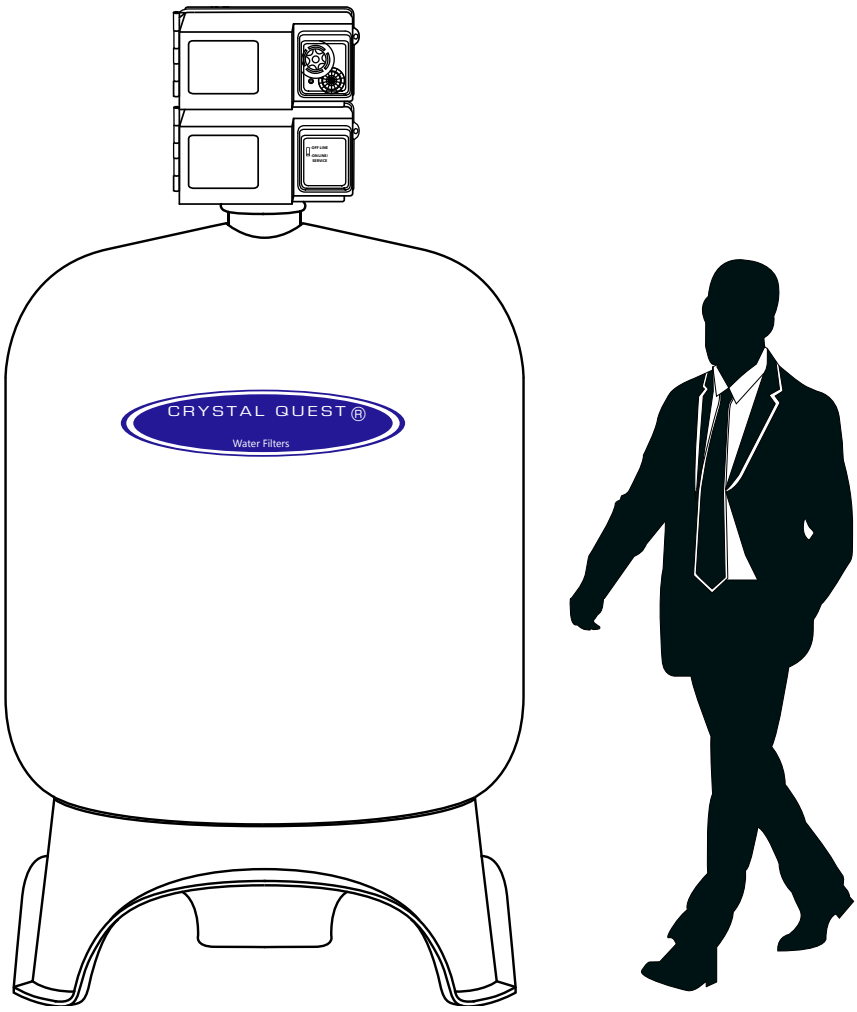
Crystal Quest® Commercial Media Filtration System
INSTALLATION AND OPERATION GUIDE



ONLINE WARRANTY INFORMATION
CrystalQuest.com/warranty.html

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GUIDE FOR MEDIA INSTALLATION

- Disregard this section if a 3 cu.ft tank was ordered. Media will already be inside of the tank.
- Materials Needed: Funnel for placing media, small amount of water to add to the tank, media (if larger than 10 cu.ft tank, media will be in seperate packaging). The only exception is 10 cu.ft iron/metal remover systems which have the media on the side due to the weight of the media.
- Media tank should be upright and at installation area. 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.

1.Place the media funnel (funnel not included) in the top of the media tank with the riser tube still inside and centered. Place a small amount of water in the tank before the media goes in.
2. Begin placing media into tank. If more than one type of media is going into tank, place heavier media in tank first. Gravel should already be in the tank. IMPORTANT – 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.
3. 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. This can vary depending on the media for your specific system.
4. Remove the funnel and the slip plug or tape from the top of the riser tube.
5. 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.
6. 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 valves as the threads are plastic.
7. Install the control valve 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.

