

## ROPure550® INSTALLATION MANUAL

Thank you for choosing the ROPure550® Reverse Osmosis Water System. You now own a superb water filtration system that is highly effective at reducing just about all contaminants in your water, including organic and inorganic compounds as well as unwanted tastes and odors.

This system uses household water pressure to reverse a natural physical process called *osmosis*. Water, under pressure, is forced through a semi-permeable membrane where minerals and impurities are filtered out. Clean drinking water goes to the faucet or storage, while the impurities are sent to the drain. These impurities are measured in the water as *total dissolved solids* (TDS).

The system includes standard, 10 inch, replaceable pre and post filter cartridges. The prefilters remove sediment and chlorine from the water supply before they can enter the RO membrane. The postfilter removes any taste or odors that may remain in the water after passing through the RO membrane, and just before going to the RO faucet. To prevent water waste, an automatic shut-off valve closes when the RO faucet is closed and the storage tank is full.

This reverse osmosis system will provide you with a continuous supply of sparkling clear, delicious water for drinking, cooking and other uses. Foods will look and taste better too. Having high quality RO water at your fingertips eliminates the need to buy bottled water. The storage tank holds up to 3.2 gallons of RO water for your needs.

## BEFORE YOU INSTALL THE RO SYSTEM

FOR OPTIMUM PERFORMANCE YOUR ROPURE REVERSE OSMOSIS SYSTEM SHOULD BE INSTALLED ON SOFTENED WATER.

**CAUTION:** A refrigerator icemaker may not operate properly when connected to a reverse osmosis system that has been installed on a water system that operates outside of the specified pressures listed on page 25.

**CHECK YOUR WATER SUPPLY:** The COLD water supply to the RO system must be within certain quality limits. See the specifications on page 25. If the supply water is not within the limits defined, the RO system will not make product water as it should and substantially reduced filter and membrane life will result.

**CAUTION:** Chlorine in the water will destroy the RO membrane. Most cities add chlorine to the water supply to kill bacteria. The prefilters will remove the chlorine up to the limits shown in the specifications on page 25 before it enters the RO membrane. It is **important** to replace the prefilter cartridges at the recommended time intervals. See System Care and Maintenance starting on pages 16-19

**CAUTION:** Before consuming any water from the RO system you must PURGE the RO membrane cartridge. The RO cartridge contains a *food grade preservative* that should be removed before consuming the water from the system. This procedure is explained on page 15.

**Your ROPure550™ system is preloaded with all the required filters and was thoroughly sanitized, tested and inspected for production leaks, and AUTO shut-off functions after its' construction. Therefore, it may have a small amount of residual water in it.**

## SAFTEY GUIDES

- Read all steps and guides carefully before installing and using your reverse osmosis system. Follow all steps exactly to correctly install. Reading this manual will also help you get all the benefits from your RO system.
- DO NOT attempt to use this product to make safe drinking water from non-potable water sources. Do not use the system on microbiologically unsafe water, or water of unknown quality without adequate disinfection before or after the system. This system is suitable for cyst reduction and may be used on disinfected water that may contain filterable cysts.
- Check with your local public works department for plumbing and sanitation codes. You must follow their guides as you install the system. Follow your local codes if they differ with guides in this manual.
- This system shall only be used for arsenic reduction on chlorinated water supplies containing detectable amounts of residual free chlorine at the system inlet. Water systems using an inline chlorinator should provide a one minute chlorine contact time before the RO system.
- This system is acceptable for treatment of influent concentrations of no more than 27mg/l nitrate and 3mg/l nitrite in combination measured as N and is suitable for nitrate/nitrite reduction only for water supplies with a pressure of 280kPa (40 psig).
- This reverse osmosis system works on water pressure of 40 psi (minimum) to 100 psi (maximum). You must install a pressure reducing valve in the water supply pipe to the reverse osmosis system if the water pressure exceeds 100 psi.
- Do not install this reverse osmosis system outside or in extreme hot or cold environments. Temperature of the feed water supply to the RO system must be between 40° F and 100° F. Do not install on hot water.
- Read the other limits (pH, hardness, etc.) in the specifications on page 25 and be sure your water supply conforms.
- The reverse osmosis membrane contains a food grade preservative for storage and shipment. Be sure to purge it as instructed on page 15.

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## WHERE TO INSTALL THE RO SYSTEM

This RO system is designed for installation under the sink, usually in the kitchen or bathroom. The RO system can be mounted on a wall surface or can stand on the cabinet floor next to the storage tank. The RO faucet installs on the sink or into the counter next to the sink.

You can also install the system in any remote location from the faucet, observing the safety guides on page 3. You will need a nearby water supply and drain point.

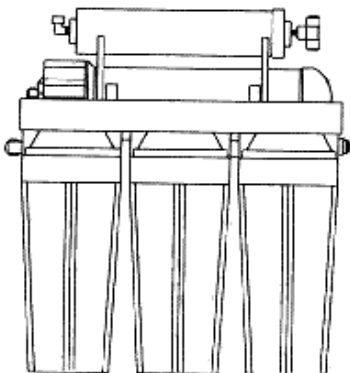
**Water supply:** To provide supply water to the RO system inlet, use the included feed supply fittings as described on pages 8-9, or your own pipe fittings as appropriate.

**Drain Point:** A suitable drain point is needed for the reject water from the RO membrane. A floor drain, laundry tub, standpipe, sump, etc., is preferred for remote installations. A Drain Line Adapter is included to install the system under the sink where codes permit, as an optional drain point.

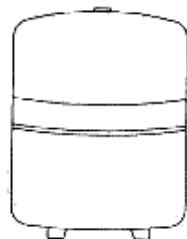
NOTE: Tubing lengths supplied with the system allow for the easy moving of the filter assembly for servicing. If tubing lengths are shortened for a neater appearance, it may be necessary to keep the filter assembly in its installed location for service.

