comfee

Reverse Osmosis Water Purifier

Instruction Manual

Model: CMP10

Please read the manual carefully before operating your water purifier.
Please keep this owner's manual for future reference.

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Product Introduction

Reverse Osmosis water purifiers use a multi-stage purification process to remove impurities and make water suitable for consumption. The intensive purification processes remove contaminants at different stages to ensure that you get completely safe and clean drinking water. The Comfee Model CMP10 has a 5-stage purification process designed to remove dissolved impurities, chlorine, and any other chemical present in water during the purification process.

Benefits of Comfee CMP10

1) Removes Disease-Causing Contaminants: CMP10 removes bacteria, viruses, and dissolved impurities from water to make it safe for consumption.
2) Makes Tasty Food: CMP10 purification process improves the taste of your food by removing chlorine and odors caused by the impurities in water.
3) Saves Money: CMP10 eliminates the need for purchasing bottled water. In addition, plastic bottles are harmful to the environment, making CMP10 the best option for your family.

Specifications & Dimensions

Water source……Municipal Tap Water
Supply water pressure ……40 – 80 psi (0.25 – 0.6 MPa)
Supply water temperature ……..39 – 100°F (4 – 38°C)
Water Quality, 24 hours ……..…..50 gal. (189 liters)
Percent rejection of TDS (new membrane) ……..…..≥90%
Product dimensions……...16” H x 9.5” W x 6.5” D

Test conditions of the above data: inlet water temperature: 77°F (25°C),
inlet water pressure: 0.25 MPa

1. Post Carbon Filter
2. Reverse Osmosis Filter
3. Fresh Water Storage Tank
4. Support Frame
5. PP Sediment Filter (Stage 1)
6. Pre-Carbon Filter (Stage 2)
7. Carbon Block Filter (Stage 3)
8. Faucet

Packing List

Your Reverse Osmosis Drinking Water System is shipped complete in one carton. Remove all items from your shipping carton and check all items against the packing list below. **Note any items lost or damaged in shipment. It is recommended to keep the small parts in the parts bag until you are ready to install them.**

Reverse Osmosis System Housing

Filter Housing

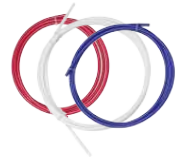
Fresh Water Storage Tank

Stage 1 Sediment Filter | Stage 2 Pre-Carbon Filter | Stage 3 Carbon Block Filter | Stage 4 RO Filter | Stage 5 Post Carbon Filter

5-Stage Filters

Faucet Assembly

Filter Housing Wrench



PE Tubing

Inlet (White), Outlet (Blue), Drain (Red)

Drain Saddle Adapter

Fresh Water Tank Connector

Faucet Base Connector

PE Tube Lock Clips (Qty 8)

Filter Housing O-Ring(Qty 6)

Feed Water Adapter 1/4"

Tools Needed for Installation

Plan Your Installation

Read through the entire manual before beginning your installation and follow all steps exactly. Comfee CMP10 RO system can be installed under a sink or in a remote location. Before starting, close the hot and cold water shutoff valves, reference Figure 1 as a visual aid.

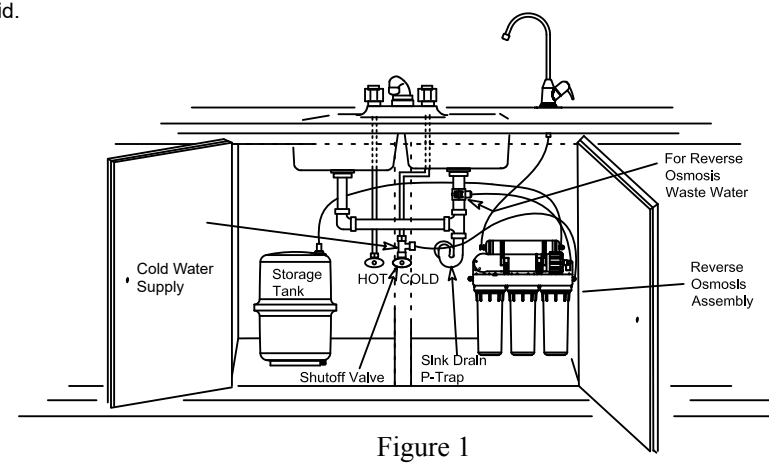


Figure 1

Site Preparation

Read through the entire manual before beginning your installation. Before starting, temporarily place water storage tank and Reverse Osmosis filter assembly into planned location. Check position of items and space required for proper installation. Ensure electrical plug and plastic tubes may be routed without kinking or bending. **NOTE: You must check and comply with all local plumbing codes.**

