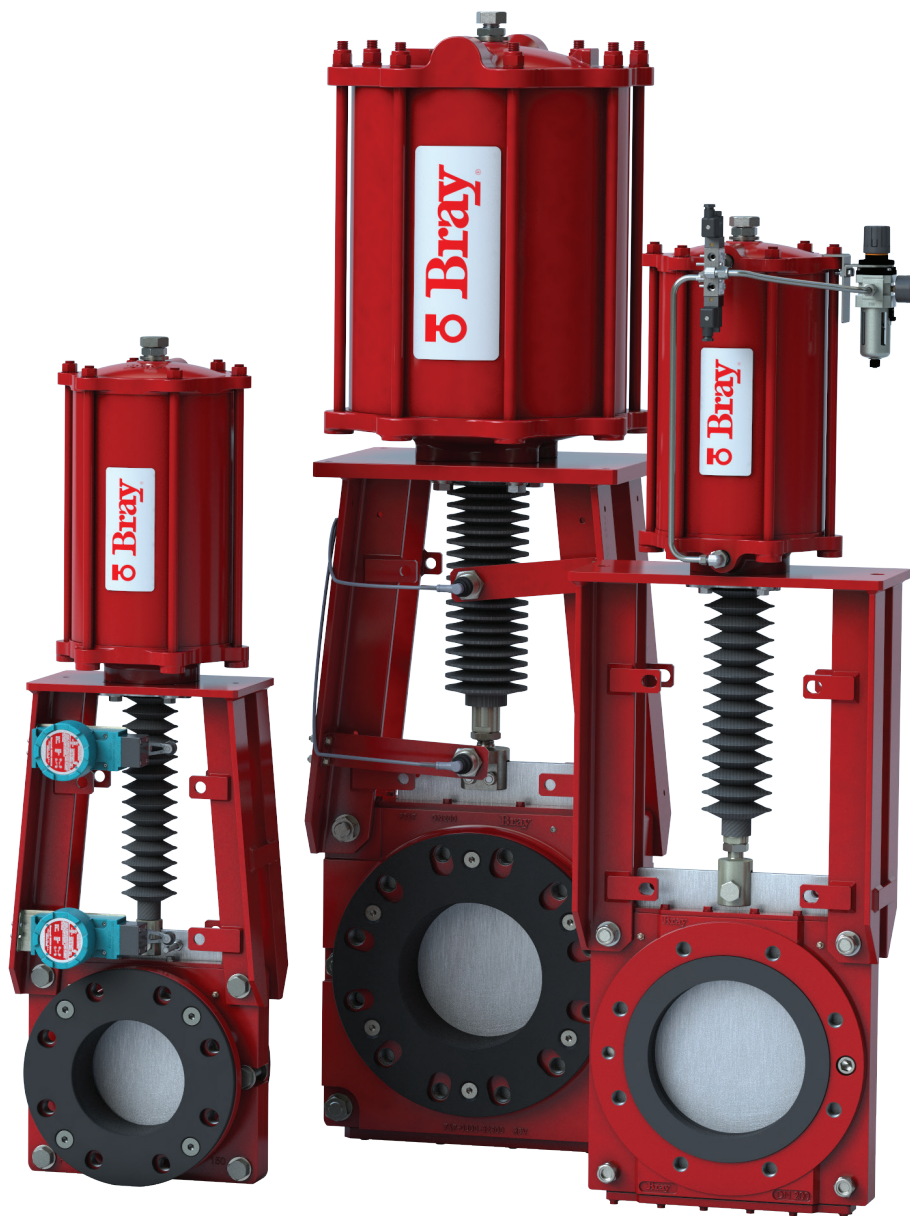
