

Thank you for purchasing an Aquatic Life Classic Reverse Osmosis & Deionization Water Unit.

When maintained properly, this unit will provide you with years of service.



## OVERVIEW

Reverse osmosis is the process of removing contaminants from tap water using a special semi-permeable membrane. By applying water pressure across the membrane, contaminants are concentrated on one side of the membrane and filtered water on the other side of the membrane. This is why reverse osmosis units have a waste water line as well as a filtered line.

In addition to the membrane, water is filtered prior to the membrane with a sediment cartridge to remove larger particulates, and a carbon block to remove chlorine, chloramines and other materials.

After water is filtered by the membrane, it passes through a color-changing resin cartridge where additional total dissolved solids (TDS) are removed from the water.



**WARNING:** Please read carefully before proceeding with installation. Your failure to follow any attached instructions and operating parameters may lead to the product's failure.



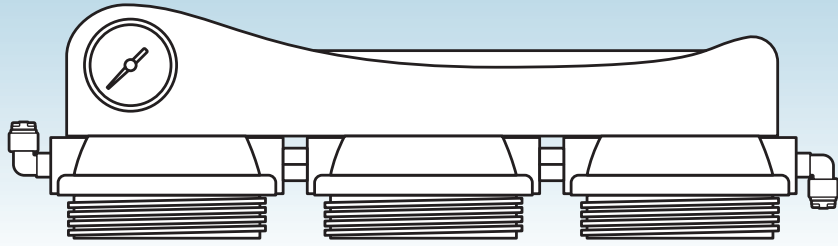
**WARNING:** Do not drink water that has been filtered with a DI resin cartridge.



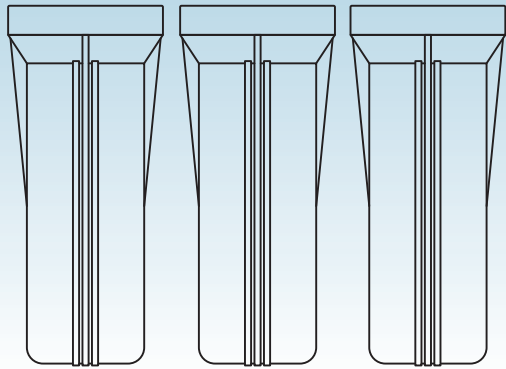
Installation Instructions

For technical assistance or warranty issues, contact Aquatic Life at [customersupport@aquaticlife.com](mailto:customersupport@aquaticlife.com)

Contents



RO Unit Housing with Mounting Bracket



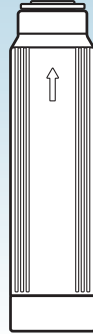
Clear Cartridge Canisters (3)



Sediment Cartridge



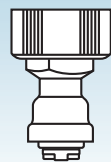
Carbon Plus Cartridge



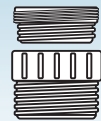
DI Resin Cartridge



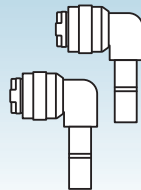
100 GPD  
RO Membrane Cartridge



Hose Bib  
Adapter

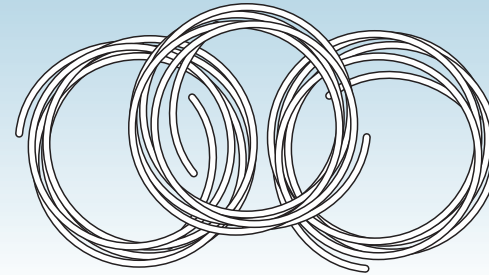


2-piece  
Faucet Adapter

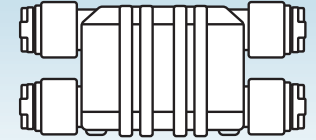


90° Press-fit  
Elbows (2)

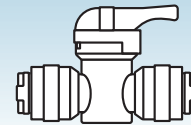
Contents



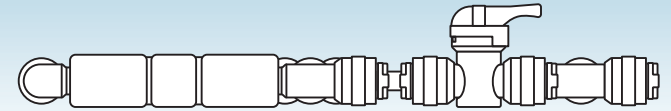
Yellow, Red & Blue 1/4" Tubing  
(10' each)



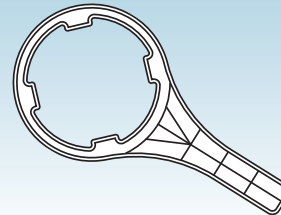
Auto-Shutoff Solenoid  
(pre-installed)



1/4" Manual On/Off Valve



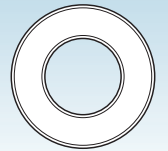
Flush Valve Assembly (pre-installed)



