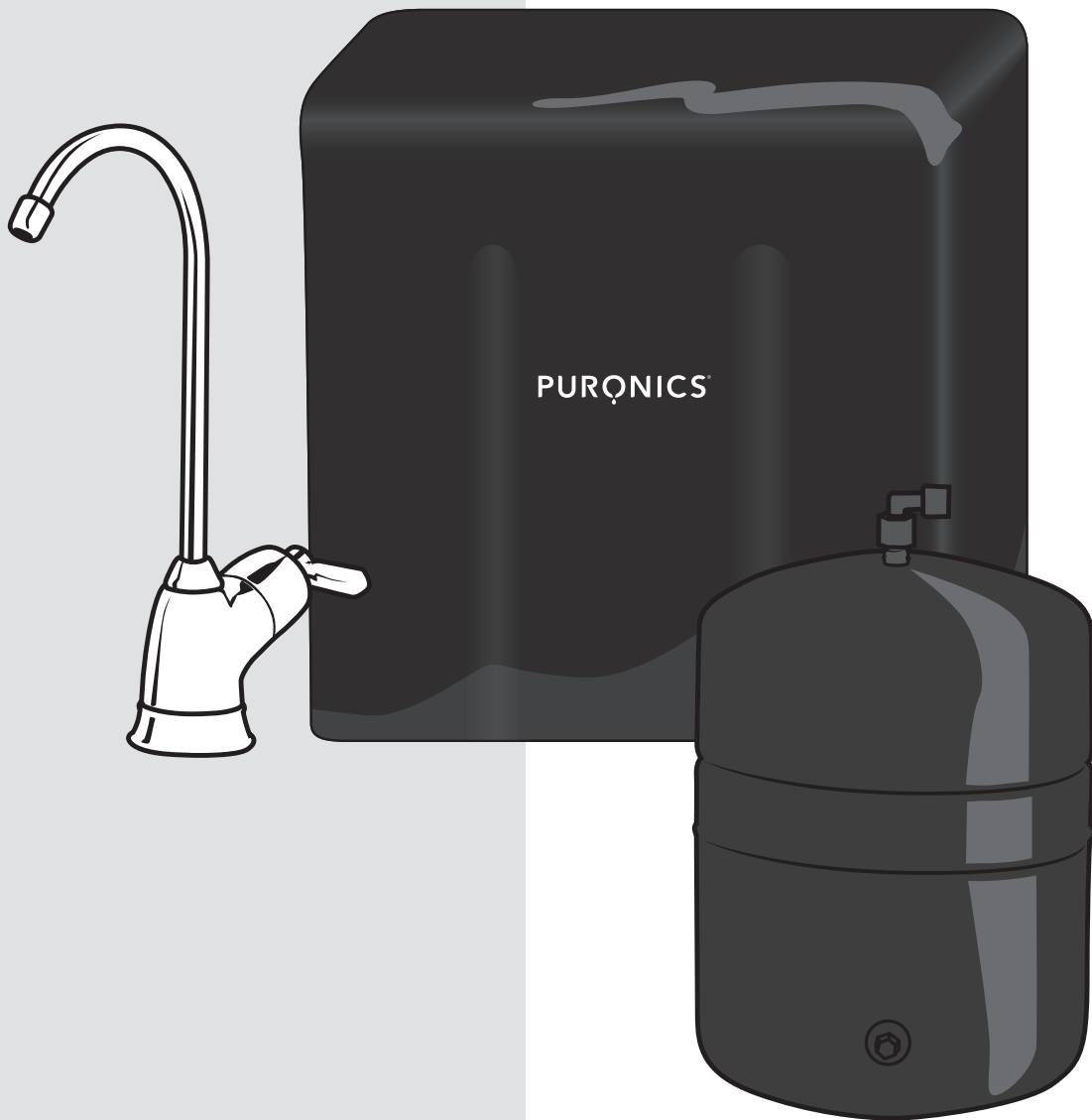


PURONICS® Micromax™ 7000

The Next Generation of Ionics® Solutions

Homeowner's Manual Purronics Reverse Osmosis System



Purronics Water Systems, Inc.

5775 Las Positas Rd., Livermore, California 94551-7819 USA
(800) 339-8780
www.purronics.com

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System Tested and Certified by the Water Quality Association (WQA) against NSF/ANSI Standard 58 for the reduction of Cysts, Lead, Pentavalent Arsenic, Cadmium, Hexavalent Chromium, Trivalent Chromium, Selenium, Nitrites/Nitrates and Total Dissolved Solids (TDS) and against NSF/ANSI Standard 42 for the aesthetic reduction of Chlorine Taste and Odor Particulates.

IMPORTANT

This booklet contains your Owner Limited Warranty Card. Make sure this Warranty Card is filled out by your Dealer and returned to Puronics Water Systems, Inc. within 30 days of installation to assure proper warranty registration.

Questions about your warranty registration may be answered by writing to:

**Warranty Registration Dept.
c/o Puronics Water Systems, Inc.
5775 Las Positas Road
Livermore, CA 94551**

You can also register your warranty online at www.puronics.com.

Your Puronics® Dealer is . . .

Congratulations

Purronics® welcomes you to a new, carefree way of life with filtered water. You can take pride and satisfaction knowing that you own the very best.

We are proud you have selected the Purronics® RO System for your home. Your sound judgment is supported by the wide acceptance received for these systems throughout the world. More and more quality conscious homeowners are purchasing Purronics® RO equipment because of its' superior performance and premium quality workmanship.

The following pages of this booklet will introduce you to your new Purronics® RO System by explaining operation, care and maintenance.

At Purronics®, we not only care for your water . . . we care for your family.

Purronics® Water Systems, Inc.

NOTICES & SAFETY INFORMATION

- These filters are not water purifiers. Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system. Systems certified for Cyst reduction may be used on disinfected waters that may contain filterable Cysts.
- This unit is not designed to filter sulfur (rotten egg odor). Use of carbon filters to treat sulfur may intensify taste/odor problems.
- Please comply with all state and local regulations regarding the installation of water treatment devices.
- The contaminants or other substances reduced by the water filter device are not necessarily in your water.
- Do not install this system in direct sunlight or in an area where it may be exposed to harsh chemicals or may be subjected to being dropped, knocked over, and struck by moving equipment or any other items that may cause damage.
- Do not install this system near any source of heat. Excessive heat can cause housing failure and water damage to surrounding area.
- Do not install this system on the "HOT" water line. Limit incoming water temperature to 37.8°C (100°F). Failure to limit incoming water temperature may result in housing failure and filter damage.
- This system must be protected against freezing, which can cause cracking of the filter and water damage to surrounding area.
- Pre and Post filters must be replaced annually. Membrane filters must be replaced at least every 5 years. Failure to replace these filters as recommended may result in housing failure and water damage to surrounding area.
- This system has a maximum pressure rating of 100 psi, if at any time your pressure may exceed 100 psi a pressure regulator must be installed before the filter, if any time. It is recommended that the pressure regulator be set at 75 psi (517 kPa) or less. This will guard against the pressure exceeding the maximum rating at any time and damage to the system, which may result in housing failure and water damage to surrounding area.

Puronics Water Systems, Inc.

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Livermore, CA 94551
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Performance Data Sheet

Puronic® Reverse Osmosis Water Filtration System
Model: Micromax™ 7000
with Filter Cartridge W-PN-1001 and Membrane Cartridge W-PN-1002

This filtration system has been tested and certified according to NSF/ANSI Standard 42 & 58 by WQA for the reduction of substances listed below, as verified and substantiated by test data. The concentration of the indicated substances in the water entering the system was reduced to a concentration less than or equal to the permissible limit for leaving the system, as specified in NSF/ANSI Standards 42 & 58. Please see warranty insert for manufacturer's limited warranty. Please see installation instructions for internal operation and maintenance requirements.

