



5-Stage Reverse Osmosis System

MODEL: RO-TFC-5-35-B-J



WQA tested and certified for the reduction of total dissolved solids (TDS).
Standard: WQA-S-300



INSTALLATION & OWNER'S MANUAL

Pure-Tel™

Pure-Tel by R&M Water Group
Reverse Osmosis Drinking-Water System
Model: RO-TFC-5-35-B-J



1. Sediment prefilter
2. Carbon block filter
3. GAC filter
4. TFC 36 gpd membrane
5. 2x10 GAC inline

FLTR-1010
FLTR-2112
FLTR-3900
MEM-1015
FLTR-3125

Water Pressure: 40-100 PSIG (280-690 kPa)
Water Temperature: 40°-100°F (4°-38°C)

This reverse osmosis system contains replaceable treatment components critical for effective performance. It is the user's responsibility to, and the manufacturer strongly recommends that the user, periodically test the product water to verify the system is performing satisfactorily. **Do NOT use with water that is microbiologically unsafe or of unknown quality, without adequate disinfection before or after the system.**

Tested and certified by Water Quality Association (WQA) against WQA S-300 for the reduction of the claims specified on the performance data sheet as verified and substantiated by test data.

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pn: LBL-RO5-STG-CERT

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Performance Data Sheet:

Model: RO-TFC-5-35-B-J

Inorganic Contaminants	Normal Reduction
Total dissolved solids	85–95%
Sediment, turbidity	>99%

Specifications and Features

Filter Elements:	5-micron prefilter, 10" GAC prefilter, 10" CTO carbon-block prefilter TFC-membrane (36 gpd production), 10" inline post-carbon filter.
Dimensions:	<u>RO system:</u> H:18" x W:16" x D:7" <u>Storage tank:</u> Dia: 12" x H:16"
Shipping Dimensions:	H:18" x W:16" x L:16"
Shipping Weight:	27 lbs
Production Rate:	10.6 gpd @ 60 psi and 77° F
Recovery Rating:	16.3% (percentage of 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 tank is bypassed.)
Tank Capacity:	2.6 gallons (air and water pressure vary storage capacity.)
Efficiency Rating:	7.8%

Recommended Operation Parameters

Pressure:	40.0–100.0 psi (280–690 Kpa)
pH:	4.0–9.0
Max Feed Flow	1.5 gpm
Temperature	40–110° F
Max Feed Turbidity	1 ntu
Max Feed Silt Density:	5 sdi
TDS Max	2000 ppm (also Mg/L) max

- System has been tested and certified under WQA S-300 for TDS reduction and structural performance only. The concentration of TDS 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 by WQA S-300. (Testing was performed under standard laboratory conditions.) Actual performance may vary.
- Testing for TDS reduction was conducted at 55±5 psi and 77±2 ° F, and 750±40 mg/L TDS challenge as sodium chloride.
- Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfections before or after the system.
- The system conforms to WQA S-300 for the specific performance claims as verified and substantiated by test data.
- See owner's manual for installation conditions and general operation and maintenance requirements.



WQA certified for the reduction of total dissolved solids (TDS).
Standard: WQA-S-300.

For additional information, contact:

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

Efficiency rating means the percentage of influent water to the system that is available to the user as reverse-osmosis-treated water under operating conditions that approximate typical daily use.

This reverse osmosis system contains a replaceable treatment component crucial for effective reduction of total dissolved solids. The product water should be tested periodically to verify the system is performing satisfactorily.

Warranty: Pure-Tel reverse osmosis systems by R&M Water Group are under warranty to the original owner as specified by the five-year limited warranty.



Water Pressure and Temperature

Water Pressure:

The amount of water pressure feeding your system will directly affect both quantity and quality of the water produced. The higher the pressure the better quality and quantity of the water produced. Due to the function of the shut off feature on the RO, as the storage tank pressure reaches 2/3 of the feed pressure, the shutoff is activated and the line pressure is closed. Consequently the lower the feed pressure to the RO, the lower the volume of water that is collected in the storage tank.

Pressure	Correction	Percent
psi	kPa	Factor
10	69	.17
15	103	.25
20	138	.33
25	172	.42
30	207	.50
35	241	.58
40	276	.67
45	310	.75
50	345	.83
55	379	.92
60	414	1.00
65	448	1.08
70	483	1.17
75	517	1.25
80	552	1.33
85	586	1.42
90	621	1.50
95	655	1.58
100	689	1.67

Production Rate Example:

Incoming water is 40 psi and 64° F. The correction formula is as follows for a 36-gpd system.

$$36 \text{ (gpd)} \times .67 \text{ (pressure-correction factor)} = 24.12 \text{ gpd}$$

$$24.12 \text{ (gpd)} \times .77 \text{ (temperature-correction factor)} = 18.57 \text{ gpd}$$

The total gpd the system will yield is **18.57 gpd** under these conditions.

Water Temperature:

Possibly one of the least understood effects on reverse osmosis production is the temperature-correction factor. Most membranes are tested and thus rated at 77° F temperature and 60 psi pressure. Any deviation from this will directly affect the performance of the membrane. The following tables will help you better determine product performance:

Temperature	Correction
F	C
40	.34
42	.38
44	.41
46	.45
48	.48
50	.52
52	.56
54	.59
56	.63
58	.66
60	.70
62	.73
64	.77
66	.80
68	.84
70	.88
72	.91
74	.95
76	.98
77	1.00
78	1.02
80	1.05
82	1.09
84	1.12
86	1.16
88	1.20
90	1.23
92	1.27
94	1.30
96	1.34
98	1.37
100	1.41
102	1.44
104	1.48
106	1.52
108	1.55
110	1.59



Rejection Rate / Rejection Ratio

Rejection Rate:

Rejection Rate: determined by measuring the volume of water discharged to the drain measured in gallons per day (gpd).

