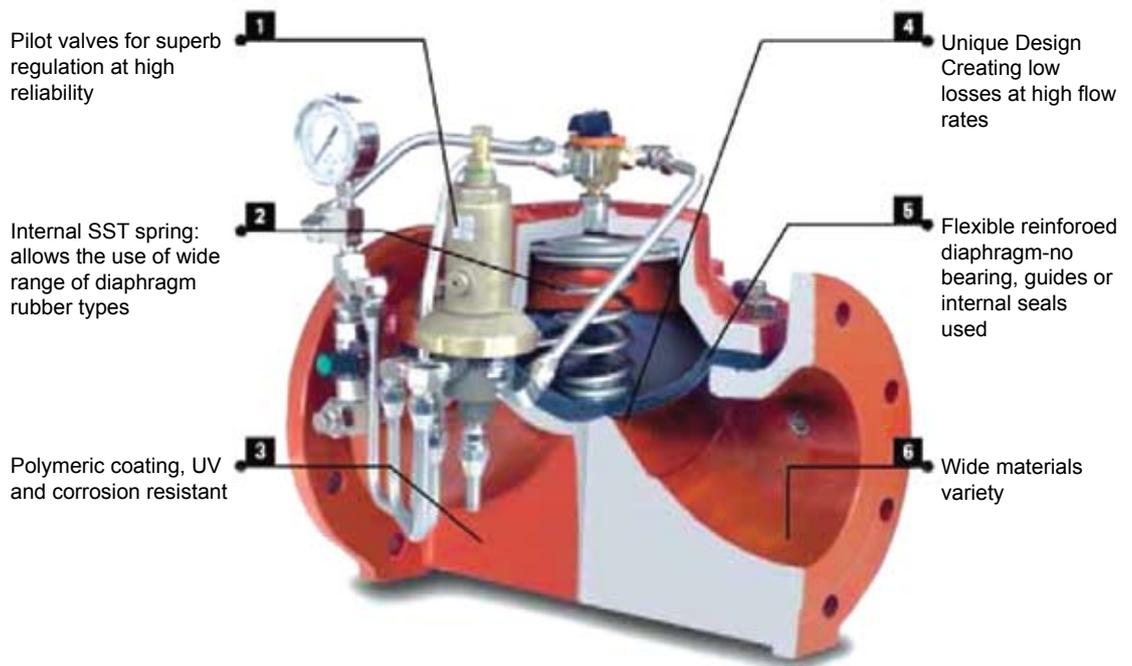
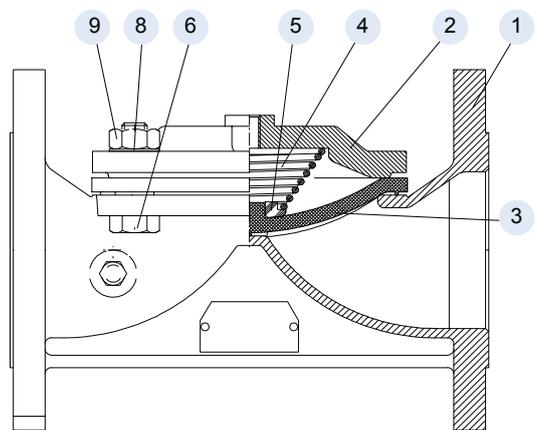
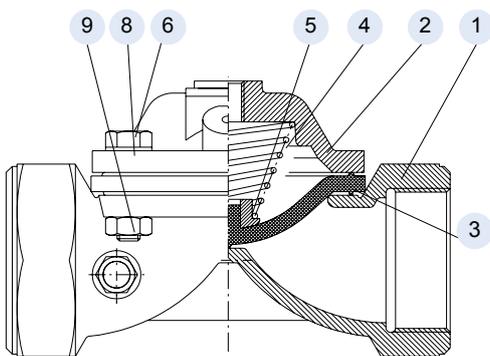
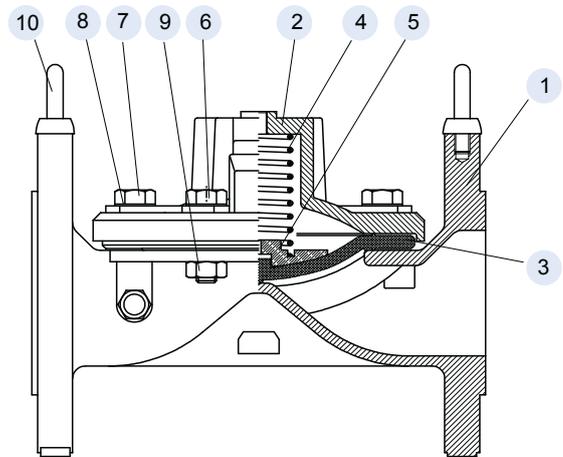


Main Components

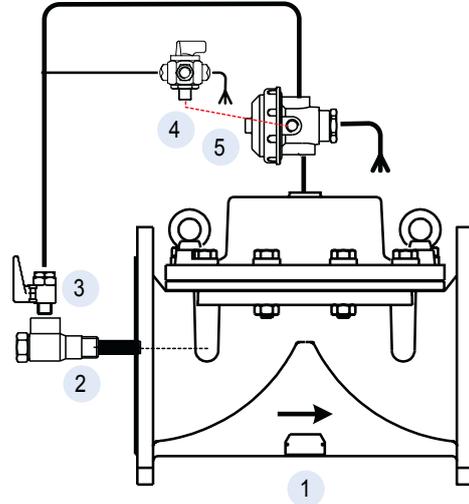


Components

Component No.	Description
1	Body
2	Bonnet
3	Diaphragm
4	Spring
5	Spring Disc
6	Bolt
7	Short Bolt
8	Washer
9	Nut
10	Suspension Ring (Hook)



M Manually Controlled Valve



Description

The valve is controlled manually by a three port selector that allows the user to select the closed, opened or remote-controlled position of the valve. The control is effected effortlessly and quickly, even under high pressure conditions

Features

- Effortless open/close activation
- Fast response
- Clog-free operation
- Can be added as manual over-ride to any other control function

Purchase Specifications

The valve will be a 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 a hand operated selector valve. The valve and the controls will be a Dorot Series 100 valve or similar in all aspects.

Quick Sizing

- Valve size same as line or one size smaller
- Maximum flow speed for continuous operation 5.5 m/sec (18 ft/sec)

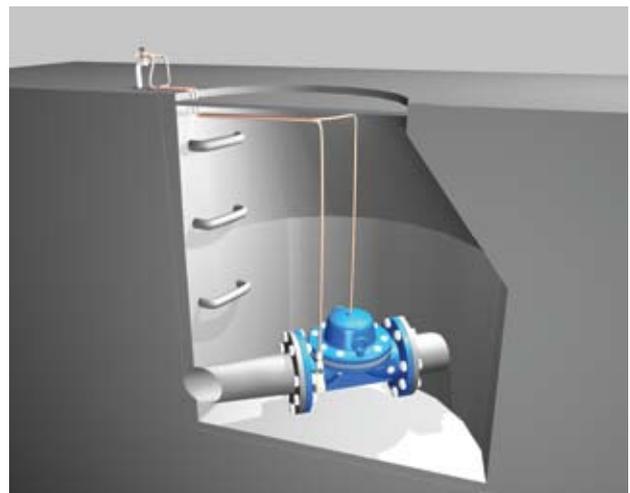
Design Considerations

- The valve should be suited for the maximal flow and allowed headloss
- Preferred selection of low pressure diaphragms when the valve is expected to stay in open position for long periods

Optional Control System Components:

- 1 Main Valve
- 2 Self-flushing filter
- 3 Cock valve*
- 4 3-way selector valve
- 5 Accelerator relay (optional for valves larger than 150mm/6")

* Optional component



Typical Application

Dorot Manually controlled valve installed in an underground, flooded pit. Manual activation is enabled from top by the selector valve.

EL Solenoid Controlled Valve



Description

A 3-way solenoid valve, activated by an electric current or an electric pulse, opens or closes the main valve. The standard valve is supplied in the “normally closed” position. The “normally open” position is optional. Electric activation can be added to other control applications on request.

