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**BRAY INTERNATIONAL**  
**PRODUCT PROFILE**



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## INTRODUCTION

At Bray International, Inc., our business is helping our customers with their flow control requirements. Our modular product line of butterfly, ball, knife gate and check valves, actuators and accessories 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 of all Bray products and their applications and can provide personal attention to every customer. To serve you locally Bray maintains a factory certified sales and service network, for all Bray products, throughout the world.

## COMMITMENT TO QUALITY

Bray International 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
- > Cost of ownership
- > Customer service
- > Delivery

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

A complete listing of approvals and certifications can be found at [bray.com](http://bray.com).

**TRI LOK®  
Triple Offset Valve**

- > High pressure
- > Zero leakage
- > Metal-to-metal sealing



<b>Size Range</b>	3" - 48" (80mm - 1200mm)
<b>Body Style</b>	Wafer, Lug, Double Flanged, Long Pattern (Gate)
<b>Temperature Range</b>	-320°F to 842°F (-196°C to 450°C)
<b>Pressure Rating</b>	ASME Class 150, 300, 600, 900
<b>Shut Off Class</b>	Zero leakage
<b>Body Materials</b>	Carbon Steel, Stainless Steel
<b>Disc Materials</b>	Carbon Steel, Stainless Steel
<b>Stem Materials</b>	17-4PH, 410 Stainless Steel, XM-19 (Nitronic® 50)
<b>Body Seat Materials</b>	316SS Hardened
<b>Disc Seal Materials</b>	Laminated 318 Stainless Steel/Graphite
<b>Applications</b>	Critical Service, High Pressure, High Temperature, Cryogenic Service

**REPLACEABLE SEAT & SEAL RING**

A field replaceable seat and seal ring system extends the overall life, without the need for costly off site repairs or total valve replacement.

**PACKING**

The fully adjustable, field replaceable stem seal system reduces fugitive emissions.

**STEM**

Tri Lok's unique splined disc-to-stem connection minimizes hysteresis and eliminates external connections.

**SUPERIOR SEAT HARDNESS**

Tri Lok's industry leading seat and seal hardness differential protects the valve from seat and seal galling and extends the valve service life.

**MCCANNALOK  
High Performance  
Butterfly Valve**

- > High pressure
- > High temperature



<b>Size Range</b>	2" - 66" (50mm - 1500mm)	
<b>Body Style</b>	Wafer, Lug, Double Flanged	
<b>Temperature Range</b>	-320°F to 900°F (-196°C to 482°C)	
<b>Pressure Rating</b>	ASME Class 150, 300 and 600	
<b>Shut Off Class</b>	Zero leakage	
<b>Body Materials</b>	Carbon Steel, Stainless Steel, Nickel Aluminum Bronze	
<b>Disc Materials</b>	Stainless Steel, Nickel Aluminum Bronze	
<b>Stem Materials</b>	Stainless Steel, Monel® K500	
<b>Seat Materials</b>	Resilient Seat	RPTFE with Resilient Energizer PTFE with Resilient Energizer
	Fire Safe	RPTFE and Inconel® with Resilient Energizer
	Polar®	Engineered Thermoplastic
	Metal Seat	Inconel®
	Low Temp.	TFM with Resilient Energizer
<b>Applications</b>	High Pressure, High Temperature, Low Temperature, Cryogenic Service, Critical Service	

The McCannalok's innovative seat design offers easy maintenance and industry-leading performance in high and low pressure services.

Available with low temperature, cryogenic, metal to metal, and fire safe seat designs, the McCannalok offers robust performance in some of the most demanding applications. The Cryogenic McCannalok offers industry-

leading shut off for the air separation industry. The Metal Seated McCannalok offers low torque performance while providing customers with a rugged control valve for abrasive and harsh chemical applications. The Fire Safe McCannalok is validated to the latest industry standards and is offered in a low temperature configuration to service ship builders worldwide.

## SERIES 30/31

<b>Size Range</b>	2" - 20" (50mm - 500mm)	
<b>Body Style</b>	Wafer, Lug	
<b>Temperature Range</b>	-20°F to 400°F (-29°C to 204°C)	
<b>Pressure Ratings</b>	Bidirectional Bubble Tight Shut Off	175 psi (12 bar)
<b>Body Materials</b>	Cast Iron, Ductile Iron, Carbon Steel, Aluminum	
<b>Disc Materials</b>	Nylon 11 Coated Ductile Iron, Aluminum Bronze, Stainless Steel, Hastelloy®, Halar® Coated Ductile Iron	
<b>Stem Materials</b>	Stainless Steel, Monel® K500	
<b>Seat Materials</b>	EPDM, BUNA-N, FKM, Polyurethane, HTEPDM	
<b>Applications</b>	Water, Wastewater, Seawater, HVAC, Other Liquids and Gases	



## SERIES 31H

<b>Size Range</b>	2" - 20" (50mm - 500mm)	
<b>Body Style</b>	Lug	
<b>Temperature Range</b>	-20°F to 250°F (-29°C to 121°C)	
<b>Pressure Ratings</b>	Bidirectional Bubble Tight Shut Off	250 psi (17.2 bar)
<b>Body Material</b>	Ductile Iron	
<b>Disc Materials</b>	Nylon 11 Coated Ductile Iron, Aluminum Bronze, Stainless Steel	
<b>Stem Materials</b>	Stainless Steel	
<b>Seat Materials</b>	Bonded EPDM, Bonded BUNA-N	
<b>Applications</b>	High Pressure, HVAC, Dead End Service	



## SERIES 3A/3AH

<b>Size Range</b>	2" - 20" (50mm - 500mm)	
<b>Body Style</b>	Double Flanged	
<b>Temperature Range</b>	-20°F to 400°F (-29°C to 204°C)	
<b>Pressure Ratings</b>	Bidirectional Bubble Tight Shut Off	250 psi (17.2 bar)
<b>Body Materials</b>	Cast Iron, Ductile Iron, Carbon Steel	
<b>Disc Materials</b>	Nylon 11 Coated Ductile Iron, Aluminum Bronze, Stainless Steel	
<b>Stem Materials</b>	Stainless Steel, Monel® K500	
<b>Seat Materials</b>	Bonded EPDM, Bonded BUNA-N, Bonded FKM	
<b>Applications</b>	Water, Wastewater, Seawater, Other Liquids and Gases	



## SERIES 20/21

<b>Size Range</b>	1" - 20" (25mm - 500mm)	
<b>Body Style</b>	Wafer, Lug	
<b>Temperature Range</b>	-20°F to 400°F (-29°C to 204°C)	
<b>Pressure Ratings</b>	Bidirectional Bubble Tight Shut Off	150 psi (10.3 bar)
<b>Body Materials</b>	Cast Iron, Ductile Iron, Stainless Steel, Aluminum	
<b>Disc/Stem Materials</b>	Stainless Steel, EPDM Molded over SS, BUNA-N Molded over SS	
<b>Seat Materials</b>	EPDM, BUNA-N, PTFE Lined EPDM, FKM, Polyurethane	
<b>Applications</b>	Sanitary Service, Mildly Corrosive, Toxic Media, Other Liquids and Gases	




