

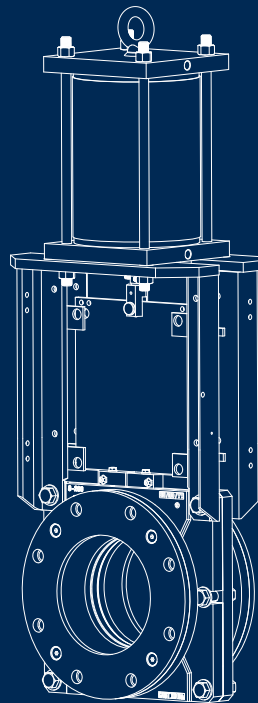
KREBS® Slurry Knife Gate Valves



FLS

Reliable performance for the most demanding abrasive slurries

Unparalleled performance and service life.
Whoever said you can't have it all never met our premium valves.

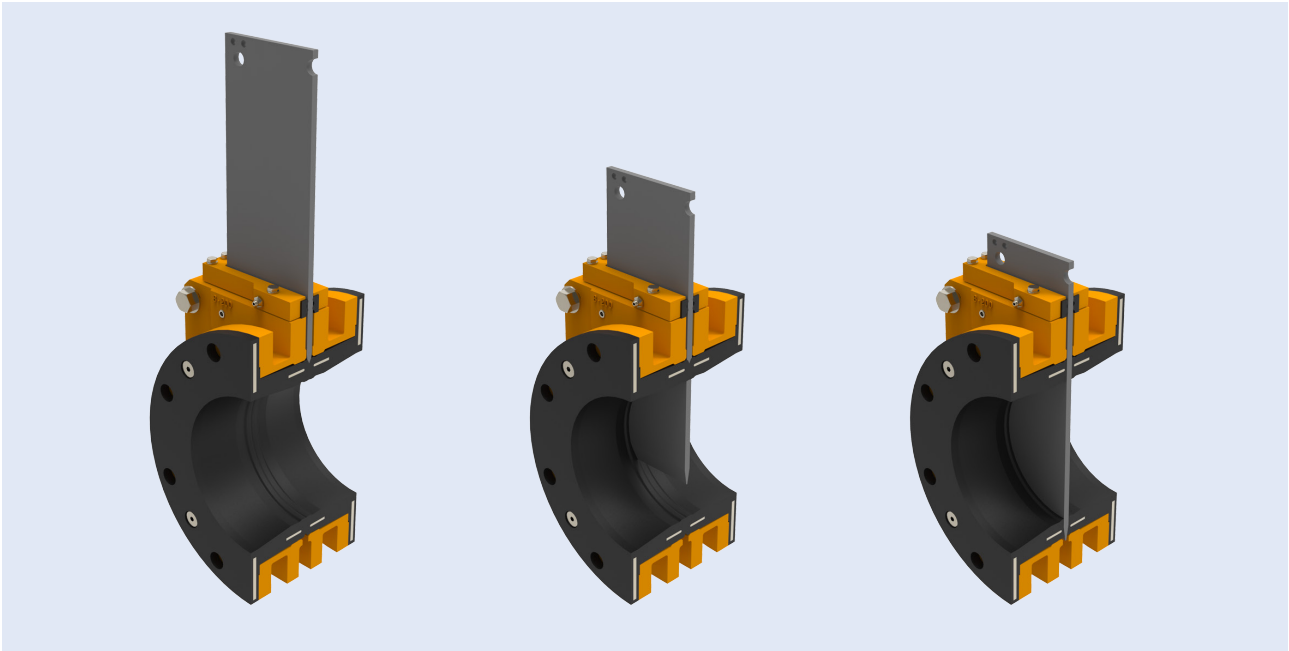


Benefits

- Enhanced safety features on every model
- Proven quality materials and reliability
- Decreased downtime and faster maintenance
- Interchangeable components reduce your inventory
- Premium materials are supplied standard on all valves
- Reduce maintenance and downtime

Design advantages

Our gate design focuses on safety and productivity. When open, the gate is fully out of the pipeline, minimising pressure drop across the valve.



Advantages of KREBS® Knife Gate Valves

- Self-flushing eliminates the need for a packing gland
- The gate fully leaves the pipeline when open, minimising pressure drop across the valve
- Material is ejected out of the bottom during actuation, ensuring full gate closure and providing a reliable seal
- Heavy duty wear sleeves provide bi-directional flow and 100% bubble-tight seal with zero downstream leakage
- Fully lined valves ensure all metal components remain clear of process material
- Heavy-duty construction supports easy spare-parts replacement
- Industry standard dimensions allows for easy drop-in replacement
- Universal frame (yoke) design allows for change of actuation without removing the valve from service
- Optimised secondary seal offers ease of maintenance and prolonged valve life

