



## **PRODUCT PROFILE**

| <del>2</del> 0 |   |                           |
|----------------|---|---------------------------|
| AO -           |   | High Performance B        |
|                | <b>TriLok</b><br>Triple Offset          | 3"- 60" (80mm-1500mm)     |
|                | <b>Bray/McCannalok</b><br>Double Offset | 2 1/2"- 60" (65mm-1500mm) |
|                |   |                           |
|                |   | <b>Resilient Seated B</b> |
|                | Series 20/21                            | 1"- 20" (25mm-500mm)      |
|                | Series 22/23                            | 2"- 24" (50mm-600mm)      |
|                | Series 30/31                            | 2"- 20" (50mm-500mm)      |
|                | Series 31H                              | 2"- 20" (50mm-500mm)      |
|                | Series 31U                              | 2"- 20" (50mm-500mm)      |
|                | Series 3A/3AH                           | 2"- 20" (50mm-500mm)      |
|                | Series 32/33 & 35/36                    | 22"- 120" (550mm-3000mm)  |
|                | Series 36H                              | 24"- 60" (600mm-1500mm)   |
|                | Series 35F                              | 32"- 60" (800mm-1500mm)   |
|                |   | Abrasive Service B        |

## erformance Butterfly Valves Page

| <b>riLok</b><br>riple Offset   | 3"- 60" (80mm-1500mm)     | ASME Class<br>150, 300, 600 & 900 | 4 |
|--------------------------------|---------------------------|-----------------------------------|---|
| ray/McCannalok<br>ouble Offset | 2 1/2"- 60" (65mm-1500mm) | ASME Class<br>150, 300, 600       | 5 |

|                 | Resilient Seated Bu      | utterfly Valves       | Page |
|-----------------|--------------------------|-----------------------|------|
| es 20/21        | 1"- 20" (25mm-500mm)     | to 150 psi (10.3 Bar) | 6    |
| es 22/23        | 2"- 24" (50mm-600mm)     | to 150 psi (10.3 Bar) | 6    |
| es 30/31        | 2"- 20" (50mm-500mm)     | to 175 psi (12 Bar)   | 6    |
| es 31H          | 2"- 20" (50mm-500mm)     | to 250 psi (17.2 Bar) | 7    |
| es 31U          | 2"- 20" (50mm-500mm)     | to 285 psi (20 Bar)   | 7    |
| es 3A/3AH       | 2"- 20" (50mm-500mm)     | to 250 psi (17.2 Bar) | 7    |
| s 32/33 & 35/36 | 22"- 120" (550mm-3000mm) | to 150 psi (10.3 Bar) | 8    |
| es 36H          | 24"- 60" (600mm-1500mm)  | to 232 psi (16 Bar)   | 8    |

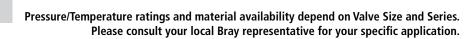
| Abrasive Service Butterfly Valves | S Page |
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|                                   |        |

to 75 psi (5.2 Bar)

8

| <b>Series 39L</b> 2"- 20" (50mm-500mm) to 230 | ) psi (16 Bar) <b>9</b> |
|---|-------------------------|
|---|-------------------------|

| Actuators & Accessories  | Page |
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| Electric & Pneumatic Actuators                                       | 10   |
| Status Monitors, Solenoids, Positioners,<br>Serial Bus Communication | 11   |
| Manual Operators   | 11   |







# **5 Bray** CONTROLS

#### INTRODUCTION

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

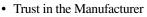
Through years of field application experience, research and development Bray has designed products that meet the stringent requirements of today's flow control industry. We have earned a reputation for excellence by creating products of superior value and quality, providing personalized customer service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

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

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

#### **COMMITMENT TO QUALITY**

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



- Confidence in the Quality Assurance and Integrity of the manufacturer
- Proven Industry Experience
- · Features and benefits of the product
- Delivery
- Customer Service
- Cost of Ownership

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

(1)



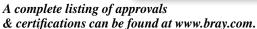




















#### **Triple Offset - Metal Seated Butterfly Valves**



#### TRIPLE OFFSET Quarter Turn valves

#### High Pressure Zero Leakage METAL TO METAL Sealing

Bray *TriLok*<sup>®</sup>Series Triple Offset Valve – the ultimate critical service quarter turn valve. Bray's *TriLok* is the only triple offset built with 21st Century innovation.