**SERIES 32/33 & 35/36**

<b>Size Range</b>	S32/33 - 22" - 36" (550mm - 900mm) S35/36 - 22" - 120" (550mm - 3000mm)	
<b>Body Style</b>	S32/33 Wafer, S35/36 Full Flanged	
<b>Temperature Range</b>	-20°F to 250°F (-29°C to 121°C)	
<b>Pressure Ratings</b>	Bidirectional Bubble Tight Shut Off	150 psi (10.3 bar)
<b>Body Materials</b>	Cast Iron, Ductile Iron, Carbon Steel, Stainless Steel	
<b>Disc Materials</b>	Nylon 11 Coated Ductile Iron, Aluminum Bronze, Stainless Steel, Duplex Stainless Steel, Super Austenitic Stainless Steel, Hastelloy®, Monel®	
<b>Stem Materials</b>	Stainless Steel, Duplex Stainless Steel, Super Austenitic Stainless Steel, Monel®	
<b>Seat Materials</b>	EPDM, BUNA-N, FKM	
<b>Applications</b>	Water, Wastewater, Seawater, Other Liquids and Gases	


**SERIES 36H**

<b>Size Range</b>	22" - 60" (550mm - 1500mm)	
<b>Body Style</b>	Full Flanged	
<b>Temperature Range</b>	-20°F to 250°F (-29°C to 121°C)	
<b>Pressure Ratings</b>	Bidirectional Bubble Tight Shut Off	232 psi (16 bar)
<b>Body Materials</b>	Ductile Iron	
<b>Disc Materials</b>	Nylon 11 Coated Ductile Iron, 316 Stainless Steel, Aluminum Bronze	
<b>Stem Materials</b>	17-4 PH Stainless Steel	
<b>Seat Materials</b>	Bonded EPDM, Bonded BUNA-N	
<b>Applications</b>	High Pressure, HVAC, Dead End Service	


**SERIES 35F**

<b>Size Range</b>	32" - 60" (800mm - 1500mm)	
<b>Body Style</b>	Full Flanged	
<b>Temperature Range</b>	-20°F to 250°F (-29°C to 121°C)	
<b>Pressure Ratings</b>	Bidirectional Bubble Tight Shut Off	75 psi (5.2 bar)
<b>Body Materials</b>	Cast Iron, Ductile Iron, Hastelloy®	
<b>Disc Materials</b>	Duplex Stainless Steel, Super Austenitic Stainless Steel, Hastelloy®	
<b>Stem Materials</b>	Stainless Steel	
<b>Seat Materials</b>	Bonded EPDM, Bonded BUNA-N	
<b>Applications</b>	FGD, Mining, Seawater	


**SERIES 31U**

<b>Size Range</b>	2" - 12" (50mm - 300mm)	
<b>Body Style</b>	Lug	
<b>Temperature Range</b>	0°F to 212°F (-18°C to 100°C)	
<b>Pressure Ratings</b>	Bidirectional Bubble Tight Shut Off	285 psi (20 bar)
<b>Body Materials</b>	Ductile Iron, Carbon Steel, Nickel Aluminum Bronze	
<b>Disc Materials</b>	Stainless Steel, Nickel Aluminum Bronze	
<b>Stem Materials</b>	Stainless Steel, Monel® K500	
<b>Seat Materials</b>	Bonded BUNA-N	
<b>Applications</b>	High Pressure Industrial and Marine Dead End Service, On-Shore and Off-Shore Fire Protection	

## SERIES 39

<b>Size Range</b>	2" - 24" (50mm - 600mm)
<b>Body Style</b>	Wafer, Flanged Long Body
<b>Temperature Range</b>	-20°F to 300°F (-29°C to 150°C)
<b>Pressure Rating</b>	230 psi (16 bar)
<b>Shut Off Rating</b>	≥ Class 1
<b>Body Materials</b>	Ductile Iron, Carbon Steel, Stainless Steel
<b>Disc Materials</b>	Chrome-Molly Iron (Hardened), PSZ Ceramic (Partially Stabilized Zirconia)
<b>Stem Materials</b>	Stainless Steel
<b>Liner Materials</b>	Ceramic (Sintered Silicone Carbide), Metallic Carbide Rich, Chrome Iron Alloy
<b>Applications</b>	Slurry Control, Highly Abrasive



## SERIES 22/23

<b>Size Range</b>	2" - 24" (50mm - 600mm)
<b>Body Style</b>	Wafer, Lug
<b>Temperature Range</b>	0°F to 392°F (-18°C to 200°C)
<b>Pressure Ratings</b>	Bidirectional Bubble Tight Shut Off   150 psi (10.3 bar)
<b>Body Materials</b>	Ductile Iron, Carbon Steel, Stainless Steel
<b>Disc/Stem Materials</b>	Stainless Steel, PTFE/SS, UHMWPE/SS, UHMWPE/DI, Hastelloy®, Titanium, PFA/SS
<b>Seat Materials</b>	PTFE, Conductive PTFE, UHMWPE
<b>Applications</b>	Highly Corrosive, Toxic Media, Ultra Pure Water



## Amrēsisit®

### ACRIS PFA LINED BUTTERFLY VALVES

<b>Size Range</b>	1" - 24" (25mm - 600mm)
<b>Body Style</b>	Wafer, Lug
<b>Temperature Range</b>	-20°F to 320°F (-29°C to 160°C)
<b>Pressure Ratings</b>	185 psi (12.5 bar) 1" to 12" 150 psi (10 bar) 14" to 24"
<b>Body Material</b>	Ductile Iron
<b>Disc/Stem Materials</b>	1k = 17-4SS over molded with PFA (1" to 12") 1s = Carbon Steel over molded with PFA (2" to 12") 7t = Titanium grade 7 (3" to 12")
<b>Applications</b>	Highly corrosive and ultra pure industrial applications



### ACRIS PFA LINED BALL VALVES

<b>Size Range</b>	1/2" to 6" (15mm - 150mm) Full Port - One Piece Ball/Stem 1" to 4" (25mm - 100mm) Standard Port - Floating Ball
<b>Body Style</b>	2 Piece
<b>Ports</b>	Full, Standard
<b>Temperature Range</b>	-49°F to 400°F (-45°C to 204°C)
<b>Pressure Ratings</b>	250psi (17bar) 1/2" to 4" 150psi (10 bar) 6"
<b>Body Material</b>	PFA Lined ASTM A-216 WCB   PFA Lined ASTM A-351 CF8M (optional)
<b>Seat Materials</b>	TFM
<b>Applications</b>	Highly corrosive and ultra pure industrial applications




**V-CONTROL**

<b>Ports</b>	V-Port (15°, 30°, 60° & 90°, Custom and Slotted Ports), Full, Standard Port	
<b>Body Style</b>	Flanged, 1-Piece, 2-Piece, 3-Piece	
<b>Size Range</b>	1/2" - 12"   DN 15 tp 300 (15mm - 300mm)	
<b>Temperature Range</b>	-50°F to +650°F ( -46°C to +343°C)	
<b>Pressure Rating</b>	F-Series: ASME Class 150, 300, 600   PN 10, PN 16, PN 25, PN 40 Triad: 2200 psi WOG S7000/S8000/S7500: 1000 psi WOG	
<b>End Connections</b>	Flanged, Threaded, Socket Weld, Butt Weld, Extended Socket Weld or Butt Weld, Tri-Clamp	
<b>Body Materials</b>	Stainless Steel, Carbon Steel, Alloys.	
<b>Seat Materials</b>	Standard: Tek-Fil®	Optional: RPTFE, TFM, PEEK, Metal
<b>Applications</b>	Flow Control, Level Control, Temperature Control, Low Pressure Steam Control	