### CHECK LIST:

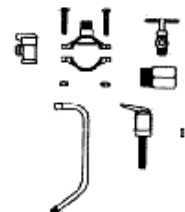
1. Reverse Osmosis Unit
2. Water storage tank
3. Five lengths of colored tubing, (black -2pcs, blue, red, white), 1/4" & 3/8" O.D., 5 feet each color
4. Installation kit includes: 1-tank ball valve, 1-feed water adapter, 1-feed water needle valve, 1-faucet assembly kit with plastic inserts and rubber washers and 1-Drain Line Adapter kit.
5. Installation manual



1) Reverse Osmosis Unit



2) Water storage tank  
4 Gallon



4) Installation kits



3) Four colored tubing  
Attached to RO unit

## TOOLS AND MATERIALS NEEDED:

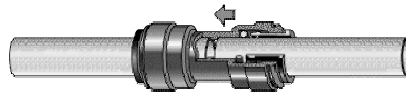
- Variable speed drill
- Hack Saw
- 1-1/4" drill bit
- 5/8, 9/16 open-end wrench, or adjustable wrench, pliers
- Phillips screwdriver
- Utility knife, or scissor
- Teflon tape

## SOME IMPORTANT INSTALLATION NOTES:

- Your RO system was flushed and pressure tested prior to shipment. At two of the connection points on the polishing filter, we have installed 3/8" plugs to prevent water leakage during shipment. You must remove each of these plugs prior to installing the 3/8" Blue faucet and 3/8" White tank line, (see instructions below to remove the plugs).
- If you should get confused as to what color tubing goes where, just refer to the Installation Diagram on page 7.
- The RO System uses John Guest® style fittings. These fittings only require you to simply push the tubing firmly into the each fitting. (See instructions below)

### Connecting standard John Guest push-in fittings

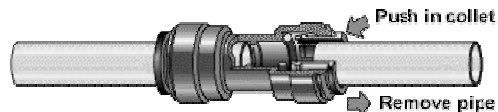
Push up to pipe stop



Push the pipe into the fitting, to the pipe stop. The collet (gripper) has stainless steel teeth which hold the pipe firmly in position whilst the 'O' Ring provides a permanent leak proof seal.

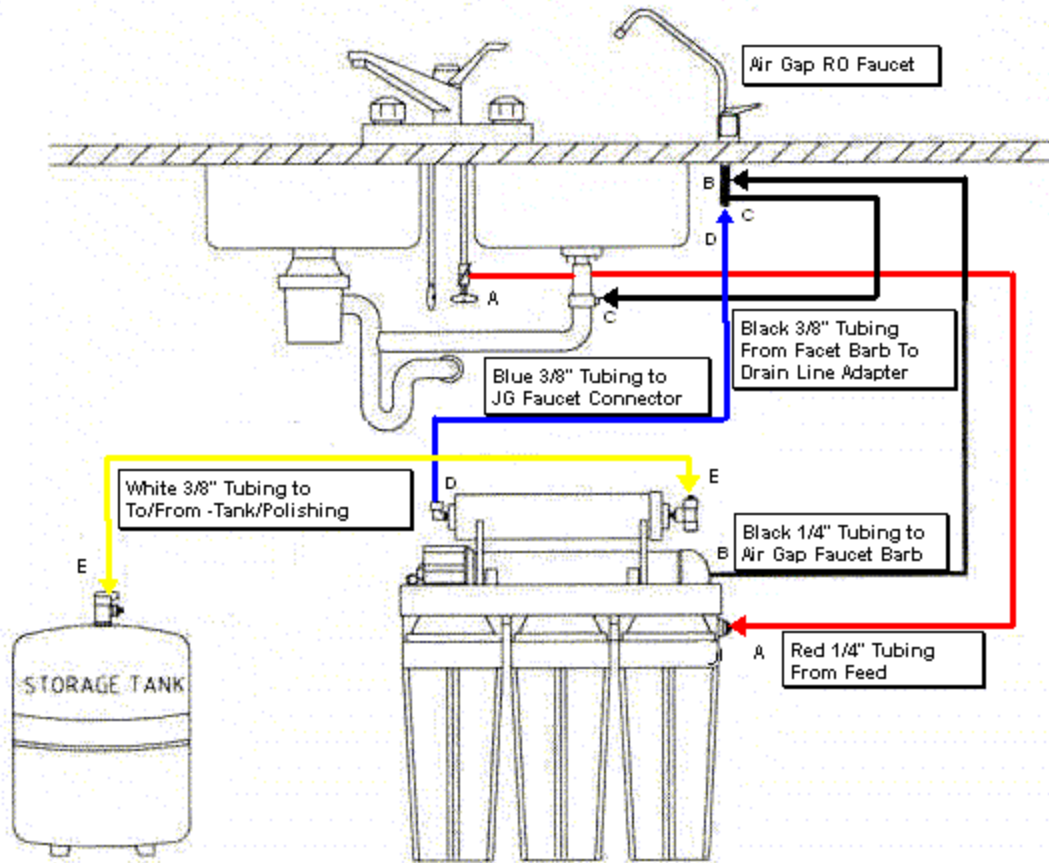
Pull on the pipe to check it is secure. It is good practice to test the system prior to leaving site and/or before use.

### Disconnecting standard John Guest push-in fittings



Ensure system is depressurized before removing fittings. Push in the collet against the face of the fitting. With the collet held in this position the pipe can be removed. The fitting can then be re-used

**INSTALLATION DIAGRAM**



	<b>5 connections</b>	<b>Size/Color of tubing</b>	<b>description</b>
A	RO Feed	1/4" Red Tubing	From Feed Water Adapter To RO Feed Input
B	Membrane Concentrate	1/4" Black Tubing	From Membrane Flow Control Fitting to 1/4" Hose Barb on Air Gap Faucet
C	Membrane Concentrate	3/8" Black Tubing	From 3/8 Hose Barb On Faucet to Drain Line Adapter (Discharge Waste To Drain)
D	RO Water	3/8" Blue Tubing	From Polishing Filter to John Guest Faucet Adapter
E	RO Water	3/8" White Tubing	From Polishing Filter To Storage Tank

## FOLLOW THESE 5 STEPS TO INSTALL YOUR RO SYSTEM :

### STEP 1: TAPPING INTO COLD WATER SUPPLY

There are a number of ways to connect the system to the mains water supply. We have provided fittings for **two** of the most convenient **methods**. One method is with the supplied John Guest EZ Faucet Adapter (see illustration).

#### **METHOD 1: John Guest EZ Faucet Adapter:**

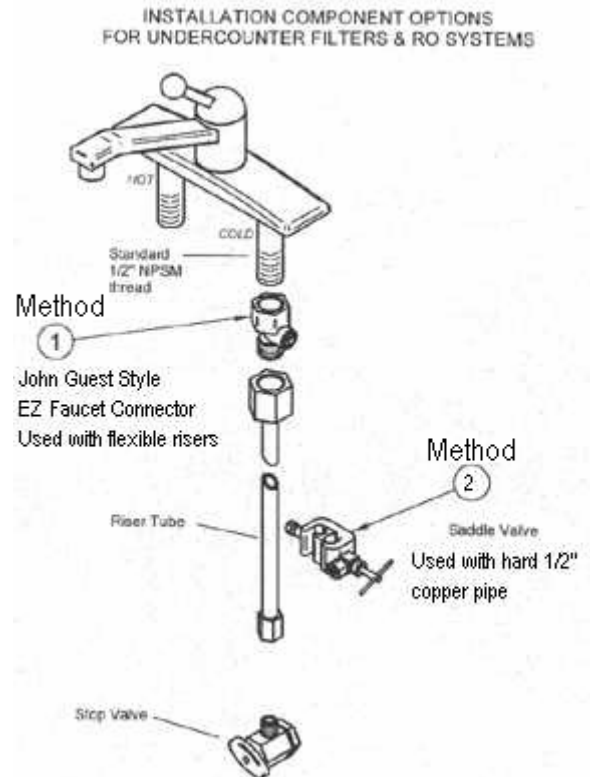
**CAUTION:** The water supply to your RO unit **MUST** be from a **COLD** water line. Hot water will severely damage your RO system.

