

NON-METALLIC CYLINDER ACTUATOR

Val-Matic Specification

1 Scope

1.1 This specification covers the design, manufacture, and testing of quarter-turn non-metallic cylinder actuators for use with AWWA butterfly and AWWA ball valves.

2. Standards, Approvals, and Verification

2.1 The actuators shall be designed, manufactured, and tested in accordance with the applicable requirements of AWWA C541.

2.2 The manufacturer shall have a quality management system that is certified to ISO 9001 by an accredited, certifying body.

3 Design

3.1 Cylinder actuators shall be designed to provide smooth quarter-turn operation of butterfly and ball valves with 40-150 psig air, oil and water supply media.

3.2 Actuators with torque ratings up to 6250 ft-lbs shall be of the slotted lever design with externally adjustable threaded stops. Actuators with torque ratings greater than 6250 ft-lbs shall be of the link and lever design.

3.3 Cylinders shall be flange-mounted, double-acting, tie-rod construction.

4 Materials

4.1 The actuator housing shall be fully sealed and constructed of gray or ductile iron. The actuator mechanism shall include a ductile iron lever, bronze crosshead, and teflon-lined, fiberglass-backed sleeve bearings.

4.2 The cylinder barrel shall be glass fiber reinforced epoxy resin. The head and cap shall be Type 304 stainless steel and sealed with o-rings. The cylinder tie rods and mounting plate shall be zinc plated.

4.3 The piston shall be Type 304 stainless steel and equipped with a PTFE wear strip and Nitrile U-cup seals.

4.4 The rod shall be hard chrome plated Type 17-4 stainless steel and threaded into the piston and sealed with a Nitrile o-ring.

4.5 The rod gland shall be acetal copolymer and equipped with internal and external rod wipers, a Nitrile u-cup seat, and external o-ring seals mating with the stainless steel head.

5 Options

5.1 When specified, a Limit Switch and Position Indicator Assembly shall be mounted to the actuator cover and coupled to the valve stem with a dowel pin and flexible coupling. Four (4) SPDT 10-amp micro switches limit shall be pre-wired to numbered terminals and provided in an aluminum NEMA 4X housing with a 3/4" NPT conduit connection.

5.2 When specified, the cylinder shall be equipped with an ASCO Series 8344 Brass 4-way solenoid and vernier type speed control valves to provide controlled operation from 10-60 seconds.

6 Manufacture

6.1 The exterior of the actuator shall be coated with primer with a dry film thickness of 3 mils.

6.2 Cylinder actuators shall be Series LSC-M2 as manufactured by Val-Matic Valve & Mfg. Corp., Elmhurst, IL USA or approved equal.

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DATE 8-28-09

VAL-MATIC[®]

VALVE AND MANUFACTURING CORP.

DRWG. NO

VM-LSC-M2-S