**SERIES 19 SEGMENTED**

<b>Port</b>	Segmented V-Ball	
<b>Body Style</b>	1 Piece	
<b>Size Range</b>	1" - 16"   DN 25 to 400 (25mm - 400mm)	
<b>Temperature Range</b>	-50°F to 500°F ( -46°C to 260°C)	
<b>Pressure Rating</b>	ASME Class 150, 300, 600 PN10, PN16, PN25, PN40	
<b>End Connections</b>	Flanged ASME Class 150, 300, 600 & Wafer ASME Class 150, 300 PN10, PN16, PN25, PN40	
<b>Body Materials</b>	Stainless Steel, Carbon Steel, Optional Special Alloys	
<b>Seat Materials</b>	Metal, Tek-Fil®	
<b>Applications</b>	Liquid, Gas, Steam, Pressure Control, Temperature Control, Level Control, Slurry & Abrasive Services, Suspended Solids	


**SERIES 19L SEGMENTED**

<b>Port</b>	Segmented V-Ball	
<b>Body Style</b>	1 Piece	
<b>Size Range</b>	1" - 16"   DN 25 to 400 (25mm - 400mm)	
<b>Temperature Range</b>	-50°F to 500°F ( -46°C to 260°C)	
<b>Pressure Rating</b>	ASME Class 150, 300, 600 PN10, PN16, PN25, PN40	
<b>End Connections</b>	Flanged ASME Class 150, 300, 600 & Wafer ASME Class 150, 300 PN10, PN16, PN25, PN40	
<b>Body Materials</b>	Stainless Steel, Carbon Steel, Optional Special Alloys	
<b>Seat Materials</b>	Metal, Tek-Fil®	
<b>Applications</b>	Liquid, Gas, Steam, Pressure Control, Temperature Control, Level Control, Slurry & Abrasive Services, Suspended Solids	

**FLANGED SERIES F15/F30, RF15/RF30**


<b>Ports</b>	Full, Standard Port	
<b>Body Style</b>	F15/F30 2 Piece, RF15/RF30 1 Piece	
<b>Size Range</b>	1/2" - 12" (15mm - 300mm)	
<b>Temperature Range</b>	-50°F to +650°F (-46°C to +343°C)	
<b>Pressure Rating</b>	ASME Class 150, 300 (PN10 to PN40)	
<b>End Connections</b>	ASME Class 150, 300 (PN10 to PN40)	
<b>Body Materials</b>	Stainless Steel, Carbon Steel, Alloys	
<b>Seat Materials</b>	Standard: TFM 1600	Optional: Tek-Fil®, PEEK, UHMWPE, RPTFE, Metal, Cavity Fillers
<b>Applications</b>	General Service, Process, Tank Farms, Fueling, Oil & Gas, NACE, Fire Safe	



## MULTI-PORT SERIES (MPT / MPC / MPS / MPB / MPF)



<b>Ports</b>	Full, Standard Port	
<b>Body Style</b>	3 & 4 Way	
<b>Size Range</b>	1/4" - 12" (8mm - 300mm)	
<b>Temperature Range</b>	-20°F to +450°F (-29°C to +232°C)	
<b>Pressure Ratings</b>	ASME Class 150, 300 (PN 10, 16, 25, 40), & 800/1000 PSI WOG (55/69 BAR)	
<b>End Connections</b>	Threaded, Tri-Clamp, Socket Weld, Butt Weld, Flanged	
<b>Body Materials</b>	Stainless Steel, Carbon Steel, Alloys	
<b>Seat Materials</b>	Standard: TFM 1600	Optional: Tek-Fil®, UHMWPE, RPTFE, PTFE, Cavity Fillers
<b>Applications</b>	Diverting, Mixing, Blending, and Bypassing	

## TRUNNION SERIES



<b>Ports</b>	Full	
<b>Body Style</b>	2-Piece, 3-Piece, Forged, Cast	
<b>Size Range</b>	2" - 24" (50mm - 600mm)	
<b>Temperature Range</b>	-50°F to +500°F (-46°C to +260°C)	
<b>Pressure Rating</b>	ASME Class 150, 300, 600	
<b>End Connections</b>	Flanged, Butt Weld, RTJ	
<b>Body Materials</b>	Stainless Steel & Carbon Steel	
<b>Seat Materials</b>	RPTFE, Nylon, Metal	
<b>Applications</b>	Liquid & Gas Transmission and Storage, Emergency Shutdown, Suction and Discharge Isolation, Block and Bypass, Pumping Units, Compression Units, Reinjection Units, Metering Stations, Pig Trap Launchers and Receivers, Surge-Relief Skids	

## TRIAD SERIES



<b>Ports</b>	Full, Standard Port	
<b>Body Style</b>	3 Piece	
<b>Size Range</b>	1/4" - 4" (8mm - 100mm)	
<b>Temperature Range</b>	-50°F to 550°F (-46°C to 287°C)	
<b>Pressure Rating</b>	2200 psi WOG (151 bar)	
<b>End Connections</b>	Threaded, Socket Weld, Butt Weld, Flanged, Extended Socket Weld or Butt Weld	
<b>Body Materials</b>	Stainless Steel, Carbon Steel, Special Alloys	
<b>Seat Materials</b>	Standard: TFM 1600	Optional: Tek-Fil®, PEEK, UHMWPE, RPTFE, Metal, Cavity Fillers
<b>Applications</b>	General Service, Process, Steam, Fire Safe, Industrial Gases, Critical Service, High Cycle	

## SERIES 7000 / 8000



<b>Port</b>	Full Port	
<b>Body Style</b>	3 Piece	
<b>Size Range</b>	1/4" - 12" (8mm - 300mm)	
<b>Temperature Range</b>	-50°F to 550°F (-46°C to 287°C)	
<b>Pressure Rating</b>	1/4" - 4": 1000 psi WOG (69 bar), 6" - 12": 400 psi WOG (27 bar)	
<b>End Connections</b>	Threaded, Socket Weld, Butt Weld, Flanged, Extended Socket Weld or Butt Weld JIC (Male), Tank Bottom, Tri-Clamp	
<b>Body Materials</b>	Stainless Steel (7000), Carbon Steel (8000)	
<b>Seat Materials</b>	Standard: RPTFE	Optional: TFM 1600, Tek-Fil®, UHMWPE, Cavity Fillers
<b>Applications</b>	General Service, Process, OEM Equipment	


**SERIES 5000 / 6000**

<b>Port</b>	Full Port
<b>Body Style</b>	3 Piece
<b>Size Range</b>	1/4" - 4" (8mm - 100mm)
<b>Temperature Range</b>	-50°F to 450°F (-46°C to 232°C)
<b>Pressure Rating</b>	1/4" - 2" 1000 psi CWP (69 bar), 2-1/2" - 4" 800 psi WOG (55 bar)
<b>End Connections</b>	Threaded, Socket Weld
<b>Body Materials</b>	Stainless Steel (5000), Carbon Steel (6000)
<b>Seat Materials</b>	RPTFE
<b>Applications</b>	General Service, OEM Equipment Process


