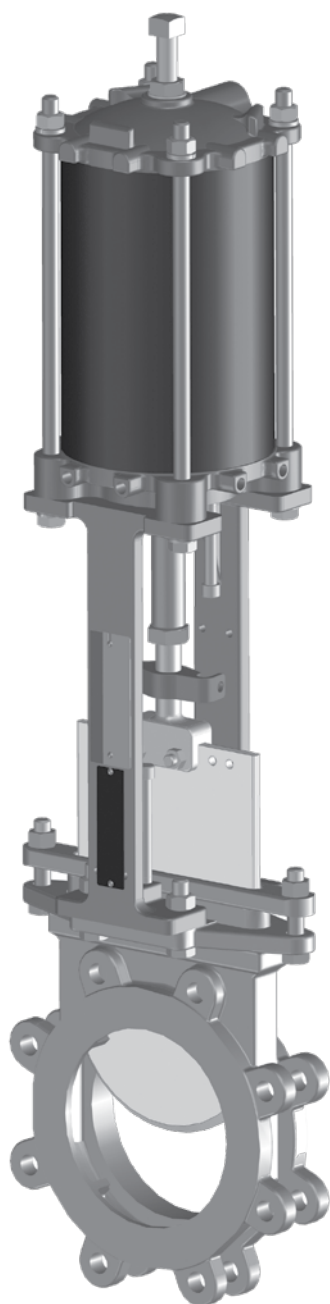


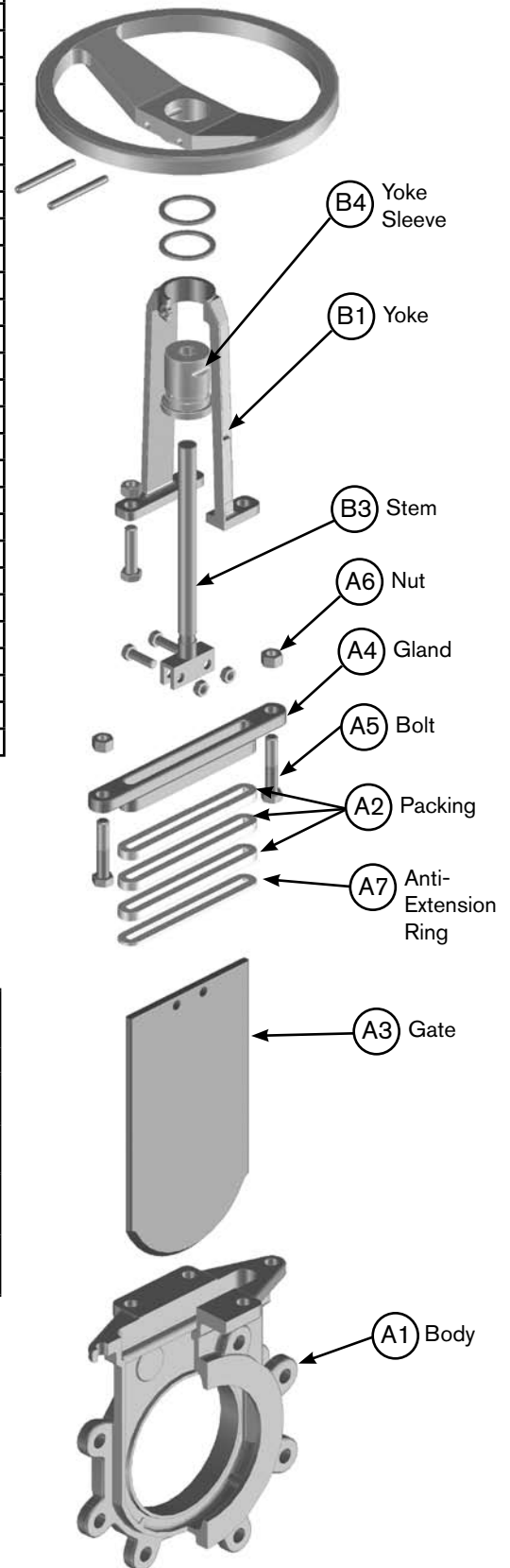


KCS CAST STAINLESS STEEL KNIFE GATE VALVES



Materials of Construction

Item	Description	Material
A1	Body	304 Stainless Steel ASTM A351 CF8
		316 Stainless Steel ASTM A351 CF8M
		317 Stainless Steel ASTM A351 CG8M
		254 SMO Stainless Steel
		Alloy 20
		Hastelloy C 276
A2	Packing	Teflon w/ Teflon anti-extrusion ring 500°F (260°C)
		Teflon w/ metal scraper 500°F (260°C)
		Dry Service-Dry Teflon with Teflon anti-extrusion ring 500°F (260°C)
		High Temperature-Braided Packing w/ metal scraper ring 1000°F (540°C)
A3	Gate	304 Stainless Steel ASTM A240
		316 Stainless Steel ASTM A240
		317 Stainless Steel ASTM A240
		Alloy 20
		17-4 Stainless Steel Hardened
		254 SMO
		Hastelloy C 276
		420 Stainless Steel Hardened
A4	Gland	316 Stainless Steel ASTM A351 CF8M
		317 Stainless Steel ASTM A351 CG8M
A5	Bolt	18-8 Stainless Steel
A6	Nut	Carbon Steel Zinc Plated
A7	Anti-Extrusion Ring	Glass-filled PTFE (with TBP & TDP Packing Only)
B5	Yoke Sleeve	Aluminum Bronze
B6	Stem	304 Stainless Steel ASTM A276
B7	Yoke	304 Stainless Steel CF8M
		Carbon Steel ASTM A216 WCB



