CRYSTAL QUEST™
Water Filters

Crystal Quest® Point of Entry Whole House Water Filter System

Installation and Operation Guide

Eagle Redox Alloy® 6500 & 9500 NSF

ISO 9001: 2008 CERTIFIED MANUFACTURER

OPERATING SPECIFICATIONS

Pressure Range:	30-60 psi (2.1-4.1 bar)
Temperature Range:	40-100°F (4.4-37.7°C)
Optimum Service Flow:	8-13 gpm (30.28-49.21 lpm)*

CE

ENERGY STAR

*Depending on the size of the system

Read all instructions, specifications, cautions, and warnings before installing and using your water filter system.

All drawings, pictures, colors and sizes are approximate for illustrative purposes only and may not exactly resemble the end product.

CRYSTAL QUEST™
Water Filters

IMPORTANT INFORMATION

Installation must be made within an area protected from the elements and freezing. The unit must be protected from rain, dust, flooding, snow, freezing, and direct sunlight (the system's exposure to direct sunlight may cause algae growth). Failure to comply will void the warranty.

- Do not run ½" I.D. semi-rigid drain tube more than 20 running feet. If over 20 ft., increase drain line tubing size to ¾" I.D. for the entire length of tube.
- Have control valve set correctly for your specific water needs.
- If more than one unit is being installed, the regeneration/backwash times should be staggered.
- A pressure regulator, such as a slow-flow regulator, must be installed in front of the unit's water inlet if the water pressure (including any possible pressure spikes) could exceed 60 psi. The most common operating water pressure range is 35-65 psi. Failure to comply will void the warranty. Crystal Quest® assumes no liability for damage caused by excessive water pressure.
- Check all the connections (i.e., water hose/tubing, connectors/fittings) to ensure proper connection and to avoid leaks.
- The filter cartridges used with this system have a limited service life. Changes in taste, odor, color, and/or flow of the water indicate that the cartridge should be replaced. Change cartridges routinely.
- After prolonged periods of non-use (such as during a vacation), it is recommended that the system be flushed thoroughly. Let water run for 10-20 minutes before using.
- Check plumbing inlet and outlet to ensure the proper flow of water through the system.
- Plug system into a 110 volt outlet which contains a fuse or circuit breaker of 20 amps.
- Locate the system near a cold water supply line. Do not set the system farther than 15 ft. from the cold water line.
- Do not use the system on cold water supply line with less than 20 psi.
- Do not use the system where water is microbiologically unsafe or with water of unknown quality.
- All water treatment installations must conform to local plumbing, electrical and sanitation codes. These codes are established for your protection. Check with your local public works department for current plumbing codes.
- Installation errors can cause property damage. Crystal Quest® assumes no liability whatsoever for systems improperly installed or those installed by someone other than a licensed plumber or qualified contractor.
- The contaminants or other substances removed or reduced by the selected cartridge(s) are not necessarily in your water. Ask your local water municipality for a copy of their water analysis, or have your water tested by a reputable water lab.

SAFETY PRECAUTIONS

- Read all instructions, specifications, cautions, and warnings before installing and using your water filter system. Learn the specific details regarding installation and use. Failure to follow them could cause serious property damage.

Installation errors can cause property damage. All equipment needs to be plumbed into the water system by a licensed plumber.

These guidelines must be followed during system installation:

- Use the system on a potable, safe-to-drink, COLD water supply only.
- The system is for indoor use only.
- Turn the cold water line off while installing the system.
- When installation is completed, re-check the system to ensure there are no leaks or drips.
- 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.
- The rubber O-ring provides a watertight seal between the cap and the bottom of the housing. Make sure the O-ring is properly seated in the groove below the threads of the housing or a water leak could occur.
- Do not cross-thread fittings or housings. If cross-threaded, place the unit out of service.

GUARANTEED PERFORMANCE

Water testing by an independent third-party lab will attest to contamination removal and validity of toxicology testing. California residents are advised to have their water tested to ensure the water filter system is in compliance with **Proposition 65**.

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

CRYSTAL QUEST™
Water Filters

TABLE OF CONTENTS

Important Information and Safety Precautions 2
Arrival, Unpacking, and Inspection 4
Proper Installation and System Location 4
Installation Diagrams 5
Installing Optional UV Lamps 6
Assemble Water Filter System and Control Valve (Mechanical and Automatic) 7
Programming Automatic Control Valve 8
Connecting Water Filter System to Water Supply 9
Connecting Pre- and Post-Filters to Water Supply 10
ConnectingTubing to Control Valve 11
Connecting Tubing to Brine Tank 12
Guide to Media Replacement 13
Ordering and Replacing Filter Cartridges 14
Troubleshooting 15
System Warranty 16

The system needs to be installed by a licensed plumber in any state or country. Specifically, the following states require a licensed plumber OR allow a *state-registered* installer or contractor to install your water filter system: AR, CA, GA, KS, MA, MI, MN, OK, RI, SC, SD, TX, VT, and WI.

Specifications are subject to change without notice.

Information & Assistance

www.CrystalQuest.com

Customer Service
1-800-934-0051

For Technical Support and Product Information
Hours of Operation: Monday through Friday, 9 AM to 5 PM Eastern Time

Support@CrystalQuest.com

For questions about your order or general comments or questions

All Point of Entry systems must be installed by a licensed plumber to avoid property damage.

ARRIVAL, UNPACKING, AND INSPECTION

- Inspect the carton and water filter for evidence of rough handling and concealed damages. If contents appear damaged, ask driver or contact the carrier for a damage claim form to fill out. Notify shipper immediately.
- Remove components from the shipping carton. Check that all installation parts are present, which includes the unit and installation hardware.
- Make a complete inspection of the system to ensure that:
  a) there are no physical damages to the system,
  b) all accessories are present,
  c) and the system is clean and dust free.
- Pipe, shut-off valves, and fittings are not provided by Crystal Quest®.

Check List		Water Filter System
• Unpack the water filter from the shipping box. • Unpack the control valve from the shipping box.	✔	All Point of Entry Whole House models with backwashing and regeneration/backwash programming
• Unpack the water softener, tannin, or nitrate water filter system from the shipping box.	✔	All Point of Entry Whole House models with regeneration/backwash programming
• Check the entire water filter system for any loss of parts.	✔	All Point of Entry Whole House models with backwashing and regeneration/backwash programming
• Parts needed to install the water filter (control valve and softener) 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.	✔	

- Read all instructions carefully to learn the details for installing and using your P.O.E. water filter system. Failure to follow the Installation and Operations Guide could cause injury and/or property damage.

