

# **Reverse Osmosis (RO) Drinking Water System** Model RO450/RO450M

Installation & Maintenance Manual (Please save for future reference)

#### INTRODUCTION

The Rainfresh RO system uses hyper-filtration technology (commonly called Reverse Osmosis or RO). The four-stage filtration system reduces molecular and ionic contaminants by up to 99% - Barium, Cadmium, Chromium, Copper, Fluoride, Lead, Mercury, Nitrates, Sodium, Total Dissolved Solids, Chlorine, Taste and Odour, It also traps protozoan cysts (Cryptosporidium & Giardia) greater than 99.95% and filters sediment, silt and rust. Water produced by the Rainfresh RO system can be used for drinking, cooking, juices, beverages, watering plants, steam irons, humidifiers, aquariums etc.

#### **OPERATING SPECIFICATIONS**

- (1) Do not use with water that is microbiologically unsafe or of unknown quality, without adequate disinfection before or after the system. Systems certified for cyst reduction may be used on disinfected water that may contain filterable cysts. For effective disinfection we recommend Rainfresh Whole-house UV disinfection systems.
- Warning: Individuals requiring water of specific microbiological purity should follow the advice of their doctor or local health unit.
- (2) If water pressure can exceed 100psi, a pressure regulator and water hammer arrestor must be installed before the filter. Recommended regulator setting is 60-75 psi.

(3) System will operate with hard water, but membrane life may be shortened.

The unit should be operated with water that meets the following minimum criteria. Source water exceeding chemical parameters (listed below) requires pre-treatment.

#### Raw Water Supply

Raw Water Supply			Chemical Parameters		
Water Supply	=	Bacteriologically Safe (1)	Max Hardness	<	170mg/L (<10 gpg) <sup>(3)</sup>
Feed Water Pressure	=	40 (min) to 100 psi (max) <sup>(2)</sup>	Iron (Fe)	<	0.1 ppm (mg/L)
		2.8 Kg/cm <sup>2</sup> to 7.4 Kg/cm <sup>2</sup>	Manganese (Mn)	<	0.05 ppm (mg/L)
Feed Water Temp.	=	4ºC - 38ºC (40ºF - 100ºF)	Hydrogen Sulfide	=	0.00 ppm (mg/L)
Feed water pH	=	3.0 to 11.0	Feed Water TDS (max)	=	1500 ppm (1500 mg/L)
Feed Water Turbidity	=	1.0 NTU (max)(NTU - Nephelom	etric Turbidity Unit		
Feed water pH Feed Water Turbidity Production Rate	= = =	3.0 to 11.0	Feed Water TDS (max) netric Turbidity Unit	=	1500 ppm (1500 mg/L)

Average efficiency rating - 9.7% - Efficiency rating means the percentage of the influent water to the system that is available to the user as RO treated water under operating conditions that approximate typical daily usage.

Average recovery rating - 18% - Recovery rating means the percentage of the influent water to the membrane portion of the

system that is available to the user as RO treated when the system is operated without a storage tank or when the storage tank is bypassed.

This system is acceptable for treatment of influent concentrations of no more than 27 mg/L nitrate measured as N and is certified for nitrate reduction only for water supplies with a pressure of 40 psig (280 kPa) or greater.

#### For optimum performance of the system, filters should be replaced as per following:

- Pre-filter 1& 2 Model CF2: Replace every six months
- Post-filter - Model IM200: Replace every six months

**RO Membrane** - Model ROM50: Replace every 2-4 years

Note : Cartridge and membrane life is directly dependent on your water conditions and the volume of water filtered. Excessive sediment and other contaminants may require more frequent replacement.

Note: This reverse osmosis system contains a replaceable membrane critical to the effective reduction of total dissolved solids. Raw and product water should be tested every six months by a water analysis lab to verify that the system is performing properly. Only replacement membrane model RO50M should be used to assure the same efficiency and contaminant reduction performance.

#### **Nitrate Reduction Performance**

or less.

A Nitrate test kit is included witht this system to verify Nitrate-reduction performance. The test should be performed at installation (after 3 tank flushes) and at least every six months thereafter.

