



IOM RAF 80Q (6"-16")

Quick Pressure Relief Control Valve
(large pilot) 6" – 16"



 **RAPHAEL**

Apr-24

DESCRIPTION

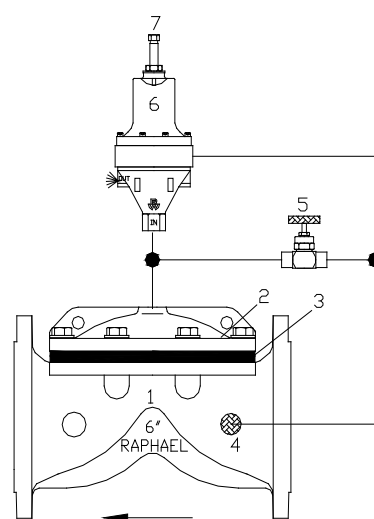
This automatic quick pressure relief valve is designed to open instantly whenever the system's pressure exceeds a safety level as determined and preset by the operator on the pilot. The valve is installed on a "Branch" and the excess pressure is relieved to the atmosphere.

INSTALLATION

- Before installing, 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 (butterfly valves type B8) upstream of the quick pressure relief valve.
- Loosen locking nut and turn adjusting screw # 7 clockwise all the way 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. Needle Valve
6. Two-Way Pressure Sustaining Pilot P-181
7. Pressure Adjusting Screw



OPERATING INSTRUCTIONS

1. Make sure that there is a downstream flow demand.
2. Close needle valve # 5 all the way and then reopen it for 1-2 turns. The needle valve # 5 adjusts the hydraulic reaction speed. The more the needle valve # 5 is opened, the quicker the valve will shut down after discharging excess pressure. While adjusting the needle valve, please keep in mind that too quick of a reaction may cause a water hammer.
3. Turn adjusting screw # 7 counterclockwise, until valve will start to open. Check the pressure upstream of the valve.
1. **To decrease** preset upstream pressure that allows the valve to close, turn adjusting screw # 7 counterclockwise one (1) turn at a time, allowing some time between turns for the valve to respond. Check upstream pressure until required pressure is achieved. Tighten locking nut on the adjusting screw # 7.
2. **To increase** preset upstream pressure that allows the valve to close, 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. Tighten locking nut on the adjusting screw # 7.

MAINTENANCE

- No maintenance is required.
- Check upstream pressure. Adjust if required.
- It is recommended that the valve 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.

TROUBLESHOOTING RAF 80Q

PROBLEM	CAUSE	CHECK	SOLUTION
When the pressure upstream is increased the valve does not open	<ol style="list-style-type: none"> 1. Adjusting nut # 7 is adjusted to open in a higher pressure. 2. Pilot # 5 is clogged or stuck. 	<ol style="list-style-type: none"> 1. No water discharge from the pilot's exhaust port. 	<ol style="list-style-type: none"> 1. Release locking nut and turn the adjusting screw # 7 counterclockwise until a lower pressure opens the valve. 2. Turn off water supply to the valve. Dismantle and clean drain connections in the pilot. Check membrane and seals. Reassemble and activate.
The valve does not close:	<ol style="list-style-type: none"> 1. The adjusting screw # 7 is adjusted to open in a lower pressure. 2. Blocked self-flushing filter. 3. Foreign object on seal. 4. The needle valve # 5 is clogged. 5. Pilot # 6 is clogged and stuck or has damaged seals or membrane. 	<ol style="list-style-type: none"> 1. The valve is constantly discharging a small amount of water. 2. The valve is constantly discharging a small amount of water. 3. Constant water discharge from pilot's exhaust or cover. 	<ol style="list-style-type: none"> 1. Release locking nut and turn the adjusting screw # 7 clockwise until a higher pressure opens the valve. 2. Turn off water supply to the valve. Remove the filter and clean or change it. Reassemble and activate. 3. Turn off water supply to the valve. Remove the cover # 2 and remove the foreign object. Check that diaphragm, body and cover are not damaged. Reassemble and activate. 4. Turn off water supply to the valve. Dismantle needle valve #5, and clean water passage. 5. Turn off water supply to the valve. Dismantle the pilot. Clean water passage. Change the membrane or seals if required. Reassemble and activate.
When the pressure upstream is increased the valve does not	<ol style="list-style-type: none"> 1. Adjusting nut # 7 is adjusted to open in a higher pressure. 2. Pilot # 5 is clogged or stuck. 	<ol style="list-style-type: none"> 1. No water discharge from the pilot's exhaust port. 	<ol style="list-style-type: none"> 1. Release locking nut and turn the adjusting screw # 7 counterclockwise until a lower pressure opens the valve. 2. Turn off water supply to the valve. Dismantle and clean drain connections in the pilot. Check membrane and seals. Reassemble and activate.