IOM G-80

2-Way Pressure Sustaining Valve

RAPHAEL VALVES INDUSTRIES

Sep-24

DESCRIPTION

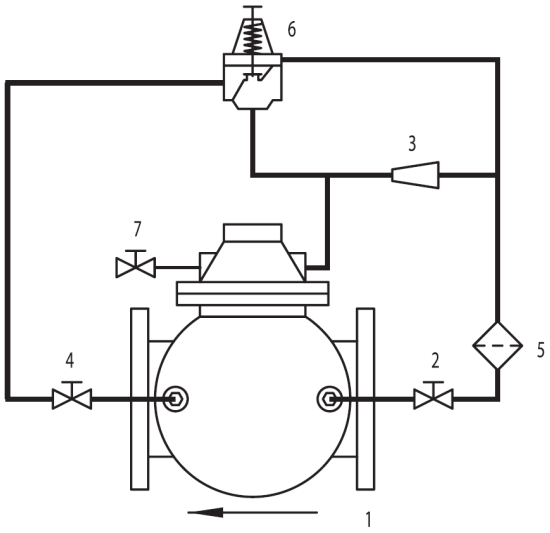
The pressure relief valve type G80 is controlled by a two-way, spring-loaded adjustable pressure relief pilot P181 (6). The valve closing speed is adjusted by needle valve (3) or preset with a constant orifice.
The valve opens and relief the excess pressure when the line pressure exceeds the set point of the pilot. When the pressure is reduced below the set value the valve closes.

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 upstream and downstream the control valve.
- Close 2-way valves # 4 and # 7. Open 2-way valve # 2 and turn on the water supply to the valve.
- Check for leaks; tighten bolts & fittings if necessary.

PARTS LIST

1. Body
2. Cock valve
3. Needle valve
4. Cock valve
5. Filter
6. Pressure sustaining pilot P181
7. Cock valve



OPERATING INSTRUCTIONS

1. Make sure that there is a downstream flow demand.
2. Close needle valve # 3 all the way and then reopen it for 3/4 - 1 turns. The needle valve # 3 adjusts the hydraulic reaction speed. The more the needle valve # 3 is opened the quicker the reaction is. While adjusting the needle valve, please keep in mind that too quick of a reaction may cause a water hammer.
3. Loosen locking nut and turn pilot adjusting screw clockwise all the way.
4. Open 2-way valve # 4.
5. Turn pilot adjusting screw counterclockwise, until valve will start to open.
6. **To increase** minimum upstream pressure, turn pilot adjusting screw 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. **To decrease** minimum upstream pressure, turn pilot adjusting screw 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.

   To manually open the valve completely, close the 2-way valves # 2 and # 4 and open 2-way valve # 7. Please note that by so doing, the pilot will be omitted, and the pressure downstream will be as high as the pressure upstream.

   To manually close the valve, close 2-way valves # 4 and # 7, and open 2-way valve # 2.

   To maintain preset pressure, , open 2-way valves # 2 & # 4. Close 2-way valve # 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 or heat protected properly.

TROUBLSHOOTING G-80

PROBLEM	CAUSE	CHECK	SOLUTION
The RAF does not open	1. Valve 4 is turned off.	1. Check state of valve.	1. Open valve 4.
	2. Blocked water connections.	2. Open valve 7. **WARNING: Maximum high pressure will pass through the valve.** If the valve opens:	2. Turn off water supply to the valve. Dismantle and clean connections. Reassemble and activate.
The RAF does not close.	1. Valve 2 is turned off.	1. Check state of valves.	1. Open valve 2.
	2. Valve 7 is open.	2. Check state of valve.	2. Turn off valve 7.
	3. Blocked or stuck needle valve (3).	3. . Check state of valve.	3. Repeat adjustment and operating instructions from 1 to 5.
	4. Foreign object on the sealing seat	4. Constant small water flow downstream.	4. Turn off water supply to the valve. Remove cover and take away foreign object. Check that diaphragm body and cover are not damaged. Reassemble and activate.
	5. Blocked self-flushing filter (5).		5. Turn off water supply to the valve. Remove filter. Clean and replace if needed. Reassemble and activate.
Unstable pressure	1. Needle valve (3) is improperly adjusted.	1. Irregular downstream pressure.	1. Repeat adjustment and operation instructions from 1 to 5.
	2. Blocked or damaged pilot.	2. Irregular downstream pressure.	2. Turn off water supply to the valve. Dismantle and clean drain connections in pilot. Check that membranes, lower seals and O rings are not damaged. Reassemble and activate.
	3. Blocked water connections.	3. Irregular downstream pressure.	3. Turn off water supply to the valve. Dismantle and clean connections. 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

RAPHAEL Valves Industries (1975) Ltd.

North Industrial Zone Or Akiva, 3063927 P.O.Box 555, Israel

Tel. +972 4 6263555 | info@raphael-valves.com | raphael-valves.com