

# Installation, Operation and Maintenance Manual

Watts Quick-Change (QC)

Reverse Osmosis System

Model: WQC4RO



## ⚠ WARNING



Please read carefully before proceeding with installation. Your failure to follow any attached instructions or operating parameters may lead to the product's failure.



Keep this Manual for future reference.

## ⚠ WARNING

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

## IMPORTANT

If you are unsure about installing your WATTS water filter, contact a WATTS representative or consult a professional plumber.

## ⚠ CAUTION

Test the water periodically to verify that the system is performing satisfactorily. Discard small parts remaining after the installation.

## NOTICE

Failure to install the system correctly voids the warranty.  
Handle all components of the system with care. Do not drop, drag or turn components upside down.  
Be sure the floor under the water filter system is clean, level and strong enough to support the unit.



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

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# WATTS®

Watts Water Quality & Conditioning Products  
13700 Highway 90 West  
San Antonio, Texas 78245

***NOTE: This manual is used for several variations of the same system. Your system may vary slightly from the pictures or descriptions contained in this manual.***

***It is end users responsibility to ensure that this system is installed according to all local codes and regulations.***

**Thank you for your purchase of a state of the art Watts Reverse Osmosis (RO) water treatment system.** Water quality concerns are becoming more of a focus for the public. This Watts water treatment system has been designed and tested to provide you with high quality water for years to come. The following is a brief overview of the system.

#### **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 pass some substances like clean water, but not other substances such as salts and minerals.

Reverse osmosis uses a semi permeable membrane; however, by applying pressure across the membrane, it concentrates contaminants on one side of the membrane, producing clean water on the other. This is why RO systems produce both clean drinking water and waste water that is flushed from the system.

Your system is a Four Stage RO which is based upon four separate treatment segments within 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 five 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 – Pre-Carbon filter, recommended change 6 months.**

The second stage contains a 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 1-2 years.**

Stage three is the heart of the reverse osmosis system, the RO membrane. This semi-permeable membrane will take out salts, minerals, metals, bacteria, viruses, cysts, and much more. 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- Post Carbon Filter, recommend change 12 months.**

The post carbon filter is a granular activated carbon (GAC) cartridge using coconut shell carbon. This filter provides final polishing and assures good tasting drinking water.

#### **System Maintenance**

The Reverse Osmosis system contains a replaceable treatment component critical for effective reduction of total dissolved solids. The product water should be tested periodically to verify that the system is performing satisfactorily. Just because you can not taste it, does not mean that it is not there. Contaminants such as lead, chromium, and arsenic are undetectable to the taste. Additionally, over time if you do not replace the filter elements, other bad tastes and odors will be apparent in your drinking water. This is why it is important to change out your filter at the recommended intervals as indicated in this system manual. Should you have any further questions please contact the dealer that you purchased the unit from.

With proper installation and maintenance, this system will provide you with high quality water for years to come. All of Watts water enhancement products are rigorously tested.

**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.**

<b>Operating Temperatures:</b>	Maximum 100°F (37.8°C)	Minimum 40°F (4.4°C)
<b>Operating Pressure:</b>	Maximum 100 psi (7.0 kg/cm <sup>2</sup> )	Minimum 40 psi (2.80 kg/cm <sup>2</sup> )
<b>pH Parameters:</b>	Maximum 11	Minimum 2
<b>Iron:</b>	Maximum 0.2 ppm	
<b>TDS (Total Dissolved Solids)</b>	< 1800 ppm	
<b>Turbidity</b>	< 5 NTU	
<b>Hardness</b>	Maximum 10 Grains Per Gallon *	

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

\* 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 Tube:** Reverse Osmosis water should not be run through copper tube as the purity of the water will leach copper causing an objectional taste in water and pin holes may form in the tube.