Features

- Low power electric activation
- Fast response
- Simple and reliable design
- Can be added as electric over-ride to any other control function

Purchase Specifications

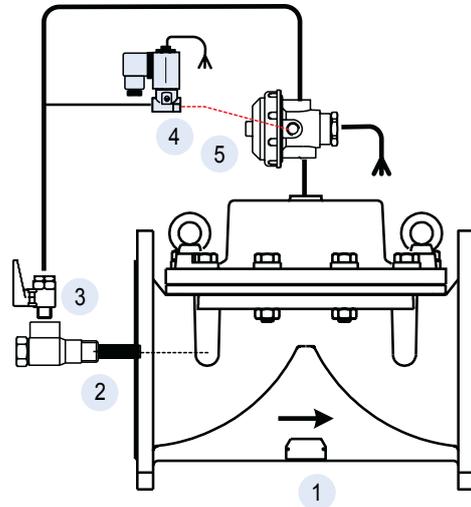
The valve will be hydraulic, direct sealing diaphragm type, which allows inline maintenance. No stem, shaft or guide bearing will be located within the water passage. The valve will be activated by the line pressure or by an external hydraulic or pneumatic pressure. The valve position will be controlled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

Quick Sizing

- Valve size same as line or one size smaller
- Maximum flow speed for continuous operation 5.5 m/sec (18 ft/sec)

Design Considerations

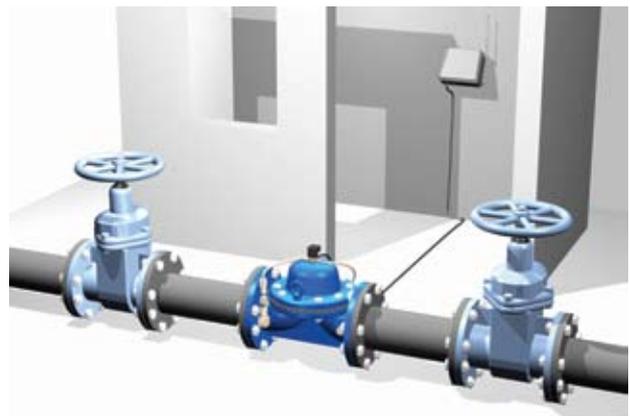
- The valve should be suited for the maximal flow and allowed headloss
- Prefer selection low pressure diaphragms when the valve is expected to stay in open position for long periods
- The valve can be opened by the electric command (NC) or closed by it (NO). The definition refers to the main valve operation and not the solenoid's characteristics



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")

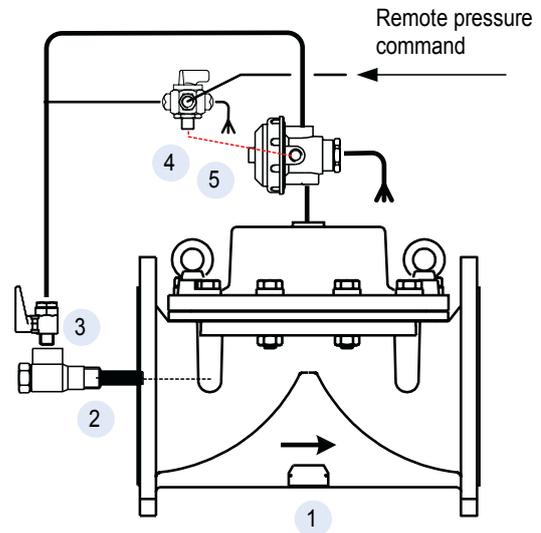
* Optional component



Typical Application

Dorot Solenoid Controlled valve, controlled by a local controller.

RC Hydraulic Remote Controlled Valve



Description

A 3-way relay valve, activated by hydraulic or pneumatic pressure command, opens or closes the main valve. The standard valve is supplied in the "normally closed" position. The "normally open" position is optional. Hydraulic activation can be added to other control applications on request.

Features

- Fast response even for long control lines
- Simple and reliable design
- Can be added as pressure command over-ride to any other control function

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 a hydraulic relay. The valve and the controls will be a Dorot Series 100 valve or similar in all aspects.

Quick Sizing

- Valve size same as line or one size smaller
- Maximum flow speed for continuous operation 5.5 m/sec (18 ft/sec)

Design Considerations

- The valve should be suited for the maximal flow and allowed headloss
- Prefer selection low pressure diaphragms when the valve is expected to stay in open position for long periods
- The valve can be opened by the pressure command (NC) or closed by it (NO). The definition refers to the main valve operation and not the relay's characteristics

Optional Control System Components:

- 1 Main Valve
- 2 Self-flushing filter
- 3 Cock valve*
- 4 Manual over-ride selector valve*
- 5 Accelerator relay (other types are optional)

* Optional component



Typical Application

Dorot Hydraulic Remote Controlled Valve, activated by a remote pressure command.

PR Pressure Reducing Valve



Description

The valve maintains a preset downstream pressure, regardless of upstream pressure or flow rate fluctuation. The main valve is controlled by either a 3-way pilot valve (allowing full opening when upstream pressure drops below the pressure set-point), or by a 2-way pilot valve (creating a minimal differential in open position).

Features

- Accurate, stable control from no-flow to full flow
- Simple and reliable design
- Exceptionally low losses at high flow
- WRAS Approval no. 04251

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.

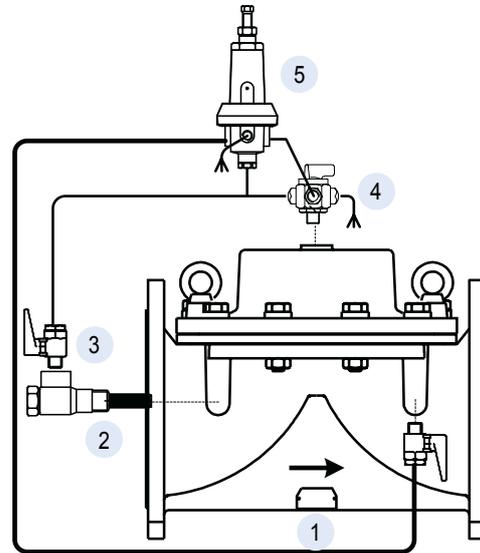
The valve will be activated by the line pressure or by an external hydraulic or pneumatic pressure. The valve will be operated by a pressure reducing pilot valve to achieve constant outlet pressure, regardless of upstream pressure or flow variations. The valve and the controls will be a Dorot Series 100 valve or similar in all aspects.

Quick Sizing

- Valve size same as line or one size smaller
- Maximum flow speed for continuous operation 5.5 m/sec (18 ft/sec)

Design Considerations

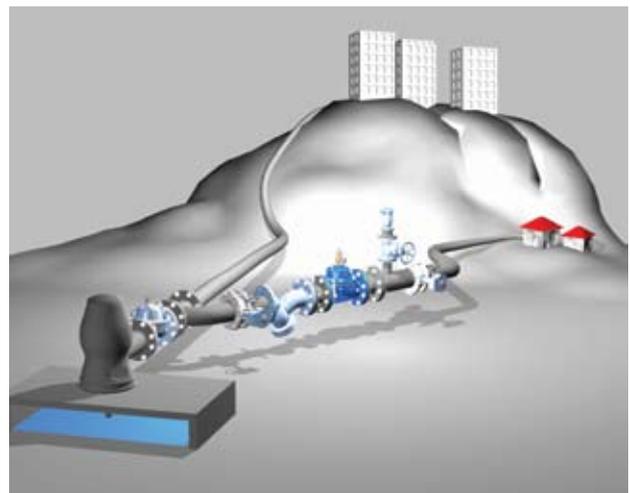
- The valve should be suited for the maximal flow and allowed headloss
- In case upstream pressure may drop to the required set pressure, select 3-way control pilot
- Large pressure differentials may cause cavitation damage. Consult Dorot for solutions if such conditions are expected



Optional Control System Components:

- 1 Main Valve
- 2 Self-flushing filter
- 3 Cock valve*
- 4 Manual over-ride selector valve*
- 5 3-way pilot valve (other types are optional)

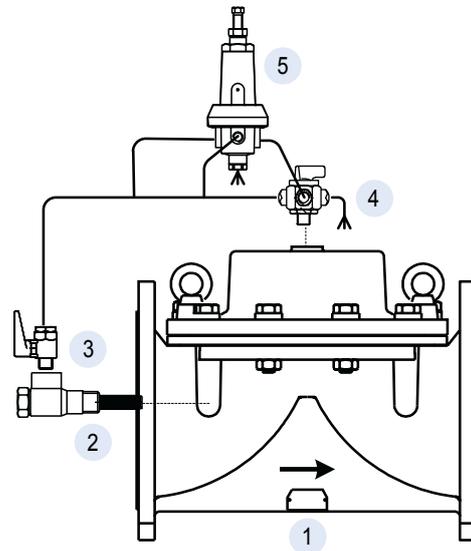
* Optional component



Typical Application

Dorot Pressure Reducing Valve reduces varying supply pressure to a stabilized downstream pressure.

