



# IOM RAF 31B

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



 **RAPHAEL**

Apr-24

## DESCRIPTION

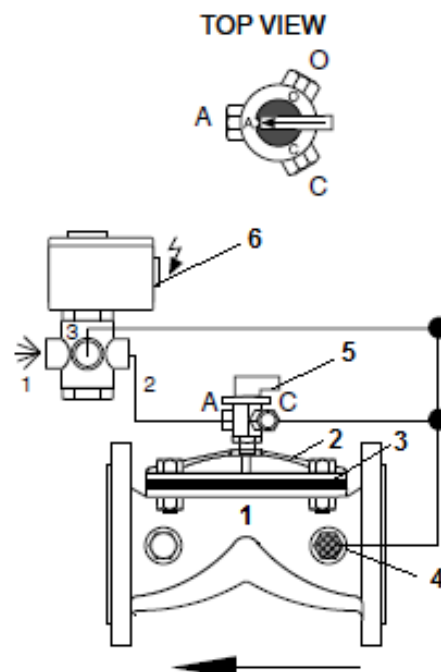
This valve is a hydraulic “on-off” control valve that can be operated manually or by electric remote control. The valve can be “normally closed” (NC) or “normally open” (NO), as required. “Normally” means the state of the valve when the solenoid is de-energized.

## 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



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## OPERATING INSTRUCTIONS

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### 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.

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## MAINTENANCE

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- 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.

## TROUBLESHOOTING RAF 31B

PROBLEM	CAUSE	CHECK	SOLUTION
The valve does not open.	<ol style="list-style-type: none"> <li>1. The 3-Way selector (5) is in the "Close" position or is clogged or damaged.</li> <li>2. The solenoid (6) is not connected to power supply.</li> <li>3. The solenoid (6) is energized, but the main valve does not open.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check state of selector.</li> <li>2. Check for loose wires or improper power supply.</li> <li>3. Check coil by touching it with a small screwdriver. It should be magnetized when solenoid is energized.</li> </ol>	<ol style="list-style-type: none"> <li>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.</li> <li>2. Wire properly and activate.</li> <li>3. Replace coil if needed or turn off water supply to the valve. Dismantle and clean solenoid's vents. Reassemble and activate.</li> </ol>
The valve does not close.	<ol style="list-style-type: none"> <li>1. The 3-Way selector (5) is in the "Open" position.</li> <li>2. Power supply is still on.</li> <li>3. Power supply is off but valve does not close due to blocked or stuck solenoid (6).</li> <li>4. Foreign objects on sealing seat.</li> <li>5. Damaged diaphragm (3).</li> <li>6. Blocked self-flushing filter (4).</li> </ol>	<ol style="list-style-type: none"> <li>1. Check state of selector.</li> <li>2. Check electrical supply to the solenoid.</li> <li>3. Check by manually closing the valve.</li> <li>4. Water flow downstream.</li> <li>5. Water is constantly vented from solenoid.</li> <li>6. No response to manually closing the valve.</li> </ol>	<ol style="list-style-type: none"> <li>1. Turn selector to the "Auto" or "Close" position.</li> <li>2. Disconnect electrical supply.</li> <li>3. Turn off water supply to the valve. Dismantle and clean the solenoid's vents. Reassemble and activate.</li> <li>4. &amp; 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.</li> <li>6. Turn off water supply to valve. Disassemble filter, clean or replace it. Re-assemble and activate.</li> </ol>