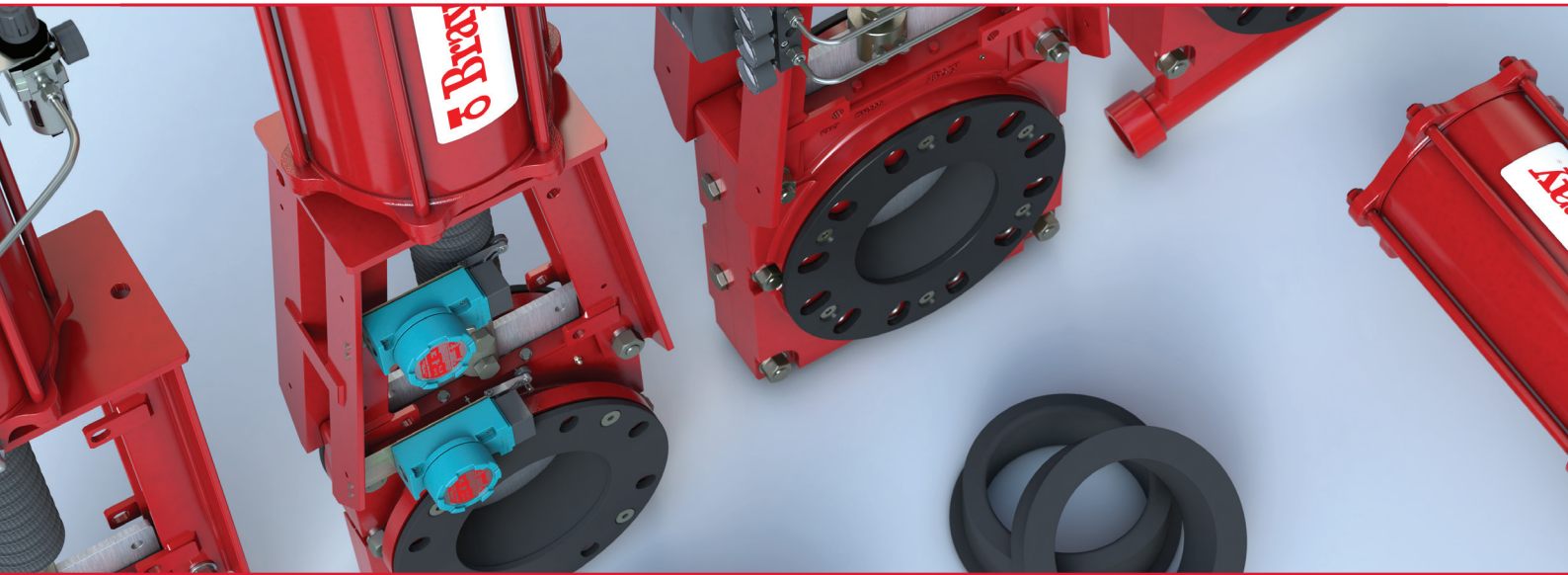

