

Thank you for purchasing an Aquatic Life Twist-In (TI) 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 semipermeable 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 both wastewater and filtered lines.

Prior to the membrane, water is filtered with a sediment cartridge to remove larger particulates, and a carbon block to remove chlorine 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.

The cartridges and membrane on your unit are designed for easy installation and replacement. Each cartridge connects to the filter housing by simply inserting and twisting. **It is important the cartridges be installed in the correct order to effectively filter the water.**

For technical assistance or warranty issues, contact Aquatic Life at customersupport@aquaticlife.com



WARNING: Read carefully before proceeding with installation. Failure to follow 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.

DO YOU HAVE CHLORAMINES IN YOUR WATER SUPPLY?

Supply water treated with Chloramines is different than Chlorine. When Chloramines are present, a special filter is required.

Contact your water company to find out if they treat with Chlorine or Chloramines.

SEE INSTALLATION 'F' on pgs. 24-25 if installing a Chloramine Filter.

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.

Water hardness should not exceed 10 grains per gallon or 170 parts per million.

Operating above this may shorten the membrane life.

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

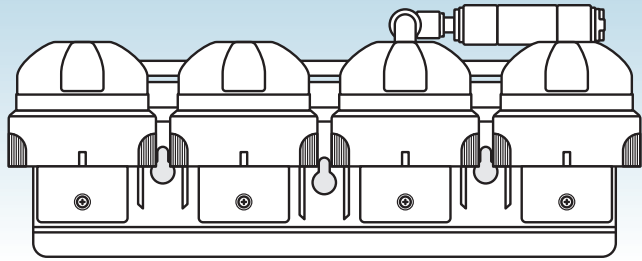
RO water can leach copper from the pipe, eventually leading to holes in the pipe.



SCAN TO VIEW VIDEO

Web Link: qrs.ly/r2atfb4

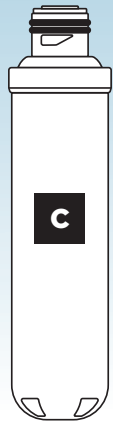
Contents



TI Module



Sediment Filter Cartridge



Carbon Block Cartridge



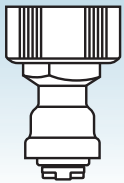
75 GPD RO Membrane Cartridge



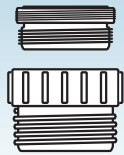
Color-changing Deionization Cartridge



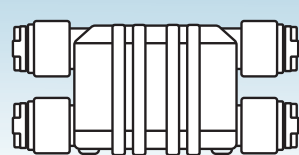
Flush Cartridges



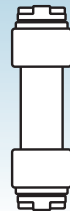
Hose Bib Adapter



Kitchen/Bathroom Faucet Adapter

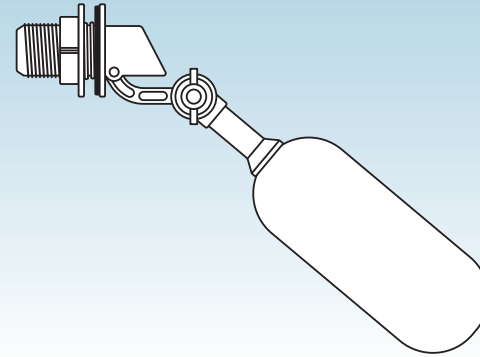


Auto-Shutoff Solenoid

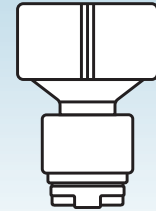


In-line Check Valve

Contents



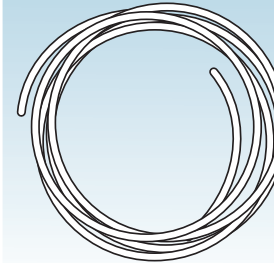
Adjustable Float with Rubber Washer



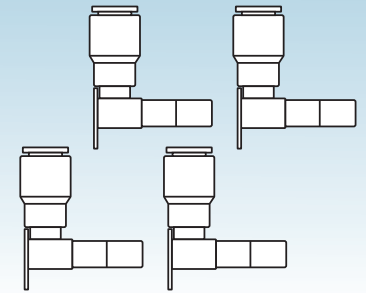
1/4" Press Fit x 1/2" FPT



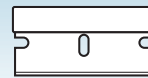
Blue Clips (spares)



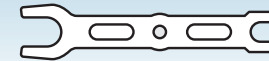
1/4" Tubing (20')



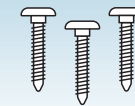
90° Elbows 1/4" Press Fit



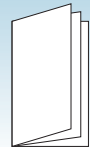
Razor Blade



Collar Tool



Mounting Screws



Installation, Operation & Maintenance Guide

RECOMMENDED TOOLS FOR INSTALLATION

Phillips Screwdriver • Pliers • Drill • 7/8" Drill Bit

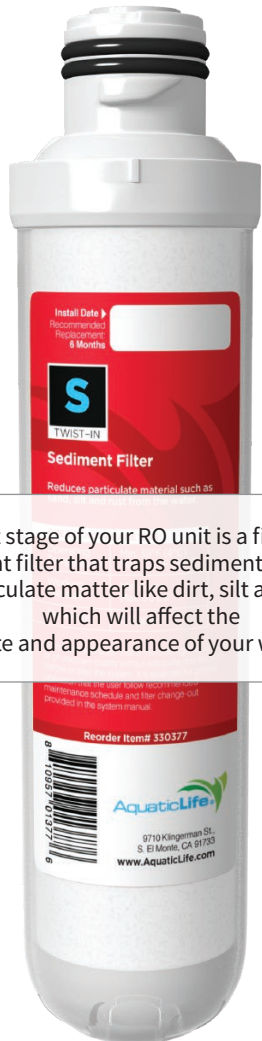
BECOMING FAMILIAR WITH YOUR RO SYSTEM

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 2,500 gallons
total or 650 gallons of
filtered water

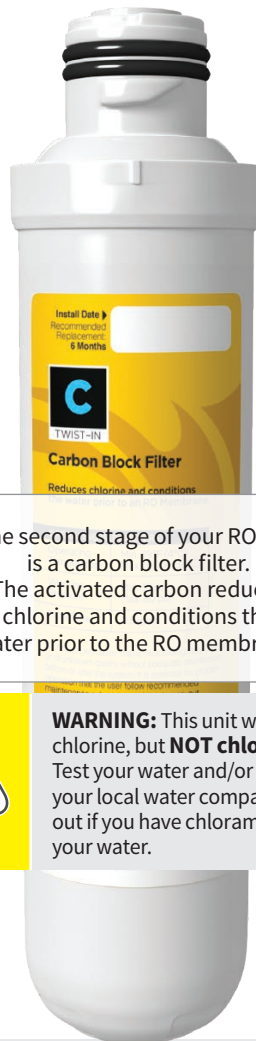


The first stage of your RO unit is a five micron sediment filter that traps sediment and other particulate matter like dirt, silt and rust which will affect the taste and appearance of your water.

C

STAGE 2: CARBON BLOCK FILTER

Recommended change 2,500
gallons total or 650 gallons
of filtered water
(at 1 ppm chlorine)



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.

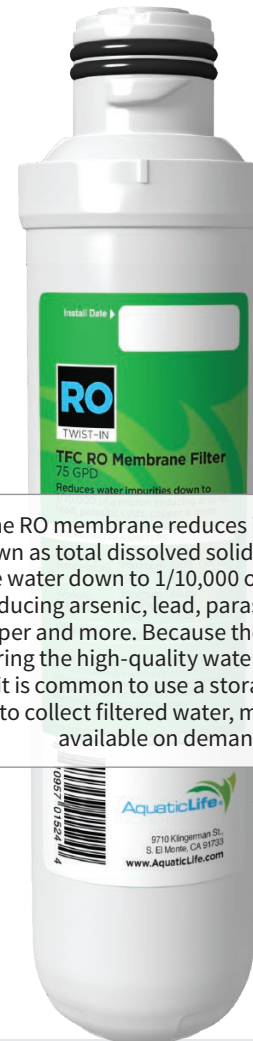


WARNING: This unit will remove chlorine, but **NOT chloramines**. Test your water and/or check with your local water company to find out if you have chloramines in your water.

RO

STAGE 3: RO MEMBRANE

Recommended change
12-24 months

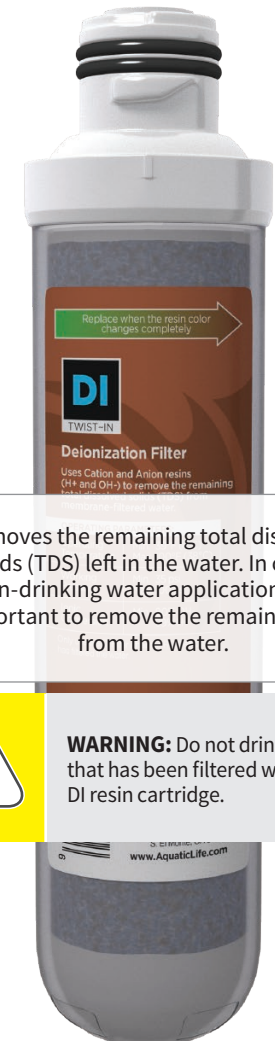


The RO membrane reduces impurities known as total dissolved solids (TDS) from the water down to 1/10,000 of a micron, reducing arsenic, lead, parasitic cysts, copper and more. Because the process of filtering the high-quality water takes time, it is common to use a storage tank to collect filtered water,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

DI

STAGE 4: DEIONIZATION

Replace when resin
changes color



Removes the remaining 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.



