

KNIFE GATE & SLURRY VALVE PRODUCT GUIDE



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Commitment To Quality



At Bray our business is helping our customers with their flow control requirements. Our modular product line offers the best compatibility, economy and quality performance in the flow control industry.

Through years of field application experience, research and development, Bray has designed products that meet the stringent requirements of today's flow control industry. We have earned a reputation for excellence by creating products of superior value and quality, providing personalized customer service and emphasizing on-time deliveries. Our success has always been the direct result of our fully integrated range of valve, actuator and control products. Rugged and reliable, our products are engineered to provide years of trouble free service.

Bray manufacturing facilities are certified to ISO 9001 quality standards, assuring product quality, precision manufacturing and internal process integrity.

Bray is committed to customer support. Our extensively trained staff is knowledgeable in all aspects of Bray's products and their applications and provide personal attention to every customer. To serve you locally, each region maintains a factory certified sales and service network for all Bray International products.

Bray recognizes that our customers make us successful and they have a choice of many manufacturers when selecting valves, actuators and accessories for their applications. Since many manufacturers have access to the same materials of construction for these products, Bray believes that a customer's purchase decision is heavily influenced by the following key factors:

- Trust in the Manufacturer
- Confidence in the Quality Assurance and Integrity of the Manufacturer
- Proven Industry Experience
- Features and Benefits of the Product
- Delivery
- Customer Service
- Cost of Ownership

"Bray is focused on and committed to meeting the expectations and needs of our customers while continually improving the effectiveness of our quality management."

Series 740 Bidirectional Knife Gate Valves

One-piece cast body with flexible wire reinforced elastomer seat for bidirectional zero leakage shutoff in a wide range of industrial applications.

Size Range	2" - 36" (50 - 900mm)	Body Materials	<ul style="list-style-type: none"> • CF8 • CF8M • WCB
Pressure Rating	<ul style="list-style-type: none"> • 2"-24" 150psi (10bar) • 30"-36" 100psi (7bar) 	Gate Materials	<ul style="list-style-type: none"> • 304 • 316
Body Style	One-piece <ul style="list-style-type: none"> • Wafer • Lug 	Seat Materials	Buna-N
Design	MSS SP-81	Packing Materials	PTFE impregnated synthetic fiber
Testing	MSS SP-81	Actuator Options	<ul style="list-style-type: none"> • Handwheel • Bevel Gear • Pneumatic • Hydraulic • Electric
Face-to-face	MSS SP-81		
Certification	Canadian CRN		
Drilling	<ul style="list-style-type: none"> • ASME B16.5 CL150 • ASME B16.47 CL150 		



Application Guide

Engineered for on/off service and isolation of clean, dirty, corrosive or viscous media in pulp & paper, chemical, mining, power and wastewater applications. e.g. Raw & Treated Water, Liquor Service, Paper Stock.

Series 745 Bidirectional Knife Gate Valves

One-piece cast body with molded polyurethane liner for bidirectional zero leakage shutoff in abrasive/corrosive applications.

Size Range	2" to 24" (50 - 600mm)	Body Materials	<ul style="list-style-type: none"> • DI • 2"-12" Stainless Steel available
Pressure Rating	150psi (10bar)	Gate Materials	304
Body Style	One-piece <ul style="list-style-type: none"> • Wafer • Lug 	Liner Materials	Polyurethane
Design	Manufacturer Standard	Packing Materials	PTFE impregnated synthetic fiber
Testing	MSS SP-81	Actuator Options	<ul style="list-style-type: none"> • Handwheel • Bevel Gear • Pneumatic • Hydraulic • Electric
Face-to-face	MSS SP-81		
Certification	Canadian CRN		
Drilling	ASME B16.5 CL150		



Application Guide

Engineered for on/off service and isolation of viscous, corrosive and abrasive media in chemical and mining applications. e.g. Slurries, Cyclone Separation.

