

NEWCO®

OIC® Cast and Forged Stainless Steel Valves

Technical Data



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PREFACE

The procedures included in this book are to be performed in conjunction with the requirements and recommendations outlined in API Specifications. Any repairs to the equipment covered by this book should be done by an authorized Cameron service representative. Cameron will not be responsible for loss or expense resulting from any failure of equipment or any damage to any property or death or injury to any person resulting in whole or in part from repairs performed by anyone other than authorized Cameron personnel. Such unauthorized repairs shall also serve to terminate any contractual or other warranty, if any, on the equipment and may also result in equipment no longer meeting applicable requirements.

File copies of this manual are maintained. Revisions and/or additions will be made as deemed necessary by Cameron. The drawings in this book are not drawn to scale, but the dimensions shown are accurate.

This book covers Cameron products.

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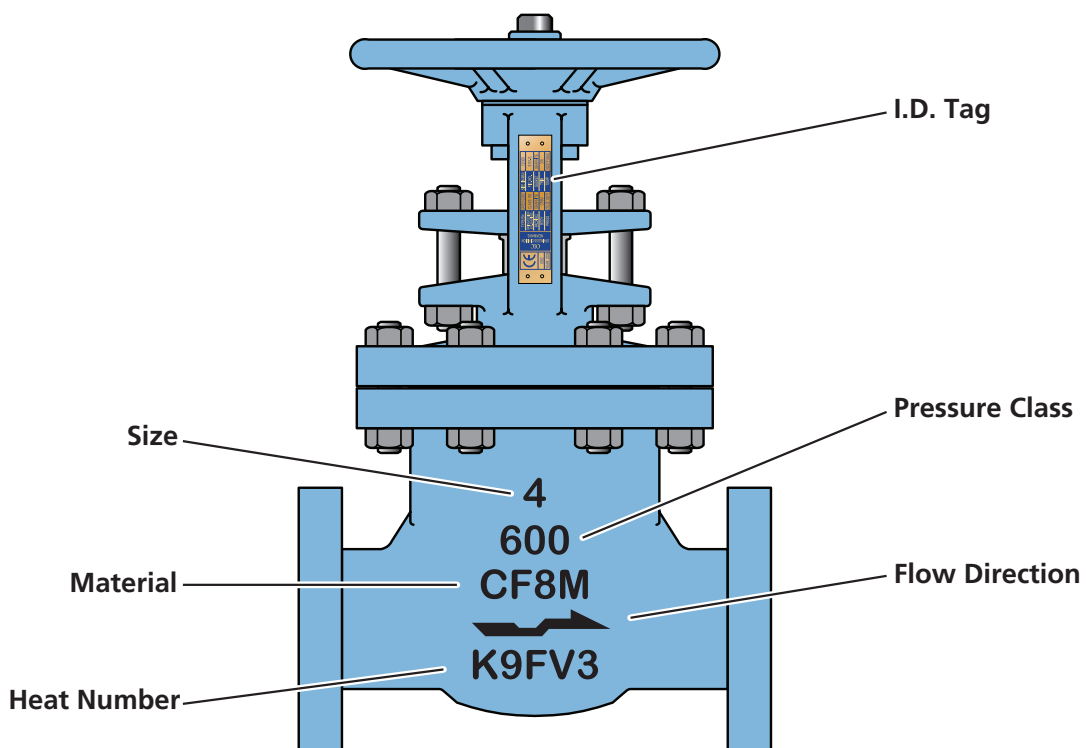
OVERVIEW

Valve and I.D. Tag


The identification tag displays all construction and tracking data regarding the respective valve on which it is attached. Below is a general overview of the identification tag components.

I.D. tags are located on the bonnet.

Globe and check valves will have a flow direction arrow on body for proper installation.



Sample NEWCO OIC I.D. Tag

| | | | | | |
|-----------------------------------------------------------------------------------------------------------|---------------------------------------------|---------------------------------|-------------|--------------|------------|
|  0062 YEAR: 2009 | OIC STAINLESS DIVISION NEWMANS | TYPE/SN | GATE/102857 | SIZE (IN/MM) | 12/300 |
| | | RATING/DESIGN B16.34/API 600 | CLASS 150 | FIG. NO. | S151-G |
| | | PACKING | GRAPHITE | GASKET | GRAPHITE |
| | | BODY | CF8M | TRIM | 316 |
| | | PRESS | 275 @ 100°F | TEMP | 1000°F MAX |

Typical Bill of Materials

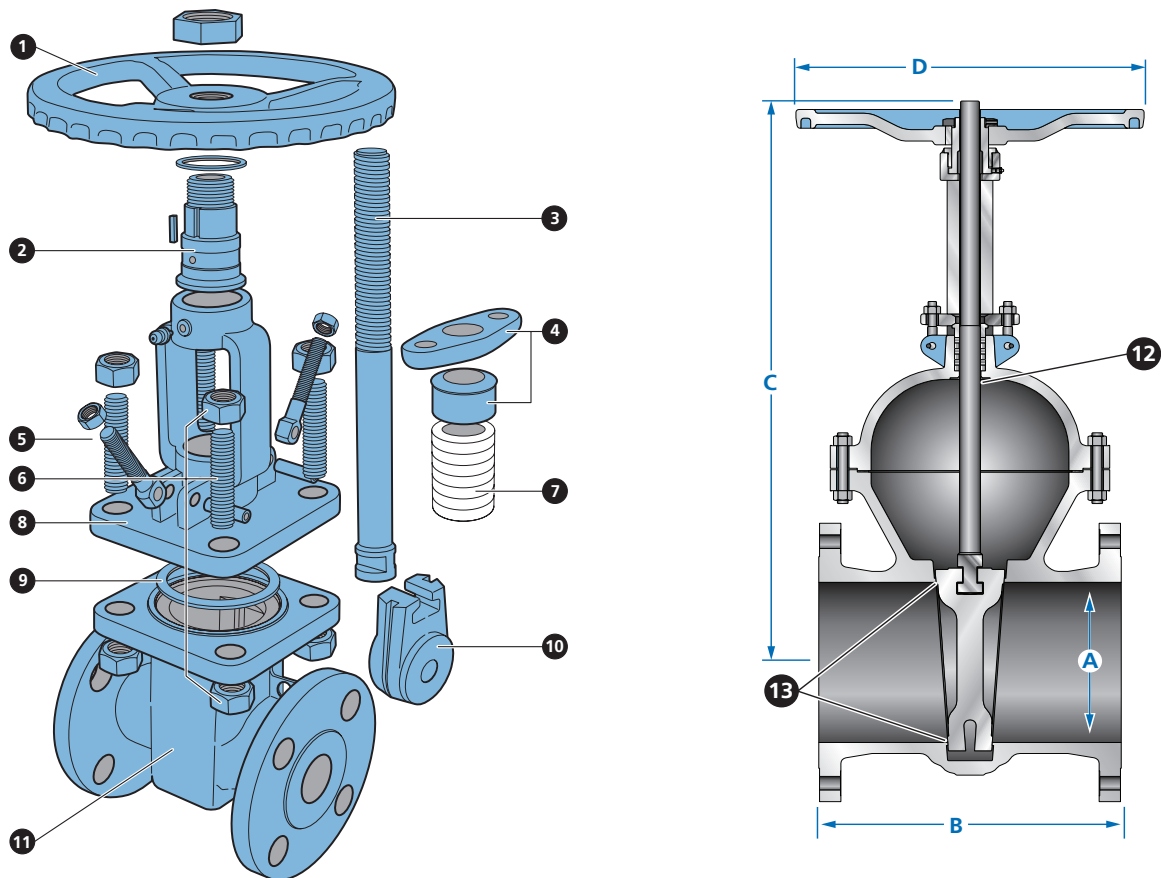
| Component | Material | Component | Material |
|------------------------|-------------------------------------|-------------------|----------------------------------|
| Gate | | | |
| Handwheel Nut | 300 Series Stainless Steel | Back Set Bushing | Integral |
| Handwheel | Nodular Iron | Bonnet | A351-CF8M (316) |
| Yoke Nut | 300 or 400 Series Stainless Steel | Bonnet Gasket | Graphite or PTFE or A182 GR.F316 |
| Yoke Sleeve | A439 Gr D2C | Bonnet Nut | A194-8/8F |
| Stem | A276-316 | Bonnet Bolt | A193-B8 |
| Gland Eye Bolt and Nut | 304SS | Body | A351-CF8M (316) |
| Gland Flange | CF8M | Seal Ring | Cast Integral Body |
| Gland | A276-316 | Wedge | A351-CF8M (316) |
| Stem Packing | Graphite or PTFE | | |
| Globe | | | |
| Handwheel Nut | 300 Series Stainless Steel | Back Seat Bushing | Integral |
| Handwheel | Nodular Iron | Bonnet | A351-CF8M |
| Stem | A276-316 | Bonnet Gasket | Graphite or PTFE or A182 GR.F316 |
| Gland Eye Bolt and Nut | 304SS | Bonnet Nut | A194-8/8F |
| Gland Flange | CF8M | Bonnet Bolt | A193-B8 |
| Gland | A276-316 | Body | A351-CF8M |
| Yoke Bushing | A439 Gr D2C | Seal Ring | Integral |
| Stem Packing | Graphite or PTFE | Disc | A351-CF8M (316) |
| Check | | | |
| Cap Bolt | A193-B8 | Seat Rings | Integral |
| Cap Nut | A194-8/8F | Hinge | A351-CF8M |
| Cap | A351-CF8M | Disc Nut | A194-8/8M |
| Cap Gasket | Graphite/PTFE or Graphite/A182-F316 | Disc Washer | A167-316 |
| Hinge Pin | A276-316 | Disc | A351-CF8M |
| Body | A351-CF8M | | |

¹PTFE (Teflon) is a registered trademark of E.I DuPont. Temperature limit 400° F (204° C).

CAST STAINLESS STEEL GATE VALVES

SIZES: 1/2" TO 24"
PRESSURE CLASS: 150 TO 1500

Typical Cameron NEWCO OIC Stainless Steel Gate Valve Expanded View



1. **Handwheel:** The nodular iron handwheels are well shaped and large enough to give ease of movement when operating the valve, even under maximum differential pressure.
2. **Yoke Sleeve:** The yoke sleeve is made from ductile iron A439 Gr D2C with a high resistance to wear and a high melting point. It is designed to permit removal from the bonnet or the yoke while the valve is in service. Gate valves 6"-600-lb class and above are fitted with a ball and thrust bearing.
3. **Stem:** The stem is stainless steel and is part of the trim. The stem is provided with a T-head. A ground backseat is provided to ensure perfectly tight seal to the stuffing box when the valve is fully open. The stem is ground to minimize friction and prevent damage to gland packing. The threading is trapezoidal ACME type. Dimensions comply with the applicable standard.
4. **Gland and Flange:** They are stainless steel and are normally supplied in two pieces. The contact surfaces between gland and gland flange have a spherical profile to permit the gland to descend parallel to the stem even if the eyebolts are not evenly tightened.

5. **Gland Bolts and Nuts:** The stainless steel gland bolts are of the eyebolt type which can be swung outward for ease of gland repacking. They are fixed to the bonnet by solid bolt pin tack welded.
6. **Bonnet Bolting:** Bonnet studs and nuts are manufactured from alloy or stainless steel to the relevant ASTM standard.
7. **Packing*:** The packing is made with die formed graphite center rings with braided graphite top and bottom rings, or with teflon.
8. **Bonnet:** The bonnet is in stainless steel. It is machined to accept the yoke sleeve and incorporate the stuffing box dimensioned in accordance with the API standard.
9. **Gasket*:** The gasket is made from graphite or teflon, as specified based on service condition requirements.
10. **Wedge:** The wedge is part of the trim, cast stainless steel or specified alloy. It is normally supplied as a flexible or solid and connected to the stem by means of a T-joint. The guides on each side of the wedge are machined for proper alignment with the body guides. Special attention is given to the seating surfaces which are round and lapped to ensure a perfectly tight seal.
11. **Body:** The body is stainless steel and is carefully designed in all its details. The basic dimensions, i.e. wall thickness, face to face and flanges, comply with the relevant API and ANSI standards. The sealing surfaces for connection to the bonnet are flat finish in the 150-lb class in sizes 1/2" - 1" and 3" and up; recessed in 1-1/2" and 2"; recessed in all sizes 300-lb and 600-lb class. Bosses may be provided for drain taps or bypass piping.
12. **Bonnet Bushing (Integral):** The bonnet bushing or backseat is integrally machined from the cast stainless steel bonnet and forms part of the trim. Special attention is given to its machining and heat treatment to insure a proper seat.
13. **Seat Rings:** The seat rings are cast integral to the body and are part of the trim. Special attention is given to the seating surfaces, which are ground and lapped for a perfectly tight seal.

* *Recommended spare parts.*

I. CONVENTIONAL PORT

SIZES: 1/2" TO 24" (15MM TO 600MM)* • CLASSES: 150 TO 1500

Design and Manufacturing Standards

Valve Design: API 603/ASME B16.34

Flange Dimensions: ASME B16.5

Face to Face Dimensions: ASME B16.10

Tested in Accordance With: API 598

| Class 150 | | | | | |
|---------------------|----------|---------|----------|---------|--------------------|
| Size NPS (DN) | A | B | C | D | Weight Lbs (Kg) |
| 1/2 | 0.50 | 4.25 | 8.19 | 4.00 | 7.0 |
| (15) | (12.7) | (108.0) | (208.0) | (101.6) | (3.2) |
| 3/4 | 0.75 | 4.63 | 8.35 | 4.00 | 7.9 |
| (20) | (19.1) | (117.6) | (212.1) | (101.6) | (3.6) |
| 1 | 1.00 | 5.00 | 9.65 | 4.75 | 11.0 |
| (25) | (25.4) | (127.0) | (245.1) | (120.7) | (5.0) |
| 1-1/2 | 1.50 | 6.50 | 8.80 | 4.72 | 17.6 |
| (40) | (38.1) | (165.1) | (223.5) | (119.9) | (8.0) |
| 2 | 2.00 | 7.00 | 14.09 | 7.09 | 26.4 |
| (50) | (50.8) | (177.8) | (357.9) | (180.1) | (12.0) |
| 2-1/2 | 2.50 | 7.50 | 15.55 | 7.09 | 37.0 |
| (65) | (63.5) | (190.5) | (395.0) | (180.1) | (17.0) |
| 3 | 3.00 | 8.00 | 16.22 | 7.87 | 46.0 |
| (80) | (76.2) | (203.2) | (412.0) | (199.9) | (21.0) |
| 4 | 4.00 | 9.00 | 20.94 | 8.82 | 75.0 |
| (100) | (101.6) | (228.6) | (531.9) | (224.0) | (34.0) |
| 6 | 6.00 | 10.50 | 28.11 | 9.84 | 123.0 |
| (150) | (152.4) | (266.7) | (714.0) | (249.9) | (56.0) |
| 8 | 8.00 | 11.50 | 35.98 | 12.40 | 200.0 |
| (200) | (203.2) | (292.1) | (913.9) | (315.0) | (91.0) |
| 10 | 10.00 | 13.00 | 43.82 | 13.98 | 301.0 |
| (250) | (254.0) | (330.2) | (1113.0) | (655.1) | (137.0) |
| 12 | 12.00 | 14.00 | 51.73 | 15.75 | 449.0 |
| (300) | (304.80) | (355.6) | (1313.9) | (400.1) | (204.0) |
| 14 | 13.25 | 15.00 | 58.43 | 19.69 | 664.0 |
| (350) | (336.6) | (381.0) | (1484.1) | (500.1) | (302.0) |

| Class 150 | | | | | |
|---------------------|---------|----------|----------|---------|--------------------|
| Size NPS (DN) | A | B | C | D | Weight Lbs (Kg) |
| 16 | 15.25 | 16.00 | 66.69 | 22.05 | 994.0 |
| (400) | (387.4) | (406.4) | (1693.9) | (560.1) | (429.0) |
| 18* | 17.25 | 17.00 | 73.86 | 22.05 | 1065.0 |
| (450) | (438.2) | (431.8) | (1876.0) | (560.1) | (484.0) |
| 20* | 19.25 | 18.00 | 83.19 | 24.80 | 1373.0 |
| (500) | (489.0) | (457.20) | (2113.0) | (629.9) | (624.0) |
| 24* | 23.25 | 20.00 | 98.07 | 27.95 | 2180.0 |
| (600) | (590.6) | (508.0) | (2491.0) | (709.9) | (991.0) |