Applicable Standards

DeZURIK KCS Knife Gate Valves are designed and/or tested to meet the following standards:

TAPPI TIS 405-8	Recommendations for Stainless Steel, Bonnetless, Flanged, Water and Knife Gate Valves
MSS SP-81-Metal Seated Valves	Stainless Steel, Bonnetless, Flanged Knife Gate Valves
ANSI B16.5- 2-24" (50-60mm)	Carbon Steel Flanges and Flanged Fittings, ANSI 150. conforms to related drilling dimensions.
ANSI 16.47- 30-48" (750-1200mm)	Large diameter Steel Flanges. Series A. Conforms to related dimensions
International Standards	Conforms to flanged bolt guides and pressure ratings- DIN 10 and ISO 7005-1PN/10; BS 4504/PN10 and AS 2129 Table D.
	Conforms to flanged bolt guides DIN 16; ISO 7005-2 PN/16; BS 4504/PN16 and AS 2129 Table E.

Valve Selections

Shut-Off Capabilities

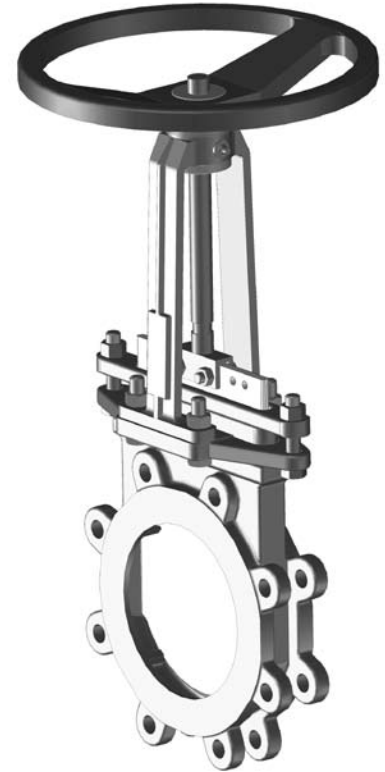
Metal Seats	Meet MSS-SP-81 and TAPPI TIS 405-8
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Pressure Ratings

2"-24" 50-600 mm	150 PSIG C.W.P. (1035 kPa)
30"-36" 750-900 mm	75 PSIG C.W.P. (520 kPa)
42" -48" 1050-1200 mm	50 PSIG C.W.P. (345 kPa)

Cv/Kv Values, K Factors, Area of Opening

Valve Size	Cv* Kv* 100% Open	K Factor **	Area of Opening (in ² /cm ²)
<u>2"</u> 50mm	<u>300</u> 259	0.20	<u>3.1</u> 20
<u>3"</u> 80mm	<u>675</u> 584	0.18	<u>7.1</u> 46
<u>4"</u> 100mm	<u>1200</u> 1038	0.17	<u>12.6</u> 81
<u>5"</u> 125mm	<u>1875</u> 1622	0.16	<u>19.6</u> 127
<u>6"</u> 150mm	<u>2700</u> 2336	0.15	<u>28.3</u> 183
<u>8"</u> 200mm	<u>4795</u> 4148	0.14	<u>50.3</u> 325
<u>10"</u> 250mm	<u>7494</u> 6479	0.13	<u>78.5</u> 506
<u>12"</u> 300mm	<u>10790</u> 9334	0.13	<u>113.1</u> 730
<u>14"</u> 350mm	<u>13150</u> 11375	0.13	<u>137.9</u> 890
<u>16"</u> 400mm	<u>17420</u> 15069	0.12	<u>182.7</u> 1179
<u>18"</u> 450mm	<u>22290</u> 19282	0.12	<u>261.6</u> 1688
<u>20"</u> 500mm	<u>27760</u> 24014	0.12	<u>291.0</u> 1878
<u>24"</u> 600mm	<u>40495</u> 35030	0.11	<u>424.6</u> 2740
<u>30"</u> 750mm	<u>64090</u> 55441	0.11	<u>672.0</u> 4336
<u>36"</u> 900mm	<u>93080</u> 80519	0.10	<u>975.9</u> 6297



*Cv = Flow in GPM of water at 1 psi pressure drop.

Kv = Flow in m³/hr. of water at 100 kPa pressure drop.

**The equivalent length of pipe may be calculated according to the following formula:

$L = \frac{K \times D}{f}$ Where L = Equivalent length of pipe in feet
 K = K factor - Resistance coefficient of valve
 D = Pipe diameter in feet
 f = Friction factor, relating to type of pipe

