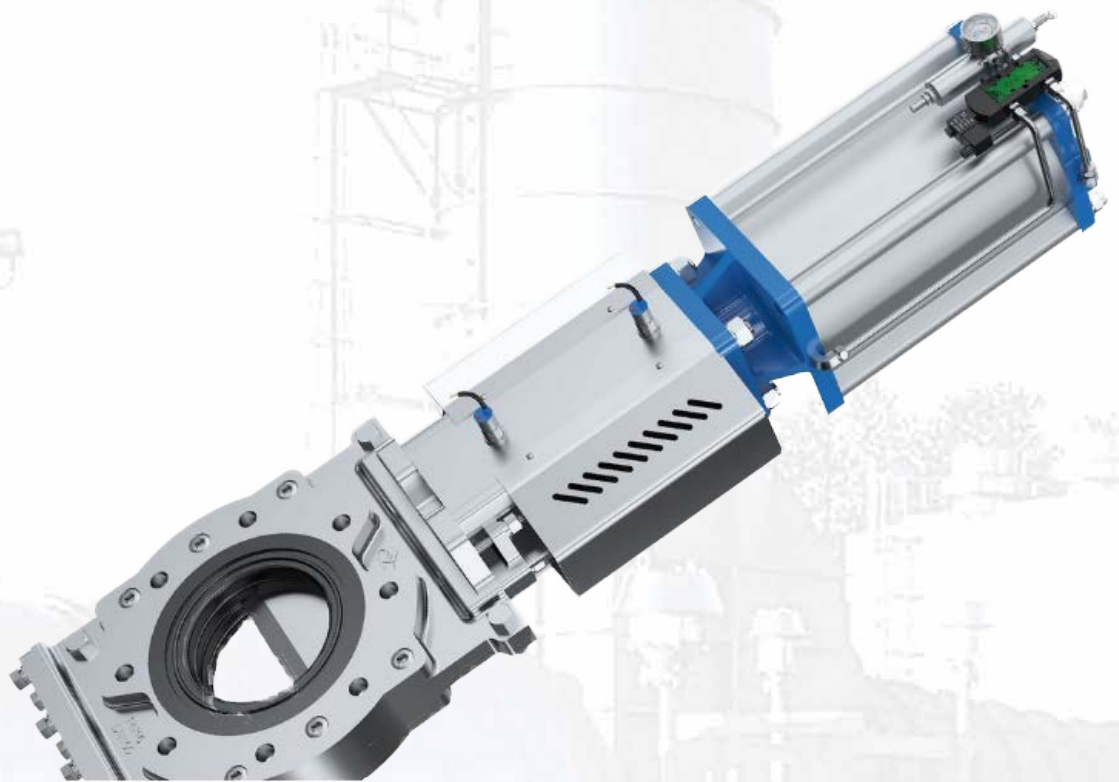




KV CONTROLS

Control & Isolation Valves



**DK SLURRY KNIFE
GATE VALVE**

Slurry Knife Gate Valve

Linuo DK series knife gate valves are soft sealing linear shut off valves that are light weight with compact construction and convenient to install and use. Valves are full port in design to realize the characteristic of small flow resistance. When the gate is open, it will achieve direct current between valve and pipeline. Valves are available as manual with handwheel, or can be automated with actuator for remote operation. The cone-shape design of the gate provides strong cutting force. The die-casting rubber seat which can realize bi-directional sealing. The biggest characteristic of valves is that when they are fully open, the medium will not come into the valve chest, which can prevent the valve chest from settling pulp during the valve running online, then reducing maintenance cost.

DESIGN FEATURES

Gate

The arc shape design of the gate provides strong cutting force. Each gate is precision ground and hard chrome plated as a standard. It provides superior abrasion and corrosion resistance.

Internal Packing

Packing gland and packing are internally located, which realizes stable sealing and easy online maintenance.