If you are measuring by mL/min, use the following formula to convert to gpd:

$$\text{milliliters per minute (mL / min) x .38 = gallons per day}$$

If you are measuring by ounces/min use the following formula to convert to gpd:

$$\text{ounces per minute x 11.2 = gallons per day}$$

Rejection Ratio:

Rejection Ratio: can now be determined by using the following formula:

$$\text{rejection rate / product rate = rejection ratio}$$

Installation Guide

Overview

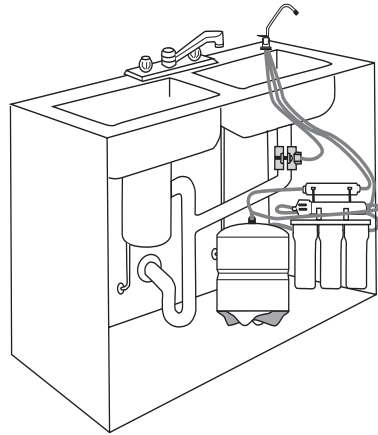
Your Pure-Tel system has been assembled, tested, and sanitized under the utmost care. Please follow all installation and maintenance procedures to ensure optimum performance.

Your system is conveniently installed beneath your kitchen sink. Your new Pure-Tel™ RO faucet* is placed next to your existing faucet.

(Installation should be done in accordance with all state and local plumbing codes.)

*Allow enough distance so as not to restrict the swivel action of both faucets.

All water-contacting materials of construction must be approved for contact of potable water.



Color-Coded Tubing

Black—RO water to faucet

Blue—Incoming feed water

Red—Drain

Yellow—Storage tank

Tools Recommended for Installation

Drill

Safety glasses

1/4" Porcelain hole cutter

1/4" Wood bit

Assorted wood drill bits

Assorted metal drill bits

Flat-blade screwdriver

Bicycle hand air pump

Adjustable wrench

Teflon tape

Scissors (to cut tubing)

Extra plastic tubing

Low-pressure gauge

Phillips-head screwdriver

Paper towels



Installation Guide (con't)

Storage Tank Air Cell

The air cell in the bottom of the storage tank is pre-charged at the manufacturing facility. However, the tank should be checked for proper inflation. Too little (or too much) air pressure will cause the system to operate improperly.

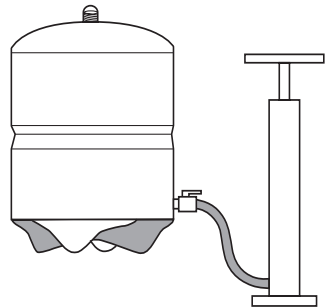
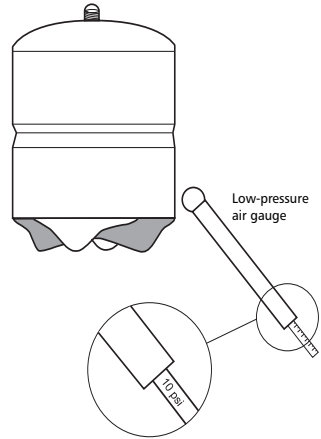
Checking Air Pressure in the Storage Tank

Note: Drain the storage tank completely (open the faucet) before checking air pressure. Lift tank to ensure it is empty. If tank won't empty due to low air pressure, add five to ten psi to force water out through the faucet. When tank is empty, adjust pressure as shown below. If the tank's diaphragm has become unseated, it may be necessary to disconnect the tank and turn it upside-down in order to totally empty the water. Failure to check tank while completely empty will result in an inaccurate reading.

Remove the plastic cap from the valve located on the side of the storage tank. Measure air pressure in the tank using a low-pressure gauge. If the pressure is not between eight and ten psi, see below.

□ Adjusting Storage Tank Air Pressure

If the tank pressure exceeds ten psi, remove air by depressing the stem in the center of the air valve. If the tank pressure is below eight psi, add air using an air pump. Always recheck tank pressure after adding or removing air to ensure proper pressure.



Installation Guide (con't)

Prepare the Storage Tank

The purpose of these steps is to sanitize the storage tank, eliminating any contaminants that may have entered the system.

□ Step 1

Remove the cap plug from the 1/4" male thread nipple located at the top of the storage tank. Using an eyedropper, place three to four drops of household bleach into the opening of the nipple.

CAUTION: Follow the warning label on the bleach bottle.

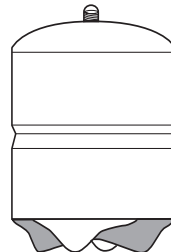
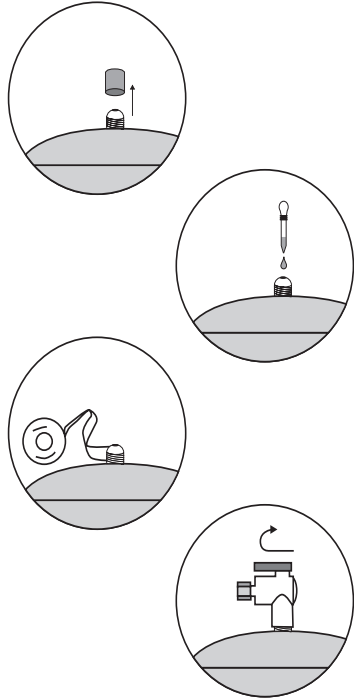
□ Step 2

Wrap teflon tape around the 1/4" male pipe thread nipple. Apply four to five wraps of tape.

