


DOROT Water Level Control (FLDI1)

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Pilot- 70550	
Applicable Series:	Sizes:
S100, S300, S500	1½" - 6" / 40-150mm

1. Function Description

An automatic, Float Pilot Water-level Control Valve.

The valve will modulate to maintain a steady, predetermined level in the reservoir and will keep a drip-tight closed position, in cases where the water level is higher than the Float Pilot location.

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)
 - S500/S100: 2 – 60°C (35 - 140°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:

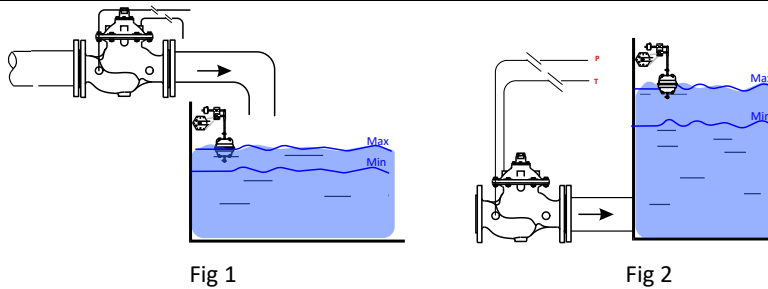
- In case the designed/actual operating conditions are not suitable for the above defined standard features, please contact Aquestia Applications-Engineering.
- Refer to specific valve model publications for further details.

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.

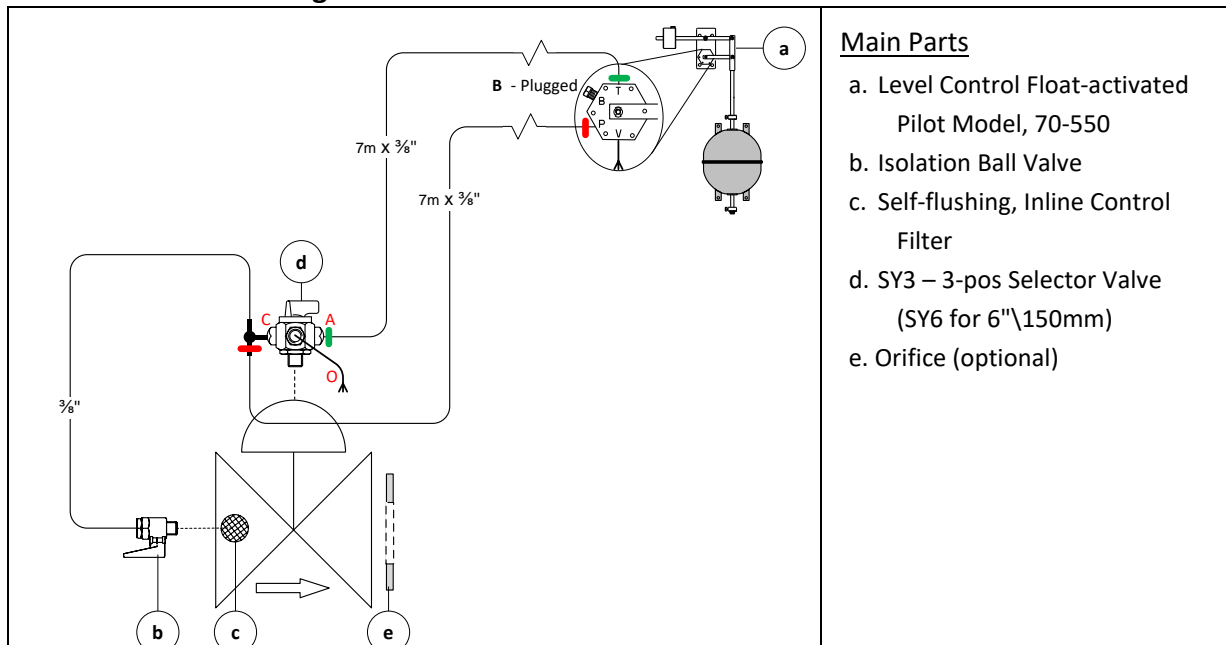

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4. Installation



- 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.
- Flush pipeline, upstream the valve, before assembly of the control-valve.
- Two methods of installing the system:
 - Fig. 1- The valve is located above the water level. The pilot is attached to the valve by a bracket. It is advisable to throttle the pipe outlet when installation is above the water level, to both reduce noise and increase flow rate.
 - Fig. 2- Separate installation of valve and pilot. The pilot is connected to the tank wall or a suspension rod (not supplied).

