

Resilient seated Butterfly Valves

Valves shall be of the resilient seated type, ANSI Class 125 (150# bolt hole pattern). Body shall be cast iron, fully lugged style rated for 175 psi close off through 12 inch and 150 psi through 20 inch. A 2inch extension neck will be provided to accommodate insulation.

Seat shall be field replaceable peroxide cured EPDM rubber rated from -40 to 250 degree F.

Disc materials shall be aluminum-bronze, stainless steel or Nylon-11 coated ductile iron. Shafts shall be stainless steel.

Valves shall be Bray Series 31 or approved equal.

High Performance Butterfly Valves

Valves shall be high performance butterfly valves, ANSI Class 150 (rated to 285 psi with 150# bolt hole pattern) or class 300 (rated to 740 psi with 250# bolt hole pattern) as required for shut-off capability and to match pipe flanges. Valves shall provide absolute shut-off (zero leakage) to full ANSI Class ratings with pressure in either direction.

Body shall be full lug style. Extended neck shall allow for piping insulation and access to packing adjustment and operator mounting. Valve body and seat retainer ring shall be carbon steel.

Disc shall be stainless steel ASTM A351 GR CF8M. Disc shall be double offset design, providing cam-seating motion. Seat retainer ring shall be bolted to valve body and not rely on flanging force. Retainer ring fasteners shall be isolated from the flowing media

Seat material shall be RPTFE. Shaft shall be one-piece construction 17-4PH stainless steel. Bearings shall be stainless steel. Packing shall be PTFE with an accessible gland allowing adjustment.

Valves shall be Bray Series 41 or 43 or approved equal.

Electric Operator

Electric motor operators shall be 120 vac rated for continuous duty and protected by an integral thermal overload and operate on a 30 second timing cycle. Each actuator shall be equipped with minimum of two form "C" limit switches for indication and mechanical travel stops. Operators will accept a 3 point signal or in modulating applications come equipped with a servo. Servo inputs and feedback outputs shall be field selectable to accept 4-20 ma, 0-20 ma, 0-5 vdc or 0-10 vdc ranges. Actuators used outdoors shall be equipped with a thermostatically controlled 120 vac heating element.

Operator enclosure shall be NEMA 4 rated for outdoor use. Cover removal shall require less than 4 inches of head-room. Operators shall be equipped with a minimum of two conduit entries, captive cover bolts, a prominent color-coded beacon style position indicator, and a de-clutching manual hand wheel override which when operates a power cut off switch on engagement.

All valves and actuators shall be factory assembled and tested as a unit.

Operators shall be Bray Series 70 or approved equivalent.

Pneumatic Operators

Pneumatic operators shall be of the piston driven rack and pinion type designed to operate at 80 psi supply air. All operators shall be equipped with integral end stops and shaft position indicators. Fail safe operators shall contain return springs.

Two position valves shall be equipped with body mounted NEMA 4, 120 vac solenoids. Modulating valves shall be equipped with pilot positioners.

All two position actuators on valves larger than 12 inches shall be equipped with proper speed controls to avoid water hammer.

All pneumatic actuators shall be fitted with a manual de-clutching override and NEMA 4 end switches.

All valves and actuators shall be factory assembled and tested as a unit.

Operators shall be Bray Series 90/92 or approved equivalent.