Series 746 Bidirectional Slurry Valves

One-piece cast body with extended, molded and bonded polyurethane liner for bidirectional zero leakage shutoff and increased protection from abrasive/corrosive high pressure slurries.

Size Range	2" to 24" (50 - 600mm)	Body Materials	DI
Pressure Rating	240psi (16bar)	Gate Materials	316
Body Style	One-piece <ul style="list-style-type: none"> • Wafer 	Liner Materials	Polyurethane
Design	Manufacturer Standard	Packing Materials	PTFE impregnated synthetic fiber
Testing	MSS SP-81	Actuator Options	<ul style="list-style-type: none"> • Handwheel • Bevel Gear • Pneumatic • Hydraulic • Electric
Face-to-face	MSS SP-81		
Drilling	ASME B16.5 CL150		



Application Guide

Engineered for on/off service handling corrosive or abrasive media in pulp & paper, chemical, mining and power applications.

Series 752 Bidirectional Slurry Valves

Two-piece bolted body with steel reinforced perimeter seat for bidirectional zero leakage shutoff in demanding slurries.

Size Range	2" to 24" (50 - 600mm)	Body Materials	<ul style="list-style-type: none"> • CF8 • CF8M • WCB • DI
Pressure Rating	<ul style="list-style-type: none"> • 150psi (10bar) • 240psi (16bar) • 300 psi (20bar) 	Gate Materials	<ul style="list-style-type: none"> • 304 • 316
Body Style	Two-piece bolted <ul style="list-style-type: none"> • Wafer 	Seat Materials	Buna-N
Design	MSS SP-81	Packing Materials	PTFE impregnated synthetic fiber
Testing	MSS SP-81	Actuator Options	<ul style="list-style-type: none"> • Handwheel • Bevel Gear • Pneumatic • Hydraulic • Electric
Face-to-face	MSS SP-81 (150psi, 240psi models)		
Certification	Canadian CRN		
Drilling	ASME B16.5 CL150		



Application Guide

Engineered for heavy-duty on/off service and isolation of dirty, corrosive, abrasive or viscous media in chemical, mining and power applications.

Series 755 Bidirectional Slurry Valves

Two-piece bolted body with a replaceable polyurethane bore liner and steel reinforced perimeter seat for bidirectional zero leakage shutoff in abrasive/corrosive slurries.

Size Range	2" to 24" (50 - 600mm)	Body Materials	<ul style="list-style-type: none"> • CF8 • CF8M • WCB • DI
Pressure Rating	<ul style="list-style-type: none"> • 150psi (10bar) • 240psi (16bar) • 300psi (20bar) 	Gate Materials	<ul style="list-style-type: none"> • 304 • 316
Body Style	Two-piece bolted <ul style="list-style-type: none"> • Wafer 	Seat Material	Buna-N
Design	Manufacturer Standard	Packing Materials	PTFE impregnated synthetic fiber
Testing	MSS SP-81	Actuator Options	<ul style="list-style-type: none"> • Handwheel • Bevel Gear • Pneumatic • Hydraulic • Electric
Face-to-face	MSS SP-81 (150psi, 240psi models)		
Certification	Canadian CRN		
Drilling	ASME B16.5 CL150		



Application Guide

Engineered for heavy-duty on/off service and isolation of dirty, corrosive, abrasive or viscous media in chemical, mining and power applications.

Series 760 Bidirectional Slurry Valves

Two-piece bolted body with twin elastomer seats and a push-through gate designed for bidirectional heavy duty zero leakage shutoff with self cleaning in demanding slurries.