WARNING: Do not use pipe dope or liquid-teflon pipe sealer. These chemicals may add an undesirable taste to your drinking water.

□ Step 3

Screw the plastic ball valve provided onto the taped nipple. Do not overtighten.



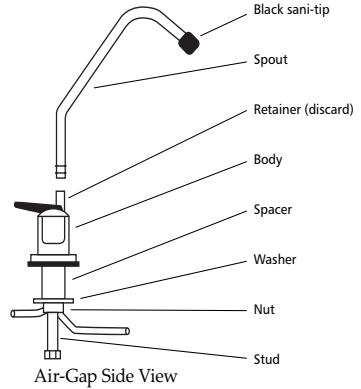


Installation Guide (con't)

The Air-Gap RO Faucet

The reverse-osmosis faucet is supplied with a built-in air-gap feature for reject water. The faucet will have three tubes connected to it:

1. 1/4" red tube from the main RO unit to the barbed fitting on the faucet.
2. 3/8" black tube from the large barbed fitting to the drain-saddle connections installed on the sink drain line (above the trap).
3. 3/8" black tube to the center compression of John Guest quick connect.

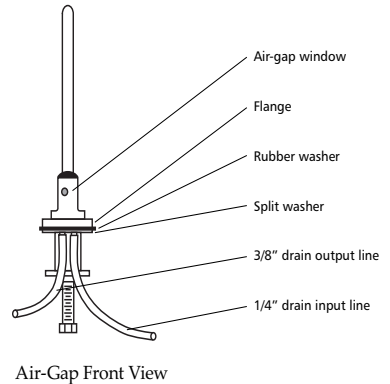


Faucet Placement and Drilling Procedure

In this procedure, you will install the air-gap faucet assembly into your sink. The air-gap faucet is designed to meet National Plumbing Code (NPC) specifications and prevents contaminants from back-flowing into the system from the drain.

CAUTION: Use extreme care when drilling into porcelain or tile sinks to prevent chipping and cracking. Always wear proper eye protection when operating a drill.

The surface of many sinks is extremely brittle and easily chipped or cracked. Pure-Tel by R&M Water Group offers these directions as basic guidelines only and assumes no liability whatsoever in the use of tools involved or any damage that may be incurred. If you feel uncomfortable with installing the reverse-osmosis system, please consult either the manufacturer, a local authorized service center, or a qualified plumbing contractor for installation.



Installation Guide (con't)

Where to Install the Faucet

Some sinks are equipped with an extra hole which may be covered by a chrome plug. This plug may be removed to install the air-gap faucet.

If your sink does not have an extra hole, you will have to drill a hole yourself. While 1 ¼" is preferable, any diameter between 1" and 1 ⅝" is acceptable. Locate the hole so as to allow room for the under-sink mounting hardware.

Drilling Through Ceramic Tile or Porcelain-Clad Sinks

Follow these steps if your sink is covered with either tile or porcelain. Drilling holes in these materials requires extra care to prevent cracking or chipping. If you have a stainless steel sink, see instructions on page 10, "Drilling Through Stainless Steel Sinks."

Step 4

Locate the faucet in the area of the sink that suits you best, but gives enough space to work under the sink. Cover the area to be drilled with either masking or duct tape. This will reduce any chipping of the ceramic or porcelain.



Installation Guide (con't)

CAUTION: Always wear proper eye protection when drilling.

□ Step 5

Using a 1/4" carbide-tipped drill bit, drill a pilot hole through the ceramic tile or porcelain. Use a low-speed setting on the drill. Once you have gone through the porcelain, replace the carbide drill with a standard 1/4" bit to drill through the cast iron or steel underneath.

IMPORTANT: Be sure to keep the drill bit perfectly vertical. Tilting the drill will cause the bit to bind the edge of the hole and chip the porcelain or tile.

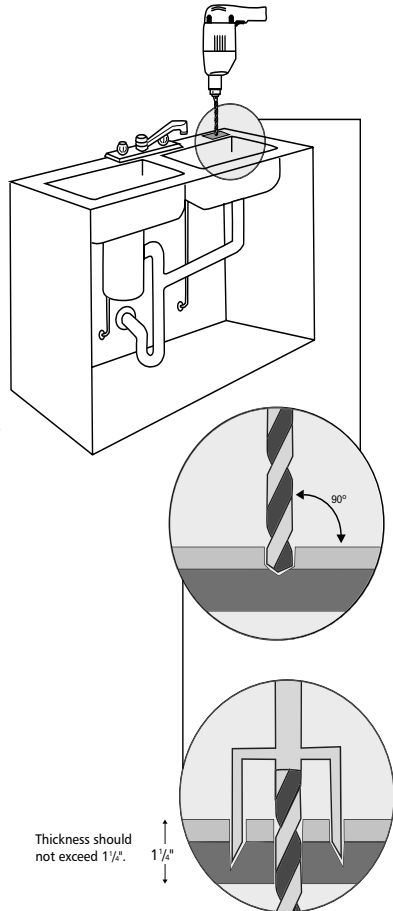
□ Step 6

Use a good quality (preferable carbide-tipped) 1 1/4" hole saw to enlarge the pilot hole. Use a low speed setting on the drill and apply slow, even pressure on the drill. Keep the drill vertical.

