



**Mega 1000**



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## CRYSTAL QUEST® Mega Undersink Water Filters Installation Guide

### To order replacement cartridges

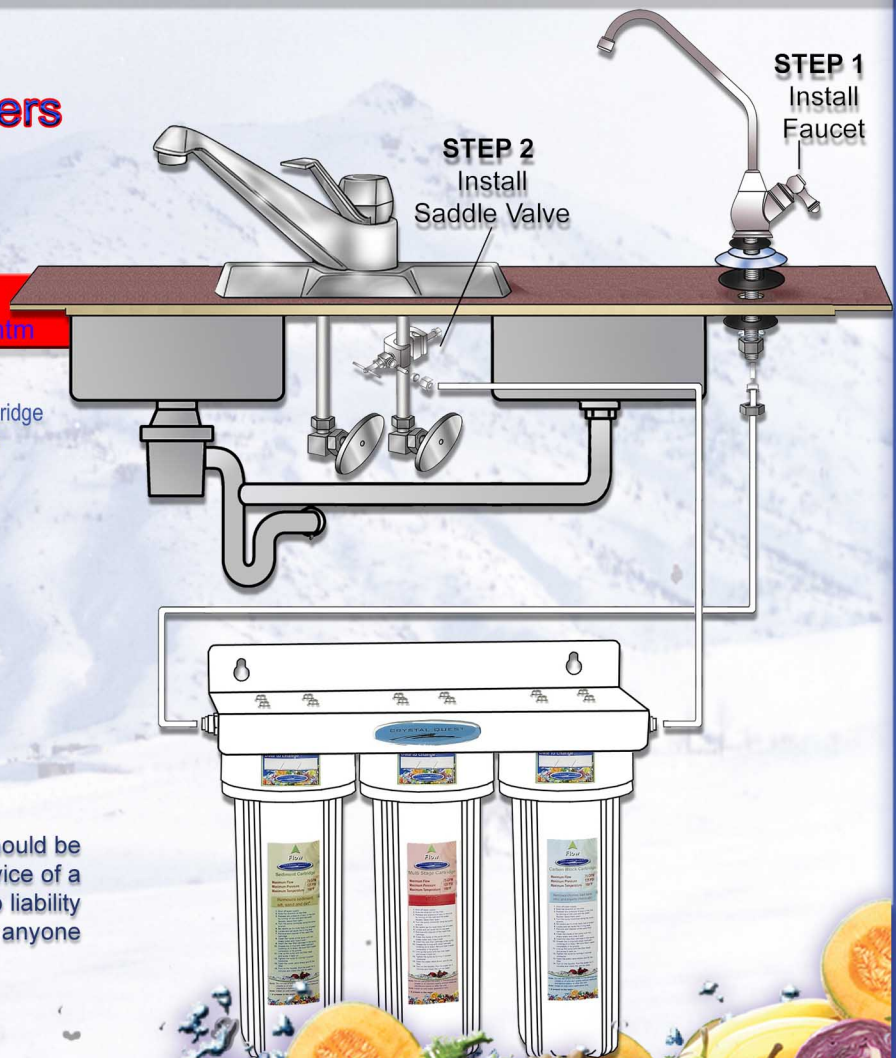
<http://crystalquest.com/water-filter-replacement-cartridge.htm>

- Item No. CQE-RC-04000 5-Micron Carbon Block Filter Cartridge
- Item No. CQE-RC-04001 5-Micron Sediment Reusable Pleated Filter Cartridge
- Item No. CQE-RC-04002 2-7/8" x 9-3/4" Multi Stage PLUS Filter Cartridge
- Item No. CQE-RC-04055 UF Membrane Filter Cartridge
- Item No. CQE-RC-04006 2-7/8" x 9-3/4" Fluoride Filter Cartridge
- Item No. CQE-RC-04049 2-7/8" x 9-3/4" Fluoride/Multi Filter Cartridge
- Item No. CQE-RC-04007 2-7/8" x 9-3/4" Nitrate Filter Cartridge
- Item No. CQE-RC-04050 2-7/8" x 9-3/4" Nitrate/Multi Filter Cartridge
- Item No. CQE-RC-04008 2-7/8" x 9-3/4" Arsenic Filter Cartridge
- Item No. CQE-RC-04051 2-7/8" x 9-3/4" Arsenic/Multi Filter Cartridge

### Online warranty registration

<http://crystalquest.com/warranty.htm>

**Important Notice:** All Crystal Quest® water filtration systems should be installed by a qualified and licensed plumber. Not using the service of a qualified plumber will void warranty. Crystal Quest® assumes no liability whatsoever for systems improperly installed or those installed by anyone other than a qualified, licensed plumber.







