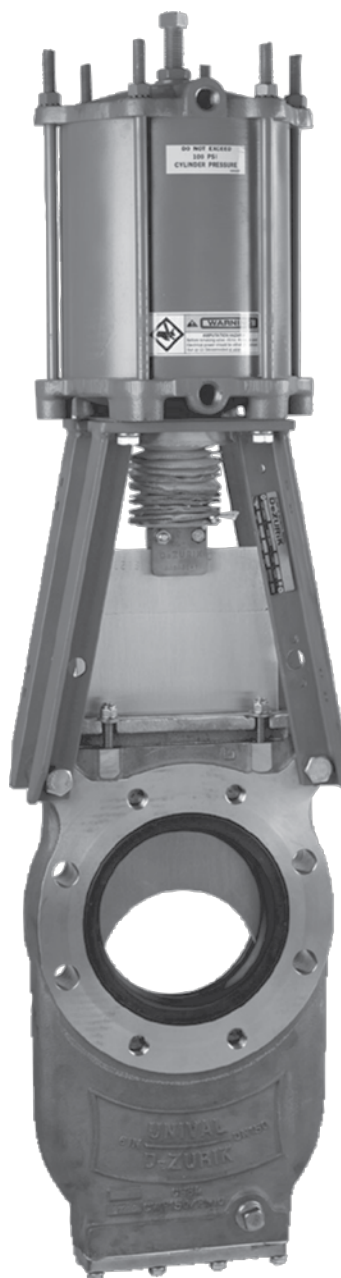
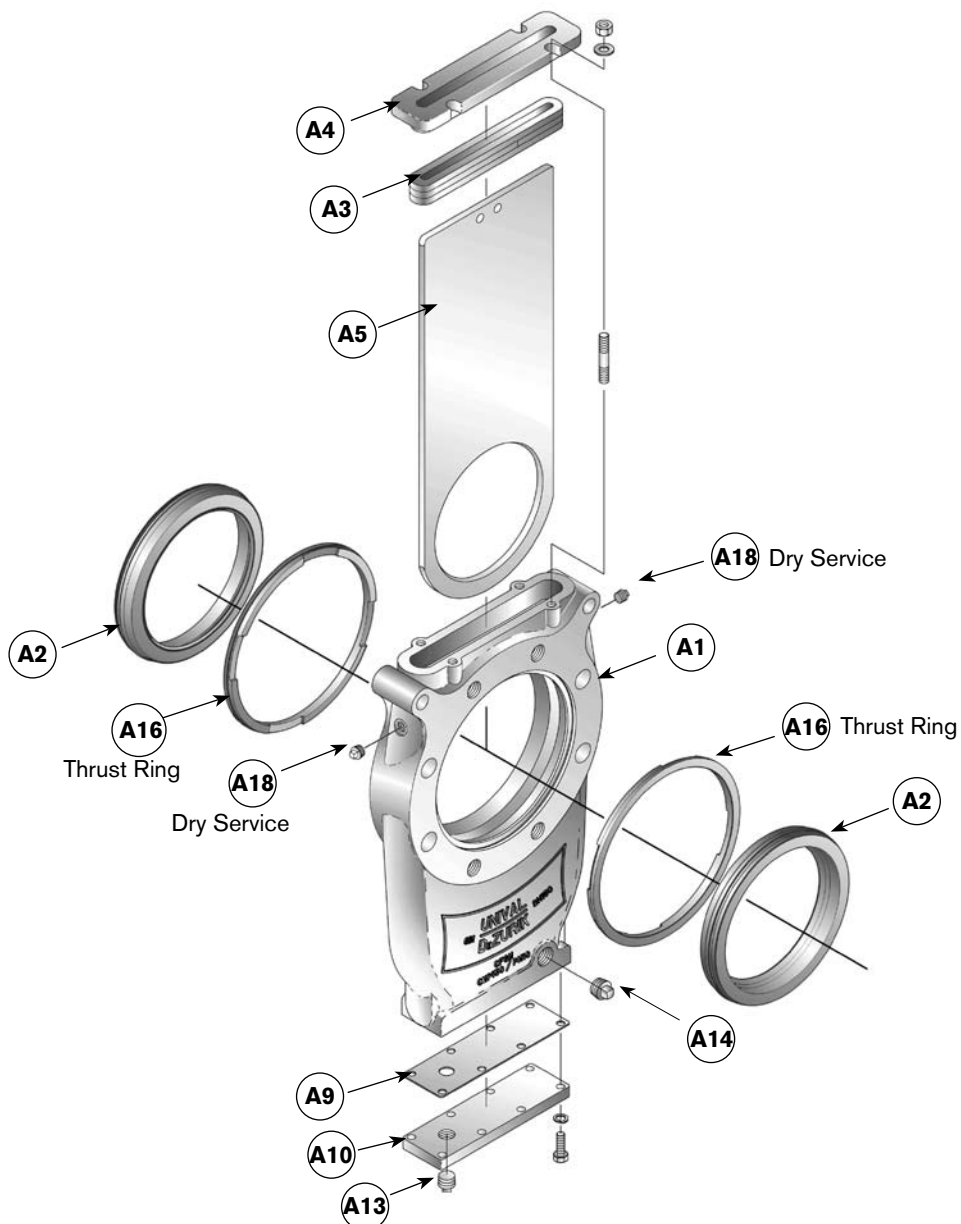




