

Knife Gate Valve



The R&D Multiples KGVs offer an unparalleled combination of features, workmanship, quality, and affordability.

With **special metallurgy** tailored for specific duties, these valves ensure **corrosion, abrasion, and wear resistance**. Added advantages include **special gate surface treatments, metal-reinforced rubber seats, low-friction, long-life secondary seals** – making them ideal even for the most **demanding applications**.

For any of your requirements, you can **rely on this reliable and trustworthy valve** for **prolonged, trouble-free service**.



SERIES RDK1

RDK1-RS
RDK1-RM
RDK1-IM

Uni-directional Valve - General Industrial Application

This is a unidirectional wafer, lug and flanged type valve design according to MSS SP-81 and AWWA C-520 for general industrial applications. These valves for unidirectional application and are leak tight in case of resilient seated valves. Metal seated valves offer leakage within permissible limits as per MSS-SP-81 and AWWA C-520 standards.

SPECIFICATIONS & STANDARDS:

Size Range: 2"-100" (50mm to 2500mm)

Pressure Rating: up to 10 bar (150 psi)

Temperature Range:

RDK1-RS: -4 °F (-20°C) / 248 °F (120°C)

RDK1-RM & RDK1-IM: -4 °F (-20°C) / 842 °F (450°C)

*Higher temperature options available.

Body Style: Up-to 600mm One-piece (Semi lug, Lug)

Above 600 Flange End

*Higher Size & Pressure options available. Consult factory for availability.

Design Std: MSS SP-81, AWWA C520-14

Testing Std: MSS SP-81

Drilling as per: IS 1538, EN 1092, ANSI B16.5 CL150, ANSI B16.47 CL150

*Additional drilling options available. Consult factory for availability.

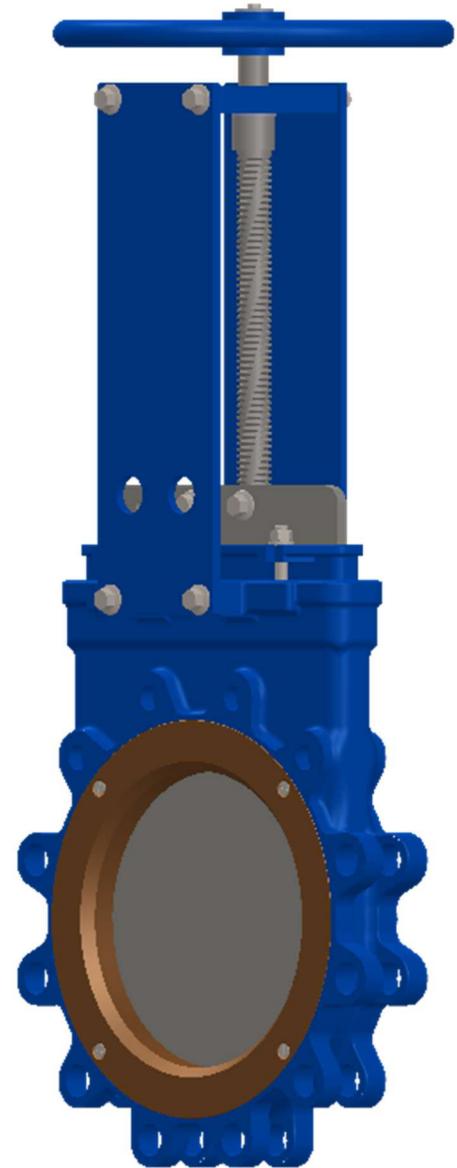
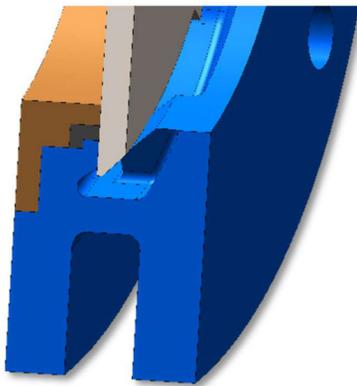
Testing Specification:

Body Shell Test at 1.5 times of rated pressure;

Seat Test at 2.8 bar.

Mode of Operation Options:

Pneumatic, Electric, Hydraulic, Gear Operated, H/W Operated.



Integral Jam Design for Superior Sealing

The Knife Gate Valve features an integral jam mechanism (as illustrated) that transforms the gate's linear motion into a controlled lateral shift during closure. This ensures firm contact between the gate and seat, significantly improving sealing performance.

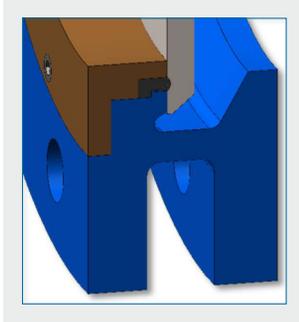
Design Advantages at a Glance:

- Superior sealing with minimal leakage
- Enhanced reliability in abrasive and high-cycle applications
- Reduced seat and gate wear
- Extended service life and lower maintenance

RDK1 Series Valve Features:

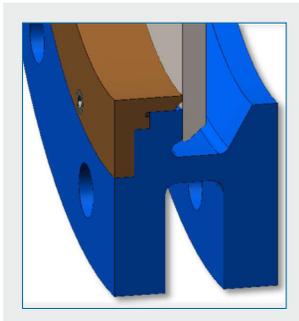
- A lug and wafer type design of slim construction having low flange to flange dimension for mounting in compact installation.
- Sealing achieved by means of integrally cast pushing the gate on to the seat for a full-face contact between gate and seat.
- Sealing configuration such as integral metal seated, resilient seat retained with replaceable metallic seat retainer ring.
- Long life PTFE impregnated synthetic fiber plus EPDM O-ring packing with easy access and adjustable gland follower. Wide range of packing materials available.
- Stainless steel gate polished both sides to avoid jamming and seat damage.
- Rising spindle or non-rising spindle as per requirement.
- Other options: bonnets, V-ports, special materials valves, etc.

RDK1-RS RDK1-RM RDK1-IM



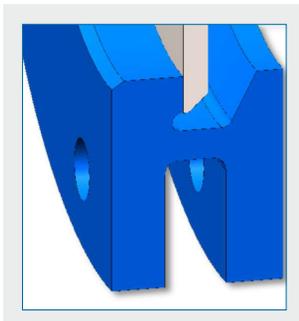
**Model : RDK1-RS
Resilient Seated Valve**

This is a unidirectional wafer, lug and flanged type valve for general industrial applications. This valve is for unidirectional application and are leak tight valves.



