

Mining's Final Knife Gate Valve Solution



NewCon Co.

KNIFE GATE SLURRY VALVES

www.NewconValve.com

605 West 37th Street, Hibbing, Minnesota USA 55746-2829
Phone: 218-262-3841 | FAX 218-262-2905
Sales E-mail: sales@newconvalve.com | newcon@newconvalve.com

Maximum Durability, Performance and Value Without the Mess

NewCon knife gate valves (KGV) perform extremely well in both large and fine-coarse mineral processing, and are built to withstand the world's most severe duty abrasive slurry applications.

As a purge-less KGV, we guarantee zero leakage to atmosphere, as well as 100% downstream isolation, with the industry's longest wear life.

Manufactured in the USA to outlast all other knife gate valves:

NewCon's field-replaceable urethane liner far outlasts the wear life of the competition's resilient seats and sleeves. It is durable, abrasive resistant, and economical to replace. Combined with the molded elastomer gate seal, the NewCon rebuild kit is 10% to 15% of the cost of a new valve. NewCon's extremely thick, robust gates are guaranteed not to bend, which contributes to maximum wear life between rebuilds. System downtime due to premature knife gate failure is reduced to the absolute minimum.

Many different mineral processing facilities depend on NewCon knife gate valves to isolate severe, abrasive slurries.

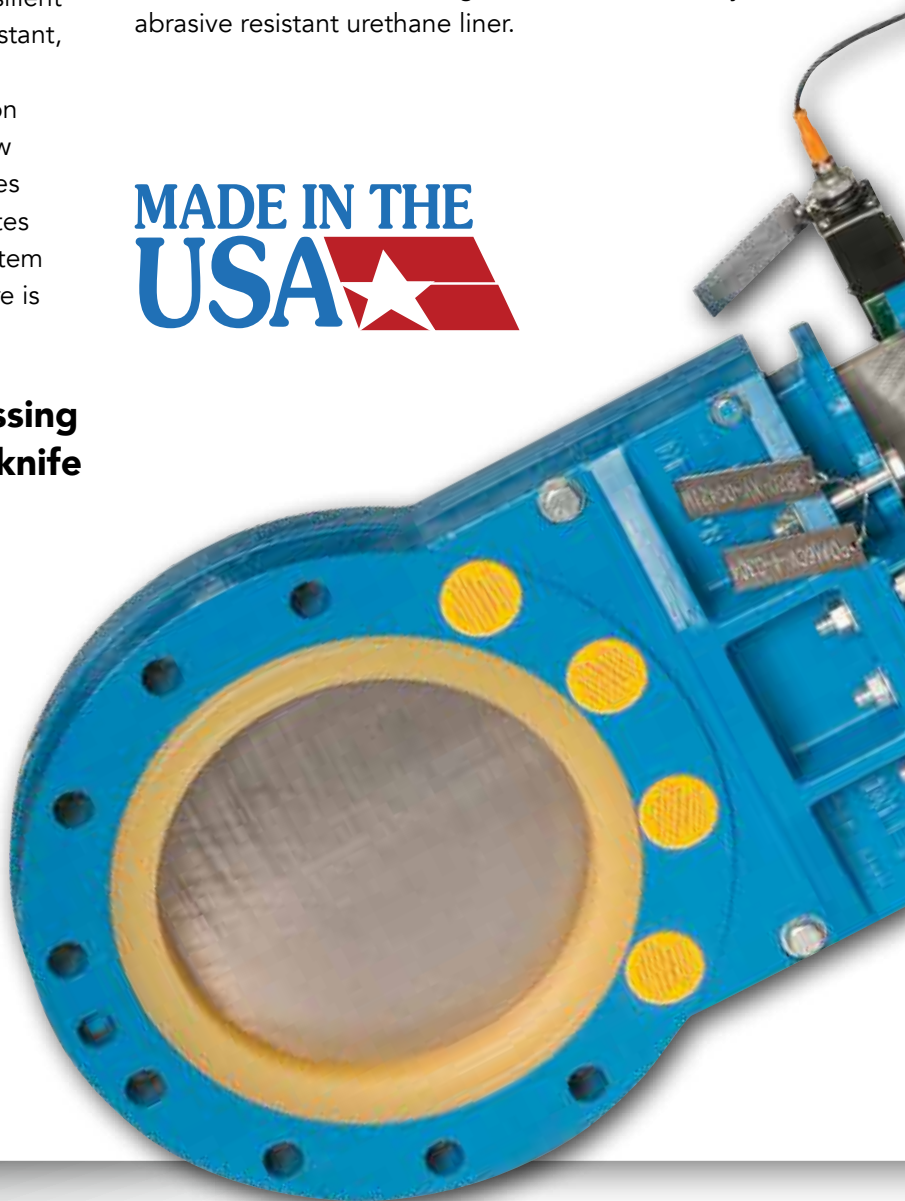
- Taconite/Iron Ore
- Copper
- Gold
- Soda Ash/Borax
- Phosphate
- Lead
- Coal
- Cement
- Limestone
- Potash