Valve Selections

Valve & Actuator Weights

Pounds
Kilograms

Valve Size	Basic Valve	Add for Lever	Add for Handwheel	Add for Chainwheel	Add for Bevel Gear w/ Handwheel*	Add for Cylinder
2" 50mm	$\frac{9}{4.1}$	$\frac{20}{9}$	$\frac{20}{9}$	$\frac{32}{14.5}$	-	4" = $\frac{29}{13}$
3" 80mm	$\frac{13}{6}$	$\frac{37}{17}$	$\frac{27}{12}$	$\frac{39}{18}$	$\frac{88}{40}$	4" = $\frac{37}{17}$
4" 100mm	$\frac{20}{9.1}$	$\frac{48}{22}$	$\frac{36}{16}$	$\frac{48}{22}$	$\frac{96}{43.5}$	4" = $\frac{45}{20}$ 6" = $\frac{63}{29}$
5" 125mm	$\frac{26}{11.8}$	$\frac{60}{27}$	$\frac{51}{23}$	$\frac{66}{30}$	$\frac{108}{49}$	4" = $\frac{58}{26}$ 6" = $\frac{76}{35}$ 8" = $\frac{88}{40}$
6" 150mm	$\frac{31}{14.1}$	$\frac{66}{30}$	$\frac{57}{26}$	$\frac{75}{34}$	$\frac{113}{51}$	4" = $\frac{63}{29}$ 6" = $\frac{81}{37}$ 8" = $\frac{93}{42}$
8" 200mm	$\frac{53}{24.1}$	$\frac{98}{44.5}$	$\frac{86}{39}$	$\frac{101}{46}$	$\frac{144}{65}$	6" = $\frac{112}{51}$ 8" = $\frac{124}{56}$
10" 250mm	$\frac{86}{39.1}$	$\frac{157}{71}$	$\frac{141}{64}$	$\frac{179}{81}$	$\frac{191}{87}$	8" = $\frac{174}{79}$ 10" = $\frac{220}{100}$ 12" = $\frac{258}{117}$
12" 300mm	$\frac{125}{56.8}$	$\frac{213}{97}$	$\frac{187}{85}$	$\frac{227}{103}$	$\frac{241}{109.5}$	8" = $\frac{225}{102}$ 10" = $\frac{270}{123}$ 12" = $\frac{309}{140}$
14" 350mm	$\frac{141}{64.1}$	-	$\frac{265}{120}$	$\frac{284}{129}$	$\frac{303}{138}$	10" = $\frac{332}{151}$ 12" = $\frac{372}{169}$
16" 400mm	$\frac{227}{103.2}$	-	$\frac{341}{155}$	$\frac{358}{163}$	$\frac{380}{173}$	10" = $\frac{409}{186}$ 12" = $\frac{449}{204}$ 14" = $\frac{495}{225}$
18" 450mm	$\frac{294}{133.6}$	-	$\frac{433}{197}$	$\frac{449}{204}$	$\frac{473}{215}$	12" = $\frac{551}{250}$ 14" = $\frac{602}{274}$ 16" = $\frac{813}{370}$
20" 500mm	$\frac{428}{194.5}$	-	$\frac{593}{269.5}$	$\frac{653}{297}$	$\frac{637}{289.5}$	12" = $\frac{712}{323.5}$ 14" = $\frac{760}{345}$ 16" = $\frac{982}{446}$
24" 600mm	$\frac{561}{255}$	-	$\frac{803}{365}$	-	$\frac{882}{401}$	12" = $\frac{947}{430}$ 14" = $\frac{1001}{455}$ 16" = $\frac{1219}{554}$ 18" = $\frac{1262}{574}$
30" 750mm	$\frac{1143}{519.5}$	-	-	-	$\frac{1595}{725}$	12" = $\frac{1692}{769}$ 14" = $\frac{1768}{804}$ 16" = $\frac{1985}{802}$ 18" = $\frac{2205}{1002}$ 20" = $\frac{2365}{1075}$
36" 900mm	$\frac{1676}{761.8}$	-	-	-	$\frac{2366}{1075}$	14" = $\frac{2541}{1155}$ 16" = $\frac{2755}{1252}$ 18" = $\frac{2987}{1358}$ 20" = $\frac{3150}{1432}$

Note: Weights are approximate and do not include crating.

For Bevel Gear with Chainwheel, add the following weight to the bevel gear with handwheel weight:

2-18" add 7 lbs. (3kg)

20" & 24" add 26 lbs. (12kg)

30" add 74 lbs. (34kg)

36" add 74 lbs. (34kg)

42" & 48" Valves and Actuators are on application

Ordering

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

Valve Style

Give valve style code as follows:

KCS = Cast Stainless Steel Knife Gate Valve

Valve Size

Give size code as follows:

2 = 2" (50mm)	16 = 16" (400mm)
3 = 3" (80mm)	18 = 18" (450mm)
4 = 4" (100mm)	20 = 20" (500mm)
5 = 5" (125mm)	24 = 24" (600mm)
6 = 6" (150mm)	30 = 30" (750mm)
8 = 8" (200mm)	36 = 36" (900mm)
10 = 10" (250mm)	42 = 42" (1050mm)
12 = 12" (300mm)	48 = 48" (1200mm)
14 = 14" (350mm)	

End Connection

Give end connection code as follows:

Standard ANSI Drilling

F1 = ANSI

Optional

F1T = ANSI Through Bolting

International Drilling

F110 = ISO 7005/PN10 Drilling

F116 = ISO 7005/PN16 Drilling

F1DA = AS2129, Table D Drilling

F1EA = AS2129, Table E Drilling

Body Material

Give body material code as follows:

S1 = 304 Stainless Steel

S2 = 316 Stainless Steel

Non Standard

S3 = 317 Stainless Steel

S6 = 254 Stainless Steel

AA = Alloy 20

HC = Hastelloy C 276

Packing Material

Give packing material code as follows:

TBP = Teflon Cord w/RTFE Anti-Extrusion ring for service up to 500°F (260°C) and pH range 0-14

TBW = Teflon Cord w/Metal Scraper for service up to 500°F (260°C) and pH range 0-14

TDP = Dry Service, un-lubricated Teflon Cord w/ RTFE Anti-extrusion ring for service up to 500°F (260°C) and pH range 0-14

HMP = High Temperature Braided Packing with Metal Scraper for service up to 1000°F (540°C) and pH range 4-10

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

Gate Material

Give gate material code as follows:

S1 = 304 Stainless Steel

S2 = 316 Stainless Steel

Non Standard

S3 = 317 Stainless Steel

S6 = 254 SMO Stainless Steel

AA = Alloy 20

HC = Hastelloy C 276

S5 = Hardened 17-4PH Stainless Steel (H900)