Instructions: The test kit included has two test strips. You need only one test strip per test. Follow instructions on the test package. Compare the colour to the test strip with the nitrate nitrogen colour shades on the test package. The colour should match with10 ppm



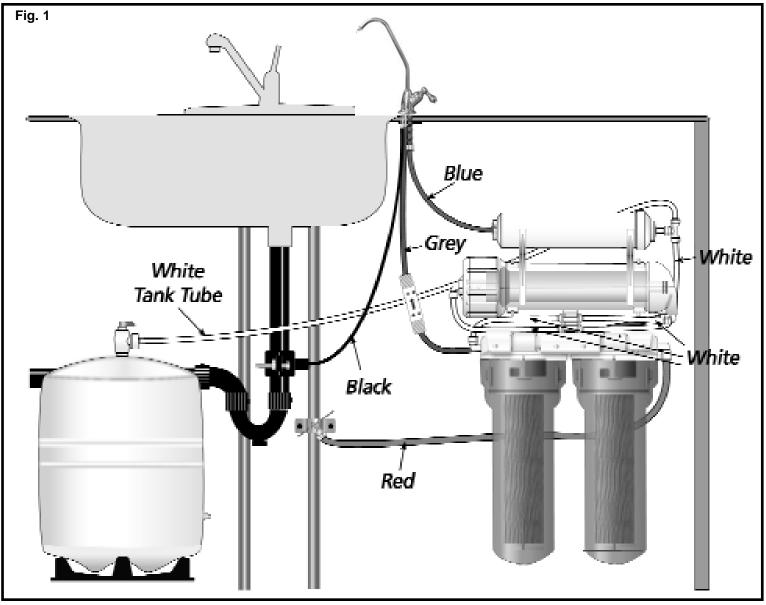
Tested and Certified to NSF/ANSI standard 58 for the reduction of TDS, Nitrate, Mercury, Sodium, Cyst (e.g. Cryptosporidium & Giardia).

System tested and certified by the Water Quality Association against CSA B483.1

Additional testing and verification for reduction of Barium, Cadmium, Chromium, Copper, Fluoride, Lead and Chlorine performed by independant laboratory. Claims not performance certified by WQA gold seal program.

#### HOW YOUR RO SYSTEM WORKS

Water first flows through two stages of pre-filtration consisting of block activated carbon filters. The third and most important stage of the system is the Reverse Osmosis Membrane that rejects most of the dissolved contaminants listed above, while the filtered water (called **Permeate**) passes through a final stage of taste and odour polishing, before flowing out of the faucet. As the RO membrane rejects contaminants at a molecular level, some of the water, along with the contaminants, flows to the drain. To achieve such fine filtration, the water production rate is slower than conventional under-sink filtration systems. Therefore, a pressurized storage tank is used to provide RO water through the faucet at normal flow and pressure. The storage tank holds a maximum of 2.2 US gallons (approx. 12 liters) of filtered water. When the storage tank is full, an automatic valve shuts off the water supply to the RO membrane. As water is used from the faucet and the pressure in the tank drops to about 65% of full pressure, the automatic shut-off valve opens and allows feed water into the RO membrane until the storage tank is full again. Model RO450M also features an electronic monitor that tracks the 6-month filter life and blinks when it is time for the pre & post filters to be changed.



## **INSTALLATION CAUTIONS**

- 1 The RO system is designed for point-of-use (POU) under-sink installation for single-faucet dispensing only.
- 2. Installation of this unit may involve some water spillage. Keep an ample supply of paper towels or an absorbent cloth handy.
- 3. This system is intended for use with **cold water only**. Hot water can damage the membrane.
- 4. Do not attempt to operate the system without the pre-filters. This can severely damage the membrane.
- 5. Ensure that there are no kinks in any of the tubing that can restrict or stop the water flow and cause damage to the system.
- 6. Protect filter from direct sunlight. Not intended for outdoor use.
- 7. Protect your unit from freezing temperature.

## INSTALLATION

## **Necessary Installation Tools**

Variable speed drill, drill/spade bits - 3/8", 7/8", utility knife, 2 adjustable wrenches, flashlight, flat-head & phillips screwdrivers.