## UNIVAL PORTED GATE VALVES TECHNICAL SPECIFICATIONS



## Materials of Construction



| Item      | Description       | Ductile Iron Body<br>2-24" (50-600mm) | 316 Stainless Steel Body<br>2-24" (50-600mm) |
|-----------|-------------------|---------------------------------------|--|
| A1        | Body              | Ductile iron, ASTM A536 65-45-12      | 316 stainless steel, ASTM A351 CF8M          |
| A5        | Gate              | 316 stainless steel, ASTM A240 T316   | 316 stainless steel, ASTM A240 T316          |
| A4        | Gland             | Ductile iron, ASTM A536 65-45-12      | 316 stainless steel, ASTM A351 CF8M          |
| A10       | Bottom Cover      | Carbon steel, ASTM A36                | 316 stainless steel, ASTM A240 T316          |
|           | Fasteners         | 316 stainless steel                   | 316 stainless steel                          |
| A2        | Rubber Seat       | See seat chart page 3                 | See seat chart page 3                        |
| A3        | Packing           | See packing chart page 3              | See packing chart page 3                     |
| A9        | Gasket            | Synthetic fiber nitrile binder        | Synthetic fiber nitrile binder               |
| A13 & A14 | Plug              | Carbon steel, ASTM A36                | 316 stainless steel, ASTM A240 T316          |
| A16       | Thrust Ring       | PPS/PTFE                              | PPS/PTFE                                     |
| A18       | Dry Service Plugs | Carbon steel, ASTM A36                | 316 stainless steel, ASTM A240 T316          |

## Ordering

### Valve Style

Give body code as follows:

PGV = Unival Ported Gate Valve, 2-24" (50-600mm)  
150 psi C.W.P. (1034 kPa).

### Valve Size

Give size code as follows:

|    |   |     |         |
|----|---|-----|---------|
| 2  | = | 2"  | (50mm)  |
| 3  | = | 3"  | (80mm)  |
| 4  | = | 4"  | (100mm) |
| 6  | = | 6"  | (150mm) |
| 8  | = | 8"  | (200mm) |
| 10 | = | 10" | (250mm) |
| 12 | = | 12" | (300mm) |
| 14 | = | 14" | (350mm) |
| 16 | = | 16" | (400mm) |
| 18 | = | 18" | (450mm) |
| 20 | = | 20" | (500mm) |
| 24 | = | 24" | (600mm) |

### End Style

Give end style code as follows:

W1 = ANSI 150 wafer  
W110 = DIN 10 or BS 4504/10 drilling  
W1J1 = JIS 10 drilling

On Application:

W116 = DIN 16 or BS 4504/16 drilling  
W1D = B.S. Table D  
W1E = B.S. Table E  
W1CA = AS2129 Table C  
W1DA = AS2129 Table D  
W1EA = AS2129 Table E

Consult factory for optional flange drillings.

### Body Material

Give body material code as follows:

DI = Ductile Iron 2-24" (50-600mm)  
S2 = 316 stainless steel 2-24" (50-600mm)

On Application:

CS = Carbon steel  
S3 = 317 stainless steel  
TN = Titanium  
AA = Alloy 20  
HC = Hastelloy C

Additional material options available on request.

