



# User Manual



## PR Series Water Purifier



**Model: P3**

Please retain the user manual for future reference

Operations and Maintenance Handbook.  
Membrane Solutions PR Series Water Purifier System

Revision	Date	Description
01	06/2024	New document.

Images used in this manual may not represent your actual product;  
they are for visual reference only.

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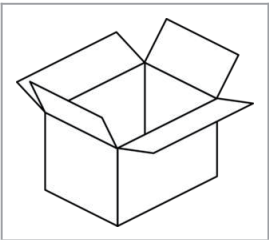
# Overview

## Getting Started



- Introduction
- Warning & Caution
- Operating Parameters
- Typical Installation

## Installation



- System Contents
- Installation List
- Installation Preparation
- Installation Steps

## Operation and Maintenance Guide



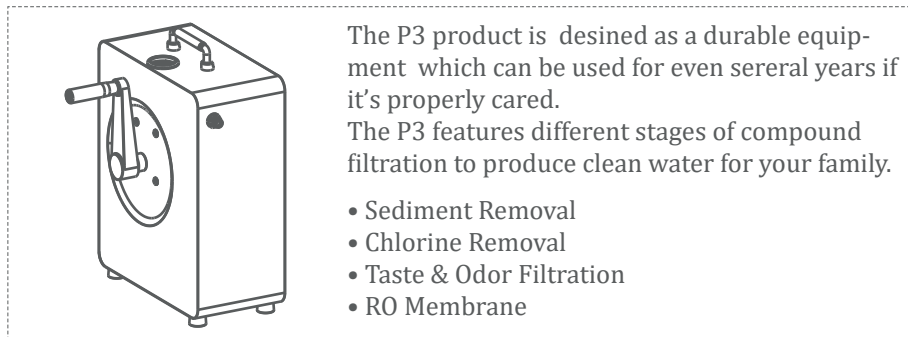
- Instructions for Use
- Transportation
- Storage
- Filter Element Replacement



# Getting Started

## Introduction

Thank you for purchasing the Membrane Solutions PR Series Water Purifier, delivering sanitized water to your home or outdoor activities. Please refer to the Membrane Solutions website for the latest product information, including manuals, product videos, support materials, and where to purchase Membrane Solutions products .



## Warning & Caution

Membrane Solutions products should be used with safety in mind. However, personnel working on these units must be familiar with any potential dangers. All safety information detailed in this handbook should be reviewed before installing and operating PR Series Water Purifier System.

1. Thoroughly flushing of the unit is required at start-up and when filters replaced (flushing instructions on page 6 of manual). The purpose of flushing is to remove protective liquid (Food-Grade Glycerin) in RO membrane and possible shipping dust.
2. This product is not a toy, please keep children away from the system or use it under adult supervision. Please keep packing materials out of children's reach.
3. The device should be used at room temperature, with the incoming water temperature not exceeding 38°C.
4. This device is suitable for water sources with a TDS level not exceeding 500PPM and cannot be used to filter seawater (as high water concentration will reduce the desalination performance).
5. If any part of the System is damaged or missing, replace the item before use. Warnings and Cautions are provided; Failing to observe the instructions could result in damage to the equipment, associated parts, surroundings or personal injury.

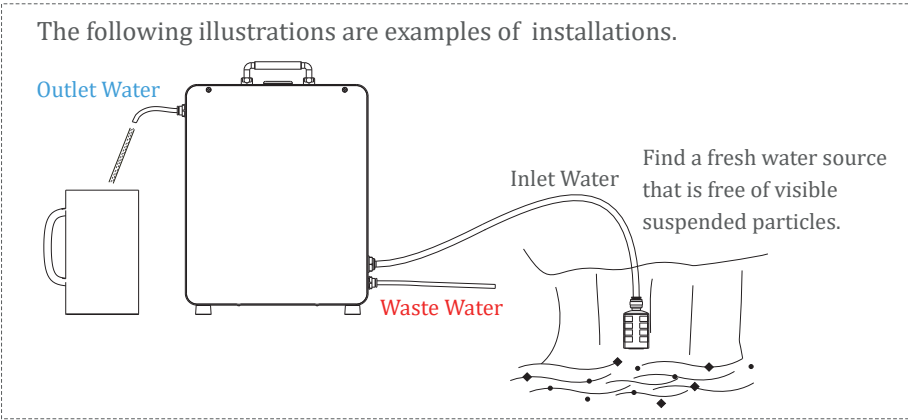
## Operating Parameters

The following table lists the operating parameters for this product. Operating this product outside these specifications may cause system performance issues and may even lead to personal injury and void any warranty. Please contact Membrane Solutions for further advice and support if unsure about the requirements.

