

SERIES 5200D PNEUMATIC CYLINDER OPERATED CONTROL PINCH VALVES
Specification #RV-5200D

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, elastomer characteristics, flow data, and 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 single-acting top down closing pinch style valves.

PART 2 PRODUCTS

2.01 CYLINDER OPERATED PINCH VALVES

- A. Valves shall be 6" or larger, of the full cast metal body, mechanical pinch type with flange joint ends. The valve length shall be as given 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-reinforcing ply. All internal valve metal parts are to be completely isolated from the process by the sleeve trim. To promote laminar flow. The interior surface of the sleeve shall be smooth. Sleeves manufactured with interior arches or folds are not permitted.
- C. The fixed pinch bar shall be set to pre-pinch the sleeve so that the minimum full open area is centered in the valve. 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.
- D. The solid steel mechanism shall be single acting. To reduce the risk of the pinch mechanism jamming and binding during valve operation. The pinch mechanism shall close on the rubber sleeve from the top down only. The pinch mechanism and stem shall be supported in the valve body and constructed of 316 stainless steel. To prevent pitting, corrosion, seizing and jamming. The pinch mechanism and side-rails shall be fully enclosed within the valve body. Side-Rails that slide through bushings or protrude through the valve body are not permitted. There shall be no cast parts in the operating mechanism. The pinching mechanism shall be adjustable for stroke without removing the valve from line.
- E. The pneumatic cylinder actuator shall be manufactured utilizing black Amalgon™ cylinder tubing. The cylinder is to have a working pressure of 150 psi. The spring for direction fail systems, when specified, shall be fully enclosed in the cylinder housing. The cylinder assembly shall be mounted on the valve body by means of an open yoke. The pneumatic cylinder and yoke shall be non-rising and shall conform to safety regulations outlined in 98/37/EC-1.3 "Protection Against Mechanical Hazards", Section 1.3.

2.02 FUNCTION

- A. Applying pneumatic pressure to one chamber of the actuator cylinder pushes the piston and piston rod out of the actuator, forcing the pinch bar into the valve body, pinching the sleeve closed. Pneumatic pressure applied to the opposite chamber of the cylinder actuator pulls the pinch bar out of the valve body, opening the sleeve.

2.03 MANUFACTURER

- A. All valves shall be of the Series 5200D 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, testing 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.