## Contents of the Reverse Osmosis (RO) System

- 1 Module
- 4 Filters
- 1 Parts Bag
- 1 Manual



*If any of the items are missing please contact Premier prior to installing.*

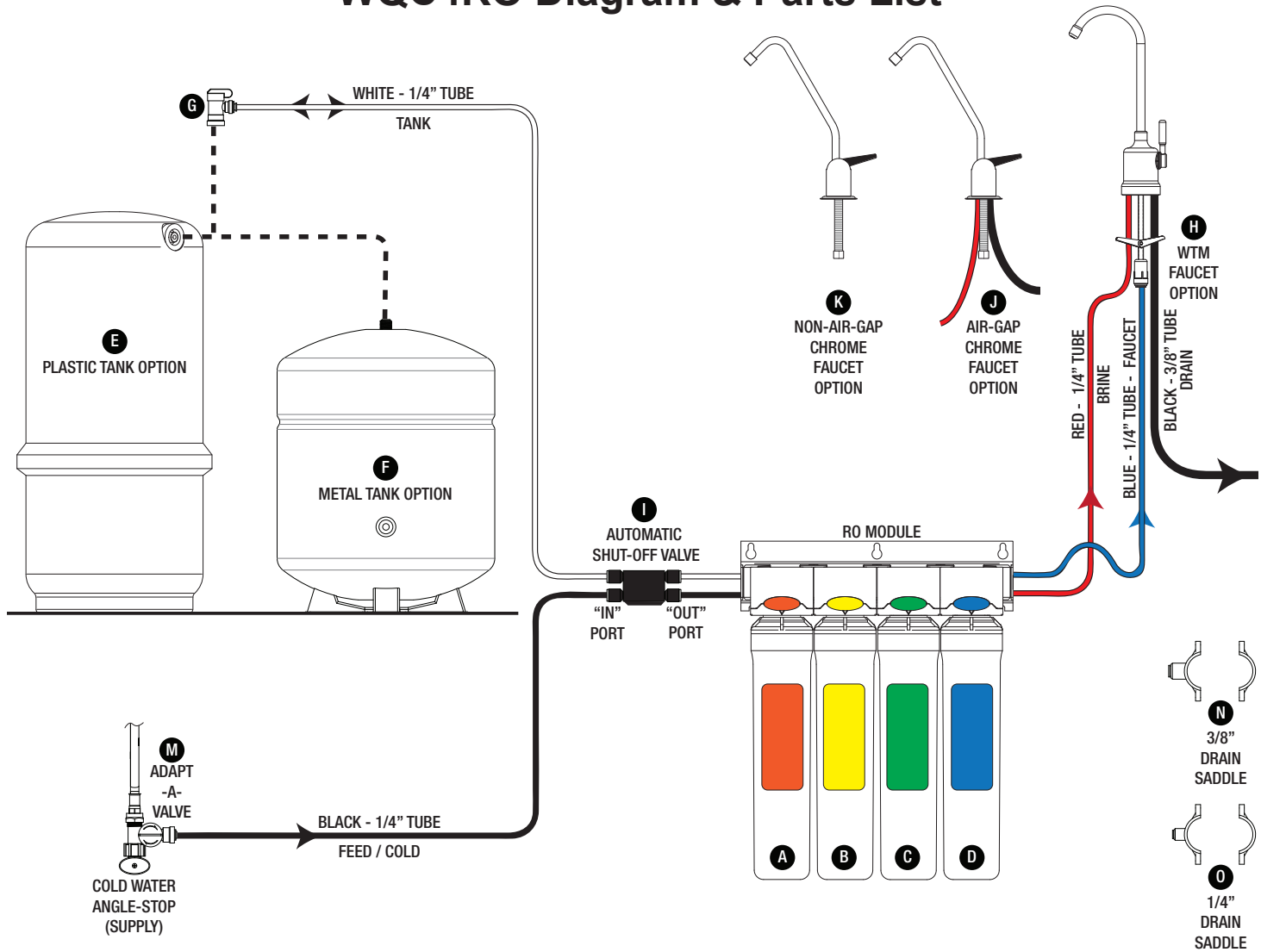
## INSTALLATION & STARTUP

### Tools Recommended For Installation

- √ 1 1/4" Diamond Tipped Hole Saw bit for faucet opening (Counter Tops/Porcelain & Stainless Sinks)
- √ 1 1/4" Adjustable Wrench
- √ 1/2" Open End Wrench
- √ 5/8" Open End Wrench
- √ Electric Drill
- √ 1/8" diamond tip bit, pilot hole
- √ 1/4" drain saddle hole
- √ Phillips bit for electric drill
- √ Needle Nose Pliers
- √ Adjustable Pliers
- √ Sharp Knife
- √ Phillips Screw Driver



# WQC4RO Diagram & Parts List



## Parts List\*

Item	Part#	Description
A	WQCSC11 / WQCSC13	SEDIMENT FILTER (11" OR 13")
B	WQCCC11 / WQCCC13	PRE-CARBON FILTER (11" OR 13")
C	WQCM11-50 / WQCM13-100	RO MEMBRANE FILTER (11"-50 GPD OR 13"-100 GPD)
D	WQCGAC11 / WQCGAC13	POST-CARBON FILTER (11" OR 13")
E	ROPRO4-W	PLASTIC TANK OPTION
F	FRO-132-W	METAL TANK OPTION
G	PPSV500822W	TANK VALVE
H	WTMFAG-C	AIR-GAP WTM CHROME FAUCET (OPTION)
I	F134003	AUTOMATIC SHUT OFF VALVE
J	FU-AGLR.C/3	AIR-GAP LONG-REACH CHROME FAUCET (OPTION)
K	FNP3033CP-US05	NON-AIR-GAP LONG-REACH CHROME FAUCET (OPTION)
L	F122051 @ 50GPD / F123001 @ 100 GPD	FLOW RESTRICTOR 500 ML / 1000ML (NOT SHOWN)
M	F560080	ADAPT-A-VALVE
N	SC500B38	3/8" DRAIN SADDLE
O	SC500B14	1/4" DRAIN SADDLE

\* PARTS LIST IS SUBJECT TO CHANGE

# Drill a Hole for the Reverse Osmosis Faucet

## Marble Counter-top

We recommend contacting a qualified contractor for drilling a hole in a marble counter-top.

## Counter Top / Porcelain & Stainless Steel Sink

**Note:** Most sinks are pre drilled with 1 1/4" diameter hole that you can use for your RO faucet. (If you are already using it for a sprayer or soap dispenser, see step 1)

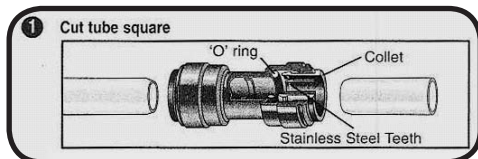
**Porcelain sinks are extremely hard and can crack or chip easily. Use extreme caution when drilling. Watts accepts no responsibility for damage resulting from the installation of faucet. Diamond tip bit recommended.**

- Step 1 Determine desired location for the RO 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 2 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 3 Using a 1 1/4" 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 4 After drilling, remove all sharp edges and make sure the surroundings of the sink are cooled before mounting the faucet.

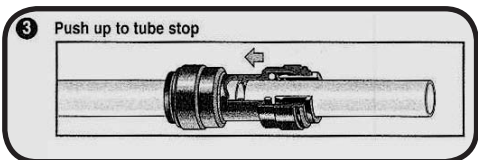


## How to use the Quick Connect Fittings

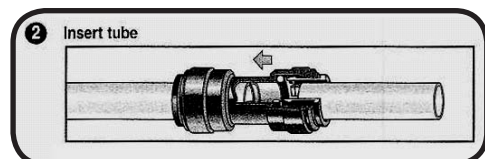
To make a connection, the tube is simply pushed into the fitting. The unique locking system holds the tube firmly in place without deforming it or restricting flow. Use the steps below in reference to any quick connect tube connections.



