DEEP WELL PUMP CONTROL VALVE

01/05

Mustang Series

M513-6 or M6513-6 (Globe)
M1513-6 or M61513-6 (Angle)

Specifications

The Deep Well Pump Control Valve shall be a pilot operated diaphragm valve designed to minimize the surges associated with the starting and stopping of deep well pumps. The valve shall be designed to close at an adjustable rate upon pump start-up, and open at an adjustable rate upon pump shut-off. When the valve is near the fully open position, the limit switch shall be tripped, turning the pump off. The pump shall start and stop against an open valve. The valve shall have provisions for manual operation in the event of power outage. Solenoid voltage shall be _____ and enclosure shall be NEMA 4 General Purpose.

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 two separate sealed chambers: 1) between the diaphragm and the valve cover, and 2) between the diaphragm and the power chamber. 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 power chamber. 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, power chamber bearing, valve seat and disc guide) shall be Stainless Steel. The valve body, cover, and power chamber 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.

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 power chamber, 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.

The pilot control system shall be designed with a “remote-supply” feature, which is field connected to the downstream side of the system check valve, utilizing static system pressure to operate the valve. It shall contain a 4-Way Solenoid Pilot with a lever type Manual Operator, Single Limit Switch, separate Adjustable Opening and Closing Speed Controls, Y-Strainer and Isolation Ball Valves on the Y-Strainer inlet and all body connections. The pilot control system shall utilize copper tubing and brass fittings.

The valve shall be Watts ACV Model M513-6 / M6513-6 (Globe) or M1513-6 / M61513-6 (Angle) Deep Well Pump Control Valve.