
BRAY INTERNATIONAL PRODUCT PROFILE



 **Bray**[®]

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THE HIGH PERFORMANCE COMPANY

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BRAY TRI LOK® TRIPLE OFFSET VALVE

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



BRAY McCANNALOK™ HIGH PERFORMANCE BUTTERFLY VALVE

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



BRAY McCANNALOK™ CRYOGENIC HIGH PERFORMANCE BUTTERFLY VALVE

Size Range	NPS 3 to 24 DN 80 to 600	
Body Style	Wafer Lug	
Temperature Range	-320°F to 250°F -196°C to 121°C	
Pressure Rating	ASME Class 150 300	
Shut Off Class	Zero Leakage (at ambient temperatures) BS 6364 (at cryogenic temperatures) ISO 28921 (at cryogenic temperatures)	
Body Materials	316 SS	
Stem Materials	XM-19	
Packing	PTFE Graphite	
Bearing	Teflon Lined Stainless Steel Nitride Hardened Stainless Steel	
Disc Materials	316 SS	
Seat Material	Polar Seat®	
Extended Bonnet	316 SS	
Applications	Liquid Oxygen LNG Liquefaction LNG Receiving Terminals LPG Handling Petroleum Refrigeration Steel Production	

BRAY SERIES 3W/3L

Size Range	NPS 2 to 24 DN 50 to 600	
Body Style	Wafer Lug	
Temperature Range	-20°F to 250°F -29°C to 121°C	
Pressure Ratings	Bidirectional Bubble Tight Shut Off	High Pressure Disc - 250 psi 17.2 bar
		Standard Disc NPS 2-12 DN 50-300 - 175 psi 12 bar NPS 14-24 DN 350-600 - 150 psi 10.3 bar
		Low Pressure Disc - 50 psi 3.4 bar
Body Materials	Cast Iron Ductile Iron	
Disc Materials	Nylon 11 Coated Ductile Iron Aluminum Bronze 316 SS Duplex Stainless Steel 4A	
Stem Materials	416 SS Stainless Steel (EN 1.4057)	
Seat Materials	EPDM BUNA-N HT-EPDM	
Applications	HVAC Chilled Water Desalination Sour Gas (NACE) Steam Vacuum	



BRAY SERIES 30/31

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



BRAY SERIES 31H

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



BRAY SERIES 20/21

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





BRAY SERIES 32/33 & 35/36

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



BRAY SERIES 36H

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



BRAY SERIES 3A/3AH

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



BRAY SERIES 31U

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

BRAY ACRIS® SERIES 24/25

Size Range	NPS 2 to 24 DN 50 to 600
Temperature Range	-20°F to 320°F -29°C to 160°C
Pressure Ratings	NPS 2 to 6: Up to 232 psi DN 50 to 150: Up to 16 bar NPS 8 to 24: Up to 150 psi DN 200 to 600: Up to 10 bar
Shutoff Rating	Zero leakage
Body Style	2-piece Wafer Lug
Body Materials	Ductile Iron
Disc/Stem Materials	17-4 Stainless Steel with over-molded PFA disc
Liner Material	PFA
Seat Energizer Material	Silicone Viton™
Applications	Corrosive Chemical Semiconductor Ultrapure Water



BRAY SERIES 22/23

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



BRAY SERIES 39

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



AMRESIST ACRIS PFA LINED BUTTERFLY VALVES

Size Range	NPS 1 to 24 DN25 to 600
Body Style	Wafer Lug
Temperature Range	-20°F to 320°F -29°C to 160°C
Pressure Ratings	NPS 1 to 12 (DN25 to 300) 185 psi (12.5 bar) NPS 14 to 24 (DN350 to 600) 150 psi (10 bar)
Body Material	Ductile Iron
Disc/Stem Materials	1k = 17-4SS over molded with PFA - NPS 1 to 12 (DN25 to 300) 1k = 17-4SS shafts/high strength steel disc over molded with PFA NPS 14 to 24 (DN350 to 600) 1s = Carbon Steel over molded with PFA - NPS 2 to 12 (DN50 to 300) 7t = Titanium grade 7 - NPS 3 to 12 (DN80 to 300)
Applications	Highly corrosive and ultra pure industrial applications

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Pressure/Temperature ratings and material availability depend on valve size and series. Please consult your local Bray representative for your specific application.

FKM is the ASTM D1418 designation for Fluorinated Hydrocarbon Elastomers (also called Fluoroelastomers)
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BALL VALVES

KUGELHAHN MÜELLER® - KM 20/21 - FLANGED

Size Range	NPS ½ to 8 DN 15 to 200
Body Type	Two-piece Flanged
Port	Full port
Temperature Range	PTFE: -76°F to 392°F -60°C to 200°C O-Ring: 13°F to 392°F -25°C to 200°C
Pressure Rating	40 bar
Valve Design	EN 12569 EN 593 NE 167
Material Standard	EN 16668 AD2000 W0
Food Contact	EC 1935
Marking	EN 19 DIN EN IEC 61406* DIN 91406*
Top Flange	ISO 5211
Flange Drilling	EN 1092-1 PN 10 16 25 40
Face-to-Face	EN 558 Series 1 Series 27
Testing Standard	EN 12266-1
Fugitive Emissions Certification	ISO 15848-1 TA Luft VDI 2440
Media	Acids Alkalis Corrosive Chemicals Gases Hydrogen Oxygen Water
Applications	Chemical Gases Chemical Fluids Petrochemicals Food and Beverage (FDA) Pharmaceutical Water and Wastewater Treatment

* Auto ID available shortly.



AMRESIST® ACRIS® PFA LINED

Size Range	NPS ½ to 6 DN 15 to 150 - Full Port - One Piece Ball/Stem NPS 1 to 4 DN 25 to 100 - Standard Port - Floating Ball
Body Style	2 Piece
Ports	Full Standard
Temperature Range	-49°F to 400°F -45°C to 204°C
Pressure Ratings	NPS ½ to 4 - 250 psi DN 15 to 100 - 17 bar NPS 6 - 150 psi DN 150 10 bar
Body Material	PFA Lined ASTM A-216 WCB PFA Lined ASTM A-351 CF8M (optional)
Seat Materials	TFM
Applications	Highly Corrosive And Ultra Pure Industrial Applications

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FLOW-TEK® SERIES S20 | S40 | S51 | S70/S90 | S80 THREADED

Size Range	NPS ¼ to 4 DN 8 to 100
Ports	Full Standard Reduced Port
Body Style	1 Piece & 2 Piece
Temperature Range	-50°F to 450°F -46°C to 232°C
Pressure Ratings	Through 2000 psi WOG 138 bar
End Connections	Threaded
Body Materials	Stainless Steel Carbon Steel Brass
Seat Materials	RPTFE PTFE
Applications	General Service Air Water Oil and Gas Vacuum Service





BRAY SERIES 19 SEGMENTED

Size Range	NPS 1 to 16 DN 25 to 400
Port	Segmented V-Ball
Body Style	1 Piece
Temperature Range	-50°F to 500°F -46°C to 260°C
Pressure Rating	ASME Class 150 300 600 PN 10 PN 16 PN 25 PN 40
End Connections	Flanged ASME Class 150 300 600 Wafer ASME Class 150 300 PN 10 PN 16 PN 25 PN 40
Body Materials	Stainless Steel Carbon Steel Optional Special Alloys
Seat Materials	Metal Tek-Fil®
Applications	Liquid Gas Steam Pressure Control Temperature Control Level Control Slurry and Abrasive Services Suspended Solids



