

PCC REISS Series “PKG” Knife Gate Valve

FEATURES

- **Bi-directional sealing at full differential pressures**
- **Encapsulated body seals protected from the media**
- **Flush out corners**
- **Fully guided blade to ensure parallel opening and closing**
- **Profiled and ground blade**
- **Face to face dimensions in accordance with TAPPI**
- **Body material – Ductile Iron and Stainless Steel**
- **Top works interchangeable between manual and cylinder operations**

The REISS PKG Knife Gate Valve has been developed to meet the arduous duties experienced within the slurry and solids handling industry.

With 25 years experience offering solutions for various types of aggressive media, REISS has developed the PKG to offer a variety of options in one complete product philosophy.



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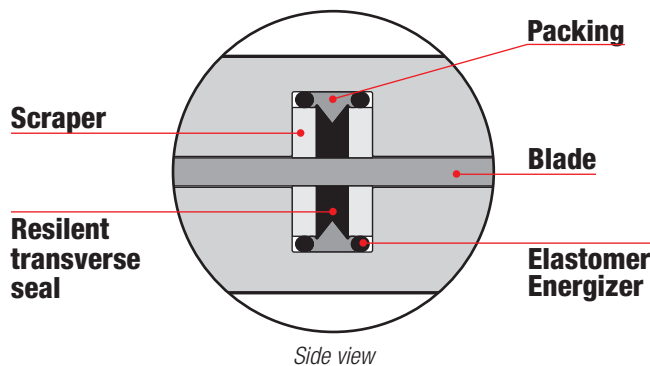
THE REISS “PKG” ADVANTAGE

The REISS “PKG” Sealing System

Traditional knife gates utilize a face seal that is exposed to the flow stream when the valve is open. In slurry and powder service, solids in the flow stream can damage the seal, resulting in a loss of shutoff integrity. The PKG seal is totally encapsulated between the body halves and protected from direct exposure to the velocity of the flowing media. This REISS PKG seal design eliminates the seal wear problem of traditional designs and provides long term, reliable shut off. The “encapsulated seal” makes the REISS PKG the ideal solution for slurry and solids flow applications. The traditional knife gate is designed to use the line pressure to push the blade into the downstream seal forming a uni-directional seal. The PKG provides continuous contact between the machined blade edge and the resilient sealing material to form a bi-directional seal. The PKG provides bubble tight shut off in both flow directions, independent of line pressure or vacuum.

The Transverse Seal

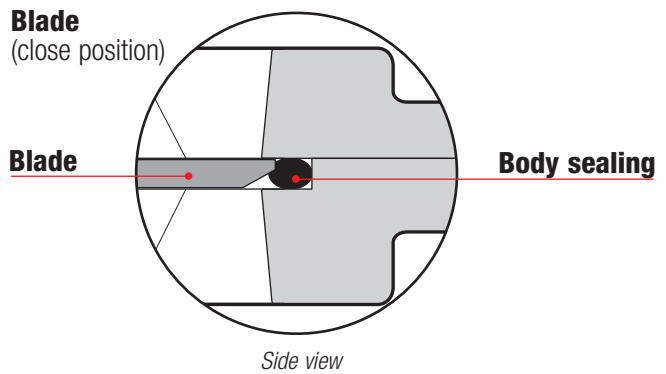
The REISS PKG design utilizes a versatile transverse seal to provide complete isolation between the process media and the atmosphere. Unlike a traditional packing arrangement, the transverse seal can be repacked in-line under pressure, thereby ensuring minimum downtime. Designed specifically for solids and slurry flow applications, the PKG incorporates, as a standard feature, dual scraper bars to prevent damage to the transverse seal. The scrapers bars, inserted above and below of the transverse seal, prevent any solids which may stick to the blade from being pulled into the transverse seal area during the opening or closing operation. This can be especially critical for valves that are in the open or closed position for an extended period of time. The transverse seal and scraper bars can be supplied in a variety of materials and configurations to match the specific application.



The “PKG” Body Design

With traditional knife gate designs, the blade can become misaligned and stick during operation or fail to seat properly. In the

REISS PKG design, the blade is guided between the body halves during the entire travel, ensuring smooth and reliable operation. The fully guided blade prevents any “flutter” or warping of the blade due to changing process conditions. The PKG body is cast with an internal profile to provide self-flushing corners to ensure solids do not build up in the seating areas. There are no cavities or dams in the bottom of the valve body. The PKG is provided, as standard, in a Ductile Iron or 316 SS body with various mating flange configurations, or optionally, in an end-of-line service configuration.