Installation Procedure

There are six-steps to installing your reverse osmosis system. Please see following steps:
STEP 1 – Install Feed Water Adapter ¼”
STEP 2 – Install Drain Saddle Adapter
STEP 3 – Install Reverse Osmosis Faucet
STEP 4 – Install Filters
STEP 5 – Install Fresh Water Storage Tank & Reverse Osmosis Assembly
STEP 6 – Connect PE Tubing
Steps 1 through 6 are explained in detail over the next few pages. It is a good idea at this time to check the installation site to make sure your drinking water system fits the designated space.

Under Sink Location

Both the Reverse Osmosis Assembly and fresh water storage tank will need to be installed in a kitchen or bathroom sink cabinet. The reverse osmosis waste water line will need to be hard connected to a sink drain-line by using the drain saddle adapter enclosed in the package.
Note: The drain saddle adapter will need to attach above the sink drain P-Trap to drain water from the reverse osmosis system. Review the following schematic, Figure 1, for more information.

Typical Under Sink Installation Layout

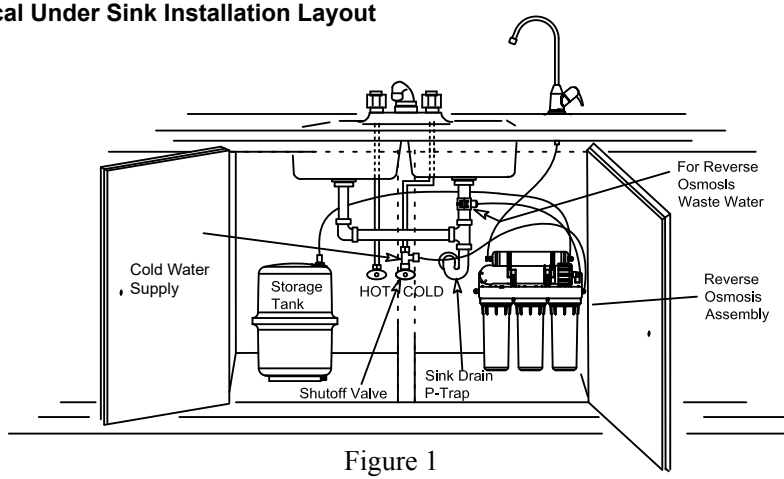


Figure 1

How to Cut and Connect the PE Tubes

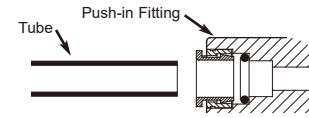
Review to the following instructions before connecting the tubes to their dedicated fittings. Failure to follow these instructions may lead to future leaks. See Figure 2 for more information.

How to Cut the PE Tube

1. Carefully use a tube-cutter or knife blade to cut the end of tubing. Always cut the tubing square.
2. Inspect the tube up to 1" from the end to be sure there are no nicks, scratches or other rough spots. If needed, cut the tubing again.

How to Connect the Tubes

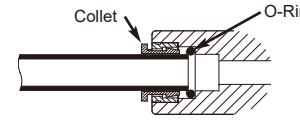
1. You will notice that the PE tubes have black marks close to the end of the tube. The black mark is to help assist you in knowing if the PE tube is seated or fully engaged into the fitting.
2. Push tubing through collet until it engages the O-Ring. See Figure 3.
3. Continue pushing until the tube bottoms out against the back of the fitting. See Figure 4.
4. Do not stop pushing when the tube engages the O-Ring. Failure to follow these instructions may lead to future leaks.



Cut tubing stratight with end of tubing round and smooth, with no frays or flat spots.