BRAY SERIES 19L SEGMENTED

Size Range	NPS 1 to 12 DN 25 to 300
Port	Segmented V-Ball
Body Style	1 Piece
Temperature Range	-50°F to 500°F -46°C to 260°C
Pressure Rating	ASME Class 150 300 600 PN 10 PN 16 PN 25 PN 40
End Connections	Flanged ASME Class 150 300 600 PN 10 PN 16 PN 25 PN 40
Body Materials	Stainless Steel Carbon Steel Optional Special Alloys
Seat Materials	Metal
Applications	Liquid Gas Steam Pressure Control Temperature Control Level Control Slurry and Abrasive Services Suspended Solids



FLOW-TEK® SERIES F15/F30 | RF15/RF30 FLANGED

Size Range	NPS ½ to 12 DN 15 to 300	
Ports	Full Standard Port	
Body Style	F15/F30 2 Piece RF15/RF30 1 Piece	
Temperature Range	-50°F to 650°F -46°C to 343°C	
Pressure Rating	ASME Class 150 300 PN 10 to PN 40	
End Connections	ASME Class 150 300 PN 10 to PN 40	
Body Materials	Stainless Steel Carbon Steel Alloys	
Seat Materials	Standard: TFM 1600	Optional: Tek-Fil® PEEK UHMWPE RPTFE Metal Cavity Fillers
Applications	General Service Process Tank Farms Fueling Oil and Gas NACE Fire Safe Potable Water (NSF 61)	



**FLOW-TEK® RESOLUTE BALL™ ACCESSORY
FOR SERIES F15/F30 | RF15/RF30**

Body Style	Model	Pressure Class	Size - NPS	Size - DN
Flanged (Full Port)	F15	ASME Class 150 PN 10 PN 16	½ to 12	15 to 300
	F30	ASME Class 300 PN 25 PN 40		
Flanged (Standard Port)	RF15	ASME Class 150 PN 10 PN 16	1 to 12	25 to 300
	RF30	ASME Class 300 PN 25 PN 40		

Available Standards and Certifications	
Valve Design	NACE MR0175 ISO 15156
Fugitive Emissions	API 641 ISO 15848-1 ISO 15848-2
Features and Benefits	Direct Replacement Ball Design Self Flushing/Cleaning Reduced Seat-to-Ball Interface Bidirectional Sealing Multiple Seating Options
Applications	Calcifying and Crystallizing Medias Abrasive Slurries Tank Drain and Isolation Pump Isolation White/Green/Black Liquor Polymers/Monomers Polyvinyl Chloride Petrochemicals



FLOW-TEK® TRIAD SERIES 3-PIECE

Size Range	NPS ¼ to 4 DN 8 to 100	
Ports	Full Standard Port	
Body Style	3 Piece	
Temperature Range	-50°F to 550°F -46°C to 287°C	
Pressure Rating	2200 psi WOG 151.6 bar	
End Connections	Threaded Socket Weld Butt Weld Flanged Extended Socket Weld or Butt Weld	
Body Materials	Stainless Steel Carbon Steel Special Alloys	
Seat Materials	Standard: TFM 1600	Optional: Tek-Fil® PEEK UHMWPE RPTFE Metal Cavity Fillers
Applications	General Service Process Steam Fire Safe Industrial Gases Critical Service High Cycle	



FLOW-TEK® SERIES 7000/8000 3-PIECE

Size Range	NPS ¼ to 12 DN 8 to 300	
Port	Full Port	
Body Style	3 Piece	
Temperature Range	-50°F to 550°F -46°C to 287°C	
Pressure Rating	NPS ¼ to 4 - 1000 psi WOG DN 8 to 100 - 69 bar NPS 6 to 12 - 400 psi WOG DN 150 to 300 - 27.6 bar	
End Connections	Threaded Socket Weld Butt Weld Flanged Extended Socket Weld or Butt Weld JIC (Male) Tank Bottom Tri-Clamp	
Body Materials	Stainless Steel Series 7000 Carbon Steel Series 8000	
Seat Materials	Standard: RPTFE	Optional: TFM 1600 Tek-Fil® UHMWPE Cavity Fillers
Applications	General Service Process OEM Equipment Potable Water (NSF 61)	



FLOW-TEK® SERIES 5000/6000 3-PIECE

Size Range	NPS ¼ to 4 DN 8 to 100	
Port	Full Port	
Body Style	3 Piece	
Temperature Range	-50°F to 450°F -46°C to 232°C	
Pressure Rating	NPS ¼ to 2 - 1000 psi CWP DN 8 to 50 - 69 bar NPS 2½ to 4 - 800 psi WOG DN 65 to 100 - 55 bar	
End Connections	Threaded Socket Weld	
Body Materials	Stainless Steel Series 5000 Carbon Steel Series 6000	
Seat Materials	RPTFE	
Applications	General Service OEM Equipment Process	



FLOW-TEK® SERIES S85 THREADED

Size Range	NPS ½ to 3 DN 15 to 80	
Port	Full Port	
Body Style	2 Piece	
Temperature Range	-50°F to 450°F -46°C to 232°C	
Pressure Ratings	1000 psi WOG 69 bar	
End Connections	Threaded	
Body Materials	Stainless Steel	
Seat Materials	Standard: RPTFE	Optional: UHMWPE
Applications	General Service Air Water Oil and Gas Vacuum Service Water Treatment Water Filtration Potable Water (NSF 61)	

FLOW-TEK® SERIES 1B TRUNNION MOUNTED

Size Range	NPS 2 to 24 DN 50 to 600
Ports	Full
Body Style	2-Piece 3-Piece Forged Cast
Temperature Range	-50°F to 500°F -46°C to 260°C
Pressure Rating	ASME Class 150 300 600 900 1500
End Connections	Flanged Butt Weld RTJ
Body Materials	Stainless Steel Carbon Steel
Seat Materials	RPTFE Nylon Metal
Applications	Liquid and 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



FLOW-TEK® SERIES S7500/S7700 MICRO PURE 3-PIECE

Size Range	¼ to 4 DN 8 to 100
Port	Tube Bore
Body Style	3 Piece
Temperature Range	-50°F to 450°F -46°C to 232°C
Pressure Rating	1000 psi WOG 69 bar
End Connections	Tri-Clamp Extended Tube JIC (Male)
Body Materials	Stainless Steel
Seat Materials	Standard: PTFE Optional: TFM 1600 UHMWPE Cavity Fillers
Applications	High Purity Semi Conductor Food and Beverage



