



RATE-OF-FLOW VALVE with PRESSURE REDUCING FEATURE

01/06

950 Series

—Model— **951**
651

Specifications

The Rate of Flow Control Valve with Pressure Reducing Feature shall be a pilot operated diaphragm valve designed to automatically limit flow rate to a constant, adjustable, maximum, and reduce a fluctuating higher upstream pressure to a constant lower downstream pressure. The flow control action of the valve shall be controlled by an externally mounted modulating Flow Control Pilot which senses differential pressure across a remote mounted orifice plate (field installed). The pressure reducing action of the valve shall be controlled by a separate Pressure Reducing Control Pilot which internally senses downstream pressure.

The main valve shall be a hydraulically operated, single diaphragm actuated, globe or angle pattern valve. Y-pattern valves shall not be permitted. The valve shall contain a disc and diaphragm assembly that forms a sealed chamber below the valve cover, separating operating pressure from line pressure. The diaphragm shall be constructed of nylon reinforced Buna-N, and shall not seal directly against the valve seat and shall be fully supported by the valve body and cover. Rolling diaphragm construction will not be allowed and there shall be no pistons operating the main valve or any pilot controls.

The main valve body and cover shall be Ductile Iron ASTM A536, and all internal cast components shall be Ductile Iron or CF8M (316) Stainless Steel. All Ductile Iron components, including the body and cover, shall be lined and coated with an NSF 61 Certified Epoxy Coating applied by the electrostatic heat fusion process. All main valve trim and throttling components (cover bearing, valve seat and disc guide) shall be Stainless Steel. The valve body and cover must be machined with a 360-degree locating lip to assure proper alignment.

The disc and diaphragm assembly shall contain a Buna-N synthetic rubber disc with a rectangular cross-section that is securely retained on 3-1/2 sides by a disc retainer and disc guide. Diaphragm assemblies utilizing bolts or cap screws for component retention will not be permitted.

The exposed portion of the seat disc shall contact the valve seat and seal drip-tight. The disc and diaphragm assembly must be guided by two separate bearings, one installed in the valve cover and one concentrically located within the valve seat, to avoid deflection and assure positive disc-to-seat contact. Center guided valves will not be permitted. All necessary repairs shall be made from the top of the valve while the body remains in line.

Pilot control systems for valves 3" and smaller shall contain a Flow Clean Strainer, Adjustable Closing Speed, Adjustable Opening Speed Control, Pressure Reducing Pilot and Rate-of-Flow Pilot. Pilot control systems for valves 4" and larger shall contain an external Y-Strainer, Adjustable Closing Speed Control, Adjustable Opening Speed Control, Pressure Reducing Pilot, Rate-of-Flow Pilot and Isolation Ball Valves on all body connections. All pilot control systems shall utilize copper tubing and brass fittings regardless of valve size. The adjustment range of the pressure reducing pilot shall be 30-300 psi. The Orifice Plate Assembly shall be included with the valve and field installed 3-5 pipe diameters downstream of the Flow Control Valve. The Orifice Plate Assembly shall be (field) connected to the Rate-of-Flow Control Pilot in accordance with factory piping schematic with minimum 3/8" diameter copper tubing.

The valve shall be AMES Model 951GD or 651GD (Globe) or 951AD or 651AD (Angle) Rate of Flow Control Valve with Pressure Reducing Feature.