



CRYSTAL QUEST® POE/Whole House Water Treatment Installation Guide

All models are subject to change without notice.



Arrival Inspection

- Inspect the carton and water filter for evidence of rough handling and concealed damages. **Report damage to the carrier.** Damage claims should be filed with the carrier directly. All damage related matters need to be addressed directly with the carrier.
- Remove the carton, top packaging tray, and shipping bag from the System.
- Make sure to inspect the System further, ensuring that:
 - 1) There no physical damage, 2) All accessories are present, 3) The system is clean and dust free.

Safety Information

- Read the instructions carefully and learn the specific details regarding installation and use. Failure to follow them could cause serious property damage. **Crystal Quest® accepts no liability for property damage.**
- The System should be installed to meet local, state and federal plumbing codes and health department rules and regulations. These guidelines must be followed as the system is installed.
- All equipment needs to be plumbed into the water system by a licensed plumber.
- Check with your local public works department for plumbing codes.
- Use the System on a potable, safe-to-drink, COLD water supply only.
- The System is for indoor use only.
- The System will stand up to 80 pounds per square inch (psi) water pressure. We recommend installing a pressure reducing valve before the System. This will reduce the water pressure flow to the system and will prevent pressure build-up on the system when not in use. The most common operating water pressure range is 35-65 psi.
- Turn the cold water line off while installing the system.

Crystal Quest accepts no liability for property damage.

- Make certain the electrical outlet is grounded by having it checked by an electrician or by using a UL Listed Circuit Analyzer. Units are furnished with 3-prong grounded plugs to protect you against the possibility of electrical shock. Do not under any circumstances remove the ground prong and never splice or cut the electrical cord.
- The outlet must be within reach of the power cord. Do not use an extension cord. Extension cords that are too long or too light do not deliver sufficient voltage to the unit and could present a safety hazard.
- Disconnect power before installing or servicing the unit. Do not plug in unit or change fuses while standing on wet or damp surfaces and do not touch any other metal surfaces while plugging in product or changing fuses.
- All water treatment installations must conform to local plumbing, electrical and sanitation codes. These codes are established for your protection.
- When installation is completed, re-check the System to make sure there are no leaks or drips.
- Do not use the System where water is microbiologically unsafe or with water of unknown quality.

CAUTION: INSTALL WATER FILTER IN AN AREA PROTECTED FROM FLOODING, RAIN, DIRECT SUN-LIGHT, DUST, SNOW AND FREEZING. THE WARRANTY DOES NOT COVER DAMAGE INCURRED AS A RESULT OF EXPOSURE TO WEATHER.

IMPORTANT NOTICE

Pay Special Attention to the Following Points

- Installation must be made within a protected area covered from the elements and freezing. The unit must be protected from direct sunlight, rain, dust, flooding, snow and freezing.

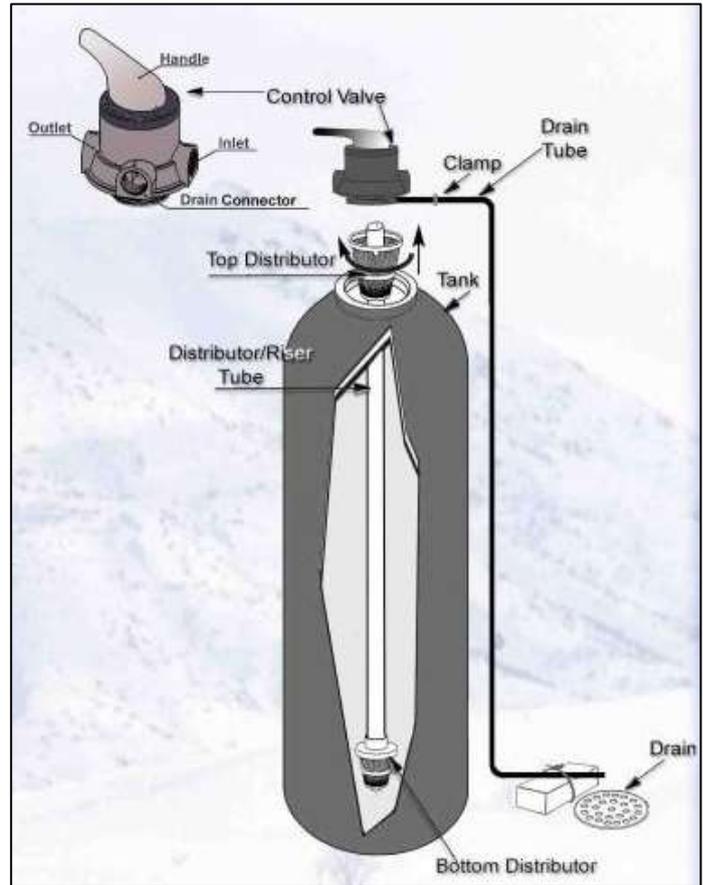
Failure to do so will void the warranty.

