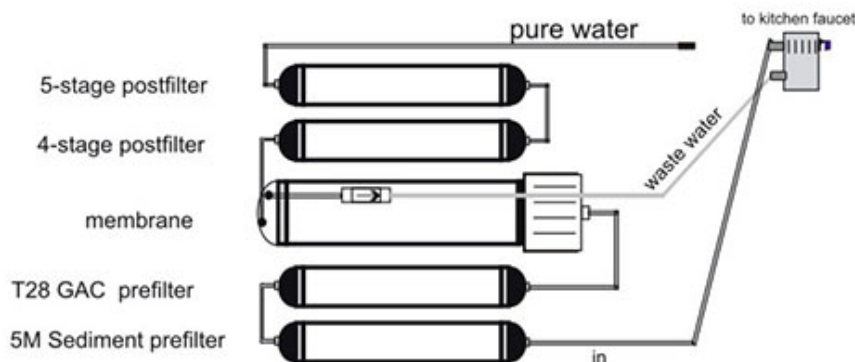


Premier Water Systems

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COUNTERTOP AND PORTABLE REVERSE OSMOSIS WATER PURIFICATION SYSTEMS

4 and 5-Stage RO SYSTEM DIAGRAM



Our Countertop and Portable RO Systems all begin as Essential 4 Stage Countertop Reverse Osmosis Water Purification Systems:

- **1st stage:** Premium Quick-Connect 5 micron sediment filter. Dust and rust particles are trapped here in a filter, which also extends the life of the system and the membrane.
- **2nd stage:** Premium USA made Quick-Connect T28 coconut activated carbon filter - VOCs (volatile organic compounds) and other common chemicals are removed from the water in this stage. This filter removes chlorine, chloramine, pesticides and herbicides, benzene, trihalomethane (THM) compounds, radon, solvents and hundreds of other man-made chemicals found in tap water, and some of metals including aluminum, cyanide, methane, silver, copper, chromium, strontium, uranium, benzene, nitrates, cysts, radium, cloudiness. This stage removes offensive odors, colors and unpleasant taste.
- **3rd stage:** Premium High Rejection TFC type Reverse Osmosis membrane (made in USA). 97%-99% of total dissolved solids (TDS) and other elements are removed in this stage. Arsenic, fluoride, lead, chromium, radium, viruses, bacteria, and other unhealthy contaminants are removed from the water. 75/100/125 or 150 gallon per day capacity.

- **4th stage. Option #1.** Premium Quick-Connect T33 coconut shell activated carbon filter. The last stage removes any potential remaining unpleasant tastes. **Option #2.** Water Re-Mineralization filter (contains 58 Minerals for your body). Filter restores natural calcium, magnesium and other minerals removed during the reverse osmosis process.

This Purification System delivers approximately 3-4 gallons of pure, clean water per hour. **Our 4 Stage Reverse Osmosis Water Purification System is the best fit for water treatment in areas with fairly clean municipal water supply (TDS level in range of 20-250).** This RO system removes more than 200 different hazardous contaminants from the water.

Before you start:

- 1) RO System connects directly to kitchen faucets or Garden Hose
- 2) Use RO System only with COLD water to avoid damaging the RO membrane and causing the entire system to malfunction
- 3) Recommended water source TDS reading: less than 250 PPM.
 - a. If your water TDS exceeds this level: you will need extra prefilters to protect the membrane and a DI post filter to lower the TDS
- 4) Do not place RO System in direct sunlight (min temp. of 40F and max of 100F)
- 5) RO System requires a minimum water pressure of 40 PSI.
 - a. If your water pressure exceeds 85 PSI, a pressure regulator must be installed
- 6) Flush RO System for at least 1 hour during the first use. If you install the new filters without the membrane installed, flush for at least 30 minutes.
 - a. (Flush means that the RO produces water, but you do not use or collect this water)
- 7) With the preinstalled flow restrictors, you can expect a ratio of pure to waste water of 1:2.5. You can reuse this waste water to water plants, ect.
- 8) This Reverse Osmosis system produces 1 gallon of water every 15-26 minutes
- 9) Filter Replacement: every 8-12 months depending on the usage, and every 3 years for the membrane.
 - a. PLEASE NOTE: when replacing filters, make sure the flow direction is correct. You want to see a “in” to “out” to “in” to “out” connection throughout the system, otherwise the system will not work.

Attaching the Diverter Valve to Faucet:

- 1) Diverter Valve: Remove the aerator from the end of the faucet. Make sure that you remove the old rubber washer as well. If the washer is in poor condition, then purchase a new one, as this fitting must be re-installed later. Compare the faucet threads to ensure that they match the diverter valve. If the threads are different, then you will require an adapter. If an adapter was not supplied with your new unit, then you will need to identify the make and possibly the model of the faucet to order one. Adapters are normally available from any full service plumbing supply or large hardware store.
- 2) Lubricate the new diverter valve stem with lubricant or vegetable oil. Pour a drop of oil into the top of the valve and then work the stem in and out. Note: This procedure should be done every few months to keep the valve lubricated internally.
- 3) Ensure that the washer in the top of the diverter valve is also lightly lubricated and positioned flat.
- 4) Using finger pressure only, screw the diverter valve onto the faucet threads. The threads are easily damaged so ensure that it goes on straight
- 6) The original aerator fitting removed from the faucet could now be re-installed on the bottom of the diverter valve in the same fashion as mentioned above. These fittings can be in very bad condition due to their age and exposure to different minerals in the water. If in doubt, purchase a new one.
- 7) Connect your feed water tube to the barb of this diverter valve

WARNING!! The installer is responsible for any leaks resulting from installation of tubing or related fittings. The installer must check over the entire system completely while under pressure to ensure system is not leaking and is functioning properly. Liability resulting from failure to check for leaks under pressure is the sole responsibility of the installer.

Membrane Installation:

Disconnect the tube going into the end of the membrane housing on the end that has only one tube going into it. Unscrew the end cap of the membrane housing.

Membranes must remain moist at all times once installed.

If the membrane is going to be reinstalled it should be put in a zip lock baggie of RO water and set into the refrigerator (*not the freezer*).

- Insert the new membrane in the direction of the arrow on the membrane.
- The end with the two small "O" rings goes in first on the regular, industry standard membranes.

- The end with the large rubber ring (brine seal) goes in last, next to the removable end cap.
- Be sure that the center tube of the membrane is seating into the receiver in the bottom of the housing. Push firmly! Screw the end cap back on and reconnect the tube to the membrane housing.

For the Portable Reverse Osmosis Systems:

Color Coded Tubing:

Red: Intake from water line (Faucet or Garden Hose)

Black: Waste Water. Can be slipped down the drain.

Blue/White: (Purified Line) Attach to Container of Choice or Spout

If your System has a base with color-coded tubing inserts, simply remove the insert and inject the corresponding color tube. SIMPLE! (see below)

With these systems: the yellow line goes to the tank valve and the blue is the purified water



If your system comes with a manual flush valve, keep the valve open during the start up phase of the unit. Once your unit is completely flushed than close the ball valve. If the ball valve is not closed, it will by pass the flow restrictor, the unit may not work.

To manual flush your membrane, open the Ball valve and let the water flow for 15 minutes. Remember to switch the handle on the ball valve back to the close position.