Efficiency Rate: 19.0%⁴ Recovery Rate: 30.6%⁵ Daily Production Rate: 35 Gallons per Day
 Operating Temperature: Min 40°F / 4°C - Max 100°F / 38°C Operating Pressure: 40-100 psi (276-690 kPa)
 Laboratory Test Conditions: pH: 6.5 – 8.5 Water Temperature: 72°F / 23°C - 75°F / 24°C

Actual performance may vary with local water conditions.

Do not use with water that is microbiologically unsafe or of unknown water quality without adequate disinfection before or after the system. Systems certified for cyst reduction may be used on disinfected waters that may contain filterable cysts.

NSF/ANSI Standard 42 Aesthetic Effects

Substance	Influent Challenge Concentration (mg./liter unless specified)	US EPA Maximum Permissible Water Concentration/ % Reduction	Actual Minimum Percent Reduction	Actual Average Percent Reduction
Taste & Odor, Aesthetic Chlorine	2 mg	1 mg 50%	94.8%	97.4%
Particulate Class III (5 um to < 15 um)	> 10,000 particles per ml	1,500 particles per ml 85%	98.0%	99.7%

NSF/ANSI Standard 58 Health Effects

Arsenic (Pentavalent) ¹	0.05 +/- 10%	0.01 mg	80.0%	89.7%	95.4%
Cadmium	0.03 +/- 10%	0.0005 mg	83.3%	96.1%	99.1%
Chromium (Trivalent)	0.30 +/- 10%	0.05 mg		99.8%	99.9%
Chromium (Hexavalent)	0.30 +/- 10%	0.05 mg	83.3%	81.0%	98.9%
Lead	0.15 +/- 10%	0.010 mg	93.3%	98.7%	99.6%
Nitrate plus Nitrite ²	30.0 +/- 10%	10.0 mg	63.3%	63.3%	63.3%
Selenium	0.10 +/- 10%	0.05 mg		99.0%	99.0%
Total Dissolved Solids	750 +/- 40	187	75.0%	96.6%	97.5%
Reduction Requirements:					
Cysts	Minimum 50,000	2,500 oocysts/liter	99.95%	99.95%	99.95%

¹ 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 0.050 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 chloramines (combined chlorine) is not sufficient to ensure complete conversion of trivalent arsenic to pentavalent arsenic. Please see Arsenic Fact Sheet for further information.

² This system is acceptable for treatment of influent concentrations of no more than 27 mg/ nitrate and 3 mg/L nitrite in combination measured as N and is certified for nitrate/nitrite reduction only for water supplies with a pressure of 280 kPa (40 psig) or greater.

³ Units are not certified on water supplies with pressure less than 40 psi (280kPa). A booster pump is strongly recommended.

⁴ 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.

⁵ Recovery rate 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.

Arsenic Fact Sheet

Arsenic (As) is a naturally occurring contaminant found in many ground waters. It generally occurs in two forms (valences or oxidations states): pentavalent arsenic (also known as As(V), As(+5), or arsenate) and trivalent arsenic (also known as As(III), As (+3), or arsenite.) In natural ground water, arsenic may exist as trivalent arsenic, pentavalent arsenic, or a combination of both. Although both forms of arsenic are potentially harmful to human health, trivalent arsenic is considered more harmful than pentavalent arsenic. More information about arsenic and its toxicity can be found on the U.S. Environmental Protection Agency website at <http://www.epa.gov/safewater/arsenic.html>.

Trivalent arsenic is generally more difficult to remove from drinking water than pentavalent arsenic. Trivalent arsenic can be converted to pentavalent arsenic in the presence of an effective oxidant such as free chlorine.

The arsenic in water containing detectable free chlorine or that has been treated with another effective oxidant will be in the pentavalent arsenic form. Treatment with chloramine (combined chlorine) is not sufficient to ensure complete conversion of trivalent arsenic to pentavalent arsenic.

Consumers using public water supplies can contact their utility to verify whether free chlorine treatment chemicals are being used. Private water supplies and waters that do not have detectable free chlorine residuals should be analyzed to determine the form(s) of arsenic present and the potential need for oxidation of trivalent arsenic to pentavalent arsenic.

Arsenic does not generally impart color, taste, or smell to water, therefore, it can only be detected by a chemical analytical test. Public water supplies are required to monitor treated water for total arsenic (trivalent arsenic plus pentavalent arsenic) and the results are available to the public from the utility. Consumers using private water sources will need to make arrangements for testing. A total arsenic test usually costs about \$15-\$30 and it is recommended a certified laboratory conduct test. Local health departments or environmental protection agencies can help provide consumers with a list of certified laboratories. Some laboratories may also be able to analyze specifically for (speciate) the forms of arsenic present in a water sample if requested and ordering information.

Water treatment systems are tested under laboratory conditions and found to reduce either 0.30 mg/L or 0.050 mg/L (refer to the product listing for influent tested levels) in the test water to less than 0/0.010 mg/L, under standard testing conditions. Actual performance of the system may vary depending on specific water quality conditions at the consumer's installation. Following installation of this system, the consumer should have the treated water tested for total arsenic to verify arsenic reduction is being achieved and the system is functioning properly.

