IOM RAF 8R

Pressure Sustaining 3-W Control Valve
Manual override with plastic pilot 1”- 4”

RAPHAEL VALVES INDUSTRIES

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DESCRIPTION

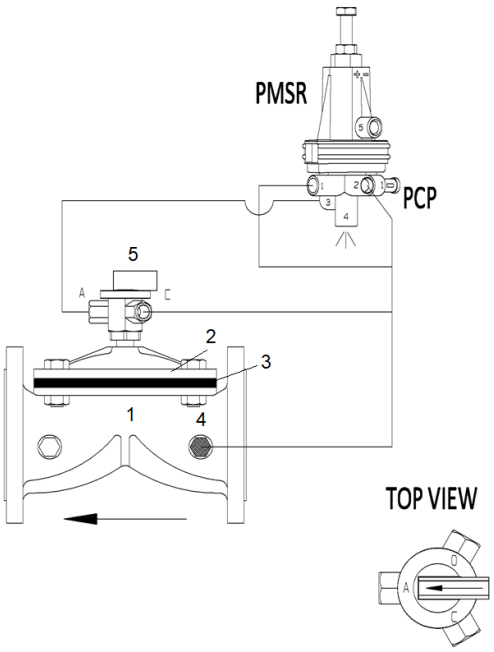
This pressure sustaining valve is an automatic control valve designed to sustain a minimum upstream pressure as determined by the operator and relieve excess pressure to the downstream system (or to the atmosphere if required).

INSTALLATION

- Before installing the RAF, flush the pipeline to remove scale, dirt and other particles that might affect the valve's performance.
- Install the RAF as indicated by the arrow on the valve's cover, 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 RAF.
- Check for leaks; tighten bolts & fittings if necessary.

PARTS LIST

1. Body
2. Cover
3. Diaphragm
4. Self-Flushing "Finger" filter
5. 3-Way manual selector
6. 3-Way pilot model PSR
7. Pressure adjusting screw



OPERATING INSTRUCTIONS

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

To open the RAF completely, turn the 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 RAF, turn the 3-way selector #5 to the "Close" position.

To sustain preset pressure, turn the 3-way selector to the "Auto" position.

MAINTENANCE

- Check downstream 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.
- During the off season, energize the solenoid from time to time for the same reason.
- It is recommended that the valve be easily accessible as well as clearly marked to prevent accidental damage.
- In freezing climates, the valve should be dismantled, and water drained during the winter months.

TROUBLSHOOTING RAF 63B31

PROBLEM	CAUSE	CHECK	SOLUTION
The RAF does not open.	1. The 3-Way selector (5) is in the "Close" position.	1. Check state of selector.	1. Turn selector to the "Auto" position.
	2. Blocked pilot.	2. No water coming out of drain.	2. Turn off water supply to the valve. Dismantle and clean drain connection in pilot. Reassemble and activate.
	3. Not enough pressure upstream.	3. Check upstream pressure.	3. Increase upstream pressure or change pilot set pressure to lower.
The RAF does not close.	1. The 3-Way selector is in the "0pen" position.	1. Check state of selector.	1. Turn selector to the "Auto" or "Close" position.
	2. Foreign object on sealing seat.	2. Constant small water flow downstream.	2. Turn off water supply to the valve. Disassemble cover and diaphragm and remove foreign object. Check that diaphragm body and cover are not damaged. Reassemble and activate.
	3. Blocked self-flushing filter (4).	3. No water flow from port # 4 on valve.	3. Turn off water supply to the valve. Remove the filter and clean or change it. Reassemble and activate.
Unstable pressure. RAF not maintaining set pressure upstream.	1. Blocked or damaged pilot.	1. Unstable pressure upstream of the valve.	1. Turn off water supply to the valve. Dismantle and clean drains in pilot. Check 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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