



**Thank you for purchasing an Aquatic Life RO Buddie® Reverse Osmosis System.**

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. Therefore, 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 and other materials.


With the RO Buddie +DI (Model # 540019), 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.



  
**Scan QR Code for Installation Instructions**  
 Models: 540016 & 540017  
 Web Link: [qrs.ly/1xdeqow](https://qrs.ly/1xdeqow)



  
**Scan QR Code for Installation Instructions**  
 Model: 540019  
 Web Link: [qrs.ly/j5deqp0](https://qrs.ly/j5deqp0)



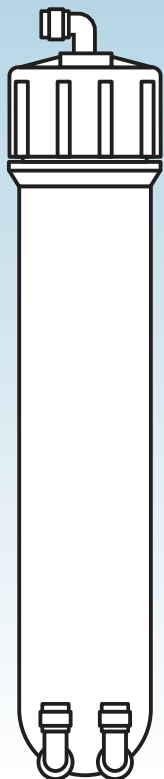
**WARNING:** Before installing this unit, find out if you have Chloramines in your water supply. Contact your local water company for this information. **If you have Chloramines, please refer to page 19 prior to installing your RO Buddie.** Failure to do so may result in a ruined RO Membrane and poor filtered water quality.



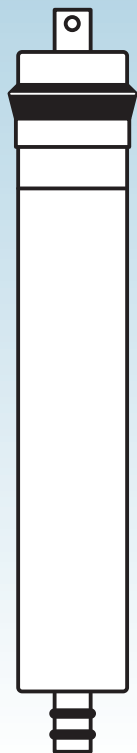
**WARNING:** Do not drink water that has been filtered with a DI resin cartridge.

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

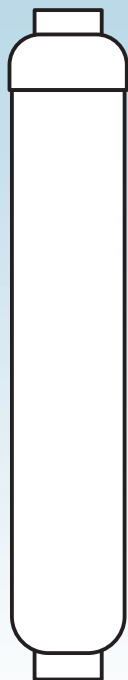
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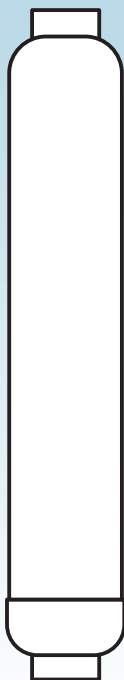
RO Membrane Housing



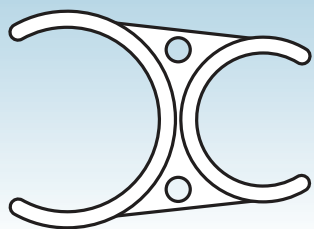
50 GPD RO Membrane (Items 540016, 540019)  
100 GPD Membrane (Item 540017)



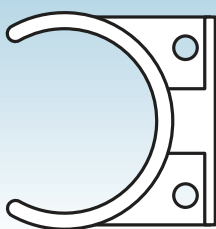
Sediment Cartridge



Carbon Cartridge

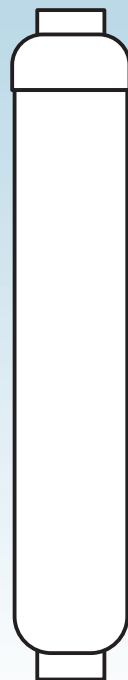


Cartridge Clips  
Items 540016 & 540017 (4)  
Item 540019 (6)

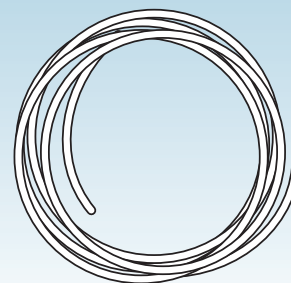


Mounting Clips (2)

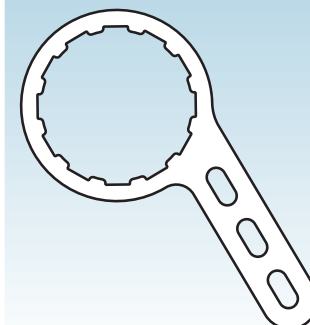
Contents



DI Resin Cartridge (Item 540019)



