BRAY INTERNATIONAL

PRODUCT PROFILE

Bray®

BRAY.COM

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

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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KUGELHAHN MÜELLER® - KM 20/21 - FLANGED

Size Range	NPS ½ to 8 | DN 15 to 200
Body Type	Two-piece Fanged
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, and 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, Fluid Catalytic Cracking, Hydrotreating

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, and other high temperature and/or high pressure medias

15° V-Port | 30° V-Port | 60° V-Port

90° V-Port | Custom Slotted | Custom Flow

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

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 NPS 30 to 36 - 100 psi DN 750 to 900 - 7 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 Pneumatic Electric Bevel Gear Hydraulic

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 Pneumatic Electric Bevel Gear Hydraulic

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 Pneumatic Electric Bevel Gear Hydraulic

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
Pressure Rating	150 psi, 240 psi 10 bar, 16 bar
Body Style	Two-Piece Bolted (Wafer)
Design	Manufacturer Standard
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 Pneumatic Electric Bevel Gear Hydraulic

Body Materials	CF8 | CF8M | WCB DI
Gate Materials	304 SS | 316 SS
Seat Materials	BUNA-N | EPDM Viton™
Packing Materials	PTFE Impregnated Synthetic Fiber
Bore Liner Materials	Polyurethane

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

BRAY SERIES 765 BIDIRECTIONAL SLURRY VALVES

Size Range	NPS 2 to 12 | DN 50 to 300
Pressure Rating	90 psi | 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 Pneumatic Electric Bevel Gear Hydraulic

Body Materials	Ductile Iron
Gate Materials	304
Seat Material	Natural Rubber
Stem Material	304
Wiper Material	EPDM

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

BRAY SERIES 762 SLURRYSHIELD® BIDIRECTIONAL SLURRY VALVES

Size Range	NPS 3 to 48 | DN 80 to 1200
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
Body Style	Two-Piece Bolted (Flanged)
Design	Manufacturer Standard
Testing	Manufacturer Standard
Face-to-Face	Per Industry Standard
Certification	CRN | ATEX | UKCA EX
Drilling	ASME B16.5 CL150 ASME 16.47 CL150
Actuator Options	Handwheel Pneumatic Electric Bevel Gear Hydraulic

Body Materials	NPS 3 to 28, DN 80 to 700 - Ductile Iron NPS 30 to 48, DN 750 to 1200 - WCB
Gate Materials	316 SS | 2205 17-4 PH (depending on pressure rating)
Seat Materials	Natural Rubber BUNA-N | EPDM EPDM-HT
Stem Material	304
Secondary Seal	EPDM

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

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 Pneumatic Electric Bevel Gear Hydraulic

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 Pneumatic Electric Bevel Gear Hydraulic

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 Pneumatic Electric Bevel Gear Hydraulic

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 Pneumatic Electric Bevel Gear Hydraulic

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.

BRAYS SERIES 942 UNIDIRECTIONAL VORTEX BREAKER KNIFE GATE VALVES

Size Range	NPS 4 to 12 | DN 100 to 300
Pressure Rating	NPS 4 to 12 - 150 psi DN 100 to 300 - 10 bar
Body Style	Single Piece - Lug
Design	MSS SP-81
Testing	MSS SP-151
Face-to-Face	MSS SP-81
Certification	CE/PED
Drilling	ASME B16.5 CL150
Actuator Options	Handwheel Pneumatic Electric Bevel Gear Hydraulic

Body Materials	CF8M (316 SS)
Gate Materials	17-4PH SS H-900
Seat Materials	Hard Faced
Packing Materials	High Performance Aramid Packing With Copper Wiper
Vortex Breaker	Hi-Chrome

Applications: Recycle/Rejects in pulp and paper.

