

PUREBLUEH2O Cost Co reverse osmosis unit. REVERSE OSMOSIS

WATER FILTRATION SYSTEM MODEL PB-TLR04H5OT Instruction manual



INSTRUCTION MANUAL for a PUREBLUEH2O REVERSE OSMOSIS WATER FILTRATION SYSTEM MODEL PB-TLR04H5OT

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 follow. Keep this Manual for future reference.

Operational Parameters

Installation must be in compliance with State and local plumbing regulations. Do not use with micro biologically unsafe water or of unknown quality without adequate disinfection before or after the system. System is intended to be installed using the cold water supply only.

Operating Temperatures: Maximum 100°F (37.8°C) Minimum 40°F (4.4°C)

Operating Pressure: Maximum 100 psi (7.0 kg/cm²) Minimum 40 psi (2.80 kg/cm²)

pH Parameters: Maximum 11 Minimum 2

Iron: Maximum 0.2 ppm

TDS (Total Dissolved Solids) < 1800 ppm

Turbidity <5 NTU

Hardness Maximum 10 Grains Per Gallon*

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

Note: System will operate with hardness over 10 grains but the membrane life may be shortened. The addition of a water softener may lengthen the membrane life.

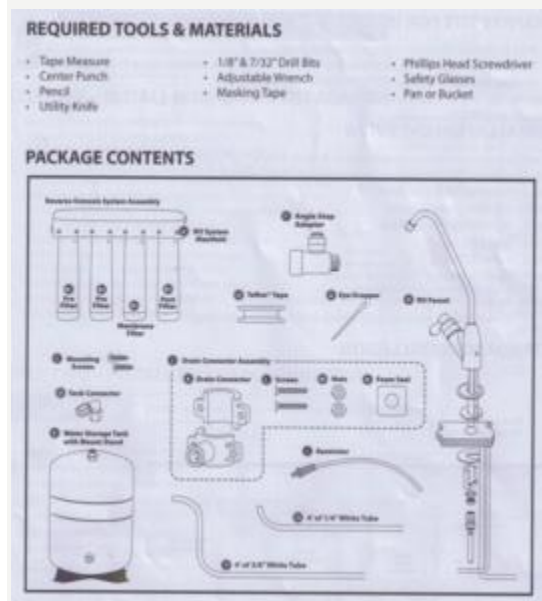
Water Pressure: The operating water pressure in your home should be tested over, a 24 hour period to attain the maximum pressure. If the incoming water pressure is above 80 psi then a water pressure regulator is required. A booster pump is needed for incoming water pressure under 40psi.

Copper Tube: Reverse Osmosis water should not be run through copper tube as the purity of the water will leach copper, which will cause an undesired taste in water and pin holes may form in the tube.

Note: Poly tubing is recommended.

Maintenance of Filters for Model PB-TLR04HSOT:

Part Number	Description	Replacement
PB-TLR04SEDT	Stage 1 -Sediment	Every 6 months
PB-TLR04CB2T	Stage 2 – Pre-Carbon	Every 6 months
PB-TLR04MC50T	Stage 3 – RO Membrane	Every 2-5 years
PB-TLR04CB4T	Stage 4 – Post-Carbon	Every 1 year -Annually



REQUIRED TOOLS & MATERIALS

- Tape Measure • 1/8" & 7/32" Drill Bits • Phillips Head Screwdriver
- Center Punch • Adjustable Wrench • Safety Glasses
- Pencil • Masking Tape • Pan or Bucket
- Utility Knife

PACKAGE CONTENTS

Reverse Osmosis System Assembly; RO System Manifold; Pre Filter, Pre Filter, Post Filter, Membrane Filter; Angle Stop Adapter; Teflon- Tape; Eye Dropper; RO Faucet; Mounting Screws; Tank Connector

Water Storage Tank with Mount Stand; Drain Connector Assembly; Drain Connector ; Screws; Nuts; Foam Seal; Restrictor; 4' of 1/4" White Tube; 4' of 3/8" White Tube

PUREBLUEH2O

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 assembly from cabinet and set aside.