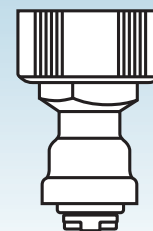
1/4" Tubing (20')



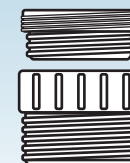
Membrane Cap Wrench



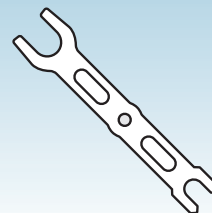
450cc Flow Restrictor (Items 540016, 540019)  
800cc Flow Restrictor (Item 540017)



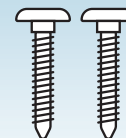
Hose Bib Adapter



2-piece Faucet Adapter



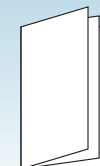
Collar Tool



Mounting Screws (2)



Single-Edge Razor Blade



Installation, Operation & Maintenance Guide

**RECOMMENDED TOOLS FOR INSTALLATION** - Phillips Screwdriver

**BECOMING FAMILIAR WITH YOUR RO/DI SYSTEM**

**S**

**STAGE 1: SEDIMENT FILTER**

Recommended change 3-6 months or 1,500 gallons total or 400 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 BLOCK FILTER**

Recommended change 1,500 gallons total or 400 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 conditions the water prior to the RO membrane.

**RO**

**STAGE 3: RO MEMBRANE**

Recommended change 12-24 months

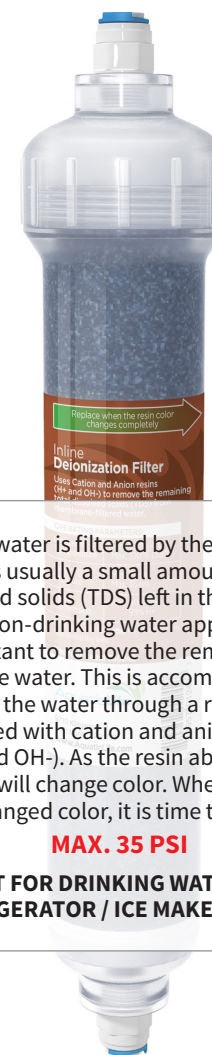


The RO membrane reduces impurities known as total dissolved solids (TDS) from the water down to 1/10,000 of a micron, reducing arsenic, lead, parasitic cysts, copper and more. Because the process of filtering the high-quality water takes time, it is common to use a storage tank to collect filtered water,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

**DI**

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

Model 540019 only - Replace filter when resin changes color



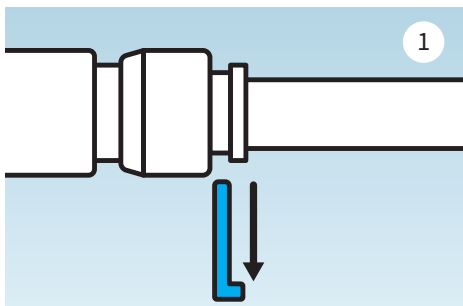
After the water is filtered by the membrane, there is usually a small amount of total dissolved solids (TDS) left in the water. In certain non-drinking water applications, it is important to remove the remaining TDS from the water. This is accomplished by filtering the water through a resin that is charged 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.

**MAX. 35 PSI**  
**NOT FOR DRINKING WATER OR REFRIGERATOR / ICE MAKER WATER**

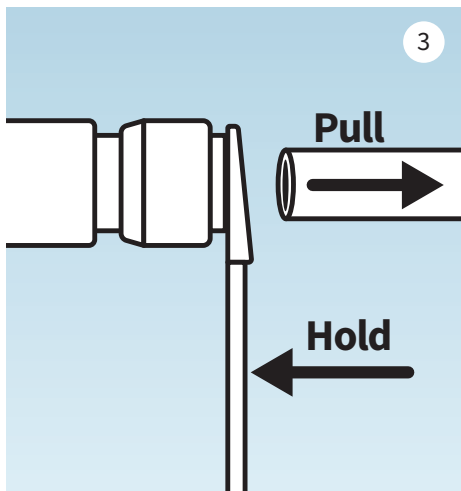
**NOTE:** Filter cartridges and membrane life may vary based on local water conditions and amount of use.