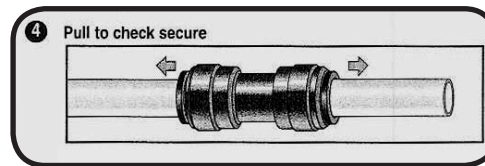
It is essential that the outside diameter be free of score marks and that burrs and sharp edges be removed before inserting into fitting.



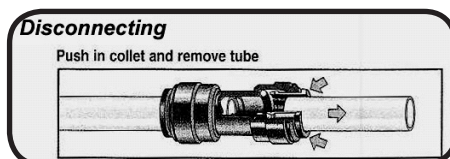
Push the tube into the fitting, to the tube stop. The collet (gripper) has stainless steel teeth which hold the tube firmly in position while the O-ring provides a permanent leak proof seal.



Fitting grips before it seals. Ensure tube is pushed into the tube stop.



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



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



# Mount the Reverse Osmosis Faucet

Refer to installation instructions found on faucet box.

If installing an Air-Gap faucet, connect tubes to the faucet prior to mounting:

1/4" Red Tube - Air Gap Feed

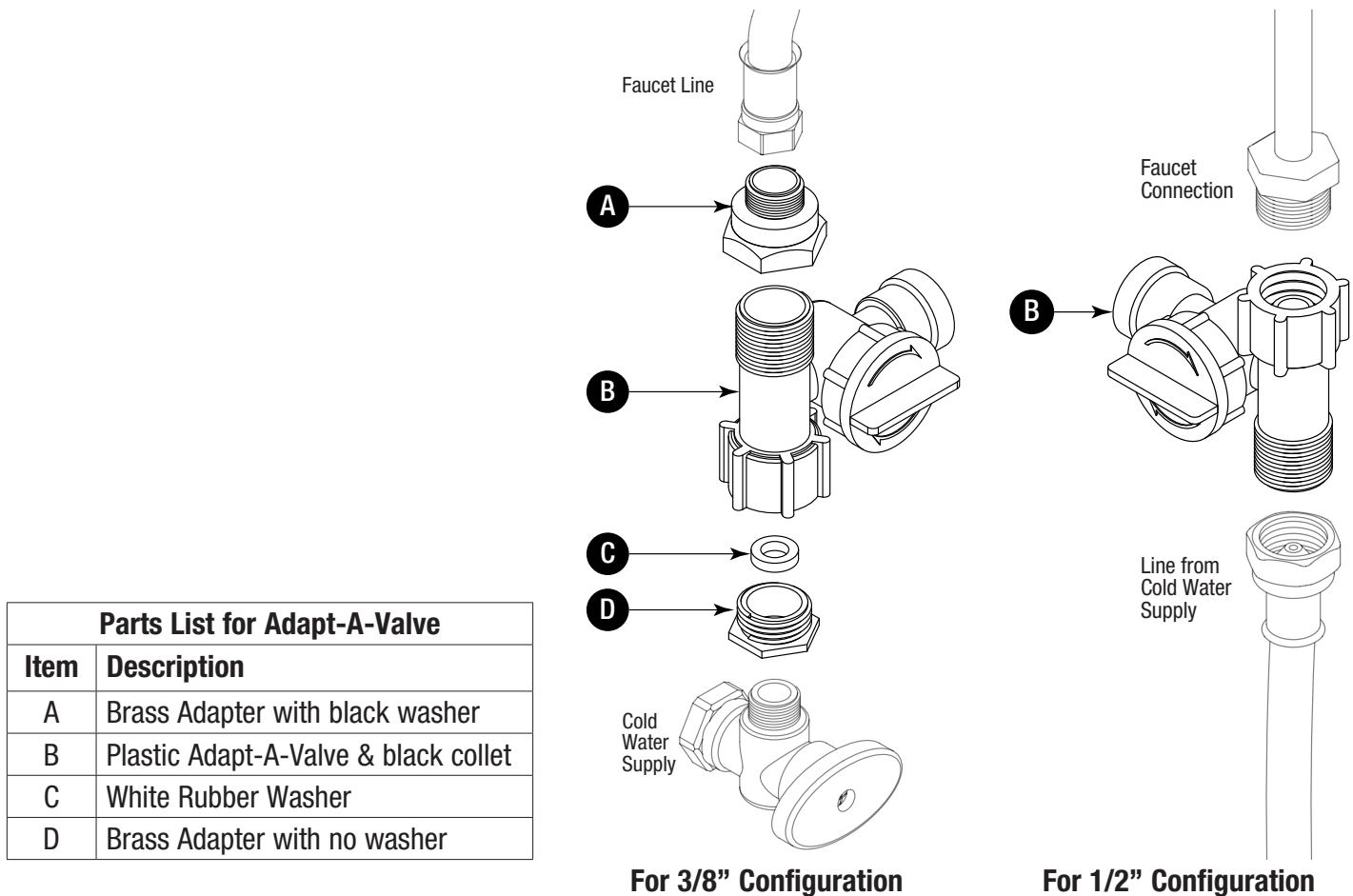
3/8" Black Tube - Air Gap Drain

1/4" Blue Tube - Drinking Water

(Use Provided Adapter if Drinking Water Connection is 3/8")

## Adapt-a-Valve Installation

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



**WARNING:** Do not use Teflon tape with the Adapt-a-Valve.

Step 5 Turn off the cold water supply to the faucet by turning the angle stop valve completely off. Open cold water sink faucet to relieve pressure.

Step 6 Choosing the configuration that fits your plumbing, attach the adapt-a-valve as illustrated in the four photos above.

**TIPS:** 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.  
Brass adapter (A) does not need to be tightened with a wrench, only finger tight.