FLOW-TEK® SERIES MPT/MPC | SERIES MPF | SERIES 3HP MULTI-PORT VALVES

Size Range	NPS ¼ to 12 DN 8 to 300
Ports	Full Standard Port T-Port L-Port LL-Port
Body Style	3 & 4 Way
Temperature Range	-20°F to 450°F -29°C to 232°C
Pressure Ratings	ASME Class 150 300 800 - 1000 PSI WOG PN 10 16 25 40 55 - 69 bar
End Connections	Threaded Tri-Clamp Socket Weld Butt Weld Flanged
Body Materials	Stainless Steel Carbon Steel Alloys
Seat Materials	Standard: TFM 1600 Optional: Tek-Fil® UHMWPE RPTFE PTFE Cavity Fillers
Applications	Diverting Mixing Blending and Bypassing





FLOW-TEK® SERIES M1 - SEVERE SERVICE

Size Range	NPS ½ to 36 DN 15 to 900 Custom and larger sizes upon request
Pressure Ratings	ASME 150-4500 PN 10 - PN 720
Temperature	Standard design rated up to 1100 °F 593 °C Can be customized for higher temperatures
Design Standards	ASME B16.34 ASME Section VIII - Div 1 Appendix 2, PED 2014/68/EU
End Connections	Raised Face and Ring Type Joint (ASME B16.5 and DIN 2501) Butt welds (ASME B16.25) Socket weld (ASME B16.11) Hubs and Custom Ends Available
End-To-End	ASME B16.10 (Long Pattern) EN 558-1
Testing	MSS SP-61 API 598 ANSI/FCI 70-2 Custom Tests Available
Applications	Conventional Power Combined Cycle Power Plants Superheated Steam Slurry Discharge Hydromet Pump Isolation High Pressure Acid Leaching Acid Injection Delayed Coking Hydrotreating Fluid Catalytic Cracking



FLOW-TEK® SERIES M4 - SEVERE SERVICE

Size Range	NPS ½ to 2½ DN 15 to 65 SW or BW NPS 3 and 4 DN 80 and 100 BW
Bore Sizes	0.63" 1.03" 1.56"
Pressure Ratings	ASME 1700 3100 4500 NPS ½ to 2½ DN 15 to 65 Limited Class NPS 3 and 4 DN 80 and 100 Standard Class
Temperature	Up to 1100°F 593°C Customizable for higher temperature upon request
Design Standards	ASME B16.34 Bore sizes per ASME TDP-1 PED 2014/68/EU
End Connections	SW per ASME B16.11 BW per ASME B16.25
Body Materials	A105 A182-F22 Cl.3 A182-F91
Ball Materials	410 SS/HVOF Chromium Carbide A182-F91/F92 Inconel® 718/Fused Chromium Carbide
Seat Materials	410 SS/HVOF Chromium Carbide Inconel® 718/HVOF Chromium Carbide
Testing	API 598 MSS SP 61 Custom Tests Available
Characteristics	On/Off Zero Leakage
Applications	Power Plant Steam Vent and Drains Isolation or Blowdown of Steam Water Other high temperature and/or high pressure medias



FLOW-TEK® V-CONTROL BALLS FOR SERIES F15/F30 | RF15/RF30 TRIAD SERIES | SERIES 7000/8000 | SERIES S7500

Size Range	NPS ¼ to 12 DN 8 to 300
Ports	V-Port 15° 30° 60° & 90° Custom and Slotted Ports Full/Standard Port
Body Style	Flanged 1-Piece 2-Piece 3-Piece
Temperature Range	-50°F to 650°F -46°C to 343°C
Pressure Rating	F-Series: ASME Class 150 300 PN 10 PN 16 PN 25 PN 40 Triad: 2200 psi WOG 7000/8000 S7500: 1000 psi WOG
End Connections	Flanged Threaded Socket Weld Butt Weld Extended Socket Weld or Butt Weld Tri-Clamp
Body Materials	Stainless Steel Carbon Steel Alloys
Seat Materials	Standard: Tek-Fil® Optional: RPTFE TFM PEEK Metal
Applications	Flow Control Level Control Temperature Control Low Pressure Steam Control



15° V-Port 30° V-Port 60° V-Port



90° V-Port Custom Slotted Custom Flow

BRAY SERIES 740 BIDIRECTIONAL KNIFE GATE VALVES

Size Range	NPS 2 to 36 DN 50 to 900		
Pressure Rating	NPS 2 to 24 - 150 psi DN 50 to 600 - 10 bar		
Body Style	Single Piece (Lug)		
Design	MSS SP-81		
Testing	MSS SP-151		
Face-to-Face	MSS SP-81		
Certification	CRN PED UKCA ATEX UKCA EX		
Drilling	ASME B16.5 CL150 ASME B16.47 CL150		
Actuator Options	Handwheel Bevel Gear	Pneumatic Hydraulic	Electric

Body Materials	CF8 (304) CF8M (316 SS)
Gate Materials	304 SS 316 SS
Seat Materials	BUNA-N EPDM Viton™
Stem Materials	304
Packing Materials	PTFE Impregnated Synthetic Fiber
Applications:	On/off service and isolation of clean/dirty, corrosive or viscous media in pulp and paper, chemical, mining, power, and wastewater applications.



BRAY SERIES 746HP POLYURETHANE LINED HIGH PERFORMANCE KNIFE GATE VALVES

Size Range	NPS 2 to 24 DN 50 - 600		
Pressure Rating	150 psi 10 bar		
Body Style	One-Piece (Wafer)		
Design	Manufacturer Standard		
Testing	MSS SP-151		
Face-to-face	MSS SP-81		
Certifications	ATEX TR CU		
Drilling	ASME B16.5 CL150		
Actuator Options	Handwheel Bevel Gear	Pneumatic Hydraulic	Electric

Body Material	Ductile Iron
Gate Material	316 SS
Gland Material	Carbon Steel
Liner Material	Polyurethane
Stem	304
Packing Materials	PTFE Impregnated Synthetic Fiber + Quad Seal
Applications:	On/off service handling corrosive or abrasive media in wastewater, chemical, mining, and power applications.



BRAY SERIES 752 BIDIRECTIONAL KNIFE GATE VALVES

Size Range	NPS 2 to 24 DN 50 to 600		
Pressure Rating	150 psi 240 psi 10 bar 16 bar		
Body Style	Two-Piece Bolted (Wafer)		
Design	MSS SP-81		
Testing	MSS SP-151		
Face-to-Face	MSS SP-81 150 psi 10 bar 240 psi 16 bar models		
Certification	CRN PED UKCA ATEX UKCA EX		
Drilling	ASME B16.5 CL150		
Actuator Options	Handwheel Bevel Gear	Pneumatic Hydraulic	Electric

Body Materials	CF8 CF8M WCB DI
Gate Materials	304 SS 316 SS
Seat Materials	BUNA-N EPDM Viton™
Stem Material	304 SS
Packing Materials	PTFE Impregnated Synthetic Fiber
Applications:	On/off service handling corrosive or abrasive media in pulp and paper, chemical, mining, and power applications.





