

# SERIES 22/23 2" - 24" (50mm-600mm)



## PRESSURE RATINGS

**BIDIRECTIONAL BUBBLE-TIGHT SHUT-OFF** Downstream Flanges/Disc in Closed Position

All Valves	2-24" (50-600mm)	150 psi (10.3 Bar)
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**DEAD-END SERVICE – Lug Bodies** No Downstream Flanges/Disc in Closed Position

All Valves	2-12" (50-300mm)	75 psi (5.2 Bar)
	14-24" (350-600mm)	50 psi (3.4 Bar)

**BODY:** 250 psi (17.2 Bar) CWP

## VELOCITY LIMITS For On/Off Services:

**Fluids** 30 ft/sec (9 m/s)

**Gases** 175 ft/sec (54 m/s)

## TEMPERATURE RATINGS

**PTFE:** 0°F(-18°C) min. – 392°F(200°C) max

**UMMWPE:** 0°F(-18°C) min. – 185°F(85°C) max

Extensive field research and engineering have developed this state-of-the-art design which provides excellent shut off protection (bubble-tight shut off) and high  $C_v$  values. The Series 22/23 is crafted in a variety of materials such as PTFE, Stainless Steel, UHMWPE and special alloys to fit a wide range of customer requirements. As with all Bray's products, precision manufacturing and exceptional quality remain the keys to a proven record of long service life.

**NECK:** An extended neck design in all valve sizes allows for 2" of piping insulation and provides easy access for mounting actuators.

**FLANGE LOCATING HOLES:** Locating holes in the wafer version provide quick and precise alignment during valve installation eliminating disc interference with adjacent pipe I.D.

**BLOWOUT PROOF STEM:** A shoulder is machined into the upper stem. The stem and the disc are pressed together during assembly to become one part, thus the design is a positive stem-to-disc drive connection.

**DISC:** The PTFE disc has 1/8" (3 mm) minimum thickness of pure, virgin PTFE encapsulated over Stainless Steel.

**TOP STEM BUSHING:** A top stem bushing, retained by a stainless steel ring, is provided to absorb actuator side thrusts and is acetal as standard or PTFE as an option.

**UPPER STEM SEAL:** The upper stem seal serves to keep any environmental contaminants from entering the stem bore.

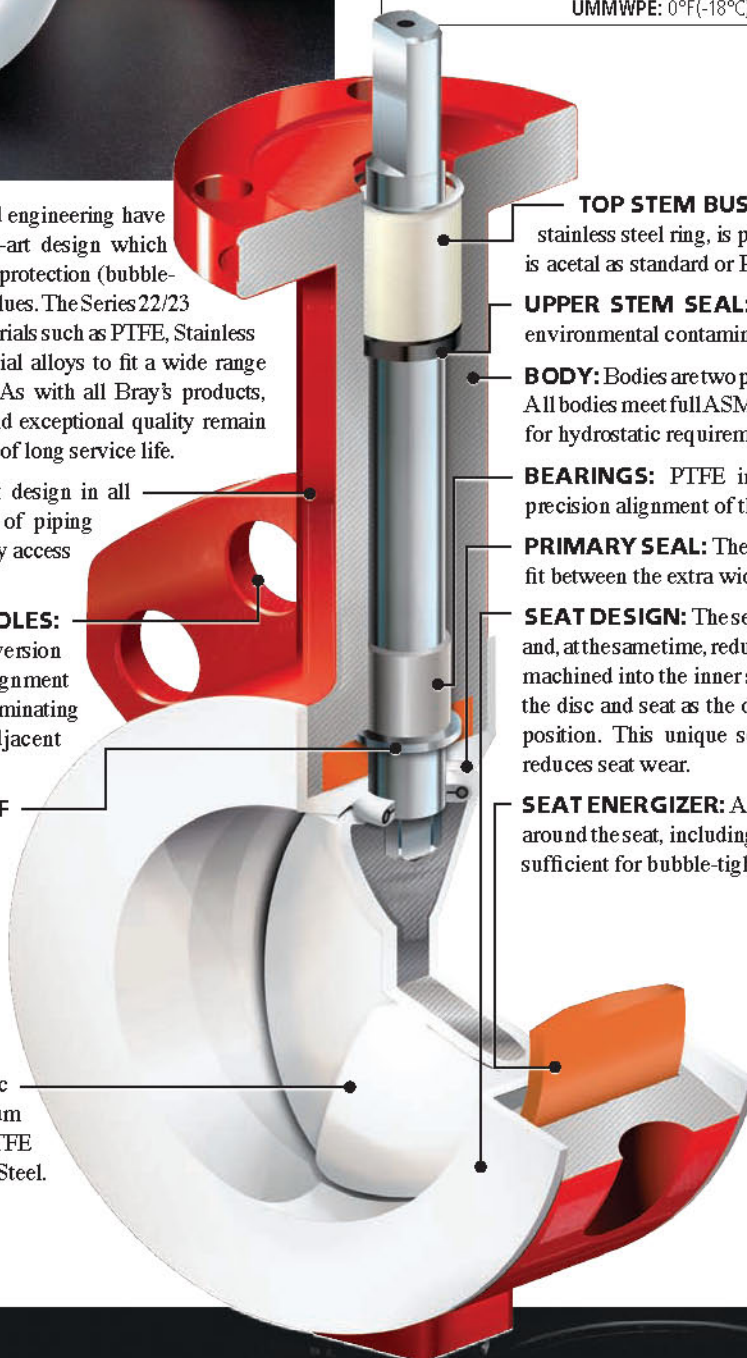
**BODY:** Bodies are two piece wafer or lug style and are epoxy coated. All bodies meet full ASME Class 150 and DIN 3840 pressure ratings for hydrostatic requirements.