**MICRO PURE SERIES**

<b>Port</b>	Tube Bore
<b>Body Style</b>	3 Piece
<b>Size Range</b>	1/2" - 4" (15mm - 100mm)
<b>Temperature Range</b>	-50°F to 450°F (-46°C to 232°C)
<b>Pressure Rating</b>	1000 psi WOG (69 bar)
<b>End Connections</b>	Tri-Clamp, Extended Tube, JIC (Male)
<b>Body Materials</b>	Stainless Steel
<b>Seat Materials</b>	Standard: PTFE   Optional: TFM 1600, UHMWPE, Cavity Fillers
<b>Applications</b>	High Purity, Semi Conductor, Food & Beverage


**THREADED SERIES S85**

<b>Port</b>	Full Port
<b>Body Style</b>	2 Piece
<b>Size Range</b>	1/2" - 3" (15mm - 80mm)
<b>Temperature Range</b>	-50°F to 450°F (-46°C to 232°C)
<b>Pressure Ratings</b>	1000 psi WOG (69 bar)
<b>End Connections</b>	Threaded
<b>Body Materials</b>	Stainless Steel
<b>Seat Materials</b>	Standard: RPTFE   Optional: UHMWPE
<b>Applications</b>	General Service, Air, Water, Oil & Gas, Vacuum Service, Water Treatment, Water Filtration, Potable Water


**THREADED SERIES S70/S90, S80, S20, S40, S51**

<b>Ports</b>	Full, Standard, Reduced Port
<b>Body Style</b>	1 Piece & 2 Piece
<b>Size Range</b>	1/4"- 4" (8mm - 100mm)
<b>Temperature Range</b>	-50°F to +450°F (-46°C to +232°C)
<b>Pressure Ratings</b>	Through 2000 psi WOG (138 bar)
<b>End Connections</b>	Threaded
<b>Body Materials</b>	Stainless Steel, Carbon Steel, Brass
<b>Seat Materials</b>	RPTFE, PTFE
<b>Applications</b>	General Service, Air, Water, Oil & Gas, Vacuum Service

## SERIES M1 - SEVERE SERVICE

<b>Design Standards</b>	ASME B16.34, ASME Section VIII - Div 1, Appendix 2, API 608, PED 2014/68/EU
<b>Sizes</b>	1/2" - 36" (DN 15 - 900), custom and larger sizes upon request
<b>Pressure Ratings</b>	ASME 150-4500   PN 10 - PN 720
<b>Temperature</b>	Standard design rated up to 1100 °F (593 °C), can be customized for higher temperatures
<b>End Connections</b>	Raised Face and Ring Type Joint (ASME B16.5 and DIN 2501) Butt welds (ASME B16.25), Socket weld (ASME B16.11) Hubs & Custom Ends Available
<b>End-To-End</b>	ASME B16.10 (Long Pattern), EN 558-1
<b>Testing</b>	MSS SP-61, API 598, ANSI/FCI 70-2, Custom Tests Available
<b>Applications</b>	Conventional Power, Combined Cycle Power Plants, Superheated Steam, Slurry Discharge, Hydromet Pump Isolation, High Pressure Acid Leaching, Acid Injection, Delayed Coking, Fluid Catalytic Cracking, Hydrotreating



## SERIES M4 - SEVERE SERVICE

<b>Size Range</b>	NPS 1/2" - 2-1/2" SW or BW (DN 15 - 65), NPS 3" & 4" BW (DN 80 & 100)
<b>Bore Sizes</b>	0.63", 1.03", 1.56"
<b>Body Materials</b>	A105, A182-F22 Cl.3, A182-F91
<b>Ball Materials</b>	410 SS/HVOF Chromium Carbide, Inconel® 718/Fused Chromium Carbide
<b>Seat Materials</b>	410 SS/HVOF Chromium Carbide, Inconel® 718/HVOF Chromium Carbide
<b>Pressure Ratings</b>	ASME 1700, 3100, 4500 1/2" thru 2-1/2", Limited Class 3" and 4" Standard Class
<b>Temperature</b>	Up to 1100°F (593°C), Customizable for higher temperature upon request
<b>End Connections</b>	SW per ASME B16.11, BW per ASME B16.25, Flanged, Custom
<b>Design Standards</b>	ASME B16.34, Bore sizes per ASME TDP-1, PED 2014/68/EU
<b>Testing</b>	API 598, MSS SP 61, Custom Tests Available
<b>Characteristics</b>	On/Off, Zero Leakage
<b>Applications</b>	Power Plant Steam Vent and Drains, Isolation or Blowdown of Steam, water, and other high temperature and/or high pressure medias



# Bray/Rite

## MODEL 205 & 210 CHECK VALVE TECHNICAL SPECIFICATIONS

<b>Size Range</b>	1" - 60" (25mm - 1500mm)
<b>Temperature Range</b>	-20°F - 450°F
<b>Pressure Ratings</b>	ASME 125, 150, 300, 600, 900, 1500
<b>Body/Disc Materials</b>	ASTM A 126 CLB, ASTM A 395, ASTM A 216 WCB ASTM A 351 CF8M, Titanium
<b>Seat Materials</b>	BUNA-N, EPDM, PTFE, Viton, A240 - 304
<b>Spacer</b>	PTFE, A479 - 316
<b>Accessories</b>	External Springs, External Weights, Backflush Lever, Limit Switch External Position Indicators, Emergency Shutoff Fusible Link, Flanged Valve, Heavy Duty Hinge



Available with Special Accessories

## MODEL DDCV CHECK VALVE TECHNICAL SPECIFICATIONS

<b>Size Range</b>	2" - 12" (50mm - 300mm)
<b>Temperature Range</b>	-40°F - 250°F
<b>Pressure Ratings</b>	ASME 150
<b>Body/Disc Materials</b>	Ductile Iron, ASTM A 351 CF8M
<b>Seat Materials</b>	BUNA-N, EPDM
<b>Spacer</b>	PTFE




**SERIES 740 BIDIRECTIONAL KNIFE GATE VALVES**

<b>Size Range</b>	2" - 36" (50 - 900mm)	<b>Body Materials</b>	CF8 (304), CF8M (316)
<b>Pressure Rating</b>	2"-24" 150psi (10bar), 30"-36" 100psi (7bar)	<b>Gate Materials</b>	304 SS, 316 SS
<b>Body Style</b>	Single Piece (Lug)	<b>Seat Materials</b>	Buna-N, EPDM
<b>Design</b>	MSS SP-81	<b>Stem</b>	304
<b>Testing</b>	MSS SP-151	<b>Packing Materials</b>	PTFE Impregnated Synthetic Fiber
<b>Face-to-Face</b>	MSS SP-81		
<b>Certification</b>	CE/PED, Canadian CRN, AWWA C520 (2019)	<b>Actuator Options</b>	Handwheel Bevel Gear Pneumatic Hydraulic Electric
<b>Drilling</b>	ASME B16.5 CL150, ASME B16.47 CL150		

**Applications:** On/off service and isolation of clean, dirty, corrosive or viscous media in pulp & paper, chemical, mining, power and wastewater applications.


