3.2 (83)	0.35 (9)	1.2/3.4	5.7 (2.6)
	300	6.0 (152)	6.4 (164)	1.9 (50)	0.35 (9)	1.2/3.4	6.2 (2.8)
	600	6.5 (165)	6.4 (164)	1.9 (50)	0.35 (9)	1.2/3.4	6.8 (3.1)
3/4 (20)	150	4.6 (118)	5.1 (130)	3.3 (85)	0.49 (12)	3.2/7.0	8.4 (3.8)
	300	7.0 (178)	7.5 (191)	2.2 (56)	0.49 (12)	3.2/7.0	10.4 (4.7)
	600	7.5 (191)	7.5 (191)	2.2 (56)	0.49 (12)	3.2/7.0	11.0 (5.0)
1 (25)	150	5.0 (127)	5.5 (140)	3.6 (93)	0.69 (18)	5.8/14.2	11.2 (5.1)
	300	*See other table		2.9 (74)	0.69 (18)	5.8/14.2	12.6 (5.7)
	600	8.5 (216)	8.5(216)	2.9 (74)	0.69 (18)	5.8/14.2	16.1 (7.3)
1 1/2 (40)	150	6.5 (165)	7.0 (178)	3.8 (97)	1.10 (28)	13.0/30.2	18.5 (8.4)
	300	*See other table		3.9 (100)	1.10 (28)	13.0/30.2	26.2 (11.9)
	600	9.5 (241)	9.5 (241)	3.9 (100)	1.10 (28)	13.0/30.2	26.5 (12.0)
2 (50)	150	8.0 (203)	8.5 (216)	4.8 (123)	1.26 (32)	17.0/56.2	31.3 (14.2)
	300	10.5 (267)	11.1 (283)	4.2 (109)	1.26 (32)	17.0/56.2	36.2 (16.4)
	600	11.5 (292)	11.6 (295)	4.2 (109)	1.26 (32)	17.0/56.2	36.6 (16.6)
1500	1500	14.5 (368)	14.6 (372)	5.3 (135)	1.10 (28)	24.8/81.8	88.2 (40.1)

NOTE: "A" dimension to be within ± 0.06 in. /1.5 mm.



\* 1 inch (25 mm) and 1 1/2 inch (40 mm) 300 ASME Class Piston Check and Swing Check have different "A" dimensions.

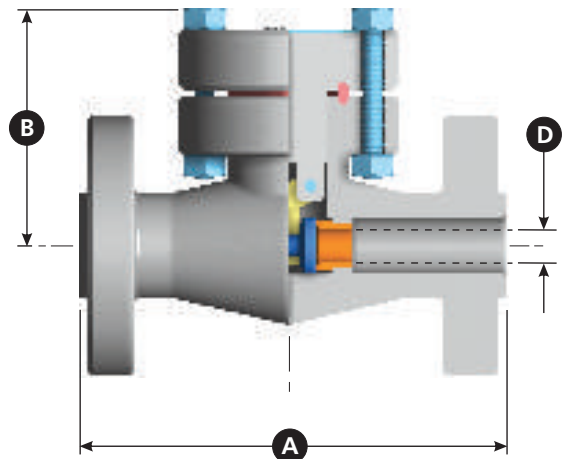
SIZE in. (mm)	ASME CLASS	A			
		SWING CHECK RF	RTJ	PISTON CHECK RF	RTJ
1 (25)	300	8.5 (216)	9.0 (229)	8.0 (203)	8.5 (216)
1 1/2 (40)	300	9.5 (241)	10.0 (254)	9.0 (229)	9.5 (241)

