

# DeZURIK KGN-RSB BI-DIRECTIONAL CAST STAINLESS STEEL KNIFE GATE VALVES

## Design & Construction

DeZURIK KGN-RSB Bi-Directional Cast Stainless Steel Knife Gate Valves are resilient seated valves designed for isolation, on-off applications in corrosive, abrasive liquid applications including: Pulp and Paper, Mining, Waste Water, Chemical, Petrochemical, Power and Steel.

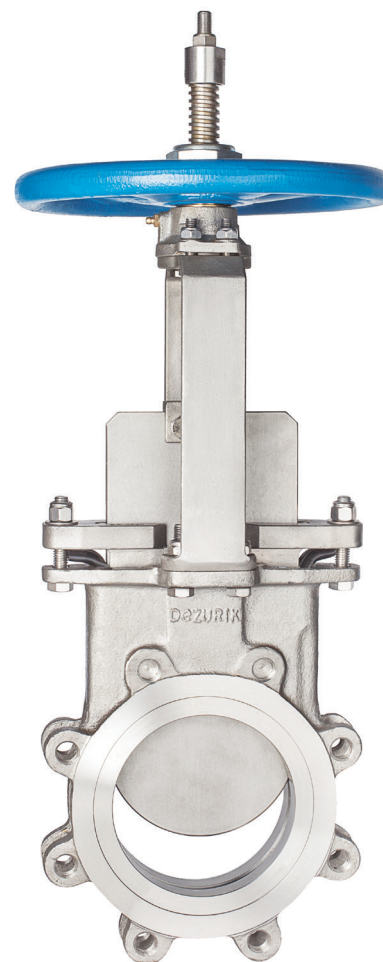
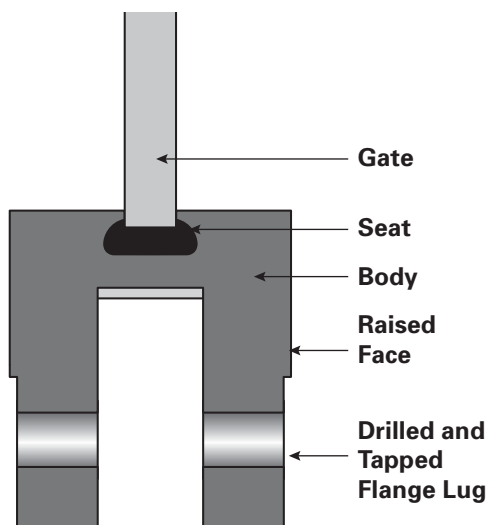
KGN-RSB Resilient Seated Bi-Directional Knife Gate Valves are available in sizes 2-24" (50-600mm).

## Bi-Directional Shutoff

The Bi-Directional Knife Gate Valve provides bubble tight shutoff in both directions up to the full rating of the valve. There is no recommended flow direction and the valve does not require line pressure to seal. The interference fit between the gate and resilient seat provides bubble tight shutoff even under the lowest pressure. The valve can be used in either direction on dead end service.

## Flow Capacity

Round port design per MSS-SP-81 requirements allows high flow capacity and minimum pressure drop.



## Seat Locked in Valve Body for Full Pressure, Bi-Directional, Dead End Service

The flat bottom gate provides full perimeter seating. The perimeter seat is locked into the body dovetail groove. The resilient perimeter seat provides bubble tight shutoff in either direction, even on dead end service. Valves are rated to 150 psig (1035 kPa) cold working pressure (CWP).

## Choice of Resilient Seat Materials

Seats are available in your choice of EPDM, NBR or FKM to provide the seat material option that performs best for your media and operating temperature.

## Long Life Packing

Square Braided PTFE packing material assures a tight seal with minimum packing gland pressure.

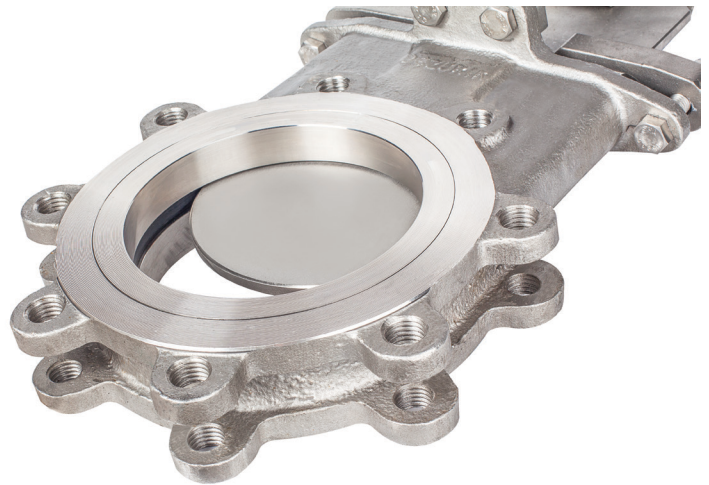
## End Connections

Raised face body has drilled and tapped flange lugs in accordance with ASME B16.5 150 Lb. drilling dimensions. International standard flange drilling is available.

## One-Piece Cast Corrosion Resistant Body

The heavy-duty, cast 316 stainless steel body provides corrosion and abrasion resistance on liquid slurry applications. The all stainless body, chest, and packing chamber provide durability and integrity for all wetted parts.

Bodies in 304 stainless steel are available.



## Precision Ground Stainless Steel Gate

The 316 stainless steel gate is precision ground on all sides with beveled edges to maximize packing life. Gates in 304 stainless steel are available.

## Corrosion Resistant Packing Gland

The packing gland is stainless steel for corrosion resistance. Packing gland bolts are easily accessible for adjustments.