## Fittings and Tubing (See Fig. 2)

Accu-Link<sup>™</sup> quick-connect fittings are used throughout the system with the exception of the self-piercing saddle valve and faucet connections. To ensure an optimal seal, tubing should be cut straight. An angled cut or distortion of the tubing will not provide an efficient seal and may cause leaks. To install a 1/4" tube (blue, white, grey, red), mark it 5/8" from the end then push it firmly 5/8" through the collet, past the o-ring until it seats on the tube stop. **Note:** For 3/8" black tube, mark and push tube in 3/4".

To remove a tube, push in the collet with two fingers on each side of the tube and pull out the tube. All extra tubing (grey, red, black, blue only) should be cut so that only optimum length of tubing remains. Loops or extra lengths of tubing are not recommended. Cut tubing to size wherever necessary.

## Starting Your Installation

System and installation shall comply with state and local regulations.

This unit comes complete with filter, cartridges, membrane, air-gap faucet, housing assembly, pressurized storage tank, do-it-yourself instructions and all necessary fittings to install the unit below the counter to copper or CPVC pipe.

A typical installation is shown in **Fig. 1** on page 2. Installation of the unit includes the following steps:

- 1. Air-gap faucet connection
- Feed water connection.
   Storage tank connection
- Drain connection
   Mounting the main unit.
  - n unit.

## Air-gap Faucet Installation (See Fig. 3)

The faucet (2640-0) may be installed on the counter-top or the sink, as desired. For counter-top installation, position faucet on counter-top beside sink where it will not be obstructed from above or below.

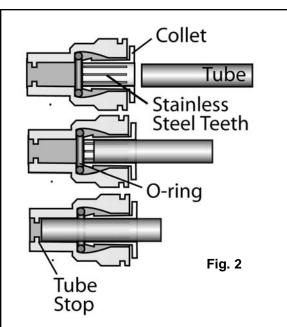
## For Porcelain/Enamel Sinks

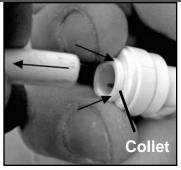
A spring-loaded Relton style drill set is strongly recommended to prevent chipping. Use a carbide-tipped drill bit to drill a 1/8" pilot hole completely through the porcelain. Use lubricating oil or liquid soap to keep the drill bit cool while drilling. Next, using a spring-loaded porcelain saw, cut through the porcelain surface only. Finally, use a 7/8" finishing hole saw to cut through any remaining metal. Avoid high motor RPM during the initial cutting of the porcelain as this can cause chipping.

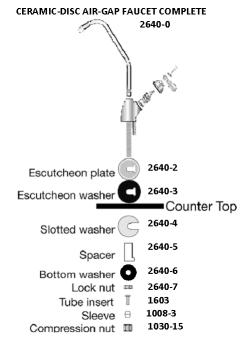
## For Stainless Steel Sinks

Make a small indent to mark the desired drilling location using a centre punch. Drill a pilot hole with a 1/8" metal drill bit. Enlarge the hole using a 7/8" metal drill bit. Then de-burr the hole and file smooth.

- 1. Mark the location and drill a 7/8" hole.
- Insert the faucet tubing (1/4" grey and 3/8" black) first through the countertop hole followed by the faucet with drain hole in faucet body facing sink.
- 3. Install slotted washer (2640-4), spacer (2640-5), bottom washer (2640-6) and lock-nut (2640-7). Tighten lock-nut while someone holds the faucet so it does not turn.
- 4. Slide compression nut (1030-15), sleeve (1008-3) on to one end of blue tube (2622) and push insert (1603) into end of tube as shown in **Fig 6**. Push tube into threaded end of faucet and hold firmly in place and tighten nut securely with a wrench, again while someone holds faucet so it does not turn.