Valve Body

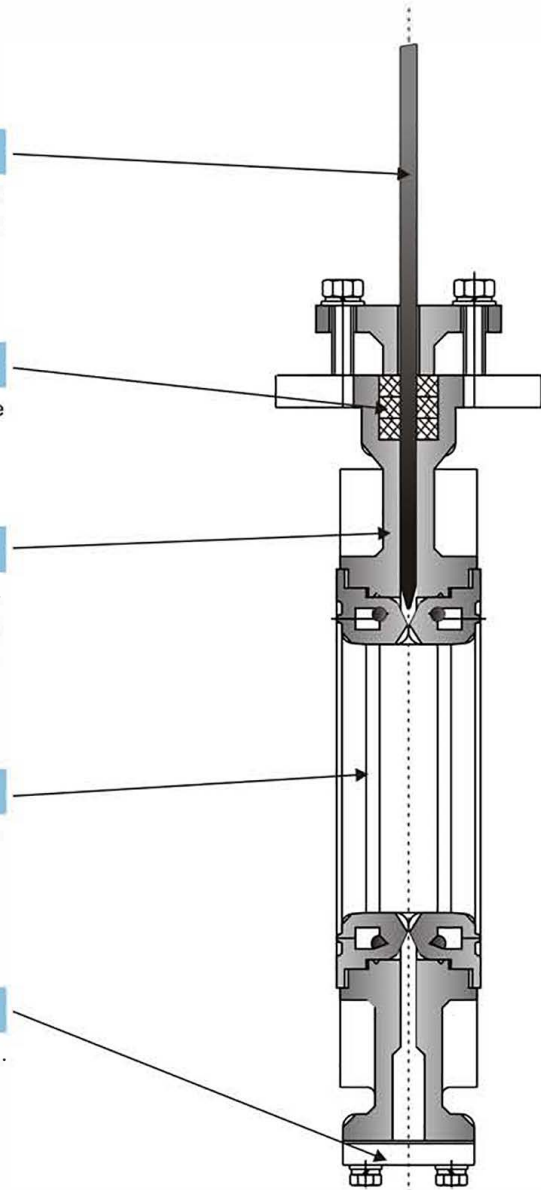
Body is two piece design that is light weight and compact. The body is designed without any cavities, so there is no place for solids to accumulate. With this design, even with high solids content in the slurry, the valve will not jam.

Sealing Seat

Resilient and abrasion resistant rubber seat are die cast in a unique rubber mould, and have a metal support ring to extend the life of the valves. Seat material options are NBR, EPDM and Naturel Rubber.

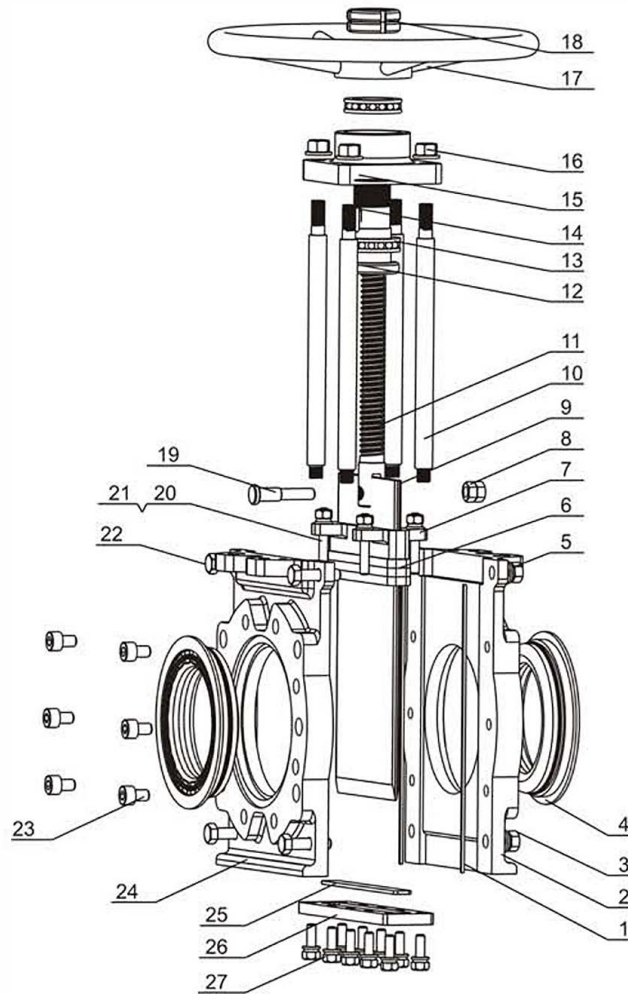
Bottom Discharge Cover

The bottom discharge cover can easily be removed for routine cleaning. Customer can also outfit the valve with their own purge system.



