Premier Water Systems MFV-1

Premier Water Systems MFV1 Manual Backwash Water Filter Valve

User Instruction Manual

1. Product Overview

The Premier Water Systems MFV1 is a manual backwash water filter valve designed for various water treatment applications, including activated carbon and iron filtration systems. This valve provides three manually controlled cycles: Filter, Rinse, and Backwash, allowing for easy operation and maintenance of your filtration system.

It features a durable metal handle and is compatible with standard FRP/mineral tanks that have a 2.5-inch threaded opening. The valve includes 1-inch NPT inlet, outlet, and drain ports.

2. Setup and Installation

This valve is designed for straightforward installation on compatible filtration tanks. Ensure all connections are secure and leak-free before operation.

1. **Tank Compatibility:** The MFV1 valve fits regular FRP/mineral tanks with a 2.5-inch threaded opening. It is compatible with tanks designed for valves from brands such as Fleck, Clack, Autorol, and Watts.
2. **Port Connections:** The valve features 1-inch NPT inlet, outlet, and drain connections. Ensure appropriate plumbing fittings are used for these connections.
3. **Media Screen:** A media screen (not included with the unit) is required to prevent filtration media from exiting the tank during backwash or rinse cycles. Install the media screen onto the riser pipe before inserting it into the tank and attaching the valve.
4. **Secure Mounting:** Carefully thread the valve onto the tank's 2.5-inch opening. Hand-tighten first, then use a strap wrench if necessary to ensure a snug fit without overtightening.



Figure 1: MFV1 valve properly installed on a standard FRP tank.

Important: This valve is not suitable for water softener systems. It is intended for filtration applications such as iron, carbon, and calcite systems.

3. Operating Instructions

The MFV1 valve offers three distinct operating positions, controlled by the metal handle. Always ensure the system is depressurized before changing valve positions to prevent damage or injury.

3.1. Filter Cycle

In the **FILTER** position, raw water enters the valve and flows downwards through the filtration media in the tank. The filtered water then flows upwards through the riser pipe, into the valve body, and exits through the

outlet port to your plumbing system.



Figure 2: Filtration process (down-flow) through the MFV1 valve.

3.2. Backwash Cycle

The **BACKWASH** position reverses the water flow to clean the filtration media. Water enters the valve, flows down the riser pipe, and then upwards through the media, lifting and expanding the media bed to dislodge trapped particles. This dirty water is then directed out through the drain port.

Perform backwash cycles as recommended by your system's design or when flow rates decrease significantly.

3.3. Rinse Cycle

The **RINSE** position is used after a backwash cycle to settle the media bed and flush any remaining fine particles to the drain. Water flows downwards through the media, then up the riser pipe, and out the drain port. This ensures the media is properly settled and clean before returning to service.

Rinse for a few minutes until the drain water runs clear.

4. Maintenance

The MFV1 valve is designed for durability and requires minimal maintenance. Regular backwashing and rinsing of your filtration media, as outlined in the operating instructions, is the primary maintenance task for the overall system.

- **Visual Inspection:** Periodically inspect the valve for any signs of leaks, cracks, or damage.
- **Handle Operation:** Ensure the handle moves smoothly between positions. Do not force the handle if it feels stiff.
- **Seal Integrity:** If leaks occur around the handle or connections, check the O-rings and seals. Replacement parts may be available from Premier Water Systems or authorized distributors.

5. Troubleshooting

This section addresses common issues you might encounter with your MFV1 valve and filtration system.

- **Reduced Flow Rate:** If the water flow rate through your system decreases, it may indicate that the filtration media is fouled and requires a backwash cycle. Ensure the valve is in the FILTER position during normal operation.
- **Water Leaks:** Check all plumbing connections for tightness. If leaks persist from the valve body or handle,

inspect internal seals and O-rings for wear or damage.

- **Media Loss During Backwash:** If filtration media is observed in the drain water during backwash, ensure the media screen is properly installed and intact. Excessive backwash flow rate can also lead to media loss; adjust water pressure if possible.
- **Valve Handle Stiffness:** If the handle is difficult to turn, ensure the system is depressurized. Do not use excessive force. Internal components may require inspection or lubrication.

For issues not resolved by these steps, please contact Premier Water Systems customer support.

6. Specifications

Feature	Specification
Model Number	MFV-1
Brand	Premier Water Systems
Material	Metal (Handle), Plastic (Body)
Exterior Finish	Metal
Inlet Connection Size	1 Inch
Inlet Connection Type	National Pipe Tapered (NPT)
Outlet Connection Size	1 Inch
Outlet Connection Type	NPT
Number of Ports	3 (Inlet, Outlet, Drain)
Base Thread Size	2.5 Inches
UPC	818368014320

7. Warranty and Support

For information regarding product warranty, technical support, or replacement parts, please contact Premier Water Systems directly. Refer to your purchase documentation for specific warranty terms and contact details.

Manufacturer: Oceanic Water Systems

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