

GENERAL SPECIFICATIONS

Model 125 Booster Pump Control Valve

1.1 General

The pump control valve shall function to eliminate the surges that result from starting and stopping the pump. The valve shall be closed when the pump is started. It shall then open slowly, gradually introducing flow into the line. When the pump is signaled to stop, the pump control valve shall slowly close while the pump continues to run. As the valve approaches the full closed position, the valve stem shall trip a limit switch mounted on the valve. The limit switch shall then shut down the pump. Opening and closing speeds shall be independently adjustable. In the event of a power failure while the pump is running, the valve shall close quickly to prevent back flow. The pump control valve shall be a <size> Model 125, <globe pattern, angle pattern>, as manufactured by OCV Control Valves, Tulsa, Oklahoma, USA.

1.2 Design

The pump control valve shall be a single-seated, line pressure operated, diaphragm actuated, pilot controlled globe valve. The valve shall seal by means of a corrosion-resistant seat and a resilient, rectangular seat disc. These, and other parts, shall be replaceable without removing the valve from the line. The stem of the main valve shall be guided top and bottom by integral bushings. Alignment of the body, bonnet and diaphragm assembly shall be by precision dowel pins. The diaphragm shall not be used as a seating surface, nor shall pistons be used as an operating means. The pilot system shall be furnished complete and installed on the main valve. It shall include separate opening and closing speed controls, a Y-strainer and isolation ball valves. The pump control valve shall be operationally and hydrostatically tested prior to shipment.

1.3 Materials of Construction

The main valve body and bonnet shall be ductile iron per ASTM A536, Grade 65-45-12. End connections shall be <ANSI B16.42 Class 150# flange > <ANSI B16.42 Class 300# flange>, <ANSI B1.20.1 threaded> <grooved ends>. All ferrous surfaces shall be coated with a minimum of 4 mils of an NSF-61 approved epoxy. The main valve seat ring shall be bronze. Elastomers (diaphragms, resilient seats, and O-rings) shall be Buna-N. The control pilots shall bronze. The speed controls and isolation ball valves shall be brass and control line tubing shall be copper. The solenoid coil shall be suitable for operation on 110-120 volts AC, 50-60 Hz. The limit switch shall be equipped with SPDT contacts rated at 15 amps at 125-480 VAC. Limit switch and solenoid enclosures shall be weatherproof per NEMA 4.

1.4 Operating Conditions

The pump control valve shall be suitable for a flow of <X> gpm and a maximum pump shutoff pressure of <X> psig.