ASSEMBLING WATER FILTER SYSTEM WITH CONTROL VALVE

Unpack the control valve from the shipping box. It is recommended that you keep the original boxes and packing materials. See specific instructions for control valve or head included with your system purchase.

1. Unscrew and remove the top cap from the 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 any non-petroleum oil (do not use coconut oil).
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. You may choose to install a flow reducer on incoming line at control valve and plumb into the inlet port on the control valve.
7. If brine tank included with system, attach drain line hose barb and compression nut of the brine tank by turning clockwise to tighten until snug.
8. To prevent leaks, wrap threads of hose barb and compression nut with thread seal tape tape clockwise, approximately 3 times around.

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

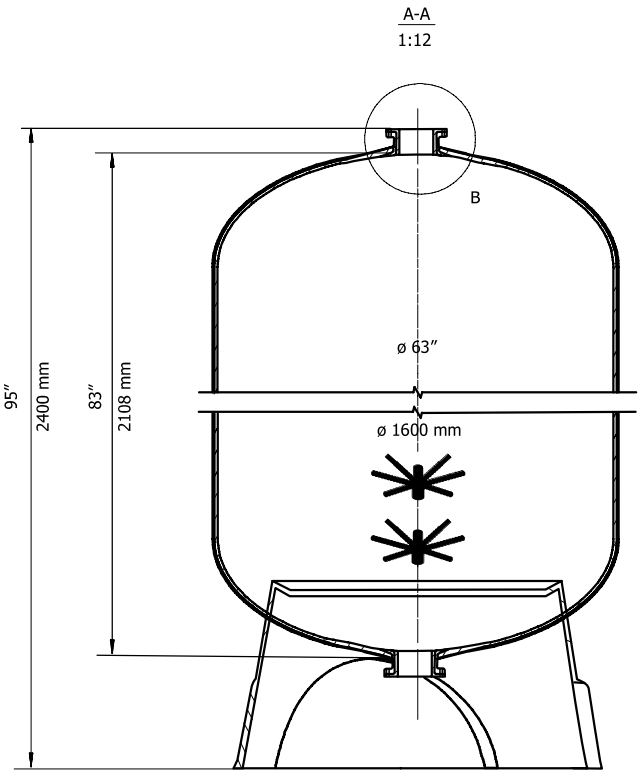
CONNECTING WATER FILTER SYSTEM TO WATER SUPPLY
MINIMUM MATERIALS NEEDED

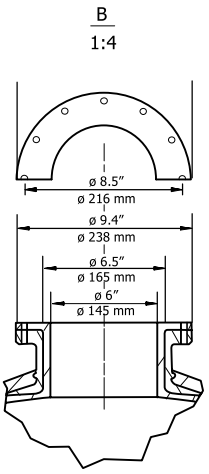
- Use specified sized male thread adapters to plumb the system
- Wrenches, either open end or adjustable jaw, sized to fit compression adapters
- Pipe cutter
- Thread seal tape
- Sandpaper or emery cloth
- Before installing fittings to the inlet and outlet of the bypass valve or manifold, wrap the threads 3 times around with thread seal tape. Install fittings.
- Parts already included: tank, media, distributor/riser tube, valve head, drain line flow reducer.

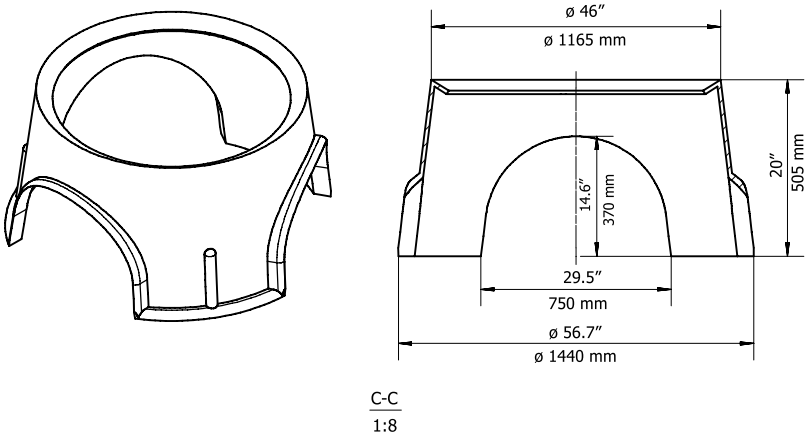
OPERATING SPECIFICATIONS:

