WATER TREATMENT SYSTEM

Manufactured By

OWNER'S MANUAL

Your new Drinking Water System works in a process called Reverse Osmosis in which water pressure is applied to a concentrated solution. Water is forced through a semi-permeable membrane from the concentrated side to the dilute side of the membrane.
When water is passed through the membrane, dissolved particulate materials are left behind and some are washed down the drain.

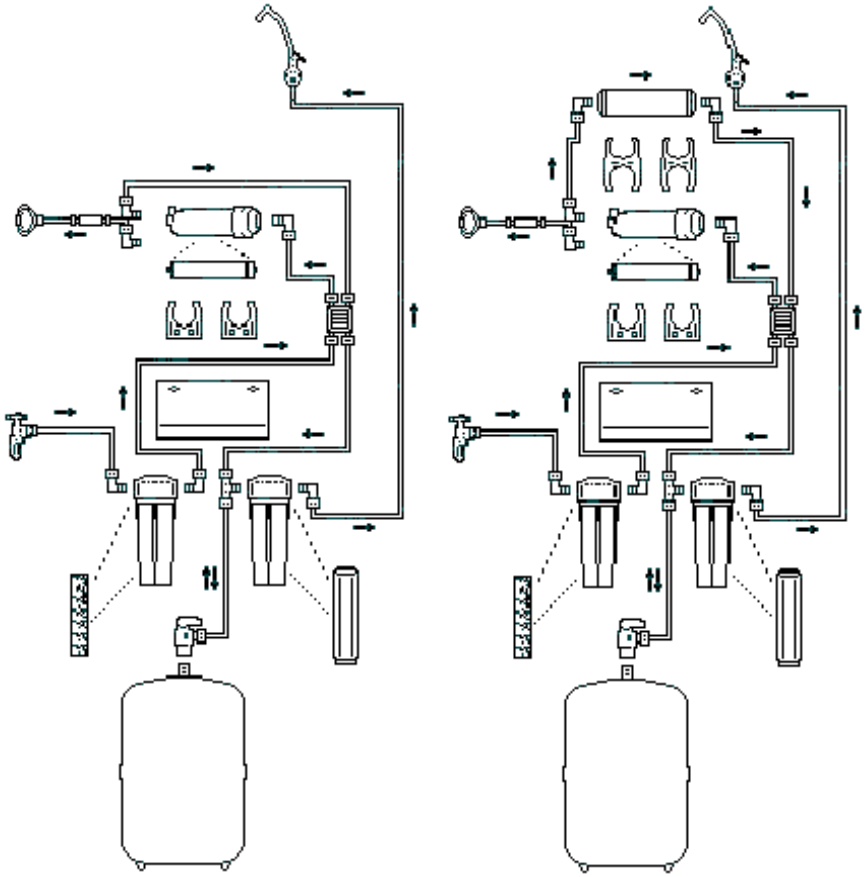
The system is designed to process potable water through various stages:
A pre-filter, a spiral wound membrane, and a charcoal post-filter. A water conserving feature is also included. Our unique control valve shuts the system off when storage tank is full of processed water. The R.O. System will perform better and last longer with heavier usage. We encourage you to use R.O. Water to cook, make coffee, tea, and mixed drinks, water the house plants, for pets, etc.

		CW 300 ST	CW 400 ST	CW 400 TCR	CW 500 TCR
Pre-filtration	30 micron	no	yes	no	yes
"	5 micron	yes	yes	yes	yes
Pre-filtration	Carbon	On TFC *	On TFC *	On TFC *	On TFC *
Post-filtration	Carbon	yes	yes	yes	yes

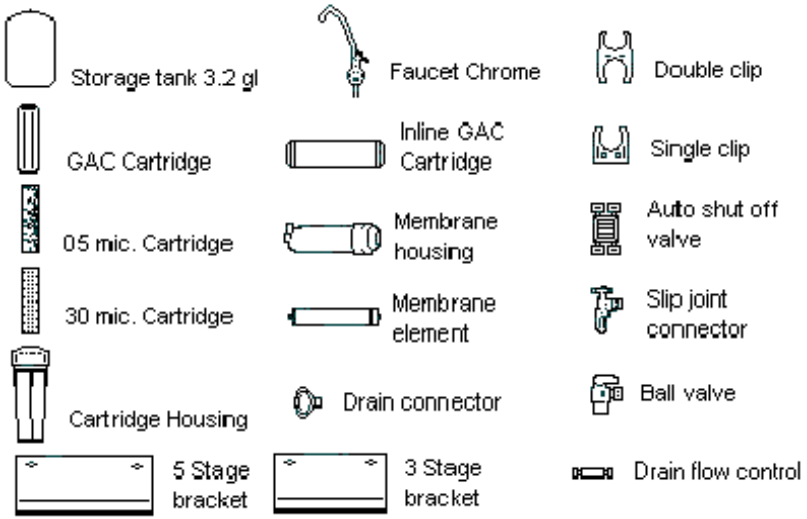
Only systems with TFC membrane requires Carbon pre-filtration. All systems come with a CTA membrane, TFC membrane is optional.