BRAY SERIES 943 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
Drilling	ASME B16.5 CL150
Actuator Options	Handwheel Pneumatic Electric Bevel Gear Hydraulic

Body Materials	CF8, CF8M
Gate Materials	304 SS | 316 SS | 317 SS
Seat Materials	Metal | BUNA-N | EPDM FKM | RPTFE
Packing Materials	PTFE Impregnated Synthetic Fiber with Quad Seal

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 950 UNIDIRECTIONAL KNIFE GATE VALVES

Size Range	NPS 2 to 24 | DN 50 to 600
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
Body Style	Single Piece | Semi-Lug
Design	Manufacturer Standard
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 Pneumatic Electric Bevel Gear Hydraulic

Body Materials	DI
Gate Materials	304 SS
Seat Materials	Metal | BUNA-N EPDM | FKM | PTFE
Stem Materials	304 SS
Gland Materials	CS
Packing Materials	PTFE Impregnated Synthetic Fiber

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

BRAY SERIES 953 UNIDIRECTIONAL KNIFE GATE VALVES

Size Range	NPS 2 to 24 | DN 50 to 600
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
Body Style	Single Piece | Semi Lug
Design	Manufacturer Standard
Testing	MSS SP-151
Face-to-Face	MSS SP-81
Drilling	ASME B16.5 CL150
Actuator Options	Handwheel Pneumatic Electric Bevel Gear Hydraulic Lever

Body Materials	Cast Iron
Gate Materials	304 SS
Seat Materials	Metal | BUNA-N EPDM | FKM | RPTFE
Stem Materials	304 SS
Gland Materials	Carbon Steel
Packing Materials	PTFE Impregnated Synthetic Fiber with Quad Seal

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 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. Other options on request.
Gasket	BS-N90 Shore O-ring. Other options on request.
Fasteners	Class 8.8 galvanized carbon steel. Stainless option as required.
Lining	Natural rubber | Nitrile | Urethane and Bromobutyl option
Finish	Grit blast 2.5 and 2 part Interzone | 954 epoxy paint
Testing	AS4037-1999 and EN 12266 PT 1 & 2 or API 598 as specified
Standard	ASME B16.34 | ASME B16.5 | ASME B31.3
Option	Non Slam | Bird Screen | Flush Port | Secondary Release
Applications	Slurries, Chemical, Sand, Pulp and Dewatering

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

Sizes Range	NPS 2 to 30 | DN 50 to 750
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 (Seat is replaceable)
Seal	Molded rubber (40 Shore hardness) when required (Seal is replaceable)
Gasket	BS-N90 O-Ring | Others on Request
Fasteners	Class 8.8 Galvanized Carbon Steel | Hi-Tensile and Stainless options as required
Lining	Natural rubber as standard | Nitrile and Bromobutyl option
Finish	Grit blast 2.5 and 2 part Interzone 954 epoxy paint
Testing	AS4037-1999 and EN 12266 PT 1 & 2 or API 598 as specified
Standard	ASME B16.34-2009 | ASME B16.5 | ASME B31.3-2002
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	BS-N90 O-Ring | Others on Request
Fasteners	Class 8.8 Galvanized Carbon Steel | Stainless Options As Required
Lining	Epoxy Coated | Natural Rubber | Nitrile | Bromobutyl
Finish	Abrasive clean to 2.5 and painted with Interzone 954, a 2 part epoxy suited to harsh environment.
Testing	AS4037-1999 and EN 12266 PT 1 & 2 or API 598 as specified
Standard	ASME B16.34 | ASME B16.5 | ASME B31.3
Applications	Chemical, Sewerage, Pulp, Food And Dewatering

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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 (Seat is replaceable)
Seal	Molded rubber (40 Shore hardness) when required (Seal is replaceable)
Gasket	BS-N90 O-Ring | Others on request
Fasteners	Class 8.8 galvanized Carbon Steel | Hi-Tensile and Stainless options as required
Lining	Natural rubber as standard | Nitrile and Bromobutyl option
Finish	Grit blast 2.5 and 2 part Interzone 954 epoxy paint
Testing	AS4037-1999 and EN 12266 PT 1 & 2 or API 598 as specified
Standard	ASME B16.34-2009 | ASME B16.5 | ASME B31.3-2002
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	Class 8.8 Galvanized Carbon Steel | Stainless options as required
Lining	Natural rubber as standard | Nitrile ceramic and Bromobutyl option
Finish	Grit Blast 2.5 And 2 Part Interzone 954 Epoxy Paint
Testing	AS4037 and EN 12266 PT 1 & 2 or API598 as specified
Option	Stainless Steel Construction
Applications	Cyclone Feed Pumps, Standby Pumps Circuits

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

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

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

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-N, 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

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-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-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-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-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-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-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-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.