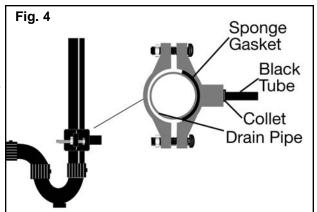






## Drain Connection

- Mark a spot on the vertical drain pipe under sink and drill a 3/8"
   (9 mm) hole in it, preferably facing direction of faucet. Make sure that while drilling you do not drill right through the other side
   of the pipe.
- 2. Peel the protective film off the sponge gasket and apply to inside of drain saddle (2618), using care to align sponge gasket hole with drain saddle hole.
- Mount the drain saddle on the drain pipe and align the drain saddle hole with the 3/8" drilled hole (use a flashlight to see clearly). Use a drill bit or any narrow straight object to confirm that the two holes are aligned. Tighten the saddle nuts and firmly secure the saddle in place. Do not over-tighten. (see Fig. 4)
- 4. Measure length of 3/8" black drain tube (2624) needed to connect to drain saddle. CAUTION: This is a gravity drain line and should be as short as possible (See Fig. 1). Water may leak from drain hole on the faucet. Cut off any excess tube and connect to drain saddle. Mark tube 3/4" from end and insert firmly 3/4" through collet past O-ring until it seats on tube stop (See Fig. 2).



## Mounting the main unit

Locate best side wall position for mounting unit under-sink near faucet.

NOTE: Leave a minimum of 5 inches clearance below sumps to allow for removal of cartridges. The higher and closer to the front you mount the unit, the better it will be for regular maintenance/servicing.

- 1. Unpack unit and pull post-filter (IM200) towards front to expose mounting bracket (2613). Mark mounting bracket screw locations using mounting bracket as a template and set unit aside.
- Partially screw the two mounting screws (1011-0) into screw locations.
   NOTE: If wall is too thin to accept screws, use round-head nuts and bolts (not supplied) to mount bracket. Install pre-filters and membrane as per instructions below before mounting unit on the wall.

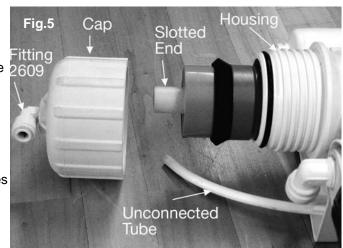
## 3 Installing Pre-filters:

- a) Turn each sump (520) 1/8 turn to left and pull away from head (2501) to remove.
- b) Pull pre-filters (CF2) gently away from head, remove shrink-wrap and re-install open end of pre-filters on to head boss.
- c) To replace sumps, align sump grooves with head lugs and push straight up on to the head. Turn sumps 1/8 turn to right fully to stop (lock position).

## 4. Installing the RO Membrane (See Fig. 5)

To make membrane installation easier, the tube to the membrane housing cap (2601) is not connected when the unit is shipped.

- a) Unscrew the membrane housing cap and take it off .
- b) Remove new membrane (ROM50) from bag and apply silicone lubricant (included) on the two "O" rings. Caution: Do not use any other lubricants.
- c) Slide membrane into housing, O-ring side first. Push membrane completely in until slotted end is flush with housing opening. If you cannot push membrane fully in, pull it out and apply some more lubricant and repeat procedure.
- d) Replace housing cap taking care that the "O" ring inside it does not come out. Firmly hand-tighten the cap.
- e) Insert unconnected white tubing into housing inlet fitting (2609). Mark tube 5/8" from end and push firmly 5/8" through collet past O-ring until it seats on the tube stop (See Fig. 2).
- 5. Installing the monitor battery (Model RO450M only)
  - a) Remove plastic cover (2508) on top of the inlet pre-filter housing by prying up gently with finger nails at front and back.
- b) Unwrap battery (2545) and insert "+" side up into battery slot and replace cover. Press and hold black button until orange LED blinks four times; then release button to set monitor.
- 6. Mount the unit on to the mounting screws and tighten screws.
- 7. Measure length of 1/4" grey drain tube (2623) from faucet needed to connect to open end of drain restrictor (2611), without kinks or sagging and cut off any excess (See Fig. 1). Mark and insert tube 5/8" as shown in Fig. 2.
- 8. Measure length of 1/4" blue tube (2622) from faucet needed to connect to open left end of post-filter (IM200) without kinks and cut off any excess (See Fig. 1). Mark and insert tube 5/8" as shown in Fig. 2.



