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Premier Water Systems RO5-MFV-100-DF

Premier Water Systems 5-Stage 150 GPD Undersink Reverse Osmosis Water Filtration System

Model: RO5-MFV-100-DF

Introduction

This instruction manual provides detailed guidance for the installation, operation, and maintenance of your Premier Water Systems 5-Stage 150 GPD Undersink Reverse Osmosis Water Filtration System. Following these instructions will ensure optimal performance, longevity, and the highest quality drinking water for your home.
The system is designed to purify tap and well water, removing up to 99% of over 1,000 contaminants, including lead, chlorine, fluoride, arsenic, hormones, asbestos, calcium, and sodium. It features a compact design that fits under most standard kitchen sinks and includes all necessary components for a do-it-yourself installation.

Product Overview and Components

The Premier Water Systems Reverse Osmosis system utilizes a 5-stage filtration process to deliver clean, great-tasting water. Key components include the main filter housing unit, a 2.8-gallon storage tank, an RO faucet, and various connection parts.



Image Description: An assembled view of the Premier Water Systems 5-Stage Reverse Osmosis system. It shows the main white manifold with four horizontal filter cartridges (Stage 4 is the RO membrane), three vertical pre-filter housings (Stages 1, 2, 3) in blue and clear, a white pressure tank, and a chrome RO faucet. The pre-filter housings are labeled AC (Activated Carbon), GC (Granular Carbon), and SD (Sediment).

Filtration Stages:

1. **Stage 1: 5 Micron Sediment Filter**
   Traps sediment and other particles like dirt, silt, and rust, which can affect water taste and appearance.
2. **Stage 2: 5 Micron Carbon Block Filter**
   Reduces chlorine, chloramines, and other materials that cause bad taste and odor.
3. **Stage 3: Granular Activated Carbon Filter**
   Further removes chlorine, organic chemicals, tastes, odors, VOCs, and other impurities from tap water.
4. **Stage 4: Semipermeable Membrane (150 GPD)**
   Removes up to 99% of total dissolved solids (TDS) and contaminants such as chromium, arsenic, copper, lead, fluoride, and sodium.
5. **Stage 5: Carbon In-Line (GAC) Final Polishing Filter**
   A high-quality In-Line Granular Activated Carbon filter used after the water storage tank to remove any remaining chlorine or other chemicals that cause bad taste or odor before the water is dispensed.

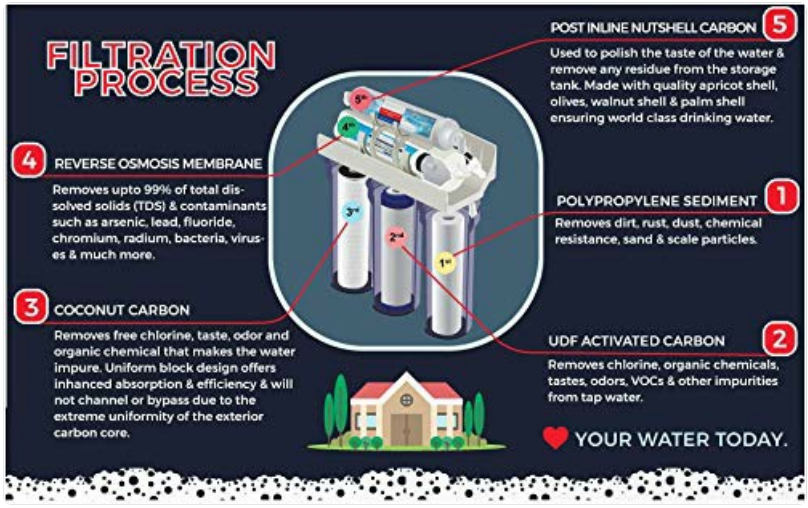


Image Description: A diagram illustrating the 5-stage filtration process. It shows water flowing through three pre-filters (Polypropylene Sediment, UDF Activated Carbon, Coconut Carbon) before reaching the Reverse Osmosis Membrane, and finally a Post Inline Nutshell Carbon filter. Each stage is numbered and described with its primary function.

Included Components:

- 5-Stage Filtration System Unit
- Water Storage Tank (2.8 Gallon, Model: RO-122)
- RO Faucet
- Housing Wrench
- Color-Coded Tubing
- Saddle Drain Valve
- Tank Ball Valve
- Auto Shut-off Valve



Image Description: A detailed view highlighting various features and components of the RO system. It shows the RO unit, storage tank, and faucet, with callouts for "Lead Free Faucet, Safe Ceramic Disk", "NSF Approved Tank, 100% 304 Stainless", "Color Coded, Quick-Connect Fittings", "Double O-Ring Housing, Leak-Resistant", "5.5\" Wide Slim Design for Under-Sink Easy Installation", and "BPA Free Genuine, All Parts are BPA-Free & FDA Approved". An "Air Leak Testing" icon is also present.