- Inspect the carton and unit for evidence of rough handling and concealed damages. **Report damage to the carrier. Damage claims should be filed with the carrier.** All damage related matter needs to be addressed directly with the carrier.
- Remove components from shipping carton. Check that all installation parts are present, which includes the unit, storage tank, faucet, installation hardware and tubing.
- 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. You must follow these guidelines as you install the filter.
- **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.

**Tools & materials that may be required, depending on each particular installation:**

- Safety glasses.
- 3/8" variable speed electric drill, 1/8" & 1/2" bits
- 1-1/4" porcelain hole cutter (if hole for second faucet is not provided)
- Extension cord, drop light or flashlight.
- Plastic anchors & screws.
- Plastic tube cutter
- Air pressure gauge (low pressure)
- Pliers.
- Phillips head and flat head screwdrivers
- 1-1/4" wood bit
- Teflon Tape®, household bleach (liquid).
- Adjustable wrench
- Crescent wrench
- Teflon tape®
- Air pump (hand)

**STEP 1 – Install The Faucet (Fig 1)**

Faucet should be placed near the sink where drinking/cooking water is normally required. A 2" flat surface is required to mount the faucet if an existing hole for a second faucet is not available. The mounting thickness should not exceed 1-1/4". If the sink has a sprayer, it may be disconnected for faucet installation. A pipe cap or plug will be necessary to seal the sprayer connection. If making the faucet mounting hole (if sprayer or second hole is not used), check to make sure the drill does not interfere with anything below. Center punch a small indent at the desired faucet location (2" flat surface is required, not exceeding 1-1/4" in thickness). Drill the required pilot hole of the chassis punch and tighten nut to cut the desired hole size. Clean up sharp edges. The faucet should be positioned so it empties into the sink and the spout swivels freely for convenience. If sink has a hole that can accommodate the RO faucet, no drilling is required. Proceed with mounting the faucet.

**Installation procedures for stainless steel sinks:**

**Recommended tools:**

- Center punch • Variable speed drill • High speed drill bits • Greenlee chassis punch 7/8" (or 9/16" for non air gap faucets) • Protective gloves & eye protectors

**Procedures:**

1. Center punch small indent for hole.
2. Drill the required pilot hole.
3. Set-up the chassis punch per instructions and tighten nut to cut the desired hole size.
4. Clean up sharp edges with file.

**Porcelain, Enamel, Ceramic on Metal or Cast Iron:**

Precautions must be taken to penetrate the porcelain through to the metal base and prevent it from chipping or scratching.

**Tools required:**

- Variable speed drill • Relton porcelain cutter tool set (7/8" or alternative size, 9/16") • Plumber's putty

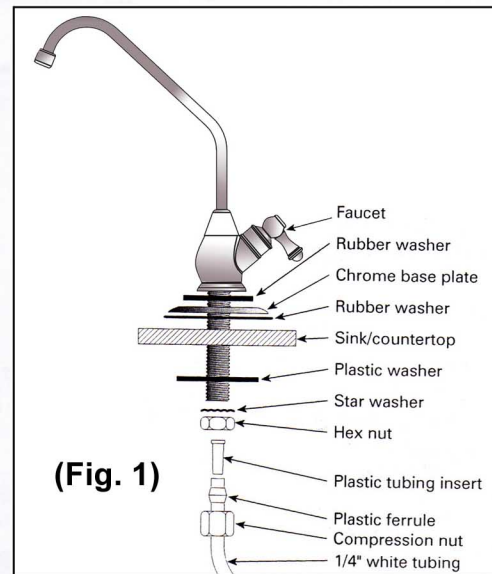
**Procedures:**

1. Mark the center for the 7/8" hole.
2. Form shallow putty around hole area and fill with enough water to lubricate carbide drill bit.
3. Carefully drill pilot hole through all layers (use light pressure and slow speed).
4. Insert pilot tip of spring-loaded porcelain cutter into pilot hole.
5. Drill porcelain/enamel using spring loaded porcelain cutter, making certain a complete ring has been cut through the porcelain/enamel to the metal base.
6. Cut away the inner porcelain/enamel disc down to the base metal. Make certain the cutter does not touch outer rim of the cut porcelain/enamel. Continue with this bit to cut through metal until sink has been completely penetrated.