### Saddle Valve Installation

**NOTE:** The Saddle Valve (1008-1) can be installed on copper or CPVC rigid plastic pipe of 3/8" to 1" diameter. (Not recommended for flexible plastic pipe).

**NOTE:** If your cold water line is other than described, use fittings (not included), that adapt to 1/4" OD tubing or contact Envirogard for assistance.

**IMPORTANT**: Orient saddle valve with outlet threads pointing towards INLET fitting (2606) (see fig 1).

 Back-off handle on saddle valve to retract piercing tip. With rubber gasket in a fixed position clamp entire assembly to pipe using bolts provided. Tighten bolts, keeping brackets parallel until rubber gasket is firmly compressed.

#### Caution: Do not over-tighten.

- 2. Measure length of 1/4" **red plastic tubing (2619)** from RO inlet needed to connect to saddle valve without kinks and cut off any excess tube.
- 3. Slide compression nut (1030-15) and sleeve (1008-3) onto tube, then put tube insert (1603) into tube (**see Fig. 6**). Push tube into end of saddle clamp fitting and hold firmly in place. Securely tighten compression nut while holding other end of fitting with a wrench.

#### **Storage Tank Connections**

**Caution:** Do not tamper with the air valve on the storage tank. It has been factory pre-set for optimum system performance at 5 psi.

- 1. Place the storage tank on its base under the sink. The tank valve (2617) and white tubing (2620) are pre-connected to the tank.
- 2. Insert open end of 1/4" white tube (2620) into "Tee" fitting (2612) at right end of post-filter (IM200). Mark and insert tube 5/8" (See Fig. 2).

## **START - UP PROCEDURE**

- 1. Turn the feed water saddle valve clockwise until handle is seated. YOU HAVE NOW PIERCED THE PIPE AND CLOSED THE VALVE.
- 2. Open your under-sink cold water valve, or the main water shut-off valve, whichever you had closed and check for leaks. Turn saddle valve handle counter-clockwise all the way to open valve and start water flow. Check all fittings for leaks.
- 3. Turn storage tank valve one quarter turn left (counter-clockwise) to open. The handle should be in line with the tubing as it enters the connection (See Fig. 7).

#### 4. Your unit is now in operation.

#### NOTE: Do not consume the water prior to three tank flushes. See tank flushing procedure below.

**NOTE:** A mild dripping or gurgling sound should be heard from the drain-hole in the faucet when the RO system is making water. This is normal.

#### Flushing the Tank

Allow the storage tank to fill up. This can take from 2-5 hours depending on your feed water pressure. Open the faucet and flush out the tank completely until it is fully drained. Repeat procedure for two more tank flushes. This

procedure is required to flush out the sanitizing solution in the RO membrane.

### The system is now ready for use.

## **OPERATION AND MAINTENANCE**

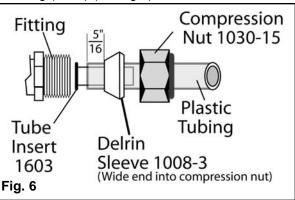
#### Electronic Monitor Functions (Model RO450M only)

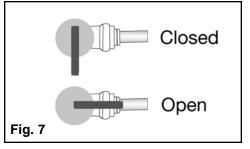
The electronic monitor tracks the 6 month period and the orange LED blinks when the limit is reached, advising you to replace the two pre-filters (Model CF2) and the post-filter (Model IM200) as soon as possible. **The monitor does not track the life of the RO membrane**. Set monitor before beginning service and re-set after cartridge replacement as follows:

#### Setting/Re-setting the monitor (See Fig. 8)

Press and hold black button until orange LED blinks 4 times, then release button. This activates monitor function that tracks time used. When 6 months expire, the orange light will blink every 5 seconds advising you to replace the cartridges.

**Battery Life -** Approximately 4 years. To test battery - Press black button for two seconds or less. If Orange LED lights, then power is on and monitor is working. Replace battery when LED does not light. To replace battery, remove plastic cover by prying up gently with finger nails at front and back. Pull used battery out of slot and push new battery (2545) into slot "+" side up and replace cover.







## Filter and Membrane Replacement

**Caution:** Routine maintenance of this unit may involve some water spillage. Keep an ample supply of paper towels or absorbent cloth handy.