- Make sure the unit is plugged into a 115 volt grounded outlet which contains a fuse or circuit breaker of 20 amps or less.

- Do not run 1/2" I.D. semi-rigid drain tube over 20 running feet. If over 20 ft., increase drain line tubing size to 3/4" I.D. for the entire length of tube.

- Make sure control valve is correctly set for your specific water needs.

- If more than one unit is being installed, the regeneration/back wash times should be staggered.



REMEMBER, YOUR PURCHASE IS AN INVESTMENT AND NEEDS TO BE MAINTAINED PROPERLY.

Typical Installation And System Location

Select the location of your water filter with care. Various conditions which contribute to proper location are as follows:

- Locate as close as possible to water supply source.

- Locate as close as possible to a floor or laundry tub drain.

- Select location where floor is level. If floor is rough and/or uneven, you can level by placing cabinet or tanks on 3/4" plywood, and shim to level as needed.

- Locate the water filter in the supply line BEFORE the water heater.

- Temperatures above 100°F (38°C) will damage the water filter and void the factory warranty.

- Install water filter in an area protected from flooding, rain, direct sun light, dust, snow and freezing. The warranty does not cover damage incurred as a result of exposure to the weather.

- Allow sufficient space around the installation for easy servicing.

- Provide a non-switched 110/120V, 60Hz power source for the control valve (if equipped).



Unpacking Tank And Inspection

- Unpack the water filter from the shipping box.
- Check the entire water filter for any missing parts.
- Parts needed to install the water filter are packaged in a plastic bag. To avoid loss of the small parts, keep them packaged until you are ready to use them. Be sure not to discard components hidden in packaging.
- Unscrew and remove the top cap from unit. *Fig 1*
- We recommend you keep the original boxes and packing materials.
- Unplug slip cap from the PVC tube called a "distributor/riser tube".
Fig 2



Figure 1

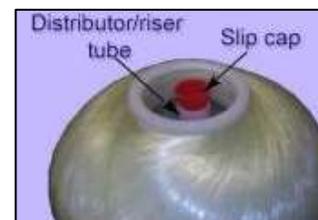


Figure 2

Unpacking Control Valve

- Unpack the control valve from the shipping box.



Figure 3

CAUTION - DO NOT OVERTIGHTEN! Hand tighten, plus a half turn with a wrench.

- To prevent leaks, lubricate the inner and outer O-rings on the bottom of control valve with Silicone Lubricant. *Fig 3*
- Snap and twist top on the distributor to the bottom of control valve. *Fig 4*
- Attach control valve to the tank by sliding distributor tube into top distributor. Distributor tube needs to be equal to the top of the resin tank (not more than 1/4" above). Lubricate the inner O-ring prior to attaching the control valve to the tank. *Fig 5*

