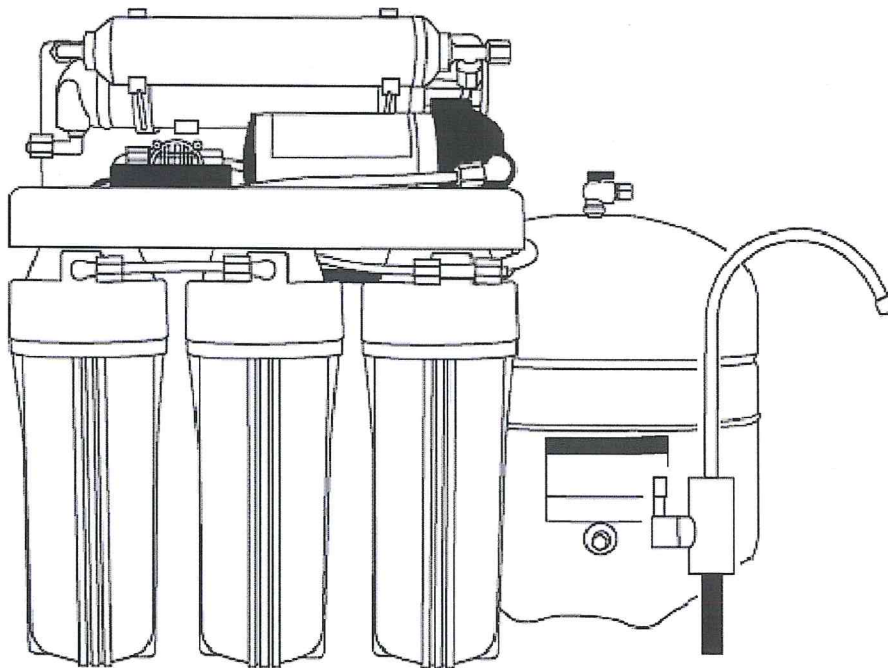




Reverse Osmosis Drinking Water System

Installation Guide



American Granby, Liverpool, NY

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Introduction

Thank you for purchasing a Reverse Osmosis (RO) Drinking Water System. This system uses a combination of filtration technologies to reduce the contaminants in your water supply and give you clear sparkling drinking water.

Purpose of this manual

This installation guide provides full instructions on how to assemble the components of the RO Drinking Water System, and to install it into your kitchen (or other location).

Please read this installation guide in full before you start to assemble and install the RO Drinking Water System. If you have any questions or you need further instructions, please contact your supplier.

Parts Supplied

The following items will come supplied as part of the RO Drinking Water System. Note that you will only be supplied with the parts required for your specific installation. Please contact your supplier if you are missing any parts, or you have any other concerns.

Parts No.	Qty	Description
A	1	Reverse Osmosis (RO) head unit
B	3	Filter housings for the carbon/sediment filters, and 3 filter housing O-rings (not shown)
C	1	Drinking water storage tank
D	1	Feed water connector and Valve
E	1	Drain clamp and associated parts
F	1	Plastic tubing (white)
G	2 or 3	Sediment/carbon filter cartridges: 1 sediment (5 micron) and 1 block carbon for 4 stage. Plus 1 granulated carbon for 5 stage
H	1	Reverse Osmosis (RO) membrane
I	1	Inline carbon filter cartridge
J	1	Wrench for removing the housings
K	1	Dispensing faucet and associated parts