S8 = 420 Series Stainless Steel

Seat Material

Give seat material code as follows:

Standard

M = Integral Metal Seat (same as body material)

V = V-Orifice Metal Seat (same as body material)

Optional Seats On Application

S5D = 17-4PH Hardened H900 Seat, Replaceable

PTFE = Teflon

RTFE = Glass Filled Teflon

Standard Options

Give options code as follows:

PSA = Purge Ports in Seat Area

PCA = Purge Ports in Chest Area

PSC = Purge Ports in Seat and Chest Area

CRT = Certified Physical and Chemical Test Report per QY00006

Ordering Example:

KCS, 6, F1, S1, TBP, S1-M*Actuator

KCS, 6, F116, S1, TBP, S1-M*Actuator

KCS, 6, F1, S3, TBP, S3-M*Actuator

Lever Actuators

Lever actuators can be furnished on 2–8" (50–200mm) valves for applications where rapid valve operation is required or where space prevents use of a standard handwheel or bevel gear actuator. Maximum pressure differential for valves with lever actuators should not exceed the limits listed. Maximums are based on the operating force for each valve size. To order, add the lever actuator code to the basic valve order code. Lever material is carbon steel for all body styles.

Valve Size	Order Code	Max. Pressure Differential psi/kPa
<u>2-4"</u> 50-100mm	MN-LV-CS	<u>75</u> 520
<u>5-6"</u> 125-150mm	MN-LV-CS	<u>45</u> 310
<u>8"</u> 200mm	MN-LV-CS	<u>25</u> 170

Handwheel & Chainwheel Actuators

All 2–24" (50–600mm) valves can be furnished with handwheel actuators, and 2–20" (50–500mm) with chainwheel actuators. Bevel gear actuators are available on 2–48" (50–1200mm) valves with handwheel or chainwheel actuators.

To order handwheel or chainwheel actuators, add the appropriate order code to the basic valve order code. Refer to information on bevel gear actuators for use on dry solids, paper stock, slurries or when pressure exceeds limits shown. Order chain for chainwheel actuators as a separate item

Valve Size	Order Code	Max. Pressure Differential psi/kPa
<u>2"</u> 50mm	MN-HD8-S1	<u>150</u> 1030
<u>3"</u> 80mm	MN-HD8-S1	<u>150</u> 1030
<u>4"</u> 100mm	MN-HD10-S1	<u>150</u> 1030
<u>5"</u> 125mm	MN-HD12-S1	<u>150</u> 1030
<u>6"</u> 150mm	MN-HD12-S1	<u>150</u> 1030
<u>8"</u> 200mm	MN-HD14-S1	<u>150</u> 1030
<u>10"</u> 250mm	MN-HD16-S1	<u>150</u> 1030
<u>12"</u> 300mm	MN-HD17-S1	<u>150</u> 1030
<u>14"</u> 350mm	MN-HD18-S1	<u>100*</u> 690*
<u>16"</u> 400mm	MN-HD18-S1	<u>75*</u> 520*
<u>18"</u> 450mm	MN-HD20-S1	<u>75*</u> 520*
<u>20"</u> 500mm	MN-HD20-S1	<u>50*</u> 345*
<u>24"</u> 600mm	MN-HD25-S1	<u>25*</u> 175*

*Bevel gear actuators are recommended when pressure exceeds limits shown

Valve Size	Order Code	Max. Pressure Differential psi/kPa
<u>2-4"</u> 50-100mm	MN-CW8-S1	<u>150</u> 1030
<u>5-8"</u> 125-200mm	MN-CW12-S1	<u>150</u> 1030
<u>10 & 12"</u> 250 & 300mm	MN-CW20-S1	<u>150</u> 1030
<u>14"</u> 350mm	MN-CW20-S1	<u>125*</u> 860*
<u>16"</u> 400mm	MN-CW20-S1	<u>100*</u> 690*
<u>18"</u> 450mm	MN-CW20-S1	<u>75*</u> 520*
<u>20"</u> 500mm	MN-CW30-S1	<u>50*</u> 345*

*Bevel gear actuators are recommended when pressure exceeds limits shown

Bevel Gear Actuators

Bevel gear actuators provide vertical mounting of the handwheel or chainwheel, or can be used where space limitations prohibit the use of a standard handwheel or chainwheel. A mechanical advantage makes large valve operation easier and faster.

Bevel Gear Chainwheel Actuator

Valve Size	Order Code		Max. Pressure Differential psi/kPa
	Std./180 Mounting	90/270 Mounting	
3-18" 80-450mm	MNB-CW12-CS	MNB-CW12-A-CS	<u>150</u> 1030
20 & 24" 500 & 600mm	MNB-CW20-CS	MNB-CW20-A-CS	<u>150</u> 1030
30 & 36" 750 & 900mm	MNB-CW30-CS	MNB-CW30-A-CS	<u>75</u> 515
42 & 48" 1050 & 1200mm	MNB-CW30-CS	MNB-CW30-A-CS	<u>50</u> 345

Ordering Example:

KCS,6,F1,S1,TBPS1-M*MNB-HD12-A-CS
Actuator mounted 90 from standard

Actuator Mounting

Bevel gears can be mounted at standard, 90, 180 or 270 degree mounting. To order, use the appropriate order code from the chart for standard or 180 degree mounting, or 90 or 270 degree mounting. Specify which position as second line information.

