USFilter

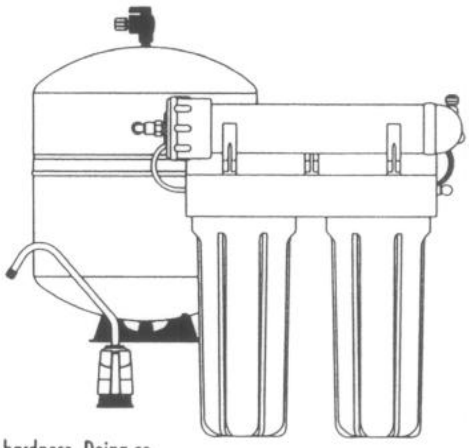
Reverse Osmosis Water Filtration System

Installation and Operating Instructions
Models RO-2127 and RO-3167

Operating Specifications

IMPORTANT: Before installing this reverse osmosis system, make certain your water supply complies with the following operating specifications. Failure to do so may reduce the effectiveness of the system and will void the warranty (see warranty on page 12). Consult your local water treatment utility or a certified water testing lab to determine the quality of your water and use the table below to record your results for future reference.

	RO-2127	RO-3167
Membrane	ROM-16C	ROM-26T
Pressure Range	40–100 psi (2.8–6.9 bar)	40–100 psi (2.8–6.9 bar)
Temperature Range	40–95°F (4.4–35°C)	40–95°F (4.4–35°C)
Total Dissolved Solids	1500 ppm	1500 ppm
Maximum Hardness[1]	10 gpg (171 mg/l)	10 gpg (171 mg/l)
Sulfide, Iron and Manganese	0 ppm	0 ppm
Chlorine In Water Supply	Rec. 0.1-3 ppm	Less than 2 ppm
Water Supply pH Limits	3-8	4–11
Daily Product Water Rate	15 gpd (56.7 Lpd)[2]	26 gpd (98.4 Lpd)[3]
TDS Rejection (at 60 psi or greater)[4]	Greater than 85%	Greater than 95%
Turbidity	5 NTU Max.	1 NTU Max



[1] **IMPORTANT!** We do not recommend that these reverse osmosis systems be used with water in excess of 10 gpg (171 mg/L) hardness. Doing so will cause lime scale to build up on and plug the membrane.

[2] 13-17 GPD with minimum 93% salt rejection when tested at 25°C, 500 ppm TDS feed water (NaCl in RO/DI water), 65 PSIG and 15% recovery. Daily water production may vary with water conditions. System normally produces 3 to 5 gallons per day.

[3] 22-30 GPD with minimum 93% salt rejection when tested at 25°C, 500 ppm TDS feed water (NaCl in RO/DI water), 65 PSIG and 15% recovery. Daily water production may vary with water conditions. System normally produces 7 to 10 gallons per day.

[4] Tested at 60 psi, 77°F and 750 ppm (reference: NSF International Standard 58).

NOTE: If your water temperature and pressure are at the low end of the listed range (40 psi [2.8 bar] and 40°F [4.4°C]), and the TDS level is near the maximum (1500 ppm), the system will not function properly. Under these extreme conditions, pre-warming the supply water using a 25 ft. (7.62 m) coil of tubing between the saddle valve and the system, and/or installing a booster pump to increase the water pressure will allow the system to perform effectively.

NOTE: The contaminants or other substances removed or reduced by this water treatment device are not necessarily in your water.

For Your Records

Model # _____

Date of purchase _____

Your Source Water

Total Dissolved Solids (TDS)	_____	ppm
Hardness	_____	gpg
Iron	_____	ppm
pH	_____	

System Dimensions

System Dimensions	15"w x 7.5"d x 17.5"h (381 mm x 191 mm x 445 mm)
System Weight	13 lbs. (5.9 kg)
Tank Dimensions	11-1/8"d x 14-1/4"h (283 mm x 362 mm)
Tank Capacity	1.9–3.2 gal. (7.2–12.3L) (depending on water conditions).
Tank Weight (full)	40 lbs. (18.2 kg. depending on feed pressure)

Tools and Materials Required

- Hand or electric drill (cordless recommended)
- Slotted and Phillips screwdrivers
- Adjustable wrench
- Drill bits: 1/8-inch, 1/4-inch, 3/8-inch
- File
- Safety glasses
- Utility knife or tube cutter
- Measuring tape

If sink does not have hole for separate faucet:

- Center punch
- Cone-shaped grinding wheel
- 1-1/4-inch hole saw

Parts Included (see page 11 for diagram)

- Pre-assembled filter system (mounting bracket, membrane housing, pre and post-polishing housings, pre and post-housings cartridges, auto shut-off valve)
- Reverse osmosis membrane
- Storage tank
- Lead-free drinking water faucet with air gap
- Saddle valve
- Drain clamp with compression fitting
- Tank valve with Teflon® tape
- Tubing
- Housing wrench

NOTE: Not all tools may be necessary for installation. Read installation procedures before starting to determine if additional tools are necessary.

Precautions

General

WARNING: Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

CAUTION: Filter must be protected against freezing which can cause cracking of the filter and water leakage.

CAUTION: Because of the product's limited service life and to prevent costly repairs or possible water damage, we strongly recommend that the bottom of all plastic housings be replaced every ten years. If the bottom of your housing has been in use for longer than this period, it should be replaced immediately. Date the bottom of any new replacement housing to recommend the next replacement date.

NOTE:

- Your water must be within required limits for satisfactory operation. If not, your membrane life may be shortened and your warranty will be voided (see Operating Specifications on p. 1).
- This reverse osmosis system will not protect against disease-causing bacteria or remove naturally-occurring harmless bacteria.
- Install on cold water line only.
- Do not use wicking or sealer to fit connections into the cap of the filter. Teflon® tape is recommended.
- Make certain that installation complies with all state and local laws and regulations.
- The replacement cartridges and reverse osmosis membrane included with this system have limited service lives. Changes in taste, odor, and color of the water being filtered indicate that the cartridge should be replaced (see Replacing the Pre- and Post-Polishing Filters on p. 7 and Replacing the Membrane on p. 8).
- For prolonged periods of non-use (such as during a vacation) is it recommended that the system be flushed for 5 minutes before it is used.

ROM-16C Membrane Precautions (RO-2127 only)

CAUTION: The ROM-16C membrane should be used on chlorinated water only. If the ROM-16C membrane is used on non-chlorinated water supplies it may only last 2-3 weeks.

CAUTION: Activated carbon filters remove chlorine from the water and therefore SHOULD NOT be used as a prefilter for the RO-2127 system.

ROM-26T Membrane Precautions (RO-3167 only)

CAUTION: Chlorine will destroy the ROM-26T membrane. If you use the RO-3167 with a chlorinated or periodically-chlorinated water supply, it is ABSOLUTELY NECESSARY to use a carbon pre-filter (D-10 cartridge, included with the system). This carbon pre-filter should be changed at least every 3 months to avoid chlorine bypass. See warranty for disclaimers and limitations that apply to the RO membrane.