Note: The Filter System should not be installed in a location susceptible to freezing.

INSTALLATION OVERVIEW

There are seven easy steps to installing your RO unit, They are as follows:

Step 1 – Install Angle Stop Adapter (water source for filter system)

Step 2 – Install RO Drain Connector

Step 3 – Install RO Filter Assembly

Step 4 – Install Water Storage Tank

Steps 5 – Install RO Faucet

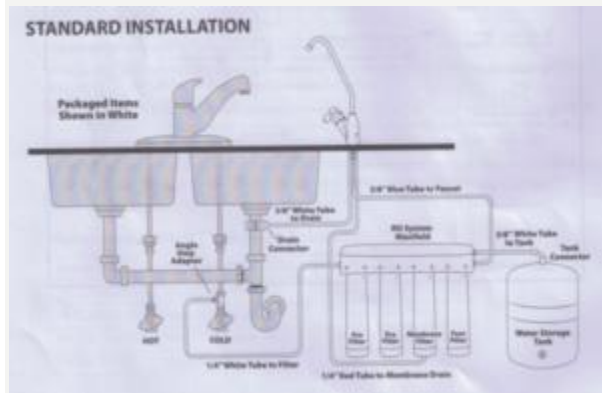
Step 6 – Connect Tubing

Step 7 – Sanitize, Pressure Test, Purge System

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

If installing in a remote location, please refer to Step Seven on page 9.

STANDARD INSTALLATION



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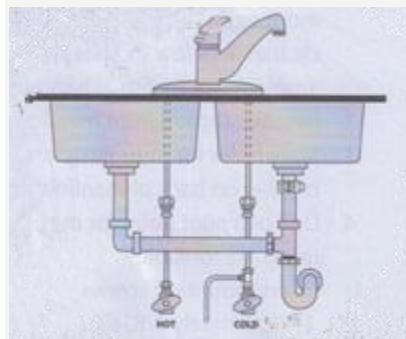
PUREBLUEH2O

WARNING

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

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.

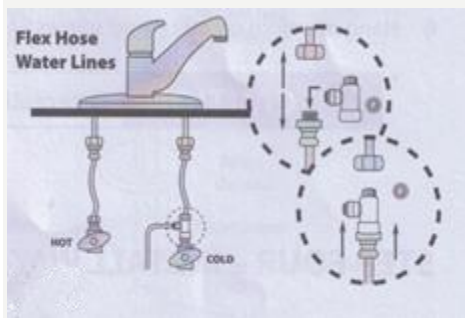
3 Disconnect the cold water line from the cold water angle stop valve. Note: You may need a plumber to shorten the supply line pipe using a hacksaw or pipe cutter to accommodate the Kitchen Faucet Adapter if pipe is rigid.

4 Screw on Angle Stop Adapter to cold water angle stop valve. Do not over tighten Angle Stop Adapter

(See diagram to the right)

5 Screw the cold water supply line to the male thread side of the Angle Stop Adapter.

Caution: Do not over tighten.



STEP TWO – INSTALL RO DRAIN CONNECTOR

Cation – Please wear safety glasses to protect eyes when drilling.

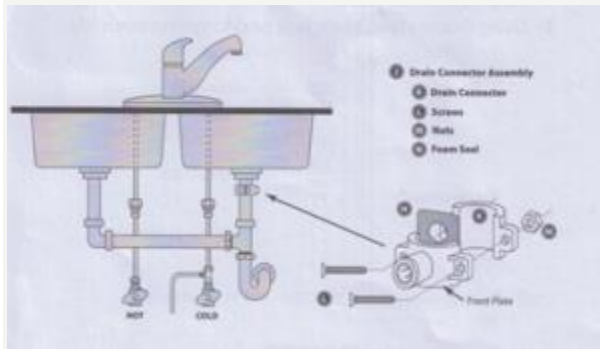
1 Identify drain outlet location.

2 From back of foam seal, remove protective cover. Knock center hole out, align holes, and attach to front plate of drain connector.

3 Allowing room for drilling, position the drain connector (K) on sink drain pipe above drain trap.

4 Securely tighten nuts (M) and screws (L).

5 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.