Bevel Gear Handwheel Actuator

Valve Size	Order Code		Max. Pressure Differential psi/kPa
	Std./180 Mounting	90/270 Mounting	
3-18" 80-450mm	MNB-HD12-CS	MNB-HD12-A-CS	<u>150</u> 1030
20 & 24" 500 & 600mm	MNB-HD16-CS	MNB-HD16-A-CS	<u>150</u> 1030
30" 750mm	MNB-HD30-CS	MNB-HD30-A-CS	<u>75</u> 515
36" 900mm	MNB-HD30-CS	MNB-HD30-A-CS	<u>75</u> 515
42" 1050mm	MNB-HD30-CS	MNB-HD30-A-CS	<u>50</u> 345
48" 1200mm	MNB-HD30-CS	MNB-HD30-A-CS	<u>50</u> 345

Ordering Example:

KCS,6,F1,S1,TBPS1-M*MNB-CW 12-CS

Accessories-Manual Actuators

Chain

Chain for use with chainwheel actuators. Order as a separate item by giving code from table and specifying length of chain as second line information. Order as a separate item.

Chain Type	Order Code
Standard	ACC*CN102
Galvanized	ACC*CN103
304 Stainless Steel	ACC*CN106

Ordering Example:

ACC*CN102

Chain 12 feet long (366cm)

Handwheel—2" Nut Extension

Provides extension of the handwheel or nut to allow remote operation — normally from above. The extension includes fittings and extension pipe with handwheel or nut mounted. To order, specify description and extension length from center line of valve to top of handwheel or nut.

Ordering Examples:

KCS,6,F1,S1,TBPS1-M*MN-HD12,ENHD

KCS,6,F1,S1,TBA,S1-M*MN-N,ENTS

Center line of valve to top of handwheel /nut 72" (1829mm).

Locking Device

Available on 2-36" sizes of handwheel, cylinder and bevel gear handwheel operated valves. To order, add a comma and the order code "LK" after the actuator code, 42-48" on application.

Ordering Examples:

KCS,6,F1,S1,TBPS1-M*MN-HD12,-CS, LK

Floorstand

A floorstand for handwheel actuated valves allows operation from above. Includes floorstand with gate position indicator, handwheel, fittings and extension. To order, specify length from center line of valve to base of floorstand. This dimension must be at least twice the dimension from center line to handwheel. For non-rising stems only. Rising stems on application.

Ordering Examples:

KCS,6,F1,S1,TBPS1-M*MN-HD12-S1

Except with Floorstand. Center line of valve to base of floorstand 72" (1829mm)

Cylinder Actuators

On-Off Cylinder Actuators

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

Actuator Sizing

60 psi (410 kPa) Air Supply

Valve Size	Actuator Order Code	Max. Pressure Differential (psi/kPa)			
		On - Off		Positioning	
		Dry Solids, Slurries, & Paper Stock	Liquids & Gases	Dry Solids, Slurries, & Paper Stock	Liquids & Gases
2" 50mm	CY-PC4	150	150	150	150
		1035	1035	1035	1035
3" 80mm	CY-PC4	125	150	100	150
		865	1035	690	1035
4" 100mm	CY-PC4	75	150	25	75
	CY-PC6	520	1035	175	520
5" & 6" 125 & 150mm	CY-PC4	150	-	75	150
	CY-PC6	1035	-	520	1035
	CY-PC8	-	50	-	-
8" 200mm	CY-PC6	100	150	25	100
	CY-PC8	690	1035	175	690
10" 250mm	CY-PC8	150	-	100	150
	CY-PC10	1035	-	690	1035
	CY-PC12	-	-	125	-
12" 300mm	CY-PC8	75	100	-	75
	CY-PC10	520	690	-	520
	CY-PC12	125	150	50	125
14" 350mm	CY-PC10	865	1035	345	865
	CY-PC12	150	-	75	150
	CY-PC14	1035	-	520	1035
16" 400mm	CY-PC10	75	125	-	75
	CY-PC12	520	865	-	520
	CY-PC14	125	150	25	125
		865	1035	175	865
		150	-	75	150
		1035	-	520	1035

Positioning Cylinder Actuators

DeZURIK cylinder actuators are available with pneumatic or electronic positioners for throttling control. Positioners are enclosed and mounted on the superstructure.

Valve Size	Actuator Order Code	Max. Pressure Differential (psi/kPa)			
		On - Off		Positioning	
		Dry Solids, Slurries, & Paper Stock	Liquids & Gases	Dry Solids, Slurries, & Paper Stock	Liquids & Gases
18" 450mm	CY-PC12	75	150	-	75
	CY-PC14	520	1035	-	520
	CY-PC16	125	-	25	125
		865	-	175	865
		150	-	75	150
		1035	-	520	1035
20" 500mm	CY-PC12	50	125	-	50
	CY-PC14	345	865	-	345
	CY-PC16	100	150	-	100
		690	1035	-	690
		150	-	25	150
		1035	-	175	1035
24" 600mm	CY-PC12	25	100	-	25
	CY-PC14	175	690	-	175
	CY-PC16	75	150	-	75
	CY-PC18	520	1035	-	520
		125	-	-	125
		865	-	-	865
		150	-	25	150
		1035	-	175	1035
30" 750mm	CY-PC12	-	50	-	-
	CY-PC14	25	75	-	-
	CY-PC16	175	520	-	-
	CY-PC18	50	-	-	25
		345	-	-	175
		75	-	-	75
		520	-	-	520
		-	-	25	-
		-	-	175	-
36" 900mm	CY-PC14	-	50	-	-
	CY-PC16	25	75	-	-
	CY-PC18	175	520	-	-
	CY-PC20	50	-	-	25
		345	-	-	175
		75	-	-	75
		520	-	-	520
		-	-	-	50
		-	-	-	345