NOTE:

- To make sure no chlorine is present in the water that reaches the membrane, you may want to use a chlorine test kit to check the brine/reject water that flows from the membrane to the drain. No chlorine should be detected.
- The ROM-26T membrane is resistant to naturally-occurring bacteria.

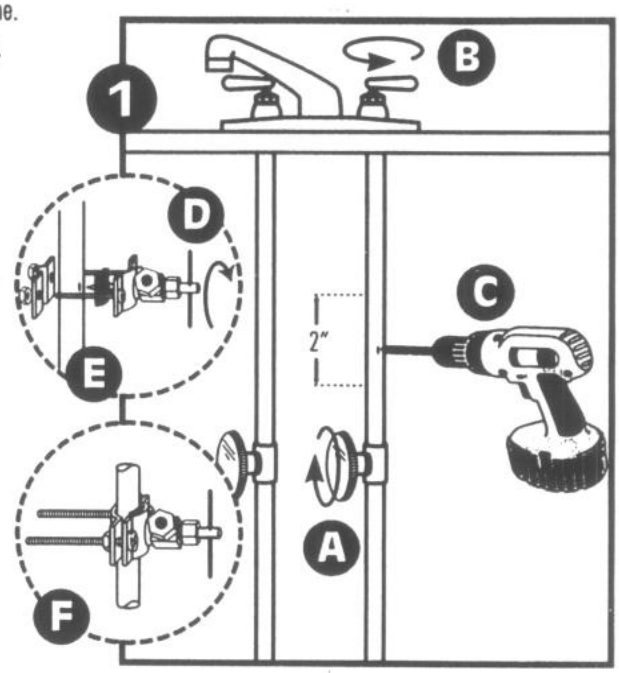
How Reverse Osmosis Works

The USFilter Reverse Osmosis (RO) system uses a semi-permeable membrane to reduce dissolved salts and minerals, improving the taste and odor of your water. The RO membrane is made of layers of micron-thin material wound around a hollow center core. Water molecules can pass through the membrane, but dissolved salts and minerals are rejected.

The USFilter RO system features triple-filter action. Your household water supply is pre-filtered to reduce dirt and/or chlorine that may foul the membrane. The RO membrane separates this pre-filtered water into PRODUCT WATER and BRINE or REJECT WATER. Your household water pressure forces the product water through the membrane and into the storage tank. Dissolved solids and other contaminants cannot pass through the membrane and are sent to the drain as reject water. When you open the drinking water faucet, product water is drawn from the storage tank through an activated carbon post-polishing filter, providing you with cleaner, great-tasting water. The system also features an auto shut-off valve, which shuts off the system once the pressure in the storage tank reaches 2/3 of the incoming water pressure (your household water pressure). When you open the drinking water faucet to draw water from the storage tank, the pressure inside the tank drops and the auto shut-off valve opens. The system then begins to produce, replenishing the water you took from the storage tank. The storage tank can hold up to 2-1/2 gallons of water at a time, more than enough for the average family's drinking and cooking needs.

Installation

- For standard, under-sink installation on 3/8-inch (10mm) steel, brass, PVC, or copper cold water line.
- Please read all instructions and precautions before installing and using your reverse osmosis system.
- Numbered diagrams correspond with numbered steps.



1. Installing the Saddle Valve

WARNING: We recommend you use a hand-drill to install the saddle valve. To protect yourself from serious injury or fatal shock when using an electric drill, be sure the drill and the outlet it is plugged into are properly grounded. When using a drill, follow the manufacturer's guidelines and procedures.

NOTE: Saddle valve must be installed on a 2-inch long, straight-walled section of 3/8-inch to 7/8-inch steel, brass, copper, or PVC pipe.

(A) Turn off the cold water supply.

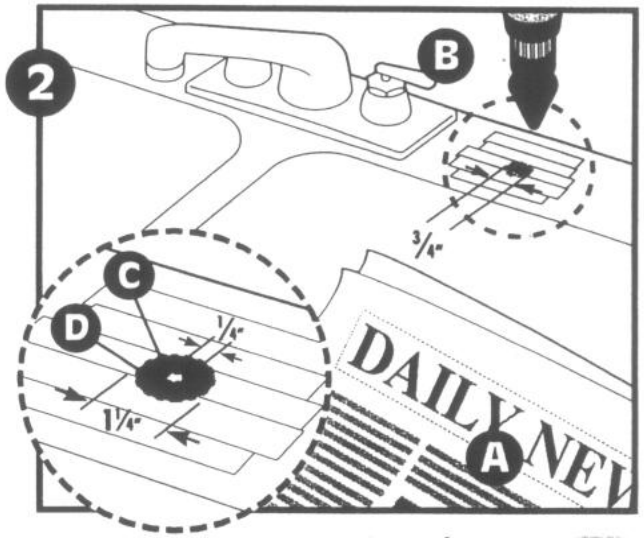
(B) Turn on the nearest faucet before starting installation. Place a tray or towels under the cold water line to catch excess water.

(C) Drill a 1/8-inch hole through one side of the cold water line. Remove any burrs with sandpaper or file.

(D) Turn the handle on the saddle valve clockwise until it stops. The lance should be exposed beyond the black rubber gasket.

(E) Place the body of the saddle valve over the hole in the cold water line so the lance fits into the hole.

(F) Attach the back plate of saddle valve and tighten the bolts evenly and firmly so brackets are parallel.



2. Selecting the Faucet Location

The drinking water faucet should be positioned with function, convenience and appearance in mind. An adequate flat area is required to allow the faucet base to rest securely. The faucet fits through a 1-1/4–inch hole. Most sinks have predrilled 1-1/2–inch or 1-3/8–inch diameter holes designed for spray hoses; the drinking water faucet may be installed using one of these holes, despite their larger size. If these pre-drilled holes cannot be used or are in an inconvenient location, it will be necessary to drill a 1-1/4–inch hole in the sink for the faucet.

Drilling

CAUTION: DO NOT ATTEMPT TO SCORE OR DRILL THROUGH AN ALL-PORCELAIN SINK. If you have an all-porcelain sink, mount the faucet in the sprayer hole or drill through the countertop next to the sink.

