IOM RAF 31B

N.C. Electric & Manual Remote Control Valve 2”- 10”

RAPHAEL VALVES INDUSTRIES

Aug-24

DESCRIPTION

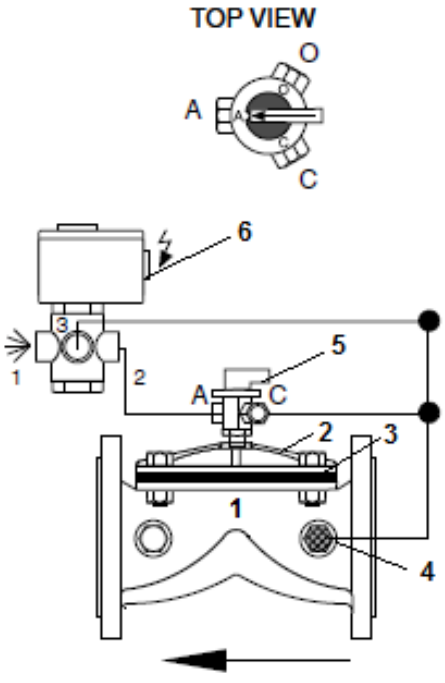
This valve is a hydraulic “on-off” control valve that can be operated manually or by electric remote control. The valve can be “normally closed” (NC) or “normally open” (NO), as required. “Normally” means the state of the valve when the solenoid is de-energized.

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.
- Make sure that the solenoid has the right specifications and connect it to the energy source.
- It is recommended to install isolation valves (butterfly valves type B8) upstream and downstream the control valve.
- Check for leaks; tighten bolts & fittings if necessary.

PARTS LIST

1. Body
2. Cover
3. Diaphragm
4. Self-flushing “finger” filter
5. 3-W selector
6. 3-W N.O. solenoid



OPERATING INSTRUCTIONS

1. **Electrical Operation**

- Turn 3-way selector (5) to the “Auto” position.
- **For normally closed valves** -
- To open the valve, energize solenoid (6).
- To close the valve, de-energize solenoid (6).
- **For normally opened valves** -
- To open the valve, de-energize solenoid (6).
- To close the valve, energize solenoid (6).
- **For pulse solenoids**, each pulse will cycle the valve operation.

2. **Manual Operation**
   - To open the valve, turn the 3-way selector (5) to the “Open” position.
   - To close the valve, turn the 3-way selector (5) to the “Close” 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.
- 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 31B

PROBLEM	CAUSE	CHECK	SOLUTION
The valve does not open.	1. The 3-Way selector (5) is in the "Close" position or is clogged or damaged.	1. Check state of selector.	1. Turn selector to the "Open" or "Auto" position. If no water is drained through these ports, turn off water supply to the valve, dismantle and clean vents. Replace selector if needed. Re-assemble and activate.
	2. The solenoid (6) is not connected to power supply.	2. Check for loose wires or improper power supply.	2. Wire properly and activate.
	3. The solenoid (6) is energized, but the main valve does not open.	3. Check coil by touching it with a small screwdriver. It should be magnetized when solenoid is energized.	3. Replace coil if needed or turn off water supply to the valve. Dismantle and clean solenoid's vents. Reassemble and activate.
The valve does not close.	1. The 3-Way selector (5) is in the "0pen" position.	1. Check state of selector.	1. Turn selector to the "Auto" or "Close" position.
	2. Power supply is still on.	2. Check electrical supply to the solenoid.	2. Disconnect electrical supply.
	3. Power supply is off but valve does not close due to blocked or stuck solenoid (6).	3. Check by manually closing the valve.	3. Turn off water supply to the valve. Dismantle and clean the solenoid's vents. Reassemble and activate.
	4. Foreign objects on sealing seat.	4. Water flow downstream.	4. & 5. Turn off water supply to the valve. Dismantle cover (2) and diaphragm (3). Remove foreign object. Check that diaphragm, body and cover are not damaged. Replace if required.
	5. Damaged diaphragm (3).	5. Water is constantly vented from solenoid.	
	6. Blocked self-flushing filter (4).	6. No response to manually closing the valve.	6. Turn off water supply to valve. Disassemble filter, clean or replace it. Re-assemble 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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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