PS Pressure Sustaining & Relief Valve



Description

The valve maintains upstream pressure, regardless of flow rate variations. The valve will be in the “closed” position if the upstream pressure drops below the set-point and will fully open when the upstream pressure exceeds the set-point.

Features

- Accurate, stable control from no-flow to full flow
- Simple and reliable design
- Exceptionally low losses at high flow

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 sustaining pilot valve to maintain constant inlet pressure, regardless of flow variations. The valve and the controls will be a Dorot Series 100 valve or similar in all aspects.

Quick Sizing

- Valve size same as line or one size smaller
- Maximum flow speed for continuous operation 5.5 m/sec (18 ft/sec)

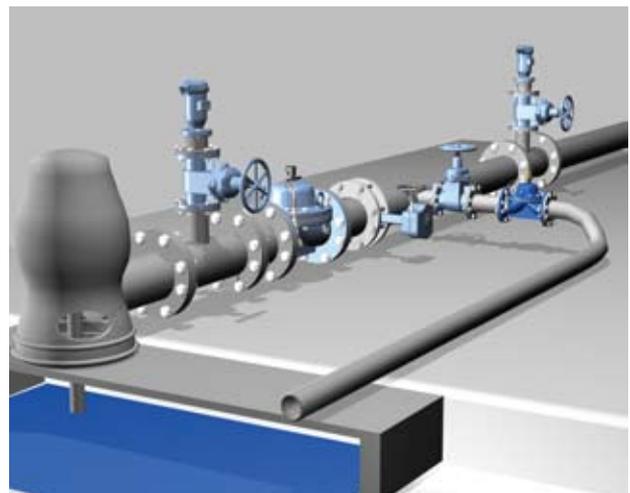
Design Considerations

- The valve should be suited for the maximal flow and allowed headloss
- Check for possible cavitation conditions and consult Dorot in case such conditions are expected

Optional Control System Components:

- 1 Main Valve
- 2 Self-flushing filter
- 3 Cock valve*
- 4 Manual over-ride selector valve*
- 5 3-way pilot valve (other types are optional)

* Optional component



Typical Application

Dorot Pressure Relief Valve relieving pump surplus flow from the system, thus preventing high pressure at low demand conditions.

DI Pressure Differential Sustaining Valve



Description

The valve maintains a preset pressure differential between its upstream and downstream sides. The valve can control booster pump discharge, heating and cooling systems, bypass configurations, filters and other similar systems.

Features

- Accurate, stable control from no-flow to full flow
- Simple and reliable design
- Exceptionally low losses at high flow

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 sustaining differential pilot valve so to maintain a minimal pressure differential, regardless of flow variations.

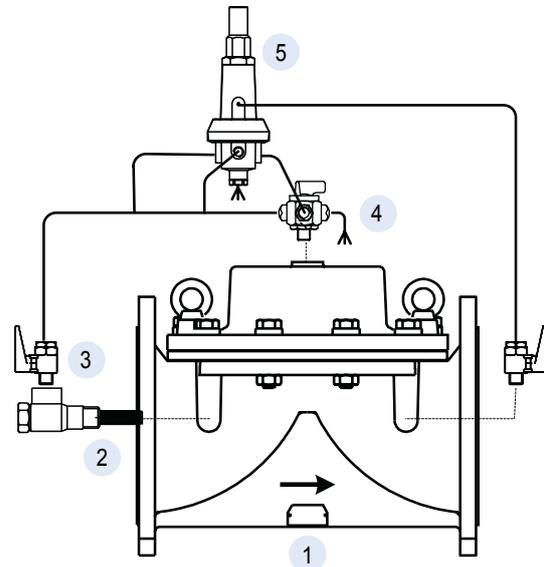
The valve and the controls will be a Dorot Series 100 valve or similar in all aspects.

Quick Sizing

- Valve size same as line or one size smaller
- Maximum flow speed for continuous operation 5.5 m/sec (18 ft/sec)

Design Considerations

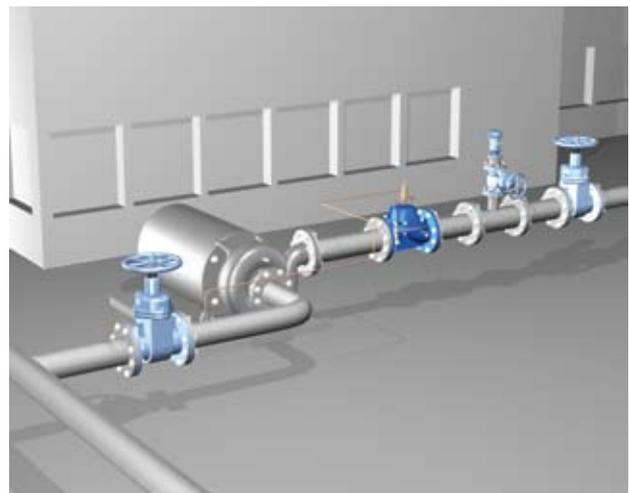
- The valve should be suited for the maximal flow and allowed headloss
- Check for possible cavitation conditions and consult Dorot in case such conditions are expected
- The connection points of the sensing tubes must be selected in locations free of turbulence and local interferences



Optional Control System Components:

- 1 Main Valve
- 2 Self-flushing filter
- 3 Cock valve*
- 4 Manual over-ride selector valve*
- 5 3-way pilot valve (other types are optional)

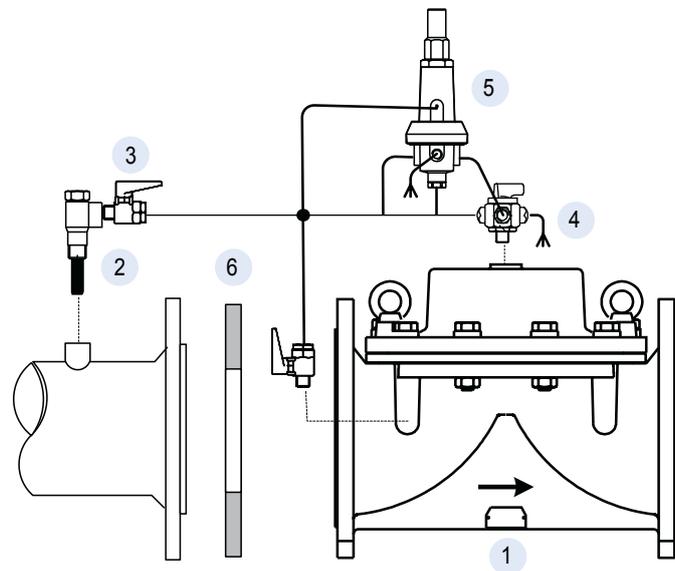
* Optional component



Typical Application

Dorot Pressure Differential Sustaining Valve controls the flow at the discharge of a booster pump whose suction pressure varies.

FR Flow Control Valve



Description

The valve limits the flow rate in the network to a preset value regardless of upstream pressure variations. The valve fully opens when the flow rate drops below the set point.

Features

- Accurate, stable control
- Simple and reliable design
- Low losses when the demand is lower than the set flow

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 reducing differential pilot valve for controlling the flow through the main valve, regardless of pressure variations. The valve and the controls will be a Dorot Series 100 valve or similar in all aspects.