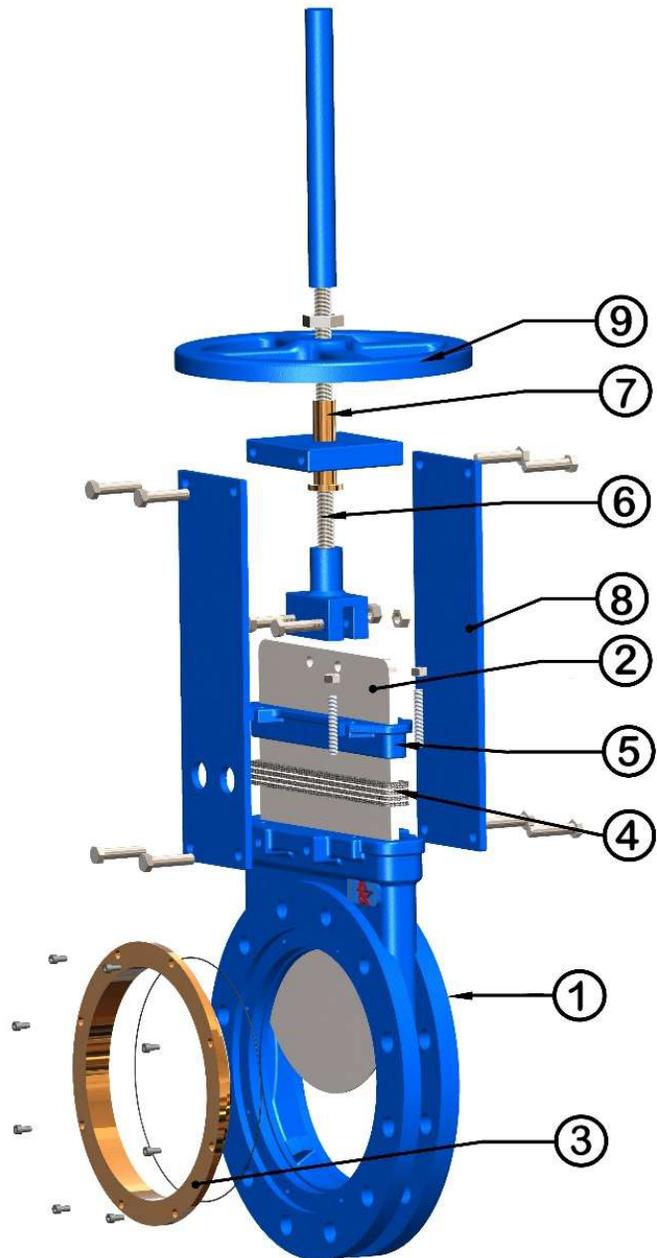
**Model : RDK1-RM
Replaceable Metal Seated Valve**

This is a unidirectional wafer, lug and flanged type valve for general industrial applications. This valve is for unidirectional application and Metal seated valves offer leakage within permissible limits as per MSS-SP-81 and AWWA C-520 Standards.



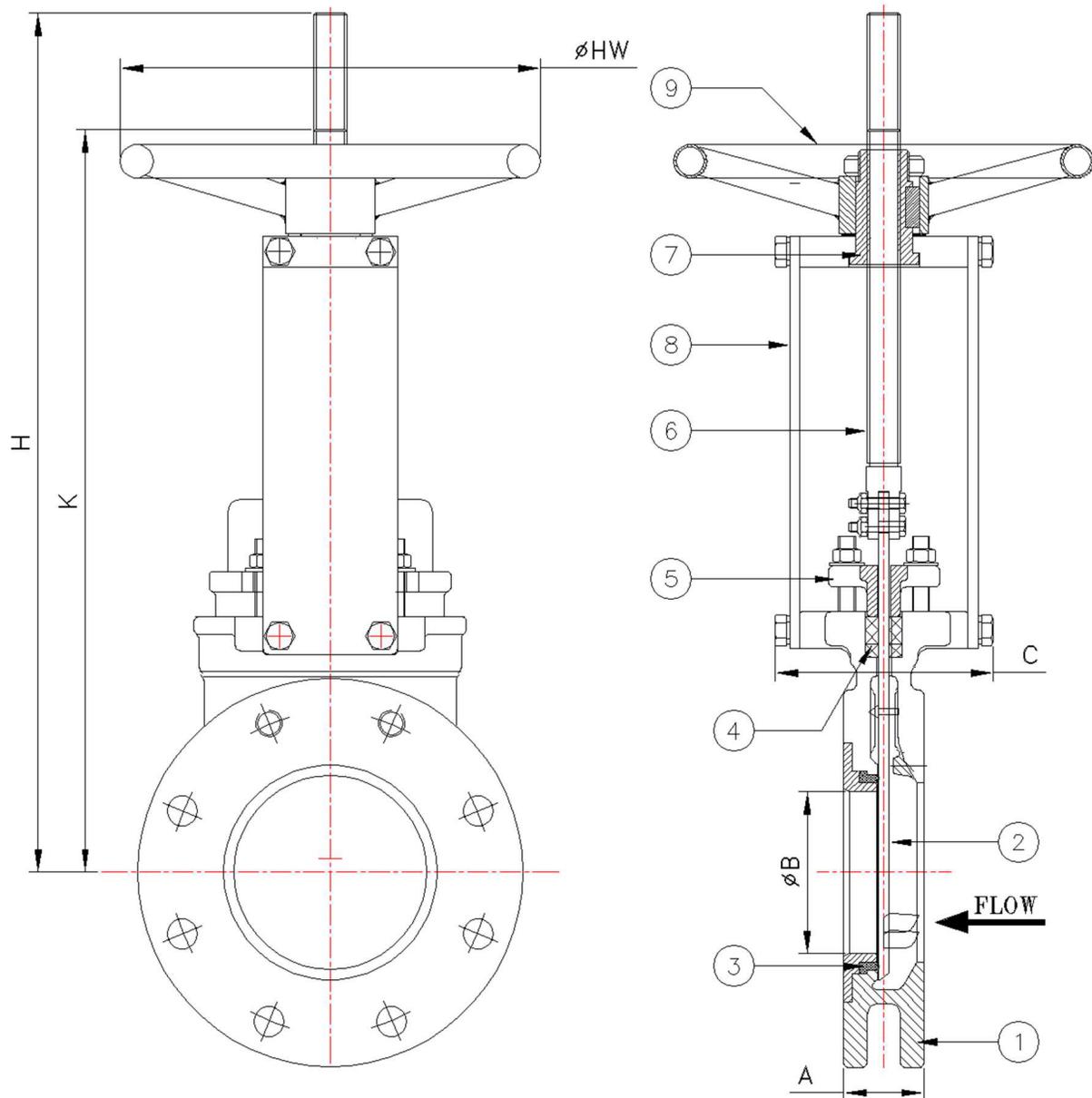
**Model : RDK1-IM
Integral Metal Seated Valve**

This is a unidirectional wafer, lug and flanged type valve for general industrial applications. This valve is for unidirectional application and Metal seated valves offer leakage within permissible limits as per MSS-SP-81 and AWWA C-520 Standards.



Specifications

No.	Part Name	Material
1	Valve Body	Ductile Iron Gr.500/7, WCB, CF8M, Duplex SS: UNS S32205
2	Knife Gate	ASTM A240 TYPE 304/316, UNS S31803 Gr. 2205
3	Seat Ring	D.I./CF8/CF8M, UNS S31803 GR. 2205
4	Gland Packing	Synthetic Yarn with PTFE, Graphited Yarn
5	Gland	D.I. GR.SG500/7,/WCB, CF8/ CF8M, Duplex SS:UNS S32205
6	Stem	ASTM A276 TYPE 410/304/316/431
7	Yoke Sleeve	Bronze IS 318 GR. LTB 2 / HT Brass
8	Bracket	Steel Epoxy Coated
9	Handwheel	Ductile Iron / Mild Steel Fabricated



Dimensions (mm)							
DN (mm)	ϕB	A	C	K	H	ϕHW	Approx Weight (Kg)
50	50	48	100	281	420	225	10
80	75	51	100	328	470	225	14
100	95	51	100	373	519	225	18
125	118	57	100	420	613	225	26
150	142	57	100	449	642	225	28
200	190	70	122	579	820	310	38
250	235	70	122	645	986	310	62
300	280	76	122	732	1071	410	97
350	315	76	193	811	1245	410	141
400	370	89	193	891	1475	410	185
450	400	89	197	1034	1510	550	215
500	450	114	197	1128	1617	550	298
600	525	114	197	1265	1883	550	362

* Dimensions are approximate and subject to change. Consult factory for certified drawings.