Operating Parameters	
<b>Model</b>	Membrane Solutions P3
<b>Housing Material</b>	Galvanized Sheet
<b>Dimensions</b>	305mm(L) x 172mm(W) x 385mm(H)
<b>Membrane Pore Size</b>	1 Micron (PP Melt-Blown + Activated Carbon) 0.0001 Micron ( Reverse Osmosis Membrane)
<b>Filter Lifespan</b>	PAC Filter 2000L or 3~6 Month RO Filter 4000L or 12 Month
<b>Flow Rate</b>	Under a stable pressure of 100Psi, the flow rate can reach 1.05L/min (400GPD), which also depends on the water quality and temperature.
<b>Raw Water Temperature</b>	41-100°F (5-38°C)
<b>Ambient Temperature</b>	40-104°F (4-40°C)
<b>Feedwater TDS* level</b>	≤500 ppm
<b>Water Hardness (Optional)</b>	For optimal results, use feedwater with a hardness level below 10 grains per gallon and no iron present.

\*TDS = Total Dissolved Solids, which is the total weight of all solids dissolved in a given volume of water, expressed in units of mg per unit volume of water (mg/L), also referred to as parts-per-million (ppm). With a Membrane Solutions® TDS meter, you can easily compare the system outlet quality with your source water to help monitor the performance of the system.

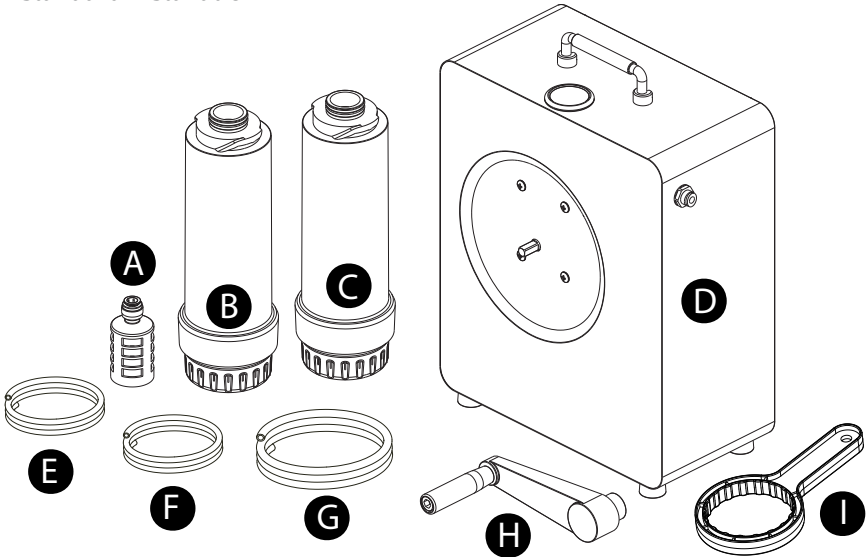
# Typical Installation



# Installation

## System Contents

Your Membrane Solutions PR series Water purifier was carefully assembled, packaged, and shipped complete with the parts you should require for a standard installation.



# Installation List

Carefully unpack your Membrane Solutions PR series Water purifier. Layout the parts, so you can check with the components, check that nothing is missing before you start the installation.

Package Contents List		
	Part Name	Description
A	Stainless Steel Pre-filter	SUS304+PP
B	PAC filter	PP+CTO
C	RO filter	Reverse Osmosis membrane
D	LIFEBOX P3(hand pump)	SECC+AL6063
E	1/4" PE tube ( White, 59 inches )	PE, 1/4"
F	1/4" PE tube ( Redness, 59 inches )	PE, 1/4"
G	3/8" PE tube ( White 78 inches )	PE, 3/8"
H	Handle	Cast iron+PP
I	Filter element removal wrench	PP

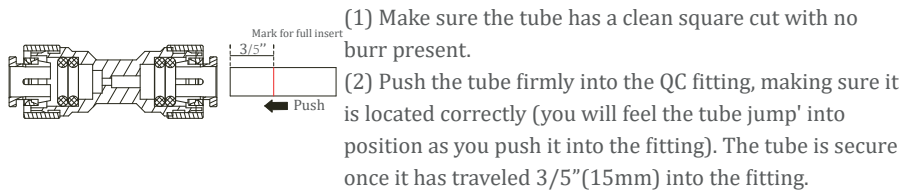
## Installation Preparation

Read the entire manual thoroughly before installation. Take note of the safety tips and follow all steps to ensure your system is installed correctly before use. Installation needs to comply with state and local laws and regulations.