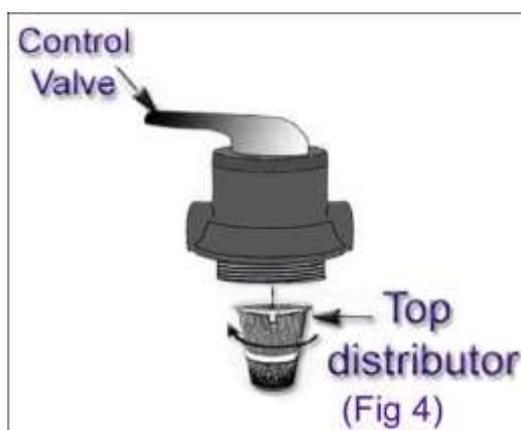


Figure 4

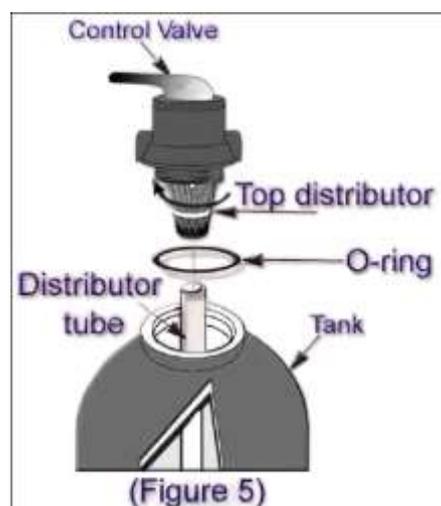
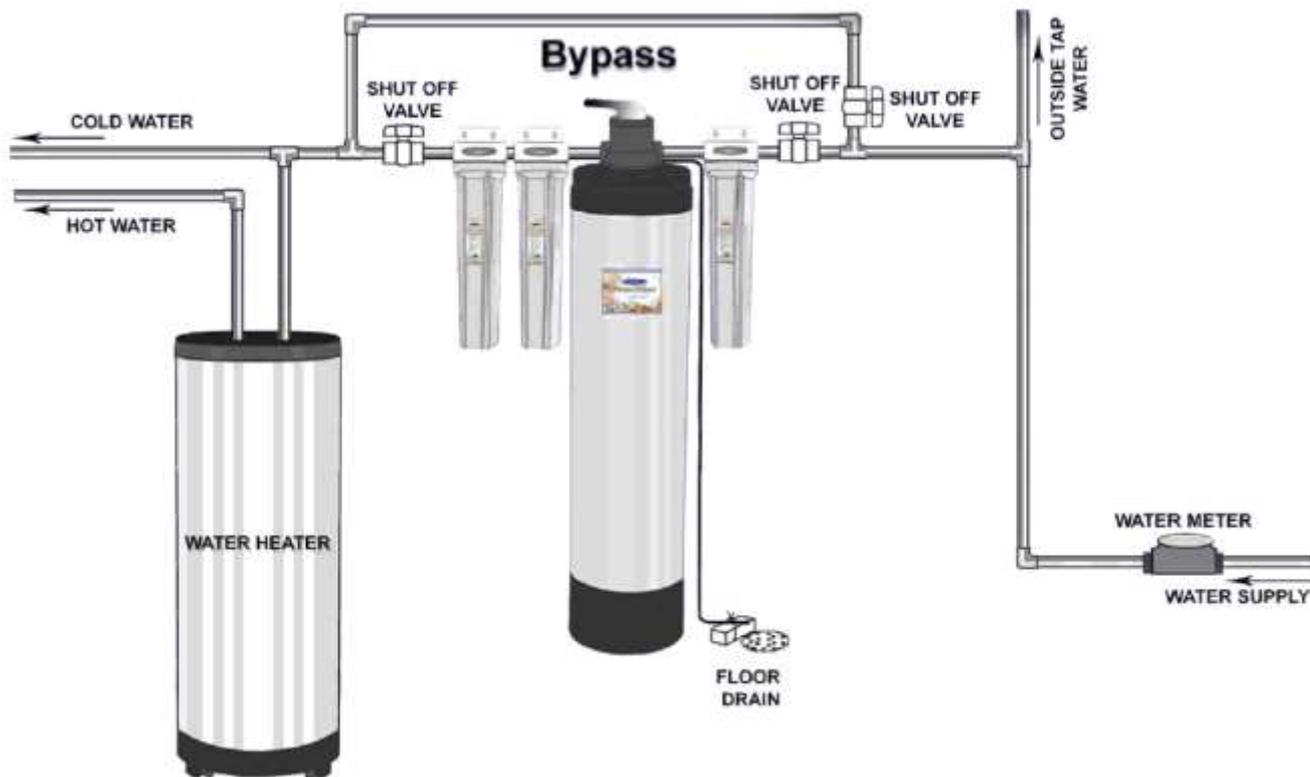


Figure 5

Installation Diagram



Connecting Water Filter To Water Supply

- Turn off the main water shutoff valve.
- Open all plumbing fixtures in the house including all outside faucets in order to drain the lines of all water possible.
- Cut and remove a section of the main incoming water line near where the system is to be installed. Allow this line to drain thoroughly.