BRAY SERIES 755 BIDIRECTIONAL KNIFE GATE VALVES

Size Range	NPS 2 to 24 DN 50 to 600		Body Materials	CF8 CF8M WCB DI
Pressure Rating	150 psi 240 psi 10 bar 16 bar		Gate Materials	304 SS 316 SS
Body Style	Two-Piece Bolted (Wafer)		Seat Materials	BUNA-N EPDM Viton™
Design	Manufacturer Standard		Packing Materials	PTFE Impregnated Synthetic Fiber
Testing	MSS SP-151		Bore Liner Materials	Polyurethane
Face-to-face	MSS SP-81		Applications:	Heavy-duty on/off service and isolation of dirty, corrosive, abrasive or viscous media in chemical, mining, and power applications.
Certification	CRN PED UKCA ATEX UKCA EX			
Drilling	ASME B16.5 CL150			
Actuator Options	Handwheel Bevel Gear	Pneumatic Hydraulic	Electric	



BRAY SERIES 765 BIDIRECTIONAL SLURRY VALVES

Size Range	NPS 2 to 12 DN 50 to 300		Body Materials	Ductile Iron
Pressure Rating	90 psi 6.2 bar		Gate Materials	304
Body Style	Two-Piece Bolted (Wafer)		Seat Material	Natural Rubber
Design	Manufacturer Standard		Stem Material	304
Testing	Manufacturer Standard		Wiper Material	EPDM
Face-to-face	MSS SP-81		Applications:	Light-duty on/off service and isolation of dirty, corrosive, abrasive or viscous media in chemical, mining, and power applications.
Certification	CRN ATEX UKCA EX			
Drilling	ASME B16.5 CL150			
Actuator Options	Handwheel Bevel Gear	Pneumatic Hydraulic	Electric	



BRAY SERIES 762 SLURRYSHIELD® BIDIRECTIONAL SLURRY VALVES

Size Range	NPS 3 to 48 DN 80 to 1200		Body Materials	NPS 3 to 28 DN 80 to 700 - Ductile Iron NPS 30 to 48 DN 750 to 1200 - WCB
Pressure Rating	NPS 3 to 24 - 100 psi DN 80 to 600 - 7 bar NPS 26 to 42 - 75 psi DN 650 to 1050 - 5 bar NPS 44 to 48 - 50 psi DN 1100 to 1200 - 3 bar		Gate Materials	316 SS 2205 17-4 PH (depending on pressure rating)
Body Style	Two-Piece Bolted (Flanged)		Seat Materials	Natural Rubber BUNA-N EPDM EPDM-HT
Design	Manufacturer Standard		Stem Material	304
Testing	Manufacturer Standard		Secondary Seal	EPDM
Face-to-Face	Per Industry Standard		Applications:	Heavy-duty on/off service and isolation of dirty, corrosive, abrasive or viscous media in chemical, mining, and power applications.
Certification	CRN ATEX UKCA EX			
Drilling	ASME B16.5 CL150 ASME 16.47 CL150			
Actuator Options	Handwheel Bevel Gear	Pneumatic Hydraulic	Electric	

BRAY SERIES 767 SLURRYSHIELD® BIDIRECTIONAL SLURRY VALVES

Size Range	NPS 3 to 36 DN 80 to 900		
Pressure Rating	300 psi 450 psi 740 psi 20 bar 30 bar 51 bar		
Body Style	Two-Piece Bolted		
Design	Manufacturer Standard		
Testing	Manufacturer Standard		
Face-to-face	Per Industry Standard		
Certification	CRN ATEX UKCA EX		
Drilling	ASME B16.5 CL300		
Actuator Options	Handwheel Bevel Gear	Pneumatic Hydraulic	Electric

Body Materials	WCB
Gate Materials	316 SS 2205 17-4PH SS (depending on pressure rating)
Sleeve Material	Natural Rubber EPDM
Stem Material	304
Secondary Seal	EPDM
Applications:	High pressure on/off service and isolation of dirty, corrosive, abrasive or viscous media in chemical, mining, and power applications.



BRAY SERIES 768 SLURRYSHIELD® BIDIRECTIONAL SLURRY VALVES

Size Range	NPS 2 to 24 DN 50 to 600		
Pressure Rating	NPS 2 to 16 150 psi NPS 18 to 24 90 psi DN 50 to 400 10 bar DN 450 to 600 6.2 bar		
Body Style	Two-piece Bolted (Wafer)		
Design	Manufacturer Standard		
Testing	Manufacturer Standard		
Face-to-Face	MSS SP-81		
Certification	CRN ATEX UKCA EX		
Drilling	ASME B16.5 CL150		
Actuator Options	Handwheel Bevel Gear	Pneumatic Hydraulic	Electric

Body Materials	DI
Gate Material	316 SS 2205 17-4PH SS (depending on pressure rating)
Sleeve Materials	Natural Rubber EPDM
Stem Material	304
Secondary Seal	EPDM
Applications:	On/off service and isolation of clean/dirty corrosive or viscous media in pulp and paper, chemical, mining, power, and wastewater applications.



BRAY SERIES 940 UNIDIRECTIONAL KNIFE GATE VALVES

Size Range	NPS 2 to 24 DN 50 to 600		
Pressure Rating	150 psi 10 bar		
Body Style	Single Piece Lug		
Design	MSS SP-81		
Testing	MSS SP-151		
Face-to-Face	MSS SP-81		
Certification	PED UKCA ATEX UKCA EX		
Drilling	ASME B16.5 CL150		
Actuator Options	Handwheel Bevel Gear	Pneumatic Hydraulic	Electric

Body Materials	CF8 CF8M
Gate Materials	316 SS 304SS
Seat Materials	Metal BUNA-N EPDM FKM PTFE
Packing Materials	PTFE Impregnated Synthetic Fiber
Applications:	General purpose on/off service and isolation of clean/dirty, corrosive, abrasive, viscous, and high temperature media in power, mining, pulp and paper, cement, carbon black, and chemical applications.



BRAY SERIES 941 UNIDIRECTIONAL KNIFE GATE VALVES

Size Range	NPS 2 to 24 DN 50 to 600		
Pressure Rating	NPS 2 to 24 - 150 psi DN 50 to 600 - 10 bar		
Body Style	Single Piece - Lug		
Design	MSS SP-81		
Testing	MSS SP-151		
Face-to-Face	MSS SP-81		
Certification	CRN PED UKCA ATEX UKCA EX		
Drilling	ASME B16.5 CL150		
Actuator Options	Handwheel Bevel Gear	Pneumatic Hydraulic	Electric

Body Materials	CF8 CF8M (316 SS)
Gate Materials	304 SS 316 SS
Seat Materials	Metal BUNA-N EPDM FKM PTFE
Stem Materials	304
Packing Materials	Energized Quad Seal with PTFE Anti Extrusion Ring
Applications:	On/off service and isolation of clean/dirty corrosive or viscous media in pulp and paper, chemical, mining power, and wastewater applications.