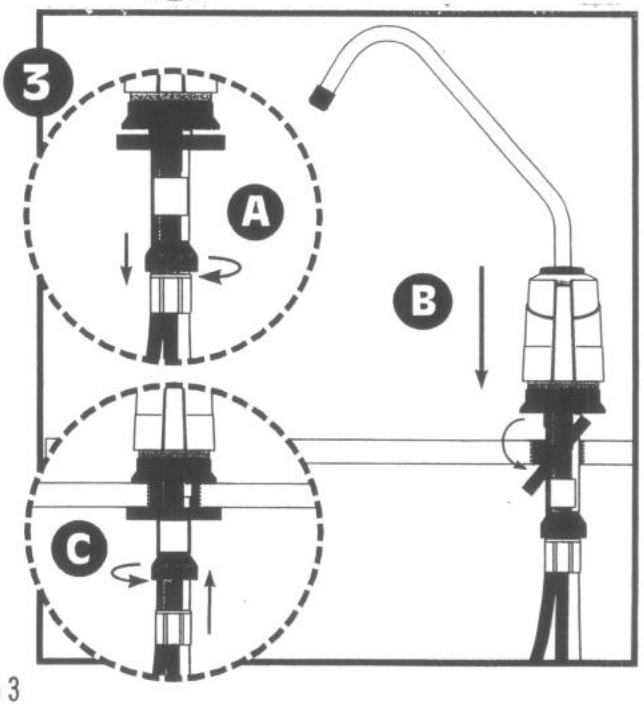
The following instructions apply to porcelain-coated cast iron and stainless steel sinks only.

(A) Line the bottom of the sink with newspaper to prevent metal shavings, parts or tools from falling down the drain.

(B) If the sink is porcelain-coated, place masking tape over the area to be drilled to prevent excess chipping of the enamel. Use a cone-shaped grinding wheel to remove a 3/4-inch diameter circle of porcelain before drilling.

(C) Mark the hole with a center punch, then use a 1/4-inch drill bit to drill a pilot hole through the sink.

(D) Use a 1-1/4–inch hole saw to enlarge the hole. Smooth the rough edges with a file.



3. Mounting the Faucet

NOTE: Remove the yellow card from the clear tube. Set the card aside for use in Step 6.

(A) Loosen the black stem nut until it comes into contact with the white nut.

(B) Angle the metal channel washer and feed the tubing and faucet stem through the hole in the sink. Position the faucet handle at the desired location.

(C) From underneath the sink, center the metal channel washer flush against the bottom of the sink. Then hand-tighten the black stem nut firmly against the metal channel washer.

4. Installing the Drain Clamp

NOTE: Before installing the drain clamp, check the drain pipes under the sink for corrosion. Corroded pipes should be replaced before continuing with installation.

(A) Attach the drain clamp to a vertical section of the drain pipe, about 6 inches above the trap. Make sure the opening on the drain clamp is facing towards the drinking water faucet.

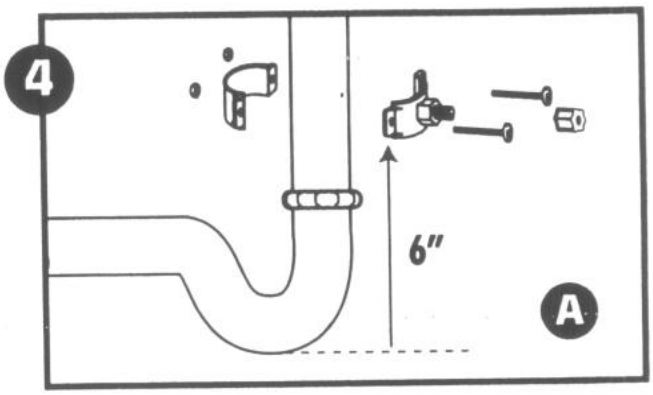
(B) Using the fitting hole of the drain clamp as a guide, drill a 1/4-inch hole through one side of the drain pipe.

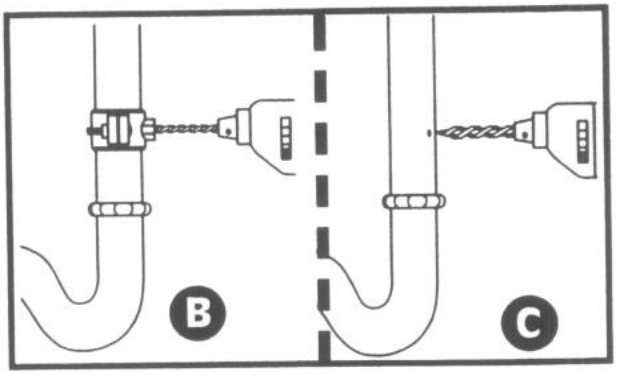
(C) Remove the clamp from the drain pipe and enlarge the hole with a 3/8-inch drill bit. Use a file to remove rough edges from the drilled hole.

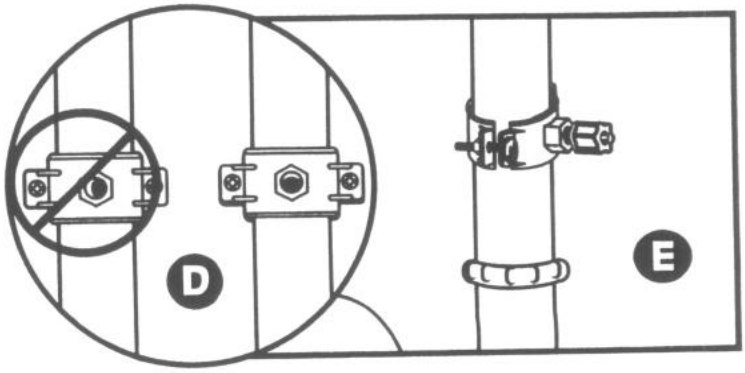
(D) Make sure the black rubber gasket is adhered to the inside of the drain clamp and place the drain clamp assembly over the drilled hole. Look through the hole and position the clamp so that the center of the clamp hole is slightly higher than the center of the drilled hole. Tighten the clamp securely.

(E) Screw the plastic compression fitting into the drain clamp until hand-tight.

NOTE: If you have a single-drain sink with a disposal unit, install the drain clamp as close to the disposal unit as possible.





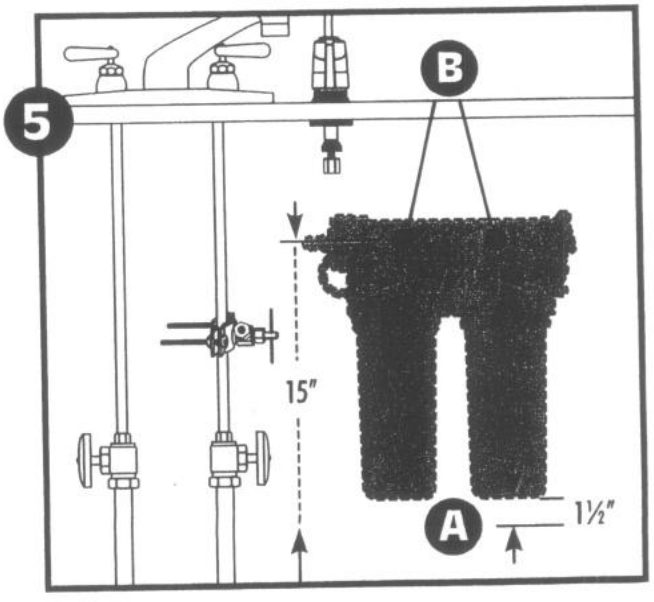


5. Mounting the System

(A) Center the system between the saddle valve and the drinking water faucet. If the system is being installed under the kitchen sink, locate it on back or left wall. Allow enough space for installation. To change the filter cartridges, a minimum of 1-1/2 inches of clearance is required underneath the filter housings.