## Stainless Steel Stem & Superstructure

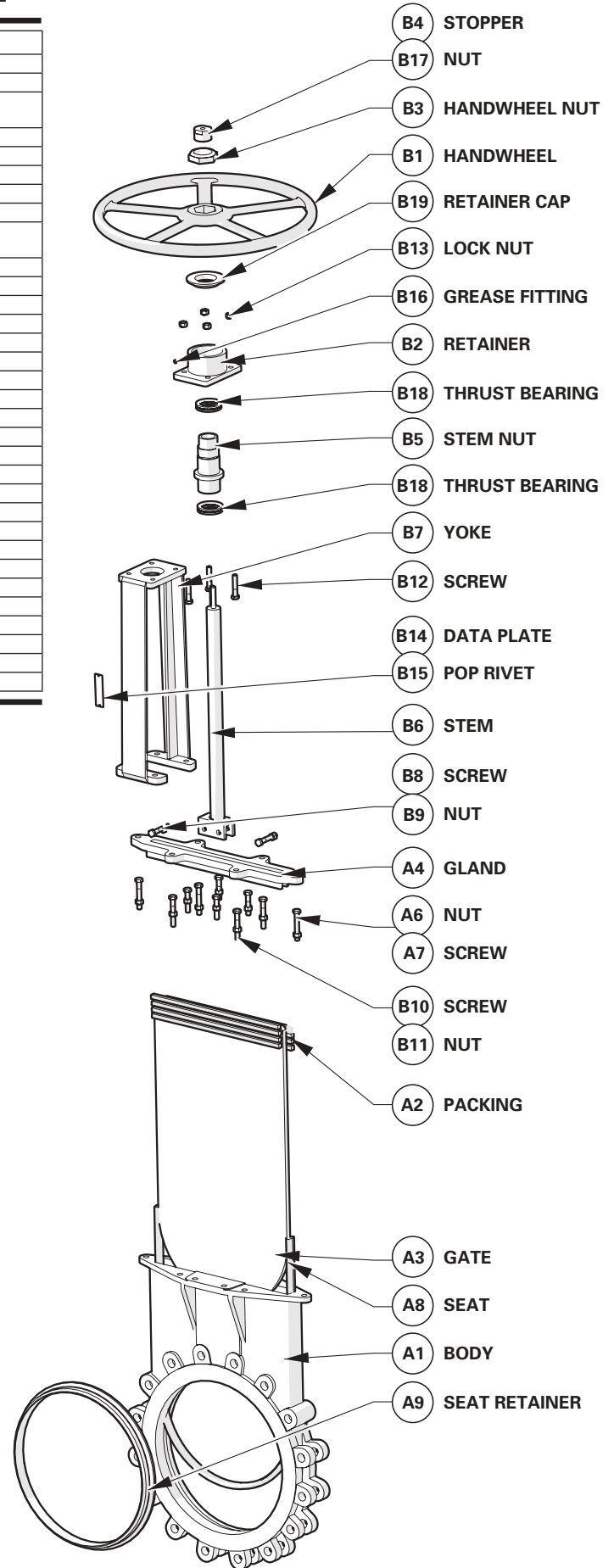
All valves are furnished with a stainless steel stem and superstructure that assures easy operation and dependable service.

## Actuators & Accessories

Actuator options include handwheels and cylinders. A full complement of accessories are also offered.

# Materials of Construction

| Item | Description    | Material   |
|------|----------------|--|
| A1   | Body           | 304 Stainless Steel, ASTM A351 CF-8<br>316 Stainless Steel, ASTM A351 CF8M   |
| A2   | Packing        | MSP - Square Braided PTFE Impregnated Synthetic Fiber to 500°F (260°C) (pH Range 4-10)   |
| A3   | Gate           | 304 Stainless Steel, ASTM A240<br>316 Stainless Steel, ASTM A240   |
| A4   | Gland          | 316 Stainless Steel, ASTM A351 CF-8M   |
| A6   | Nut            | 18-8 Stainless Steel   |
| A7   | Screw          | 18-8 Stainless Steel   |
| A8   | Seat           | EPDM - Terpolymer of Ethylene, Propylene and a Diene to 250°F (122°C)<br>NBR - Acrylonitrile-Butadiene to 180°F (83°C)<br>FKM - Fluoro Rubber to 400°F (204°C) |
| A9   | Seat Retainer  | 304 Stainless Steel, ASTM A240<br>316 Stainless Steel, ASTM A240   |
| B1   | Handwheel      | Cast Iron, ASTM A126 Class B   |
| B2   | Retainer       | 304 Stainless Steel, ASTM A351 CF-8  |
| B3   | Handwheel Nut  | Carbon Steel, Zinc Plated  |
| B4   | Stopper        | 304 Stainless Steel, ASTM A276   |
| B5   | Stem Nut       | Aluminum Bronze, ASTM B148 C95200  |
| B6   | Stem           | 304 Stainless Steel, ASTM A276   |
| B7   | Yoke           | 316 Stainless Steel, ASTM A351 CF-8M   |
| B8   | Screw          | 18-8 Stainless Steel   |
| B9   | Nut            | 18-8 Stainless Steel   |
| B10  | Screw          | 18-8 Stainless Steel   |
| B11  | Nut            | 18-8 Stainless Steel   |
| B12  | Screw          | 18-8 Stainless Steel   |
| B13  | Lock Nut       | 18-8 Stainless Steel   |
| B14  | Data Plate     | 18-8 Stainless Steel   |
| B15  | Pop Rivet      | 316 Stainless Steel, A240  |
| B16  | Grease Fitting | Brass  |
| B17  | Nut            | Carbon Steel, Zinc Plated  |
| B18  | Thrust Bearing | High Carbon Chromium Steel, AISI 52100   |
| B19  | Retainer Cap   | 304 Stainless Steel, ASTM A276   |



# Valve Selection

## Shut-Off Capabilities

|                |                                   |
|----------------|-----------------------------------|
| Bi-Directional | Bubble Tight to Full Valve Rating |
|----------------|-----------------------------------|

## Pressure Ratings

|                  |                           |
|------------------|---------------------------|
| 2-24" (80-600mm) | 150 psi C.W.P. (1035 kPa) |
|------------------|---------------------------|