5. Control-trim Design



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6. Commissioning & Adjustment

- Close the valve by closing the water source.
- Connect the Pilot to the water tank.
- The Pilot should be connected to the tank at the water height required.
- Connect the Pilot to the 3W ball valve, using a $\frac{3}{8}$ " pipe/tube.
 - Note- on the Pilot Valve, the T-connector and the selector valve have green and red markings to the right of the connection tubes.
- Switch selector valve in to A (AUTO) position.
- Open the water source to fill the tank.

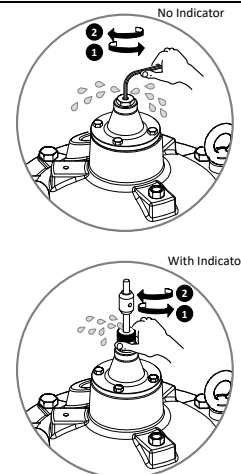
ⓘ Charging the downstream system must be done slowly to prevent pressure surges

Air bleed in S-300/500 valves

This should be done with the control chamber pressurized (main valve closed)

Using the supplied Allen key – open air-bleed-screw at the top of the bonnet and reclose it when only water, (no air) is discharged (refer to diagram on the right).

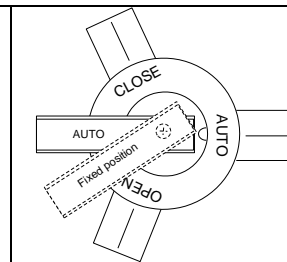
In cases where an indicator rod exists – using hand force only – release and tighten the round nut at the top of the indicator guide.



7. Manual Activation

ⓘ Note that:

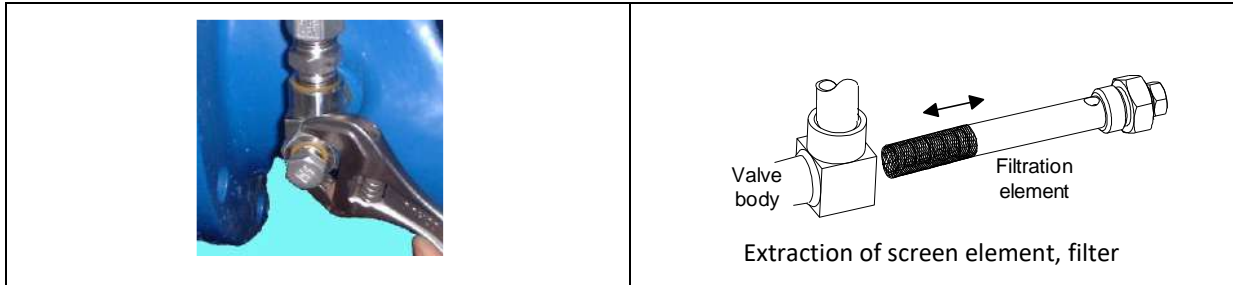
Valve can be opened or closed manually by operating the selector valve. Turn the handle toward port "OPEN" or "CLOSE" respectively.



ⓘ Return valves [d] to "OPEN" position after maintenance is completed.

8. Maintenance

- Inspect and clean the inline filter [c] as water quality dictates. This service should be performed every few months.
- During this operation, the main valve must be isolated from external pressure, by closure of up- and downstream isolation valves [A, B].
- Inspect valve performance by checking water level in the tank periodically.


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9. Troubleshooting		
General check list	Ball valves [b]	All must be open when operated
	Schematic diagram	Verify that the piping is consistent with the schematic diagram
	Release air trapped in the control chamber (S300 only)	
	Filter	Check and clean
Valve fails to open	Valve [b] is closed	Open [b]
	Pilot is stuck in CLOSE position	Check the mobility of the float – if float isn't mobile replace pilot
		Check connection of the weight to the pilot
	Water running out of the overflow pipe/tube	Verify that pilot is assembled beneath the overflow tube (note that an extension can be added for this purpose)
	Control tube connection is done incorrectly	Verify that pipes are connected according to the Green/Red rings
Valve fails to close	Verify that diaphragm is not leaking	Replace diaphragm if needed
	Detect for clogged ports or fittings	

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