

DOROT Non-slam, Hydraulic Check Valve (NS)

Non-slam, Dual-stage Closure, Hydraulic Check-Valve

Applicable Series:

S300

Sizes:

2" - 14" / 50 - 350mm

1. Function Description

A non-slam, dual-stage closure, Hydraulic Non-return Check Valve. The valve is open when the pump is operating and flow direction is normal. Valve closing is done in a two-stage operation – the first stage, 90% of valve closure, is done rapidly. The second stage, 10% of valve closure is done at an attenuated (slow), controllable rate. This enables surge dampening and prevents the plug from slamming into the seat. Both stages; rapid and slow closure operations, are user adjustable.

2. Technical Features

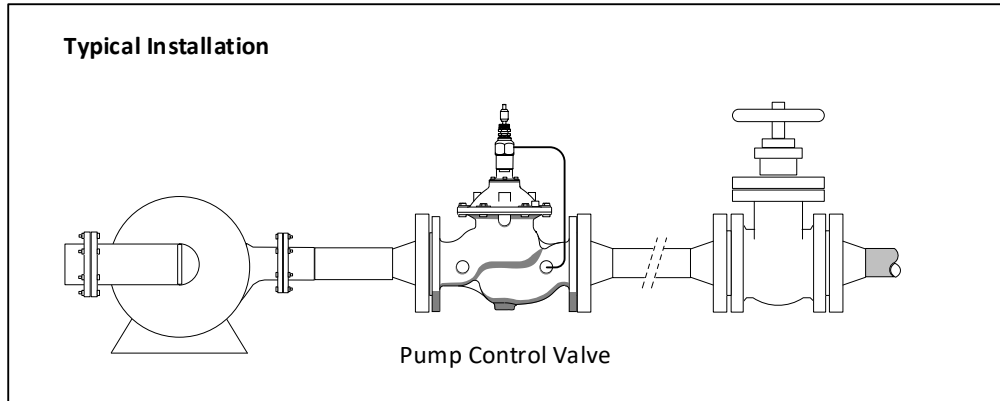
- Media: Water; natural, non-aggressive fluids
- Pressure rating: PN16 or PN25 (250psi or 360 psi) per specific valve-model
- Temp. range:
S300: 2 – 80°C (35 - 176°F)
- Flow velocity for continuous operation: 0.05 – 5.5 m/sec (0.3 – 18 ft/sec)
Max. flow velocity for intermittent operation: 8 m/sec (26 ft/sec)

Notes:

- In case the designed/actual operating conditions are not suitable for the above defined standard features, please contact Aquestia Applications-Engineering.
- Refer to specific valve model publications for further details.