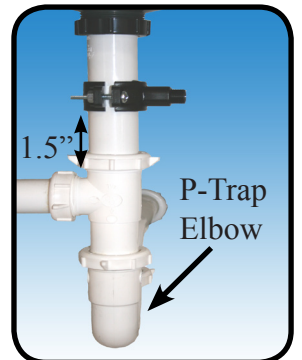
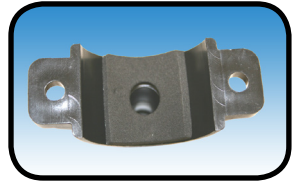
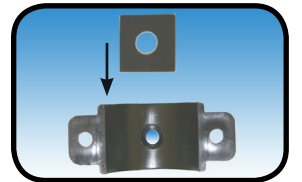
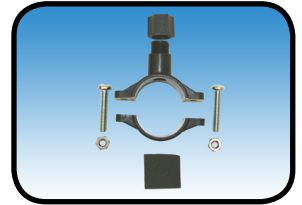
## Drain Saddle Installation - Fits standard 1 1/4" – 1 1/2" drain pipes

**Caution:** *If you have a garbage disposal, do not install the drain saddle near it. Installation of the drain saddle must be either above the garbage disposal, or if a second sink drain is available, install it above the cross bar on the second drain. Installation of the drain saddle near a garbage disposal may cause the drain line to plug.*

**Follow all local plumbing codes for your installation.**

- Step 7 Determine if a 1/4" tube connection or 3/8" tube connection drain saddle should be installed. For air-gap RO faucets (3 tubes) use larger 3/8" tube connection drain saddle. For non air-gap RO faucets (1 tube) use 1/4" tube connection drain saddle.
- Step 8 Locate the correct drain saddle kit in the parts bag.
- Step 9 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. (See Picture to Right)
- Step 10 The drain saddle must be installed at least 1 1/2" above the nut of the P-Trap elbow or cross bar from the garbage disposal to insure proper drainage. Using the 1/4" drill bit, drill into the drain pipe at best available location as specified above, for drain saddle installation. **Take extreme caution to only drill through one side of the drain pipe.**
- Step 11 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.

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

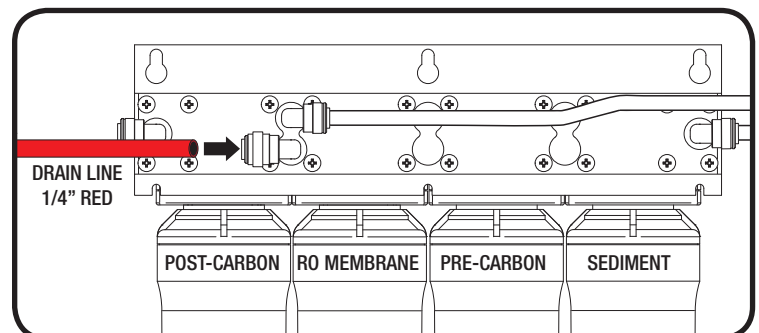


## Drain Saddle Tube Connection

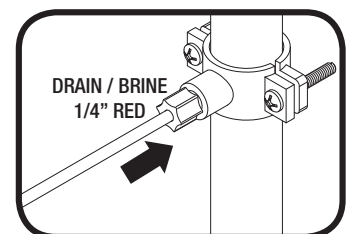
- Step 12 Choose your configuration below ( **A - 1/4"** or **B - 3/8"** ):

### ( A ) 1/4" Tube Fitting Drain Saddle

- Step 13A-1 In the parts bag, locate the 1/4" red tube. Connect the tube to the elbow fitting on the back of the RO Module - behind the RO Membrane. Make sure the tube is pushed in all the way to the tube stop.

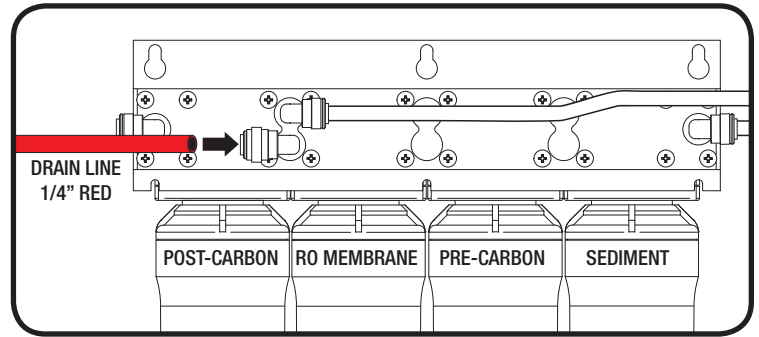


- Step 13A-2 Push the 1/4" red drain tube open end through the black compression nut included in the drain saddle kit. Insert the drain tube into the opening in the drain saddle, hand tighten the black nut and add 1/4 turn with a wrench. Continue to step 14 on the next page.



## ( B ) 3/8" Tube Fitting Drain Saddle

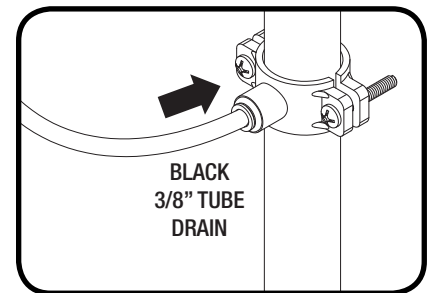
Step 13B-1 Locate the 1/4" red tube attached to the RO Faucet. Connect the tube to the elbow fitting on the back of the RO Module - behind the RO Membrane. Make sure the tube is pushed in all the way to the tube stop.



Step 13B-2

**NOTE:** *The 3/8" drain tube must be as SHORT and STRAIGHT as possible from the RO faucet to the drain saddle, making a downward slope from faucet to drain saddle to allow for proper drainage. 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.*

Locate the 3/8" drain tube attached to the RO faucet. Measure the 3/8" drain tube from the RO faucet to the drain saddle mounted on the drain pipe and make a straight cut to the correct length per note above. Insert the open end of the 3/8" black tube into the drain quick connect fitting on the drain saddle.