SYSTEM LOCATION

Select the location of your water filter system with care. For correct installation, refer to the appropriate diagram.

Various conditions which contribute to proper location are as follows:

- Do not locate the system where the environment would offer any risk of water contamination.
- Do not put any liquid other than water into the system.
- Position the water filter near main water supply line, drain and electrical outlet. Position so that main water supply shut-off valve is between water filter and main water source.
- Turn off the water flow to the house while installing system.
- Select location where floor is level. If floor is rough and/or uneven, you can level by placing tanks on 3/4" plywood, and shim to level as needed.
- Install the water filter by positioning it BEFORE the water heater.
- Water temperatures above 100°F (38°C) will damage the water filter. Use on cold water line only.
- Allow sufficient space around the installation area for easy servicing.
- Provide a non-switched 110/120V, 60Hz power source for the control valve (automatic/softener system).

All models are subject to change without notice.

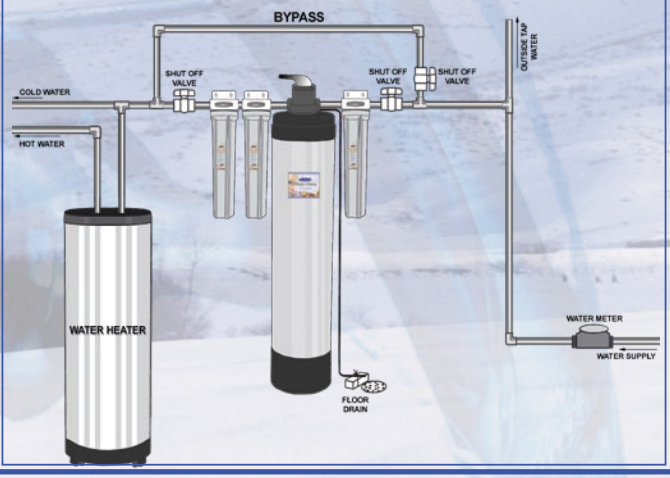
CRYSTAL QUEST™
Water Filters

TYPICAL INSTALLATIONS AND SYSTEM LOCATIONS

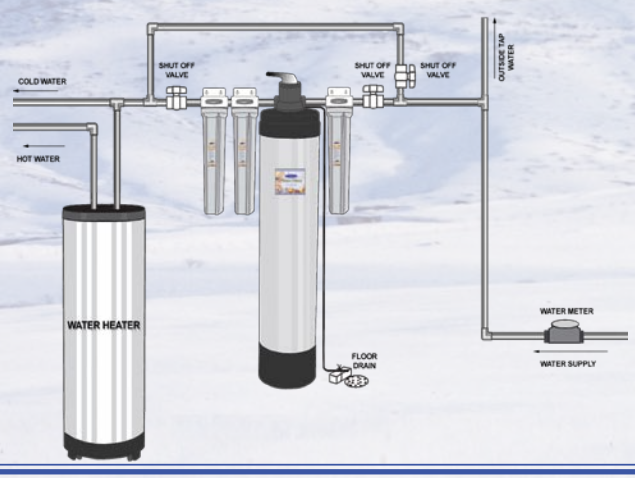
(with backwash or regeneration features)

The system needs to be installed by a licensed plumber in any state or country. Specifically, the following states require a licensed plumber to install the system OR allow a *state-registered* installer or contractor: AR, CA, GA, KS, MA, MI, MN, OK, RI, SC, SD, TX, VT, and WI.

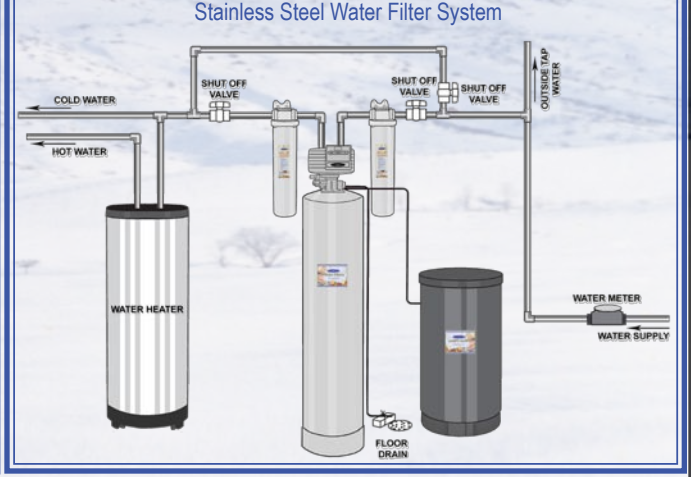
Mechanical System/Polyglass Water Filter System



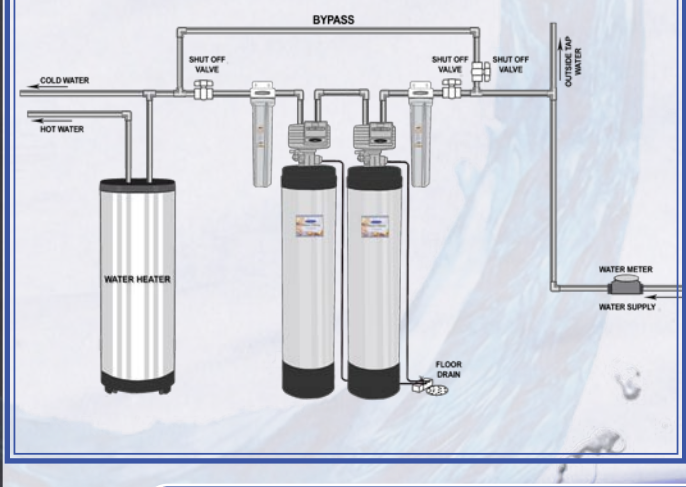
Mechanical System/Polyglass Water Filter System



Softener, Tannin or Nitrate System/ Stainless Steel Water Filter System



Automatic System/Polyglass Water Filter System



Softener, Tannin or Nitrate System/ Triple Stainless Steel Water Filter System

Softener, Tannin or Nitrate System/ Quad Stainless Steel Water Filter System

*See Tank Orientation

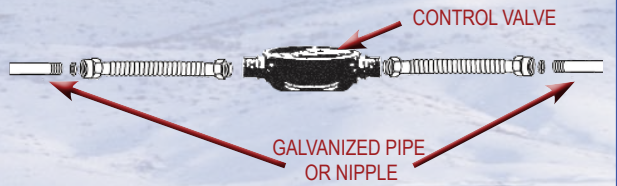
*Orientation of tanks are based on water report/conditions.

Combo systems can be customized based on water conditions/lab reports.