J – Drain Connector Assembly

K – Drain Connector

L – Screws

M -Nuts

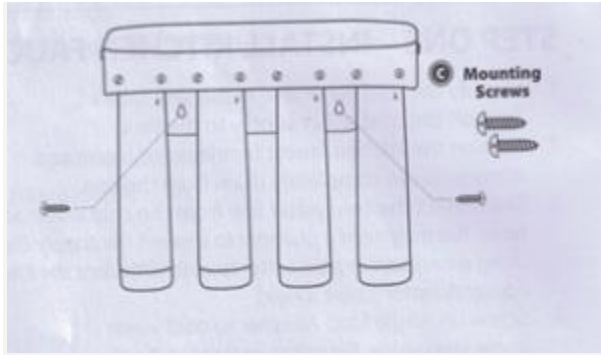
N -Foam Seal

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PURE BLUE H2O – solutions for water reverse osmosis repair Phoenix Arizona, Scottsdale Arizona, Cave Creek Arizona, Laveen Arizona and Water Filtration for San Tan Valley Arizona, Casa Grande Arizona and Queen Creek Arizona.

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 Remove shroud from manifold and set aside.
- 3 Mark holes for mounting screws using built-in bracket on back of manifold.
- 4 Drill two pilot holes for mounting brackets using 1/8" drill bit*
- 5 Insert mounting screws into the wall leaving approximately 3/8" of each screw exposed.
- 6 Hang manifold on mounting screws.



STEP FOUR – INSTALL WATER STORAGE TANK for Water Filtration and water treatment in Buckeye, AZ Avondale AZ, Phoenix Arizona reverse osmosis storage tanks and water treatment for Scottsdale Arizona and Fountain Hills Arizona.

1 On the nipple on top of the tank, apply 4-6 wraps of Teflon® tape.

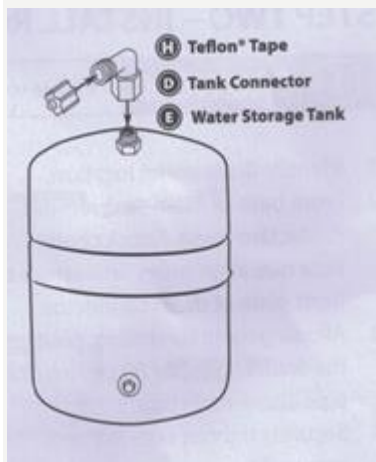
2 Hand-tighten the tank connector onto the tank

nipple 3-4 times. Note: do not cross-thread or over-tighten.

3 Using mount stand, place tank next to system assembly.

(Teflon® Tape

(a Tank Connector and Water Storage Tank)



PUREBLUE H2O Cost Co Ro parts and repair and filters.

STEP FIVE – INSTALL RO FAUCET Figure: 1A

You will need a sink top hole of 1.25" in diameter. Note: Drilling holes into solid surfaces or surfaces made of stone should only be performed by a qualified and certified installer. Boyett's Family Rayne Water Conditioning specializes and drilling Reverse Osmosis faucets and we also carry many styles of RO faucets.

1 Ensure faucet base will mount flat against surface.

2 Ensure there is a sufficient length of all three tubes between faucet body and manifold 3/8" white drain tube, 1/4" red air gap tube and 3/8" blue filtered water faucet tube.

3 Loosen locking nut on stem allowing white"spacer"to slide down shank and split washer to slide out and set it aside (see faucet drawing in figure 1A on right).

4 Route 3 tubes on faucet from top of sink through hole in sink. Make sure all tubing is inserted through hole without restriction.

5 Lower faucet body, making sure rubber washer and escutcheon plate fit properly over hole on sink.

6 Insert split washer above spacer and begin to tighten faucet to sink base. Make sure to check alignment of rubber washer and escutcheon plate to make sure they are centered properly (refer to figure 1 A).

7 If alignment proper, continue to fasten faucet to sink base by tightening locking nut enough to hold the faucet base in place.