## Applicable Standards

| DeZURIK KGN-RSB Knife Gate Valves are designed and/or tested to meet the following standards: |  |
|---|--|
| MSS SP-81   | Stainless Steel, Bonnetless, Flanged Knife Gate Valves   |
| MSS SP-151  | Pressure testing of knife gate valves  |
| ASME B16.5  | Flanges and Flanged Fittings, ASME 150<br>Conforms to related drilling dimensions  |
| International Standards   | Conforms to flanged bolt guides — DIN 10 and DIN 16; ISO 7005-1/PN10 and 7005-2/PN16; BS 4504/PN10 and BS 4504/PN16; and AS 2129 Tables D and E; SANS 1123-1000 and SANS 1123-1600 |
| TAPPI TIS 405-8   | Recommendations for Stainless Steel, Bonnetless, Flanged, Wafer Knife Gate Valves. Revoked by TAPPI, Same as MSS SP-81   |

## Flow Parameters

| Valve Size   | Cv*<br>Kv*<br>100%<br>Open | Port Area<br>(in <sup>2</sup> /cm <sup>2</sup> ) |
|--------------|----------------------------|--|
| 2"<br>50mm   | 264<br>226                 | 3.2<br>20  |
| 3"<br>80mm   | 607<br>520                 | 7.0<br>45  |
| 4"<br>100mm  | 1096<br>939                | 11.9<br>77                                       |
| 6"<br>150mm  | 2516<br>2156               | 26.7<br>172                                      |
| 8"<br>200mm  | 4534<br>3885               | 48.7<br>314                                      |
| 10"<br>250mm | 6729<br>5766               | 76.1<br>491                                      |
| 12"<br>300mm | 9900<br>8483               | 111<br>716                                       |
| 14"<br>350mm | 12575<br>10776             | 138<br>892                                       |
| 16"<br>400mm | 16625<br>14246             | 182<br>1176                                      |
| 18"<br>450mm | 21425<br>18359             | 234<br>1507                                      |
| 20"<br>500mm | 26850<br>23008             | 291<br>1878                                      |
| 24"<br>600mm | 39300<br>33676             | 425<br>2743                                      |

\*Cv = Flow in GPM of water at  
1 psi pressure drop.  
Kv = Flow in m<sup>3</sup>/hr. of water at  
100 kPa pressure drop.

## Valve and Actuator Weights

| Valve Size   | Basic Valve | With Handwheel | With Cylinder |      |     |
|--------------|-------------|----------------|---------------|------|-----|
|              |             |                | Size          | Lbs  | Kg  |
| 2"<br>50mm   | 18<br>9     | 26<br>12       | 4" (100mm) =  | 37   | 17  |
|              |             |                | 6" (150mm) =  | 65   | 30  |
| 3"<br>80mm   | 26<br>12    | 40<br>19       | 4" (100mm) =  | 54   | 25  |
|              |             |                | 6" (150mm) =  | 72   | 33  |
|              |             |                | 8" (200mm) =  | 89   | 41  |
| 4"<br>100mm  | 33<br>15    | 49<br>23       | 6" (150mm) =  | 96   | 44  |
|              |             |                | 8" (200mm) =  | 108  | 49  |
|              |             |                | 10" (250mm) = | 152  | 69  |
| 6"<br>150mm  | 53<br>25    | 73<br>34       | 8" (200mm) =  | 143  | 65  |
|              |             |                | 10" (250mm) = | 187  | 85  |
|              |             |                | 12" (300mm) = | 224  | 102 |
| 8"<br>200mm  | 84<br>39    | 108<br>49      | 8" (200mm) =  | 203  | 93  |
|              |             |                | 10" (250mm) = | 249  | 113 |
|              |             |                | 12" (300mm) = | 286  | 130 |
| 10"<br>250mm | 132<br>60   | 159<br>73      | 14" (350mm) = | 336  | 153 |
|              |             |                | 10" (250mm) = | 298  | 136 |
|              |             |                | 12" (300mm) = | 337  | 153 |
| 12"<br>300mm | 176<br>80   | 214<br>98      | 14" (350mm) = | 399  | 181 |
|              |             |                | 16" (400mm) = | 560  | 255 |
|              |             |                | 18" (450mm) = | 645  | 293 |
| 14"<br>350mm | 220<br>100  | 291<br>132     | 10" (250mm) = | 353  | 161 |
|              |             |                | 12" (300mm) = | 393  | 179 |
|              |             |                | 14" (350mm) = | 443  | 201 |
| 16"<br>400mm | 331<br>151  | 408<br>186     | 16" (400mm) = | 618  | 281 |
|              |             |                | 18" (450mm) = | 704  | 320 |
|              |             |                | 20" (500mm) = | 800  | 363 |
| 18"<br>450mm | 441<br>201  | 564<br>256     | 12" (300mm) = | 508  | 231 |
|              |             |                | 14" (350mm) = | 554  | 252 |
|              |             |                | 16" (400mm) = | 743  | 338 |
| 20"<br>500mm | 580<br>264  | 708<br>322     | 18" (450mm) = | 830  | 377 |
|              |             |                | 20" (500mm) = | 928  | 421 |
|              |             |                | 14" (350mm) = | 682  | 310 |
| 24"<br>600mm | 725<br>329  | 864<br>392     | 16" (400mm) = | 789  | 358 |
|              |             |                | 18" (450mm) = | 878  | 399 |
|              |             |                | 20" (500mm) = | 977  | 444 |
| 24"<br>600mm | 725<br>329  | 864<br>392     | 14" (350mm) = | 822  | 373 |
|              |             |                | 16" (400mm) = | 1044 | 474 |
|              |             |                | 18" (450mm) = | 1051 | 477 |
| 24"<br>600mm | 725<br>329  | 864<br>392     | 20" (500mm) = | 1151 | 523 |
|              |             |                | 16" (400mm) = | 1158 | 526 |
|              |             |                | 18" (450mm) = | 1251 | 568 |
| 24"<br>600mm | 725<br>329  | 864<br>392     | 20" (500mm) = | 1355 | 615 |

Pounds  
Kilograms

Note: Weights are approximate and do not include crating.