(B) Install mounting screws at least 15 inches from the cabinet floor and 7-1/4 inches apart. Leave a space the thickness of a nickel between the head of the screw and the wall to slip the bracket onto the screws. Place the bracket over the screws on the wall and slide sideways.

CAUTION: Make certain the system is firmly attached to the wall to prevent it from falling and becoming damaged.



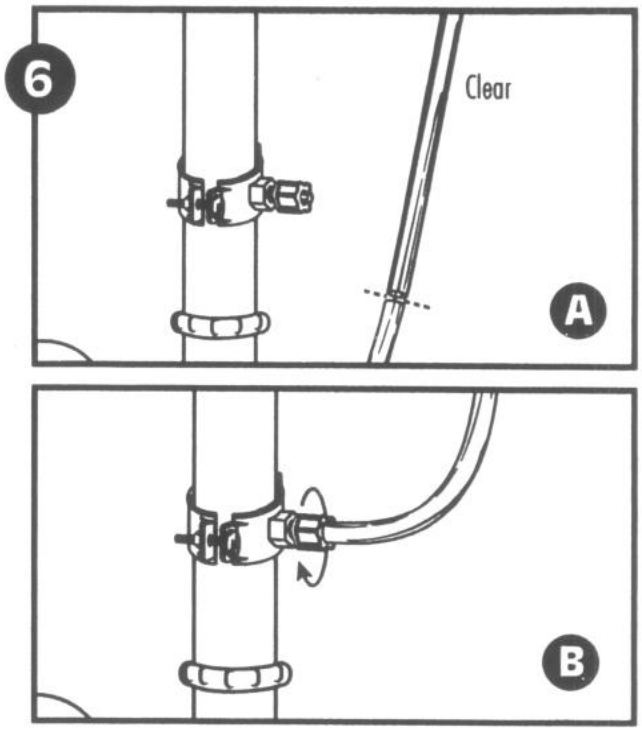
Installation continued

6. Connecting the Faucet to the Drain

(A) Align the clear 3/8-inch tubing from the faucet with the compression fitting on the drain clamp. Create as straight a path as possible with the tubing. Cut the tubing squarely below the fitting and remove the internal and external burrs.

NOTE: THIS IS A GRAVITY DRAIN LINE. ANY LOOPS, KINKS OR SHARP BENDS MUST BE ELIMINATED BEFORE PROCEEDING. FAILURE TO CREATE A STRAIGHT LINE TO THE DRAIN MAY RESULT IN BRINE WATER LEAKING THROUGH THE AIR GAP IN THE FAUCET.

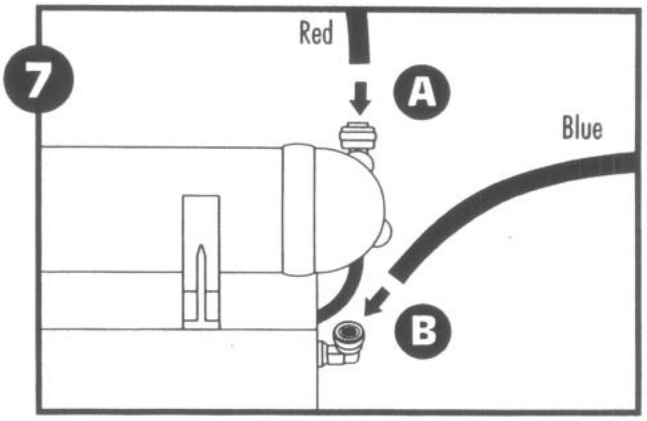
(B) Loosen the compression nut two complete turns. Insert the tubing into the nut until it stops. Tighten with fingers, then tighten 1 to 2 turns with a wrench.



7. Connecting the Faucet to the System

(A) Locate the red fitting on the right side of the RO membrane housing. Align the red tubing from the faucet with this fitting and insert the tubing 5/8-inch into the fitting, until it stops.
(B) Locate the blue fitting on the right side of the post-polishing filter housing. Align the blue tubing from the faucet with this fitting and insert the tubing 5/8-inch into the fitting, until it stops.

CAUTION: Make sure all the tubing is connected firmly, or leaks may occur.



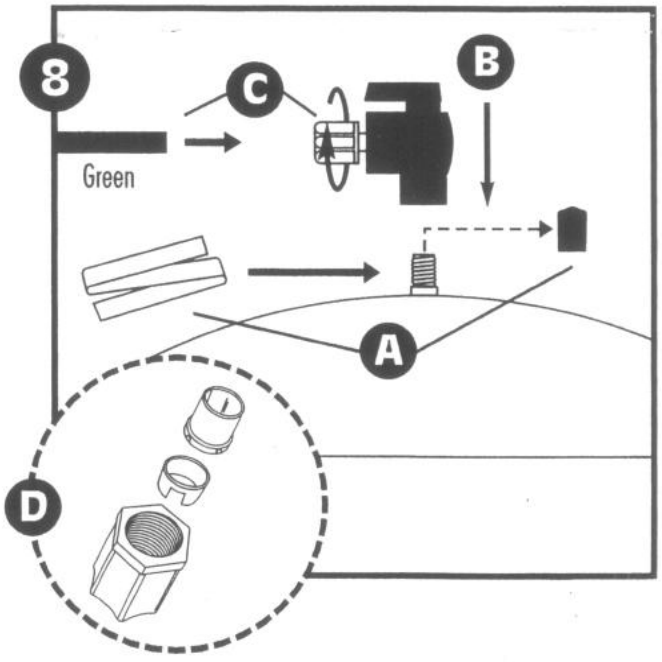
8. Connecting the System to the Storage Tank

(A) Remove the black protective cap on top of the storage tank to expose the 1/4-inch threaded opening. DO NOT remove the blue cap on the bottom of the tank. Locate the tank valve and Teflon® tape. Apply two wraps of Teflon tape to the threads on the top of the tank .
(B) Tighten the valve onto taped connection by hand.
NOTE: Do not cut the green tubing. This line should be left at its standard length so the system can be removed from the bracket if necessary.
(C) Loosen the nut on the tank valve and insert the green tubing until it comes to a stop. Tighten the nut with your fingers, then tighten 1 to 2 turns with a wrench.