Temperature range for all systems above: Minimum 40 F-Maximum 85 F
Pressure range " " : Minimum 35 PSI.- Max 85 PSI.
Raw water pH : 3-11
Raw water total dissolved solids (T.D.S.): 1800 PPM Maximum

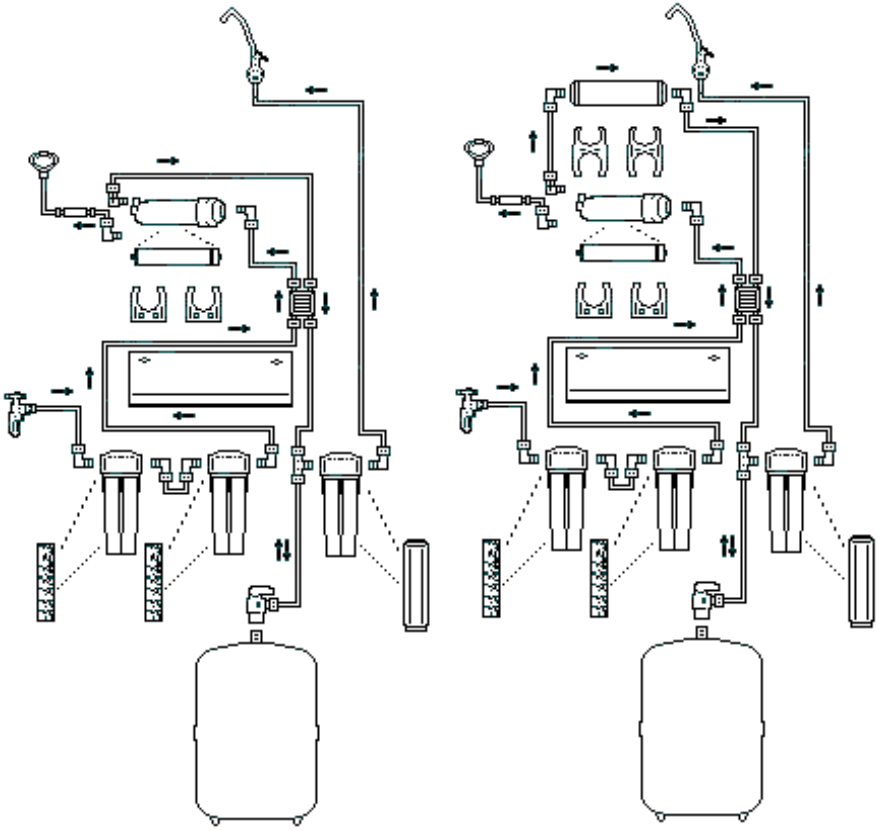
When T.D.S. Exceeds 1800 PPM or water pressure is below 35 PSI., a pressurized system is required, contact your dealer for assistance.



CW-300-ST CW-400-TCR



Please read and become familiar with all instructions, processes, and parts before installation.



CW-400-ST CW-500-TCR

Membrane housing fitting

40-4-2 N-O w/ check valve elbow connector fitting

40-4-2 N-O 1/4" x1/8" Elbow connector fitting

Inline filter and Cartridge housing fitting

40-4-4 N-O 1/4" x 1/4" Elbow connector fitting

60-4-4 N-O 1/4" x 1/4" x 1/4" Male branch tee

1/4" tubing

STEP 1. INSTALLATION OF FEED WATER ADAPTER

A.) The feed water assembly consists of a ½" brass slip joint adapter, cone washer, a black washer and a ¼" x $^1/_8$" angle valve shut. Locate these parts in the installation kit. The angle valve should be installed into slip joint adapter before assembly is connected to feed cold water line. (Note: Teflon tape must be used on angle valve to prevent leaks).

B.) Locate Cold water angle shut off valve under the sink and turn-it off. Open cold water faucet to release the pressure. On single handled faucets, the hot water may have to be turned off to prevent any hot water crossover. If water continues to come out of the faucet with the angled valves turned off, the house main will have to be turned off.

C.) Now that the water is turned off, disconnect the cold water riser tube and install the slip joint connector. (FLEX LINE) Loosen nut and separate cold riser tube from faucet shank. Gently bend the riser tube, so that the slip joint adapter fits onto the faucet shank. Replace the existing cone washer with new washer provided in installation kit onto slip joint adapter and tighten. On solid copper riser tube, use theSame procedure as flex tubing except you must cut a piece of the riser tube about ¾" to 1" from one end, so slip joint adapter fits between faucet and riser tube.

