

# Installation, Operation and Maintenance Manual


## 4-Stage Reverse Osmosis Systems

### Model RO-PURE



RO-PURE

**WARNING**



Read this Manual **BEFORE** using this equipment. Failure to read and follow all safety and use information can result in death, serious personal injury, property damage, or damage to the equipment. Keep this Manual for future reference.

**THINK SAFETY FIRST**

**WARNING**

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

**WARNING**

Discard small parts remaining after the installation.


**NOTICE**

If you are unsure about installing this product, consult a professional plumber or call a WATTS representative.

Failure to follow instructions and install correctly may result in leaks, property damage and/or product not performing correctly, and voids warranty.

Handle all system parts and components carefully. Do not drop, drag, or turn components upside down.

Be sure floor under the system is clean, level and strong enough to support the unit, and that the Module is mounted to a surface strong enough to support its weight.



System tested and certified by WQA against NSF/ANSI Standard 58 for the reduction of the claims specified on the performance data sheet and to NSF/ANSI 372 for lead free compliance.

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# Introduction

Thank you for your purchase of the Premier Reverse Osmosis (RO) water treatment system. This Premier water treatment system has been designed and tested to provide you with high quality drinking water when installed, maintained and used in accordance with the instructions in this Manual, and any requirements of local, state and federal law. Failure to do so could result in personal injury, property damage or damage to the equipment. This Manual should be considered a permanent part of your system and should be kept available for easy reference by any user.

If this system or any of its parts becomes damaged or needs repair, turn off the water supply, stop using the system and contact an experienced service individual immediately.

If on-product labels or this Manual are misplaced, damaged or illegible, or if you require additional copies, please contact Watts for these items at no charge.

If you are ever uncertain about a particular task or the proper method of operating this system, consult this Manual, contact a licensed plumber, or contact Watts at 800-752-5582

## Your Reverse Osmosis System:

Osmosis is the process of water passing through a semi permeable membrane in order to balance the concentration of contaminants on each side of the membrane. A semi permeable membrane is a barrier that will allow clean drinking water through, but will reduce the passage of containments such as arsenic or lead\*. This reverse osmosis system also utilizes carbon block filtration technology, and can therefore provide a higher quality drinking water than carbon filtration systems alone.

**\*This product cannot effectively reduce the trivalent form of Arsenic. Please read the Arsenic Fact Sheet and Performance Data Sheet in the back of this manual for additional information.**

## The Stages of Filtration

Your system is a four stage RO which is based upon separate treatment segments within the one complete water filtration system. These stages are as follows:

### Stage 1 – Sediment filter, recommended change 6 months.

The first stage of your RO system is a 5 micron sediment filter that traps sediment and other particulate matter like dirt, silt and rust which affect the taste and appearance of your water.

### Stage 2 – Carbon filter, recommended change 6 months.

The second stage contains a 5 micron carbon block filter. This helps ensure that chlorine and other materials that cause bad taste and odor are greatly reduced.

### Stage 3 - Membrane, recommended change 2-5 years.

Stage three is the heart of the reverse osmosis system, the 50GPD (Gallons Per Day) RO membrane. This semi permeable membrane will effectively remove TDS, Sodium and a wide range of contaminants such as Perchlorate, Chromium, Arsenic, Copper, Lead as well as Cysts, such as Giardia and Cryptosporidium. Because the process of extracting this high quality drinking water takes time, your RO water treatment system is equipped with a storage tank.

### Stage 4 - Carbon post filter, recommend change 12 months.

The final stage is a high quality carbon filter. Drinking water enters this filter after the water storage tank and it is used as a final polishing filter.

## NOTICE

Filter & Membrane life may vary based upon local water conditions and/or use patterns.

## Operational Parameters

### NOTICE

Installation must comply with State and local plumbing regulations. Do not use with water that is micro biologically unsafe or of unknown quality without adequate disinfection before or after the system.

System is intended to be installed using the cold water supply only.

	Maximum	Minimum
Operating Temperatures	100°F (37.8°C)	40°F (4.4°C)
Operating Pressure	85 psi (6.0 kg/cm <sup>2</sup> )	40 psi (2.8 kg/cm <sup>2</sup> )
pH Parameters	11	2
Iron	0.2 ppm	
TDS (Total Dissolved Solids)	< 1800 ppm	
Turbidity	< 5 NTU	
Hardness	Maximum 10 Grains Per Gallon *	

**Hardness:** Recommended hardness not to exceed 10 grains per gallon, or 170ppm.

\* System will operate with hardness over 10 grains but the membrane life may be shortened. Addition of a water softener may lengthen the membrane life.

**Water Pressure:** The operating water pressure in your home should be tested over a 24 hour period to attain the maximum pressure. If the incoming water pressure is above 100 psi then a water pressure regulator is required. A booster pump is needed for incoming water pressure under 40psi.

**Copper Tubing:** Reverse Osmosis water should not be run through copper tubing as the purity of the water will leach copper causing an objectional taste in water and pin holes may form in the tubing. Watts Premier supplies speciality filters (part numbers WP107008, WP560060 and WP560059) that can be used if copper tubing follows the Reverse Osmosis unit. Be sure to follow any state or local regulations during installation.