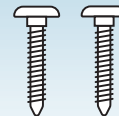
Canister Wrench



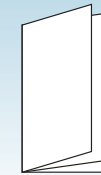
Membrane Wrench



Plumbers Tape



Mounting Screws



Installation, Operation  
& Maintenance Guide

**RECOMMENDED TOOLS  
FOR INSTALLATION**

- Phillips Screwdriver

## BECOMING FAMILIAR WITH YOUR RO/DI SYSTEM

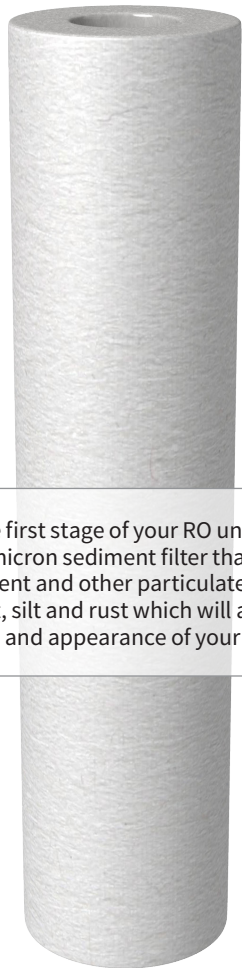


**NOTE:** Filter cartridges and membrane life may vary based on local water conditions and amount of use.

**S**

### STAGE 1: SEDIMENT FILTER

Recommended change  
3-6 months or 3,500 gallons  
total or 900 gallons of  
filtered water

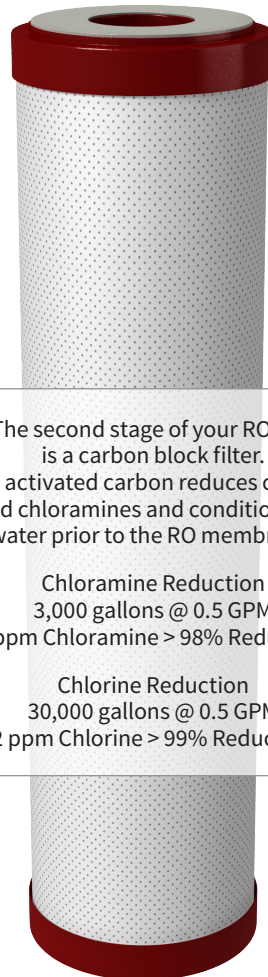


The first stage of your RO unit is a five micron sediment filter that traps sediment and other particulate matter like dirt, silt and rust which will affect the taste and appearance of your water.

**C+**

### STAGE 2: CARBON PLUS FILTER

Recommended change 3,000  
gallons total or 800 gallons  
of filtered water  
(at 3 ppm chloramine)



The second stage of your RO unit is a carbon block filter. The activated carbon reduces chlorine and chloramines and conditions the water prior to the RO membrane.

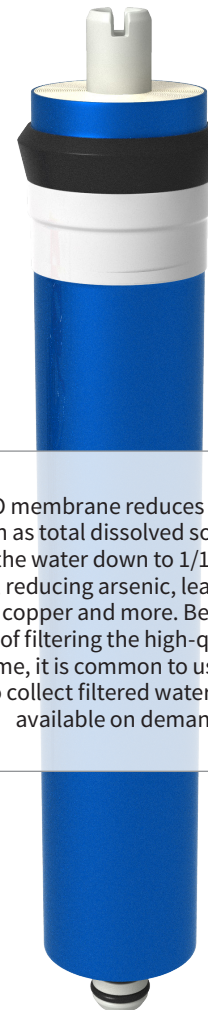
Chloramine Reduction  
3,000 gallons @ 0.5 GPM  
3 ppm Chloramine > 98% Reduction

Chlorine Reduction  
30,000 gallons @ 0.5 GPM  
2 ppm Chlorine > 99% Reduction

**RO**

### STAGE 3: RO MEMBRANE

Recommended change  
12-24 months

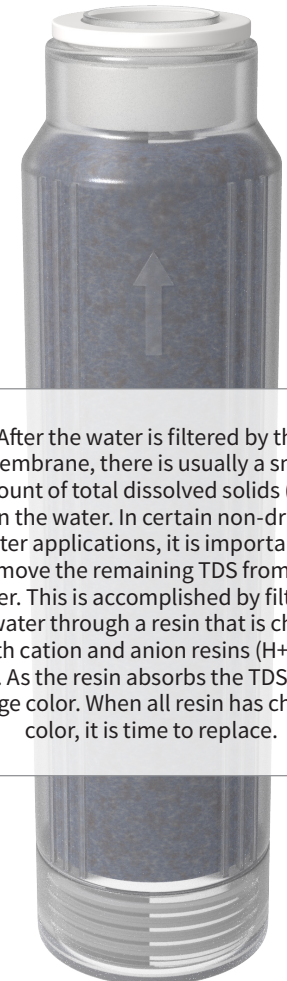


The RO membrane reduces impurities known as total dissolved solids (TDS) from the water down to 1/10,000 of a micron, reducing arsenic, lead, parasitic cysts, copper and more. Because the process of filtering the high-quality water takes time, it is common to use a storage tank to collect filtered water, making it available on demand.