- **Zero leakage to atmosphere**
- **100% downstream isolation**

Self-flushing design - how it works.

As our gate cycles, and slurry velocity increases, the tapered edge of the NewCon gate redirects the slurry flow into the molded urethane gate seat area, creating turbulence and increased velocity. This allows for the valve to flush itself, ensuring a tight seal. The rigid gate, and the abrasion resistant properties of urethane, allow for our valve to seal time after time, again and again, regardless of how often the valve is actuated. Cycle a NewCon valve daily or just annually, and you will get the same result—zero down-stream leakage—this is accomplished only through the utilization of NewCon's thick, robust stainless steel gate, and our extremely abrasive resistant urethane liner.

**MADE IN THE
USA** 





Mining Applications

- Tailings • Concentrator • HydroCyclone • Ball Mills
- Flotation • Thickeners • Screen Box Isolation
- Water Recirculation • Sag Mill Discharge

NewCon valves are utilized in mining operations around the world by a growing list of companies:

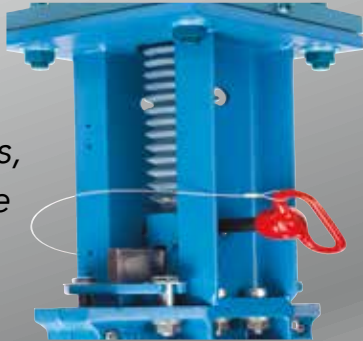
Agnico-Eagle Mines Ltd.
ArcelorMittal
Aurizon Mines, Ltd.
Barrick Gold Corporation
Capstone Mining
Century Mining
Chinalco Corporation
Cliffs Natural Resources
Codelco Corporation
Freeport McMoRan Copper
& Gold, Inc.

Hubei Shennong Phosphate
IMC (Mosaic) Phosphate
Intrepid Potash
Jacobs Engineering
J.R. Simplot Company -
Simplot Phosphates
Kennecott Utah Copper
Newalta Corporation
Newmont Mining Corporation
Northgate Minerals
Corporation/AuRico Gold

PotashCorp
Rio Tinto
Samarco Mineração S.A
Siemens Industry, Inc.
Southern Peru Copper
United States Steel
Washington Group Intl.
Wesdome Mining
Wushan Copper & Moly
Wynndalco Enterprises
Xstrata Mining

Standard and Optional Valve Features

Safety
lock-out pins,
and protective
rod boots



Steel-reinforced
rubber-coated
flange seals in 16"
valves and larger



Hand-wheel
safety lock-outs



Optional
pinch-point
safety shroud



Bevel-gear
safety
lock-outs



HT2 premium urethane liner
for added abrasive resistance
and temperatures to 250° F



Optional
hand-wheel
stem
protection



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PRODUCT OPTIONS:

(Contact NewCon)

Grease Fittings or Ports: None. Lubrication not needed.

Splash Drainage Plates: Not needed. NewCon valves are purge-less.

Blind Flange Bodies: Optional, some sizes in stock, BHT body drilling is available for "dead-end" service.

Body Coatings: Enhanced environmentally resistant body coatings are available.

Shrouds: Pinch point safety shrouds are available.

SS Fastener Kit: Stainless steel fastener kits are in stock.

Metric: Metric flange drilling is available.

Gate Alloys: 316, 2205, 255, 2507, AL6XN, C276, 17-4 plus others, in stock, and available.

Gate Coatings: Teflon and others are available.

Protective Stem or Rod Boots: Available as an option with standard lead time.

Electrical or Air Accessories: Most brands/models in stock at NewCon.

Termination Enclosures: Available and in stock.

