

 **DOROT Excessive Flow Shut-off (FE)**

Excessive Flow Shut-off (FE)	
Pilot 3110F	
Applicable Series:	Sizes:
S300	1.5" - 6" /40-150mm

1. Function Description

Dorot Series 300 Excessive Flow Shut-off Valve ('30-FE'), is activated by the pressure of the pipeline. The valve closes drip-tight when the flow rate exceeds the normal value (due to pipe rupture). The valve will manually reset OPEN after fixing the pipe break.

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)
 - 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:

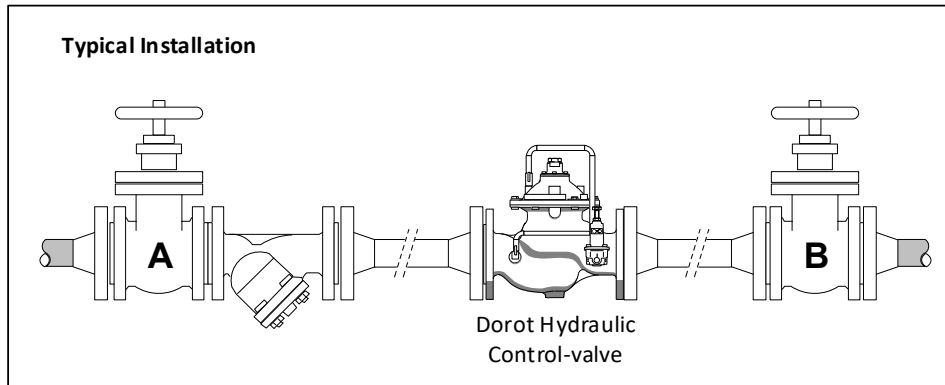
- In case the designed/actual operating conditions are not suitable for the above defined standard features, please contact Aquestia Applications-Engineering.
- Refer to specific valve model publications for further details.

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.