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

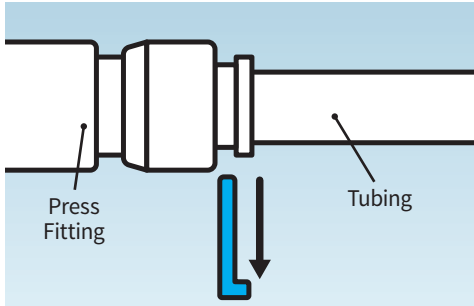


NOTE: Filter cartridges and membrane life may vary based on local water conditions and amount of use.

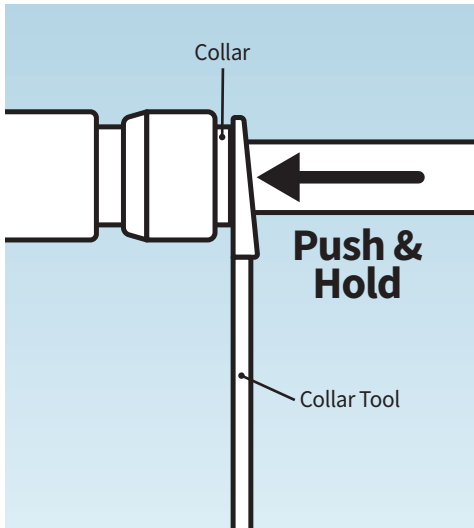
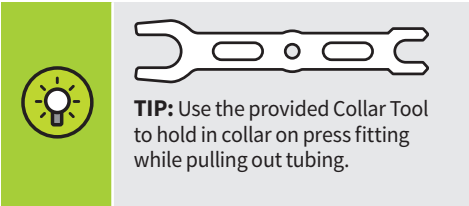
BECOMING FAMILIAR WITH YOUR RO SYSTEM

REMOVING TUBING from the Press Fittings

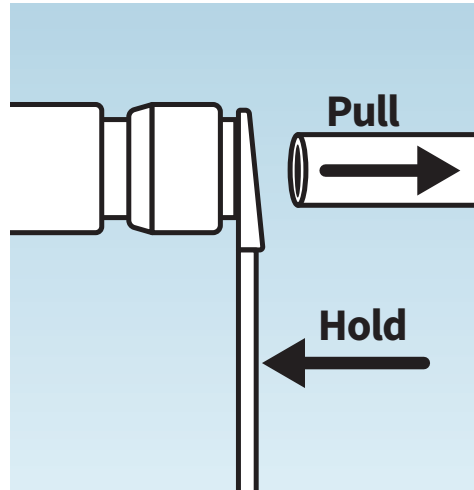
STEP 1 - Remove the blue clip from the press fitting.



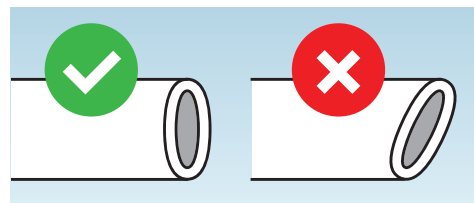
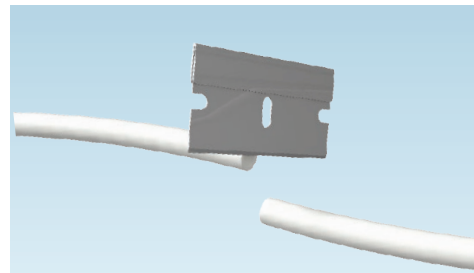
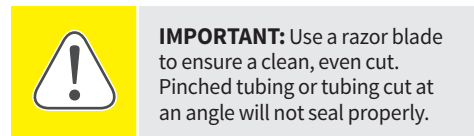
STEP 2 - Press in & hold the collar on the Press Fitting. Using the Collar Tool makes this easier.



STEP 3 - Continue to hold the collar while pulling out tubing.



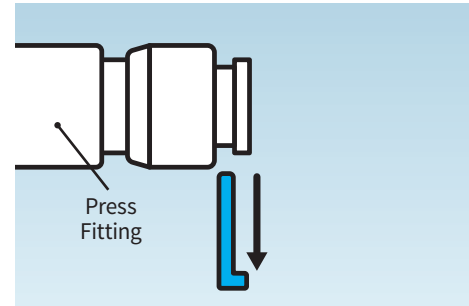
BEFORE INSTALLING TUBING



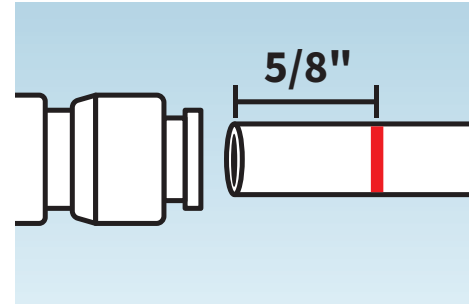
BECOMING FAMILIAR WITH YOUR RO SYSTEM

INSTALLING TUBING in the Press Fittings

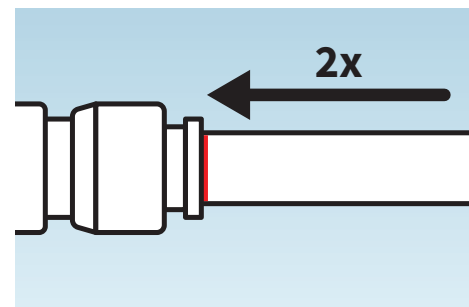
STEP 1 - Remove the blue clip from the press fitting.



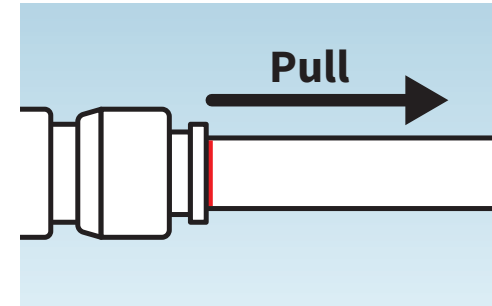
STEP 2 - Mark the tubing 5/8" from end.



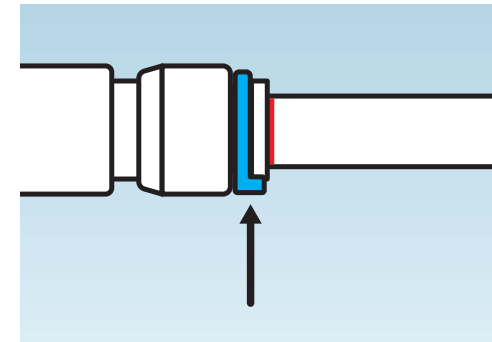
STEP 3 - Push the tubing into the fitting. You will hit the first stop. The tubing is still not secured properly. Push the tubing a second time until it reaches the 5/8" mark.



STEP 4 - Pull the tubing to ensure it is properly locked in place & sealed.



STEP 5 - Reinstall the blue clip. Your tubing is now secure & water-tight.



SCAN TO VIEW VIDEO
Web Link: qrs.ly/zzbo14d

BECOMING FAMILIAR WITH YOUR RO/DI SYSTEM

COMPONENT & TUBING INSTALLATION

Depending on your needs, you may not use all the components included with this Twist-In RO/DI unit.

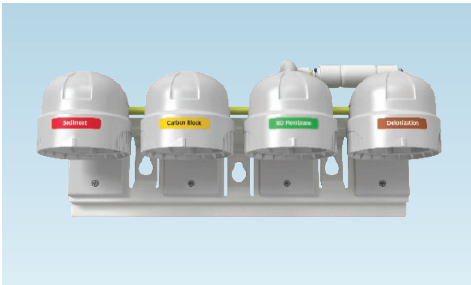
Review the components and then refer to the plumbing diagram that best fits your needs.



TIP: Keep all unused parts or components for future use.

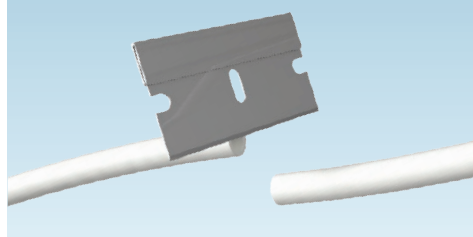
RO/ DI Heads

The pivoting heads are what hold the cartridges. Always install in an area where the heads can pivot up for easy cartridge install and removal.