Setup and Installation

Installation of the Premier Water Systems RO unit is designed for do-it-yourself convenience and typically takes a couple of hours. Ensure you have basic plumbing tools available before beginning. The system is intended for under-sink installation.

General Installation Steps:

1. **Prepare the Installation Area:** Clear the space under your sink. Ensure access to the cold water line, drain pipe, and a suitable location for the RO faucet on your countertop or sink.
2. **Install the RO Faucet:** Drill a hole (if necessary) in your countertop or sink for the RO faucet. Secure the faucet according to the manufacturer's instructions.
3. **Connect to Cold Water Supply:** Install the feed water adapter (usually a T-valve) to your cold water line.
4. **Install the Drain Saddle Valve:** Attach the saddle drain valve to the drain pipe under your sink. This will carry the wastewater from the RO system.

5. **Mount the RO Unit:** Secure the main RO filter housing unit under the sink using the provided mounting bracket.
6. **Connect Tubing:** Use the color-coded tubing to connect the components. For leak-free installation, simply push tubing approximately ½ inch deep into the quick-fitting connectors until it seats firmly, then secure with the locking clips if provided. Refer to the system diagram for correct connections.
7. **Install the Storage Tank:** Place the storage tank in a convenient location under the sink and connect it to the RO unit using the tank ball valve and tubing.
8. **Flush the System:** Before first use, flush the system according to the detailed instructions in the full manual to remove carbon fines and air.

For detailed, step-by-step instructions with diagrams, please refer to the comprehensive installation guide included with your product packaging.