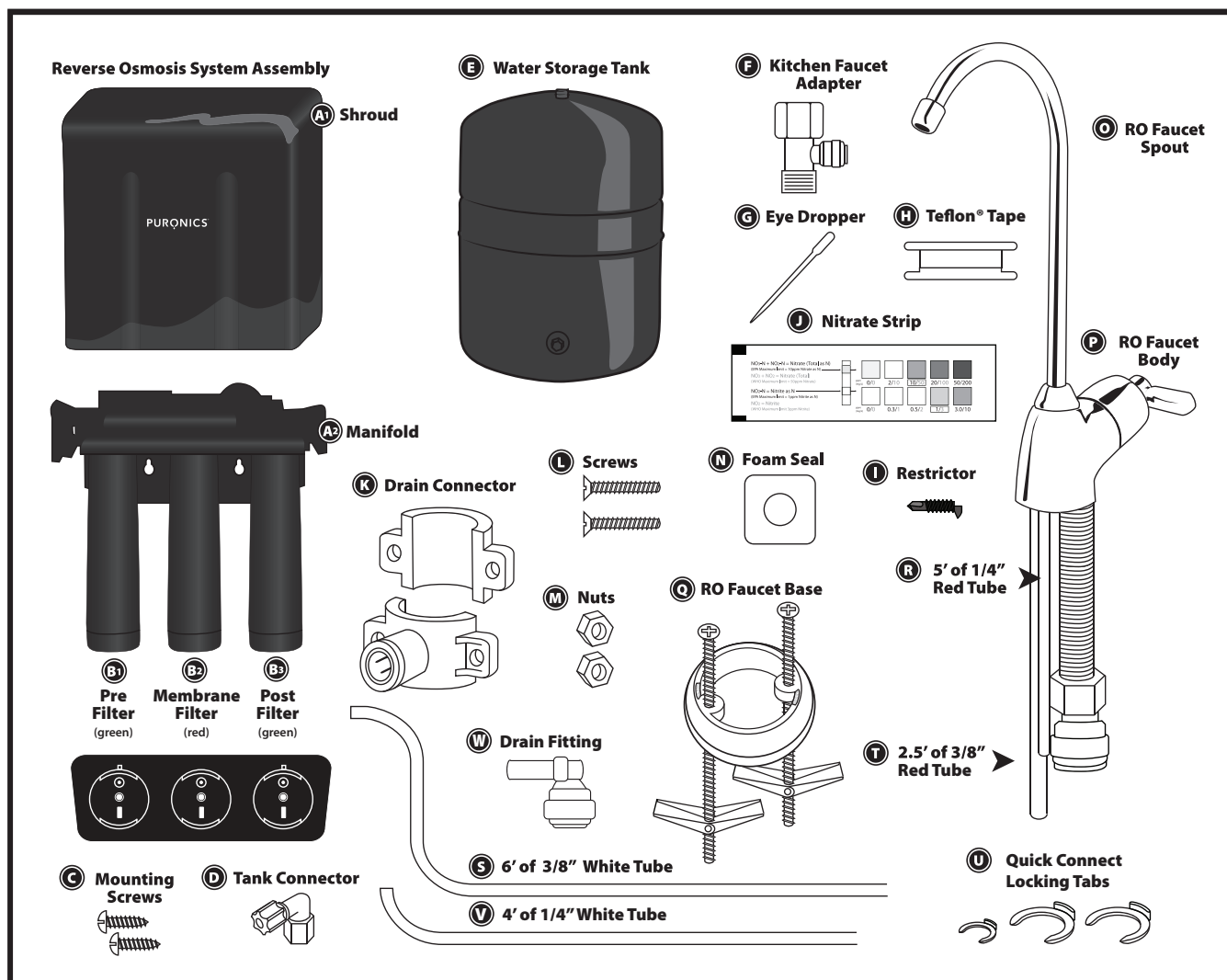
The pentavalent arsenic removal component of this system must be replaced at the end of its' useful life. Replacement component(s) can be purchased from the original source of this system (retailer or distributor), from other sources of this treatment system, or directly from the manufacturer. Refer to the installation and operation manual of you water treatment device to obtain replacement frequency and ordering information.

RO System

REQUIRED TOOLS & MATERIALS

- Tape Measure
- Phillips Head Screwdriver
- Adjustable Wrench
- File
- Pencil
- Pan or Bucket
- Utility Knife
- 1/8" and 7/32" Drill Bits
- Center Punch
- Safety Glasses
- Masking Tape
- Compression Cap (Optional – for Kitchen Spray Hose Connector)

PACKAGE CONTENTS



PLAN FOR INSTALLATION

Prior to installation, we recommend you read the entire manual. This will not only familiarize you with the system, but it will help you determine the best location for installation whether under a sink or in a remote location. Helpful diagrams are on both pages 3 and 4.

PREPARE SITE FOR INSTALLATION

- 1 Prior to starting, close the cold water shut-off valve.
- 2 Temporarily place tank and filter assembly into cabinet to ensure adequate space and proper positioning.
- 3 Remove tank and filter from cabinet and set aside.

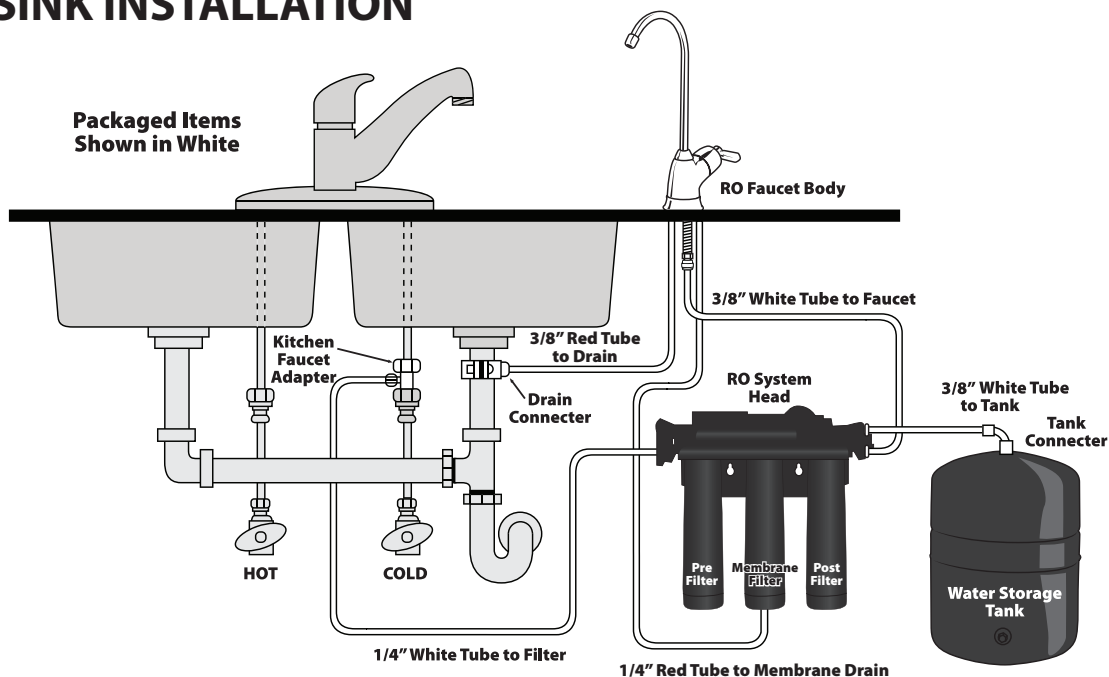
INSTALLATION OVERVIEW

There are eight easy steps to installing your RO unit. They are as follows:

- Step 1** - Install Kitchen Faucet Adapter
- Step 2** - Install RO Drain Connector
- Step 3** - Install RO Filter Assembly
- Step 4** - Install Water Storage Tank
- Step 5** - Install RO Faucet
- Step 6** - Connect Tubing
- Step 7** - Install RO System and Drain in Remote Location
- Step 8** - Sanitize, Pressure Test, Purge System

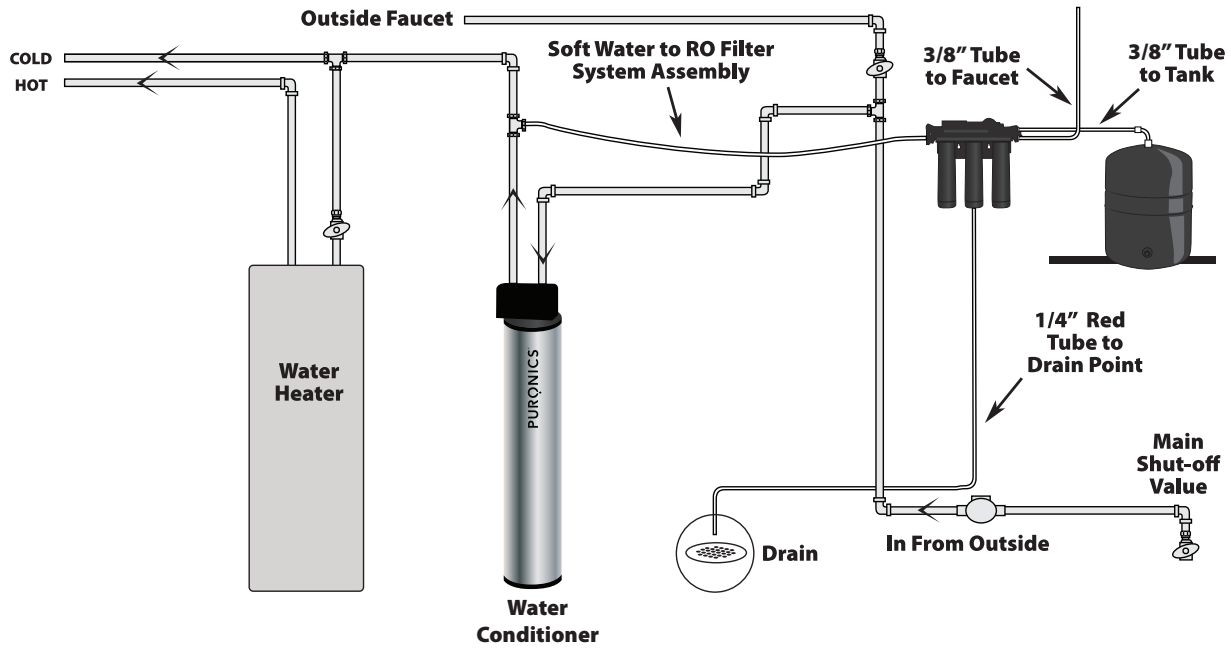
NOTE: You must check and comply with all local plumbing codes.