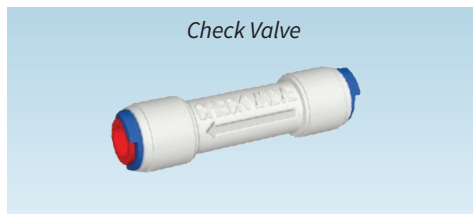
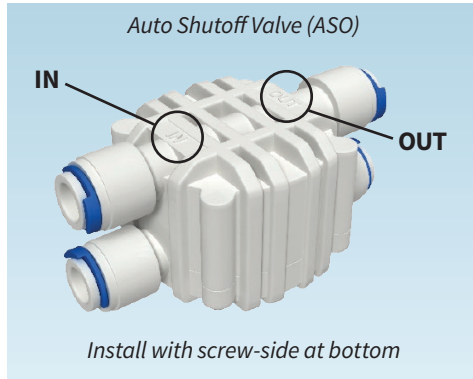
Tubing

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



Auto Shutoff Solenoid (ASO) and Check Valve

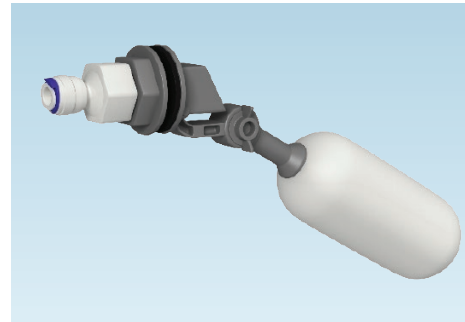
When plumbed correctly, the ASO and Check Valve will shut off the wastewater line when the filtered water line is stopped. If you install the Float Valve, you **MUST** also install the ASO and Check Valve.



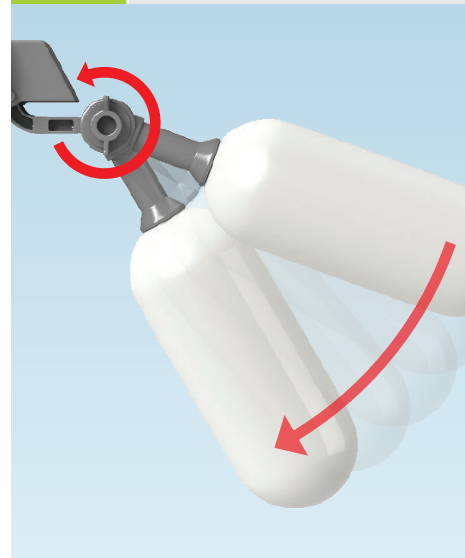
BECOMING FAMILIAR WITH YOUR RO/DI SYSTEM

Float Valve

Like the float in a toilet tank, this Float Valve allows you to fill tanks, containers and aquariums automatically. Drill a 7/8" hole in the container to install the Float Valve.



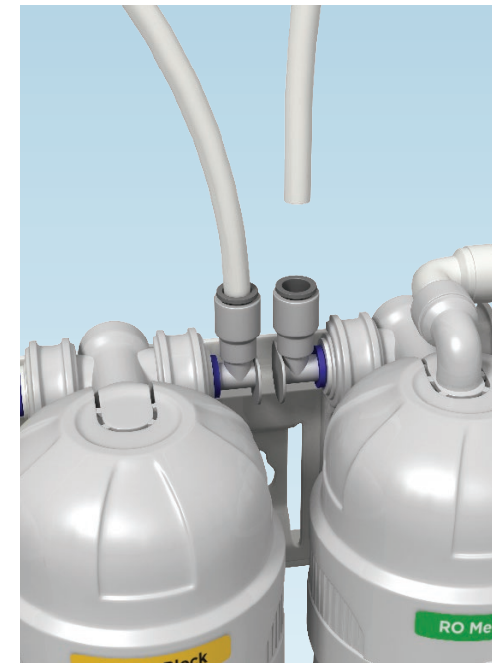
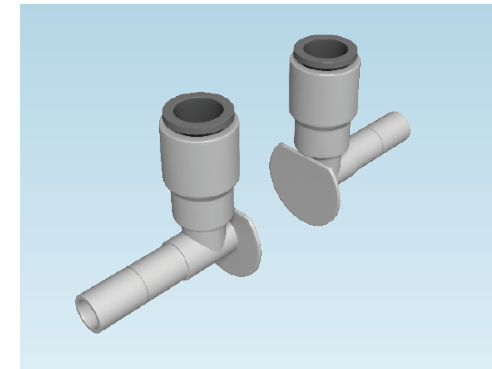
TIP: The Float works best when angled down. Adjust Float angle by loosening pivot knob, moving Float to desired position, and re-tightening knob to hold Float in place.



90° Elbows

Depending on your requirements, you may need to install components between two of the pivoting heads. We have included four 90° elbows that fit between the heads.

These elbows **DO NOT** require the locking blue clips.

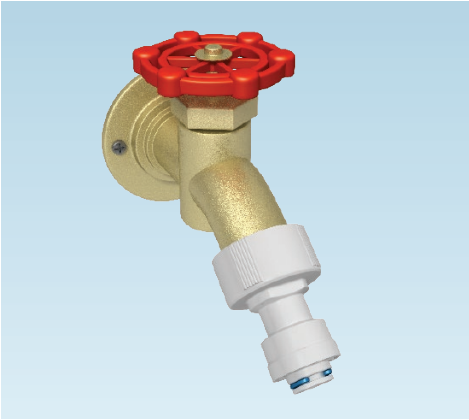


WATER SUPPLY INSTALLATION

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

OPTION 1:

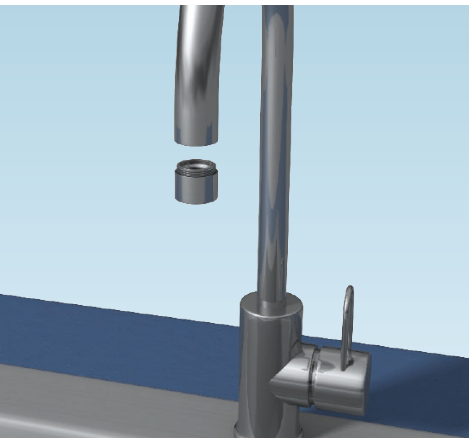
Connect to a standard water faucet (often found on the exterior of houses, utility sinks, and washing machines) with the Hose Bib Adapter.



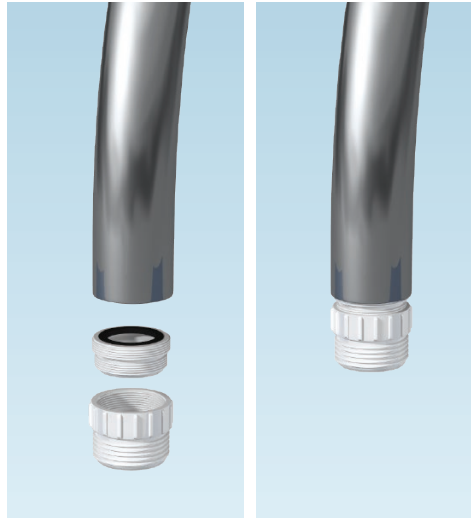
OPTION 2:

Connect to kitchen or bathroom faucet using the sink adapters.

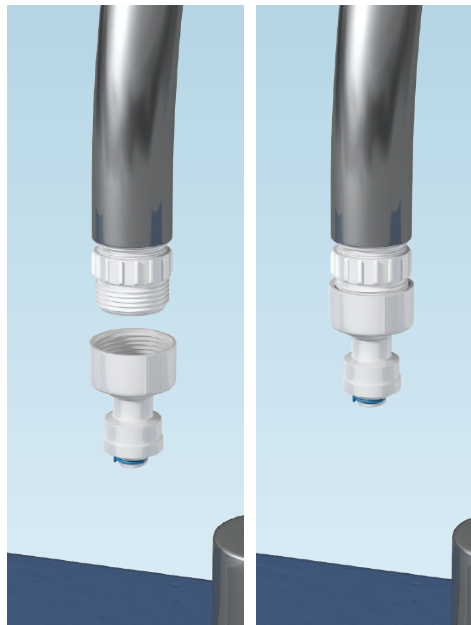
STEP 1 - Remove the existing sink aerator.



STEP 2 - Install the two-piece sink adapter. You may need one or both pieces, depending on your sink.



STEP 3 - Attach the hose bib connection to the sink adapter.



MOUNTING THE RO/DI UNIT

STEP 1 - Locate a secure surface to mount the unit. Insert the Mounting Screws partially into the surface and hang the TI module on the screws.



STEP 2 - Once the TI module is hanging on the screws, tighten the screws to secure the TI module to the surface.



CARTRIDGE INSTALLATION

Each TI cartridge uses a triple gasket seal to prevent water leaks.

The TI module heads are equipped with a valve that automatically turns off the water supply to each filter cartridge when you remove the cartridge.

NOTE: Cartridges must be installed in the correct order. Match the cartridge label/color to the labels on TI module heads.

Failure to do so will result in loss of filter performance & can shorten the lifespan of the filter.



INSTALLING/REPLACING CARTRIDGES

IMPORTANT! Turn off water supply to unit prior to removing cartridges

STEP 1 - Tilt cartridge up.



STEP 2 - Twist cartridge to the left and remove from module head.



STEP 3 - Insert new cartridge into module head and twist right to secure.



STEP 4 - Return to down position.



PREPARING CARTRIDGES FOR USE



IMPORTANT: The Carbon Cartridge & RO Membrane **MUST BE FLUSHED** prior to use.