- Seat/Seal system features field replaceable body seats and disc seals.
- Splined Disc/Stem Connection facilitates self-alignment of the disc seal with the seat and eliminates the requirements of external pins, keyways and other types of fasteners.
- Hub & Bearing System provides maximum stem support while preventing media ingress.

| Size Range:                 | 3" – 60" (80mm – 1500mm)   |
|-----------------------------|--|
| Body Style                  | Wafer, Lug and Double Flanged Style                                    |
| Temperature Range:          | -425°F to +1,200°F (-254°C - +650°C)                                   |
| Pressure Rating:            | ASME Class 150, 300, 600 and 900<br>and PN10 to 140                    |
| Shut-Off Class:             | Zero Leakage   |
| <b>Body Materials:</b>      | Carbon Steel, Stainless Steel  |
| Disc Materials:             | Carbon Steel, Stainless Steel  |
| Stem Materials:             | Stainless Steel  |
| <b>Body Seat Materials:</b> | 321 Stainless Steel  |
| <b>Disc Seal Materials:</b> | Laminated 321 Stainless Steel/Graphite                                 |
| Applications:               | High Pressure, High Temperature<br>Critical Service, Cryogenic Service |

#### **Double Offset High Performance Butterfly Valves**





#### BRAY / McCANNALOK

#### **High Pressure & Temperature**

The Bray/McCannalok's innovative design offers rugged reliability and extremely easy maintenance in the field. Independent and internal tests prove Bray/McCannalok's superior service life capability, with zero-leakage shut-off. The Bray/McCannalok High Performance Valve delivers the highest quality and highest value available for meeting today's demanding requirements.

Available with proven bidirectional fire safe seats for reliable control of flammable and hazardous fluids in petroleum, petrochemical, chemical and other high-risk applications. The fire safe design combines superior performance, extended service life and compliance with the most demanding worldwide fire-test standards – before, during and after a fire!

| Size Range:        | 2 1/2" – 60" (65mm – 1500mm)   |
|--------------------|--|
| Body Style         | Wafer, Lug and Double Flanged Style  |
| Temperature Range: | -20°F to 500°F (-29°C to 260°C)  |
| Pressure Rating:   | ASME Class 150, 300 and 600  |
| Shut-Off Class:    | Zero Leakage   |
| Body Materials:    | Carbon Steel, Stainless Steel, Nickel<br>Aluminum Bronze   |
| Disc Materials:    | Stainless Steel, Nickel Aluminum Bronze  |
| Stem Materials:    | Stainless Steel, Monel K500  |
| Seat Materials:    | Standard - RTFE with Resilient Energizer,<br>PTFE with Resilient Energizer<br>Fire Safe – RTFE and Inconel with<br>Resilient Energizer |
| Applications:      | High Pressure, High Temperature,<br>Critical Service   |

## **5 Bray** CONTROLS





### **SERIES 20/21**

| Size Range:             | 1" – 20" (25mm – 500mm)                                       |                       |
|-------------------------|---|-----------------------|
| Body Style              | Wafer, Lug  |                       |
| Temperature Range:      | -20°F to 400°F (-29°C to 204°C)                               |                       |
| Pressure Ratings:       | Bidirectional Bubble-tight Shut-Off                           | to 150 psi (10.3 Bar) |
| Pressure Ratings.       | Body (CWP)  | 250 psi (17.2 Bar)    |
| <b>Body Materials:</b>  | Cast Iron, Ductile Iron, Stainless Steel                      | , Aluminum            |
| Disc/Stem<br>Materials: | Stainless Steel, EPDM Molded over SS<br>BUNA-N Molded over SS | 5,                    |
| Seat Materials:         | BUNA-N, EPDM, PTFE Lined EPDM, F                              | KM*, Polyurethane     |
| Applications:           | Sanitary Service, Mildly Corrosive, Tox                       | ic Media              |





\*FKM is the ASTM D1418 designation for Fluorinated Hydrocarbon Elastomers (also called Fluoroelastomers) Hastelloy<sup>®</sup> is a registered trademark of Haynes International, Inc. Halar<sup>®</sup> is a registered trademark of Ausimont U.S.A., Inc.

