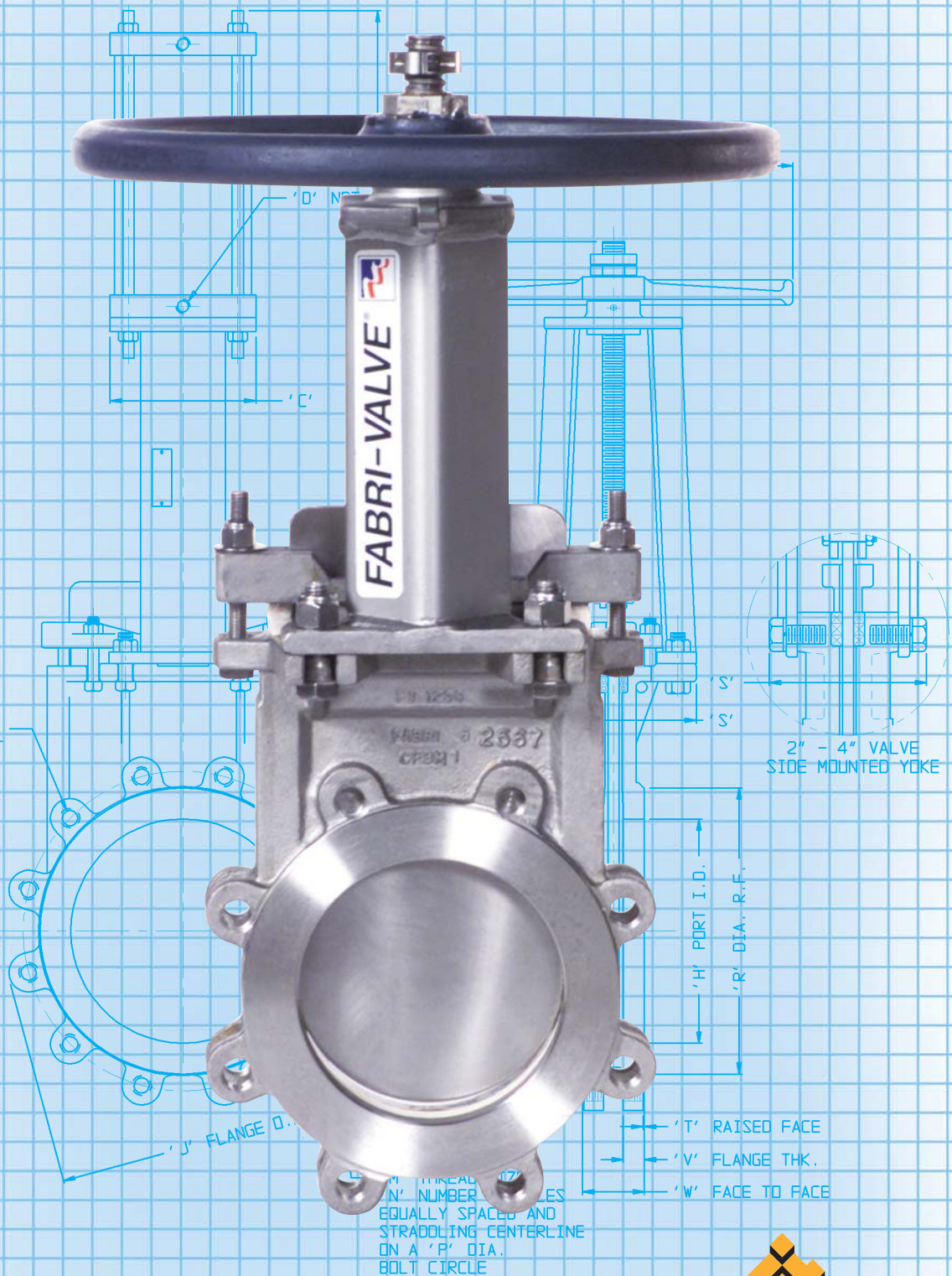
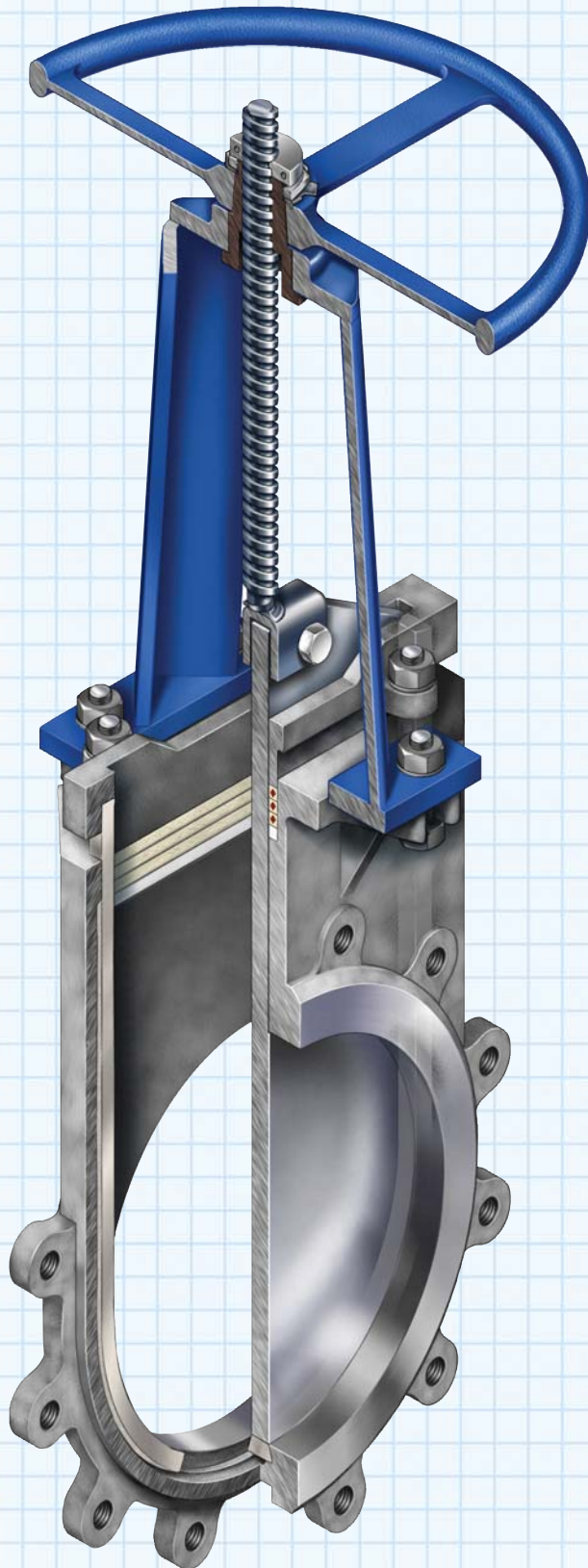


