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## RESILIENT SEATED BUTTERFLY VALVES



**Bray**<sup>®</sup>

BRAY.COM

THE HIGH PERFORMANCE COMPANY

The Bray Series 30/31 features a high strength one piece stem design utilizing an efficient internal disc to stem connection. This resilient seated butterfly valve provides a primary and secondary seal between the disc and seat as well as the stem and seat which ensures the total encapsulation of the line media and zero external leakage.

### PRESSURE RATINGS

#### BIDIRECTIONAL BUBBLE TIGHT SHUT OFF – Standard Disc\*

Downstream flanges and disc in closed position

Series 30/31	2"-12" (50-300mm)	175 psi (12 bar)
Standard Disc*	14"-20" (350-500mm)	150 psi (10.3 bar)

#### DEAD END SERVICE – Lug Bodies and Standard Disc\*

No downstream flanges and disc in closed position

Series 31	2"-12" (50-300mm)	75 psi (5.2 bar)
	14"-20" (350-500mm)	50 psi (3.4 bar)

**BODY:** 250 psi (17.2 bar)

\*For low pressure (50 psi) applications, Bray offers a standard reduced disc diameter to decrease seating torques and extend seat life, thus increasing the valve's performance and reducing actuator costs.

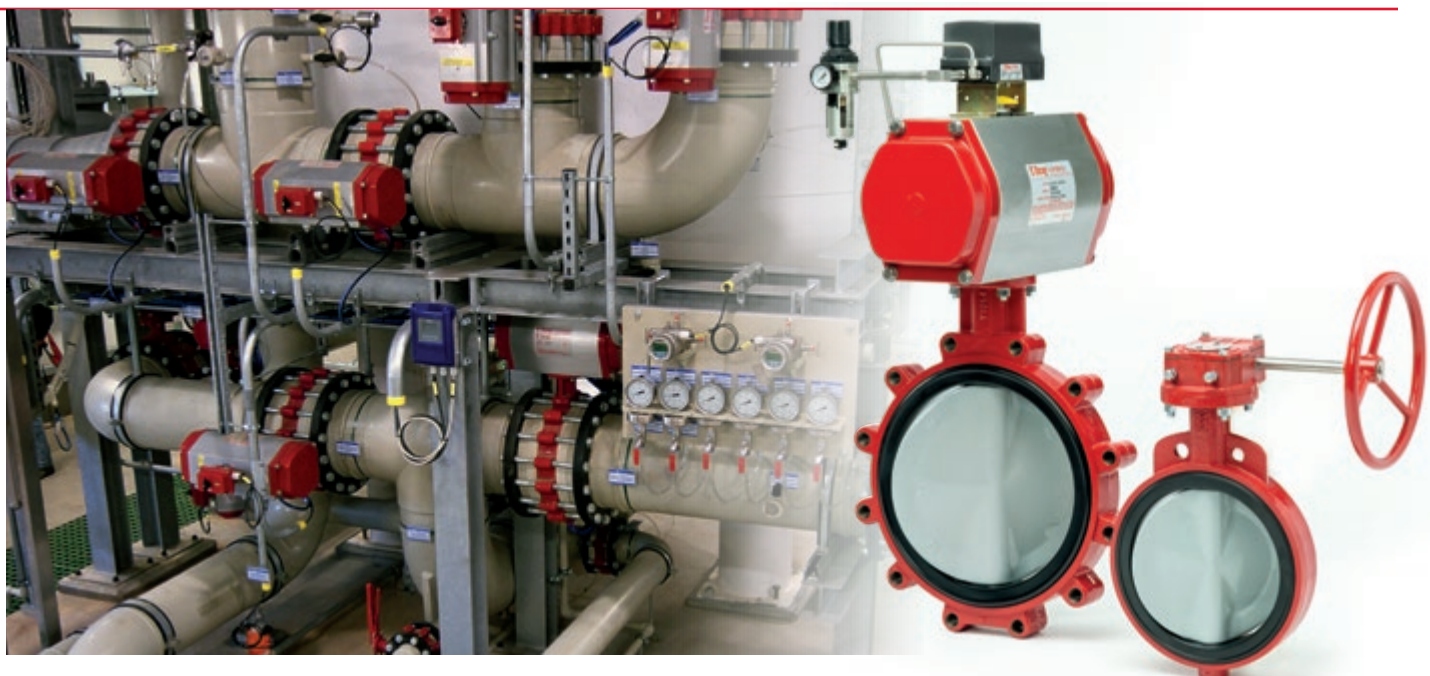
### VELOCITY LIMITS FOR ON/OFF SERVICES

**FLUIDS:** 30 ft/sec (9 m/s)

**GASES:** 175 ft/sec (54 m/s)



- 1 – STEM RETAINING ASSEMBLY:** The stem is retained in the body by means of a unique stainless steel Spirolox® retaining ring, a thrust washer and two C-rings, manufactured from brass as standard, stainless steel upon request.
- 2 – STEM BUSHING:** Non-corrosive, heavy duty acetal bushing absorbs actuator side thrust.
- 3 – STEM SEAL:** Double "U" cup seal design is self-adjusting and gives positive sealing in both directions.
- 4 – PRIMARY AND SECONDARY SEALS:** These seals prevent line media from coming in contact with the stem or body. The primary seal is an interference fit of the molded seat flat with the disc hub. The secondary seal is created because the stem diameter is greater than the diameter of the seat stem hole.
- 5 – BODY:** One piece wafer or lug style. Polyester coating for excellent corrosion resistance. Nylon 11 coating is available as an option.
- 6 – SEAT:** Bray's tongue and groove seat design provides complete isolation of flowing media from the body. The seat also features a molded o-ring which eliminates the use of flange gaskets.
