SERIES 20/21 1"-20" (25mm-500mm)

PRESSURE RATINGS			
BIDIRECTIONAL BUBBLE-TIGHT SHUT-OFF Downstream Flanges/Disc in Closed Position			
Resilient Seated	Metal Disc/Stem	1-20" (25-500mm)	150 psi (10.3 Bar)
	Resilient Molded Disc/Stem	2-20" (50-500mm)	100 psi (7 Bar)
PTFE Seated	Metal Disc/Stem	2-20" (50-500mm)	150 psi (10.3 Bar)
	PTFE Molded Disc/Stem	2-20" (50-500mm)	100 psi (7 Bar)
DEAD-END SERVICE – Lug Bodies No Downstream Flanges/Disc in Closed Position			
All Valves		1-12" (25-300mm)	75 psi (5.2 Bar)
		14-20" (350-500mm)	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)

The Series 20/21 valve not only surpasses the high standards required in sanitary valve applications, and inherent flow characteristics and capabilities. Bray's Series 20 valve is a wafer version with flange locating holes, and the Series 21 is the companion lug version for dead-end service and other flange requirements.

- Sanitary & Chemical applications
- One-piece disc/stem
- High C_V, low pressure drop

STEM BUSHING: Non-corrosive, heavy duty acetal bushing absorbs actuator side thrust.

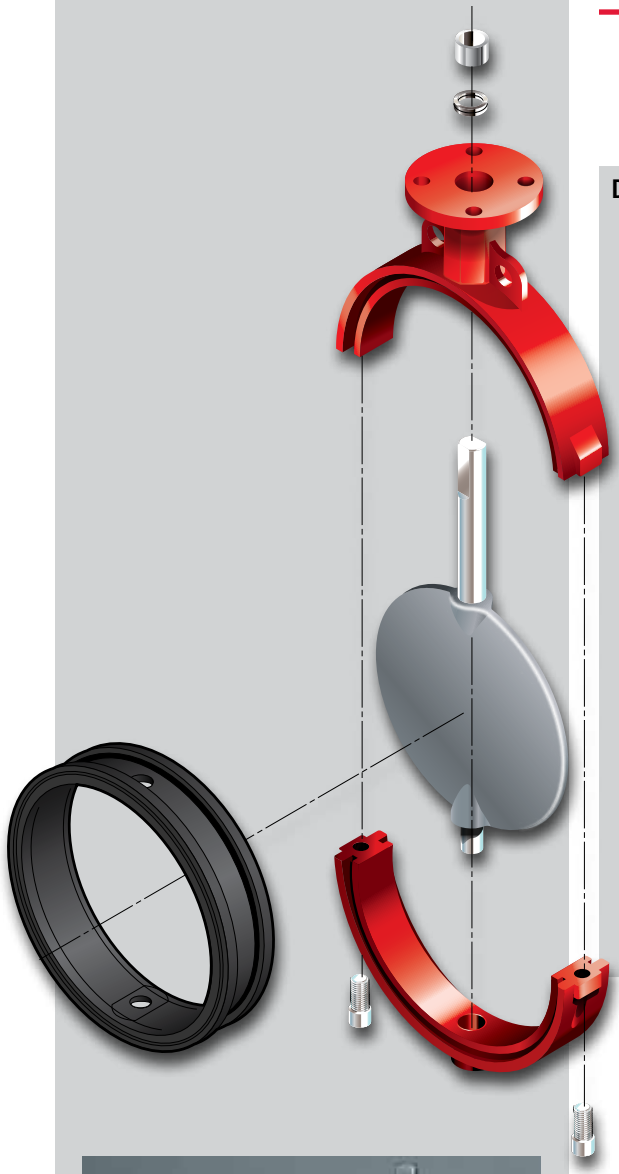
STEM SEAL: Double "U" cup seal design is self-adjusting and gives positive sealing in both directions and prevents external substances from entering the stem bore.

DISC / STEM: One-piece design. The disc edge is spherically machined and hand polished to produce a bubble-tight shut off, minimum torque, and longer seat life. The disc/stem design inherently provides complete protection from particle entrapment and bacterial decay, protection that is required for sanitary performance. For superior erosion and abrasion resistance, the one-piece disc/stem is fully encased in either EPDM or BUNA-N. The thin disc profile provides a much higher C_V (up to 50% greater than most through-stem designs) and greater pressure recovery, thus resulting in lower pressure drops and a more energy-efficient valve.

PRIMARY & SECONDARY SEALS: These seals prevent line media from coming in contact with the stem or body. *Primary* Seal is achieved by an interference fit of the molded seat flat with the disc hub. *Secondary* Seal is created because the stem diameter is greater than the diameter of the seat stem hole.

SEAT: Bray's tonque and groove seat design lowers torque and provides complete isolation of flowing media from the body. The seat also features a molded O-ring which eliminates the use of flange gaskets.

BODY: Two-piece wafer or lug style allows for ease of assembly and maintenance. Nylon 11 coating for excellent corrosion resistance is standard for 1"-8" valves and available on larger sizes upon request. Polyester coating is standard for 10"-20" bodies.



STANDARD MATERIALS SELECTION

NAME	MATERIAL
Body	Cast Iron
	Ductile Iron
	316 Stainless Steel
	Aluminum
Disc/Stem	**METAL:**
	1″-12″ One Piece Investment Cast 316 Stainless Steel Hastelloy® C-22
	14″-20″ Fabricated 316 Stainless Steel disc with 316 Stainless Steel stem Hastelloy® disc with Hastelloy® stem
	RUBBER MOLDED:
	2″-12″ One Piece Investment Cast EPDM molded over one piece Stainless Steel disc/stem BUNA-N molded over one piece Stainless Steel disc/stem
	14″-20″ Fabricated EPDM molded over Stainless Steel disc with Stainless Steel stem BUNA-N molded over Stainless Steel disc with Stainless Steel stem
	PTFE MOLDED:
	2″-12″ One Piece Investment Cast PTFE molded over one piece Stainless Steel disc/stem
	HALAR® COATED:
	2″-12″ Investment Cast Halar® coated over one piece Stainless Steel disc/stem
	14″-20″ Fabricated Halar® coated over Stainless Steel disc with Stainless Steel stem
Seat	BUNA-N – Food Grade
	EPDM – Food Grade
	FKM*
	White BUNA-N – Food Grade
	PTFE-Lined EPDM

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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