SLURRYSHIELD® SLURRY VALVES

PRODUCTS & SOLUTIONS



Bray®



BRAY SLURRYSHIELD® PRODUCTS OFFER A LOWER TOTAL COST OF OWNERSHIP THAN OTHER SLURRY PRODUCTS. OUR SOLUTIONS ARE ENGINEERED TO DELIVER RELIABILITY, DURABILITY, AND 100% BIDIRECTIONAL ISOLATION FOR A VARIETY OF INDUSTRIES. OUR ADVANCED TECHNOLOGY FEATURE LONG SLEEVE CYCLE LIFE AND VERY MINIMAL DISCHARGE DURING CYCLE.



MINING



METALS



**POWER
GENERATION**



**PULP &
PAPER**



ALUMINA



RESEARCH & DEVELOPMENT

Extensive research & development is a key component in Bray's formula for providing optimized slurry valve solutions. Our advanced testing lab provides a real-world environment where our slurry valve engineering team performs a variety of ongoing activities that include:

- > Elastomer research on formulation and compounding
- > Metallurgy, and advanced coatings research
- > Latest technology in pipeline cycle testing
- > Flow analysis and CFD Modeling
- > 3D printing, prototyping, and manufacturing advancements
- > Proven testing and third-party validation with benchmarking against all major competitors

COMBATTING COMMON SLURRY VALVE PROBLEMS



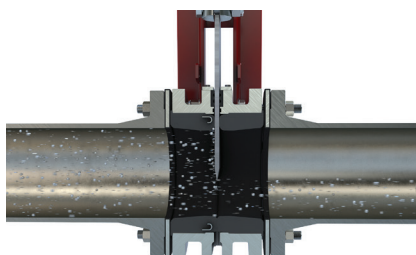
EROSION

Hardened materials

Elastomer materials

Ultra-hard proprietary coatings

Replaceable Elastomer Sleeves



POSITIVE ISOLATION

Self-Cleaning/Self-Purging for Zero Entrapment of Media

Absolute Shutoff in Both Directions

Isolates as a Safety Line Blind/Blank

Functions as a Double Block & Bleed



DISCHARGE

Energized Sleeve design limits discharge

Discharge validation to be 66% less than other competitive brands

Easy control for discharge with containment device

Discharge containment easily added



OPTIMIZING YOUR SLURRY PROCESS

Bray's group of experienced application engineers are always available to help customers throughout the process of identifying their challenges, exploring potential solutions, and designing the right isolation valve package to fit their needs utilizing Bray standard products.

DISCOVERY

Fully understanding our customers' unique challenges.

- > Site Walkdowns
- > On-site evaluations of application and pipeline issues
- > Valve performance tests
- > Diagnostics & monitoring
- > Deep-dive investigations to assure performance

ANALYSIS

Implementing established engineering technology and tools.

- > Computational Fluid Dynamics (CFD) analysis
- > Advanced flow analysis with ANSYS
- > Finite Element Analysis (FEA)
- > 3D Modeling of product and application if required

SOLUTIONS

Developing optimized valve, actuation, and controls solutions.

- > Advanced materials and proprietary coating selections assuring delivery of the most cost-effective solution
- > Advanced diagnostics for continuous monitoring
- > Performance optimization

ON-DEMAND ENGINEERING CAPABILITIES

Our **Rapid Response Engineering Team** is ready and available to assist you with technical solutions and customization.

CUSTOMER SUCCESS STORY

Our slurry valve engineering team is accustomed to working with customers to analyze their specific isolation and slurry challenges — providing them with standard and customized solutions that deliver performance, and reliability.



HYDROCYCLONE MILLING - MINING PROCESS **SERIES 762 BiDIRECTIONAL SLURRY VALVE**

MEDIA

- > Thick copper slurry
- > Abrasive media
- > Frequent cycles

CHALLENGE

- > Valve failures every 4 to 6 weeks due to abrasive wear, losing product through slurry watering, and requiring complete valve replacement each time.

SOLUTION

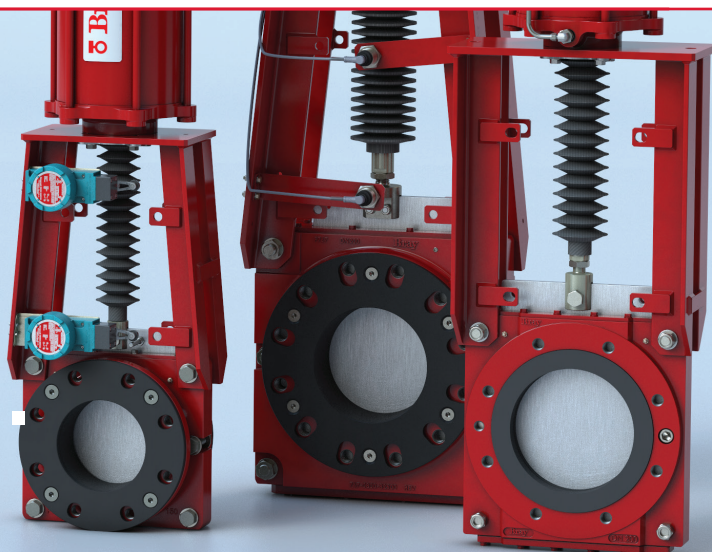
- > Heavy-duty Series 762 SlurryShield® Slurry Valve. The robust slurry valve uses SLURRYSHIELD® technology to solve the applicational problem.
- > Bray uses advanced engineering methods combining embedded J-Rings, Encapsulated Elastomer Sleeves — to improve elasticity, rebound, cycle life and minimizes discharge as the gate cycles.
- > Tested cycle life exceeds 50,000 cycles in a lab environment

