


**DOROT Quick pressure relief (QR)**
**Control function QR**
**Quick pressure relief valve**

Applicable models: 80

Sizes: 1½" - 4"R / 40 - 100mmR

**1. Function description**

An automatic, pilot controlled back-pressure sustaining/relief valve. The valve maintains a steady, predetermined pressure in the network, upstream of its location. If the pressure falls below the set-pressure, the valve closes drip tight.

**2. Technical features**

- Medium: Water; natural, non-aggressive fluids, other (contact Aquestia).
- Pressure-rating: 1½" - 4"R – 10 bar (145 psi).
- Temp. range: 2 – 60°C (35 - 140°F).
- Flow speed for continuous operation: 0.1 – 5.5 m/sec (0.3 – 18 ft/sec).  
Maximal flow speed for intermittent operation: 8 m/sec (26 ft/sec).

**Notes:**

- If the designed/actual operating conditions on-site are incompatible with the definitions above – please contact Aquestia application engineering.
- Refer to the specific valve model publications for further details.

**3. Safety guidelines**
**Before using this product:**

- Read and understand the instructions and save them for future reference.

**Before disassembly of any accessory or component:**

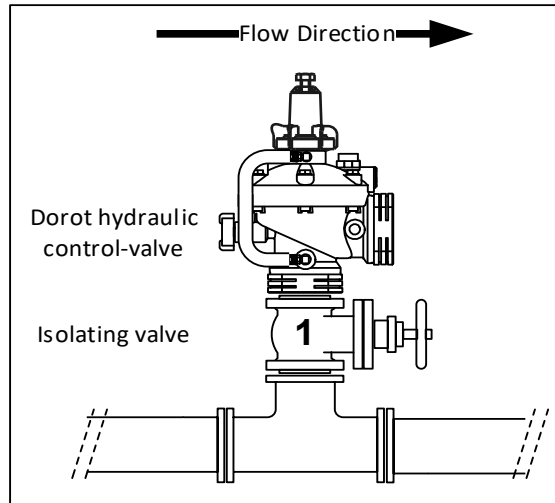
- All internal pressures must be relieved, and all media drained from the system in accordance with all applicable procedures.
- Pressure must be 0 (zero) bar/psi.

**Please note:**

- Damage to the system/surroundings may occur if installation, commissioning, operation, and maintenance instructions are not followed, or if applicable codes of practice and regulations are ignored.
- Electrical works (e.g., connection of solenoid-valves, limit-switches etc.) must be performed by a certified electrician.
- Errors in the layout design, installation or operation may affect the valve's performance and risk the system and the operator/users.
- The system's layout, installation, and commissioning are the responsibility of the system designer, installer and/or user.
- In any case of doubt and prior to taking any further action – please contact an Aquestia representative for assistance.

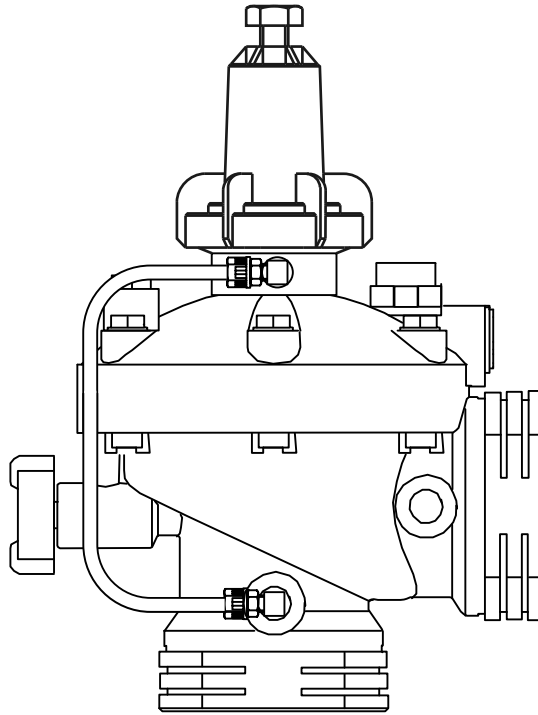
**ⓘ Failure to follow the instructions set forth in this publication could result in property damage, personal injury, or death from hazards that may be associated with this type of equipment.**

#### 4. Pre-installation



- a. The valve can be installed in any position, though installation with the bonnet facing up is recommended for ease of maintenance.
- b. Flow direction must match the engraved arrow on the bonnet.
- c. It is highly recommended to install an upstream manual isolating valve [1], as shown in the drawing above.
- d. Flush the pipeline, upstream of the valve, before assembly of the control valve.
- e. Dorot valves are generally designed for use in freshwater systems. Please consult Aquestia application engineering if other media is to be used.

## 5. Control-trim



## 6. Commissioning & adjustment

- a. Turn adjusting bolt of the pilot-valve clockwise completely.
- b. Start the pump or open the upstream isolation valve [1] (see section 4).
- c. Slowly turn adjusting bolt of the pilot-valve counter-clockwise, until the pilot's vent starts dripping. Once the pilot's vent starts dripping, turn adjusting bolt of the pilot-valve clockwise 1 turn.

**ⓘ** *Pressurizing the downstream system must be done slowly to prevent pressure surges.*

| <b>7. Troubleshooting</b>            |  |                               |  |
|--------------------------------------|--|-------------------------------|--|
| <b>Issue</b>                         | <b>Cause</b>                                 | <b>Check</b>                  | <b>Solution</b>  |
| <b>Valve fails to open</b>           | Pilot incorrectly adjusted.                  | Verify upstream pressure.     | Readjust the pilot set-point (7-10 mwc above normal maximal pressure). |
| <b>Valve fails to close or leaks</b> | Pilot incorrectly adjusted.                  | Verify upstream pressure.     | Readjust the pilot set-point (7-10 mwc above normal maximal pressure). |
|                                      | Debris between diaphragm and diaphragm seat. | Reduced water flow, noisy.    | Dismantle, clean, and reassemble.                                      |
|                                      | Damaged diaphragm.                           | Continuous flow at discharge. | Replace diaphragm.   |