FABRI-VALVE® Bi-directional Knife Gate Valve



Engineered for life

Fabri-Valve® C67 Bi-directional Knife Gate Valve



Energized cored packing and packing supports are standard with 6" (DN 150) and larger Figure C67 valves

The Fabri-Valve Figure C67 features a unique, patented*, perimeter seal that provides bi-directional shutoff. The seal is retained in the valve body by its trapezoidal shape. A relief has been cast into the valve body behind the seal. Designed to overcome the problems experienced with existing perimeter seal designs, the relief greatly reduces seal compression set; the shape of the seal eliminates leakage due to seat rollover, eliminates seal pullout due to fluid velocity, and eliminates grooves that collect material and prevent the valve from properly closing. This unique valve design is available in stainless steel and carbon steel. Stainless steel bodied valves have white EPDM seals as standard. Carbon steel bodied valves have black EPDM seals as standard. Black Viton or white Viton, AFLAS, Hycar, Hypalon, Neoprene, HNBR, and other seal materials are available as options.

All Figure C67 handwheel actuated knife gate valves include a provision for a locking device.

Specifications

Size Range

2" – 36"

Pressure Rating

2" – 24" 150 psi (10.3 bar) CWP (cold working pressure)

30" 100 psi (6.9 bar)

36" 80 psi (5.5 bar)

Consult factory for higher pressure designs.

Temperature Rating

EPDM Seat -50°F (-45°C) to 280°F (138°C)

Viton Seat -30°F (-34°C) to 350°F (177°C)

Flange Drilling

ANSI 125/150 Drilling

Testing

Every Fabri-Valve Figure C67 valve is fully tested prior to shipment. Testing includes a body shell test, a seat test and a cycling test to insure proper functioning of moving parts. Additional testing is also available. Please let us know your requirements.

- Standard Shell test: Hydro test at 1.5 times the rated CWP (cold working pressure) – Zero allowable leakage
- Standard Resilient Seat test: Hydro test at 15 psi (1 bar) and rated CWP

*U.S. Patent #5, 154,397

Pressure/Temperature Ratings

The table below is the Maximum Pressure Temperature Ratings for the metallic components only. When checking pressure/temperature ratings, check the temperature rating and chemical compatibility of the packing material and the resilient seat material. In a majority of knife gate valve designs, the temperature limit or the chemical compatibility of the seat and/or packing material determines the practical pressure/temperature limitations.

| Figure C67 | | | | | | | |
|----------------------------------|-----|----------|-----------|----------|-----------|-----------|----------------|
| Pressure-Temperature Rating -psi | | | | | | | |
| Temp | | Cast 304 | Cast 304L | Cast 316 | Cast 316L | Cast 317L | Cast WCB A-216 |
| °F | °C | | | | | | |
| 150 | 66 | 150 | 150 | 150 | 150 | 150 | 150 |
| 200 | 93 | 142 | 142 | 150 | 150 | 135 | 150 |
| 250 | 121 | 135 | 135 | 142 | 142 | 128 | 150 |
| 300 | 149 | 129 | 129 | 134 | 134 | 121 | 150 |
| 350 | 177 | 123 | 123 | 128 | 128 | 116 | 150 |
| 400 | 204 | 118 | 118 | 123 | 123 | 112 | 150 |
| 450 | 232 | 114 | 114 | 118 | 118 | 108 | 150 |
| 500 | 260 | 111 | 111 | 114 | 114 | 105 | 150 |

