

microline Reverse Osmosis Drinking Water System

Model T.F.C.-435

- Delicious, sparkling-clear drinking water
- Convenience: Fresh, clean water ready at your tap
- Pristine, flavorful coffee, tea and juice
- Quality water for your aquarium
- Clean, rinsed fresh fruits and vegetables
- Crystalline, harder and clearer ice cubes
- Prolong the life of your humidifier or steam iron
- Spotless glassware, when rinsed with R.O. water
- Cost effective: No more bottled water costs
- Better tasting soups, sauces and meals
- Environmentally sound: No chemicals!
- Great for your pets!



Four High Performance Filtration Stages...

Stage 1

The Sediment/Carbon Prefilter protects the automatic shut-off and membrane from clogging with debris, but also filters out chlorine, to protect the refined T.F.C. membrane.

Stage 2

Reverse Osmosis. This is the heart of the system. Most particles too small to be trapped by the prefilter are removed by the T.F.C. membrane, reducing unwanted contaminants from the water stream.

Stage 3

The R.O. water is then routed to an Activated Carbon Filter, where the water flows through the filter very slowly to achieve prolonged contact with this specialized carbon.

Stage 4

The final stage of filtration, an Inline Carbon Filter, removes any remaining tastes and odors before the water reaches your glass, adding a final "polish" to your filtered water.

State-Of-The-Art Features...

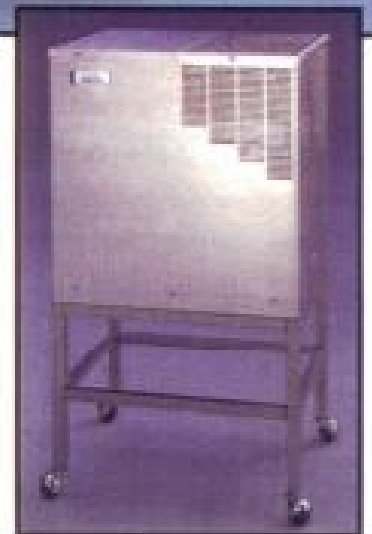
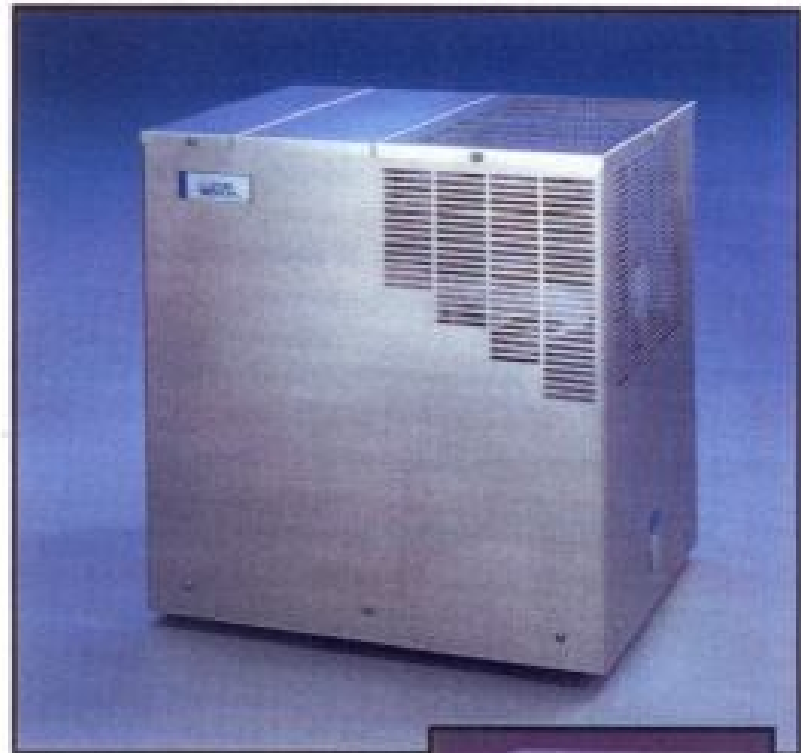
- **Patented Design:** Exclusive manifold plate with patented channel design reduces tubing connections and simplifies installation.
- **High Capacity Tank:** Holds approximately 2 gallons of water without taking up a lot of space.
- **Compact System:** Space-saving design is ideal for undersink installations and uses a minimum of space.
- **Automatic Shut-Off:** Signals the system to stop making water until more is needed.
- **Maximum Production:** High performance T.F.C. membrane with a rating of 50 gallons per day, (189 liters per day).
- **Optional Water Quality Monitor:** An optional Water Quality Monitor allows you to ensure your system is working by simply pushing a button.