## FLANGED - ASME CLASS 1500/2500 RTJ BONNET PISTON AND SWING CHECK

### DIMENSIONS

SIZE in. (mm)	ASME CLASS	A		B	D	C <sub>v</sub> Piston/Swing	WEIGHT lb. (kg)
		RF	RTJ				
1/2 (15)	1500	8.5 (216)	8.5 (216)	3.6 (93)	0.43 (11)	2.8/4.6	16.5 (7.5)
	2500	10.3 (263)	10.3 (263)	3.7 (96)	0.39 (10)	2.4/4.0	22.7 (10.3)
3/4 (20)	1500	9.0 (229)	9.0 (229)	4.2 (109)	0.57 (14)	4.6/10.2	24.0 (10.9)
	2500	10.7 (273)	10.7 (273)	4.0 (103)	0.51 (13)	3.6/6.2	32.2 (14.6)
1 (25)	1500	10.0 (254)	10.0 (254)	4.8 (122)	0.75 (19)	6.2/17.6	31.7 (14.4)
	2500	12.1 (308)	12.1 (308)	4.9 (126)	0.71 (18)	5.8/11.2	23.8 (10.8)
1 1/2 (40)	1500	12.0 (305)	12.0 (305)	6.2 (158)	1.22 (31)	19.4/56.4	66.8 (30.3)
	2500	15.1 (384)	15.2 (387)	6.4 (164)	1.10 (28)	15.8/48.4	93.0 (42.2)
2 (50)	1500	14.5 (368)	14.6 (372)	6.7 (171)	1.48 (38)	24.8/81.8	97.0 (44.0)
	2500	17.7 (451)	17.8 (454)	7.1 (181)	1.34 (34)	24.0/70.0	133.8 (60.7)

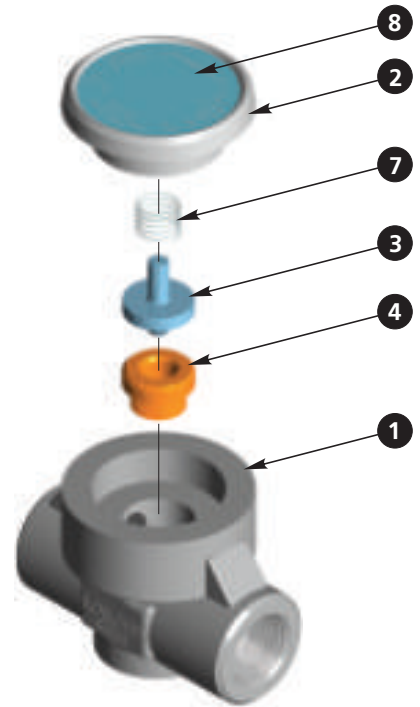
NOTE: "A" dimension to be within ± 0.06 in. /1.5 mm.



**FORGED STEEL CHECK VALVE**  
**SW/NPT/BW - ASME CLASS 800/1500**  
**SEAL WELDED BONNET**

PRESSURE RATINGS	
ASTM A105/A350 Gr. LF2	
CLASS	PRESSURE
800	1975 psi @ 100°F
1500	3705 psi @ 100°F
2500	6170 psi @ 100°F

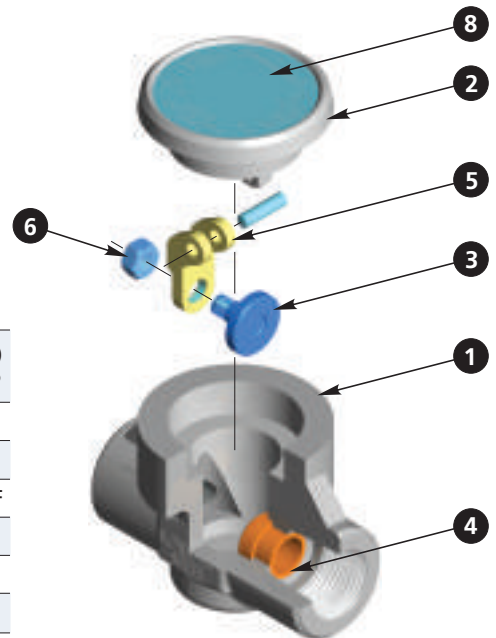
SPECIFICATION	
DESIGN	- BS 5352/ASME B16.34
SOCKET WELD	- ASME B16.11
THREADED	- ASME B1.20.1
TEST	- BS 6755 (Pt.1)/API 598



PISTON

**MATERIALS LIST**

ITEM	PISTON	SWING	STANDARD	SOUR (NACE)	SOUR (NACE) & LOW TEMP
1	Body	Body	A105	A105	A350 LF2
2	Cap	Cap	A105	A105	A350 LF2
3	Piston	Disc	A182 F6a+HF	A182 F316+HF	A182 F316+HF
4	Seat	Seat	F6a+HF	F316+HF	F316+HF
5	-	Swing Arm	A182 F6a	A182 F316	A182 F316
6	-	Disc Nut	316	316	316
7	Spring	-	Stainless Steel	Stainless Steel	Stainless Steel
8	Nameplate	Nameplate	Aluminum	Aluminum	Aluminum



SWING

Cameron reserves the right to substitute materials listed above with alternate material.

