

# RUBBER SEATED BALL VALVE

## Val-Matic® Specification

### 1 Scope

1.1 This specification covers the design, manufacture, and testing of 4"-54" AWWA Class 150 and 300 Rubber Seated Ball Valves.

### 2. Standards and Approvals

2.1 The valves shall be designed, manufactured and tested in accordance with American Water Works Association Standard ANSI/AWWA C507.

2.2 The valves shall be certified to be Lead-Free in accordance with NSF/ANSI 372.

2.3 Manufacturer shall have a quality management system that is certified to ISO 9001 by an accredited, certifying body.

### 3 Design

3.1 The valve shall be constructed with a two-piece body rated for 150 or 300 psi and with end flanges in full conformance with ANSI B16.1 Class 125 or Class 250. The main body section and end piece shall contain integrally cast support feet and lifting lugs.

3.2 The valve port shall be a 100% clear bore equal to the nominal valve size with no seat hardware in the flow stream when fully open. The ball shall be self-flushing when in intermediate positions for wastewater service.

3.3 Double (or single) resilient seats shall provide drop-tight service and shall be located on the ball and mechanically retained with a stainless steel retaining ring and stainless steel nylok cap screws, which shall pass through both the resilient seat and the retaining ring. The retaining ring shall be continuous or investment cast with overlapping sections, serrated grooves and shoulders. The resilient seat shall be field adjustable and replaceable without removing the valve from the pipeline and mate to a continuous 316 stainless steel body seat ring.

3.4 Valve shafts shall be inserted into blind hubs in the ball and locked to the ball with taper pins retained with stainless steel jam bolts. The shaft shall be sealed with resilient grit seals in the body bores.

3.5 Teflon-lined, fiberglass-backed sleeve bearings shall be located in the body hubs.

3.6 An adjustable thrust bearing shall be provided to center the ball in the body.

3.7 Shaft seals shall be of the V-type and shall be replaceable without removal of the valve from the line or the shaft from the valve.

### 4 Actuation

4.1 Manual actuators shall be of the traveling nut design with characterized closure per AWWA C507 and equipped with externally adjustable closed position stops capable of withstanding 450 ft-lbs. Actuators shall be lubricated with EP-2 grease and fully enclosed in an iron housing sealed against the entry of water.

4.2 Cylinder actuators shall be traveling nut design with characterized closure sized to position the valve with an air, water or oil supply pressure of 80-150 psi and built in accordance with AWWA C541. The rotating mechanism will consist of a lever and traveling nut directly connected to the cylinder rod. The cylinder rod, heads and barrel shall be constructed of stainless steel or non-metallic material for water service. Rod and piston seals shall be of the self-adjustable, wear-compensating type. The piston shall be one-piece with a wear strip.

4.3 Motor actuators shall be furnished in accordance with AWWA C542 for Power Actuators and factory tested on the production ball valve. The motor unit shall be mounted to a self-locking traveling nut actuator with characterized closure and externally adjustable closed stop. The motor actuator assembly shall be designed for open/close service with a minimum operating time of 60 sec. The motor unit shall be furnished with a position indicator, independently adjustable, 15-amp limit switches, and adjustable torque sensors to protect the valve indicator. A handwheel with a declutch lever shall be provided so that the handwheel does not rotate during electrical operation. Motors shall be sized with a 1.5 safety factor and a power supply of 230/460V, three phase, 60 Hz AC. Electrical operation shall include Local-Off-Remote selector switch, Local Open/Close push buttons and position indication lamps.

### 5 Manufacture

5.1 Valve interiors and exteriors shall be coated with an NSF/ANSI 61 certified fusion bonded epoxy in accordance with AWWA C550.

5.2 Rubber Seated Ball Valves shall be Val-Matic® Series #4000 as manufactured by Val-Matic® Valve & Mfg.

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**VAL-MATIC®**

VALVE AND MANUFACTURING CORP.

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