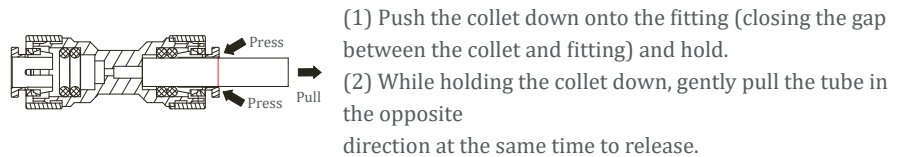
### Notice before installation:

P3 uses quick-connect (QC) fittings making the installation simple and easy.

### How to insert the tube into a quick-connect.



### How to release a tube from a quick-connect.

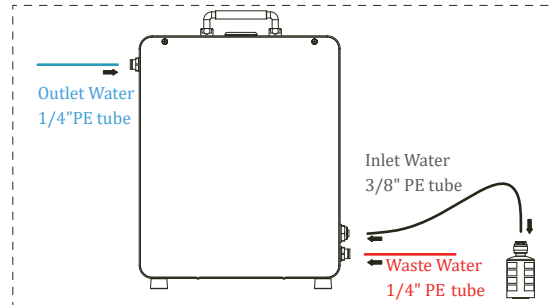


# Installation Steps

## Step 1 - Connect PE Tupe

Cut the PE tubing (E&F) to the appropriate length, then connect it to the LIFEBOX P3(hand pump) (D),and Install Stainless Steel Pre-filter(A) .

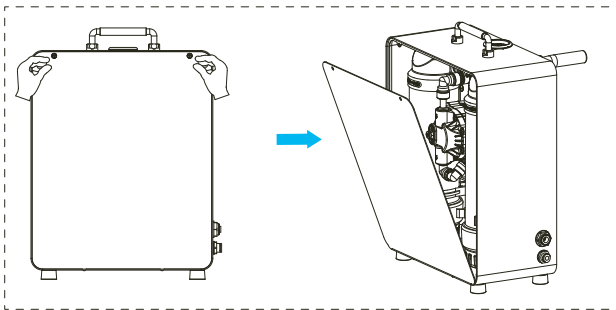
Install as shown.



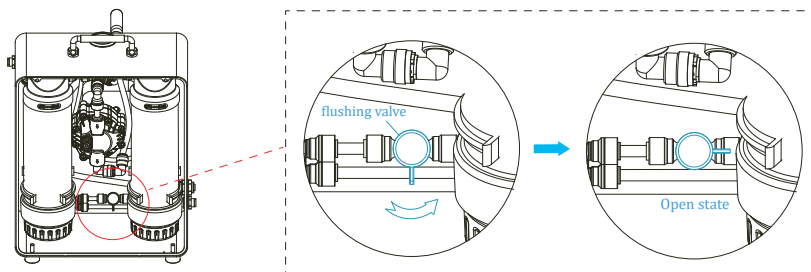
## Step 2 - Wash LIFEBOX P3 Filter

a.Unscrew the screws by hand and remove the front panel.

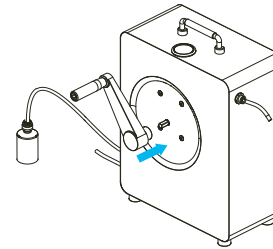
Install as shown.



b.Open flushing valve(Install as shown).

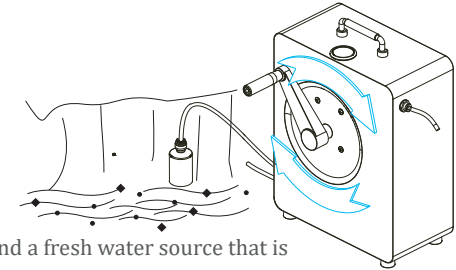


c.Install Handle(G).