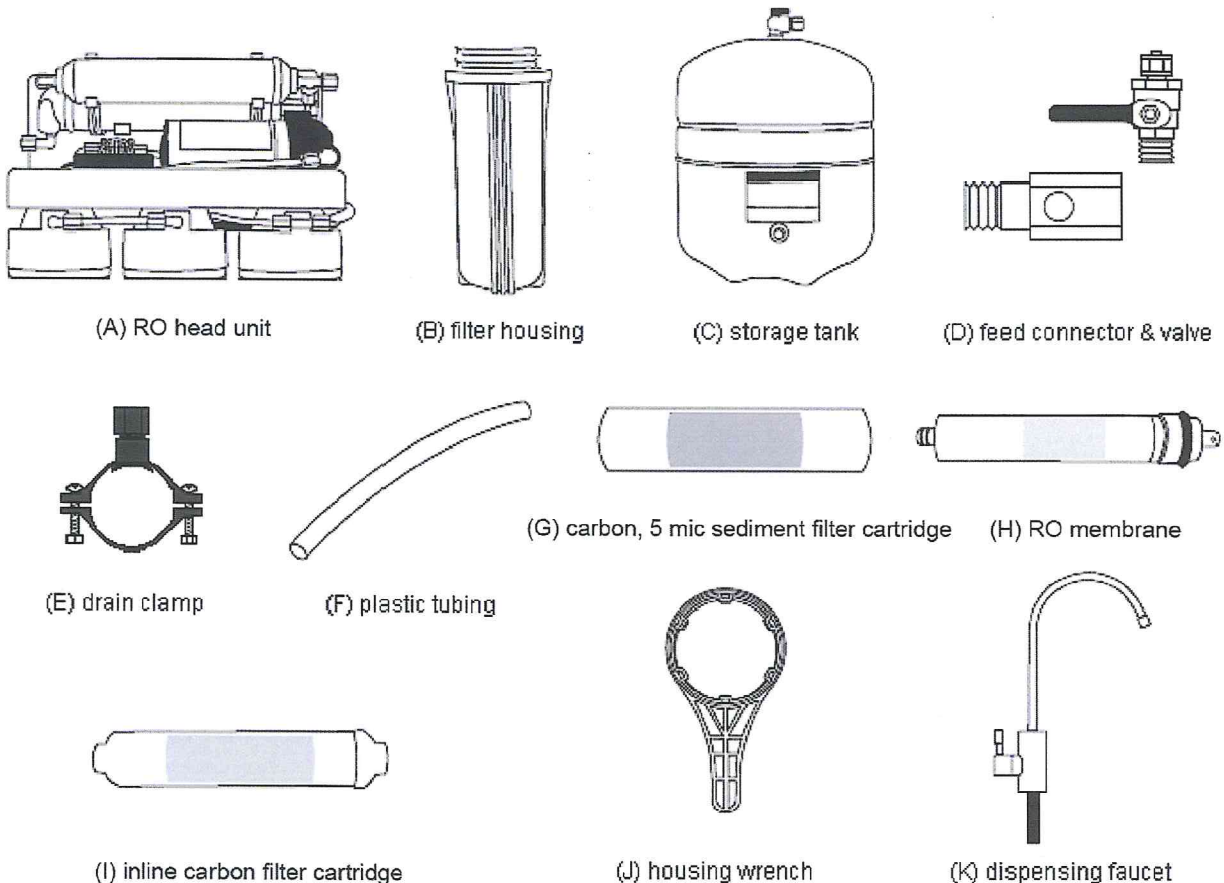


Figure 1: Parts Supplied

Equipment Required

The following equipment is needed to install and run the RO drinking water system:

- Variable speed electric drill
- Phillips head and flat blade screwdrivers
- Assorted wood and metal drill bits
- Assorted wrenches
- Wide masking tape or duct tape
- Utility knife
- Thread seal tape
- Extra plastic tubing (if you are placing the water storage tank some distance away from the unit)
- Low range air pressure gauge
- Bicycle hand pump
- Bottle of chlorine bleach (to sanitize the system)

Before You Begin:

1. Remove all the system components from the shipping containers. Check that all the components listed in **Parts Supplied** (page 3) are present. (If you buy 4 stage RO units, there will be 2 filter housings and 2 filters.)
2. Decide where you will install the RO unit, the water storage tank, and the faucet.
Note the following:
 - The faucet should be placed near the sink where drinking/cooking water is usually required. It is best to install the faucet by drilling a hole in the counter top. See **Install the Faucet**. (page 5). You may use an existing sink hole if the hole diameter is small enough to accept the faucet base (no greater than 1/2" diameter).
 - The water storage tank can be placed anywhere, so long as it is reasonably close to the tap. It can sit upright or on its side.
 - The RO unit should be placed under the sink, where it will have access to a COLD water supply line and the waste pipe.
3. Measure the tubing to each fitting to ensure there is adequate length.
4. Check the pressure of the empty water storage tank. It should be between 48 – 82 kPa (7 – 12 psi). Use a bicycle pump to increase the pressure in the tank, if necessary.