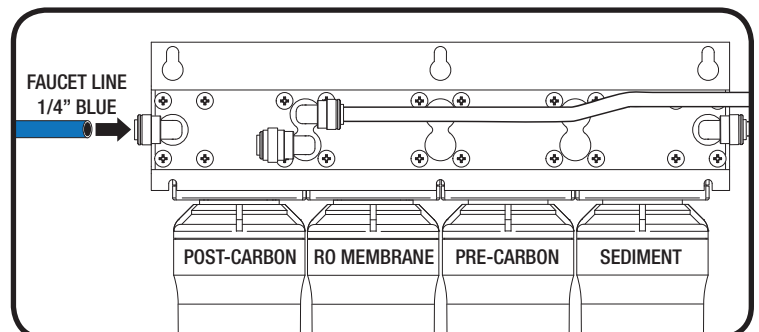
## Faucet Tube Connection - RO Water

Step 14 Choose your configuration below ( **A - Non Air-Gap Faucet** or **B - Air-Gap Faucet** ):

### ( A ) Non Air-Gap faucet - Single tube

Step 15A-1 In the parts bag locate blue 1/4" tube. Connect one open end of the tube to the RO faucet.

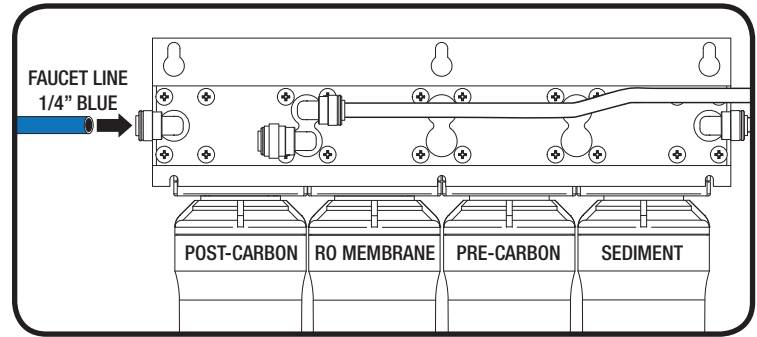
Step 15A-2 Connect the other open end of the blue 1/4" tube to the elbow fitting on the back of the RO Module behind the Post-Carbon Filter. Make sure the tube is pushed in all the way to the tube stop. Continue to step 16 on the next page.





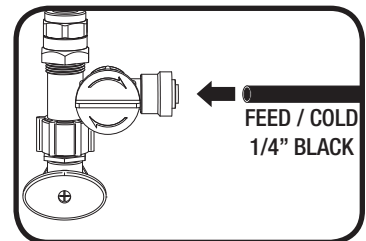
## ( B ) Air-Gap faucet - Three tubes

- Step 15B Locate the blue 1/4" tube attached to the RO faucet. Connect the open end of tube to the elbow fitting on the back of the RO Module labeled "FAUCET" making sure the tube is pushed in all the way to the tube stop.



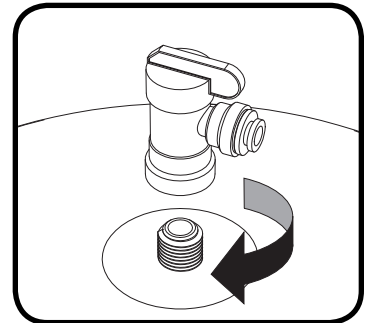
## Black 1/4" Tube Connection - Inlet Water

- Step 16 Locate the 1/4" black tube connected to the module labeled "Cold" and insert into the plastic adapt-a-valve. Make sure the tube is pushed in all the way to the tube stop.



## Tank Valve Installation - Metal Tank

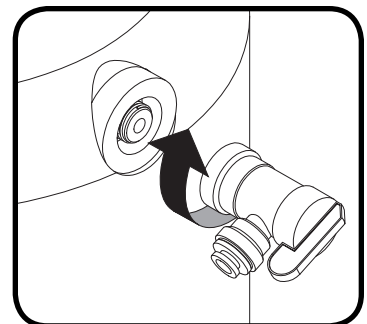
- Step 17 Teflon tape must be applied in a clockwise direction. Wrap 5 to 7 turns around the male pipe threads (MPT) on the Stainless Steel fitting on top of the tank.
- Step 18 Thread the plastic valve onto the tank fitting. **Do not over tighten or the valve could crack.**



## Tank Valve Installation - Plastic Tank

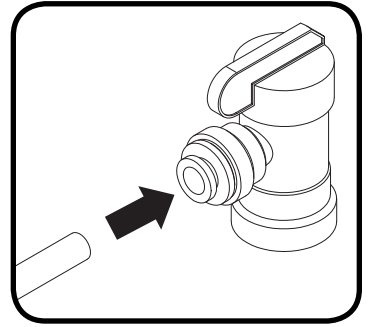
- Step 19 Make sure the O-ring is located at the bottom of the recess for the tank connection.
- Step 20 Thread the plastic valve onto the tank fitting. **Do not over tighten or the valve could crack.**

**Note:** *DO NOT use Teflon tape on plastic tank.*



## White Tube Connection - RO Module to Storage Tank

- Step 21 Locate the 1/4" white tube from the RO module labeled "Tank" and plug into the valve at the water storage tank



- Step 22 Connect the open end of the white 3/8" tube into the 3/8" quick connect fitting on the tank ball valve making sure the tube is pushed in all the way to the tube stop.

## Reverse Osmosis Module Mounting

- Step 23 Determine best location for the RO module to be mounted to allow for future system maintenance. The parts bag has 2 self tapping screws. Using an electric drill with a Phillips bit, screw them into the cabinet wall 10-5/8" apart and 16" from the bottom of the cabinet.



## Install the Cartridges

- Step 24 Identify each cartridge and the proper location on the system by matching the colors and description.
- Step 25 Insert each cartridge with a 1/4 turn in the clock wise direction. The cartridge is installed properly when the label is facing toward the front of the unit.