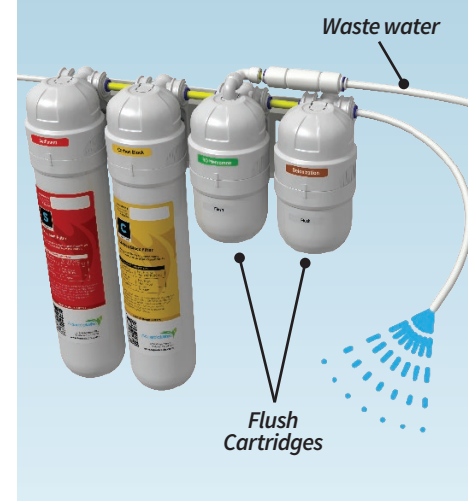
NOTE: Two Flush Cartridges are included and will be used when flushing the Carbon Cartridge and RO Membrane.

FLUSHING THE CARTRIDGES

STEP 1 - Install **Flush Cartridges** on the **Membrane & Deionization heads**. Run water through the unit for five minutes or until the **water runs clear**.



FLUSH UNTIL CLEAR



STEP 2 - Remove the **Flush Cartridge** from the **Membrane head & install the RO Membrane**. Run water through the unit for 30 minutes to flush the preservative out of the new membrane. **DISCARD ALL WASTE & FILTERED WATER** for the first 30 minutes.



FLUSH FOR 30 MINUTES & DISCARD ALL WATER



STEP 3 - Remove the other **Flush Cartridge** and **install the Deionization Cartridge**.

**UNIT IS READY FOR USE!
DO NOT FLUSH DI CARTRIDGE**



INSTALLATION TYPES

Review the installation diagrams on the following pages to find a configuration that works best for your needs. Some installations will require the purchase of additional components.

Some installations will require the use of the 90° elbows included with your unit. Follow these steps to install the elbows.

INSTALLING 90° ELBOWS

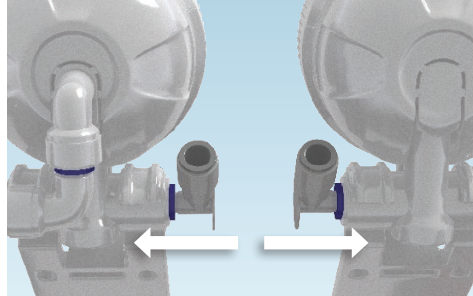
STEP 1 - Remove cartridges



STEP 2 - Detach module heads from mounting bracket by removing the 3 screws in each head.



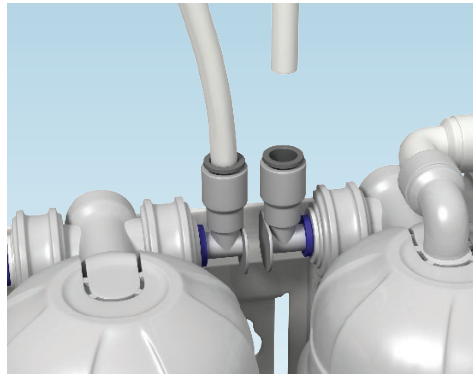
STEP 3 - Remove tubing between module heads & insert a 90° Elbow in each port.



STEP 4 - Reattach module heads to mounting bracket & reinstall cartridges.



STEP 5 - 90° Elbows are ready to be plumbed with appropriate component(s).

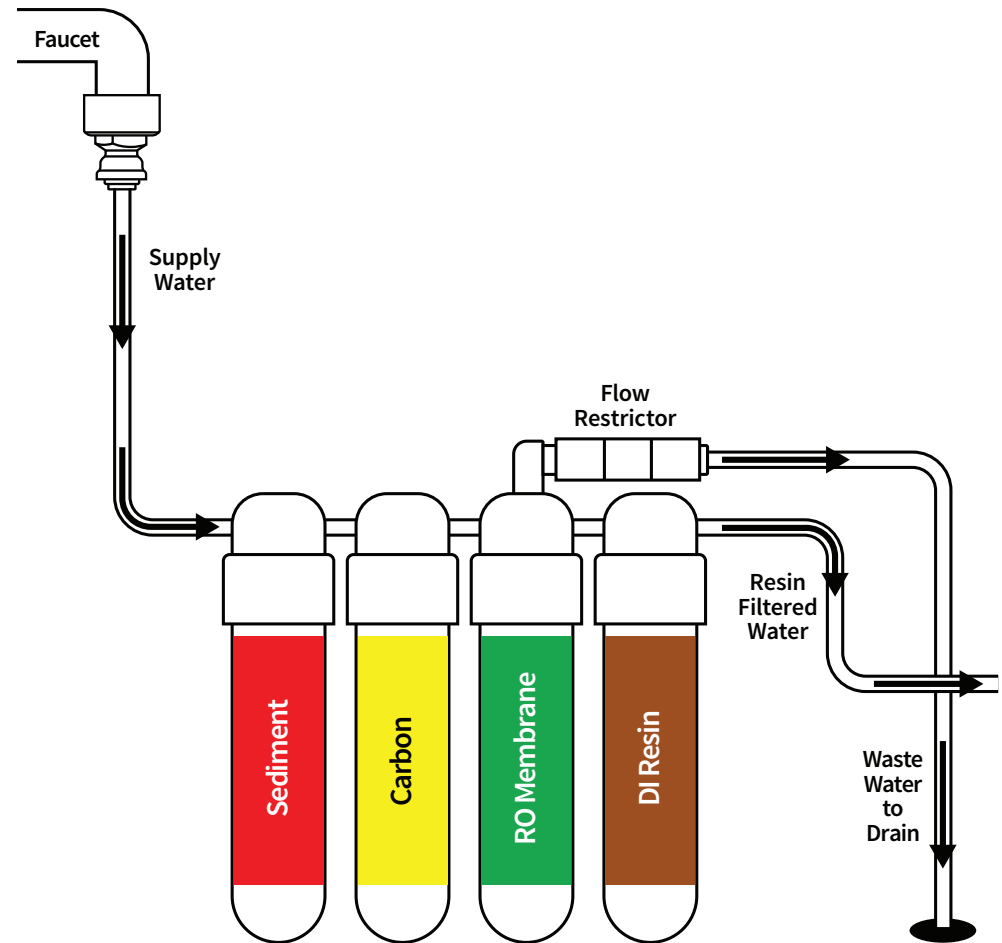


INSTALLATION

A

NO FLOAT VALVE

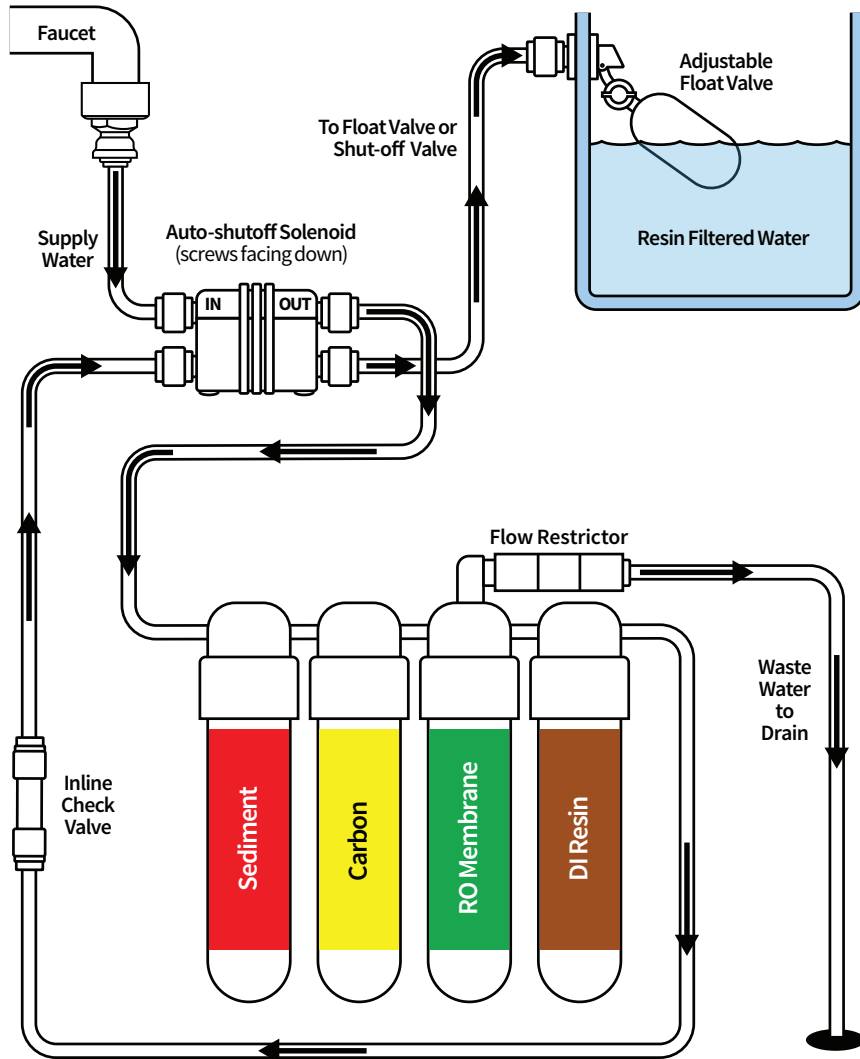
When finished using RO/DI unit, turn off the supply water at the faucet.