| Class 300 | | | | | |
|---------------------|---------|---------|----------|---------|--------------------|
| Size NPS (DN) | A | B | C | D | Weight Lbs (Kg) |
| 1/2 | 0.50 | 5.50 | 8.23 | 3.87 | 7.0 |
| (15) | (12.7) | (139.7) | (209.0) | (98.3) | (3.2) |
| 3/4 | 0.75 | 6.00 | 8.43 | 4.87 | 7.9 |
| (20) | (19.1) | (152.4) | (214.1) | (123.7) | (3.6) |
| 1 | 1.00 | 6.50 | 11.02 | 7.00 | 16.3 |
| (25) | (25.4) | (165.1) | (279.9) | (177.8) | (7.4) |
| 1-1/2 | 1.50 | 7.50 | 13.30 | 7.87 | 30.8 |
| (40) | (38.1) | (190.5) | (337.8) | (199.9) | (14.0) |
| 2 | 2.00 | 8.5 | 14.92 | 7.87 | 50.6 |
| (50) | (50.8) | (215.9) | (379.0) | (199.9) | (23.0) |
| 2-1/2 | 2.50 | 9.50 | 16.95 | 7.87 | 68.0 |
| (65) | (63.5) | (241.3) | (430.5) | (199.9) | (31.0) |
| 3 | 3.00 | 11.13 | 18.39 | 8.82 | 88.0 |
| (80) | (76.2) | (282.7) | (467.1) | (224.0) | (40.0) |
| 4 | 4.00 | 12.00 | 21.38 | 9.84 | 123.0 |
| (100) | (101.6) | (304.8) | (543.1) | (249.9) | (56.0) |
| 6 | 6.00 | 15.88 | 29.57 | 13.98 | 238.0 |
| (150) | (152.4) | (403.4) | (751.1) | (355.1) | (108.0) |
| 8 | 8.00 | 16.50 | 38.50 | 15.75 | 398.0 |
| (200) | (203.2) | (419.1) | (977.9) | (400.1) | (181.0) |
| 10 | 10.00 | 18.00 | 46.61 | 17.72 | 568.0 |
| (250) | (254.0) | (457.2) | (1183.9) | (450.1) | (258.0) |

| Class 300 | | | | | |
|---------------------|----------|----------|----------|---------|--------------------|
| Size NPS (DN) | A | B | C | D | Weight Lbs (Kg) |
| 12 | 12.00 | 19.75 | 53.82 | 19.69 | 827.0 |
| (300) | (304.80) | (501.7) | (1367.0) | (500.1) | (376.0) |
| 14* | 13.25 | 30.00 | 60.12 | 22.05 | 1184.0 |
| (350) | (336.6) | (762.0) | (1527.1) | (560.1) | (538.0) |
| 16* | 15.25 | 33.00 | 57.25 | 24.80 | 2053.0 |
| (400) | (387.4) | (838.2) | (1454.2) | (629.9) | (931.0) |
| 18* | 17.00 | 36.00 | 74.28 | 27.95 | 2370.0 |
| (450) | (431.8) | (914.4) | (1886.7) | (709.9) | (1075.0) |
| 20* | 19.00 | 39.00 | 84.10 | 31.50 | 2919.0 |
| (500) | (482.6) | (990.6) | (2136.1) | (800.1) | (1324.0) |
| 24* | 23.00 | 45.00 | 98.85 | 31.50 | 4674.0 |
| (600) | (590.6) | (1143.0) | (2510.8) | (800.1) | (2120.0) |

| Class 600 | | | | | |
|---------------------|---------|---------|----------|---------|--------------------|
| Size NPS (DN) | A | B | C | D | Weight Lbs (Kg) |
| 2 | 2.00 | 11.50 | 14.76 | 7.87 | 75.0 |
| (50) | (50.8) | (292.1) | (374.9) | (199.9) | (34.0) |
| 3 | 3.00 | 14.00 | 18.58 | 9.84 | 130.0 |
| (80) | (76.2) | (355.6) | (471.9) | (249.9) | (59.0) |
| 4 | 4.00 | 17.00 | 19.45 | 13.98 | 227.0 |
| (100) | (101.6) | (431.8) | (494.0) | (355.1) | (103.0) |
| 6 | 6.00 | 22.00 | 28.03 | 19.69 | 462.0 |
| (150) | (152.4) | (558.8) | (712.0) | (500.1) | (210.0) |
| 8 | 7.87 | 26.00 | 40.03 | 19.69 | 761.0 |
| (200) | (199.9) | (660.4) | (1016.8) | (500.1) | (346.0) |
| 10 | 9.75 | 31.00 | 49.02 | 22.05 | 1232.0 |
| (250) | (247.7) | (787.4) | (1245.1) | (560.1) | (560) (G) |
| 12 | 11.75 | 33.00 | 54.20 | 24.80 | 1665.0 |
| (300) | (298.5) | (838.2) | (1376.7) | (629.9) | (757) (G) |

| Class 900 | | | | | |
|---------------------|-------|-------|--------|-------|--------------------|
| Size NPS (DN) | A | B | C | D | Weight Lbs (Kg) |
| 2 | 1.85 | 14.50 | 17.72 | 11.02 | 154.3 |
| (50) | (47) | (368) | (450) | (280) | (70) |
| 2-1/2 | 2.25 | 16.50 | 18.50 | 11.02 | 174.2 |
| (65) | (57) | (419) | (470) | (280) | (79) |
| 3 | 2.83 | 15.00 | 22.05 | 12.40 | 202.8 |
| (80) | (72) | (381) | (560) | (315) | (92) |
| 4 | 3.85 | 18.00 | 25.59 | 13.98 | 341.7 |
| (100) | (98) | (457) | (650) | (355) | (160) (G) |
| 6 | 5.75 | 24.00 | 35.04 | 19.69 | 661.4 |
| (150) | (146) | (610) | (890) | (500) | (304) (G) |
| 8 | 7.48 | 29.00 | 42.52 | 24.80 | 1102.3 |
| (200) | (190) | (737) | (1080) | (630) | (500) |
| 10 | 9.37 | 33.00 | 55.12 | 24.80 | 1719.6 |
| (250) | (238) | (838) | (1400) | (630) | (788) (G) |
| 12 | 11.10 | 38.00 | 62.99 | 24.80 | 2645.6 |
| (300) | (282) | (965) | (1600) | (630) | (1206) (G) |

| Class 1500 | | | | | |
|---------------------|-------|-------|--------|-------|--------------------|
| Size NPS (DN) | A | B | C | D | Weight Lbs (Kg) |
| 2 | 1.85 | 14.50 | 17.72 | 11.02 | 154.3 |
| (50) | (47) | (368) | (450) | (280) | (70) |
| 2-1/2 | 2.25 | 16.50 | 18.50 | 11.02 | 174.2 |
| (65) | (57) | (419) | (470) | (280) | (79) |
| 3 | 2.72 | 18.50 | 27.56 | 13.98 | 326.3 |
| (80) | (69) | (470) | (700) | (355) | (148) |
| 4 | 3.62 | 21.50 | 33.46 | 19.69 | 529.1 |
| (100) | (92) | (546) | (850) | (500) | (240) |
| 6 | 5.35 | 27.75 | 43.31 | 24.80 | 1355.8 |
| (150) | (136) | (705) | (1100) | (630) | (615) |
| 8 | 6.96 | 32.75 | 45.28 | 27.95 | 1918.0 |
| (200) | (177) | (832) | (1150) | (710) | (870) |

* This size not normally stocked. Other sizes available upon request.

Note: Dimensions: Inches/Millimeters – Weights: Pounds/Kilograms. Dimensions are subject to change without notice.

II. SPECIAL APPLICATIONS – CRYOGENIC CONVENTIONAL PORT SIZES: 1/2" TO 24" (15MM TO 600MM) • CLASSES: 150 TO 600

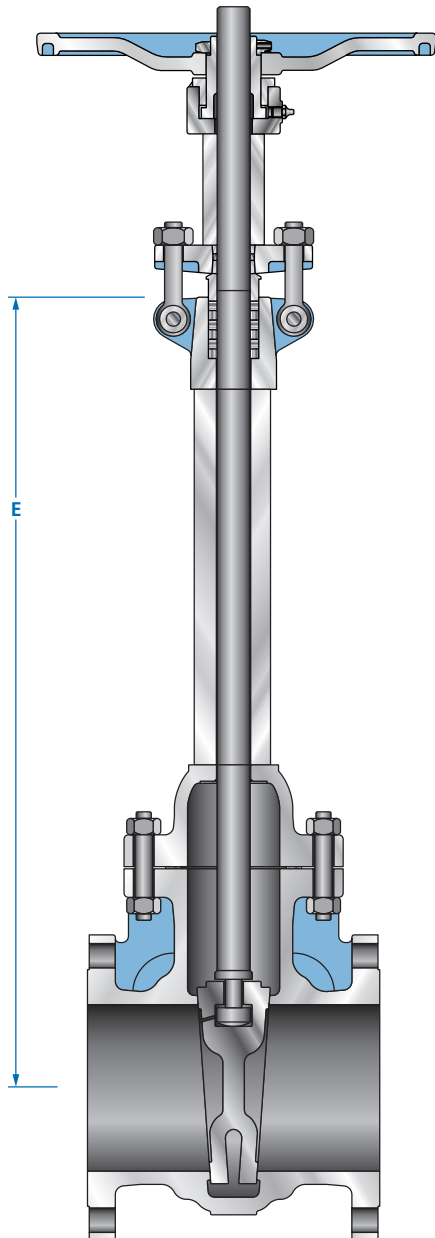
Design and Manufacturing Standards

Valve Design: API 603/ASME B16.34

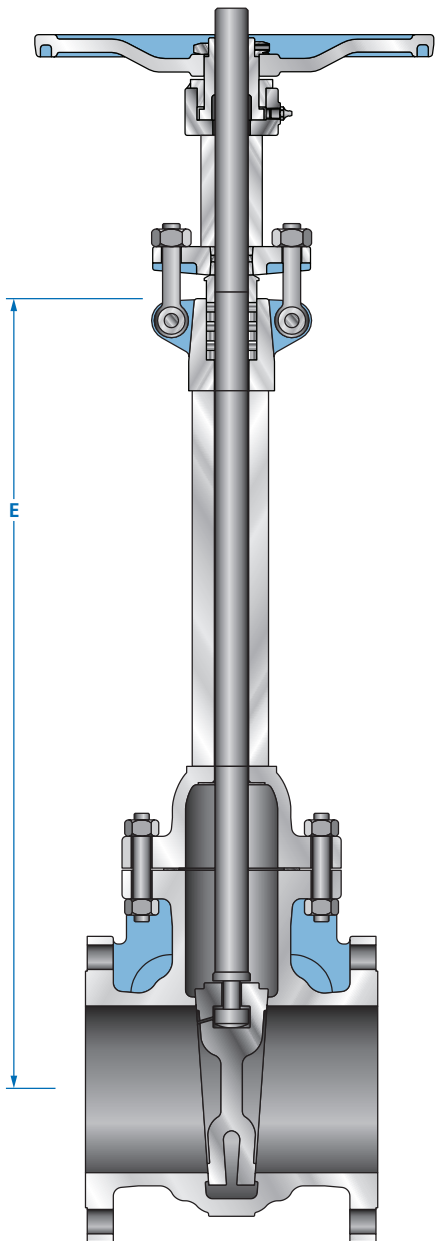
Flange Dimensions: ASME B16.5

Face to Face Dimensions: ASME B16.10

Tested in Accordance With: API 598



| Special Design Cryogenic | |
|---------------------------------------------|------------------|
| "E" Dimension (Standard Recommended Length) | |
| Size NPS (DN) | Extension Length |
| 1/2 | 12 |
| (15) | (305) |
| 3/4 | 12 |
| (20) | (305) |
| 1 | 12 |
| (25) | (305) |
| 1-1/2 | 14 |
| (40) | (356) |
| 2 | 16 |
| (50) | (406) |
| 3 | 18 |
| (80) | (457) |
| 4 | 22 |
| (100) | (559) |
| 6 | 24 |
| (150) | (610) |
| 8 | 27 |
| (200) | (686) |
| 10 | 32 |
| (250) | (813) |
| 12 | 36 |
| (300) | (914) |



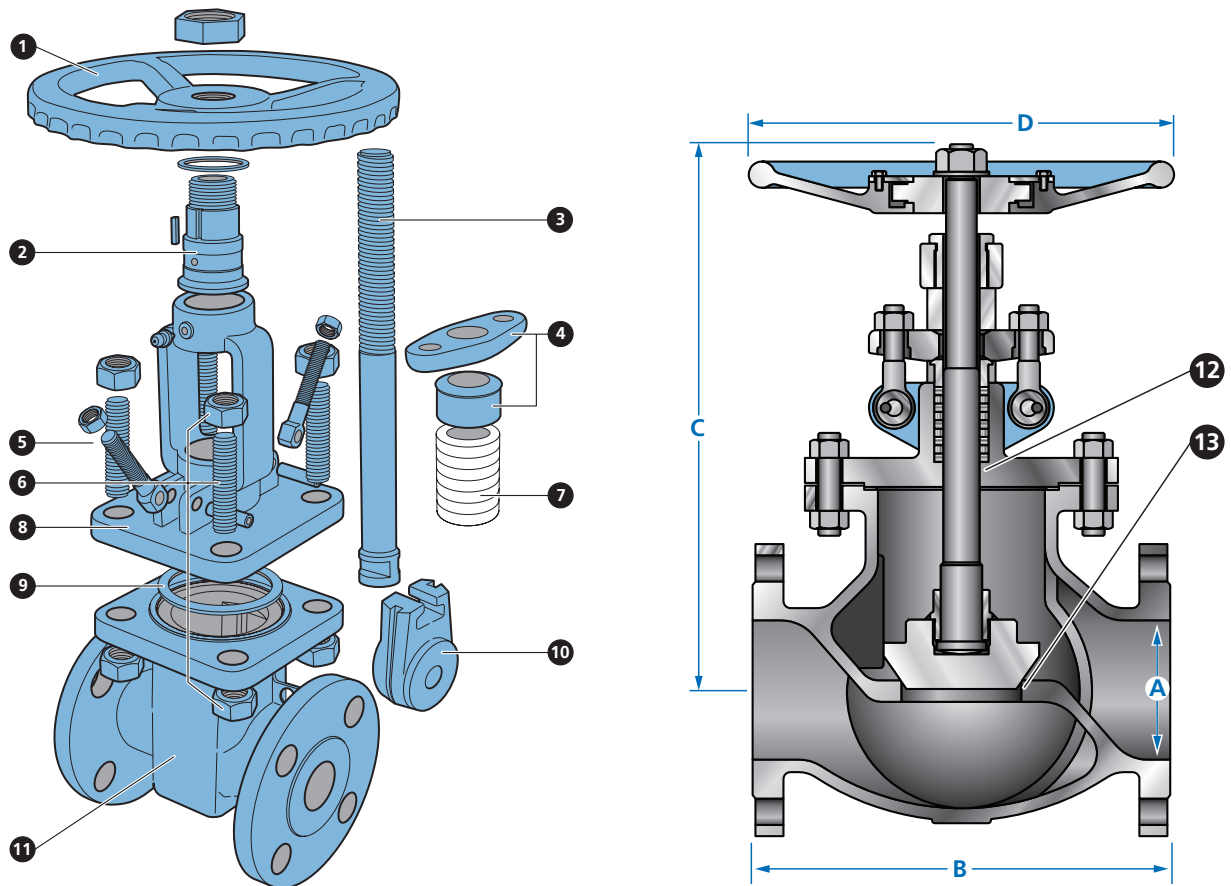
| Special Design Cryogenic | |
|---------------------------------------------|---------------------------------------------------------------------------|
| "E" Dimension (Standard Recommended Length) | |
| Size NPS (DN) | Extension Length |
| 14 | Sizes 14" and Up – As Per Cameron's Recommended Extension Length |
| (350) | |
| 16 | |
| (400) | |
| 18 | |
| (450) | |
| 20 | |
| (500) | |
| 24 | |
| (600) | |

Note: Dimensions: Inches/Millimeters.
 Larger sizes available on request.
 Dimensions are subject to change without notice.

CAST STAINLESS STEEL GLOBE VALVES

SIZES: 1/2" TO 12" (15MM TO 300MM)
PRESSURE CLASS: 150 TO 1500

Typical Stainless Steel Globe Valve Expanded View



1. **Handwheel:** The nodular iron handwheels are well shaped and large enough to give ease of movement when operating the valve, even under maximum differential pressure.
2. **Yoke Sleeve:** The yoke sleeve is made from ductile iron with a high resistance to wear and a high melting point. It is screwed into the bonnet and properly sized to withstand the stresses which develop when opening and closing the valve.
3. **Stem:** The stem is stainless steel and is part of the trim. A ground backseat is provided to ensure perfectly tight seal to the stuffing box when the valve is fully open. The stem is attached to the disc by means of a threaded ring which allows the disc to rotate. The stem is ground to minimize friction and prevent damage to gland packing.
4. **Gland Bolts and Nuts:** The stainless steel gland bolts are of the eyebolt type which can be swung outward for ease of gland repacking. They are fixed to the bonnet by solid bolt pin tack welded.

5. **Gland and Flange:** The gland and flange are stainless steel and are normally supplied in two pieces. The contact surfaces between gland and gland flange have a spherical profile to permit the gland to descend parallel to the stem even if the eyebolts are not evenly tightened.
6. **Bonnet:** The bonnet is in stainless steel. It is machined to accept the yoke sleeve and incorporate the stuffing box dimensioned in accordance with the API standard and MSS SP standard.
7. **Disc:** The disc is part of the trim and is cast in stainless steel. It is normally supplied as a tapered type. Special attention is given to the seating face which is ground and lapped for a perfectly tight seal
8. **Packing*:** The packing is made with die formed graphite center rings with braided graphite top and bottom rings, or with teflon.
9. **Gasket*:** The gasket is made from graphite or teflon as specified based on service condition requirements.
10. **Bonnet Bolting:** Bonnet studs and nuts are manufactured from stainless steel to the relevant ASTM standard.
11. **Body:** The body is stainless steel and is carefully designed in all its details. The basic dimensions, i.e. wall thickness, face to face and flanges, comply with the relevant API and ANSI standards. The body to bonnet flange is circular. The sealing surfaces for connection to the bonnet are recessed in the 150-lb, 300-lb and 600-lb series. Bosses may be provided for drain taps and bypass piping.
12. **Bonnet Bushing (Integral):** The bonnet bushing or backseat is integrally machined from the cast stainless steel bonnet and forms part of the trim. Special attention is given to the seating face which is ground and lapped for a perfectly tight seal.
13. **Seat Rings (Integral):** The seat ring is cast integral in the body and is part of the trim. Special attention is given to the seating face, which is ground and lapped for a perfectly tight seal.