Note: On heavy porcelain sinks, frequently apply water to lubricate and cool the drill bit and sink.

CAUTION: Extreme heat, which may be generated by drilling, can cause the porcelain to "pop" off the sink in the drilling area. Pure-Tel by R&M Water Group offers these directions as basic guidelines only and assumes no liability whatsoever arising from this drilling operation or the use of tools as suggested herein.

Note: The thickness of the mounting hole should not exceed 1 1/4". If the surface (drill entry to drill exit) is thicker than 1 1/4", contact Pure-Tel by R&M Water Group for advice.



Installation Guide (con't)

Drilling Through Stainless-Steel Sinks

Center punch the top of the stainless-steel sink at the location for the faucet. Drill a 1/4" pilot hole and enlarge as in Step 3 (page 9), using either a 1" or 1 1/8" hole saw.

Installing the Faucet in the Mounting Hole

Before installation, compare your air-gap faucet assembly with the faucet drawing on page 7 to ensure you have all parts necessary for installation. Some parts shown in the drawing are built into the faucet itself.

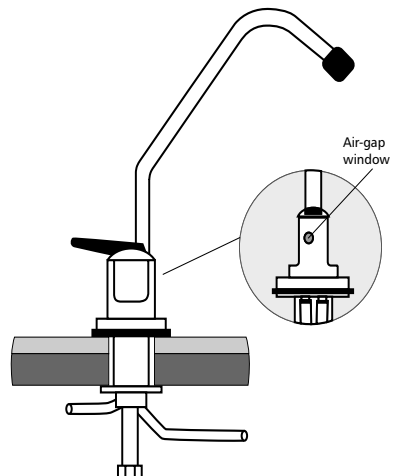
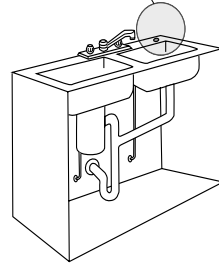
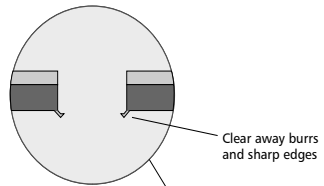
□ Step 7

Using care to avoid cuts and lacerations, remove any burrs and sharp edges from the mounting hole.

□ Step 8

Install the air-gap faucet as shown in the diagram.

Note: It is suggested the air-gap window (small opening in the faucet body) should face toward the sink when you install the faucet.





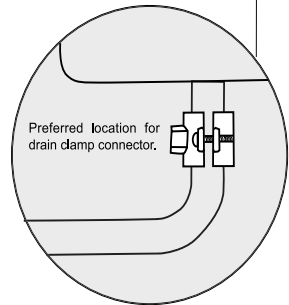
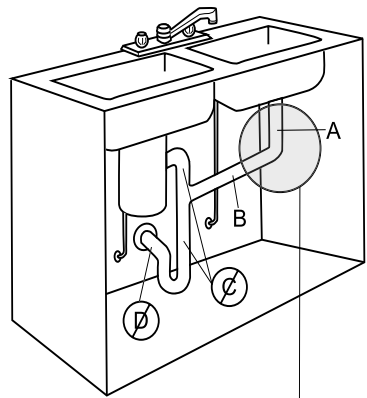
Installation Guide (con't)

Installing the Drain Clamp Connector

In this procedure, you will install the drain clamp connector onto your sink's drain pipe. This connector allows the reverse-osmosis system to dispose of contaminants.

Note: The drain clamp connector should always be installed above the drain trap and garbage disposal crosspiece on either a vertical or horizontal tailpiece. Position 'A' is the best position for the system; however, placing the connector here may lead to gurgling noises when the system eliminates contaminants. Refer to the Troubleshooting section if this problem occurs. If mounting the connector on a horizontal tailpiece such as position 'B,' be certain the hole is drilled in the top, or 12 o'clock position. Otherwise the connector may become clogged. **Do not mount the connector in positions 'C' or 'D.'**

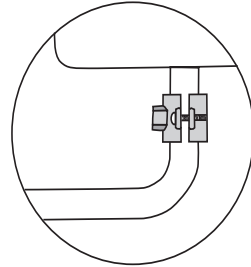
CAUTION: The drain clamp connector should never be placed on the same side of the drain system as the garbage disposal (positions 'C' or 'D'). Also, do not install the drain clamp on the dishwasher air-gap tube (if one is present). Installation of the drain clamp at any of these locations may result in plugging of the drain clamp's fitting by debris.



Installation Guide (con't)

□ Step 9

Mount the drain clamp connector in the desired location. Position the other half of the drain clamp on the opposite side of the drain pipe. Secure the two halves using the hardware provided.



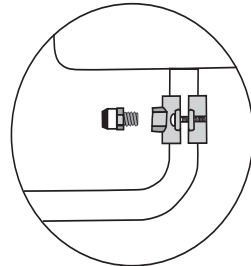
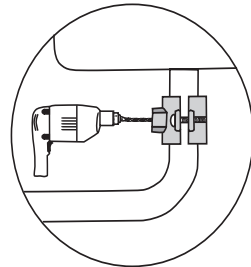
□ Step 10

Drill a $\frac{3}{8}$ " hole into the drain pipe (through the hole in the drain clamp). Remove any loose plastic or metal shavings from the threaded hole.