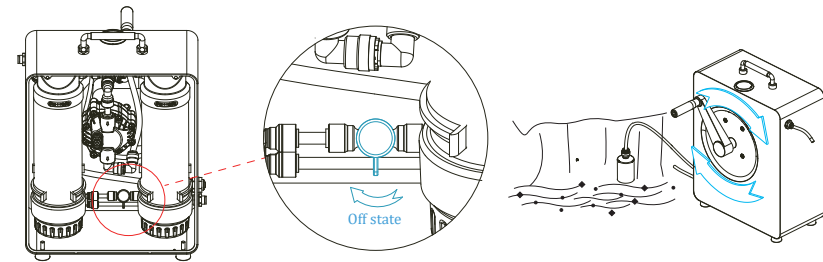
d.Place the inlet tube into a water source such as a river, Turn the handle clockwise, Shake for about 5 minutes.

**NOTE:** You may notice Black Carbon particles for the first minute,this is normal.

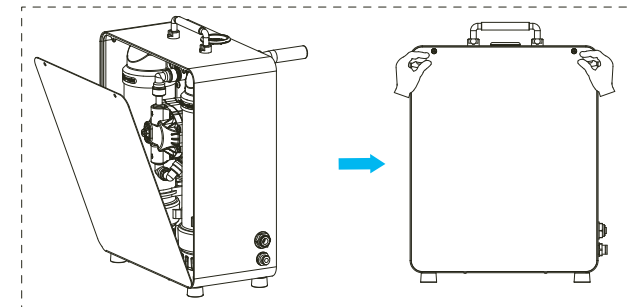


Find a fresh water source that is free of visible suspended particles.

e.Clean the RO membrane: After finishing the above steps, turn off the flush valve as shown in the below picture. Rotate the handle clockwise again at a constant speed to increase the water pressure reach more than 50 PSI, maintain the water pressure and then rotate the handle continuously, rinse the RO filter element for about 5 minutes.

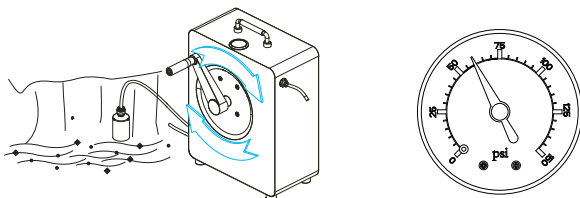


f.Tighten the screws by hand and install the front panel.  
Install as shown.



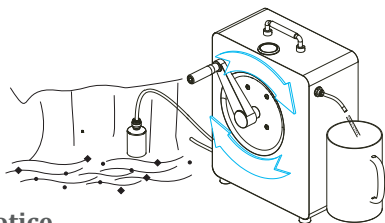
### Step 3 - Start making pure water

Once a second of shaking or pressure to maintain 70psi, so that the water speed is fast, good experience.

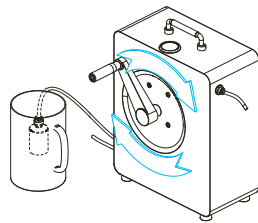


Before the end of use, fill 2 to 5L of pure water as inlet water, so that pure water into the chamber

a. fill 2 to 5L of pure water as inlet water

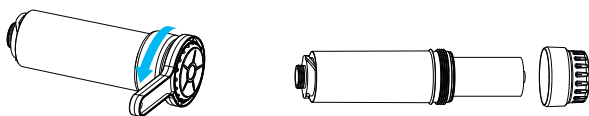


b. pure water into the chamber

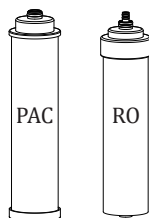


#### Notice

1. Soaking the filter element with pure water is beneficial to prolong the life of the filter element.
2. If the product is not used within 15 days, remove the lower filter element assembly according to the content on page 9 and store it in the refrigerator at low temperature (**do not put it in the freezer**).
3. If the product is not used for more than 15 days, it is necessary to use the filter element removal wrench, open the lower shell cover of the filter element, take out the inner core and reinstall the lower shell cover; then remove the water trace of the inner core, seal it with fresh-keeping bag or wrap, and store it in the refrigerator at low temperature (**do not put it in the freezer**).



The residual water inside the filter element should be removed as much as possible before disassembly, to avoid water flowing out.