INSTALLATION
B1

FLOAT VALVE with AUTO-SHUTOFF SOLENOID

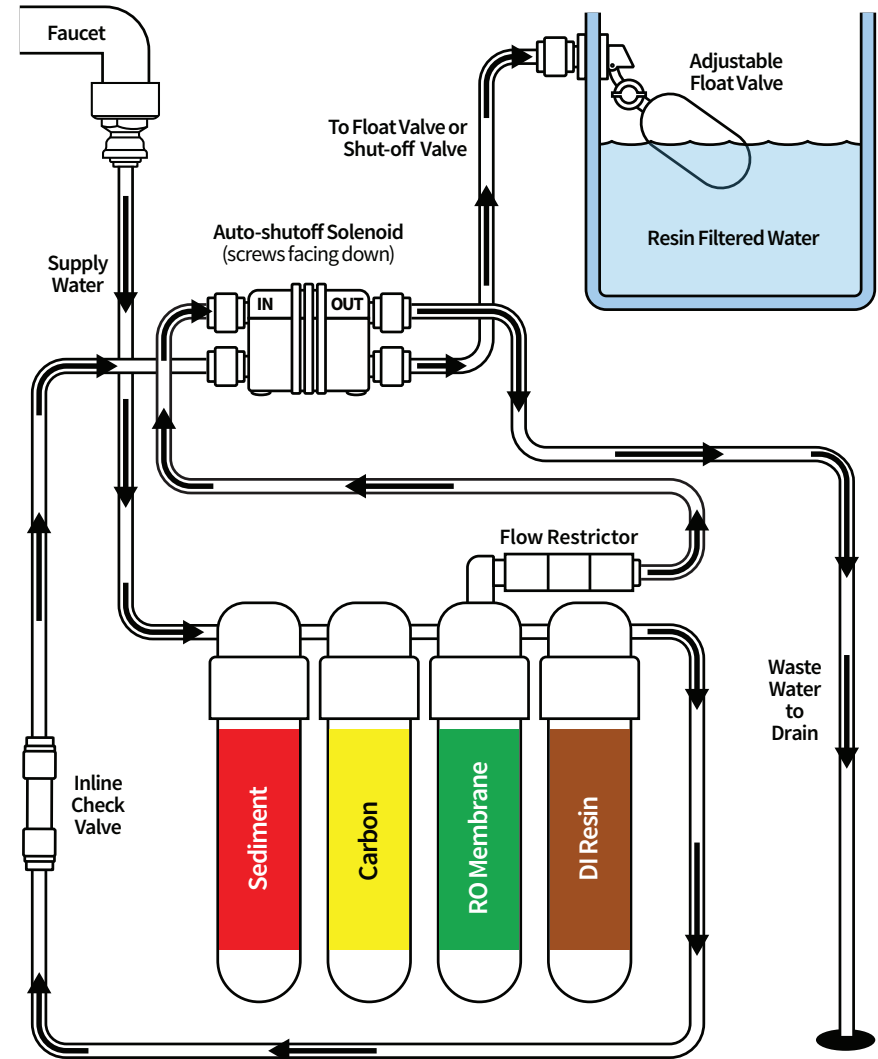
When the Float shuts off the filtered water, the Solenoid will stop the wastewater.



INSTALLATION
B2

LOW WATER PRESSURE
FLOAT VALVE with AUTO-SHUTOFF SOLENOID

Use when incoming water pressure is LESS THAN 50 PSI



INSTALLATION

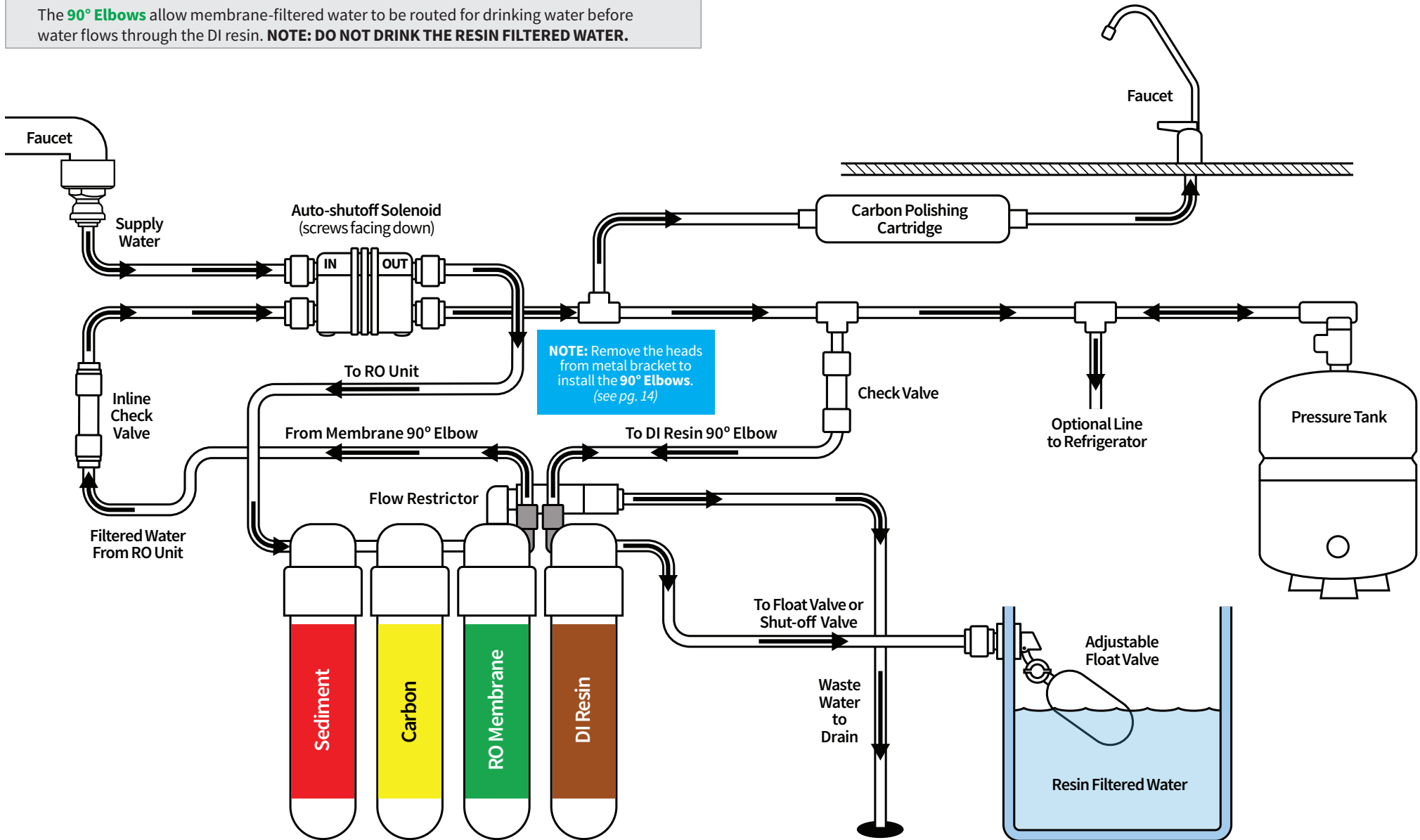
C

FILTERED DRINKING WATER

The **90° Elbows** allow membrane-filtered water to be routed for drinking water before water flows through the DI resin. **NOTE: DO NOT DRINK THE RESIN FILTERED WATER.**

ADDITIONAL ITEMS REQUIRED TO COMPLETE INSTALLATION

- Check Valve - Item #500449 | Shut-off Valve (if not using Float Valve) - Item #9000356
- Carbon Polishing Cartridge - Item #330250 | Tees - Item #9000432 | 1/4" Tubing - Item #500297
- Pressure Tank | Faucet