**BEARINGS:** PTFE impregnated steel bearings provided for precision alignment of the upper and lower stem.

**PRIMARY SEAL:** The primary seal is achieved by an interference fit between the extra wide disc hubs and contoured seat.

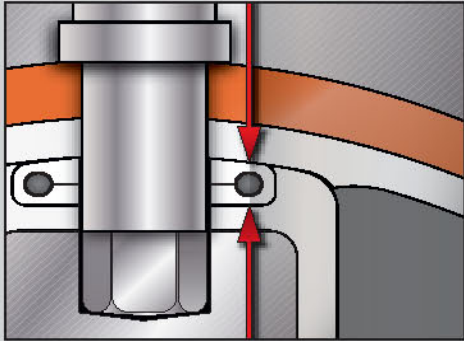
**SEAT DESIGN:** The seat design reduces seating/unseating torque and, at the same time, reduces wear on the contacting parts. Curvatures machined into the inner seat area minimize contact forces between the disc and seat as the disc approaches, or opens from, the closed position. This unique seat geometry permits lower torques and reduces seat wear.

**SEAT ENERGIZER:** A resilient seat energizer extends completely around the seat, including the disc hub. This provides uniform force sufficient for bubble-tight shut off.

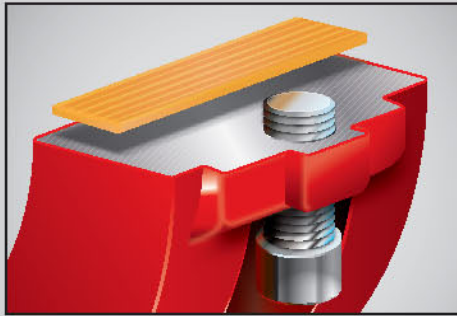


All Bray valves are pressure tested to 110% of rated pressure to assure bubble tight shutoff.

**SEAL CAPSULE:** (Secondary Seal) This seal capsule fully isolates the valve body and stem from the line media. The Seal Capsule is made of a virgin PTFE enclosing the internal energizer. The capsule fits into grooves machined in the upper and lower disc hubs. When compressed between the disc and seat during assembly, the capsule becomes energized, exerting both upward and downward pressure on disc and seat surfaces.

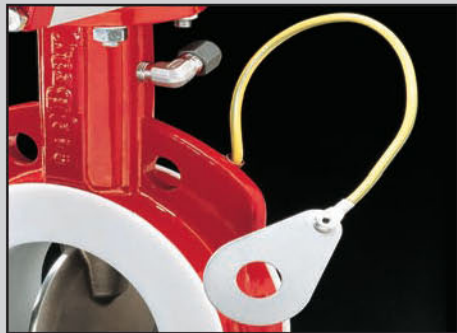


**BODY SEALS:** (Bidirectional): Reinforced PTFE gaskets are placed between the body halves. These seals eliminate contamination from external environmental conditions and potential leak path from the line media.



## ACCESSORIES

- **TAPPED PORT** can be provided in the body neck below the stem seal to connect leak detectors or instrumentation.
- **GROUNDING CABLE** is offered to protect against static charge build-up. The cable mounts to the valve body.



## STANDARD MATERIALS SELECTION

NAME	MATERIAL
Body	Ductile Iron
	Stainless Steel
	Carbon Steel
Disc	Stainless Steel
	PTFE molded over Stainless Steel
	UHMWPE molded over Stainless Steel
	Hastelloy®
	Titanium
Upper Stem	17-4 PH Stainless Steel
Lower Stem	17-4 PH Stainless Steel
Seat	PTFE
	Conductive PTFE
	UHMWPE
Bushing	Acetal
	PTFE
Upper Stem Seal	BUNA-N FKM*
Seal Capsule (2)	PTFE/FKM
Bearing (2)	PTFE / Steel
Seat Energizer (2)	Silicone FKM*
Body Bolt (2)	Stainless Steel
Retainer	Stainless Steel
Body Seal (2)	Reinforced PTFE
ID Tag	Stainless Steel

Material availability depends on valve size & series. Other materials are available. 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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