### BECOMING FAMILIAR WITH YOUR RO/DI SYSTEM

#### REMOVING TUBING from the Press Fittings



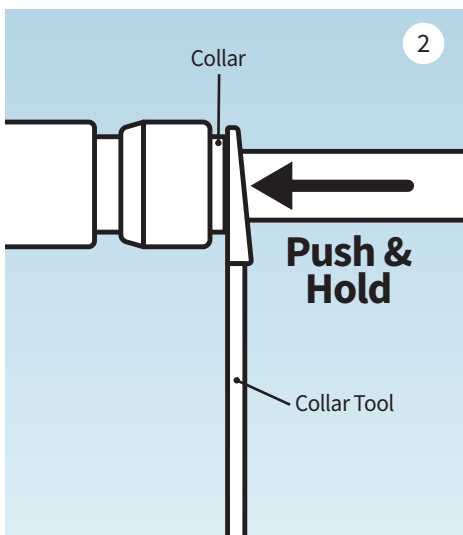
Remove the blue clip from the press fitting.



Continue to hold the collar while pulling out tubing.



**TIP:** Use the provided Collar Tool to hold in collar on press fitting while pulling out tubing.

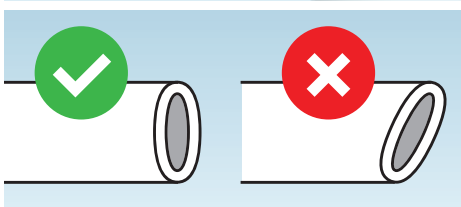
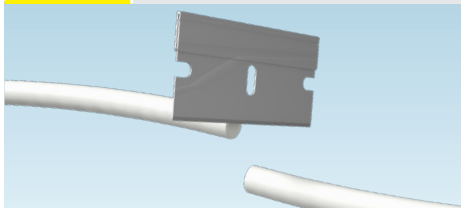


Press in & hold the collar on the Press Fitting. Using the Collar Tool makes this easier.

#### BEFORE INSTALLING TUBING

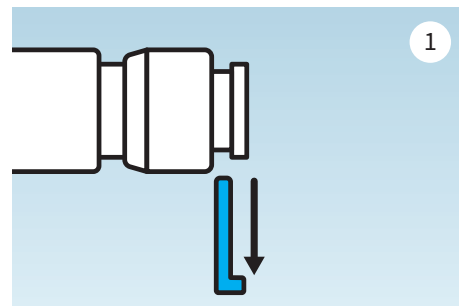


**IMPORTANT:** Use a razor blade to ensure a clean, even cut. Pinched tubing or tubing cut at an angle will not seal properly.

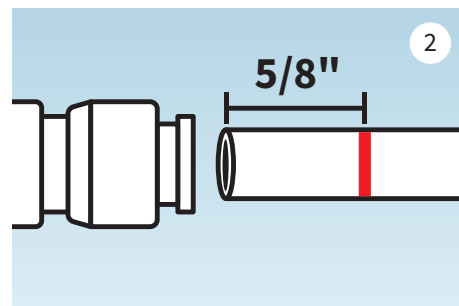


### BECOMING FAMILIAR WITH YOUR RO/DI SYSTEM

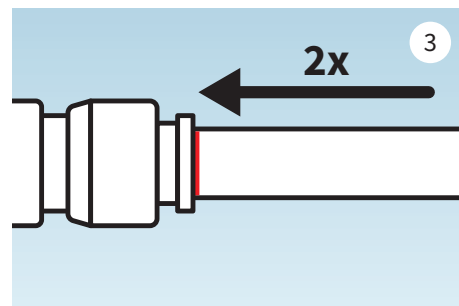
#### INSTALLING TUBING in the Press Fittings



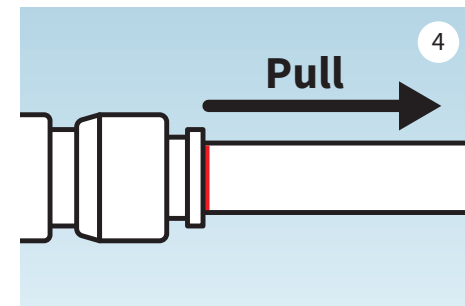
Remove the blue clip from the press fitting.