**Note:** Always use sharpened porcelain cutter to eliminate chips and cracks.

**Mounting the faucet**

Disassemble hardware from the threaded nipple, except for chrome base plates and rubber washers (rubber washers may be replaced with a bead of plumber's putty for neater appearance). Feed the threaded nipple through sink or counter mounting hole and position the faucet. From below sink or counter, assemble the white spacer flat washer and hex nut on threaded nipple and tighten by hand (open end up; open side toward air gap). After checking faucet orientation, tighten with a wrench until secure (Figure 1.).



**(Fig. 1)**





**STEP 2 – Install The Saddle (Feed Water) Valve & Tubing (Fig 2)**

**• CHOOSE THE VALVE LOCATION**

Choose a location for the valve that is easily accessible. It is best to connect into the side of a vertical water pipe. When it is necessary to connect into a horizontal water pipe, make the connection to the top or side, rather than at the bottom, to avoid drawing off any sediment from the water pipe.

• Disconnect the cold water supply line. Attach and tighten the saddle valve connector assembly being careful not to pinch or crimp any tubing or water supply line while tightening. Use Teflon Tape® to insure a tight fit.

**NOTE:** The saddle valve clamps onto soft or hard tubing or pipe. It will make its own hole in copper tubing, but not in iron or brass. For brass or galvanized iron pipe, drill a 1/4" hole in pipe before mounting saddle valve. Risk of electric shock. If possible, use a hand or cordless drill when drilling water pipe. If using an electric drill, be sure that drill, cord and outlet are all properly grounded.

**NOTE:** Do not turn handle before installing or while installing saddle valve. To prevent damage to piercing needle, make sure that piercing lance does not project beyond the rubber gasket.

**NOTE:** Leave handle in this position (valve closed) until filter installation is complete.

1. Hold back plate against tube.
2. Hold valve saddle against tubing in a position directly opposite back plate.
3. Tighten screw enough so valve saddle and back plate are held securely against tube.
4. Tighten screw firmly. Do not crush tube.

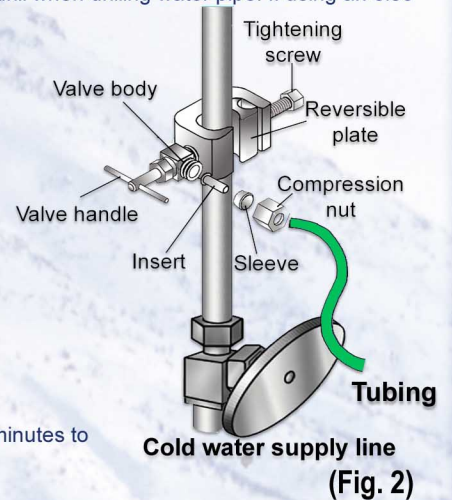
**Connect source water feed tubing to valve body using compression fitting.**

1. Slide nut and sleeve onto tubing (in that order).
2. Install insert into tubing.
3. Install tubing with insert and sleeve into valve body.
4. Thread compression nut onto valve body, Tighten.
5. Turn saddle-tapping valve handle clockwise until it is firmly seated and piercing lance is fully extended.

**CAUTION:** When the supply line is pierced, the valve should be closed. Do not open valve until system is activated.

Turn on cold water supply. Check saddle-tapping valve installation for leaks. Allow water to run from faucet for a few minutes to clear any debris in the line caused by installation.

**NOTE:** If flow from sink faucet is reduced, clean faucet aerator.



**Connecting tubing into filter (Figs 3, 4 and 5)**

**PLASTIC TUBING**

- Cut tube ends square and straight. Do not deform tube (i.e., cause tube to compress its diameter so it is no longer round).
- Avoid sharp changes in direction when routing tubing. Sharp turns cause tubing to flex and deform, which reduces its flow capacity and may increase lateral stress on the fittings, causing leakage.

1. Push in **tube from Saddle Valve** through water filter INLET fitting (Figure 3). (Remove blue locking clip if any).
2. Push in **tube from faucet** through water filter OUTLET fitting (Figure 3). (Reattach blue locking clip if any).

**Using QUICK-CONNECT FITTINGS**

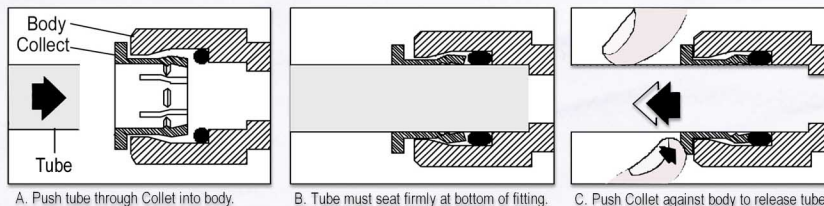
Fittings consist of two parts: a Body and a Collet.