CAUTION: Always wear proper eye protection when drilling. Use care to avoid damaging the drain connector threads or drilling through both sides of the drain pipe.

□ Step 11

Screw the $\frac{3}{8}$ " tube fitting into the threaded hole of the drain clamp. Tighten as necessary with a wrench. Do not overtighten as this may damage the fitting.





Installation Guide (con't)

Feed Water Valve Installation

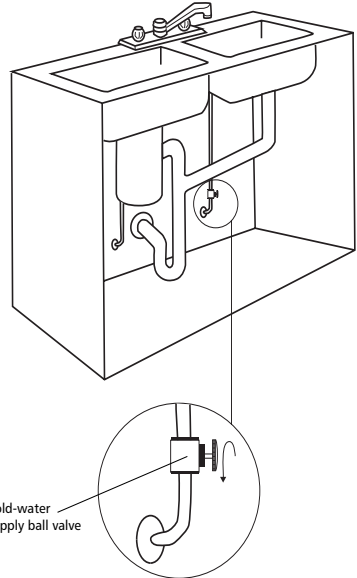
In this procedure, you will install the tap valve to supply water to the reverse-osmosis unit for purification.

CAUTION: The water tap hookup valve is designed for installation onto copper water lines only. Do NOT install the valve on corrugated metal or plastic water lines. For installations on material other than copper piping, obtain an "angle stop supply valve with a water tap" from a hardware or plumbing-supply store.

□ Step 12

Turn off the cold water supply line to the kitchen faucet by turning the ball-valve knob counterclockwise. The cold line is usually located on the right side of the faucet. If you have any doubt, run hot water into your sink until one of the supply lines becomes noticeably hot to the touch. This will allow you to distinguish between the hot and cold supply lines.

WARNING: Do NOT install unit on a hot-water supply line. Elevated temperatures will destroy the reverse-osmosis membrane and render the system inoperable.



Installation Guide (con't)

□ Step 13

Run your cold water to relieve any pressure in the pipes. After pressure is relieved, disconnect the cold supply line from the base. Do not disconnect under the sink.

□ Step 14

Insert feed valve adapter as shown in diagram. Teflon tape is not necessary at this union. Ensure the o-ring is in place inside the feed-valve adapter facing the copper supply line.

WARNING: Installing an RO system without an o-ring will cause leakage and possible water damage. Make sure the o-ring is not damaged (cracked or sliced).

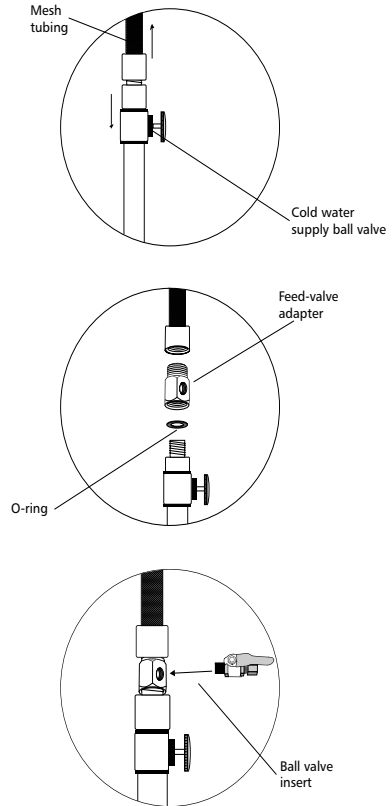
Tighten the adapter, but take care not to overtighten. When the adapter is snugly in place, reconnect the cold-water supply line (copper pipe).

□ Step 15

Use teflone tape on the ball valve insert, then tighten until firm.

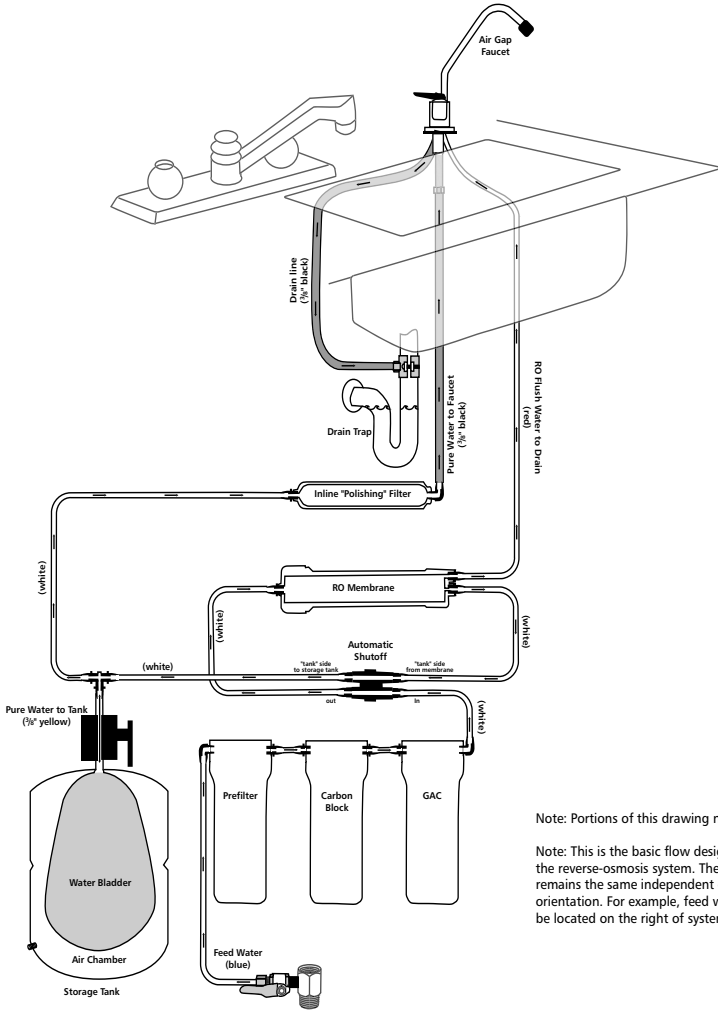
□ Step 16

Turn on the cold-water supply line and check to see if the system is leaking. Check all unions and if necessary, repair leaks using teflon tape.





