

QR Quick Pressure-relief Valve



Description

The valve opens instantly when the pressure in the pipeline exceeds the safe level, thus relieving excessive pressure from the network. When the pressure returns to normal, the valve closes slowly, at an adjustable pace.

Features

- No slam operation
- Simple and reliable design
- Easy installation and maintenance
- Low Resistance and high flow capacity
- Protection for sewage as well as clean water pumping systems

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 will be operated by a pressure relief pilot valve for fast opening at a high pressure set-point. The valve and the controls will be a Dorot Series 100 valve or similar in all aspects.

Quick Sizing

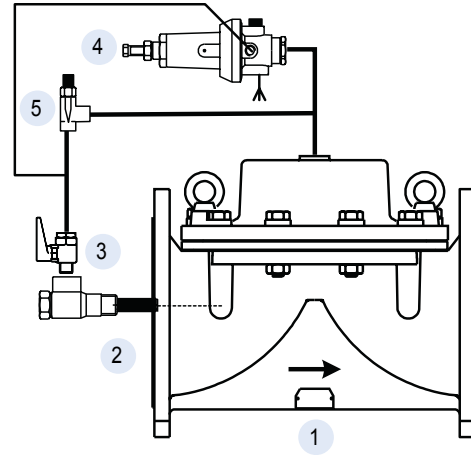
- The valve should be sized to match the expected relief flow at the set opening pressure:

$$D[\text{mm}] \leq \sqrt{(250 \times \text{Flow}[\text{m}^3/\text{hr}] / \sqrt{\text{Pressure}[\text{mwc}]})}$$

$$D[\text{inch}] \leq \sqrt{(0.109 \times \text{Flow}[\text{gpm}] / \sqrt{\text{Pressure}[\text{psi}]})}$$

Design Considerations

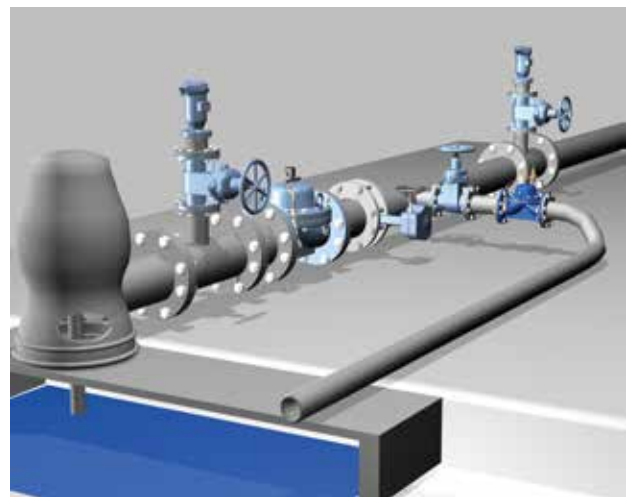
- Install a manual separation valve, upstream of the valve position
- Closure time is related to the pipe length and should be extended for longer pipe
- The valve opens instantly at the set pressure. For regulating the system pressure use a Pressure Sustaining Relief Valve and not a Quick Relief valve



Optional Control System Components:

- 1 Main Valve
- 2 Self-flushing filter
- 3 Cock valve*
- 4 Pressure relief pilot valve
- 5 Needle valve

* Optional component



Typical Application

Dorot Quick Pressure-relief Valve protects a system against pressure surges caused by pump start-up or valves closure.