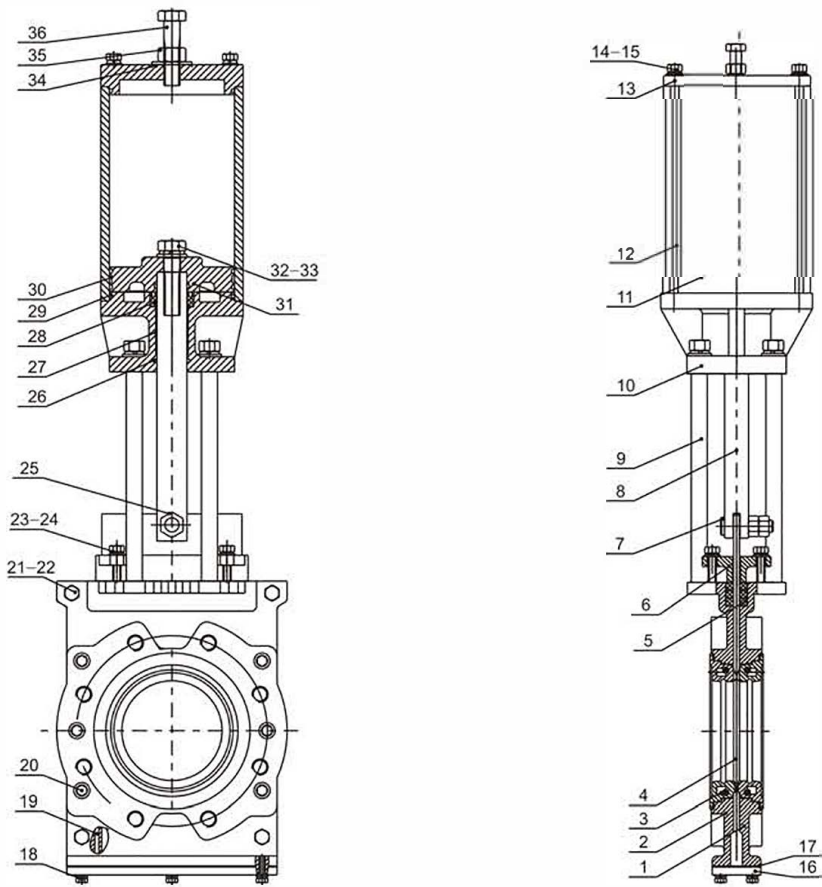
Technical Specification

1. Nominal Diameter: DN50–DN600
2. Flange connection as per: ANSI B16.5
3. Valve design and manufacture as per: MSS SP-81
4. Material standard: ASTM A351, A216, etc.
5. Seat tightness testing pressure: 2.8Bar and maximum allowable working differential pressure (1 0.3bar for size \leq DN600 / 24" , 6.9bar for size $>$ DN600/24")
6. Air supply pressure: 4~7 bar
7. Air supply pressure: 4~7 bar
8. Connection Type: Lugged
9. Working Temperature: NBR : -20~+120°C; EPDM : -20~+120°C; Naturel Rubber : -20~+70°C; Viton : -20~+200°C
10. Applicable Media: Pulp, Slurry, Water
11. Leakage: Zero Leakage