BRAY SERIES 942 UNIDIRECTIONAL VORTEX BREAKER KNIFE GATE VALVES

Size Range	NPS 4 to 12 DN 100 to 300		Body Materials	CF8M (316 SS)
Pressure Rating	NPS 4 to 12 - 150 psi DN 100 to 300 - 10 bar		Gate Materials	17-4PH SS H-900
Body Style	Single Piece - Lug		Seat Materials	Hard Faced
Design	MSS SP-81		Packing Materials	High Performance Aramid Packing with Copper Wiper
Testing	MSS SP-151		Vortex Breaker	Hi-Chrome
Face-to-Face	MSS SP-81		Applications: Recycle/rejects in pulp and paper.	
Certification	CE/PED			
Drilling	ASME B16.5 CL150			
Actuator Options	Handwheel Bevel Gear	Pneumatic Hydraulic	Electric	



BRAY SERIES 943 UNIDIRECTIONAL KNIFE GATE VALVES

Size Range	NPS 2 to 24 DN 50 to 600		Body Materials	CF8 CF8M
Pressure Rating	150 psi 10 bar		Gate Materials	304 SS 316 SS 317 SS
Body Style	Single Piece Lug		Seat Materials	Metal BUNA-N EPDM FKM RPTFE
Design	MSS SP-81		Packing Materials	PTFE Impregnated Synthetic Fiber with Quad Seal
Testing	MSS SP-151		Applications: General purpose on/off service and isolation of clean/dirty corrosive, abrasive, viscous, and high temperature media in power, mining, pulp and paper, cement, carbon black, and chemical applications.	
Face-to-Face	MSS SP-81			
Drilling	ASME B16.5 CL150			
Actuator Options	Handwheel Bevel Gear	Pneumatic Hydraulic	Electric	



BRAY SERIES 950 UNIDIRECTIONAL KNIFE GATE VALVES

Size Range	NPS 2 to 24 DN 50 to 600		Body Materials	DI
Pressure Rating	NPS 2 to 12 - 150 psi NPS 14 to 24 - 75 psi DN 50 to 300 - 10 bar DN 350 to 600 - 5 bar		Gate Materials	304 SS
Body Style	Single Piece Semi-Lug		Seat Materials	Metal BUNA-N EPDM FKM PTFE
Design	Manufacturer Standard		Stem Materials	304 SS
Testing	MSS SP-151		Gland Materials	CS
Face-to-Face	MSS SP-81		Packing Materials	PTFE Impregnated Synthetic Fiber
Certification	CRN PED UKCA ATEX UKCA EX		Applications: Heavy-duty on/off service and isolation of dirty, corrosive, abrasive or viscous media in chemical, mining, and power applications.	
Drilling	ASME B16.5 CL150			
Actuator Options	Handwheel Bevel Gear	Pneumatic Hydraulic	Electric	



BRAY SERIES 953 UNIDIRECTIONAL KNIFE GATE VALVES

Size Range	NPS 2 to 24 DN 50 to 600		Body Materials	Cast Iron
Pressure Rating	2-10 150 psi 50-250mm 10 bar 12-16 90 psi 300-400mm 6 bar 18 75 psi 450mm 5 bar 20-24 60 psi 500-600mm 4 bar		Gate Materials	304 SS
Body Style	Single Piece Semi Lug		Seat Materials	Metal BUNA-N EPDM FKM RPTFE
Design	Manufacturer Standard		Stem Materials	304 SS
Testing	MSS SP-151		Gland Materials	Carbon Steel
Face-to-Face	MSS SP-81		Packing Materials	PTFE Impregnated Synthetic Fiber with Quad Seal
Drilling	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 and paper, cement, carbon black, and chemical applications.	
Actuator Options	Handwheel Bevel Gear	Pneumatic Hydraulic	Electric Lever	

**BRAY SLURRYTUFF® - EZI-VAC AIR RELEASE
VACUUM BREAK VALVE**

Operation	Air Release & Vacuum Break (EV) Triple Action (ET) Vacuum Break Only (EB)
Sizes Range	NPS 1 to 16 DN 25 to 400
Rating	ASME Class 150 300 600
Body	Fabricated or cast Carbon Steel Stainless Duplex steel
Float	High density polyethylene or urethane coated aluminum
Outlet Cover	Carbon steel standard Stainless steel optional
Connection	Flanged ANSI B16.5 RF Class 150 300 600 (or as required)
Seal	Chutex wear resistant natural rubber standard Nitrile Viton™ EPDM
Gasket	BUNA-N O-ring Viton™ EPDM Other options on request
Fasteners	Galvanized Carbon Steel Stainless Steel
Lining (Optional)	Natural rubber Nitrile Urethane EPDM Bromobutyl
Finish	2-coat Interzone 954 epoxy paint
Testing	API 598
Standard	ASME B16.34 ASME B16.5 ASME B31.3
Option	Non-Slam Bird Screen Flush Port Secondary Release
Applications	Slurries Chemical Sand Pulp Dewatering and Process Water



**BRAY SLURRYTUFF® - MAXI-CHECK H
HIGH WEAR BALL CHECK VALVE (MH)**

Sizes Range	NPS 2 to 32 DN 50 to 800
Rating	ASME Class 150 300 600 900
Body	Carbon Steel standard Stainless Steel option
Connection	Flanged ANSI B16.5 RF Class 150 300 600 900 or as required
Ball	Urethane Coated Aluminum Silica Bronze Stainless Steel
Seat	Stainless Steel Hardened Carbon Steel (Replaceable)
Seal	Molded rubber (40 Shore hardness) when required (Replaceable)
Gasket	BUNA-N & Synthetic Fiber Nitrile Viton™ EPDM
Fasteners	Galvanized Carbon Steel Stainless Steel
Lining	Natural rubber as standard Nitrile EPDM Bromobutyl
Finish	2-Coat Interzone 954 epoxy paint
Applications	Slurries Chemicals Sands Pulp Dewatering and Ash Disposal



**BRAY SLURRYTUFF® - MAXI-CHECK L
LOW WEAR BALL CHECK VALVE (ML)**

Size Range	NPS 3 to 24 DN 80 to 600
Rating	ANSI B16.5 150 300
Body	Carbon Steel Standard Stainless Steel Option
Connection	Flanged ANSI B16.5 Class 150 300 or as required
Ball	Urethane Coated Aluminum
Seat	Integral Carbon Steel
Gasket	BUNA-N O-Ring Nitrile Viton™ EPDM
Fasteners	Galvanized Carbon Steel Stainless Steel
Lining	Epoxy Coated as Standard Natural Rubber Nitrile EPDM
Finish	2-Coat Interzone 954 epoxy paint
Applications	Light Duty Dewatering Process Water Chemical Wastewater Sewerage Pulp Food



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**BRAY SLURRYTUFF® MAXI-CHECK I
DUAL FUNCTION BALL CHECK ISOLATION VALVE (MI)**

Sizes Range	NPS 2 to 30 DN 50 to 750
Actuation	Hand wheel actuated up to DN 450 Bevel gearbox DN 500-DN 750 and higher
Option	Electric, pneumatic or hydraulic actuators as required Proximity switches are optional
Rating	ASME B16.5 class 150 300 600 900
Body	Carbon Steel standard Stainless Steel optional
Connection	Flanged ANSI B16.5 RF Class 150 300 600 900 or as required
Ball	Urethane Coated Aluminum Silica Bronze Stainless Steel
Seat	Stainless Steel Hardened Carbon Steel (Replaceable)
Seal	Molded rubber (40 Shore hardness) when required (Seal is replaceable)
Gasket	BUNA-N O-Ring Nitrile Viton™ EPDM
Fasteners	Galvanized Carbon Steel Stainless Steel
Lining	Natural rubber as standard Nitrile EPDM Bromobutyl
Finish	2-coat Interzone 954 epoxy paint
Applications	Slurries Chemicals Sands Pulp Dewatering and Ash Disposal