MEGA-CLASSIC™

Automatic Distilled Drinking Water System

If you desire the ultimate in convenience and faster production, the Mega-Classic is perfect for you! It produces twelve gallons of distilled water per day and is equipped with a ten gallon storage tank. It has a built-in demand pump to deliver pure water right to your sink and refrigerator or has a manual distilled water outlet for dispensing water directly from the storage tank.

Maintenance is at a minimum with the Mega-Classic's self-flushing feature.



shown with optional floor stand



Reo-Pure water purification systems

Light Commercial RO Systems

LP-ES Models From 50 GPD to 1,750 GPD

Today's Most Popular Reo-Pure System
Our LP-ES Series was originally introduced over 25 years ago, and has earned its nickname, 'The WORKHORSE.'

Small In Size, Yet Big In Capacity
LP-ES Systems are designed using energy saving, high flow membranes to conserve energy and offer a system that is high in production, yet compact in size.

Dual Storage Tank Design
Our LP-ES Systems are equipped with a storage tank pressure switch and tank level float control connection to accommodate either a pressurized or atmospheric storage tank.

Compare The Standard Features
Every component has been carefully selected to provide accurate system monitoring, quick and easy maintenance, and years of trouble-free operation.

Ideal For Applications Such As...
Restaurants, greenhouses, misting systems, laboratories, water dispensers, fountain machines, etc.

MODELS AVAILABLE

- LP-ES 50
- LP-ES 100
- LP-ES 200
- LP-ES 225
- LP-ES 500
- LP-ES 900
- LP-ES 1,750



LP-ES RO SYSTEM STANDARD FEATURES

- Low Energy, High Flow Membrane Elements
- PVC Membrane Vessels
- Stainless Steel Membrane Vessel (LP-ES 1750 model)
- 5-Micron Sediment Pre-Filter
- 10-Micron Carbon Pre-Filter
- Powder Coated Steel Frame
- Inlet & Outlet Pre-Filter Gauges
- System Operating Pressure Gauge
- Manual Flush Valve
- Low Pressure Switch/Automatic Feed Water Shut-Off
- Product Water Storage Tank Pressure Switch
- Product Water Relief Valve
- Atmospheric Storage Tank Float Control Connection
- Inlet Water Shut-Off Valve
- Reject Water Re-Circulation Loop
- Brass Rotary Vane Pump
- Product Water Check Valve
- 115V, 60Hz, 1Ph
- Fixed Reject Water Control (50% Recovery)
- Salt Rejection: 95% to 99%
- 12 Month (One Year) Limited Warranty

LP-ES RO SYSTEM OPTIONAL FEATURES

- 220V, 50Hz, 1Ph
- Stainless Steel Pump
- In-Line TDS Monitor
- Timed Automatic Flush On (LP-ES 225 to 1750 models)

SECTION V. OPERATION & MAINTENANCE

A. Normal Operation

1. It is normal for the Total Dissolved Solids (TDS) of the water to be higher than normal during the first 5 gallons of operation; this is due to the sanitizing solution and the new Post Filters. After this water is rinsed to drain, the removal rate should stabilize at a value of greater than 75%. The optional Water Quality Monitor measures the TDS reduction and gives an indication of proper performance. Water pressure affects the production rate and quality.

2. R.O. systems produce drinking water at relatively slow rates; it can take up to 5 hours or more to fill the Holding Tank. Normal operation is to let the Holding Tank fill with water and then draw water as needed. When the pressure in the Holding Tank falls to a given pressure (as the water is being used) the Automatic Shut-Off Valve (ASO Valve) will start water production and the system will refill the Holding Tank. When the Holding Tank is full and no water is being used, the ASO Valve will automatically shut off the feed water to conserve water. The more water that is used (up to the capacity of the system) the better the R.O. system will function. Other uses for the water are flowers, pets and rinsing glassware.

With each use it is recommended that you run the faucet for at least 10 seconds prior to using water. This is especially important if the system has not been used daily. After periods of non-use, such as a week of vacation, it is better to empty the Holding Tank and allow the system to produce fresh water for use. If the system is not used for 3-4 weeks or longer, it is a good idea to resanitize the system and to change the prefilter and post filters.

B. Changing Filters

THIS R.O. SYSTEM CONTAINS FILTERS WHICH MUST BE REPLACED AT REGULAR INTERVALS TO MAINTAIN PROPER PERFORMANCE. USE ONLY FACTORY APPROVED FILTERS.

All individuals should take adequate precautions when changing the filters, including wearing protective gloves, to avoid direct contact with the exhausted filters.