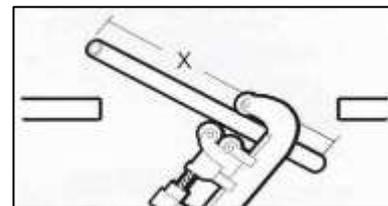


Figure 8

- You need 3/4" or 1" male thread adapters to plumb the system.
- If copper piping is used and soldered, make sure to remove the valve from the tank and attach your plumbing adapters to the valve away from tank. This simple step will ensure that you are not applying heat as you solder or pressure as you tighten the adapters onto the valve, while they are mounted on the valve body itself.
- Make sure to solder a 3" to 5" piece of copper pipe into each of the two pipe adapters away from the tank, then let them cool off before threading each one onto tank.
- After they cool off, apply Teflon® tape onto the male adapters for the valve, and securely tighten them to the tank.



Figure 9

- Position the water filter near main water supply line, drain and electrical outlet. Position so main water supply shut-off valve is between water filter and main water source.

NOTE: Install unit in an area protected from the elements and freezing.

- Close main water supply shutoff valve.

- Cut out section of main water supply line downstream from the supply shut off, at position water filter is to be installed. Using a pipe cutter, sand (file) cut ends of pipe to assure that they are square and smooth. (Fig 8).

- Open nearest faucet to relieve pressure and drain plumbing lines.

- Check plumbing inlet and outlet to ensure the proper flow of water through the unit. Match plumbing inlet and outlet with arrows located on the sides of the valve (Fig 9).

CAUTION: Install in the direction of the arrows.

- Before installing 3/4" or 1" fittings to the inlet and outlet of the bypass valve or manifold, wrap the threads 3 times around with Teflon® tape. Install 3/4" or 1" fittings. CAUTION: Do not over tighten.

- Soldering is no longer required to plumb with copper pipe. Instead, use 3/4" or 1" compression fittings. Connect plumbing as shown below *Figs 10, 11 & 12*. **Turn fittings clockwise to tighten. Do not over tighten.**

CAUTION: IF COPPER PIPING WITH SWEAT FITTINGS IS USED, DO NOT SWEAT DIRECTLY INTO THE IN/OUT MANIFOLD OF WATER FILTER VALVE OR BYPASS VALVE. HEAT WILL DAMAGE PLASTIC PARTS.

Connecting to galvanized pipe or nipple

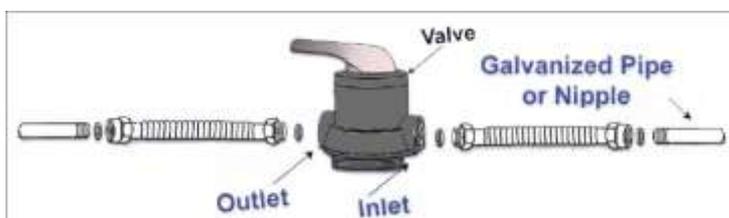


Figure 10

Connecting to plastic pipe

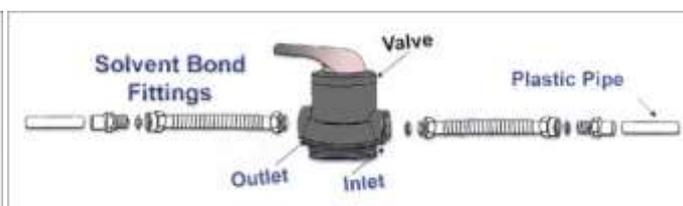


Figure 11

Connecting to copper pipe

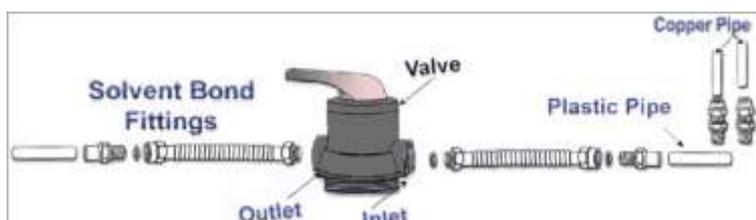


Figure 12

Connecting Pre & Post Filters To Water Supply

WARNING: A copper or galvanized cold water pipe may be used to ground electrical outlets in the home. Failure to maintain this ground path may result in an electric shock hazard.