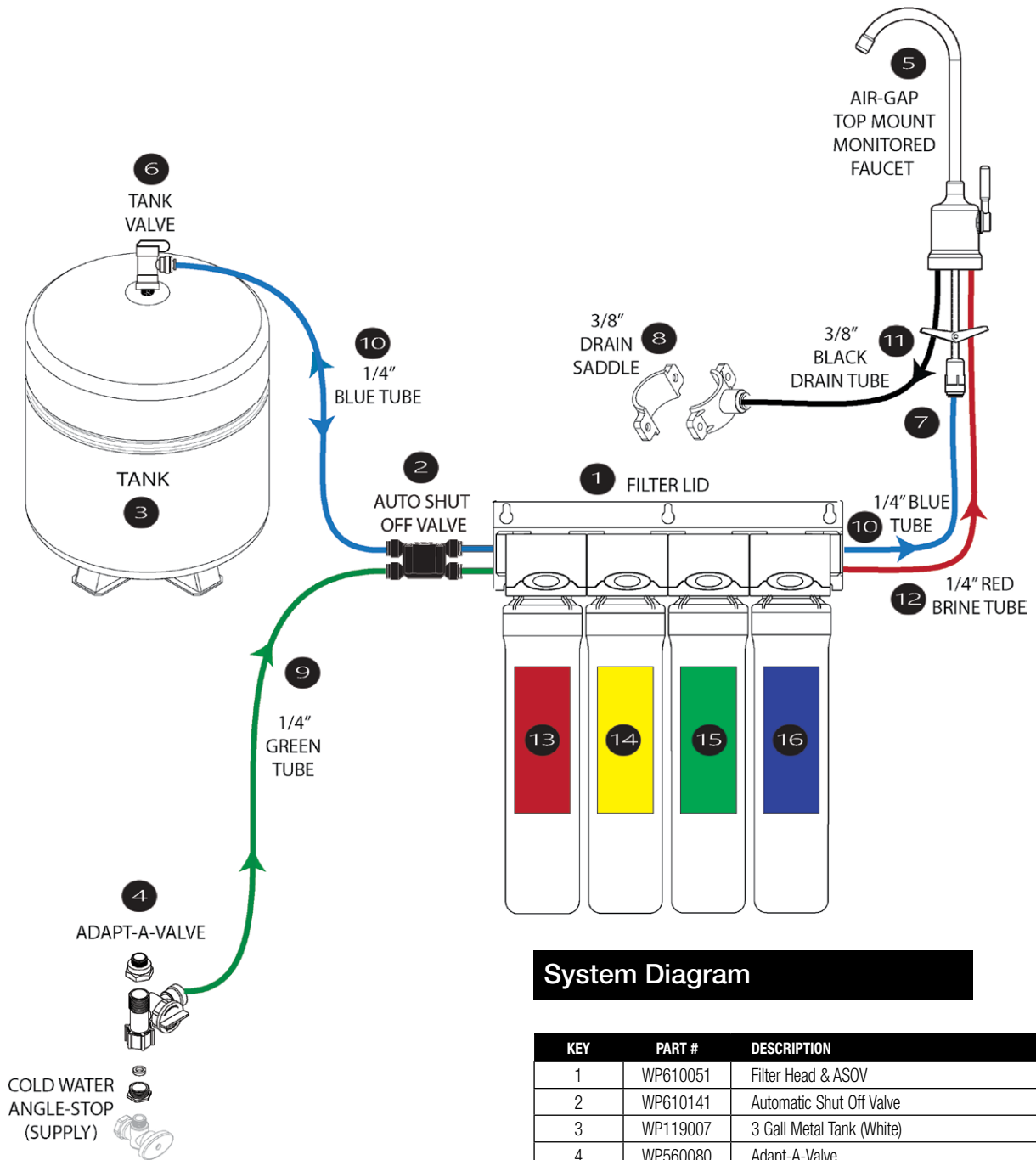
## Contents of Reverse Osmosis (RO) System

**Please make sure all of the items listed below are contained in the box. If any of the items are missing please contact Watts Premier at 800-752-5582 prior to installing.**

- 1 Tank – White
- 1 RO Module (complete with filters)
- 1 Parts Bag
- 1 Faucet Box
- 1 Manual



# Plumbing Diagram and Parts List



## System Diagram

KEY	PART #	DESCRIPTION
1	WP610051	Filter Head & ASOV
2	WP610141	Automatic Shut Off Valve
3	WP119007	3 Gall Metal Tank (White)
4	WP560080	Adapt-A-Valve
5 A	WP116094	Chrome Air-Gap Top Mount Monitored Faucet w/Tubing
5 B	WP116093	Brushed Nickel Air-Gap Top Mount Monitored Faucet w/Tubing
6	WP134018	1/4" QC x 1/4" FPT Tank Ball Valve
7	WP228173	Fitting 3/8" Stem x 1/4" QC Adapter
8	WP164056	Drain Saddle 3/8" (Kit)
9	WP610109	4' Green 1/4" Tubing
10	WP610113	4' Blue 1/4" Tubing
11	WP400048	3' Black 3/8" Drain Line Tubing
12	WP142002	4' Red 1/4" Tubing
13	WP105311	Sediment Pre-Filter
14	WP105351	Carbon Pre-Filter
15	WP105331	50 GPD Reverse Osmosis Membrane
16	WP105341	GAC Carbon Post-Filter

**NOTE: Parts may vary depending on model**

## Tools Recommended for Installation

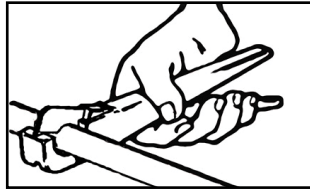
- 1/4" Diamond Tipped Hole Saw bit for faucet opening (Counter Tops/Porcelain & Stainless Sinks)
- Phillips bit for electric drill
- 1/4" Adjustable Wrench
- Adjustable Pliers
- Electric Drill
- Sharp Knife
- 1/8" diamond tip bit, (pilot hole)
- Phillips Screw Driver
- 1/4" Diamond tip bit (Drain saddle hole)



## Using Quick-Connect Fittings

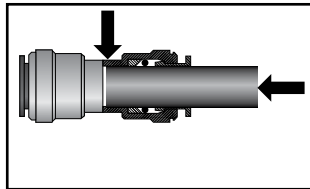
### Cutting

Cut the tube square. It is essential that the outside diameter be free of score marks and that burrs and sharp edges be removed before inserting into fitting.



### Connecting

Make certain to push the tubing completely into the connector until it comes into contact with the internal tubing stop. The collet (gripper) has stainless steel teeth which hold the tube firmly in position while the O-ring provides a permanent leak proof seal.



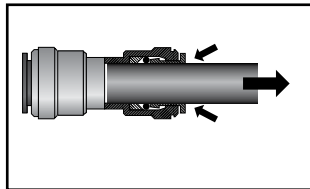
Pull on the tube to check that it is secure.

### NOTICE

**Always test the system and all connections for leaks prior to concluding installation and before use.**

### Disconnecting

To disconnect, ensure the system is depressurized before removing the tube. Push in collet squarely against the face of the fitting. With the collet held in this position, the tube can be removed. The fitting can then be reused.