Installation Instructions

1. Install the Faucet

The faucet should be installed on a flat surface and near the sink where drinking/cooking water is normally required. You will need to drill the counter top, unless there is an existing hole on the sink top that is small enough to accept the faucet base (no greater than 1/2" in diameter).

Drill the counter top (if required)

Note: The counter top must be less than 1-1/4" (3.175cm) thick.

1. Check below where you want to make a hole. Make sure the drill will not interfere with anything under the counter, and that there is enough room.
2. Use masking tape to mark out the area where you want to make a hole. This will prevent the drill skidding on the hard surface.
3. Drill the hole, starting on the slowest speed. Use the appropriate drill bits and tools according to the counter type. Take care not to chip or scratch porcelain or ceramic tile counters. Formica counter tops can be drilled with a 1/2" (1.27cm) wood bit.
4. Clean up any sharp edges with a file.

Mount the faucet

1. Slide the black rubber washer (smaller size) onto the top of the threaded shaft.
2. Feed the threaded shaft through the hole in the counter top.
3. Slide on the metal washer, followed by the plastic locknut, and then the hexagon locknut.
4. Screw on the lock nut and hand tighten it.
5. Orient the tap as required.
6. Tighten the hexagon locknut with a wrench.

Attach the faucet to the plastic tubing

1. Place the compression nut onto the end of the plastic tubing, then place the barb end of the faucet inside the tubing.
2. Screw the compression nut on to the shaft of the faucet.

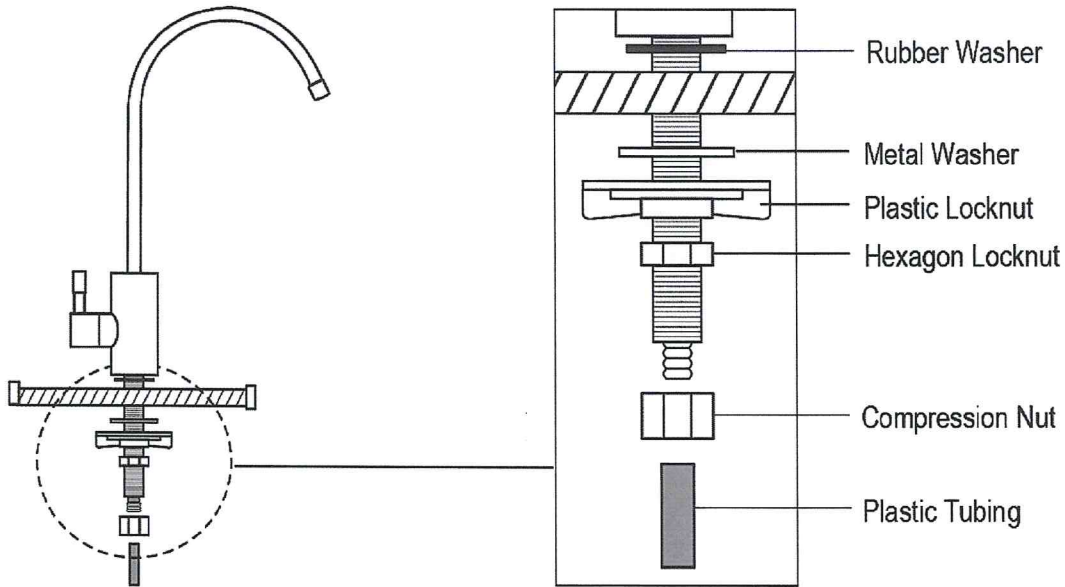


Figure 2: Faucet installation

Figure 3: Attach the faucet to the plastic tubing

2. Install the Feed Water Connector and Valve

The feed water connector must be connected to the main cold water supply line, and should be located as close to the RO unit as possible.