Cut Water Line

- Turn off the water supply and open a nearby faucet to drain the water out of pipes.
- Using a tape measure or ruler, measure the distance "X" as shown.

Fig 13

- Using a pipe cutter, cut pipe. Sand (file) cut ends of pipe to assure that they are square and smooth. *Fig 14*

- Select a secure location surface to install filter and mounting bracket. The location should align the filter system with inlet and outlet pipe and should not cause the pipes to bend or damage. Mark the distance "X" on the pipe.

- The bracket can be used as a template for marking the location of the mounting screws.

- Use four hex washer-head screws to mount bracket to the wall firmly. Use proper anchors on wall. Anchors are NOT included.

- Apply 4 or 5 wraps of Teflon® tape, in a clockwise direction, to the pipe threads of each fitting. DO NOT use joint compound on any parts connecting to filter housing.

- Soldering is no longer required to plumb with copper pipe. Instead, use 3/4" or 1" compression fittings. Connect plumbing as see *Figs 15, 16 & 17*

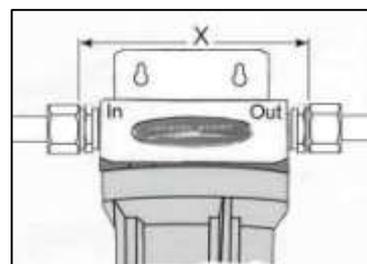


Figure 13

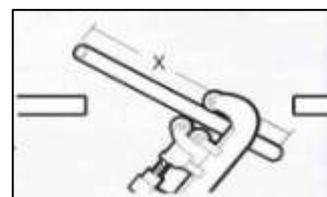
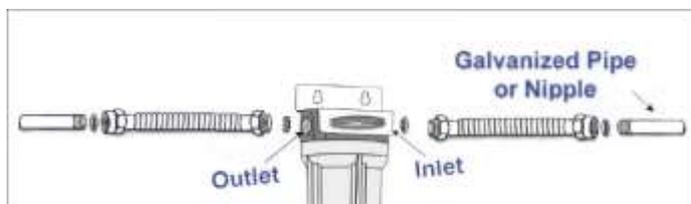


Figure 14

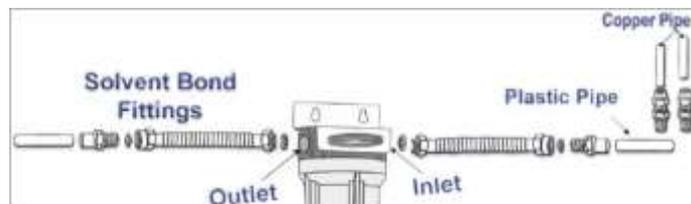
CAUTION: IF COPPER PIPING WITH SWEAT FITTINGS IS USED, DO NOT SWEAT DIRECTLY INTO THE IN/OUT MANIFOLD OF SOFTENER VALVE OR BYPASS VALVE. HEAT WILL DAMAGE PLASTIC PARTS.

Turn fitting clockwise to tighten. Do not over tighten

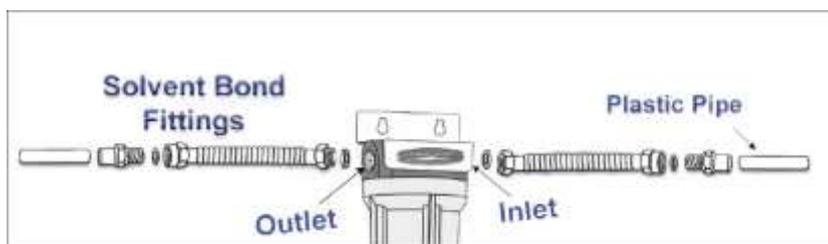
Connecting to galvanized pipe (*Fig. 15*)



Connecting to copper pipe (*Fig. 16*)



Connecting to plastic pipe (*Fig. 17*)



Connecting Tubing To Control Valve

- Press 1/2" I.D. semi-rigid or non-collapsible plastic tubing onto drain line hose barb until snug and secure with a hose clamp. *Figs 18 & 19*

NOTE: Do not run 1/2" drain line over 20'. If over 20', increase tube size to 3/4"



