

**SERIES 5400E DOUBLE-ACTING
ELECTRICALLY OPERATED CONTROL PINCH VALVES
Specification #RV-5400E**

PART 1 GENERAL

1.01 SUBMITTALS

- A. Submit product literature that includes information on the performance and operation of the valve, materials of construction, dimensions and weights, sleeve trim design, elastomer characteristics, flow data, pressure rating.
- B. Upon request, provide shop drawings that clearly identify the valve dimensions including all supplied accessories.

1.02 QUALITY ASSURANCE

- A. Supplier shall have at least ten (10) years experience in the manufacture of pinch style valves, and shall provide references and a list of installations upon request.

PART 2 PRODUCTS

2.01 DUAL ACTING ELECTRIC MOTOR OPERATED PINCH VALVES

- A. Valves are to be of the full cast metal body, mechanical pinch type with flange joint ends. The valve length shall be as listed in ISA S75.08. The flanges shall be drilled and tapped to mate with ANSI B16.1, Class 125 / ANSI B16.5, Class 150 flanges.
- B. The sleeve trim shall be one piece construction with integral flanges drilled to be retained by the flange bolts. The sleeve trim shall be reinforced with calendared nylon or calendared polyester fabric to match service conditions. The sleeve trim shall be connected to the pinch bar by tabs imbedded in the sleeve trim-reinforcing ply. All internal valve metal parts are to be completely isolated from the process fluid by the sleeve trim. For full port and reduced port sleeves the port areas shall be 100% of the full pipe area at the valve ends. For Cone and Variable Orifice sleeves the port area at the inlet shall be 100% of the full pipe area, reducing to a smaller port size at the outlet.
- C. The steel mechanism shall be double acting, closing the pinch sleeve on the centerline of the valve. The mechanism shall be interlocking so that any movement of the top pinch bar is mirrored by the lower pinch bar. The mounting yoke shall support the mechanism. There shall be no cast parts in the operating mechanism. The pinch mechanism shall be adjustable for stroke without removing the valve from the line. The mechanism shall be connected to the electric actuator by a stainless steel ACME threaded stem. The electric motor shall be as specified. Valve shall be manufactured in the USA.

2.02 FUNCTION

- A. The electric motor rotates a threaded nut, pushing the threaded stem into the valve body, causing the pinch bar to push the sleeve in one direction. Using a cantilevered mechanism, this action also simultaneously raises two side bars to pull a second pinch bar, pushing the sleeve in the opposite direction, pinching the sleeve closed at the centerline of the valve.

2.03 MANUFACTURER

- A. All valves shall be of the Series 5400E as manufactured by the Red Valve Co., Inc. of Carnegie, PA 15106 or approved equal.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Valve shall be installed in accordance with manufacturer's written Installation and Operation Manual and approved submittals.

3.02 MANUFACTURER'S CUSTOMER SERVICE

- A. Manufacturer's authorized representative shall be available for customer service during installation and start-up, and to train personnel in the operation, maintenance and troubleshooting of the valve.

- B. Manufacturer shall also make customer service available directly from the factory in addition to authorized representatives for assistance during installation and start-up, and to train personnel in the operation, maintenance and troubleshooting of the valve.