## Adapt-A-Valve™ Installation

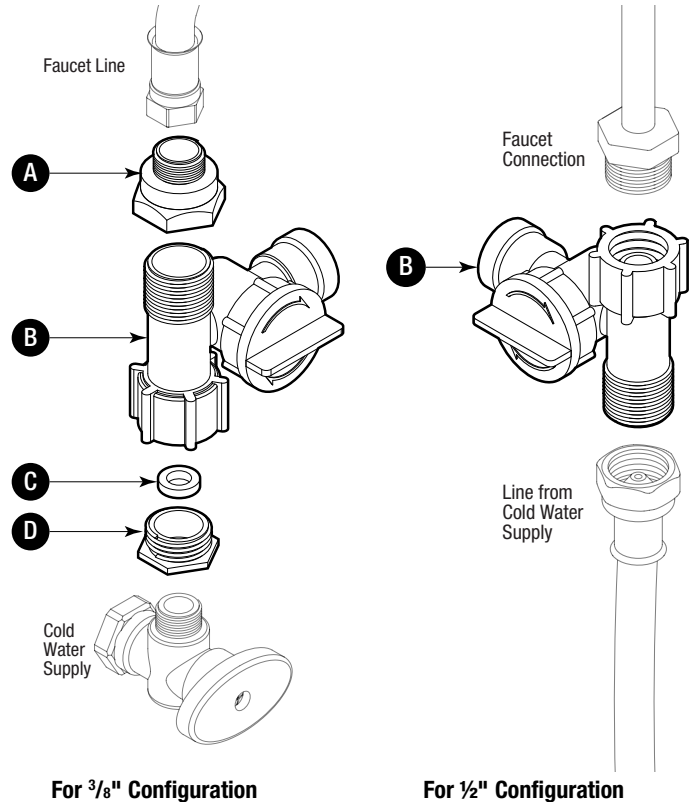
### STEP 1

### NOTICE

**Water supply line to the system must be from the cold water supply line only. Hot water will severely damage your system.**

### NOTICE

**Do not use Teflon tape with the Adapt-A-Valve™.**



## Parts List for Adapt-A-Valve™

ITEM	DESCRIPTION
A	Brass Adapter with black washer
B	Plastic Adapt-A-Valve™ & black collet
C	White Rubber Washer
D	Brass Adapter with no washer

**Step A** – Turn off the cold water supply to the faucet by turning the angle stop valve completely off.

**Step B** – Open cold water sink faucet to relieve pressure.

**Step C** – Choosing the configuration that fits your plumbing, attach the Adapt-A-Valve™ as illustrated in the diagrams above.

### NOTICE

**Make sure that the black collet is installed in to the 1/4" opening on the Adapt-a-Valve™. Don't forget to install the white compression washer with the 3/8" configuration. The Brass Adapters do not need to be tightened with a wrench, only finger tight.**

## Drill a Hole for the Faucet in a Sink

### STEP 2

**Note:** Some sinks have predrilled 1¼" or 1½" holes that are suitable for installation of your Drinking Water faucet. If so, please Skip to step Step 3.

#### NOTICE

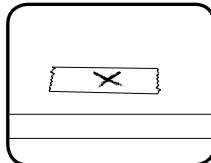
Drilling a hole in a sink or countertop for faucet installation is entirely out of the control of Watts. Watts accepts no responsibility for damage resulting from installing faucet in any surface including marble countertop or a porcelain sink.

For Marble countertops, porcelain sinks and other surfaces: ALWAYS use a qualified contractor for drilling a hole in a marble counter-top, porcelain sink and other surfaces because they can crack and chip easily when drilling the hole.

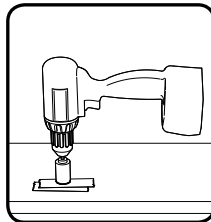
#### NOTICE

Always use a diamond-tip drill bit and hole saw.

**Step A** – Determine desired location for the faucet on your sink and place a piece of masking tape over where the hole is to be drilled. Mark the center of the hole on the tape.



**Step B** – Using a variable speed drill set on the slowest speed, drill a 1/8" pilot hole through both porcelain and metal casing of sink at the marked center of the desired location. Use lubricating oil or liquid soap to keep the drill bit cool (If drill bit gets hot it may cause the porcelain to crack or chip).



**Step C** – Using a 1¼" diamond-tip hole saw, proceed to drill the large hole. Keep drill speed on the slowest speed and use lubricating oil or liquid soap to keep the hole saw cool during cutting.

**Step D** – After drilling, remove all sharp edges and make sure the surroundings of the sink are cooled before mounting the faucet.

## Watts Top Mount Faucet Installation

### STEP 3

This RO faucet is equipped with quick connect fittings for easy tube installation. To connect tubes, simply push them firmly into their corresponding fitting on the RO faucet until fully seated.

**NOTE:** A 1" to 1¼" mounting hole is required for the faucet installation

**Step 3-1** – During shipping/handling the toggle bolt on your new faucet may push up out of position. Prior to the install, hold the faucet as shown in the picture and pull down on the wing nut. This will ensure that the O-rings are in their proper position and that your faucet will have a good seal.

#### NOTICE

The quick-connect ports on the faucet are color coded. Make sure the tube being inserted matches the color of the port.

**Step 3-2** – In the parts bag, locate one 3/8" Stem x 1/4" Quick connect fitting adapter, one 1/4" red tube, one 1/4" blue tube and one 3/8" black tube.

**Step 3-3** – Insert the 3/8" Stem adapter into the 3/8" fitting located on the end of the toggle bolt assembly.

#### NOTICE

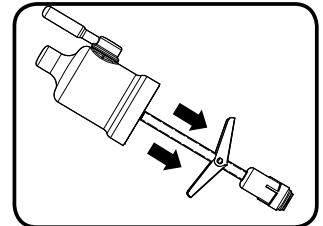
Approximately 3/4" of ALL tubing must go into the fitting.

**Step 3-4** – The BLUE tubing has one BENT end and one STRAIGHT end. Connect the STRAIGHT end of the 1/4" BLUE tube firmly into the faucet fitting.

**Step 3-5** – Connect the 3/8" BLACK tube into the bottom of the faucet.

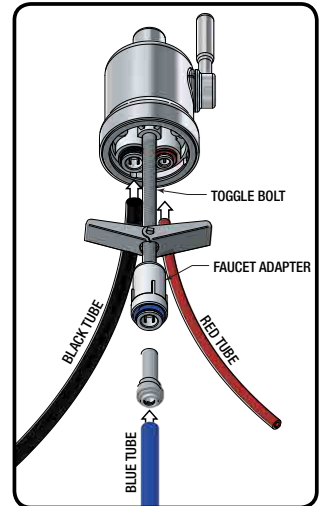
**Step 3-6** – The RED tubing has one BENT end and one STRAIGHT end. Connect the STRAIGHT end of the 1/4" RED tube firmly into the faucet fitting.

**Step 3-7** – From above the sink, feed the faucet tubing & toggle bolt down through the mounting hole in the sink. Test fit the faucet placement.



**Step 3-8** – Peel the white backing paper off the seal on the bottom of the faucet base and press firmly over the mounting location

**Step 3-9** – Insert your Phillips head screwdriver through the spout hole of the RO faucet and then turn the toggle bolt until the faucet is secure.