### Gate Material

Give gate material code as follows:

S2 = 316 stainless steel

On Application:

S3 = 317 stainless steel  
TN = Titanium  
AA = Alloy 20  
HC = Hastelloy C  
S5 = 17-4 PH stainless steel hardened (RC43)

Plasmadize and Nedox coatings available.  
Consult factory for information.

### Packing Material

Give packing material code as follows:

T = Square braid, solid PTFE to 500°F (260°C) (contains lubricant). Recommended for all liquid or slurry applications except molten alkali metals.  
ZJ = Square braided PTFE impregnated synthetic fiber with one ring PTFE rubber cord to 500°F (260°C) (contains no lubricant). Recommended for all dry service applications.  
ESP = Multi lock braided TFE with one ring EPDM rubber cord and Teflon Glass filled Anti-Extrusion Ring to 300°F (150°C) (contains no lubricants).  
Other packing options available on request.

### Trim Combination

Resilient Seat Material

Give resilient seat material code as follows:

FKM = Fluoro-rubber Viton to 350°F (177°C)  
EPDM = Terpolymer of ethylene, propylene and a diene to 250°F (121°C)

Note: Temperature limit of FKM exceeds temperature limit of standard thrust ring. Contact factory for special thrust ring on services with temperatures above 250°F (121°C)

Optional seat material codes:

CIIR = Chloro-isobutene-isoprene to 250°F (121°C)  
CR = Chloroprene (Neoprene) to 180°F (82°C)  
NBR = Acrylonitrile-butadiene (Nitrile) to 180°F (82°C)  
NAR = Natural (gum) rubber to 180°F (82°C)  
NBRW = White food grade nitrile to 180°F (82°C)  
AF = Aflas 350°F (177°C)  
GF = Viton 350°F (177°C)

Thrust Ring

Give thrust ring material code as follows:

PT = PPS/PTFE 250°F (121°C)

### Options

Give option code as follows, separate with dash if both are specified:

LC = Less lower body cover  
DS = Dry service

### Actuators

Add actuator code from following pages to basic valve code.

### Valve Accessories

Order as separate item only. Enter ACC\*FLS-PGV followed by dash, material code and valve size.

ACC\*FLS = Flange seal

CS = Carbon steel 14 - 24" (350-600mm)

Required only if valve is installed in non-standard ANSI or international flanges. Refer to page 6 for face-to-face dimensions when using flange seals.

Ordering Example:

ACC\*FLS-PGV-CS-14

### Ordering Example:

PGV,4,W1,S2,S2,T,EPDM-PT\*MN-HD12-CS

## Rotary Manual Actuators

Valves through 12" (300mm) can be furnished with Handwheel or Chainwheel Actuators. Bevel Gear style Handwheel and Chainwheel Actuators are available on valve sizes 8–24" (200–600mm). Bevel Gear Actuators are available on smaller valve sizes on application. Standard yoke material is carbon steel. Stainless steel yokes are available on request. To order, add the appropriate code from the table to the basic valve order code.

### Handwheel/Chainwheel Actuators and Bevel Gear Handwheel/Chainwheel Actuators

| Valve Size<br>DN | Order Code |            |                         |                          | CWP (PN) psi<br>(kPa) |
|------------------|------------|------------|-------------------------|--------------------------|-----------------------|
|                  | Handwheel  | Chainwheel | Bevel Gear<br>Handwheel | Bevel Gear<br>Chainwheel |                       |
| 2"<br>50mm       | MN-HD12-CS | MN-CW8-CS  | –                       | –                        | 150<br>1034           |
| 3"<br>80mm       | MN-HD12-CS | MN-CW8-CS  | –                       | –                        | 150<br>1034           |
| 4"<br>100mm      | MN-HD12-CS | MN-CW8-CS  | –                       | –                        | 150<br>1034           |
| 6"<br>150mm      | MN-HD12-CS | MN-CW12-CS | –                       | –                        | 150<br>1034           |
| 8"<br>200mm      | MN-HD16-CS | MN-CW20-CS | MNB-HD12-CS             | MNB-CW12-CS              | 150<br>1034           |
| 10"<br>250mm     | MN-HD20-CS | MN-CW20-CS | MNB-HD12-CS             | MNB-CW12-CS              | 150<br>1034           |
| 12"<br>300mm     | MN-HD20-CS | MN-CW20-CS | MNB-HD12-CS             | MNB-CW12-CS              | 150<br>1034           |
| 14"<br>350mm     | –          | –          | MNB-HD16-CS             | MNB-CW20-CS              | 150<br>1034           |
| 16"<br>400mm     | –          | –          | MNB-HD16-CS             | MNB-CW20-CS              | 150<br>1034           |
| 18"<br>450mm     | –          | –          | MNB-HD16-CS             | MNB-CW20-CS              | 150<br>1034           |
| 20"<br>500mm     | –          | –          | MNB-HD30-CS             | MNB-CW30-CS              | 150<br>1034           |
| 24"<br>600mm     | –          | –          | MNB-HD30-CS             | MNB-CW30-CS              | 150<br>1034           |