**DI**

### STAGE 4: COLOR-CHANGING RESIN (DEIONIZATION)

Replace filter when resin  
changes color



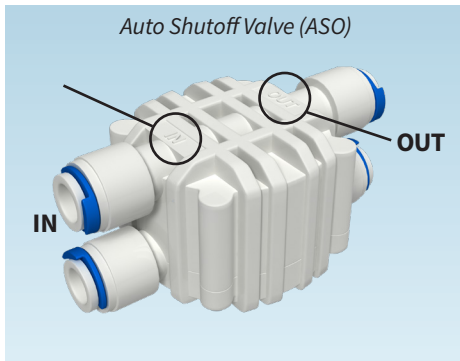
After the water is filtered by the membrane, there is usually a small amount of total dissolved solids (TDS) left in the water. In certain non-drinking water applications, it is important to remove the remaining TDS from the water. This is accomplished by filtering the water through a resin that is charged with cation and anion resins (H+ and OH-). As the resin absorbs the TDS, it will change color. When all resin has changed color, it is time to replace.

## BECOMING FAMILIAR WITH YOUR RO/DI SYSTEM

### Auto Shutoff Solenoid (ASO)

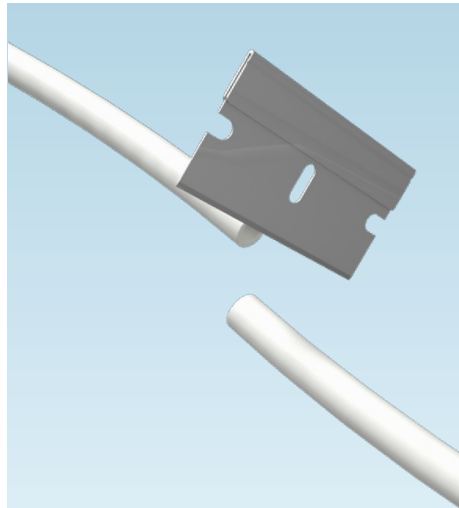
The pre-plumbed ASO will shut-off the incoming water supply when you turn off the filtered water line.

For example, you are filling a barrel with RO water and turn off the fill valve when the barrel is full. The ASO will then stop the incoming water from flowing through the unit and existing the waste line.



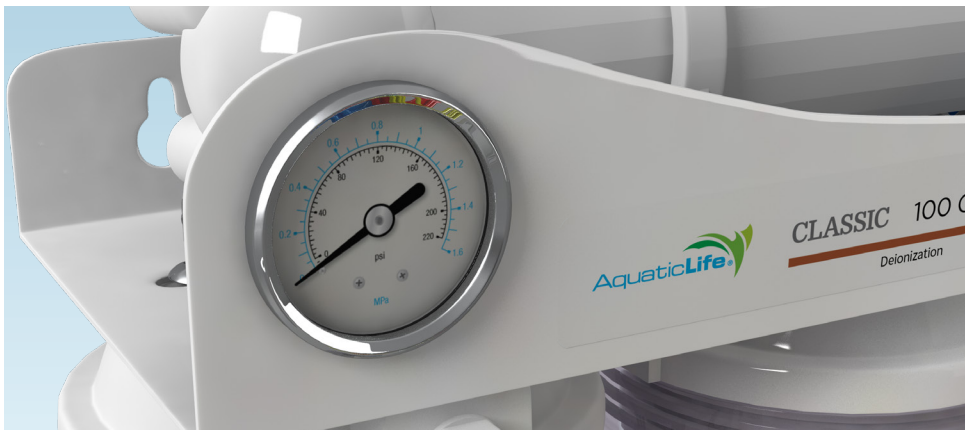
### Tubing

Cut the tubing as needed to connect the various components. Use a razor blade to ensure a clean, even cut.



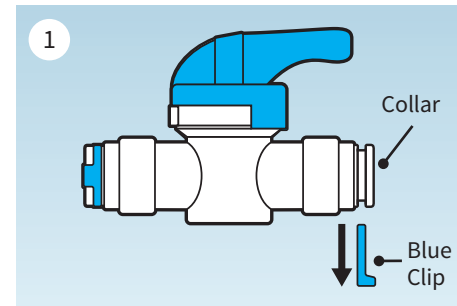
### Pressure Gauge

The pressure gauge will measure the water PSI against the membrane. The ideal pressure for a membrane is 65 PSI. If after the unit is operating for a while, you see the pressure drop, this is an indication that the sediment and/or carbon cartridges are plugged and should be replaced.