Quick Sizing

- Valve size same as line or one size smaller
- Maximum flow speed for continuous operation 5.5 m/sec (18 ft/sec)

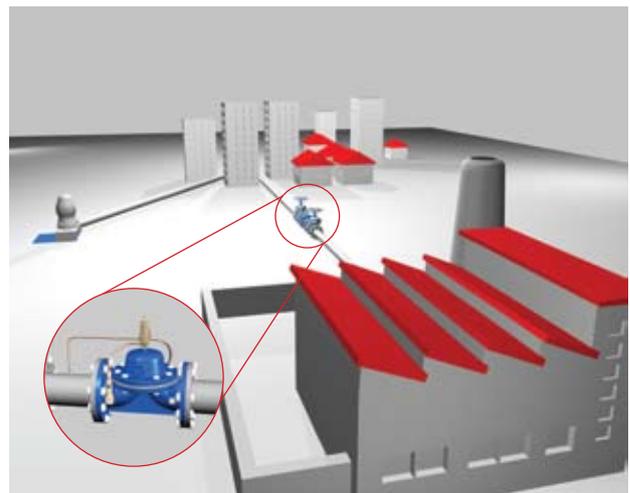
Design Considerations

- A 1/2" pressure sensing port should be provided, upstream of the valve
- Check for possible cavitation conditions and consult Dorot in case such conditions are expected
- An additional pressure loss of about 2.5 mwc is created by the orifice plate (at the set flow)

Optional Control System Components:

- 1 Main Valve
- 2 Self-flushing filter
- 3 Cock valve*
- 4 Manual over-ride selector valve*
- 5 3-way differential pilot valve (other types are optional)
- 6 Orifice plate

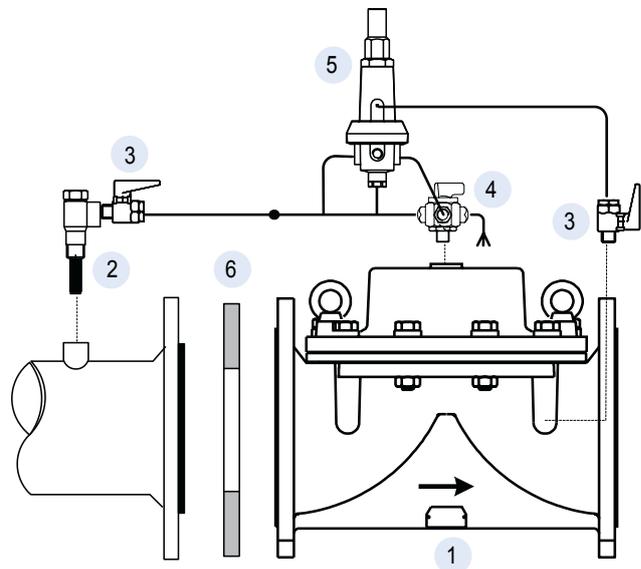
* Optional component



Typical Application

Dorot Flow Control Valve limits the flow to a specific customer.

FE Excessive Flow Shut-off Valve



Description

The valve closes drip tight when the flow rate exceeds the normal value (due to pipe rupture). The valve will manually re-set open after fixing the break.

Features

- Hydraulic burst protection. No electronic controllers are used
- Simple and reliable design
- Low losses

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 reducing differential pilot valve for closing when the flow through the main valve exceeds the safe level, regardless of pressure variations. The valve and the controls will be a Dorot Series 100 valve or similar in all aspects.

Quick Sizing

- Valve size same as line or one size smaller
- Maximum flow speed for continuous operation 5.5 m/sec (18 ft/sec)

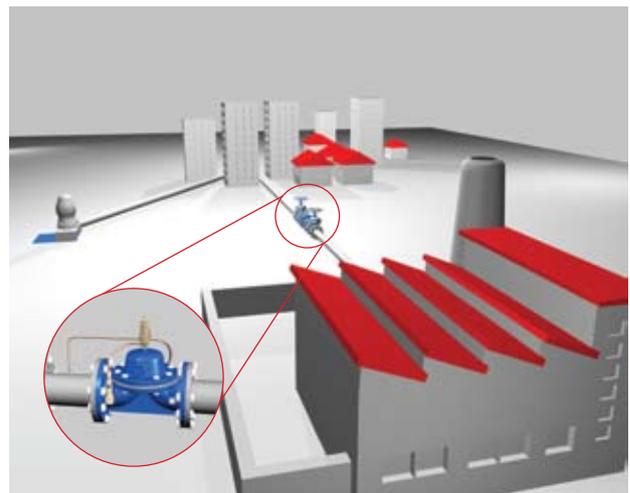
Design Considerations

- A 1/2" pressure sensing port should be provided, upstream of the valve
- The valve is adjusted to close when the flow rate exceeds the maximal design flow by 10%-20%
- An additional pressure loss of about 2 mwc is created by the orifice plate (at the normal flow)

Optional Control System Components:

- 1 Main Valve
- 2 Self-flushing filter
- 3 Cock valve*
- 4 Manual over-ride selector valve*
- 5 3-way differential pilot valve (other types are optional)
- 6 Orifice plate

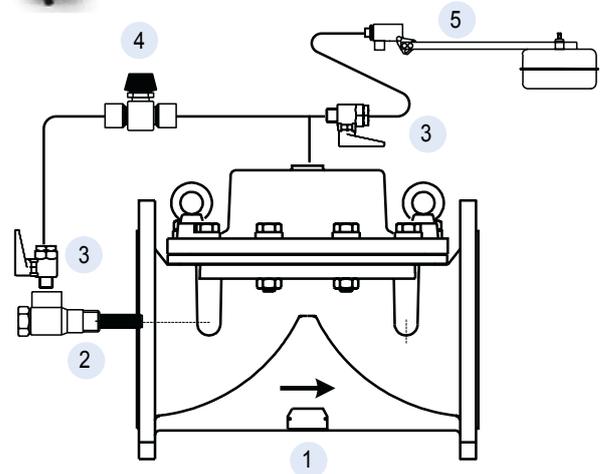
* Optional component



Typical Application

Dorot excessive flow shutoff valve installed to prevent flood damages caused by pipe rupture.

FL Modulating Float Controlled Valve



Description

The main valve is controlled by a float valve, located in the tank or reservoir and set at the required maximum water level. The valve maintains the maximum level continuously.

Features

- Accurate and repeatable level control
- Simple and reliable design
- Easy installation and maintenance
- Adjusts the inlet flow to the reservoir's outlet flow
- WRAS Approval no. 0009092

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 and be operated by a modulating, 2-way float activated pilot valve. The valve and the controls will be a Dorot Series 100 valve or similar in all aspects.

Quick Sizing

- Valve size same as the fill line or one size smaller
- Maximum flow speed for continuous operation 5.5 m/sec (18 ft/sec)

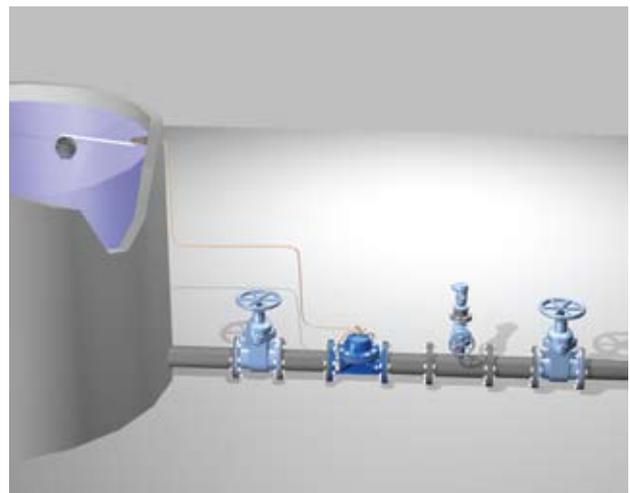
Design Considerations

- The valve should be suited for the maximal flow
- Upstream pressure at closed position should be at least 10m (15psi) higher than the hydrostatic water pressure at the downstream
- Large pressure differentials may cause cavitation damage. Consult Dorot for solutions if such cases are expected
- Prefer use of differential level control in case excessive noise should be avoided (residential areas)

Optional Control System Components:

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

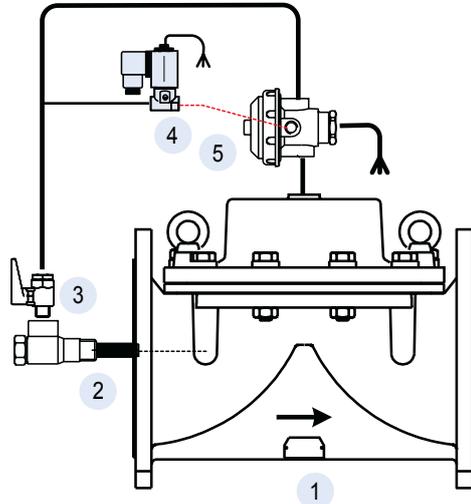
* Optional component



Typical Application

Dorot Modulating Float Controlled valve prevents tank overflow.

