

# Coal Power's Final Knife Gate Valve Solution



**NewCon Co.**

**KNIFE GATE SLURRY VALVES**

[www.NewconValve.com](http://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](mailto:sales@newconvalve.com) | [newcon@newconvalve.com](mailto:newcon@newconvalve.com)

# Maximum Durability, Performance and Value Without the Mess

Years ago, NewCon began servicing the coal-fired power generation industry with installations in bottom ash slurry. Maintenance personnel would soon appreciate the long-term durability, and zero leakage to atmosphere achieved by a NewCon knife gate valve (KGV). Soon after, a growing list of flue gas desulfurization (FGD) scrubbers were constructed with specified NewCon valves. Today, worldwide, NewCon is the preferred knife gate valve in FGD applications.

## **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.

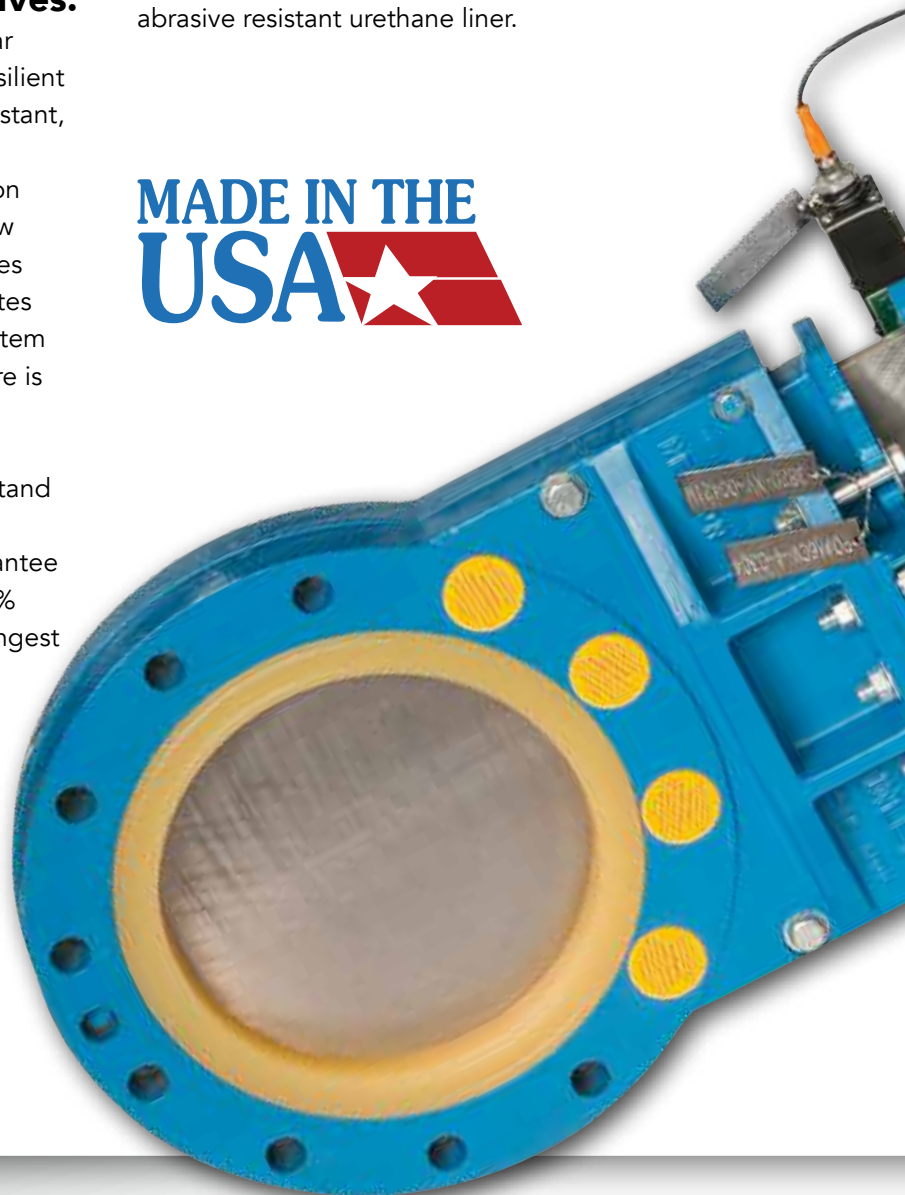
NewCon knife gate valves are built to withstand the world's most severe-duty abrasive slurry applications. As a purge-less KGV, we guarantee zero leakage to atmosphere, as well as 100% downstream isolation, with the industry's longest wear life.

