IOM ULTRAF 73

Limit Flow Control Valve 3-Way, metal pilot
2”- 4” (10 bar)

RAPHAEL VALVES INDUSTRIES

Sep-24

DESCRIPTION

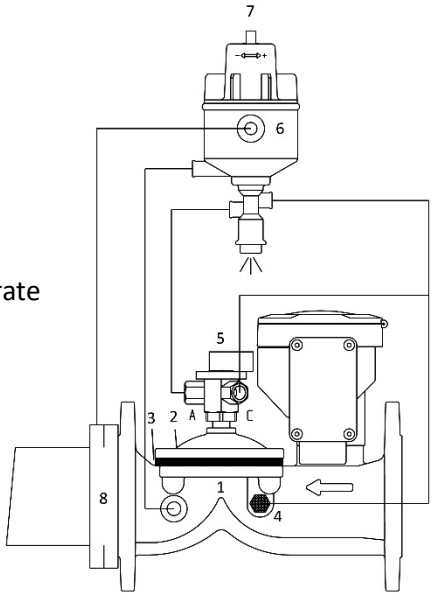
This water meter and flow limiting valve is an automatic control valve designed to limit maximum flow rate to a preset value and not allow greater flow past the valve, regardless of flow-rate demand or upstream pressure fluctuations.

INSTALLATION

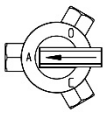
- Before installing the Ultraf, flush the pipeline to remove scale, dirt and other particles that might affect the valve's performance.
- Install the Ultraf as indicated by the arrow on the valve's body, showing flow direction. Make sure sensor port of pilot 6 is connected to the orifice plate 8.
- It is recommended to install isolation valves upstream and downstream the control valve.
- Turn the 3-way selector 5 to the "Close" position and turn on the water supply to the valve.
- Check for leaks; tighten bolts & fittings if necessary.

PARTS LIST

1. Body
2. Cover
3. Diaphragm
4. Self-flushing "finger" filter
5. 3-way selector
6. 3-way "flow control" pilot model FC
7. Pressure adjusting screw
8. Factory pre- calibrated orifice plate to given flow rate



TOP VIEW



OPERATING INSTRUCTIONS

1. Make sure that there is a downstream flow demand.
2. Turn adjusting screw 7 clockwise (-) all the way so that there is almost no pressure on the pilot's spring.
3. Turn the 3-way selector 5 to the "Auto" position.
4. Gradually increase flowrate demand downstream the Ultraf to the limited flowrate as designed. As you try to increase demand further, the Ultraf will start throttling the flow and maintain it at the maximum set flowrate.
5. To increase maximum set flow rate, turn adjusting screw 7 counterclockwise (+) one turn at a time, allowing some time. Note: It may only be increased by approximately 10% from originally pre-designed.

To open the Ultraf completely, turn 3-way selector 5 to the "Open" position. Please note that by so doing the pressure downstream will be as high as the pressure upstream.

To close the Ultraf, turn 3-way selector 5 to the "Close" position.

To limit flowrate, turn 3-way selector to the "Auto" position.

MAINTENANCE

- No maintenance is required. However, from time to time it is recommended to rotate the 3-way selector 360° to prevent sticking by sediments.
- Check maximum flowrate. Adjust if required.
- It is recommended that the valve will be easily accessible as well as clearly marked to prevent damage.
- In freezing climates, the Ultraf should be dismantled, and water drained during the winter months.

TROUBLSHOOTING ULTRAF 73

PROBLEM	CAUSE	CHECK	SOLUTION
The Ultraf does not open.	1. The 3-Way selector 5 is in the “close” position.	1. Check state of selector.	1. Turn selector to “auto”.
	2. The 3-Way selector 5 is clogged or damaged.	2. Turn selector to ‘Open’ position; No water is vented.	2. Turn off water supply to the valve. Dismantle the 3-way selector, clean or replace if required. Reassemble and activate.
	3. Pilot 6 is clogged or damaged.	3. Check manual opening using 3 way selector.	3. Turn off water supply to the valve. Clean drain ports in pilot and in valve/pipeline intakes. Check membrane. If needed - Replace damaged pilot.
The Ultraf does not close.	1. The 3-Way selector is in the “open” position.	1. Check state of selector.	1. Turn selector to the “auto” or “close” position.
	2. Blocked self-flushing filter.		2. Turn off water supply to the valve. Remove filter 4. Clean or replace if needed. Reassemble and activate.
	3. Foreign object on sealing seat or damaged diaphragm 3.	3. Poor water flow downstream.	3. Turn off water supply to the valve. Dismantle cover 2 and diaphragm 3 and remove the foreign object. Check that diaphragm body and cover are not damaged. Replace if needed. Reassemble and activate.

RAPHAEL, founded in 1949, is the first Israeli manufacturer of water control valves. RAPHAEL´s research department constantly strives to introduce new and innovative products and solutions for water control systems including water works, fire-protection and irrigation systems.

RAPHAEL

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