FLEL Electric Float Controlled Valve



Description

An electric sensor float, located in the tank/reservoir, sends a command to a solenoid controlled valve. The main valve will fully open when the solenoid activated and will close drip tight when the solenoid de-energized, thus enabling accurate and reliable differential level control.

Optional Addition: Stepped Surge-Preventing Closure.

Features

- Accurate and repeatable differential level control
- Low power electric activation
- Fast response
- Simple and reliable design
- Easy installation and maintenance

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 activated from a float in the tank/reservoir. The valve and the controls will be a Dorot Series 100 valve or similar in all aspects.

Quick Sizing

- Valve size same as line or one size smaller
- Maximum flow speed for continuous operation 5.5 m/sec (18 ft/sec)

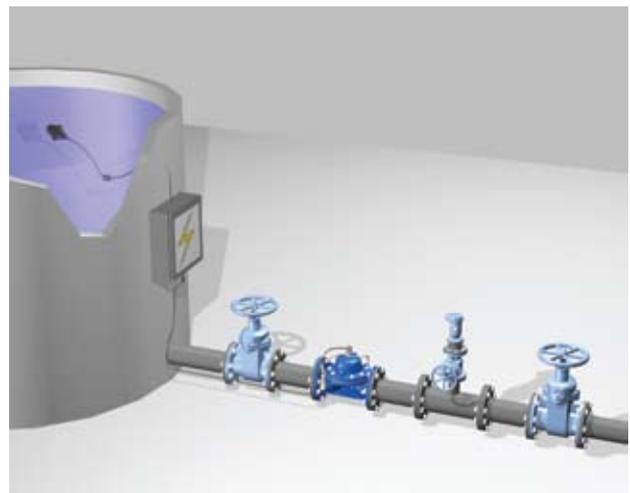
Design Considerations

- The valve should be suited for the maximal flow and allowed headloss
- The valve can be opened by the electric command (NC) or closed by it (NO). The definition refers to the main valve operation and not to the solenoid's characteristics

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 Electric float switch

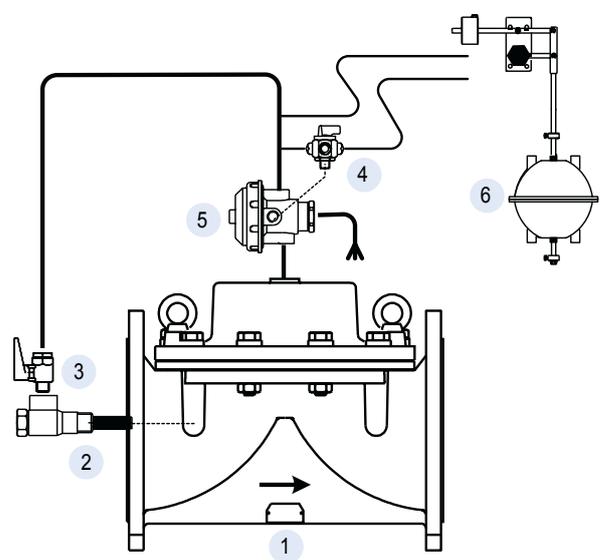
* Optional component



Typical Application

Dorot Electric Float Controlled Valve controlling the water volume in a tank.

FLDI Differential Float Controlled Valve



Description

A float valve controls the main valve, closing it when the water reaches maximum level, and opening it when the water drops to its preset minimum level. The differential between the maximum and the minimum levels is adjustable.
Optional Addition: Stepped Surge-Preventing Closure.

Features

- Accurate and repeatable differential level control
- Adjustable differential
- Fast response
- Simple and reliable design
- Easy installation and maintenance

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 pressure. The valve position will be controlled by a 4-way float pilot located at the top of the tank/reservoir. The valve and the controls will be a Dorot Series 100 valve or similar in all aspects.

Quick Sizing

- Valve size same as line or one size smaller
- Maximum flow speed for continuous operation 5.5 m/sec (18 ft/sec)

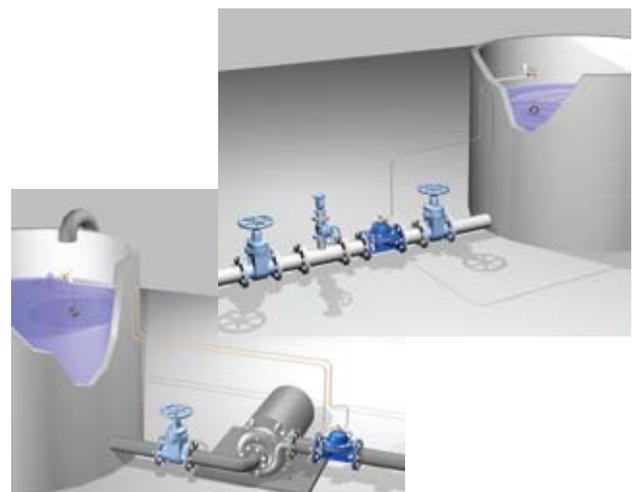
Design Considerations

- The valve should be suited for the maximal flow
- Upstream pressure at closed position should be at least 10m (15psi) higher than the static water pressure at the downstream
- Fast stream and waves may cause mechanical damage to the float levers. It is advisable to install the pilot in a still part of the reservoir

Optional Control System Components:

- 1 Main Valve
- 2 Self-flushing filter
- 3 Cock valve*
- 4 Manual over-ride selector valve*
- 5 Accelerator relay (optional for valves larger than 150mm/6")
- 6 4-way differential pilot valve (other types are optional)

* Optional component



Typical Application

Dorot Differential Float Pilot Controlled Valve controlling the water volume in a filling or emptying tank.

AL Altitude Pilot Controlled Valve



Description

The main valve is controlled by a highly sensitive pilot, located outside the tank. The pilot opens or closes the valve in response to the static pressure of the water. The pilot allows for differential adjustments between the maximum and minimum level. Optional Addition: Stepped Surge-Preventing Closure.

Features

- Accurate and repeatable differential level control
- Fast response
- Easy access - no float is located in the tank/reservoir
- Simple and reliable design
- Easy installation and maintenance

Purchase Specifications

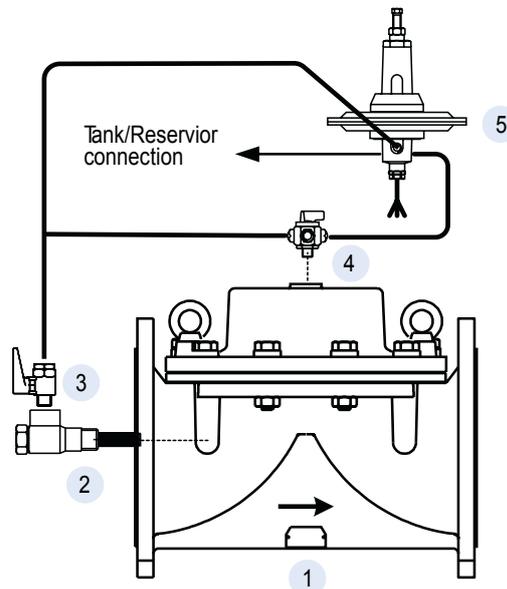
The valve will be hydraulic, direct sealing diaphragm type, which allows inline maintenance. No stem, shaft or guide bearing will be located within the water passage. The valve will be activated by the line pressure or by an external hydraulic or pneumatic pressure. The valve position will be controlled by a hydrostatic pressure sensing pilot valve. The valve and the controls will be a Dorot Series 100 valve or similar in all aspects.

Quick Sizing

- Valve size same as line or one size smaller
- Maximum flow speed for continuous operation 5.5 m/sec (18 ft/sec)

Design Considerations

- The valve should be suited for the maximal flow
- The pilot valve must be located at least 2 meters below the closing level in the tank
- When water-hammer/surge expected during closure - add stepped surge preventing closure function to the altitude control pilot



Optional Control System Components:

- 1 Main Valve
- 2 Self-flushing filter
- 3 Cock valve*
- 4 Manual over-ride selector valve*
- 5 High sensitivity altitude control pilot valve

* Optional component



Typical Application

Dorot Altitude Pilot Controlled Valve controlling the water volume in an elevated tank.