# Ordering

To order, simply complete the valve order code from information shown. An ordering example is shown for your reference.

|  |
|--|
| <b>Valve Style</b><br><b>Give valve style code as follows:</b><br>KGN = Cast Knife Gate Valves |
|--|

|  |
|--|
| <b>Body Material</b><br><b>Give body material code as follows:</b><br>S1 = 304 Stainless Steel<br>S2 = 316 Stainless Steel |
|--|

|  |
|--|
| <b>Valve Size</b><br><b>Give valve size code as follows:</b>   |
| 2 = 2" (50mm)                      12 = 12" (300mm)<br>3 = 3" (80mm)                      14 = 14" (350mm)<br>4 = 4" (100mm)                      16 = 16" (400mm)<br>6 = 6" (150mm)                      18 = 18" (450mm)<br>8 = 8" (200mm)                      20 = 20" (500mm)<br>10 = 10" (250mm)                      24 = 24" (600mm) |

|  |
|--|
| <b>Packing Material</b><br><b>Give packing material code as follows:</b><br>MSP = Square Braided PTFE Impregnated Synthetic Fiber to 500°F (260°C) (pH Range 4-10) |
|--|

|  |
|--|
| <b>Body Style</b><br><b>Give body style code as follows:</b><br>RSB = Resilient Seated, Bi-Directional |
|--|

|  |
|--|
| <b>Gate Material</b><br><b>Give gate material code as follows:</b><br>S1 = 304 Stainless Steel (Standard for S1 body material)<br>S2 = 316 Stainless Steel (Standard for S2 body material) |
|--|

|   |
|---|
| <b>End Connection</b><br><b>Give end connection code as follows:</b><br>F1 = ASME 150 UNC Tapping for Threads<br>F110 = ISO 7005/PN10 Drilling<br>F116 = ISO 7005/PN16 Drilling<br>F1DA = AS2129 Table D Drilling<br>F1EA = AS2129 Table E Drilling<br>F1T = ASME 150 Through Bolting<br>F1S10 = SANS 1123-1000<br>F1S16 = SANS 1123-1600<br>F1J1 = JIS 10 Drilling |
|---|

|  |
|--|
| <b>Seat Material</b><br><b>Give seat material code as follows:</b><br>EPDM = Terpolymer of Ethylene, Propylene and a Diene to 250°F (122°C)<br>NBR = Acrylonitrile-Butadiene to 180°F (83°C)<br>FKM = Fluoro Rubber to 400°F (204°C) |
|--|

|   |
|---|
| <b>Options</b><br><b>Give option code as follows:</b><br>CMC = Certificate of Material Conformance<br>— = DeZURIK Standard Test Certification |
|---|

Notes:  
The limiting factor in valve selection is the lowest temperature limit of the packing or seat.

**Ordering Example:**  
KGN,6,RSB,F1,S2,MSP,S2-EPDM\*Actuator

# Manual Actuators

## Handwheel Actuator

All 2-24" (50-600mm) valves can be furnished with handwheel actuators. To order, add the code from the chart below to the basic valve ordering code.

| Valve Size   | Order Code        | Maximum Pressure Differential<br>psi/kPa |
|--------------|-------------------|--|
|              | 304 SST (S1) Yoke |  |
| 2"<br>50mm   | MN-HD10-S1        | 150<br>1035                              |
| 3"<br>80mm   | MN-HD10-S1        | 150<br>1035                              |
| 4"<br>100mm  | MN-HD10-S1        | 150<br>1035                              |
| 6"<br>150mm  | MN-HD12-S1        | 150<br>1035                              |
| 8"<br>200mm  | MN-HD12-S1        | 150<br>1035                              |
| 10"<br>250mm | MN-HD14-S1        | 150<br>1035                              |

| Valve Size   | Order Code        | Maximum Pressure Differential<br>psi/kPa |
|--------------|-------------------|--|
|              | 304 SST (S1) Yoke |  |
| 12"<br>300mm | MN-HD14-S1        | 100*<br>690                              |
| 14"<br>350mm | MN-HD18-S1        | 100*<br>690                              |
| 16"<br>400mm | MN-HD18-S1        | 100*<br>690                              |
| 18"<br>450mm | MN-HD24-S1        | 75*<br>518                               |
| 20"<br>500mm | MN-HD24-S1        | 50*<br>345                               |
| 24"<br>600mm | MN-HD24-S1        | 25*<br>173                               |

NOTE: The limiting factor in actuator selection is the lowest pressure rating of the valve or actuator.

\*Contact DeZURIK for actuators when pressure exceeds limits shown.

# Cylinder Actuators

DeZURIK cylinder actuators are available with double-acting pneumatic or hydraulic cylinders for on/off service. Supply pressure is 60 or 80 psi (410 or 550 kPa). To order, add the proper code from the table to the valve order code. Specify hydraulic media if other than oil.