PARTS LIST-Model DK

No.	Description	QTY	Material of Construction	No.	Description	QTY	Material of Construction
1	Gasket	1	NBR	15	Square Plate	1	WCB, ZI108
2	Upper Body	1	CF8M,CF8,WCB	16	Nut	4	304
3	Hexagon Nut	varies	304	17	Handwheel	1	Ductile Cast Iron
4	Seat	2	EPDM,NBR,NB	18	Nut	1	45
5	Hexagon Nut	varies	304	19	Driving Nut	1	ZCuZn38Mn2Fb2
6	Packing	varies	PTFE	20	Nut	varies	304
7	Gland	1	CF8M,CF8,WCB	21	Connection Bolt	varies	304
8	Hexagon Nut	2	304	22	Hexagon Bolt	varies	304
9	Gate	1	304,316,410+HCr	23	Screws	varies	304
10	Pillar	4	304, 45+Cr	24	Lower Body	1	CF8M,CF8,WCB
11	Stem	1	304	25	Gasket	1	NBR
12	Nut	1	H59	26	Cap	1	CF8M,CF8,WCB
13	Plane Bearing	2	Gcr6	27	Hexagon Bolt	varies	304
14	Flat Key	1	45				



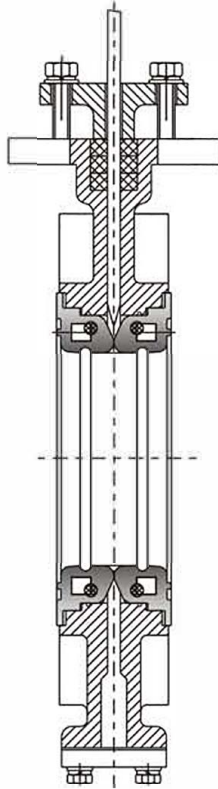
PARTS LIST-Model DK

No.	Description	QTY	Material	No.	Description	QTY	Material
1	Upper Body	1	WCB/CF8/CF8M	19	Sealing Rope	1	NBR
2	Lower Body	1	WCB/CF8/CF8M	20	Socket Head Screw	varies	304
3	Seat	3	EPDM/NBR	21	Hexagon Bolt	varies	304
4	Gate	1	410/304/316+Hcr	22	Hexagon Nut	varies	304
5	Packing	1	PTFE	23	Connection Bolt	varies	304
6	Gland Packing	1	WCB/CF8/CF8M	24	Hexagon Nut	varies	304
7	Connection Pin	1	304	25	Hexagon Nut	2	304
8	Piston Rod	1	45#+Cr	26	O-ring	2	NBR
9	Pillar	4	304/45#+Cr	27	Bushing	1	Composite Material
10	Lower Cylinder Cover	1	Carbon Steel/ZL108	28	Y-ring	1	Polyurethane
11	Cylinder	1	Aluminium Alloy /Q235	29	O-ring	4	NBR
12	Connection Rod	varies	Carbon Steel+Zn	30	Guiding Ring	1	PTFE
13	Upper Cylinder Cover	1	Carbon Steel/ZL108	31	Piston	1	ZI108/Q235
14	Hexagon Nut	varies	304	32	Hexagon Bolt	1	45
15	Spring Gasket	varies	65Mn	33	Spring Gasket	1	65Mn
16	Cap	1	WCB/CF8/CF8M	34	Gasket	1	PTFE
17	Gasket	1	NBR	35	Hexagon Nut	1	304
18	Hexagon Bolt	varies	304	36	Adjusting Bolt	1	304

Fully Open and Close Status

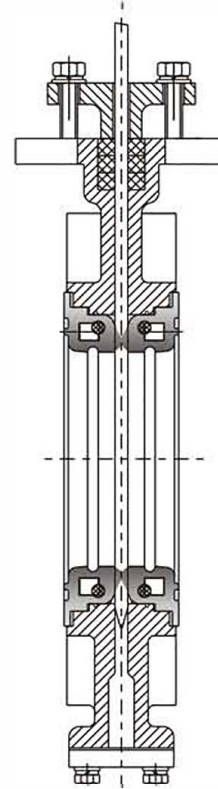
Full Open Status

Low flow resistance at full open position as both seats will be in tight contact to form full bore flow path which is ensured by good seat strength with internal metal support ring as well as pipeline pressure. It offers perfect sealing performance to prevent the clogging inside body cavity by medium during the running, extending service life and reducing maintenance cost.