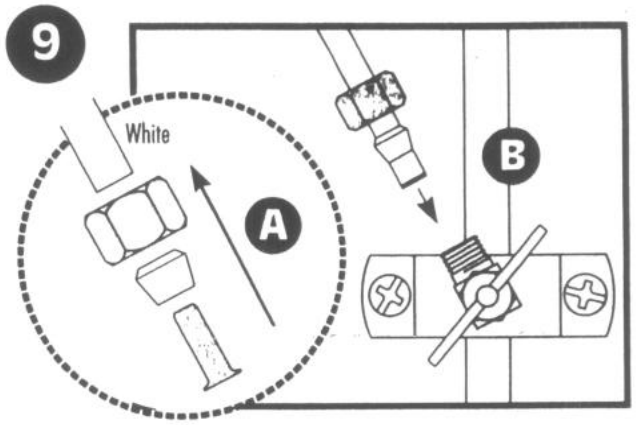
(D) Should the compression nut become disassembled, refer to diagram 8D to reassemble it.

CAUTION: The tank is usually installed in the upright position and as close to the system as possible. However, the tank can also be placed on its side on the stand. When the tank is full, it weighs approximately 40 lbs. Provide ample support under the tank.

NOTE: The tank's air pressure is factory set at 5 to 7 psi when the tank is empty.

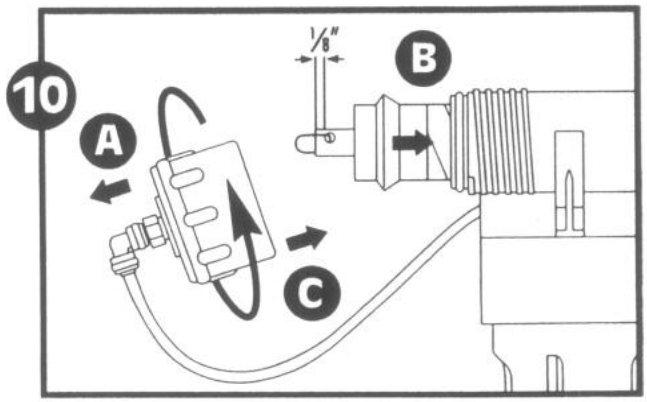


9. Connecting the System to the Saddle Valve



(A) Locate the white tubing from the right side of the system. Slide the compression nut and plastic ferrule onto the tubing. The long, tapered end of the ferrule should face towards the end of the tubing. Place the insert into the end of the tubing.
(B) Insert the tubing into the saddle valve and hand-tighten the compression nut. Using a wrench, tighten the nut 1 to 1-1/2 turns.

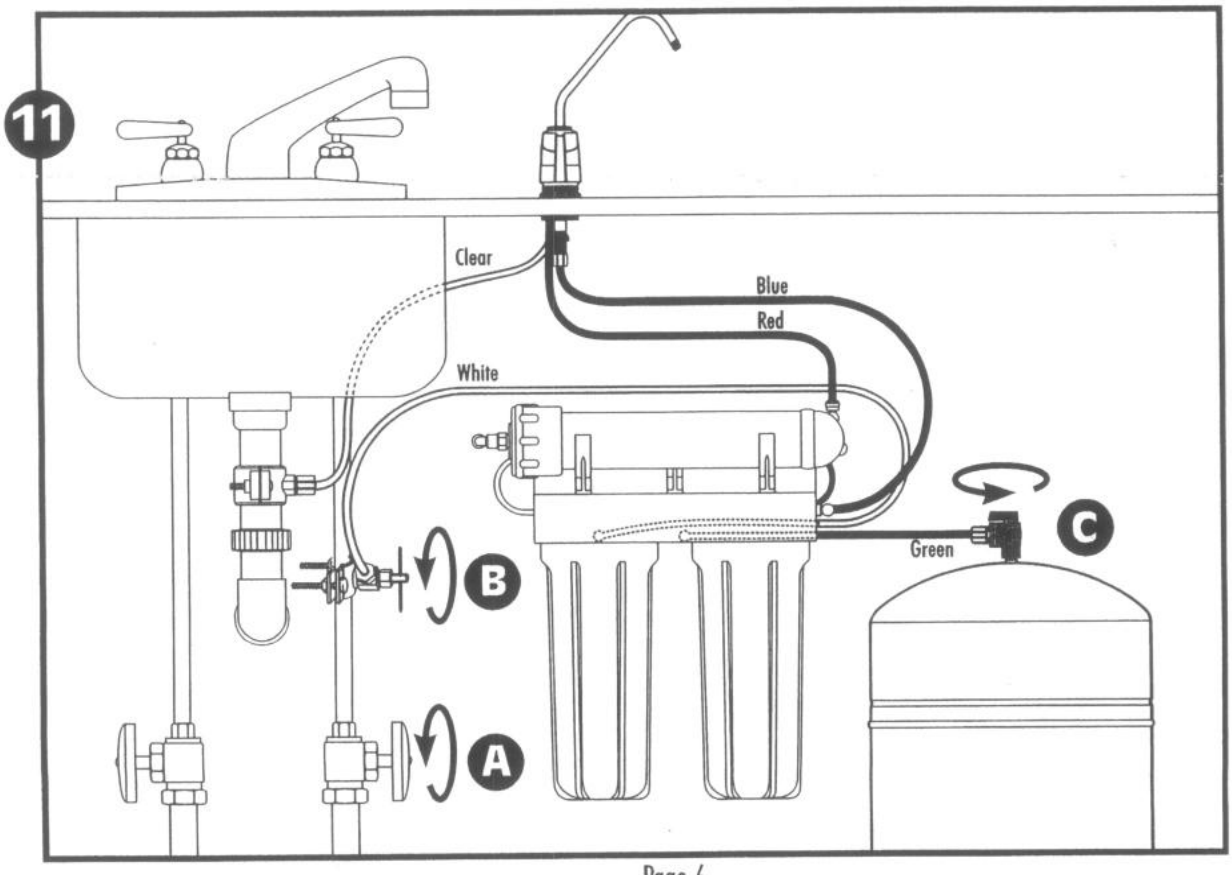
10. Installing the Membrane



(A) Hold the membrane housing with one hand and unscrew the cap with your other hand.
DO NOT DISCONNECT THE TUBING FROM THE CAP.
With clean hands, remove the membrane from the plastic bag. HANDLE WITH CARE.
NOTE: Do not unwrap the tape around the membrane; it is part of the membrane.
Do not squeeze the membrane.
(B) With the double O-ring side first, push the membrane firmly into the housing until it stops. Push on the end of the membrane with both thumbs to make sure that it is completely inserted.
NOTE: No lubricant is needed on the membrane housing O-ring. It is self-lubricating.
(C) Hand tighten the membrane housing cap until you feel resistance, then tighten an additional half turn. Do not over-tighten. Do not use a wrench to tighten the cap.

11. Placing the System into Operation

After you have installed your system, follow this procedure to check for leaks and to flush the system:
(A) Turn on the cold water supply to the system.
(B) Turn the handle on the saddle valve counterclockwise until it stops. This will allow cold water to flow into the RO system.
(C) Visually check the entire system for leaks. Tighten fittings if necessary. Make sure the valve on the storage tank is open. **NOTE:** Tank valve is open when blue switch is aligned with the green tubing. Allow the system to run for 8-12 hours to fill storage tank. Check for leaks every hour. As pressure builds in tank, leaks may appear where none previously existed.