## Pre-filter Replacement Procedure (CF2)

- 1. Shut off cold water supply to the unit, shut off tank valve and turn on faucet to de-pressurize unit.
- 2. Turn sumps 1/8 turn to left, lower to remove, discard old filters and insert new filters. Replace sumps and turn 1/8 turn to right fully to stop (Lock Position).
- 3. Open supply valve, check for leaks, then open tank valve.

### Post-Filter Replacement (IM200)

- 1. Shut off cold water supply to the unit, shut off tank valve and turn on faucet to de-pressurize unit.
- 2. At each end of the post-filter, push the collet in with two fingers and pull the tubing out (See Fig 2).
- 3. Lift post filter out of double clips (2605). Push new post filter on to clips (make sure arrow on filter points in correct direction (right to left).
- 4. Push tubes firmly back into collets 5/8" to tube stop at both ends. (See Fig. 2)
- 5. Open supply valve, check for leaks, then open the tank valve. Open the faucet and let water flush. The water will initially have black activated carbon residue which will clear up in about a minute.

#### Membrane Replacement (ROM50)

End of membrane life is indicated by increase in the permeate TDS (mineral content) or low or no product water flow.

- 1. Shut off cold water supply and the tank valve and turn on faucet to de-pressurize unit.
- 2. Disconnect the following tubes from the main unit. Push the collet in with 2 fingers and pull tube out (See Fig. 2).
  - blue tube from faucet
  - grey tube from faucet
  - white tube from tank
  - red tube from saddle valve

- red tube to filter inlet fitting (2606)

- 3. Loosen mounting screws and remove main unit from undersink.
- 4. Undo tubing on the inlet fitting (2606) of membrane housing by pressing the collet in with two fingers on either side and pull out the tubing. Unscrew membrane housing cap and using pliers, pull old membrane out of housing.
- 5. Unpack the new membrane and apply silicone lubricant on the two O-rings. Slide membrane into housing, "O" ring side first. (See Fig. 5). Push membrane completely in until slotted end is flush with housing opening. If you cannot push the membrane fully in, pull it out and apply some more lubricant and repeat procedure.
- 6. Replace housing cap. Firmly hand-tighten the cap. Insert white tubing into housing inlet fitting (2609). Push tube firmly through collet 5/8" past O-ring until it seats on tube stop. (See Fig. 2)
- 7. Remount main unit undersink and reconnect tubes (See Fig. 1) as follows:
  - white tube to tee fitting on right end of post-filter (IM200)
  - grey tube to open end of drain restrictor (2611)
- blue tube to left end of post filter (IM200)
- 8. Flush the unit as described previously under "Start-Up Procedure".

## System Sanitization

It is recommended to sanitize your system for general hygiene at least once a year when the pre-filters and the post filter are to be changed. **Note :** This procedure involves some water spillage. Keep an absorbent towel handy to clean up. Use sanitary rubber gloves for this procedure and read "warning" information on bleach container before using.

- 1. Shut off the cold water supply and drain the storage tank by turning on the RO faucet. Once this is completed remove the pre-filters and membrane. Do not remove old post-filter at this point.
- 2. Put 1/2 teaspoon of household bleach in 1/2 litre of water and fill the inlet filter sump, then replace both sumps and reconnect membrane housing. Open supply valve and faucet and run water until you can smell chlorine through the faucet.
- 3. Close faucet and supply valve and allow the bleach to remain in the system for about 4 to 5 hours.
- 4. Open faucet and drain tank completely. Close tank valve.
- 5. Open supply valve and flush water out of faucet for a minute.
- 6. Close supply valve and leave faucet on until unit de-pressurizes. Close faucet.
- 7. Remove sumps and membrane housing cap and install membrane and pre-filters. Install new post-filter.
- 8. Open inlet valve and check for leaks. Open tank valve.
- 9. Open faucet and flush for a minute. System is ready.