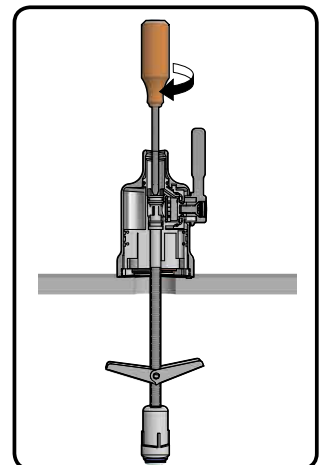
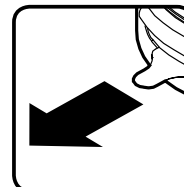


#### NOTICE

Do not overtighten

**Step 3-10** – Insert spout into the faucet base until fully seated.

**Step 3-11** – Pull the Battery Safety Tab out to activate the faucet monitor. Make sure that the clear drawer is firmly seated in the faucet base. The monitor will flash briefly once activated.



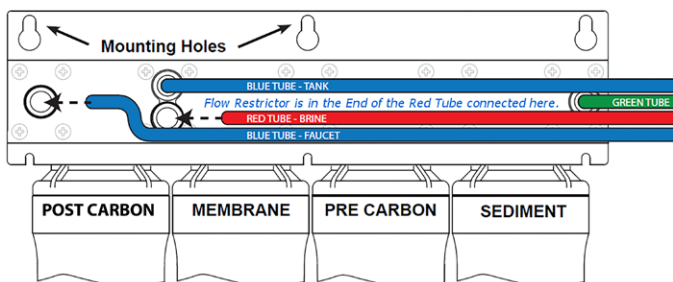
#### ⚠ DANGER

KEEP AWAY FROM CHILDREN

This product contains a button (coin) cell battery. If swallowed, it could cause severe injury or death in just 2 hours. Seek immediate medical help. Contact a Poison Control Center.

## Watts Top Mount Faucet Installation -Cont'd

### STEP 4



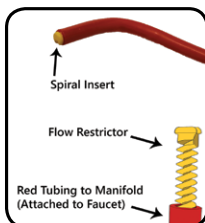
### Blue Tube from Faucet to RO Module

**Step A** – Locate the ¼" BLUE tube attached to the RO faucet. Insert the open end of the tube with the 90° bend into the open ¼" quick connect fitting on the back side of the RO-Pure Head behind the Post Filter head making sure the tube is pushed in all the way to the tube stop. See Diagram Above

### STEP 5

### Red Tube from Faucet to RO Module

**Step A** – Locate the ¼" RED tube attached to the RO faucet. Insert the end of the red tube with the 90° bend into the open ¼" quick connect fitting on the back side of the RO-Pure Head behind the Membrane head making sure the tube is pushed in all the way to the tube stop. See Diagram Above



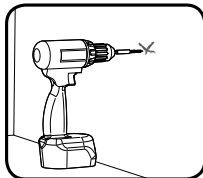
### NOTICE

**The Flow Restrictor is installed inside of the red tube at the bent end. DO NOT REMOVE THE FLOW RESTRICTOR OR CUT THE RED TUBING AS IT WILL DAMAGE THE FLOW RESTRICTOR.**

### STEP 6

### Reverse Osmosis Module Mounting

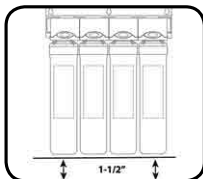
**Step A** – Determine best location for the RO module to be mounted to allow for future system maintenance.



### NOTICE

**Make sure to allow a minimum of 1½" under the system for removing the filter canisters.**

**Step B** – Using the mounting holes on the bracket, lift the system up 1½" from the cabinet floor and mark the location for the mounting screws on the cabinet wall under the sink.



**Step C** – In the parts bag, locate the two self tapping screws. Using an electric drill with a Phillips bit, screw them into the cabinet at the marked location. Hang the module on the screws using the mounting holes in the bracket

### STEP 7

### Drain Saddle Installation

### NOTICE

Drain Saddle fits standard ¼" – 1½" drain pipes

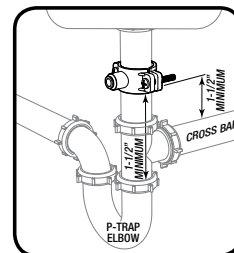
### NOTICE

If you have a garbage disposal, do not install the drain saddle downstream of it. Installation of the drain saddle should be on a separate sink, if available.

The drain connection can instead be made at the dishwasher inlet port of the garbage disposal using a Garbage Disposal Drain Line Adapter which is available for purchase from Watts Premier (PN# WP164020).

**Step A** – Gather the pieces of the drain saddle:

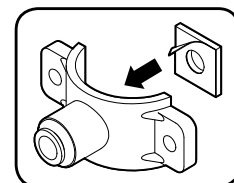
- (1) Saddle - Front Portion
- (1) Saddle - Rear Portion
- (1) Foam Gasket
- (2) Screws
- (2) Nuts (for Screws)



### NOTICE

**The drain saddle must be installed at least 1½" above the nut of the P-Trap elbow or cross bar from the garbage disposal to ensure proper drainage.**

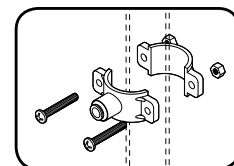
**Step B** – The small square black foam gasket with a circle cut out of the middle must be applied to the inside of the drain saddle. Remove sticky tape backing and stick to the drain saddle as shown.



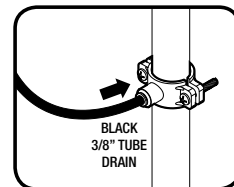
### NOTICE

**Take extreme caution to only drill through one side of the drain pipe.**

**Step C** – The drain saddle must be installed at least 1½" above the nut of the P-Trap elbow or cross bar from the garbage disposal to insure proper drainage. Using the ⅜" drill bit, drill into the drain pipe at the best available location as specified above.



**Step D** – Assemble the drain saddle around the drain pipe and align drain saddle fitting opening with the hole drilled in the previous step - you may use a small screwdriver to feed through the drain saddle into the drain pipe to aid with the alignment. Using a Phillips screw driver tighten the drain saddle bolts evenly and securely on both sides.