RESULTS

- > **Service life extended up to 600% over existing valves.**
- > **Uptime of hydrocyclone application was greatly increased.**
- > **Loss of customer media was eliminated.**
- > **Downtime for valve replacement and associated costs were eliminated.**
- > **Profitability was significantly increased for the end users.**



Slurry Valves Performance. Reliability. Peace of Mind.



APPLICATION SPECIFIC

Choosing the right slurry valve for your application can determine productivity and profitability. Bray's slurry valve packages are designed, engineered, and extensively tested to deliver repeatable absolute positive isolation.

**CONTACT BRAY'S APPLICATION ENGINEERS TO ASSIST
WITH YOUR SLURRY ISOLATION REQUIREMENTS AND VALVE
SPECIFICATIONS.**



SERIES 762
HEAVY DUTY SLURRY
VALVES



SERIES 768
HEAVY DUTY SLURRY
VALVES

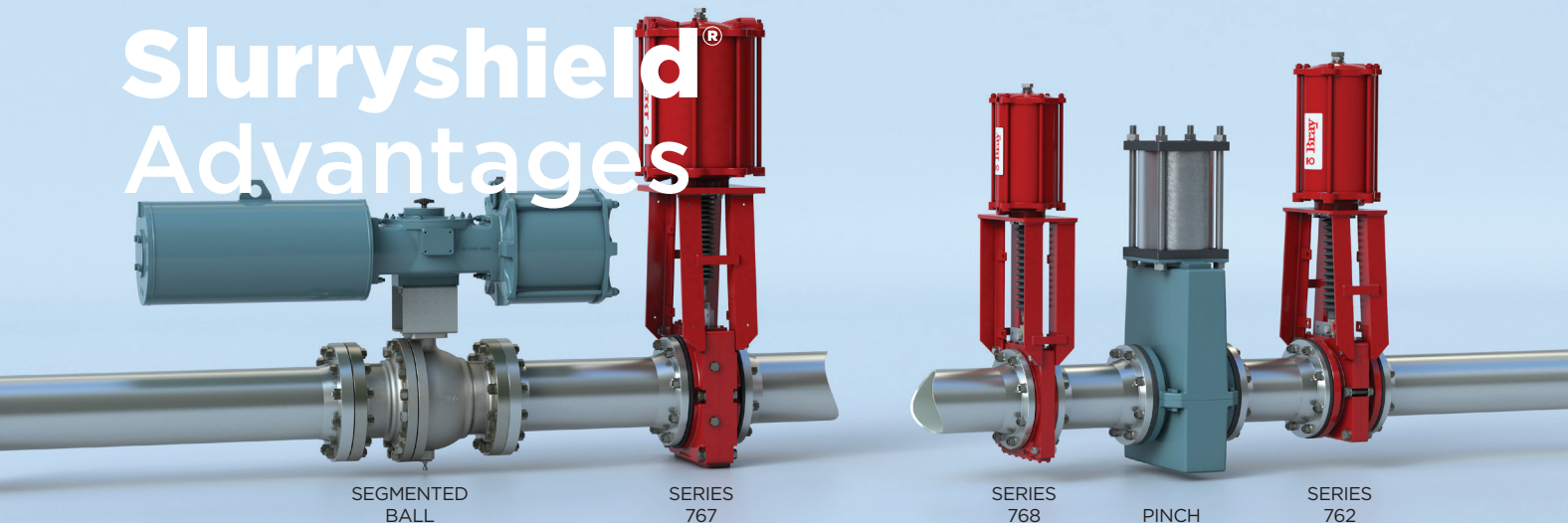


SERIES 767
HIGH PRESSURE
SLURRY VALVES

LOWER COST OF OWNERSHIP

When comparing overall operation costs and full product life cycle, Bray Slurryshield® products offer a lower total cost of ownership than other slurry isolation products. This is driven by pipeline runtime, sleeve performance, minimized discharge and many features designed in as standard on the Bray Slurryshield® products that competitors charge extra for.

