



SPECIFICATION

MODEL 42AFCV

SOLENOID OPERATED (THROTTLING) FLOW CONTROL VALVE

APPLICATION

The solenoid operated (throttling) flow control valve shall receive a control signal to automatically maintain a constant rate of flow. The valve is operated by hydraulic pressure control, via independent opening and closing solenoids and speed controls. In the event of a power failure, the valve can be configured to "lock" in its last position, go fully closed, or go fully open.

DESIGN

The flow control valve shall be globe (inline) or angle (90 degree) body with flanged end connections, be fully mounted, external solenoid pilot operated, with free floating piston (operated without springs, diaphragm or levers). It shall contain a single full-ported seat, with seat bore equal to size of valve. The minimum travel of the piston shall be equal to 25% of the diameter of the seat. For true alignment (to correct lateral thrust and stem binding), the piston shall be guided above and below the seat a distance equal to no less than 75% of the diameter of the seat. The piston shall be cushioned and so designed as to insure positive closure. The main valve shall be packed with leather (or other soft material) to insure tight closure and prevent metal-to-metal friction and seating. The valve shall be furnished with an indicator rod to show position of piston opening, and pet-cocks for attachment to valve body for receiving gauges for testing purposes. The design shall be such that repairs and dismantling internally of main valve may be made without its removal from the line.

The solenoid pilot valve(s), controlling operation of the main valve, shall be easily accessible and arranged to allow for easy removal from the main valve while the main valve is under pressure. The solenoid pilot valve(s), speed control valve(s), external strainer with blow-off, isolation valves, and all associated rigid brass piping and fittings shall be factory assembled and furnished with the valve.

PHYSICAL & CHEMICAL PROPERTIES

Valve body and cap(s) shall be constructed of gray iron castings that conform to ASTM Specification A 126 Class B. Internal bronze components shall conform to ASTM Specification B-584. Internal Stainless Steel components shall conform to ASTM Specification A-743 Grade CF-8 or CF-8M. The control piping shall be rigid red brass, no less than 0.5" in diameter.

The flanged assemblies shall conform to ANSI standards for wall thickness of body and caps, and flange thickness and drilling, subject to other specified standards.

PAINT

Ferrous surfaces of the valve shall be coated with NSF Certified Epoxy (Tnemec Series FC20) in accordance with ANSI/NSF Std. 61, and conforming to AWWA D102 Inside System No. 1.

TESTING

A trio of tests shall be performed on the completely assembled valve prior to shipment. These shall include a hydrostatic test of up to two (2) times the working pressure (maximum 500 psi testing pressure), a tight seating test, and a performance test for simulated field conditions. The tests may be witnessed by the customer/engineer or representative.

The valve shall be equal in all respects to the Model 42AFCV as manufactured by Ross Valve Mfg. Co., Inc, 6 Oakwood Ave, Troy, NY 12180.

Note: The Ross Valve Mfg. Co., Inc. reserves the right to modify valve construction which will result in equal or superior performance to existing designs. These modifications may be made at any time and at the sole discretion of the manufacturer.