INSTALLATION

D

INSTALL A **SMART BUDDIE BOOSTER PUMP**
FOR LOW WATER PRESSURE INSTALLATIONS

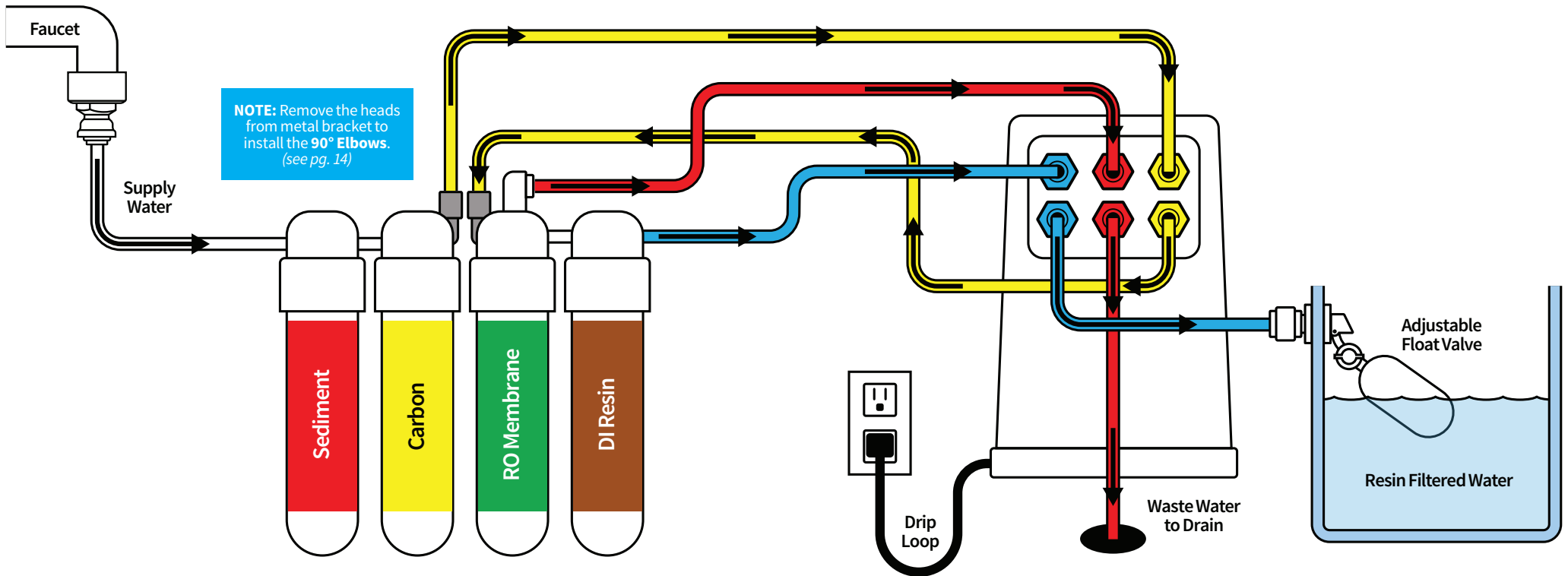
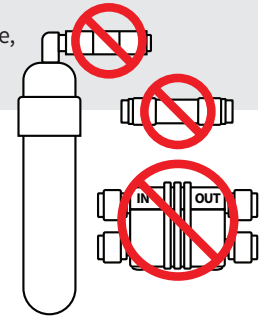
If supply water pressure is too low to operate the RO/DI unit, install a Smart Buddie Booster Pump.

ADDITIONAL ITEMS REQUIRED TO COMPLETE INSTALLATION

Smart Buddie Booster Pump - Item #540292 | 1/4" Tubing - Item #500297 | Wall Plug Timer



NOTE: DO NOT USE a Flow Restrictor, Check Valve, or Auto-shutoff Solenoid in this installation.



Use a wall timer to control the Smart Buddie Booster Pump once a day. This extends the life of the DI Resin by preventing "TDS creep".

INSTALLATION
E

FILTERED DRINKING WATER USING A SMART BUDDIE BOOSTER PUMP FOR LOW WATER PRESSURE INSTALLATIONS

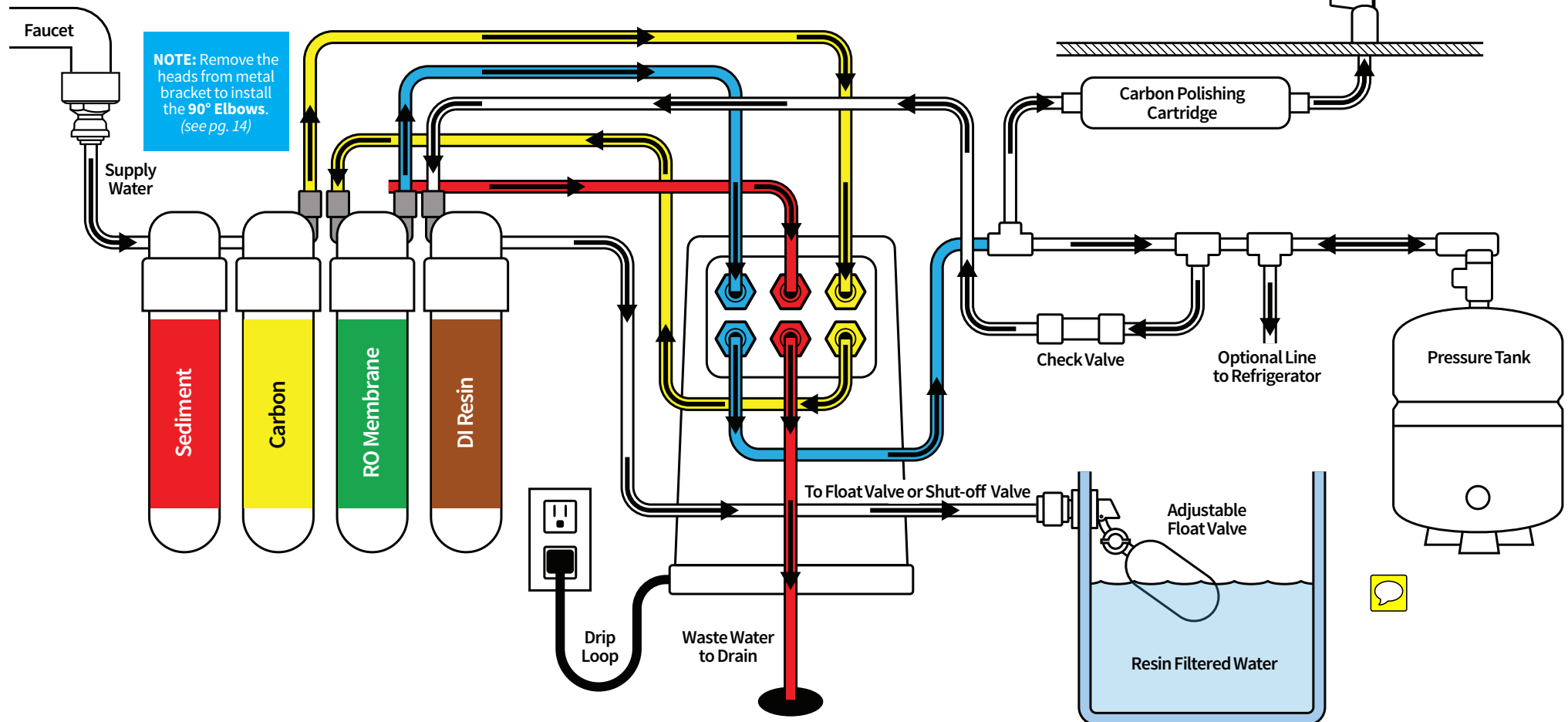
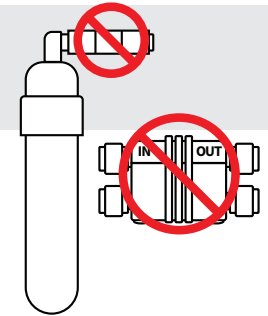
If supply water pressure is too low to operate the RO/DI unit, install a Smart Buddie Booster Pump.

ADDITIONAL ITEMS REQUIRED TO COMPLETE INSTALLATION

- Check Valve - Item #500449 | Shut-off Valve (if not using Float Valve) - Item #9000356
- Carbon Polishing Cartridge - Item #330250 | Tees - Item #9000432 | 1/4" Tubing - Item #500297
- Pressure Tank | Faucet



NOTE: DO NOT USE a Flow Restrictor, or Auto-shutoff Solenoid in this installation.



INSTALLATION

F

ADD A CHLORAMINE FILTER

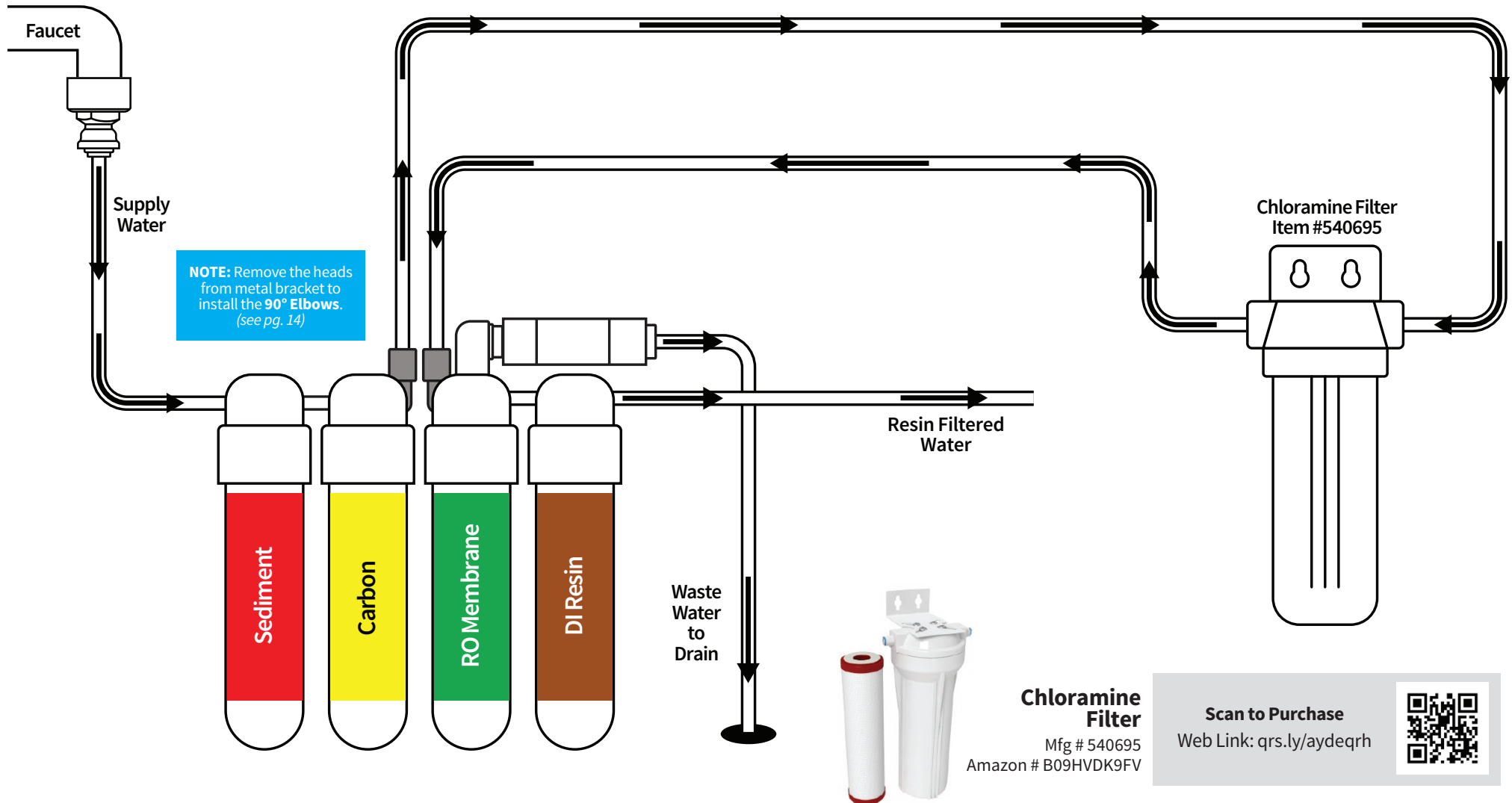
A CHLORAMINE FILTER MUST BE USED if Chloramines are present in the supply water.