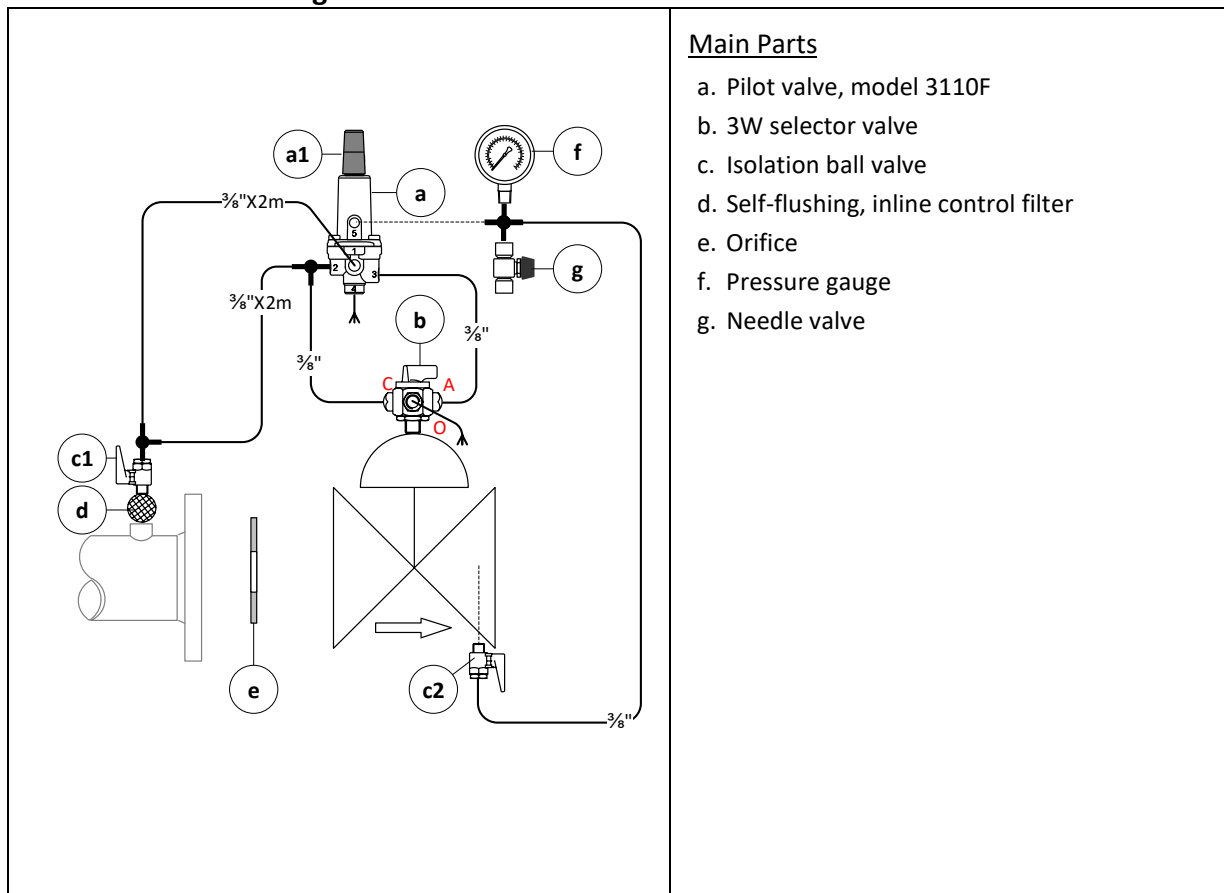

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4. Installation



- 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.
- 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.

5. Control-trim Design



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6. Commissioning & Adjustment

- While the network flow-rate is at the maximal allowed value, disconnect the pipe from port 'AUTO' on selector valve [b], unscrew cap off pilot valve [a] and tighten adjustment bolt [a1] all the way.
- Turn adjustment bolt counterclockwise until water starts flowing from the disconnected pipe.
- Turn adjustment bolt clockwise just until water stop flowing, add approx. one clockwise turn further.
- Reconnect the pipe from pilot valve [a] to port 'AUTO' on selector valve [b].
- Return the cap to its original location over the adjustment bolt on pilot valve [a].

Note: The supplied orifice plate allows increasing the preset flow-rate by 40% and reducing it by approx. 15%. Modification beyond these limits requires changing the orifice plate.

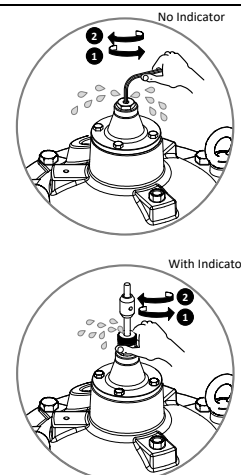
ⓘ Charging the downstream system must be done slowly to prevent pressure surges

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

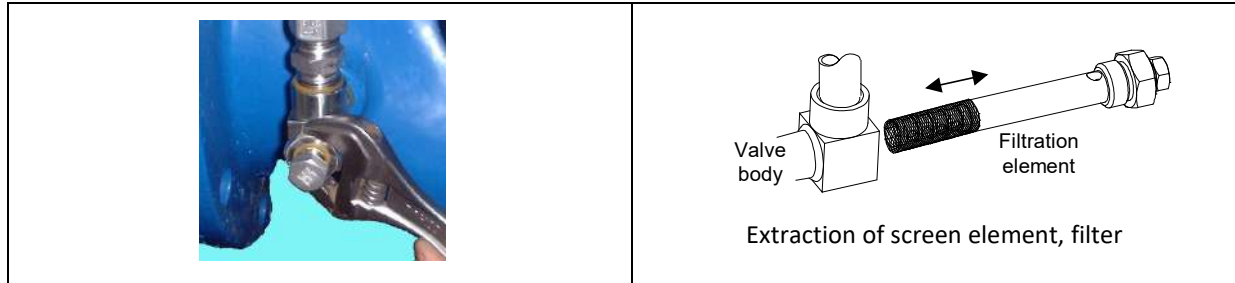
ⓘ Note that:

- Valve can be closed manually by closing ball valve [b3] while valves [b1] is opened.
- Valve can be set in a fixed position, for maintenance of control circuit, by closure of valve [b3, b1 and b2] in that order. The automatic control is cancelled while valve [b3] is closed.

ⓘ Return valves [b] to “OPEN” position after maintenance is completed.

8. Maintenance

- Inspect and clean the in-line 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 pressure gauge(s) periodically.


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9. Troubleshooting

General check list	Ball valves [b]	All must be opened when operated
	Schematic diagram	Verify that the piping is consistent with the schematic diagram
		Verify that the orifice is the correct diameter
	Release air trapped in the control chamber	
	Filter	Check and clean
	System adjustment	Verify that the pilot valve is adjusted correctly
Closes too slowly	Needle valve	Fully close the needle valve and reopen it 1.5 turns

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