#### Ordering Example:

PGV,8,W1,S2,S2,T,CR-PT\*MNB-HD12-CS

## Cylinder Actuators

DeZURIK Unival Ported Gate Valves are available with Double-Acting Pneumatic or Hydraulic Cylinders. Maximum supply pressure is 100 psi (690 kPa) for Pneumatic Cylinders and 1500 psi (10,342 kPa) for hydraulic. Minimum supply pressure for hydraulic actuators is 1000 psi (6,895 kPa). Corrosion-resistant cylinder coatings are available on application. Consult factory for Spring Return Cylinder sizing information.

To order, add the appropriate code to the basic valve order code.

#### Ordering Example:

PGV,4,W1,S2,S2,T,CR-PT\*CY-PC6-CS

| Valve Size<br>DN | Order Code                    |                                   | CWP (PN)<br>psi (kPa) |
|------------------|-------------------------------|-----------------------------------|-----------------------|
|                  | Pneumatic<br>60 psi (414 kPa) | Hydraulic<br>1000 psi (6,896 kPa) |                       |
| 2"<br>50mm       | CY-PC6-CS                     | CY-H1.5-CS                        | 150<br>1034           |
| 3"<br>80mm       | CY-PC6-CS                     | CY-H2-CS                          | 150<br>1034           |
| 4"<br>100mm      | CY-PC6-CS                     | CY-H2-CS                          | 150<br>1034           |
| 6"<br>150mm      | CY-PC8-CS                     | CY-H2-CS                          | 150<br>1034           |
| 8"<br>200mm      | CY-PC8-CS                     | CY-H2-CS                          | 150<br>1034           |
| 10"<br>250mm     | CY-PC10-CS                    | CY-H2-CS                          | 150<br>1034           |
| 12"<br>300mm     | CY-PC10-CS                    | CY-H2.5-CS                        | 150<br>1034           |
| 14"<br>350mm     | CY-PC12-CS                    | CY-H3.25-CS                       | 150<br>1034           |
| 16"<br>400mm     | CY-PC12-CS                    | CY-H3.25-CS                       | 150<br>1034           |
| 18"<br>450mm     | CY-PC14-CS                    | CY-H4-CS                          | 150<br>1034           |
| 20"<br>500mm     | CY-PC14-CS                    | CY-H4-CS                          | 150<br>1034           |
| 24"<br>600mm     | CY-PC14-CS                    | CY-H4-CS                          | 150<br>1034           |

## Accessories

### Air Filter Regulator

The DeZURIK Air Filter Regulator is designed to provide clean, accurate air pressure to actuators and positioners.

### Four-Way Solenoid Valves

Solenoid valves may be ordered mounted and piped as part of a complete valve/actuator assembly or as a separate item.

### Position Indicating Switches

Position Indicating Switches are available for use on double-acting cylinder actuators. Order as part of a complete valve/actuator assembly by adding the appropriate code from the table below to the valve and actuator order code. Two switches will automatically be set to indicate full open and full closed positions.