Make sure outer surface of tube is clear of marks or scratches for a length equal to twice tube diameter. This allows "O" ring to seat properly against tube.

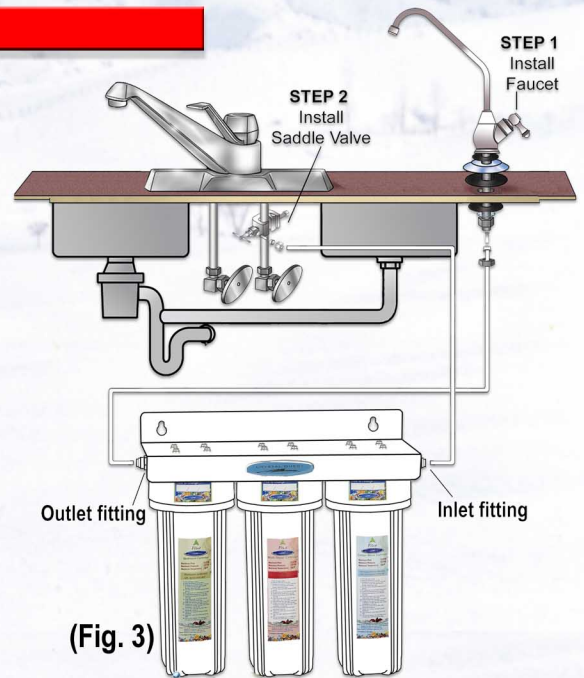
- To install a tube, push it through Collet until it seats firmly at bottom of fitting (Figure 4A and 4B).
- To remove a tube, push and hold Collet against Body while pulling tube out (Figure 4C).

**Using COMPRESSION FITTINGS**

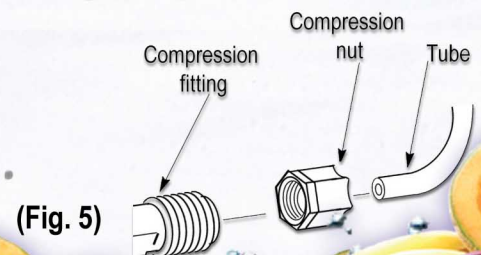
1. Slide **compression nut** onto the end of tubing (Figure 5).
2. Connect it to **compression fitting** and tighten the **compression nut** securely (Figure 5).



(Fig. 4)



(Fig. 3)



(Fig. 5)

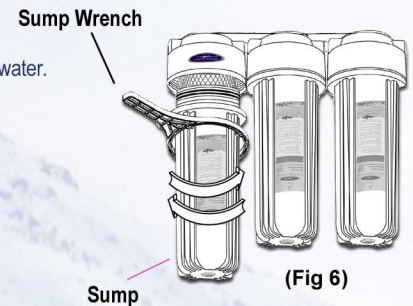


## Changing Filters (Fig 6)

**NOTE: THIS MEGA UNDERSINK SYSTEM CONTAINS CARTRIDGES WHICH MUST BE REPLACED AT REGULAR INTERVALS TO MAINTAIN PROPER PERFORMANCE. USE ONLY FACTORY APPROVED CARTRIDGES.**

Use a drip pan to catch any water that may spill when the Filter Housings are removed.

- Close the Saddle valve that feeds the filter.
- Release any pressure in the line by turning on the cold-and hot-water faucets.
- Loosen the sump by turning counterclockwise using the sump wrench that came with the filter. Be careful; it's most likely full of water.
- Remove and throw away the used filter cartridge.
- Clean the inside of the sump with hot, soapy water and rinse it very well.  
(Remember that you turned the water off at the sink you're working on.)
- Remove shrink wrap and insert the new filter cartridge in the sump.
- Check the O-ring to insure that it is positioned properly in its groove and tighten the sump by turning it clockwise.
- Open the water valve slowly and fill the filter.
- Turn off the faucets and check the unit for leaks.
- Run the water for 5 minutes to clear out carbon particles may that have settled in the cartridge.



## Troubleshooting

### Water appearance

**WHITE water.** When a new water filter or cartridge is installed or after cleaning, the water may appear milky or white for a while. It is harmless and will soon clear. White water is due to micro bubbles of air. On standing, the water will become clear as the bubbles move upwards. Water in some areas of the country has a high level of lime or calcium. The Redox inside the unit changes these substances into harmless elements which react with air and temperature. You may want to check other filtration alternatives such as reverse osmosis or water conditioner/softener.