The “PKG” Blade Design

The PKG blade is precision ground and finished to ensure it is uniformly flat and parallel. The blade edge is profiled with a radius proven to cut through the most aggressive or viscous media, ensuring many years of smooth operation. The standard blade is machined from 316 SS. As an option, in extremely erosive or high cycle applications, the blade can be hardened through a chroming or electro-nickel plating processes.

Increased Clearance

The body chest area is machined with increased clearance to allow particles to free-flow back into the line. This prevents packing of material between the blade and the body that could inhibit blade movement.

Ni-Hard Inserts

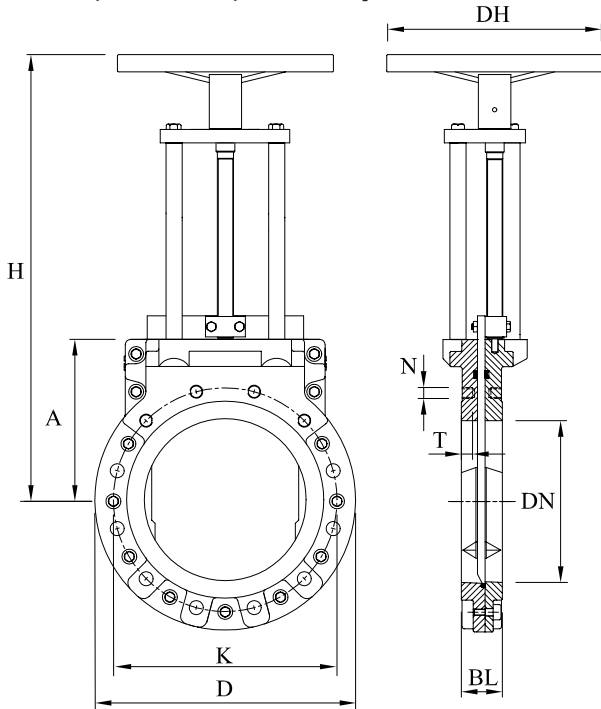
For very high velocity slurry and conveying applications of abrasive materials like fly ash, cement, or metals, the inlet valve port can be fitted with a replaceable Ni-Hard insert as an option. This Ni-Hard insert protects the valve body from erosion, thereby providing extended valve life in these severe applications.

Actuation Design

The four-pillar construction ensures the shaft is perfectly aligned and stable to eliminate any side loads even under high vibration conditions. The top mounting plate can be easily modified to adapt a wide variety of actuation from hand wheels to electric and pneumatic actuators.

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PN16, DN50-600, manual operation

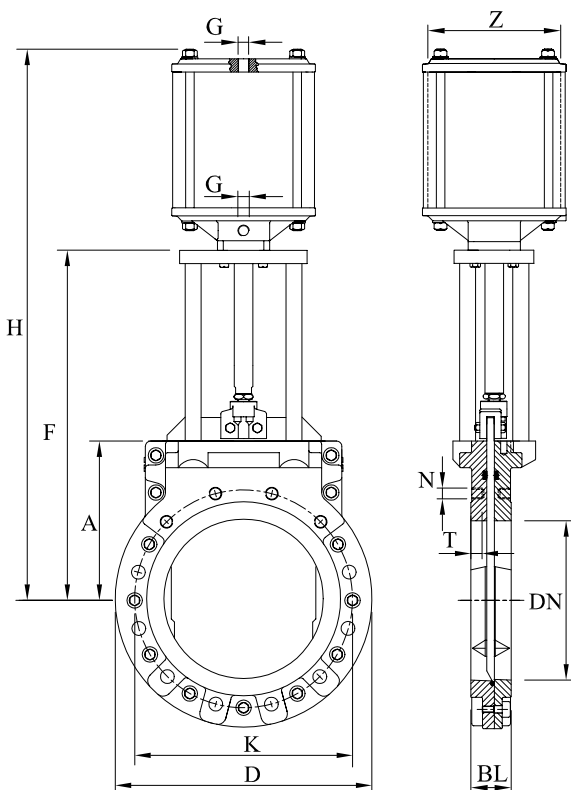


Hand operated type with non-rising spindle*

Valve Size (DN)	A	BL	D	DH	H	K	Weight (approx.) kg
50 PN16	107	48	165	160	321	125	11.4
65 PN16	112	48	185	160	345	145	12.2
80 PN16	142	50	200	200	396	160	16.7
100 PN16	157	50	220	200	430	180	18.8
125 PN16	166	57	250	200	472	210	23.0
150 PN16	187	56	285	200	536	240	34.0
200 PN16	222	70	340	315	630	295	49.9
250 PN16	257	70	405	315	730	355	65.3
300 PN16	297	76	483	400	834	410	98.9
350 PN16	330	76	520	400	885	470	118.4
400 PN16	363	89	585	400	970	525	147.7
450 PN16	410	89	640	500	1112	585	199.2
500 PN16	421	114	715	500	1173	650	234.5
600 PN16	517	114	840	590	2144	770	361.4