Designed for your safety and productivity

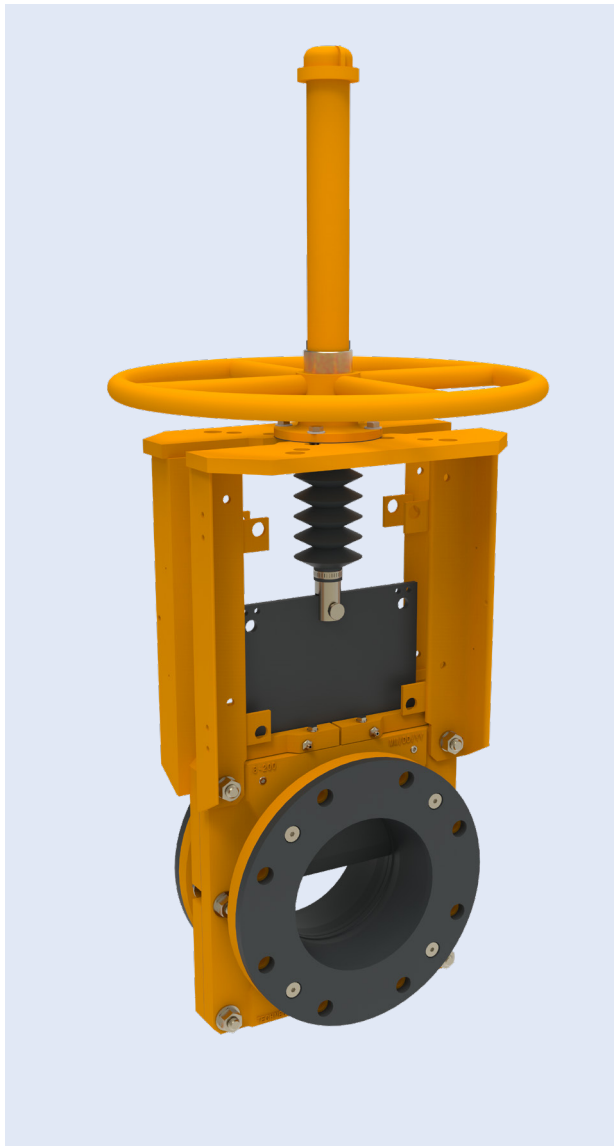
Field-replaceable wear sleeves and universal frame design reduce downtime, keeping the valve in service by allowing faster maintenance.

Design features

- Long-lasting, field-replaceable sleeves constructed of a dense-moulded elastomer, with an integral stiffener ring moulded into the sleeve
- Premium materials are supplied standard on all valves
- Multiple flange drill patterns available
- Customisable options are available to meet the service requirements of any application

KREBS® TG

Slurry Knife Gate Valves



Our knife gate valve is a true bi-directional slurry knife gate valve with a self-flushing design, and full port flow. Replaceable rubber sleeves to seal to protect the vital components and withstand the harsh, abrasive conditions inherent in mining and milling applications.

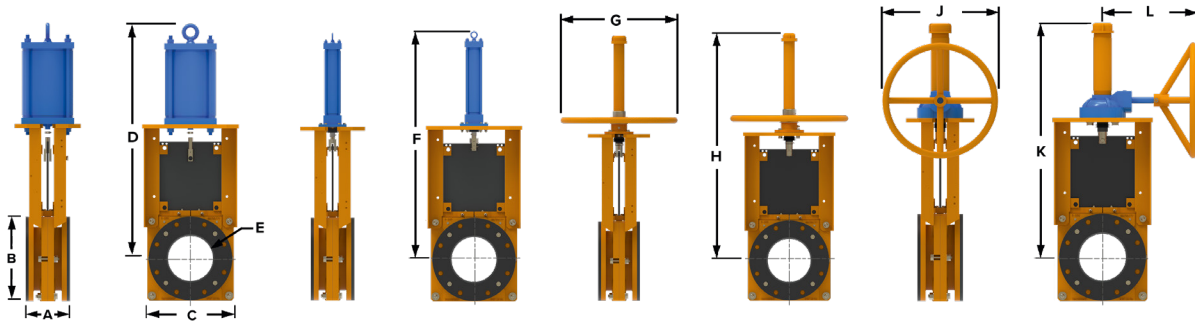
Our TG series of knife gate valves offers many upgraded design features for even better performance and easier maintenance.

Specifications

Size range	2" - 48" (50 mm - 1,200 mm) (54" - 1,350 mm also available)
Valve type	Slurry knife gate
Body style	Full flanged
Temperature range	-60F to 300F (-51C to 149C)
Pressure rating	Up to 150 psi
Body material	Cast ductile iron / 2 coat epoxy painted
Gate material	17-4PH stainless steel, 316L stainless steel, 2205 duplex stainless steel, 2507 duplex stainless steel, C276 HASTELLOY®
Seat material	Gum rubber, high temp EPDM, neoprene, nitrile, chlorobutyl
Duty	Heavy duty abrasive applications

Pressure and temperature ratings depend on valve size and material selection. Please consult your local representative for more information.

TG Series: Slurry Knife Gate Valves



Imperial units (in)

- Denotes not available for size or actuator.