1. Use Teflon tape to wrap the threads of the valve that screws into the side of the connector, then screw both parts together and use a wrench to securely tighten.
2. Insert black rubber washer into end of connector. Never install on hot water line. Turn off cold water supply to sink faucet.
3. Follow the pipe up from the shut-off valve toward faucet until you reach a coupling nut (may be all the way up to the faucet). Unscrew coupling nut, and screw the connector onto previous location of coupling nut. Hand tighten and then one more complete turn with wrench.
4. Re-attach water line coupling nut to connector. The valve on the side of the connector is the shut off valve for your new RO system. If the handle is turned perpendicular to the water line, this is the "OFF" position for your new RO system.

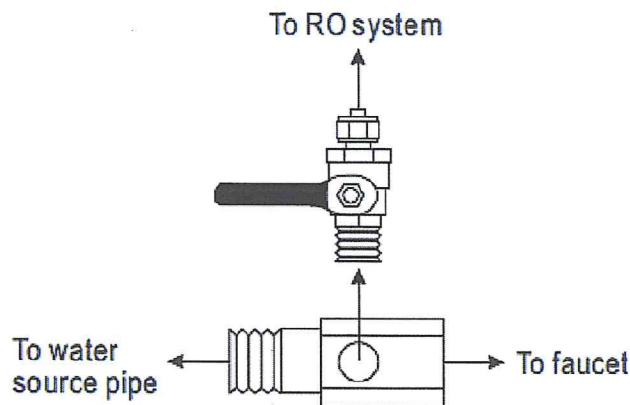


Figure 4: Feed connector and valve

3. Install the Drain Clamp

The drain clamp will fit most standard drain pipes. Make sure you leave the appropriate air gap, if this is required.

1. Position the drain clamp onto the sink drain pipe above the water level in the drain trap, and position securely. Make sure you allow enough room for drilling.
2. Drill a 7/32" (0.556cm) hole through the wall of the drain pipe. DO NOT penetrate the opposite side of the pipe.
3. Route the drain tubing to the drain clamp and trim it to length. The lowest point of the line should be the point of connection to the drain clamp. There should be no sag in the line.

Note: Make clean square cuts in the tube. Failure to do this could lead to poor connections and possible leaks.

4. Insert the tubing into the drain clamp. Make sure the tubing is pressed all the way in to create a pressure tight connection and hand tighten the plastic nut.