## 60 psi (410 kpa) Supply

| Valve Size   | Order Code             |                               | Maximum Pressure Differential psi/kPa |                 |
|--------------|------------------------|-------------------------------|---------------------------------------|-----------------|
|              | Carbon Steel (CS) Yoke | 304 Stainless Steel (S1) Yoke | Slurries, Paper Stock                 | Liquids & Gases |
| 2"<br>50mm   | CY-PC4-CS              | CY-PC4-S1                     | 150<br>1034                           | 150<br>1034     |
| 3"<br>80mm   | CY-PC4-CS              | CY-PC4-S1                     | 25<br>172                             | 100<br>689      |
|              | CY-PC6-CS              | CY-PC6-S1                     | 150<br>1034                           | 150<br>1034     |
| 4"<br>100mm  | CY-PC6-CS              | CY-PC6-S1                     | 100<br>689                            | 150<br>1034     |
|              | CY-PC8-CS              | CY-PC8-S1                     | 150<br>1034                           | N/R             |
| 6"<br>150mm  | CY-PC6-CS              | CY-PC6-S1                     | 25<br>172                             | 75<br>517       |
|              | CY-PC8-CS              | CY-PC8-S1                     | 125<br>862                            | 150<br>1034     |
|              | CY-PC10-CS             | CY-PC10-S1                    | 150<br>1034                           | N/R             |
| 8"<br>200mm  | CY-PC8-CS              | CY-PC8-S1                     | 50<br>345                             | 75<br>517       |
|              | CY-PC10-CS             | CY-PC10-S1                    | 100<br>689                            | 150<br>1034     |
|              | CY-PC12-CS             | CY-PC12-S1                    | 150<br>1034                           | N/R             |
| 10"<br>250mm | CY-PC10-CS             | CY-PC10-S1                    | 50<br>345                             | 75<br>517       |
|              | CY-PC12-CS             | CY-PC12-S1                    | 100<br>689                            | 150<br>1034     |
|              | CY-PC14-CS             | CY-PC14-S1                    | 150<br>1034                           | N/R             |
| 12"<br>300mm | CY-PC12-CS             | CY-PC12-S1                    | 50<br>345                             | 75<br>517       |
|              | CY-PC14-CS             | CY-PC14-S1                    | 75<br>517                             | 125<br>862      |
|              | CY-PC16-CS             | CY-PC16-S1                    | 125<br>862                            | 150<br>1034     |
|              | CY-PC18-CS             | CY-PC18-S1                    | 150<br>1034                           | N/R             |
| 14"<br>350mm | CY-PC12-CS             | CY-PC12-S1                    | 25<br>172                             | 50<br>345       |
|              | CY-PC14-CS             | CY-PC14-S1                    | 50<br>345                             | 75<br>517       |
|              | CY-PC16-CS             | CY-PC16-S1                    | 75<br>517                             | 125<br>862      |
|              | CY-PC18-CS             | CY-PC18-S1                    | 125<br>862                            | 150<br>1034     |
|              | CY-PC20-CS             | CY-PC20-S1                    | 150<br>1034                           | N/R             |

N/R = Not Required. Use next smaller actuator  
N/A = Not Available. Use next larger actuator

| Valve Size   | Order Code             |                               | Maximum Pressure Differential psi/kPa |                 |
|--------------|------------------------|-------------------------------|---------------------------------------|-----------------|
|              | Carbon Steel (CS) Yoke | 304 Stainless Steel (S1) Yoke | Slurries, Paper Stock                 | Liquids & Gases |
| 16"<br>400mm | CY-PC14-CS             | CY-PC14-S1                    | 50<br>345                             | 50<br>345       |
|              | CY-PC16-CS             | CY-PC16-S1                    | 75<br>517                             | 100<br>689      |
|              | CY-PC18-CS             | CY-PC18-S1                    | 100<br>689                            | 125<br>862      |
|              | CY-PC20-CS             | CY-PC20-S1                    | 125<br>862                            | 150<br>1034     |
| 18"<br>450mm | CY-PC14-CS             | CY-PC14-S1                    | 25<br>172                             | 50<br>345       |
|              | CY-PC16-CS             | CY-PC16-S1                    | 50<br>345                             | 75<br>517       |
|              | CY-PC18-CS             | CY-PC18-S1                    | 75<br>517                             | 100<br>689      |
|              | CY-PC20-CS             | CY-PC20-S1                    | 100<br>689                            | 125<br>862      |
| 20"<br>500mm | CY-PC16-CS             | CY-PC16-S1                    | 25<br>172                             | 50<br>345       |
|              | CY-PC18-CS             | CY-PC18-S1                    | 50<br>345                             | 75<br>517       |
|              | CY-PC20-CS             | CY-PC20-S1                    | 75<br>517                             | 100<br>689      |
| 24"<br>600mm | CY-PC16-CS             | CY-PC16-S1                    | N/A                                   | 25<br>172       |
|              | CY-PC18-CS             | CY-PC18-S1                    | 25<br>172                             | 50<br>345       |
|              | CY-PC20-CS             | CY-PC20-S1                    | 50<br>345                             | 75<br>517       |