#### **Installing the John Guest EZ Faucet Adapter**

This fitting is for use with flexible hose connectors only. If you do not have a flex line installed under your sink, we highly recommend purchasing one or go to **method 2**.



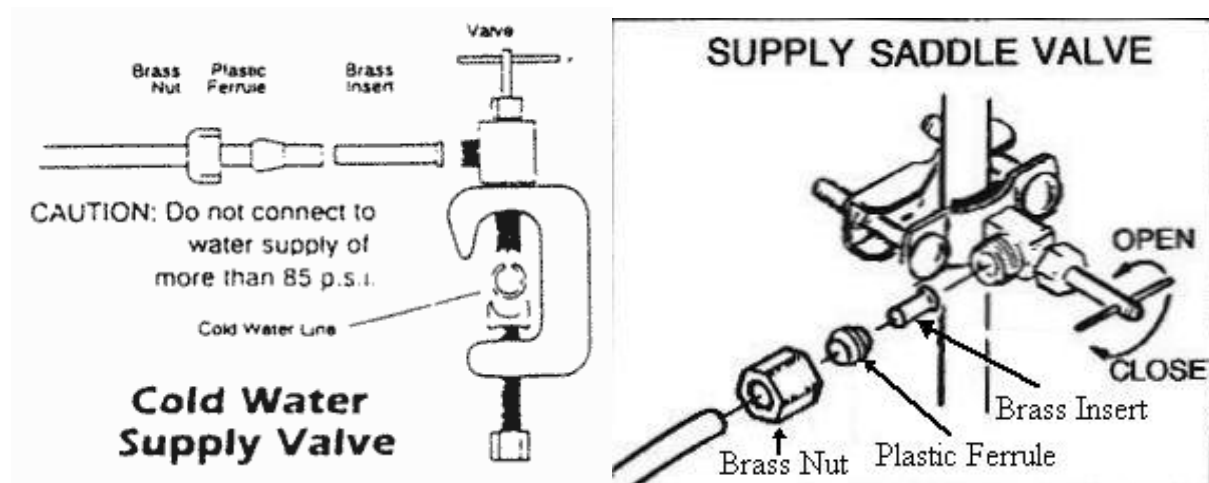
1. Locate cold water shut off valve under the sink and turn it off. Open cold-water faucet to release the pressure, and make sure there is no water running.
2. Loosen nut and separate cold water riser (Flex)tube from your sinks' cold water faucet shank. Install the EZ connector shown at right onto the faucet stem (see illustrations below), then attach the flexible tube to the lower connection of the EZ adapter. Be sure the washers are in place in the EZ Adapter before attaching it to the faucet. No tools are needed to connect the orange feed water tubing to the faucet adapter. To make a connection to the adapter, make sure the orange tube is cut straight and square, insert (PUSH) the tube all the way in, then pull it slightly to lock it.
3. Now, install the other free end of the orange 1/4" red tubing into the "feed" port of the Water System, where indicated by the red tube piece.  
**Note:** The cold water valve is now the on/off valve for the unit.



## **STEP 1 continued: TAPPING INTO COLD WATER SUPPLY**

**METHOD 2: Self-Piercing Saddle Valve:** Use this method when connecting to a hard ½" copper pipe. There are two types of saddle valves, either of which may be included with your system. Follow the diagrams exactly as shown below for your supplied valve.

**CAUTION:** The water supply to your RO unit MUST be from a COLD water line. Hot water will severely damage your RO system.



- 1) Turn off cold water supply and install the saddle valve to the cold water line. Turn the valve so that it pierces the copper water line.
- 2) Connect the red tube to the Saddle Valve as illustrated above, then install the other free end of the red 1/4" tubing into the "feed" port of the Water System, where indicated by the piece of tubing.

**Note:** The Piercing Valve can be used as a system shut-off. However, as a precaution, it is highly recommended that the valve be installed after an existing main shut-off valve.

## **STEP 2: INSTALLING THE AIR GAP DISPENSING FAUCET**

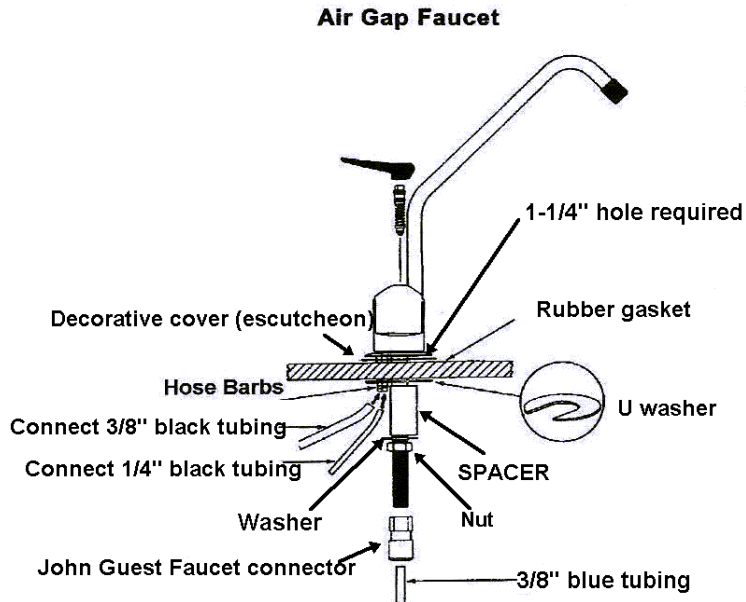
- A 1-1/4" hole is required for the Air Gap Faucet. The faucet should be positioned with aesthetics, function and convenience in mind. An ample flat surface is required for the faucet base so that it can be drawn down tight. Also, check the under sink area of the desired location to see if there is enough space to complete the faucet installation.
- If the space is not available on the upper sink area, the faucet could be positioned on the counter top at the edge of the sink. Be sure to watch for obstructions below, i.e., drawers, cabinet walls, support braces, etc. If the counter top is ceramic tile, the method for drilling the hold should be the same as for porcelain sink.

**NOTE:** The sink drilling process, although not complicated, requires a certain amount of caution and forethought. A porcelain enamel sink, granite or tile counter can chip if care is not exercised. It is necessary to obtain a special ceramic drill bit for a porcelain granite or tile sink/counter. When drilling the faucet hole for the sink/counter, you should wear eye protection and exercise caution.