Size Range	2" to 30" (50 - 750mm)	Body Materials	DI
Pressure Rating	<ul style="list-style-type: none"> • 2"-24" 100psi (7bar) • 30" 75psi (5bar) 	Gate Materials	304
Body Style	Two-piece bolted <ul style="list-style-type: none"> • Flanged 	Seat Material	Natural Rubber
Design	Manufacturer Standard	Wiper Material	Polyurethane
Testing	MSS SP-81	Actuator Options	<ul style="list-style-type: none"> • Handwheel • Bevel Gear • Pneumatic • Hydraulic • Electric
Face-to-face	Per Industry Standard		
Certification	Canadian CRN		
Drilling	<ul style="list-style-type: none"> • ASME B16.5 CL150 • ASME B16.47 CL150 		



Application Guide

Engineered for heavy-duty on/off service and isolation of dirty, corrosive, abrasive or viscous media in chemical, mining and power applications.

Series 762 Bidirectional Slurry Valves

Two-piece bolted body with twin elastomer seats and a push-through gate designed for bidirectional heavy duty zero leakage shutoff with self cleaning in high pressure slurries.

Size Range	3" to 24" (80 - 600mm)	Body Materials	DI
Pressure Rating	240psi (16bar)	Gate Materials	316
Body Style	Two-piece bolted <ul style="list-style-type: none"> • Flanged 	Seat Material	Natural Rubber
Design	Manufacturer Standard	Wiper Material	Polyurethane
Testing	MSS SP-81	Actuator Options	<ul style="list-style-type: none"> • Handwheel • Bevel Gear • Pneumatic • Hydraulic • Electric
Face-to-face	Per Industry Standard		
Drilling	ASME B16.5 CL150		



Application Guide

Engineered for heavy-duty on/off service and isolation of dirty, corrosive, abrasive or viscous media in chemical, mining and power applications.

Series 765 Bidirectional Slurry Valves

Compact, two-piece bolted body with twin elastomer seats and a push-through gate designed for bidirectional zero leakage shutoff with self cleaning in demanding slurries.

Size Range	2" to 24" (50 - 600mm)	Body Materials	DI
Pressure Rating	150psi (10bar)	Gate Materials	304
Body Style	Two-piece bolted <ul style="list-style-type: none"> • Wafer 	Seat Material	Natural Rubber
Design	Manufacturer Standard	Wiper Material	EPDM
Testing	MSS SP-81	Actuator Options	<ul style="list-style-type: none"> • Handwheel • Bevel Gear • Pneumatic • Hydraulic • Electric
Face-to-face	MSS SP-81		
Certification	Canadian CRN		
Drilling	ASME B16.5 CL150		



Application Guide

Engineered for heavy-duty on/off service and isolation of dirty, corrosive, abrasive or viscous media in chemical, mining and power applications.

Series 766 Bidirectional Slurry Valves

Compact, one-piece cast body with twin elastomer seats and a push-through gate designed for bidirectional zero leakage shutoff with self cleaning in demanding slurries.

Size Range	3" to 24" (80 - 600mm)	Body Materials	DI
Pressure Rating	150psi (10bar)	Gate Materials	304
Body Style	One-piece <ul style="list-style-type: none"> • Wafer 	Seat Material	Natural Rubber
Design	Manufacturer Standard	Wiper Material	EPDM
Testing	MSS SP-81	Actuator Options	<ul style="list-style-type: none"> • Handwheel • Bevel Gear • Pneumatic • Hydraulic • Electric
Face-to-face	MSS SP-81		
Drilling	ASME B16.5 CL150		



Application Guide

Engineered for heavy-duty on/off service and isolation of dirty, corrosive, abrasive or viscous media in chemical, mining and power applications.

Series 767 Bidirectional Slurry Valves

Two-piece bolted body with twin elastomer seats and a push-through gate designed for bidirectional zero leakage shutoff with self cleaning in high pressure slurries.