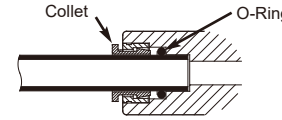
Example of Correctly Cut Tube

Figure 2



Tube Partially Engaged with Fitting

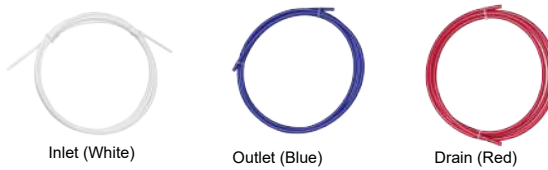
Figure 3



Tube Fully Engaged with Fitting

Figure 4

PE Tube Supplied with Reverse Osmosis System



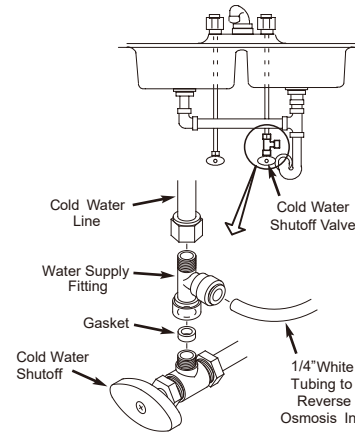
Installation Instructions

STEP 1 – Install Cold Water Supply Fitting

Check and comply with your local plumbing codes before you start installation. Refer to the Specifications and Dimensions page 3 for supply water requirements. The Water Supply Fitting can be adapted to a 3/8" or ½" supply line with the enclosed adapter. See Figure 4 for more details.

INSTALL THE COLD WATER SUPPLY FITTING

1. As shown in Figure 4, the hot and cold water supply shut-off valve can be located under the kitchen or bathroom sink. Close both valves and open the sink faucet to release any pressure in the water supply lines. Make sure the sink faucet water has stopped flowing before proceeding to the next step.
Note: Typically, the cold-water supply shut-off valve is located on the right side. However, in order to ensure this, please keep the hot water on for two minutes. Feel the two hoses with your palm. The hot water supply riser hose should be warm, and the other pipe which is cold should be the cold-water supply pipe.
2. Before disconnecting the cold-water supply line, have a bucket and towel ready to capture any water left-over in the water supply line.
3. Disconnect the existing cold-water supply line from the water shutoff valve and water faucet supply line.
4. Inspect the water supply fittings to make sure that the gasket is inside the female threaded portion of the fitting.
5. Before installing the water supply fitting onto the cold-water shutoff valve, be sure to wrap the threads with thread-tape. Be careful not to cross thread or over-tighten.
6. Connect the existing cold-water line to the male threaded portion of the water supply fitting and hand-tighten. Be careful not to cross thread or over-tighten. Once threaded properly, tighten with an adjustable wrench.
7. When the water supply fitting is connected to the cold-water supply, make sure the water shutoff valve is in the closed position, refer to Figure 5.
8. Hold off on attaching the "white" PE tube to the water supply fitting, this water connection will be made in Step 6 – Connect PE Tube.



Cold Water Supply Connection
(using included water supply fitting)

Figure 4

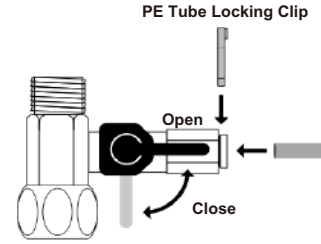


Figure 5

STEP 2 – Install Drain Saddle Adapter

The drain saddle adapter is needed for the drain water produced from the Reverse Osmosis Filter. Please make sure the drain saddle adapter is located above the P-trap, as shown in Figure 6 and do not connect or install the drain saddle adapter on a drain-line coming from a garbage disposal.

INSTALL DRAIN ADAPTOR

The drain saddle adapter is included with your RO system. The drain saddle adapter will fit around a standard 1-1/2" drain pipe.

Shown in Figures 6, 7, and 8, you will install the drain saddle adapter above the P-trap. Note: If your sink is equipped with a garbage disposal drain, do not install the drain saddle adaptor to this drain point. Please inspect the drain pipe for corrosion and replace, if necessary.

1. Test fit the drain saddle adaptor around the sink drain to make sure will it fit properly. The drain saddle adaptor should be installed approximately 6-inches above the P-trap, see Figure 6.
2. Make sure the quick connect fitting on the drain saddle adapter is installed in the direction toward the RO system for ease of installation of the PE tube.
3. With a pencil, carefully scribe the drain pipe to mark the location of where the PE tube will connect. See Figure 7 for location of quick connect fitting.
4. After making your mark on the drain tube, remove drain saddle adaptor and drill a 3/8" diameter hole in the drain pipe. **Note: Do not drill with the drain saddle adaptor attached, it may damage the quick connect fitting. Only drill through one side of the drain pipe.**
5. Remove any loose plastic and line up the drain saddle adapter with the hole you just drilled.
6. Place the two halves of the drain saddle adaptor back onto the drain pipe. Now fasten the nuts and screws. Tighten both sides equally to secure the drain saddle adaptor onto the drain pipe. Do not overtighten. See Figure 8.
7. Hold off on connecting the "RED" PE tube to the quick connect fitting on the drain saddle adapter, this water connection will be made in Step 6 – Connect PE Tube.