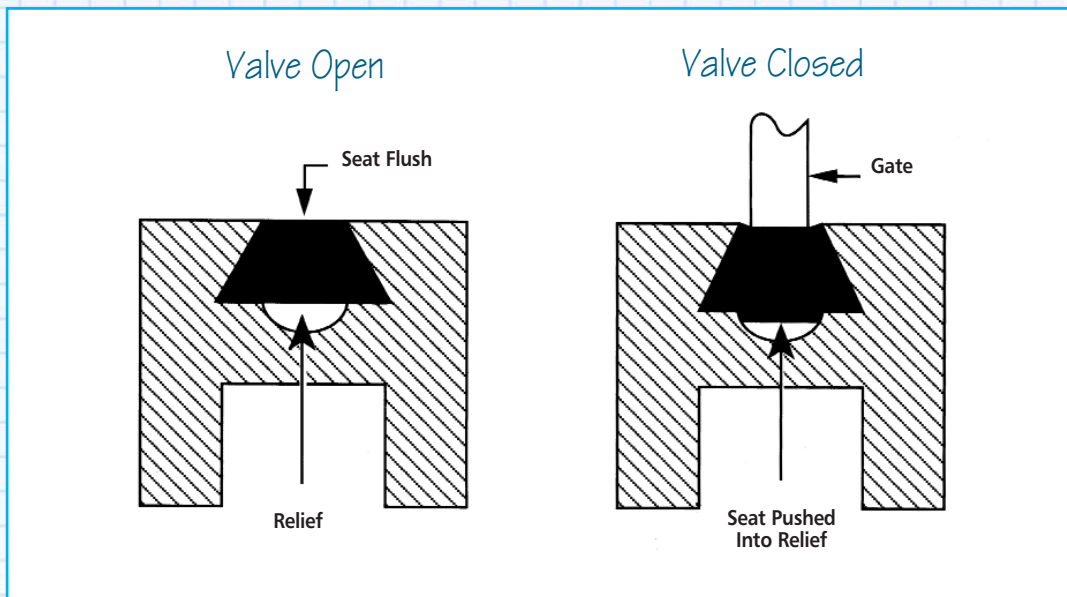
Shutoff Performance

Zero leakage. All sizes.

Flow Coefficients

The Cv values below represent U.S. gallons per minute 60°F water through a 100% open valve at a pressure drop of 1 psi. The metric equivalent, Kv, is the flow of water at +16°C through the valve in cubic meters per hour at a pressure drop of 1 kg/cm². To convert Cv to Kv, multiply the Cv by 0.8569.

| Figure C67 Knife Gate Valves | | | | | | | |
|------------------------------------|-----|---------------|-------------------|-------------------|-------------|------------------|-------------------|
| Cv Ratings, Port Diameter and Area | | | | | | | |
| | | Standard Port | | | With V-Seat | | |
| Valve Size In. | DN | Cv | Port I. D. Inches | Port Area Sq. In. | Cv | Port I.D. Inches | Port Area Sq. In. |
| 2 | 50 | 288 | 2.00 | 3.1 | 165 | 2.00 | 2.8 |
| 3 | 75 | 648 | 3.00 | 7.1 | 355 | 3.00 | 6.3 |
| 4 | 100 | 1,152 | 4.00 | 12.6 | 515 | 4.00 | 9.5 |
| 6 | 150 | 2,592 | 6.00 | 28.3 | 1,350 | 6.00 | 24.9 |
| 8 | 200 | 4,608 | 8.00 | 50.3 | 2,050 | 8.00 | 38.1 |
| 10 | 250 | 7,208 | 10.00 | 78.5 | 3,200 | 10.00 | 59.0 |
| 12 | 300 | 10,400 | 12.00 | 113.1 | 4,450 | 12.00 | 82.3 |
| 14 | 350 | 12,650 | 13.25 | 137.9 | 5,350 | 13.25 | 98.8 |
| 16 | 400 | 16,750 | 15.25 | 182.6 | 6,950 | 15.25 | 128.4 |
| 18 | 450 | 21,450 | 17.25 | 233.7 | 10,700 | 17.25 | 198.2 |
| 20 | 500 | 26,700 | 19.25 | 291.0 | 13,250 | 19.25 | 245.4 |
| 24 | 600 | 38,900 | 23.25 | 424.6 | 15,400 | 23.25 | 284.7 |
| 30 | 750 | 61,600 | 29.25 | 671.9 | | | |
| 36 | 900 | 89,460 | 35.25 | 975.9 | | | |
| Consult Factory | | | | | | | |