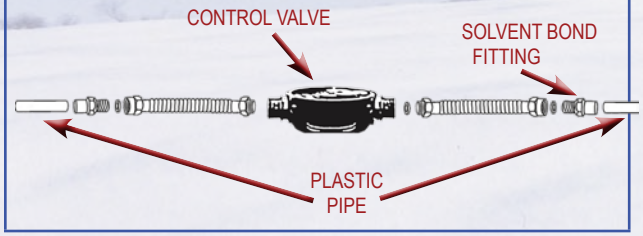
DOWNFLOW WITH NO BACKWASH WATER FILTER SYSTEMS

This system is ideal for acidic water conditions or as a post-filter for a reverse osmosis system to remineralize and enhance pH. This design will allow quick and easy media refill.

Connecting to galvanized pipe



Connecting to plastic pipe



Refer to section "CONNECTING WATER FILTER SYSTEM TO WATER SUPPLY" for detailed instructions.

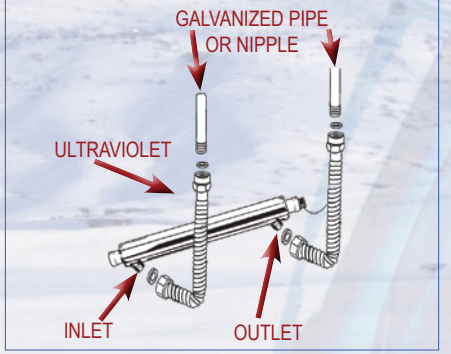
UV Install Hints

- Electronic ballast must be connected to a grounded outlet, and the lamp connector ground wire must be connected to the stainless steel reactor chamber.
- This disinfection system is designed to be mounted horizontally or vertically at the point of use or point of entry, depending on the specific flow rate of the unit.
- The UV disinfection system is intended for indoor use only.
- Do not install disinfection system where it may be exposed to the weather or temperatures above 100°F.

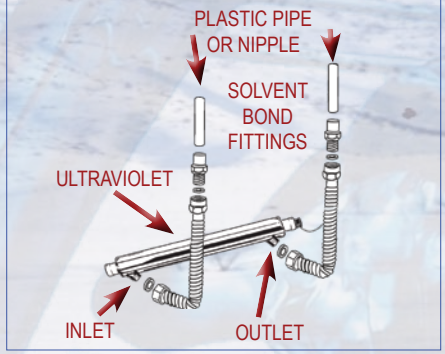
ULTRAVIOLET WATER STERILIZER SYSTEM

This system is great for well water and as an add-on to any whole house water filter. For detailed installation instructions, refer to the UV Installation and Operations Guide.

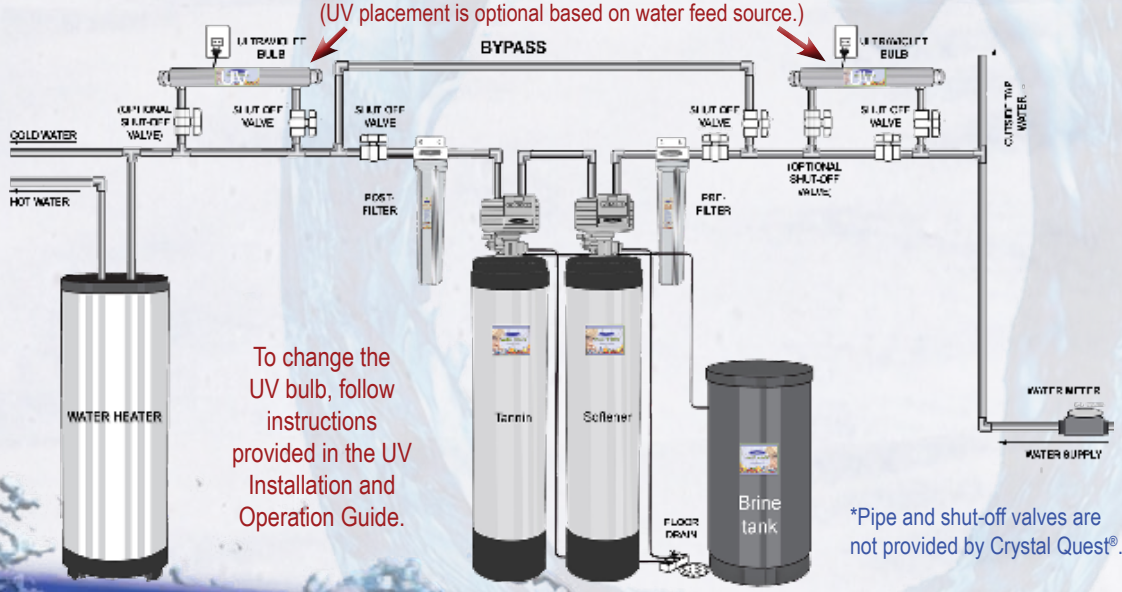
Connecting UV to galvanized pipe*



Connecting UV to plastic pipe



(UV placement is optional based on water feed source.)



To change the UV bulb, follow instructions provided in the UV Installation and Operation Guide.

*Pipe and shut-off valves are not provided by Crystal Quest®.

CRYSTAL QUEST™
Water Filters

ASSEMBLE WATER FILTER SYSTEM WITH CONTROL VALVE and BRINE TANK

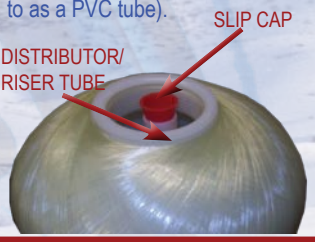
Unpack the control valve from the shipping box. It is recommended that you keep the original boxes and packing materials.

■ 1

Unscrew and remove the top cap from unit.

■ 2

Unplug slip cap from the distributor/riser tube (also referred to as a PVC tube).



■ 3

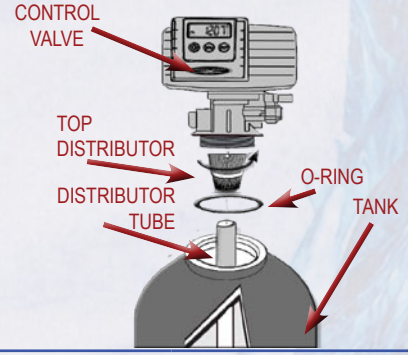
To prevent leaks, lubricate the inner and outer O-rings on the bottom of control valve with food grade silicone lubricant.

■ 4

Twist and lock top distributor to the bottom of control valve. Ensure it is fully locked in place.

■ 5

Attach control valve to the tank by sliding distributor tube into top distributor. Turn control valve clockwise to tighten. 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.