Valve size	A	B	C	D	E	F	G	H	J	K	L
2	6 1/2	6	7 5/8	19 7/8	1 3/4	19	12	19 1/16	-	-	-
3	6 3/4	7 1/2	9 1/8	23 5/8	2 13/16	22 9/16	12	22 3/8	-	-	-
4	6 3/4	9	10 5/8	26 1/4	3 7/8	25 7/16	12	24 9/16	12	24 7/8	12 3/4
5	6 7/8	10	12 3/8	29 3/4	4 3/4	28 9/16	16	28 5/16	18	28 3/8	14 9/16
6	6 7/8	11	13 3/8	32 3/8	5 3/4	31 7/16	16	31	18	30 7/8	14 9/16
8	7 1/8	13 1/2	15 5/8	37 15/16	7 3/4	37	20	36 3/16	18	36 5/16	14 9/16
10	8 11/16	16	17 3/4	43 11/16	10	45 1/16	20	42 3/16	18	42 7/8	14 9/16
12	10	19	21 1/8	51 3/8	11 1/2	51 15/16	-	-	24	49 5/16	19 3/16
14	10	21	22 7/8	55	13 1/4	55 9/16	-	-	24	52 5/8	19 3/16
16	10 7/8	23 1/2	25 1/8	62 1/2	14 3/4	62 1/2	-	-	24	60 3/16	19 11/16
18	12 1/8	25	26 7/8	68 15/16	16 3/4	69 3/16	-	-	24	67 5/16	19 3/8
20	14 1/8	27 1/2	28 7/8	75 1/16	18 1/2	75 11/16	-	-	24	73 1/8	19 3/8
24	14 9/16	32	33 3/8	86 13/16	23	87 15/16	-	-	24	84 1/8	19 3/8
26	14 3/8	34 1/4	36 3/8	91 11/16	25	91 13/16	-	-	-	-	-
28	14 11/16	36 1/2	38 3/4	101 11/16	27	102	-	-	-	-	-
30	15 1/2	38 3/4	41 1/2	105 1/2	29	105 13/16	-	-	-	-	-
32	15 1/2	41 3/4	43 7/8	111 7/8	31	111 7/16	-	-	-	-	-
36	18 3/8	46	48 1/2	121 13/16	35	121 3/16	-	-	-	-	-
42	21	53	56 3/4	-	41	146 3/4	-	-	-	-	-
48	21 1/8	59 1/2	62 1/2	-	46 7/8	161 3/16	-	-	-	-	-

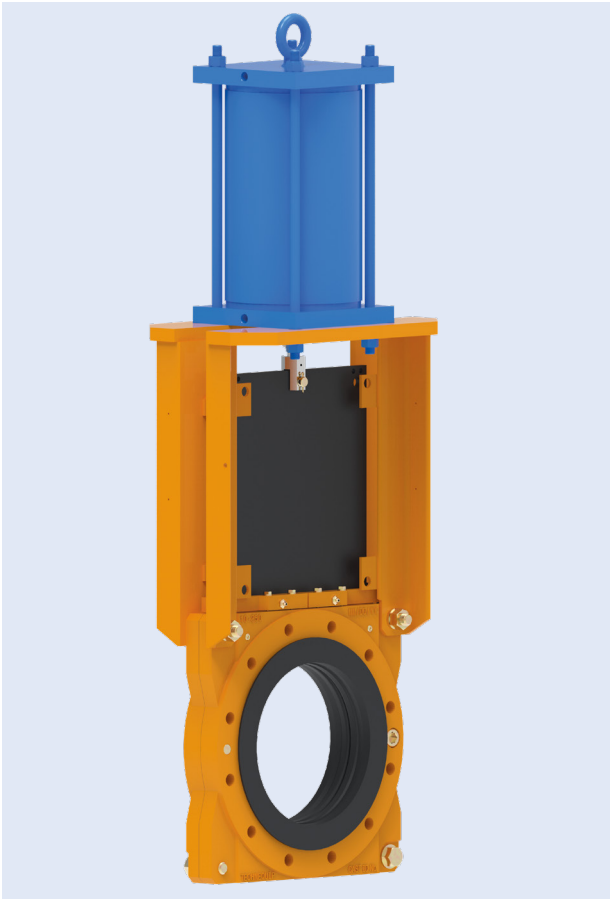
Metric units (mm)

- Denotes not available for size or actuator.

Valve size	A	B	C	D	E	F	G	H	J	K	L
50	165	152	194	505	44	483	305	484	-	-	-
80	171	191	232	600	71	573	305	568	-	-	-
100	171	229	270	667	98	646	305	624	305	632	324
125	175	254	314	756	122	725	406	719	457	721	370
150	175	279	340	822	146	799	406	787	457	785	370
200	181	343	397	964	197	940	508	919	457	923	370
250	221	406	451	1110	254	1145	508	1072	457	1089	370
300	254	483	537	1305	292	1319	-	-	610	1253	487
350	254	533	581	1397	337	1411	-	-	610	1337	487
400	276	597	638	1588	375	1588	-	-	610	1529	500
450	308	635	683	1751	425	1757	-	-	610	1710	492
500	359	699	733	1907	470	1922	-	-	610	1842	492
600	370	813	848	2205	584	2230	-	-	610	2137	492
650	365	870	924	2345	635	2332	-	-	-	-	-
700	373	927	984	2583	686	2591	-	-	-	-	-
750	394	984	1054	2680	737	2688	-	-	-	-	-
800	394	1060	1114	2842	787	2831	-	-	-	-	-
900	467	1168	1232	3094	889	3078	-	-	-	-	-
1050	537	1346	1441	-	1041	3727	-	-	-	-	-
1200	537	1511	1588	-	1191	4094	-	-	-	-	-