Fabri-Valve® C67 Bi-directional Knife Gate Valve

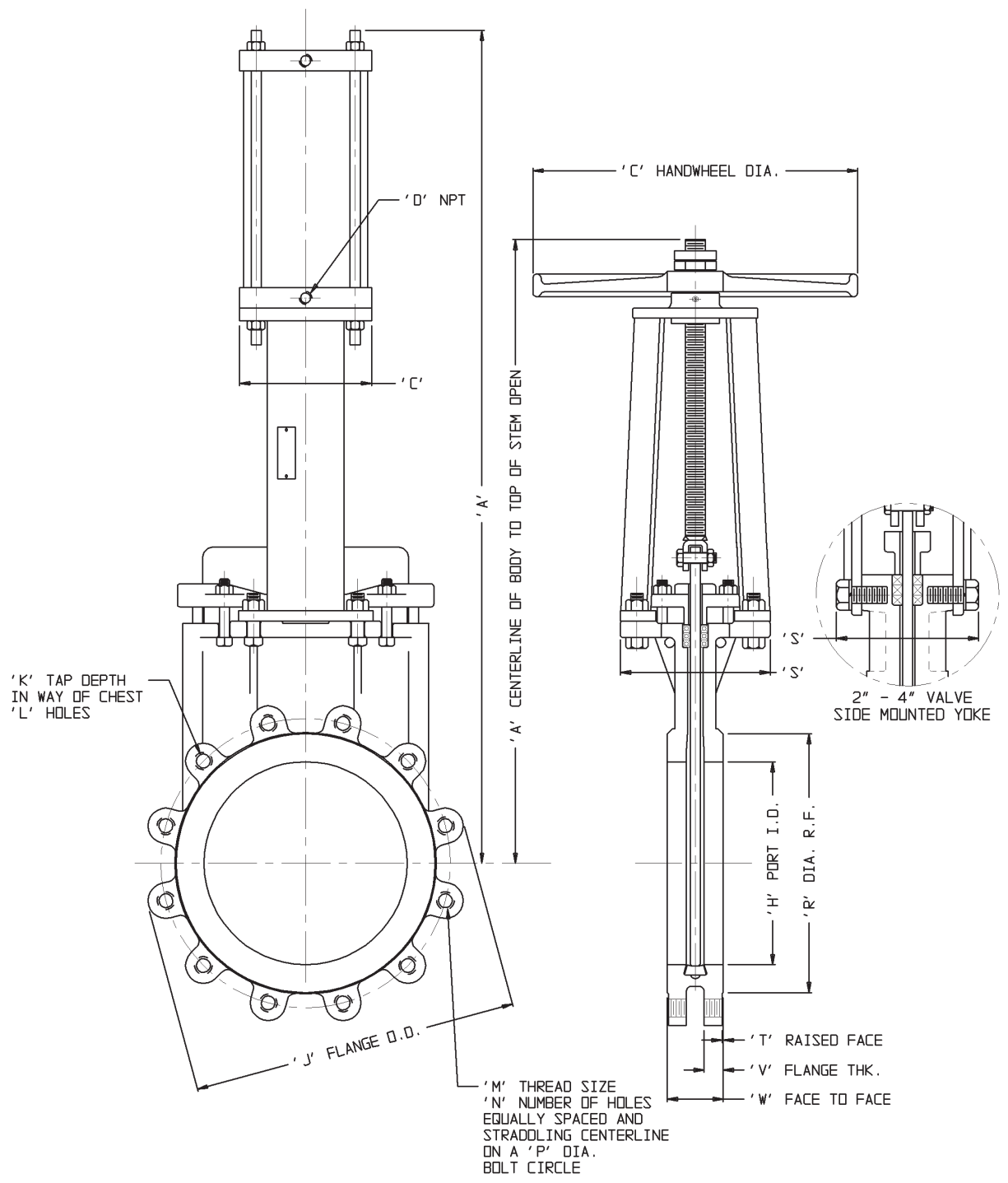
Dimensions

| Valve Size | | TABLE 1 DIMENSION Inches (mm) C67 with HANDWHEEL OR CYLINDER | | | | | | | | | | | | | | | | | Weight * | | | | |
|------------|-----|--|---------------------|---------------------|-------------|-----------------|-----------------|-----------|-----------|-----------------|-----------------|---------------|----|-----------|----|------------------|------------------|-----------------|-------------|----------------|----------------|--------------------|-----|
| Inches | DN | A | | | C | | | D | | H | J | K | L | M | N | P | R | S | T | V | W | lb | kg |
| | | HW | 2-1/2 CYL | 3-1/4 CYL | HW | 2-1/2 CYL | 3-1/4 CYL | 2-1/2 CYL | 3-1/4 CYL | | | | | | | | | | | | | | |
| 2 | 50 | 14-7/8 (378) | 18-3/16 (462) | 16-7/16 (418) | 10 (254) | 3 (76) | 4 (102) | 3/8-18 | 1/4-18 | 2 (51) | 6 (152) | 27/64 (11) | 2 | 5/8-11NC | 4 | 4-3/4 (121) | 3-5/8 (92) | 4 (102) | 1/16 (2) | 9/16 (14) | 1-7/8 (48) | 17 | 8 |
| 3 | 80 | 17-5/8 (448) | 20-11/16 (525) | 19-3/16 (487) | 10 (254) | 3 (76) | 4 (102) | 3/8-18 | 1/4-18 | 3 (76) | 7-1/2 (191) | 23/64 (9) | 2 | 5/8-11NC | 4 | 6 (152) | 5 (127) | 4 (102) | 1/16 (2) | 9/16 (14) | 2 (51) | 21 | 10 |
| 4 | 100 | 19-13/16 (503) | 21-15/16 (557) | 22-11/16 (576) | 10 (254) | 4 (102) | 4-1/2 (114) | 1/4-18 | 3/8-18 | 4 (102) | 9 (229) | 27/64 (11) | 2 | 5/8-11NC | 8 | 7-1/2 (191) | 6-3/16 (157) | 4 (102) | 1/16 (2) | 11/16 (17) | 2 (51) | 30 | 14 |
| 6 | 150 | 27-3/8 (695) | 29-9/16 (751) | 29-15/16 (760) | 16 (406) | 4-1/2 (114) | 6-1/2 (165) | 3/8-18 | 3/8-18 | 6 (152) | 11 (279) | 7/16 (11) | 2 | 3/4-10NC | 8 | 9-1/2 (241) | 8-1/2 (216) | 7-3/8 (187) | 1/16 (2) | 5/8 (16) | 2-1/4 (57) | 75 | 34 |
| 8 | 200 | 34-3/16 (868) | 36-3/8 (924) | 36-7/8 (937) | 16 (406) | 6-1/2 (165) | 8-5/8 (219) | 3/8-18 | 3/8-18 | 8 (203) | 13-1/2 (343) | 21/32 (17) | 2 | 3/4-10NC | 8 | 11-3/4 (298) | 10-5/8 (270) | 7-3/8 (187) | 1/16 (2) | 13/16 (21) | 2-3/4 (70) | 95 | 45 |
| 10 | 250 | 39-5/8 (1006) | 42-9/16 (1081) | 43-5/16 (1100) | 16 (406) | 8-5/8 (219) | 10-7/8 (276) | 3/8-18 | 1/2-14 | 10 (254) | 16 (406) | 9/16 (14) | 4 | 7/8-9NC | 12 | 14-1/4 (362) | 12-3/4 (324) | 7-3/8 (187) | 1/16 (2) | 15/16 (24) | 2-3/4 (70) | 139 | 63 |