Actuator Sizing

80 psi (550 kPa) Air Supply

Valve Size	Actuator Order Code	Max. Pressure Differential (psi/kPa)				Valve Size	Actuator Order Code	Max. Pressure Differential (psi/kPa)				
		On - Off		Positioning				On - Off		Positioning		
		Dry Solids, Slurries, & Paper Stock	Liquids & Gases	Dry Solids, Slurries, & Paper Stock	Liquids & Gases			Dry Solids, Slurries, & Paper Stock	Liquids & Gases	Dry Solids, Slurries, & Paper Stock	Liquids & Gases	
2" 50mm	CY-PC4	150	150	150	150	18" 450mm	CY-PC12	125	150	25	100	
		1035	1035	1035	1035			865	1035	175	690	
3" 80mm	CY-PC4	150	150	100	150			CY-PC14	150	-	75	150
		1035	1035	690	1035		1035		520	1035		
4" 100mm	CY-PC4	75	150	25	75		CY-PC16		-	-	100	-
		520	1035	175	520			690				
5" & 6" 125 & 150mm	CY-PC6	150	-	75	150	20" 500mm		CY-PC12	100	150	-	50
		1035	-	520	1035		690		1035	-	345	
		25	75	-	-		CY-PC14		150	-	25	100
175	520	-	-	1035	175	690						
8" 200mm	CY-PC8	150	150	50	100	CY-PC16		-	-	75	150	
		1035	1035	345	690		520	1035				
		-	-	125	150		24" 600mm	50	150	-	25	
100	150	-	25	CY-PC12	345	1035		-	175			
690	1035	-	175		CY-PC14	125		-	-	75		
150	-	75	150			CY-PC16	865	-	-	520		
10" 250mm	CY-PC10	100	150	-			100	30" 750mm	CY-PC12	-	75	-
		690	1035	-	690		520			-	-	-
		150	-	100	150	CY-PC14	-			-	-	175
1035	-	690	1035	CY-PC16	75		-	-	75			
-	-	150	-		520		-	-	-	520		
12" 300mm	CY-PC12	100	150		-	75	CY-PC18	-	-	25	-	
		690	1035	-	520	175		-	-	175		
		150	-	75	125	CY-PC20		-	-	75	-	
1035	-	520	865	520	-		-	520				
-	-	125	150	36" 900mm	25		75	-	-			
100	150	50	75		CY-PC14	175	520	-	-			
690	1035	345	520			CY-PC16	50	-	-	25		
150	-	75	150	CY-PC18			345	-	-	175		
14" 350mm	CY-PC12	150	-		50		150	CY-PC20	75	-	-	50
		1035	-		520	1035	520		-	-	345	
		-	-	125	150	CY-PC14	-		-	25	75	
100	150	25	75	CY-PC16	-		-	175	520			
690	1035	175	520		CY-PC18		25	75	-	-		
150	-	50	125			CY-PC20	175	520	-	-		
16" 400mm	CY-PC14	100	150	100			150	CY-PC16	-	-	25	75
		690	1035	690	1035		CY-PC18		-	-	175	520
		150	-	100	150	CY-PC20			-	-	175	520
1035	-	690	1035	CY-PC14	-			-	100	150		
-	-	690	1035		CY-PC16		-	-	150	1035		
-	-	100	150			CY-PC18	-	-	25	75		
-	-	690	1035	CY-PC20			-	-	175	520		

NOTE: 42" & 48" Valve Actuators on Application

Electric Motor Actuators

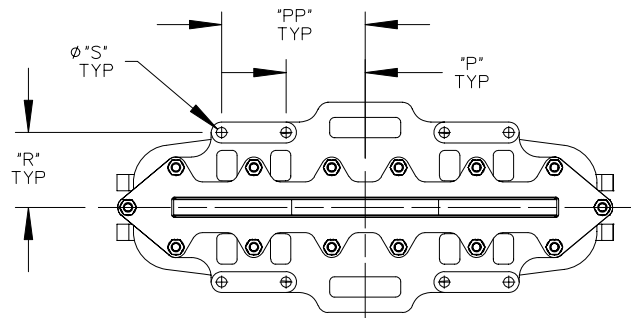
DeZURIK KCS Knife Gate Valves can be furnished with electric motor actuators including Limitorque Auma, Rotork, E.I.M. and others.