**BRAY SLURRYTUFF® TISO-CHECK - AUTOMATIC CHANGEOVER
BALL CHECK VALVE (TC)**

Size Range	NPS 4 to 24 DN 100 to 600
Rating	ANSI B16.5 Cass 150 @ 65°C nominal 10 bar CWP
Connection	Flanged either Table D E PN 10 PN 16 (EN or AS) or ANSI150.
Body	Carbon Steel
Ball	Urethane Coated Aluminum
Seat	Replaceable Stainless Steel
Fasteners	Galvanized Carbon Steel Stainless options as required
Lining	Natural rubber as standard Nitrile EPDM Bromobutyl Ceramic
Finish	2-coat Interzone 954 Epoxy Paint
Option	Stainless Steel Construction
Applications	Cyclone Feed Pumps Standby Pumps Circuits

CHECK VALVES

BRAY/RITE® MODEL 210/212 WAFER CHECK VALVES

Size Range	NPS 1 to 60 DN 25 to 1500
Temp. Range	Cryogenic to high temperature (pending model selected)
Pressure Ratings	ASME 125 150 300 PN 10/16/25/40
Body/Disc Materials	ASTM A126 CLB ASTM A216 WCB ASTM A351 CF8M ASTM A 395 DI and exotics on request
Seat Materials	BUNA EPDM PTFE-Virgin Teflon Encapsulated Silicone Viton™ A240-304 SS A240-316 SS
Spacer	ASTM A479-316 SS (PTFE optional)
Face to Face	Manufacturer Standard Valve Design ASME B16.34
Test Standard	API 598 ASME B16.34
Optional Approvals	API 6FD CE CRN FM NSF-61 PED ULC
Optional Special Accessories	H-100 SA-01 SA-1 SA-2 SA-3 SA-4 SA-4A SA-6 SA-7 SA-10 SA-16 SA-40 SA-40A SA-50



BRAY/RITE® MODEL 205 WAFER CHECK VALVES

Size Range	NPS 2 to 60 DN 50 to 1500
Temp. Range	Cryogenic to high temperature (pending model selected)
Pressure Ratings	API 594 150 300 600 900 1500 2500
Body/Disc Materials	ASTM A126 CLB ASTM A216 WCB ASTM A351 CF8M ASTM A 395 DI and exotics on request
Seat Materials	BUNA EPDM PTFE-Virgin Teflon Encapsulated Silicone Viton™ A240-304 SS A240-316 SS
Spacer	ASTM A479-316 SS (PTFE optional)
Face to Face	API 594 Valve Design ASME B16.34
Test Standard	API 598 ASME B16.34
Optional Approvals	API 6FD CE CRN NSF-61 PED
Optional Special Accessories	H-100 SA-01 SA-1 SA-2 SA-3 SA-4 SA-4A SA-6 SA-7 SA-10 SA-16 SA-40 SA-40A SA-50



BRAY/RITE® MODEL 211 FLANGED CHECK VALVES

Size Range	NPS 2 to 42 DN 50 to 1050
Temp. Range	Cryogenic to high temperature (pending model selected)
Pressure Ratings	API 594 150 300 600 900 1500 2500
Body/Disc Materials	ASTM A126 CLB ASTM A216 WCB ASTM A351 CF8M ASTM A 395 DI and exotics on request.
Seat Materials	BUNA EPDM PTFE-Virgin Teflon Encapsulated Silicone Viton™ A240-304 SS A240-316 SS
Spacer	ASTM A479-316 SS (PTFE optional)
Face to Face	API 594 Valve Design ASME B16.34
Test Standard	API 598 ASME B16.34
Optional Approvals	API 6FD CE CRN NSF-61 PED
Optional Special Accessories	H-100 SA-01 SA-1 SA-2 SA-3 SA-4 SA-4A SA-6 SA-7 SA-10 SA-16 SA-40 SA-40A SA-50



BRAY/RITE® MODEL PVC FLANGED CHECK VALVES

Size Range	NPS 2 to 24 DN 50 to 600
Temp. Range	-240°F to 400°F -151°C to 204°C pending model selected
Pressure Ratings	API 594 125 150
Body Material	ASTM D 1784 PVC
Seat Materials	BUNA EPDM Viton™
Spacer	ASTM A479-316 SS
Face to Face	API 594 Valve Design B16.34
Test Standard	API 598 Optional Approvals CE CRN PED
Optional Special Accessories	SA-4A





BRAY/RITE® MODEL H-100

External Spring, Hydraulic Damper, and Weight

Use: Fluctuating flow application.

Design slows down the opening of the valve to protect the disc assembly in the last few degrees of travel.



BRAY/RITE® MODEL SA-3

Backflush Lever, and External Spring

Use: Application requires backflush process, or manual operation which may require additional force to close.

Lever allows manual operation and provides a visual indication of the disc position, and the spring provides force to assist valve closure where rapid media flow reversal conditions exist.



BRAY/RITE® MODEL SA-01

External Lever and Spring

Use: Valve needs additional force to close due to rapid media flow.

Design applies additional force for valve closure.



BRAY/RITE® MODEL SA-4

External Position Indicator

Use: Valve requires visual indication of disc position.

Provides a visual indication of the disc position (degree of open/close).



BRAY/RITE® MODEL SA-1

External Lever, Spring, and Weight

Use: Valve needs flexibility to decrease/increase closing time and application may require solids handling.

Design provides additional cracking pressure and weight to disc.



BRAY/RITE® MODEL SA-4A

Backflush Lever

Use: Application requires backflush process, or manual operation.

Lever allows manual operation and provides a visual indication of the disc position (degree of open/close).



BRAY/RITE® MODEL SA-2

Limit Switch

Use: Remote indication required within automated control system environment.

Design sends signal for remote indication of flow and valve position.



BRAY/RITE® MODEL SA-6

Foot Valve with Basket

Use: System requires straining of impurities to maintain pump prime.

Filter impurities in the line to maintain downstream pump prime, and allows valve to close as intended.

OPTIONAL SPECIAL ACCESSORIES FOR CHECK VALVES



BRAY/RITE® MODEL SA-7 **Emergency Shut-off Fusible Link**

Use: Valve requires failsafe protection in case of fire. Design allows fusible link to melt which releases lever to allow disc to close.



BRAY/RITE® MODEL SA-40A **External Compression Spring, Lever, and Weight**

Use: Valve needs additional force to close due to rapid media flow. Valve requires the ability to change the opening pressure of the valve, within a certain range and/or change the closing characteristics of the valve.

Design provides additional cracking pressure and weight to disc. Spring assists valve closure before flow reverses. This reduces or eliminates water-hammer and the associated problems where rapid media flow reversal conditions exist. The compression spring design protects the spring from the elements. The valve has been modified to increase the opening pressure. One weight is used to provide the necessary torque to close the disc, and the spring provides force to assist valve closure in rapid media flow reversal conditions. The weight also provides external mass to increase the cracking pressure and increase the closing force of the moving disc.



BRAY/RITE® MODEL SA-10 **Dual-Balanced Weights**

Use: Low flow rate applications (i.e. blower). Design provides weight # 1 to adjust cracking pressure, and weight # 2 to counterbalance the disc.