#### Two Switches — Open/Closed

| Description              | Switch Type | Rating              | Order Code |
|--------------------------|-------------|---------------------|------------|
| 2 SPDT                   | Mechanical  | Nema 1,3,4,6,13     | SE649      |
| 2 DPDT                   | Mechanical  | Nema 1,3,4,6,13     | SE524      |
| 2 SPDT                   | Mechanical  | Nema 1,3,4,6,7,9,13 | SEH95      |
| 2 DPDT                   | Mechanical  | Nema 1,3,4,6,7,9,13 | SEH96      |
| 2 SPDT,<br>Brass Housing | Proximity   | No Approval         | SEH93      |
| 2 SPDT,<br>ST Housing    | Proximity   | UL, CSA, FA*        | SEH94      |

\*Class I, Div. 1, Group A,B,C,D, Class II, Groups E,F,G

#### One Switch — Open

| Description              | Switch Type | Rating              | Order Code |
|--------------------------|-------------|---------------------|------------|
| 1 SPDT                   | Mechanical  | Nema 1,3,4,6,13     | SEJ40      |
| 1 DPDT                   | Mechanical  | Nema 1,3,4,6,13     | SEJ42      |
| 1 SPDT                   | Mechanical  | Nema 1,3,4,6,7,9,13 | SEJ46      |
| 1 DPDT                   | Mechanical  | Nema 1,3,4,6,7,9,13 | SEJ44      |
| 1 SPDT,<br>Brass Housing | Proximity   | No Approval         | SEJ36      |
| 1 SPDT,<br>SST Housing   | Proximity   | UL, CSA, FA*        | SEJ38      |

#### One Switch — Closed

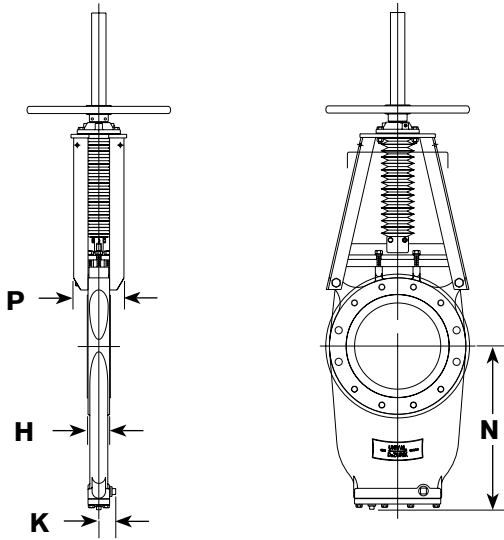
| Description              | Switch Type | Rating              | Order Code |
|--------------------------|-------------|---------------------|------------|
| 1 SPDT                   | Mechanical  | Nema 1,3,4,6,13     | SEJ41      |
| 1 DPDT                   | Mechanical  | Nema 1,3,4,6,13     | SEJ43      |
| 1 SPDT                   | Mechanical  | Nema 1,3,4,6,7,9,13 | SEJ47      |
| 1 DPDT                   | Mechanical  | Nema 1,3,4,6,7,9,13 | SEJ45      |
| 1 SPDT, Brass<br>Housing | Proximity   | No Approval         | SEJ37      |
| 1 SPDT, SST<br>Housing   | Proximity   | UL, CSA, FA*        | SEJ39      |

#### Ordering Example:

PGV, 4, WI, S2, S2, T, EPDM-PT\*CY-PC6-CS\*SEH96

## Dimensions

### Basic Valve 2–24" (50–600mm)



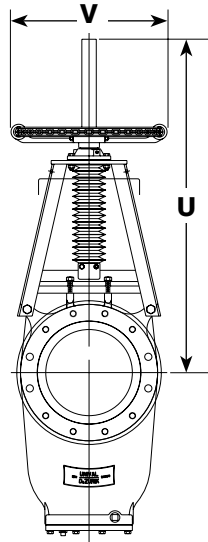
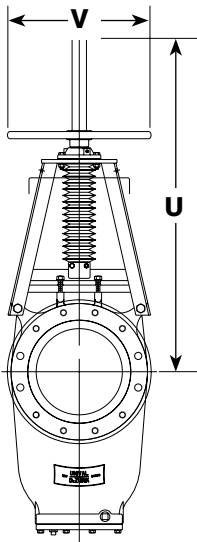
### Basic Valve