KREBS® TGW

Wafer Slurry Knife Gate Valves



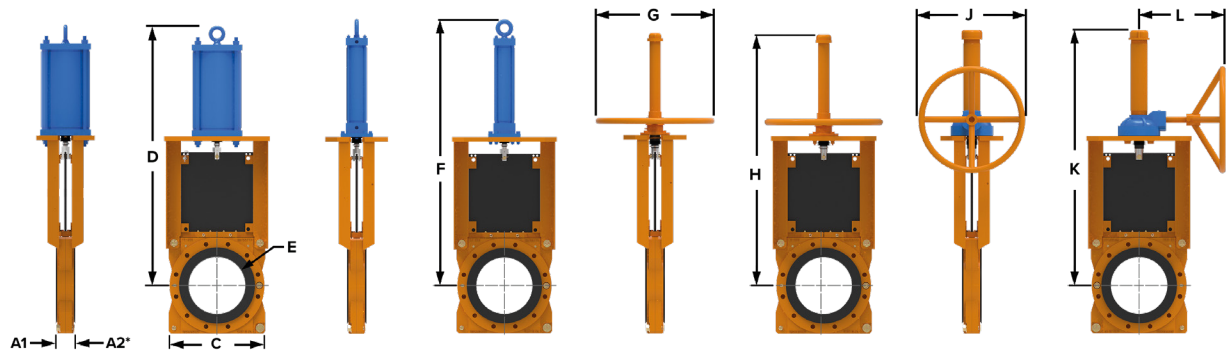
Our wafer knife gate valve is a space-saving option for medium to heavy duty applications. We designed it in response to the industry's need for valves that are able to isolate flow in demanding conditions requiring smaller face-to-face flange dimensions.

Specifications

Size range	2" - 24" (50 mm - 600 mm)
Valve type	Slurry knife gate
Body style	Narrow body
Temperature range	-60F to 300F (-51C to 149C)
Pressure rating	Up to 150 psi
Body material	Cast ductile iron / 2 coat epoxy painted
Gate material	17-4PH stainless steel, 316L stainless steel, 2205 duplex stainless steel, 2507 duplex stainless steel, C276 HASTELLOY®
Seat material	Gum rubber, high temp EPDM, neoprene, nitrile, chlorobutyl
Duty	Medium to heavy duty abrasive applications

Pressure and temperature ratings depend on valve size and material selection. Please consult your local representative for more information.

TGW Series: Wafer Slurry Knife Gate Valves



Imperial units (in)

Valve size	A1	A2	C	D	E	F	G	H	J	K	L
2	2 5/16	2 1/8	7 3/4	20 1/8	1 3/4	19 1/4	8	19	-	-	-
3	2 1/2	2 1/4	9 1/8	23 3/8	2 7/8	22 3/8	12	22	12	22 3/16	12 3/4
4	2 1/2	2 1/4	10 3/4	26 1/16	3 7/8	25 3/8	12	24 9/16	12	25 9/16	12 3/4
6	2 3/4	2 1/2	13 3/8	32 1/4	5 7/8	31 1/4	16	31	18	31 7/8	14 5/8
8	3 1/4	3	15 5/8	37 13/16	7 13/16	37	20	36 1/16	18	37 1/4	14 5/8
10	3 5/16	3	17 3/4	43 9/16	9 3/4	45	20	42 1/16	18	44	14 5/8
12	3 9/16	3 1/4	21	51 1/4	11 3/4	52 1/2	-	-	24	52	16 3/4
14	3 9/16	3 1/4	22 7/8	55	13	55 5/8	-	-	24	55 1/4	16 3/4
16	4 1/16	3 3/4	25	61 1/2	15	61 1/2	-	-	24	61	16 3/4
18	4 1/8	3 3/4	27	68 11/16	17	69	-	-	24	68 3/4	19 3/8
20	5 3/16	4 3/4	28 7/8	76	19	76	-	-	24	75 7/8	19 3/8
24	5 1/4	4 3/4	33 3/8	86 9/16	23 1/8	87 3/16	-	-	24	87 1/8	19 3/8

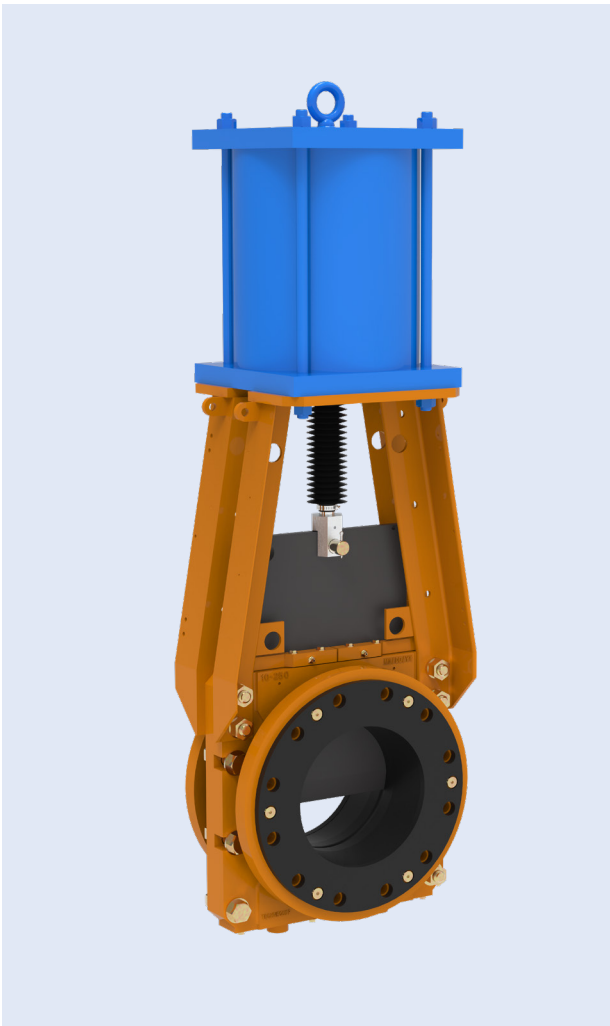
- Denotes not available for size or actuator.