## FORGED STEEL CHECK VALVE SW/NPT/BW - API/ASME CLASS 800/1500

### DIMENSIONS

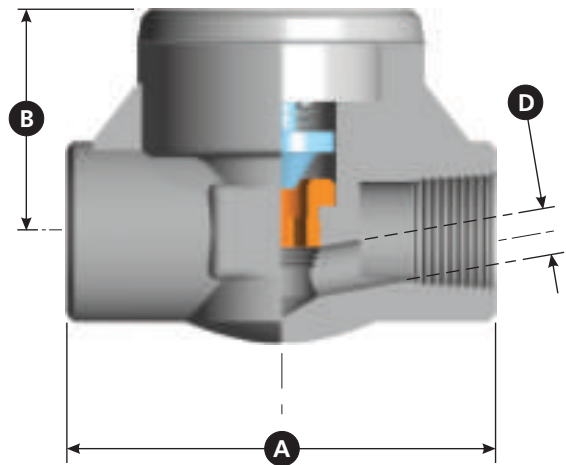
SIZE in. (mm)	ASME CLASS	A	B	D	C <sub>v</sub>	WEIGHT lb. (kg)
1/4 (8)	800	3.0 (76)	1.9 (48)	0.25 (6.4)	-	2.6 (1.2)
	1500	3.4 (86)	2.1 (54)	0.25 (6.4)	-	2.9 (1.3)
3/8 (10)	800	3.0 (76)	1.9 (48)	0.37 (9.5)	-	2.2 (1.0)
	1500	3.4 (86)	2.1 (54)	0.37 (9.5)	-	2.9 (1.3)
1/2 (15)	800	3.0 (76)	1.9 (48)	0.37 (9.5)	1.0	2.2 (1.0)
	1500	3.4 (86)	2.1 (54)	0.37 (9.5)	1.0	2.9 (1.3)
3/4 (20)	800	3.4 (86)	2.1 (54)	0.50 (12.7)	2.7	2.9 (1.3)
	1500	5.9 (152)	2.5 (63)	0.50 (12.7)	2.7	5.0 (2.3)
1 (25)	800	4.0 (102)	2.5 (63)	0.69 (17.5)	5.4	5.0 (2.3)
	1500	5.9 (152)	3.2 (81)	0.69 (17.5)	5.4	11.0 (5.0)
1 1/4 (32)	800	5.9 (152)	3.2 (81)	0.89 (22.5)	-	11.0 (5.0)
	1500	6.8 (172)	4.1 (105)	1.06 (22.5)	-	15.7 (7.1)
1 1/2 (40)	800	5.9 (152)	3.2 (81)	1.16 (29.5)	16.0	13.2 (5.0)
	1500	6.8 (172)	4.5 (105)	1.16 (29.5)	16.0	14.3 (7.0)
2 (50)	800	6.8 (172)	4.1 (105)	1.79 (35.0)	20.0	19.8 (7.0)
	1500	7.4 (210)	5.0 (128)	1.38 (35.0)	20.0	20.9 (9.1)

NOTE: " A " dimension to be within ± 0.06 in. /1.5 mm.