Size Range	3" to 30" (80 - 750mm)	Body Materials	DI
Pressure Rating	<ul style="list-style-type: none"> • 3"-24" 375psi (25bar) • 26"-30" 300psi (20bar) 	Gate Materials	316
Body Style	Two-piece bolted <ul style="list-style-type: none"> • Wafer 	Seat Material	Natural Rubber
Design	Manufacturer Standard	Wiper Material	Polyurethane
Testing	MSS SP-81 / MSS SP-135	Actuator Options	<ul style="list-style-type: none"> • Handwheel • Bevel Gear • Pneumatic • Hydraulic • Electric
Face-to-face	Per Industry Standard		
Drilling	<ul style="list-style-type: none"> • ASME B16.5 CL300 • ASME B16.47 CL300 		



Application Guide

Engineered for high pressure on/off service and isolation of dirty, corrosive, abrasive or viscous media in chemical, mining and power applications. e.g. Ash Slurries, Mining Slurries

Series 768 Bidirectional Slurry Valves

Two-piece bolted body with twin elastomer seats and a push-through gate designed for bidirectional zero leakage shutoff with self cleaning in demanding slurries.

Size Range	2" to 30" (50 - 750mm)	Body Materials	DI
Pressure Rating	<ul style="list-style-type: none"> • 2"-24" 240psi (16bar) • 26"-30" 150psi (10bar) 	Gate Materials	316
Body Style	Two-piece bolted <ul style="list-style-type: none"> • Wafer 	Seat Material	Natural Rubber
Design	Manufacturer Standard	Wiper Material	Polyurethane
Testing	MSS SP-81	Actuator Options	<ul style="list-style-type: none"> • Handwheel • Bevel Gear • Pneumatic • Hydraulic • Electric
Face-to-face	MSS SP-81		
Drilling	<ul style="list-style-type: none"> • ASME B16.5 CL150 • ASME B16.47 CL150 		



Application Guide

Engineered for heavy-duty on/off service and isolation of dirty, corrosive, abrasive or viscous media in chemical, mining and power applications.

Series 770 Bidirectional O-Port Gate Valves

Two-piece bolted body with o-ported slide gate designed for minimal stress with maximum sealing in severe media applications.

Size Range	2" to 24" (50 - 600mm)	Body Materials	DI
Pressure Rating	150psi (10bar) CWP	Gate Materials	304
Body Style	Two-piece bolted <ul style="list-style-type: none"> • Wafer 	Seat Material	EPDM
Design	Manufacturer Standard	Packing Material	PTFE impregnated synthetic fiber
Testing	MSS SP-81	Actuator Options	<ul style="list-style-type: none"> • Handwheel • Bevel Gear • Pneumatic • Hydraulic • Electric
Face-to-face	MSS SP-81		
Certification	Canadian CRN		
Drilling	ASME B16.5 CL150		



Application Guide

Engineered for on/off service and isolation of dirty, corrosive, abrasive or viscous media in chemical, mining, power and high cycle applications. e.g. Phosphate Slurries, FGD Limestone Slurries, Pneumatic Conveying Systems.

Series 940 Unidirectional Knife Gate Valves

One-piece cast body designed for rugged performance in applications ranging from general purpose to severe media handling.

Size Range	2" to 36" (50 - 900mm)
Pressure Rating	<ul style="list-style-type: none"> • 2"-24" 150psi (10bar) • 30"-36" 100psi (7bar)
Body Style	One-piece <ul style="list-style-type: none"> • Lug
Design	MSS SP-81
Testing	MSS SP-81
Face-to-face	MSS SP-81
Certification	Canadian CRN
Drilling	<ul style="list-style-type: none"> • ASME B16.5 CL150 • ASME B16.47 CL150

Body Materials	<ul style="list-style-type: none"> • CF8 • CF8M • WCB
Gate Materials	<ul style="list-style-type: none"> • 304 • 316
Seat Material	Integral
Packing Material	PTFE impregnated synthetic fiber
Actuator Options	<ul style="list-style-type: none"> • Handwheel • Bevel Gear • Pneumatic • Hydraulic • Electric



Application Guide

Engineered for general purpose on/off service and isolation of clean, dirty, corrosive, abrasive, viscous and high temperature media in power, mining, pulp & paper, cement, carbon black and chemical applications.