- 7 – DISC:** Casting is spherically machined and hand polished to provide a bubble tight shutoff, minimum torque, and longer seat life. Bray's resilient Nylon 11 coating comes as standard.
- 8 – STEM:** Precision double "D" disc to stem connection drives the disc without the need for screws or pins. The close tolerance, double "D" connection that drives the valve disc is an exclusive feature of the Bray valve. Disassembly of the Bray stem is just a matter of pulling the stem out of the disc.



## MATERIAL SELECTION OPTIONS

BODY	DISC	STEM	SEAT
Cast Iron <sup>★</sup> Ductile Iron <sup>★</sup> Carbon Steel Aluminum	Nylon 11 Coated Ductile Iron <sup>★</sup> 316 Stainless Steel <sup>★</sup> Nickel Aluminum Bronze Coated Ductile Iron Halar <sup>®</sup> Coated Ductile Iron 304 Stainless Steel Duplex Stainless Steel Super Duplex Stainless Steel Hastelloy <sup>®</sup>	416 Stainless Steel <sup>★</sup> 304 Stainless Steel 316 Stainless Steel Monel <sup>®</sup> K500	BUNA-N Food Grade <sup>★</sup> EPDM Food Grade <sup>★</sup> FKM <sup>*</sup> White BUNA-N Food Grade Bonded EPDM Bonded BUNA-N

<sup>★</sup>Standard Option

<sup>\*</sup>FKM is the ASTM D1418 designation for fluorinated hydrocarbon elastomers (also called fluoroelastomers).

Monel<sup>®</sup> is a registered trademark of The International Nickel Company, Inc.

Halar<sup>®</sup> is a registered trademark of Solvay Solexis, Inc.

Hastelloy<sup>®</sup> is a registered trademark of Haynes International, Inc.



## SERIES 31H

2"-20" (50mm-500mm)

Series 31H Lug valves are drilled and tapped to meet ASME Class 125/150 and PN16 flanges. Series 31H valves are designed for manual operation only.

### PRESSURE RATINGS

#### BIDIRECTIONAL BUBBLE TIGHT SHUT OFF AND DEAD END SERVICE

2"-20" (50-500mm) 250 psi (17.2 bar)

BODY: 250 psi (17.2 bar)

### VELOCITY LIMITS FOR ON/OFF SERVICES

FLUIDS: 30 ft/sec (9 m/s) GASES: 175 ft/sec (54 m/s)

### STANDARD MATERIAL SELECTIONS

Body	Cast Iron Ductile Iron
Disc	Nickel Aluminum Bronze Nylon 11 Coated Ductile Iron 316 Stainless Steel
Stem	416 Stainless Steel
Seat	Bonded EPDM Bonded BUNA-N

Material availability depends on valve size and series. Other materials are available. Please consult your local Bray representative for your specific application.