DO YOU HAVE CHLORAMINES IN YOUR WATER SUPPLY?

Supply water treated with Chloramines is different than Chlorine. When Chloramines are present, a special filter is required.

Contact your water company to find out if they treat with Chlorine or Chloramines. **If Chloramines are present in your water, install a Chloramine Filter (Item #540695)**

ADDITIONAL ITEMS REQUIRED TO COMPLETE INSTALLATION • Chloramine Filter - Item # 540695



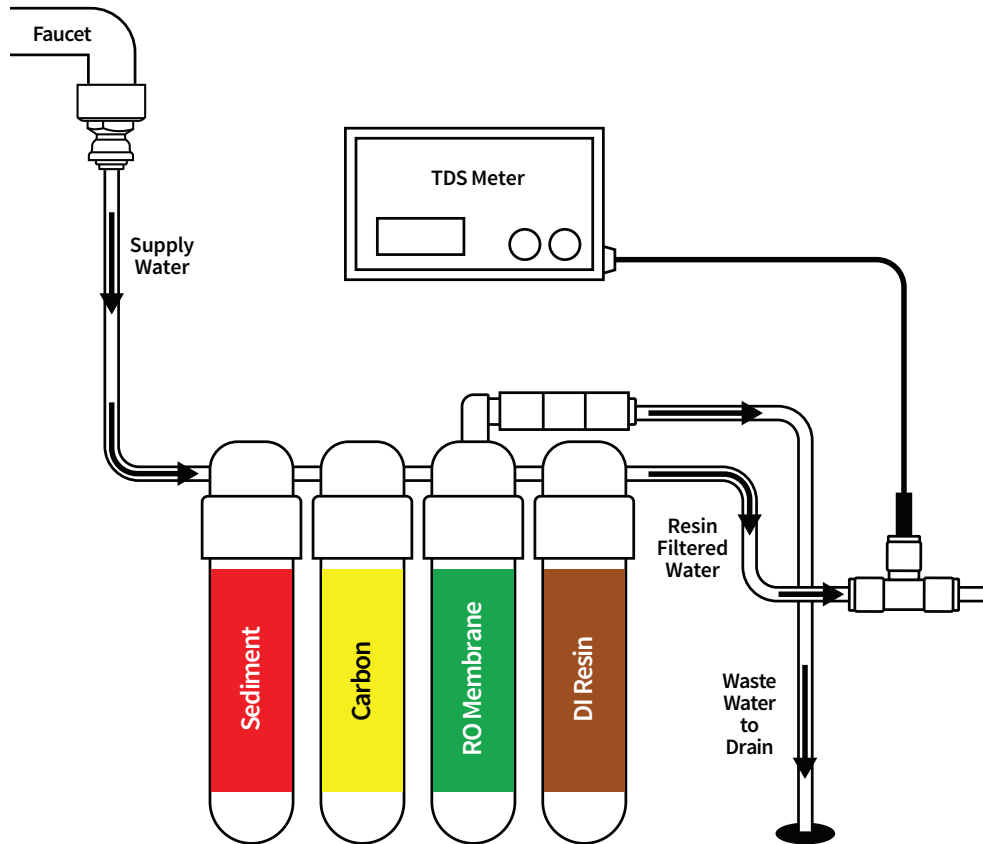
INSTALLATION

G

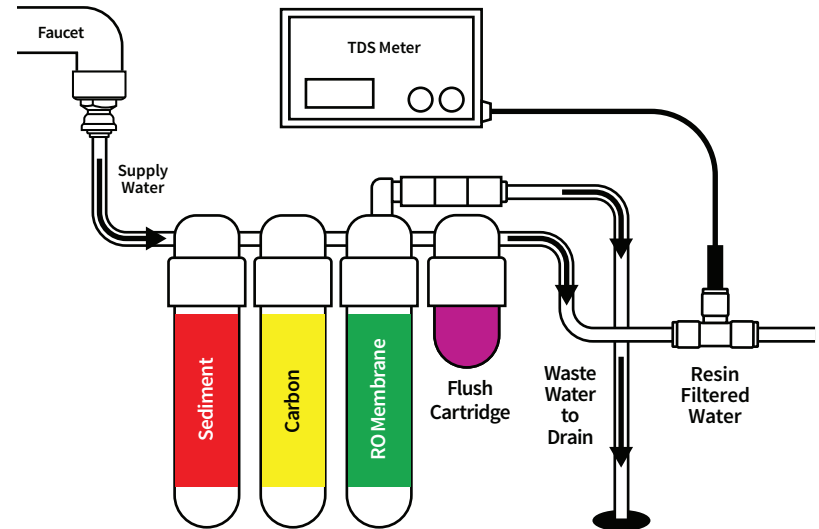
INSTALL A TDS METER

Using a TDS Meter with one probe will allow you to monitor the efficacy of the resin.

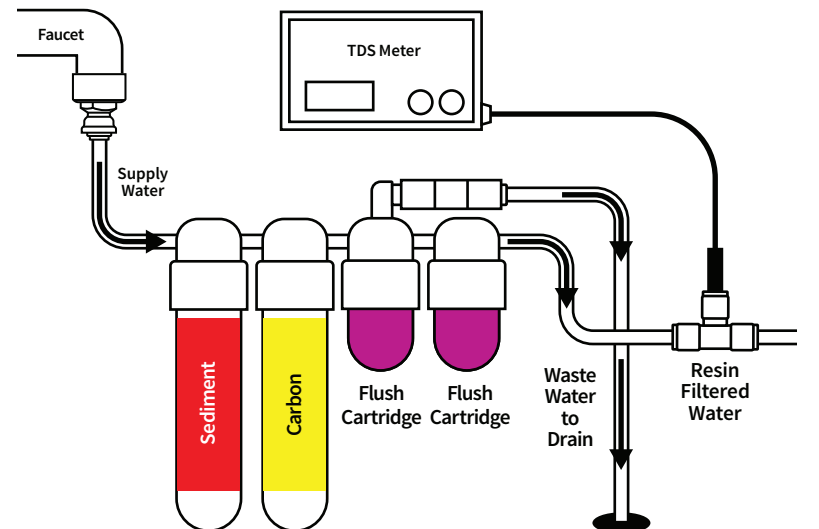
ADDITIONAL ITEMS REQUIRED TO COMPLETE INSTALLATION • HM Digital Single Probe TDS Meter



NOTE: Install a **Flush Cartridge** in the DI Resin position to measure the **TDS of the water exiting the Membrane.**



NOTE: Install **Flush Cartridges** in the DI Resin & Membrane positions to measure the **TDS of the incoming water supply.**