Figure 18

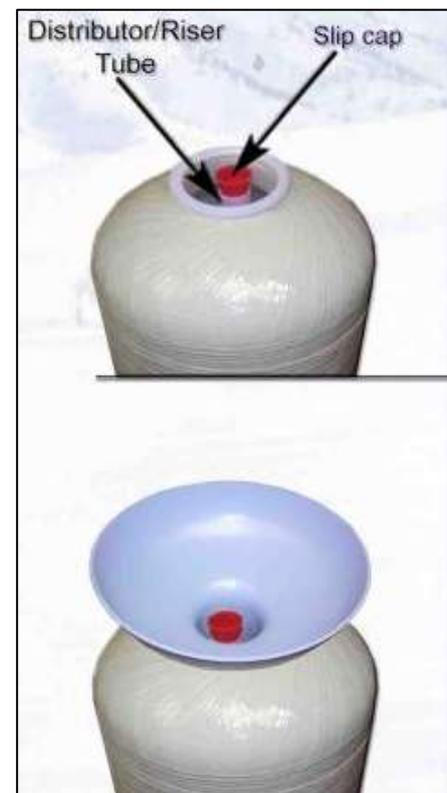


Figure 19

- Open main water supply shutoff valve. CHECK FOR LEAKS! Close previously opened faucet.

Guide for Replacing Media

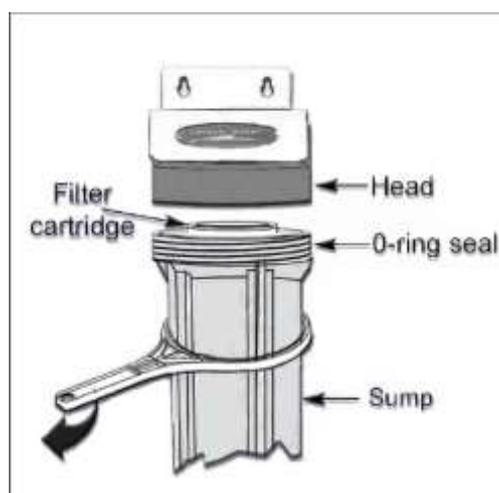
- Turn off the water to the unit by the bypass valve.
- Disconnect the unit from your plumbing.
- Carefully unscrew the control valve off the top of the tank.
- Inside of your tank is plastic tubing known as the "distributor/riser tube". The riser tube sucks up the water from the bottom of the tank during normal operation, and forces water to the bottom of the tank during the backwash operation. After removing the control valve from the tank, remove the riser tube from inside the mineral tank.
- Lay the tank on its side, or lay over trash can, to remove media.
- Rinse the inside of the tank clean with a garden hose.
- Discard old resin.
- Save old gravel.
- Stand media tank straight up.
- Plug a slip cup or put a piece of tape over the top of the distributor/riser tube to prevent media from entering the tube while you are loading the media.
- Put the media funnel in the top of the media tank with the riser tube still inside and centered.
- The gravel goes into the tank first. When pouring in the gravel, make sure the riser tube is firmly on the bottom of the tank. Once you add your media, if the riser tube is pulled out of the gravel, it is impossible to put back in without removing the other media from the tank.



- Pour the resin/media into the funnel, slowly letting it fall down inside the media tank around the riser tube. If you have a twin alternating system, divide the resin/media equally between the two tanks.
- When you have poured all of the resin/media into the media tank, it should be approximately 3/4 full.
- Remove the funnel and then the slip plug or tape from the top of the riser tube.
- Brush any loose resin/media off the top opening of the tank. Clean the top edge with a cloth so the O-ring can seal securely to the valve base.
- Look at the bottom of your control valve and you will see an upper basket. Inside of the basket, the control valve has O-rings that will seal on the riser tube. Tilt the valve over on top of the media tank making sure the top of the riser tube inserts inside the opening of the upper basket. Guide the riser into the O-ring seal and tighten gently. Be careful not to over-torque the valve as the threads are plastic.
- Screw the control valve back onto the top of the tank. Be sure to hold the control valve where there will be no damage to the valve from the pressure you exert from tightening the valve back onto the tank.
- Reconnect your plumbing to your unit. Turn the water to the unit on and check for leaks.
- Leave all faucets turned off inside the house, and open a single faucet (such as an outside faucet) letting the water run for 3-5 minutes. This rinses the new resin/media of inside the tank, and any particles or color will rinse out through the one open faucet, and not throughout your home plumbing system.
- Manually turn your backwash control knob slowly through a complete cycle, allowing the water to run through the unit in each position for a minute or so.
- Once the backwash knob is back in the service position, your unit is back in service and ready to operate!