System Plumbing Diagram



Note: Portions of this drawing not to scale.

Note: This is the basic flow design of the reverse-osmosis system. The flow remains the same independent of system orientation. For example, feed water may be located on the right of system.



Preventative Maintenance

Although your Pure-Tel by R&M Water Group reverse-osmosis system has no moving parts to wear out, the filter cartridges can remove a considerable amount of debris and pollutants over their lives. These filters eventually become 'used up' and **must** be changed to ensure proper system operation and purified water quality.

Periodically test the product water to verify the system is performing properly. The system contains a water-quality test kit (MON-9015).

Warranty Requirements

Failure to follow the recommended intervals for filter cartridge replacement; or use of filter cartridges from manufacturers other than Pure-Tel by R&M Water Group; reduces the life of your reverse-osmosis system and voids its warranty.

Approximate Filter Cartridge Life and Replacement Schedule

Note: Your reverse-osmosis system may require more frequent filter replacement than shown depending on quality of incoming water, water temperature, and incoming water pressure.

Replacement filter pack* (FLTR-FP5-CTA/TFC)	6–12 months
5-Micron sediment prefilter (FLTR-1010)	6 months
Carbon block filter (FLTR-2112)	6 months
GAC filter (FLTR-3125)	6–12 months
2x10 GAC inline filter (FLTR-3125)	6–12 months
Reverse-osmosis membrane (replace only when expired) (MEM-1015)	24–36 months

*Filter pack includes one 5-micron sediment filter, one carbon block filter, one GAC filter, and one 2x10 GAC inline filter.

Other Maintenance

Sanitize storage tank	6 months
Check storage-tank air pressure	6 months or as needed



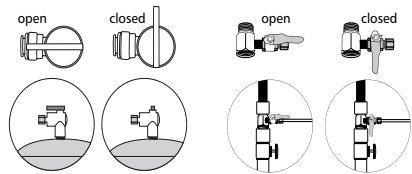
Sanitization

The reverse-osmosis system was sanitized during the manufacturing process and tube ends were capped to prevent contamination. We recommend chlorine sanitization every 12 months, usually coinciding with a filter replacement or membrane replacement.

In order to sanitize your reverse-osmosis system, make sure you have access to unscented 5¼ percent liquid chlorine household bleach, and replacement o-rings (as needed).

□ Step 1

Close the ball valve located at the top of the storage tank. When the valve lever is perpendicular to the valve body, the valve is in the "closed" position



Close the water feed valve and open the reverse-osmosis faucet to relieve system pressure. (If water continues to pour from the faucet, either or both of the ball valve or the feed water valve is open).

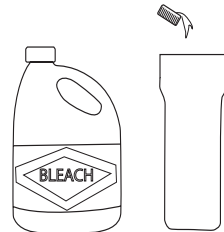
□ Step 2

Remove the filters and the membrane.

WARNING: Chlorine will damage the membrane. Do NOT allow the membrane to come in contact with chlorine.

□ Step 3

Add one full cap (2 tsp, or 10 mL) of high-quality, unscented 5¼ percent liquid chlorine household bleach to the sediment filter housing and carbon filter housing.



□ Step 4

Check o-rings for cuts or normal wear. Replace o-rings if necessary. Replace the o-ring in the canister groove and hand-tighten the housings.



Sanitization (con't)

□ *Step 5*

Turn on the water supply and engage the reverse-osmosis faucet until water begins to drip. Close the faucet and allow 15 minutes for the system to pressurize. After 15 minutes, close the water feed valve and drain the pressure.

□ *Step 6*

Open the canisters and return the filter and membrane to their housing (or install replacement filters and membrane—see below).

□ *Step 7*

Open the feed valve and allow the system to pressurize. Check system for leaks. Allow six hours for the system to properly refill. Drain the tank twice before using the water.



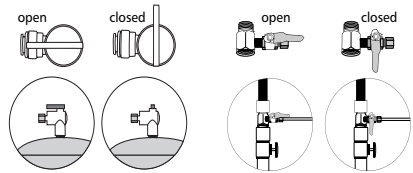
Filter Replacement

Before initiating a filter replacement, make sure you have access to replacement filters, and replacement o-rings (as needed).

□ Step 1

Close the ball valve located at the top of the storage tank. When the valve lever is perpendicular to the valve body, the valve is in the "closed" position

Close the water feed valve and open the reverse-osmosis faucet to relieve system pressure. (If water continues to pour from the faucet, either or both of the ball valve or the feed water valve is open).



□ Step 2

Unscrew the filter housings. Use a filter wrench (contact Pure-Tel by R&M Water Group) if the housing is too tight.

Match replacement filters to their counterparts to ensure correct replacement and position of filters. Remove and discard spent filters. Install replacement filters.

□ Step 3

Check the o-ring inside the canister for cracks and normal wear. Replace the o-ring if necessary. Ensure the o-ring is seated before tightening the housing.

