SEAT ON BODY BUTTERFLY VALVE

AWWA C-504
SIZE 3"-36"

SUGGESTED SPECIFICATIONS

GENERAL

Butterfly valves shall be designed, manufactured, and tested in accordance with the latest edition of AWWA Standard C504 Class 150B and 250B. Butterfly valves shall be MPI Series 4700/4750 as manufactured by McWane Plant & Industrial or pre-approved equal.

REFERENCE STANDARDS & CERTIFICATIONS

AWWA Standard C504 "Rubber Seated Butterfly Valves"

ASTM A536 Standard Specification for Ductile Iron Castings

ANSI B16.1, Class 125 or Class 250 "Pipe Flanges and Flanged Fittings"

AWWA C111 "Rubber-Gasketed Joints for Ductile-Iron Pressure Pipe and Fittings"

Valve sizes 4" and larger shall be certified to NSF/ANSI 61 Drinking Water System Components – Health Effects, and certified to be lead free in accordance with NSF/ANSI 372.

VALVE BODY

The valve body shall be ASTM A536 Grade 65-45-12 ductile iron. Flanged end valves shall fully conform with ANSI B16.1 for Class 125 or Class 250 iron flanges. Mechanical joint end valves shall meet the requirements of ANSI/AWWA C111.

VALVE DISC

For valve sizes 4" and larger, valve disc shall be ASTM A536 Grade 65-45-12 ductile iron with uninterrupted 360-degree 316 stainless steel seating edge. For valve sizes smaller than 4", valve disc shall be 316 stainless steel. The disc shall be securely attached to the valve shaft using stainless steel taper pins. Discs with bronze edges are not acceptable where valves will be operated more than once per month, per AWWA C504.

VALVE SHAFT

Valve shafts shall be ASTM A276 type 316 stainless steel for CL 150B or ASTM A564 type 630 stainless steel for CL 250B valves. Each valve shaft shall be of a one-piece design for valves 24" and smaller and a two-piece design for valves 30" and larger. Valve shafts shall have a minimum diameter extending through the valve bearings and into the valve disc as specified in AWWA C504. All valve shafts must meet or exceed the minimum connection torque requirement set forth in AWWA C504.

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SEAT

3" through 24" valve seats shall be molded into and vulcanized to the valve body. Seat inserts or boot style seats are not acceptable. 30" and larger valve seats shall be mechanically retained and field adjustable and replaceable without the need for special equipment, such as pressure regulators or syringes to inject epoxy between the valve body and seat. Epoxy injection is not acceptable as mechanical retention.

SHAFT BEARINGS

Valve shaft bearings shall be PTFE lined with a non-metallic fiberglass composite backing.

SHAFT SEALS

Valve shaft seals shall be of the V-type ring packing utilizing the same elastomer as specified for the valve seats and the intended service. All valve shaft seals must be field replaceable without removal of the valve from the pipeline. V-type packing shall be field adjustable in above ground installations without removing the actuator or removing the valve from service.

ACTUATORS

Manual actuators for valve sizes 24" and smaller shall be of the traveling nut type, sealed and lubricated for underground or in-plant service. Actuator shall be capable of withstanding input torques of up to 450 ft-lbs. at full-open or full-closed position without damage to the valve actuator. Actuators for valves 14" and larger must be provided with adjustable external stainless steel stop limiting devices without removing the actuator from the valve.

Manual actuators for valve sizes larger than 24" shall be of the worm gear type with adjustable external stop limiting devices

Actuators shall be designed to produce the required operating torque with a maximum rim pull of 80lb. on handwheel or chainwheel and a maximum input of 150 ft lb on operating nuts.

Actuators shall be sized to customer specified operating conditions. If actual operating conditions are not provided within customer specification, per ANSI/AWWA C504, the valve actuator shall be sized to operate the valve at the rated working conditions of the valve. Each valve and valve actuator shall be assembled, adjusted, and tested as a unit per the latest revision of AWWA C504, by the valve manufacturer.

COATINGS

The valve interior and exterior surfaces shall be coated with an NSF/ANSI 61 certified epoxy coating in accordance with AWWA C504.

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