UNDER SINK INSTALLATION



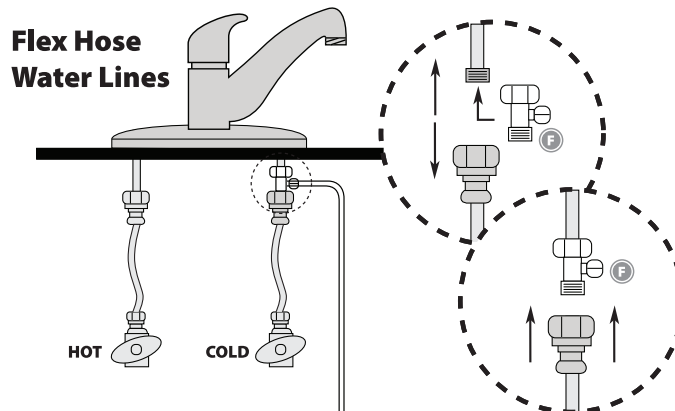
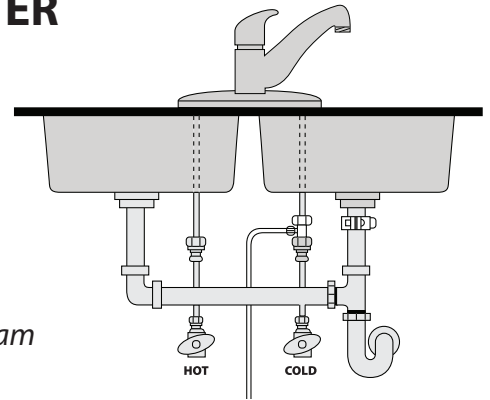
REMOTE INSTALLATION

(requires nearby water source and drain)



STEP ONE – INSTALL KITCHEN FAUCET ADAPTER

- 1 Identify the cold water line in the sink cabinet.
Turn off the cold water supply to the sink.
- 2 Turn on the kitchen faucet to release pressure and allow water to completely drain from the line.
- 3 Disconnect the cold water line from the 1/2" threaded stem on the bottom of the kitchen faucet.
- 4 Holding the Kitchen Faucet Adapter in an upright position (see diagram in Package Contents on page 6), screw onto the threaded faucet stem.
- 5 Screw the cold water supply line to the male threads of the Kitchen Faucet Adapter using the nut that was previously connecting the cold water line to the kitchen faucet.



STEP TWO – INSTALL RO DRAIN CONNECTOR



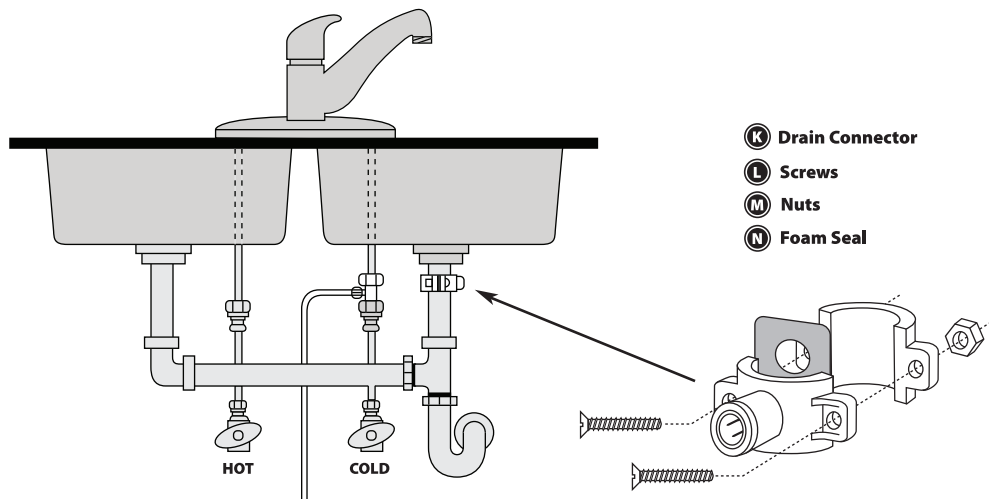
! WARNING

Be sure that all electrical appliances and outlets are turned off at the circuit breaker before working in the cabinet area.

! CAUTION

Please wear safety glasses to protect eyes when drilling.

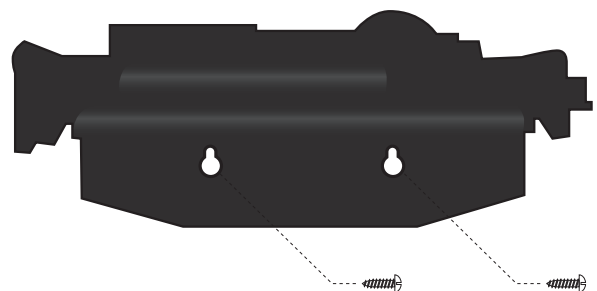
- 1 Identify drain outlet location.
- 2 Remove protective cover from back of foam seal.
- 3 Knock center hole out of the foam seal. Align holes and attach to front plate of drain connector.
- 4 Allowing room for drilling, position the drain connector on sink drain pipe above drain trap.
- 5 Securely tighten nuts and screws.
- 6 Using drain connector port as drill guide, drill 7/32" hole through wall of drain pipe. Be sure not to penetrate opposite side of pipe, and be careful not to damage side of drain port fitting.



STEP THREE – INSTALL RO FILTER ASSEMBLY

- 1 Select easily accessible area under sink to mount system manifold. Note: Allow 4-6" clearance below the filter to the floor to allow ample space for filter changes.
- 2 Mark holes for mounting screws using built-in bracket on back of manifold.
- 3 Drill two pilot holes for mounting brackets using 1/8" drill bit.*
- 4 Insert mounting screws into the wall leaving approximately 3/8" of each screw exposed.
- 5 Hang manifold on mounting screws.

Ⓢ Mounting Screws



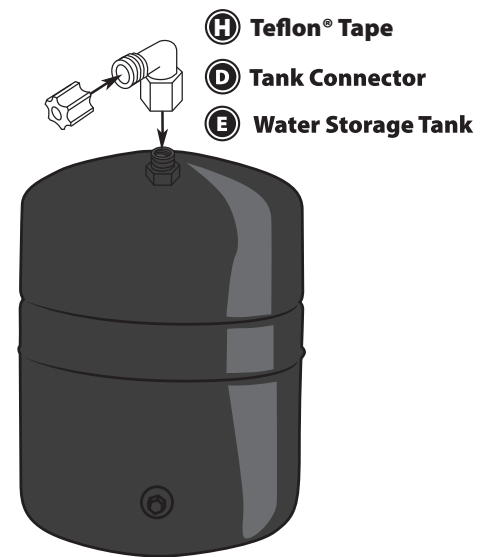
*

! CAUTION

Use caution not to drill into anything beyond the cabinet wall.