**BLACK water.** When a new water filter or cartridge is installed or after cleaning, very fine black particles may appear in the water. Again this is normal and the particles are harmless carbon. Flushing the system for a few minutes by turning the tap on and off rapidly several times will help to clear this.

**COLORED water (often RED).** Water in some areas may be high in dissolved iron and this can pass through the filter. When the water is left to stand, dissolved iron gives a red or brown color as the iron oxidizes (rusts). In very severe cases you should contact the manufacturer for specialist advice. Ordinary particulate rust in the water will be removed by the system.

### Water taste

Filtered and treated water tastes so much better than unfiltered water. But there are also some who cannot detect any change. Others find that the treated water tastes "different", but they will soon become accustomed to the taste of the filtered water. A major factor affecting taste may be the natural composition in a particular area. There can be considerable local differences in the mineral content of the water for example.

**Fish odor and sour taste water.** System is not flushed properly. Run the water for five minutes and shut off for five minutes. Do three to four times consecutively. Some areas might have hard water. In very severe cases you should contact the manufacturer for specialist advice.

**Chlorine taste.** The 'natural' taste of an area's water is often masked by the presence of chlorine used in the treatment process. If the chlorine taste consistently reappears, the cartridge should be replaced. If after prolonged standing or during infrequent use any strong objectionable taste occurs, flush the system by running water for 5 minutes and if the taste persists, carry out the sanitizing process (note that during the disinfection process chlorine will be generated and this will taint the water. Flush the system adequately to remove it).

**Bad taste and/or odor.** The cartridge needs replacing.

### No water

- Check that the water filter faucet is open and that the main water is still on.
- Check that the saddle valve is open.
- Check that all the tubes are connected correctly.
- Check direction of water flow.

Low water flow

- Check that you have removed all the shrink wrap from a new filter cartridge.
- Low water pressure. During periods of high water demand the pressure may fall and so will the water flow from the filter. Running a bath, shower or appliance connected to the same line on which your system is connected may starve the unit of water.
- Reduction of water flow sooner than normal may be an indication of a high volume of sediment in your water. (Add sediment pre-filter, backwash the system and/or replace the cartridge).
- Check that the saddle valve is fully opened, or if there is low flow at the time of installation, check that the saddle valve instructions were carried out correctly and that the water line has been pierced fully. (Close the line saddle valve fully and then open it up again).
- The filter system needs a minimum pressure of 20 psi to work. If the pressure is inadequate, a pump may be needed, and for this you should contact the manufacturer or a plumber.

### High water flow

- If the water flow has excessive force, this will lead not only to splashing at the tap but also to lower performance from the filter. Reduce the flow rate to the minimum acceptable by turning the line saddle valve handle in the clockwise direction. For optimum performance we suggest a flow rate of 0.5 gpm.

## Water leaks

Your system has been tested before leaving the factory. In the unlikely event of a fault, small leaks sometimes do occur as a result of incorrect assembly or abuse. The following tips may be helpful:

- Depending on the positioning of the filter and the temperature of the incoming water and air, condensation on the outside of the filter housing may occur, resulting in a frosted appearance of fine water droplets on the surface. This does not of course mean that there is a leak in the system. The remedy is to either insulate the area around the filter, or reposition it.
- Always ensure that sump top is snapped into sump by being pushed in.
- Always ensure that the sump ring is screwed fully onto the sump top. This is essential both for the internal seal and the housing seal.
- In the event of leaks, carefully examine its source. Water from a leak may run along the pipe work (it may drip or collect some distance from the actual position of the leak).
- Leaks occurring at the line saddle valve may mean that the unit has not been fully clamped onto the water line (please adhere to the instructions given on page 3).
- Leaks at the quick fittings are usually due to the tubing not being pushed fully into the fitting. Remove the tubing, cut off an inch of tubing with a sharp knife and reinsert into the quick fitting. Ensure that the quick fit collet is in position. When fitted correctly, the tube should not pull out of the fitting (unless the collet is pushed in at the same time to release the tubing).
- If there are leaks at the compression fittings, make sure that the components are fitted correctly and that the compression nuts are fully tightened.
- If there is a leak from the body of the faucet, check that the tap outlet arm is pushed down firmly. Two O-rings are fitted to the faucet outlet spout - ensure they are still in position.
- If there is a leak from the water filter Inlet and Outlet, unscrew fitting, wrap Teflon Tape® around it and screw it back.