## **SERIES 22/23**

| Size Range:             | 2" – 24" (50mm – 600mm)   |                       |
|-------------------------|---|-----------------------|
| Body Style              | Wafer, Lug  |                       |
| Temperature Range:      | 0°F to 392°F (-18°C to 200°C)   |                       |
| Pressure Ratings:       | Bidirectional Bubble-tight Shut-Off                                       | to 150 psi (10.3 Bar) |
|                         | Body (CWP)  | 250 psi (17.2 Bar)    |
| <b>Body Materials:</b>  | Ductile Iron, Carbon Steel, Stainless St                                  | teel                  |
| Disc/Stem<br>Materials: | Stainless Steel, PTFE/SS, UHMWPE/SS,<br>Hastelloy <sup>®</sup> , Titanium | UHMWPE/DI,            |
| Seat Materials:         | PTFE, Conductive PTFE, UHMWPE   |                       |
| Applications:           | Highly Corrosive, Toxic Media   |                       |

## **SERIES 30/31**

| Size Range:            | 2" – 20" (50mm – 500mm)   |                          |
|------------------------|---|--------------------------|
| Body Style             | Wafer, Lug  |                          |
| Temperature Range:     | -20°F to 400°F (-29°C to 204°C)   |                          |
| Pressure Ratings:      | Bidirectional Bubble-tight Shut-Off   | to 175 psi (12 Bar)      |
|                        | Body (CWP)  | 250 psi (17.2 Bar)       |
| <b>Body Materials:</b> | Cast Iron, Ductile Iron, Carbon Steel, A  | luminum                  |
| Disc Materials:        | Nylon 11 Coated Ductile Iron, Aluminum<br>Hastelloy <sup>®</sup> , Halar <sup>®</sup> Coated Ductile Iron | Bronze, Stainless Steel, |
| Stem Materials:        | Stainless Steel, Monel K500   |                          |
| Seat Materials:        | BUNA-N, EPDM, FKM <sup>*</sup> , Polyurethane   |                          |
| Applications:          | Potable Water, Wastewater, Seawater,  | HVAC                     |

Pressure/Temperature ratings and material availability depend on Valve Size and Series. Please consult your local Bray representative for your specific application.

#### **Resilient Seated Butterfly Valves**

## **5 Bray** CONTROLS

## **SERIES 31H**

| Size Range:        | 2" – 20" (50mm – 500mm)               |                            |
|--------------------|---------------------------------------|----------------------------|
| 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)         |
| Pressure Ratings.  | Body (CWP)                            | 250 psi (17.2 Bar)         |
| Body Materials:    | Cast Iron, Ductile Iron               |                            |
|                    | ····· · · · · · · · · · · · · · · · · |                            |
| Disc Materials:    | Nylon 11 Coated Ductile Iron, Aluminu | ım Bronze, Stainless Steel |
| -                  | ·                                     | ım Bronze, Stainless Steel |
| Disc Materials:    | Nylon 11 Coated Ductile Iron, Aluminu | ım Bronze, Stainless Steel |



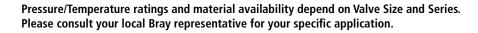
## **SERIES 31U**

| Size Range:            | 2" – 20" (50mm – 500mm)  |                  |
|------------------------|--|------------------|
| Body Style             | Lug  |                  |
| Temperature Range:     | 0°F to 212°F (-18°C to 100°C)  |                  |
| Droceuro Dotingo       | Bidirectional Bubble-tight Shut-Off  | 285 psi (20 Bar) |
| Pressure Ratings:      | Body (CWP)   | 285 psi (20 Bar) |
| <b>Body Materials:</b> | Ductile Iron, Carbon Steel, Nickel Aluminum Bronze                                   |                  |
| Disc Materials:        | Stainless Steel, Nickel Aluminum Bron  | ze               |
| Stem Materials:        | Stainless Steel, Monel K500  |                  |
| Seat Materials:        | Bonded BUNA-N  |                  |
| Applications:          | High Pressure Industrial and Marine Dead-E<br>On-Shore and Off-Shore Fire Protection | nd service,      |