8 Adjust faucet body handle as desired and complete tightening faucet to sink base, making sure to not over tighten.

Words displayed in Figure: 1 A (faucet)

Display

Circuit Board

Battery

(CR2032)

Battery Seat

Large Rubber Washer

Split Washer

Spacer

Lockwasher Locking Nut

Faucet

Air Gap

Window

Brine Input

Brine Output

Escutcheon

Counter Top

1.25" Hole

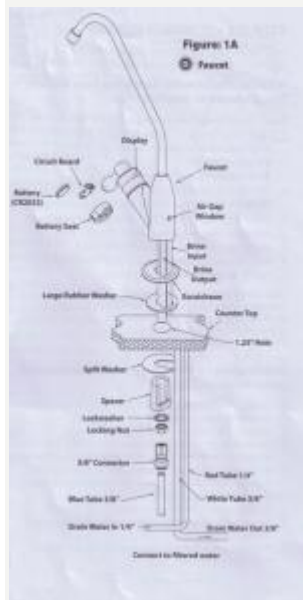
3/8" Connector

Red Tube 1/4"

Blue Tube 3/8" White Tube 3/8"

Drain Water In 1/4" Drain Water Out 3/8"

Connect to filtered water



PURE BLUEH2O COST CO RO FILTERS, FITTINGS, PARTS AND REPAIR. BOYETT'S FAMILY RAYNE WATER CONDITIONING SPECIALIZES IN RO REPAIR, SCOTTSDALE, AZ, CAVE CREEK AZ, TEMPE AZ, MESA AZ, QUEEN CREEK AZ, SAN TAN VALLEY AZ.

STEP SIX – CONNECT TUBING

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

Install RO, REVERSE OSMOSIS tubing PHOENIX ARIZONA, FOUNTAIN HILLS ARIZONA for water supply line from kitchen faucet adaptor to manifold inlet. RO FAUCETS BUCKEYE, AZ GILBERT AZ, SCOTTSDALE AZ.

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

1 Locate and identify 1/4" white tubing (Q) determine length necessary to connect to manifold (A) where it is labeled "INLET"

Allow sufficient tubing to prevent line kinking.

2 With utility knife, cut the 1/4" white tubing squarely to desired length needed to reach the Angle Stop Adapter (F).

3 With water, wet one end of tubing and push into the faucet connection adaptor approximately 5/8" until it stops.

Note: make sure tube is fully inserted until it stops.

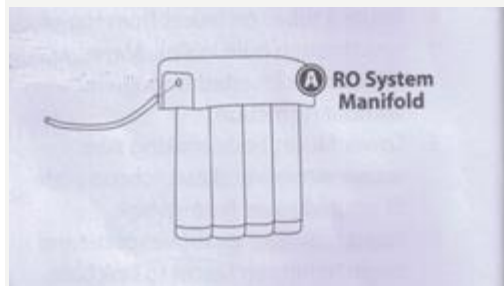
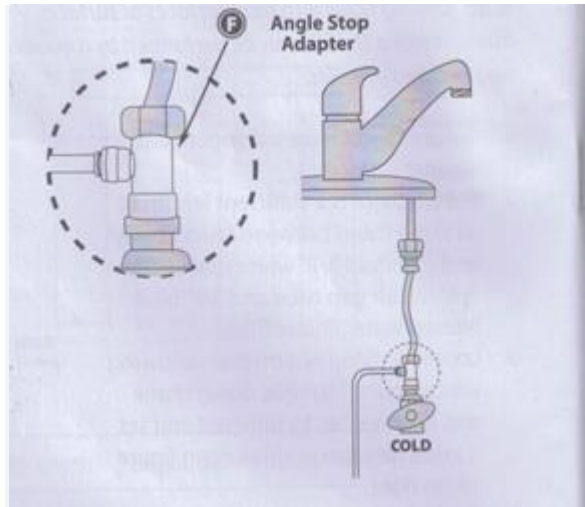
4 Wet other end of tubing and push into the manifold "INLET" approximately 5/8" until it stops. Inlet Water.