BC Booster Pump Control Valve



Description

The valve eliminates damaging surges caused by pump start-up and shut-off. The electrically activated valve gradually opens on pump start up, and slowly closes before the pump is switched off. The valve will automatically close drip tight in case of power failure. Optional Additions: Flow Rate Limitation, Extended Closure, Two Stage Operating, Pressure Reducing and Pressure Sustaining.

Features

- No slam operation
- Exceptionally low losses at high flow conditions
- Simple and reliable design
- Easy installation and maintenance

Purchase Specifications

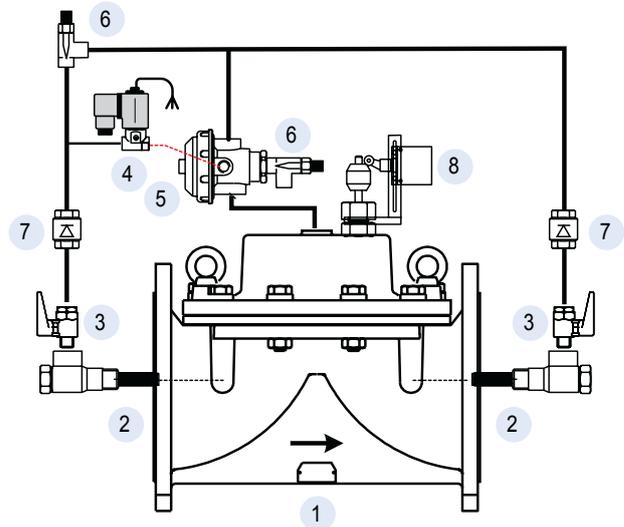
The valve will be hydraulic, direct sealing diaphragm type, which allows inline maintenance. No stem, shaft or guide bearing will be located within the water passage. The valve will be activated by the line pressure or by an external hydraulic or pneumatic pressure. The valve position will be controlled 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

- Valve size same as line or one size smaller
- Maximum flow speed for continuous operation 5.5 m/sec (18 ft/sec)

Design Considerations

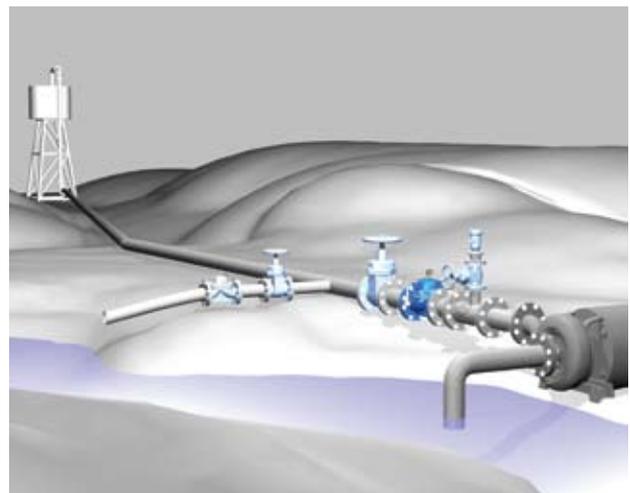
- The valve should be suited for the maximal flow
- Closure time is related to the pipe length and should be extended for longer pipe
- For power failure situations, add a fast reacting checkvalve in series and a surge anticipating valve to relief possible surges



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 Booster Pump Control Valve preventing surges caused by pump startup and shutoff and drainage of main pipe.

DW 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

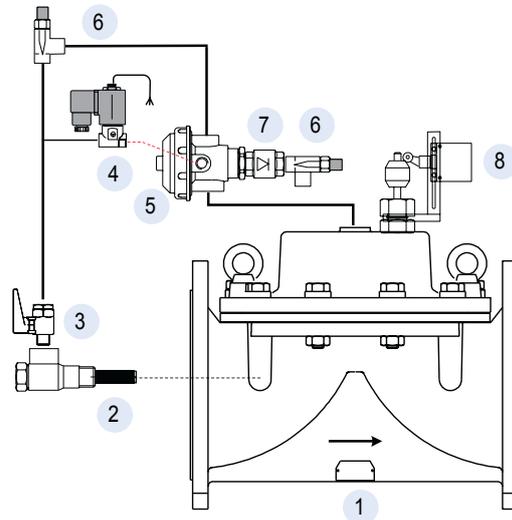
The valve will be hydraulic, direct sealing diaphragm type, which allows inline maintenance. No stem, shaft or guide bearing will be located within the water passage. The valve will be activated by the line pressure or by an external hydraulic or pneumatic pressure. The valve position will be controlled 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

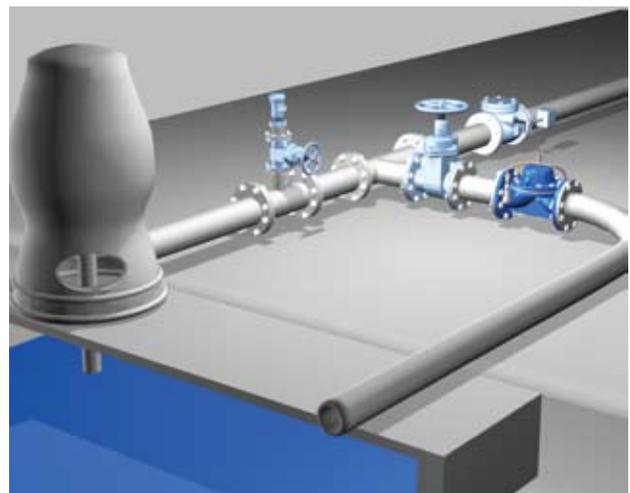
- The valve should be suited for the maximal flow
- Closure time is related to the pipe length and should be extended for longer pipe
- For power failure situations, add a fast reacting checkvalve in series and a surge anticipating valve to relief possible surges



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.

RE Surge Anticipating Valve



Description

The valve protects the pumping system from water hammer, caused by sudden pump shut-off (case of power failure, for example). The valve is assembled on a T-junction of the main pipeline, instantly opens when the pump stops, relieving the returning high pressure wave. The valve slowly closes once the pressure returns to the static level. The valve also functions as a pressure relief valve.

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

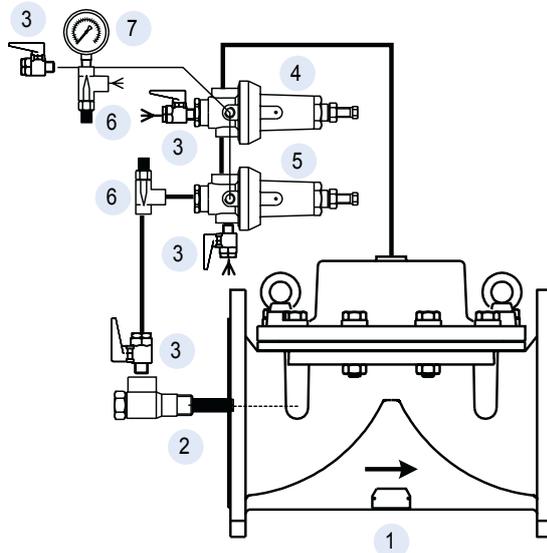
The valve will be hydraulic, direct sealing diaphragm type, which allows inline maintenance. No stem, shaft or guide bearing will be located within the water passage. The valve will be activated by the line pressure or by an external hydraulic or pneumatic pressure. The valve will be operated by pressure relief pilot valve for opening at a low pressure set point and another pilot for pressure relief 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 80% of the normal flow at static head in the valve site:
 $D[\text{mm}] \leq \sqrt{(250 \times \text{Flow}[\text{m}^3/\text{hr}] / \sqrt{\text{Pressure}[\text{mwc}]})}$
 $D[\text{inch}] \leq \sqrt{(0.109 \times \text{Flow}[\text{gpm}] / \sqrt{\text{Pressure}[\text{psi}]})}$