### NOTICE

**Do not over tighten the screws. It may crack the drain saddle.**

### NOTICE

**The black ⅜" drain tube must be as SHORT and STRAIGHT as possible to the drain saddle. Make sure there is a downward slope from faucet to drain saddle to allow for proper drainage without stretching or sagging of the tube. This is a gravity fed line and if there is any bend or dip in the tube, the rinse water will not flow into the drain properly. Water may back up and come out the air gap hole in the back of the faucet.**

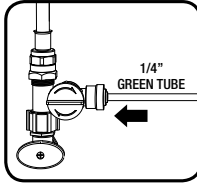
**Step E** – Measure the 3/8" black tube from faucet to the drain saddle on the drain pipe and make a straight cut to the correct length.

**Step F** – Connect the black tube to the open quick connect fitting on the drain saddle by pushing the tube all the way to the tube stop.

## STEP 8

### Green Tube Connection

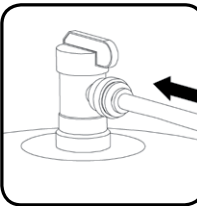
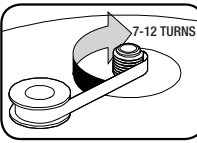
**Step A** – Locate green tube attached to the RO Module. Insert the open end of the green 1/4" tube into the open 1/4" quick connect fitting on the plastic Adapt-A-Valve™ valve making sure the tube is pushed in all the way to the tube stop.



## STEP 9

### Tank Ball Valve Installation

**Step A** – Teflon tape must be applied in a clockwise direction. Wrap (7 to 12 turns) around the male pipe threads (MPT) on the stainless steel fitting on top of the tank.



## NOTICE

**Do not over-tighten.**

**Step A** – Thread the quick connect ball valve (supplied in the parts bag), by hand, onto the stainless steel connector on the tank.

## STEP 10

### Blue Tube Connection To Tank

**Step A** – Position tank in desired location. Stand it upright or lay it on its side (using the black plastic stand). Measure the blue tube (marked "TANK") from the RO module to the tank and cut it to length leaving a straight, square edge. Insert the tube into the quick connect fitting on the tank ball valve. Make sure the tube is pushed in all the way to the tube stop (see page 4 for quick connect fitting use directions).

## STEP 11

### Ice maker Connection

**Step A** – If you have a refrigerator / ice maker that you would like to connect to your RO system, you can connect that to the blue tube (purified water) leading to the RO faucet.

## NOTICE

A connection from the RO to the refrigerator / ice maker system must have an in-line valve installed in-between so it can easily be closed to prevent water flowing to the ice maker during start up and periodic maintenance. An Ice maker Connection Kit can be purchased through Premier.

## Startup

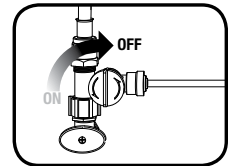
### NOTICE

**If your RO system is connected to a refrigerator / ice maker, you must turn off the connection to that appliance during the system startup.**

**Do not re-open the connection until after the system has been completely flushed (as described below) and the tank is allowed to fill up completely in order for the appliance to work properly.**

**Discard the first batch of water or ice made from the RO water after startup.**

**Step A** – Turn on the water supply at both the cold water supply valve and Adapt-A-Valve™. Check the system for leaks and tighten any fittings as necessary. (Continue to check frequently over the next 24 hours to ensure no leaks are present).



**Step B** – Open the RO faucet and leave it open until water begins to trickle out (this may take a few minutes and the water will come out slowly).

**Step C** – Close the RO faucet allowing the storage tank to fill with water. It may take 3 to 6 hours to fill the tank completely depending on the production capability of the membrane, local water temperature and water pressure.

**NOTE:** During the fill period you may hear water trickling which is a normal occurrence.

**Step D** – After the storage tank is full, open the RO Faucet to flush the tank completely. You will know that the tank is empty when the flow rate from the RO faucet is down to a trickle. Repeat this step two more times. The fourth tank can be used for drinking.

**NOTE:** The flushing process should take about a day to complete.

**NOTE:** Flushing of the tank 3 times is only necessary during the initial startup and after replacing the membrane.

### NOTICE

**Check frequently over the next 24 hours to ensure no leaks are present.**

## Maintenance

### ⚠ WARNING

For proper performance and to help avoid exposure to contaminants, this system must be installed, maintained and operated as specified in this Manual.

It is important to change out your filters at the recommended intervals as indicated in this system manual. When replacing the filter elements, pay special attention to any cleaning instructions. Should you have any further questions please refer to our web site at [www.premierh2o.com](http://www.premierh2o.com) or call our customer service department at 1-800-752-5582.

With proper installation and maintenance, this system will provide you with high quality water for years to come. All of Premier's water enhancement products are rigorously tested by independent laboratories for safety and reliability. If you have any questions or concerns, please contact our customer service department at 1-800-752-5582 (outside USA 480-675-7995) or refer to our on-line troubleshooting guide at [www.premierh2o.com](http://www.premierh2o.com).

### NOTICE

If your RO system is connected to a refrigerator / ice maker, you must turn off the connection to that appliance during the system maintenance.

### NOTICE

The following is a minimum replacement schedule – More frequent filter replacement may be required depending on your particular water conditions and use.

## 6 Month Maintenance

*\*Order filters by calling 1-800-752-5582 or buy online at [www.premierh2o.com](http://www.premierh2o.com).*

Replace: (1) Sediment Filter            Red Label P/N: WP105311  
(1) Carbon Block Filter            Yellow Label P/N: WP105351

## Annual Maintenance

Replace: (1) Sediment Filter            Red Label P/N: WP105311  
(1) Carbon Pre-Filter            Yellow Label P/N: WP105351  
(1) Carbon Post-Filter            Blue Label P/N: WP105341

### NOTICE

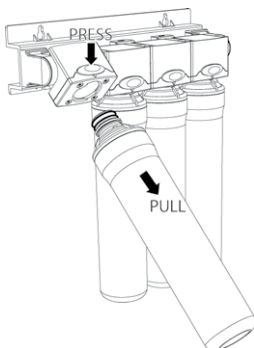
This is a good time to check the air pressure in your storage tank. For instructions please see page 9.

Flush first tank full after completing the annual maintenance.

**Step A** – Place a towel under the RO module to catch any excess water that drips out from the filters during the changeover.

**Step B** – To make the removal of the filter housings easier, the heads and housings may be lifted up to 90° as shown in the pictures to the right.

**To remove a filter cartridge:** Push & hold the button on the valve head above the filter. Pull cartridge downward (from the head) to remove. Release button and discard old filter.



**Step C** – Make sure to remove the cap off of the new replacement filter.

**To install a filter cartridge:** Remove the seal cap and insert the cartridge into the valve head until you hear an audible "click" (the button does not need to be pressed to install new filters).

