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- › [Membrane Solutions](#) /
- › [Membrane Solutions Reverse Osmosis Membrane 50 GPD User Manual](#)

Membrane Solutions WS02

Membrane Solutions Reverse Osmosis Membrane User Manual

Model: WS02

1. INTRODUCTION

This manual provides essential information for the installation, operation, and maintenance of your Membrane Solutions Reverse Osmosis (RO) Membrane. Designed for under-sink RO drinking water purification systems, this membrane utilizes 100% food-grade Thin Film Composite (TFC) material to deliver safe and clean drinking water. It is tested by an independent third-party to meet NSF/ANSI 58 standards, ensuring high performance and reliability. The membrane effectively reduces hundreds of impurities by over 99%, including heavy metals, organic materials, and harmful minerals, providing a high 97% stabilized salt rejection rate.



Figure 1: Membrane Solutions Reverse Osmosis Membrane (Model: WS02)

2. SETUP AND INSTALLATION

The Membrane Solutions RO membrane is designed with an industry-standard size of 11.75 x 1.75 inches, making it compatible with most standard 1812/2012 residential-style RO membrane housings that utilize a 2-inch internal diameter. Ensure your system is compatible before installation.

2.1 Pre-Installation Steps

1. **Preparation:** Ensure the water supply to your RO system is turned off and the pressure in the system is relieved.
2. **Handling:** Keep the membrane element moist at all times after initial wetting. It is shipped dry in an original sealed package to maintain quality. Avoid touching the membrane surface directly with bare hands.
3. **Compatibility Check:** Verify that the membrane fits your specific RO system housing. Refer to the compatibility chart below for common compatible models.

Does it fit your Water System?

Make a simple check of the appearance or consult MS support to ensure this membrane fits your system.



Note the location of this Y-shaped brine seal. It should NOT seat close to the water outlet (the end has 2 small black washers).

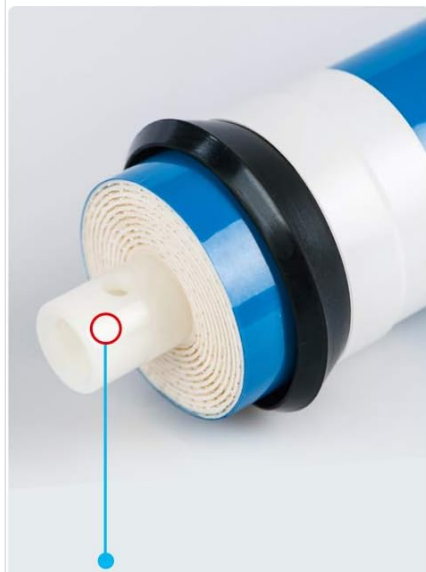
Figure 2: Compatibility chart for Membrane Solutions RO Membrane, showing various compatible RO systems.

2.2 Installation Procedure

1. **Remove Old Membrane:** Carefully open the RO membrane housing and remove the old membrane. Dispose of it according to local regulations.
2. **Insert New Membrane:** Insert the new Membrane Solutions RO membrane into the housing. Ensure it is seated correctly, paying attention to the center hole design and double sealing-rings for proper fit and prevention of re-pollution.
3. **Secure Housing:** Close and securely tighten the RO membrane housing.
4. **Restore Water Supply:** Slowly turn on the water supply to the RO system. Check for any leaks.
5. **Initial Flush:** It is recommended to rinse the new membrane for 24 hours prior to first use to meet NSF/ANSI 58 Standard. The first full tank of permeate (filtered water) must be discarded. Do not use this initial permeate for drinking water or food preparation. A 30-minute flush is suggested when used for the first time.

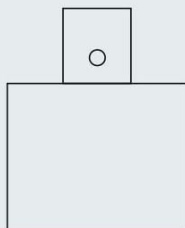
The Best Filtration

Made to the highest standard



Center Hole Design

Easy to remove or replace filter by grabbing the plastic spindle in the middle.



Thin-Film Composite

High density graded membrane film ensures that you get the best filtration.



Double Sealing-Ring

Food-grade o-ring to prevent the filtered water from being polluted again.

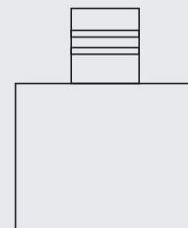


Figure 3: Key features of the membrane, including the center hole design for easy replacement, thin-film composite for high density filtration, and double sealing-rings for secure fit.

Easy Swap

Changing Filter is Quick and Easy



30
min

Flush new membrane
30 minutes when used
for the first time.