Angle Stop Adapter FOR RO UNITS SCOTTSDALE, AZ PARADISE VALLEY, AZ GOODYEAR ARIZONA.

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 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" blue tubing already attached to faucet stem as described in Step 2 on page 6.

2 Identify blue tubing coming down from faucet.

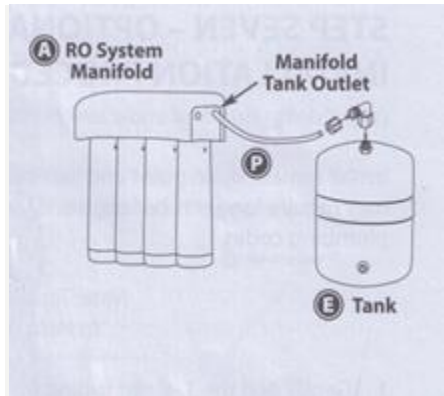
3 Measure length needed to connect to "manifold outlet" on RO system.

4 If necessary, cut tubing to desired length, making sure to leave enough tubing to freely assemble and attach. Make sure to cut tubing squarely

and cleanly with no abrasive edges.

5 Wet end of blue tubing and insert into manifold outlet labeled "faucet"

Push firmly into fitting and then gently tug to make sure connection is secure.



PUREBLUEH20 COST CO RO; BOYETT'S CARRY PARTS; FILTERS AND PROVIDES SERVICE AND SANITIZATION OF THE RO STORAGE TANK FOR CAVE CREEK, AZ SAN TAN VALLEY, AZ CHANDLER, AZ AHWATUKEE, AZ FOUNTAIN HILLS, AZ SCOTTSDALE, AZ PHOENIX AZ AND BUCKEYE AZ. WE ALSO PROVIDE WATER FILTRATION AND WHOLE HOUSE WATER FILTRATION FOR CAVE CREEK, AZ SAN TAN VALLEY, AZ CHANDLER, AZ AHWATUKEE, AZ FOUNTAIN HILLS, AZ SCOTTSDALE, AZ PHOENIX AZ AND BUCKEYE AZ.

STEP SIX – CONNECT TUBING (Continued)

Connect tubing from manifold to tank.

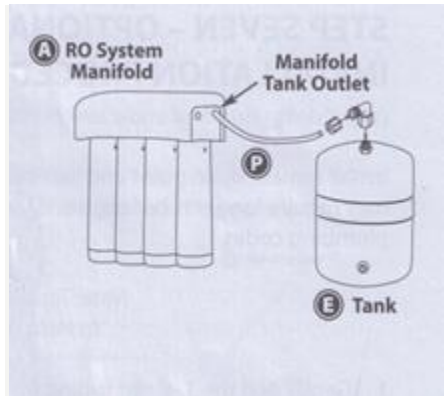
1 Use 4 ft. 3/8" white tubing (P), measure and identify length needed to connect tank outlet labeled "TANK" on (A) manifold to (E) tank, plus four to six inches (4" to 6").

2 Cut white tubing square with a utility knife.

3 Wet tubing end and insert into compression nut of tank connector fitting (connected to tank) all the way to the tube stop inside the fitting 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.



WORDS IN PICTURE:

RO System Manifold

Manifold

Tank Outlet

Air gap from faucet to RO Assembly.

1 Locate membrane drain port on bottom of Stage 3 (50 GPD Membrane) filter.

2 By pushing down on the red collar while pulling plug with other hand, remove black plug from membrane filter drain port.

3 Identify 1/4" red tubing attached to faucet body.

4 Identify length necessary to connect to drain port on membrane vessel.

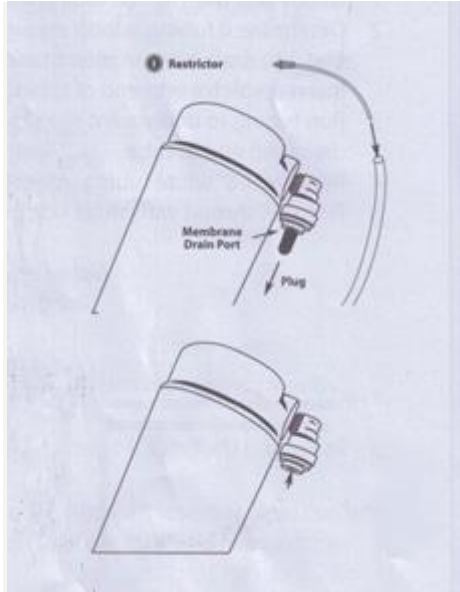
5 With utility knife, cut the 1/4" red tubing squarely to desired length.