**SERIES 746 BIDIRECTIONAL SLURRY VALVES**

<b>Size Range</b>	2" to 24" (50 - 600mm)	<b>Body Materials</b>	Ductile Iron
<b>Pressure Rating</b>	240psi (16bar)	<b>Gate Materials</b>	316SS
<b>Body Style</b>	One-piece (Wafer)	<b>Liner Materials</b>	Polyurethane
<b>Design</b>	Manufacturer Standard	<b>Packing Materials</b>	PTFE impregnated synthetic fiber
<b>Testing</b>	MSS SP-151		
<b>Face-to-face</b>	Per Industry Standard	<b>Actuator Options</b>	Handwheel Bevel Gear Pneumatic Hydraulic Electric
<b>Drilling</b>	ASME B16.5 CL150		

**Applications:** On/off service handling corrosive or abrasive media in pulp & paper, chemical, mining and power applications.


**SERIES 755 BIDIRECTIONAL SLURRY VALVES**

<b>Size Range</b>	2" to 24" (50 - 600mm)	<b>Body Materials</b>	CF8, CF8M, WCB, DI
<b>Pressure Rating</b>	150psi (10bar), 240psi (16bar), 300psi (20bar)	<b>Gate Materials</b>	304, 316SS
<b>Body Style</b>	Two-piece bolted (Wafer)	<b>Seat Materials</b>	Buna-N, EPDM
<b>Design</b>	Manufacturer Standard	<b>Packing Materials</b>	PTFE impregnated synthetic fiber
<b>Testing</b>	MSS SP-151		
<b>Face-to-face</b>	MSS SP-81	<b>Actuator Options</b>	Handwheel Bevel Gear Pneumatic Hydraulic Electric
<b>Certification</b>	Canadian CRN		
<b>Drilling</b>	ASME B16.5 CL150		

**Applications:** Heavy-duty on/off service and isolation of dirty, corrosive, abrasive or viscous media in chemical, mining and power applications.


**SERIES 768 BIDIRECTIONAL SLURRY VALVES**

<b>Size Range</b>	2" - 24" (50 - 600mm)	<b>Body Materials</b>	DI
<b>Pressure Rating</b>	2"-16" 150psi (10bar) 18"-24" 90psi (6.2bar)	<b>Gate Materials</b>	316SS
<b>Body Style</b>	Two-piece Bolted (Wafer)	<b>Seat Materials</b>	Natural Rubber, EPDM
<b>Design</b>	Manufacturer Standard	<b>Secondary Seal</b>	EPDM
<b>Testing</b>	Manufacturer Standard		
<b>Face-to-Face</b>	Per Industry Standard	<b>Actuator Options</b>	Handwheel Bevel Gear Pneumatic Hydraulic Electric
<b>Certification</b>	Canadian CRN		
<b>Drilling</b>	ASME B16.5 CL150		

**Applications:** On/off service and isolation of clean, dirty, corrosive or viscous media in pulp & paper, chemical, mining, power and wastewater applications.

## SERIES 762 BIDIRECTIONAL SLURRY VALVES

<b>Size Range</b>	3" to 48" (80 - 1200mm)	<b>Body Materials</b>	3"-28" Ductile Iron 30"-48" WCB
<b>Pressure Rating</b>	3"-24" 100psi (7bar), 26"-42" 75psi (5bar) 44"-48" 50psi (3bar)	<b>Gate Materials</b>	316SS
<b>Body Style</b>	Two-piece bolted (Flanged)	<b>Seat Materials</b>	Natural Rubber, EPDM
<b>Design</b>	Manufacturer Standard	<b>Secondary Seal</b>	EPDM
<b>Testing</b>	Manufacturer Standard		
<b>Face-to-Face</b>	Per Industry Standard	<b>Actuator Options</b>	Handwheel Bevel Gear Pneumatic Hydraulic Electric
<b>Drilling</b>	ASME B16.5 CL150, ASME 16.47 CL150		

**Applications:** 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

<b>Size Range</b>	2" to 12" (50 - 300mm)	<b>Body Materials</b>	Ductile Iron
<b>Pressure Rating</b>	90psi (6.2bar)	<b>Gate Materials</b>	304SS
<b>Body Style</b>	Two-piece bolted (Wafer)	<b>Seat Material</b>	Natural Rubber
<b>Design</b>	Manufacturer Standard	<b>Wiper Material</b>	EPDM
<b>Testing</b>	Manufacturer Standard		
<b>Face-to-face</b>	MSS SP-81	<b>Actuator Options</b>	Handwheel Bevel Gear Pneumatic Hydraulic Electric
<b>Certification</b>	Canadian CRN		
<b>Drilling</b>	ASME B16.5 CL150		

**Applications:** 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

<b>Size Range</b>	3" to 24" (80 - 600mm)	<b>Body Materials</b>	WCB
<b>Pressure Rating</b>	300psi (20bar), 450psi (31bar), 740psi (51bar)	<b>Gate Materials</b>	316SS
<b>Body Style</b>	Two-piece bolted (Flanged)	<b>Seat Materials</b>	Natural Rubber, EPDM
<b>Design</b>	Manufacturer Standard	<b>Secondary Seal</b>	EPDM
<b>Testing</b>	Manufacturer Standard		
<b>Face-to-face</b>	Per Industry Standard	<b>Actuator Options</b>	Handwheel Bevel Gear Pneumatic Hydraulic Electric
<b>Drilling</b>	ASME B16.5 CL150 ASME B16.5 CL300		

**Applications:** High pressure on/off service and isolation of dirty, corrosive, abrasive or viscous media in chemical, mining and power applications.



## SERIES 940 UNIDIRECTIONAL KNIFE GATE VALVES

<b>Size Range</b>	2" to 24" (50 - 600mm)	<b>Body Materials</b>	CF8, CF8M
<b>Pressure Rating</b>	150psi (10bar)	<b>Gate Materials</b>	316, 304SS
<b>Body Style</b>	940-Single piece Lug	<b>Seat Materials</b>	Metal, Buna-N, EPDM, FKM, PTFE
<b>Design</b>	MSS SP-81	<b>Packing Materials</b>	PTFE Impregnated synthetic fiber
<b>Testing</b>	MSS SP-151		
<b>Face-to-Face</b>	MSS SP-81	<b>Actuator Options</b>	Handwheel Bevel Gear Pneumatic Hydraulic Electric
<b>Certification</b>	CE/PED, Canadian CRN, AWWA C520 (2019)		
<b>Drilling</b>	ASME B16.5 CL150		

**Applications:** 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.





## EZI-VAC AIR RELEASE - VACUUM BREAK VALVE

<b>Sizes Available</b>	NPS 1 to 16 (DN25 - DN400)
<b>Rating</b>	ANSI B6.5 class 150, 300, 600 @ 35°C nominal
<b>Body</b>	Fabricated carbon steel or cast ASTM A216   Stainless   Duplex steel
<b>Float</b>	High density polyethylene or urethane coated aluminum
<b>Outlet Cover</b>	Carbon steel standard   Stainless steel optional
<b>Connection</b>	Flanged ANSI B16.5 RF Class 150, 300, 600 (or as required)
<b>Seal</b>	Chutex wear resistant natural rubber standard. Other options on request.
<b>Gasket</b>	BS-N90 Shore O-ring between body and outlet flange for high pressure seal
<b>Fasteners</b>	Class 8.8 galvanized carbon steel. Stainless option as required
<b>Lining</b>	Natural rubber. Nitrile, urethane and bromobutyl option
<b>Finish</b>	Grit blast 2.5 and 2 part Interzone   954 epoxy paint
<b>Testing</b>	AS4037-1999 and EN 12266 PT 1 & 2 or API598 as specified
<b>Standard</b>	ASME B16.34, ASME B16.5   ASME B31.3
<b>Option</b>	Non slam/ bird screen/ flush port/secondary release
<b>Approvals</b>	Canadian C.R.N
<b>Applications</b>	Slurries, chemical, sand, pulp and dewatering