| 12 | 300 | 46-1/4 (1175) | 49 (1245) | 49-3/4 (1264) | 20 (508) | 8-5/8 (219) | 10-7/8 (276) | 3/8-18 | 1/2-14 | 12 (305) | 19 (483) | 1/2 (13) | 4 | 7/8-9NC | 12 | 17 (432) | 15 (381) | 7-1/2 (191) | 3/16 (5) | 1 (25) | 3 (76) | 197 | 87 |
| 14 | 350 | 51-9/16 (1310) | 55-1/16 (1399) | 56-3/16 (1427) | 20 (508) | 12-3/4 (324) | 14-3/4 (375) | 1/2-14 | 3/4-14 | 13-1/4 (337) | 21 (533) | 1/2 (13) | 4 | 1-8NC | 12 | 18-3/4 (476) | 16-1/4 (413) | 7-3/4 (197) | 3/16 (5) | 15/16 (24) | 3 (76) | 301 | 147 |
| 16 | 400 | 59-3/16 (1503) | 62-3/8 (1584) | 63-1/2 (1613) | 20 (508) | 12-3/4 (324) | 14-3/4 (375) | 1/2-14 | 3/4-14 | 15-1/4 (387) | 23-1/2 (597) | 5/8 (16) | 6 | 1-8NC | 16 | 21-1/4 (540) | 18-1/2 (470) | 11-1/4 (286) | 3/16 (5) | 1-1/16 (27) | 3-1/2 (89) | 379 | 180 |
| 18 | 450 | 66-1/2 (1689) | 70-1/16 (1780) | 70-11/16 (1795) | 30 (762) | 12-3/4 (324) | 14-3/4 (375) | 1/2-14 | 3/4-14 | 17-1/4 (438) | 25 (635) | 19/32 (15) | 6 | 1-1/8-7NC | 16 | 22-3/4 (578) | 21 (533) | 11-1/4 (286) | 3/16 (5) | 1-1/16 (27) | 3-1/2 (89) | 467 | 212 |
| 20 | 500 | 72-7/8 (1851) | 77-1/4 (1962) | 77-3/4 (1975) | 30 (762) | 14-3/4 (375) | 17 (432) | 3/4-14 | 3/4-14 | 19-1/4 (489) | 27-1/2 (699) | 31/32 (25) | 8 | 1-1/8-7NC | 20 | 25 (635) | 23 (584) | 14 (356) | 3/16 (5) | 1-3/16 (30) | 4-1/2 (114) | 523 | 237 |
| 24 | 600 | 84-3/4 (2153) | 88-9/16 (2249) | 90-1/2 (2299) | 30 (762) | 17 (432) | 19 (483) | 3/4-14 | 3/4-14 | 23-1/4 (591) | 32 (813) | 29/32 (23) | 8 | 1-1/4-7NC | 20 | 29-1/2 (749) | 27-1/4 (692) | 14-1/8 (359) | 3/16 (5) | 1-5/16 (33) | 4-1/2 (114) | 713 | 321 |
| 30 | 750 | N/A | 106-15/16 (2716) | 108-13/16 (2764) | N/A | 17 (432) | 19 (483) | 3/4-14 | 3/4-14 | 29-1/4 (591) | 38-3/4 (984) | 15/16 (24) | 10 | 1-1/4-7NC | 28 | 36 (914) | 33-3/4 (857) | 15 (381) | 3/16 (5) | 1-5/16 (33) | 4-1/2 (114) | Consult Factory | |
| 36 | 900 | N/A | 130-15/16 (3326) | 131-11/16 (3345) | N/A | 19 (483) | 21 (533) | 3/4-14 | 3/4-14 | 35-1/4 (895) | 46 (1168) | 1 (25) | 12 | 1-1/2-6NC | 32 | 42-3/4 (1086) | 40-1/4 (1022) | 19 (483) | 3/16 (5) | 1-3/8 (35) | 5-1/2 (140) | | |