STEP FOUR – INSTALL WATER STORAGE TANK

- 1 On the nipple on top of the tank, apply 2-3 wraps of Teflon® tape.
- 2 Hand-tighten the tank connector onto the tank nipple 3-4 times. Note: do not cross thread or over-tighten.
- 3 Using mount stand, place tank next to system assembly.

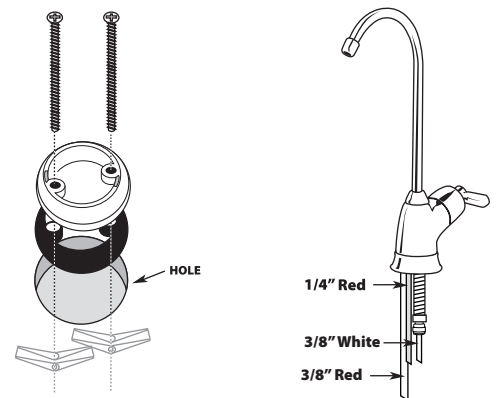
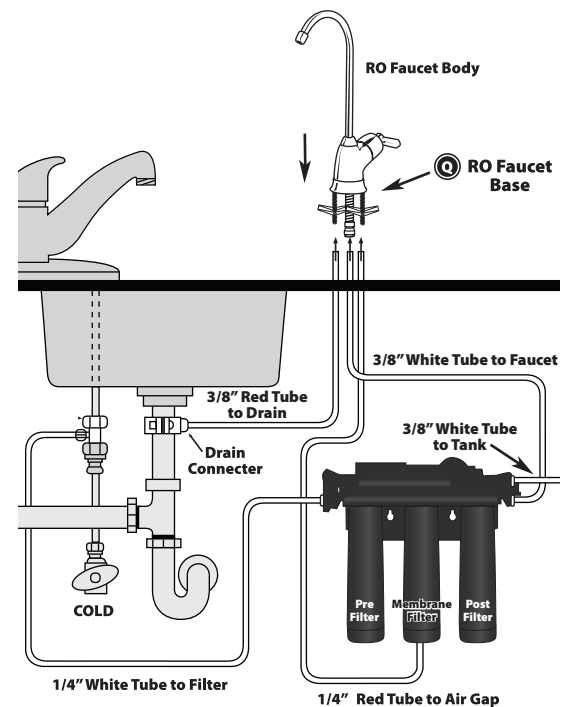


STEP FIVE – INSTALL RO FAUCET

You will need a sink top hole between 1-3/8" and 1-5/8" in diameter.

Note: Drilling holes into solid surfaces or surfaces made of stone should only be performed by a qualified and certified installer.

- 1 Ensure faucet body will mount flat against surface.
- 2 Ensure there is sufficient tube space between faucet body and manifold.
- 3 Attach 3/8" white tube to stem on faucet body by wetting tubing end and inserting into faucet stem fitting approximately 5/8" until it stops.
- 4 Gently tug on tubing to ensure it is firmly seated in fitting.
- 5 Through faucet base, route 3 tubes attached to faucet body. Do not connect faucet body to faucet base at this time.
- 6 Route 3 tubes through hole in sink until 12" of tubing remains above sink.
- 7 Place faucet body on countertop.
- 8 Mount faucet base by pushing toggle bolts through the sink hole until faucet base is flush with countertop.
- 9 Position toggle bolts under sink surface being certain faucet stem will not be obstructed.
- 10 Loosely fasten faucet base to countertop by loosely tightening toggle bolts.
- 11 Turning 1/4 clockwise and holding faucet base firmly, mount faucet body to faucet base. Adjust faucet body handle as desired.
- 12 To tighten faucet base, remove faucet by turning faucet body 1/4 turn counter-clockwise. Tighten toggle bolts making sure not to overtighten.
- 13 Mount faucet body to faucet base; Turn 1/4 turn clockwise until it locks.
- 14 Attach faucet spout to faucet body by screwing spout nut to body.

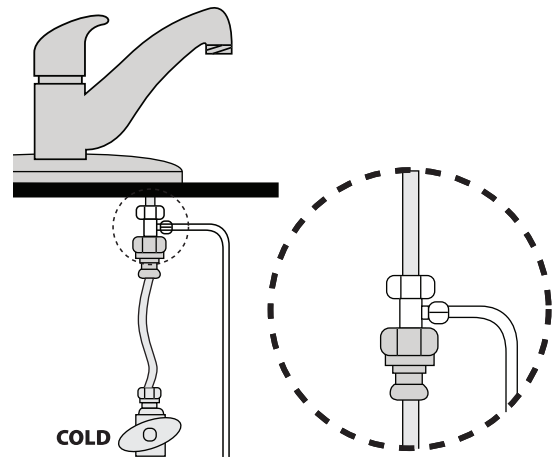


STEP SIX – CONNECT TUBING

Install tubing for water supply line from kitchen faucet adaptor to manifold inlet.

Note: Do not bend or crimp tubing during this step.

- 1 Identify length of 1/4" white tubing necessary to connect manifold "INLET" to kitchen faucet adaptor. Allow sufficient tubing to prevent line kinking.
- 2 With utility knife, cut the 1/4" white tubing squarely to desired length.
- 3 With water, wet one end of tubing and push into the kitchen faucet adaptor approximately 5/8" until it stops.
- 4 Wet other end of tubing and push into the manifold "INLET" approximately 5/8" until it stops.
- 5 Install Quick Connect Locking Tab between collar and manifold.



Note: It is not necessary to remove tubing for routine maintenance and filter exchanges, however, it may easily be disconnected if necessary. To disconnect, turn off water supply to system, remove locking tab and press in white collar around fitting while pulling tubing out with other hand.

Install tubing for water supply line from manifold outlet to faucet.

- 1 Locate 3/8" white tubing already attached to faucet stem during Step 5.
- 2 Identify length of tubing necessary to connect to manifold outlet labeled "FAUCET."
- 3 Cut tubing squarely with utility knife. Do not discard remaining tubing.
- 4 With water, wet one end of tubing and push into manifold outlet labeled "FAUCET" approximately 5/8" until it stops.
- 5 Install Quick Connect Locking Tab between collar and manifold.



Connect tubing from manifold to tank.

- 1 Use remaining white tubing set aside earlier and identify length needed to connect tank outlet labeled "TANK" on manifold to tank.
- 2 Cut white tubing square with a utility knife.
- 3 Wet tubing end and insert into compression nut of tank connector fitting (previously connected to tank) all the way to the tube stop inside the body. If tubing does not enter the nut easily, loosen the nut one turn and insert tubing all the way to the tube stop in the fitting body.
- 4 Hand-tighten the nut and then tighten with wrench 1-2 turns.
- 5 Insert other end of white tubing into outlet of manifold labeled "TANK" approximately 5/8" until it stops.
- 6 Install Quick Connect Locking Tab between collar and manifold.