Full Close Status

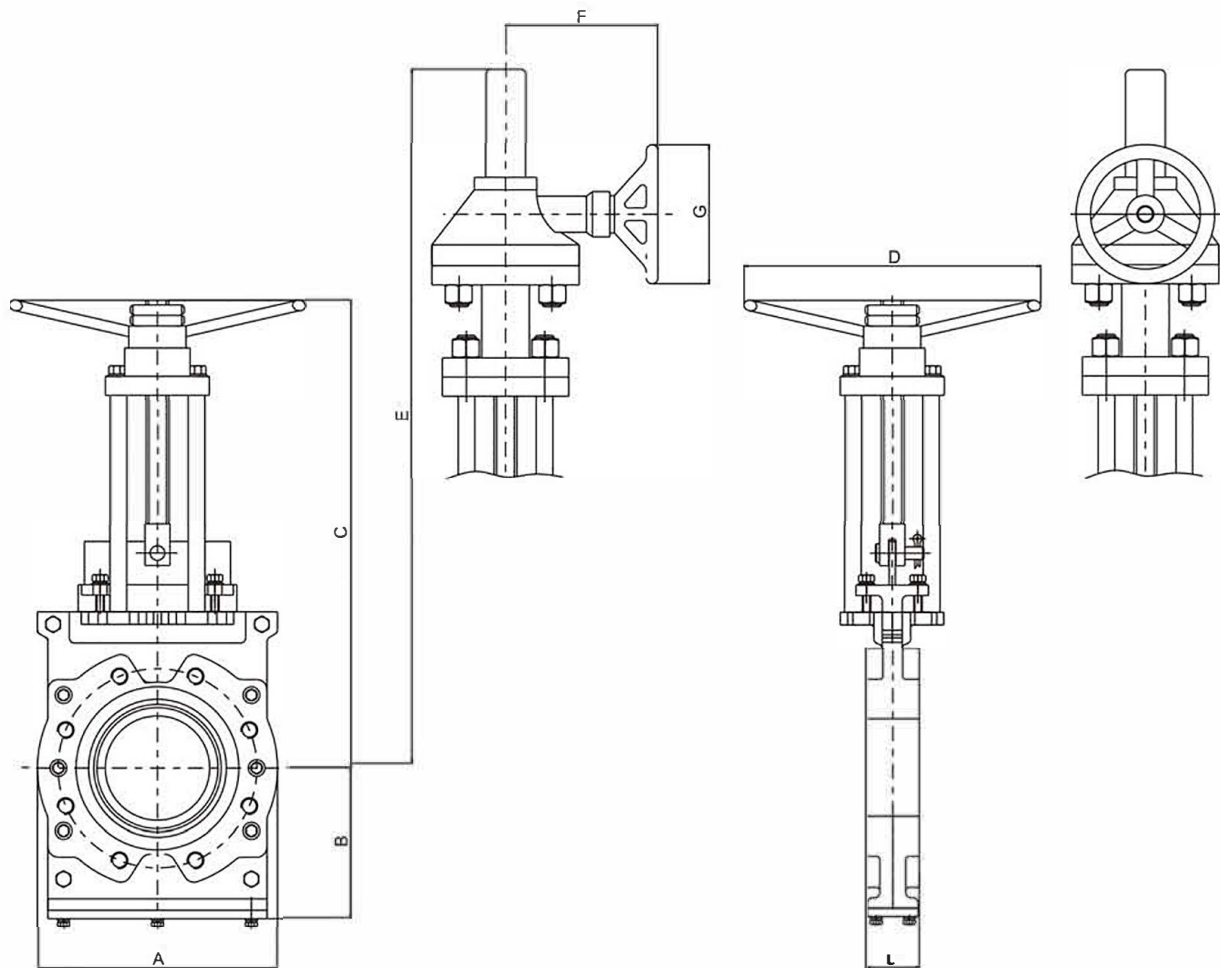
Both seats will be in tight contact with gate by good seat strength with internal metal support ring as well as pipeline pressure to ensure absolute bidirectional bubble tightness.