### DIMENSIONS

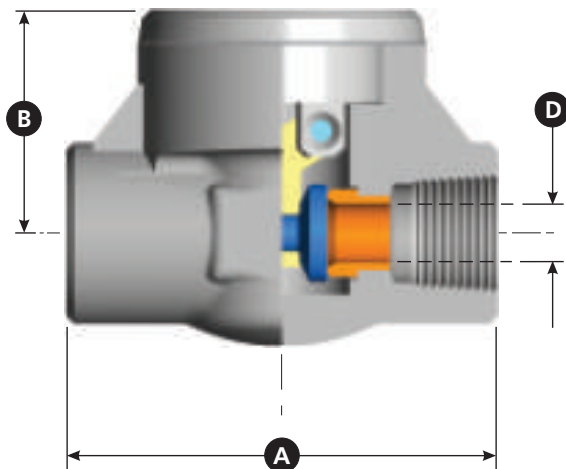
SIZE in. (mm)	ASME CLASS	A	B	D	C <sub>v</sub>	WEIGHT lb. (kg)
1/4 (8)	800	3.0 (76)	1.8 (48)	0.25 (6.4)	-	2.6 (0.9)
	1500	3.4 (86)	2.1 (54)	0.25 (6.4)	-	2.8 (1.1)
3/8 (10)	800	3.0 (76)	1.8 (48)	0.37 (9.5)	-	2.2 (0.9)
	1500	3.4 (86)	2.1 (54)	0.37 (9.5)	-	2.8 (1.1)
1/2 (15)	800	3.0 (76)	1.8 (48)	0.37 (9.5)	6.0	2.2 (0.9)
	1500	3.4 (86)	2.1 (54)	0.37 (9.5)	6.0	2.8 (1.1)
	2500	4.3 (110)	2.2 (56)	0.39 (10.0)	-	3.9 (4.0)
3/4 (20)	800	3.4 (86)	2.1 (54)	0.50 (12.7)	11.3	2.8 (1.1)
	1500	4.0 (102)	2.5 (63)	0.50 (12.7)	11.3	5.0 (2.0)
	2500	5.0 (127)	2.6 (67)	0.51 (13.0)	-	6.6 (3.0)
1 (25)	800	4.0 (102)	2.5 (63)	0.69 (17.5)	26.3	5.0 (2.0)
	1500	4.6 (117)	3.5 (89)	0.69 (17.5)	26.3	11.0 (4.4)
	2500	6.1 (155)	3.9 (99)	0.71 (18.0)	-	10.1 (4.6)
1 1/4 (32)	800	4.6 (117)	3.5 (89)	1.20 (30.5)	-	11.0 (4.4)
	1500	5.2 (132)	4.1 (104)	1.20 (30.5)	-	15.6 (6.2)
	2500	8.3 (210)	4.7 (119)	1.10 (28.0)	-	20.2 (9.2)
1 1/2 (40)	800	4.6 (117)	3.5 (89)	1.20 (30.5)	78.0	11.0 (4.4)
	1500	5.2 (132)	4.1(104)	1.20 (30.5)	78.0	15.4 (6.2)
	2500	8.3 (210)	4.7 (119)	1.10 (28.0)	-	20.2 (9.2)
2 (50)	800	5.2 (132)	4.1 (104)	1.15 (35.0)	115.0	15.4 (6.2)
	1500	8.3 (210)	5.0 (128)	1.15 (29.2)	115.0	20.0 (8.9)
	2500	9.4 (240)	5.6 (142)	1.34 (34.0)	-	35.3

NOTE: " A " dimension to be within ± 0.06 in. /1.5 mm.



SEAL WELDED BONNET  
PISTON

NOTE: ANGLE PATTERN PISTON CHECK  
AVAILABLE UPON REQUEST.



SEAL WELDED BONNET  
SWING

# FORGED STEEL GATE, GLOBE AND CHECK VALVES

## PRESSURE/TEMPERATURE RATINGS

### A105\*/LF2\*

TEMPERATURE °F	CLASS 150	CLASS 300	CLASS 600	CLASS 800	CLASS 1500	CLASS 2500
-20 to 100	285	740	1480	1975	3705	6170
200	260	675	1350	1800	3375	5625
300	230	655	1315	1750	3280	5470
400	200	635	1270	1690	3170	5280
500	170	600	1200	1595	2995	4990
600	140	550	1095	1460	2735	4560
650	125	535	1075	1430	2685	4475
700	110	535	1065	1420	2665	4440
750	95	505	1010	1345	2520	4200
800	80	410	825	1100	2060	3430
850	65	270	535	715	1340	2230
900	50	170	345	460	860	1430
950	35	105	205	275	515	860
1000	20	50	105	140	260	430
1050	-	-	-	-	-	-
1100	-	-	-	-	-	-
1150	-	-	-	-	-	-
1200	-	-	-	-	-	-

### F22\*\*

TEMPERATURE °F	CLASS 150	CLASS 300	CLASS 600	CLASS 800	CLASS 1500	CLASS 2500
-20 to 100	290	750	1500	2000	3750	6250
200	260	750	1500	1910	3750	6250
300	230	730	1455	1805	3640	6070
400	200	705	1410	1730	3530	5880
500	170	665	1330	1705	3325	5540
600	140	605	1210	1615	3025	5040
650	125	590	1175	1570	2940	4905
700	110	570	1135	1515	2840	4730
750	95	530	1065	1420	2660	4430
800	80	510	1015	1355	2540	4230
850	65	485	975	1300	2435	4060
900	50	450	900	1200	2245	3745
950	35	375	755	1005	1885	3145
1000	20	260	520	715	1305	2170
1050	-	175	350	530	875	1455
1100	-	110	220	300	550	915
1150	-	70	135	275	345	570
1200	-	40	80	145	205	345