To reset the electronic monitor during replacement of filters, simply slide out the battery from the base of the faucet and reinsert.

## Membrane Replacement

**Includes:** (1) RO Membrane (50 GPD Green Label P/N: WP105331)

Membranes have a life expectancy between 2 and 5 years, depending on the incoming water conditions and the amount the RO system is used. This reverse osmosis membrane is critical for effective reduction of total dissolved solids (TDS). The product water should be tested periodically to verify that the system is performing satisfactorily.

Normally, a membrane would be replaced during a semiannual or annual filter change. However, if at any time you notice a reduction in water production or an unpleasant taste in the reverse osmosis water, it could be time to replace the membrane. Premier recommends replacing the membrane when TDS reduction falls below 75%.



## Annual Sanitization

### NOTICE

Do not change your post-carbon filter until the sanitization has been completed.

The pre-filters and membrane can be changed before the sanitization

**Step A** – Turn off the water supply to your RO system at the Adapt-A-Valve™ and open the RO faucet to drain the storage tank.

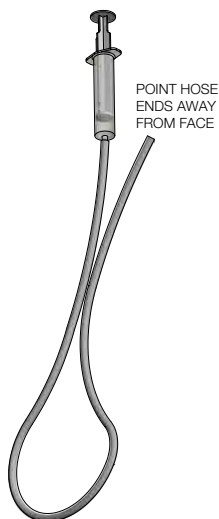
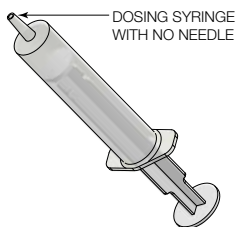
### NOTICE

If you have connected your RO system to a refrigerator/ ice maker, make sure the connection has been turned off. Do not re-open the connection until the sanitization process is complete.

**Step B** – Locate the tube that runs between your filter module and the storage tank and disconnect at both ends.

**Step C** – Drain any remaining water in the tube

**Step D** – Hold both ends of the tube together with the ends pointed away from your face. Using a dosing syringe (see figure) slowly insert 1 teaspoon (5 mL) of common household bleach into the tube.



### WARNING

Do not use needle syringe

### ⚠ DANGER



**IF BLEACH GETS IN EYES: Hold eye open and rinse slowly and gently with water for 15 - 20 minutes. Remove contact lenses if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.**

**Step E** – While covering one end of the tube with your finger, insert the other into the tank. Then insert the open end into the filter module.

**Step F** – Turn the incoming water back on and let the system fill for approximately 10 minutes

**Step G** – Turn off the incoming water and let the system sit for 1 minute.

**Step H** – Drain the system completely and then follow the startup procedure - filling then draining two full tanks of water.

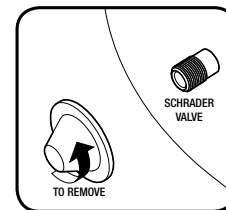
**Step I** – Replace the post-carbon filter once complete.

## Check Air Pressure in the Tank

### NOTICE

Check air pressure only when tank is empty of water!

Check air pressure in the storage tank when you notice a decrease in available water from the RO system. Air can be added with a bicycle pump using the schrader valve that is located on the lower side of the tank behind the blue plastic cap.



**Step A** – Turn off the incoming water supply to the RO.

**Step B** – Open the RO Faucet and allow water to drain from the tank until it is completely empty.

**TIP:** When water from the RO faucet slows to a trickle, with the faucet still in the open position, you may add air to the tank to purge any left over water, this will ensure that the tank is completely empty.

**Step C** – Once all water in the tank is purged, check air pressure using an air pressure gauge, it should read between 5 - 7 PSI. (Digital air pressure gauge is recommended)

**Step D** – Follow startup procedure on page 7.

## Procedure for Extended Non-Use (More than 2 months)

**Step A** – Turn off the water supply to your RO system at the Adapt-A-Valve™ and open the RO faucet to drain the storage tank. Once the storage tank is empty, remove all filter cartridges (order not important), place them into a sealed plastic bag and store in your refrigerator.

### NOTICE

Do Not Freeze!

## To Restart your system

**Step A** – Reinstall the RO filters (per Page 8 - Annual Maintenance).

**Step B** – Follow the Startup Procedure (per Page 7). You will only need to flush the tank one time.

### NOTICE

If you have connected your RO system to a refrigerator / ice maker, make sure the ice maker is off (do not allow water to flow to the ice maker) until the tank has been allowed to completely fill.

# Troubleshooting

## NOTICE

**BEFORE DISCONNECTING ANY TUBES, MAKE SURE TO TURN OFF WATER SUPPLY AND MAKE SURE THE SYSTEM IS DEPRESSURIZED**

PROBLEM	CAUSE	SOLUTION
1. Low/Slow production	Low water pressure	Assure a minimum of 40psi incoming water pressure. Watts sells a booster pump if home water pressure is low. Make sure water supply is turned on and Adapt-A-Valve™ is all the way open.
	Crimps in tubing	Check tubing and straighten or replace as necessary.
	Clogged pre-filters	Replace pre-filters.
	Fouled membrane	Replace membrane and flow restrictor.
2. Milky colored water	Air in system	Air in the system is a normal occurrence with initial start up of the RO system. This milky look will disappear during normal use within 1-2 weeks. If condition reoccurs after filter change, drain tank 1 to 2 times.
3. Water constantly running, unit will not shut off	Low water pressure	See #1 above
	Crimp in supply tube	Check tubing and straighten or repair as necessary.
	High water pressure	Check incoming water pressure to make sure it does not exceed 80psi. A pressure relief valve may be necessary.
	High pressure in Tank	Empty storage tank of water. Set tank air pressure between 5-7psi. See previous page.
	Low Pressure in Tank	Use a Digital Air Gauge for best results. The empty tank pressure should be 5-7psi. See Page 9.
4. Noise / Water from faucet vent hole or noise from in drain line drain.	Crimp or restriction	Check tubing and straighten or repair as necessary. Straighten all drain lines. Clear blockage. Cut off any excess tubing
	Drain tube clogged	Caused from dishwasher or garbage disposal. Disconnect the 3/8" black line at the drain, clean the 3/8" black line out with a wire, then reconnect. Blowing air through the line will not always remove the clog.
5. Small amount of water in storage tank	System starting up	Normally it takes 4-6 hours to fill tank. Note: low incoming water pressure and/or temperature can drastically reduce production rate.
	Low water pressure	See #1 above.
	To much air in tank	Tank air pressure should be 5-7psi when empty of water. If below 5psi, add air or bleed if above 7psi. Check only when tank is empty of water. See previous page.
6. Low water flow from faucet		Check air pressure in tank Use a Digital Air Gauge for best results. The empty tank pressure should be 5-7psi. See Page 9.