**Note:** The cartridge head swivel up and down for easy access.

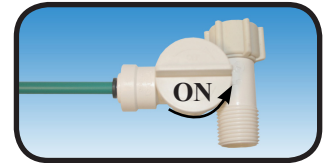
# ***Congratulations!***

**You have completed the installation of new your Reverse Osmosis system.**

**Please Follow the Startup Instructions.**

## **Start up Instructions**

- Step 1 Turn on the incoming cold water at the angle stop valve and the Adapt-a-Valve. Check the system for leaks and tighten any fittings as necessary. (Check frequently over the next 24 hours to ensure no leaks are present).



**Note:** *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 flushing (Step 4) is complete and the tank has been allowed to fill completely. Connection from the RO to the ice maker system should have an in-line valve installed before the ice maker so it can easily be closed to prevent water flowing to the ice maker during start up and periodic maintenance. Your storage tank must be allowed to fill up fully in order for the ice maker system to work properly.*

- Step 2 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 3 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 4 After the storage tank has filled (the water trickling has stopped), 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.

***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.*

# MAINTENANCE & TROUBLESHOOTING

## Changing The Filter Cartridges

Your RO module is equipped with valved heads which will automatically turn off the water supply to each filter when the filter is released, thus you do not need to turn off the incoming water supply at the Adapt-a-Valve. The RO faucet must be off when filters are replaced. To make the removal of the filter cartridges easier, the heads & cartridges may be swiveled up to 90 degrees as shown in the pictures below.

## 6 Month System Maintenance

**Replace:**     √ One sediment filter           (P/N: WQCSC11 / WQCSC13)  
                  √ One carbon pre-filter       (P/N: WQCCC11 / WQCCC13)

## Annual Maintenance -(Sanitization Recommended See Page 14)

**Replace:**     √ One sediment filter           (P/N: WQCSC11 / WQCSC13)  
                  √ One carbon pre-filter       (P/N: WQCCC11 / WQCCC13)  
                  √ One carbon post-filter     (P/N: WQCGAC11 / WQCGAC13)

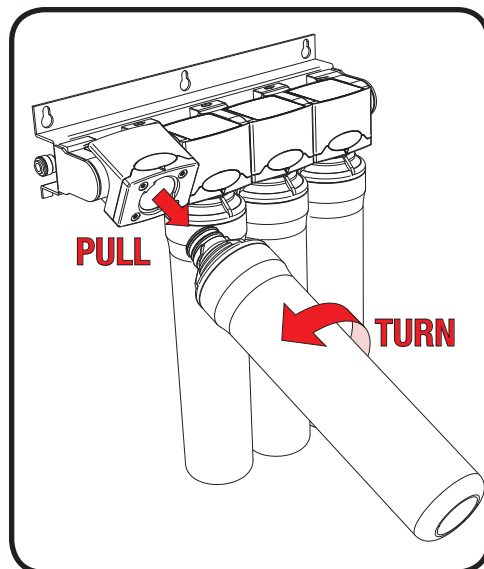
**Tip:**       *This is a good time to check the air pressure in your storage tank. For instructions please see page 14.*

**Note:**       *Flush first tank full after completing the annual*

**Step 1**     Place a towel under the RO module to catch any excess water that may drip out from the filters during the changeover.

**Step 2**     **To remove a filter cartridge:** Grasp the cartridge and pull it towards you. Rotate the cartridge 1/4 turn counter clockwise to remove.

**Step 3**     **To install a filter cartridge:** Remove the seal cap and insert the cartridge into the valved head with the label facing to the left (9 o'clock position) rotating it clockwise 1/4 turn.



*This reverse osmosis system contains a replaceable component (the RO membrane) which is critical to the efficiency of the system. Replacement of this reverse osmosis membrane should be with one of identical specifications as defined by Watts Premier to assure the same efficiency and contaminant reduction performance.*

## Membrane Replacement (2 - 5 Years)

**Replace:**     √ One Membrane           (P/N: WQCM11-50 / WQCM13-100)

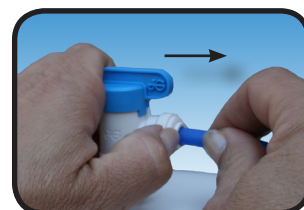
Membranes have a life expectancy between 2 and 5 years, depending on the incoming water conditions and the amount the RO system is used. This reverse osmosis membrane is critical for effective reduction of total dissolved solids (TDS). The product water should be tested periodically to verify that the 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. Watts Premier recommends replacing the membrane when TDS reduction falls below 75%.

# Annual Sanitization

**Note:** *Sanitization procedure must be performed before a filter change.*

- Step 1 Turn off the water supply to your RO system at the adapt-a-valve and open the RO faucet to drain the storage tank.
- Step 2 Disconnect the white tube from the ball valve on the storage tank (see page 6 for quick connect fitting use instructions).
- Step 3 Using a clean eye dropper insert ½ teaspoon of hydrogen peroxide or common household bleach into the white tube. This will flow into the tank once water is turned back on to unit. Reattach white tube to the ball valve. Follow start up procedure and drain two full tanks of water. Replace Post Carbon Filter



## Check Air Pressure in the Tank

**Important:** *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 1 Turn off the incoming water supply to the RO.
- Step 2 Open the RO Faucet and allow water to drain from the tank until it is completely empty.