Installation continued

NOTE: The RO system does not produce a high volume of water on demand as an ordinary filter does. The product water is produced at a slow, drop-by-drop rate. The system requires about 8-12 hours to fill the storage tank. When you use water from the storage tank, after it has filled, the system will immediately begin producing more water to replace the water you removed.

(D) Remove the disinfectant agent from the membrane. The reverse osmosis membrane is treated with a food grade sanitizing agent that may cause an undesirable taste to the product water. Although it is not harmful, the sanitizing agent should be flushed from the system. Before using any water from the system, discard the first two tankfuls as follows:

(E) After 12 hours, turn on the drinking water faucet. Let it run until faucet drips. This will take 4 to 5 minutes. Allow 8-12 hours for the storage tank to refill and repeat.

NOTE: Initially, water may appear cloudy. This is a result of air trapped in the carbon post-polishing filter cartridge. It is not harmful, and will disappear in a matter of minutes.

The system is ready for operation. You can now enjoy quality water from your Reverse Osmosis system.

Connecting your Reverse Osmosis System to your Refrigerator Icemaker/Water Dispenser (Optional)

CAUTION: Use polyethylene tubing and plastic fittings. Do not use copper tubing or brass fittings.

NOTE: For optimum performance, it is recommended that the distance between the RO system and the refrigerator icemaker/water dispenser be no greater than 10 feet (3 m). At distances greater than 10 feet, the water pressure from the system may not be adequate to deliver water to the refrigerator.

MATERIALS REQUIRED: (available from your local hardware store)

- 1/4-inch x 1/4-inch x 1/4-inch (0.635 cm x 0.635 cm x 0.635 cm) compression tee
- 1/4-inch (0.635 cm) polyethylene tubing (maximum length of 10 feet (3m) recommended)
- Shutoff valve (optional, to control flow if use of refrigerator is discontinued)

INSTRUCTIONS

NOTE: Before connecting your RO System to your refrigerator, make sure you drain the first two tanks of water and allow storage tank to refill. (see 11D on p.6-7)

1. Close the tank valve (on top of storage tank). Close the saddle tapping valve to turn off the water to the system.
2. Open the drinking water faucet to relieve pressure.
3. Locate blue tubing leading to your drinking water faucet. Cut the tubing and insert the 1/4-inch x 1/4-inch x 1/4-inch compression tee (consult manufacturers guidelines before installing the compression tee). This connection allows the water to flow to the faucet and to a second location (your refrigerator icemaker/water dispenser) at the same time.

CAUTION: While cutting the line, you may experience some water leakage.

4. Using a length of 1/4-inch polyethylene tubing, connect the icemaker/water dispenser with the free port on the compression tee.
5. Turn on the water supply to the system and open the tank valve.
6. Turn off the drinking water faucet when you receive a steady stream or a constant drip of water.
7. Check connections for leaks and tighten if necessary.

Maintenance

Replacing the Pre-Filter and Post-Polishing Cartridges

Replacement Filter Cartridges

RO-2127: The P5 pre-filter cartridge should be replaced every six months, or earlier if your water is highly turbid. The D-20 post-polishing cartridge should be replaced at least every six months.

RO-3167: The D-10 pre-filter cartridge should be replaced at least every three months, or earlier if your water contains high levels of chlorine or sediment. The D-20 post-polishing cartridge should be replaced at least every six months.

Replacing the Filter Cartridges

1. Turn off water to system and place a tray under the system to catch any water that spills during removal of the filter housings.
2. Unscrew bottom of filter housings from caps. Discard used cartridges.
3. Remove black rubber O-rings from grooves in housings. Wipe grooves and O-rings clean; set O-rings aside.
4. Rinse out housings and fill each 1/3 with water. Add 2 tablespoons of bleach and scrub with nonabrasive brush or sponge. Rinse thoroughly.
5. Lubricate each O-ring with a coating of clean petroleum jelly (Vaseline®). With two fingers, press each O-ring securely into groove below the threads of the appropriate housing.

CAUTION: The rubber O-ring provides the water-tight seal between the cap and the bottom of the housing. It is important that the O-ring be properly seated in the groove below the threads of the housing or a water leak could occur.

6. Insert cartridges in the bottom of the housings.
   NOTE: Be sure to install cartridges in proper housings (see diagram on page 11).
   NOTE: The D-20 post-polishing cartridge should be placed so that black-gasketed end is facing up.
7. Screw bottoms of housings back onto caps securely; do not over-tighten.
8. Turn the handle on the saddle valve counterclockwise until it stops. This will allow cold water to flow into the RO system.
9. Check for leaks. Continue to check periodically to make sure no leaks develop.

Replacing the Reverse Osmosis Membrane

IMPORTANT: Be sure to order the correct membrane for your system:

RO-2127: ROM-16C
RO-3167: ROM-26T

About the Reverse Osmosis Membrane

When used under operating conditions specified on page 1 of the manual, you should replace the membrane after 18 to 24 months, or earlier if you notice a return of unpleasant tastes or odors or a noticeable decline in water production. The precise life span of your system's membrane will depend on the quality of the water entering the system and the frequency with which you use it. Frequent use prevents the filtered salts and minerals from building up on the membrane as scale.

NOTE: The more water the system is required to produce, the longer the membrane will last. You may wish to find a variety of uses for your system in order to prolong the life of the membrane.

During extended periods of non-use (such as during a vacation), remove the membrane from the membrane housing and place it in a sealed plastic bag. Store membrane in refrigerator for future use. **DO NOT FREEZE.**

NOTE: If system stands for more than 2 to 3 days without being used, the storage tank should be emptied.

Replacing the Membrane and Sanitizing the System

NOTE: It is recommended that you sanitize the system each time you change the membrane. It is not necessary to sanitize the system when changing only the pre-filter or post-polishing filter cartridges.

NOTE: When installing a new membrane, it is recommended that you replace the pre-filter and post-polishing filter cartridges as well.

Removing the Filter Cartridges and Membrane

1. Turn off water to system at saddle valve. Place a tray under the system to catch any water that spills during removal of the filter housings.
2. Open drinking water faucet to drain storage tank. When tank is drained, close faucet.
3. Hold the membrane housing with one hand and remove the cap with the other hand.
   NOTE: Do not disconnect tubing from membrane cap.
4. To remove the RO membrane, grasp pull ring on membrane tube with pliers and pull. Discard old membrane. Screw cap back onto membrane housing. DO NOT install new membrane.
5. Unscrew bottom of filter housings from caps and discard used cartridges.
6. Remove black rubber O-rings from grooves in housings. Wipe grooves and O-rings clean; set O-rings aside.