Slurry Knife Gate Valve

Size	Torque(N · m)
DN50	71.5
DN65	78
DN80	97.5
DN100	117
DN125	156
DN150	195
DN200	221
DN250	338
DN300	429
DN350	624
DN400	702
DN450	884
DN500	1014

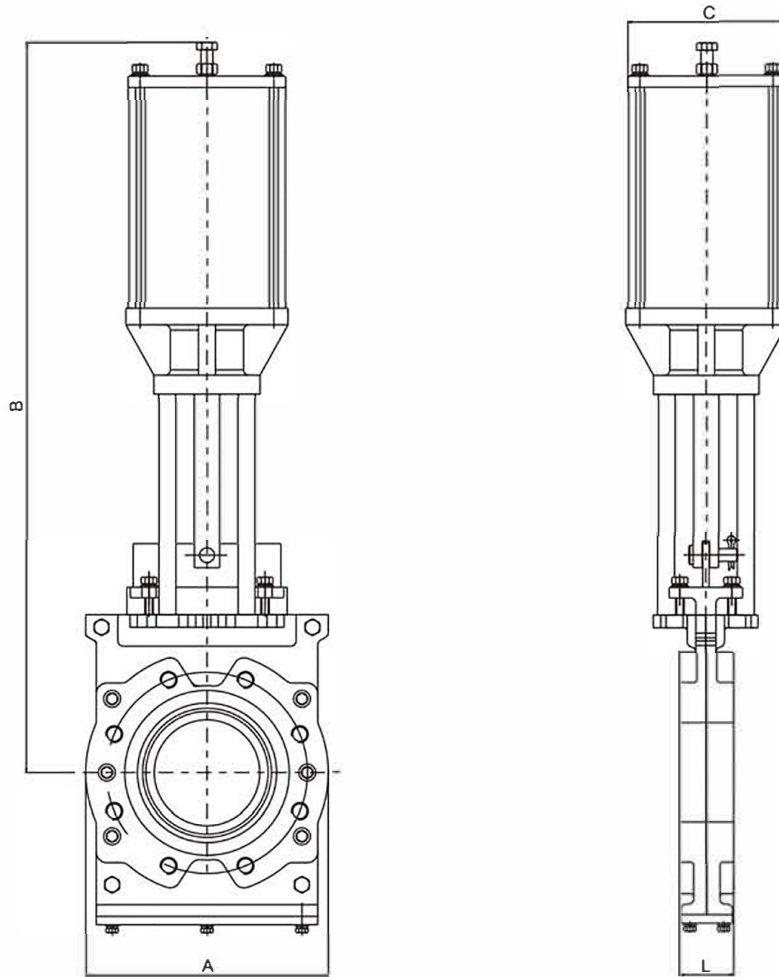
With 30% safety factor included



DIMENSIONS-Manual

Dimensions in mm

Size	A	B	L	C(Fully Open/Fully Close)	E(Fully Open/Fully Close)	D	F	G
DN50	165	120	48	445/360	/	φ 220	/	/
DN65	190	130	48	475/390	/	φ 220	/	/
DN80	200	145	51	535/415	/	φ 220	/	/
DN100	230	150	51	600/450	/	φ 250	/	/
DN125	230	180	57	690/510	/	φ 250	/	/
DN150	285	200	57	740/550	/	φ 280	/	/
DN200	345	220	70	885/660	/	φ 355	/	/
DN250	405	275	70	1061/780	/	φ 355	/	/
DN300	485	330	76	/	1400/1050	/	260	φ 310
DN350	535	350	76	/	1570/1160	/	260	φ 310
DN400	600	380	89	/	1670/1220	/	260	φ 310
DN450	635	400	89	/	1800/1230	/	340	φ 460
DN500	705	450	114	/	1950/1790	/	340	φ 460
DN600	820	510	114	/	2490/1890	/	340	φ 460