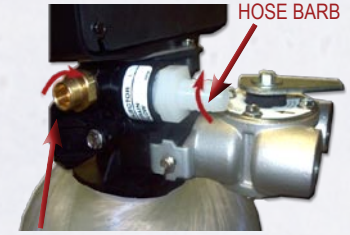


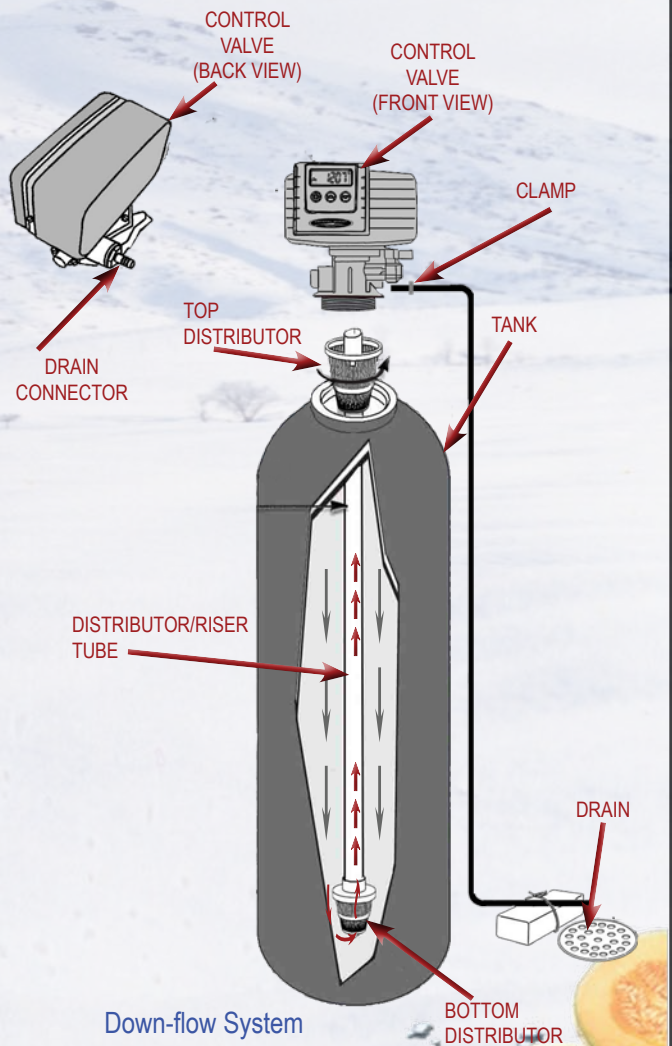
■ 6

Attach bypass valve to the back ports of the control valve by sliding the bypass over the O-rings and tighten (it is held in place by two metal clips and two screws).

■ 7

Attach drain line hose barb and compression nut of the brine tank by turning clockwise to tighten until snug. To prevent leaks, wrap threads of hose barb and compression nut with Teflon® tape clockwise, approximately 3 times around.





Down-flow System

CAUTION - DO NOT OVERTIGHTEN compression nut! Hand tighten and add a half turn with a wrench.

CRYSTAL QUEST™
Water Filters

PROGRAMMING AUTOMATIC CONTROL VALVE

Programming to backwash non-regeneration systems once every 7 days:

1) Use the up or down arrows to set the time to 12:01 PM. Once the time is changed to 12:01 PM, push the Recycle button (refer to Figure A1) to lock it in.
2) Push and hold both arrow buttons until screen changes to read "GAL".
3) Push Recycle button. Screen will read "DF 1b". This is set at factory and will not need to be changed.
4) Push Recycle button. Screen should read "tc". If not, use up/down arrow buttons to set to "tc".
5) Push Recycle button. Screen will read "NT ---1". This is the number of tanks the timer is controlling (one tank). Do not change this.
6) Push Recycle button. Screen should read "DO 7". If not, use up/down arrow buttons to set number to 7.
7) Push Recycle button. Screen should read "RT 2:00".* If not, use up/down arrow buttons to set to 2:00.
8) Push Recycle button. Screen should read "BW 10". If not, use up/down arrow buttons to set to 10.
9) Push Recycle button. Next screen will be "BD 60". Use up/down arrow buttons to change screen to read "OFF".
10) Push Recycle button. Screen will change to time display and programming is locked in.

***If more than one tank is being used, regeneration time (RT 2:00) should be staggered for each tank.**

Programming to backwash Softener, Nitrate, or Tannin systems to regenerate once every 7 days:

1) Use the up/down arrow buttons to set the time to 12:01 PM. Once the time is changed to 12:01 PM, push the Recycle button to lock it in.
2) Push and hold both arrow buttons (Figure A2) until screen changes to read "GAL".
3) Push Recycle button. Screen will read "DF 1b". This is set at factory and will not need to be changed.
4) Push Recycle button. Screen should read "tc". If not, use up/down arrow buttons to set to "tc".
5) Push Recycle button. Screen will read "NT ---1". This is the number of tanks that timer is controlling (one tank). Do not change this.
6) Push Recycle button. Screen should read "DO 7". If not, use up/down arrow buttons to set to 7.
7) Push Recycle button. Screen should read "RT 2:00".* If not, use up/down arrow buttons to set to 2:00.
8) Push Recycle button. Screen should read "BW 10". If not, use up/down arrow buttons to set to 10.
9) Push Recycle button. Screen should read "BD 60". If not, use up/down arrow buttons to set to 60.
10) Push Recycle button. Screen should read "RR 10". If not, use up/down arrow buttons to set to 10.
11) Push Recycle button. Screen should read "BF 12". If not, use up/down arrow buttons to set to 12.
12) Push Recycle button. Screen will change to time display and programming is locked in.

Programming to Backwash and Regenerate using an Automatic Valve

(Refer to instructions for programming Automatic Control Valve)

A1

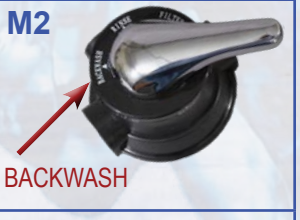
A2

Programming to Backwash using the Mechanical Control Valve

(See instructions below)

M1

M2



M3

- When programming the mechanical valve to backwash, firmly grip the handle, turning it counterclockwise from the service FILTER (M1) position.
- Lock the handle to the BACKWASH (M2) position.
- Allow the water to run through the unit for five minutes or until the water becomes clear and free of dust or media fines.
- Manually turn the control knob clockwise to the service FILTER (M3) position. Your unit is back in service and ready to operate.

CAUTION - Failure to fully lock distributor will cause improper operation.