### **FOLLOW THESE STEPS IN THE ORDER THEY ARE PRESENTED, TO INSTALL THE FAUCET CORRECTLY. (also, see the faucet diagram on next page)**

1. Pass the escutcheon plate (chrome base plate), large rubber washer, according to the diagram, through the threaded faucet mounting tube at the base of the faucet.
2. Take the 5 ft length of 3/8" black tubing and push one end onto the 3/8" barb fitting on the faucet.
3. Take the 5 ft length of 1/4" black tubing and push one end onto the 1/4" barb fitting on the faucet.
4. Work the tubing and faucet stud down into the mounting hole.
5. On the underside of the sink, slide on the U-Washer, the Spacer and the round Washer onto the faucet stud and have someone above the sink hold the faucet in place while you tighten the hex nut onto the faucet stud underneath the sink.
6. With all fittings in place, thread the John Gust faucet connector onto the faucet's threaded end and insert the Blue tubing into the open end of the fitting.
7. Connect the other free end of the 3/8" blue tubing to the Stage 5 postfilter where indicated by the blue piece of tubing.

## Faucet Diagram



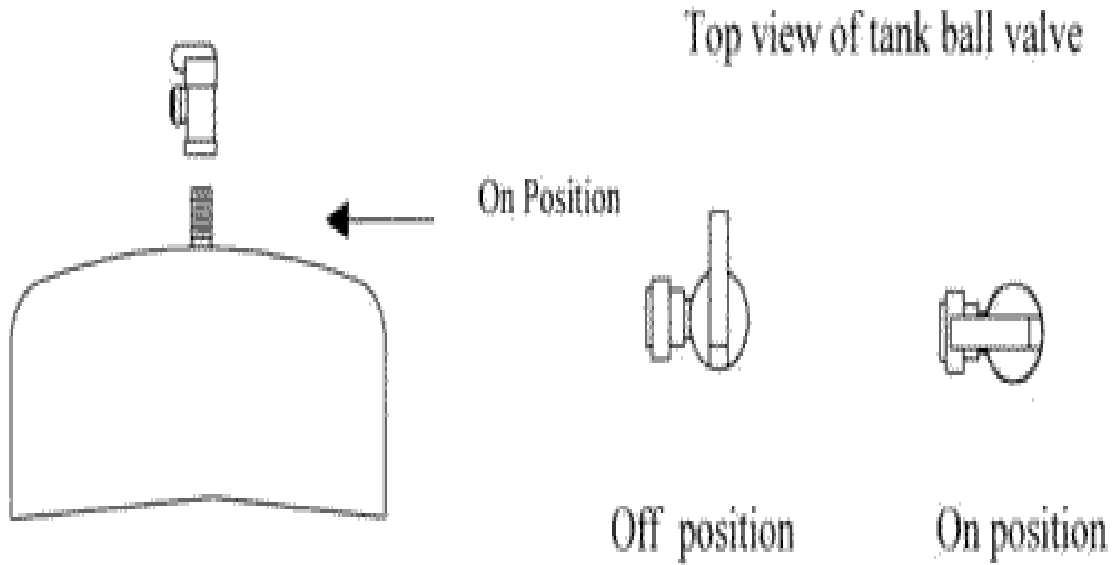
**NOTES:**

- The 3/8" black tubing goes from the faucet to the drain line.
- The 1/4" black tubing goes from the faucet to the membrane drain fitting
- The 3/8" blue tubing goes from the faucet to the polishing filter fitting

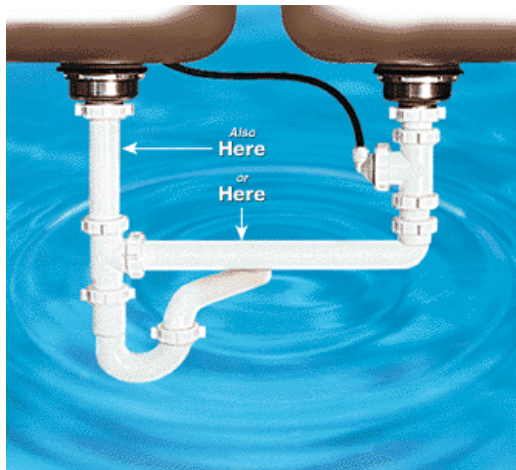
### **STEP 3: MOUNTING THE TANK BALL VALVE**

**NOTE:** Do not tamper with the air valve on the lower side of the storage tank. It has been preset to 5-7psi at the factory.

1. Remove the plastic cap on top of the tank.
2. Put 3 turns of Teflon tape around the tanks 1/4" male thread.
3. Connect the ball valve to the thread. Hand tighten only. Do not use a wrench or over tighten it. **BE CAREFUL NOT TO CROSS THREAD THE PLASTIC VALVE.**
4. Connect the other free end of the 3/8" white tubing to the Stage 5 postfilter where indicated by the Installation Diagram.



**STEP 4: MOUNTING THE DRAIN LINE ADAPTER**

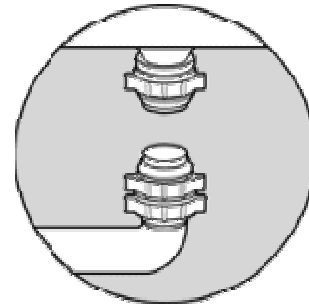
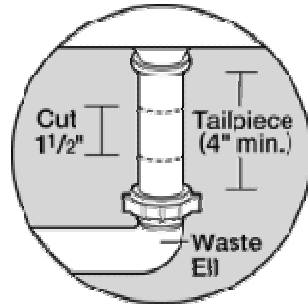


LIST OF PARTS ENCLOSED		
1	Drain Line Adapter with Speedfit® Push-In Connector or 1/2" Barb (DLA-9/12)	
1	3-Way Repair Tee	
3	Slip Joint (SJ) Wing Nuts	
3	Slip Joint (SJ) Beveled Washers	

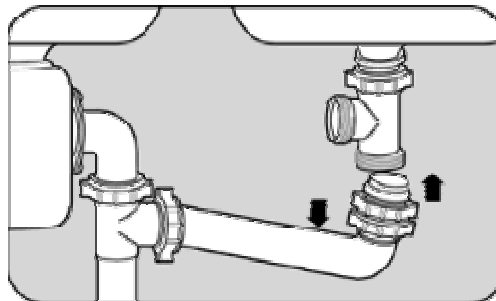
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**INSTALLATION PROCEDURES**  
(Average time to install is typically 1-3 minutes)  
**Vertical Installation**