SERIES RDK2

RDK2-DG
RDK2-SD

Bi-directional Valve - General Industrial Application

The innovative Body & Seat design assures non-clogging shut off on suspended solids in industries such as Pulp, wastewater, Treatment plant, Food and Beverage Power plant, Mining, Chemical plant etc.

SPECIFICATIONS & STANDARDS:

Size Range: 2"-36" (50mm to 900mm)

Pressure Rating: Up to 24" (600mm) 10 bar (150 psi)
30"-36" (750mm-900mm) 7 bar (100 psi)

Temperature Range: 4 °F (-20°C) / 248 °F (120°C)

Body Style: One-piece (Double Flange, Wafer)

*Higher Size options available, Consult factory for availability

Design Std: MSS SP-81, AWWA C520-14

Testing Std: MSS SP-81

Drilling as per: IS 1538, EN 1092, ANSI B16.5 CL150, ASMEB16.47 CL150

*Additional drilling options available. Consult factory for availability.

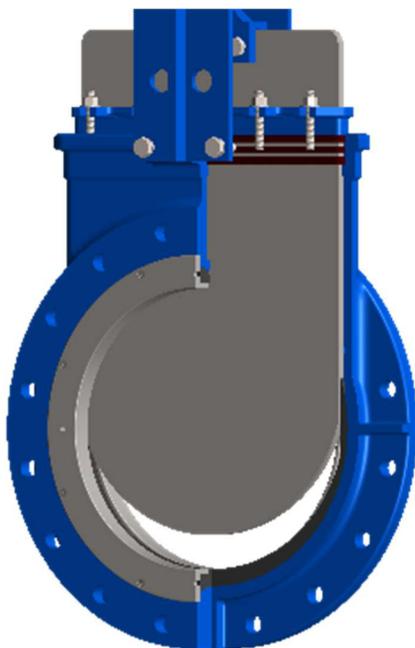
Testing Specification:

Body Shell Test at 1.5 times of rated pressure.

Seat Test at 1.1 times of rated pressure.

Mode of Operation Options:

Pneumatic, Electric, Hydraulic, Gear Operated, H/W Operated.

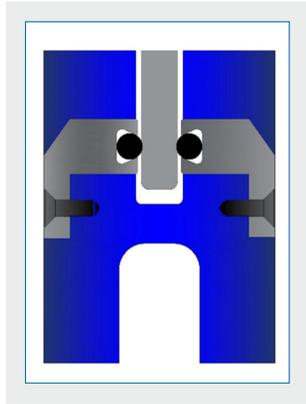


Valve Features:

- Single piece Body with Elastomer sleeve, general purpose Bi-Directional. Shutt off valve. Peripheral sealing design of Gate edge. Zero Leakage Full Bore valve.
- Stainless steel gate polished both sides to avoid jamming and seat, packing damage.
- Resilient seat with a new typical sleeve design. Two stainless steel seat rings keep the sleeve in position and also serve to guide the gate.
- Long life PTFE impregnated synthetic fibre plus EPDM O-ring packing with easy access and adjustable gland follower. Wide range of packing materials available.
- Other options: bonnets, V-ports, special materials valves, etc.

RDK2-DG

RDK2-SD

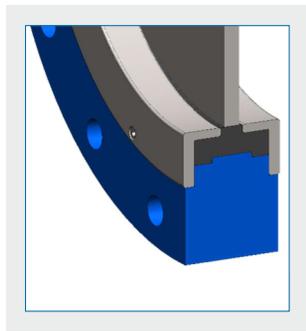


Model : RDK2-DG
Dovetail Groove Seal Design

This is a bi-directional wafer, lug and flanged type valve for general water applications. This valve for bi-directional application and are leak tight valves.

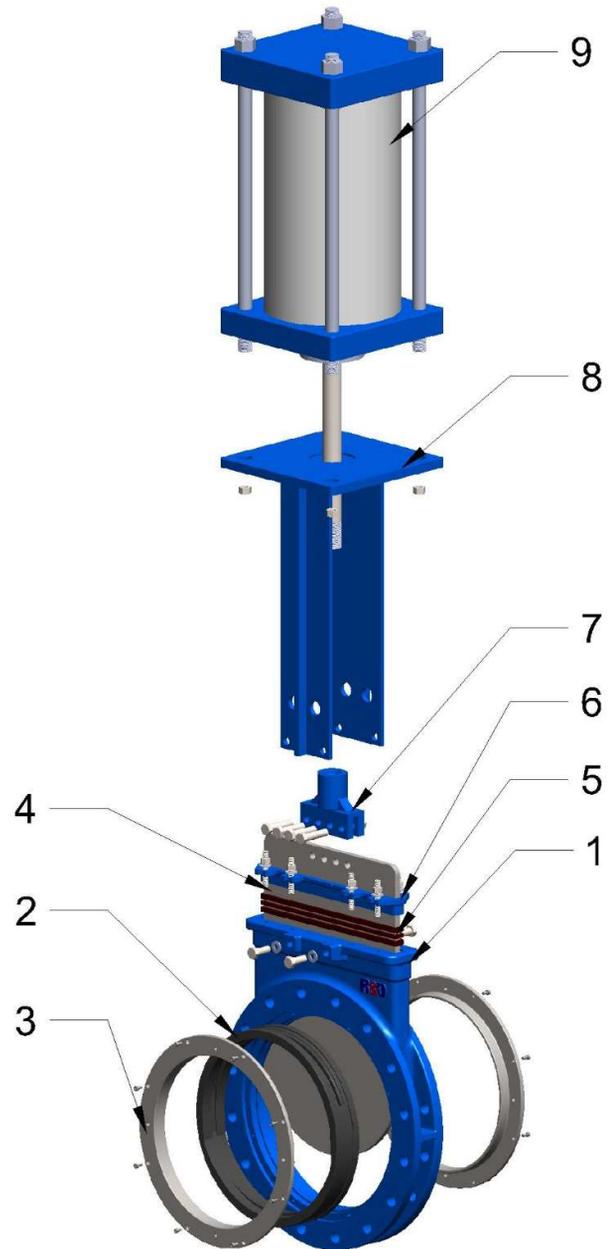
At a Glance - Sealing Advantages

- Secure O-ring Retention
- Enhanced Sealing Integrity
- Longer Service Life
- Ease of Maintenance