BRAY/RITE® MODEL SA-16 **External Lever, and Weight**

Use: Valve requires the ability to change the opening pressure of the valve, within a certain range and/or change the closing characteristics of the valve.

Provides weight to achieve necessary torque to close the valve. The weight also provides external mass to increase the cracking pressure and increase the closing force of the moving disc.



BRAY/RITE® MODEL SA-50 **External Compression Spring, Hydraulic Damper, Lever, and Weight**

Use: Fluctuating flow application. The hydraulic damper is used to reduce disc oscillations due to variations in flow, and to stop the disc from being slammed open

or closed. This model provides damping for the final few degrees of travel upon opening, and closing. Speed Controls + Compression Spring slow down the opening of the valve to protect the disc assembly. The compression spring design protects the spring from the elements. The valve is designed to close as soon as the flow starts to decrease with the help of an external spring and weight. This reduces or eliminates water-hammer and associated problems.



BRAY/RITE® MODEL SA-40 **External Compression Spring, and Lever**

Use: Valve needs additional force to close due to rapid media flow. Spring provides additional force to assist valve closure before flow reverses. This reduces or

eliminates water-hammer and the associated problems where rapid media flow reversal conditions exist. The compression spring design protects the spring from the elements.



S92 Double Acting



S93 Spring Return



Extreme High Temperature Actuator



Stainless Steel Actuator

BRAY SERIES 92/93

Rack and pinion actuators available in double acting and spring return

SPECIFICATIONS

Output Torque	Double Acting up to: 44,130 lb-in 4,986 N m
	Spring End Torque up to: 14,173 lb-in 1,601 N m
Pressure Range	40 - 140 psi 2.8 - 10 bar
Temperature Range¹	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
Supply Media	Dry Compressed Air/Inert Gas*
Series 92 Double Acting	Available in 90° 135° 180° rotation
Series 93 Spring Return	Available in 90° Rotation
Direct Mounting	ISO 5211: 2001(E)
Control Options	On-Off Modulating Double Acting Spring Return
Power Source	Pneumatic
Enclosure Ratings	IP66/IP67M per IEC 60529
Options	Single or Double Acting Extended Travel Stops
Valve Compatibility	Butterfly Valves Ball Valves

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

1. Cycle life on low and high temperature seal kits is reduced compared to standard BUNA-N seals.

CERTIFICATIONS AND APPROVALS

ABS | ATEX | Bureau Veritas | PED | SIL 3

FEATURES

- > Series 92/93 is completely enclosed and self contained
- > Minimal maintenance
- > Safe, simple disassembly and assembly.
- > Two independently adjustable travel stop screws and a cam on the output shaft to permit precise bidirectional adjustment of movement in both the open and closed positions for quarter turn valves (+5° to -5° limit adjustment)
- > Integral porting
- > Standard units have anodized aluminum bodies with polyester coated end caps
- > Optional Seacorr® coating for harsh environments
- > SIL 3 capable
- > NAMUR accessory compatible



BRAY SERIES 98 PNEUMATIC

Media¹	Dry Compressed Air Inert Gas Natural Gas
Pressure Range	40 to 150 psi 2.8 to 10.3 bar
	Standard -20°F to 200°F -29°C to 93°C
Temperature Range¹	High Temperature Up to 300°F Up to 149°C
	Low Temperature Down to -50°F Down to -46°C
Torque Output	Double Acting 1787 lb-in to 885,100 lb-in Double Acting 220 N m to 100,000 N m
Spring End Torque	2,741 to 445,261 lb-in 310 to 50,306 N m
Torque Base	Mounting Dimensions as per ISO 5211: 2017
Accessories	Shaft Driven Accessories Mounting per NAMUR-VDE
Performance Testing	EN 15714-3:2009
Ingress Protection	IP67M per IEC 60529
Safety	ATEX SIL 3 suitable PED on request

¹ Contact factory for other media or non-standard temperature range.



BRAY SERIES 98C COMPACT PNEUMATIC

Media¹	Dry Compressed Air Inert Gas Natural Gas
Pressure Range	40 to 150 psi 2.8 to 10.3 bar
	Standard -20°F to 200°F -29°C to 93°C
Temperature Range¹	High Temperature Up to 300°F Up to 149°C
	Low Temperature Down to -50°F Down to -46°C
Torque Output	Double Acting 661 lb-in to 17,701 lb-in Double Acting 75 N m to 2,000 N m
Spring End Torque	490 to 6,176 lb-in 55 to 698 N m
Torque Base	Mounting Dimensions Options per ISO 5211
Accessories	Shaft Driven Accessories Mounting per NAMUR-VDE
Performance Testing	EN 15714-3
Ingress Protection	IP66 IP67M & IP68 per IEC 60529
Safety	ATEX SIL 3 PED

¹ Contact factory for other media or non-standard temperature range.



BRAY SERIES 98H HYDRAULIC

Media¹	Hydraulic Fluid - Standard Trim ISO VG 32/46, ISO-L-HV
Pressure Range	500 to 3000 psi 35 to 207 bar
	Standard: -20°F to 212°F -29°C to 100°C
Temperature Range¹	Low Temperature: Down to -50°F Down to -46°C
	PED: -20°F to 176°F -29°C to 80°C
Torque Output	Double Acting 730 lb-in to 885,100 lb-in Double Acting 84 N m to 100,000 N m
Spring-End Torque	2,741 to 445,261 lb-in 310 to 50,306 N m
Mounting Base	ISO 5211: 2017
Accessory Mounting	NAMUR-VDE (Shaft Driven)
Performance Testing	EN 15714-4:2009
Ingress Protection	IP67M and IP68 per IEC 60529
Safety	ATEX SIL 3 suitable PED on request

¹ Contact factory for other media or non-standard temperature range.

SYMMETRICAL OR CANTED YOKES

The heart of the Series 98 actuator is the scotch yoke. This mechanism converts linear motion into rotational motion. The piston and/or springs directly couple to a rotating yoke with a slot that engages the sliding blocks.

This type of actuator has a distinct torque curve, which starts high, then dips toward the middle of the stroke, and ends with increasing torque — offering an inherent optimization of torque requirements associated with many valve applications.



SYMMETRICAL YOKE

- > Torque output curve is balanced.
- > Torque demands are similar at seat break and end positions.



CANTED YOKE

- > Torque output curve is shifted.
- > Torque demands are not the same at seat break and end positions.
- > Applications for optimizing the torque output vs shaft angle curve.

SCOTCH YOKE COMMON FEATURES

- > Compact design offers a high torque-to-weight ratio.
- > Modular design offers multiple configurations, providing flexibility and efficiency at reduced cost.
- > Module alignment ensured by precision machined centering rings.
- > Symmetrical yoke or canted yoke options available to meet a broad range of application torque requirements.
- > Optimized for ISO 5211 mounting bases, with fully configurable direct-mount accessories.
- > Easy field configuration and simplified maintenance.
- > Premium epoxy/polyurethane coating as standard.