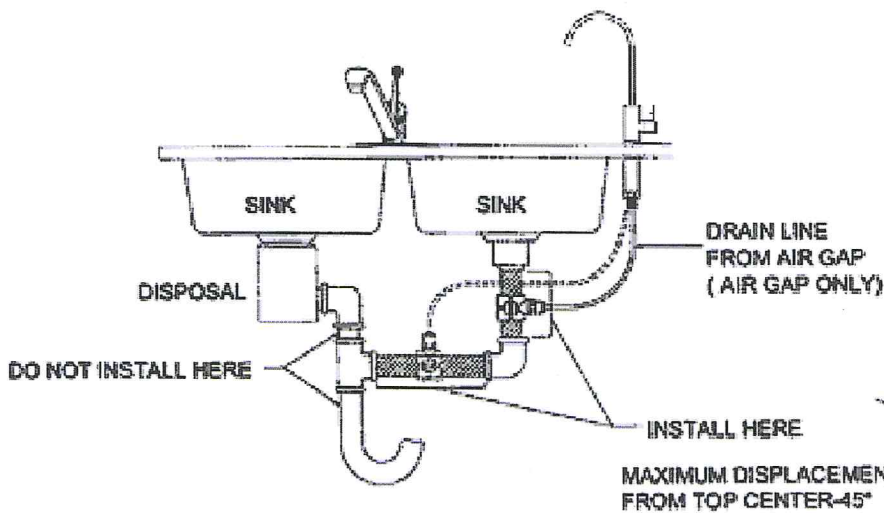


Figure 5: Position of drain clamp

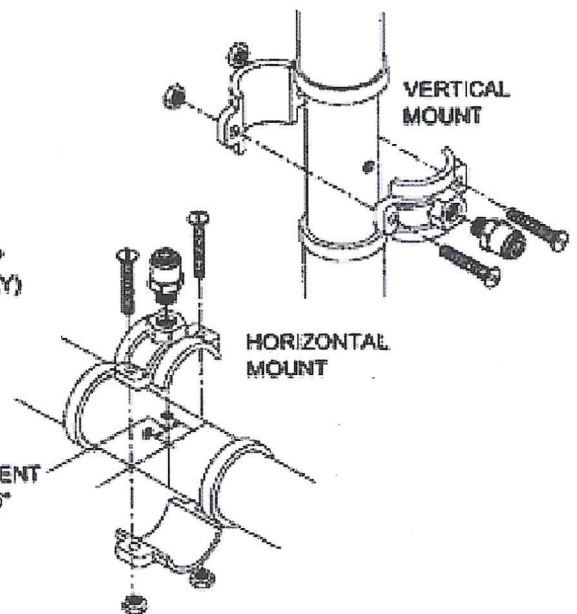


Figure 6: Drain clamp fittings

4. Prepare the Water Storage Tank

The water storage tank should be placed under the sink or counter. As a water tank can hold approximately 2 gallons (7.5 litres) of water (total weight over 22 lbs or 10 kgs), it should be placed on a sturdy surface.

1. Wrap thread seal tape three times around the thread on the top of the storage tank. You should wrap in the direction of the threads (clockwise when looking down at the tank).
2. Screw on the storage tank shut off valve by hand. DO NOT OVERTIGHTEN IT.
3. Attach one end of the tubing to the shut off valve. Attach the other end to the tee. The fittings will grab the tubing and seal it in place.
4. Position the storage tank under the sink. The tank can sit upright or on its side.

5. Install the RO Unit & Connect the Tubing

Place the RO unit under the sink. You will need to drill holes for the mounting screws and then install the unit.

1. Connect the tubing from the faucet to the RO unit at the interface (A).
2. Connect the tubing from the intake connector to the RO unit (B).
3. Connect the tubing from the water storage tank to the inline carbon filter on the RO unit (C).
4. Connect the tubing from the drain clamp to the RO unit (D).

Note: Cut the tubing to length as required.