Design Considerations

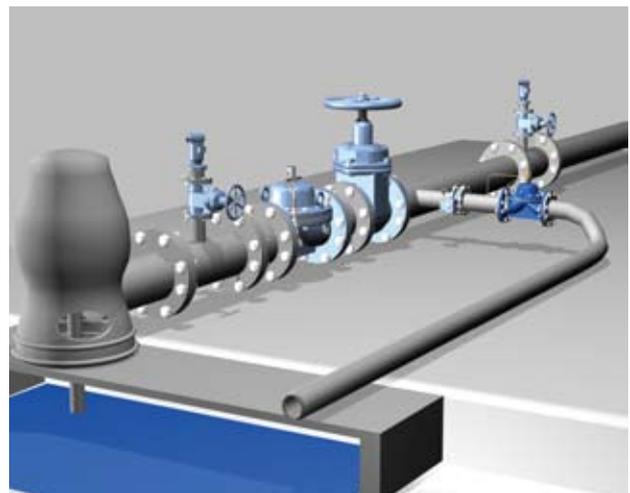
- Install a manual separation/throttling valve, upstream of the valve position
- Closure time is related to the pipe length and should be extended for longer pipe
- The valve sensor tube must be connected to the main line



Optional Control System Components:

- 1 Main Valve
- 2 Self-flushing filter
- 3 Cock valve*
- 4 Low-pressure relief pilot valve
- 5 High-pressure relief pilot valve
- 6 Needle valve
- 7 Pressure gauge

* Optional component



Typical Application

Dorot Surge Anticipating Valve prevents water-hammer surges caused by an un-expected pump shut-off.

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

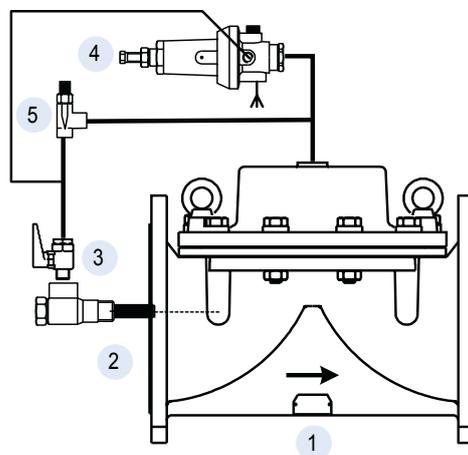
The valve will be hydraulic, direct sealing diaphragm type, which allows inline maintenance. No stem, shaft or guide bearing will be located within the water passage. The valve will be activated by the line pressure or by an external hydraulic or pneumatic pressure. The valve will be operated by a pressure 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

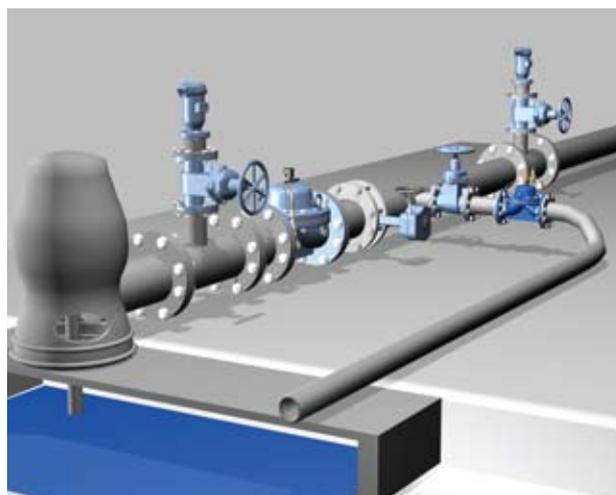
- Install a manual separation valve, upstream of the valve position
- Closure time is related to the pipe length and should be extended for longer pipe
- The valve opens instantly at the set pressure. For regulating the system pressure use a Pressure Sustaining Relief Valve and not a Quick Relief valve



Optional Control System Components:

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

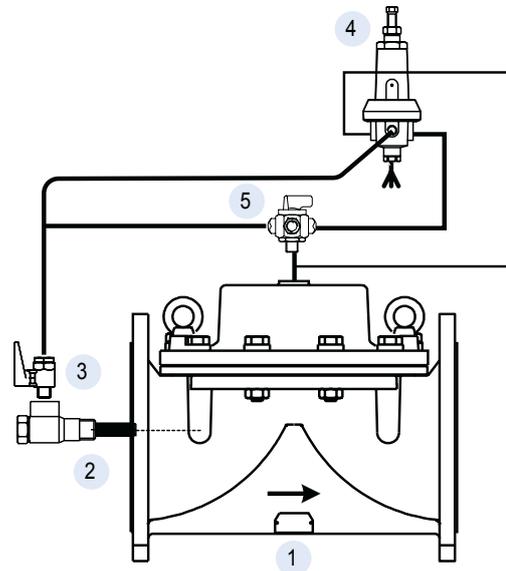
* Optional component



Typical Application

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

TO Two Stage Opening Addition



Description

The device can be added to any control function and will prevent damage caused by too fast filling of a drained pipeline. The flow rate will be restricted, until the network, downstream of the valve is full and then a full opening of the valve is enabled. Please consult DOROT for more details.

Features

- Can be added to any pipe-filling control function
- User adjusted filling pace
- Completely hydraulic – no electronic controllers, batteries or relays are used
- Simple and reliable design

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's opening will be restricted by a two-stage opening control that limits the filling flow until the downstream system is full. The valve and the controls will be a Dorot Series 100 valve or similar in all aspects.

Quick Sizing

- Valve size same as line or one size smaller
- Maximum flow speed for continuous operation 5.5 m/sec (18 ft/sec)

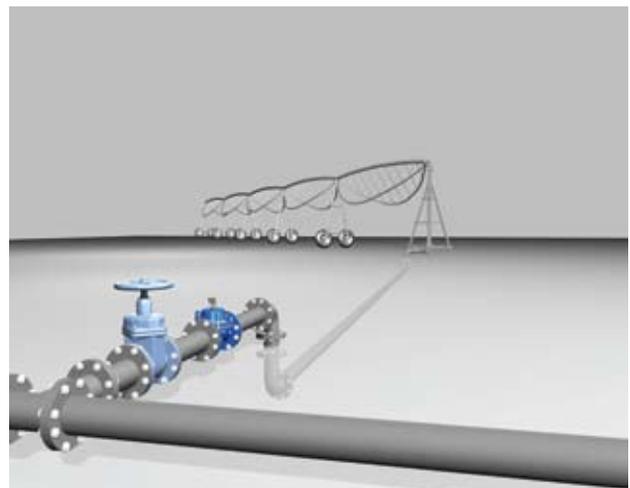
Design Considerations

- The valve should be suited for the maximal flow and allowed headloss
- Prefer selection low pressure diaphragms when the valve is expected to stay in open position for long periods

Optional Control System Components:

- 1 Main Valve
- 2 Self-flushing filter
- 3 Cock valve*
- 4 Pilot valve
- 5 3-way selector valve*

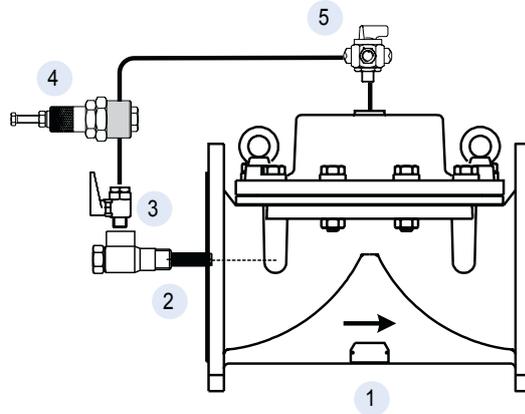
* Optional component



Typical Application

Dorot two-stage function prevents water-hammer/surges caused by fast drained pipe filling.

SP Surge Preventing Stepped-Closure Addition



Description

The device can be added to any control function and automatically adjusts the closing speed of a valve that is located at the end of a long pipeline. This ensures a moderate flow change pace that prevents pressure surges from evolving. Please consult DOROT for more details

Features

- Can be added to any fast closing control function
- Automatically self-adjusted closing pace
- Completely hydraulic – no electronic controllers, batteries or relays are used
- Simple and reliable design

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's closure pace will be controlled by a stepped closure control pilot that stops the closing procedure whenever surge waterhammer conditions evolve. The valve and the controls will be a Dorot Series 100 valve or similar in all aspects.