6 Insert restrictor into end of red tubing. (See diagram below)

7 Insert red tubing into membrane drain filter approximately 5/8" until it stops.

8 Gently tug on red tubing to ensure it is firmly seated in fitting.

Note: Do not remove restrictor from tube.



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

1 Identify 3/8" white tubing attached to faucet body.

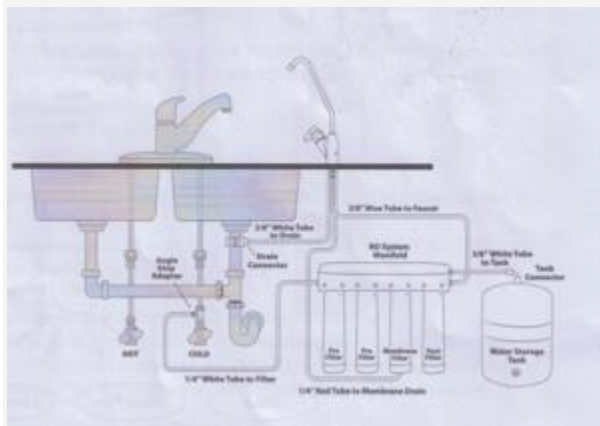
2 Attach other end of tubing to collet on sink drain connector.

3 Cut enough 3/8" white tubing to route in as straight as possible without any twists, kinks, loops or valleys.

4 Cut end of 3/8" white tubing squarely with utility knife.

5 Insert into fitting approximately 1" until it stops.

6 Gently tug on white tubing to ensure it is firmly seated in fitting.



PURE BLUEH2O COST CO RO PARTS, SERVICE AND FILTERS. REVERSE OSMOSIS REPAIR

STEP SEVEN – OPTIONAL REMOTE INSTALLATION PROCEDURE

(skip if doing standard under sink installation)

Install remote drain point and leave 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.

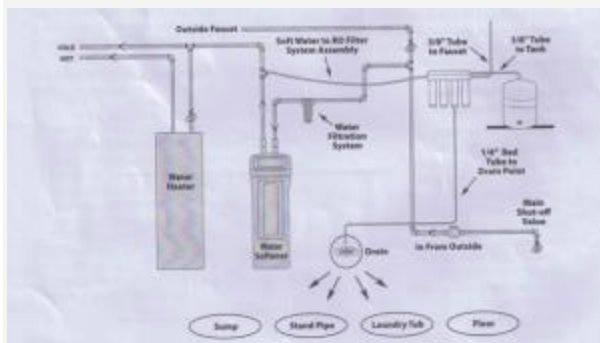
2 Determine if tubing is long enough to reach drain. If yes, insert restrictor in end of tubing and insert this end into drain port on membrane filter. If no, replace red tubing with tubing of adequate length and insert restrictor into end of tubing. Insert this end of tubing into drain port on membrane 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" white tubing from faucet body and discard.

5 Reinstall 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.



Words in picture:

Outside Faucet

3/8" reverse osmosis Tube

RO 3/8" Tube for reverse osmosis repair San Tan Valley, AZ and Queen Creek, AZ; Scottsdale, AZ; Cave Creek, AZ.

Soft Water to RO Filter to RO Faucet to RO storage Tanks in Mesa, AZ.

HOT Water HEATER System Assembly

Water Water

Water Heater Filtration Tube

System Drain Point

Main water Value

Water Softener Drain line

PUREBLUEH2O. Cost Co Reverse Osmosis system, service, parts and repairs.