## 80 psi (550 kPa) Supply

| Valve Size   | Order Code             |                               | Maximum Pressure Differential psi/kPa |                    |
|--------------|------------------------|-------------------------------|---------------------------------------|--------------------|
|              | Carbon Steel (CS) Yoke | 304 Stainless Steel (S1) Yoke | Slurries, Paper Stock                 | Liquids & Gases    |
| 2"<br>50mm   | CY-PC4-CS              | CY-PC4-S1                     | $\frac{150}{1034}$                    | $\frac{150}{1034}$ |
| 3"<br>80mm   | CY-PC4-CS              | CY-PC4-S1                     | $\frac{100}{689}$                     | $\frac{150}{1034}$ |
|              | CY-PC6-CS              | CY-PC6-S1                     | $\frac{150}{1034}$                    | N/R                |
| 4"<br>100mm  | CY-PC4-CS              | CY-PC4-S1                     | $\frac{25}{172}$                      | $\frac{75}{517}$   |
|              | CY-PC6-CS              | CY-PC6-S1                     | $\frac{150}{1034}$                    | $\frac{150}{1034}$ |
| 6"<br>150mm  | CY-PC6-CS              | CY-PC6-S1                     | $\frac{75}{517}$                      | $\frac{125}{862}$  |
|              | CY-PC8-CS              | CY-PC8-S1                     | $\frac{150}{1034}$                    | $\frac{150}{1034}$ |
| 8"<br>200mm  | CY-PC8-CS              | CY-PC8-S1                     | $\frac{75}{517}$                      | $\frac{125}{862}$  |
|              | CY-PC10-CS             | CY-PC10-S1                    | $\frac{150}{1034}$                    | $\frac{150}{1034}$ |
| 10"<br>250mm | CY-PC8-CS              | CY-PC8-S1                     | $\frac{25}{172}$                      | $\frac{75}{517}$   |
|              | CY-PC10-CS             | CY-PC10-S1                    | $\frac{75}{517}$                      | $\frac{125}{862}$  |
|              | CY-PC12-CS             | CY-PC12-S1                    | $\frac{150}{1034}$                    | $\frac{150}{1034}$ |
| 12"<br>300mm | CY-PC10-CS             | CY-PC10-S1                    | $\frac{50}{345}$                      | $\frac{75}{517}$   |
|              | CY-PC12-CS             | CY-PC12-S1                    | $\frac{75}{517}$                      | $\frac{125}{862}$  |
|              | CY-PC14-CS             | CY-PC14-S1                    | $\frac{125}{862}$                     | $\frac{150}{1034}$ |
|              | CY-PC16-CS             | CY-PC16-S1                    | $\frac{150}{1034}$                    | N/R                |
| 14"<br>350mm | CY-PC10-CS             | CY-PC10-S1                    | $\frac{25}{172}$                      | $\frac{50}{345}$   |
|              | CY-PC12-CS             | CY-PC12-S1                    | $\frac{50}{345}$                      | $\frac{75}{517}$   |
|              | CY-PC14-CS             | CY-PC14-S1                    | $\frac{100}{689}$                     | $\frac{125}{862}$  |
|              | CY-PC16-CS             | CY-PC16-S1                    | $\frac{150}{1034}$                    | $\frac{150}{1034}$ |
| 16"<br>400mm | CY-PC12-CS             | CY-PC12-S1                    | $\frac{25}{172}$                      | $\frac{50}{345}$   |
|              | CY-PC14-CS             | CY-PC14-S1                    | $\frac{75}{517}$                      | $\frac{100}{689}$  |
|              | CY-PC16-CS             | CY-PC16-S1                    | $\frac{100}{689}$                     | $\frac{150}{1034}$ |
|              | CY-PC18-CS             | CY-PC18-S1                    | $\frac{125}{862}$                     | N/R                |
|              | CY-PC20-CS             | CY-PC20-S1                    | $\frac{150}{1034}$                    | N/R                |

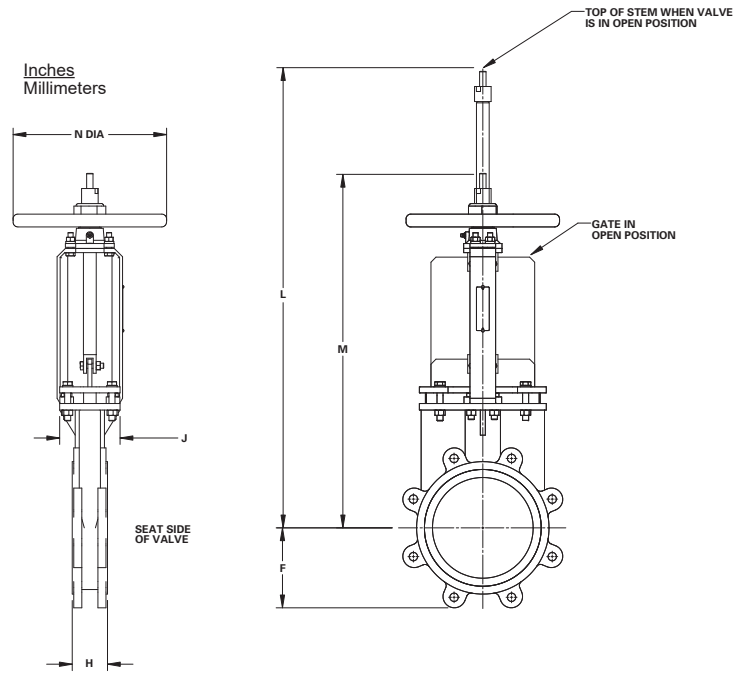
| Valve Size   | Order Code             |                               | Maximum Pressure Differential psi/kPa |                    |
|--------------|------------------------|-------------------------------|---------------------------------------|--------------------|
|              | Carbon Steel (CS) Yoke | 304 Stainless Steel (S1) Yoke | Slurries, Paper Stock                 | Liquids & Gases    |
| 18"<br>450mm | CY-PC14-CS             | CY-PC14-S1                    | $\frac{50}{345}$                      | $\frac{75}{517}$   |
|              | CY-PC16-CS             | CY-PC16-S1                    | $\frac{75}{517}$                      | $\frac{100}{689}$  |
|              | CY-PC18-CS             | CY-PC18-S1                    | $\frac{100}{689}$                     | $\frac{150}{1034}$ |
|              | CY-PC20-CS             | CY-PC20-S1                    | $\frac{125}{862}$                     | N/R                |
| 20"<br>500mm | CY-PC14-CS             | CY-PC14-S1                    | $\frac{25}{172}$                      | $\frac{50}{345}$   |
|              | CY-PC16-CS             | CY-PC16-S1                    | $\frac{50}{345}$                      | $\frac{75}{517}$   |
|              | CY-PC18-CS             | CY-PC18-S1                    | $\frac{75}{517}$                      | $\frac{100}{689}$  |
|              | CY-PC20-CS             | CY-PC20-S1                    | $\frac{100}{689}$                     | $\frac{150}{1034}$ |
| 24"<br>600mm | CY-PC16-CS             | CY-PC16-S1                    | $\frac{25}{172}$                      | $\frac{50}{345}$   |
|              | CY-PC18-CS             | CY-PC18-S1                    | $\frac{50}{345}$                      | $\frac{75}{517}$   |
|              | CY-PC20-CS             | CY-PC20-S1                    | $\frac{75}{517}$                      | $\frac{100}{689}$  |