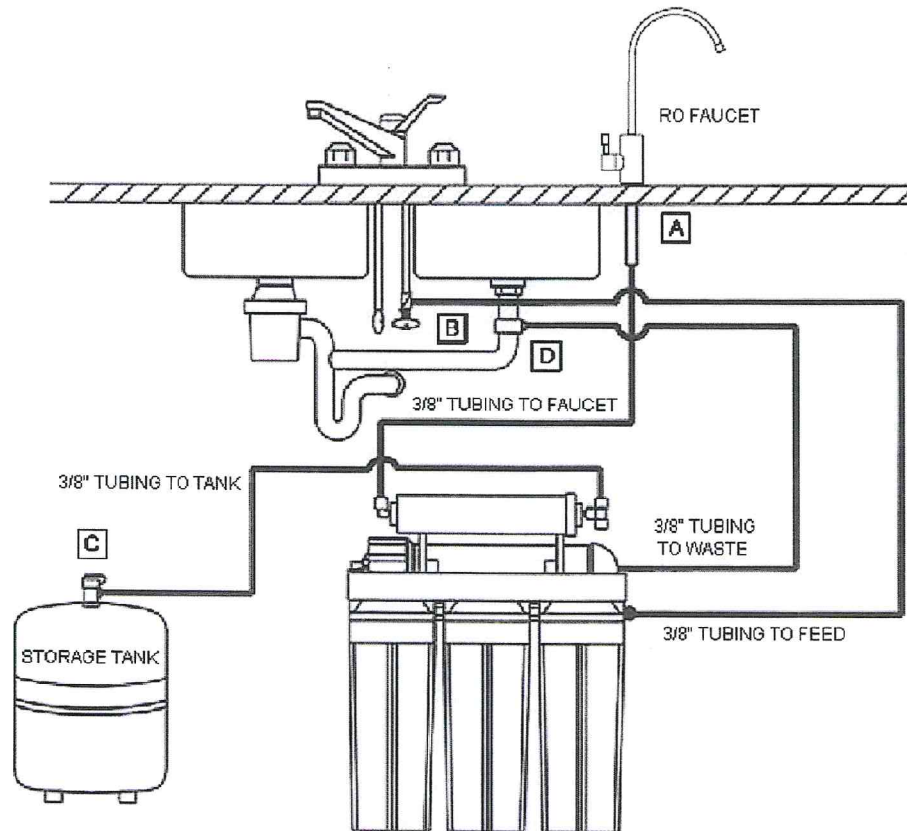


Figure 7: Installation diagram

6. Sanitize the System

It is important that you sanitize the RO Drinking Water System before you complete the installation. This will ensure that any contaminants from the manufacturing and shipping process are completely removed.

1. Unscrew all the three housings. Use the wrench if needed.
2. Remove the carbon filter(s) from the carbon filter housing(s).
Do not remove the sediment filter(s).
3. Place a capful of chlorine bleach into each filter housing.
4. Screw the housings back onto the unit.
5. Open the valve on the storage tank (the blue lever should be in line with the tubing) so that the sanitizing solution can enter the tank.
6. Slowly open the valve on the feed connector.
7. As soon as the water starts coming out of the dispensing faucet, close the faucet.
8. Let the unit stand for 15 minutes.
9. At the end of 15 minutes, close the valve on the feed connector, and then open the dispensing faucet.
10. When the flow slows from the dispensing faucet, close it, then place the carbon filter(s) into the carbon filter housing(s) and screw them back on.

7. Start Up the System

Once you have sanitized the system (see above) you can start it up for normal operation.

1. Make sure the ball valve (white with black handle) on the waste water drain line is in the fully closed position. The black handle should be in the "12 o'clock" position as you look down at it facing the RO system. The RO system will not work if this valve is left in the open position. This valve should only be opened when flushing the system after changing out the filter cartridges and closed when the system is ready again to operate.
2. Insert the RO membrane into the RO housing on the top of the unit. Screw the unit back on firmly.
3. Close the valve on the storage tank.
4. Open the dispensing faucet.
5. Slowly open the valve on the feed connector. The water should soon start dripping out of the faucet along with any air in the system. Let it continue until the air stops bubbling and the water drips continuously.

Note: You may see carbon "fines" (dust from the new carbon filter) being washed out the dispensing faucet as it begins to flow again. This is normal. Just wait for the water to run clear.

6. Open the storage tank valve and close the dispensing faucet to allow the tank to fill. Typically, the tank may take up to 3 – 4 hours to fill each time. The capacity of the tank is approximately 2 gallons (7.5 litres).

Note: Do not drink the first three full tanks of water as they will contain chlorine in diminishing amounts.

ATTENTION!

Filter housings have a maximum operating pressure rating of 85 psi. It is recommended that a pressure regulator be installed and set at 75 psi or less.

CAUTION!

It is important that the O-rings be properly seated in the grooves of the filter housing sumps or a water leak may occur.

SPECIFICATIONS

Operating Temperature:

40-100°F (4-38°C)

Operating Pressure:

45-85 psi (3.1-5.8 bar)

PROTECT FILTER HOUSING FROM FREEZING

For help with installation and ongoing service and maintenance contact your supplier or local water treatment specialist.