* Valves above 500 mm will be gearbox mounted and have rising spindle

PN16, DN50-600, pneumatically operation



Pneumatically operated type

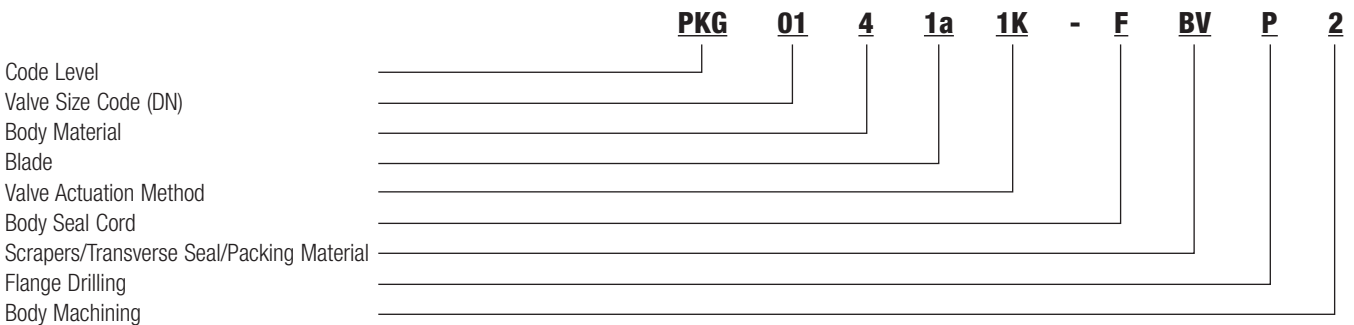
Valve Size (DN)	A	BL	D	F	H	K	Z	G	Weight (approx.) kg
50 PN16	107	48	165	257	402	125	80	R1/4"	10.4
65 PN16	112	48	185	282	442	145	80	R1/4"	12.2
80 PN16	142	50	200	325	500	160	80	R1/4"	14.7
100 PN16	157	50	220	367	566	180	100	R1/4"	17.8
125 PN16	166	57	250	401	625	210	100	R1/4"	23.0
150 PN16	187	56	285	456	729	240	160	R1/4"	36.0
200 PN16	222	70	340	542	858	295	160	R1/4"	49.9
250 PN16	257	70	405	637	1057	355	200	R1/2"	71.3
300 PN16	297	76	483	727	1197	470	250	R1/2"	98.9
350 PN16	330	76	520	840	1360	540	250	R1/2"	128.4
400 PN16	363	89	585	923	1494	540	300	R1/2"	157.7
450 PN16	410	89	640	1023	1644	578	300	R1/2"	209.2
500 PN16	421	114	750	1083	1756	635	300	R1/2"	274.5
600 PN16	517	114	840	1290	1958	749	300	R1/2"	341.4

Note: Detailed dimensional information available on separate data sheets.