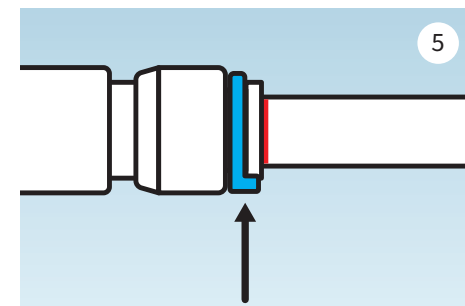
Mark the tubing 5/8" from end.



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 until it reaches the 5/8" mark.



Pull the tubing to ensure it is properly locked in place & sealed.



Reinstall the blue clip. Your tubing is now secure & water-tight.



**SCAN TO VIEW VIDEO**  
Web Link: [qrs.ly/zzbo14d](https://qrs.ly/zzbo14d)

## 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.

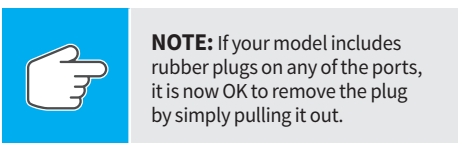
## STORAGE

If you don't plan to use the RO Buddie for more than two weeks, disconnect the unit from the water supply and place in an air-tight bag. Keep in the refrigerator or other cool place.

**DO NOT ALLOW THE UNIT TO FREEZE.**

## MOUNTING THE RO BUDDIE®

Mount to a secure surface using the provided mounting brackets. Use screws designed for the mounting surface. **Only operate the RO Buddie in the vertical position** to ensure proper water flow. Operating horizontally may result in higher TDS filtered water.



**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.



## 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.

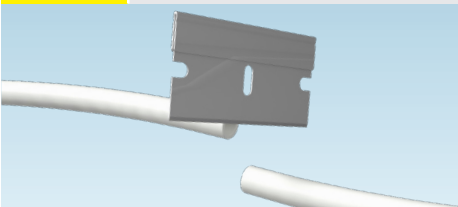




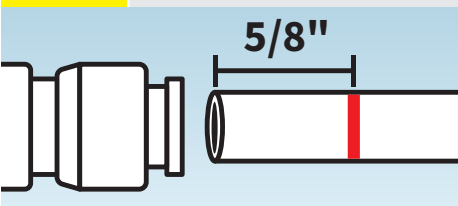
## CONNECT TUBING



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



**IMPORTANT:** Before inserting tubing, make a mark 5/8" from end. Fully insert tubing to mark to ensure a water-tight seal.



**Step 1:** Remove blue clip & connect a piece of the 1/4" tubing between the faucet adapter and the top of the sediment cartridge. Reinstall blue clip.



**Step 2:** Remove blue clip & connect tubing to the top of the flow restrictor. This is the **waste water** to be discarded. Reinstall blue clip.



**Step 3:** Remove blue clip & connect tubing to the open port at the bottom of the RO membrane housing. This is the **filtered water**. Run this line to your water collection container. Reinstall blue clip.



**IMPORTANT:** Carbon Cartridge must be flushed prior to using the RO Buddie.

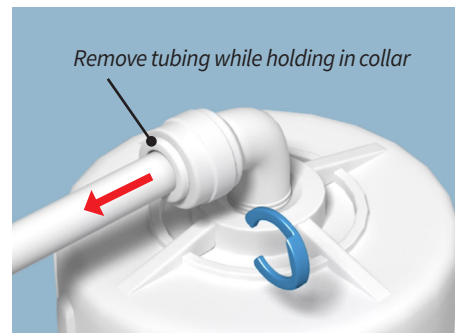
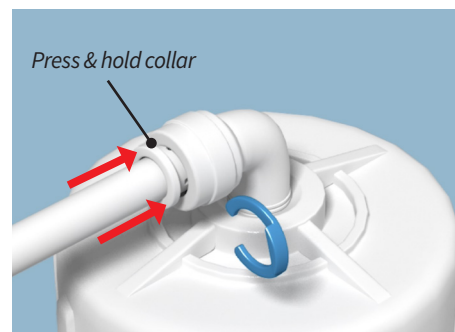
## FLUSHING THE CARBON CARTRIDGE

With both filtered water and waste water lines in the drain, turn on the water supply. This will flush the filter cartridges prior to installing the membrane and extend the membrane life.