N/R = Not Required. Use next smaller actuator  
 N/A = Not Available. Use next larger actuator

# Dimensions

## Basic Valve with Handwheel Actuator

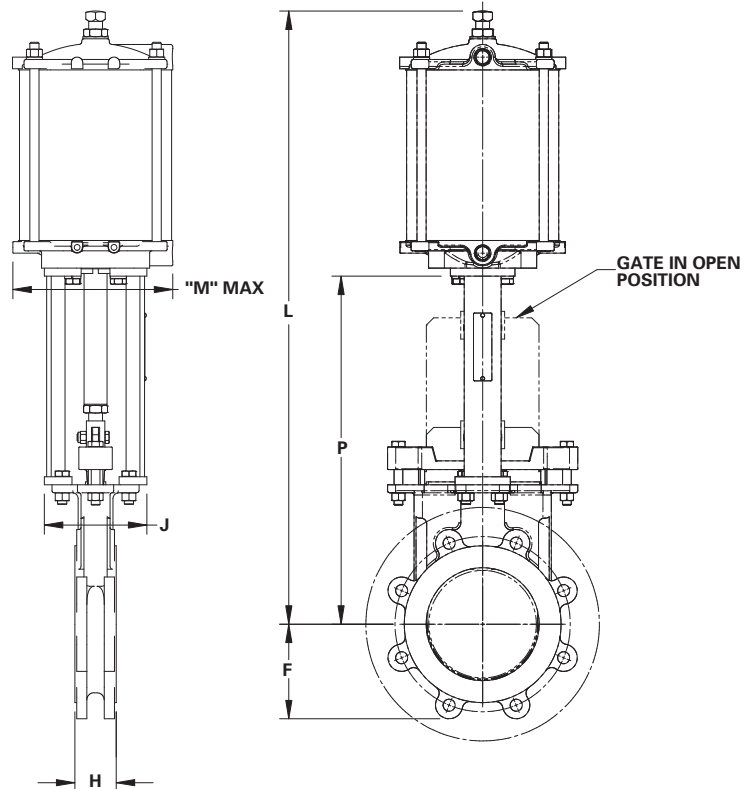
| Valve Size   | Dimensions   |             |             |               |               |              |
|--------------|--------------|-------------|-------------|---------------|---------------|--------------|
|              | F            | H           | J           | L             | M             | N            |
| 2"<br>50mm   | 2.36<br>60   | 1.88<br>48  | 5.04<br>128 | 15.55<br>395  | 13.52<br>343  | 10.00<br>254 |
| 3"<br>80mm   | 2.89<br>73   | 2.00<br>51  | 5.12<br>130 | 19.88<br>505  | 16.69<br>424  | 10.00<br>254 |
| 4"<br>100mm  | 4.23<br>107  | 2.00<br>51  | 5.12<br>130 | 22.78<br>579  | 18.66<br>474  | 10.00<br>254 |
| 6"<br>150mm  | 5.13<br>130  | 2.25<br>57  | 5.12<br>130 | 29.08<br>739  | 23.19<br>589  | 12.00<br>305 |
| 8"<br>200mm  | 6.25<br>159  | 2.75<br>70  | 5.12<br>130 | 35.69<br>907  | 27.72<br>704  | 12.00<br>305 |
| 10"<br>250mm | 7.82<br>199  | 2.75<br>70  | 6.45<br>164 | 42.87<br>1089 | 32.87<br>835  | 14.00<br>356 |
| 12"<br>300mm | 9.30<br>236  | 3.00<br>76  | 6.46<br>164 | 48.64<br>1235 | 36.52<br>928  | 14.00<br>356 |
| 14"<br>350mm | 10.24<br>260 | 3.00<br>76  | 6.93<br>176 | 54.88<br>1394 | 41.56<br>1056 | 18.00<br>457 |
| 16"<br>400mm | 11.55<br>293 | 3.50<br>89  | 7.87<br>200 | 62.44<br>1586 | 47.17<br>1198 | 18.00<br>457 |
| 18"<br>450mm | 12.40<br>315 | 3.50<br>89  | 7.87<br>200 | 69.53<br>1766 | 51.87<br>1317 | 24.00<br>610 |
| 20"<br>500mm | 13.82<br>351 | 4.50<br>114 | 7.87<br>200 | 77.40<br>1966 | 57.71<br>1466 | 24.00<br>610 |
| 24"<br>600mm | 15.86<br>403 | 4.50<br>114 | 9.06<br>230 | 89.29<br>2268 | 65.70<br>1669 | 24.00<br>610 |



## Basic Valve with Cylinder Actuator

| Valve Size   | Dimensions   |             |             |
|--------------|--------------|-------------|-------------|
|              | F            | H           | J           |
| 2"<br>50mm   | 2.36<br>60   | 1.88<br>48  | 5.04<br>128 |
| 3"<br>80mm   | 2.89<br>73   | 2.00<br>51  | 5.12<br>130 |
| 4"<br>100mm  | 4.23<br>107  | 2.00<br>51  | 5.12<br>130 |
| 6"<br>150mm  | 5.13<br>130  | 2.25<br>57  | 5.12<br>130 |
| 8"<br>200mm  | 6.25<br>159  | 2.75<br>70  | 5.12<br>130 |
| 10"<br>250mm | 7.82<br>199  | 2.75<br>70  | 6.45<br>164 |
| 12"<br>300mm | 9.30<br>236  | 3.00<br>76  | 6.46<br>164 |
| 14"<br>350mm | 10.24<br>260 | 3.00<br>76  | 6.93<br>176 |
| 16"<br>400mm | 11.55<br>293 | 3.50<br>89  | 7.87<br>200 |
| 18"<br>450mm | 12.40<br>315 | 3.50<br>89  | 7.87<br>200 |
| 20"<br>500mm | 13.82<br>351 | 4.50<br>114 | 7.87<br>200 |
| 24"<br>600mm | 15.86<br>403 | 4.50<br>114 | 9.06<br>230 |