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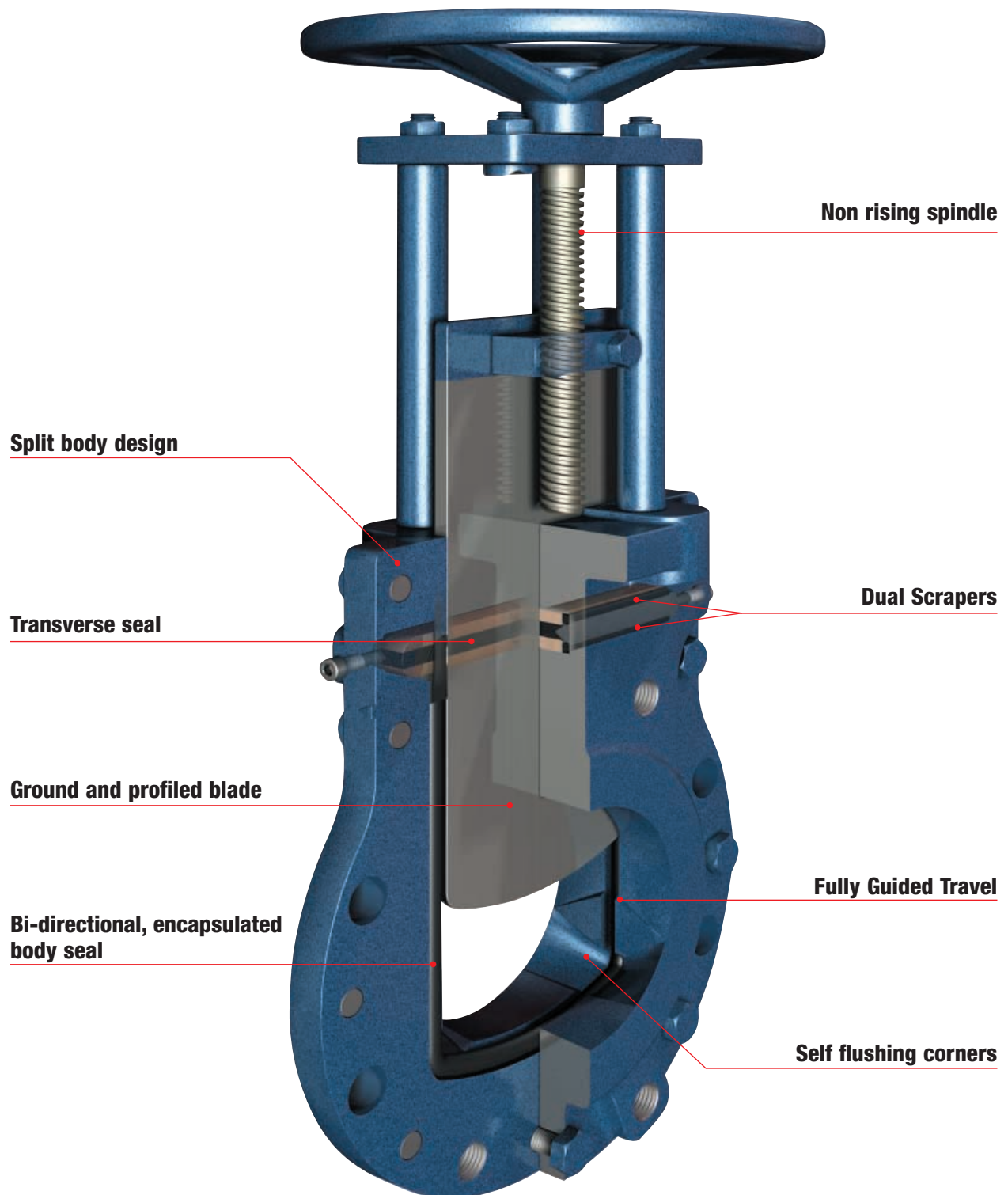
Component	Material	Code	ASTM	BS	DIN
Body	Ductile Iron	SG GR 65-45-12	A536	BSEN1563	0.7043
	316SS	C16	A351 CF-8M	BSEN10213	1.4408
Blade	316SS	S31	A276-316	BSEN10029	1.4401
Spindle	416SS	S21	A582-416	BS970	1.4005
Topworks	Mild Steel	GR230 M07	A283C	BS10210	1.07159
Pillars	Mild Steel	GR230 M07	A283C	BS10210	1.07159
Fasteners	304SS	A2			

REISS valve product coding system



Valve Size (DN)	Body Material	Blade	Valve Actuation Method	Body Seal Cord	Scrapers / Transverse Seal / Packing Material	Flange Drilling	Body Machining
pos. 1 & 2	pos. 3	pos. 4	pos. 5&6	pos. 7	pos. 8 & 9	pos. 10	pos. 11
Code mm inch	4 Ductile Iron	1a 316	1K Body & Blade Assembly	F Nitrile	BN Brass Scrapers, Nitrile Seal	O undrilling flange	N Ni-Hard
01 50 2"	5 Stainless Steel	1b 316 hardened	2K Handwheel Operated	G Viton	BV Brass Scrapers, Viton Seal	J BSTD Flange	
02 65 2 1/2"			3K Direct Acting Cylinder	H PTFE	SS SS Scrapers, PTFE Seal	P PN 10 Flange	
03 80 3"			4K Gear Operated		VS Stainless Steel Scrapers and Viton Seal	Q PN 16 Flange	
04 100 4"						M ANSI Flange	
05 125 5"							
06 150 6"							
08 200 8"							
10 250 10"							
12 300 12"							
14 350 14"							
16 400 16"							
18 450 18"							
20 500 20"							
23 600 24"							

PCC REISS Series "PKG" Knife Gate Valve



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