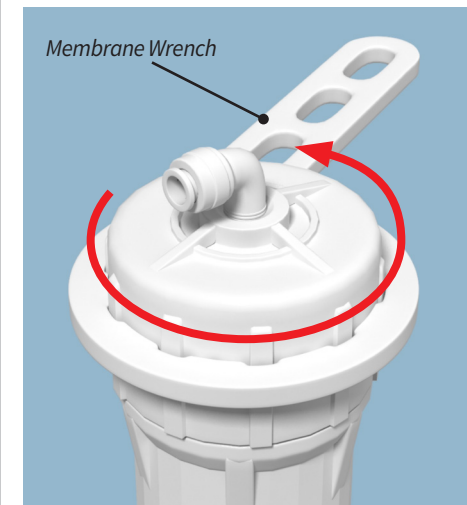
**Flush for 5 minutes or until water from both lines runs clear.** Turn off the water supply and allow the RO Buddie to drain.

## INSTALLING THE RO MEMBRANE

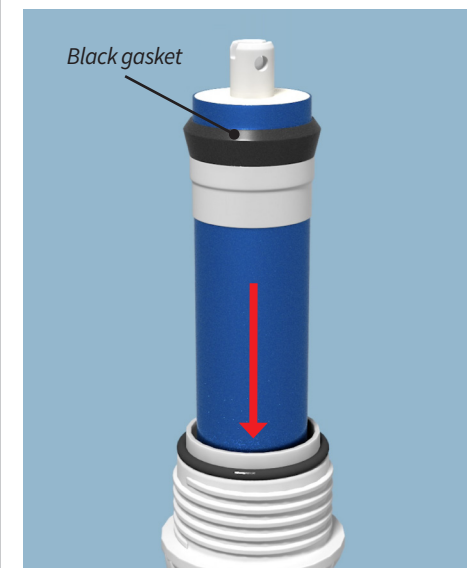
**Step 1:** Remove the tubing attached to the elbow fitting on top of the RO membrane. Remove blue clip, press & hold collar while pulling out tubing.



**Step 2:** Unscrew the membrane housing lid from the membrane housing. Use membrane wrench if necessary.



**Step 3:** Remove the membrane from the plastic bag and re-insert into the membrane housing. The black gasket should be towards the cap end.

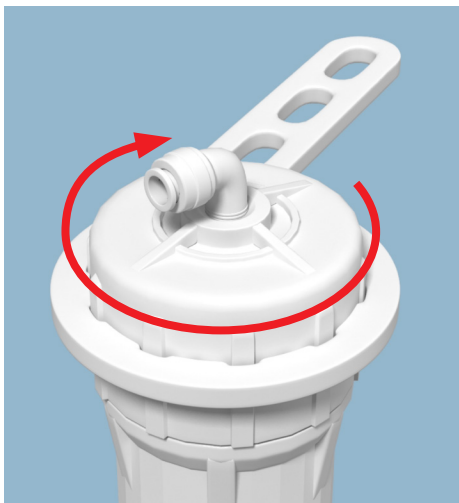


## INSTALLING THE RO MEMBRANE (cont.)

**IMPORTANT:** The membrane should be inserted so that the top of the plastic pipe in the membrane is flush with the top of the membrane housing.



**Step 4:** Replace the cap and tighten with the supplied wrench. Re-attach the tubing and replace the blue clip.



## FLUSHING THE RO MEMBRANE

**IMPORTANT:** All RO Membranes contain a preservative to keep them sterile. It is important to **flush the preservative out of the membrane** prior to using the filtered water.