For additional troubleshooting procedures visit PremierH2O.com or contact our Technical Support team at 800-752-5582.

# Performance Data Sheet

Watts Premier • 8716 W Ludlow Drive, Suite 1 • Peoria, AZ 85381 • Phone: 800-752-5582

## Model: RO-PURE

### General Use Conditions

1. System to be used with municipal or well water sources treated and tested on regular basis to insure bacteriological safe quality. Systems certified for cyst reduction may be used on disinfected water that may contain filterable cysts.

#### **⚠ WARNING**

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

2. This system is acceptable for treatment of influent concentrations of no more than 65 mg/L nitrate and 5 mg/L nitrite in combination measured as N and is certified for nitrate/nitrite reduction only for water supplies with a pressure of 350 kPa (50 psig) or greater along with an internal built in booster pump.
3. Operating Temperature: Maximum: 100°F (40.5°C)  
Minimum: 40° (4.4°)
4. Operating Water Pressure: Maximum: 85 psi (6.0kg/cm<sup>2</sup>)  
Minimum: 40 psi (2.8kg/cm<sup>2</sup>)
5. pH Maximum: 11  
Minimum: 2
6. Maximum Iron present in incoming water supply must be less than 0.2 ppm.
7. Hardness of more than 10 grains per gallon (170 ppm) may reduce RO membrane life expectancy.
8. Recommend TDS (Total Dissolved Solids) not to exceed 1800 ppm.

### Recommended Replacement Parts and Change Intervals

**Note:** Depending on incoming feed water conditions, replacement time may vary.

DESCRIPTION	PART#	CHANGE TIME FRAME
Sediment Pre-Filter	WP105311	6 Months
Carbon Pre-Filter	WP105351	6 Months
Final Carbon Filter	WP105341	12 Months
50 GPD RO Membrane	WP105331	2 to 5 Years

While testing was performed under standard laboratory conditions, actual performance may vary depending on water chemistry, water temperature, and water pressure. Efficiency rating means the percentage of the influent water to the system that is available to the user as reverse osmosis treated water under operating conditions that approximate typical daily usage. Recovery rating means the percentage of the influent water to the membrane portion of the system that is available to the user as reverse osmosis treated water when the system is operated without a storage tank or when the storage tank is bypassed. There is an average of 4 gallons of reject water for every 1 gallon of product water produced.

**REFER TO OWNER'S INSTALLATION/SERVICE MANUAL FOR FURTHER MAINTENANCE REQUIREMENTS AND WARRANTY INFORMATION.**

# Performance Data Sheet -Cont'd

## Performance Claims



This system has been tested according to NSF/ANSI 58 for reduction of the substances listed below, and to NSF/ANSI 372 for lead free compliance.

C US

The concentration of the indicated substances in water entering the system was reduced to a concentration less than or equal to the permissible limit for water leaving the system as specified in NSF/ANSI 58. This system has been tested for the treatment of water containing pentavalent arsenic (also known as As (V), As (+5), or arsenate) at concentrations of 0.30 mg/L or less. This system reduces pentavalent arsenic, but may not remove other

forms of arsenic. This system is to be used on water supplies containing a detectable free chlorine residual at the system inlet or on water supplies that have been demonstrated to contain only pentavalent arsenic. Treatment with chloramine (combined chlorine) is not sufficient to ensure complete conversion of trivalent arsenic to pentavalent arsenic, Please see the Arsenic Facts section for further information.

	AVERAGE INFLUENT (MG/L)	AVERAGE EFFLUENT (MG/L)	% REDUCTION	PH	PRESSURE	MAXIMUM EFFLUENT (MG/L)	INFLUENT CHALLENGE CONCENTRATION	MAXIMUM ALLOWABLE CONCENTRATION (MG/L)
Arsenic (Pentavalent)	0.31	0.001	98.80%	7.24	50 psi	0.002	0.30 +/- 10%	0.010
Barium	9.2	0.08	97.60%	7.64	50 psi	0.12	10.0 +/- 10%	2.0
Cadmium	0.031	0.0004	95.70%	7.49	50 psi	0.0008	0.03 +/- 10%	0.0005
Chromium (Hexavalent)	0.3	0.002	98.50%	7.24	50 psi	0.004	0.03 +/- 10%	0.1
Chromium (Trivalent)	0.3	0.001	96.70%	7.64	50 psi	0.002	0.03 +/- 10%	0.1
Copper	3.2	0.02	98.70%	7.4	50 psi	0.04	3.0 +/- 10%	1.3
Cyst	92,000 / ml	3 / ml	99.97%	7.44	50 psi	18	min. 50,000/ml	N/A
Fluoride	8.7	0.19	95.70%	7.24	50 psi	0.3	8.0 +/- 10%	1.5
Lead	0.15	0.002	95.70%	7.39	50 psi	0.005	0.15 +/- 10%	0.0107
Perchlorate	130	2.8	96.90%	N/A	N/A	N/A	N/A	N/A
Radium 226 / 228	25 pCi/L	5 pCi/L	80%	7.24	50 psi	5 pCi/L	25 pCi/L	5 pCi/L
Selenium	94.85	< 0.2	96.50%	7.24	50 psi	< 0.2	0.10 +/- 10%	0.05
TDS	770	35	96.40%	7.28	50 psi	26	750 +/- 40 mg/L	187
Turbidity	11.3	0.1	99%	7.43	50 psi	0 - 1	11 +/- 1 mg/L	0.5 NTU
Nitrate / Nitrite	N/A	N/A	83.30%	N/A	N/A	N/A	N/A	N/A
Recovery- 25.5%			Daily Production Rate-23.5 GPD			Efficiency-12.8%		

## Arsenic Facts

Arsenic (As) is a naturally occurring contaminant found in many ground waters. Arsenic in water has no color, taste or odor. It must be measured by an arsenic test kit or lab test.

Public water utilities must have their water tested for arsenic. You can obtain the results from your water utility contained within your consumer confidence report. If you have your own well, you will need to have the water evaluated. The local health department or the state environmental health agency can provide a list of test kits or certified labs.

There are two forms of arsenic: pentavalent arsenic (also called As (V), As (+5)) and trivalent arsenic (also called As (III), As (+3)). In well water, arsenic may be pentavalent, trivalent, or a combination of both. Although both forms of arsenic are potentially hazardous to your health, trivalent arsenic is considered more harmful than pentavalent arsenic.