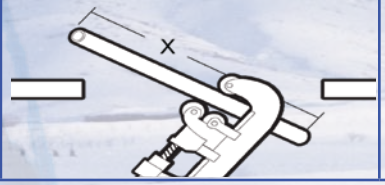
CRYSTAL QUEST™
Water Filters

CONNECTING WATER FILTER SYSTEM TO WATER SUPPLY (Mechanical/Automatic Control Valve)

- 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.
- 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 (Fig 8)
- If copper piping is used and soldered, remove the bypass from the valve assembly and attach your plumbing adapters to the bypass away from the valve. This simple step will ensure that you are not applying heat as you solder, or pressure as you tighten the adapters onto the bypass while they are mounted on the valve body itself.
- Solder a 3" to 5" piece of copper pipe into each of the two pipe adapters away from the valve, then let them cool before threading each one onto the yoke or bypass valve.
- Apply Teflon® tape onto the male adapters for the brass bypass valve when cool, and securely tighten them to the bypass valve. This is done before reattaching them onto the rear of the valve/meter body assembly.
- Close main water supply shutoff valve.
- Open nearest faucet to relieve pressure and drain plumbing lines.

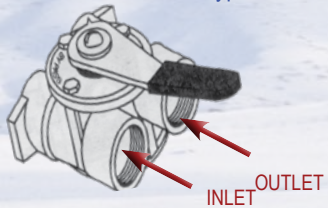
■ 8

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 ensure that they are square and smooth.



■ 9

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 head and on the bypass valve.



MINIMUM MATERIALS NEEDED

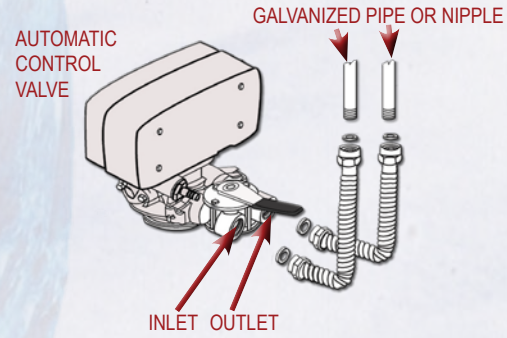
- ¾" or 1" male thread adapters to plumb the system
- Wrenches, either open end or adjustable jaw, sized to fit compression adapters
- Pipe cutter
- Teflon® tape
- Sandpaper or emery cloth
- Before installing ¾" or 1" fittings to the inlet and outlet of the bypass valve or manifold, wrap the threads 3 times around with Teflon® tape. Install ¾" or 1" fittings.
- Soldering is no longer required to plumb with copper pipe. Instead, use ¾" or 1" compression fittings. Connect plumbing as shown below (Fig 10), choosing appropriate connection for mechanical/automatic control valve.

CAUTION:
Do not overtighten or cross-thread.

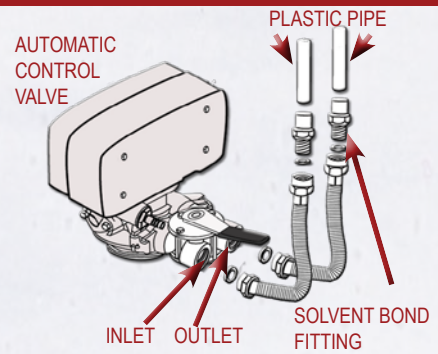
CAUTION:
Install water filter in direction of arrows.

(Choose appropriate connection below)

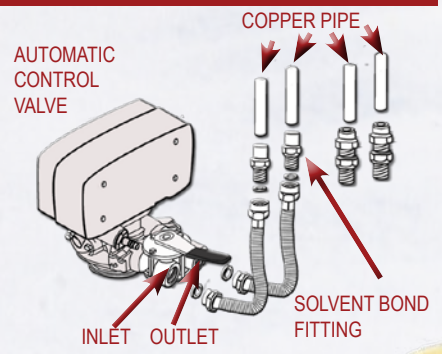
■ 10 Connecting to galvanized pipe

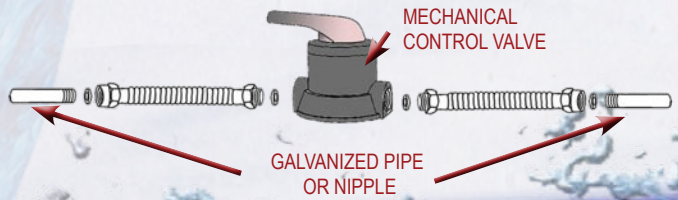


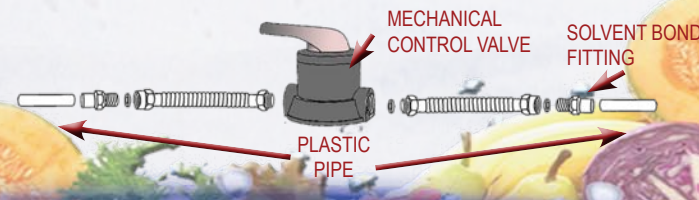
Connecting to plastic pipe



Connecting to copper pipe







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.

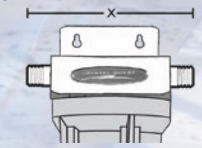
CRYSTAL QUEST™
Water Filters

CONNECTING PRE- AND POST-FILTERS TO WATER SUPPLY

- 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 get damaged. 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 firmly to wall. Use proper anchors on wall. Anchors and screws 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.
- Turn fittings clockwise to tighten. Do not overtighten.

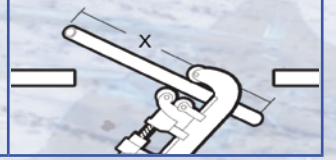
■ 11

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.