**Step 5:** Turn on the water to the RO Buddie. **FLUSH THE MEMBRANE FOR 30 MINUTES.**

**DISCARD ALL WATER FROM THIS FIRST 30 MINUTES OF OPERATION.**

**IMPORTANT:** If using the RO Buddie + DI (Model 540019), **DO NOT CONNECT THE DI RESIN CARTRIDGE UNTIL THE MEMBRANE HAS BEEN FLUSHED.**

## INSTALLING THE DEIONIZATION CARTRIDGE (MODEL # 540019)

The color-changing Mixed Bed Resin DI Cartridge will absorb the remaining TDS not filtered by the membrane. By adding a DI cartridge to the RO Buddie, you can produce zero TDS water.

**New Mixed Bed Resin:**  
Blue/green color

**Wet Mixed Bed Resin:**  
Dark blue color

**Spent/Exhausted Mixed Bed Resin:**  
Changes to a light brownish/tan color



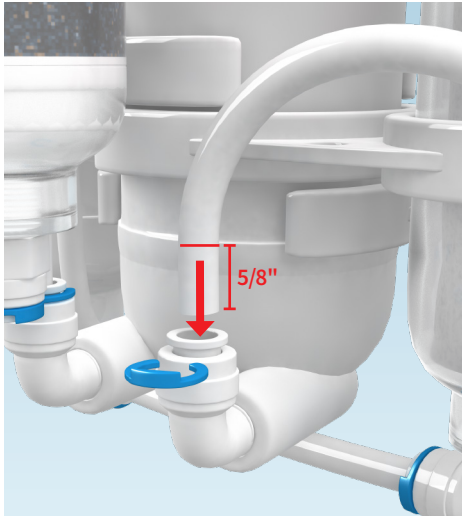
**Step 1:** Use the included clips to connect the DI cartridge to the front of the RO membrane housing.



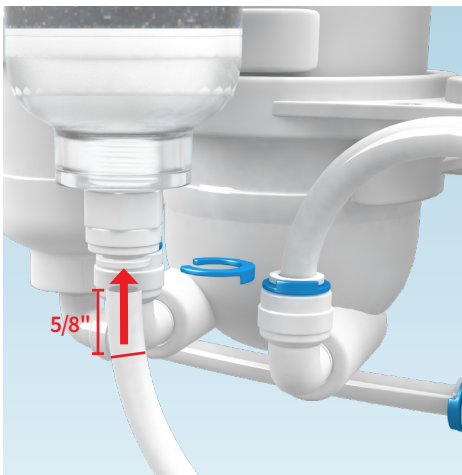
**NOTE:** With the preservative flushed from the new Membrane, it is now OK to connect the filtered water line to the bottom of the DI Cartridge.

## INSTALLING THE DEIONIZATION CARTRIDGE (cont.)

**Step 2:** Remove blue clip & remove tubing used to flush the membrane. Cut a small piece of the tubing to connect the **filtered water** output to the bottom of the DI Resin cartridge. Reinstall blue clips.



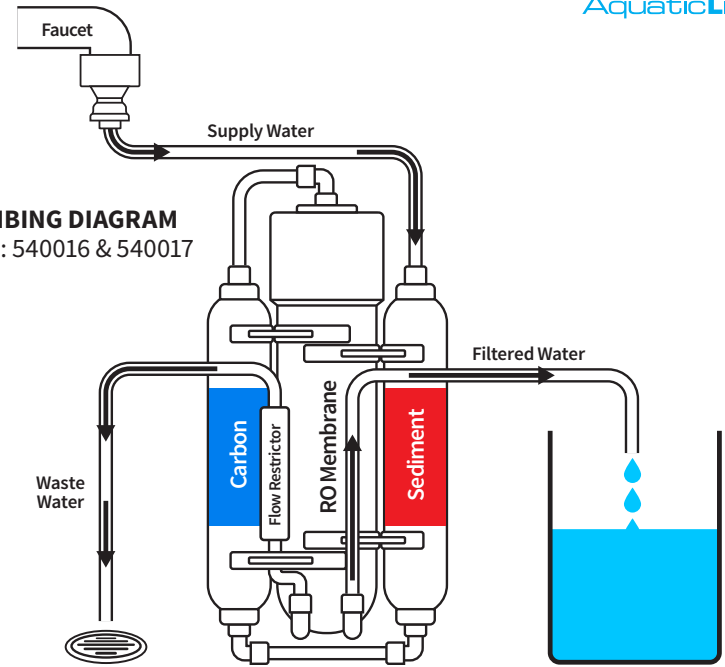
**Step 3:** Remove blue clip & connect other end of tubing to bottom of DI Resin Cartridge. Reinstall blue clip.