□ Step 4

When the housings are securely tightened, repressurize the system by opening the ball valve and the feed water valve.

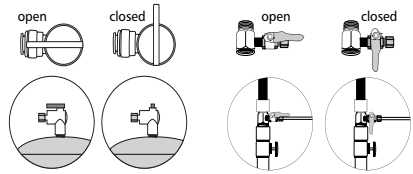
Open the faucet to flush the system prior to drinking to remove carbon dust and preservatives. Allow the storage tank to empty. Allow six hours for the system to properly refill. Drain the tank twice before using the water.

Membrane Replacement

Before initiating a membrane replacement, make sure you have access to the replacement membrane, Vaseline lubricant or silicone grease, and replacement o-rings (as needed).

□ Step 1

Close the ball valve located at the top of the storage tank. When the valve lever is perpendicular to the valve body, the valve is in the "closed" position



Close the water feed valve and open the reverse-osmosis faucet to relieve system pressure. (If water continues to pour from the faucet, either or both of the ball valve or the feed water valve is open).

□ Step 2

Remove the single white tube connected to the membrane housing lid.

Turn the membrane-housing lid counter-clockwise to open the housing. If the lid is too tight, use a crescent wrench to loosen.

□ Step 3

Pull the membrane from the housing. Use pliers if the membrane is difficult to remove. Dispose of any excess water inside the housing.

Using the membrane posts, remove the replacement membrane from packaging.

CATION: Do NOT touch the outer-wrapping of the membrane. Acids and oils from your skin will damage the membrane and subsequently decrease performance.



Membrane Replacement (con't)

□ **Step 4**

Lubricate the o-rings on the lower membrane post. Use the Vaseline or silicone grease to lubricate.

Push the membrane into the housing (o-rings first). The membrane will seat when it reaches the appropriate location in the housing.

Once the membrane is seated, replace the cap and re-connect the tubing to the fitting cap.

□ **Step 5**

Repressurize the system by opening the ball valve and the feed water valve.

Open the faucet to flush the system prior to drinking. Allow the storage tank to empty. Allow six hours for the system to properly refill. Drain the tank twice before using the water.



Troubleshooting

Symptom	Possible Cause	Remedy
Water leaking from air-gap window in body of faucet	<ul style="list-style-type: none"> • Sink drain is clogged. • Faucet drain line is clogged. • Drain line is too long or kinked. • Air in system. 	<p>Clean drain and trap.</p> <p>Disconnect $\frac{3}{8}$" drain line and clean out. Clean fitting in drain clamp connector. Clean air-gap window by blowing through hole in faucet. Reposition connector if necessary.</p> <p>Shorten line to minimum needed or straighten as necessary.</p> <p>Hold finger over hole for 10–20 seconds.</p>
Unit produces loud ‘gurgling’ noise in sink.	<ul style="list-style-type: none"> • Drain clamp connector not mounted properly. • Air in system (new installations or upon filter replacement) • Obstructed drain line • Faucet drain line installed improperly. 	<p>Reposition connector.</p> <p>Noise should lessen during first week of operation.</p> <p>Clean drain line. Make sure drain line is not connected to disposal or dishwasher line.</p> <p>Reinstall drain line.</p>
Water is dripping from faucet spout.	<p>Internal faucet valve is mis-adjusted.</p> <ul style="list-style-type: none"> • Handle sticking or worn. 	<p>To adjust valve, remove spout by pulling upward. Push horizontally on handle to remove from T-nut. Using a small standard screwdriver, turn the slotted valve (under T-nut) clockwise slightly. Reinstall handle and spout, making sure handle slips easily over T-nut. If drop cannot be eliminated by adjustment, obtain repair kit from the factory.</p> <p>Obtain faucet repair kit from factory.</p>
Water is leaking at faucet base.	Faucet is misaligned.	Center faucet base on the mounting gasket.

Troubleshooting (con't)

Symptom	Possible Cause	Remedy
No (or very little) water in storage tank.	<ul style="list-style-type: none"> • Filter cartridges have failed. • Filter cartridges out of sequence. • Too much or too little air pressure in storage tank. • Automatic shut-off valve malfunctioning. • Kinked lines • Check valve clogged • Incoming water pressure too low. 	<p>Replace filter cartridges as described in Regular System Maintenance. Note: Prefilters should last up to six months, but may require more frequent replacement in areas having high levels of contaminants.</p> <p>Install cartridges in proper sequence.</p> <p>Check pressure with a bicycle-type air-pressure gauge. Adjust pressure to a minimum of eight psi and maximum of ten psi.</p> <p>Check lines to valve for correct hook-up. Ensure water is running to drain (listen for water flow at air-gap window on faucet). Replace automatic shutoff valve if necessary.</p> <p>Straighten lines if necessary.</p> <p>Clean or replace (valve is located inside fitting connected to tubing on membrane housing).</p> <p>Check water line where it comes into the house to ensure a minimum of 40 psi. If low, contact Pure-Tel by R&M Water Group for remedies.</p>
Unit only produces two gallons in 24 hours. (Low water production)	<ul style="list-style-type: none"> • Kinks in system tubing. • Low (cold) feed water temperature • Storage-tank pressure too low. • Filters are clogged. • Membrane clogged/ old <p>Incoming water pressure too low.</p>	<p>Straighten or replace tubing as necessary.</p> <p>Be aware that cooler water temperatures decrease production. You may need to increase feed water temperature.</p> <p>Check pressure with a low-pressure air gauge and increase to maximum of ten psi. If diaphragm inside storage tank has become unseated, it may be necessary to disconnect the tank and turn it upside down over the sink to totally empty all the water (before checking air pressure).</p> <p>Replace filters</p> <p>Replace membrane.</p> <p>Check water line where it comes into the house. Ensure a minimum of 40 psi. If low, contact Pure-Tel by R&M Water for remedies.</p>