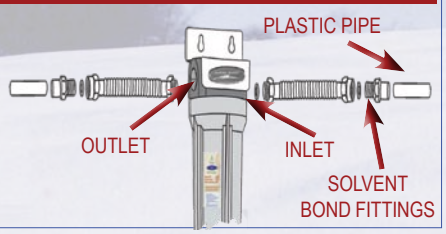
■ 12

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

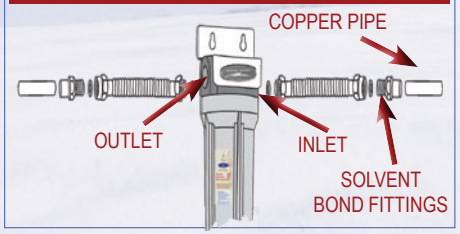


■ 13 POLYPROPYLENE FILTER - choose appropriate connection below

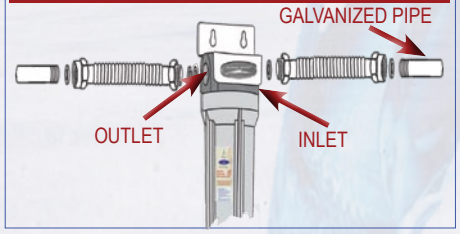
Connecting to plastic pipe



Connecting to copper pipe

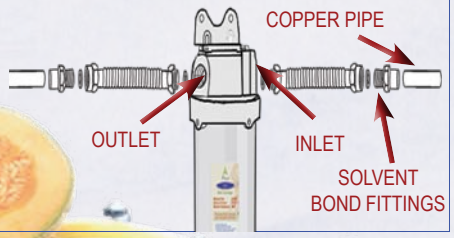


Connecting to galvanized pipe

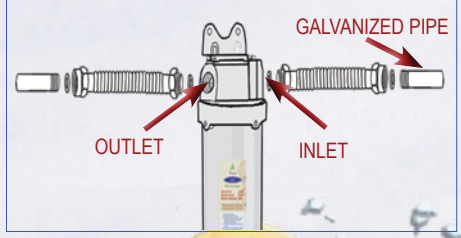


■ 13 STAINLESS STEEL FILTER - choose appropriate connection below

Connecting to copper pipe



Connecting to galvanized pipe



MINIMUM MATERIALS NEEDED

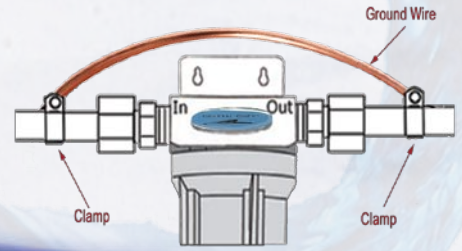
- Tape measure or ruler
- 4 hex washer-head screws
- Anchors
- Pipe cutter
- Teflon® tape
- Sandpaper or emery cloth
- Before installing ¾" or 1" fittings to the inlet and outlet of the bypass valve or manifold, wrap the threads 3 times around with Teflon® tape. Install ¾" or 1" fittings.
- Soldering is no longer required to plumb with copper pipe. Instead, use ¾" or 1" compression fittings. Connect fitting as shown below (Fig 13).

INSTALLING GROUND WIRE

IMPORTANT: A copper or galvanized cold water pipe is often used to ground electrical outlets in the home. Grounding protects you from electrical shock. The water filter housing may have broken this ground path. To restore connection, install an 18" long, 6-gauge copper wire across the filter, tightly clamped using UL approved 1/2"-1" bronze grounding clamps at both ends as shown. Zinc clamps should not be used on copper plumbing. Wire and clamps may be purchased separately from your local hardware store.

With emery cloth, clean copper pipe and ends of wire. Bare wire is recommended. If insulated wire is used, it should be stripped 3/4" at each end before cleaning with emery cloth.

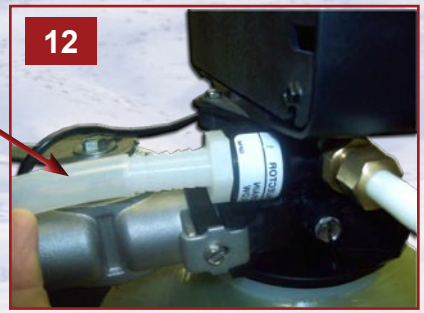
- Attach bronze clamps to pipe. Tighten screws.
- Attach wire to clamps as shown. Tighten screws.



TURN FITTING CLOCKWISE TO TIGHTEN. DO NOT OVERTIGHTEN. DO NOT CROSS-THREAD.

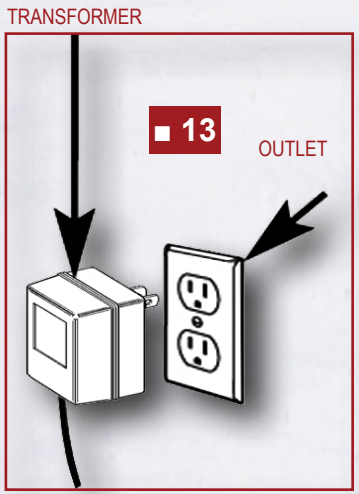
CONNECTING TUBING TO CONTROL VALVE - MECHANICAL AND AUTOMATIC

- 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 11 and 12).



- Plug cord from control valve into 115V electrical outlet. Make certain that outlet is supplied with power at all times. Make sure area is dry before plugging the unit in (Fig 13). Open main water supply shutoff valve.

- **CHECK FOR LEAKS!** Close previously opened faucet.



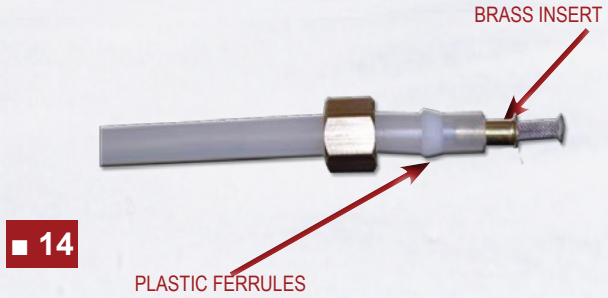
NOTE: Do not run 1/2" drain line over 20'. If over 20', increase tube size to 3/4".

CONNECTING TUBE TO BRINE TANK

- Connect tubing to control valve as shown in Figs 11 and 12 for the mechanical and automatic water filter systems.

- For connecting tube to brine tank (softener, nitrate and tannin systems), see Fig 14 below:

  (1) Slide plastic ferrules and brass insert into brine tube and slide compression nut onto brine tube.
  (2) Turn compression nut clockwise with wrench to tighten. **DO NOT OVERTIGHTEN.**



CRYSTAL QUEST™
Water Filters

CONNECTING TUBE TO BRINE TANK

CAUTION - DO NOT OVERTIGHTEN compression nut! Hand tighten and add a half turn with a wrench.

■ 15

Remove plug from brine tank lid.

■ 16 and ■ 17

Insert other end of 3/8" plastic tube, from control valve, through hole on brine tank.

■ 18

Remove brine well cover.

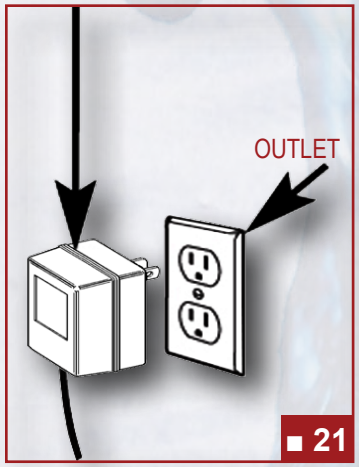
■ 19

Loosen the compression nut, turning counterclockwise to insert tubing. Turn compression nut clockwise with wrench to tighten.