Series 950 Unidirectional Knife Gate Valves

Economical semi-lugged one-piece cast body for rugged performance in applications ranging from general purpose to severe media handling.

Size Range	2" to 60" (50 - 1500mm)
Pressure Rating	<ul style="list-style-type: none"> • 2"-24" 150psi (10bar) • 30"-36" 100psi (7bar) • 40"-60" 50 to 100psi (3 to 7 bar)
Body Style	One-piece <ul style="list-style-type: none"> • Wafer (Semi-lug)
Design	MSS SP-81
Testing	MSS SP-81
Face-to-face	MSS SP-81
Certification	CE/PED, Canadian CRN
Drilling	<ul style="list-style-type: none"> • ASME B16.5 CL150 • ASME B16.47 CL150

Body Materials	<ul style="list-style-type: none"> • CF8 • CF8M • WCB • CI/DI
Gate Materials	<ul style="list-style-type: none"> • 304 • 316
Seat Material	Integral
Packing Material	PTFE impregnated synthetic fiber
Actuator Options	<ul style="list-style-type: none"> • Handwheel • Bevel Gear • Pneumatic • Hydraulic • Electric



Application Guide

Engineered for general purpose on/off service and isolation of clean, dirty, corrosive, abrasive, viscous and high temperature media in power, mining, pulp & paper, cement, carbon black and chemical applications.

Packing Options



Maximum Temperature Range

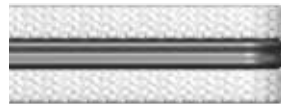
PTFE impregnated Synthetic Fiber	232°C/450°F
PTFE w/Buna-N Quad Seal ¹	90°C/194°F
PTFE w/Viton® Quad Seal ¹	200°C/392°F
EPDM Quad Seal	120°C/248°F
Pure PTFE (Food Grade)	260°C/500°F
Copper Wiper ²	500°C/932°F
Graphite	650°C/1202°F

¹ PTFE packing with energized elastomer.

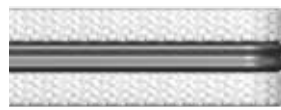
² PTFE packing with copper wiper. Copper wiper not applicable for F752 / 755



PTFE impregnated synthetic fiber



PTFE w/Buna-N Quad Seal



PTFE w/Viton® Quad Seal



PTFE w/Copper Wiper



High Temp Graphite

Seat Options

Series 740

Replaceable flexible wire reinforced elastomer seat

Buna-N	-35° to 194°F	-37° to 90°C
EPDM	-65° to 248°F	-54° to 120°C
Viton®	-15° to 392°F	-26° to 200°C



Series 752

Replaceable steel reinforced elastomer seat

Buna-N	-35° to 194°F	-37° to 90°C
EPDM	-65° to 248°F	-54° to 120°C
Viton®	-15° to 392°F	-26° to 200°C



Series 755

Replaceable steel reinforced elastomer seat

Buna-N	-35° to 194°F	-37° to 90°C
EPDM	-65° to 248°F	-54° to 120°C
Viton®	-15° to 392°F	-26° to 200°C



Series 760

Twin elastomer seats

Natural Rubber	-60° to 165°F	-51° to 74°C
EPDM	-65° to 248°F	-54° to 120°C



Series 762

Twin elastomer seats

Natural Rubber	-60° to 165°F	-51° to 74°C
Buna-N	-35° to 194°F	-37° to 90°C
EPDM	-65° to 248°F	-54° to 120°C