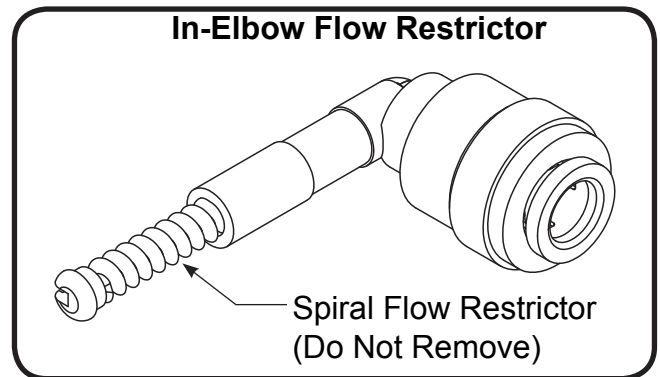
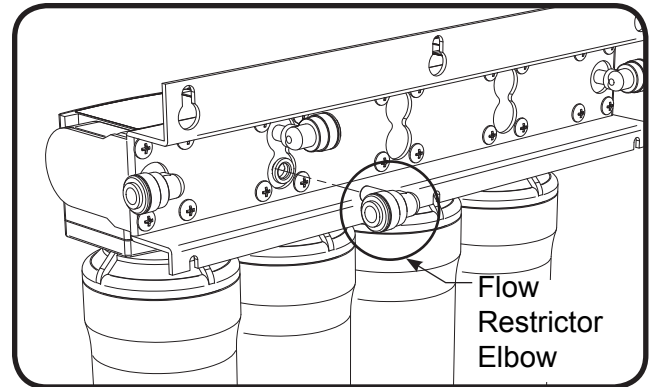
**Tip:** *When water from the RO faucet slows to a trickle, with the faucet still in the open position, you may add air to the tank to purge any left over water, this will ensure that the tank is completely empty.*

- Step 3 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 4 Follow startup procedure on page 12.



# Flow Restrictor

NOTE: Your reverse osmosis system is equipped with a Spiral flow restrictor. This flow restrictor is pre-installed inside of the drain connection elbow, it is maintenance free and does not need to be replaced when the RO membrane is changed.



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

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.

### ***To Restart System:***

- Step 1 Reinstall all filters on to the RO unit. Filters are color coded to match the filter heads they twist in to. Refer to page 13 step three for cartridge installation procedure.
- Step 2 Turn on water supply to the system at the Adapt-a-Valve.  
(Check frequently over the next 24 hours to ensure no leaks are present).
- Note:** ***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.***
- Step 4 Open the RO faucet and leave it open until water begins to trickle out (it will come out slowly).
- Step 5 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.
- Step 6 After the Tank has filled, 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. The second tank can be used for drinking.

# TROUBLE SHOOTING

Problem	Cause	Solution
1. Low/Slow Production	<p>Low Water Pressure</p> <p>Crimps in tubing Clogged pre-filters Fouled membrane</p>	<p>Assure a minimum of 40 psi incoming water pressure. Premier sells a booster pump if home water pressure is low. Make sure water supply is turned on and feed water valve is all the way open.</p> <p>Check tubing and straighten or replace as necessary. Replace pre-filters. Replace membrane.</p>
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	<p>Low water pressure</p> <p>Crimp in supply tube High water pressure</p> <p>High pressure in Tank</p> <p>Low Pressure in Tank</p>	<p>See #1 Above</p> <p>Check tubing and straighten or repair as necessary. Check incoming water pressure to make sure it does not exceed 80 psi. A pressure relief valve may be necessary.</p> <p>Empty storage tank of water. Set tank air pressure between 5-7 psi. See previous page.</p> <p>Use a Digital Air Gauge for best results. The empty tank pressure should be 5-7 psi. See page 14.</p>
4. Noise / Water from faucet vent hole or noise from drain.	<p>Crimp or restriction in drain line</p> <p>Drain tube clogged</p>	<p>Check tubing and straighten or repair as necessary. Straighten all drain lines. Clear blockage. Cut off any Excess tubing</p> <p>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.</p>
5. Small amount of water in storage tank	<p>System starting up</p> <p>Low water pressure Too much air in tank</p>	<p>Normally it takes 4-6 hours to fill tank. Note: low incoming water pressure and/or temperature can drastically reduce production rate.</p> <p>See #1 above.</p> <p>Tank air pressure should be 5-7 psi when empty of water. If below 5 psi add air or bleed if above 7 psi. Check only when tank is empty of water. See previous page.</p>
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 5-7 psi. See page 14.

# TECHNICAL & WARRANTY INFORMATION

## Watts Water Quality & Conditioning Products

13700 Highway 90 West

San Antonio, Texas 78245 USA

WQC4 RO

System conforms to NSF Standard 58 for specific claims.

### 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. DO NOT use with water that is microbiologically unsafe or unknown quality without adequate disinfection before and after the system. Systems certified for cyst reduction may be used on disinfected water that may contain filterable cysts.
2. This system is acceptable for treatment of influent concentrations of no more than 27 mg/L nitrate and 3 mg/L nitrite in combination measured as N and is certified for nitrite/nitrate reduction only for water supplies with a pressure of 280 kPa (40 psig) or greater. If your water supply is under 40 psi Watts Premier recommends the use of a RO booster pump for proper operation.
3. Operating Temperature: Maximum: 100°F (40.5°C) Minimum: 40° (4.4°)
4. Operating Water Pressure: Maximum: 100 psi (7.0kg/cm2) Minimum: 40 psi (2.8kg/cm2)
5. pH 2 to 11
6. No iron present in incoming feed water supply.
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 frame may vary.

Description	Change time Frame
Sediment Pre-filter:	6 Months
Carbon Pre-filter:	6 Months
Final Carbon filter	12 Months
R.O. Membrane:	2 to 5 years



This system has been tested according to NSF/ANSI 58 for reduction of the substances listed below. 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 of the Performance Data Sheet for further information.