* Figures C67R and C67S with Handwheel

Reference Dimensions in (parentheses)

Refer to TABLE 1 for dimensions



with Cylinder

with Handwheel

Fabri-Valve® C67 Bi-directional Knife Gate Valve

Dimensions

| Valve Size | | TABLE 2 DIMENSION Inches (mm) C67 W/BEVEL GEAR | | | | | | | | | | | | | | | | |
|------------|-----|--|-------------------|-------------|------------------|----------------|-----------------|-----------------|---------------|----|-----------|----|------------------|------------------|-----------------|-------------|----------------|----------------|
| Inches | DN | A | B | C | D | E | H | J | K | L | M | N | P | R | S | T | V | W |
| 6 | 150 | 26-11/16 (678) | 20-11/16 (525) | 12 (305) | 12-3/8 (314) | 6-1/2 (165) | 6 (152) | 11 (279) | 7/16 (11) | 2 | 3/4-10NC | 8 | 9-1/2 (241) | 8-1/2 (216) | 7-3/8 (187) | 1/16 (2) | 5/8 (16) | 2-1/4 (57) |
| 8 | 200 | 34-1/4 (870) | 25-1/2 (648) | 12 (305) | 12-3/8 (314) | 6-1/2 (165) | 8 (203) | 13-1/2 (343) | 21/32 (17) | 2 | 3/4-10NC | 8 | 11-3/4 (298) | 10-5/8 (270) | 7-3/8 (187) | 1/16 (2) | 13/16 (21) | 2-3/4 (70) |
| 10 | 250 | 39-5/8 (1006) | 29-1/16 (738) | 12 (305) | 12-3/8 (314) | 6-1/2 (165) | 10 (254) | 16 (406) | 9/16 (14) | 4 | 7/8-9NC | 12 | 14-1/4 (362) | 12-3/4 (324) | 7-3/8 (187) | 1/16 (2) | 15/16 (24) | 2-3/4 (70) |
| 12 | 300 | 46-1/4 (1175) | 33-7/16 (849) | 12 (305) | 12-3/8 (314) | 6-1/2 (165) | 12 (305) | 19 (483) | 1/2 (13) | 4 | 7/8-9NC | 12 | 17 (432) | 15 (381) | 7-1/2 (191) | 3/16 (5) | 1 (25) | 3 (76) |
| 14 | 350 | 51-9/16 (1310) | 37-1/16 (941) | 12 (305) | 12-3/8 (314) | 6-1/2 (165) | 13-1/4 (337) | 21 (533) | 1/2 (13) | 4 | 1-8NC | 12 | 18-3/4 (476) | 16-1/4 (413) | 7-3/4 (197) | 3/16 (5) | 15/16 (24) | 3 (76) |
| 16 | 400 | 59-3/16 (1503) | 43 (1092) | 12 (305) | 12-1/16 (306) | 6-1/2 (165) | 15-1/4 (387) | 23-1/2 (597) | 5/8 (16) | 6 | 1-8NC | 16 | 21-1/4 (540) | 18-1/2 (470) | 11-1/4 (286) | 3/16 (5) | 1-1/16 (27) | 3-1/2 (89) |
| 18 | 450 | 66-1/2 (1689) | 47 (1194) | 12 (305) | 12-1/16 (306) | 6-1/2 (165) | 17-1/4 (438) | 25 (635) | 19/32 (15) | 6 | 1-1/8-7NC | 16 | 22-3/4 (578) | 21 (533) | 11-1/4 (286) | 3/16 (5) | 1-1/16 (27) | 3-1/2 (89) |
| 20 | 500 | 72-7/8 (1851) | 51-3/8 (1305) | 12 (305) | 12-1/16 (306) | 6-1/2 (165) | 19-1/4 (489) | 27-1/2 (699) | 31/32 (25) | 8 | 1-1/8-7NC | 20 | 25 (635) | 23 (584) | 14 (356) | 3/16 (5) | 1-3/16 (30) | 4-1/2 (114) |
| 24 | 600 | 84-3/4 (2029) | 59-3/8 (1508) | 12 (305) | 12-1/16 (306) | 6-1/2 (165) | 23-1/4 (591) | 32 (813) | 29/32 (23) | 8 | 1-1/4-7NC | 20 | 29-1/2 (749) | 27-1/4 (692) | 14-1/8 (359) | 3/16 (5) | 1-5/16 (33) | 4-1/2 (114) |
| 30 | 750 | 106-3/16 (1851) | 77-1/4 (1305) | 18 (457) | 12-1/16 (306) | 6-1/2 (165) | 29-1/4 (743) | 38-3/4 (984) | 15/16 (24) | 10 | 1-1/4-7NC | 28 | 36 (914) | 33-3/4 (857) | 15 (381) | 3/16 (5) | 1-5/16 (33) | 4-1/2 (114) |
| 36 | 900 | 129-1/16 (2153) | 94 (1508) | 24 (610) | 12-1/16 (306) | 6-1/2 (165) | 35-1/4 (895) | 46 (1168) | 1 (25) | 12 | 1-1/2-6NC | 32 | 42-3/4 (1086) | 40-1/4 (1022) | 19 (483) | 3/16 (5) | 1-3/8 (35) | 5-1/2 (140) |