■ 20

- Install 1/2" I.D. semi-rigid or non-collapsible tubing (not included) to the overflow hose barb located on the side of the softener brine tank and run to a suitable drain. Do not connect to drain line off of softener (Fig 20).
- Plug cord from control valve into 110V grounded electrical outlet. Make certain that outlet is supplied with power at all times. Make sure area is dry before plugging the unit in (Fig 21).
- Open main water supply shutoff valve. CHECK FOR LEAKS! Close previously opened faucet.
- Pour the 5 gallon bucket of water into the brine tank.
- Pour 1-1/2 oz of chlorine bleach solution directly into the brine tank or salt/ potassium permanganate compartment.
- Pour salt or potassium permanganate into brine tank compartment. Fill about ¾ (do not pack full). If any red rust stains are apparent, mix iron control agents (Super Iron Out®) with the salt or potassium permanganate.

TRANSFORMER

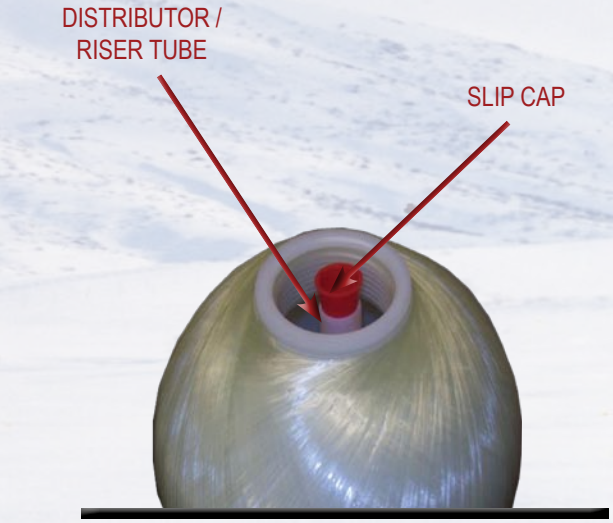


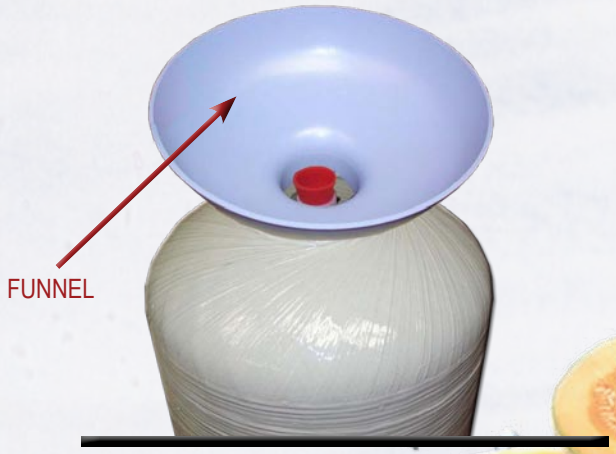
■ 21

CRYSTAL QUEST™
Water Filters

GUIDE FOR REPLACING MEDIA

- Turn off the water to the unit and unplug from the power source.
- Disconnect the unit from your plumbing.
- Carefully unscrew the control valve off the top of the tank.
- Remove the riser tube from inside the mineral tank.
- Lay the tank on its side or lay over a trash can to remove media.
- Rinse the inside of the tank clean with a garden hose, discard old resin, and save the old gravel.
- Stand media tank upright. Plug a slip cap or put a piece of tape over the top of the distributor/riser tube to prevent media from entering the tube while loading the media.
- Place the media funnel in the top of the media tank with the riser tube still inside and centered.
- Begin replacing media by putting gravel into the tank first. Make sure the riser tube is firmly on the bottom of the tank. If the riser tube is pulled out of the gravel once the media is added, it is impossible to put it back in without removing the other media from the tank.
- Pour 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. The media tank should be approximately 3/4 full.
- Remove the funnel and 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 locate the upper basket. Inside the basket, the control valve has O-rings that will seal on the riser tube. Install the valve 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 and plug the control valve back in, making sure to set the correct time of day. Turn on the water to the unit 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 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 regeneration/backwash control knob slowly through a complete cycle, allowing the water to run through the unit for a minute or so in each position.
- Once the regeneration/backwash knob is back in the service position, your unit is in service and ready to operate!

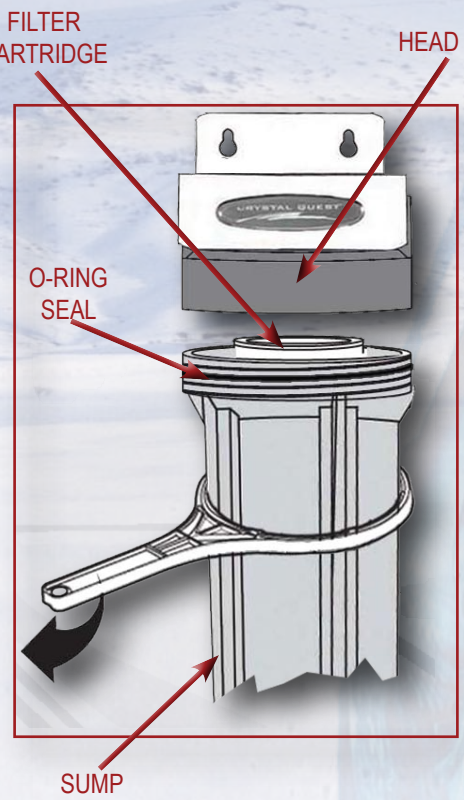




For details on replacement media or to order replacement media, visit http://www.crystalquest.com/whole-house-water-filters.htm.

REPLACING FILTER CARTRIDGE AND MAINTENANCE

- 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 petroleum jelly. 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 sump 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, and then flush again for 10 minutes before using the water.



MAINTENANCE:

- Periodically check time setting. Power outages will cause time of day setting to become incorrect. To reset, refer to "Setting the Control Valve."
- Should your family size, your water usage habits or your water quality change, the regeneration program setting may have to be adjusted. Do not lower salt setting.