Sanitizing the System

7. Rinse out bottom of housings and fill each 1/3 with water. Add 2 tablespoons of household bleach to each housing and scrub caps and bottoms of housings with non-abrasive sponge or cloth. Rinse thoroughly.
8. Lubricate O-rings with a coating of clean petroleum jelly (Vaseline®). With two fingers, press each O-ring securely into groove below the threads of the appropriate housing.
   CAUTION: The rubber O-ring provides the water-tight seal between the cap and the bottom of the housing. It is important that the O-ring be properly seated in the groove below the threads of the housing or a water leak could occur.
9. Add one tablespoon of bleach to the bottom of each housing. Screw bottom of housing onto caps **WITHOUT** inserting cartridges and hand-tighten. Do not over-tighten.
10. Turn on water to system at the saddle valve and let the system run for 5 minutes to carry the bleach solution throughout.

Maintenance continued

11. Open the drinking water faucet until you can smell the bleach, then turn the faucet off.
12. Let the entire system stand for 30 minutes to sanitize.
13. After 30 minutes, turn on the drinking water faucet to allow the bleach water to run out (about 5 minutes or until you can no longer smell bleach in the water).
14. Turn off the water supply to the system at the saddle valve.
15. Turn on the drinking water faucet and let the system drain completely.

Replacing the Membrane and Filter Cartridges

To replace the filter cartridges, see *Replacing the Pre-filter and Post-Polishing Cartridges* on p.7
To replace the membrane, see *Step Ten: Installing the Membrane* on p.6, and *Step Eleven: Placing the System into Operation* on p.6.
NOTE: After installing new membrane and cartridges, allow system to run for 8-12 hours to fill tank. Check for leaks every hour.
As pressure builds in tank, leaks may occur that did not exist directly after installation.

Troubleshooting Guide

Leaks between bottom of housing and cap:

1. Close the tank valve and turn off the water supply to system at the saddle valve.
2. Clean black rubber O-ring and lubricate with petroleum jelly (Vaseline®). Clean O-ring groove below threads of housing to remove any dirt or particles that may be preventing the O-ring from sealing completely. With two fingers, insert O-ring in groove and press into place. Tighten housing back onto cap. DO NOT OVER-TIGHTEN.
3. Open the tank valve and turn the handle on the saddle valve counterclockwise until it stops. This will allow cold water to flow into the RO system. If leaks persist, call Technical Support.

Leaks on compression fittings at saddle valve, inlet or system-to-tank connections.

1. Close the tank valve and turn off the water to the system at the saddle valve. For plastic fittings, tighten the nut with pliers. For metal fittings, loosen the compression nut and pull the tubing from the fitting. Inspect to see if the ferrule and insert are properly installed on the tubing (see 9A on p. 6). If so, reconnect tubing finger-tight, then tighten nut snug about 1/2 to 1 turn with a wrench.
2. Open the tank valve and turn on the water to the system at the saddle valve. If the leaks persist, or if there are other leaks on the system, turn off the tank valve and cold water supply, then call Technical Support.

Leaks on quick-connect fittings

1. Close the tank valve and turn off water to the system at the saddle valve. Turn on the drinking water faucet to relieve pressure in the system.
2. Depress colored plastic collar and pull out tubing.
3. Cut off 1 inch of tubing and place a mark 5/8-inch from end of tubing. Tubing should be cut squarely. The internal and external burrs should be removed.
4. Insert tubing 5/8-inch into fitting.
5. Turn off the drinking water faucet, open the tank valve and turn on the water supply to the system at the saddle valve. If leaks persist, call Technical Support.

No flow or slow flow from the brine (reject) line (see typical brine flow)

(less than 6 fl. oz. or 180 milliliters per minute).
Symptoms: Poor water quality
Check: Brine flow rate
Procedure: 1. Turn off the storage tank and turn on the drinking water faucet to start the system.
2. Disconnect the 3/8" clear tube where it is connected to the drain clamp.
3. Collect water that runs from the tube for one minute.

NOTE: Typical Brine Flow: RO-2127 3-5 oz/min.; RO-3167 6-8 oz/min.

Results:

If the brine flow is less than the values shown above:

1. Remove the pre-filter and re-check the brine flow without the pre-filter cartridge installed. Replace the pre-filter if the brine flow returns to the typical values shown above.

2. If this does not correct the problem, the brine flow controller is plugged and will require replacement. Contact Technical Support.

Leaks from faucet air-gap

1. Check to make sure that the clear tubing leading from the drinking water faucet to the drain is as straight as possible (it is usually necessary to cut this line during installation). Any kinks or sags in this drain line will impede the flow of water to the drain.
2. Unscrew compression fitting on drain clamp. Make sure that the fitting and the drain hole are clear, and clean out if necessary. Replace fitting.
3. Check to make sure there is no foreign matter clogging the drain line. If leaks persist, call Technical Support.

No water pressure from drinking water faucet OR low volume in storage tank

1. Lift storage tank to see if it is heavy. If it is heavy, this means that water is present but there is not enough pressure to deliver the water to the faucet.
2. Locate the blue cap on the bottom of the storage tank and unscrew it to expose the air valve.
3. Turn off the water to the system at the saddle valve.
4. With the faucet in the open position, pump air into the air valve using a bicycle pump or air compressor. This will push the water out of the tank. Continue to pressurize until no water comes out of the faucet.
5. When the tank is empty, use a pressure gauge to check the tank pressure. An empty tank should contain 5-7 psi pressure. Increase or decrease the air pressure accordingly.
6. Turn the handle on the saddle valve counterclockwise until it stops. This will allow cold water to flow into the RO system. Let system run for 8-12 hours to fill the tank completely, then check system performance. If performance has not improved, call Technical Support.

High TDS in Product Water

If high TDS (Total Dissolved Solids) is detected in your product water (approximately 30% or greater of what is in your tap water, as determined with a conductivity meter or by a TDS monitor faucet), the RO membrane may need to be reinstalled, the membrane may need to be replaced, or the brine (or reject) flow control tubing may be clogged. See your dealer or plumber to check your product water TDS.

Reduced Production of Product Water

Slow or no product water flow usually indicates either a clogged prefilter or an exhausted membrane. First, replace the prefilter.
If the production rate is not improved, replace membrane.

NOTE: If you have recently changed the filters or the membrane, check to make sure that you reopened the saddle valve. Unless the saddle valve is completely opened, it will not allow full water pressure into the system.

Gradual Return of Taste and Odor

After a long period of time a gradual return of noticeable taste and odors may indicate that the system needs cleaning and servicing.
Replace all cartridges. See *Maintenance* on p. 7.