* *Recommended spare parts.*

I. CONVENTIONAL PORT SIZES: 1/2" TO 12"* • CLASSES: 150 TO 1500

Design and Manufacturing Standards

Valve Design: API 603/ASME B16.34

Flange Dimensions: ASME B16.5

Face to Face Dimensions: ASME B16.10

Tested in Accordance With: API 598

| Class 150 | | | | | |
|---------------------|---------|---------|---------|---------|--------------------|
| Size NPS (DN) | A | B | C | D | Weight Lbs (Kg) |
| 1/2 | 0.50 | 4.25 | 7.84 | 4.00 | 6.8 |
| (15) | (12.7) | (108.0) | (199.1) | (101.6) | (3.1) |
| 3/4 | 0.75 | 4.63 | 7.84 | 4.00 | 7.7 |
| (20) | (19.1) | (117.6) | (199.1) | (101.6) | (3.5) |
| 1 | 1.00 | 5.00 | 9.93 | 4.75 | 11.7 |
| (25) | (25.4) | (127.0) | (252.2) | (120.7) | (5.3) |
| 1-1/2 | 1.50 | 6.50 | 9.60 | 4.75 | 18.7 |
| (40) | (38.1) | (165.1) | (243.8) | (120.7) | (8.0) |
| 2 | 2.00 | 8.00 | 13.03 | 7.09 | 39.6 |
| (50) | (50.8) | (203.2) | (50.8) | (180.1) | (12.0) |
| 2-1/2 | 2.50 | 8.50 | 12.70 | 7.09 | 58.0 |
| (65) | (63.5) | (216.0) | (322.3) | (180.1) | (16.8) |
| 3 | 3.00 | 9.50 | 15.04 | 8.82 | 59.0 |
| (80) | (76.2) | (241.3) | (382.0) | (224.0) | (27.0) |
| 4 | 4.00 | 11.50 | 16.38 | 11.02 | 99.0 |
| (100) | (101.6) | (292.1) | (416.1) | (279.9) | (45.0) |
| 6 | 6.00 | 16.00 | 17.80 | 12.40 | 163.0 |
| (150) | (152.4) | (406.4) | (452.1) | (315.0) | (74.0) |
| 8 | 8.00 | 19.50 | 22.72 | 15.75 | 288.0 |
| (200) | (203.2) | (495.3) | (577.1) | (400.1) | (131.0) |
| 10 | 10.00 | 24.50 | 26.25 | 19.68 | 463.0 |
| (250) | (254.0) | (622.3) | (666.8) | (499.9) | (210.0) |
| 12* | 12.00 | 27.50 | 28.50 | 23.62 | 794.0 |
| (300) | (304.8) | (698.5) | (723.9) | (600.0) | (360.0) |

| Class 300 | | | | | |
|---------------------|----------|---------|---------|---------|--------------------|
| Size NPS (DN) | A | B | C | D | Weight Lbs (Kg) |
| 1/2 | 0.50 | 6.00 | 7.84 | 4.00 | 8.6 |
| (15) | (12.7) | (152.4) | (199.1) | (101.6) | (3.9) |
| 3/4 | 0.75 | 7.00 | 7.84 | 4.00 | 10.6 |
| (20) | (19.1) | (177.8) | (199.1) | (101.6) | (4.8) |
| 1 | 1.00 | 8.00 | 9.93 | 4.75 | 15.6 |
| (25) | (25.4) | (203.2) | (252.2) | (120.7) | (7.1) |
| 1-1/2 | 1.50 | 9.00 | 10.15 | 7.08 | 28.6 |
| (40) | (38.1) | (228.6) | (257.8) | (179.8) | (13.0) |
| 2 | 2.00 | 11.50 | 14.56 | 7.87 | 48.4 |
| (50) | (50.8) | (266.7) | (369.8) | (199.9) | (22.0) |
| 2-1/2 | 2.50 | 11.50 | 14.41 | 8.82 | 75.0 |
| (65) | (63.5) | (292.1) | (366.0) | (224.0) | (34.1) |
| 3 | 3.00 | 12.50 | 18.22 | 11.02 | 88.0 |
| (80) | (76.2) | (317.5) | (462.8) | (279.9) | (40.0) |
| 4 | 4.00 | 14.00 | 20.35 | 12.40 | 145.0 |
| (100) | (101.6) | (355.6) | (516.9) | (315.0) | (66.0) |
| 6 | 6.00 | 17.50 | 28.03 | 15.74 | 262.0 |
| (150) | (152.4) | (444.5) | (712.0) | (399.8) | (119.0) |
| 8 | 8.00 | 22.00 | 30.80 | 19.69 | 455.0 |
| (200) | (203.2) | (558.8) | (782.3) | (500.1) | (207.0) |
| 10 | 10.00 | 24.50 | 34.35 | 27.56 | 882.0 |
| (250) | (254.0) | (622.3) | (872.5) | (700.0) | (400.0) |
| 12* | 12.00 | 28.00 | 35.62 | 27.56 | 1213.0 |
| (300) | (304.80) | (711.2) | (904.7) | (700.0) | (550.0) |

| Class 600 | | | | | |
|---------------------|---------|---------|---------|---------|--------------------|
| Size NPS (DN) | A | B | C | D | Weight Lbs (Kg) |
| 2 | 2.00 | 11.50 | 14.56 | 7.87 | 81.0 |
| (50) | (50.8) | (292.1) | (369.8) | (199.9) | (30.0) |
| 3 | 3.00 | 14.00 | 18.22 | 11.02 | 136.0 |
| (80) | (76.2) | (355.6) | (462.8) | (279.9) | (60.0) |
| 4 | 4.00 | 17.00 | 20.35 | 12.40 | 238.0 |
| (100) | (101.6) | (431.8) | (516.9) | (314.9) | (95.0) |
| 6 | 6.00 | 22.00 | 28.03 | 15.74 | 502.0 |
| (150) | (152.4) | (558.8) | (718.8) | (399.8) | (190.0) |

| Class 600 | | | | | |
|---------------|---------|---------|----------|---------|-----------------|
| Size NPS (DN) | A | B | C | D | Weight Lbs (Kg) |
| 8* | 8.00 | 26.00 | 30.80 | 19.69 | 913.0 |
| (200) | (203.2) | (660.4) | (782.32) | (500.1) | (360.0) |
| 10* | 10.00 | 31.00 | 34.35 | 27.56 | 1052.0 |
| (250) | (254.0) | (787.4) | (872.5) | (700.0) | (478.0) |
| 12* | 12.00 | 33.00 | 35.62 | 27.56 | 1623.0 |
| (300) | (304.8) | (838.2) | (904.7) | (700.0) | (736.0) |

| Class 900 | | | | | |
|---------------|-------|-------|--------|-------|-----------------|
| Size NPS (DN) | A | B | C | D | Weight Lbs (Kg) |
| 2 | 1.85 | 14.50 | 18.28 | 11.02 | 163.1 |
| (50) | (47) | (368) | (490) | (280) | (74) |
| 2-1/2 | 2.25 | 16.50 | 19.69 | 12.40 | 211.6 |
| (65) | (57) | (419) | (500) | (315) | (96) |
| 3 | 2.83 | 15.00 | 21.65 | 13.98 | 185.2 |
| (80) | (72) | (381) | (550) | (355) | (84) |
| 4 | 3.85 | 18.00 | 23.62 | 15.75 | 390.2 |
| (100) | (98) | (457) | (600) | (400) | (177) |
| 6 | 5.75 | 24.00 | 33.31 | 23.62 | 687.8 |
| (150) | (146) | (610) | (846) | (600) | (312) |
| 12 | 11.10 | 38.00 | 57.09 | 35.43 | 4739.9 |
| (300) | (282) | (965) | (1450) | (900) | (2150) |

| Class 1500 | | | | | |
|---------------|------|-------|-------|-------|-----------------|
| Size NPS (DN) | A | B | C | D | Weight Lbs (Kg) |
| 2 | 1.85 | 14.50 | 18.29 | 11.02 | 163.1 |
| (50) | (47) | (368) | (490) | (280) | (74) |
| 2-1/2 | 2.25 | 16.50 | 19.69 | 12.40 | 211.6 |
| (65) | (57) | (419) | (500) | (315) | (96) |
| 3 | 2.72 | 18.50 | 27.56 | 13.98 | 297.6 |
| (80) | (69) | (470) | (700) | (355) | (135) |

* This size not normally stocked. Other sizes available upon request.

Note: Dimensions: Inches/Millimeters – Weights: Pounds/Kilograms. Dimensions are subject to change without notice.

II. SPECIAL APPLICATIONS – CRYOGENIC CONVENTIONAL PORT SIZES: 1/2" TO 6" (15MM TO 150MM) • CLASSES: 150 TO 300

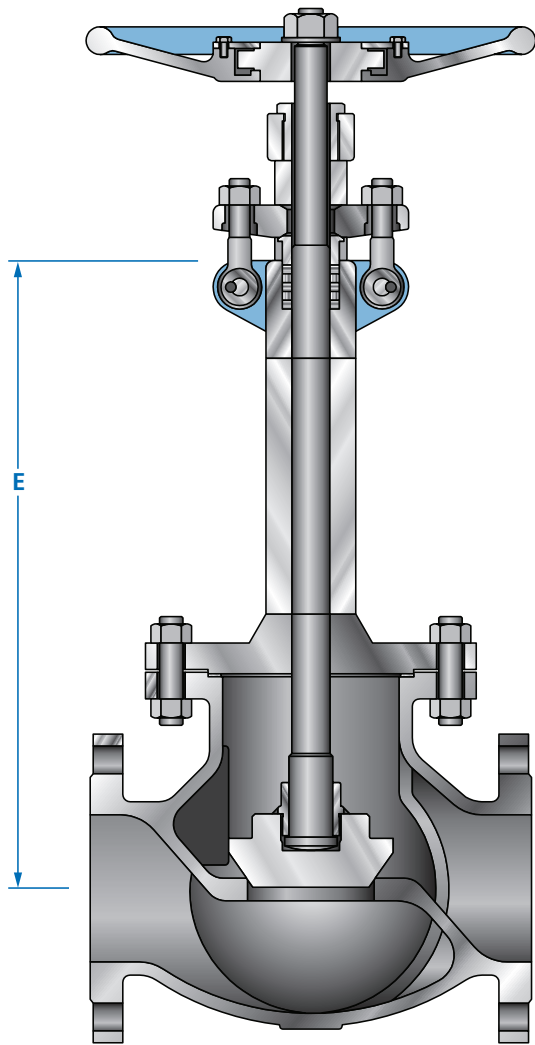
Design and Manufacturing Standards

Valve Design: API 603/ASME B16.34

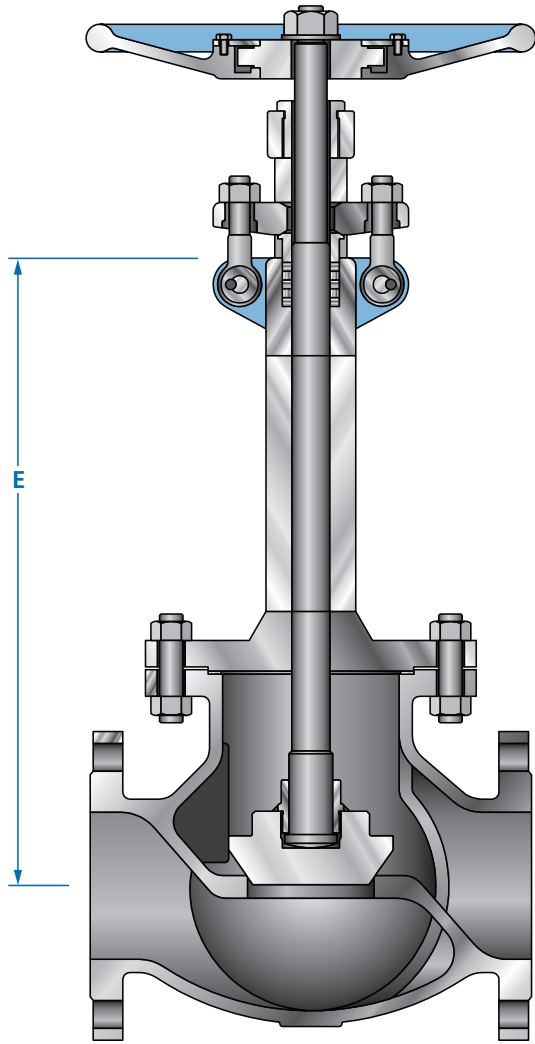
Flange Dimensions: ASME B16.5

Face to Face Dimensions: ASME B16.10

Tested in Accordance With: API 598



| Special Design Cryogenic | |
|---------------------------------------------|------------------|
| "E" Dimension (Standard Recommended Length) | |
| Size NPS (DN) | Extension Length |
| 1/2 | 12 |
| (15) | (305) |
| 3/4 | 12 |
| (20) | (305) |
| 1 | 12 |
| (25) | (305) |
| 1-1/2 | 14 |
| (40) | (356) |
| 2 | 16 |
| (50) | (406) |
| 3 | 18 |
| (80) | (457) |
| 4 | 22 |
| (100) | (559) |
| 6 | 24 |
| (150) | (610) |
| 8 | 27 |
| (200) | (686) |
| 10 | 32 |
| (250) | (813) |
| 12 | 36 |
| (300) | (914) |



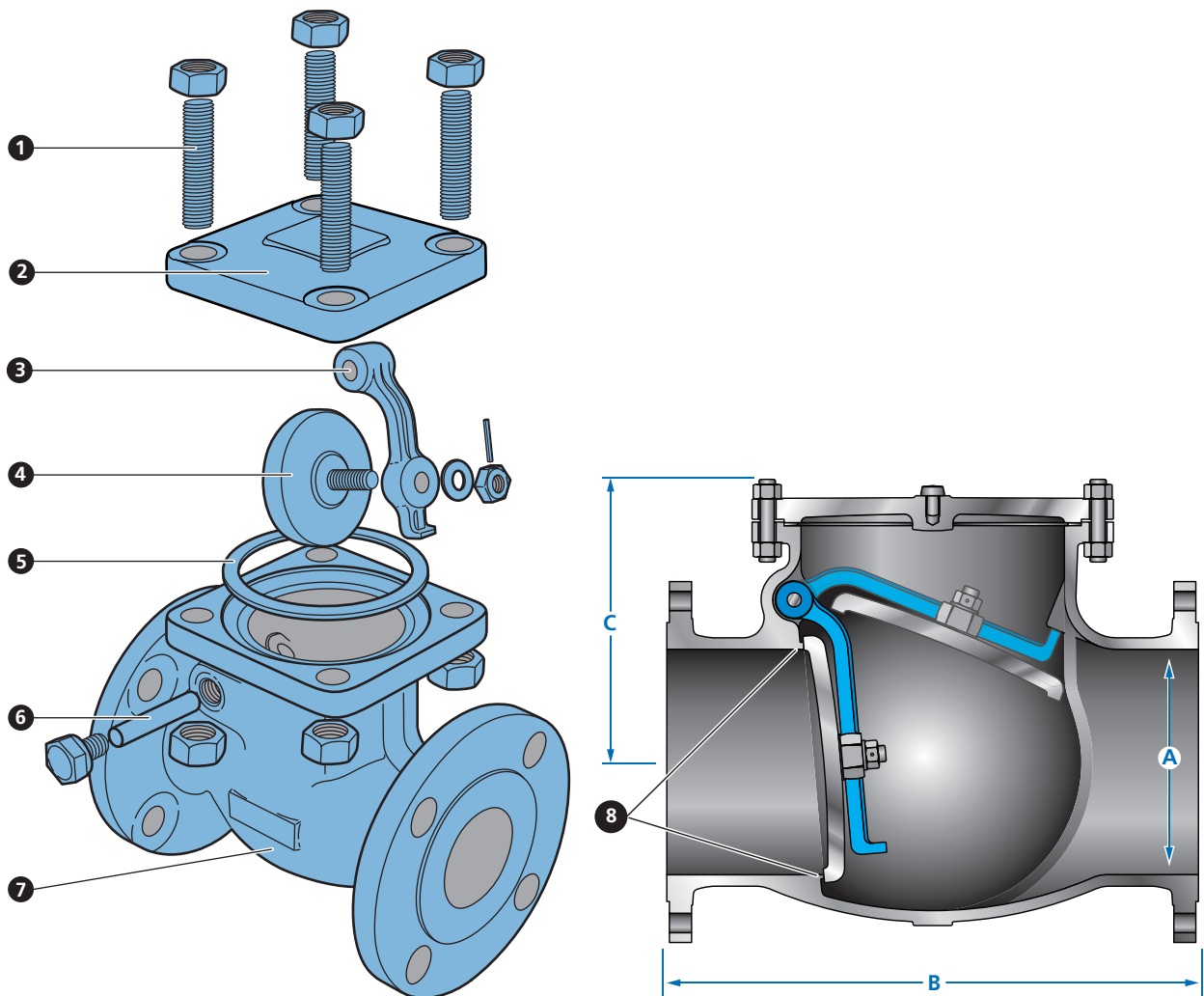
| Special Design Cryogenic | |
|---------------------------------------------|---------------------------------------------------------------------------|
| "E" Dimension (Standard Recommended Length) | |
| Size NPS (DN) | Extension Length |
| 14 | Sizes 14" and Up – As Per Cameron's Recommended Extension Length |
| (350) | |
| 16 | |
| (400) | |
| 18 | |
| (450) | |
| 20 | |
| (500) | |
| 24 | |
| (600) | |

Note: Dimensions: Inches/Millimeters - Weights: Pounds/Kilograms. Larger sizes available on request. Dimensions are subject to change without notice.