12-36
months

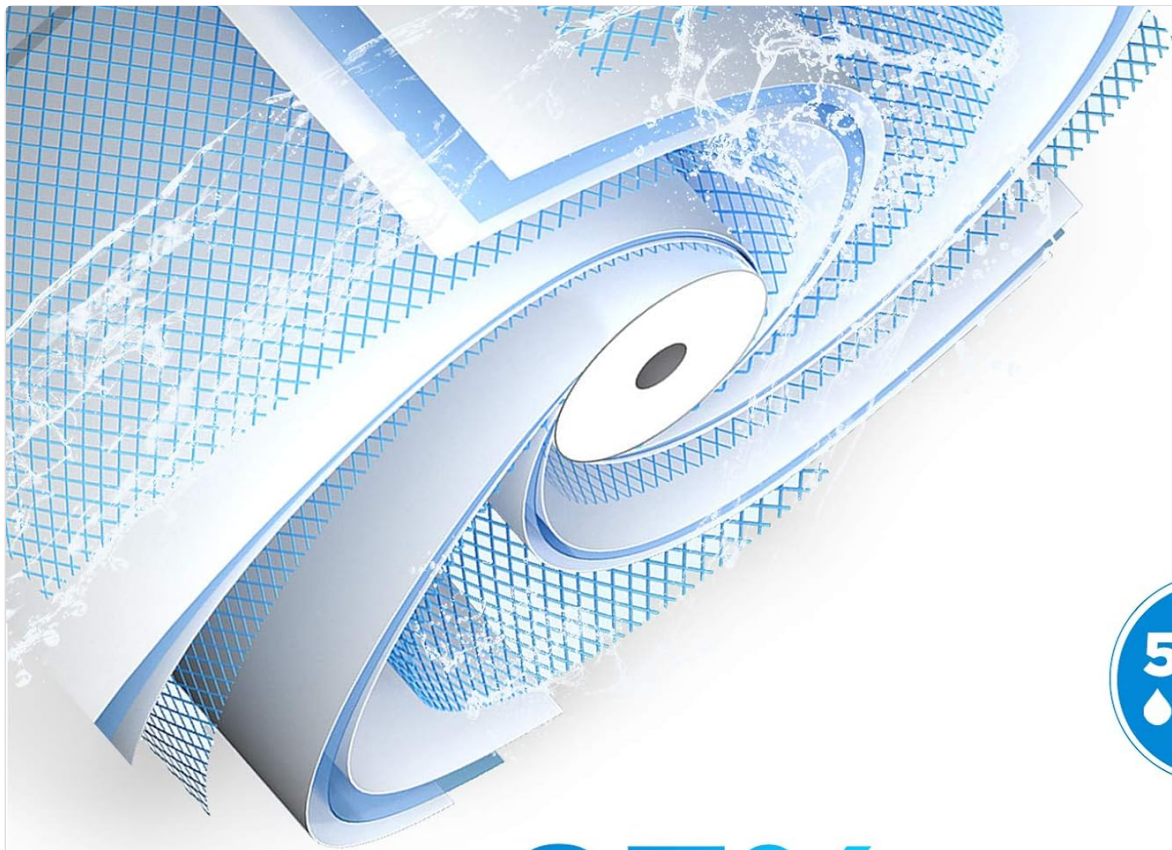
Recommended change
filter once a year for
better water quality.

NOTE that this RO membrane
lifespan will vary based upon
local water conditions and
household usage.

Figure 4: Visual guide for easy membrane replacement, highlighting the initial 30-minute flush and recommended change interval.

3. OPERATING INSTRUCTIONS

Once installed and flushed, your Membrane Solutions RO membrane will begin purifying your water. The 0.0001-micron TFC membrane layer effectively removes up to 99% of over 1000 contaminants, including heavy metals like fluoride, calcium, magnesium, lead, colloids, chromium, nitrates, organic materials, and other harmful minerals. This results in clean, great-tasting water.



97%
STABILIZED SALT REJECTION



Industry leading state-of-the-art TFC (Thin Film Composite) designed, removes a broad range of water contaminants.

Figure 5: Illustration of the membrane's high 97% stabilized salt rejection rate and 50 GPD (Gallons Per Day) capacity.

High Density Graded RO membrane

Removes up to **99%** of over **1000** contaminants from your water



Figure 6: Visual representation of the high-density graded RO membrane's ability to remove up to 99% of contaminants down to 0.0001 micron.

4. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your RO membrane.

4.1 Membrane Lifespan

The membrane element has a life expectancy between **24 to 36 months**. This duration is based on average feedwater quality, temperature, and incoming water pressure. Regular monitoring of your water quality (e.g., using a TDS meter) can help determine the ideal replacement time for your specific conditions. While some visual guides suggest annual changes, the product's stated lifespan is 24-36 months.