Slurryshield Advantages



PROPRIETARY ELASTOMERS

Proprietary Engineered Natural Rubber and EPDM elastomers provide superior abrasion resistance and resilience.

Ensures longest sleeve life performance in the industry.
Expands and contracts to assure Absolute Positive Isolation on every cycle.

SIMPLER DESIGN

Simpler design uses fewer parts, requires less maintenance.
No machine tools required allowing field repairability at the point of location in the pipeline.

The SlurryShield Sleeves are the heart of the technology and offer extended life cycle compared to competitors.

SEVERE MEDIA HANDLING

- > Slurries, sludges, or viscous fluids
- > Suspended solids or fibers
- > Corrosive or abrasive media
- > High pressure fluids
- > 100% Solids
- > Scaling applications

J-RING TECHNOLOGY

The fully encapsulated J-ring ensures a strong sleeve with a spring-return function to quickly seal when the valve opens.

The mechanical compressibility and energized rebound allows the sleeves to respond faster than any other brand on the market when the valve is cycling.

ELASTOMER MOLDING

Provides a more uniform and consistent finished product with higher strength properties than other styles of molding.

Combine the molding process with highly formulated elastomer technology and you have a world-class performing SlurryShield sleeve.

SUPERIOR ISOLATION

When closed, the double-sleeve design incorporates an upstream sleeve-to-gate seal, a downstream sleeve-to-gate seal, and a vent to atmosphere between seals to prevent any chance of downstream leakage.

Slurryshield® Series 762 & Series 768



DESIGNED FOR DEMANDING SLURRY APPLICATIONS.

- > Twin elastomer seats and gate design facilitate self-cleaning and prevent media build up
- > The durable ductile iron body is offered in a two-piece bolted flange style. When fully open, the valve is full bore, offering no resistance to line media

SERIES 762 SLURRY VALVE | BIDIRECTIONAL

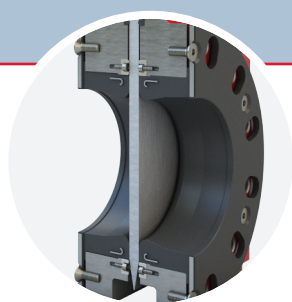
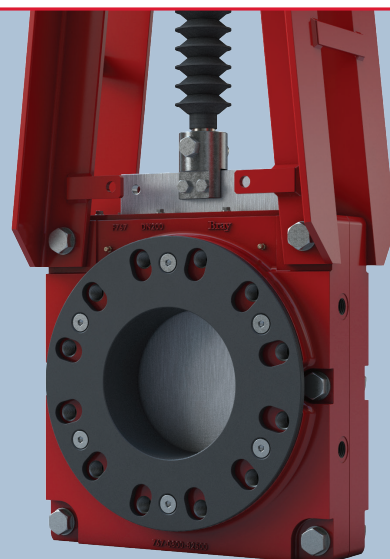
- > Industry standard face to face.
- > Protective stem cover increases cycle life in hazardous environments.
- > Unique J-ring steel-reinforced, elastomer sleeve design provides energized, zero leakage shutoff in both directions.
- > Retaining rings included as standard throughout the entire size range.
- > In the open position, the energized sleeves shield all metal components from direct contact with the flowing process media.
- > Robust gate design available in a wide range of corrosion resistant alloys.
- > Unrestricted flow path with minimal pressure drop achieved through full port valve design for extended sleeve life.