### F-11\*\*

TEMPERATURE °F	CLASS 150	CLASS 300	CLASS 600	CLASS 800	CLASS 1500	CLASS 2500
-20 to 100	290	750	1500	2000	3750	6250
200	260	750	1500	1900	3750	6250
300	230	720	1445	1795	3610	6015
400	200	695	1385	1755	3465	5775
500	170	665	1330	15710	3325	5540
600	140	605	1210	1615	3025	5040
650	125	590	1175	1570	2940	4905
700	110	570	1135	1515	2840	4730
750	95	530	1065	13420	2660	4430
800	80	510	1015	1355	2540	4230
850	65	485	975	1300	2435	4060
900	50	450	900	1200	2245	3745
950	35	320	640	1005	1595	2655
1000	20	215	430	595	1080	1800
1050	-	145	290	365	720	1200
1100	-	95	190	255	480	800
1150	-	60	125	140	310	515
1200	-	40	75	90	190	315

### F316\*\*\*

TEMPERATURE °F	CLASS 150	CLASS 300	CLASS 600	CLASS 800	CLASS 1500
-20 to 100	275	720	1440	1920	3600
200	235	620	1240	1655	3095
300	215	560	1120	1495	2795
400	195	515	1025	1370	2570
500	170	480	955	1275	2390
600	140	450	900	1205	2255
650	125	445	890	1185	2220
700	110	430	870	1150	2170
750	95	425	855	1130	2135
800	80	420	845	1105	2110
850	65	420	835	1080	2090
900	50	415	830	1050	2075
950	35	385	775	1030	1930
1000	20	350	70	970	1750
1050	-	345	685	960	1720
1100	-	305	610	860	1525
1150	-	235	475	735	1185
1200	-	185	370	550	925

### F-5

TEMPERATURE °F	CLASS 150	CLASS 300	CLASS 600	CLASS 800	CLASS 1500
-20 to 100	290	750	1500	2000	3750
200	260	745	1490	2000	3725
300	230	715	1430	1940	3580
400	200	705	1410	1880	3530
500	170	665	1330	1775	3325
600	140	605	1210	1615	3025
650	125	590	1175	1570	2940
700	110	570	1135	1515	2840
750	95	530	1055	1420	2640
800	80	510	1015	1325	2540
850	65	485	965	1170	2415
900	50	370	740	940	1850
950	35	275	550	695	1370
1000	20	200	400	510	995
1050	-	145	290	375	720
1100	-	100	200	275	495
1150	-	60	125	185	310
1200	-	35	70	120	170

### F316L

TEMPERATURE °F	CLASS 150	CLASS 300	CLASS 600	CLASS 800	CLASS 1500
-20 to 100	230	600	1200	1600	3000
200	195	505	1015	1350	2530
300	175	455	910	1210	2270
400	160	415	825	1100	2065
500	145	380	765	1020	1910
600	140	360	720	960	1800
650	125	350	700	935	1750
700	110	345	685	915	1715
750	95	335	670	895	1680
800	80	330	660	875	1645
850	65	320	645	860	1610

NOTES:

- \* Permissible, but not recommended for prolonged usage above 800°F.
- \*\* Permissible, but not recommended for prolonged usage above 1100°F.
- \*\*\* At temperature over 1000°F, use only when carbon content is -04% or higher.

## TRADEMARK INFORMATION

NUTRON® is a registered trademark which is owned by Cameron.

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<b>Trademark</b>	<b>Owner</b>
Inconel	INCO Nickel Sales, Inc.
Monel	INCO Alloys International, Inc.
Teflon	E.I. DuPont De Nemours & Company
Viton	E.I. DuPont De Nemours & Company

**VALVES & MEASUREMENT**

3250 Briarpark Drive, Suite 300  
Houston, Texas 77042  
USA Toll Free 800 323 9160

For the most current contact and location information go to: [www.c-a-m.com](http://www.c-a-m.com)