STEP EIGHT – SANITIZE, PRESSURE TEST & PURGE SYSTEM

Sanitize

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

1 Shut off water supply to RO system.

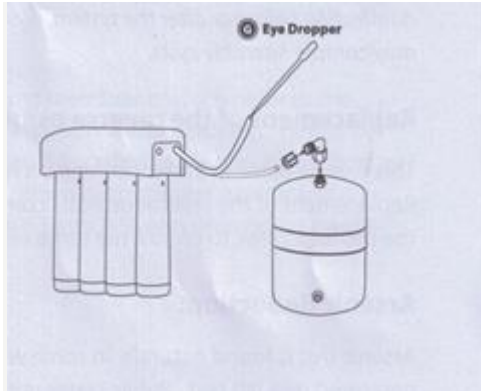
2 Open faucet. If tank is not empty, allow to drain until empty.

3 Disconnect white tubing from tank by unscrewing nut from tank connector fitting.

4 With included eyedropper, add 3ml household bleach (5.25%), into open end of tank white tubing. Warning: Bleach needs to be handled according to manufacturer's instructions.

5 Reconnect tank and white tubing to tank connector fitting.

6 Sanitization will be completed during the following pressure test and purge.



Words in picture:

Eye Dropper to sanitize RO tank. Boyett's Rayne Water Conditioning inventory sanitization fluid for reverse osmosis units.

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

Pressure Test

Warning: 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 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).

2 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.

3 After the storage tank has filled, open the RO faucet to flush the tank completely. You will know 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.

PURE BLUE H2O

NOTE: See Product Data Sheet (PDS) for specifications.

ADDITIONAL SYSTEM PERFORMANCE INFORMATION

Non-potable Water Sources:

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

Replacement of the reverse osmosis membrane cartridge:

This reverse osmosis system contains a replaceable component critical to the efficiency of the system. Replacement of the reverse osmosis component should be with one of identical specifications, as defined by the manufacturer, to ensure the same efficiency and contaminant reduction performance.

Arsenic Reduction:

Arsenic (As) is found naturally in some well water. Arsenic in water has no color, taste or odor. It must be measured by a lab test. Public water utilities must have their water tested for arsenic. You can get the result from your water utility. If you have your own well, you can have the water tested by an accredited lab. The local health department or the state environmental health agency can provide a list of certified labs. Further information about arsenic in water can be found through the EPA's website at www.epa.gov/sfaewater/arsenic.html.

There are two forms of arsenic: pentavalent + arsenic (As (V)) and trivalent arsenic (As (III)). Special sampling procedures are needed for a lab to determine what type and how much of each type of arsenic is in the water. In well water, arsenic may be pentavalent, trivalent, or a combination of both. Reverse osmosis membranes are effective at reducing pentavalent arsenic but not trivalent arsenic.

+ pentavalent-having a valence of five

PURE BLUE H2O COST CO RO UNIT; FILTERS, SERVICE AND PARTS.

SYSTEM MAINTENANCE

RO Prefilter/RO Postfilter

Note: The prefilter and post-filters are replaceable sediment and activated carbon cartridges located in stages 1, 2 and 4. It is recommended to replace stage 1 and 2 every 6 months, stage 3 every 2-5 years and stage 4 annually. 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.

RO Membrane Cartridge

The RO cartridge is located in stage 3. This membrane is a spiral 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 24 months. When output water quality and production rate decrease, it is time to replace the membrane cartridge. Lasts 2-5 years depending on incoming water quality.

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 1000 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.

RO Cartridge Replacement

Remove 1/4" drain tube from bottom of membrane cartridge.

Remove the pre-filter cartridges by turning each to the left and pulling down to first relieve pressure on the RO filter.

3 Turn RO filter to the left while pulling down and remove.

4 Remove post-filter cartridge by turning to the left while pulling down.

5 Discard cartridges.

6 Install new cartridges in reverse order turning to the right to secure:

4- Post-Carbon Block Cartridge

3 – RO Membrane Cartridge

2 – Pre-Carbon Block Cartridge

1 – Sediment Cartridge

7 Install 1/4" red tube into fitting at bottom of membrane cartridge. (Do not remove (I) flow restrictor)

8 Purge RO Filter System as outlined in Step Eight (page 10).

PUREBLUEH2O COST CO RO UNIT, FILTERS; SERVICE, MEMBRANES, RO STORAGE TANKS, PARTS IN THE GILBERT, AZ; CHANDLER ARIZONA AND PHOENIX, AZ.