4.2 Prolonged System Shutdowns

To prevent biological growth during prolonged system shutdowns, it is recommended that membrane elements be immersed in a preservative solution. Remember to rinse out the preservative thoroughly before resuming use of the system.

4.3 Chlorine Exposure

The membrane shows some resistance to short-term attack by chlorine (hypochlorite). However, continuous exposure may damage the membrane and should be avoided. Ensure your pre-filters (e.g., carbon filters) are effectively removing chlorine before it reaches the RO membrane.

5. TROUBLESHOOTING

If you experience issues with your water purification system after installing the Membrane Solutions RO membrane, consider the following common scenarios:

- **Low Water Production:** Check for adequate water pressure, ensure pre-filters are not clogged, and verify the membrane is correctly seated in its housing.
- **Poor Water Quality (High TDS):** This often indicates a depleted membrane. If the membrane is nearing the end of its lifespan (24-36 months) or if your incoming water quality is particularly challenging, replacement may be necessary. Ensure proper flushing after installation.
- **Leaks:** Inspect all connections and O-rings. Ensure the membrane housing is properly sealed and tightened.

For more complex issues or if problems persist, please refer to the 'Warranty and Support' section for assistance.

6. SPECIFICATIONS

Attribute	Detail
Brand	Membrane Solutions
Model Number	WS02
Material	Polyamide Thin-Film Composite
Product Dimensions	1.75"D x 1.75"W x 11.75"H
Item Weight	7.2 ounces
External Testing Certification	NSF
Product Benefits	Provides safe-clean drinking water by reducing hundreds of impurities
Unit Count	1.0 Count
Compatible Water Purifier Models	APEC Water Systems ROES-50 (and other standard 1812/2012 residential-style RO systems)
Manufacturer	Membrane Solutions Corp
UPC	730440363051

Certification Assurance



This ROULP-1812/2012/3012 RO Membranes is Tested and Certified by NSF International against NSF/ANSI Standard 58 for materials requirements.

COMPONENT



Figure 7: Certification Assurance details, including NSF/ANSI 58 standard compliance for the RO membrane.

7. WARRANTY AND SUPPORT

Membrane Solutions is committed to providing high-quality products and customer satisfaction.


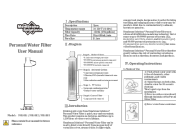
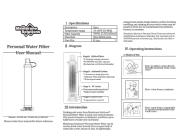



7.1 Return Policy

This product is eligible for a refund or replacement within 30 days of purchase, subject to the retailer's return policy.

7.2 On-Demand Support

Assistance is available from our experts, ready to answer any of your questions about your RO membrane. American-based customer support is available for the life of the product. For concerns or questions, please reach out to Membrane Solutions customer service.

Related Documents - WS02

	<p>Membrane Solutions MSA3S Air Purifier: User Manual and Operating Guide</p> <p>Comprehensive user manual and operating guide for the Membrane Solutions MSA3S Air Purifier. Covers installation, operation, maintenance, troubleshooting, warranty, and safety precautions.</p>
	<p>Membrane Solutions Personal Water Filter User Manual - Safe Drinking Water Guide</p> <p>Comprehensive user manual for the Membrane Solutions Personal Water Filter (Models M01001, M01002, M01003). Learn how to use, maintain, and care for your portable water purifier to ensure safe drinking water from rivers, streams, and lakes, removing bacteria and protozoa.</p>
	<p>Membrane Solutions Personal Water Filter User Manual</p> <p>User manual for the Membrane Solutions Personal Water Filter, detailing its specifications, diagram, introduction, operating instructions, cautions, and disclaimer. Learn how to use and maintain your portable water filter for safe drinking water.</p>
	<p>Membrane Solutions Personal Water Filter User Manual: Portable Water Purification for Outdoors</p> <p>Comprehensive user manual for the Membrane Solutions Personal Water Filter. Learn how to use, maintain, and store your portable water purifier for hiking, camping, travel, and emergency preparedness.</p>
	<p>Membrane Solutions MSA3S Air Purifier: Quick Start Guide for EZ Mode App Setup</p> <p>This guide provides step-by-step instructions for setting up the Membrane Solutions MSA3S Air Purifier using the MSPure mobile app in EZ Mode. It covers app download, account registration, device pairing via Wi-Fi, and adding members.</p>
	<p>MSA3S Air Purifier: Connect to Alexa via MSPure App - Quick Start Guide</p> <p>A step-by-step guide to connect the Membrane Solutions MSA3S Air Purifier to Amazon Alexa using the MSPure mobile app. Learn how to enable voice control for your smart air purifier.</p>