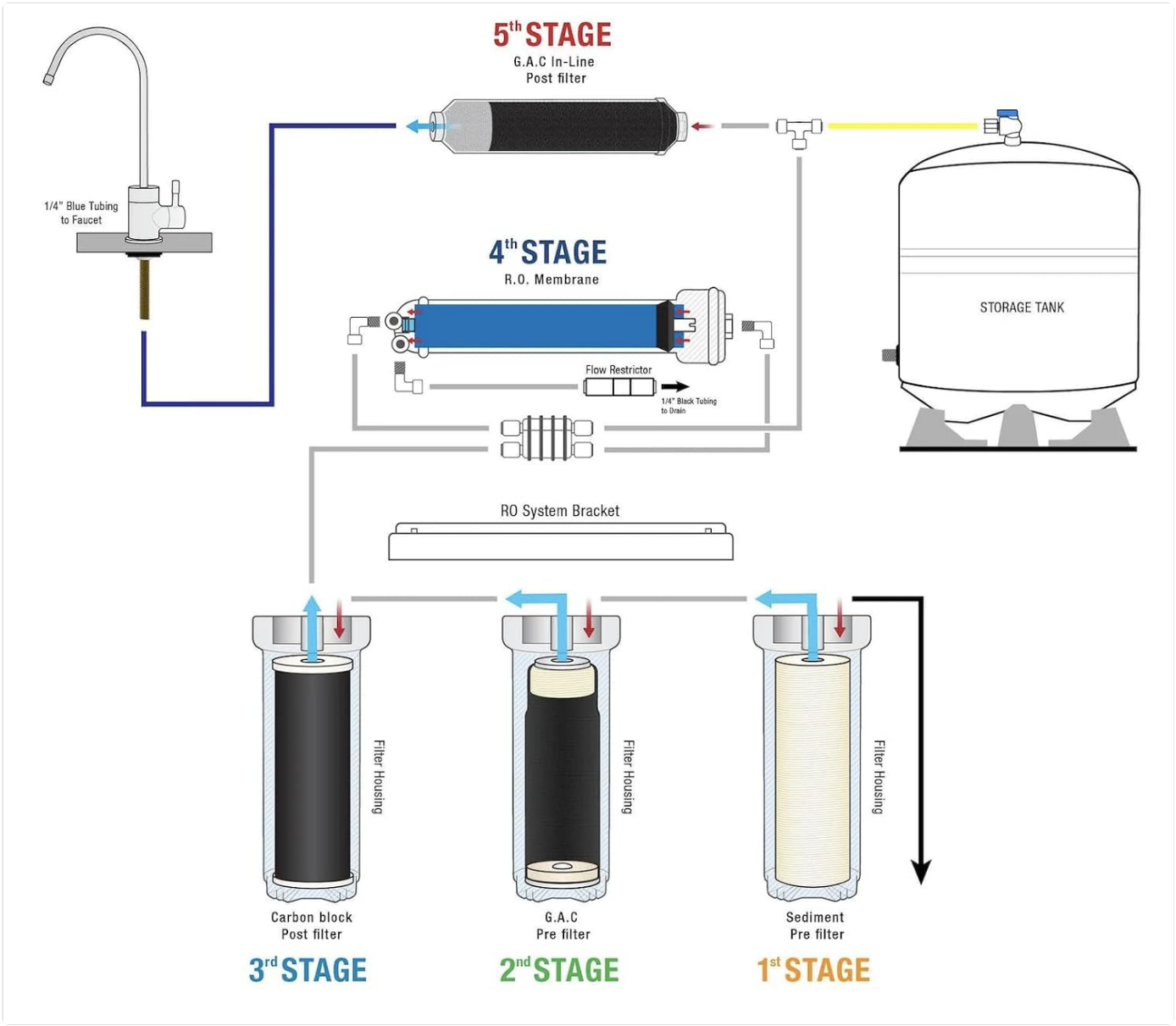


Image Description: A schematic plumbing diagram of the 5-stage RO system. It illustrates the flow of water from the sediment pre-filter (1st Stage), through the G.A.C. pre-filter (2nd Stage), carbon block post-filter (3rd Stage), R.O. Membrane (4th Stage) with a flow restrictor and drain line, to the storage tank, and finally through the G.A.C. In-Line Post filter (5th Stage) to the faucet. Tubing connections are shown with blue for filtered water and black for drain water.

Operating Instructions

Once installed and flushed, your Premier Water Systems RO unit operates automatically. When you open the RO faucet,

purified water from the storage tank will be dispensed. As water is drawn, the system will automatically refill the tank.

- **Initial Fill:** After installation and flushing, allow the storage tank to fill completely. This may take several hours. The first tank of water should be drained completely to ensure proper system function and to remove any residual carbon fines.
- **Water Dispensing:** Turn the handle of the RO faucet to dispense purified water. The flow rate will depend on the pressure in the storage tank.
- **System Refill:** The auto shut-off valve will automatically stop water flow to the drain once the storage tank is full and restart when water is drawn, maintaining a full tank of purified water.

Maintenance

Regular maintenance, primarily filter replacement, is crucial for the continued performance and water quality of your RO system.

Filter Replacement:

The frequency of filter replacement depends on your incoming water quality and usage. General guidelines are:

- **Pre-filters (Stages 1, 2, 3):** Replace every 6-12 months. These filters protect the RO membrane from sediment and chlorine.
- **RO Membrane (Stage 4):** Replace every 2-3 years, or when water production significantly decreases, or when the taste of the water deteriorates.
- **Post-filter (Stage 5):** Replace every 12 months.

Replacement Procedure:

1. Turn off the cold water supply to the RO system and close the tank ball valve.
2. Open the RO faucet to relieve pressure in the system.
3. Use the provided housing wrench to unscrew the filter bowls.
4. Remove old filters and dispose of them. Clean the inside of the filter housings.
5. Insert new filters, ensuring proper orientation.
6. Screw the filter bowls back on, hand-tighten, then use the wrench for a snug fit (do not overtighten).
7. Slowly turn on the cold water supply and open the tank ball valve. Check for leaks.
8. Flush the system as per initial setup instructions after filter replacement.

Troubleshooting

Problem	Possible Cause	Solution
No water from faucet or very slow flow	• Low incoming water pressure • Clogged pre-filters or RO membrane • Tank ball valve closed • Air in the system	• Check household water pressure (requires 45-70 psi) • Replace pre-filters or RO membrane • Ensure tank ball valve is open • Allow system to fill and flush

Problem	Possible Cause	Solution
Water has bad taste or odor	• Expired carbon filters (Stages 2, 3, 5) • Contaminated storage tank	• Replace carbon filters • Sanitize the storage tank (refer to full manual)
Constant drain water flow	• Faulty auto shut-off valve • Clogged flow restrictor • Damaged RO membrane	• Inspect/replace auto shut-off valve • Clean or replace flow restrictor • Replace RO membrane
Leaks	• Loose connections • Damaged O-rings • Cracked housing	• Tighten all connections • Inspect and replace O-rings • Contact customer support for replacement parts

If troubleshooting steps do not resolve the issue, please contact Premier Water Systems customer support for further assistance.

Specifications

Model Number	RO5-MFV-100-DF
Filtration Stages	5 Stages
Membrane Capacity	150 Gallons Per Day (GPD)
Storage Tank Capacity	2.8 Gallons (Model: RO-122)
Installation Type	Under Sink
Feed Water Pressure	45-70 psi (pounds per square inch)
Contaminant Reduction	Up to 99% of over 1,000 contaminants including lead, chlorine, fluoride, arsenic, hormones, asbestos, calcium, sodium.
Special Features	Chlorine Reduction, Lead-Free Faucet, NSF Approved Tank, BPA-Free Components, Quick-Connect Fittings
Manufacturer	Premier Water Systems
UPC	818368016171

Warranty and Support

For information regarding product warranty, please refer to the warranty card included with your purchase or contact Premier Water Systems directly. Premier Water Systems is committed to providing high-quality products and customer satisfaction.

If you require technical assistance, have questions about installation, operation, or maintenance, or need to order replacement parts, please contact Premier Water Systems customer support. Contact details can typically be found on the product packaging or the manufacturer's official website.

Ask a question about this manual

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

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Details

Model number, symptoms, what you tried, or the section of the manual you are using.

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