EMERGENCY SHUTDOWN CAPABILITY

- > Fast Acting (less than one second)
- > Rugged Design
- > Customizable Configurations
- > Manual and Automatic Release Options
- > Certified Safety Integrity Level 3 (SIL) per IEC 61508

MODULAR DESIGN

PRESSURE MODULE

- > Pneumatic

TORQUE MODULE

- > Symmetrical or Canted Yoke

HAND PUMP

- > Hand Pump for Hydraulic Override

DIRECT ACTING OR SPRING RETURN MODULES

- > Jackscrew Direct Drive Override
- > Jackscrew Gear Driven Override
- > Hydraulic Override
- > Extended Travel Stop
- > Hydraulic Damper
- > Partial Stroke Testing/Locking Device



OPTIONS

DAMPER

- > Provides self contained hydraulic cushioning at the end of high speed stroke, preventing slamming and seat damage to the valve, as well as shock to the piping. (Available for Double Acting or Spring Return.)



PARTIAL STROKE DEVICE

- > Allows ESD valve function verification without disrupting the running process.





Compact Automation

COMPACT AUTOMATION

Hydraulic Break to Open Torque Range 730 lb-in to 885,100 lb-in | 84 N m to 100,000 N m

Spring-Ending Torque Range 2,741 lb-in to 445,261 lb-in | 310 N m to 50,306

Supply Voltage 12 or 24 VDC or 48VDC
120 - 220 VAC
480 V 3-Phase
50/60 Hz
Solar or wind charged power packs

Control Signal 4-20mA
12 or 24 VDC or 48 VDC
120 - 220 VAC
Network Protocols

Rugged and repeatable performance under the most challenging conditions.



Custom Built Automation Packages



Custom Built Linear Actuators

KEY FEATURES

- > Completely self-contained
- > Electric on/off failsafe
- > Continuous modulating duty
- > Precise controllability and repeatable accuracy
- > Adjustable opening and closing speeds
- > Weather-proof or explosion-proof construction
- > Fail freeze, fail last, fail open or fail close using spring or stored accumulator energy
- > ESD and PST capable
- > Line break protection
- > SIL capable
- > UL | FM | ATEX | CSA certifications
- > Manual hydraulic override
- > Custom built options available

APPLICATIONS

- > Power Generation
- > Mining and Minerals
- > Refining
- > LNG Facilities
- > Gas Pipelines
- > Liquid Pipelines
- > Water / Wastewater
- > Oil and Gas Exploration and Production
- > Pulp and Paper Plants

SERIES 70 ELECTRIC ACTUATOR



SPECIFICATIONS

Output Torque	120/230 V	300 to 18,000 lb-in 34-2034 N m
	24 V	S70-E06: 600 lb-in 68 N m
		S70-E20: 2,000 lb-in 226 N m
		S70-050: 5,000 lb-in 565 N m
Control Options	On/Off	Interposing Relay Board (I.R.B) - 120/230 VAC On/Off NXT Controller - 24V AC/DC
	Modulating	Servo NXT Controller 120/230 VAC 24V AC/DC 4-20 mA 0-10 V 0-5 V 2-10 V
	Communication Protocols	EtherNet/IP
Voltages	120/230 VAC 50/60 Hz 1-phase 24 VAC/VDC	
Enclosure Ratings	NEMA Type 4/4x and IP65 1P67 (IP67 does not include S70-130/131 and 180/181)	
Mounting	ISO-5211 & MSS SP-101	
Motor	120/230 VAC: 1-phase, reversible, permanent split capacitor induction motor	
	24 V: Permanent magnet brushed DC Motor	
Temp. Range	-20°F to 150°F -29°C to +65°C	
Switch Options	2 SPDT mechanical switches standard	
	Additional auxiliary switches available (up to 6 total)	
	Optional torque switches available	
Duty Rating	Continuous Duty - Will operate continuously at max ambient temperature of 104°F 40°C	
	Intermittent Duty - One motor-on period, followed by three motor-off periods	

CERTIFICATIONS & APPROVALS

UL | CSA and CE approved (most 120V models)

24V & 230V; CE approved

NOTES: A complete listing of certifications and approvals can be found at BRAY.COM

SERIES 76 ELECTRIC ACTUATOR



SPECIFICATIONS

Voltage	3 Phase: 220V, 380V & 460V 1 Phase: 110V, 220V & 240VAC 24V DC, 24V AC/DC	
Torque Rating	3 Phase: Torque up to 79,000 in-lbs (9,000 N m) 1 Phase: Torque up to 26,500 in-lbs (3,000 N m)	
Enclosure Ratings	NEMA: 4, 4X, 6 Ingress Protection: 66/67 Submersible: IP68 (Optional)	
Main Housing	High grade aluminum alloy Anodized interior and exterior Polyester powder top coated	
Mounting	ISO 5211/MSS SP-101	
Ambient Temperature	-4°F -20°C to 140°F +60°C Optional: -40°F -40°C to 140°F +60°C	
Conduit Entries	Weatherproof: > Sizes 1 thru 5 = 3x 3/4" NPT or 3x M20 > Sizes 6 thru 7 = 2x 3/4" NPT + 1x 1" NPT or 2x M20 + 1x M25	Explosionproof: > 2x 3/4" NPT or 2x M25
Lubrication	Grease moly EP type	
Duty Cycle	S4 Per EN 60034-1	
Control Options	Potentiometer: 1K Ohm Position Transmitter: Output Signal: 4-20mA dc Modulating: 0-20mA 4-20mA 0-5V 1-5V 0-10V 2-10V Local Control Stations	
Motor	Squirrel Caged AC Induction Motor > Class F Motor Insulation 311F(155C) > Embedded thermal protection 275F (135C)	
Drive Bushing	Removable drive bushing	
Manual Override	Declutch mechanism, which can be padlocked	
Position Indicator	Top mount visual position indicator	
Travel	90 degrees +/- 5°	

CERTIFICATIONS & APPROVALS

NEMA 4, 4X & 6	Flameproof: Ex db IIB T4
IP66 IP67	Dust: Ex tb IIIC T135°C
IP68 certified for submersible applications (32ft 72 hours)	Weatherproof: FCC ICES CE UKCA CSA
CSA CE UKC	Explosionproof: FCC ICES ATEX IECEx CSA



BRAY SERIES 6A ELECTRO-PNEUMATIC POSITIONER

- > Smart digital positioner for precise control of valve in various applications
- > Low air consumptions thanks to zero bleed design
- > Compatible with rotary or linear actuators for single and double acting applications
- > Various enclosure options available to withstand challenging environmental conditions
- > Equipped with on-board diagnostics checks to support preventative and efficient maintenance
- > Local user interface for quick and easy positioner configuration
- > Modular design capable of field upgradeable options
- > Integral volume booster available for fast operation of large valves
- > Fail safe, Fail in Place, Fail to Open options available
- > Advanced communications via PROFIBUS PA, Foundation Fieldbus and HART



BRAY SERIES 6P PNEUMATIC POSITIONER

- > Pneumatic to pneumatic positioner for single and double acting actuators
- > Rugged aluminum die cast 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



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

- > Discrete status monitor for quarter turn rotary actuators
- > All Models: NEMA 4, 4X and IP66 and IP67 ingress protection
- > Model 5A/B Resin and 5C Aluminum:
NEMA 4, 4X and IP66, IP67 and IP68 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



BRAY SERIES 54 VALVE PROXIMITY SENSOR

- > Dual proximity sensors for valve position
- > 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



BRAY 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.

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

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