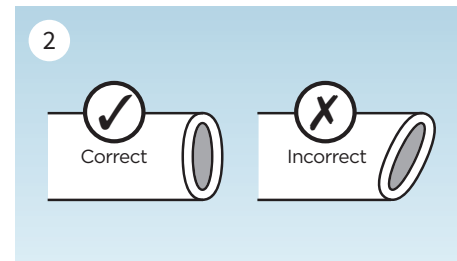


## BECOMING FAMILIAR WITH YOUR RO/DI SYSTEM

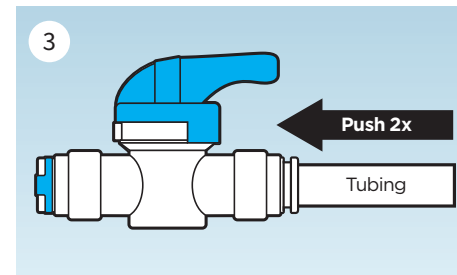
### USING THE PRESS FITTINGS



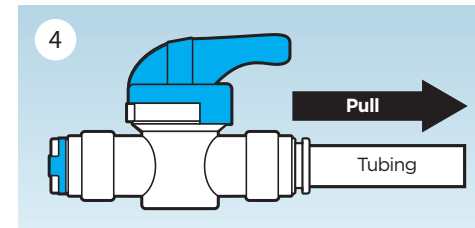
Remove the blue clip from the press fitting.



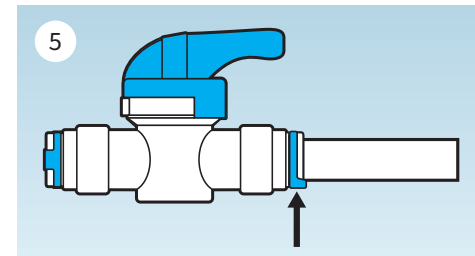
Cut tubing evenly and not at an angle.



Push the tubing into the fitting. You will hit the first stop. The tubing is still not secured properly. Push the tubing a second time and you will feel the tubing insert completely (5/8") into the press fitting.



Pull back on the tubing to ensure it is secure.



Replace the blue clip back onto the fitting.



**NOTE:** To remove a piece of tubing, remove the blue clip, then press and hold down on the collar while pulling out the tubing.



**NOTE:** Cut the tubing with a single-edge razor blade to prevent pinching. Pinched tubing will not seal properly. Fittings use a "double push" connection. You will feel a two-step insert to verify the tubing is inserted completely into the connectors.



See Instructional Video



## OPERATING GUIDELINES

**DO NOT** use with water that is micro-biologically unsafe or of unknown quality without adequate disinfection before or after the unit.

**The maximum incoming water pressure for the unit is 80 PSI.**

If the pressure is more than 80 PSI, a pressure regulator is required. If the water pressure is less than 40 PSI, a booster pump is needed.

**Reverse osmosis filtered water should not be run through a copper tube.**

The pure RO water can leach copper from the pipe, eventually leading to holes in the pipe.

**DO NOT** operate the unit unattended.

## WATER SUPPLY INSTALLATION

This unit includes two options for easy connection to a water supply.

### OPTION 1:

Use **Hose Bib Adapter** to connect to a standard water faucet (found on the exterior of houses, utility sinks, & washing machines).



### OPTION 2:

Use **2-piece Faucet Adapter** to connect to most kitchen & bathroom faucets.

#### Step 1:

Remove the existing aerator & all rubber washers from the faucet.



#### Step 2:

Install the 2-piece sink faucet adapter.



#### Step 3:

Attach the hose bib connection to the other end of the sink faucet adapter.



## MOUNTING THE REVERSE OSMOSIS UNIT

The Aquatic Life Classic RO unit is designed to be mounted to a secure surface. This will allow for the cartridges to easily be replaced as needed. A metal bracket and mounting screws are provided.

#### Step 1:

Insert mounting screws & leave them extending about 1/8" from the surface.



#### Step 2:

Hang the metal bracket on the screws & tighten screws to secure bracket.



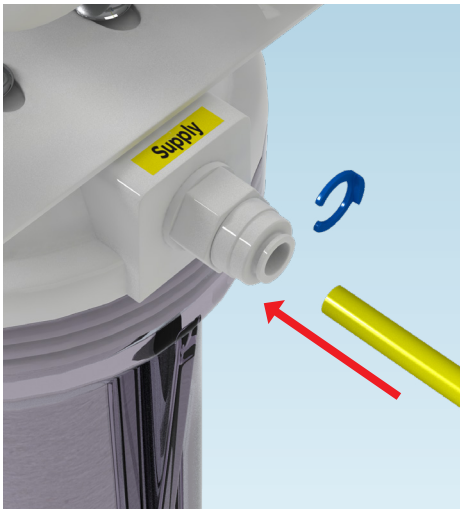
**NOTE:** If your model includes rubber plugs on any of the ports, it is now OK to remove the plug by simply pulling it out.