Filter Cartridge Replacement

- You should change your filter cartridge when the water flow is noticeably reduced.
- Turn off water to filter. Water must be shut off from an upstream valve or bypass.
- Unscrew the filter sump and discard used cartridge.
- Wash the filter sump with mild soap and water. Do not use harsh cleaners or hot water.
- Inspect the filter sump O-ring. Make sure it is lightly lubricated with clean food grade silicone grease or Vaseline. Be sure the O-ring is seated in the groove. It is recommended that you replace the O-ring as needed or if it becomes damaged.



- Place a new filter cartridge into the sump, making sure it is centered and completely seated on the bottom seal.
- Reinstall the filter sump to the unit. Use the canister wrench to tighten the sump. DO NOT OVERTIGHTEN.
- Slowly turn on water to the filter by using the upstream shut-off valve or bypass.

- After installation, flush the cartridge for 10 minutes, wait one hour, then flush again for 10 minutes before using the water.

Troubleshooting

Just installed unit and water is not filtered.

Problem	Correction
Has the system been installed properly?	Re-read the instructions to install the System properly.
Has the unit been piped in backwards?	Check in & out arrows on the control valve and make sure water is flowing consistent with the direction arrows are pointing.
Top distributor not working?	Make sure it been installed properly.
Control valve is not working correctly and causing water flow not to go through the system.	Shut off water supply, depressurize the system*, de attach the valve head from unit and exchange it.

** Always shut off the water to depressurize the system prior to removing filters or tank.*

Replacement Cartridges

- Item No. CQE-RC-04014 5-Micron Carbon Block Filter Cartridge 12-18 months lifetime expectancy
- Item No. CQE-RC-04015 5-Micron Sediment Reusable Pleated Filter Cartridge 12-18 months lifetime expectancy
- Item No. CQE-RC-04016 2-7/8" x 9-3/4" Multi Stage PLUS Filter Cartridge 18-36 months lifetime expectancy
- Item No. CQE-RC-04019 2-7/8" x 9-3/4" Fluoride Filter Cartridge 12-18 months lifetime expectancy
- Item No. CQE-RC-04020 2-7/8" x 9-3/4" Nitrate Filter Cartridge 12-18 months lifetime expectancy
- Item No. CQE-RC-04021 2-7/8" x 9-3/4" Arsenic Filter Cartridge 12-18 months lifetime expectancy

Installation and Maintenance Instructions

KEEP THIS MANUAL FOR FUTURE REFERENCE AND UNIT MAINTENANCE

Online warranty registration
<http://crystalquest.com/warranty.htm>
Product design is subject to change without notice.
For further assistance contact your Crystal Quest® dealer
Or visit us @ www.crystalquest.com

One-year Limited Warranty

CRYSTAL QUEST® warrants CRYSTAL QUEST® Whole House Water Filter System for one year from the date of purchase against all defects in materials and workmanship when used in compliance with the manual. This warranty does not include replacement cartridge unless defective upon receipt. CRYSTAL QUEST® disclaims all implied warranties, including without limitations, warranties of merchantability and fitness for a particular purpose. If for any reason the product proves to be defective within one year from the date of purchase, please call for assistance. This warranty gives you specific legal rights and you may have other legal rights which vary from state to state. CRYSTAL QUEST® assumes no responsibility for incidental or consequential damages; for damages arising out of misuse of the product or the use of any unauthorized attachment. Some states do not allow the exclusion or limitation of implied warranties or incidental or consequential damages, so the above limitations or exclusions may not apply to you. Should service be required during or after the warranty period or should you have any questions regarding how to use your CRYSTAL QUEST® Whole House Water Filter System, contact our Technical Department at service@crystalquest.com, Monday through Friday, 9 A.M. to 5 P.M. Eastern Standard Time.



Authorized Distributor

Contact us to purchase or for further assistance



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