Metric units (mm)

Valve size	A1	A2	C	D	E	F	G	H	J	K	L
50	59	54	197	511	44	489	203	483	-	-	-
80	64	57	232	593	73	568	305	559	304	564	324
100	64	57	273	661	98	645	305	620	304	649	324
150	70	64	340	818	149	940	406	777	457	810	371
200	83	76	397	960	198	1143	508	916	457	946	371
250	84	76	451	1106	248	1334	508	1068	457	1118	371
300	90	83	533	1302	299	1413	-	-	610	1321	425
350	90	83	581	1397	330	1562	-	-	610	1403	425
400	103	95	635	1562	381	1753	-	-	610	1549	425
450	105	95	686	1745	432	1753	-	-	610	1746	492
500	132	121	733	1930	483	1930	-	-	610	1927	492
600	133	121	848	2199	587	2215	-	-	610	2213	492

- Denotes not available for size or actuator.

KREBS® TGH High-Pressure Slurry Knife Gate Valve



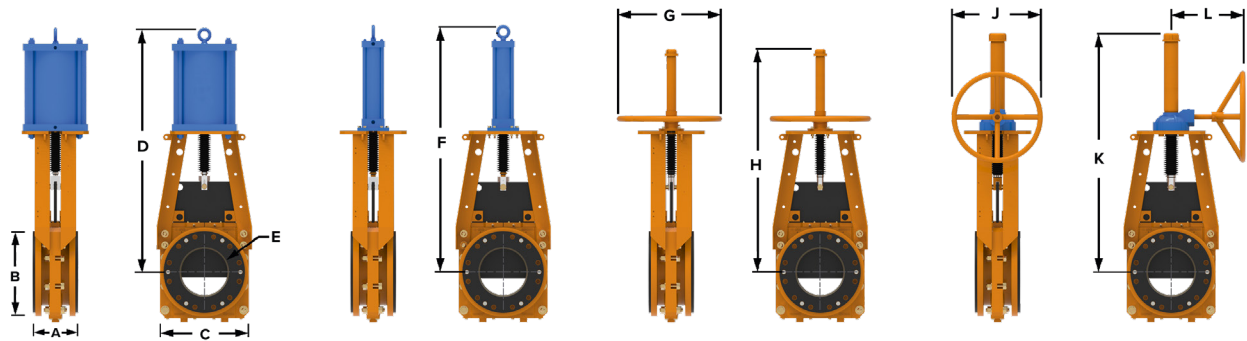
Our KREBS® High-Pressure Knife Gate Valve is specifically designed for demanding applications. It can handle higher pressures of up to 300 psi. All our high pressure valves are constructed with an integrated splash guard for safety.

Specifications

Size range	2" - 36" (50 mm - 900 mm)
Valve type	Slurry knife gate
Body style	Full flanged
Temperature range	-60F to 300F (-51C to 149C)
Pressure rating	Up to 300 psi
Body material	Cast ductile iron / 2 coat epoxy painted
Gate material	17-4PH stainless steel, 2205 duplex stainless steel, 2507 duplex stainless steel, C276 HASTELLOY®
Seat material	Gum rubber, high temp EPDM, neoprene, nitrile, chlorobutyl
Duty	Heavy duty abrasive applications for high pressures

Pressure and temperature ratings depend on valve size and material selection. Please consult your local representative for more information.

TGH Series: High-Pressure Slurry Knife Gate Valve



Imperial units (in)

Valve size	A	B	C	D	E	F	G	H	J	K	L
2	6 9/16	6 1/2	7 5/8	20 7/8	1 3/4	19 3/4	12	19 9/16	-	-	-
3	6 15/16	8 1/4	10 1/16	23 1/8	2 13/16	22 1/8	12	23 1/8	-	-	-
4	7 1/8	10	11 1/2	26 5/8	3 7/8	25 13/16	16	25 3/8	12	25 1/4	12 3/4
6	7 1/4	12 1/2	14	33 3/4	5 3/4	34 9/16	20	33 3/4	18	33 7/16	14 9/16
8	7 1/4	15	16	39 15/16	7 3/4	40 3/16	20	38 7/16	18	39 1/2	14 9/16
10	8 15/16	17 1/2	18 3/4	47 7/8	9 3/4	47 15/16	-	-	18	46 13/16	14 9/16
12	9 9/16	20 1/2	21 1/2	54 1/8	11 1/2	54 1/8	-	-	24	52 13/16	16 11/16
14	9 7/8	23	24 1/2	60 3/8	12 7/8	60 3/8	-	-	24	58 3/16	19 3/16
16	11 3/8	25 1/2	26 3/4	66 7/8	14 3/4	66 7/8	-	-	24	65 7/8	19 3/8
18	12 5/8	28	29 1/2	70 7/16	16 3/4	70 9/16	-	-	30	69 9/16	21
20	14 7/16	30 1/2	33	74 3/8	18 1/2	79	-	-	30	75 5/8	21
24	14 1/2	36	37 3/4	95 5/8	23	93 5/16	-	-	-	-	-
26	14 5/16	38 1/4	40 1/2	-	25	100 11/16	-	-	-	-	-
28	16 1/4	40 3/4	44 3/4	-	27	107 11/16	-	-	-	-	-
30	16 1/4	43	47	-	29	112 1/2	-	-	-	-	-
36	18 3/8	50	54 1/2	-	35	133 3/4	-	-	-	-	-

- Denotes not available for size or actuator.