## MAXI-CHECK H - HIGH WEAR BALL CHECK VALVE (MCH)

<b>Sizes Available</b>	NPS 2 to 30 (DN50 - DN750)
<b>Rating</b>	ANSI B16.5 Class 150, 300, 600 and 900 @ 65° nominal
<b>Body</b>	Carbon Steel standard   Stainless Steel option
<b>Figure</b>	MCH50-MCH750
<b>Connection</b>	Flanged ANSI B16.5 RF Class 150, 300, 600 & 900 (certified) or as required
<b>Ball</b>	Stainless Steel   Silica Bronze   Aluminum Urethane Coated
<b>Seat</b>	304 SS machined to suit ball (Seat is replaceable)
<b>Seal</b>	Molded rubber (40 Shore hardness) when required (Seal is replaceable)
<b>Gasket</b>	O-Ring used between flanges for high pressure seal
<b>Fasteners</b>	Class 8.8 galvanized Carbon Steel. Hi-Tensile and Stainless options as required
<b>Lining</b>	Natural rubber as standard. Nitrile and Bromobutyl option
<b>Finish</b>	Grit blast 2.5 and 2 part Interzone 954 epoxy paint
<b>Testing</b>	AS4037-1999 and EN 12266 PT 1&2 or API598 as specified
<b>Standard</b>	ASME B16.34-2009 ASME B16.5 ASME B31.3-2002
<b>Applications</b>	Slurries, chemicals, sands, pulp, dewatering and ash disposal



## MAXI-CHECK L - LOW WEAR BALL CHECK VALVE (MCL)

<b>Size Available</b>	NPS 3 to 24 (DN80 - DN600)
<b>Rating</b>	Max work pressure: 30 Bar
<b>Body</b>	Fabricated carbon steel
<b>Figure</b>	MCL80 to MCL600
<b>Connection</b>	Flanged either Table D, E, PN10, PN16 (EN or AS) or ANSI150/300
<b>Ball</b>	Metal core urethane coated
<b>Seat</b>	Carbon steel seat is integral to the body
<b>Gasket</b>	90 shore O ring used between flanges for seal
<b>Fasteners</b>	Class 8.8 galvanized carbon steel. Stainless options as required
<b>Lining</b>	Hot vulcanized natural rubber standard
<b>Finish</b>	Abrasive clean to 2.5 and painted with Interzone 954, a 2 part epoxy suited to harsh environment
<b>Testing</b>	AS4037-1999 and EN 12266 PT 1&2 or API598 as specified
<b>Standard</b>	ASME B16.34 ASME B16.5 ASME B31.3
<b>Applications</b>	Chemical, sewerage, pulp, food and dewatering



### MAXI-CHECK I - DUAL FUNCTION BALL CHECK ISOLATION VALVE (MCI)

<b>Sizes Available</b>	NPS 2 to 30 (DN50-DN750)
<b>Actuation</b>	Hand wheel actuated up to DN450   Bevel gearbox DN500-DN750 and higher
<b>Option</b>	Electric, pneumatic or hydraulic actuators as required. Proximity switches are optional
<b>Figure</b>	MCI 50 to MCI 750
<b>Rating</b>	ANSI B16.5 class 150, 300, 600 and 900 @ 65° nominal
<b>Body</b>	Carbon Steel standard   Stainless Steel optional
<b>Connection</b>	Flanged ANSI B16.5 RF class 150, 300, 600 & 900 (certified) or as required
<b>Ball</b>	Stainless Steel/ Silica Bronze/ Urethane Coated Aluminum core (hollow)
<b>Seat</b>	304 SS machined to suit ball (Seat is replaceable)
<b>Seal</b>	Molded rubber (40 Shore hardness) when required (Seal is replaceable)
<b>Gasket</b>	O Ring used between flanges for high pressure seal
<b>Fasteners</b>	Class 8.8 galvanized Carbon Steel. Hi-Tensile and Stainless options as required
<b>Lining</b>	Natural rubber as standard. Nitrile and Bromobutyl option
<b>Finish</b>	Grit blast 2.5 and 2 part Interzone 954 epoxy paint
<b>Testing</b>	AS4037-1999 and EN 12266 PT 1&2 or API598 as specified
<b>Standard</b>	ASME B16.34-2009 ASME B16.5 ASME B31.3-2002
<b>Applications</b>	Slurries, Chemicals, Sands, Pulp, Dewatering and Ash Disposal



### PENTA-WEDGE - SLURRY GATE VALVE (PW)

<b>Size Available</b>	NPS 4 to 24 (DN100-DN600) (larger sizes on request)
<b>Actuation</b>	DN100-DN300 Hand wheel, DN300-DN700 Gearbox 4:1 ratio, subject to pressure. Hydraulic, pneumatic or electric actuators are an option as required
<b>Figure</b>	PW100-PW600
<b>Rating</b>	From 150 psi (10 bar) to 2175 psi (150 bar) at 150°F (65°C)
<b>Body</b>	GR 460R boiler plate and ASTM A106 pipe to suit as standard, other on request
<b>Connection</b>	Flanged ANSI B16.5 Class 150, 300, 600 or 900 (certified) or as required
<b>Packing</b>	Oxidized Acrylic & Kevlar blended fiber, PTFE dispersion mineral lubricant
<b>Stem</b>	AISI 304 Stainless Steel as standard, other on request
<b>Disc</b>	Polyurethane lined steel disc
<b>Dimensions</b>	ASME B16.10 table 1, 2 & 3 or on customer request
<b>Testing</b>	AS4037 and EN 12266 PT 1&2 or API598 as specified
<b>Finish</b>	Grit blast 2.5 and 2 part Interzone 954 epoxy paint
<b>Standard</b>	ASME B16.34 ASME B16.5 ASME B31.3 ASME B16.10
<b>Applications</b>	Slurries, sewerage, sands, pulp and dewatering-abrasive applications



### TISO-CHECK - AUTOMATIC CHANGEOVER BALL CHECK VALVE (TC)

<b>Size Available</b>	NPS 4 to 24 (DN100 - DN600)
<b>Figure</b>	TC0100 - TC600
<b>Rating</b>	ANSI B16.5 class 150 @ 65°C nominal 10 BAR CWP
<b>Connection</b>	Flanged either Table D, E, PN10, PN16 (EN or AS) or ANSI150.
<b>Body</b>	G350 carbon steel
<b>Ball</b>	Aluminum core urethane coated
<b>Seat</b>	Replaceable AISI 304 stainless steel
<b>Fasteners</b>	Class 8.8 galvanized carbon steel. Stainless options as required
<b>Lining</b>	Natural rubber as standard. Nitrile ceramic and Bromobutyl option
<b>Finish</b>	Grit blast 2.5 and 2 part Interzone 954 epoxy paint
<b>Testing</b>	AS4037 and EN 12266 PT 1&2 or API598 as specified
<b>Option</b>	Stainless steel construction
<b>Applications</b>	Cyclone feed pumps, standby pumps circuits



## KM-TXST/TAST - FLANGED BALL VALVE (PTFE)

<b>Size Range<sup>1</sup></b>	NPS 1/2 to 8 (DN15 - DN200)
<b>Body Type</b>	Two-piece
<b>Port</b>	Full port
<b>Temperature Range<sup>2</sup></b>	-60°C to +260°C
<b>Operating Pressure</b>	Max. 40 bar
<b>Flange Connection<sup>3</sup></b>	EN 1092 Form B1, PN10 - 40
<b>Top Flange</b>	ISO 5211
<b>Face-to-Face<sup>4</sup></b>	EN 558 Series 1, 27
<b>Design</b>	EN 12516/AD2000
<b>Pressure Test</b>	EN 12266-1
<b>Certification</b>	TA-Luft VDI 2440   PED 2014/68/EU

<sup>1</sup> DN20 and DN32 available as type TX/TA.