## INSTALL THE COLOR-CODED TUBING

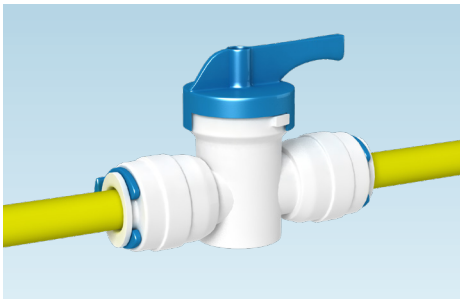
The Aquatic Life Classic units include color coded tubing to help identify filtered, incoming and waste water. This also makes it easier to correctly connect the tubing to the unit.

Refer to the Press Fittings instructions (pg. 7) before installing the tubing.

**Step 1:** Connect one end of the yellow tubing to the hose adapter on the incoming water supply and the other to the supply port.



**Step 2:** Cut the yellow tubing and install the 1/4" manual on/off valve in a convenient place in the water supply line.



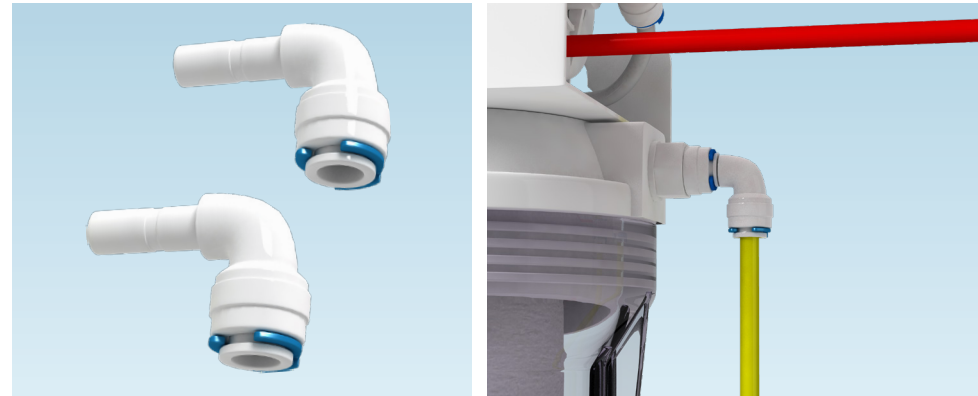
**Step 3:** Connect one end of the red tubing to the waste port. Secure the other end to a drain or collection container.



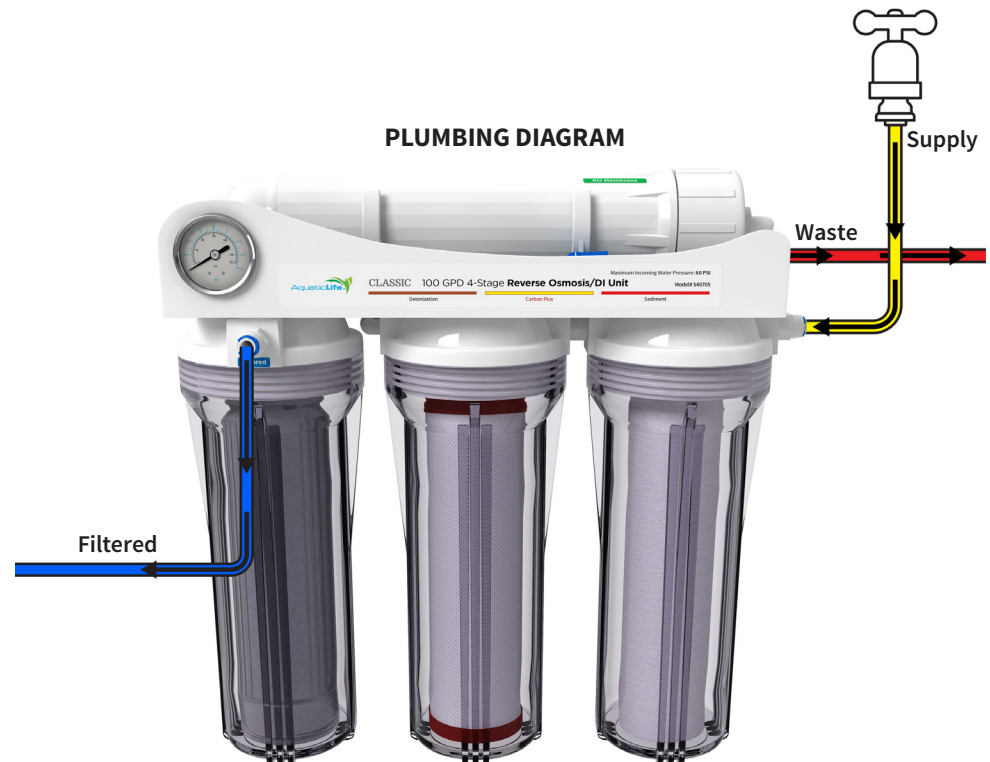
**Step 4:** Connect one end of the blue tubing to the filtered water port. The other end should be plumbed to a container that will collect your reverse osmosis water.