| Valve Size<br>DN | Dimensions    |                  |            |               |             |
|------------------|---------------|------------------|------------|---------------|-------------|
|                  | H<br>Standard | H Flange<br>Seal | K          | N             | P           |
| 2"<br>50mm       | 1.88<br>48    | 2.31<br>59       | 1.56<br>40 | 6.34<br>161   | 4.38<br>111 |
| 3"<br>80mm       | 2.00<br>51    | 2.44<br>62       | 1.62<br>41 | 7.84<br>199   | 5.00<br>127 |
| 4"<br>100mm      | 2.00<br>51    | 2.44<br>62       | 1.72<br>44 | 9.63<br>245   | 5.00<br>127 |
| 6"<br>150mm      | 2.25<br>57    | 2.81<br>71       | 1.85<br>47 | 12.93<br>328  | 5.25<br>133 |
| 8"<br>200mm      | 2.75<br>70    | 3.31<br>84       | 2.10<br>53 | 16.91<br>430  | 6.75<br>171 |
| 10"<br>250mm     | 2.75<br>70    | 3.31<br>84       | 2.23<br>57 | 19.66<br>499  | 6.75<br>171 |
| 12"<br>300mm     | 3.00<br>76    | 3.56<br>90       | 2.35<br>60 | 22.72<br>577  | 7.00<br>178 |
| 14"<br>350mm     | 3.00<br>76    | 3.81<br>97       | 2.35<br>60 | 24.57<br>624  | 7.00<br>178 |
| 16"<br>400mm     | 3.50<br>89    | 4.31<br>109      | 2.60<br>66 | 27.69<br>703  | 7.50<br>191 |
| 18"<br>450mm     | 3.50<br>89    | 4.31<br>109      | 2.78<br>71 | 30.63<br>778  | 7.50<br>191 |
| 20"<br>500mm     | 4.50<br>114   | 5.56<br>141      | 3.28<br>83 | 34.79<br>884  | 8.50<br>216 |
| 24"<br>600mm     | 4.50<br>114   | 5.56<br>141      | 3.28<br>83 | 41.01<br>1042 | 8.50<br>216 |

Inches  
Millimeters

### Handwheel

### Chainwheel



### Handwheel/Chainwheel

| Valve Size<br>DN | Dimensions    |                  |            |               |             |
|------------------|---------------|------------------|------------|---------------|-------------|
|                  | H<br>Standard | H Flange<br>Seal | K          | N             | P           |
| 2"<br>50mm       | 1.88<br>48    | 2.31<br>59       | 1.56<br>40 | 6.34<br>161   | 4.38<br>111 |
| 3"<br>80mm       | 2.00<br>51    | 2.44<br>62       | 1.62<br>41 | 7.84<br>199   | 5.00<br>127 |
| 4"<br>100mm      | 2.00<br>51    | 2.44<br>62       | 1.72<br>44 | 9.63<br>245   | 5.00<br>127 |
| 6"<br>150mm      | 2.25<br>57    | 2.81<br>71       | 1.85<br>47 | 12.93<br>328  | 5.25<br>133 |
| 8"<br>200mm      | 2.75<br>70    | 3.31<br>84       | 2.10<br>53 | 16.91<br>430  | 6.75<br>171 |
| 10"<br>250mm     | 2.75<br>70    | 3.31<br>84       | 2.23<br>57 | 19.66<br>499  | 6.75<br>171 |
| 12"<br>300mm     | 3.00<br>76    | 3.56<br>90       | 2.35<br>60 | 22.72<br>577  | 7.00<br>178 |
| 14"<br>350mm     | 3.00<br>76    | 3.81<br>97       | 2.35<br>60 | 24.57<br>624  | 7.00<br>178 |
| 16"<br>400mm     | 3.50<br>89    | 4.31<br>109      | 2.60<br>66 | 27.69<br>703  | 7.50<br>191 |
| 18"<br>450mm     | 3.50<br>89    | 4.31<br>109      | 2.78<br>71 | 30.63<br>778  | 7.50<br>191 |
| 20"<br>500mm     | 4.50<br>114   | 5.56<br>141      | 3.28<br>83 | 34.79<br>884  | 8.50<br>216 |
| 24"<br>600mm     | 4.50<br>114   | 5.56<br>141      | 3.28<br>83 | 41.01<br>1042 | 8.50<br>216 |

Inches  
Millimeters



## **Sales and Service**

For information about our worldwide locations, approvals, certifications and local representative:

Web Site: [www.dezurik.com](http://www.dezurik.com) E-Mail: [info@dezurik.com](mailto:info@dezurik.com)



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