* Example drawings provided following installation guide.

FAUCET HOLE IN SINK

The faucet should be positioned with aesthetics, function and convenience in mind. An ample flat area is required for the faucet base, so that it can be drawn down tight. Some conditions could eliminate the need to drill a hole in the sink, a faucet previously installed in the sink, the hole covered by a chrome hole cover. Remove the cover and mount the faucet.

Sprays hose neither functioning nor desired. Remove the spray hose and plug the outlet under the main faucet. Be sure to check if the spray uses a diverter valve at

the base of the spout, if so, remove it to avoid trouble later. Spray diverter pops up and shut off water to the main faucet.

If space is not available on the upper sink area, the faucet could be located on the counter top at the edge of the sink. Be careful watch for obstructions below, i.e., drawers, cabinet walls, support braces, etc. If the counter top is ceramic tile, the method for drilling the hole would be the same as for porcelain sinks.

The sink drilling process although not complicated, requires a certain amount of caution and forethought. Porcelain sinks can be chipped if care is not exercised when drilling the hole for the faucet hole.

STEP 2. FAUCET HOLE DRILLING PROCESS

AIR GAP FAUCET:

Porcelain sinks:

Grind the porcelain away from the hole area with a grinding stone or wheel, before drilling through the metal with the metal drill bit, and carbide tipped hole saw. Use a ¼" carbide tipped drill bit, and drill a guide hole. Then use a $^{1}/_{8}$" carbide tipped hole saw and enlarge the hole.

Stainless Steel Sink:

Drilling through stainless steel sinks can be achieved by drilling a $^{3}/_{8}$" guide hole, then using a 1 $^{1}/_{8}$" chassis punch to enlarge the hole.

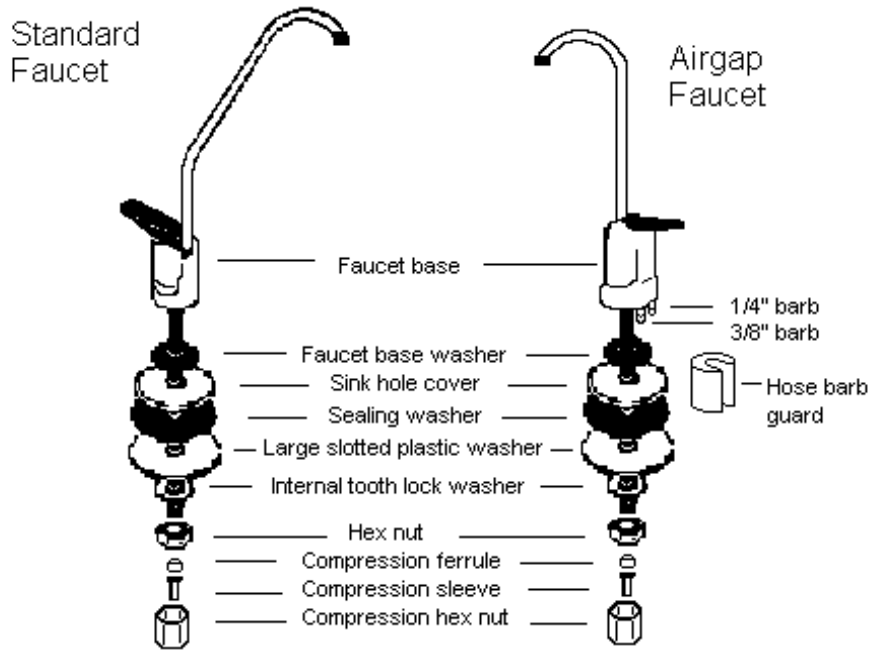
STANDARD FAUCET

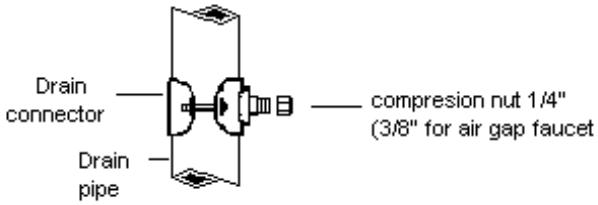
Porcelain sinks and steels sinks:

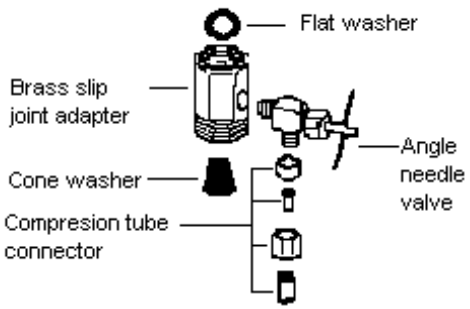
Only a ½" hole is required for the standard faucet. To drill the hole, begin with a small drill bit and graduate to a larger drill bit until the ½" hole is achieved.