**NOTE:** 90° elbows are included that can be used in plumbing the Classic RO/DI unit. If desired, insert the elbows between one of the ports and the tubing.



## PLUMBING DIAGRAM



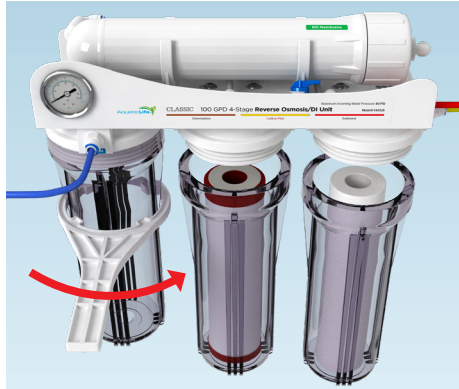


## CARTRIDGE INSTALLATION

**Step 1:** Use the canister wrench to loosen the canisters. Remove the plastic wrap from the cartridges.

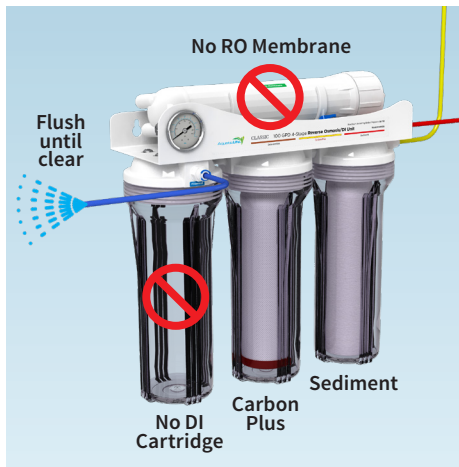


**Step 2:** Install the Sediment & Carbon Plus cartridges. **DO NOT INSTALL THE DI CARTRIDGE AT THIS POINT.** Thread each canister onto the housing & hand-tighten. Use the canister wrench to tighten 1/8 to 1/4 of a turn. **DO NOT OVER-TIGHTEN.**

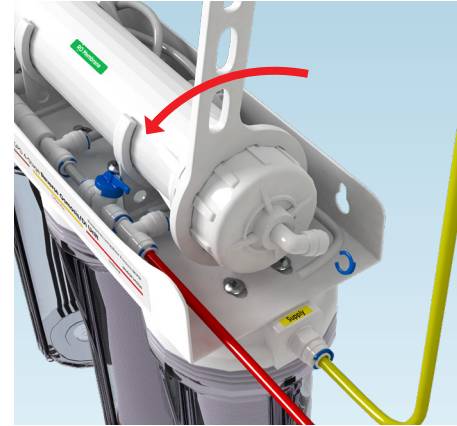


**IMPORTANT:** Flush Carbon Plus cartridge prior to installing the RO Membrane & DI Resin cartridge.

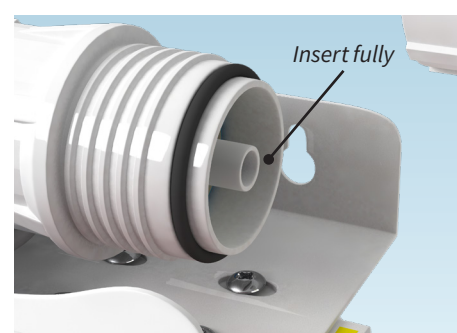
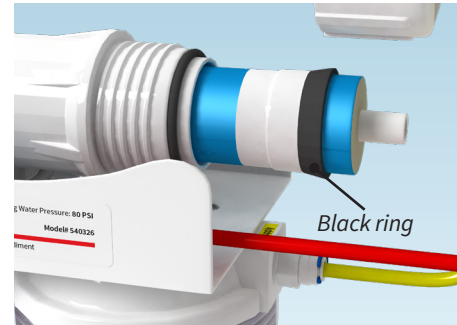
**Step 3:** Flush the Carbon Plus cartridge. With only the Sediment and Carbon Plus installed, allow water to run through the unit for several minutes until water runs clear.



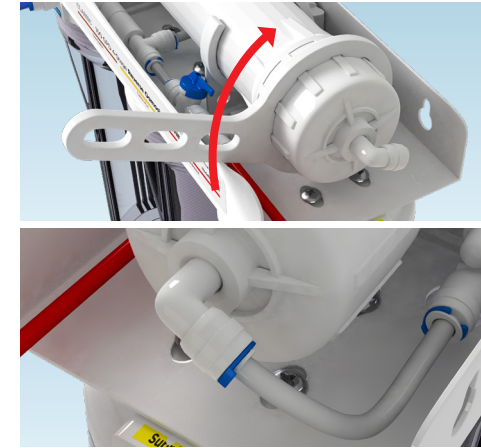
**Step 4:** Remove the tubing connected to the membrane cap & use the membrane wrench to remove the cap.