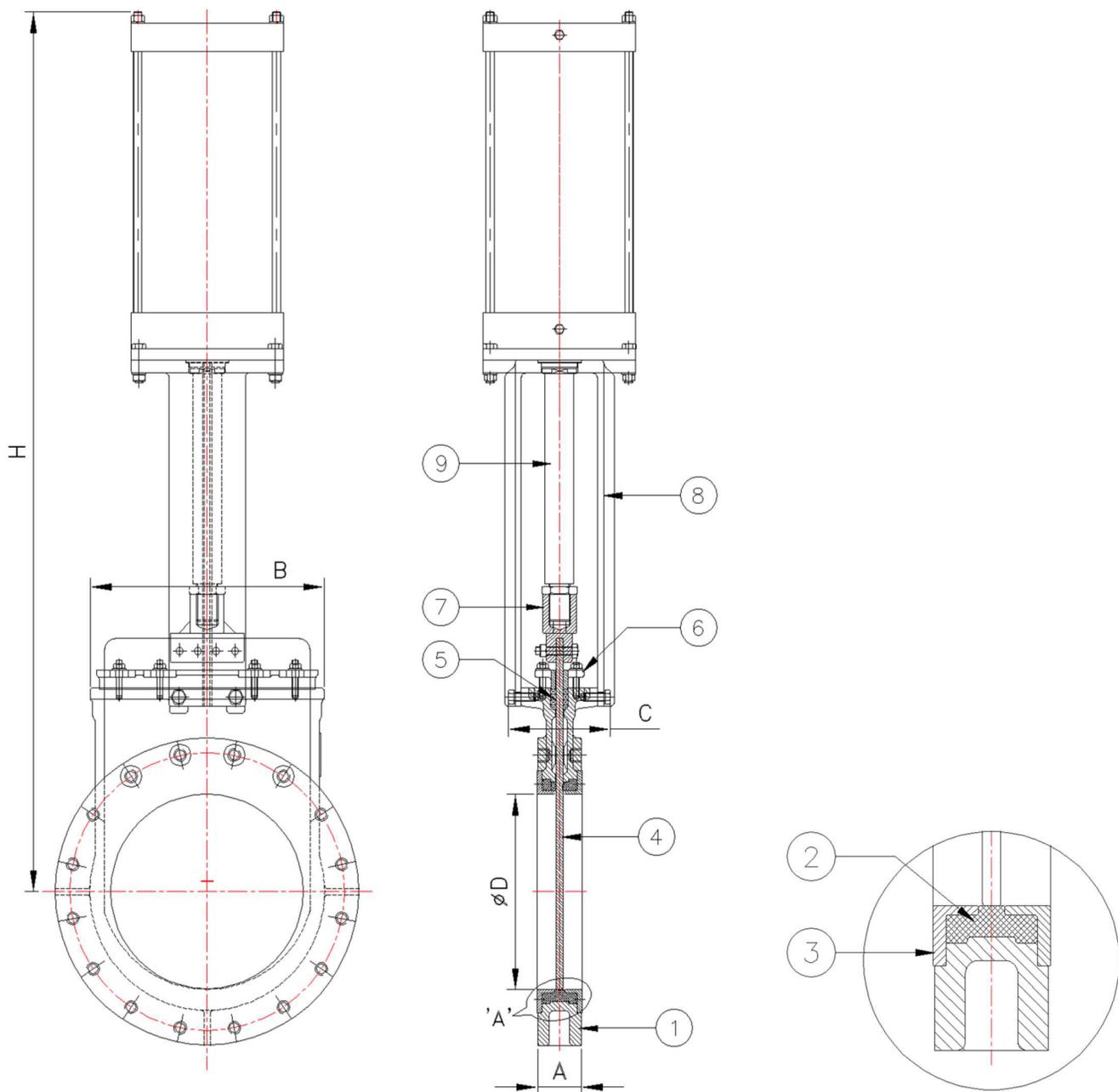


Model : RDK2-SD
Sleeve Type Seal Design

This is a bi-directional wafer, lug and flanged type valve for general industrial applications. This valve for bi-directional application and are leak tight valves.



Specifications		
No.	Part Name	Material
1	Valve Body	Ductile Iron, ASTM A536 GR.65-45-12, ASTM A216 GR.WCB, ASTM A351 GR.CF8 / CF8M / CF3 / CF3M / UNS-S32205
2	Seat	NBR / EPDM / Viton / Polyurethane
3	Seat Sleeve	ASTM A351 Gr.CF8 / CF8M / CF3 / CF3M / UNS-S32205
4	Gate	ASTM-A240 Gr.304 / 316 / 304L / 316L, ASTM-B674/ 677 TP904L
5	Packing	Synthetic yarn with PTFE / Graphited Yarn
6	Gland	ASTM A536 Gr.65-45-12, ASTM A216 Gr. WCB, ASTM A351 GR.CF8 / CF8M / CF3 / CF3M / UNS-S32205
7	Connector	ASTM A240 Gr. 304 / 316 / ASTM B 674 / 677 TP904L
8	Bracket	ASTM A351 Gr. CF8 / ASTM A216 Gr. WCB / M.S. Fabricated
9	Cylinder	Aluminium / Stainless Steel / FRP (Reputed Make)



Dimensions (mm)						
DN (mm)	ϕB	A	B	C	H	Approx Weight (Kg)
50	50	48	128	105	412	17
80	75	51	168	105	492	20
100	95	51	180	115	560	24
125	118	57	190	115	647	33
150	142	57	225	115	723	40
200	190	70	270	140	907	65
250	235	70	350	140	1065	85
300	280	76	380	140	1233	145
350	315	76	415	215	1328	218
400	370	89	475	215	1475	305
450	400	89	505	265	1644	410
500	450	114	575	270	1755	495
600	525	114	650	270	2028	595

* Dimensions are approximate and subject to change. Consult factory for certified drawings.

SERIES RDK3

RDK3-SB
RDK3-HDS

Bi-directional Resilient Seated - Metal Reinforced Rubber Sleeve Seat

Wafer & Flanged Type with Dual Sleeve Sealing - Design for Slurry Applications

The RDK-3, Series is a robust knife gate valve designed for abrasive slurry applications. Featuring two metal-reinforced rubber sleeves and a reliable force-seal design, it offers excellent bi-directional sealing and wear resistance. Available in both wafer and flanged configurations, it is ideal for industries such as Mining, Power, Chemical, Cement, Alumina, Phosphate, and Wastewater treatment.

SPECIFICATIONS & STANDARDS:

RDK3-SB

(Slim Body Slurry Valve)

Size Range: 2"-24" (50mm to 600mm)

Pressure Rating: Up to 24" (600mm) 10 bar (150 psi)
30"-36" (750mm-900mm) 7 bar (100 psi)

Temperature Range: 4 °F (-20°C) / 248 °F (120°C)

Body Style: One-piece (Wafer End)

Design Std: MSS SP-81, AWWA C520-14, Manufacturer's Standard

Testing Std: MSS SP-81, Manufacturer's Standard

Drilling as per: IS 1538, EN 1092, ASME B16.5 CL150

*Additional drilling options available. Consult factory for availability.

RDK3-HDS

(Heavy Duty Slurry Valve)

Size Range: 2"-36" (50mm to 900mm)

Pressure Rating: Up to 25 bar (362.5 psi)

Temperature Range: 4 °F (-20°C) / 176 °F (80°C)

Body Style: One-piece (Flange End)

*Higher size & rating options available. Consult factory for availability.

Design Std: MSS SP-81, AWWA C520-14, Manufacturer's Standard

Testing Std: MSS SP-81, Manufacturer's Standard

Drilling as per: IS 1538, EN 1092, ANSI B16.5

CL150/CL300, ASME B16.47 CL150/CL300

*Additional drilling options available. Consult factory for availability.