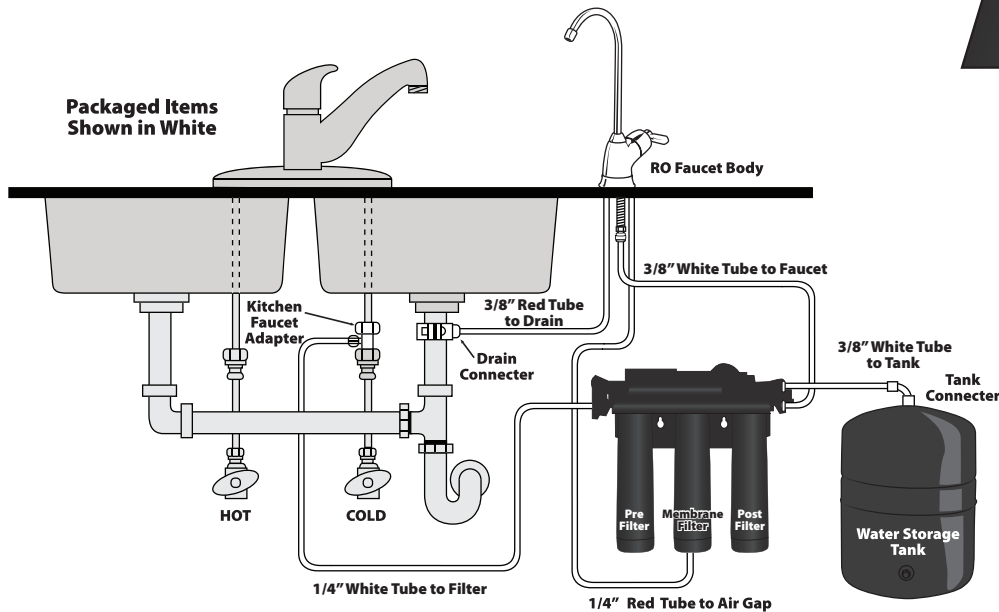
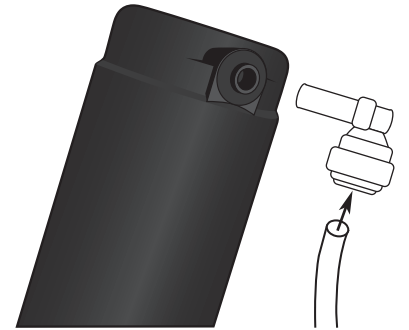
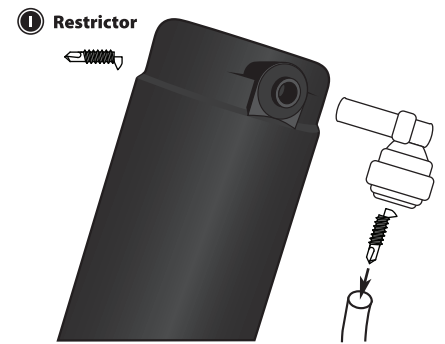


Note: For servicing, tubing lengths should allow for removal of assembly from mount screws.

STEP SIX – CONNECT TUBING (Continued)

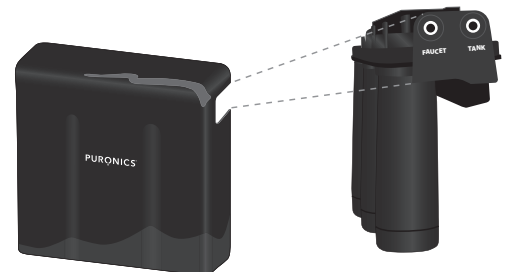
Air gap from faucet to RO Assembly.

- 1 Locate membrane drain port.
- 2 By pushing down on the red collar while pulling plug with other hand, remove black plug from membrane filter drain port.
- 3 Identify drain fitting and insert into drain port on membrane cartridge.
- 4 Identify 1/4" red tubing attached to air gap barb on faucet body.
- 5 Identify length necessary to connect to drain fitting now attached to drain port.
- 6 With utility knife, cut the 1/4" red tubing squarely to desired length.
- 7 Insert restrictor into end of red tubing.
- 8 Insert red tubing into drain fitting on bottom of membrane filter approximately 5/8" until it stops.
- 9 Gently tug on red tubing to ensure it is firmly seated in fitting.



Connect 3/8" tube from faucet to drain adapter.

- 1 Identify 3/8" red tubing attached to faucet body.
- 2 Attach other end of tubing to collet on sink drain connector.
- 3 Cut enough 3/8" red tubing to route in as straight as possible without any twists, kinks, loops or valleys.
- 4 Cut end of 3/8" red tubing squarely with utility knife.
- 5 Insert into fitting approximately 1" until it stops.
- 6 Gently tug on red tubing to ensure it is firmly seated in fitting.



Shroud Installation

- 1 Install shroud with short side to the back by sliding shroud over manifold until it is snug.

NOTE: THIS STEP FOR REMOTE LOCATIONS ONLY

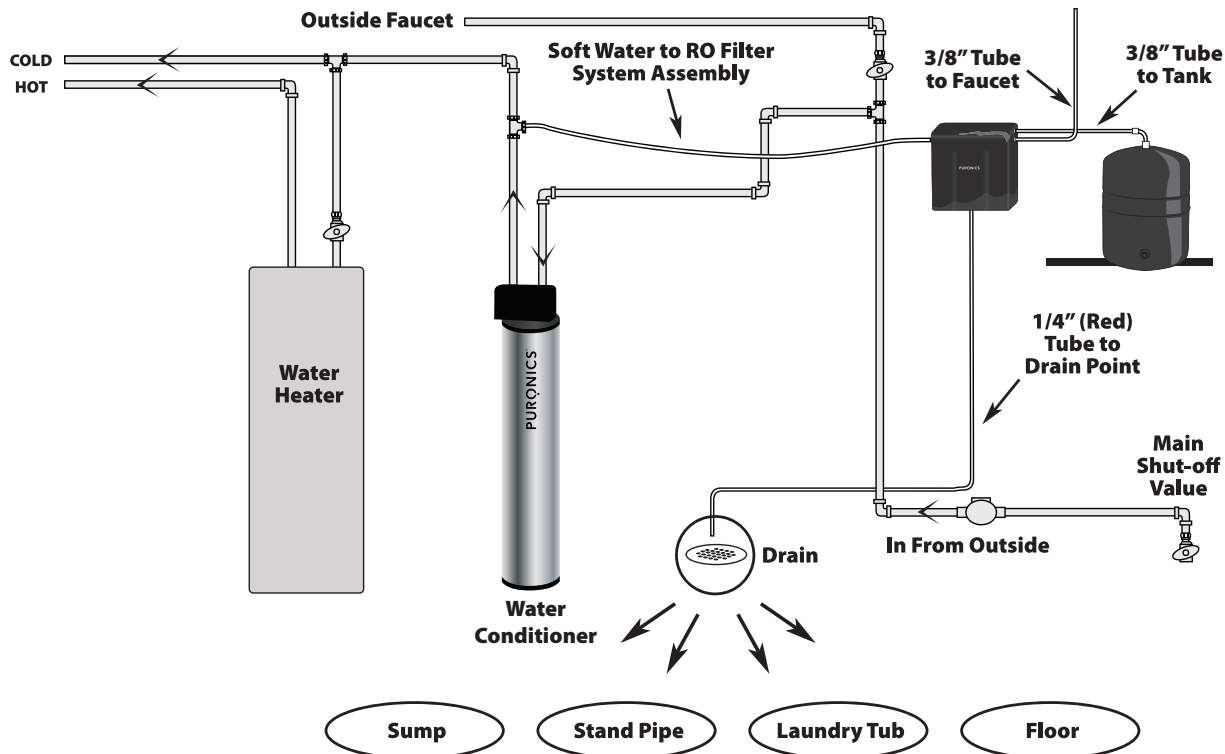
STEP SEVEN – INSTALL RO SYSTEM & DRAIN

Install remote drain point and air gap. Running drain tubing to an existing drain is also an option but may require longer tube lengths. Suitable drains include laundry tubs, floor drains or sumps. Check local plumbing codes.