Pressure Range:	35-65 psi
Temperate Range:	40°-100° F
Optimum Service Flow:	14-280 gpm*

*Depending on size of system







NOTES:

1. Inner shell - Polyethylene (PE) seamless one-piece tank liner
2. Outer shell - Continuous strands of fiber-glass with high strength epoxy resin
3. Bottom base - FRP reinforced tripod base
4. Opening - 6 inch top and bottom Aluminium Flange opening
5. Tanks meet all applicable specification of NSF/ANSI 61 standard
6. Operating Specifications:
   - Maximum Working Pressure : 150 PSI (1.0 MPA)
   - Temperature: 34 °F - 120 °F (1°C - 49 °C)
   - Maximum Vacuum: 5″ Hg (127mm Hg)
7. Surface finish
8. Surface to be free of resin, glass, nicks, barbed filament
9. Tank to be bonded to base
10. The base to be level correction
11. Top and bottom opening to be parallel, top opening to be parallel with the base

CONNECTING WATER FILTER SYSTEM TO WATER SUPPLY INSTRUCTIONS

1. Turn off the main water shutoff valve.
2. Open all plumbing fixtures fed by filtration system including all outside faucets in order to drain the lines of all water.
3. 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.
4. If copper piping is used and soldered, preform these procedures away from the valve. This simple step will ensure that you are not applying head as you solder, or pressure as you tighten the adapters onto the bypass while they are mounted on the valve body itself.
5. Solder a 3" to 5" piece of copper pipe into each of the two pipe adapters away from the valve, and then let them cool before threading each one onto the yoke valve.
6. 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 cut ends of pipe. Sand ends to ensure that they are square and smooth.
7. Check plumbing inlet and outlet to ensure the proper flow of water through the unit. Match plumbing inlet and outlet located on the sides of the valve head.
8. Apply threaded seal tape onto the male adapters for the brass valve when cool and securely tighten them to the valve. This is done before reattaching them onto the read of the valve/meter body assembly.
9. Turn on the water to the unit and check for leaks. Leave all faucets turned off 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 drain tube.

GENERAL COMMERCIAL TANK HEAD SIZING CHART

Tank Size	Head Used	Alternate Control Head	Line Size	Drain Size	Brine Tubing
1.5 Cube	5600		1"	1/2"	1/2"
2 Cube	5600		1"	1/2"	1/2"
3 Cube	2510		1"	1/2"	3/8"
4 Cube	2850		1.5"	1.25"	3/8"
7 Cube	2850		1.5"	1.25"	3/8"
10 Cube	2850	3150 for Iron/Arsenic	1.5"	1.25"	3/8"
15 Cube	2900	3150 for Iron/Arsenic	2"	1"	3/8"
15/20 Cube Heavy	3150	Iron & Arsenic Systems **only**	2"	1"	3/8"
20 Cube	3900		3"	2"	1"
30 Cube	3900		3"	2"	1"
40 Cube	3900		3"	2"	1"

CONNECT TUBING TO BRINE TANK

For connecting tube to brine tank (softener, nitrate and tannin systems), see Fig 1 below:

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

1



2

Remove the black brine tank lid.



3 and 4

Remove the small white lid from the inside of the brine tank. Lift out parts inside and unscrew bolt.





5

Thread the screw through the pre-made hole, and use the bolt to secure in place.