**Step 5:** Remove the protective bag from the membrane and install into the housing. Insert membrane completely with the black ring closest to the cap.



**Step 6:** Reattach the cap and use the wrench to finish tightening. Reinstall tubing and clips.



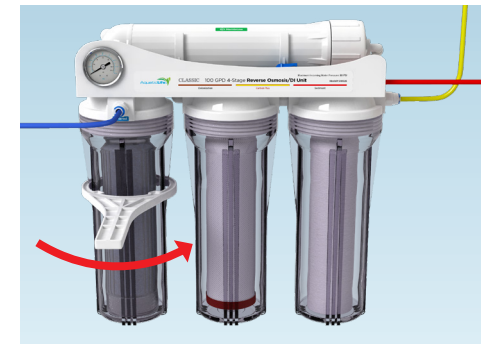
## PREPARING MEMBRANE FOR USE



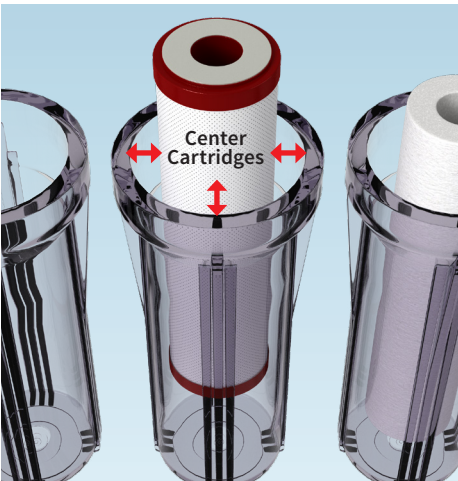
**IMPORTANT:** You must flush the RO Membrane before use of the RO/DI unit.

All RO membranes contain a packing material to keep them sterile. **IT IS IMPORTANT TO FLUSH THE MEMBRANE PRIOR TO USING THE FILTERED WATER.** Turn on the water to the RO unit and allow to run for 30 minutes. Discard all the water from the first 30 minutes of operation.

**Step 7:** Install the DI Resin cartridge. The unit is now ready for use.



**IMPORTANT:** Make sure cartridges are centered in canister before reinstalling.



## UNIT MAINTENANCE

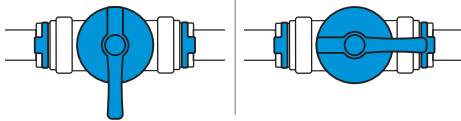
### Weekly Maintenance

The pre-plumbed flush valve should be used at least once a week if using the RO unit on a regular basis. This will help prolong the life of the membrane. While the unit is operating, open the valve for 45 seconds and then close.



Flush Valve Closed

Flush Valve Open



### Cartridge Replacement

#### Sediment Cartridge (Item 330088)

Recommended change 3-6 months or 3,500 gallons of total or 900 gallons of filtered water.

#### Carbon Plus Cartridge (Item 330694)

Recommended change 3,000 gallons of total water or 800 gallons of filtered water at 3 ppm chloramine.

#### Chloramine Reduction

3,000 gallons @ 0.5 GPM  
3 ppm Chloramine > 98% Reduction

#### Chlorine Reduction

3,000 gallons @ 0.5 GPM  
2 ppm Chlorine > 99% Reduction

#### DI Resin Cartridge (Item 330091)

As required by visible color change.

## REVERSE OSMOSIS FILTER BASICS

The membrane does most of the work by removing up to 98% of the TDS from your water. The sediment and carbon filters protect the membrane from the many malicious elements that shorten its life. The sediment cartridge removes suspended particles larger than 5 microns (3 times smaller than a mold spore). The 0.5 micron Carbon Plus removes chlorine and chloramine. Timely replacement of the cartridges will increase membrane life.

### The Carbon Plus cartridge is the most important cartridge to change frequently.

The Carbon Plus cartridge can filter about 3,000 gallons of water before being replaced if your chloramine level is 3 ppm (parts per million). Any chlorine and/or chloramine not absorbed by a spent carbon cartridge will break down your membrane, thus greatly shortening its life.

The 3,000 gallon threshold is TOTAL water that passes through the unit. The RO unit has an average rejection ratio of 1:3.5. That means for every 1 gallon of good water produced you will reject 3.5 gallons for a total of 4.5 gallons of water passed through the unit.

When the sediment cartridge needs to be changed, the production of water will reduce. Even with reduced water production, the cartridge will not allow anything larger than five microns to pass through the chamber. On average the sediment cartridge should be changed at every other carbon change.

With proper filter changes, the membrane could last up to two years. The membrane's water production rating is based on 77°F water at 65 PSI. Any deviation from this will affect the water production. Reference the following conversion table. You will notice that the warmer the water, the better the production. It is not advised that you introduce water from your water heater to increase water temperature. The membrane cannot handle temps over 100°F.