## **SERIES 3A/3AH**

| Size Range:                        | 2" – 20" (50mm – 500mm)               |                            |
|------------------------------------|---------------------------------------|----------------------------|
| Body Style                         | Double Flanged                        |                            |
| Temperature Range:                 | -20°F to 400°F (-29°C to 204°C)       |                            |
| Pressure Ratings:                  | Bidirectional Bubble-tight Shut-Off   | to 250 psi (17.2 Bar)      |
| Pressure Ratings.                  | Body (CWP)                            | 250 psi (17.2 Bar)         |
| <b>Body Materials:</b>             | Cast Iron, Ductile Iron, Carbon Steel |                            |
| Disc Materials:                    | Nylon 11 Coated Ductile Iron, Alumin  | um Bronze Stainless Steel  |
|                                    |                                       | uni bionze, stanness steel |
| Stem Materials:                    | Stainless Steel, Monel K500           | un biolize, staniess steel |
| Stem Materials:<br>Seat Materials: | •                                     |                            |





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## **5 Bray** CONTROLS







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### **Resilient Seated Butterfly Valves**

## SERIES 32/33 & 35/36

| Size Range:            | S32/33 – 22" – 36" (550mm – 900mm)<br>S35/36 – 22" – 120" (550mm – 3000m   |                            |
|------------------------|--|----------------------------|
| Body Style             | Full Flanged   |                            |
| Temperature Range:     | -20°F to 250°F (-29°C to 121°C)  |                            |
| Droccuro Potinge       | Bidirectional Bubble-tight Shut-Off  | to 150 psi (10.3 Bar)      |
| Pressure Ratings:      | Body (CWP)   | 250 psi (17.2 Bar)         |
| <b>Body Materials:</b> | 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 <sup>®</sup> , Monel |                            |
| Stem Materials:        | Stainless Steel, Duplex Stainless Steel,<br>Steel, Monel   | Super Austenitic Stainless |
| Seat Materials:        | BUNA-N, EPDM, FKM <sup>*</sup>   |                            |
| Applications:          | Wastewater, Seawater   |                            |

## **SERIES 36H**

| Size Range:            | 24" –60" (600mm – 1500mm)   |                    |
|------------------------|---|--------------------|
| Body Style             | Full Flanged  |                    |
| Temperature Range:     | -20°F to 250°F (-29°C to 121°C)   |                    |
| Droccuro Potingo       | Bidirectional Bubble-tight Shut-Off   | 232 psi (16 Bar)   |
| Pressure Ratings:      | Body (CWP)  | 250 psi (17.2 Bar) |
| <b>Body Materials:</b> | Ductile Iron  |                    |
| Disc Materials:        | Nylon 11 Coated Ductile Iron, Nickel Aluminum Bronze, Duplex<br>Stainless Steel, Super Austenitic Stainless Steel |                    |
| Stem Materials:        | Stainless Steel, Duplex Stainless Steel,<br>Super Austenitic Stainless Steel                                      |                    |
| Seat Materials:        | Bonded BUNA-N, Bonded EPDM  |                    |
| Applications:          | High Pressure, HVAC, Dead-End servic  | e                  |

## **SERIES 35F**

| Size Range:            | 32" – 60" (800mm – 1500mm)               |                               |
|------------------------|--|-------------------------------|
| Body Style             | Full Flanged                             |                               |
| Temperature Range:     | -20°F to 250°F (-29°C to 121°C)          |                               |
| Droccuro Patingo       | Bidirectional Bubble-tight Shut-Off      | 75 psi (5.2 Bar)              |
| Pressure Ratings:      | Body (CWP)                               | 250 psi (17.2 Bar)            |
| <b>Body Materials:</b> | Cast Iron, Ductile Iron, Hastelloy®      |                               |
| Disc Materials:        | Duplex Stainless Steel, Super Austenitie | c Stainless Steel, Hastelloy® |
| Stem Materials:        | Stainless Steel                          |                               |
| Seat Materials:        | Bonded BUNA-N, Bonded EPDM               |                               |
| Applications:          | FGD, Mining, Seawater                    |                               |

Pressure/Temperature ratings and material availability depend on Valve Size and Series. Please consult your local Bray representative for your specific application.