### **MAINTENANCE / PRECAUTIONS**

**Caution:** If your unit is not used in winter, or will be subject to freezing temperatures, drain unit and remove cartridges from sumps. Place cartridges in sink or on a paper towel to dry, which will occur in several days. Remove membrane and place it in a sealed plastic bag with a few drops of RO water and store in your refrigerator. For re-start, follow annual sanitization procedure.

**Note:** Lubricate Head O-rings (2502) at least once a year or when draining for winter. Use food grade silicone grease (i.e. Dow 111 Compound) or any other non petroleum lubricant. Water conditions can be hard on rubber seals. Head O-ring replacement at least every two years is recommended to minimize wear and tear and prevent leakage.

**Caution:** Due to a limited product service life and to prevent costly repairs or possible water damage, we strongly recommend that sumps (#520) be replaced every 5 years. If sumps of your RO system have been used for more than this period, replace immediately. Date the bottom of any new sump to indicate next replacement date.

**Do not** clean the system with organic solvents such as those found in sprays for cleaning products or insecticides as these may cause cracking or crazing and lead to failure and leakage.

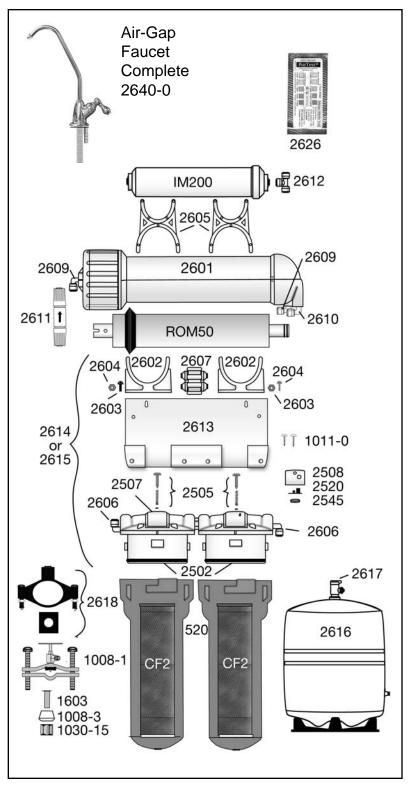
#### FREQUENTLY ASKED QUESTIONS

Problem	Possible Reason	Solution
Faucet makes gurgling noise	Drain water running from unit.	This is normal when the RO is filling the storage tank.
Water does not come out from the faucet?	<ol> <li>The feed water saddle valve may be closed.</li> <li>Pre-filter may be plugged and may need replacement.</li> <li>RO membrane may be plugged</li> <li>Shut-off valve may be defective</li> </ol>	<ol> <li>Open feed water valve.</li> <li>Replace pre-filter</li> <li>Replace membrane</li> <li>Contact Envirogard to replace shut-off valve</li> </ol>
Water comes out in a trickle	<ol> <li>One of the above</li> <li>The tank valve may be closed</li> <li>The tank may have low air pressure.</li> <li>Tank may be empty</li> </ol>	<ol> <li>Solution as above OR</li> <li>Open tank valve (See Fig. 7)</li> <li>Re-pressurize tank using a bicycle pump. Drain the tank completely first and make sure that the tank pressure does not exceed the initial factory pre-set pressure.</li> <li>Wait for about an hour to allow tank to be full.</li> </ol>
Water has a sour taste to it	Your post filter may have exhausted it's life.	Replace post filter
I fill up air in the pressure tank, but it reduces again.	The storage tank may have problems.	Replace storage tank.
Water runs continuously down the drain and does not stop when storage tank is full.	The shut-off valve can be plugged with dirt or be faulty.	Contact Envirogard.
Water doesn't seem to go to drain?	<ol> <li>The grey drain tube may be kinked or blocked.</li> <li>The drain restrictor (DR) may be clogged with dirt.</li> </ol>	<ol> <li>Take out kink. If tube is damaged or restricting flow, replace tube.</li> <li>Blow some air in the drain restrictor in the reverse direction. If you feel air at the other end, re-install. If the DR is blocked, replace.</li> </ol>
Under-sink area is wet	Possible leak in any of the fittings.	Use flashlight to identify source and fix.
Water comes out of drain hole in the faucet	1. 3/8" black drain tube plugged or kinked.	<ol> <li>Disconnect black tube from drain saddle and inspect tube and saddle hole for plugging. Clean/replace components if necessary.</li> </ol>
Water from faucet has air bubbles	Air in system after installation or cartridge change.	Will stop after water runs for a while.