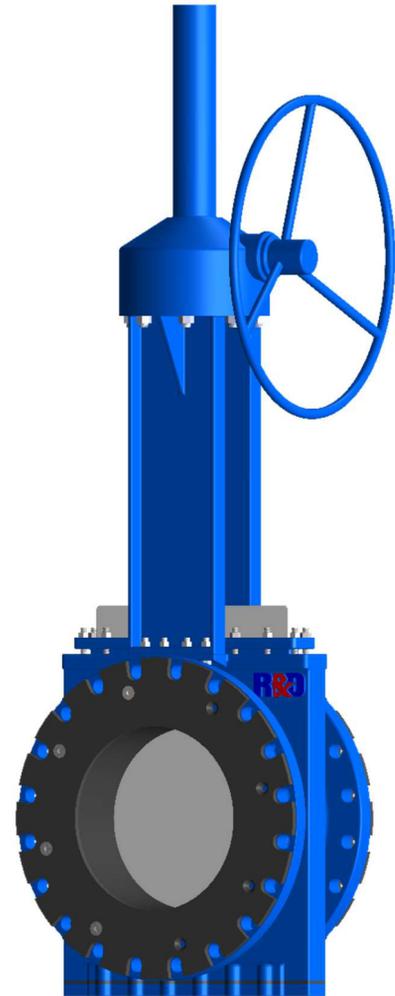
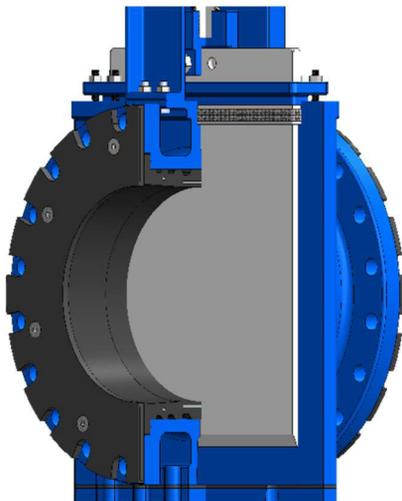
Testing Specifications:

Body Shell Test at 1.5 times of rated pressure.

seat Test at 1.1 times of rated pressure.

Mode of Operation Options:

Pneumatic, Electric, Hydraulic, Gear Operated, H/W Operated.



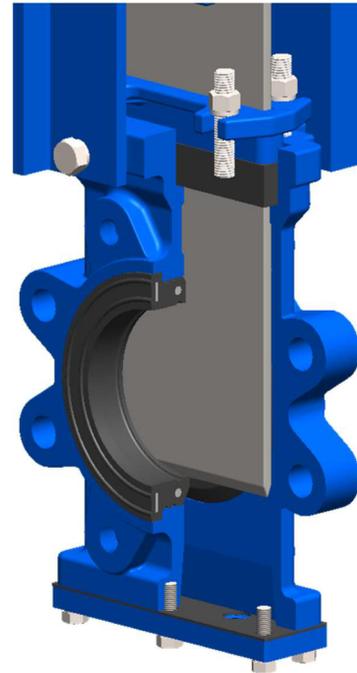
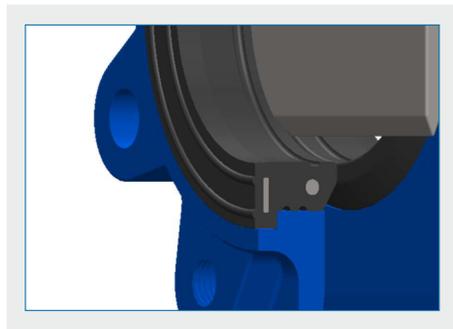
Valve Features:

- 100% bubble tight shut-off.
- 2 Piece sleeves provide bidirectional full-bore valve with Dual, embedded spring steel reinforced elastomer sleeves providing dynamically corrected sealing for ZERO leakage.
- Cavity free flow path ensuring minimum pressure drop.
- Body fully isolated from Media except during short duration of opening/closing of the valve.
- Metal reinforced rubber sleeve seats, designed to allow maximum flexibility.
- Flanged cast single body with machined where the sleeves fit perfectly and grease nipples to lubricate the gate.
- Open at the bottom for draining purposes, also available with covers or splash guards.
- Conventional leak proof packing. *RDK3
- EPDM packing as standard. Conventional leak proof packing also available. *RDK4
- Rectangular shaped stainless-steel gate, polished both sides to reduce friction and avoid seat damage.
- Other options: open-closed lockout system, flush ports, special materials etc.

RDK3-SB RDK3-HDS

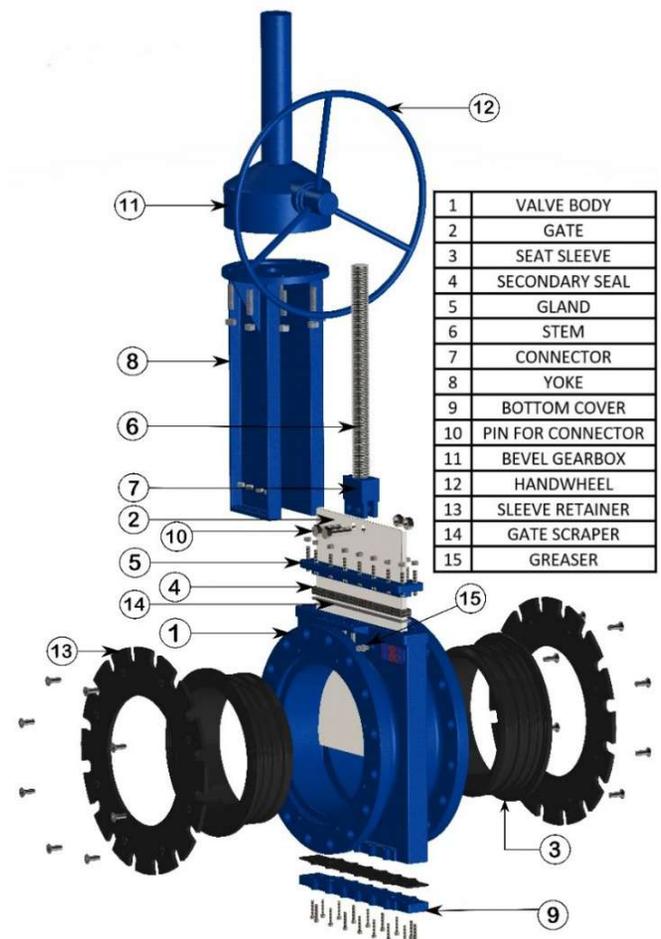
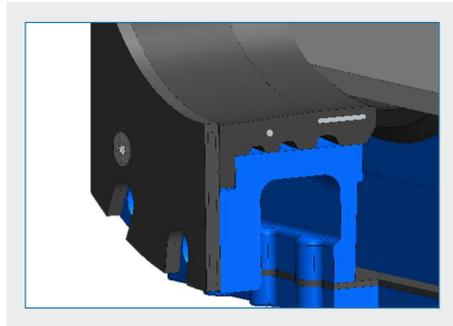
Model : RDK3-SB Slim Body Slurry Valve

The RDK-3 model knife gate valve is a wafer type valve equipped with two metal reinforced rubber sleeves, designed for applications with abrasive slurries. The RDK-3 slurry knife gate valve is mainly used in industries such as Mining, Chemical Plants, Power Plants, Wastewater Treatment Plants, Cement, Alumina and Coal slurry applications etc.