Inches  
Millimeters





## Valve Sizes 2-10" (50-250mm)

| Actuator Order Code | L                   |                     |                     |                      |                      |                      | M                   | P                   |                     |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
|                     | Valve Size          |                     |                     |                      |                      |                      |                     | Valve Size          |                     |                     |                     |                     |                     |
|                     | 2"<br>50mm          | 3"<br>80mm          | 4"<br>100mm         | 6"<br>150mm          | 8"<br>200mm          | 10"<br>250mm         |                     | 2"<br>50mm          | 3"<br>80mm          | 4"<br>100mm         | 6"<br>150mm         | 8"<br>200mm         | 10"<br>250mm        |
| CY-PC4              | <u>23.96</u><br>609 | <u>24.89</u><br>632 | <u>25.74</u><br>654 | —                    | —                    | —                    | <u>5.38</u><br>137  | <u>13.11</u><br>333 | <u>13.72</u><br>348 | <u>14.75</u><br>375 | —                   | —                   | —                   |
| CY-PC6              | —                   | <u>25.00</u><br>635 | <u>27.46</u><br>697 | <u>33.02</u><br>839  | —                    | —                    | <u>7.88</u><br>200  | —                   | <u>13.29</u><br>338 | <u>14.44</u><br>367 | <u>19.00</u><br>483 | —                   | —                   |
| CY-PC8              | —                   | —                   | <u>30.50</u><br>775 | <u>33.25</u><br>845  | <u>39.74</u><br>1009 | <u>50.63</u><br>1286 | <u>10.50</u><br>267 | —                   | —                   | <u>16.31</u><br>414 | <u>18.87</u><br>479 | <u>23.16</u><br>588 | <u>29.58</u><br>751 |
| CY-PC10             | —                   | —                   | —                   | <u>39.89</u><br>1013 | <u>41.68</u><br>1059 | <u>52.58</u><br>1336 | <u>13.00</u><br>330 | —                   | —                   | —                   | <u>21.43</u><br>544 | <u>23.60</u><br>599 | <u>29.95</u><br>761 |
| CY-PC12             | —                   | —                   | —                   | —                    | <u>53.61</u><br>1362 | <u>55.92</u><br>1420 | <u>15.00</u><br>381 | —                   | —                   | —                   | —                   | <u>31.10</u><br>790 | <u>33.39</u><br>848 |
| CY-PC14             | —                   | —                   | —                   | —                    | —                    | <u>58.95</u><br>1497 | <u>17.00</u><br>432 | —                   | —                   | —                   | —                   | —                   | <u>33.20</u><br>843 |

## Valve Sizes 12-24" (300-600mm)

| Actuator Order Code | L                    |                      |                      |                      |                      |                      | M                   | P                   |                     |                      |                      |                      |                      |
|---------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|----------------------|
|                     | Valve Size           |                      |                      |                      |                      |                      |                     | Valve Size          |                     |                      |                      |                      |                      |
|                     | 12"<br>300mm         | 14"<br>350mm         | 16"<br>400mm         | 18"<br>450mm         | 20"<br>500mm         | 24"<br>600mm         |                     | 12"<br>300mm        | 14"<br>350mm        | 16"<br>400mm         | 18"<br>450mm         | 20"<br>500mm         | 24"<br>600mm         |
| CY-PC10             | <u>54.18</u><br>1376 | <u>63.45</u><br>1612 | —                    | —                    | —                    | —                    | <u>13.00</u><br>330 | <u>32.00</u><br>813 | <u>37.37</u><br>949 | —                    | —                    | —                    | —                    |
| CY-PC12             | <u>57.38</u><br>1457 | <u>63.21</u><br>1606 | <u>66.14</u><br>1680 | —                    | —                    | —                    | <u>15.00</u><br>381 | <u>35.25</u><br>895 | <u>37.37</u><br>949 | <u>40.60</u><br>1031 | —                    | —                    | —                    |
| CY-PC14             | <u>61.81</u><br>1570 | <u>63.21</u><br>1606 | <u>66.39</u><br>1686 | <u>76.96</u><br>1955 | <u>80.30</u><br>2040 | —                    | <u>17.00</u><br>432 | <u>35.25</u><br>895 | <u>37.37</u><br>949 | <u>40.60</u><br>1031 | <u>46.54</u><br>1182 | <u>49.84</u><br>1266 | <u>50.63</u><br>1286 |
| CY-PC16             | <u>52.94</u><br>1345 | <u>57.50</u><br>1461 | <u>64.52</u><br>1639 | <u>70.75</u><br>1797 | <u>78.25</u><br>1988 | <u>90.08</u><br>2288 | <u>17.00</u><br>432 | <u>33.12</u><br>841 | <u>36.49</u><br>927 | <u>41.59</u><br>1056 | <u>45.60</u><br>1158 | <u>50.93</u><br>1294 | <u>58.83</u><br>1494 |
| CY-PC18             | <u>53.19</u><br>1351 | <u>57.75</u><br>1467 | <u>64.77</u><br>1645 | <u>71.00</u><br>1803 | <u>78.50</u><br>1994 | <u>90.33</u><br>2294 | <u>19.00</u><br>483 | <u>33.12</u><br>841 | <u>36.49</u><br>927 | <u>41.59</u><br>1056 | <u>45.60</u><br>1158 | <u>50.93</u><br>1294 | <u>58.83</u><br>1494 |
| CY-PC20             | —                    | <u>58.00</u><br>1473 | <u>65.02</u><br>1652 | <u>71.25</u><br>1810 | <u>78.75</u><br>2000 | <u>90.58</u><br>2301 | <u>21.00</u><br>533 | —                   | <u>36.49</u><br>927 | <u>41.59</u><br>1056 | <u>45.60</u><br>1158 | <u>50.93</u><br>1294 | <u>58.83</u><br>1494 |

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