6 and 7

Remove the black plastic screw on opposite side and thread the hose through the tank.

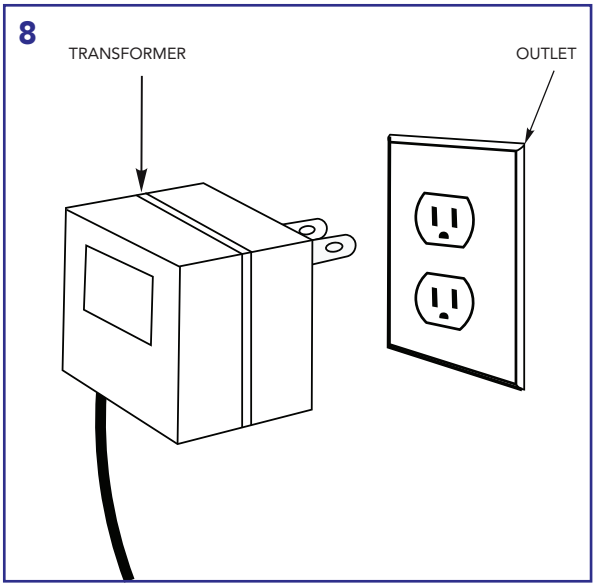
Place the black screw and additional parts around the hose and then screw securely into place.

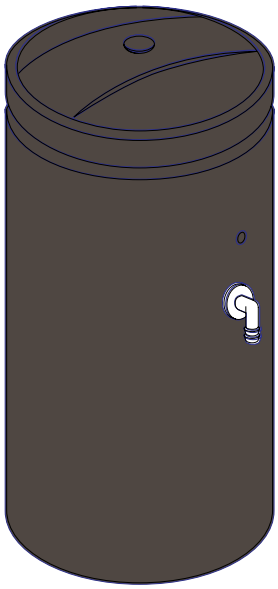




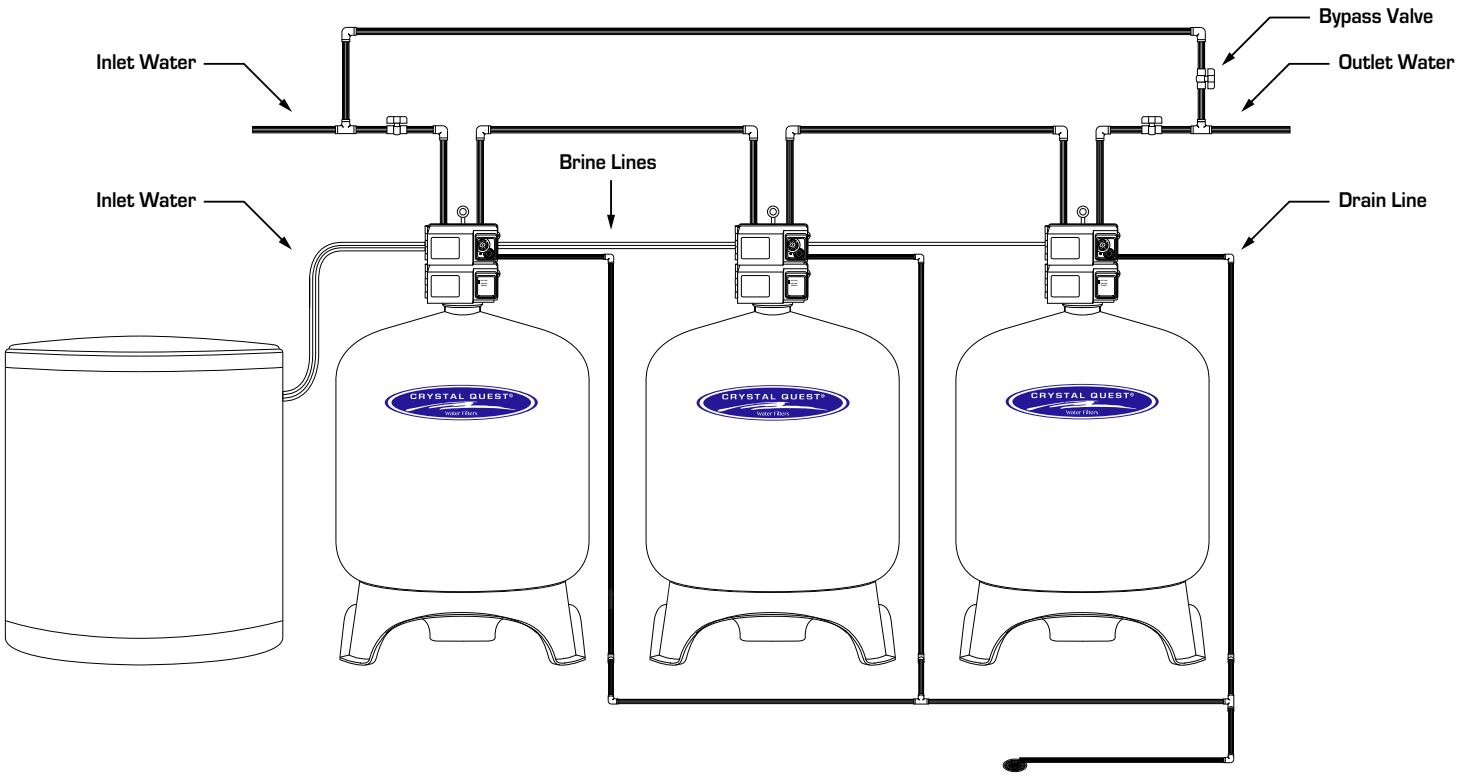
CONNECT TUBING TO BRINE TANK *CONTINUED*