Ordering

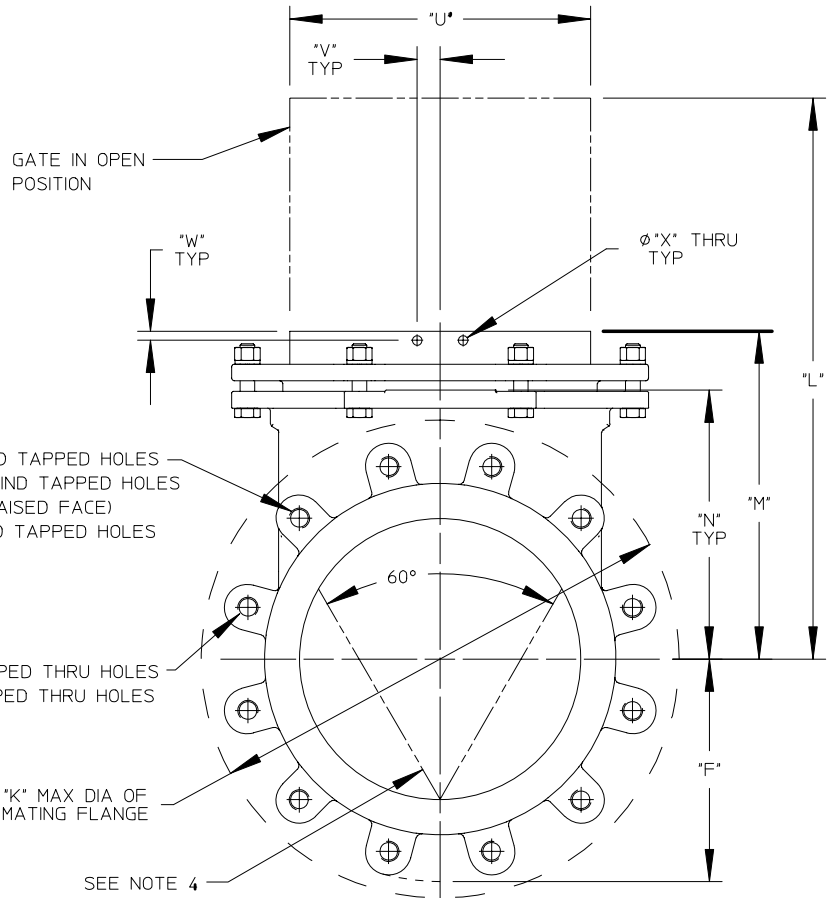
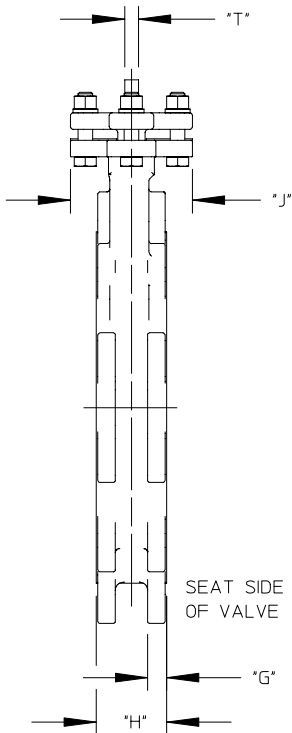
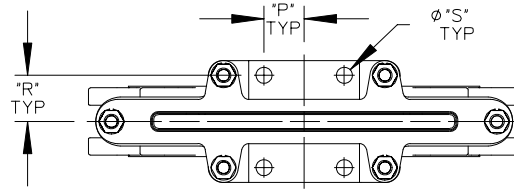
When ordering electric motor actuators, specify valve order code, shutoff pressure, service conditions — flowing media and installation direction; type of application — on/off or throttling; speed of operation; NEMA rating — 4, 7, submersible, etc.; electrical characteristics — voltage and phase; actuator accessories and controls as per specification requirements.

Basic Valve Dimensions

Valve Size	Dimensions																					
	Inches										Millimeters											
A	B	C	D	E	F	G	H	J	K	L	M	N	P	PP	R	S	T	U	V	W	X	
2" 50mm	4.75 121	5/8-11 UNC	2	2	.45 11	3.00 76	.50 13	1.88 48	3.50 89	6.00 152	7.87 200	5.55 141	3.62 92	1.32 34	N/A	1.32 34	.43 11	.30 8	2.44 62	.75 19	.39 10	.41 11
3" 80mm	6.00 152	5/8-11 UNC	2	2	.46 12	3.75 95	.50 13	2.00 51	3.46 88	7.75 197	9.77 248	6.72 171	4.47 114	1.32 34	N/A	1.32 34	.43 11	.30 8	3.54 90	.75 19	.39 10	.41 11
4" 100mm	7.50 191	5/8-11 UNC	6	2	.49 12	4.51 115	.56 14	2.00 51	3.46 88	9.00 229	11.66 296	7.45 189	5.22 133	1.32 34	N/A	1.32 34	.43 11	.30 8	4.58 116	.75 19	.39 10	.41 11
5" 125mm	8.50 216	3/4-10 UNC	6	2	.47 12	5.00 127	.63 16	2.25 57	4.09 104	10.38 264	13.66 347	8.22 210	5.98 152	1.61 41	N/A	1.52 39	.57 15	.30 8	5.67 144	.75 19	.39 10	.41 11
6" 150mm	9.50 241	3/4-10 UNC	6	2	.59 15	5.50 140	.63 16	2.25 57	4.33 110	11.38 289	14.96 380	8.63 219	6.52 165	1.61 41	N/A	1.52 39	.69 18	.30 8	6.65 169	.98 25	.39 10	.41 11
8" 200mm	11.75 298	3/4-10 UNC	6	2	.61 15	6.75 171	.69 18	2.75 70	4.72 120	14.38 365	18.71 475	10.56 268	8.05 205	1.71 44	N/A	1.71 44	.69 18	.39 10	8.76 222	.98 25	.39 10	.41 11
10" 250mm	14.25 362	7/8-9 UNC	8	4	.59 15	8.00 203	.79 20	2.75 70	5.12 130	17.38 441	22.35 568	12.11 308	9.67 246	1.71 44	N/A	1.89 48	.69 18	.49 12	10.80 274	.98 25	.39 10	.41 11
12" 300mm	17.00 432	7/8-9 UNC	8	4	.59 15	9.50 241	.81 21	3.00 76	5.20 132	20.88 530	26.28 668	14.00 356	11.48 292	1.71 44	N/A	1.97 50	.69 18	.59 15	12.83 326	.98 25	.39 10	.41 11
14" 350mm	18.75 476	1-8 UNC	8	4	.65 17	10.50 267	.87 22	3.00 76	5.16 131	21.25 540	28.72 729	15.11 384	12.28 312	1.71 44	N/A	1.91 49	.69 18	.59 15	14.06 357	.98 25	.39 10	.41 11
16" 400mm	21.25 540	1-8 UNC	10	6	.77 20	11.75 298	.94 24	3.50 89	5.67 144	23.50 597	33.71 856	17.90 455	14.72 374	1.71 44	N/A	2.17 55	.69 18	.77 20	16.10 409	1.18 30	.55 14	.55 14
18" 450mm	22.75 578	1-1/8-7 UNC	10	6	.76 19	12.50 318	.94 24	3.50 89	5.67 144	25.13 638	38.12 968	20.08 510	17.15 436	1.71 44	N/A	2.17 55	.69 18	.77 20	18.19 462	1.18 30	.55 14	.55 14
20" 500mm	24.96 634	1-1/8-7 UNC	12	8	1.00 25	13.75 349	1.00 25	4.50 114	8.03 204	27.63 702	41.91 1065	21.28 541	18.45 469	2.11 54	N/A	3.31 84	.69 18	.96 25	20.28 515	1.18 30	.55 14	.55 14
24" 600mm	29.50 749	1-1/4-7 UNC	12	8	1.04 26	16.00 406	1.00 25	4.50 114	9.69 246	34.25 870	48.63 1235	24.60 625	21.74 552	2.11 54	N/A	4.13 105	.69 18	.96 25	24.35 619	1.18 30	.55 14	.55 14
30" 750mm	36.05 916	1-1/4-7 UNC	6	22	1.10 28	19.37 492	1.38 35	5.35 136	16.30 414	38.63 981	59.82 1519	29.37 746	23.23 590	6.14 156	11.14 283	5.81 148	.81 21	1.18 30	31.54 801	1.97 50	1.44 37	.81 21
36" 900mm	43.23 1098	1-1/2-6 UNC	6	26	1.10 28	22.76 578	1.61 41	6.30 160	16.85 428	46.00 1168	69.98 1777	33.21 844	27.17 690	6.14 156	11.14 283	5.81 148	.81 21	1.42 36	36.50 927	1.97 50	1.44 37	.81 21
42" 1070mm	49.49 1257	1-1/2-6 UNC	14	22	1.18 30	26.50 673	1.50 38	5.43 138	17.91 455	53.50 1359	80.35 2041	38.13 969	31.22 793	5.94 151	11.26 286	6.61 168	.94 24	1.42 36	43.11 1095	1.95 50	1.44 37	.81 21