**Step 4:** Remove blue clip & connect tubing to the top of the DI Resin Cartridge. This is the **filtered water**. Run this line to your water collection container. Reinstall blue clip.

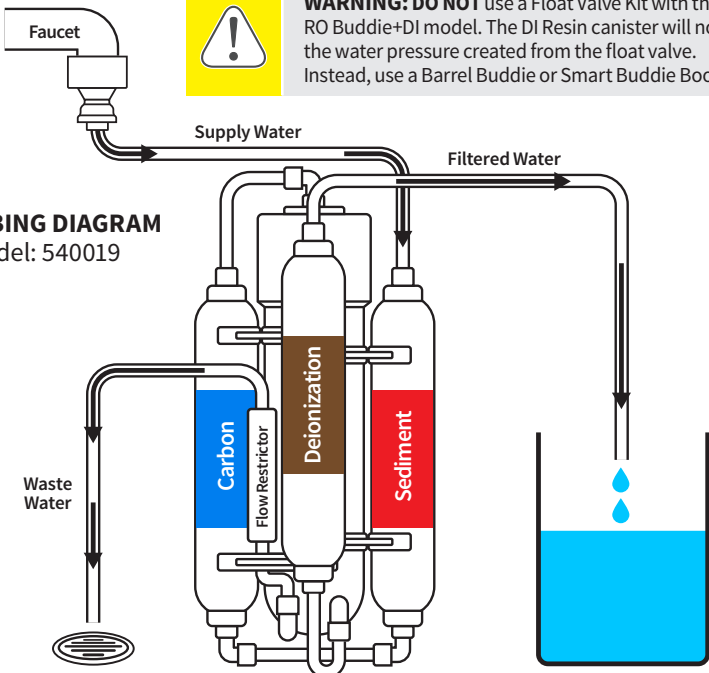


### PLUMBING DIAGRAM Models: 540016 & 540017



**WARNING: DO NOT** use a Float Valve Kit with the RO Buddie+DI model. The DI Resin canister will not handle the water pressure created from the float valve. Instead, use a Barrel Buddie or Smart Buddie Booster Pump.

### PLUMBING DIAGRAM Model: 540019





## REVERSE OSMOSIS FILTER BASICS

The membrane does most of the work by removing up to 96-98% of the TDS from your water. The other two included filters protect the membrane from the many malicious elements that shorten its life. The sediment cartridge removes suspended particles larger than 5 micron. The carbon block removes chlorine. Timely replacement of the cartridges will increase the membrane's life.

**The carbon cartridge is the most important cartridge to change frequently.** The carbon cartridge can filter about 1,500 gallons of water before being replaced IF your chlorine level is 1 ppm. With a 2 ppm you should filter 750 gallons of water before needing to change, with a 3 ppm you should get 500 gallons, and so on. Any chlorine not absorbed by a spent carbon cartridge will break down your Membrane, thus greatly shortening its life.

The 1,500 gallon threshold is TOTAL water that passes through the unit. The RO Buddie 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. At 1 ppm of chlorine, you can make about 400 gallons of good water before changing the carbon cartridge, 2 ppm you can make about 200 gallons, 3 ppm you can make about 133 gallons, and so on.

**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 micron 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 conversion table at right. 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 can't handle temps over 100°F.

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  $100 \times 0.58 = 58$  gallons per day.



**TIP:** To make more water with your 50 GPD RO Buddie, you can install a 100 GPD Membrane, but you also need to change the 450cc Flow Restrictor to a 800cc Flow Restrictor (Part #9000704). You **CANNOT** use the inline DI Resin cartridge with a 100 GPD Membrane. The water flow will be too fast for the resin to absorb the remaining TDS.