3. Safety Guidelines

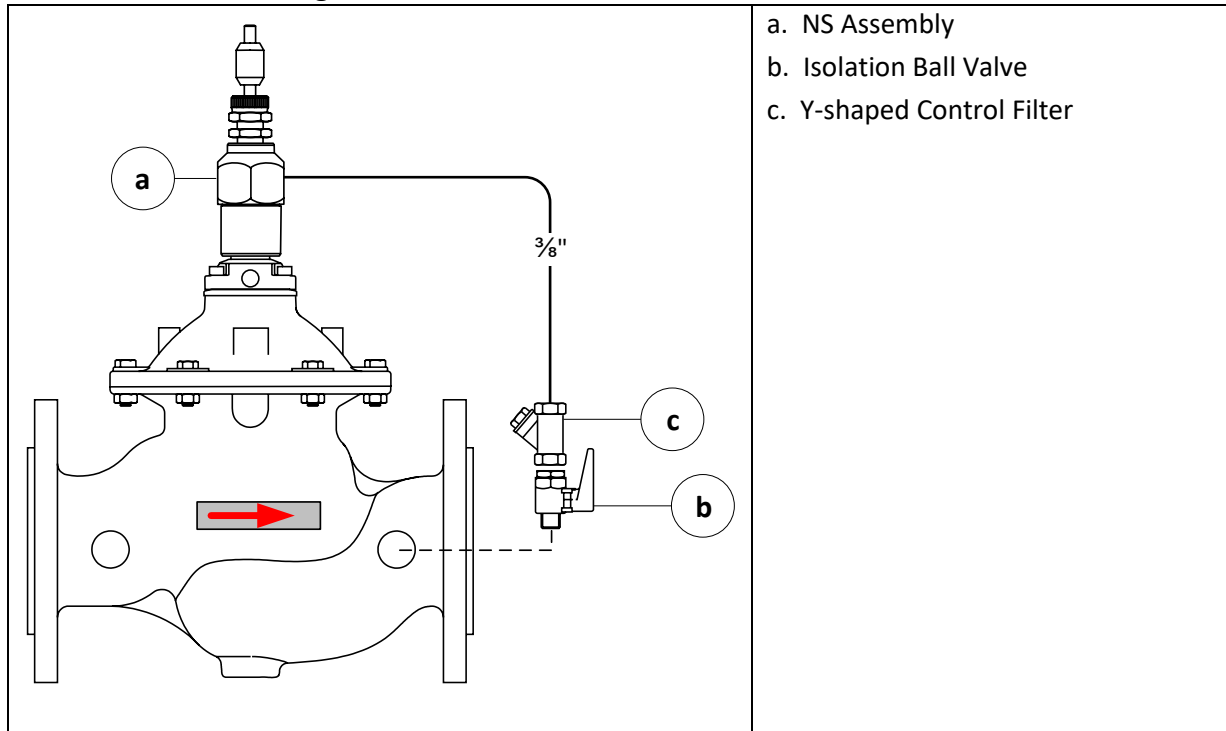
- Injury or damage to the system/surroundings may occur if installation, commissioning, operation or maintenance instructions are not followed correctly, or if applicable codes of practice and regulations are ignored.
- Dorot valves are designed for use in fresh water-systems. Please consult Aquestia Applications-Engineering in case other media is to be used.
- Be sure to depressurize the valve, prior to any disassembly of valve or control-trim parts.
- Electrical works (e.g. connection of solenoid-valves, limit-switches etc.), must be executed by a certified electrician.
- Errors in the layout-design, installation or operation may affect valve performance and may be a risk to the system and operators/users. Please note, the system layout, installation and commissioning of valves is the responsibility of the system designer, installer and/or user.
- In any case of doubt and prior to taking any further action, please contact Aquestia representative for assistance.

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4. Installation

- The valve can be installed in any position, although installation with the bonnet facing up is recommended for ease of maintenance.
- Flow direction should match the engraved arrow on the bonnet.
- For maintenance considerations, it is recommended that manual isolation valves (gate or butterfly) are installed, both sides with a strainer between the upstream isolation valve and the valve inlet (as shown in the diagram above).
- Flush pipeline upstream of the valve, before assembly of the control valve.

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5. Control Trim Design

6. Commissioning & Adjustment

- a. Install Valve - **NO ADJUSTMENT NEEDED**
- b. Open downstream Ball Valve
- c. Open downstream Isolation Valve
- d. Start the Pump.
- e. Release trapped air from control chamber by opening the air-release nut.

7. Maintenance

- a. Inspect and clean the Y-shaped Control Filter [c] as water quality dictates.
- b. Unless the water is very dirty, this service should be performed once a year.
- c. During this operation, the Main Valve must be isolated from external pressure by closure of upstream and downstream Isolation Valves.

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8. Troubleshooting

Problem	Probable Cause	Remedy
Main valve does not open	Inlet pressure lower than minimal operating pressure	Verify there is sufficient inlet pressure (upstream separation valve is open)
	Ball valve [b] is closed	Open ball valve
Main valve does not close	Ball valve [b] is closed	Open ball valve
	Filter [c] is clogged	Extract filter [c] and clean
	Foreign object stuck in valve	Disassemble main valve and flush out
	Crack in valve diaphragm	Replace diaphragm

Aquestia Ltd. reserves the right to make product changes without prior notice.

To ensure receiving updated information on parts specifications, please contact us at info@aquestia.com.

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