## Filter Element Replacement

It is important to maintain the filters to ensure the outlet water quality is at a consistently high standard.

The life expectancy of filters and replacement schedule is depended on raw water quality and water consumption.

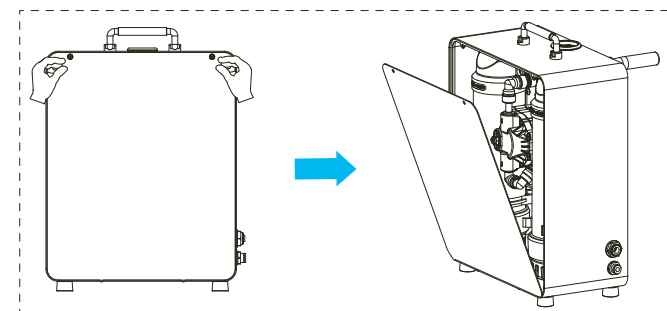
Under normal situations, we recommend users replace filters as per the table below:

Replacement Filter Part Number		
Part No.	Description	Replacement Schedule (Months)
P3-PAC	PAC Filter	2000L or 3~6 Month
P3-Ro	Ro Filter	4000L or 12 Month

**Note:** Due to the difference in feed water quality, the above is an estimate only. Please contact Membrane Solutions for purchase options:

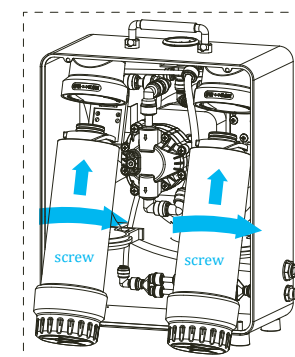
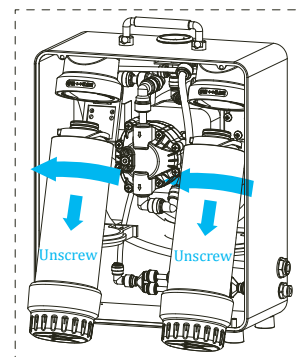
### Filter cartridge replace steps

**Step1-** Unscrew the screws by hand and open the side plate. Install as shown.



**Step2-** you can see the PAC Filter and the Ro Filter, unscrew the old filter; take out the new filter, insert the new filter into the main body first, and then screw it tightly.

**Note:** Refer to the markings to ensure that each filter cartridge is installed in the correct location.

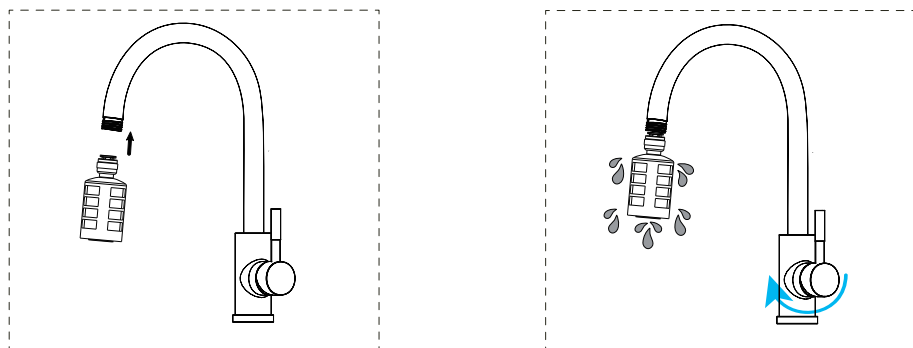


**Step 3** - Run water to drain for 10 minutes to rinse the new cartridge. refer to **Installation Steps-Step 2 - Wash LIFEBOX P3 Filter**

#### **Stainless Steel Pre-filter cleaning steps**

Take out the Pre-filter, place in the faucet outlet, turn on the faucet and start cleaning.

**Note:** If the cleaning is not clean, the surface of the filter can be cleaned with a brush at the same time.



## Frequently Asked Questions

### **Q: Why does black water come out of the wastewater pipe when flushing?**

A: When you first start using the filter, it is normal for black water to come out of the drainpipe. This is because carbon powder from the activated carbon filter is being washed away. Simply continue running the water for about five minutes until the water runs clear, and then your system will be ready for use

### **Q: There is no output water from the outlet.**

A1: Incorrect installation of the filter cartridge: Reinstall the filter cartridge and make sure each cartridge is installed in the correct position.