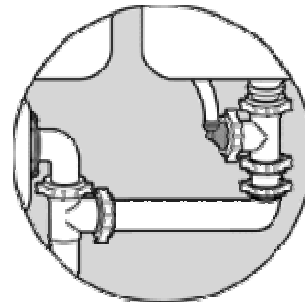
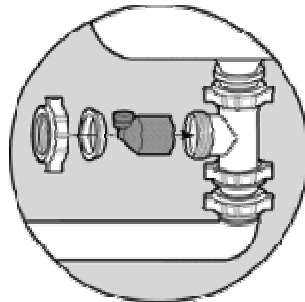
**Step One:**  
Cut 1-1/2" from  
center of tailpiece



**Step Two:**  
Loosen waste ell  
and mount repair tee

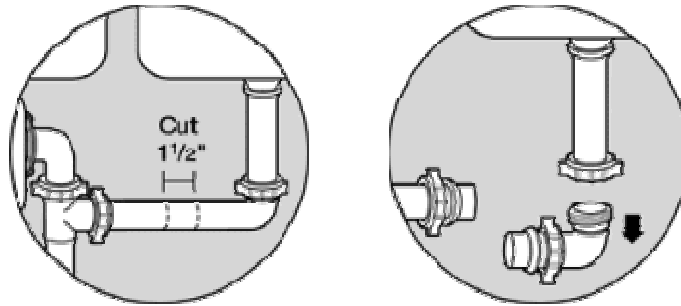


**Step Three:**  
Install  
DLA-9/12  
adapter and  
insert RO  
drain tube

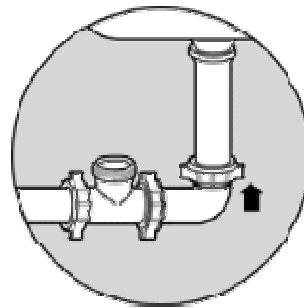


### Horizontal Installation

**Step One:**  
Cut 1-1/2"  
from center  
of waste ell



**Step Two:**  
Mount  
repair tee,  
DLA-9/12  
and insert  
drain tube



Once The Drain Line Adapter is in place, insert the 3/8" Black tubing from the Air Gap Faucet into the John Guest Fitting.

Next, Insert the 1/4" Black tubing from the Air Gap Faucet into the system's membrane drain fitting,

### **STEP 5: PRESSURE TESTING AND PURGING**

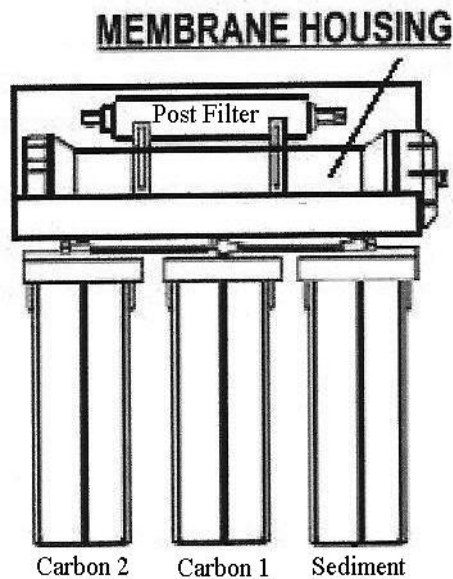
1. Check all tubing to be sure there are no kinks or obstructions.
2. Turn the Storage Tank Valve to OFF position.
3. Turn RO faucet lever to continuous flow ON position (handle pointed up.)
4. Turn the cold water supply main valve on slowly. When the system is pressurized, check for leaks.

5. You will hear the air purging from the system and within 5 minutes, the water should start dripping from the RO faucet. Once the water starts to drip, allow 20 more minutes for the water to flow through the system and purge all the air trapped inside the system.
6. After 10 minutes, turn the Storage Tank Valve to the ON position (handle is parallel to the tubing)
7. Turn the RO faucet handle to the OFF position. Now the purified water will start going into the storage tank.
8. **YOU MUST PURGE THE FIRST TWO TANKS OF WATER FROM THE SYSTEM PRIOR TO CONSUMPTION OF THE PRODUCT WATER. DO NOT DRINK THE FIRST 2 TANKS OF WATER PRODUCED BY THE SYSTEM . IT IS NORMAL TO NOTICE SOME BLACK CARBON FINES COMING OUT OF THE FAUCET UPON THE FIRST FLUSH.** Allow the storage tank to fill for 4 hours. Then open the faucet until the tank is empty and the flow just drips from the faucet
9. Close the faucet and allow the storage tank to fill again for 4 hours. Then open the RO faucet and empty the tank again. After discharging the contents of the Storage Tank twice, you can start enjoying the pure water.

**You're Finished, Job Well Done!**

**NOTE:** Check for leaks daily for the first week after installation

## SYSTEM CARE AND MAINTENANCE:



### Maintenance:

- **STAGE 1 : 20-micron Sediment Prefilter- Replace every 325 gallons of product water consumed or every 3-12months.**
- **STAGE 2: 10-micron Carbon Block Prefilter - Replace every 325 gallons of product water consumed or every 3-12 months.**
- **STAGE 3: 5-micron Carbon Block Replace every 325 gallons of product water consumed or every 3-12 months.**

Stage 1: Sediment, - 20-micron polyspun filter (part # 3125200)  
Stage 2: Carbon 1, - 10-micron carbon block filter (part # OMB93410M)  
Stage 3: Carbon 2, - 5-micron carbon block filter (part # OMB9345M)  
Stage 4: RO Membrane, 50 gallons per day TFM (GPD) (part # 1204694)  
Stage 5: 10" Post GAC Filter (part # CL10ROT33)

- **STAGE 4: Membrane - Replace every 18-24 months.**
- **STAGE 5: Post Filter - Replace every 18-24 months.**

\* A higher frequency of filter changes may be necessary, dependent upon your feed water quality. You should inspect the filters periodically and maintain a service record to establish a maintenance schedule that is unique to your water conditions.