Note: To prevent water from backing up into system, be sure to install air gap between drain point and end of hose.

- 1 Gently pull the 1/4" red tubing from the faucet body.
- 2 Determine if tubing is long enough to reach drain. If yes, insert restrictor in end of tubing and insert this end into drain port on membrane filter. If no, replace red tubing with tubing of adequate length and insert restrictor into end of tubing. Insert this end of tubing into drain port on membrane filter.
- 3 Run tubing to drain point securing at end with bracket (not supplied). Ensure 1-1/2" air gap is between drain and end of tube.
- 4 Remove 3/8" red tubing from faucet body and discard.
- 5 Install shroud with short side to the back by sliding shroud over manifold until it is snug.

Note: Faucet will not have 1/4" or 3/8" tubing attached to air gap barbs in faucet body for remote installation.

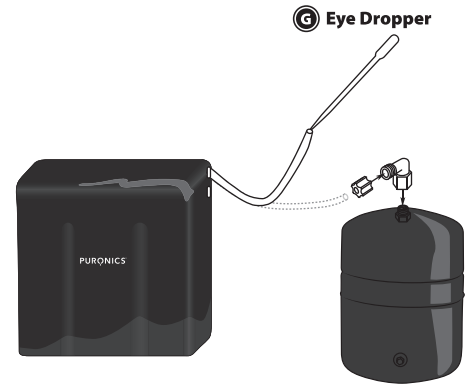


STEP EIGHT – SANITIZE, TEST & PURGE

Sanitize

Note: Sanitization is recommended immediately after RO Filter System installation and any inner-part servicing. The person sanitizing should have clean hands during this process.

- 1 Shut off water supply to RO system.
- 2 Open faucet. If tank is not empty, allow to drain until empty.
- 3 With included eyedropper and household bleach (5.25%), disconnect white tubing from tank by unscrewing nut from tank connector fitting. **Note: Bleach needs to be handled according to manufacturer's instructions.**
- 4 Add 3ml bleach into open end of tank white tubing.
- 5 Reconnect tank and white tubing to tank connector fitting.
- 6 Sanitization will be completed during the following pressure test and purge.



Important: Bleach must be completely removed from system before drinking water. See Purge instructions below.

Pressure Test

Important: Complete sanitization prior to pressure test.

- 1 Open cold water supply valve to RO Filter System.
- 2 To purge air from the plumbing system, open kitchen faucet. Close faucet when water runs smooth.
- 3 Confirm RO faucet is closed.
- 4 Within approximately 2 hours, pressure will start to build in the RO Filter System. Carefully inspect all connections and fittings while this pressure buildup occurs.
- 5 Check for leaks. If leaks are found, fix by ensuring all tubing is cut squarely and fully inserted. Also confirm there are no scratches, dents or notches at tubing end. If there are, squarely cut 1" off and re-insert.

Note: When RO Filter System is first pressurized, water may project from faucet air gap hole until air is passed from RO Filter System.

Purge

- 1 Open RO faucet and let water flow through system for 24 hours.
Note: Flow rate will be slow during this time.
- 2 Close RO faucet after purge is complete.

Note: Your RO Filter System is ready for use when purge is complete, however, you will not have filtered water immediately. It takes 1 – 3 hours to completely fill the tank. The flow rate will be less than your kitchen faucet. Water will run to the drain while the RO Filter System is filtering water – even when not in use. This is normal. Water going to drain will stop automatically when tank is at capacity.

RO SYSTEM – MODEL MICROMAX™ 7000

	U.S.	Metric
Membrane Production ¹	35 ± 7 gpd	(106–159 lpd)
Membrane TDS Reduction ¹	96.6% minimum	96.6% minimum
System Production ²	19.4 gpd	73.4 lpd
TDS Reduction ²	97.5%+ typical	97.5%+ typical
Maximum TDS	2000 ppm	2000 ppm
Maximum water hardness @ 6.9pH	10 gpg	2.64 gpL
Maximum Chlorine in water	3.0 ppm	3.0 ppm
Supply water pH limits	4-10	4-10
Drain (reject water) Flow	3-5 x product flow	3-5 x product flow
Empty Storage Tank Precharge	5-7 psi air	35-48 kPa air
Storage Tank Capacity ²	2.8 gallons	10.6 liters
Supply water pressure limits	40-100 psi	280-689 kPa
Supply water temperature limit	40-100° F	5-40° C
Efficiency ³	19%	19%
Recovery ⁴	30.6%	30.6%

Specifications – Qualified System Performance

Because the performance of a Reverse Osmosis Membrane is highly dependent upon pressure, temperature and TDS, the following should be used for comparison purposes only.

1. Industry standards measure RO Membranes performance with no back pressure on the product water, at 60 psig (414kPa) and 77°F (25°C). Further conditions on the above are 250 ppm TDS and a 30.6% recovery rate. Production rate and TDS reduction figures are for a new Membrane that has been rinsed for 24 hours. The production rate of a new Membrane can decrease by 10% per year or more, depending upon the scaling and fouling tendencies of the Feed Water.
2. Measured at 50 psi, 77°±2°F, and 717 mg/l TDS per NSF/ANSI Standard 58.
3. 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.
4. 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.

Non-potable Water Sources:

Do not attempt to use this product to make safe drinking water from non-potable water sources. Do not use the system on microbiologically unsafe water, or water of unknown quality without adequate disinfection before or after the system. This system is certified for cyst reduction and may be used on disinfected water that may contain filterable cysts.

Arsenic Reduction:

This system shall only be used for arsenic reduction on chlorinated water supplies containing detectable residual free chlorine at the system inlet. Water systems using an inline chlorinator should provide a one minute chlorine contact time before the reverse osmosis system.

Nitrate/Nitrite Test Kit:

This system is acceptable for treatment of influent concentrations of no more than 27mg/L nitrate and 3mg/L nitrite in combination measured as N. It is certified for nitrate/nitrite reduction only for water supplies with a pressure of 280 kPa (40 psig) or greater. This system is supplied with a nitrate/nitrite test kit. Product water should be monitored periodically according to the instructions provided with the test kit.

Installations in The Commonwealth of Massachusetts:

The Commonwealth of Massachusetts requires installation be performed by a licensed plumber and do not permit the use of saddle valves. Plumbing code 248--CMR of the Commonwealth of Massachusetts must be followed in these cases.

Product Water Testing:

The Reverse Osmosis System contains a replaceable membrane cartridge critical for the effective reduction of total dissolved solids (TDS).

Replacement of the reverse osmosis membrane cartridge:

The reverse osmosis system contains a replaceable membrane cartridge critical to the efficiency of the system. Membrane replacement is often based on your local water quality and usage. Only replace the reverse osmosis membrane with a part approved for use in your Reverse Osmosis system.

SYSTEM MAINTENANCE

Easy Change™ Prefilter/Postfilter

The pre-filter and post-filters are replaceable activated carbon cartridges located in stages 1 and 3. It is recommended replacing these cartridges at least every 12 months (2,500 gallon capacity). You may need to replace more often with high water usage or high sediment level. Replacing these cartridges timely will protect the RO membrane from high levels of chlorine and/or sediment. As these filters build up with sediment, you may notice slower water output.