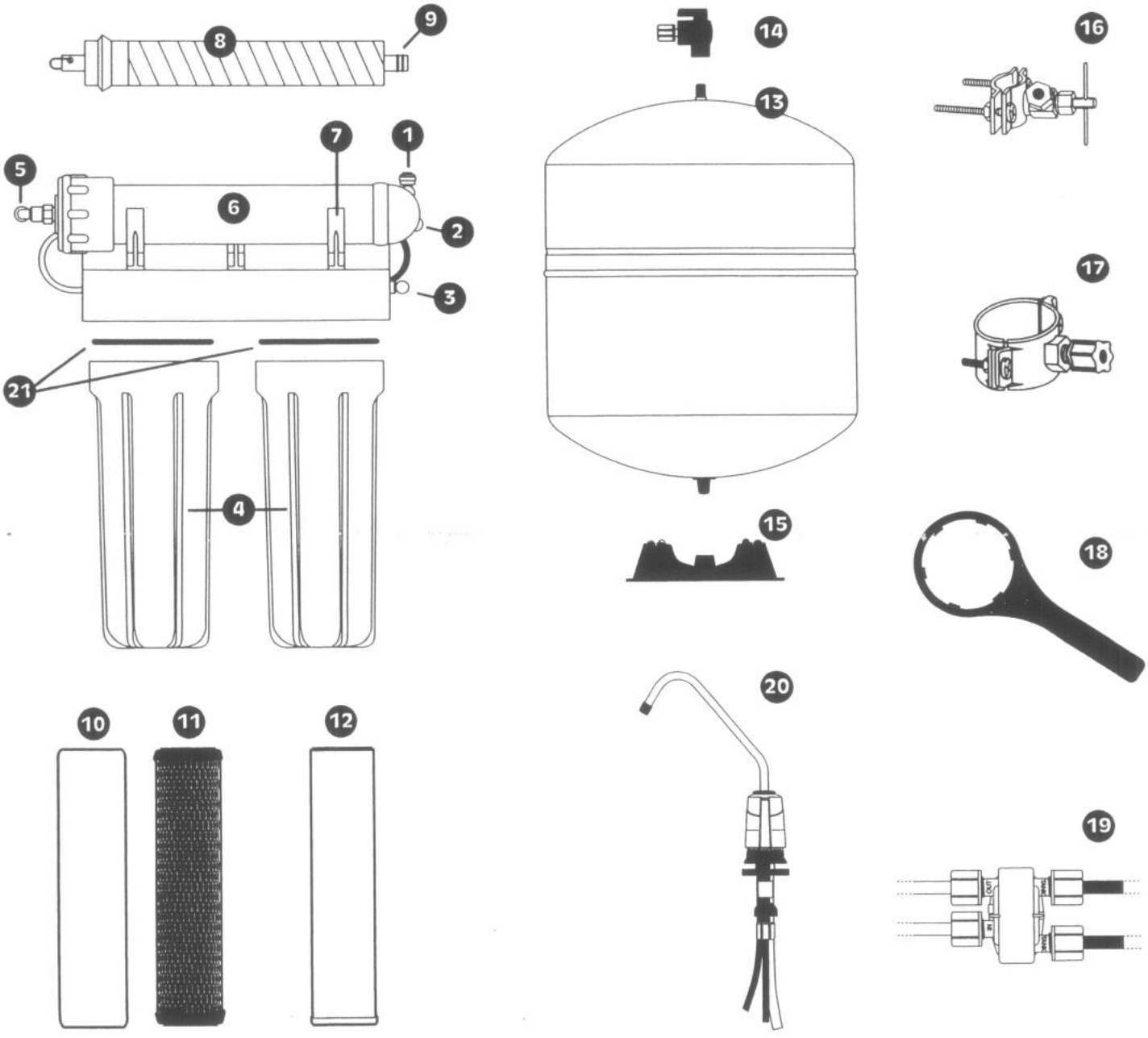
Sudden Return of Taste and Odor

If noticeable taste and odors return shortly after completed servicing, contact Technical Support.

Replacement Parts

Call your local retailer or call: 1-888-777-7962 for replacement part orders.

1	144382	Brine Control Elbow, RO-2127
	144445	Brine Control Elbow, RO-3167
2	149612	Check Valve
3	144381	Fix Elbow
4	153049	Bottom of Housing
5	144449	Membrane Intake Fitting
6	144376	Membrane Housing
7	144375	Membrane Housing Clip
8	155415	ROM-16C membrane, RO-2127
	155431	ROM-26T membrane, RO-3167
9	------	Membrane O-Rings
10	155014	Pre-filter cartridge (P5), RO-2127
11	155528	Pre-filter cartridge (D-10), RO-3167
12	155532	Post-polishing cartridge (D-20)
13	144165	Storage tank
14	144387	Storage tank Valve
15	------	Storage tank Stand
16	144730	Saddle Valve
17	144616	Drain clamp
18	150294	Housing Wrench (SW-1)
19	144615	Auto Shut-Off Valve
20	151193	Faucet, Air-Gap (AG-1)
21	151121	Housing O-ring (OR-38)



WARRANTY

This warranty applies to the Filter Housings only. It does NOT apply to any disposable filter cartridge, which has a life expectancy that varies with the water being filtered. This warranty covers defects in materials and workmanship only for one full year from original date of delivery. USFilter will replace any part which in USFilter's opinion is defective, unless: (1) any part of the system has been subjected to any type of tampering, alteration, or improper use after delivery, or (2) any part of the system has been repaired by anyone not approved by USFilter. Our obligation does not include the cost of shipment of materials. USFilter is not responsible for damage in transit, and claims for such damage should be presented to the carrier by the customer.

This product has been designed solely for use as a housing for a disposable filter cartridge. It is NOT warranted against freezing, and neither this product nor its parts is warranted against defects or deterioration caused by uses for which this product was not expressly intended.

THE FOREGOING WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, WHETHER ORAL OR ARISING BY USAGE OF TRADE OR COURSE OF DEALING, INCLUDING, WITHOUT LIMITATION, ANY WARRANTIES OF FITNESS OR MERCHANTABILITY. THIS WARRANTY IS THE PURCHASER'S SOLE AND EXCLUSIVE REMEDY. IN NO EVENT SHALL USFILTER BE LIABLE FOR ANY ANTICIPATED OR LOST PROFITS, INCIDENTAL DAMAGES, CONSEQUENTIAL CHARGES OR OTHER LOSSES, WHETHER BASED ON BREACH OF CONTRACT, TORTIOUS CONDUCT OR ANY OTHER THEORY, INCURRED IN CONNECTION WITH THE PURCHASE, INSTALLATION, REPAIR OR OPERATION OF THE OPAQUE FILTER HOUSING. CULLIGAN DOES NOT AUTHORIZE ANYONE TO ASSUME FOR IT ANY LIABILITY OR MAKE ON ITS BEHALF ANY ADDITIONAL WARRANTIES IN CONNECTION WITH THE OPAQUE FILTER HOUSING OR ANY PART THEREOF.

For servicing under this warranty, return any defective part to YOUR RETAILER within the one-year period referred to above.

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