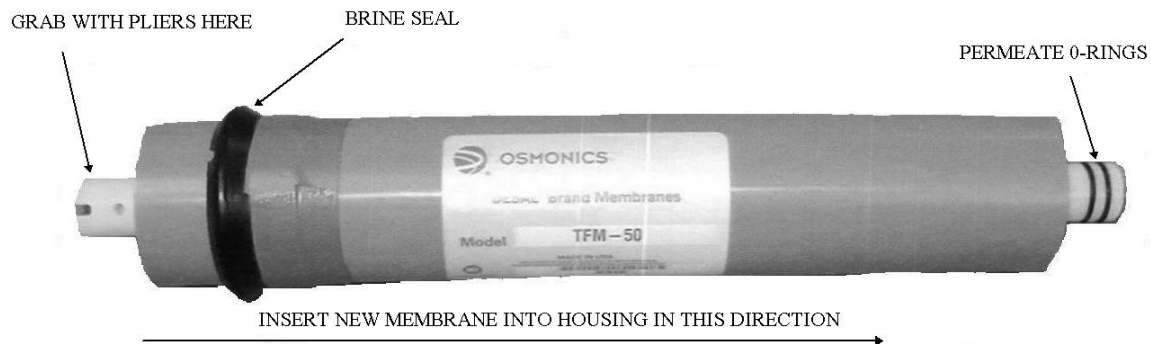
**TO CHANGE THE PREFILTERS (STAGES 1-3), FOLLOW THESE INSTRUCTIONS:**

**CAUTION: ANY REPLACEMENT FILTERS OR MEMBRANES NOT RECOMMENDED BY THE FACTORY CAN CAUSE SEVERE DAMAGE TO THE SYSTEM AND VOID ALL WARRANTIES.**

1. Shut off the feed water to the system by turning the saddle valve or cold water faucet stop valve on the water supply clockwise until it stops,
2. Close the storage tank ball valve by turning the handle perpendicular to the valve body.
3. Press down on the faucet handle to relieve pressure.
4. Allow 3-5 minutes for pressure in the system to drop.
5. Remove the filter sumps(housings) with the filter wrench supplied with unit by turning the sump to the left (counterclockwise).. Be careful, as the sumps will be filled with water. Be cautious that the o-ring seal remains seated in place inside the sump.
6. Remove and discard the inner cartridges in a proper manner. Flush the inside of the sumps with fresh water.
6. Check to see if the o-ring is in its place and Insert the new cartridges into the sump. Turn the sump to the right to reattach. Use the supplied sump wrench to tighten the sump just slightly beyond hand tight. **DO NOT OVERTIGHTEN THE SUMP.**

## **TO CHANGE THE MEMBRANE, STAGE 4, (see diagram on page 16), AND FOLLOW THESE INSTRUCTIONS:**

1. Shut off the feed water to the system by turning the saddle valve or cold water faucet stop valve on the water supply clockwise until it stops,
2. Close the storage tank ball valve by turning the handle perpendicular to the valve body.
3. Press down on the faucet handle to relieve pressure.
4. Allow 3-5 minutes for pressure in the system to drop.
5. Remove the 1/4" white poly line from the cap end of the membrane housing by following the instructions on page 6 of this manual (see: Disconnecting Standard John Guest Push-in Fittings on the bottom of page 6)
6. Unscrew the membrane cap by turning it counter clockwise until it is completely removed. Be sure that the O-ring remains properly seated on the collar of the housing.
7. With a pair of pliers, gently grab the membrane plastic end tube twist and pull it out. This procedure may require a little back and forth twisting and pulling motion, as the membrane is press-fitted into the housing. **BE CAREFUL NOT TO DAMAGE THE INSIDE WALLS OF THE MEMBRANE HOUSING WITH THE PLIERS.**



8. Wet the brine seal and permeate o-rings with some water and Insert the new membrane into the membrane housing with your fingers, using a GENTLE twist and push motion until you feel the permeate o-rings snap into the base of the housing.

**TO CHANGE THE POSTFILTER, STAGE 5, (see diagram on page 15),  
FOLLOW THESE INSTRUCTIONS:**

1. Shut off the feed water to the system by turning the saddle valve or cold water faucet stop valve on the water supply clockwise until it stops,
2. Close the storage tank ball valve by turning the handle perpendicular to the valve body.
3. Press down on the faucet handle to relieve pressure.
4. Allow 3-5 minutes for pressure in the system to drop.

Remove the 3/8" blue faucet tubing and the 3/8" white storage tank tubing from each of the John Guest Male Adapters at either end of the filter.

5. Now, using an adjustable wrench, remove the male adapters on each end of the post filter and dispose of the filter properly.
6. Wrap one to two turns of Teflon tape around the threaded end each male adapter and use an adjustable wrench to screw them back into the new postfilter- DO NOT OVERTIGHTEN..
7. Reattach the 3/8" white FAUCET LINE to the male adapter on the left end of the post filter. Reattach the 3/8" blue poly TANK LINE to the TEE on the right end of the filter. Snap the filter back onto the membrane clips.

**SERVICE RECORD:**

DATE OF PURCHASE: \_\_\_\_\_

INVOICE # \_\_\_\_\_

DATE OF INSTALLATION/SERVICE: \_\_\_\_\_

Service Date	Date	Date	Date	Date
1 <sup>st</sup> stage 20 micron sediment prefilter				
2 <sup>nd</sup> stage 10 micron carbon block prefilter				
3 <sup>rd</sup> stage 5 micron carbon block prefilter				
4 <sup>th</sup> stage RO membrane				
5 <sup>th</sup> stage inline carbon postfilter				
Batteries changed in flow meter				
Batteries changed in TDS Meter				

## SYSTEM CARE AND TROUBLE SHOOTING GUIDE

### ROPure550 & 5100®

1. AT LEAST every 6-8 months, replace the stages 1-3 prefilters or when the FlowPro water meter(if equipped) indicates 0 gals remaining.
2. Replace the RO membrane, postfilter and flow control valve when the percent rejection of total dissolved solids (TDS) is less than 90% or every 12 -14 months.
3. Replace the batteries in your FloPro water meter and/or TDS meter (if equipped) every 12 months.

#### IF ANY OF THE FOLLOWING OCCUR BEFORE 6 MONTHS, REPLACE AS DIRECTED.

1. SLOW MAKING OF PRODUCT WATER: Replace the prefilter cartridge. If the production rate does not improve, replace the postfilter(stage 5), the RO membrane cartridge and the flow control valve.
2. You should monitor the total dissolved solids (TDS) in the feed water as well as the system product water on a regular basis (once per month suggested). This will give you an idea of your systems performance and alert you to any potential system problems. The RO membrane should reduce the untreated (feed) water's TDS by at least 90%. If the product water's TDS is not within the specifications, replace the prefilters, postfilter, RO membrane and the flow control valve.

