

WB Series Specifications

The WB wide body slurry knife gate valve is specifically designed for tough, abrasive and corrosive applications.



Features

- Heavy duty construction ensures long service life
- Two-piece sleeves are easily replaced without disassembling the valve and are available in a wide range of elastomers
- Packingless design. No gate or stem packing
- Bi-directional 100% bubble tight shut-off
- Full port design reduces pressure drop and minimizes turbulence
- Open bottom allows for purging of large solids and solids in high concentrations
- No seat cavities where solids can collect and cause gate interference

General Applications

- Mining
- Power utilities
- Pulp and paper
- General industrial
- General chemical
- Cement
- Sand and gravel
- Coal
- Phosphate
- Soda ash

Size Range

Available in sizes 18" through 54"

Maximum Working Pressure

Sizes 18" through 24": 100 psi

Sizes 30" through 54": 75 psi

Standard Materials

Body: Cast ductile Iron

Gate: 316 stainless steel

Sleeves: Natural rubber

Isogate WB series wide body slurry knife gate valve

Available Sleeve Materials

Natural rubber: Best abrasion resistance for long life when good chemical compatibility is achieved (ph 2-14). Black natural rubber is the standard series WB sleeve offering. Affected by hydrocarbons, oils, fats and solvents. The maximum recommended high temperature is 180°F. Minimum low temperature -60°F.

EPDM: General resistance to most moderate chemicals, alcohol, ozone and organic acids. Affected by strong acids, solvents, most hydrocarbons, chloroform and aromatic solvents. The maximum recommended high temperature is 275°F. Minimum low temperature -60°F.

Fluro Rubber: (Viton) Recommended for general chemical applications at elevated temperatures. Affected by solvents, strong caustic, and ketones. The maximum recommended high temperature is 400°F. Minimum low temperature is -50°F.

Neoprene: General resistance to moderate chemicals, salt water, oil, fats, grease, and a number of hydrocarbons and solvents. Affected by strong oxidizing acids, acetic acids, ketones and esters, chlorinated and nitrohydrocarbons. The maximum recommended high temperature is 210°F. Minimum low temperature -40°F.

Available Gate Materials

316 stainless steel: Austenitic stainless steel with a good combination of strength and corrosion resistance. 316 stainless steel is the standard series WB gate offering. Resists sea water and corrosive pitting type chemicals.

17-4 PH stainless steel: Heat treatable stainless steel whose corrosion and oxidation resistance compares to standard stainless steel but exhibits superior strength.

Hastelloy C-276: Highly versatile corrosion resistant alloy. Excellent resistance to oxidizing corrosives, acids, and chlorine-contaminated hydrocarbons.

Alloy 2205: A duplex stainless steel that combines the favorable qualities of a ferritic alloy with those of an austenitic alloy. Good general corrosion resistance suited for chemical, pulp mill digesters, and flue gas desulfurization equipment.

AL6XN: A high nickel content, 6% molybdenum alloy with very good corrosion resistance. Suited for chemical, pulp mill digesters, and flue gas desulfurization equipment.

Recommended specifications for Isogate WB series slurry knife gate valves

Wide body, slurry knife gate valve shall be designed specifically for highly abrasive or corrosive applications and made of heavy duty materials. The valve shall be bi-directional, provide 100% bubble tight shut-off in the closed position, and shall have no seat cavities where solids could collect and cause gate interference. The valve's sealing surface is to be between two thick elastomer sleeves of a material suitable for the intended application. The sleeves will be molded with an integral, fully encapsulated, stiffener ring and shall be replaceable without disassembling the valve. Sleeves shall be held in place with elastomer lined retainer flanges. The valve shall be designed with no gate or stem packing and have an open bottom to allow for purging of larger solids and solids in high concentrations. An optional flush control splash guard to collect discharged slurry and direct proper drainage should be available. The valve gate shall be made of 316 stainless steel or an alloy material

suitable for the intended application and shall be completely withdrawn from the process flow when in the open position. During operation, the gate should pass between the elastomer sleeves, purging any slurry or solids from between. The gate should be guided by guide channels that are integral to the valve body and be removable for inspection or replacement while the valve body remains in service. The valve body should be a robust design and heavy duty construction with integral flanges slotted to meet ANSI B16.5 up through 24" and MSS SP44 for sizes 26" and larger. The valve shall be equipped with a heavy steel fabricated yoke which can accommodate a bevel gear, pneumatic or hydraulic cylinder, or an electric motor operator depending on the application. All exterior surfaces shall be painted with factory standard epoxy paint.

Specify Isogate WB series wide body style slurry knife gate valves.



ISOGATE®

*WB series wide body
slurry knife gate valve*

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