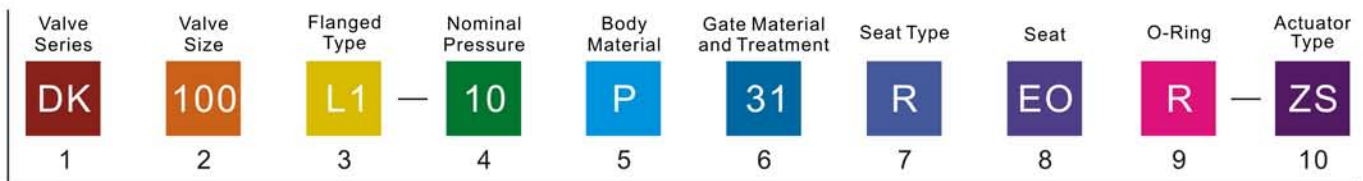


DIMENSIONS-Pneumatic

Dimensions in mm

Size	L	A	B	C	Weight kg
DN50	48	165	550	120	
DN65	48	190	600	120	
DN80	51	200	640	120	
DN100	51	230	700	145	
DN125	57	230	840	190	
DN150	57	285	910	180	
DN200	70	345	1100	225	
DN250	70	405	1280	225	
DN300	76	485	1440	280	
DN350	76	535	1700	260	215
DN400	89	600	1855	410	230
DN450					255
DN500					270

How To Order - Knife Gate Valves



1 Valve Series

DK Slurry Knife Gate Valve	DT Through-going Knife Gate Valve
DF Square Knife Gate Valve	DB Funnel Knife Gate Valve
DS Double Knife Gate Valve	DQ Wafer Type Knife Gate Valve
DC Lugged Type Knife Gate Valve	

Knife Gate Valve

2 Valve Size

050 DN50 2"	250 DN250 10"	600 DN600 24"
080 DN80 3"	300 DN300 12"	700 DN700 28"
100 DN100 4"	350 DN350 14"	800 DN800 32"
125 DN125 5"	400 DN400 16"	900 DN900 36"
150 DN150 6"	450 DN450 18"	1000 DN1000 40"
200 DN 200 8"	500 DN 500 20"	

3 Flanged Type

L1 RF Lugged	D1 RF Wafer
--------------	-------------

4 Nominal Pressure

10	PN10	01	150Lb
16	PN16	1K	10K

5 Body Material

C	WCB	B	LCB
P	CF8	D	LCC
Q	CF3	W	WC6
M	CF8M	L	CF3M

6 Gate Material and Treatment

3 SS304	7 SS317	1 Hard Chrome Plating
4 SS304L	8 SS410	3 Nickel Base Alloy
5 SS316	9 SS201	4 Tungsten Carbide
6 SS316L		5 Ionitriding
		6 Stellite

7 Seat Type

Y Metal Seat	R Soft Seat
--------------	-------------

8 Seat

Metal Seat		Soft Seat	
3 SS304	1 Hard Chrome Plating	PO	PTFE
4 SS304L	2 Nickel Plating	RO	RTFE
5 SS316	3 Nickel Base Alloy	NO	NYLON
6 SS316L	4 Tungsten Carbide	LO	PPL
7 SS317	5 Ionitriding	KO	PEEK
8 SS410	6 Stellite	EO	EPDM
9 SS201			

9 O-Ring

R	NBR	Temp.Range	-20°C~100°C
E	EPDM	Temp.Range	-20°C~120°C
V	VITON	Temp.Range	-20°C~230°C

10 Actuator Type

ZS	Double Acting
ZK	Electric Motor
SD	Manual

Note: Not all materials available for all models.

Note: Dimensions are for reference only. Consult factory for certified drawings.

Note: Specifications subject to change.

Wide industrial application range served by KV CONTROL product including
Chemical / Petrochemical / Oil & Gas / Pulp & Paper / Biochemistry / Pharmaceutical / Water
/ Mining



KV CONTROLS

Total Cost of Ownership

7 Venus Street
Naledi Industrial Park
Sasolburg
Tel: 27 16 100 4592
Fax: 086 671 3957
www.kvcontrols.co.za