Model : RDK3-HDS Heavy Duty Slurry Valve

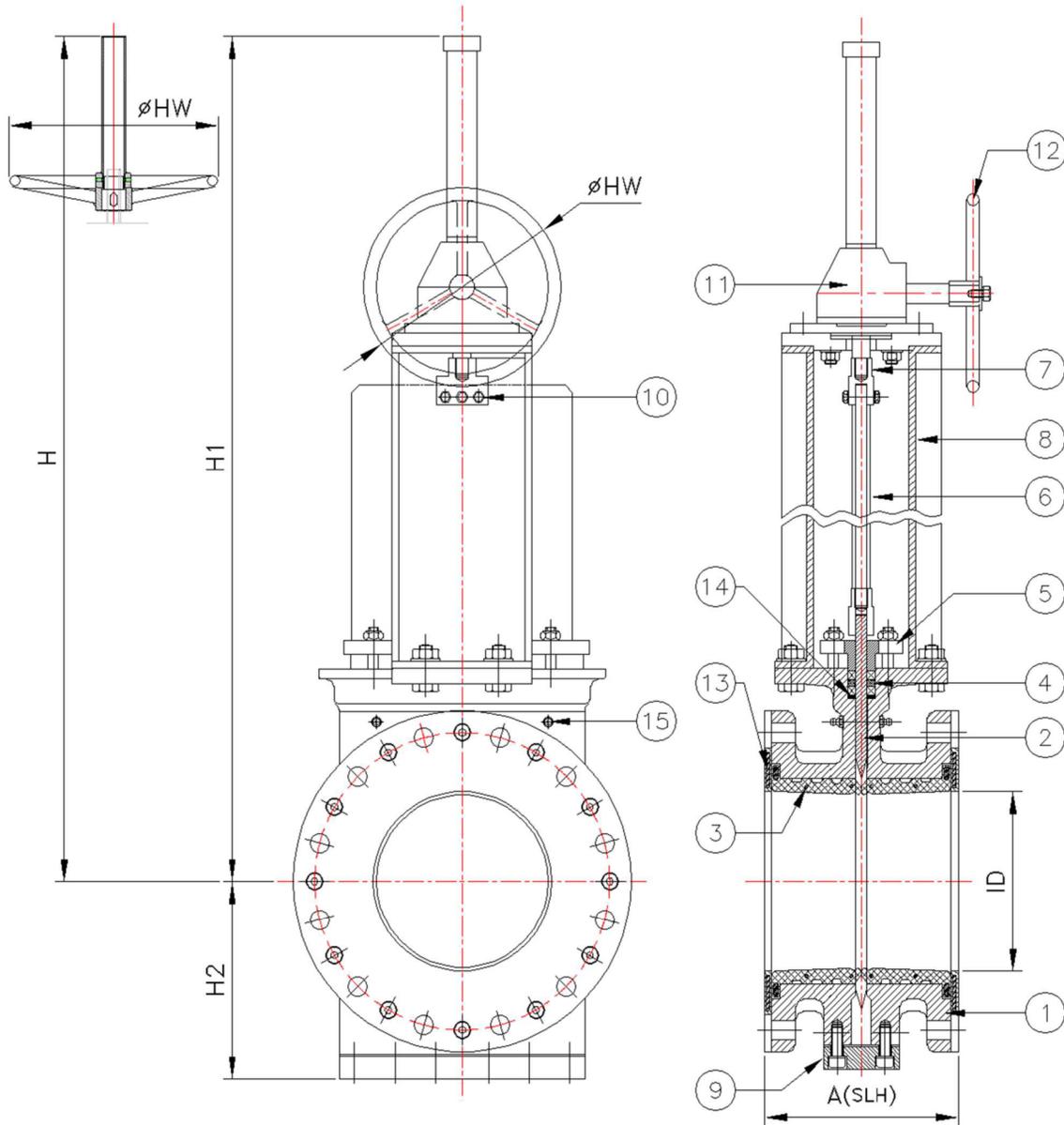
The RDK-3 model slurry knife gate valve face seal design, is a flanged heavy-duty valve equipped with two metal reinforced rubber sleeves designed for use in the handling of abrasive slurries, mainly in industries such as Mining, Chemical Plants, Power Plants, Cement, Alumina, Phosphate and Coal slurry applications etc.



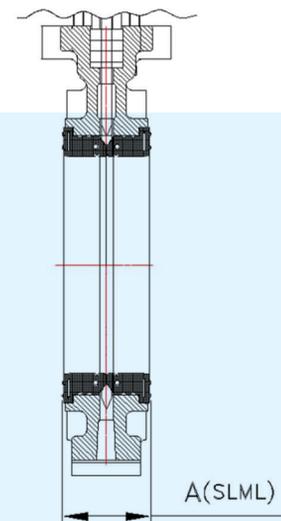
Specifications		
No.	Part Name	Material
1	Valve Body	SS ASTM-A351 GR.CF8M / A216 GR. WCB
2	Knife gate	Duplex S.S. GR. 2507/ SS GR. 316
3	Seat Sleeve	Rubber With Metal Reinf. (EPDM/PU/NITRILE)
4	Secondary Seal	PTFE Impreg. Synth. Fibre & EPDM
5	Gland	SS. ASTM-A351 GR. CF8M / A216 GR. WCB
6	Stem	SS. BS 970 GR. 304/ 316/ 431
7	Connector	NI-AL Bronze/ HT Brass
8	Yoke	Epoxy - Coated Carbon Steel
9	Bottom Cover	S.S. ASTM - A351 GR. CF8M/ A216 GR. WCB
10	Pin For Connector	S.S. BS 970 GR. 304/ 316/ 431
11	Bevel Gearbox	Reputed Make
12	Hand-Wheel	Epoxy Coated Steel / Ductile Iron
13	Sleeve retainer	Steel + Natural Rubber Encapsulation
14	Gate Scraper	UHMWPE / PTFE
15	Greaser	Stainless Steel AISI 304 / 316

Model : RDK3-HDS
Heavy Duty Slurry Valve

Model : RDK3-SB
Slim Body Slurry Valve



RDK3-HDS (Heavy Duty Slurry Valve)



RDK3-SB (Slim Body Slurry Valve)

Valve Size (mm)	A*		H	H1	H2	Body Bore VID	H/W DIA.	Approx Weight (Kg)	
	Series							Series	
	RDK3-SB	RDK3HDS						RDK3-SB	RDK3HDS
50	-	-	-	-	-	-	-	12	19
65	59	-	500	550	115	65	300	14	26
80	64	175	550	610	120	69	400	15	35
100	64	175	600	655	160	92	400	16	46
150	70	178	760	815	185	138	400	26	51
200	83	184	880	920	215	180	500	40	78
250	83	226	1050	1100	230	228	500	65	109
300	89	257	-	1210	290	273	600	84	206
350	92	257	-	1360	320	300	600	116	285
400	106	279	-	1480	340	343	600	165	324
450	106	311	-	1710	360	386	600	207	390
500	132	359	-	1880	400	430	600	284	542
600	132	372	-	2250	460	517	600	388	-

*Dimensions are approximate and subject to change. Consult factory for certified drawings.