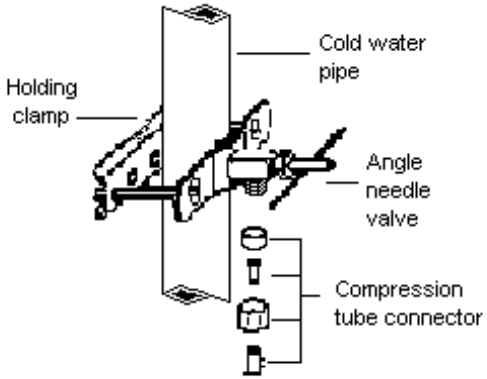
Make sure when starting to drill, to begin slowly through the porcelain portion of the sink, so that chipping is cut down to a minimum.

R.O. FAUCETS









Leaking from under black handle faucet	1. Crimp in loop in line	Straighten
	2. Drain line clogged	Clear
	3. Misalignment of drain clamp	Re-align
Bad taste	1. Restriction in waste flow	Clear
	2. Carbon post-filter	Replace
	3. Bacterial growth in storage tank	Sanitize
	4. Low water pressure (35 p.s.i. Min)	Increase pressure on feed line
Milky colored water	1. Air in system	Air in system is normal it'll dissapear in a few days
Small amount of water in storage tank	1. system just starting up .	Normally it takes 3-5 hours to fill the storage tank
	2. Air pressure in storage tank is high	Air pressure in storage tank should be between 5-7 p.s.i. When empty

STEP 3. FAUCET MOUNTING

AIR GAP FAUCET

After the hole for the faucet has been drilled, and system is in place, slip the ¼" and 3/8" Black tubing from the system, through the hole, from under the counter, and connect the ¼" tubing to the ¼' barbed fitting on faucet, and the 3/8" tubing to the 3/8" barbed. Put faucet into the pre-drilled hole and re-assemble from under the sink with provided hardware. Drawing provided following the installation guide.

STANDARD FAUCET

Disassemble bottom portion of faucet, put in hole of sink and reassemble from underneath sink.

STEP 4. SYSTEM HOOK UP

¼" Red line: Connect from system to feed adapter. (use plastic insert and plastic sleeve provided in the installation kit).

¼" Blue line: Connect from system onto threaded faucet shank with compression nut supplied with faucet. (uses plastic insert and plastic sleeve provided in the installation kit).

3/8 yellow line : Connect from system to holding reservoir tank. (use plastic insert and plastic sleeve provided in the installation kit).

¼" Black line: (Standard faucet) Connect to drain clamp fitting use ¼" plastic insert provided in installation kit. (Air gap faucet) Directions below.

3/8" Black line: Air gap faucet only. (3/8" black line as on Step 3) connect to 3/8" drain clamp fitting provided in installation kit.

SYSTEM START-UP

Slowly open needle valve (on feed adapter) allowing raw water to enter the system.

CHECK FOR LEAKS

Move ball valve lever on storage tank to open position. allow system to run while cleaning up tools. Check all connections, including those in unit for leaks. It will take the system from 3 to 5 hours (depending on size of membrane) to fill the storage tank. When the tank is full, turn on the system's faucet on top of the sink and let water run for a few minutes to clear all of the new tubes and filters, then turn the faucet off. The system will start automatically to fill the storage tank again and supply you with fresh pure drinking water at your fingertips.

TROUBLE SHOOTING GUIDE

SYMPTOM	PROBABLE CAUSE	SOLUTION
No water	1. Tank improperly pressurized	Set tank pressure at 5-7 p.s.i.
	2. Water supply turned off	Turn on
	3. Low water pressure (35 p.s.i. Min)	Increase pressure on feed line .
	4. Pre-filter is clogged	Replace
	5. Housing damage or clogged	Replace
	6. Product line crimped	Remove crimp
	7. Post-filter clogged	Replace
	8. Ball valve closed on storage tank	Move valve to open position
Slow flow through faucet	1. Post filter clogged	Replace
	2. Low air pressure in holding tank	Raise air pressure to 5-7 p.s.i. .
	3. pre-filter clogged	Replace
	4. Low water pressure (35 p.s.i. Min)	Increase pressure on feed line
Leaking housing	1. Glued joint leaking	Replace housing
	2. Threaded end cap leak	Lube o-ring and tighten
	3. Compression fitting leak	Tighten or replace
	4. Leak at screw cap	Replace o-ring if damaged
Leaking faucet	1. Fitting leak	Tighten or replace
	2. Leak at base of brass barb fitting (air gap faucet)	Replace faucet
	3.Spigot drips	Install faucet repair kit
	4.Overflow at air gap	Shorten 3/8" line from faucet to drain connection