MAINTENANCE FOR WATER SOFTENERS

Water softeners work using a process called ion exchange. Your water softener replaces harmful calcium and magnesium ions with neutral sodium chloride / potassium chloride ions. The mineral exchange takes place in one tank as water passes over plastic beds coated with sodium chloride / potassium chloride ions. A second tank (called a brine tank) replenishes the sodium chloride / potassium chloride as it is used up during the mineral exchange process. Here's how to keep your water softener in top shape:

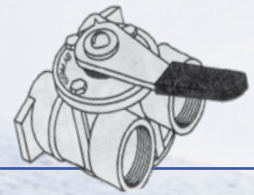
- Inspect the sodium chloride / potassium chloride level in the brine tank at least once a month. If your water softener has recently been installed, check more frequently until you can gauge how much sodium chloride / potassium chloride your unit will require. Fill tank about ¾ full. Do not pack full. Do not use block salt or block potassium chloride.
- Sodium chloride / potassium chloridee in your water softener's brine tank can form solid cakes that inhibit the proper operation of the unit. As you inspect your brine tank, look for large clumps of solidified sodium chloride / potassium chloride. As a temporary measure, caked salt can be broken up with a broom handle or other long, solid object. Bridged salt will bridge again at a much faster rate and should be removed as soon as possible.
- If iron is present in the water supply, the softener will eventually become iron fouled, resulting in reduced softening capacity and rust stained fixtures. Mixing one or two ounces of Super Iron Out® or similar resin bed cleaner with every 80 lbs. of sodium chloride / potassium chloride added to the brine compartment will minimize these problems.
- Periodically check time setting. Power outages will cause timer/meter setting to become incorrect. To reset, refer to "Setting the Control Valve".
- Once a year, your brine tank should be drained, emptied and cleaned with soap and water. The tank should be rinsed well and refilled.
- Should your family size, your water usage habits or your water quality change, the regeneration program setting may have to be adjusted. Do not lower salt setting.

CRYSTAL QUEST™
Water Filters

TROUBLESHOOTING

Problem		Correction	Water Filter System
NO WATER FLOW	✔	• Re-read the instructions to install the system properly. • Check the in and out arrows on the bypass valve to ensure the system is not piped backwards. • Make sure the bypass valve is in the "Service" position.	Mechanical, Automatic, Water Softener or Nitrate and Tannin Filter Systems
MEDIA DISCHARGING DURING BACKWASH/ REGENERATION	✔	• Make sure top distributor has been installed properly.	Mechanical, Automatic, Water Softener or Nitrate and Tannin Filter Systems
SYSTEM DOES NOT BACKWASH/ REGENERATE PROPERLY OR REGULARLY	✔	• Control valve not programmed properly. Check programming and re-program as needed. • Check the well float in the brine tank. The well float should be able to move up and down, and the hose should be able to inject water into the tank and siphon it out again.	Water Softener or Nitrate and Tannin Filter Systems
POOR PERFORMANCE (FILTRATION/ SOFTENING ABILITY)	✔	• Check the resin media level in the tank. System should be 2/3 full. • Check sodium chloride / potassium chloride level in brine tank. This should be 3/4 full. • Check the frequency and period of backwashing.	Mechanical, Automatic, Water Softener or Nitrate and Tannin Filter Systems
SYSTEM USES TOO MUCH SODIUM CHLORIDE / POTASSIUM CHLORIDE AND EXCESSIVE WATER IN BRINE TANK	✔	• Brine draw not functioning. Clean injectors. Check and reset sodium chloride / potassium chloride settings.	Water Softener or Nitrate and Tannin Filter Systems
SOFTENER FAILS TO REGENERATE	✔	• Electricity to system has been interrupted. • Check the power source and programming of control valve.	Water Softener or Nitrate and Tannin Filter Systems
IRON BUILD UP IN WATER CONDITIONER AND LOSS OF WATER PRESSURE	✔	• Clean control and add resin cleaner. Increase regeneration frequently. • Check the pre- and post-filters for timely replacement.	Water Softener or Nitrate and Tannin Filter Systems
INJECTOR OR INJECTOR SCREEN PLUGGED	✔	• Clean control and add resin cleaner. Increase regeneration frequently.	Water Softener or Nitrate and Tannin Filter Systems
LEAK IN DISTRIBUTOR TUBE	✔	Put the system in bypass position and depressurize* the unit by putting into "Backwash" position. There are 2 screws on neck of valve where the salt rinse line goes into softener. Remove the 2 screws and clean screen to remove any chunks of salt, etc.	Water Softener or Nitrate and Tannin Filter Systems

*To depressurize, refer to control valve instructions.



After prolonged periods of non-use (such as during a vacation), it is recommended that the system be flushed thoroughly.

1. First put the system in bypass by turning the bypass valve to the "BYPASS" position.
2. Let water run for 10-20 minutes by opening all faucets to flush the pre- and post-filters and all water supply lines.
3. Turn handle on bypass valve to "SERVICE" position to backwash* the system.

**Refer to manual for "Automatic/Mechanical Control Valve" to backwash the system.*

A TASTE OF NATURE ®

One-Year Limited Warranty

CRYSTAL QUEST® warrants your CRYSTAL QUEST® Point of Entry 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 cartridges unless defective upon receipt. CRYSTAL QUEST® disclaims all implied warranties including, without limitation, 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; therefore, 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® Point of Entry Whole House Water Filter System, please contact our Technical Support Department at service@crystalquest.com, Monday through Friday, 9 AM to 5 PM Eastern Time.

**Warranty varies on components of the whole house water filter system. Contact your Crystal Quest® Dealer or Email support@crystalquest.com for more information.*

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 Email us at support@crystalquest.com

Your Purchase Information

Please record the information below for your future reference

Plumber's Name	Plumber's Address	Plumber's Telephone

ORDERING REPLACEMENT CARTRIDGES

CQE-RC-04014
2-7/8" x 20" Carbon Block Filter Cartridge
12-18 months lifetime expectancy

CQE-RC-04015
2-7/8" x 20" Sediment Reusable Pleated Filter Cartridge
12-18 months lifetime expectancy

CQE-RC-04056
2-7/8" x 20" UF Membrane Filter Cartridge
18-36 months lifetime expectancy

(Optional cartridges for use with Compact Whole House systems. Refer to Compact Whole House Installation and Operation Guide for more details.)

CQE-RC-04016
2-7/8" x 20" Multi Stage Filter Cartridge
12-18 months lifetime expectancy

CQE-RC-04019
2-7/8" x 20" Fluoride Filter Cartridge
12-18 months lifetime expectancy

CQE-RC-04020
2-7/8" x 20" Nitrate Filter Cartridge
12-18 months lifetime expectancy

CQE-RC-04021
2-7/8" x 20" Arsenic Filter Cartridge
12-18 months lifetime expectancy

To order replacement cartridges or replacement media, contact your Crystal Quest® Dealer or visit us online at http://www.crystalquest.com

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