Easy Change™ RO Membrane Cartridge

The RO cartridge is located in stage 2. This membrane is a tightly wound membrane which reduces the dissolved solids and organic matter. Cartridge life depends on pH and supply water hardness. Higher pH shortens membrane life by causing pin-hole leaks. If pH is higher than 8.0, cartridge life may be as short as 6 months. If pH is under 7.5, cartridge life may last up to 3-5 years. When output water quality and production rate decrease, it is time to replace the membrane cartridge.

Flow rate and output are determined by 3 factors:

- 1 Incoming water temperature
- 2 Total dissolved solids (TDS) present in supply water
- 3 Incoming water pressure

Lower temperatures are directly proportional to slower flow rate. All membranes are tested at 77°F. Incoming water temperature should not exceed 100°F. The RO Filter System should also not be installed in a location susceptible to freezing.

The more TDS in the supply water, greater filter time is required. Incoming TDS should not exceed 2000 ppm.

Higher water pressure enables a higher flow rate. Pressure must be above 40 psi for proper system operation. You may consider installing a permeate pump or booster pump if your pressure is below 40 psi.

Easy Change™ Filter Replacement

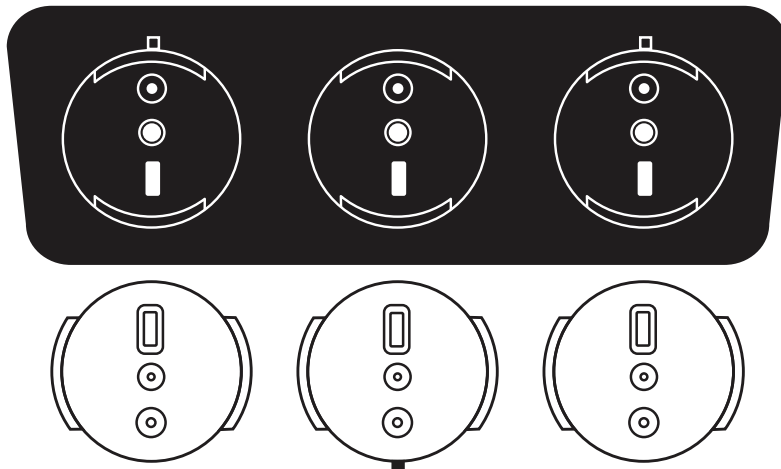
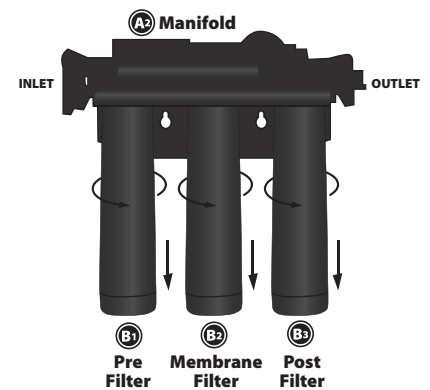
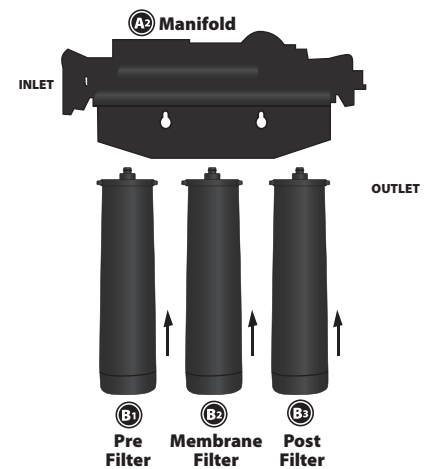
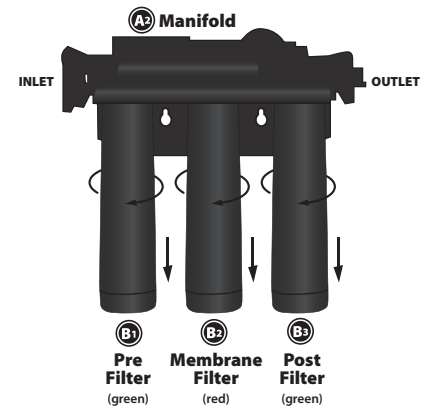
- 1 Remove the pre-filter cartridge first to relieve pressure on the RO filter. This shuts off the water supply to the unit.
- 2 Turn cartridge from right to left until unit releases. Gently pull down to remove from head. Discard used cartridge.

Note: Place a bucket or pan under system to catch any water drips.

- 3 Hold new cartridge with label slightly facing left. The two nozzles on top of cartridge should be toward the back of the Filter System, and the two extended flanges should be out to each side.

Note: Part No. W-PN-1001 should be in stages 1 and 3 (green), and Part No. W-PN-1002 should be in stage 2 (red).

- 4 Lift cartridge straight up into the manifold until the two nozzles seat into the manifold ports, and the two extended flanges are flush with the manifold.
- 5 Turn cartridge from left to right until it stops.
- 6 Turn on cold water shut-off valve and RO faucet. Check for leaks.
- 7 Pressure test and Purge per Step Eight.



NOTE: Red Membrane Filter should always be in the center position. System may leak if placed in wrong position.

Easy Change™ Pre-Filter & Post-Filter Cartridge Replacement

- 1 Remove pre-filter cartridge by turning to the left.
- 2 Remove post-filter cartridge by turning to the left.
- 3 Discard cartridges.
- 4 Install new cartridges in reverse order by turning to the right:
 - a – post-filter
 - b – pre-filter
- 5 Purge RO Filter System as outline in Step Eight.

Drain Flow Restrictor

The restrictor is vital for proper operation of the RO membrane cartridge as it keeps water flowing through the membrane at the proper rate ensuring the water produced is the best quality. It is recommended the restrictor assembly be periodically inspected to be sure it is clean and unrestricted. If service is required on the drain flow assembly, disassemble and reassemble as outlined in Step Six.

REPLACEMENT PARTS

PART NUMBER	DESCRIPTION
W-PN-1001	Carbon Block Cartridge
W-PN-1002	Membrane Cartridge
W-PN-1003	Shroud
W-PN-1004	Manifold (Includes ASO, check valve, twist valves & quick connects)
W-PN-1005	Storage Tank
W-PN-1006	ASO Cover Assembly (Includes rear tube, check valve, 5 screws & o-rings)
W-PN-1007	ASO Diaphragm Parts
W-PN-1008	Drain Clamp Assembly – 3/8"
W-PN-1009	KFA
W-PN-1010	Tank Elbow Fitting
W-PN-1011	Nitrate Test Strip
W-PN-1012	Restrictor
W-PN-1013	Eye Dropper
W-PN-1014	Faucet – Air Gap (Includes ferrule, nut & tube insert)
W-PN-1015	Installation Kit (Includes KFA, drain clamp assembly kit and tank elbow fitting)
W-PN-1016	Drain Fitting



PURONICS®

Pure Water Solutions

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System Tested and Certified by the Water Quality Association (WQA) against NSF/ANSI Standard 58 for the reduction of Cysts, Lead, Pentavalent Arsenic, Cadmium, Hexavalent Chromium, Trivalent Chromium, Selenium, Nitrites/Nitrates and Total Dissolved Solids (TDS) and against NSF/ANSI Standard 42 for the aesthetic reduction of Chlorine Taste and Odor and Particulates.