- Install 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 (Figs 6 & 7).
- 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 8).
- 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 component (not included). Fill tank 1/2 - 3/4 full (do not pack full) and add water until it is just above the salt level. If any red rust stains are apparent, mix iron control agents (Super Iron Out®) with the salt or potassium permanganate.

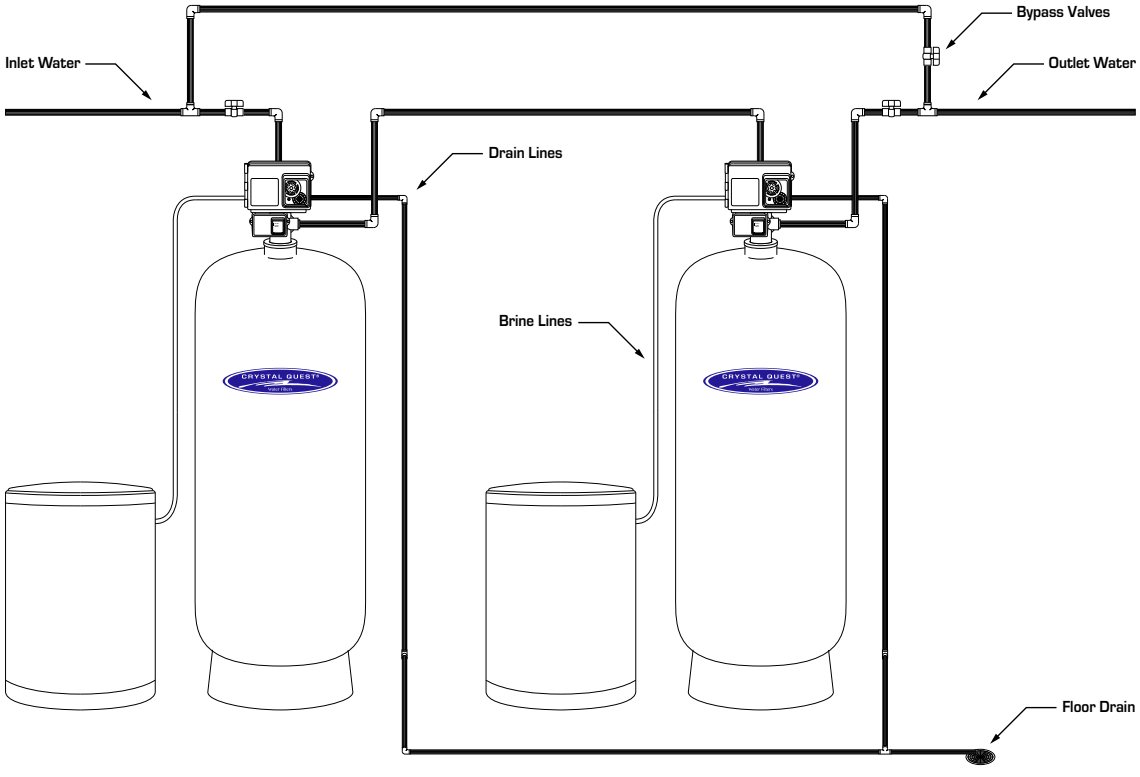




TRIPLE 40 CUBE WTIH SHARED BRINE DIAGRAM



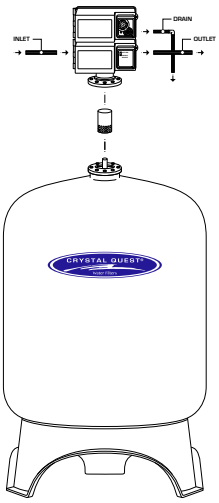
TWIN 15 CUBE WITH BRINE



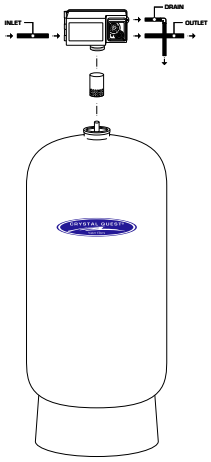
ALL CONTROL HEAD MODELS



3900 Head
40cu Tank



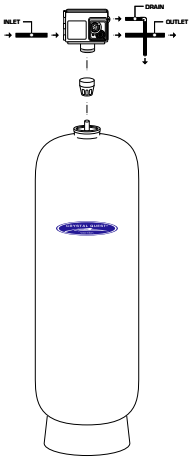
3900 Head
30cu Tank



3150 Head
20cu Tank



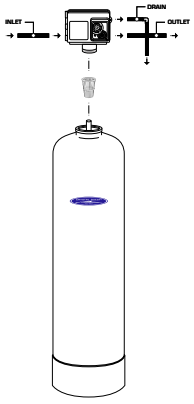
2900 Head
15cu Tank



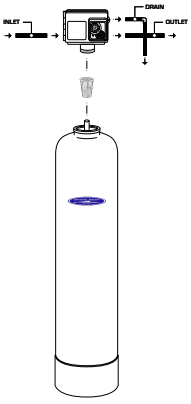
2850 Head
10cu Tank



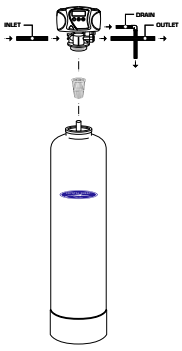
2850 Head
7cu Tank



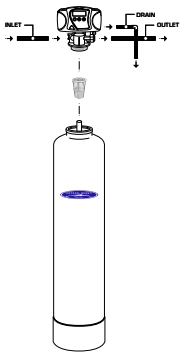
2850 Head
4cu Tank



2510 Head
3cu Tank



5600 Head
2cu Tank



5600 Head
1.5cu Tank



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WARRANTY & GUARANTEE

Warranty Terms

Subject to the terms and conditions set forth hereinafter, Seller warrants to the original purchaser (hereafter the "Buyer") that the products manufactured by Seller are free from defects in material and in workmanship for twelve (12) months from the Warranty Commencement Date (as defined below) only when used strictly in accordance with the applicable operating instructions and within the range of the operating conditions specified by Seller for each such product. This Warranty does not extend to equipment or components manufactured by others into which a Seller product has been incorporated or to equipment or components which have been incorporated into a Seller product but, if allowable, Seller hereby assigns, without warranty, to the Buyer its interest, if any, under any warranty made by the manufacturer of such equipment or component. This Warranty does not cover disposable items such as fuses, lamps, filters, cartridges, or other such disposable items, which must be replaced periodically under the normal and foreseeable operating conditions of the goods warranted hereby.