Troubleshooting (con't)

Symptom	Possible Cause	Remedy
Water runs to drain continuously.	<ul style="list-style-type: none"> • Very heavy drinking water usage (or ice-maker usage). • Feed water line is kinked. • Automatic shutoff valve is malfunctioning. • Incoming water pressure too low. 	<p>Check unit in morning after it has run overnight. If unit has stopped running and storage tank is full, the unit is operating properly and household demand for drinking water exceeds the capacity for the RO system. RO's water production can be increased by obtaining a higher output membrane or larger storage tank from the factory.</p> <p>Straighten or replace as necessary.</p> <p>Replace, making sure to re-connect properly.</p> <p>Check water line where it comes into the house to ensure a minimum of 40 psi. If low, contact Pure-Tel by R&M Water Group for details.</p>
Milky or cloudy water.	<ul style="list-style-type: none"> • Air in system. 	<p>Air in system is normal upon initial installation or after replacing filter cartridges. Allow the system to operate normally and the water should clear within a week.</p>
Water leakage at filter bowls.	<ul style="list-style-type: none"> • Filter bowls are loose. • Filter bowls are too tight. • Housing o-rings are missing, damaged, or unseated. • Burr on bowl or cap where o-ring seats. 	<p>Tighten bowls. Do not overtighten.</p> <p>Loosen bowls and retighten properly. If leak persists, obtain new o-rings from Pure-Tel by R&M Water Group.</p> <p>Replace or reposition o-ring as necessary.</p> <p>Remove burr carefully with fine sandpaper or emery cloth.</p>
Purified water has off-taste or odor.	<ul style="list-style-type: none"> • Polishing filter exhausted. • Carbon filter exhausted. • Membrane fouled / old • Accumulated taste and odors in storage tank. 	<p>Replace post-polishing filter.</p> <p>Replace activated carbon filter.</p> <p>Send water sample to Pure-Tel by R&M Water Group for analysis. Replace reverse osmosis membrane if necessary.</p> <p>Sanitize storage tank.</p>

Replacement Parts

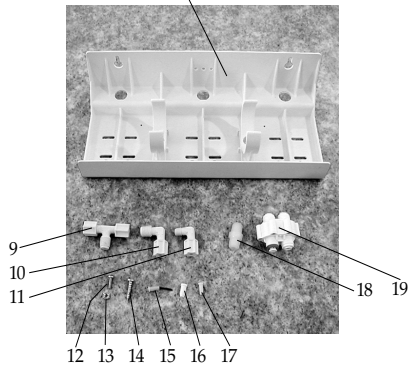
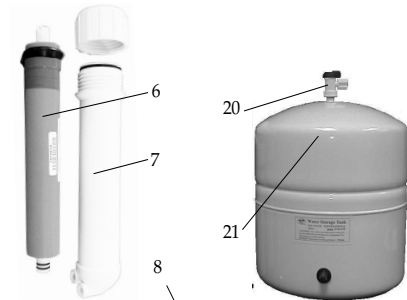
Part Number	Description
1. FLTR-3125	2x10 GAC inline
2. FLTR-3900	GAC filter
3. FLTR-2112	Carbon block
4. FLTR-1010	5-micron prefilter
5. HSG-1000	10" HSG, white
6. MEM-1015	TFC 36 gpd membrane
7. HSG-1020	Membrane housing
8. ROA-1240	Bracket, plastic
9. FTG-2480	Male run T
10. FTG-2230	1/4"x1/4" elbow
11. FTG-2225	1/4"x1/8" elbow
12. ROA-3425	Bolt
13. ROA-3430	Nut
14. ROA-3420	Screw
15. ROA-2260	DLFC
16. ROA-1300	Check valve, JACO
17. TB-1200	1/4" tubing insert
18. FTG-6000	1/4" hex nipple
19. ROA-1015	Auto shutoff
20. FTG-3005	Ball valve
21. ROA-3245	Storage tank

Items Not Shown:

ROA-2020	RO faucet
RO-PACKET-3/8 AG	Installation packet
MON-9015	Water-quality test kit
TB-1055	1/4" white tubing
TB-1085	3/8" black tubing



Replacement Filter Pack: FLTR-FP5-CTA/TFC





Notes



Notes

Installation Checklist

After all tubing connects have been made, use the following checklist to ensure proper pressurization and performance of the Pure-Tel by R&M Water Group RO system.

Installer's
initials

- _____ Open feed saddle valve connected to blue tubing.
Check for leaks. Any leaks must be repaired before continuing.
- _____ Open the ball valve on top of the storage tank.
- _____ Check all tubing connects for tightness and proper angle to prevent tube kinking.
- _____ Open faucet periodically to release air that has built up in the tank.
- _____ Let the unit fill storage tank. It will take approximately four hours. After the tank is full, open the RO faucet and drain all the water. The water will be black at first, it's cleaning the carbon dust of the post filter. Fill and drain the tank twice before drinking the water—this flushes preservatives the membrane is stored in.
- _____ System installation should be completed in accordance with all state and local plumbing codes.

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

_____ installed by

_____ date

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