SERIES RDK4

RDK4-SQ

Uni-directional valve - Square/Rectangular-Port Slide gate valve

The RDK4-SQ model Slide gate valve is a fabricated square or rectangular port low-pressure valve for fluids with high solids concentration or solids, mainly used in bulk handling and silo outlet applications in industries such as Chemical Plants, Food and Beverage, Cement Industries Etc.

SPECIFICATIONS & STANDARDS:

RDK4-SQ

(Square/Rectangular-Port Slide gate valve)

Size Range: 150mm x 150mm to 600mm x 600mm

Pressure Rating: Not rated for holding pressure.

*Gate is designed to hold column of power material up-to 20 meters.

Temperature Range: -4 °F (-20°C) / 842 °F (450°C)

*Higher temperature options available.

Body Style: Fabricated Valve (Wafer or Flange)

Design Std. & Testing: Manufacturing Standard

Drilling as per: Manufacturing Standard

*Higher Size options available. Consult factory for availability.

Testing Specifications:

Body Shell Test: Tested with water at 2 bar pressure to check welding integrity.

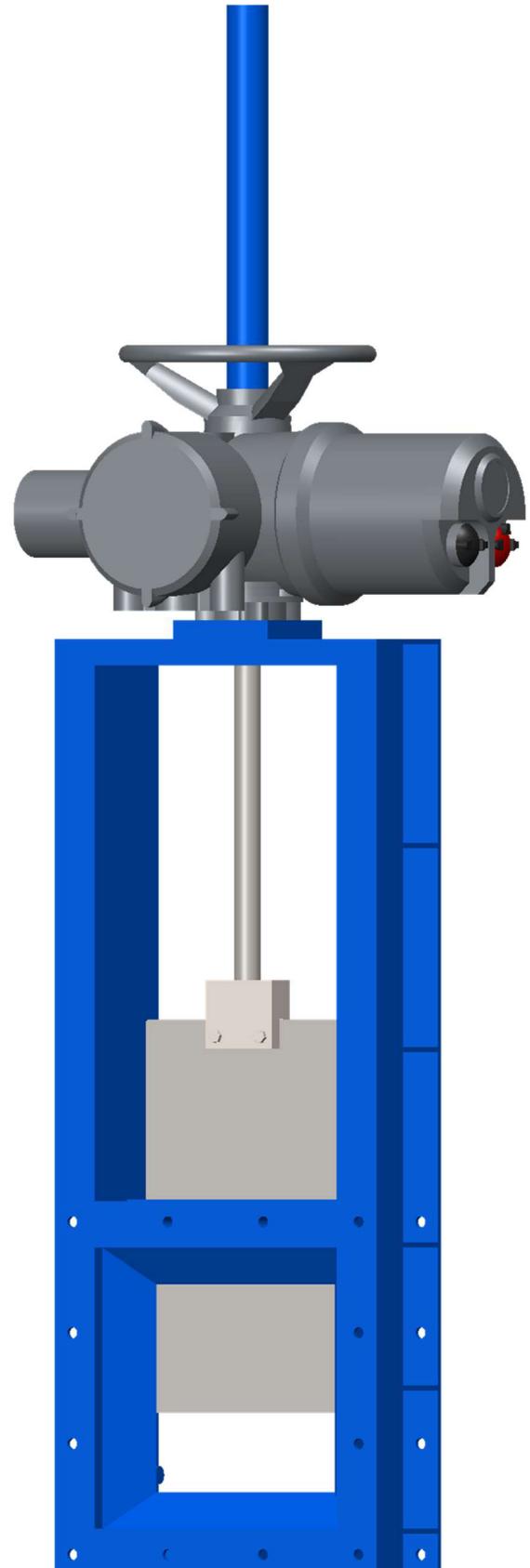
Seat leakage test: Not Applicable

Mode of Operation Options:

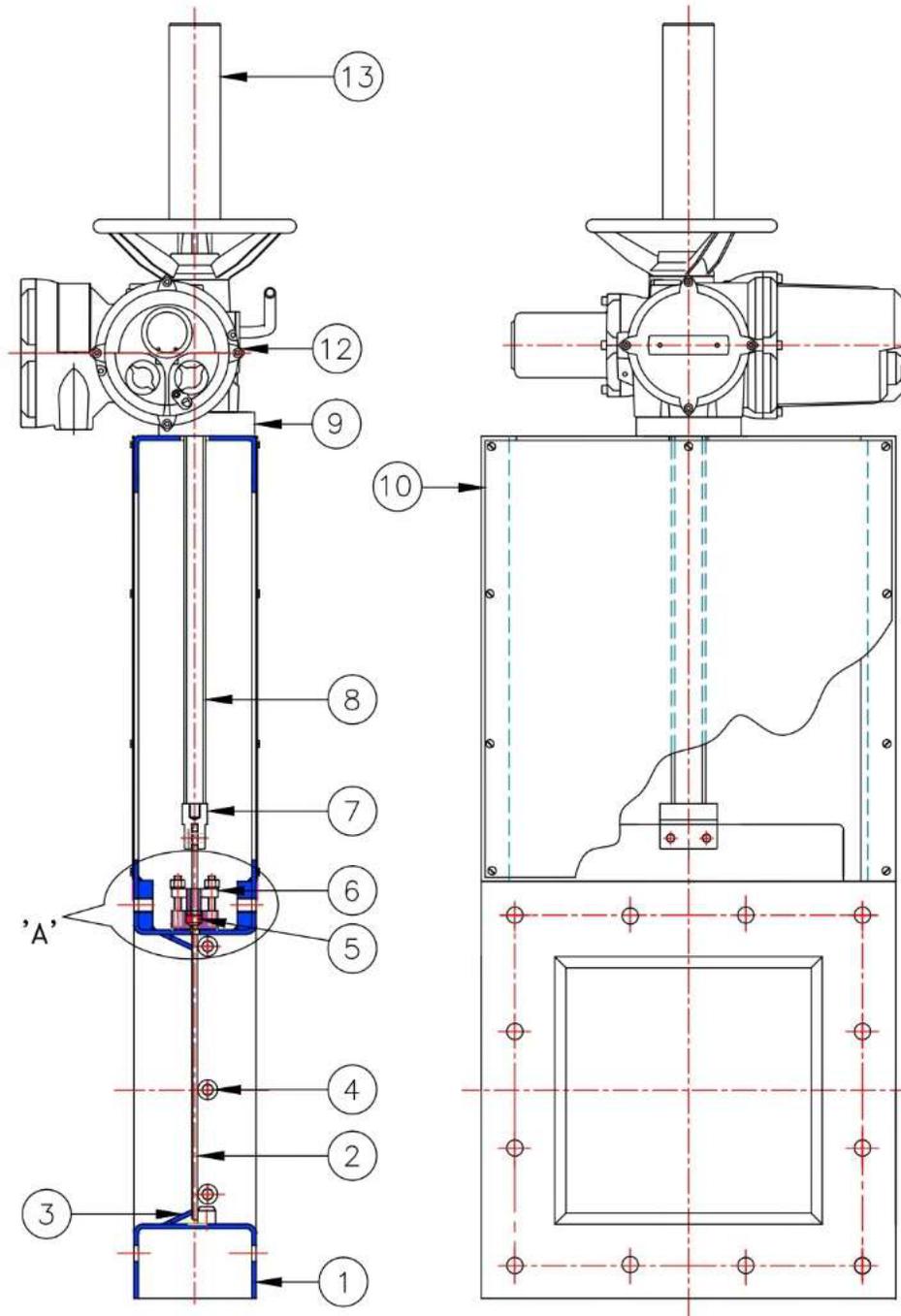
Pneumatic, Electric, Hydraulic, Gear Operated, H/W Operated.