Faucet Battery Replacement

1 Pull out battery drawer located on faucet handle.

2 Install battery.

3 Reset: Install battery, blue light should be flashing, followed by the red light.

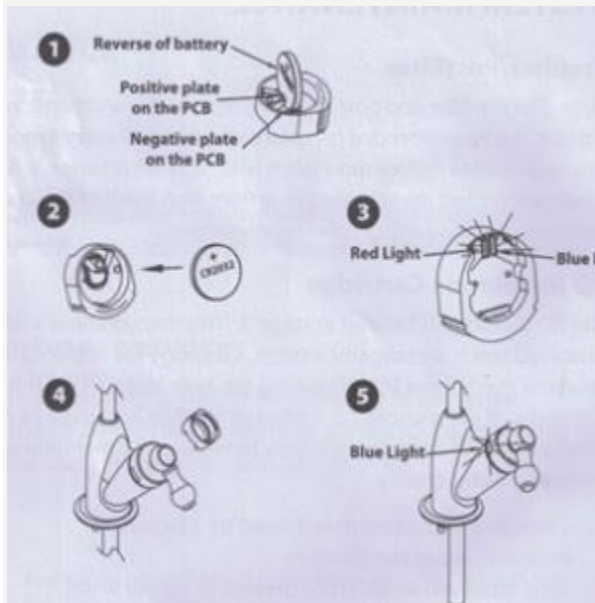
4 Install into faucet canopy.

5 Open filtered water with blue signal.

LED Function:

1 Timer and LED display function built in.

2 The blue light flashes during normal operation indicating filters are good. If the operation time exceeds 6 months and/or the red light flashes change the appropriate filters and battery.



Filter Replacement

1 Turn cartridge 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.

2 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.

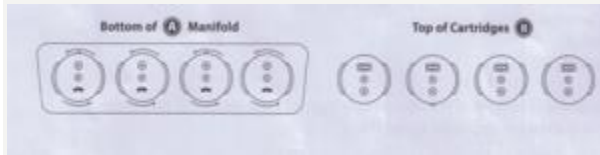
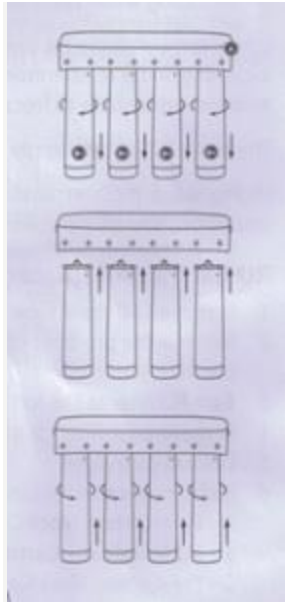
Note: Part No. PB-TLR04SEDT (Sediment) should be in stage 1, Part No. PBTLR04CB2T (Pre-Carbon) should be in stage 2, Part No. PB-TLR04MC50T (RO Membrane) should be in stage 3 and Part No. PB-TLR04CB4T (Post-Carbon) should be in stage 4.

3 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.

4 Turn cartridge to the right until it stops.

5 Turn on cold water shut-off valve and RO faucet. Check for leaks.

6 Pressure test and Purge per Step Eight above.



Words in pictures:

Reverse osmosis Manifold

Top of reverse osmosis filter Cartridges

PUREBLUEH2O COST CO RO UNIT, FILTERS; SERVICE, MEMBRANES, RO STORAGE TANKS, DRAIN FLOW RESTRICTOR PARTS IN THE LAWEEN, AZ; AHWATUKEE ARIZONA AND Foothills, AZ; GOLD CANYON, ARIZONA; SURPRISE, AZ, PERALTA TRAIL, AZ.

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 above.