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-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-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.

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-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 SERIES 98 PNEUMATIC

Media[1]	Dry Compressed Air | Inert Gas | Natural Gas	
Pressure Range	40 to 150 psi | 2.8 to 10.3 bar	
Temperature Range[1]	Standard	-20°F to 200°F | -29°C to 93°C
	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 98 HYDRAULIC

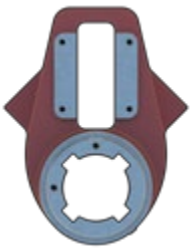
Media[1]	Hydraulic Fluid - Standard Trim ISO VG 32/46, ISO-L-HV, flash point>157°C	
Pressure Range	500 to 3000 psi | 35 to 207 bar	
Temperature Range[1]	Standard: -20°F to 212°F | -29°C to 100°C	
	Low Temperature: Down to -50°F | Down to -46°C	
	PED: -20°F to 176°F | -29°C to 80°C	
Torque Output	Double 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

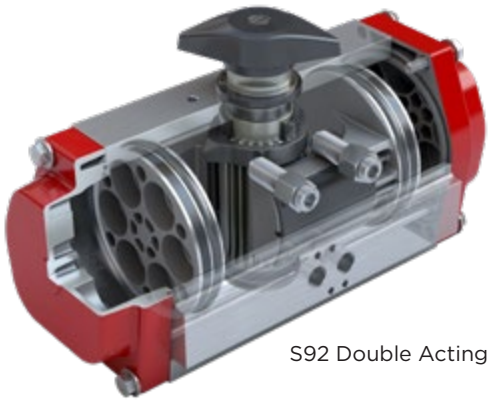
- Torque output curve is balanced.
- Torque demands are similar at seat break and end positions.

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.



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 Range[1]	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)	
Testing Standard	EN 15714-3:2009	
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 70

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 24VAC/DC
	Modulating	Servo NXT Controller 120/230 VAC/24 VAC/DC 4-20 mA, 0-10 V, 0-5 V, 2-10 V
	Communication Protocols	Analog | DeviceNet | EtherNet/IP
Voltages	120/230 VAC 50/60 Hz, 1-phase | 24 VAC/VDC	
Enclosure Ratings	NEMA 4, 4x, 7, 9 and IP65, IP67 (IP67 does not include S70-130/131 and 180/181) Class I, DIV 1 & 2, Group C, D | Class II, DIV 1 & 2, Group E, F, G	
Mounting	IS05211	
Motor	120/230 VAC: 1-phase, reversable, 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 tp 6 total)	
	Optional torque switches available	
Duty Rating	Continious 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

BRAY SERIES 98 EH

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 lb-in to 445,261 lb-in | 310 N m to 50,306 N m
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 or 0-10VDC | 12 or 24 VDC or 48 VDC | 120 - 220 VAC Network Protocols

Rugged and repeatable performance under the most challenging conditions.

BRAY SERIES 93 EH ELECTRIC FAIL-SAFE

Torque Output	Double Acting 75 lb-in to 44,130 lb-in | Double Acting 9 N m to 4,986 N m
Spring-End Torque	24 lb-in to 14,173 lb-in | 3 N m to 1,601 N m
Supply Voltage	12 or 24 VDC or 48VDC |120 - 220 VAC | 50/60 Hz Solar or wind charged power packs
Control Signal	4-20mA or 0-10VDC | 2 or 24 VDC or 48 VDC | 120 - 220 VAC Network Protocols

Compact tubeless configurations are excellent where space and weight consideration is important.

Custom Built Rotary Actuators

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
- 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

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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