Metric units (mm)

Valve size	A	B	C	D	E	F	G	H	J	K	L
50	167	165	194	530	44	502	305	497	-	-	-
80	176	210	256	588	71	562	305	588	-	-	-
100	181	254	286	676	99	656	406	644	305	642	324
150	184	318	356	857	146	878	508	857	457	850	371
200	184	381	406	1014	197	1021	508	976	457	1004	371
250	226	445	476	1217	248	1218	-	-	457	1189	371
300	242	521	546	1375	292	1375	-	-	610	1342	425
350	251	584	622	1533	327	1533	-	-	610	1478	488
400	288	648	679	1699	375	1698	-	-	610	1674	492
450	321	711	749	1789	425	1793	-	-	762	1767	533
500	367	775	838	1991	470	2006	-	-	762	1921	533
600	368	914	959	2429	584	2370	-	-	-	-	-
650	364	972	1029	-	635	2558	-	-	-	-	-
700	413	1035	1137	-	686	2739	-	-	-	-	-
750	413	1092	1194	-	737	2857	-	-	-	-	-
900	467	1270	1384	-	889	3396	-	-	-	-	-

- Denotes not available for size or actuator.

KREBS® TGHP

Extra High-Pressure Slurry Knife Gate Valve



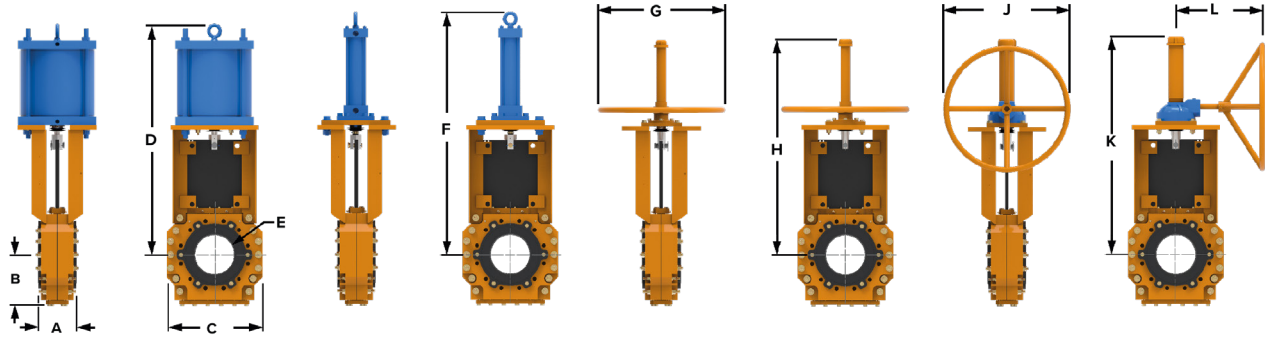
Our Extra High-Pressure Knife Gate Valves are designed for the most demanding of high pressure slurry applications. The heavy duty, extra-high-pressure valve is bi-directional with a full port design. All our high pressure valves are constructed with an integrated splash guard for safety.

Specifications

Size range	2" - 36" (50 mm - 900 mm)
Valve type	Slurry knife gate
Body style	Full flanged
Temperature range	-60F to 300F (-51C to 149C)
Pressure rating	Up to 740 psi
Body material	Fabricated Steel / 2 coat epoxy painted
Gate material	17-4PH stainless steel, 2205 duplex stainless steel, 2507 duplex stainless steel, C276 HASTELLOY®
Seat material	Gum rubber, high temp EPDM, neoprene, nitrile, chlorobutyl
Duty	Heavy duty abrasive applications for extra high pressures

Pressure and temperature ratings depend on valve size and material selection. Please consult your local representative for more information.

TGHP Series: Extra High-Pressure Slurry Knife Gate Valve



Imperial units (in)

Valve size	A	B	C	D	E	F	G	H	J	K	L
2	6 15/16	5 15/16	9	22 3/8	1 13/16	*	*	*	-	-	-
3	6 15/16	6 1/8	10 3/4	25 11/16	2 13/16	25 7/8	16	24 9/16	12	24 1/2	14 1/2
4	6 15/16	7 1/8	12 1/2	28 7/16	3 3/4	28 1/8	16	26 7/8	12	27	14 1/2
6	7 1/4	8 1/4	15	37 5/16	5 13/16	38 1/8	20	35	18	35 5/8	14 1/2
8	7 1/4	9 9/16	18	43 5/16	7 3/4	44 11/16	24	40 1/2	24	40 13/16	16 11/16
10	8 15/16	11 9/16	20 1/2	52 1/4	9 3/4	52 1/2	-	-	24	49 5/8	19 3/8
12	10 1/4	13 1/2	25	58 3/4	11	59 1/8	-	-	30	56 1/2	21
14	10 1/4	14 7/8	27 1/2	67 11/16	13	69 11/16	-	-	24	64	19 3/8
16	11	15 3/4	30	75 7/16	15	77 1/2	-	-	24	70 7/8	21 15/16
18	12 5/8	18	33	81 1/2	17	86 7/8	-	-	*	*	*
20	14 9/16	18 9/16	36 1/8	-	19	86 3/4	-	-	*	*	*
24	14 9/16	21 1/16	42 1/2	-	23	99 7/8	-	-	*	*	*
26	14 1/2	*	*	-	*	*	-	-	-	-	-
30	16 1/4	26 3/4	53 1/2	-	29	125 3/8	-	-	-	-	-
36	18 3/8	30 15/16	62	-	35	149 1/2	-	-	-	-	-

* Consult with your FLS representative.

- Denotes not available for size or actuator.