CAST STAINLESS STEEL CHECK VALVES

SIZES: 1/2" TO 24" (15MM TO 600MM)
PRESSURE CLASS: 150 TO 1500

Typical Forged Steel Bolted Check Valve Expanded View



1. **Cap Bolting:** The cover studs and nuts are manufactured from stainless steel to the relevant ASTM standard.
2. **Cap:** The cap is cast stainless steel. The sealing surfaces for the connection to the body are flush in the 150-lb. class (sizes 1/2" - 1") and recessed in the 150-lb. class (sizes 1-1/2" and up), 300-lb. class and 600-lb. class valves.
3. **Hinge Arm:** The hinge is in forged stainless steel for small diameter and cast for 2" and up.
4. **Disc:** The disc is part of the trim. The back side has a threaded stud for attachment to the hinge arm with a stainless steel nut. To insure a strong connection, the nut is secured to the threaded stud by spot welding. The seating face is ground and lapped for a perfectly tight seal.

5. **Gasket***: The gasket is made from graphite or teflon as specified based on service condition requirements.
6. **Hinge Pin**: The hinge pin is part of the trim. It is stainless steel and is machined from round bar. The hinge pin is retained in the body by threaded plug and can be easily removed for maintenance of the valve.
7. **Body**: The body is cast stainless steel, carefully designed to keep pressure drops to a minimum. A wide opening on top of the body permits easy inspection and maintenance. The basic dimensions, i.e. wall thickness, face to face and flanges, comply with the relevant API and ANSI standards. Bosses may be provided for drain taps or bypass piping.
8. **Seat Ring (Integral)**: The seat ring is cast integral to the body and is part of the trim. Special attention is given to the seating face, which is ground and lapped for a perfectly tight seal.

* *Recommended spare parts.*

I. SWING CHECK VALVE CONVENTIONAL PORT SIZES: 1/2" TO 14" (15MM TO 350MM)* • CLASSES: 150 TO 1500

Design and Manufacturing Standards

Valve Design: API 603/ASME B16.34

Flange Dimensions: ASME B16.5

Face to Face Dimensions: ASME B16.10

Tested in Accordance With: API 598

| Class 150 | | | | |
|---------------------|----------|---------|---------|--------------------|
| Size NPS (DN) | A | B | C | Weight Lbs (Kg) |
| 1/2 | 0.50 | 4.25 | 2.44 | 4.0 |
| (15) | (12.7) | (108.0) | (62.0) | (1.8) |
| 3/4 | 0.75 | 4.63 | 2.44 | 4.8 |
| (20) | (19.1) | (117.6) | (62.0) | (2.2) |
| 1 | 1.00 | 5.00 | 2.94 | 6.8 |
| (25) | (25.4) | (127.0) | (74.7) | (3.1) |
| 1-1/2 | 1.50 | 6.50 | 4.92 | 16.5 |
| (40) | (38.1) | (165.1) | (125.0) | (7.5) |
| 2 | 2.00 | 8.00 | 5.12 | 26.0 |
| (50) | (50.8) | (203.2) | (130.0) | (12.0) |
| 2-1/2 | 2.50 | 8.5 | 5.71 | 40.0 |
| (65) | (63.5) | (216.0) | (145.0) | (18.0) |
| 3 | 3.00 | 9.50 | 5.94 | 51.0 |
| (80) | (76.2) | (241.3) | (150.9) | (23.0) |
| 4 | 4.00 | 11.50 | 7.64 | 77.0 |
| (100) | (101.6) | (292.1) | (194.1) | (35.0) |
| 6 | 6.00 | 14.00 | 9.25 | 128.0 |
| (150) | (152.4) | (355.6) | (235.0) | (58.0) |
| 8 | 8.00 | 19.50 | 11.22 | 238.0 |
| (200) | (203.2) | (495.3) | (285.0) | (108.0) |
| 10 | 10.00 | 24.50 | 14.69 | 339.0 |
| (250) | (254.0) | (622.3) | (373.1) | (154.0) |
| 12 | 12.00 | 27.50 | 18.11 | 475.0 |
| (300) | (304.80) | (698.5) | (460.0) | (216.0) |
| 14* | 13.25 | 31.00 | 19.80 | 620.0 |
| (350) | (336.6) | (787.4) | (502.9) | (282.0) |

| Class 150 | | | | |
|---------------------|---------|----------|---------|--------------------|
| Size NPS (DN) | A | B | C | Weight Lbs (Kg) |
| 16 | 15.25 | 34.00 | 21.69 | 920.0 |
| (400) | (387.4) | (863.6) | (550.9) | (418.0) |
| 18* | 17.25 | 38.50 | 22.05 | 1284.0 |
| (450) | (438.2) | (977.9) | (560.1) | (582.0) |
| 20* | 19.25 | 38.50 | 24.80 | 1363.0 |
| (500) | (489.0) | (977.9) | (629.9) | (618.0) |
| 24* | 23.25 | 51.00 | 27.95 | 2922.0 |
| (600) | (590.6) | (1295.4) | (709.9) | (1325.0) |

| Class 300 | | | | |
|---------------------|---------|---------|---------|--------------------|
| Size NPS (DN) | A | B | C | Weight Lbs (Kg) |
| 1/2 | 0.50 | 6.00 | 2.52 | 5.1 |
| (15) | (12.7) | (152.4) | (64.0) | (2.3) |
| 3/4 | 0.75 | 7.00 | 2.56 | 7.5 |
| (20) | (19.1) | (177.8) | (65.0) | (3.4) |
| 1 | 1.00 | 8.50 | 3.23 | 10.8 |
| (25) | (25.4) | (215.9) | (82.0) | (4.9) |
| 1-1/2 | 1.50 | 9.50 | 5.51 | 23.5 |
| (40) | (38.1) | (241.3) | (140.0) | (10.7) |
| 2 | 2.00 | 10.50 | 5.94 | 40.0 |
| (50) | (50.8) | (266.7) | (150.9) | (18.0) |
| 3 | 3.00 | 12.50 | 4.48 | 79.0 |
| (80) | (76.2) | (317.5) | (113.8) | (36.0) |
| 4 | 4.00 | 14.00 | 8.66 | 121.0 |
| (100) | (101.6) | (355.6) | (220.0) | (55.0) |
| 6 | 6.00 | 17.5 | 12.83 | 235.0 |
| (150) | (152.4) | (444.5) | (325.9) | (107.0) |
| 8 | 8.00 | 21.00 | 14.80 | 352.0 |
| (200) | (203.2) | (533.4) | (375.9) | (160.0) |
| 10 | 10.00 | 24.50 | 16.18 | 535.0 |
| (250) | (254.0) | (622.3) | (411.0) | (243.0) |
| 12 | 12.00 | 28.00 | 19.13 | 768.0 |
| (300) | (304.8) | (711.2) | (485.9) | (349.0) |
| 14* | 13.25 | 33.00 | 19.80 | 1233.0 |
| (350) | (336.6) | (838.2) | (502.9) | (560.5) |

| Class 600 | | | | |
|---------------------|---------|---------|---------|--------------------|
| Size NPS (DN) | A | B | C | Weight Lbs (Kg) |
| 2 | 2.00 | 11.50 | 7.28 | 66.0 |
| (50) | (50.8) | (292.1) | (184.9) | (30.0) |
| 3 | 3.00 | 14.00 | 9.17 | 132.0 |
| (80) | (76.2) | (355.6) | (232.9) | (60.0) |
| 4 | 4.00 | 17.00 | 10.78 | 209.0 |
| (100) | (101.6) | (431.8) | (273.8) | (95.0) |
| 6 | 6.00 | 22.00 | 15.10 | 418.0 |
| (150) | (152.4) | (558.8) | (383.5) | (190.0) |
| 8 | 7.87 | 26.00 | 17.48 | 792.0 |
| (200) | (199.9) | (660.4) | (444.0) | (360.0) |
| 10 | 9.75 | 31.00 | 20.19 | 1052.0 |
| (250) | (247.7) | (787.4) | (512.8) | (478.0) |
| 12* | 11.75 | 33.00 | 22.00 | 1544.0 |
| (300) | (298.5) | (838.2) | (558.8) | (700.0) |

| Class 900 | | | | |
|---------------------|-------|-------|-------|--------------------|
| Size NPS (DN) | A | B | C | Weight Lbs (Kg) |
| 2 | 1.85 | 14.50 | 8.86 | 187.4 |
| (50) | (47) | (368) | (225) | (85) |
| 2-1/2 | 2.25 | 16.50 | 9.25 | 209.4 |
| (65) | (57) | (419) | (235) | (95) |
| 3 | 2.83 | 15.00 | 10.43 | 207.2 |
| (80) | (72) | (381) | (265) | (94) |
| 4 | 3.85 | 18.00 | 11.05 | 348.3 |
| (100) | (98) | (457) | (280) | (158) |
| 6 | 5.75 | 24.00 | 17.13 | 553.4 |
| (150) | (146) | (610) | (435) | (251) |
| 8 | 7.48 | 29.00 | 20.08 | 1146.1 |
| (200) | (190) | (737) | (510) | (520) |
| 10 | 9.37 | 33.00 | 22.05 | 1763.7 |
| (250) | (238) | (838) | (560) | (800) |
| 12 | 11.10 | 38.00 | 24.21 | 2425.1 |
| (300) | (282) | (965) | (615) | (1100) |

| Class 1500 | | | | |
|---------------------|-------|-------|-------|--------------------|
| Size NPS (DN) | A | B | C | Weight Lbs (Kg) |
| 2 | 1.85 | 14.50 | 7.87 | 187.4 |
| (50) | (47) | (368) | (200) | (85) |
| 2-1/2 | 2.25 | 16.50 | 9.06 | 209.4 |
| (65) | (57) | (419) | (230) | (95) |
| 3 | 2.72 | 18.50 | 10.63 | 308.7 |
| (80) | (69) | (470) | (270) | (140) |
| 4 | 3.62 | 21.50 | 15.75 | 302.0 |
| (100) | (92) | (546) | (400) | (137) |
| 6 | 5.35 | 27.75 | 22.83 | 1067.0 |
| (150) | (136) | (705) | (580) | (484) |

* This size not normally stocked. Other sizes available upon request.

Note: Dimensions: Inches/Millimeters – Weights: Pounds/Kilograms. Dimensions are subject to change without notice.

FORGED GATE, GLOBE AND CHECK VALVES

SIZES: 1/4" TO 2" (6MM TO 50MM)

PRESSURE CLASS: 800 AND 1500

I. REGULAR PORT GATES – SOCKET WELD AND THREADED SIZES: 1/4" TO 2" (6MM TO 50MM) • CLASSES: 800 AND 1500

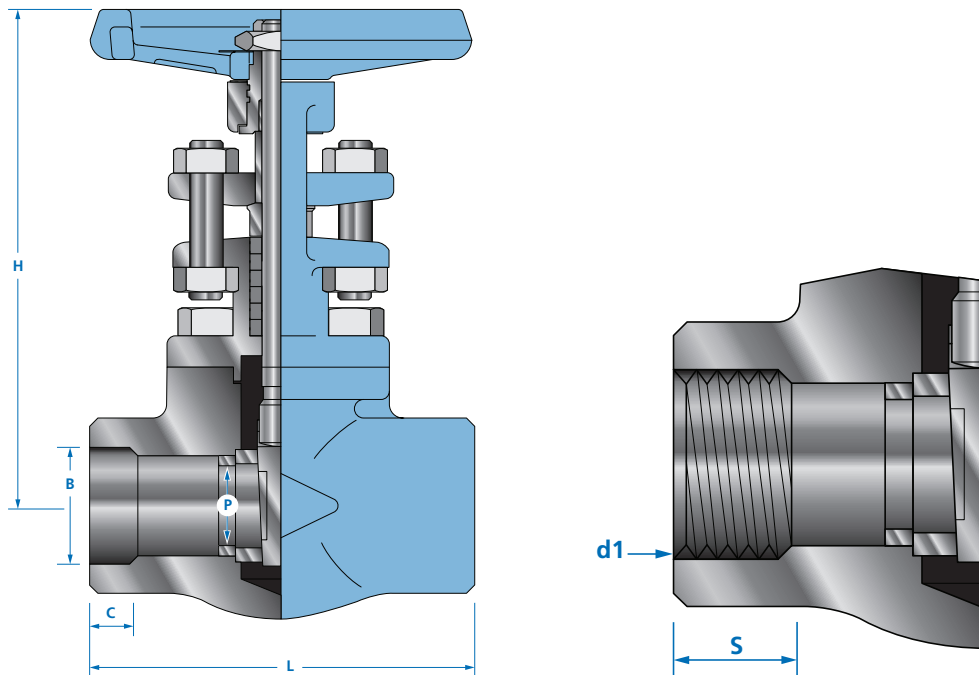
Design and Manufacturing Standards

Valve Design: API 602 and B16.34

Pipe Threads, General Purpose, Inch: ASME B1.20.1

Socket Welding and Threaded: ASME B16.11

Tested in Accordance With: API 598



| Class 800 | | | | | | | | | |
|---------------------|-------|------|------|------|------|------|-----|--------|-----------------------|
| Size In. (DN) | H | L | W | P | End | | | | Weight Lbs (Kg) |
| | | | | | B | C | d1 | S | |
| 1/4* | 5.43 | 2.99 | 3.35 | 0.25 | 0.56 | 0.38 | - | - | 3.3 |
| (6)* | (138) | (76) | (85) | (6) | (14) | (10) | | - | (1.5) |
| 3/8* | 5.43 | 2.99 | 3.35 | 0.38 | 0.69 | 0.38 | - | - | 3.3 |
| (10)* | (138) | (76) | (85) | (10) | (18) | (10) | | - | (1.5) |
| 1/2 | 5.43 | 2.99 | 3.35 | 0.38 | 0.86 | 0.38 | 1/2 | 0.54 | 3.3 |
| (15) | (138) | (76) | (85) | (10) | (22) | (10) | | (13.7) | (1.5) |

| Class 800 | | | | | | | | | |
|---------------|-------|-------|-------|------|------|------|-------|---------|-----------------|
| Size In. (DN) | H | L | W | P | End | | | | Weight Lbs (Kg) |
| | | | | | B | C | d1 | S | |
| 3/4 | 5.79 | 3.62 | 3.82 | 0.50 | 1.07 | 0.50 | 3/4 | 0.54 | 4.6 |
| (20) | (147) | (92) | (97) | (13) | (27) | (13) | | (13.7) | (2.1) |
| 1 | 6.85 | 4.08 | 3.82 | 0.71 | 1.33 | 0.50 | 1 | 0.69 | 6.20 |
| (25) | (174) | (104) | (97) | (18) | (34) | (13) | | (17.52) | (2.8) |
| 1-1/4 | 8.54 | 4.53 | 5.39 | 1.13 | 1.68 | 0.50 | 1-1/4 | 0.71 | 10.6 |
| (30) | (217) | (115) | (137) | (29) | (43) | (13) | | (18.0) | (4.8) |
| 1-1/2 | 8.54 | 4.53 | 5.39 | 1.13 | 1.92 | 0.50 | 1-1/2 | 0.72 | 10.6 |
| (40) | (217) | (115) | (137) | (29) | (49) | (13) | | (18.3) | (4.8) |
| 2 | 10.28 | 5.75 | 6.18 | 1.46 | 2.41 | 0.62 | 2 | 0.76 | 18.0 |
| (50) | (261) | (146) | (157) | (37) | (61) | (16) | | (19.3) | (8.2) |

* Size available in socket weld design only.

| Class 1500 | | | | | | | | | |
|---------------|-------|-------|-------|------|------|------|-------|---------|-----------------|
| Size In. (DN) | H | L | W | P | End | | | | Weight Lbs (Kg) |
| | | | | | B | C | d1 | S | |
| 1/2 | 5.79 | 3.62 | 3.82 | 0.38 | 0.86 | 0.38 | 1/2 | 0.54 | 4.6 |
| (15) | (147) | (92) | (97) | (10) | (22) | (10) | | (13.7) | (2.1) |
| 3/4 | 6.14 | 4.09 | 3.82 | 0.50 | 1.07 | 0.50 | 3/4 | 0.54 | 6.4 |
| (20) | (156) | (104) | (97) | (13) | (27) | (13) | | (13.7) | (2.9) |
| 1 | 8.15 | 4.53 | 5.39 | 0.71 | 1.33 | 0.50 | 1 | 0.69 | 11.0 |
| (25) | (207) | (115) | (137) | (18) | (34) | (13) | | (17.52) | (5.0) |
| 1-1/4 | 9.69 | 5.75 | 6.18 | 1.13 | 1.68 | 0.50 | 1-1/4 | 0.71 | 18.0 |
| (30) | (246) | (146) | (157) | (28) | (43) | (13) | | (18.0) | (8.2) |
| 1-1/2 | 9.69 | 5.75 | 6.18 | 1.13 | 1.92 | 0.50 | 1-1/2 | 0.72 | 18.0 |
| (40) | (246) | (146) | (157) | (29) | (49) | (13) | | (18.3) | (8.2) |
| 2 | 11.93 | 8.27 | 6.18 | 1.48 | 2.41 | 0.62 | 2 | 0.76 | 26.2 |
| (50) | (303) | (210) | (157) | (38) | (61) | (16) | | (19.3) | (11.9) |

Note: Pipe threads, general purpose, inch: B1.20.1. Socket welding and thread: B16.11.

