IOM ULTRAF 83

Ultrasonic Hydrometer Pressure Sustaining Metal Pilot, with Pulse

1.5”- 8”

RAPHAEL VALVES INDUSTRIES

Sep-24

DESCRIPTION

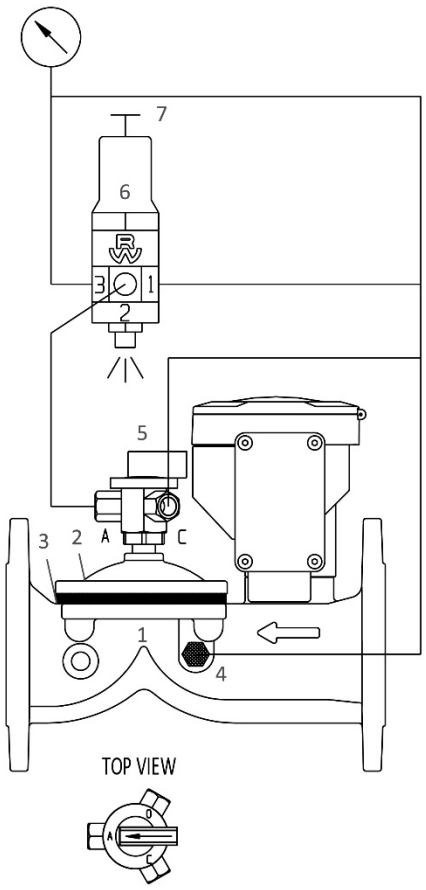
This water meter and pressure sustaining hydraulic valve is designed to sustain an upstream pressure to a preset minimum and to maintain this pressure constantly regardless of flow-rate or downstream pressure fluctuations.

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 body, showing flow direction.
- 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 Ultraf.
- 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 pilot model PSR
7. Pressure adjusting screw



OPERATING INSTRUCTIONS

1. Turn the 3-way selector 5 to the "Auto" position.
2. Make sure that there is a downstream flow demand.
3. Turn adjusting screw 7 on pilot 6 clockwise all the way.
4. Turn adjusting screw 7 counterclockwise, until water will be discharged from the vent of pilot 6 and the Ultraf will start to open.
5. To decrease upstream set pressure, continue to turn adjusting screw 7 counterclockwise one turn at a time, allowing some time between turns for the Ultraf to respond. Check upstream pressure until required pressure is achieved.
6. To increase upstream set pressure, turn adjusting screw 7 clockwise one turn at a time, allowing some time between turns for the Ultraf to respond. Check upstream pressure until required pressure is achieved.

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

To manually open the Ultraf, turn the 3-way selector 5 to "open "position.

To operate the Ultraf as PSV, turn the 3-way selector 5 to the "Auto" position.

MAINTENANCE

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

TROUBLSHOOTING ULTRAF 83

PROBLEM	CAUSE	CHECK	SOLUTION
The ULTRAF does not open.	1. The 3-way selector 5 is in "close" position. 2. Blocked pilot valve 6. 3. Not enough pressure upstream.	1. Check position. 2. No water venting from the pilot's 6 drain port. 3. Check upstream pressure.	1. Shift back to "auto" or "open". 2. Turn off water supply to valve. Dismantle and clean drains in the pilot. Reassemble and activate. 3. Increase upstream pressure or change pilot set pressure to lower.
The ULTRAF does not close.	1. The 3-way selector 5 is in "open" position. 2. Foreign object on sealing seat. 3. Blocked self-flushing filter 4.	1. Check position. 2. Poor water flow downstream the Ultraf.	1. Shift back to "auto". 2. Turn off water supply to the Ultraf. Disassemble cover 2, diaphragm 3 and remove foreign object. Check that diaphragm, body and cover are not damaged. Reassemble and activate. 3. Turn off water supply to the Ultraf. Remove filter to clean or change it. Reassemble and activate
Unstable set pressure upstream / minimum set pressure not obtained.	1. Blocked or damaged pilot 6.	1. Upstream set pressure not met upon changing flow rate.	1. Turn off water supply to the Ultraf. Dismantle and clean pilot's drains. Check state of the membrane. In case of internal parts wear, change pilot. 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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