#### Abrasive Service Butterfly Valves

## SERIES 39L

| Size Range:            | 2" – 20" (50mm – 500mm)   |
|------------------------|---|
| 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:       | $\geq$ Class 4  |
| <b>Body Materials:</b> | Ductile Iron, Stainless Steel   |
| Disc Materials:        | Chrome-Molly Iron (Hardened), PSZ Ceramic<br>(Partially Stabilized Zirconia)    |
| Stem Materials:        | Stainless Steel   |
| Liner Materials:       | Ceramic (Sintered Silicone Carbide)<br>Metallic Carbide Rich, Chrome Iron Alloy |
| Applications:          | Highly Abbrasive, Slurry Control  |



## RESILIENT SEATED BUTTERFLY VALVES WITH **POLYURETHANE TRIM**

50mm-300mm (2"-12")

The Series 20/21 and Series 30/31 butterfly valves are available with polyurethane seats. Polyurethane (more commonly referred to as "urethane") has successfully been used to line pipelines for a wide range of industries because of its ability to resist abrasive wear in many applications such as slurries, pneumatic conveying, hopper isolation, sediment, dry powder, dust extraction, mineral sands, mining, potash and fertilizer.

Urethane will withstand severe impact, recover its original shape after distortion and resist abrasion better than other elastomers such as EPDM and Buna N.

Pressure/Temperature ratings and material availability depend on Valve Size and Series. Please consult your local Bray representative for your specific application.





### SERIES 70 ELECTRIC

| Torque             | 300 to 18,000 lb-ins (34-2030 Nm) |
|--------------------|-----------------------------------|
| Voltage            | VAC: 24, 120, 220<br>VDC: 12, 24  |
| Standard Enclosure | NEMA 4, 4X                        |
| Explosion Proof:   | NEMA 4, 4X, 7 and 9               |

#### The Series 70 is a low profile, compact and powerful actuator with customer-friendly features.

- Manual declutchable handwheel
- Local high visibility position indicator
- Digital interface available
- Optional microprocessor based modulating control



## SERIES 73 ELECTRIC

| Torque             | 100 to 600 lb-ins (11-70 Nm) |
|--------------------|------------------------------|
| Voltage            | VAC: 120, 220<br>VDC: 12, 24 |
| Standard Enclosure | NEMA 4, 4X, IP65             |

#### The Series 73 is a low cost electric actuator for rotary valves.

- Powered by permanent split-capacitor, reversible induction motor
- All AC motors provided with an internal motor brake
- Heavy duty spur grear system
- · Heater available to prevent damage to components due to condensation
- LED position indication

### **SERIES 92/93 PNEUMATIC**

Bray pneumatic actuators are rack and pinion, opposedpiston actuators available in two versions: double acting and spring return.

- Maximum pressure rating of 140 psi (9.7 Bar) and a temperature range of -20°F (-29°C) to +200°F (+95°C)
- 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.
- Special coatings and materials available for corrosive environments
- NAMUR accessory compatible



**SS ACTUATOR** 



**TRAVEL STOP** 



**SPRING RETURN** 

#### Accessories





#### SERIES 50 - Valve Status Monitors

- 10 amps at 125 or 250 volts AC
- Internal travel switches that are prewired to a terminal block



#### SERIES 52 - Valve Status Monitors

- ProxSensor provides 2 proximity sensors in one fully sealed, compact enclosure
- AC, DC, Intrinsically Safe and BUS Network versions are offered



#### SERIES 63 - 3 & 4 way solenoids

- Waterproof (NEMA 4,4X) and explosion proof (NEMA 7,9) housings are standard
- NPT and IP65 DIN connections are offered with both single and dual coils



**SERIES 6A** Electro-Pneumatic Positioners

- Precise, microprocessor driven flow control and advanced communication
- For use with either double or single acting actuators



#### Serial Bus Communication

- Bray offers several products featuring serial bus communication
- Multiple protocols available. Consult your local Bray representative



SERIES 1 - Handle & Notch Plate



**Manual Operators** 

SERIES 4 - Gear Operator



SERIES 5 - Declutchable Gear Operator

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## Global Manufacturing, Service Around the Corner

To serve you locally, each region maintains a factory certified sales and service network for all Bray International products.



BRAY CONTROLS - CHINA Office & Manufacturing



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