Note: Dimensions: Inches/Millimeters – Weights: Pounds/Kilograms. Dimensions are subject to change without notice.

II. REGULAR PORT GLOBES – SOCKET WELD SIZES: 1/2" TO 2" (15MM TO 50MM) • CLASSES: 800 AND 1500

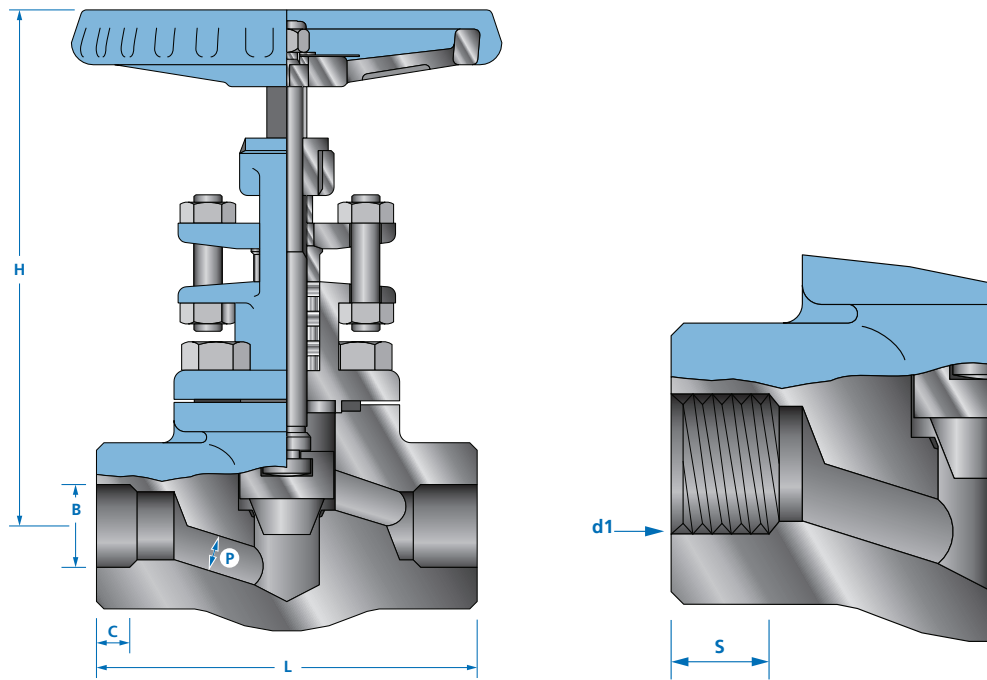
Design and Manufacturing Standards

Valve Design: API 602 and B16.34

Pipe Threads, General Purpose, Inch: ASME B1.20.1

Socket Welding and Threaded: ASME B16.11

Tested in Accordance With: API 598



| Class 800 | | | | | | | | | |
|---------------------|----------|-------|-------|--------|------|------|----------|---------|-----------------------|
| Size In. (DN) | H | L | W | P | End | | | | Weight Lbs (Kg) |
| | | | | | B | C | d1 (NPT) | S | |
| 1/2 | 5.67 | 2.99 | 3.35 | 0.37 | 0.86 | 0.38 | 1/2 | 0.54 | 3.3 |
| (15) | (144.0) | (76) | (85) | (9.40) | (22) | (10) | | (13.7) | (1.5) |
| 3/4 | 6.06 | 3.62 | 3.82 | 0.50 | 1.07 | 0.50 | 3/4 | 0.54 | 4.8 |
| (20) | (153.9) | (92) | (97) | (12.7) | (27) | (13) | | (13.7) | (2.1) |
| 1 | 6.97 | 4.09 | 3.82 | 0.69 | 1.33 | 0.50 | 1 | 0.69 | 6.2 |
| (25) | (177.0) | (104) | (97) | (17.5) | (34) | (13) | | (17.52) | (2.8) |
| 1-1/4 | 8.86 | 5.51 | 5.39 | 1.16 | 1.68 | 0.50 | 1-1/4 | 0.71 | 12.3 |
| (30) | (225.00) | (140) | (137) | (29.5) | (43) | (13) | | (18.0) | (5.6) |

| Class 800 | | | | | | | | | |
|---------------|----------|-------|-------|--------|------|------|----------|--------|-----------------|
| Size In. (DN) | H | L | W | P | End | | | | Weight Lbs (Kg) |
| | | | | | B | C | d1 (NPT) | S | |
| 1-1/2 | 8.86 | 5.51 | 5.39 | 1.16 | 1.92 | 0.50 | 1-1/2 | 0.72 | 12.3 |
| (40) | (225.00) | (140) | (137) | (29.5) | (49) | (13) | | (18.3) | (5.6) |
| 2 | 10.00 | 5.75 | 6.18 | 1.38 | 2.41 | 0.62 | 2 | 0.76 | 18.7 |
| (50) | (254.0) | (146) | (157) | (35.1) | (61) | (16) | | (19.3) | (8.5) |

| Class 1500 | | | | | | | | | |
|---------------|-------|-------|-------|--------|------|------|-------|---------|-----------------|
| Size In. (DN) | H | L | W | P | End | | | | Weight Lbs (Kg) |
| | | | | | B | C | d1 | S | |
| 1/2 | 5.91 | 3.62 | 3.82 | 0.37 | 0.86 | 0.38 | 1/2 | 0.54 | 5.1 |
| (15) | (150) | (92) | (97) | (9.40) | (22) | (10) | | (13.7) | (2.3) |
| 3/4 | 7.05 | 4.09 | 3.82 | 0.50 | 1.07 | 0.50 | 3/4 | 0.54 | 7.0 |
| (20) | (179) | (104) | (97) | (12.7) | (27) | (13) | | (13.7) | (3.2) |
| 1 | 9.09 | 5.51 | 5.39 | 0.63 | 1.33 | 0.50 | 1 | 0.69 | 13.4 |
| (25) | (231) | (140) | (137) | (16.0) | (34) | (13) | | (17.52) | (6.1) |
| 1-1/4 | 10.16 | 5.75 | 6.18 | 1.06 | 1.68 | 0.50 | 1-1/4 | 0.71 | 23.1 |
| (30) | (258) | (146) | (157) | (26.9) | (43) | (13) | | (18.0) | (10.5) |
| 1-1/2 | 10.16 | 5.75 | 6.18 | 1.06 | 1.92 | 0.50 | 1-1/2 | 0.72 | 23.1 |
| (40) | (258) | (146) | (157) | (26.9) | (49) | (13) | | (18.3) | (10.5) |
| 2 | 11.85 | 8.27 | 6.18 | 1.38 | 2.41 | 0.62 | 2 | 0.76 | 28.6 |
| (50) | (301) | (210) | (157) | (35.1) | (61) | (16) | | (19.3) | (13.0) |

Note: Pipe threads, general purpose, inch: B1.20.1. Socket welding and thread: B16.11.

Note: Dimensions: Inches/Millimeters – Weights: Pounds/Kilograms. Dimensions are subject to change without notice.

III. SWING REGULAR PORT CHECKS – SOCKET WELD AND THREADED SIZES: 1/2" TO 2" (15MM TO 50MM) • CLASSES: 800 AND 1500

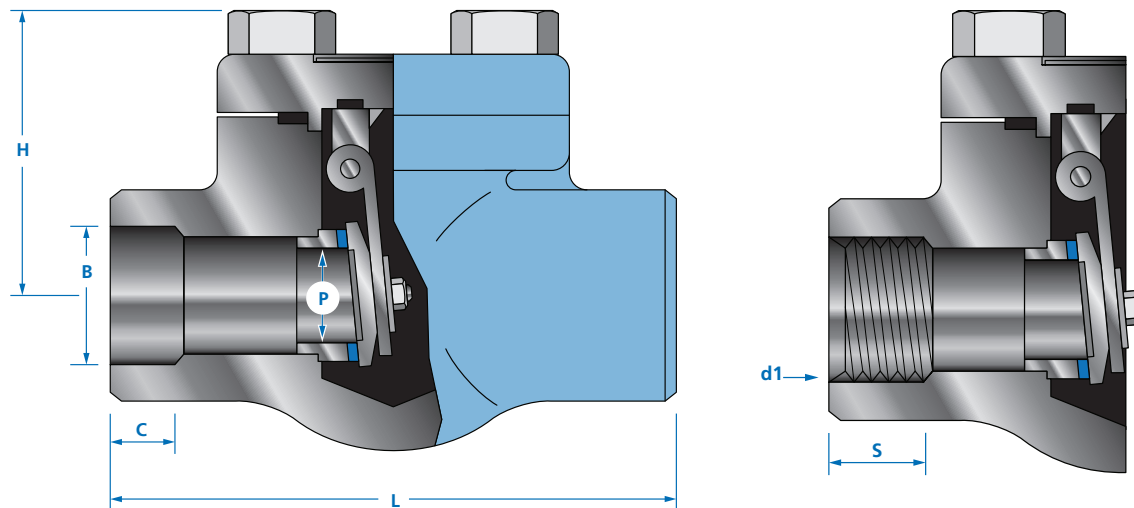
Design and Manufacturing Standards

Valve Design: API 602 and B16.34

Pipe Threads, General Purpose, Inch: ASME B1.20.1

Socket Welding and Threaded: ASME B16.11

Tested in Accordance With: API 598



| Class 800 | | | | | | | | |
|---------------------|-------|-------|------|------|------|----------|------|-----------------------|
| Size In. (DN) | H | L | P | End | | | | Weight Lbs (Kg) |
| | | | | B | C | d1 (NPT) | S | |
| 1/2 | 1.81 | 2.99 | 0.36 | 0.86 | 0.38 | 1/2 | 0.54 | 2.2 |
| (15) | (46) | (76) | (10) | (22) | (10) | | (14) | (1.0) |
| 3/4 | 2.20 | 3.62 | 0.50 | 1.07 | 0.50 | 3/4 | 0.54 | 3.3 |
| (20) | (56) | (92) | (13) | (27) | (13) | | (14) | (1.5) |
| 1 | 2.56 | 4.09 | 0.71 | 1.33 | 0.50 | 1 | 0.69 | 4.4 |
| (25) | (65) | (104) | (18) | (34) | (13) | | (18) | (2.0) |
| 1-1/4 | 2.95 | 4.53 | 1.13 | 1.68 | 0.50 | 1-1/4 | 0.71 | 9.0 |
| (30) | (75) | (115) | (29) | (43) | (13) | | (18) | (4.1) |
| 1-1/2 | 2.95 | 4.53 | 1.13 | 1.92 | 0.50 | 1-1/2 | 0.72 | 9.0 |
| (40) | (75) | (115) | (29) | (49) | (13) | | (18) | (4.1) |
| 2 | 3.94 | 5.75 | 1.46 | 2.41 | 0.62 | 2 | 0.76 | 14.1 |
| (50) | (100) | (146) | (37) | (61) | (16) | | (19) | (6.4) |

| Class 1500 | | | | | | | | |
|---------------|-------|-------|------|------|------|-------|------|-----------------|
| Size In. (DN) | H | L | P | End | | | | Weight Lbs (Kg) |
| | | | | B | C | d1 | S | |
| 1/2 | 2.20 | 3.62 | 0.38 | 0.86 | 0.38 | 1/2 | 0.54 | 3.3 |
| (15) | (56) | (92) | (10) | (22) | (10) | | (14) | (1.5) |
| 3/4 | 2.56 | 4.09 | 0.50 | 1.07 | 0.50 | 3/4 | 0.54 | 4.4 |
| (20) | (65) | (104) | (13) | (27) | (13) | | (14) | (2.0) |
| 1 | 2.95 | 4.53 | 0.71 | 1.33 | 0.50 | 1 | 0.69 | 9.0 |
| (25) | (75) | (115) | (18) | (34) | (13) | | (18) | (4.1) |
| 1-1/4 | 3.94 | 5.75 | 1.13 | 1.68 | 0.50 | 1-1/4 | 0.71 | 14.1 |
| (30) | (100) | (146) | (29) | (43) | (13) | | (18) | (6.4) |
| 1-1/2 | 3.94 | 5.75 | 1.13 | 1.92 | 0.50 | 1-1/2 | 0.72 | 14.1 |
| (40) | (100) | (146) | (29) | (49) | (13) | | (18) | (6.4) |
| 2 | 4.92 | 8.27 | 1.46 | 2.41 | 0.62 | 2 | 0.76 | 21.6 |
| (50) | (125) | (210) | (37) | (61) | (16) | | (19) | (9.8) |

Note: Pipe threads, general purpose, inch: B1.20.1. Socket welding and thread: B16.11.

Note: Dimensions: Inches/Millimeters – Weights: Pounds/Kilograms. Dimensions are subject to change without notice.

IV. LIFT REGULAR PORT CHECKS – SOCKET WELD AND THREADED SIZES: 1/2" TO 2" (15MM TO 50MM) • CLASS: 800 AND 1500

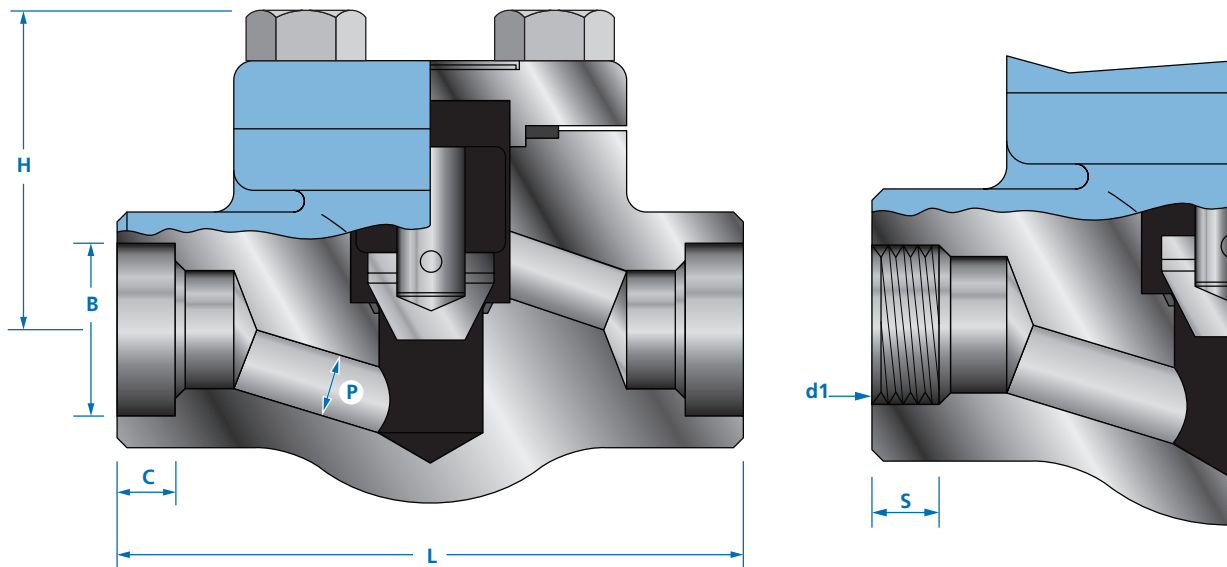
Design and Manufacturing Standards

Valve Design: API 602 and B16.34

Pipe Threads, General Purpose, Inch: ASME B1.20.1

Socket Welding and Threaded: ASME B16.11

Tested in Accordance With: API 598



| Class 800 | | | | | | | | |
|---------------------|-------|-------|--------|------|------|----------|------|-----------------------|
| Size In. (DN) | H | L | P | End | | | | Weight Lbs (Kg) |
| | | | | B | C | d1 (NPT) | S | |
| 1/2 | 1.81 | 2.99 | 0.38 | 0.86 | 0.38 | 1/2 | 0.54 | 2.2 |
| (15) | (46) | (76) | (10) | (22) | (10) | | (14) | (1.0) |
| 3/4 | 2.20 | 3.62 | 0.50 | 1.07 | 0.50 | 3/4 | 0.54 | 3.3 |
| (20) | (56) | (92) | (13) | (27) | (13) | | (14) | (1.5) |
| 1 | 2.56 | 4.09 | 0.69 | 1.33 | 0.50 | 1 | 0.69 | 4.4 |
| (25) | (65) | (104) | (17.5) | (34) | (13) | | (18) | (2.0) |
| 1-1/4 | 2.95 | 5.51 | 1.16 | 1.68 | 0.50 | 1-1/4 | 0.71 | 9.0 |
| (30) | (75) | (140) | (29.5) | (43) | (13) | | (18) | (4.1) |
| 1-1/2 | 2.95 | 5.51 | 1.16 | 1.92 | 0.50 | 1-1/2 | 0.72 | 9.0 |
| (40) | (75) | (140) | (29.5) | (49) | (13) | | (18) | (4.1) |
| 2 | 3.94 | 5.75 | 1.38 | 2.41 | 0.62 | 2 | 0.76 | 14.1 |
| (50) | (100) | (146) | (35.1) | (61) | (16) | | (19) | (6.4) |

| Class 1500 | | | | | | | | |
|---------------------|-------|-------|--------|------|------|-------|------|-----------------------|
| Size In. (DN) | H | L | P | End | | | | Weight Lbs (Kg) |
| | | | | B | C | d1 | S | |
| 1/2 | 2.20 | 3.62 | 0.37 | 0.86 | 0.38 | 1/2 | 0.54 | 3.3 |
| (15) | (56) | (92) | (9.40) | (22) | (10) | | (14) | (1.5) |
| 3/4 | 2.56 | 4.09 | 0.50 | 1.07 | 0.50 | 3/4 | 0.54 | 4.4 |
| (20) | (65) | (104) | (12.7) | (27) | (13) | | (14) | (2.0) |
| 1 | 2.95 | 5.51 | 0.63 | 1.33 | 0.50 | 1 | 0.69 | 9.0 |
| (25) | (75) | (140) | (16.0) | (34) | (13) | | (18) | (4.1) |
| 1-1/4 | 3.94 | 5.75 | 1.06 | 1.68 | 0.50 | 1-1/4 | 0.71 | 14.1 |
| (30) | (100) | (146) | (26.9) | (43) | (13) | | (18) | (6.4) |
| 1-1/2 | 3.94 | 5.75 | 1.06 | 1.92 | 0.50 | 1-1/2 | 0.72 | 14.1 |
| (40) | (100) | (146) | (26.9) | (49) | (13) | | (18) | (6.4) |
| 2 | 4.92 | 8.27 | 1.38 | 2.41 | 0.62 | 2 | 0.76 | 21.6 |
| (50) | (125) | (210) | (35.1) | (61) | (16) | | (19) | (9.8) |

Note: Pipe threads, general purpose, inch: B1.20.1. Socket welding and thread: B16.11.

