

CYLINDER OPERATED FLEXGATE SLURRY KNIFE GATE VALVE

Specification #RV-FG-C

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, 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 knifegate valves utilizing elastomer cartridge seats, and shall provide references and a list of installations upon request.

PART 2 PRODUCTS

2.01 SLURRY KNIFEGATE VALVES

- A. Flexgate Slurry Knife Gate Valves shall be bonnetless, wafer type gate valves made with a cast iron body in sizes 3" through 24" or a fabricated steel body in sizes 30" and up. Port areas shall be 100% of the full pipe area throughout the entire length. The Flexgate valve will meet MSS SP-81 face-to-face dimensions and ANSI B16.5 Class 150 drilling dimensions. Flush port(s) area will be located in the base of the valve, and will be drilled, tapped, and plugged.
- B. All sizes shall have two full-port elastomer cartridge seats halves that shall be supported and compressed between the flanges. The seat halves will be steel reinforced molded rubber and shall act as wiper blades to clean the gate as it strokes. The seats shall provide bi-directional sealing. Elastomer material shall be as specified in the purchase order.
- C. Packing box will be of the inverted type, compressed by a weir cast into the valve body. 3 layers of packing material shall be supplied as standard. Packing material shall be as specified in the purchase order.
- D. The gate will be of sufficient thickness to provide against permanent deformation at 1.2 times the rated working pressure. The gate shall be ASTM A240 T-316 Stainless Steel. The stem shall be ASTM A276 T-304 Stainless Steel and shall have single pitch acme threads. The stem nut will be acid resistant bronze.
- 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 a heavy-duty fabricated topworks. Valve shall be manufactured in the USA.

2.02 FUNCTION

- A. Applying air pressure to one chamber of the actuator cylinder pushes the piston and piston rod out of the actuator, sliding the gate into the valve body between the seats, blocking the port opening. Air pressure applied to the opposite chamber of the cylinder actuator pulls the gate out of the valve body, the seats acting to wipe the surface of the gate clean.

2.03 MANUFACTURER

- A. All valves shall be of the Flexgate CFG 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.