Specification: KFlo 500 Series Butterfly Valves, 3”-20”, AWWA C504, Cl 150B

GENERAL

All butterfly valves shall be of the tight-closing, rubber-seated type, conforming to the design standards of ANSI/AWWA C504's latest revision, except where noted herein. Valves shall be bubble-tight at the rated pressure in either direction, and shall be suitable for throttling service and/or operation after long periods of inactivity. Maximum operating non-shock shut-off pressure and maximum operating non-shock line pressure is 150psi. Each valve shall be performance and leak tested as specified in AWWA C504 revised as follows: In addition to the testing requirements of AWWA C504, each butterfly valve will be thoroughly cleaned and opened at least three (3) times prior to testing. The manufacturer shall certify that the butterfly valves are capable of operating in continuous duty service under the specified pressures and flow conditions.

BODIES

Butterfly valves shall be Class 150B unless otherwise indicated and of the flanged short body design. The valve bodies shall be constructed of Cast Iron (ASTM A-126 Cl B), or Ductile Iron (ASTM A536 Gr 65-45-12) in accordance with ANSI B16.1 for flanged drilling, or ANSI/AWWA C111/A21.11 for mechanical joints. Flanges shall conform to AWWA Class D standards.

DISC

Discs for valve sizes 3"-20" shall be of the concentric design. Valve discs shall be constructed of 316 stainless steel for sizes 3"-8" and epoxy coated ductile iron ASTM A536 for sizes 10"-20." Valve disc shall have a 316 stainless steel seating edge, and shall seat at 90 degrees to the access of the pipe. The valve disc shall require no torque to hold it in the closed position.

SEATS

For valve sizes 3"-20", the resilient seat shall be Buna-N or EPDM rubber and be simultaneously bonded and vulcanized to the body of the valve. All interior surfaces in contact with water, excluding stainless steel and disc, shall be completely rubber lined. Seats for shall be designed so that they will require no internal adjustment or maintenance to seat against a pressure differential of 150 psi on either side of the valve. Field replaceable or adjustable seats in sizes 3"-20" shall not be considered. Valves with seat designs that are located on the disc will not be acceptable.

BEARINGS

All bearings shall be of the self-lubricating, corrosion-resistant sleeve type. Bearings shall be designed for horizontal and/or vertical shaft loading. The valve assembly shall be furnished with a factory set two-way thrust bearing designed to center the valve disc in the valve seat at all times.

SHAFTS

Valves 3"-20" shall have a one piece through shaft constructed of stainless steel ASTM A-276 grade 304, corresponding to the requirements of AWWA C504's latest revision. The shaft shall be fastened to the disc by means of a torque plug providing a positive leak proof connection of the shaft to the disc. The use of taper pins for the shaft/disc connection allowing for potential leak paths across the disc will not be considered.

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SHAFT PACKING

Shaft packing shall be of the V-type, self-adjusting type and suitable for pressure and vacuum service. The packing shall be self-compensating type. Stuffing boxes for pull down packing shall not be considered.

COATINGS

The interior of the valves in sizes 3”-20” shall be completely rubber lined. The valve disc shall either be entirely 316 Stainless Steel or be ductile iron with epoxy coating from an AWWA/NSF coating system. The lining material shall be in compliance with ANSI/NSF Standard 61 for contact with potable water. The disc coating shall be in compliance with ANSI/NSF Standard 61 for contact with potable water. The disc coating material shall be “Pota-Pox” as manufactured by Tnemec, or equal, and shall be applied in a minimum of two coats, at 4-5 mils per coat; the total dry thickness shall be 8-10 mils. The exterior surfaces shall be cleaned and sandblasted. Coating shall be applied in accordance with Manufacturer’s instructions. Surface face cleanliness shall be inspected and any contaminants on the surface shall be removed prior to the coating operations. The coating material shall be “Pota-Pox” as manufactured by Tnemec, or equal, and shall be applied in a minimum of two coats, at 4-5 mils per coat; the total dry thickness shall be 8-10 mils.

VALVE IDENTIFICATION

All valves shall have the name or symbol of the Manufacturer, the nominal size, date of manufacture, and the working pressure for which they are designed, cast, stamped, or permanently marked on the body.

SITE COMMISSIONING

The Valve Vendor or Manufacturer shall provide the services of a factory trained and authorized Manufacturer’s Representative for a sufficient period of time as required to insure proper adjustment, installation, and operation of the valve. Pre-installation shall be required prior to the delivery of the valves to the selected installers.

EXPERIENCE AND REQUIREMENTS

The Manufacturer shall have had a successful experience in manufacturing tight closing Buna N or other acceptable synthetic rubber-seated butterfly valves for this type service in the size indicated. The Manufacturer shall have at least 10 years experience in the manufacture of valves. All butterfly valves of the same type shall be the product of one manufacturer. All materials used shall be new, of high grade, and with properties best suited to the working environment.

ACCEPTABLE MANUFACTURERS

The valve shall be Crispin/K-Flo Series 500 for 3”-20” sizes, as manufactured by Crispin-Multiplex Manufacturing Co., Berwick, PA.

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