Warranty Commencement Date

The Warranty Commencement Date for each Seller product shall be the later of the date of: (1) receipt by the Buyer, or (2) the date of installation at the Buyer's premises provided that such installation must occur within three (3) months of shipment from the Seller's manufacturing facility in California. In no event shall the Warranty Commencement Date exceed three (3) months from the shipment from the Seller's manufacturing facility. The Buyer shall provide proof of purchase in order to exercise rights granted under this Warranty. If requested by manufacturer, the Buyer must also provide proof of the installation date. Proof of installation shall be returned by Buyer to Seller within thirty (30) days after installation by virtue of supplying a Warranty Validation Card supplied with each Seller product fully completed and signed in ink by Buyer and the authorized installer of the product.

Warranty Service

SELLER'S OBLIGATION UNDER THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT (AT SELLER'S SOLE DISCRETION) OF ANY PRODUCT, OR COMPONENT THEREOF, PROVED TO BE DEFECTIVE IN MATERIAL OR WORKMANSHIP WITHIN THE COVERED WARRANTY PERIOD.

The buyer, at the Buyer's risk and expense, shall be responsible for returning such product or component, only after obtaining a Return Goods Authorization (RGA) number from the Seller, arranging for freight prepaid, and in conformance with any special packaging and shipping instructions set forth on the operation documentation or RGA instructions, or as otherwise reasonably required, to the Seller's address set forth below, together with (1) RGA number issued by Seller at Buyer's request; (2) proof of purchase and, if necessary, proof of installation date; (3) a Return Good Authorization Form; (4) a description of the suspected defects; (5) the serial number of the Seller product alleged to be defective; and (6) a description of the type of water and pretreatment equipment which has been utilized in connection with the product, if any. Seller shall, in Seller's reasonable discretion, be the sole judge of whether a returned product or component is defective in material or workmanship. Required or replaced products or components shall be returned surface freight. In genuine emergency situations, the Seller will (at Seller's sole discretion) forward replacement parts to Buyer without waiting for authorized return of the questionable part(s). In such cases, Buyer will issue a purchase order or other payment guarantee prior to shipment. If the returned part is found to have been misused or abused, the defective part is not received by Seller within thirty (30) days; the Buyer will be invoiced for the replacement part(s) provided. This Warranty does not cover or include labor and/or travel to the Buyer's premise or location or any other location. Charges of $1000 per day plus associated travel expenses will be incurred by the Buyer in providing the Warranty Service at any location other than Seller's main headquarters; that is if the Seller deems that the product is not covered by said Warranty. The Seller reserves the right to precondition such travel to Buyer's premises upon prepayment of Seller's anticipated costs of attending such premises.

Voidability of Warranty

CRYSTAL QUEST®
Water Filters

WARRANTY & GUARANTEE

This Warranty shall be void and unenforceable as to any Seller product which has been damaged by accident, mishandling, abuse or has been repaired, modified, altered, disassembled or otherwise tampered with by anyone other than Seller or an authorized Seller service representative; or, if any replacement parts are not authorized by Seller have been used, or, the product has not been installed, operated and maintained in strict accordance and adherence with the operating documentation and manuals for such product. Any expressed warranty, or similar representation of performance set forth in the operation documentation for a reverse osmosis, nanofiltration, or ultrafiltration membrane incorporated into a Seller product shall be void and unenforceable unless the feed water requirements set forth in the operating documentation for such product are unequivocally and strictly adhered to.

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CRYSTAL QUEST®
Water Filters

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