<sup>2</sup> Maximum temperature ranges only valid for special version.

<sup>3</sup> Other drilling patterns on request.

<sup>4</sup> ≤ DN100 (Series 1 and 27)

> DN100 (Series 27).



## KM-OXST/OAST - FLANGED BALL VALVE (O-RING)

<b>Size Range<sup>1</sup></b>	NPS 1/2 to 8 (DN15 - DN200)
<b>Body Type</b>	Two-piece
<b>Port</b>	Full port
<b>Temperature Range<sup>2</sup></b>	-25°C to +220°C
<b>Operating Pressure</b>	Max. 40 bar
<b>Flange Connection<sup>3</sup></b>	EN 1092 Form B1, PN10 - 40
<b>Top Flange</b>	ISO 5211
<b>Face-to-Face<sup>4</sup></b>	EN 558 Series 1, 27
<b>Design</b>	EN 12516/AD2000
<b>Pressure Test</b>	EN 12266-1
<b>Certification</b>	TA-Luft VDI 2440   PED 2014/68/EU

<sup>1</sup> DN20 and DN32 available as type OX/OA.

<sup>2</sup> Maximum temperature ranges only valid for special version.

<sup>3</sup> Other drilling patterns on request.

<sup>4</sup> ≤ DN100 (Series 1 and 27)

> DN100 (Series 27).



## KM-TX-AS/TA-AS - FLANGED BALL VALVE (O-RING)

<b>Size Range</b>	NPS 1/2 to 6 (DN15 - DN150)
<b>Body Type</b>	Two-piece
<b>Port</b>	Full port
<b>Temperature Range<sup>1</sup></b>	-60°C to +260°C
<b>Operating Pressure</b>	Max. 40 bar
<b>Flange Connection</b>	ASME B16.5 RF, Class 150, 300
<b>Top Flange</b>	ISO 5211
<b>Face-to-Face<sup>2</sup></b>	EN 558 Series 3, 4
<b>Design</b>	ASME B16.34
<b>Pressure Test</b>	API 598
<b>Certification</b>	TA-Luft VDI 2440 Fire Safe <sup>3</sup> ISO 10497, API 607

<sup>1</sup> Maximum temperature ranges only valid for special version.

<sup>2</sup> 6" (DN150) Class 150 (Series 12).

<sup>3</sup> Optional: Ball with relief bore on pressure side (requires unidirectional)



## KM-TX-H/TA-H - BALL VALVE WITH HEAT JACKET

<b>Size Range</b>	NPS 1/2 to 4 (DN15 - DN100)
<b>Heat Jacket Connections</b>	DN15-25: DN15   DN40-100: DN25
<b>Body Type</b>	Two-piece
<b>Port</b>	Full port
<b>Temperature Range<sup>1</sup></b>	-60°C to +260°C
<b>Operating Pressure</b>	Max 580 psi (40 Bar)
<b>Flange Connection<sup>2</sup></b>	EN 1092 Form B1, PN16/40
<b>Top Flange</b>	ISO 5211
<b>Face-to-Face</b>	EN 558 Series 1, 27
<b>Design</b>	EN 12516/AD2000
<b>Pressure Test</b>	EN 12266-1
<b>Certification</b>	TA-Luft VDI 2440   PED 2014/68/EU

<sup>1</sup> Maximum temperature ranges only valid for special version.

<sup>2</sup> Other drilling patterns on request.



# SERIES 98 SCOTCH YOKE ACTUATORS

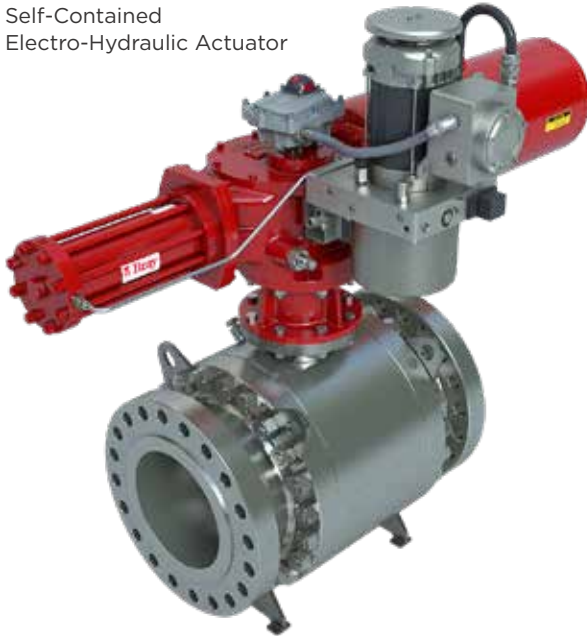
Series 98  
Pneumatic Actuator



Series 98H  
Hydraulic Actuator



Series 98EH  
Self-Contained  
Electro-Hydraulic Actuator



- > Low Pressure Pneumatic Actuator
- > High Pressure Hydraulic Actuator
- > Compact design with a high torque to weight ratio
- > Modular design offers easy configuration in the field
- > Module alignment ensured by precision machined centering rings
- > Premium epoxy/polyurethane coating as standard
- > SIL 3 capable
- > Pressure Equipment Directive (PED) 97/23/EC compliant
- > Standardized interfaces: ISO 5211, VDI/VDE 3845 for accessories
- > All Bray control accessories are fully configurable and directly mount to the actuator providing flexibility and efficiency at reduced cost.

## Optional

- > Manual overrides
- > Hydraulic dampener for fast acting operation
- > Lockout/PST device
- > Self-Contained Integral Hydraulic Power Pack or Centralized Hydraulic Power Unit to power multiple hydraulic actuators.

## OPERATING CONDITIONS

<b>Torque</b>	Double Acting: Pneumatic or Hydraulic up to: 885,000 lb-in (100,000 Nm)
	Spring Return (Spring End): Pneumatic or Hydraulic up to: 445,261 lb-in (50,306 Nm)
<b>Pressure Range</b>	Pneumatic: 40 - 150 psi (2.8 - 10.3 bar)
	Hydraulic: 500 - 3000 psi (35 - 207 bar)
<b>Media</b>	Pneumatic: Dry compressed air/inert gas
	Hydraulic: Hydraulic Fluid (Standard Trim) ISO VG 32/46, ISO-L-HV, flash point >157°C
<b>Temperature Range</b>	Standard -4°F to 200°F (-20°C to 93°C)
	High Temperature Up to 300°F (149°C)
	Low Temperature Down to -50°F (-46°C)

Contact factory for other media or non-standard temperature range.