Note: Dimensions: Inches/Millimeters - Weights: Pounds/Kilograms. Dimensions are subject to change without notice.

INSIDE DIAMETER DIMENSIONS

| Size NPS (DN) | Inside Diameter Dimensions | | | | | |
|---------------------|----------------------------|---------|---------|---------|---------|---------|
| | Full Bore | | | | | |
| | 150 | 300 | 600 | 900 | 1500 | 2500 |
| 1/2 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.44 |
| (15) | (12.7) | (12.7) | (12.7) | (12.7) | (12.7) | (11.2) |
| 3/4 | 0.75 | 0.75 | 0.75 | 0.69 | 0.69 | 0.56 |
| (20) | (19.1) | (19.1) | (19.1) | (17.5) | (17.5) | (14.2) |
| 1 | 1.00 | 1.00 | 1.00 | 0.87 | 0.87 | 0.75 |
| (25) | (25.4) | (25.4) | (25.4) | (22.1) | (22.1) | (19.1) |
| 1-1/4 | 1.25 | 1.25 | 1.25 | 1.12 | 1.12 | 1.00 |
| (32) | (31.8) | (31.8) | (31.8) | (28.4) | (28.4) | (25.4) |
| 1-1/2 | 1.50 | 1.50 | 1.50 | 1.37 | 1.37 | 1.12 |
| (40) | (38.1) | (38.1) | (38.1) | (34.8) | (34.8) | (28.4) |
| 2 | 2.00 | 2.00 | 2.00 | 1.87 | 1.87 | 1.50 |
| (50) | (50.8) | (50.8) | (50.8) | (47.5) | (47.5) | (38.1) |
| 2-1/2 | 2.50 | 2.50 | 2.50 | 2.25 | 2.25 | 1.87 |
| (65) | (63.5) | (63.5) | (63.5) | (57.2) | (57.2) | (47.5) |
| 3 | 3.00 | 3.00 | 3.00 | 2.87 | 2.75 | 2.25 |
| (80) | (76.2) | (76.2) | (76.2) | (72.9) | (69.9) | (57.2) |
| 4 | 4.00 | 4.00 | 4.00 | 3.87 | 3.62 | 2.87 |
| (100) | (101.6) | (101.6) | (101.6) | (68.3) | (91.9) | (72.9) |
| 5 | 5.00 | 5.00 | 5.00 | 4.75 | 4.37 | 3.62 |
| (125) | (127.0) | (127.0) | (127.0) | (120.7) | (111.0) | (91.9) |
| 6 | 6.00 | 6.00 | 6.00 | 5.75 | 5.37 | 4.37 |
| (150) | (152.4) | (152.4) | (152.4) | (146.1) | (136.4) | (111.0) |
| 8 | 8.00 | 8.00 | 7.87 | 7.50 | 7.00 | 5.75 |
| (200) | (203.2) | (203.2) | (199.9) | (190.5) | (177.8) | (146.1) |
| 10 | 10.00 | 10.00 | 9.75 | 9.37 | 8.75 | 7.25 |
| (250) | (254.0) | (254.0) | (247.7) | (238.0) | (222.3) | (184.2) |
| 12 | 12.00 | 12.00 | 11.75 | 11.12 | 10.37 | 8.62 |
| (300) | (304.8) | (304.8) | (298.5) | (282.4) | (263.4) | (218.9) |
| 14 | 13.25 | 13.25 | 12.87 | 12.25 | 11.37 | 9.50 |
| (350) | (336.6) | (336.6) | (326.9) | (311.2) | (288.8) | (241.3) |
| 16 | 15.25 | 15.25 | 14.75 | 14.00 | 13.00 | 10.87 |
| (400) | (387.4) | (387.4) | (374.7) | (355.6) | (330.2) | (276.1) |

| Size NPS (DN) | Inside Diameter Dimensions | | | | | |
|---------------------|----------------------------|---------|---------|---------|---------|---------|
| | Full Bore | | | | | |
| | 150 | 300 | 600 | 900 | 1500 | 2500 |
| 18 | 17.25 | 17.00 | 16.50 | 15.75 | 14.62 | 12.25 |
| (450) | (438.2) | (431.8) | (419.1) | (400.1) | (371.3) | (311.2) |
| 20 | 19.25 | 19.00 | 18.25 | 17.50 | 16.37 | 13.50 |
| (500) | (489.0) | (482.6) | (463.6) | (444.5) | (415.8) | (342.9) |
| 22 | 21.25 | 21.00 | 20.12 | 19.25 | 18.00 | 14.87 |
| (550) | (539.8) | (533.4) | (511.0) | (489.0) | (457.2) | (377.7) |
| 24 | 23.25 | 23.00 | 22.00 | 21.00 | 19.62 | 16.25 |
| (600) | (590.6) | (584.2) | (558.8) | (533.4) | (498.3) | (412.8) |
| 26 | 25.25 | 25.00 | 23.75 | 22.75 | 21.25 | 17.62 |
| (650) | (641.4) | (635.0) | (603.3) | (577.9) | (539.8) | (447.5) |
| 28 | 27.25 | 27.00 | 25.50 | 24.50 | 23.00 | 19.00 |
| (700) | (692.2) | (685.8) | (647.7) | (622.3) | (584.2) | (482.6) |
| 30 | 29.25 | 29.00 | 27.37 | 26.25 | 24.62 | 20.37 |
| (750) | (743.0) | (736.6) | (695.2) | (666.8) | (625.3) | (517.4) |

PRESSURE TEMPERATURE RATINGS

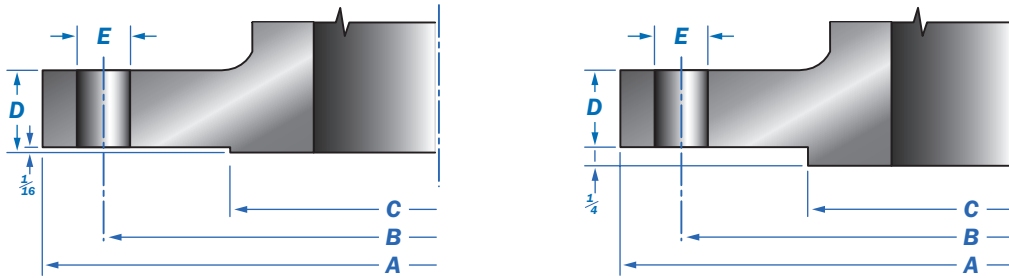
| Temp. °F | Valve Class Working Pressures by Class - PSI | | | | | |
|-------------|-------------------------------------------------|-----|------|------|------|------|
| | A351-CF8 • A351-CF3 • A182-F304 | | | | | |
| | A351-CF8M • A351-CF3M • A182-F316 | | | | | |
| | 150 | 300 | 600 | 900 | 1500 | 2500 |
| -20 to 100 | 275 | 720 | 1440 | 2160 | 3600 | 6000 |
| | 275 | 720 | 1440 | 2160 | 3600 | 6000 |
| 200 | 230 | 600 | 1200 | 1800 | 3000 | 5000 |
| | 240 | 620 | 1240 | 1660 | 3095 | 5160 |
| 300 | 205 | 540 | 1075 | 1615 | 2690 | 4480 |
| | 215 | 560 | 1120 | 1680 | 2795 | 4660 |
| 400 | 190 | 495 | 995 | 1490 | 2485 | 4140 |
| | 195 | 515 | 1030 | 1540 | 2570 | 4280 |
| 500 | 170 | 465 | 930 | 1395 | 2330 | 3880 |
| | 170 | 480 | 955 | 1435 | 2390 | 3980 |
| 600 | 140 | 440 | 885 | 1325 | 2210 | 3680 |
| | 140 | 450 | 905 | 1355 | 2255 | 3760 |
| 650 | 125 | 430 | 865 | 1295 | 2160 | 3600 |
| | 125 | 445 | 890 | 1330 | 2220 | 3700 |
| 700 | 110 | 420 | 845 | 1265 | 2110 | 3520 |
| | 110 | 430 | 865 | 1295 | 2160 | 3600 |
| 750 | 95 | 415 | 825 | 1240 | 2065 | 3440 |
| | 95 | 425 | 845 | 1270 | 2110 | 3520 |
| 800 | 80 | 405 | 810 | 1215 | 2030 | 3380 |
| | 80 | 415 | 830 | 1245 | 2075 | 3460 |
| 850 | 65 | 395 | 790 | 1190 | 1980 | 3300 |
| | 65 | 405 | 810 | 1215 | 2030 | 3320 |
| 900 | 50 | 390 | 780 | 1165 | 1945 | 3240 |
| | 50 | 395 | 790 | 1180 | 1970 | 3280 |
| 950 | 35 | 380 | 765 | 1145 | 1910 | 3180 |
| | 30 | 385 | 775 | 1160 | 1930 | 3220 |
| 1000 | 20 | 355 | 710 | 1065 | 1770 | 2950 |
| | 20 | 365 | 725 | 1090 | 1820 | 3030 |
| 1050 | 20 | 325 | 650 | 975 | 1630 | 2715 |
| | 20 | 360 | 720 | 1080 | 1800 | 3000 |
| 1100 | 20 | 255 | 515 | 770 | 1285 | 2145 |
| | 20 | 325 | 645 | 965 | 1610 | 2685 |
| 1150 | 20 | 205 | 410 | 615 | 1030 | 1715 |
| | 20 | 275 | 550 | 825 | 1370 | 2285 |
| 1200 | 20 | 165 | 330 | 495 | 825 | 1370 |
| | 20 | 205 | 410 | 620 | 1030 | 1715 |
| 1250 | 20 | 135 | 265 | 400 | 670 | 1115 |
| | 20 | 180 | 365 | 545 | 910 | 1515 |
| 1300 | 20 | 115 | 225 | 340 | 565 | 945 |
| | 20 | 140 | 275 | 410 | 685 | 1145 |

| Temp. °F | Valve Class Working Pressures by Class - PSI | | | | | |
|-----------------------------------------------------------|-------------------------------------------------|------|------|------|------|------|
| | A351-CF8 • A351-CF3 • A182-F304 | | | | | |
| | A351-CF8M • A351-CF3M • A182-F316 | | | | | |
| | 150 | 300 | 600 | 900 | 1500 | 2500 |
| 1350 | 20 | 95 | 185 | 280 | 465 | 770 |
| | 20 | 105 | 205 | 310 | 515 | 860 |
| 1400 | 20 | 75 | 150 | 225 | 380 | 630 |
| | 20 | 75 | 150 | 225 | 380 | 630 |
| 1450 | 20 | 60 | 115 | 175 | 290 | 485 |
| | 20 | 60 | 115 | 175 | 290 | 485 |
| 1500 | 15 | 40 | 85 | 125 | 205 | 345 |
| | 10 | 40 | 85 | 125 | 205 | 345 |
| Hydrostatic Test Pressures in Pounds Per Square Inch Gage | | | | | | |
| Shell | 425 | 1100 | 2175 | 3250 | 5400 | 9000 |
| Seat | 303 | 792 | 1584 | 2376 | 3960 | 6600 |

| Temp. °C | Valve Class Working Pressures by Class - bar | | | | | |
|-------------|-------------------------------------------------|------|------|-------|-------|-------|
| | A351-CF8 • A351-CF3 • A182-F304 | | | | | |
| | A351-CF8M • A351-CF3M • A182-F316 | | | | | |
| | 150 | 300 | 600 | 900 | 1500 | 2500 |
| -29 to 38 | 19.0 | 49.6 | 99.3 | 148.9 | 248.2 | 413.7 |
| | 19.0 | 49.6 | 99.3 | 148.9 | 248.2 | 413.7 |
| 100 | 15.7 | 40.9 | 81.7 | 122.6 | 204.3 | 340.4 |
| | 16.2 | 42.2 | 84.4 | 126.6 | 211.0 | 351.6 |
| 150 | 14.2 | 37.0 | 74.0 | 111.0 | 185.0 | 308.4 |
| | 14.8 | 38.5 | 77.0 | 115.5 | 192.5 | 320.8 |
| 200 | 13.2 | 34.5 | 69.0 | 103.4 | 172.4 | 287.3 |
| | 13.7 | 35.7 | 71.3 | 107.0 | 178.3 | 297.2 |
| 250 | 12.1 | 32.5 | 65.0 | 97.5 | 162.4 | 270.7 |
| | 12.1 | 33.4 | 66.8 | 100.1 | 166.9 | 278.1 |
| 300 | 10.2 | 30.9 | 61.8 | 92.7 | 154.6 | 257.6 |
| | 10.2 | 31.6 | 63.2 | 94.9 | 158.1 | 263.5 |
| 350 | 8.4 | 29.6 | 59.3 | 88.9 | 148.1 | 246.9 |
| | 8.4 | 30.3 | 60.7 | 91.0 | 151.6 | 252.7 |
| 375 | 7.4 | 29.0 | 58.1 | 87.1 | 145.2 | 241.9 |
| | 7.4 | 29.9 | 59.8 | 89.6 | 149.4 | 249.0 |
| 400 | 6.5 | 28.4 | 56.9 | 85.3 | 142.2 | 237.0 |
| | 6.5 | 29.4 | 58.9 | 88.3 | 147.2 | 245.3 |
| 425 | 5.5 | 28.0 | 56.0 | 84.0 | 140.0 | 233.3 |
| | 5.5 | 29.1 | 58.3 | 87.4 | 145.7 | 242.9 |
| 450 | 4.6 | 27.4 | 54.8 | 82.2 | 137.0 | 228.4 |
| | 4.6 | 28.8 | 57.7 | 86.5 | 144.2 | 240.4 |
| 500 | 2.8 | 26.5 | 53.0 | 79.5 | 132.4 | 220.7 |
| | 2.8 | 28.2 | 56.5 | 84.7 | 140.9 | 235.0 |

| Temp. °C | Valve Class Working Pressures by Class - PSI | | | | | |
|------------------------------------------------------------------|-------------------------------------------------|------|------|------|-------|-------|
| | A351-CF8 • A351-CF3 • A182-F304 | | | | | |
| | A351-CF8M • A351-CF3M • A182-F316 | | | | | |
| | 150 | 300 | 600 | 900 | 1500 | 2500 |
| 538 | 1.4 | 24.4 | 48.9 | 73.3 | 122.1 | 203.6 |
| | 1.4 | 25.2 | 50.0 | 75.2 | 125.5 | 208.9 |
| 550 | 1.4(a) | 23.6 | 47.1 | 70.7 | 117.8 | 196.3 |
| | 1.4(a) | 25.0 | 49.8 | 74.8 | 124.9 | 208.0 |
| 575 | 1.4(a) | 20.8 | 41.7 | 62.5 | 104.2 | 173.7 |
| | 1.4(a) | 24.0 | 47.9 | 71.8 | 119.7 | 199.5 |
| 600 | 1.4(a) | 16.9 | 33.8 | 50.6 | 84.4 | 140.7 |
| | 1.4(a) | 19.9 | 39.8 | 59.7 | 99.5 | 165.9 |
| 625 | 1.4(a) | 13.8 | 27.6 | 41.4 | 68.9 | 114.9 |
| | 1.4(a) | 15.8 | 31.6 | 47.4 | 79.1 | 131.8 |
| 650 | 1.4(a) | 11.3 | 22.5 | 33.8 | 56.3 | 93.8 |
| | 1.4(a) | 12.7 | 25.3 | 38.0 | 63.3 | 105.5 |
| 675 | 1.4(a) | 9.3 | 18.7 | 28.0 | 46.7 | 77.9 |
| | 1.4(a) | 10.3 | 20.6 | 31.0 | 51.6 | 86.0 |
| 700 | 1.4(a) | 8.0 | 16.1 | 24.1 | 40.1 | 66.9 |
| | 1.4(a) | 8.4 | 16.8 | 25.1 | 41.9 | 69.8 |
| 725 | 1.4(a) | 6.8 | 13.5 | 20.3 | 33.8 | 56.3 |
| | 1.4(a) | 7.0 | 14.0 | 21.0 | 34.9 | 58.2 |
| 750 | 1.4(a) | 5.8 | 11.6 | 17.3 | 28.9 | 48.1 |
| | 1.4(a) | 5.9 | 11.7 | 17.6 | 29.3 | 48.9 |
| 775 | 1.4(a) | 4.6 | 9.0 | 13.7 | 22.8 | 38.0 |
| | 1.4(a) | 4.6 | 9.0 | 13.7 | 22.8 | 38.0 |
| 816 | 1.0(a) | 2.8 | 5.9 | 8.6 | 14.1 | 23.8 |
| | 1.0(a) | 2.8 | 5.9 | 8.6 | 14.1 | 23.8 |
| Hydrostatic Test Pressures in Pounds Per Square Inch Gage | | | | | | |
| Shell | 425 | 1100 | 2175 | 3250 | 5400 | 9000 |
| Seat | 303 | 792 | 1584 | 2376 | 3960 | 6600 |