## UNIT MAINTENANCE

**Recommended change 3-6 months**  
Sediment Filter Cartridge (Item # 330249)  
Carbon Block Cartridge (Item # 330250)

**12-24 Month Maintenance**  
RO 50 GPD Membrane Cartridge (Item # 330084)  
RO 100 GPD Membrane Cartridge (Item # 330093)

**As Required – By Visible Color Change**  
Deionization Color-Changing Resin Cartridge (Item # 330242)



**TIP:** See next page to scan & easily order replacement cartridges.



**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.

## TROUBLESHOOTING

- Leaks at the threaded connection:**  
If once installed the unit should leak, use plumbers tape on the threaded fitting. Typically, no more than three wraps will be required to seal the connection.
- Leaks at the tubing connections:**  
The fittings on the RO Buddie use an o-ring inside of them. This will require the tubing to be inserted past the o-ring. You will want to make sure that when inserting the tubing you feel the initial stop when the tubing first meets the o-ring and a second stop when you push past the o-ring and meet the end inside the fitting. This is what we call the “double push”. Also, make sure to cut the tubing with a razor or similar object so that the tubing is not pinched and causes the tubing to not seal properly.



**IMPORTANT:** Tubing should insert 5/8" inside the Press Fitting when property installed.

- No water production:**  
Make sure the water supply is turned OFF. Remove the tubing from the elbow on top of the membrane housing, direct the tubing into a container and turn on the water. Does the water flow quickly through the cartridges? If not, the cartridges likely need to be changed.
- Low filtered water production:**  
The RO membrane is rated to produce the stated volume of water based on 65 PSI and a 77° F water supply. If you have one or both specifications out of tolerance, use the Temperature and Pressure correction factors from charts on previous page.

SCAN TO PURCHASE



**Sediment Cartridge**  
Mfg # 330249  
Amazon # B00DOG6614  
Web Link: [qrs.ly/wndeqp8](http://qrs.ly/wndeqp8)



**50 GPD RO Membrane**  
Mfg # 330084  
Amazon # B00DOG656K  
Web Link: [qrs.ly/5ldeqqk](http://qrs.ly/5ldeqqk)



SCAN TO PURCHASE



**VALUE PACK**  
**Sediment, Carbon, 50 GPD Membrane**  
Mfg # 330445  
Amazon # B01LBK3KWC  
Web Link: [qrs.ly/dideqr2](http://qrs.ly/dideqr2)



**VALUE PACK**  
**Sediment, Carbon, 100 GPD Membrane**  
Mfg # 330446  
Amazon # B01LBK9OR2  
Web Link: [qrs.ly/dkdeqr](http://qrs.ly/dkdeqr)



**Carbon Cartridge**  
Mfg # 330250  
Amazon # B00DOG66RI  
Web Link: [qrs.ly/tndeqqj](http://qrs.ly/tndeqqj)



**100 GPD RO Membrane**  
Mfg # 330093  
Amazon # B001XYD2IO  
Web Link: [qrs.ly/ezdeqqj](http://qrs.ly/ezdeqqj)



**VALUE PACK**  
**Sediment, Carbon, DI Color-Changing Resin**  
Mfg # 330656  
Amazon # B08HC2JRZR  
Web Link: [qrs.ly/31deqrc](http://qrs.ly/31deqrc)



**⚠ CHLORAMINES ⚠**

Supply water treated with Chloramines is different than Chlorine. The Carbon Cartridge removes Chlorine. **When Chloramines (Chlorine & Ammonia) are present, a special filter is required.**

**FAILURE TO USE A CHLORAMINE FILTER WILL QUICKLY DESTROY YOUR RO MEMBRANE & PROVIDE POOR FILTERED WATER QUALITY.**



**SCAN TO VIEW VIDEO**  
Adding a Chloramine Filter to RO Buddie  
Web Link: [qrs.ly/b7ch2ra](http://qrs.ly/b7ch2ra)



**Chloramine Filter**  
Mfg # 540695  
Amazon # B09HVDK9FV  
Web Link: [qrs.ly/aydeqrl](http://qrs.ly/aydeqrl)



## LIMITED WARRANTY

Lifetime Products LLC warrants that this Reverse Osmosis/ Deionization Unit (excluding cartridges and membrane) shall be free from defective components and leaks or cracks due to defects in materials or workmanship for a period of one (1) year 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 Buddie 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. 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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