Series 765

Twin elastomer seats

Natural Rubber	-60° to 165°F	-51° to 74°C
EPDM	-65° to 248°F	-54° to 120°C



Seat Options

Series 766

Twin elastomer seats

Natural Rubber	-60° to 165°F	-51° to 74°C
EPDM	-65° to 248°F	-54° to 120°C



Series 767

Twin elastomer seats

Natural Rubber	-60° to 165°F	-51° to 74°C
EPDM	-65° to 248°F	-54° to 120°C



Series 768

Twin elastomer seats

Natural Rubber	-60° to 165°F	-51° to 74°C
Urethane	-35° to 194°F	-37° to 90°C
EPDM	-65° to 248°F	-54° to 120°C



Series 770

Replaceable steel reinforced elastomer seat

EPDM	-65° to 248°F	-54° to 120°C
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Series 940

Standard integral metal seat and optional replaceable zero leakage resilient seat

Buna-N	-35° to 194°F	-37° to 90°C
EPDM	-65° to 248°F	-54° to 120°C
Viton®	-15° to 392°F	-26° to 200°C
PTFE	-235° to 500°F	-148° to 260°C



Series 950

Standard integral metal seat and optional replaceable zero leakage resilient seat

Buna-N	-35° to 194°F	-37° to 90°C
EPDM	-65° to 248°F	-54° to 120°C
Viton®	-15° to 392°F	-26° to 200°C
PTFE	-235° to 500°F	-148° to 260°C



Actuator Options



Direct Mounted Handwheel



Bevel Gear Actuator



Electric Actuator



Hydraulic Actuator



Double Acting Pneumatic Actuator

Additional Accessories (Illustrated in red)



Deflection Cone



Gate Guard



Gate Lock



Non Rising Stem



Lockout Open



Manual Override



Lever



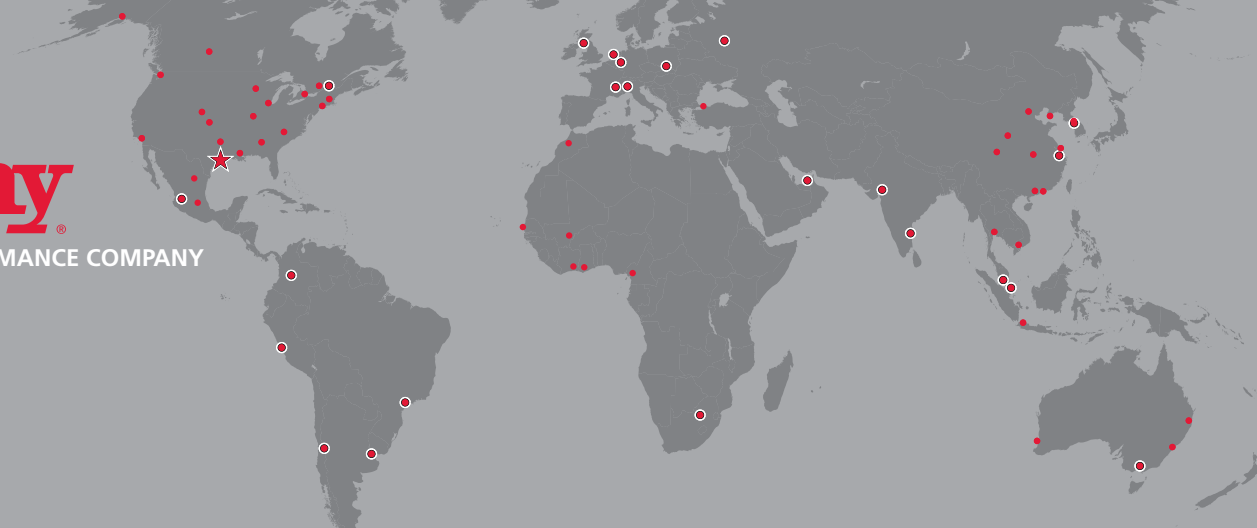
Chain Wheel



Pneumatic Failsafe



THE HIGH PERFORMANCE COMPANY



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HEADQUARTERS

Bray International, Inc.
 13333 Westland East Blvd.
 Houston, Texas 77041
 Tel: 281.894.5454
 bray.com

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