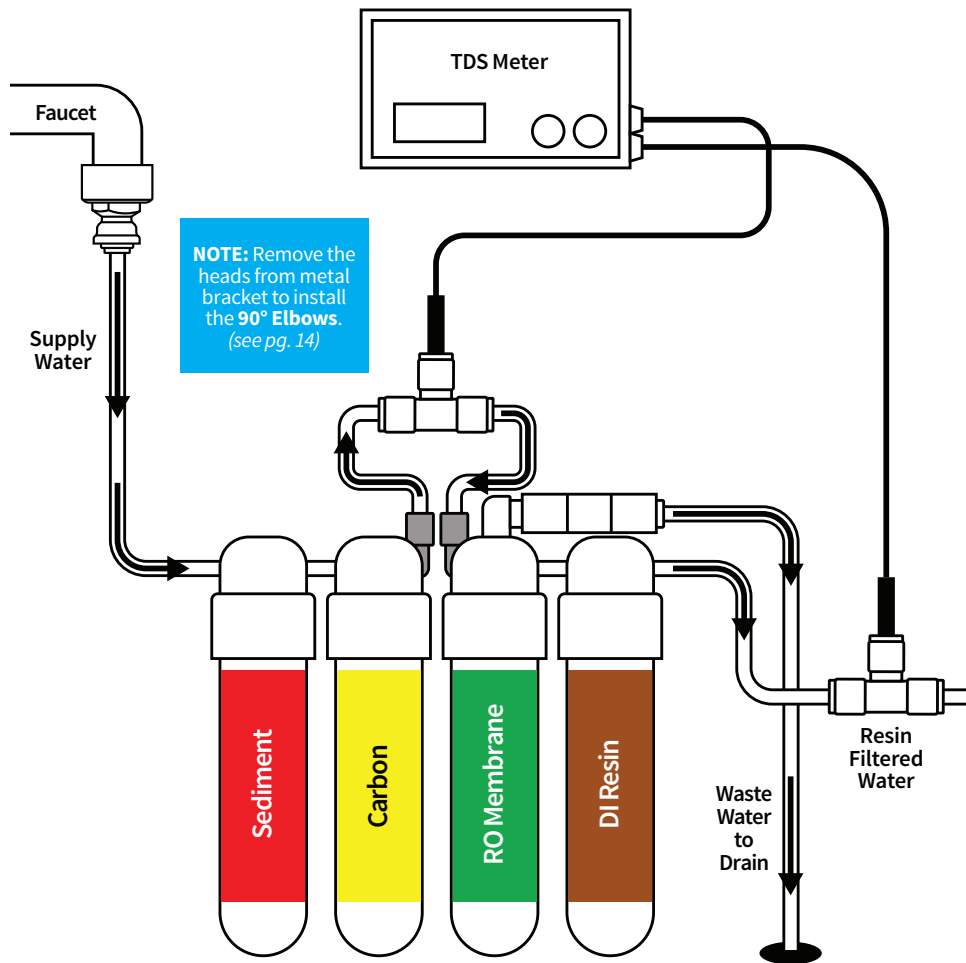
INSTALLATION

H

INSTALL A **DOUBLE PROBE TDS METER**

Using a TDS Meter with **two probes** will allow you to monitor the TDS of the incoming water supply and efficacy of the resin.

ADDITIONAL ITEMS REQUIRED TO COMPLETE INSTALLATION • HM Digital Double Probe TDS Meter



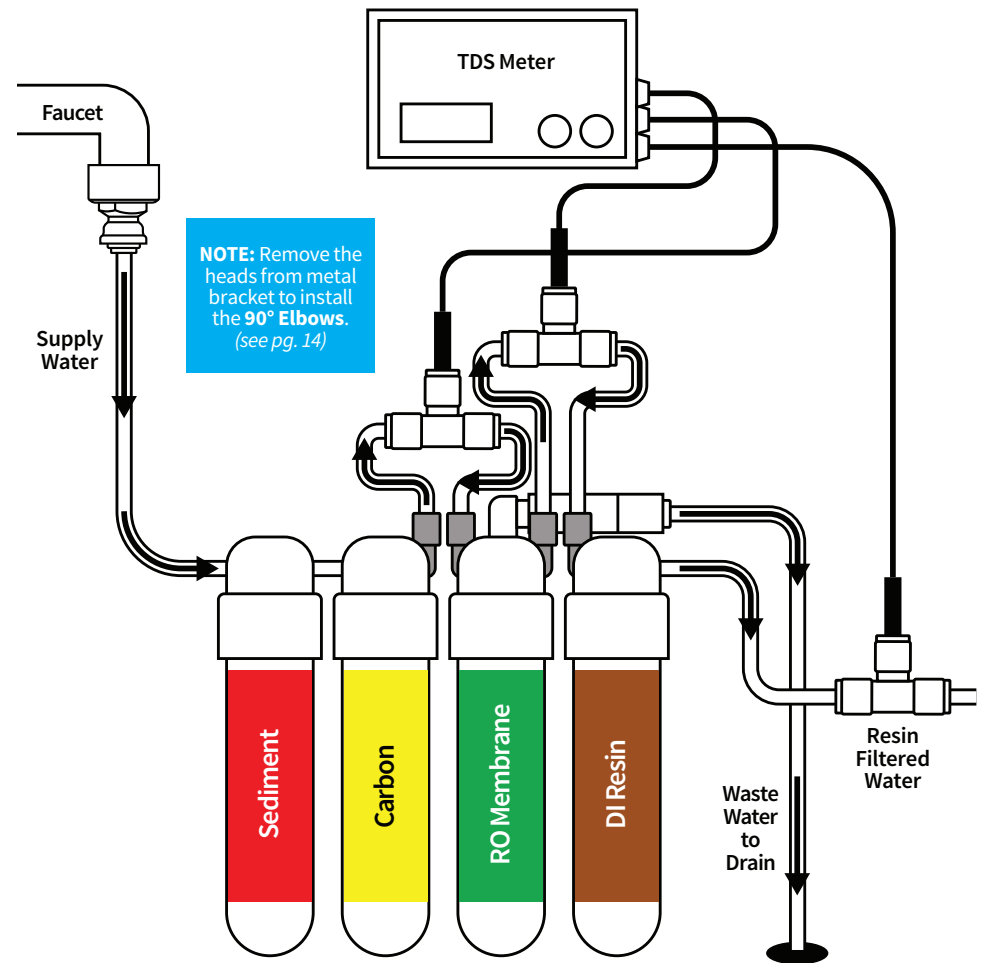
INSTALLATION

I

INSTALL A **TRIPLE PROBE TDS METER**

Using a TDS Meter with **three probes** will allow you to monitor incoming water supply TDS, quality of the Membrane and efficacy of the resin.

ADDITIONAL ITEMS REQUIRED TO COMPLETE INSTALLATION • HM Digital Triple Probe TDS Meter



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 2,500 gallons of water before being replaced IF your chlorine level is 1 ppm (parts per million). With a 2 ppm you can filter 1,250 gallons of water before needing to change, with a 3 ppm you can filter 833 gallons, and so on. Any chlorine not absorbed by a spent carbon cartridge will break down your membrane, thus greatly shortening its life.

The 2,500 gallon threshold is TOTAL water that passes through the unit. The Twist-In 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. At 1 ppm of chlorine, you can make about 650 gallons of good water before changing the carbon cartridge, 2 ppm you can make about 325 gallons, 3 ppm you can make about 217 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 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 55 PSI. Any deviation from this will affect the water production.

Reference the conversion table below. Notice that the warmer the water, the better the production. Do not introduce water from your water heater to increase water temperature. **The membrane cannot 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	0.1 to 0.2
77/25	1.00	50	0.4 to 0.5
80/27	1.06	65	1
90/32	1.23	70	1.05 to 1.15
100/38	1.45	80	1.25 to 1.35

Example

The RO membrane production rate at 77°F, 55 PSI = 75 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 75 x 0.58 = **43.5 gallons per day.**

UNIT MAINTENANCE



NOTE: Cartridge life depends on supply water quality & amount of use. Recommended replacements are based on average usage.

Recommended change 3-6 months or 2,500 gallons total or 650 gallons of filtered water.

- Sediment Filter Cartridge (Item #330377)
- Carbon Block Cartridge (Item #330379)

12-24 Month Maintenance

- 75 GPD Membrane Cartridge (Item #330524)

As Required – By Visible Color Change

When DI resin is new, it is a blue green color. When it gets wet, it will change to a dark blue color. **When the medium is spent it will change to a light brownish tan color.**

- DI Resin Cartridge (Item #330380)



MAINTENANCE REMINDERS

The cartridges include a place to write the date of installation to remind you when cartridges need replaced.

ADDITIONAL PURCHASE CONSIDERATIONS

Scan to order on Amazon



DI Cartridge Value 4-Pack



Sediment & Carbon Value 4-Pack



TROUBLESHOOTING

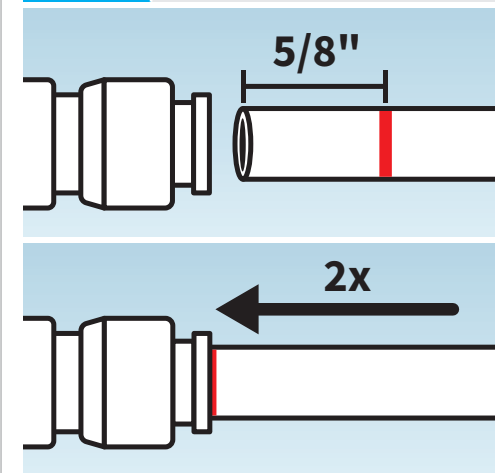
Leaks at the tubing connections:

Ensure the tubing is inserted 5/8" into fitting. When inserting the tubing you feel the initial stop when the tubing meets the o-ring and a second stop when you push past the o-ring. This is what we call the "double push".

See pgs. 6-7 for detailed instructions.



NOTE: Tubing will insert 5/8" inside the fitting when properly 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 55 PSI and a 77°F water supply. If you have one or both specifications out of tolerance, use the temperature correction factors from chart on previous page.

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 TI 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
9710 Klingerman St. | S. El Monte, CA 91733

customersupport@aquaticlife.com

www.aquaticlife.com