A2: Incorrect connection of the inlet and outlet pipes: Check if the inlet pipe is connected to the system's outlet and the outlet pipe is connected to the system's inlet. If so, please install them correctly according to the instructions.

A3: The pre-filter head is not submerged below the water surface: Ensure that the filter head is submerged below the water surface to avoid air intake which can affect flow rate.

### **Q: The water outlet has low flow.**

A1: Flush valve not closed: Open the back cover and close the flush valve following the instruction manual.

A2: Insufficient pressure before the membrane: Increase the hand pump frequency to achieve a working pressure above 50 PSI.

A3: Leakage at the quick connectors where the hose meets the piping: Check and ensure all tubes are properly and completely installed.

A4: Low water temperature: Please ensure the water temperature is between 41-100°F (5-38°C).

A5: Filter cartridge is clogged: If you use well water as the source for the filter, make sure the water has passed through a pre-filtration system. Otherwise, large particles in the well water can easily clog the filter and shorten its lifespan.

### **Q: Why does the first use require rinsing for 10 minutes?**

A1: Rinsing is needed to remove protective food-grade oil from the reverse osmosis (RO) membrane in the machine at the beginning of water extraction.

A2: Rinse approximately 10 liters of water, which is equivalent to hand-pumping for 10 minutes, until there are no bubbles on the surface of the water.

A3: Even after long periods of non-use, a 10-minute rinse is still required upon the next use.

### **Q: The water tastes bad or has a strange odor.**

A1: The PAC filter cartridge is saturated with adsorption: Please replace the PAC filter cartridge.

A2: The product hasn't been used for a long time: Replace all the filter cartridges and rinse for more than 10 minutes.

## Contact Us

If you require technical assistance, please contact our friendly professional support engineers, who will be pleased to assist you.

Toll-Free Phone: +1-866-528-4572

Customer Service: [service@mspurelife.com](mailto:service@mspurelife.com)

Website: [www.mspurelife.com](http://www.mspurelife.com)



Our membrane, for your  
pure water and air solutions

**Membrane Solutions Corp**

4530 B STREET NW #A, AUBURN WA 98001,USA



# Warranty

Membrane Solutions warrants to the customer that its water purifiers will be free from defects in material and workmanship under normal use and service for a period of 1 year. We will replace or repair any part of the Membrane Solutions water purifier that we find to be defective in operation due to faulty materials or workmanship within one year since the date of the original purchase. Used replaceable filter cartridges are excluded.

## General Conditions

Membrane Solutions obligation to the customer under these warranties shall be limited, at its option, to replacement or repair of items covered by these warranties. Prior to return or repair of covered items, the customer must obtain a return goods authorization number from Membrane solutions and, at Membrane Solutions option, return the item with freight prepaid by the customer.

Damage to any part of this system because of misuse, misapplication, negligence, alteration, accident, installation, or operation contrary to our instructions, this warranty does not cover incompatibility with accessories not installed by Membrane Solutions, or damage caused by freezing, flood, fire, or Acts of God. In all such cases, regular charges will apply. This limited warranty does not include service to diagnose a claimed malfunction in this unit. This warranty is void if the claimer is not the original purchaser of the unit or if the unit is not operated under normal operating conditions. We assume no warranty liability in connection with this system other than that specified herein. This warranty is in lieu of all other warranties, expressed or implied, including warranties of fitness for a particular purpose. Membrane Solutions liability hereunder shall not exceed the cost of the product. Under no circumstances will Membrane Solutions be liable for any incidental or consequential damages or for any other loss, damage or expense of any kind, including loss of use, arising in connection with the installation or use or inability to use the covered items. These warranties are governed by the laws of the state of Washington, USA, and may change at any time without notice.

# Our Products & Services

## OUTDOOR WATER FILTERS



Membrane Solutions Outdoor Products guard your outdoor drinking water and last longer to give you the best value in outdoor filtration.

## HOUSE WATER FILTER SYSTEMS



Membrane Solutions Whole House Filter Systems to purify the water coming into your home. Say goodbye to the hidden dangers of tap water and eliminate the need to purchase bottled water for your home.

## AIR PURIFIERS



Membrane Solutions Air Purifiers purify the air coming into your home, quickly captures and neutralize bad smells, pet odor, and VOC to freshen the air quality.