FLANGE DIMENSIONS – ASME B16.5



| Flange Dimensions | | | | | | | |
|-------------------|-------|-------|-------|-------------|------|------|-------|
| Class 150 | | | | | | | |
| Size NPS DN | A | B | C | D | E | Bolt | |
| | | | | | | Num. | Diam. |
| 1/2 | 3.50 | 2.38 | 1.38 | 0.44 | 0.62 | 4 | 0.50 |
| 15 | 89 | 61 | 35 | 11 | 16 | | 13 |
| 3/4 | 3.88 | 2.75 | 1.69 | 0.50 (0.44) | 0.62 | 4 | 0.50 |
| 20 | 98 | 70 | 43 | 13 (11) | 16 | | 13 |
| 1 | 4.25 | 3.12 | 2.00 | 0.56 (0.44) | 0.62 | 4 | 0.50 |
| 25 | 108 | 79 | 51 | 14 (11) | 16 | | 13 |
| 1-1/2 | 5.00 | 3.88 | 2.88 | 0.69 (0.56) | 0.62 | 4 | 0.50 |
| 40 | 127 | 99 | 73 | 18 (14) | 16 | | 13 |
| 2 | 6.00 | 4.75 | 3.62 | 0.75 (0.62) | 0.75 | 4 | 0.63 |
| 50 | 152 | 121 | 92 | 19 (16) | 19 | | 16 |
| 2-1/2 | 7.00 | 5.50 | 4.12 | 0.88 (0.69) | 0.75 | 4 | 0.63 |
| 65 | 178 | 140 | 105 | 22 (18) | 19 | | 16 |
| 3 | 7.50 | 6.00 | 5.00 | 0.94 (0.75) | 0.75 | 4 | 0.63 |
| 80 | 191 | 152 | 127 | 24 (19) | 19 | | 16 |
| 4 | 9.00 | 7.50 | 6.19 | 0.94 | 0.75 | 8 | 0.63 |
| 100 | 229 | 191 | 157 | 24 | 19 | | 16 |
| 5 | 10.00 | 8.50 | 7.31 | 0.94 | 0.88 | 8 | 0.75 |
| 125 | 254 | 216 | 186 | 24 | 22 | | 19 |
| 6 | 11.00 | 9.50 | 8.50 | 1.00 | 0.88 | 8 | 0.75 |
| 150 | 279 | 241 | 216 | 25 | 22 | | 19 |
| 8 | 13.50 | 11.75 | 10.62 | 1.12 | 0.88 | 8 | 0.75 |
| 200 | 343 | 299 | 270 | 28 | 22 | | 19 |
| 10 | 16.00 | 14.25 | 12.75 | 1.19 | 1.00 | 12 | 0.88 |
| 250 | 406 | 362 | 324 | 30 | 25 | | 22 |

| Flange Dimensions | | | | | | | |
|-------------------|-------|-------|-------|------|------|------|-------|
| Class 150 | | | | | | | |
| Size NPS DN | A | B | C | D | E | Bolt | |
| | | | | | | Num. | Diam. |
| 12 | 19.00 | 17.00 | 15.00 | 1.25 | 1.00 | 12 | 0.88 |
| 300 | 183 | 432 | 381 | 32 | 25 | | 22 |
| 14 | 21.00 | 18.75 | 16.25 | 1.38 | 1.12 | 12 | 1.00 |
| 350 | 553 | 476 | 413 | 35 | 28 | | 25 |
| 16 | 23.50 | 21.25 | 18.50 | 1.44 | 1.12 | 16 | 1.00 |
| 400 | 597 | 540 | 470 | 37 | 28 | | 25 |
| 18 | 25.00 | 22.75 | 21.00 | 1.56 | 1.25 | 16 | 1.13 |
| 450 | 635 | 578 | 533 | 40 | 32 | | 29 |
| 20 | 27.50 | 25.00 | 23.00 | 1.69 | 1.25 | 20 | 1.13 |
| 500 | 699 | 635 | 584 | 43 | 32 | | 29 |
| 24 | 32.00 | 29.50 | 27.25 | 1.88 | 1.38 | 20 | 1.25 |
| 600 | 813 | 749 | 692 | 48 | 35 | | 32 |

| Flange Dimensions | | | | | | | |
|-------------------|------|------|------|------|------|------|-------|
| Class 300 | | | | | | | |
| Size NPS DN | A | B | C | D | E | Bolt | |
| | | | | | | Num. | Diam. |
| 1/2 | 3.75 | 2.62 | 1.38 | 0.56 | 0.62 | 4 | 0.50 |
| 15 | 95 | 67 | 35 | 14 | 16 | | 13 |
| 3/4 | 4.62 | 3.25 | 1.69 | 0.62 | 0.75 | 4 | 0.63 |
| 20 | 117 | 83 | 43 | 16 | 19 | | 16 |
| 1 | 4.88 | 3.50 | 2.00 | 0.69 | 0.75 | 4 | 0.63 |
| 25 | 124 | 89 | 51 | 18 | 19 | | 16 |
| 1-1/2 | 6.12 | 4.50 | 2.88 | 0.81 | 0.88 | 4 | 0.75 |
| 40 | 155 | 114 | 73 | 21 | 22 | | 19 |
| 2 | 6.50 | 5.00 | 3.62 | 0.88 | 0.75 | 8 | 0.63 |
| 50 | 165 | 127 | 92 | 22 | 19 | | 16 |
| 2-1/2 | 7.50 | 5.88 | 4.12 | 1.00 | 0.88 | 8 | 0.75 |
| 65 | 191 | 149 | 105 | 25 | 22 | | 19 |
| 3 | 8.25 | 6.62 | 4.00 | 1.12 | 0.88 | 8 | 0.75 |
| 80 | 210 | 168 | 127 | 29 | 22 | | 19 |

| Flange Dimensions | | | | | | | |
|-------------------|-------|-------|-------|------|------|------|-------|
| Class 300 | | | | | | | |
| Size NPS DN | A | B | C | D | E | Bolt | |
| | | | | | | Num. | Diam. |
| 4 | 10.00 | 7.88 | 6.19 | 1.25 | 0.88 | 8 | 0.75 |
| 100 | 254 | 200 | 157 | 32 | 22 | | 19 |
| 5 | 11.00 | 9.25 | 7.31 | 1.38 | 0.88 | 8 | 0.75 |
| 125 | 279 | 235 | 186 | 35 | 22 | | 19 |
| 6 | 12.50 | 10.62 | 8.50 | 1.44 | 0.88 | 12 | 0.75 |
| 150 | 318 | 270 | 216 | 37 | 22 | | 19 |
| 8 | 15.00 | 13.00 | 10.62 | 1.62 | 1.00 | 12 | 0.88 |
| 200 | 381 | 330 | 270 | 41 | 25 | | 22 |
| 10 | 17.50 | 15.25 | 12.75 | 1.88 | 1.12 | 16 | 1.00 |
| 250 | 445 | 387 | 324 | 48 | 28 | | 25 |
| 12 | 20.50 | 17.75 | 15.00 | 2.00 | 1.25 | 16 | 1.13 |
| 300 | 521 | 451 | 381 | 51 | 32 | | 29 |
| 14 | 23.00 | 20.25 | 16.25 | 2.12 | 1.25 | 20 | 1.13 |
| 350 | 584 | 514 | 413 | 54 | 32 | | 29 |
| 16 | 25.50 | 22.50 | 18.50 | 2.25 | 1.38 | 20 | 1.25 |
| 400 | 648 | 572 | 470 | 57 | 35 | | 32 |
| 18 | 28.00 | 24.75 | 21.00 | 2.38 | 1.38 | 24 | 1.25 |
| 450 | 711 | 629 | 533 | 61 | 35 | | 32 |
| 20 | 30.50 | 27.00 | 23.00 | 2.50 | 1.38 | 24 | 1.25 |
| 500 | 775 | 686 | 584 | 64 | 35 | | 32 |
| 24 | 36.00 | 32.00 | 27.25 | 2.75 | 1.62 | 24 | 1.50 |
| 600 | 914 | 813 | 692 | 70 | 41 | | 38 |

| Flange Dimensions | | | | | | | |
|-------------------|------|------|------|------|------|------|-------|
| Class 600 | | | | | | | |
| Size NPS DN | A | B | C | D | E | Bolt | |
| | | | | | | Num. | Diam. |
| 1/2 | 3.75 | 2.62 | 1.75 | 0.56 | 0.62 | 4 | 0.50 |
| 15 | 95 | 67 | 45 | 14 | 16 | | 13 |
| 3/4 | 4.62 | 3.25 | 2.06 | 0.62 | 0.75 | 4 | 0.63 |
| 20 | 117 | 83 | 52 | 16 | 19 | | 16 |

| Flange Dimensions | | | | | | | |
|-------------------|-------|-------|-------|------|------|------|-------|
| Class 600 | | | | | | | |
| Size NPS DN | A | B | C | D | E | Bolt | |
| | | | | | | Num. | Diam. |
| 1 | 4.88 | 3.50 | 2.25 | 0.69 | 0.75 | 4 | 0.63 |
| 25 | 124 | 89 | 57 | 18 | 19 | | 16 |
| 1-1/2 | 6.12 | 4.50 | 2.88 | 0.88 | 0.88 | 4 | 0.75 |
| 40 | 115 | 114 | 73 | 22 | 22 | | 19 |
| 2 | 6.50 | 5.00 | 3.62 | 1.00 | 0.75 | 8 | 0.63 |
| 50 | 165 | 127 | 92 | 25 | 19 | | 16 |
| 2-1/2 | 7.50 | 5.88 | 4.12 | 1.12 | 0.88 | 8 | 0.75 |
| 65 | 191 | 149 | 105 | 29 | 22 | | 19 |
| 3 | 8.25 | 6.62 | 5.00 | 1.25 | 0.88 | 8 | 0.75 |
| 80 | 210 | 168 | 127 | 32 | 22 | | 19 |
| 4 | 10.75 | 8.50 | 6.19 | 1.50 | 1.00 | 8 | 0.88 |
| 100 | 273 | 216 | 157 | 38 | 25 | | 22 |
| 5 | 13.00 | 10.50 | 7.31 | 1.75 | 1.12 | 8 | 1.00 |
| 125 | 330 | 267 | 186 | 45 | 28 | | 25 |
| 6 | 14.00 | 11.50 | 8.50 | 1.88 | 1.12 | 12 | 1.00 |
| 150 | 356 | 292 | 216 | 48 | 28 | | 25 |
| 8 | 16.50 | 13.75 | 10.62 | 2.19 | 1.25 | 12 | 1.13 |
| 200 | 419 | 349 | 270 | 56 | 32 | | 29 |
| 10 | 20.00 | 17.00 | 12.75 | 2.50 | 1.38 | 16 | 1.25 |
| 250 | 508 | 432 | 324 | 64 | 35 | | 32 |
| 12 | 22.00 | 19.25 | 15.00 | 2.62 | 1.38 | 20 | 1.25 |
| 300 | 559 | 489 | 381 | 67 | 35 | | 32 |
| 14 | 23.75 | 20.75 | 16.25 | 2.75 | 1.50 | 20 | 1.38 |
| 350 | 603 | 527 | 413 | 70 | 38 | | 35 |
| 16 | 27.00 | 23.75 | 18.50 | 3.00 | 1.62 | 20 | 1.50 |
| 400 | 686 | 603 | 470 | 76 | 41 | | 38 |
| 18 | 29.25 | 25.75 | 21.00 | 3.25 | 1.75 | 20 | 1.63 |
| 450 | 743 | 654 | 533 | 83 | 45 | | 41 |
| 20 | 32.00 | 28.50 | 23.00 | 3.50 | 1.75 | 24 | 1.63 |
| 500 | 813 | 724 | 584 | 89 | 45 | | 41 |
| 24 | 37.00 | 33.00 | 27.25 | 4.00 | 2.00 | 24 | 1.88 |
| 600 | 940 | 838 | 692 | 102 | 51 | | 48 |

HOW TO ORDER CAMERON'S OIC CAST PRODUCTS

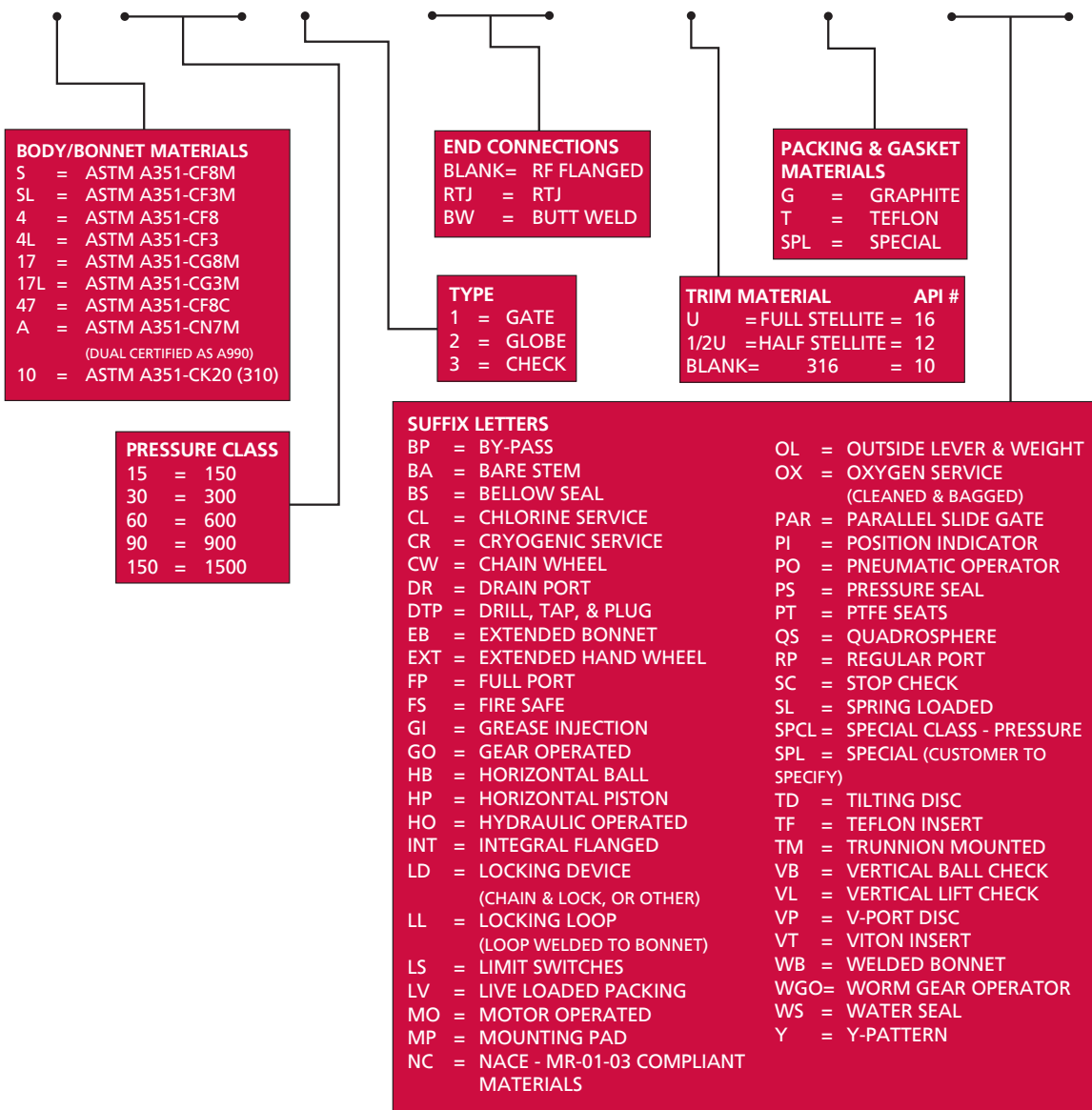
Figure Number

The figure number shown below identifies specific valve configuration details of Cameron's OIC valves such as valve type, pressure class, end connections, body/bonnet and trim materials, and special features.