The recommended interval for changing the filters (not the R.O. Membrane) is every 6 to 12 months. Typical T.F.C. Membrane life expectancy is three years. Local conditions may dictate more frequent changes.

NOTE: If the R.O. Membrane is to be replaced, see Sec. IV, E1-3 for the proper procedure.

Use a drip pan to catch any water that may spill when the Filter Housings are removed. Refer to Fig. 1 for component location.

1. Close the Feed Water Saddle Valve by turning fully clockwise and open the Dispensing Faucet. Allow the Holding Tank to empty.
2. Loosen and remove the Sediment/Carbon Filter and the Activated Carbon Filter Housings. Discard the filters.
3. Wash the inside of the Housings using a mild detergent and a soft cloth. Do not use abrasive cleaners or pads. Thoroughly rinse all soap from the Housings before reassembly.
4. To sanitize the system and replace the filters:

NOTE: The system should be sanitized before installing the Sediment/Carbon Prefilter and Activated Carbon Post Filter.

- Use a good quality unscented 5¼% liquid chlorine household bleach.
- Add one capful of bleach (this is 2 tsp. or 10 ml) to the Sediment/Carbon Filter Housing and temporarily install the Housing without the Sediment/Carbon Prefilter. Check the Housing O-ring for proper position in its groove, engage and firmly tighten the Housing hand tight only.
- Add one capful of bleach to the Activated Carbon Filter Housing. Carefully fill the Housing with tap water and temporarily install the Housing without the Activated Carbon Post Filter.
- The Dispensing Faucet should be open, slowly open the Feed Water Saddle Valve.
- As soon as water begins to drip out of the Dispensing Faucet, close the Faucet.
- Let the system stand for 15 minutes.

- At the end of 15 minutes, in the following order, close the Feed Water Saddle Valve, close the Holding Tank Valve and open the Dispensing Faucet to release the pressure.
- Remove the Sediment/Carbon Filter Housing and empty. Remove the wrapping and install the Sediment/Carbon Prefilter. Firmly tighten the Housing hand tight only.
- Remove the Activated Carbon Filter Housing and empty. Remove the wrapping and install the Activated Carbon Post Filter. Firmly tighten the Housing hand tight only.
- Disconnect the yellow product water tubing that runs from the Holding Tank to the Tee (see Fig. 1). Put 50 drops of bleach (this is $\frac{1}{2}$ tsp. or 3 ml) into the tubing and reconnect it to the Tee.

NOTE: Now is the convenient time to change the In-Line Activated Carbon Post Filter, see Sec. V, C.1-6.

- Slowly open the Feed Water Saddle Valve. When water begins dripping out of the Dispensing Faucet, in the following order, close the Faucet and then open the Holding Tank Valve.
- Do not open the Faucet for at least 8 hours.
- Discard the first three full tanks of water produced, they will contain chlorine.

IN-LINE ACTIVATED CARBON POST FILTER ASSEMBLY

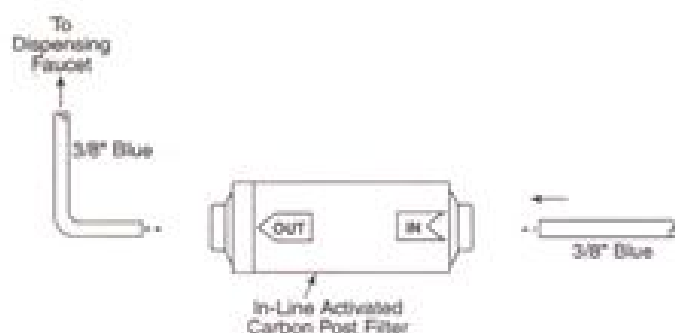


Figure 5

C. Changing the In-Line Activated Carbon Post Filter

1. Close the Feed Water Saddle Valve by turning fully clockwise.
2. Close the Holding Tank Valve and then open the Dispensing Faucet to release the pressure.
3. Remove the In-Line Activated Carbon Post Filter. Disconnect the used Post Filter by pressing in the connector's collar and at the same time pulling the tube out of the fitting.
4. Firmly reconnect the polytubes to the new Post Filter. (Refer to Fig. 5). Make sure the tubing is pressed all the way in to create a pressure tight connection.

NOTE: If you want to pull the tubing out for some reason, push the ring around the tubing in and pull the tubing out.

5. Slowly open the Feed Water Saddle Valve.
6. When water begins dripping out of the Faucet, in the following order, close the Faucet and open the Holding Tank Valve. When the Faucet is first opened, expect air and carbon fines (very fine black powder), from the new Post Filter to be rinsed out. This is normal for the first tank of water.