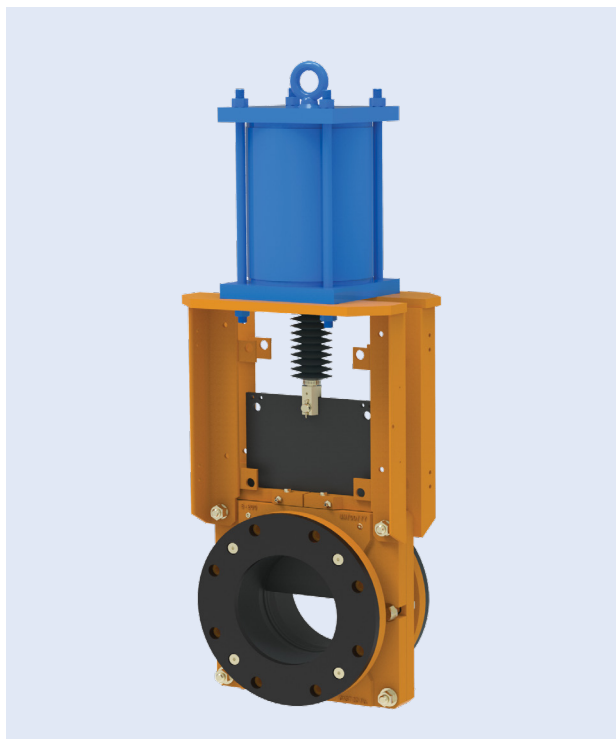
Metric units (mm)

Valve size	A	B	C	D	E	F	G	H	J	K	L
50	176	151	229	568	46	*	*	*	-	-	-
80	176	156	273	652	71	657	406	624	305	622	368
100	176	181	318	722	95	714	406	683	305	686	368
150	184	210	381	948	148	968	508	889	457	905	368
200	184	243	457	1100	197	1135	610	1029	610	1037	424
250	227	294	521	1327	248	1334	-	-	610	1260	492
300	260	343	635	1492	279	1502	-	-	762	1435	533
350	260	378	699	1648	330	1686	-	-	610	1634	492
400	279	400	762	1916	381	1968	-	-	610	1800	557
450	321	457	838	2070	432	2207	-	-	-	-	-
500	370	471	918	-	483	2203	-	-	-	-	-
600	370	535	1080	-	584	2537	-	-	-	-	-
650	368	*	*	-	*	*	-	-	-	*	-
750	413	679	1359	-	737	3185	-	-	-	-	-
900	467	786	1575	-	889	3797	-	-	-	-	-

* Consult with your FLS representative.

- Denotes not available for size or actuator.

Actuation options

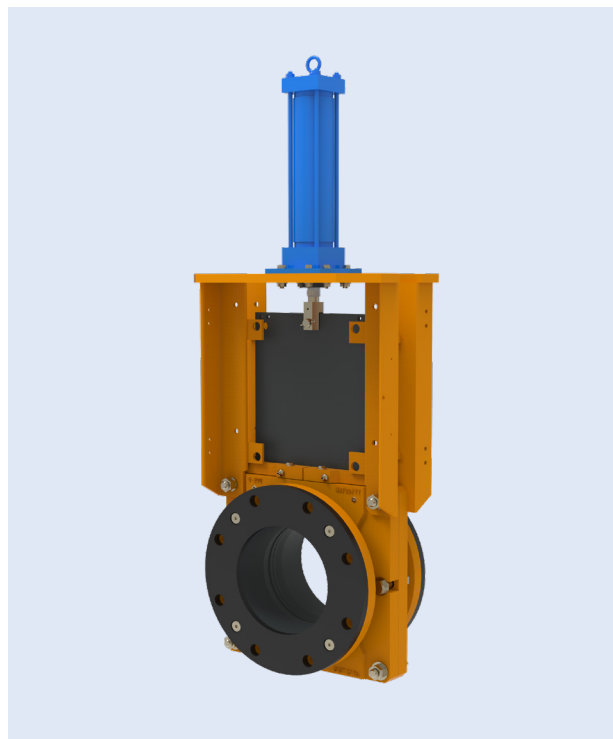


Pneumatic (AC)

Our standard pneumatic actuator is a double acting cylinder supplied with many upgraded features for superior wear and reliability. This includes painted steel end caps, chrome-plated steel piston rod, machined 17-4PH SS gate clevis and a housing constructed of composite FRP material. Every pneumatic actuator is supplied with an internal magnetic ring attached to the piston. This allows the cylinder to be easily adapted with externally mounted reed limit switches.

We can supply over-sized pneumatic actuators when low pressure air supply is a concern. Our AC60 actuators are suitable for a minimum of 60 psi (4.1 bar) air.

For mechanical fail safety, we have our single-acting, spring-return pneumatic actuators that are built for either fail open or fail close configurations as required.



