IOM RAF 83B

Pressure Sustaining Control Valve

3-Way Metal Pilot 2”- 16”

RAPHAEL VALVES INDUSTRIES

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DESCRIPTION

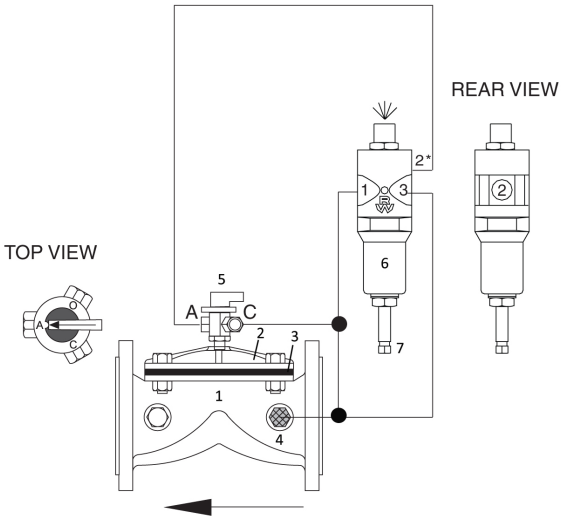
This pressure sustaining valve is an automatic control valve designed to sustain a minimum upstream pressure as determined by the operator and relieve excess pressure to the downstream system (or to the atmosphere if required).

INSTALLATION

- Before installing the valve, flush the pipeline to remove scale, dirt and other particles that might affect the valve's performance.
- Install the valve 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 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 Pilot Model P683S
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 discharge port of pilot 6 and the valve will start to open. Check the upstream pressure.
5. To increase the upstream pressure that will allow the valve to open, turn adjusting screw 7 clockwise one (1) 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 allow the valve to open, turn adjusting screw 7 counterclockwise one (1) turn at a time, allowing some time between turns for the valve to respond. Check downstream pressure until required pressure is achieved.

<u>To open</u> the valve 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.

<u>To close</u> the valve, turn the 3-way selector 5 to the "Close" position.

<u>To sustain</u> preset pressure, turn the 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 upstream pressure. 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 valve should be dismantled, and water drained during the winter months.

TROUBLSHOOTING RAF 83B

PROBLEM	CAUSE	CHECK	SOLUTION
The valve does not open.	1. The 3-Way selector (5) is in the "Close" position. 2. Blocked pilot 6	1. Check state of selector. 2. No water coming out of drain.	1. Turn selector to the "Auto" position. 2. Turn off water supply to the valve. Dismantle and clean drain connection in pilot. Reassemble and activate.
The valve does not close.	1. The 3-Way selector is in the "0pen" position. 2. Foreign object on sealing seat. 3. Blocked self-flushing filter (4).	1. Check state of selector. 2. Constant small water flow downstream. 3. No water flow from port # 4 on valve.	1. Turn selector to the "Auto" or "Close" position. 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. Turn off water supply to the valve. Remove the filter and clean or change it. Reassemble and activate.
Unstable set pressure upstream / minimum set pressure not obtained.	1. Blocked or damaged pilot.	1. Unstable pressure downstream 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.

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