PROBLEM	PROBABLE CAUSE	SOLUTION
<b>Chlorine taste and/or odor in the product water</b>	<ul style="list-style-type: none"> <li>• The ppm of chlorine in your water supply exceeds maximum limits and has destroyed the RO membrane.</li> <li>• The prefilter is no longer removing chlorine from the water supply.</li> </ul>	<ul style="list-style-type: none"> <li>• If the water supply contains more than 2.0 ppm of chlorine, additional filtering of the water supply to the RO is needed. Correct this condition before doing maintenance on the RO system.</li> <li>• Replace the prefilter, postfilter and RO membrane cartridges and flow control valve on drain line.</li> </ul>
<b>Other taste and odor</b>	<ul style="list-style-type: none"> <li>• Postfilter expended.</li> <li>• RO membrane cartridge expended.</li> <li>• Contamination in product water storage.</li> </ul>	<ul style="list-style-type: none"> <li>• Replace the postfilter cartridge. If taste and odor persists, replace the prefilter cartridge and RO membrane cartridge and flow control valve on drain line.</li> <li>• Use sanitizing procedures. Replace the postfilter cartridge.</li> </ul>
<b>System makes product water too slowly</b>	<ul style="list-style-type: none"> <li>• Prefilter or RO Cartridges plugged with sediments</li> <li>• Water supply to RO not within specifications</li> </ul>	<ul style="list-style-type: none"> <li>• Replace the prefilter cartridge. If rate does not increase, replace the postfilter cartridge, RO membrane cartridge and flow control valve on drain line.</li> <li>• Increase water pressure, precondition the water etc., as needed to conform, before doing maintenance on the RO system.</li> </ul>
<b>System makes lower amount of product water than usual</b>	<ul style="list-style-type: none"> <li>• Storage tank air-charge less than 5-7 psi</li> </ul>	<ul style="list-style-type: none"> <li>• Open RO faucet and drain tank until flow slows to a drip. Keep faucet open and check tank pressure. If low, pressurize to 6psi. Close faucet to refill tank.</li> </ul>
<b>High total dissolved solids in product water</b>	<ul style="list-style-type: none"> <li>• Water supply to the RO system is not within specifications.</li> <li>• RO membrane cartridge expended</li> </ul>	<ul style="list-style-type: none"> <li>• Increase water pressure, precondition water, etc. as needed to conform before doing maintenance on the RO system</li> <li>• Replace the prefilter, postfilter, RO membrane cartridges, and flow control valve on drain line.</li> </ul>
<b>Continuous water flow to drain</b>	<ul style="list-style-type: none"> <li>• Automatic shut-off valve assembly plugged, restricted.</li> </ul>	<ul style="list-style-type: none"> <li>• Clean repair or replace as needed</li> </ul>

## HOW YOUR REVERSE OSMOSIS SYSTEM WORKS

### PREFILTER STAGE: 1

Water from the cold water supply pipe enters the RO assembly sediment prefilter first. This prefilter has a replaceable 20-micron polyspun sediment cartridge. This is the 1<sup>st</sup> stage of the system and this filter removes sand, silt and other sediments that you may or may not be able to see in your water.

### PREFILTER STAGE: 2

This prefilter has a replaceable 10-micron activated carbon block cartridge. This is the 2<sup>nd</sup> stage of the system and this filter removes even smaller sediments (unseen to the human eye) as well as chlorine and other organics.

### PREFILTER STAGE: 3

This prefilter has a replaceable 5-micron activated carbon block cartridge. This is the 3<sup>rd</sup> stage of the system. Sediment and or chlorine can destroy the RO membrane and this filter provides polished, filtered, chlorine-free water to the RO membrane.

### REVERSE OSMOSIS MEMBRANE: STAGE 4

The RO cartridge is a tightly wound special membrane. The membrane removes the dissolved solids such as calcium carbonate, chlorides, nitrates etc. and organic matter when the water is forced through the cartridge. High quality product water, (about 3 ounces per minute), exits the RO cartridge and goes to the storage tank, or to the postfilter and RO faucet. Rejected water, with the dissolved solids and organic matter is routed through the flow control valve and to the drain.

### STORAGE TANK

The storage tank will hold between 2.3-and 3.2 gallons of water, depending on the household water pressure. A diaphragm inside the tank keeps the water pressurized to about 30psi, when the tank is full. This pressure provides a fast flow to the RO faucet. The tank, when empty, is pressurized to 5-7psi.

### POST FILTER

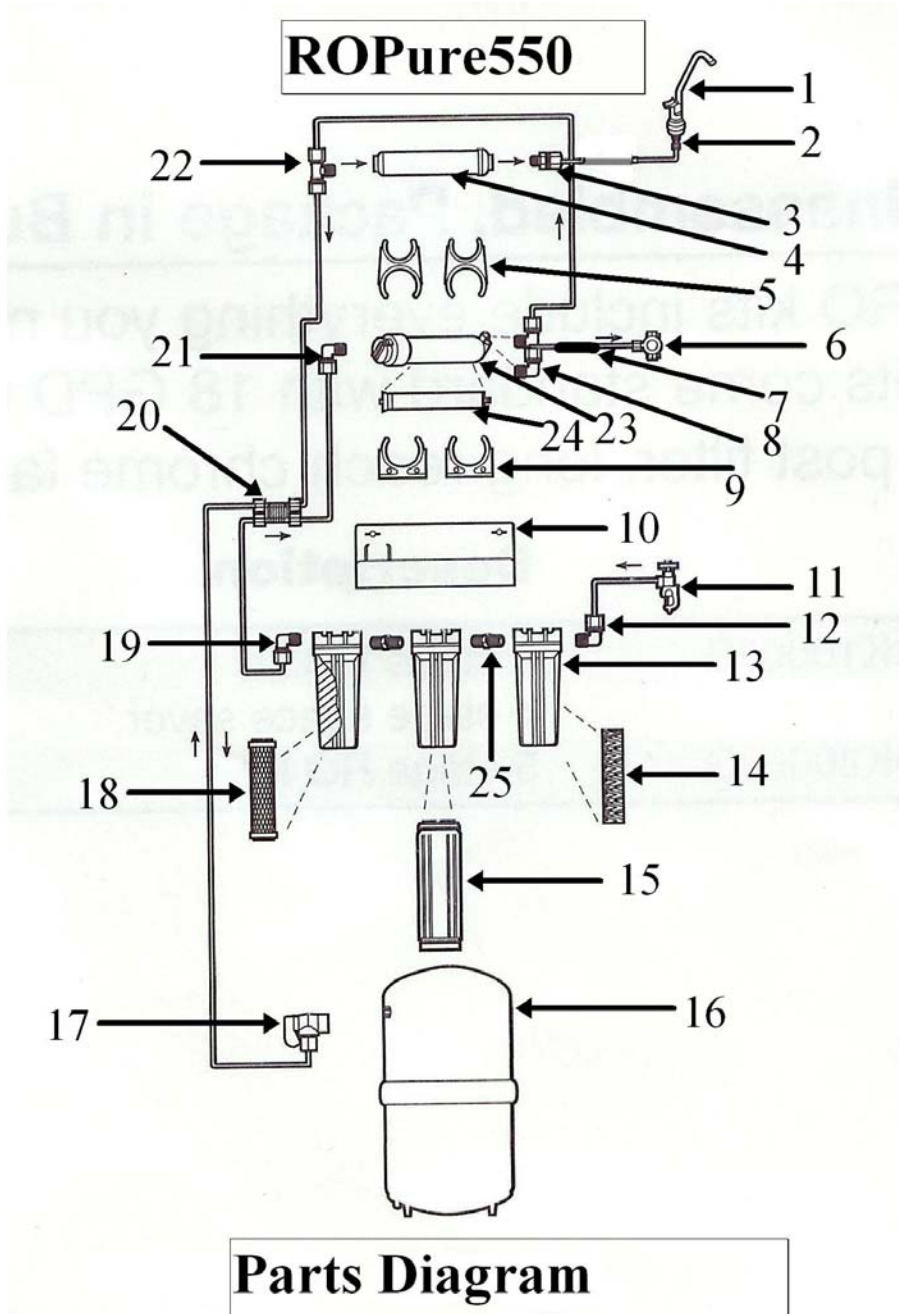
After leaving the storage tank, but before going to the RO faucet, product water goes through the activated carbon postfilter. The postfilter is an acid washed, activated carbon type filter which removes any remaining tastes or odors from the product water. Taste-free, odor-free, clean, pure, high quality water is always available for use!