## COMPLIANCES

<b>Torque Base</b>	Mounting Dimensions as per ISO 5211: 2001(E)
<b>Accessories</b>	Shaft driven accessories mounting per NAMUR-VDE
<b>Performance Testing</b>	EN 15714-3:2009
<b>Ingress Protection</b>	IP66/IP67M per IEC 60529
<b>Safety</b>	ATEX, SIL 3 suitable, PED on request

## SYMMETRICAL YOKE

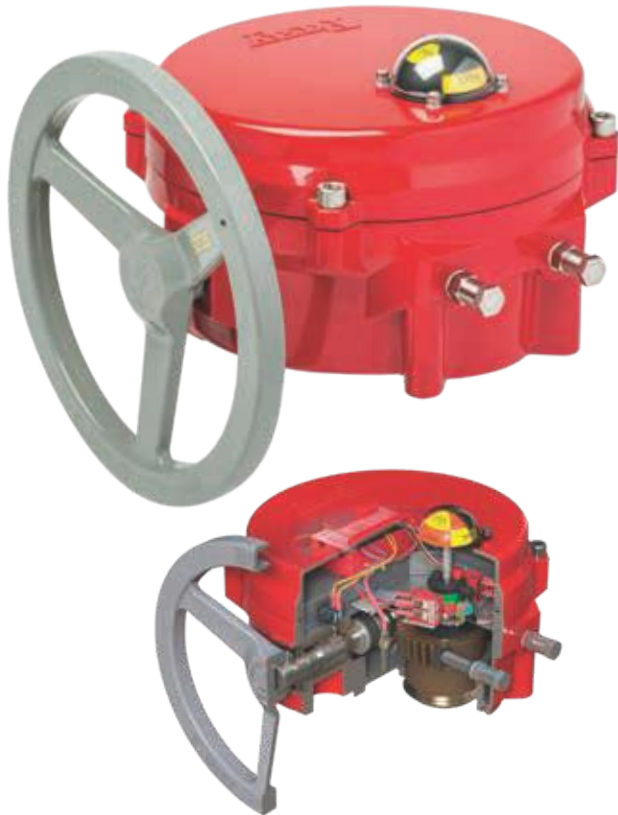
The symmetrical yoke provides a balanced torque output curve. This is the best choice in applications where the torque requirements at the seat break out and end positions are similar. As the name suggests, the output torque curve is symmetrical about the mid rotation point.



## CANTED YOKE

The torque demands of some valve types are not the same at the break and end points. These applications call for optimizing the torque output vs shaft angle curve. The canted yoke option shifts the torque output curve. The torque output is matched to the application requirements.




**SERIES 70 ELECTRIC ACTUATOR**

**Low profile, compact, high output actuator for quarter turn applications**

- > UL, CSA and CE certification on most units
- > Low profile, light weight
- > High visibility dome position indicator
- > Simple manual override handwheel system
- > On/Off or modulating control
- > Terminal strip for cable terminations
- > Hand or screw driver adjustment of travel limit cams
- > ISO 5211 for direct mounting
- > Manual declutchable handwheel
- > Network protocols available
- > Optional hazardous location model available
- > Optional Seacorr® coating for harsh environments

<b>Voltages</b>	120, 220, 24VAC 50/60 Hz, 1-phase, 24VDC
<b>Output Torque</b>	300 to 18,000 lb-ins (34 to 2,034 Nm)
<b>Standard Enclosure</b>	NEMA Type 4, 4X
<b>Explosion Proof (Optional)</b>	NEMA Type 4, 4X, 7, 9 Class I, Div 1 & 2, Group C, D Class II, Div 1 & 2, Group E, F, and G


**SERIES 92/93 PNEUMATIC ACTUATOR**

**Rack and pinion actuators available in double acting and spring return**

- > Standard units have anodized aluminum bodies with polyester coated end caps
- > SIL 3 capable
- > Optional Seacorr® coating for harsh environments
- > Integral porting
- > Internal bidirectional travel stops

<b>Torque</b>	Double Acting up to: 44,130 lb-in (4,986 Nm) Spring End Torque up to: 14,173 lb-in (1,601 Nm)	
<b>Pressure Range</b>	40 - 140 psi (2.8 - 10 bar)	
<b>Media</b>	Dry Compressed Air/Inert Gas*	
<b>Temperature Range</b>	Standard	-4°F to 200°F (-20°C to 93°C)
	Low	-40°F to 176°F (-40°C to 80°C)
	High	0°F to 300°F (-18°C to 149°C)
	Extreme High Temperature	0°F to 482°F (-18°C to 250°C)

\*Contact factory for other media or non-standard temperature range.

Extreme High Temperature Actuator

Stainless Steel Actuator



## SERIES 6A ELECTRO-PNEUMATIC POSITIONER

- > Precision digital control
- > Zero bleed design
- > Compatible with rotary or linear actuators for single and double acting applications
- > Various housing options available
- > Precise, microprocessor driven flow control and advanced communication
- > Non-contacting position sensor technology
- > Integral volume booster
- > Connective and preventative maintenance self-diagnostic checks



## SERIES 6P PNEUMATIC POSITIONER

- > Pneumatic to pneumatic positioner for single and double acting actuators
- > Rugged aluminum diecast housing for harsh environments
- > Minimal setup time for zero and span adjustment
- > Split range capabilities
- > High visibility dome position indicator
- > Optional 2 x SPDT mechanical switches



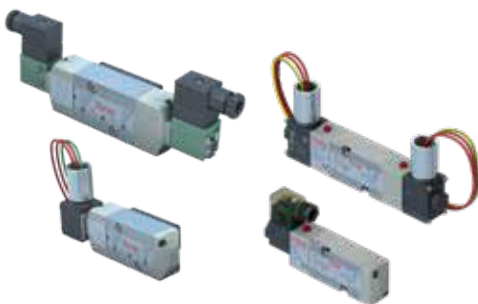
## SERIES 5A, 5B AND 5C VALVE STATUS MONITORS

- > Discrete status monitor for quarter turn rotary actuators
- > NEMA 4, 4X and IP66 and IP67 ingress protection
- > Intrinsically safe or explosion-proof options for hazardous locations
- > High visibility dome position indicator
- > Up to 6 SPDT switches or non-contacting proximity switches
- > Switches pre-wired to internal terminal block
- > Available in die-cast aluminum housing coated with 2-layers of polyester or fiberglass reinforced PBT housing for highly corrosive environments



## SERIES 54 VALVE PROXIMITY SENSOR

- > Dual proximity sensors for valve position
- > NEMA 4, 4X and IP66, IP67, IP69K ingress protection available
- > Available solenoid outputs
- > 2 or 3 wire DC, AC/DC, intrinsically safe, and AS-i interface
- > Pin connector or conduit versions available



## SERIES 63 SOLENOID VALVES

- > Weatherproof NEMA 4, 4X and explosion proof housings available
- > Flying leads or DIN connectors, single or dual coil
- > 5/2 or 3/2 operation
- > NAMUR mounted
- > High flow up to 1.4 Cv
- > Intrinsically safe versions available
- > Available voltages: 12, 24 VDC; 24, 110, 220 VAC

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

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