Quick Sizing

- Valve size same as line or one size smaller
- Maximum flow speed for continuous operation 5.5 m/sec (18 ft/sec)

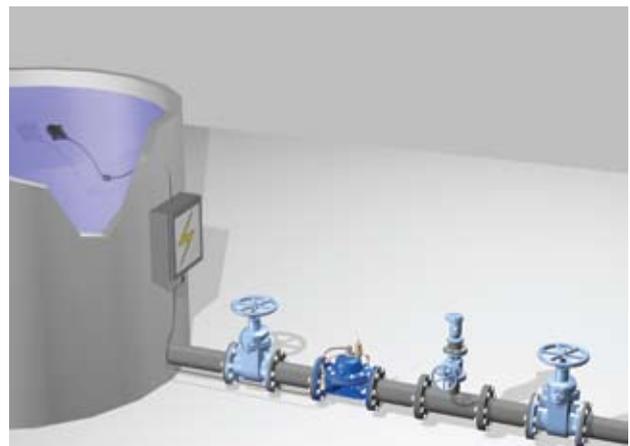
Design Considerations

- The valve should be suited for the maximal flow and allowed headloss
- Prefer selection low pressure diaphragms when the valve is expected to stay in open position for long periods
- Should be used whenever the supply pipe is longer than 2 km/ 1.2 mile and the flow speed exceeds 1.5 m/sec

Optional Control System Components:

- 1 Main Valve
- 2 Self-flushing filter
- 3 Cock valve*
- 4 Stepped closure adjusting pilot valve
- 5 3-way selector valve*

* Optional component



Typical Application

Dorot stepped closure function prevents water-hammer surges caused by fast closing level control valve.

EC PLC Controlled Valve



Description

The valve is controlled by a PLC controller that enables local or remote control of various functions such as, time related operation, the batching of liquid, and conditional (automatically modified) control parameters, in various applications. A recommended option is using the Dorot "ConDor" controller that enables the selection from a vast range of pre-programmed control functions and their combinations.

Features

- Can perform any control function
- Highly accurate and reliable electronic control
- Low power actuation
- Simple and reliable design
- Controlled by Dorot ConDor valve controller or by a third party controller

Purchase Specifications

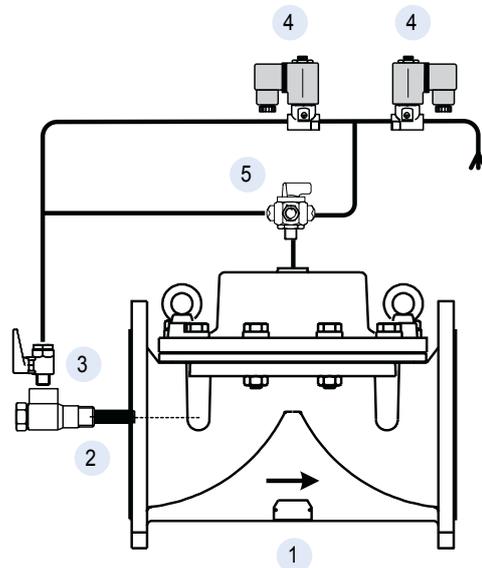
The valve will be hydraulic, direct sealing diaphragm type, which allows inline maintenance. No stem, shaft or guide bearing will be located within the water passage. The valve will be activated by the line pressure or by an external hydraulic or pneumatic pressure. The valve position will be determined by a set of two solenoid valves controlled by a PLC controller. The valve and the controls will be a Dorot Series 100 valve or similar in all aspects.

Quick Sizing

- Valve size same as line or one size smaller
- Maximum flow speed for continuous operation 5.5 m/sec (18 ft/sec)

Design Considerations

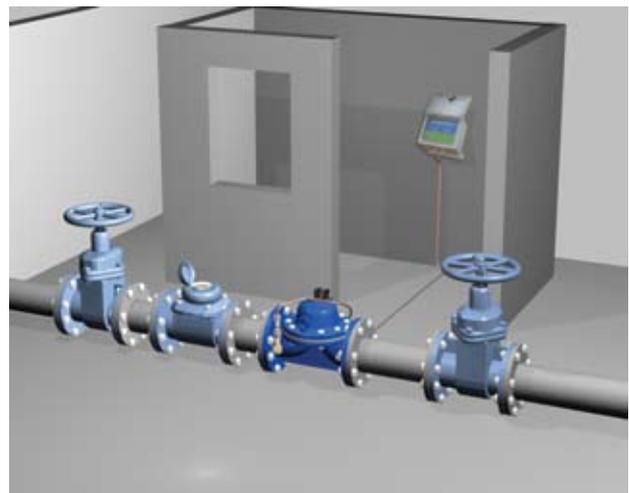
- The valve should be suited for the maximal flow and allowed headloss
- Solenoid wiring diameter should be selected so that the activation voltage - losses will equal the rated value $\pm 10\%$



Optional Control System Components:

- 1 Main Valve
- 2 Self-flushing filter
- 3 Cock valve*
- 4 2/2, NC solenoid valve
- 5 3-way selector valve*

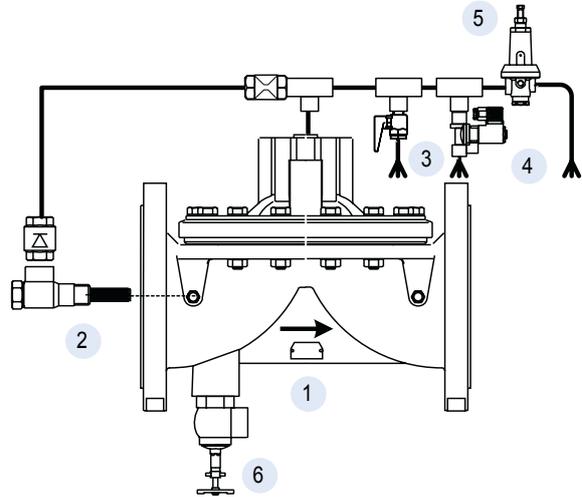
* Optional component



Typical Application

Dorot PLC Controlled Valve adjusts the flow rate following a set-point signal sent from a remote center.

DE Deluge Dry-pipe and Pre-action Valves



Description

The valve prevents flow of water into fire extinguishing sprinklers system until it is activated by the activation devices. Different valve and control system configurations are available to meet the customer and relevant standards demands. Please check Dorot Fire-Fighting publications for further information.

Features

- Fast opening
- Simple and reliable design
- Automatic reset
- Wide range of applications
- UL Approval no. VLFT EX.6543

Purchase Specifications

The valve will be hydraulic, direct sealing diaphragm type, which allows inline maintenance. No stem, shaft or guide bearing will be located with in the water passage.

The valve will be activated by the line pressure or by an external hydraulic or pneumatic pressure. The valve and the controls will be a Dorot Series 100 valve or similar in all aspects.

Quick Sizing

- Valve size same as line or one size smaller
- Maximum flow speed for intermittent operation 8 m/sec (26 ft/sec)

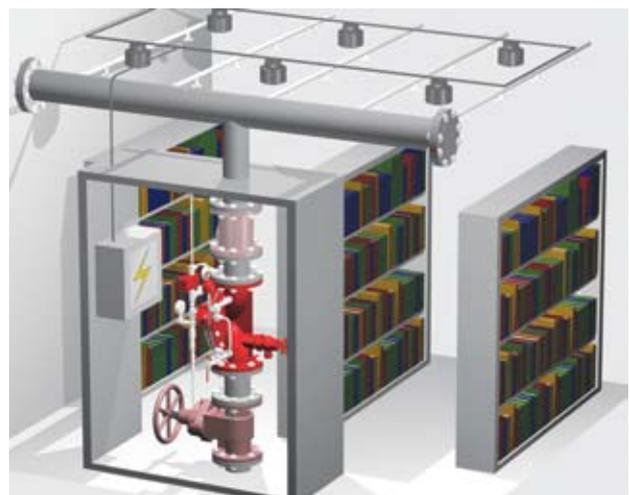
Design Considerations

- The valve should be suited for the maximal flow and allowed headloss
- Check Dorot catalogue for Fire Fighting Valves for more information with regards to valve and applications types

Optional Control System Components:

- 1 Main Valve
- 2 Self-flushing filter
- 3 Manual activation valve
- 4 Solenoid activation*
- 5 Pilot activation (by detection line)*
- 6 Drain valve

* Optional component



Typical Application

Dorot valve, activated by a sprinkler detection line.