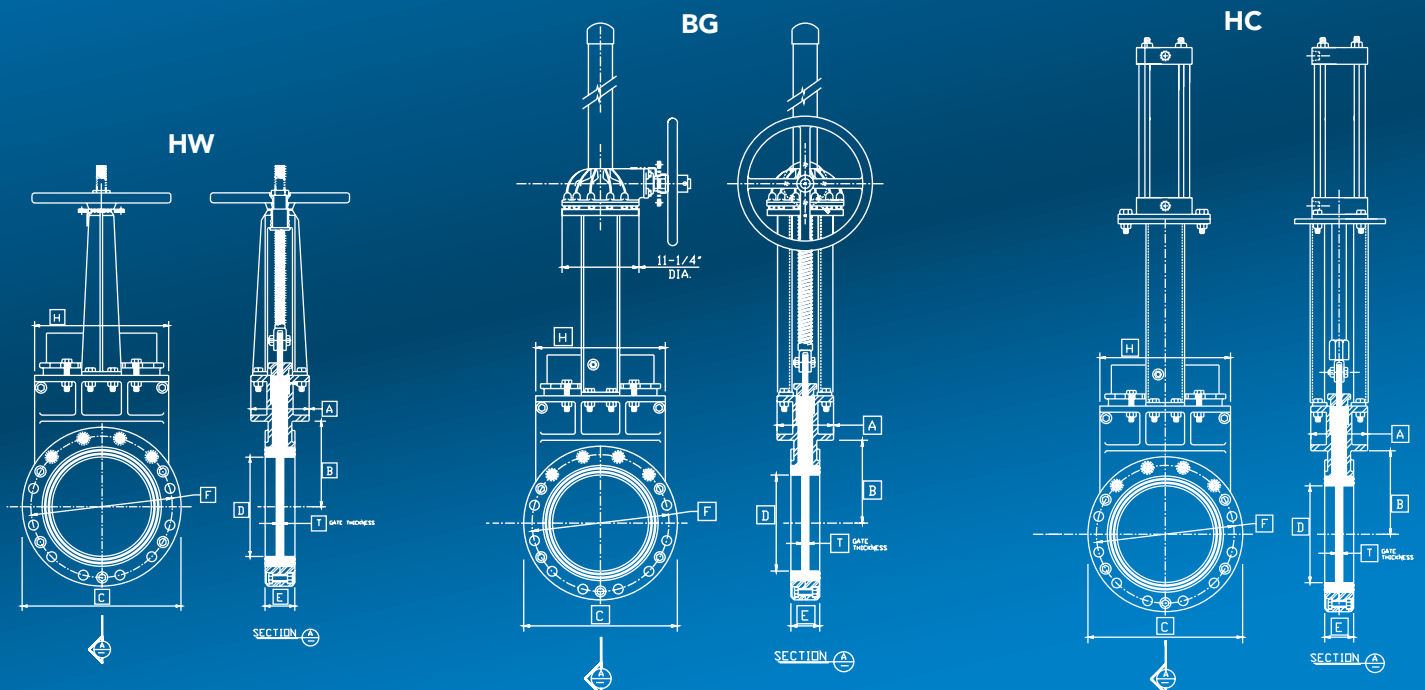
Oversized Air Cylinders: Oversized double acting air cylinders are available, sized for 60 psi.

Failure Modes: Spring return air cylinders are available for failure modes upon loss of air.

Chain Wheel: Chain wheel adaptors and chain are available for bevel gear and hand-wheel valves.