6" - 14" Valves have a bevel gear ratio of 3:1
 16" - 36" Valves have a bevel gear ratio of 4:1

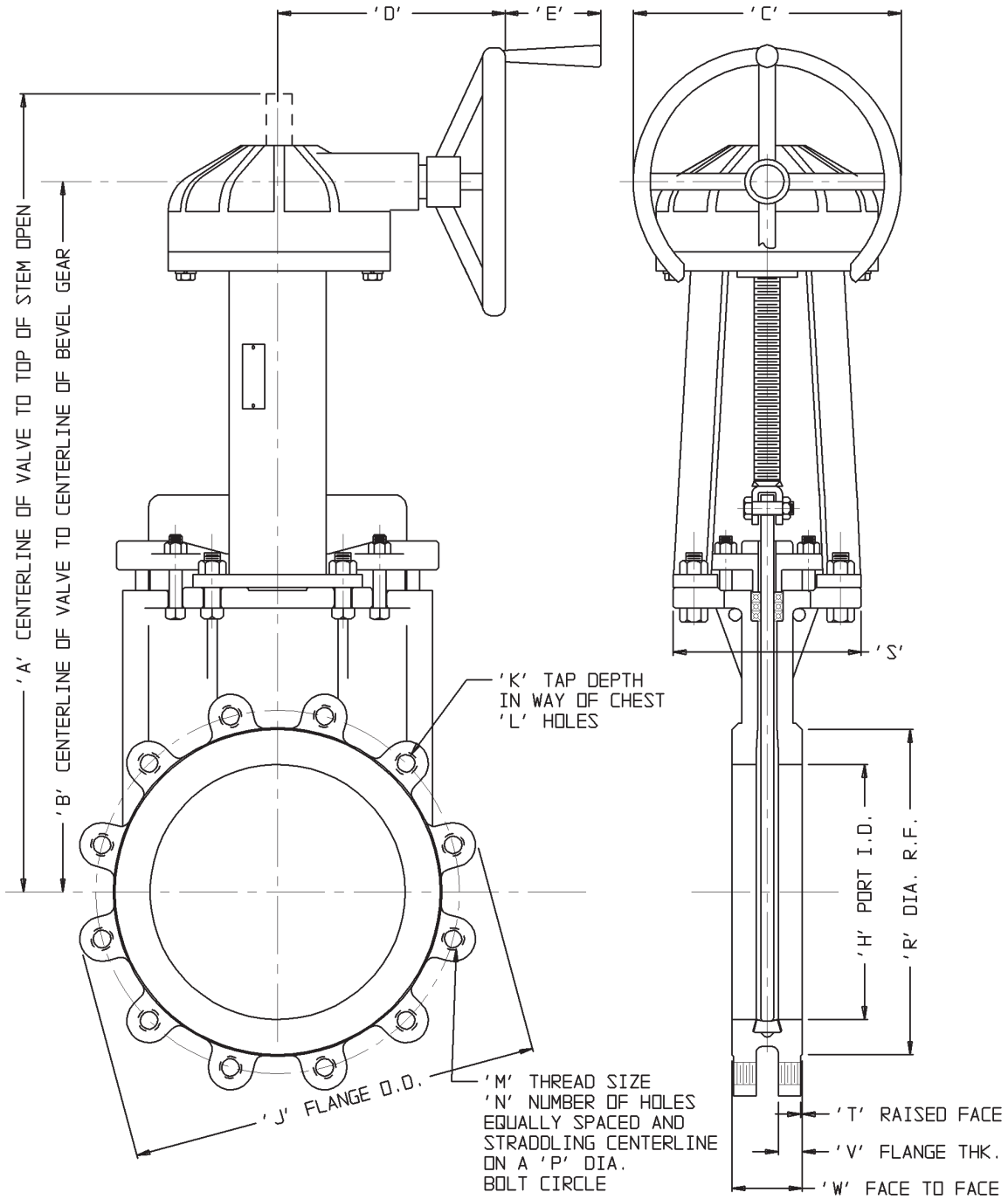
Reference Dimensions in (parentheses)