RO systems are very effective at removing pentavalent arsenic. A free chlorine residual will rapidly convert trivalent arsenic to pentavalent arsenic. Other water treatment chemicals such as ozone and potassium permanganate will also change trivalent arsenic to pentavalent arsenic. A combined chlorine residual (also called chloramine) where it does convert trivalent arsenic to pentavalent arsenic, may not convert all the trivalent arsenic in to pentavalent arsenic. If you get your water from a public water utility, contact the utility to find out if free chlorine or combined chlorine is used in the water system.

This reverse osmosis system is designed to remove up to 98% of pentavalent arsenic. It will not convert trivalent arsenic to pentavalent arsenic. Under laboratory standard testing conditions, this system reduced 0.30 mg/L (ppm) pentavalent arsenic to under 0.010 mg/L (ppm) (the USEPA standard for drinking water). Actual performance of the system may vary depending on specific water quality conditions at the consumer's installation. In addition to the independent laboratory standard testing conditions we have conducted additional field testing on our reverse osmosis units to determine trivalent arsenic reduction capabilities. Based upon field testing, it has been determined that the RO units are capable of reducing up to 67% of trivalent arsenic from the drinking water.

This reverse osmosis system contains a replaceable component critical to the efficiency of the system, and for the removal of arsenic. Replacement of the reverse osmosis membrane should be with one of identical specifications, as defined by the manufacturer, to ensure the same efficiency and contaminant reduction performance. Specific RO membrane identification and ordering information can be found in the maintenance section of this manual.



# Limited Warranty

## WHAT YOUR WARRANTY COVERS:

Watts Regulator Co. ("Watts") warrants its Reverse Osmosis System to be free from defects in workmanship (excluding replaceable filters and membranes) under normal usage for a period of one year from the date of original shipment. In the event of such defects within the warranty period, return the unit (less tank) after obtaining a return authorization (see below) and Watts will repair or, at Watts' option, replace the unit at no charge.

**THE WARRANTY SET FORTH HEREIN IS GIVEN EXPRESSLY AND IS THE ONLY WARRANTY GIVEN BY WATTS WITH RESPECT TO THE PRODUCT. WATTS MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED. WATTS HEREBY SPECIFICALLY DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**

The remedy described in the first paragraph of this warranty shall constitute the sole and exclusive remedy for breach of warranty, and Watts shall not be responsible for any incidental, special or consequential damages, including without limitation, lost profits or the cost of repairing or replacing other property which is damaged if this product does not work properly, other costs resulting from labor charges, delays, vandalism, negligence, fouling caused by foreign material, damage from adverse water conditions, chemical, or any other circumstances over which Watts has no control. This warranty shall be invalidated by any abuse, misuse, misapplication, improper installation or improper maintenance or alteration of the product. Some States do not allow limitations on how long an implied warranty lasts, and some States do not allow the exclusion or limitation of incidental or consequential damages. Therefore the above limitations may not apply to you. This Limited Warranty gives you specific legal rights, and you may have other rights that vary from State to State. You should consult applicable state laws to determine your rights. **SO FAR AS IS CONSISTENT WITH APPLICABLE STATE LAW, ANY IMPLIED WARRANTIES THAT MAY NOT BE DISCLAIMED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO ONE YEAR FROM THE DATE OF ORIGINAL SHIPMENT.**

## HOW TO OBTAIN WARRANTY SERVICE:

For warranty service, call 1-800-752-5582 for documentation and a return authorization number. Once the return authorization number has been created, ship your Reverse Osmosis unit (less tank) to our factory, freight and insurance prepaid, with proof of date of original purchase. Include a note stating the problem experienced and include your name, address and your return authorization number. No returns will be accepted without the proper return authorization number. Watts will repair it or, at Watt's option, replace and ship it back to you prepaid.

## WHAT THIS WARRANTY DOES NOT COVER:

This warranty does not cover defects resulting from improper installation, (contrary to Watts' printed instructions), from abuse, misuse, misapplication, improper maintenance, neglect, alteration, accidents, casualties, fire, flood, freezing, environmental factors, water pressure spikes or other such acts of God.

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

1. The Reverse Osmosis System must be hooked up to a potable municipal or well cold water supply.
2. The hardness of the water should not exceed 10 grains per gallon, or 170 ppm.
3. Maximum incoming iron must be less than 0.2 ppm.
4. The pH of the water must not be lower than 4 or higher than 11.
5. The incoming water pressure must be between 40 and 100 pounds per square inch (2.81 - 7.03 kilograms per square centimeter).
6. Incoming water to the RO cannot exceed 100 degrees F (37.8 degrees C.)
7. Incoming TDS/Total Dissolved Solids not to exceed 1800 ppm.
8. Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

This warranty does not cover any equipment that is relocated from the site of its original installation. This warranty does not cover any charges incurred due to professional installation. This warranty does not cover any equipment that is installed or used outside the United States of America and Canada.

## OTHER CONDITIONS:

If Watts chooses to replace the equipment, Watts 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 for the remainder of the original warranty period, whichever is longer. This warranty is not assignable or transferable.

**WATTS MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED AND HEREBY SPECIFICALLY DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. WATTS WILL NOT BE RESPONSIBLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING TRAVEL EXPENSE, TELEPHONE CHARGES, LOSS OF REVENUE, LABOR CHARGES, DAMAGE CAUSED BY ADVERSE WATER CONDITIONS, LOSS OF TIME, INCONVENIENCE, LOSS OF USE OF THE EQUIPMENT, AND DAMAGE CAUSED BY THIS EQUIPMENT AND ITS FAILURE TO FUNCTION PROPERLY. THIS WARRANTY SETS FORTH ALL OF WATTS'S RESPONSIBILITIES REGARDING THIS EQUIPMENT.**

## YOUR RIGHTS UNDER STATE LAW:

Some States do not allow limitations on how long an implied warranty lasts, and some States do not allow the exclusion or limitation of incidental or consequential damages. Therefore the above limitations may not apply to you. This Limited Warranty gives you specific legal rights, and you may have other rights that vary from State to State. You should consult applicable state laws to determine your rights. **SO FAR AS IS CONSISTENT WITH APPLICABLE STATE LAW, ANY IMPLIED WARRANTIES THAT MAY NOT BE DISCLAIMED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO ONE YEAR FROM THE DATE OF ORIGINAL SHIPMENT.**



A WATTS Brand

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