Valve Features:

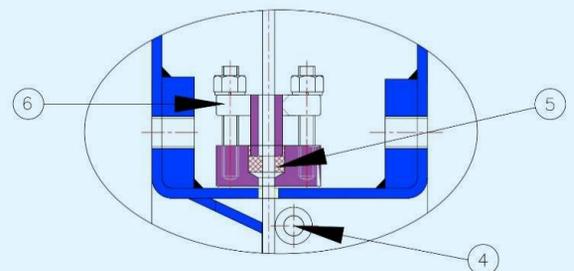
- Fabricated design with internal gate wedges and guides for tighter shut off.
- Square or rectangular port design for higher flow capacity and minimal pressure drop.
- Stainless steel gate polished both sides to avoid jamming and seat damage.
- Long life PTFE impregnated synthetic fiber plus EPDM O-ring packing with easy access and adjustable gland follower. Wide range of packing materials available.



Model : RDK4-SQ
Square/Rectangular-Port Slide gate valve



No.	Part Name	Material
1	Body	Carbon Steel, Stainless Steel, Other materials on request
2	Gate	Carbon Steel, Stainless Steel, Other materials on request
3	Seat/Deflection Cone	Integral metal-to-metal
4	Roller	Stainless Steel, Other materials on request
5	Gland Packing	PTFE Impreg. Synth. Fibre, Other materials on request
6	Gland	Stainless Steel, Other materials on request
7	Clevis	Carbon Steel, Stainless Steel, Other materials on request
8	Spindle	Stainless Steel, Other materials on request
9	Adopter Plate	Carbon Steel, Stainless Steel, Other materials on request
10	Cover	Carbon Steel, Stainless Steel, Other materials on request
11	Electric Actuator	Reputed Make
12	Spindle Protector	M.S. Pipe (Painted)



Valve Selection Guide

Applications	Valve Series									
	Uni-directional		Bi-directional			Bi-directional - Slurry			Uni-directional	
	RDK1-RS	RDK1-RM	RDK1-IM	RDK2-DG	RDK2-SD	RDK3-SB	RDK3-HD	RDK4-SQ		
Blast furnace dust	Generally not used	Generally not used	Typical Application	Generally not used	Generally not used	Generally not used	Generally not used	May be Used		
Bottom ash slurry	Generally not used	Typical Application	Typical Application	Generally not used	Typical Application	Generally not used	May be Used	May be Used		
Lime & Gypsum Slurry in FGD	Generally not used	May be Used	May be Used	Generally not used	May be Used	Typical Application	Typical Application	Generally not used		
Buried valve services	May be Used	Typical Application	Typical Application	Generally not used	Typical Application	Generally not used	May be Used	Generally not used		
Carbon Black powder	Generally not used	May be Used	Typical Application	Generally not used	May be Used	Generally not used	Generally not used	Typical Application		
Chemical Slurries	Generally not used	Typical Application	Typical Application	Generally not used	May be Used	Generally not used	Typical Application	Generally not used		
Coal firing lines-Boilers	Generally not used	May be Used	Typical Application	Generally not used	Generally not used	Generally not used	Generally not used	Generally not used		
Coal Slurry	Generally not used	Typical Application	Typical Application	Generally not used	Typical Application	May be Used	May be Used	Generally not used		
Copper tailings	Generally not used	Typical Application	Typical Application	Generally not used	Typical Application	May be Used	May be Used	Generally not used		
Detergent powders	Generally not used	Typical Application	Typical Application	Generally not used	Typical Application	Typical Application	May be Used	Typical Application		
Dryer loading/discharge	Generally not used	May be Used	May be Used	Generally not used	May be Used	Generally not used	Generally not used	May be Used		
Flyash slurry	Generally not used	Typical Application	Typical Application	Generally not used	Typical Application	May be Used	May be Used	Generally not used		
General mining slurries	Generally not used	Typical Application	Typical Application	Generally not used	Typical Application	Typical Application	Typical Application	Generally not used		
Clean gases (Low temperature upto 120Deg C)	May be Used	Generally not used	Generally not used	Generally not used						
Hot & dirty gases - Carbon Black, boilers	Generally not used	May be Used	Typical Application	Generally not used	Generally not used	Generally not used	Generally not used	Generally not used		
Iron ore slurry	Generally not used	Typical Application	Typical Application	Generally not used	Typical Application	Typical Application	Typical Application	Generally not used		
Magnetite slurry	Generally not used	Typical Application	Typical Application	Generally not used	Typical Application	Typical Application	Typical Application	Generally not used		
Massecte/Molasses-Sugar mills	Generally not used	Typical Application	Typical Application	Generally not used	May be Used	May be Used	Typical Application	May be Used		
Phosphoric acid slurry	Generally not used	Typical Application	Typical Application	Generally not used	May be Used	Typical Application	Typical Application	Generally not used		
Pneumatic conveying	Generally not used	May be Used	May be Used	Generally not used	Typical Application	Generally not used	Generally not used	Generally not used		
Polymer chips	Generally not used	Typical Application	Typical Application	May be Used	May be Used	May be Used	May be Used	May be Used		
Pulp stock- 4% to 10% consistency	Generally not used	Typical Application	Typical Application	May be Used	May be Used	Generally not used	Generally not used	Generally not used		
Pulp stock- upto 3% consistency	May be Used	Typical Application	Typical Application	May be Used	May be Used	Generally not used	Generally not used	Generally not used		
Raw water intake	Typical Application	Typical Application	Typical Application							
Silo isolation-free flowing powder	Generally not used	Typical Application	Typical Application	May be Used	May be Used	Generally not used	Generally not used	Typical Application		
Silo isolation-stagnant column	Generally not used	May be Used	May be Used	Generally not used						
Slag slurry	Generally not used	Typical Application	Typical Application	Generally not used	May be Used	Typical Application	Typical Application	Generally not used		
Toxic / hot gas handling	Generally not used	Typical Application	Typical Application	Generally not used	Generally not used	Generally not used	Generally not used	Generally not used		
Viscouse rayon	Generally not used	Typical Application	Typical Application	May be Used	May be Used	Generally not used	Generally not used	Generally not used		
Waste water / sewage / mild sludges	May be Used	Typical Application	Typical Application	Typical Application	Typical Application	May be Used	May be Used	May be Used		
Water (Weigh hoppers)	Typical Application	Typical Application	Typical Application	Typical Application	Generally not used	Generally not used	Generally not used	Typical Application		

Rating System:

Applications	Valve Series						
	Uni-directional		Bi-directional		Bi-directional - Slurry		Uni-directional
	RDK1-RS	RDK1-RM	RDK1-IM	RDK2-DG	RDK2-SD	RDK3-SB	RDK3-HD
May be Used	Thoroughly evaluate the application before selecting this valve. Though this valve may have the lowest initial cost, it would seldom provide the lowest total cost of ownership.						
Typical Application	Based on experience, it is very common to install this valve in the stated application.						
Generally not used	Generally not used.						

***This is only a guideline; appropriate selection will be done by our engineering team. Kindly provide complete details of the application.**



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