SERIES 768 SLURRY VALVE | BIDIRECTIONAL

- > MSS SP-81 face to face.
- > Protective stem cover increases cycle life in hazardous environments.
- > Unique J-ring steel-reinforced, elastomer sleeve design provides energized, zero leakage shutoff in both directions.
- > In the open position, the energized sleeves shield all metal components from direct contact with the flowing process media.
- > Robust gate design available in a wide range of corrosion resistant alloys.
- > Unrestricted flow path with minimal pressure drop achieved through full port valve design for extended sleeve life.

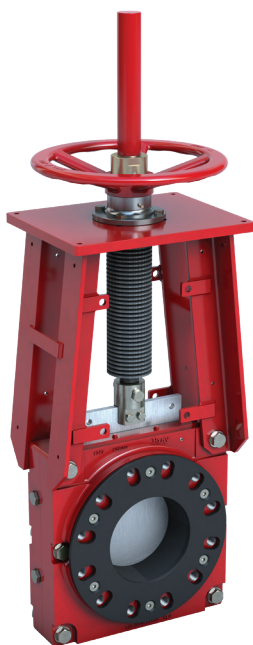


Slurryshield® Series 767



DESIGNED FOR DEMANDING HIGH PRESSURE SLURRY APPLICATIONS.

- > Industry standard face to face.
- > Twin elastomer seats and gate design facilitate self-cleaning and prevent media build up.
- > The durable WCB body is offered in a two-piece bolted flanged style. When fully open, the valve is full bore, offering no resistance to line media.



HIGH PRESSURE SLURRY VALVE | BIDIRECTIONAL

- > Protective stem cover increases cycle life in hazardous environments
- > J-ring steel-reinforced, elastomer seats provide energized, zero leakage shutoff in both directions. Retaining rings included as standard throughout the entire size range.
- > In the open position, the energized seats shield all metal components from direct contact with the flowing process media.
- > Robust gate available in a wide range of corrosion resistant alloys to suit the application.
- > Design provides unobstructed flow path, extending seat life and minimizing pressure drop across valve
- > Ample clearance for push-through allows complete gate closure
- > Two-piece bolted wafer body allows for easy maintenance and is drilled and tapped to ASME B16.5 CL300 flange patterns as standard.

Actuators & Controls Intelligent Precision



INNOVATIVE AUTOMATION SOLUTIONS

Bray is a leader in valve automation, providing innovative products and state-of-the-art technical solutions for your needs. Through years of working closely with customers, our robust technology organization is able to develop an evolving portfolio of Bray products that include actuators, positioners, switches, sensors, and accessories for various applications in multiple industries.

From smart, intelligent positioners and IIoT enabled sensors/switchboxes, to Ethernet plug & play electric actuation and solar powered electro-hydraulic actuators, Bray offers a wide range of high performing products to maximize customer uptime, safety, and efficiency. That's why customers around the world rely on Bray products to keep their processes running smoothly.

ACTUATORS

Our modular designs and customizable configurations provide best in class performance and reliability.

DOUBLE-ACTING (PNEUMATIC)
HYDRAULIC & ELECTRO HYDRAULIC POWER UNITS

CONTROL ACCESSORIES

Bray will package our products with any type of requested accessory.

LIMIT SWITCHES
PROXIMITY SENSORS
FILTER REGULATORS
SOLENOIDS

OPTIMIZE YOUR PERFORMANCE

Bray stands ready for the opportunity to help optimize your plant's performance through our innovative automation solutions.



**Encompass™
Product Partner**

A ROCKWELL AUTOMATION PARTNER
Global

SINCE 1986, BRAY HAS PROVIDED FLOW CONTROL SOLUTIONS
FOR A VARIETY OF INDUSTRIES AROUND THE WORLD.

VISIT **BRAY.COM** TO LEARN MORE ABOUT
BRAY PRODUCTS AND LOCATIONS NEAR YOU.

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