	Avg. In. (mg/L)	Avg. Eff. (mg/L)	% Reduction	pH	Pressure	Max Eff. mg/L	Inf. challenge concentration mg/L	Max Allowable concentration mg/L
Arsenic (Pentavalent)	.310	0.001	99.6%	7.24	50psi	0.002	0.30±10%	0.010 mg/L
Barium Reduction	9.2	0.08	99.0%	7.64	50psi	0.12	10.0±10%	2.0
Cadmium Reduction	0.031	0.0004	98.0%	7.49	50psi	0.0008	0.03±10%	0.005
Chromium (Hexavalent)	0.30	0.002	99.0%	7.24	50psi	0.004	0.03±10%	0.1
Chromium (Trivalent)	0.30	0.001	99.0%	7.64	50psi	0.002	0.03±10%	0.1
Copper Reduction	3.2	0.02	99.0%	7.40	50psi	0.04	3.0±10%	1.3
Cysts	92,000#/ml	3 #/ml	99.99%	7.44	50psi	18	minimum 50,000/mL	N/A
Fluoride Reduction	8.7	0.19	97.0%	7.24	50psi	0.3	8.0±10%	1.5
Lead Reduction	0.15	0.002	98.8%	7.39	50psi	0.005	0.15±10%	0.0107
Nitrate	27	3.8	86.0%	7.24	50psi	4.3	27.0 ±10%	10.0
Nitrite	3.1	0.41	86.0%	7.24	50psi	0.46	3.0 ±10%	1.0
Nitrate + Nitrite	30	4.2	86.0%	7.24	50psi	4.8	30.0 ±10%	10.0
Perchlorate	0.14	0.003	97.0%	7.39	50psi	0.005 mg/L	0.10±10%	0.006
Radium 226/228	25pCi/L	5pCi/L	80.0%	7.24	50psi	5pCi/L	25pCiL±10%	5pCiL
Selenium	94.85	<0.2	97.0%	7.24	50psi	<0.2	0.10±10%	0.05
TDS	741	22	97.0%	7.28	50psi	26.0	750±40mg/L	187
Turbidity	11.3	0.1	99.0%	7.43	50psi	0-1	11±1mg/L	0.5NTU

Recovery - 15.77%

Daily Production Rate - 18.43 GPD

Efficiency - 8.82%

Depending on water chemistry, water temperature, and water pressure Watts Water Quality R.O. Systems production and performance will vary. 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.

## Arsenic Fact Sheet

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 Watts Water Quality 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 Watts Water Quality has conducted additional field testing on our reverse osmosis units to determine trivalent arsenic reduction capabilities. Based upon Watts Water Quality field testing, it has been determined that the RO units are capable of reducing up to 67% of trivalent arsenic from the drinking water.

The RO membrane component of this Watts Water Quality reverse osmosis system must be maintained according to its recommended maintenance cycle. Specific component identification and ordering information can be found in the installation/operation manual maintenance section, by phone at 1-800-659-8400 or online [www.watts.com](http://www.watts.com)

California Proposition 65 Warning

WARNING: this product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. (Installer: California law requires that this warning be given to the consumer). For more information: [www.wattsind.com/prop65](http://www.wattsind.com/prop65).

Service Record

Serial No. \_\_\_\_\_

Date of Purchase: \_\_\_\_\_ Date of Install: \_\_\_\_\_ Installed by: \_\_\_\_\_

Date	1st stage Sediment (6 months)	2nd stage Carbon (6 months)	4th stage Carbon (1 year)	3rd stage Membrane (2-5 years)	

NOTES:



## Limited Warranty

This Drinking Water Filter Unit is warranted against defects in material and workmanship for a period of one year from the date of installation, not to exceed 2 years from the date of manufacture. Expendable items such as filter cartridges and membranes are not covered by this warranty.

How to obtain Warranty Service: Contact the dealer that you purchased the system from. Watts will work in conjunction with our dealer to repair or replace at our discretion any unit that is determined to be defective. No returns will be accepted without the proper return authorization number.

What this warranty does not cover: This warranty does not cover defects resulting from improper installation, from abuse, misuse, misapplication, improper maintenance, neglect, alteration, accidents, casualties, fire, flood, freezing, environmental factors, water pressure spikes or other such acts of God.

Return shipping charges are not included in this warranty and are the responsibility of the end user.

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

1. The Drinking Water Filter Unit 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 2 or higher than 11
5. The incoming water pressure must be between 40 and 100 pounds per square inch.
6. Incoming water to the filter system cannot exceed 100 degrees F (38 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 equipment that is installed or used outside the United States of America and Canada.

### LIMITATIONS AND EXCLUSIONS:

WATTS WILL NOT BE RESPONSIBLE FOR ANY IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. WATTS WILL NOT BE RESPONSIBLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING WATER DAMAGE, TRAVEL EXPENSE, TELEPHONE CHARGES, LOSS OF REVENUE, 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 RESPONSIBILITIES REGARDING THIS EQUIPMENT.

### OTHER CONDITIONS:

If Watts chooses to replace the equipment, it may be replaced 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.

**WARNING:** This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.  
**For more information:** [www.watts.com/prop65](http://www.watts.com/prop65)

**LIMITED WARRANTY:** Certain Watts products come with a limited warranty from Watts Regulator Co. Other products may have no warranty or are covered by the original manufacturer's warranty only. For specific product warranty information, please visit [www.watts.com](http://www.watts.com) or the published literature that comes with your product. Any remedies stated in such warranties are exclusive and are the only remedies for breach of warranty. **EXCEPT FOR THE APPLICABLE PRODUCT WARRANTY, IF ANY, WATTS MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED. TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, 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, AND IN NO EVENT SHALL WATTS BE LIABLE, IN CONTRACT, TORT, STRICT LIABILITY OR UNDER ANY OTHER LEGAL THEORY, FOR INCIDENTAL, INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES, INCLUDING, WITHOUT LIMITATION, LOST PROFITS OR PROPERTY DAMAGE, REGARDLESS OF WHETHER IT WAS INFORMED ABOUT THE POSSIBILITY OF SUCH DAMAGES.**



A Watts Water Technologies Company

**USA:** Tel: (800) 659-8400 • Fax: (800) 659-8402 • [Watts.com](http://Watts.com)

**Canada:** Tel: (905) 332-4090 • Fax: (905) 332-7068 • [Watts.ca](http://Watts.ca)

**Latin America:** Tel: (52) 81-1001-8600 • Fax: (52) 81-8000-7091 • [Watts.com](http://Watts.com)