Materials of Construction

| Part | Materials | | |
|--------------------------|--|--|-------------------------------------|
| | C67R 2" - 36" | C67S 2" - 36" | C67R-WCB 2" - 36" |
| Body and Chest | Solid, one piece, cast 304, 316 or 317L stainless steel. | Solid, one piece, cast 304, 316 or 317L stainless steel. | Solid, one piece, cast carbon steel |
| Seat | Elastomer, white EPDM std. | Elastomer, white EPDM std. | Elastomer, black EPDM standard |
| Gate | Same grade as body | Same grade as body | 304 stainless steel |
| Yoke 2" - 4" 6" - 36" | Ductile iron Carbon steel | Cast 304 stainless steel 304 stainless steel | Ductile iron Carbon steel |
| Yoke Fasteners | Plated steel | Stainless steel | Plated steel |
| Stem | 304 stainless steel | 304 stainless steel | 304 stainless steel |
| Stem Nut | Acid resistant bronze | Acid resistant bronze | Acid resistant bronze |
| Lubrication Fitting | Plated steel | Plated steel | Plated steel |
| Packing | Acrylic/PTFE ¹ /Silicone | Acrylic/PTFE ¹ /Silicone | Acrylic/PTFE ¹ /Silicone |
| Packing Follower | Ductile iron/Carbon steel | 304 stainless steel | Ductile iron |
| Follower Bolts | Plated steel | Stainless steel | Plated steel |
| Handwheel | Cast iron | Cast iron | Cast iron |
| Handwheel Retaining Nut | Malleable iron | Stainless steel | Malleable Iron |
| Tab Washer | Stainless steel | Stainless steel | Stainless steel |
| Travel Stop | Plated steel | Stainless steel | Plated steel |

¹ PTFE/Graphite/Viton packing is standard with Viton and AFLAS seals.

Refer to TABLE 2 for dimensions



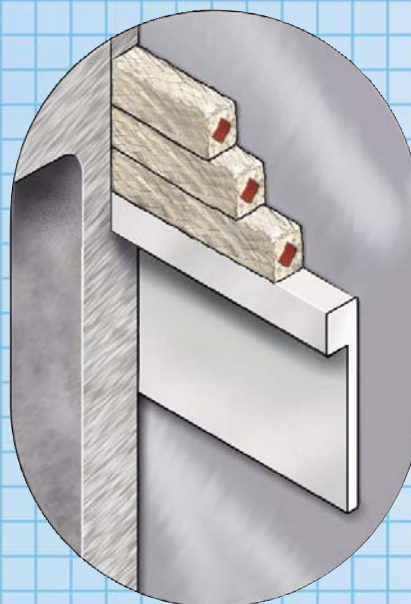
with Bevel Gear

Available Options

- Hard Gate Material
- Nickel-TFE Coated Gate
- Epoxy Coating
- Thru Drilled Flanges
- Flush Ports: Chest Only, 6" (DN 150) and larger
- V-Port
- Locking Devices
- E-Z Spin Handwheel
- Live Loaded Packing
- Chest Liners
- Self-Supporting Yokes
- Alternate Flange Drilling
- Bevel Gear
- Chainwheels
- Cylinder Actuators
- Electric Actuators
- Ratchet
- Extended Stems
- Rod Boots

Chest Liners

Optional chest liners fill the clearances between the gate and the chest of the Figure C67 body. Chest liners prevent solids entrapment in the chest area, and also provide increased gate support for high flow/high pressure applications. Standard materials are ultra high molecular weight polyethylene (UHMW) and reinforced PTFE.



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