Hydraulic (HYD)

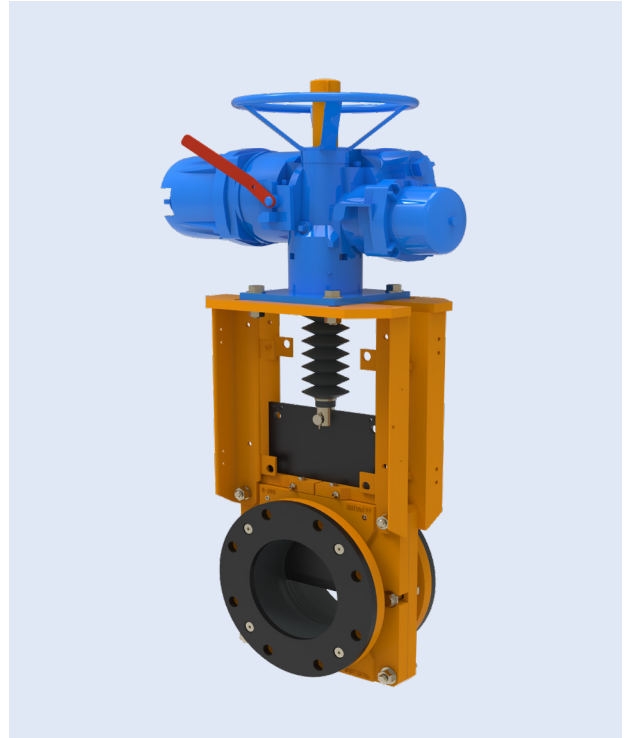
Our standard hydraulic actuator is a double acting cylinder available in either standard or high pressure configurations. Each cylinder is supplied with painted steel end caps, chrome-plated steel piston rod, bronze gland rod, and a machined 17-4PH SS gate clevis.

* Optional hydraulic power units, portable power units or hydraulic hand pumps can be supplied.



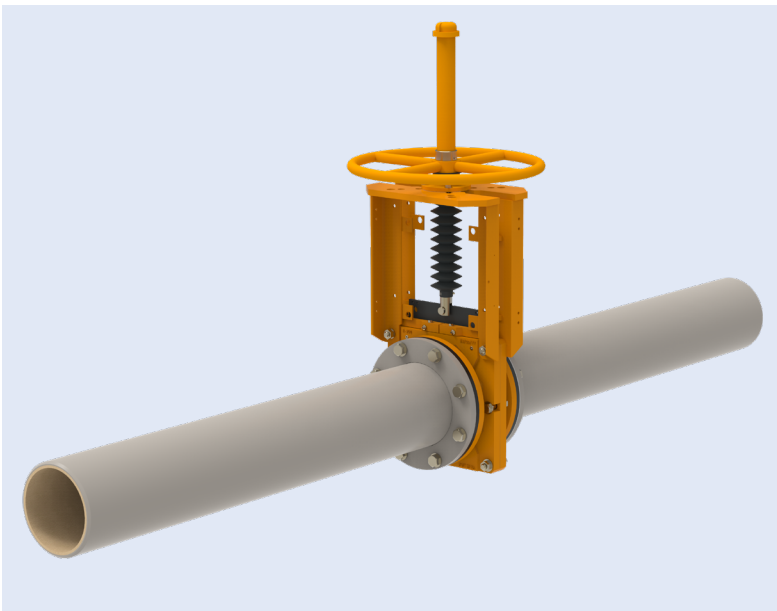
Bevel gear (BG)

All bevel gear actuators are manufactured with 3:1 or 4:1 ratios, dependent on size. Each valve is supplied with a 304 SS stem, protected by a painted steel stem cover and dust boots.



Electric (ELEC)

All our knife gate valves can be fitted with electric actuators of many different makes and models to meet numerous voltage requirements. Each valve is supplied with a 304 SS stem, protected by a painted steel stem cover and dust boots.



Handwheel (HW)

Our knife gate valves are available with hand wheel operators in sizes 2" (50mm) to 10" (250mm). For sizes larger than 10" (250mm), the rim pull force to operate a hand wheel becomes too large and a bevel gear operator is recommended. Each valve is supplied with a 304 SS stem, protected by a painted steel stem cover and dust boots.

Optional safety features

Plate splash guard

This is a flat plate with a gasket mounted to the bottom of the valve with two NPT fittings for either a slurry discharge pipe or a water flush pipe. It is optional for TG and TGW valves.

Pipe splash guard

This guard is mounted to the bottom of the valve and consists of a machined pipe with a gasket to collect and drain discharge. It comes standard in our TGH and TGHP valves and is optional in TG and TGW valves.

Gate guards

Expanded metal gate guards prevent access to the gate, while allowing for a washout of the gate area.



Gate maintenance pin

Tabs allow a pin to be placed through the gate for maintenance purposes.

Air lockout

A lockable air valve is installed between the air supply and actuator, preventing valve actuation.

Industries

- Mining and mineral processing
- Mineral sands
- Oil sands
- Cement
- Aggregates
- Coal
- Phosphate
- Ash
- Alumina
- Power (FGD)
- Pulp and paper
- Chemical
- Automotive
- Manufacturing



Quality as a standard

- Manual or automated actuators
- Two-coat epoxy-painted for corrosion resistance
- High-strength 17-4 PH stainless steel gate clevis
- Dust boots supplied to protect stem and actuators
- Fluorocarbon gate coating to reduce friction
- No packing gland necessary
- Full port, bi-directional design
- Metric or imperial flange patterns
- Retainer flanges supplied on TG, TGH, TGHP models
- Long-wearing, field-replaceable sleeves create sealing surface
- Machined gate guides to control gate opening and closing
- Lubrication ports easily accessible for maintenance
- Flush ports in valve housing help keep gate area free of debris
- Optional factory-installed instrumentation and controls available

Quality – keep the valve that works for you

Our Knife gate valves are designed with the operator in mind, using premium quality materials and providing reliable performance.

Inventory – keep your costs low

Our interchangeable component design reduces the amount of inventory you need to keep on hand.



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KREBS® product offerings for Mining and Industrial

- KREBS® Slurry pumps
- KREBS® Cyclones
- KREBS® Knife Gate Valves
- KREBS® DeSanders
- KREBS® Vessels

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