- **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** 







# Coal-Fired Power Applications

- Absorber Bleed Tank and Feed Isolation • Ball Mill Discharge Isolation
- Bottom Ash • Control Valve Isolation • Dewatering Pump Isolation
- Filter Feed Tank Isolation • FGD Recycle Pump Isolation
- Gas Cooling Pump Suction and Discharge
- Gypsum Management • Hydro-cyclone Feed
- JBR Drain • Reagent Tank Drain • Water Reclaim
- Reagent Feed Isolation
- Sump Drain and Discharge

**NewCon valves are utilized in coal-fired power generation by a growing list of companies:**

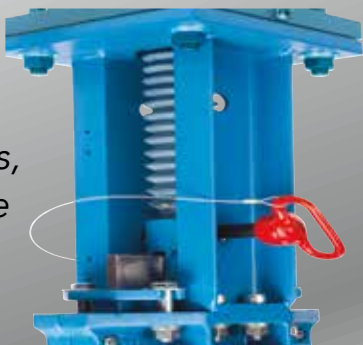
Allegheny Energy  
Alstom Power  
American Electric Power  
Arizona Public Service  
Babcock & Wilcox  
Babcock Power  
Basin Electric Power Cooperative  
Black & Veatch  
Burns & McDonnell Engineering  
Dakota Gasification Company  
Detroit Edison Electric Company  
Duke Energy

Edison Mission Energy  
First Energy  
FL Smidth Georgia Power  
Indiana Power & Light  
Indianapolis Power & Light  
Jacksonville Electric Authority  
Kiewit Corporation  
Kentucky Utilities  
Louisville Gas & Electric  
Lower Colorado River Authority  
PacifiCorp  
Progress Energy

Public Service of New Hampshire  
Public Service of New Mexico  
South Carolina Electric & Gas  
Korea Electric Power  
Siemens Energy  
Southern Company  
Texas Utilities  
URS Corporation  
Washington Group  
Westar Energy

# 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

**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.

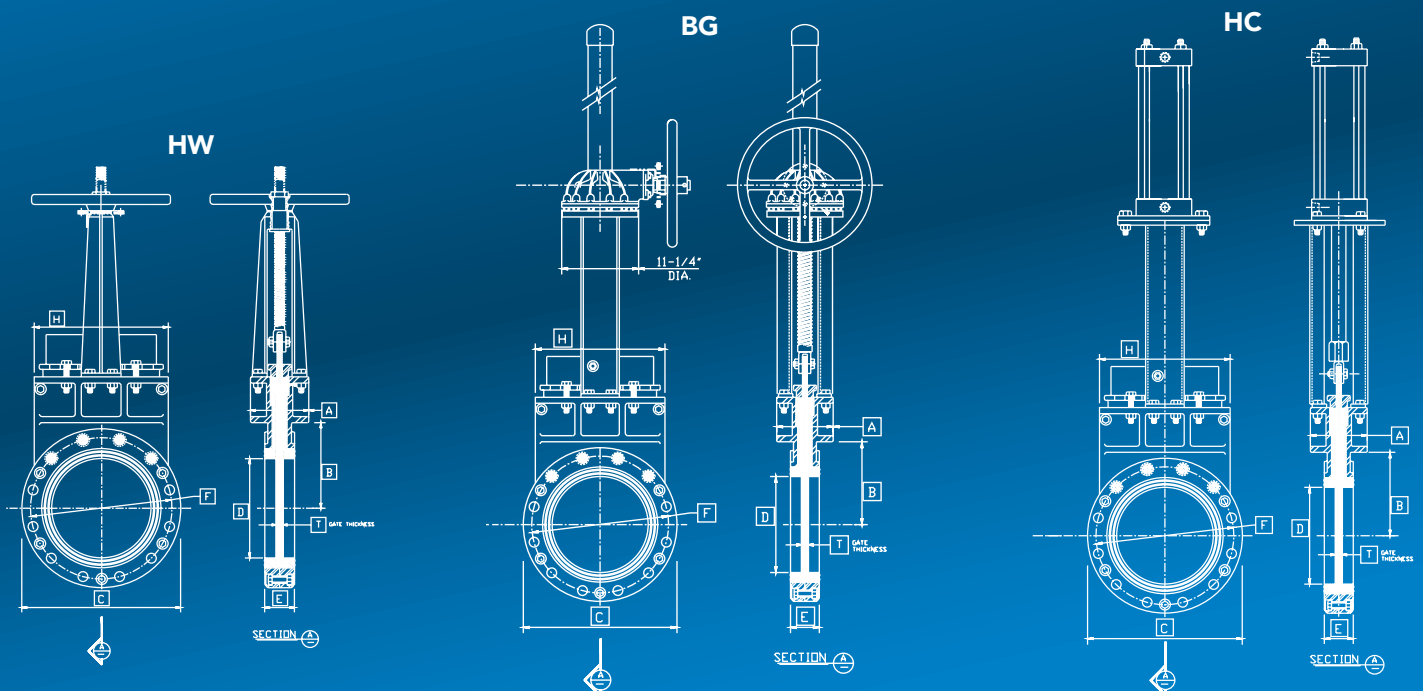
Termination Enclosures: Available and in stock.

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](http://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!**