Please specify end connections, body materials and trims not listed below.

When placing an order, please refer to the respective product section of the catalog for size availability. A detailed description must be included with any special orders.

S 151 - B W - U - G - * *



* For multiple modifications, continue adding letter designations with a hyphen between modifications.

Note: 800 Series valves are shown in separate forged stainless catalogue.

HOW TO ORDER CAMERON'S OIC FORGED PRODUCTS

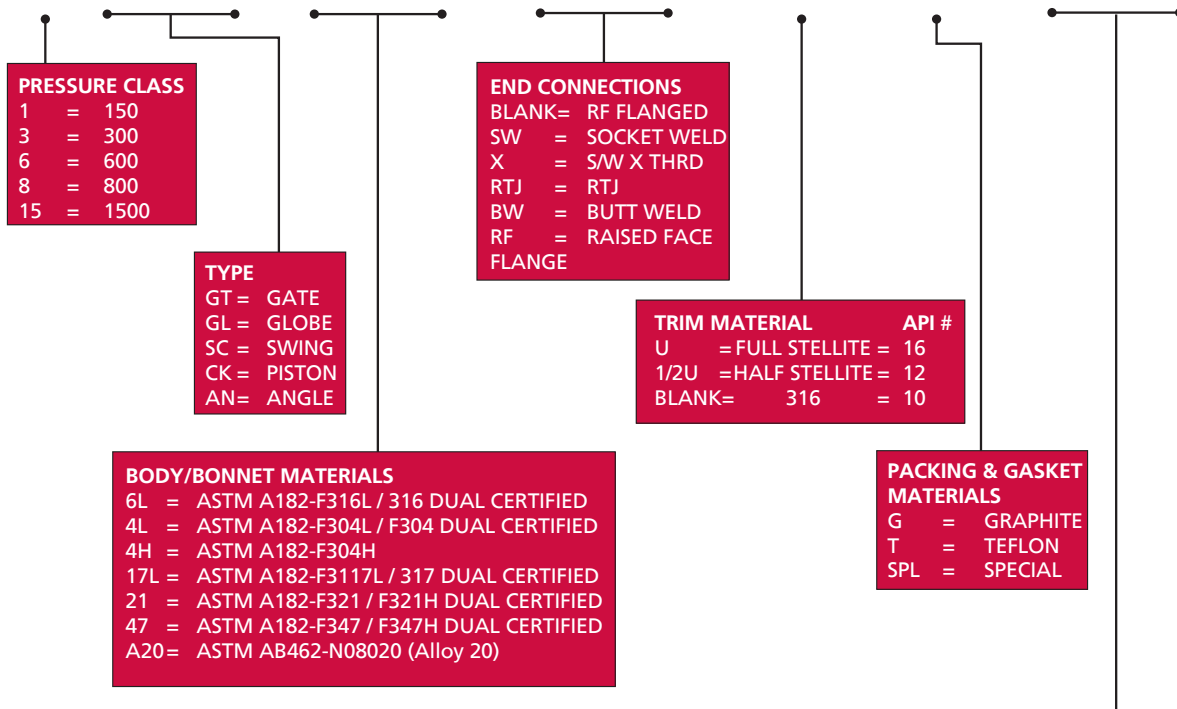
Figure Number

The figure number shown below identifies specific valve configuration details of Cameron's OIC valves such as valve type, pressure class, end connections, body/bonnet and trim materials, and special features.

Please specify end connections, body materials and trims not listed below.

When placing an order, please refer to the respective product section of the catalog for size availability. A detailed description must be included with any special orders.

8GT-6L-SW-U-G-**-**



| SUFFIX LETTERS | | |
|----------------|---|-----------------------------------------|
| BP | = | BY-PASS |
| BA | = | BARE STEM |
| BS | = | BELLOW SEAL |
| CL | = | CHLORINE SERVICE |
| CR | = | CRYOGENIC SERVICE |
| CW | = | CHAIN WHEEL |
| DR | = | DRAIN PORT |
| DTP | = | DRILL, TAP, & PLUG |
| EB | = | EXTENDED BONNET |
| EXT | = | EXTENDED HAND WHEEL |
| FP | = | FULL PORT |
| FS | = | FIRE SAFE |
| GI | = | GREASE INJECTION |
| GO | = | GEAR OPERATED |
| HB | = | HORIZONTAL BALL |
| HP | = | HORIZONTAL PISTON |
| HO | = | HYDRAULIC OPERATED |
| INT | = | INTEGRAL FLANGED |
| LD | = | LOCKING DEVICE (CHAIN & LOCK, OR OTHER) |
| LL | = | LOCKING LOOP (LOOP WELDED TO BONNET) |
| LS | = | LIMIT SWITCHES |
| LV | = | LIVE LOADED PACKING |
| MO | = | MOTOR OPERATED |
| MP | = | MOUNTING PAD |
| NC | = | NACE - MR-01-03 COMPLIANT MATERIALS |
| OL | = | OUTSIDE LEVER & WEIGHT |
| OX | = | OXYGEN SERVICE (CLEANED & BAGGED) |
| PAR | = | PARALLEL SLIDE GATE |
| PI | = | POSITION INDICATOR |
| PO | = | PNEUMATIC OPERATOR |
| PS | = | PRESSURE SEAL |
| PT | = | PTFE SEATS |
| QS | = | QUADROSPHERE |
| RP | = | REGULAR PORT |
| SC | = | STOP CHECK |
| SL | = | SPRING LOADED |
| SPCL | = | SPECIAL CLASS - PRESSURE |
| SPL | = | SPECIAL (CUSTOMER TO SPECIFY) |
| TD | = | TILTING DISC |
| TF | = | TEFLON INSERT |
| TM | = | TRUNNION MOUNTED |
| VB | = | VERTICAL BALL CHECK |
| VL | = | VERTICAL LIFT CHECK |
| VP | = | V-PORT DISC |
| VT | = | VITON INSERT |
| WB | = | WELDED BONNET |
| WGO | = | WORM GEAR OPERATOR |
| WS | = | WATER SEAL |
| Y | = | Y-PATTERN |

INDUSTRY STANDARDS TYPICALLY USED IN VALVE MANUFACTURING

(For Reference Only)

ISO 9001: 2000
RWTUV had approved NEWCO for design, manufacture, sales, & service of industrial valves under certificate registration number #05-1026

American Petroleum Institute (API)

API RP 574 (1998) - Inspection practices for piping system components
API 589 (1998) - Fire test for evaluation of valve stem packing
API RP 591 (2003) - Process valve qualification procedure
API 594 (2004) - Check valves-flanged, lug, wafer & buttwelding
API 597 (1981) - Steel venturi gate valves, flanged, buttwelding ends
API 598 (2004) - Valve inspection & testing
API 599 (2002) - Metal plug valves - flanged, welding ends
API 601 (1988) - Metallic gaskets for raised-face pipe flanges & flanged connections (double-jacketed corrugated & spiral wound)
API 600 (2001) - Bolted bonnet steel gate valves for petroleum & natural gas industries "ISO adoption from ISO 10434"
API 602 (2005) - Steel gate, globe, & check valves for sizes DN100 and smaller for the petroleum & natural gas industries
API 603 (2001) - Corrosion-resistant, bolted bonnet gate valves-flanged & buttweld ends
API 604 (1981) - Ductile iron gate valves, flanged ends
API 605 (1988) - Large-diameter carbon steel flanges (nominal pipe sizes 26" through 60", classes 75, 150, 300, 400, 600, & 900 (replaced by ANSI/ASME B16.47)
API 606 (1989) - Compact steel gate valves, extended body (included in API 602) fire test for soft-seated quarter-turn valves "ISO adoption from ISO 10497-5 2004"
API 607 (2005) - Fire test for soft-seated quarter-turn valves "ISO adoption from ISO 10497-5 2004"
API 608 (2002) - Metal ball valves, flanged, threaded, & welding ends
API 609 (2004) - Butterfly valves-double flanged, lug- & wafer-type
API RP 941 (2004) - Steel for hydrogen service at elevated temperatures & pressures in petroleum refineries & petrochemical plants
API RP 520 (2000), Part 1 - Sizing, selection & installation of pressure relieving devices in refineries
API RP 520 (2003), Part 2 - Sizing, selection & installation of pressure relieving devices in refineries devices in refineries
API Spec 6A (2005) - Specification for wellhead & christmas tree equipment
API Spec 6D (2005) - Specifications for pipeline valves
API Spec 14D (1994) - Specifications for wellhead surface safety valves & underwater safety valves for offshore service
API 5B (2004) - Threading, gauging thread inspection of coring, tubing, & line pipe threads
API 6AM (2003) - Material toughness
API 6FA (1999) - Fire test for valves
API 6FC (1999) - Fire test for valves with backseats
API 6FD (1995) - Specification for fire test for check valves
API Q1 (2003) - Specification for quality programs for the petroleum, petrochemical, & natural gas

American Society of Mechanical Engineers (ASME)

ASME Code (1997 addenda) - Boiler & pressure vessel code
ASME A13.1 (1996) - Scheme for the identification of piping systems
ASME B1.1 (2003) - Unified inch screw threads, UN, & UNR thread form
ASME B1.5 (1997) - ACME screw threads
ASME B1.7M (1984) - Nomenclature, definitions, & letter symbols for screw threads
ASME B1.8 (1988) - Stub ACME screw threads
ASME B1.12 (1987) - Class 5 interference - fit thread
ASME B1.20.1 (1983) - Pipe threads, general purpose, inch
ASME B1.20.3 (1976) - Dry-seal pipe threads, inch
ANSI/ASME B16.1 (1998) - Cast iron pipe flanges & flanged fittings
ANSI/ASME B16.5 (2003) - Pipe flanges & flanged fittings: NPS 1/2" through 24"
ASME B16.9 (2003) - Factory made wrought steel buttwelding fittings
ANSI/ASME B16.10 (2002) - Face-to-face & end-to-end dimensions of valves
ASME B16.11 (2001) - Forged fittings, socket welding & threaded
ASME B16.20 (1998) - Metallic gaskets for pipe flanges: ring joint spiral wound & jacketed
ASME B16.21 (2005) - Non-metallic flat gaskets for pipe flanges
ASME B16.25 (2003) - Butt-welding ends
ANSI/ASME B16.33 (2002) - Manually operated metallic gas valves for use in gas piping systems up to 125 PSI (sizes NPS 1/2" through 2")
ANSI/ASME B31.1 (2004) - Power piping
ANSI/ASME B31.3 (2004) - Process piping
ANSI/ASME B16.34 (2004) - Valves flanged, threaded & welding end
ANSI/ASME B16.36 (1996) - Orifice flanges
ANSI/ASME B16.38 (1985) - Large metallic valves for gas distribution (manually operated, NPS 2-1/2" through 12", 125 PSIG maximum)
ANSI/ASME B16.42 (1998) - Ductile iron pipe flanges & flanged fittings: classes 150 & 300
ANSI/ASME B16.47 (1996) - Large diameter steel flanges
ANSI B17.1 (1967, R' 89) - Keys & keyseats
ANSI B18.2.2 (1987) - Square & hex nuts
ASME B31.4 (2002) - Pipeline transportation systems for liquid hydrocarbons & other ammonia & alcohols
ANSI/ASME B31.8 (2003) - Gas transmission & distribution piping systems
ANSI/ASME B36.10 (2004) - Welded & seamless wrought steel pipe
ANSI/ASME B36.19 (2004) - Stainless steel pipe
ANSI FCI-2 (1991) - Control valve seat leakage

American Society Non-destructive Test (ASNT)

ASNT-TC-1A (1996) - Recommended practice no. SNT-TC-1A 1996

American Society for Testing and Materials (ASTM)

British Standards Institute (BS)

BS 1414 (1975, R' 91) - Gate, wedge & double disk valves: steel
BS 1868 (1975, R' 91) - Check valves: steel
BS 1873 (1975, R' 91) - Globe & check valves: steel
BS 2080 (1989) obsolete - Flanged & buttweld end steel valves
BS 5146 - (withdrawn) Replaced by BS 6755 p.1 steel valves testing (1986) & BS 6755 p.2 (1984)
BS 5152 (1974, R' 91) - Globe & check: cast iron
BS 5153 (1974, R' 91) - Check: cast iron
BS 5159 (1974, R' 91) - Ball: cast iron & carbon steel
BS 5160 (1974, R' 91) - Globe & check: steel
BS 5163 (1986, R' 91) - Gate, wedge & double disk: cast iron
BS 5351 (1986, R' 91) - Ball: steel
BS 5352 (1986, R' 91) - Globe & check: steel
BS 5755: Part 1 (1986, R' 91) - Specification for production pressure testing requirements
BS 5840 (1980, R' 91) - Valve mating details for actuator operation
BS 6364 (1984, R' 91) - Cryogenic
BS 6683 (1985, R' 91) - Guide: installation & use of valves
BS 6755: Part 2 (1987) - Specification for fire type-testing requirements
BS EN 19 (1992) - Marking of general purpose industrial valves

Canadian Standards Association

B51-97 - Boiler, pressure vessel, & pressure piping code
Z245.15-96 - Steel valves
CAN3-z299.4-85 (reaffirmed 1997) - Quality assurance program - Category 4
CAN3-z299.3-85 (reaffirmed 1997) - Quality assurance program - Category 3

International Organization for Standardization

ISO 5211/1 (2001) - Industrial valves- part-turn actuator attachments
ISO 5211/2 (2001) - Part-turn valve actuator attachment-flange & coupling performance characteristics
ISO 5211/3 (2001) - Part-turn valve actuator attachment-dimensions of driving components
ISO 5752 (1982) - Metal valves for use in flanged pipe systems face-to-face & center-to-face dimensions
ISO 9000 (2005) - Quality management systems and fundamentals & vocabulary
ISO 10012-1 (1992) - Quality assurance requirements for measuring equipment

Manufacturers Standardization Society

SP-6 (2001) - Standard finishes for contact faces of pipe flanges & connecting-end flanges of valves & fittings
SP-9 (r2005) - Spot facing for bronze, iron & steel flanges
SP-25 (1998) - Standard marking system for valves, fittings, flanges & unions
SP-42 (2004) - Class 150 corrosion resistant gate, globe, angle, & check valves with flanged & buttweld ends
SP-44 (2001) - Steel pipeline flanges
SP-45 (2003) - Bypass & drain connections
SP-51 (2003) - Class 150/w corrosion resistant cast flanges & flanged fittings
SP-53 (2002) - Quality standard for steel castings & forgings for valves, flanges, & fittings & other piping components: magnetic particle exam method
SP-54 (2002) - Quality standard for steel castings for valves, flanges, & fittings and other piping components: radiographic examination method
SP-55 (2001) - Quality standard for steel castings for valves, flanges other piping components-visual method for evaluation of surface irregularities
SP-60 (2004) - Connecting flange joint between tapping sleeves & tapping valves
SP-61 (2003) - Pressure testing of steel valves
SP-65 (2004) - High pressure chemical industry flanges & threaded stubs for use with lens gaskets
SP-67 (2000A) - Butterfly valves
SP-69 (2003) - ANSI/MSS edition pipe hangers & supports, selection & application
SP-70 (1998) - Cast iron gate valves, flanged & threaded ends
SP-71 (1997) - Gray iron swing check valves, flanged & threaded ends
SP-72 (1999) - Ball valves with flanged or butt-welding ends for general service
SP-79 (2004) - Socket-welding reducer inserts
SP-81 (2001) - Stainless steel, bonnetless, flanged knife gate valves
SP-82 (1992) - Valve pressure testing methods
SP-84 (1990) - Valves - socket welding & threaded ends
SP-85 (2002) - Cast iron globe & angle valves, flanged & threaded ends
SP-86 (2002) - Guidelines for metric data in standards for valves, flanges, fittings & actuators
SP-88 (r2001) - Diaphragm valves
SP-91 (1992) - Guidelines for manual operation of valves
SP-92 (1999) - MSS valve user guide
SP-93 (r2004) - Quality standard for steel castings & forgings for valves, flanges & fittings & other piping components- liquid penetrant exam method
SP-94 (r2004) - Quality standard for ferritic & martensitic steel castings for valves, flanges, & fittings and other piping components - ultrasonic exam method
SP-96 (r2005) - Guidelines on terminology for valves & fittings
SP-98 (2001) - Protective coatings for the interior of valves, hydrants, & fittings
SP-99 (r2005) - Instrument valves
SP-101 (r2001) - Part-turn valve actuator attachment-flange and driving component dimensions & performance characteristics
SP-102 (r2001) - Multi-turn valve actuator attachment: flange and driving component dimensions & performance characteristics
SP-110 (1996) - Ball valves threaded, socket-welding, solder joint, grooved, & flared ends
SP-117 (2002) - Bellows seals for globe & gate valves
SP-118 (2002) - Compact steel globe and check valves-flanged, flangeless, threaded & welding ends (chemical & petroleum refinery service)
SP-120 (2002) - Flexible graphite packing system for rising stem steel valves (design requirements)
SP-121 (R2002) - Qualification testing methods for stem packing for rising stem steel valves

National Association of Corrosion Engineers (NACE) MR0175 (2005)

- Sulfide stress cracking resistant metallic materials for oil field equipment
MR0103 (2005) - Materials resistant to sulfide stress cracking in corrosive petroleum refining environments

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