

# SERIES 31U 2"-20" (50mm-500mm)



## PRESSURE RATINGS

BIDIRECTIONAL BUBBLE-TIGHT SHUT-OFF & DEAD-END SERVICE

2-20" (50-500mm)

285 psi (20 Bar)

BODY: 285 psi (20 Bar) CWP

## VELOCITY LIMITS For On/Off Services:

Fluids 30 ft/sec (9 m/s)

Gases 175 ft/sec (54 m/s)

Bray Controls offers our high quality, high pressure resilient-seated butterfly valves to meet the requirements of today's industrial/marine markets. This valve is specifically designed for onshore and offshore fire protection where the applicable certification is D.O.T. 54 (UK Department of Trade). The series 31U is designed to withstand high line velocities and pressure drops through the valve.

**NECK:** Extended neck length allows for piping insulation and is easily accessible for mounting operators.

**BODY:** One-piece lugged style flange configuration, with a choice of Polyester Coated Ductile Iron/Carbon Steel or uncoated Nickel Aluminium Bronze. All bodies can be drilled to be compatible with ASME 125/150, PN10/16 or other international flange standards.

**STEM:** High Strength upper and lower stem incorporate a close tolerance double 'D' disk drive connection. This eliminates stem retention components being exposed to the line media and allows for easy disassembly for maintenance purposes, unlike disc screws and taper pins.

**DISC:** Casting is spherically machined and hand polished to provide bubble-tight shut-off with minimum torque and an extended seat life.

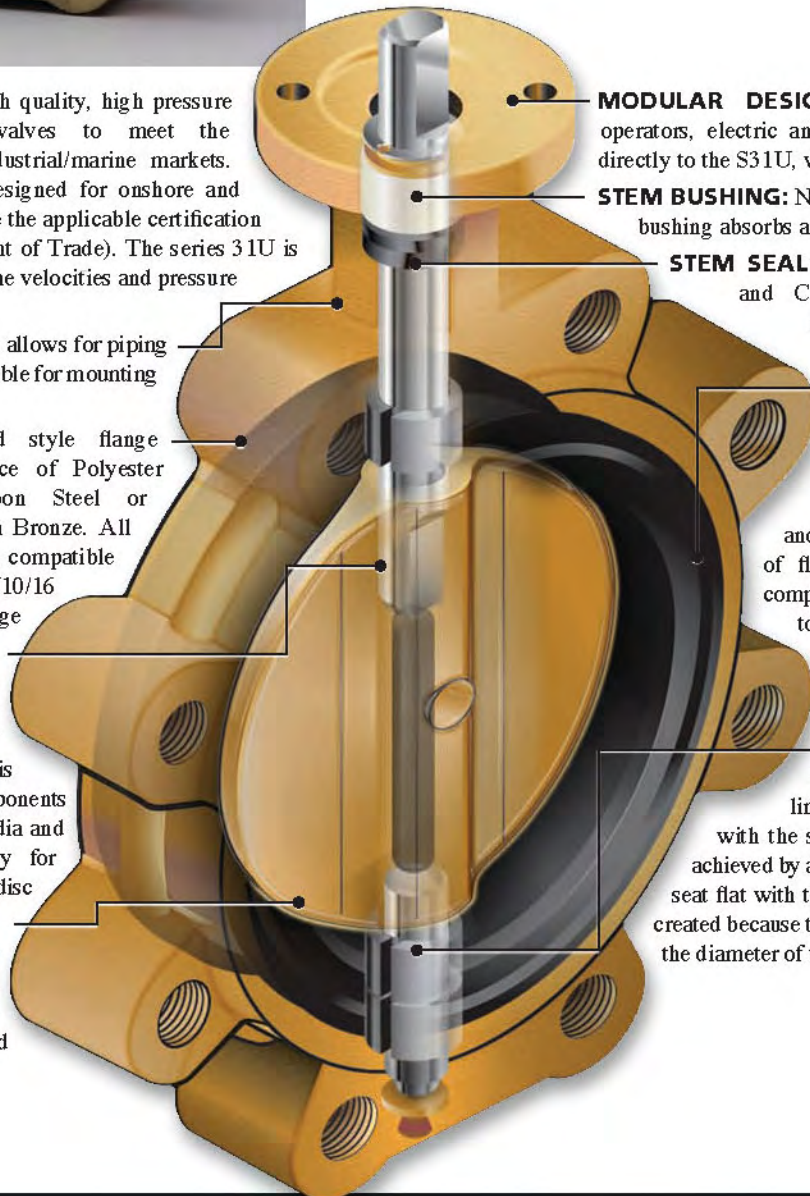
**MODULAR DESIGN:** All Bray manual gear operators, electric and pneumatic actuators mount directly to the S31U, with no brackets required.

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

**STEM SEAL:** Patented stem retaining ring and C-rings prevent unintentional removal of the stem during field service.

**SEAT DESIGN:** Bray's bonded tongue and groove resilient seat design offers lower torque than many valves on the market today and provides complete isolation of flowing media from all valve components (excluding the disc) by a totally encasing design. The seat features a molded tangential O-ring eliminating any need for flange gaskets.

**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.



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

### STANDARD MATERIALS SELECTION

NAME	MATERIAL
Body	Carbon Steel
	Nickel Aluminum Bronze
	Ductile Iron
Disc	316 Stainless Steel
	Monel K500
	Nickel Aluminum Bronze
Stem	17-4PH Stainless Steel
	Monel K500
	Stainless Steel
Seat	Bonded BUNA-N

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