The color-changing Mixed Bed DI Resin cartridge will absorb the remaining TDS not filtered by the membrane.

When Mixed Bed Resin is new, it is a dark blue & brown color.

When the medium is spent it will change to a tan color.

Temperature Correction		Pressure Correction	
Temp. F/C	Correction Factor	Pressure PSI	Correction Factor
50/10	0.58	Less than 40 PSI requires a booster pump	
60/16	0.73		
70/21	0.87	40	0.67
77/25	1.00	50	0.83
80/27	1.06	65	1
90/32	1.23	70	1.17
100/38	1.45	80	1.33

### Example

An RO membrane production rate at 77° F, 65 PSI = 100 gallons per day. What is the production rate at 50° F?

### Answer

Use the temperature correction factor (from table above) = 0.58  
New production flow rate at 50° F is 100 x 0.58 = 58 gallons per day.

## OPERATION & CONSIDERATIONS

The unit includes a pressure gauge to show the incoming water pressure. Your target pressure is 60- 65 PSI. You will produce less filtered water if your water pressure is below 60 PSI. Pressure above 60 PSI may produce more water. If the incoming water pressure is less than 40 PSI, you may need to add a booster pump.

- Operating the Classic RO/DI unit using softened feed water greatly reduces the chances of membrane failure.
- Clear canisters have a limited life and should be replaced on an annual basis to prevent possible failure.
- Operating pressure less than 40 PSI may require a booster pump.
- Operating pressure greater than 80 PSI requires a pressure regulator.
- With initial operation, check for leaks. If a leak is observed, verify that the tubing is pushed into the push-fitting far enough to seal the tubing against the o-ring and that the canisters and caps are sealed properly with their o-rings.
- Many of the components in the Classic RO/DI unit are plastic and subject to damage by ultraviolet light.
- Never store or operate the unit in direct sunlight or other bright lights.
- Do not store or operate the unit in temperatures above 100°F.
- Do not store or operate the unit in freezing temperatures.
- Do not leave the unit unattended while connected to a water supply.



**NOTE:** Cartridge & membrane life are dependent on multiple factors, including the quality of the incoming water supply (TDS levels, chlorine, etc.) and the amount of use. Recommended replacement is based on average usage.



### 3-YEAR LIMITED WARRANTY

Lifetime Products LLC warrants that this Reverse Osmosis/Deionization Unit (excluding cartridges, membrane and clear canisters) shall be free from defective components and leaks or cracks due to defects in materials or workmanship for a period of three (3) years from the date of purchase. If a defect is shown, Lifetime Products LLC will, at Lifetime Product's sole discretion, either repair or replace the product without charge. No cash refunds will be made. This warranty is provided solely to the original consumer purchaser of the product and may not be transferred or assigned. If Lifetime Products chooses to replace the equipment, Lifetime Products may replace it with reconditioned equipment. Parts used in repairing or replacing the equipment will be warranted for 90 days from the date the equipment is returned to you or the remainder of the original warranty period, whichever is longer.

This warranty does not apply to damage resulting from accident, misuse, abuse, lack of reasonable care, failure to follow safety and installation instructions.

This warranty will be void if defects occur due to failure to observe the following conditions:

The Aquatic Life RO/DI unit should only be connected to a potable municipal or potable well cold water supply.

Do not use with water that is of unknown quality without adequate disinfection before or after the unit.

- Incoming total dissolved solids (TDS) not to exceed 1,800 ppm.
- Incoming water to the RO cannot exceed 100°F.
- Incoming water pressure must be between 40 and 80 PSI.
- Incoming water pH must not be lower than 2 or higher than 11.
- Incoming water iron content must be less than 0.2 ppm.
- Incoming water hardness must not exceed 10 grains per gallon or 170 ppm.
- Do not use outdoors or in a location that is subjected to direct sunlight or freezing.

This warranty will not be effective unless and until the Aquatic Life product is shown to have been used in accordance with the installation and maintenance instructions accompanying the product.

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Some states and provinces do not allow the exclusion or limitation of incidental or consequential damages or exclusions or limitations on the duration of implied warranties or conditions, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights that vary by state or province.

Lifetime Products, LLC shall not have any obligations under this warranty unless the owner notifies Lifetime Products, LLC in writing of any alleged defect(s) within 30 days of discovery of the defect(s).

Any notice to Lifetime Products, LLC must be delivered by United States or electronic mail to the following address: U.S. Mail: Lifetime Products, LLC, 9710 Klingerman St., S. El Monte, CA 91733 or electronic mail: [customersupport@aquaticlife.com](mailto:customersupport@aquaticlife.com). Lifetime Products shall be allowed a reasonable period of time to investigate any warranty claim and to perform any testing Lifetime Products deems necessary to determine the cause of the defect. This warranty shall be interpreted under the laws of the State of California.

**Lifetime Products, LLC**  
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