DIMENSION LOCATIONS FOR
30" & 36" & 42" VALVES ONLY



- *B* SIZE OF BLIND TAPPED HOLES
- *E* DEPTH OF BLIND TAPPED HOLES (INCLUDING RAISED FACE)
- *D* QTY OF BLIND TAPPED HOLES PER FLANGE
- *A* DIA OF BC
- *B* SIZE OF TAPPED THRU HOLES
- *C* QTY OF TAPPED THRU HOLES PER FLANGE
- *A* DIA OF BC

Note:

1. Valve is shown in the closed position.
2. Valve ordered with thru bolting have all holes, except those that are blind tapped. Drilled to ANSI standards Class 125 & 150.
3. Drawing shows flange drillings for use with ANSI flanges, for use with other than ANSI flanges, see DeZurik drawing A-64605.
4. Vee Orifice option is shown on drawing with phantom lines. Flow must be from side opposite the seat.
5. Install the valve with the higher pressure against the side opposite the seat when the valve is closed. Flow may be in either direction.

Accessories

Positioners

DeZURIK cylinder actuators are available with pneumatic or electro-pneumatic or digital positioners for throttling control. Positioners are enclosed and mounted on the yoke.

Air Filter Regulator

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

Ordering Example:

ACC*CNP025

Manual Loading Station Control Panel

For all positioning pneumatic actuators. Output is 0–15 psi (0–100 kPa). It includes signal output gauge and pressure reducing valve. Order as a separate item by giving code

ACC*CNP025.

Four-Way Manual Control Valves

Four-Way Manual Control Valves are for all pneumatic or hydraulic double-acting cylinder actuators. They are available mounted or as a separate item. To order mounted as part of a complete valve and actuator assembly, add code from table below to valve and actuator order code. To order separately, enter code ACC* followed by code from table below.

Valve Size	NPT Size (Inches)	Code
2–36" (50–900mm)	1/4"	CV201
2–10" (50–250mm)	3/8"	CV202
12–36" (300–900mm)	1/2"	CV203

Ordering Example:

KCS,6,F1,S2,TBPS2-M*CY-PC6, CV201

Ordering Example (Separate Item):

ACC*CV201

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.

Speed Control Valves

Speed Control Valves are available for controlling valve opening or closing speed with pneumatic actuators. The speed of operation is adjustable. To order mounted, add the appropriate code* to the valve and actuator order code.

Speed Control	Order Code
Two speed controls	SP
One control to close	SPC
One control to open	SPO

Ordering Example:

KCS,6,F1,S2,TBPS2-M*CY-PC6, CS,SP

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, Brass Housing	Proximity	No Approval	SEH93
2 SPDT, SST Housing	Proximity	UL, CSA, FA*	SEH94

* Class I, Div. I, 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, Brass Housing	Proximity	No Approval	SEJ36
1 SPDT, SST Housing	Proximity	UL, CSA, FA*	SEJ38

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

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 Housing	Proximity	No Approval	SEJ37
1 SPDT, SST Housing	Proximity	UL, CSA, FA*	SEJ39

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

Ordering Example:

KCS,6,F1,S2,TBPS2-M*CY-PC6, CS,SEH96

Sales and Service

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

Web Site: www.dezurik.com E-Mail: info@dezurik.com



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DeZURIK reserves the right to incorporate our latest design and material changes without notice or obligation. Design features, materials of construction and dimensional data, as described in this bulletin, are provided for your information only and should not be relied upon unless confirmed in writing by DeZURIK. Certified drawings are available upon request.