## Limited 1 year Warranty

This Envirogard system is warranted, to the original Consumer purchaser/owner, for a period of one (1) year, from the date of purchase, against defects in materials or workmanship. The Companies obligation under this warranty shall consist of repair, replacement or credit, at its option, of any part found by the Company inspection to be defective, provided that the product has not been misused, abused, altered or damaged as determined by the Company and provided that only approved Enivrogard/Rainfresh replacement cartridges have been used in the housings. This warranty does NOT apply to the replacement cartridge(s), membrane, or battery which by nature will diminish in performance through normal use and require(s) regular replacement. This warranty does NOT cover, and is intended to exclude, any liability on the part of Envirogard for any incidental damages, consequential damages, labour charges or any other costs incurred in connection with the purchase, installation, use, maintenance or repair of the water filter whether under this warranty or any other warranty implied by law. Some provinces/states do not allow the exclusion of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights and you may also have other rights, which vary from province to province/state to state. This warranty applies only to water filters/systems purchased in Canada or the U.S.A.

Parts List						
Part #	Item	Qty				
CF2	Block Activated Carbon Pre-filter	2				
IM200	Granular Activated Carbon Post-filter	1				
ROM50	TFC RO Membrane 50gpd	1				
520	Sump	2				
1008-1	Self Piercing Saddle Valve	1				
1008-3	1/4" Delrin Sleeve	2				
1011-0	Bracket Screws	2				
1030-15	1/4" Compression Nut	2				
1603	1/4"Tube Insert	2				
2501	Filter Head 3/8" White	2				
2502	Head O-ring	2				
2505	Vent Pin Assembly	2				
2507	Head Cover plate - 1 hole	1				
2508	Head Cover plate - no hole	1				
2520	Monitor PCB (Model RO450M only)	1				
2545	Battery (Model RO450M only)	1				
2640-0	Air Gap Faucet Assembly	1				
2640-2	Chrome Escutcheon Plate	1				
2640-3	Escutcheon Washer	1				
2640-4	Mounting Plate	1				
2640-5	Spacer	1				
2640-6	Bottom Washer	1				
2640-7	Lock Nut	1				
2601	Membrane Housing	1				
2602	Base Clip	2				
2603	Base Clip Mounting Bolt	2				
2604	Base Clip Mounting Nut	2				
2605	Post-Filter Double Clip	2				
2606	1/4" x 3/8" Acculink™ Fitting 90°	2				
2607	Shut-off valve 1/4"QC	1				
2609	1/4" x 1/8" Acculink™ Fitting 90º	2				
2610	Checkvalve 1/4" x 1/8" 90°	1				
2611	Drain Restrictor (500ml) 1/4" QC	1				
2612	Union T 1/4" Acculink Fitting	1				
2612	RO450 bracket	1				
2614	RO450 Head Assembly complete	1				
2615	RO450M Head Assembly complete	1				
2616	Storage Tank (3.2 gal) w base	1				
2617	Tank Ball Valve 1/4"QC x 1/4" FPT	1				
2618	Drain Connector 3/8" QC	1				
2619	Red Inlet Tube 1/4" x 3' (See Fig.1)	1				
2619	White Tank Tube 1/4"x 4' (See Fig.1)	1				
2620	Blue Post-filter Tube 1/4" x 4' (See Fig. 1)	1				
2623	Grey Drain Tube 1/4" x 4' (See Fig.1)	1				
2623	Black Drain Tube 3/8" x 3' (See Fig.1)	1				
2626	Nitrate Test Kit	1				
	you for purchasing the Rainfresh Reverse	· ·				



Thank you for purchasing the Rainfresh Reverse Osmosis Drinking Water System. We are committed to ensuring you are totally satisfied with our product. If you have any questions don't go back to the store. Please give us a call ! Most issues can be resolved over the phone.

HELP-LINE : 1-800-667-8072

Toronto & Area : (905) 884-9388

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