

Deep Well (Borehole) Pump Control Valve



Description

The valve eliminates surges caused by the start-up and shut-off of vertical or submersible pumps. It is a relief valve, assembled on a T-junction of the main pipeline. When the pump starts, the valve slowly closes, gradually increasing network pressure. Before pump shut-off, the valve slowly opens, gradually reducing network pressure.

Features

- No slam operation
- Simple and reliable design
- Easy installation and maintenance
- Low Resistance and high flow capacity

Purchase Specifications

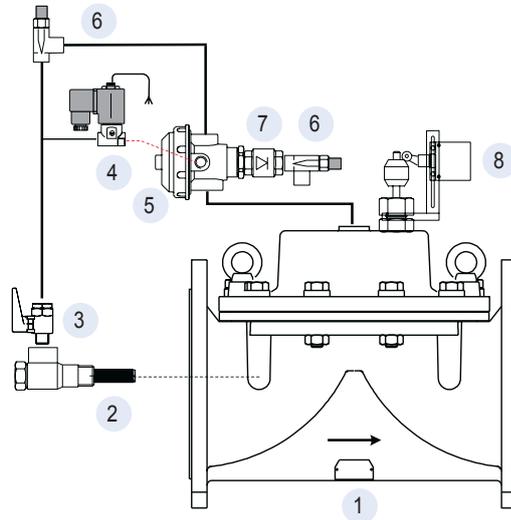
The valve will be hydraulic, direct sealing diaphragm type, which allows inline maintenance. No stem, shaft or guide bearing will be located within the water passage. The valve will be activated by the line pressure or by an external hydraulic or pneumatic pressure. The valve position will be controlled by an electric solenoid valve with adjustable open/close speed control valves. The valve and the controls will be a Dorot Series 100 valve or similar in all aspects.

Quick Sizing

- The valve should be sized to match the well flow at 5 mwc/8 psi in the valve site (pump head water table depth):
 $D[\text{mm}] \geq 170 \times \sqrt{\text{Flow} [\text{m}^3/\text{hr}]}$
 $D[\text{inch}] \geq 0.55 \times \sqrt{\text{Flow} [\text{gpm}]}$

Design Considerations

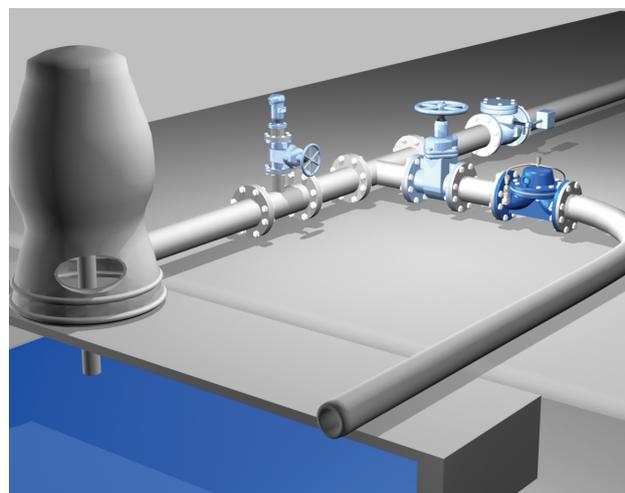
- The valve should be suited for the maximal flow
- Closure time is related to the pipe length and should be extended for longer pipe
- For power failure situations, add a fast reacting checkvalve in series and a surge anticipating valve to relief possible surges



Optional Control System Components:

- 1 Main Valve
- 2 Self-flushing filter
- 3 Cock valve*
- 4 3/2 Solenoid valve
- 5 Accelerator relay (optional for valves larger than 150mm/6")
- 6 Open/close speed adjustment needle valve
- 7 Check valve
- 8 Limit switch assembly

* Optional component



Typical Application

Dorot Deep Well Pump Control Valve preventing surges caused by pump start-up or shut-off.