Size	A	B	C	D	E	F	H	Gate Thickness	Pressure Rating
2	5.25"	3.50"	7.00"	2.00"	2.00"	4.75"	8.50"	.50"	150 psi
3	5.25"	3.50"	7.00"	3.00"	2.00"	6.00"	8.50"	.50"	150 psi
4	5.25"	4.50"	8.38"	4.00"	2.00"	7.50"	9.50"	.50"	150 psi
6	5.38"	6.00"	10.88"	6.00"	2.25"	9.50"	11.25"	.50"	150 psi
8	5.75"	7.25"	13.25"	8.00"	2.75"	11.75"	11.50"	.50"	150 psi
10	5.50"	8.50"	16.00"	10.00"	2.75"	14.25"	13.38"	.50"	150 psi
12	6.63"	10.00"	18.75"	12.00"	3.00"	17.00"	16.50"	.625"	150 psi
14	7.50"	10.88"	20.88"	13.25"	3.00"	18.75"	16.88"	.625"	150 psi
16	10.50"	12.50"	23.50"	14.75"	SEE G.A.	21.25"	21.25"	1.125"	150 psi
18	10.75"	15.50"	25.38"	17.25"	SEE G.A.	22.75"	23.50"	1.125"	150 psi
20	11.00"	16.00"	27.63"	19.00"	SEE G.A.	25.00"	26.50"	1.50"	150 psi
24	12.00"	19.00"	32.25"	23.00"	SEE G.A.	29.50"	32.12"	1.50"	150 psi
28	12.00"	21.00"	36.50"	25.75"	SEE G.A.	34.00"	35.88"	1.50"	150 psi
30	12.00"	23.12"	38.75"	29.75"	SEE G.A.	36.00"	38.00"	1.50"	100 psi
36	12.50"	25.50"	45.62"	33.75"	SEE G.A.	42.75"	45.63"	1.50"	100 psi
40	20.00"	28.38"	50.75"	37.75"	SEE G.A.	47.25"	50.75"	1.75"	100 psi
42	20.00"	30.50"	53.00"	46.68"	SEE G.A.	49.50"	52.50"	1.75"	100 psi

* For additional dimensions and data, please register at www.newconvalve.com for complete general arrangement drawings.



TECHNICAL DATA

- Valve Style: Bi-directional, resilient seated, 150# Class, Combination Lug/Wafer.
 Purge-less, self-flushing. It is not necessary to discharge media during cycling.
- Applications: On/off service in severe, abrasive slurries, and dry material handling with working temperatures under 250 degrees F (Red HT2 Liner) and 200 degrees F (Amber Standard Liner).
- Size Range: 02" to 28" - Standard Pressure Rating 150 psi.
 Size Range: 30" to 42" - Standard Pressure Rating 100 psi.
- Operation/Actuation Options: Manual hand-wheel & bevel gear, air cylinder, hydraulic, electric, and chain wheel.
- Air Cylinders: Standard bore diameters are sized for 80 psi, and rated for 150 psi. Oversized cylinders are sized for 60 psi, and rated for 150 psi.
- Valve Orientation: 2" through 14" sizes have a proper flow orientation. 16" valves, and larger, do not. See GA drawings.
- Leakage: Zero leakage to atmosphere & 100% bubble tight downstream shut-off.
- One-Piece Field Replaceable Liner: Amber Standard Polyurethane with maximum temperature rating of 200 degrees F.
 Red Premium HT2 Polyurethane with maximum temperature rating of 250 degrees F.
 Liner seat cavity matches gate bevel profile. Solids do not permanently collect or become imbedded in the liner seat.
- Gate Seal: Field replaceable molded elastomer, with maximum temperature rating of 250 degrees F.
- Wafer Style Bodies: Epoxy coated ductile iron (ASME/ANSI B16.5/150, B16.10, B16.47).
- Mechanical Flange Seals: One pair, 3/4" steel reinforced, rubber coated, standard on valves 16" and larger.
- Cycle Speeds: NewCon valves can be cycled, open or closed, at the customer's preferred speeds without limitations.
- Installation Requirements: Typical installations include applications in both horizontal and vertical piping. See GA drawings.
- Hydro Testing/Pressure Rating: Standard at 1.5X rated pressure. Higher test ratings are available, with or without optional gate alloys.
- Valve Port: Full, unobstructed flow, enabling reduced internal wear.
- Wear Components: Rebuild kit consists of a one-piece urethane liner and a molded elastomer gate seal. SS gates are rarely replaced.
- Safety Locking Devices: Standard in air cylinder actuated valves up to 30" and all manual valves.
- Stainless Gate Material: Standard is 304 SS. Others are available and in stock.
- Materials of Construction: The NewCon knife gate valve bodies are internally and externally epoxy coated ductile iron. The knife gate is standard with 304 SS, and the liner is one-piece, field replaceable urethane. The gate seal is molded elastomer, and is also field replaceable.

Gate Thicknesses:

02" through 10"	.500"
12" through 14"	.625"
16" through 18"	1.125"
20" through 36"	1.500"
40" through 42"	1.750"

**Thickest Gate
in the Industry!**