### AUTOMATIC SHUT-OFF VALVE ASSEMBLY

To conserve water, this drinking water system has an automatic shut-off valve system. When the storage tank is filled to capacity and the RO faucet is closed, pressure closes the shut-off valve to stop the flow to drain. Pressure in the storage tank is about half of the water supply pressure. After drinking water is used, and pressure in the system drops, the shut-off valve opens to allow water to flow again.

### FLOW CONTROL CHECK VALVE

A flow control/check valve is located in the ¼" black drain line to regulate the pressure across the RO membrane and to prevent a backward flow from the drain to the RO membrane. A second check valve fitting is installed between the 5<sup>th</sup> stage postfilter and the storage tank to prevent a backward flow from the tank to the RO membrane. (See items 7 & 8 in the parts diagram on page 24)



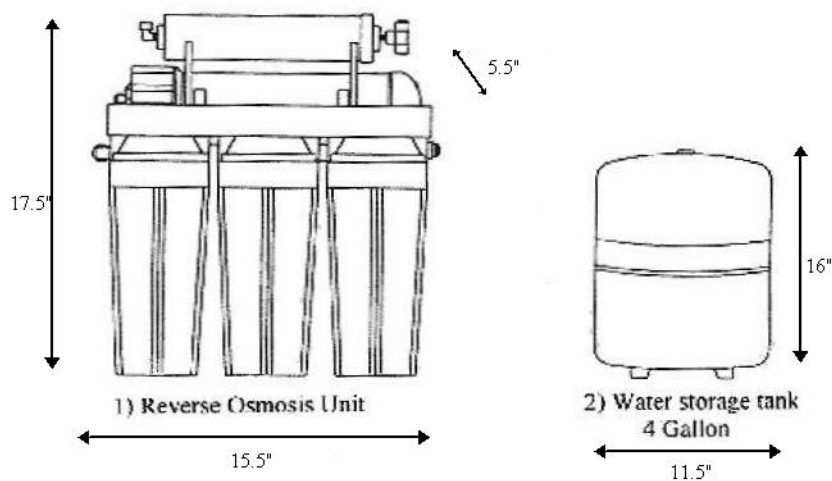
## ROPure Model 550 & 5100 PARTS DIAGRAM LIST

ITEM #	DESCRIPTION
1	RO Faucet
2	Faucet Adapter
3	Post Filter Faucet Fitting
4	Post Filter
5	Post Filter Clip
6	Drain Line Adapter
7	Flow Control Valve
8	Membrane TEE
9	Membrane Clip
10	Housing Bracket
11	Piercing Saddle Valve
12	John Guest Elbow
13	10" Sump Housing
14	Sediment Filter Stage 1
15	Carbon Filter Stage 2
16	Storage Tank
17	Tank Ball Valve
18	Carbon Filter Stage 3
19	Stage 3 John Guest Elbow
20	Automatic Shut-off Valve
21	Membrane Feed Fitting
22	Post Filter TEE
23	RO Membrane Housing
24	RO Membrane Cartridge
25	Sump Connector

Please call to order parts and for part numbers.

# ROPure Model 550 & 5100 Residential Reverse Osmosis SYSTEM SPECIFICATIONS

## Dimensions



Supply water pressure limits.....	40-100 psi
Supply water temperature limits.....	40-100°F
Maximum total dissolved solids (TDS).....	2000 ppm
Maximum hardness.....	10 gpg
Maximum iron, manganese, hydrogen sulfide.....	0
Maximum chlorine ppm.....	2.0
Supply water pH limits.....	4-10
Product (quality) water/24 hrs*.....	42 -84gal.
Wastewater per gallon of product water*.....	3.5
Percent rejection of TDS, minimum (new membrane)*..	90-95
Storage tank capacity (max).....	3.2
Automatic shut-off control.....	yes

\*feed water supply at 50psi and 77° F, and 750 ppm TDS – Quality water production, amount of wastewater and percent rejection all vary with changes in pressure, temperature and total dissolved solids of feed water.

## *Limited Warranty*

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Products manufactured by ROwater Systems are warranted to the original purchaser only to be free of defects in material and workmanship for a period of twelve months from the date of receipt. RWS' liability under this warranty shall be limited to repairing or replacing at RWS' option, without charge, F.O.B. RWS' factory, any product manufactured by RWS. ROwater Systems will not be liable for any cost of removal, installation, transportation, or any other charges which may arise in connection with a warranty claim.

Products which are sold but not manufactured by RWS are subject to the warranty provided by the manufacturer of said products and not by RWS' warranty. RWS will not be liable for damage or wear to products caused by abnormal operating conditions, accident, abuse, misuse, unauthorized alteration, or repair, or if the product was not installed in accordance with RWS printed installation and operating instructions.

RWS warrants the performance of its membrane elements for one year from date of receipt by the buyer, providing that the loss of performance was not caused by fouling or neglect. RWS will, on confirmation of loss of performance during the warranty period, credit one-twelfth of the current catalog price of the element for each month remaining in the warranty period.

To obtain specific performance under this warranty, the defective product must be returned to RWS together with proof of purchase, installation date, failure date, and supporting technical data. Any defective product to be returned to the factory or service center must be sent Freight Prepaid. Documentation supporting the warranty claim and a Returned Goods Authorization (RGA) number must be included, if so instructed.

ROWATER SYSTEMS WILL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES, LOSSES, OR EXPENSES ARISING FROM INSTALLATION, USE, OR ANY OTHER CAUSES. THERE ARE NO EXPRESS OR IMPLIED WARRANTIES, INCLUDING MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WHICH EXTENDS BEYOND THOSE WARRANTIES DESCRIBED OR REFERRED TO ABOVE.

Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages and some jurisdictions do not allow limitations on how long implied warranties may last. Therefore, the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights, which vary from jurisdiction to jurisdiction.