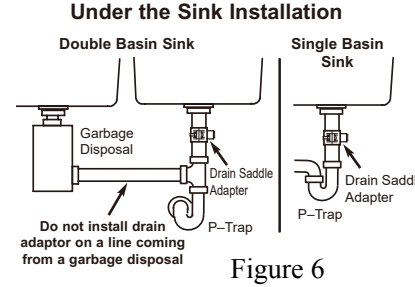


Figure 6

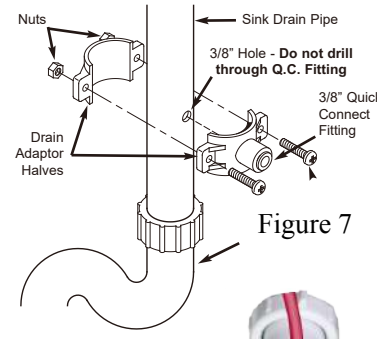


Figure 7


Figure 8

STEP 3 – Install Reverse Osmosis Faucet

You will need to select a location to install the reverse osmosis faucet. In most kitchen installations, the spray hose or soap dispenser is removed and replaced with the RO faucet. The hole size must be 1-1/4" in diameter. If a spray hose or soap dispenser is not available, you will need to either drill a hole in the sink or a new hole in the countertop, next to the sink. **Note: When installing the RO faucet in the sink or countertop, please consider hiring a professional to drill the holes. Drilling surfaces made of stone or solid surface materials such as granite, marble or plastic resin product, or sinks made of porcelain or stainless steel may cause permanent damage or irreparable damage to the sink or countertop surface.**

INSTALL REVERSE OSMOSIS FAUCET

1. The RO faucet is included with your RO System. Locate and organize the RO installation parts, see Figure 9 for more details on assembly.
2. Referring to Figure 9, You will need to install the part in the order shown, Stainless Steel Washer; Thin Black Washer.
Slide both onto the base of the faucet screw rod. The thin rubber washer should be sandwiched in between the faucet top and stainless steel washer.
3. Remove the red protective cap from the end of the RO faucet screw rod.
4. Now install the RO faucet through the mounting hole.
5. Under the cabinet install the following components in this order: Reference Figure 9: Thick Black Rubber Washer; Metal Serrated Washer; Nut.
In the order shown above, slide onto the base of the RO faucet screw rod.
6. Hand tighten the nut to threaded rod of the RO faucet until the faucet cannot move freely. Check the RO faucet to make sure the stainless steel washer and thin black washer is centered under the faucet. Once aligned, tighten the nut with an adjustable wrench.
7. The RO Faucet Base Connector is included with your RO System. Install this connector to the base of the faucet. Push connector onto faucet base until the connector bottoms out, see Figure 9.
8. You will attach the “BLUE” PE tube to the base of the faucet quick connect connector.
9. After you have inserted the blue PE tube into the connector, insert the blue PE Tube Lock Clips into the quick connector end. See Figure 10 for order of installation.

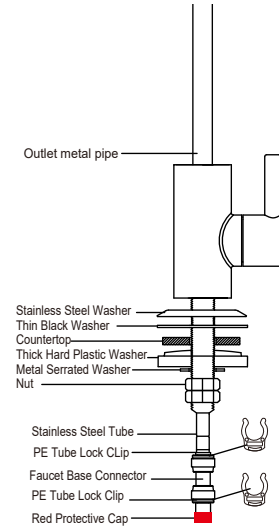


Figure 9


Figure 10

STEP 4 – Install Filters

Each filter is individually wrapped in a plastic protective coating, remove and safely discard the plastic before installing filter into filter housing. You will find 6-black rubber O-Rings in a sealed zip-lock back. These will be installed onto the filter housing, see Figure 11. **Note: The RO filter will NOT be installed at this time. We will install the RO filter after the RO system is flushed with fresh water. Refer to First Time Use – Flushing the Filters for more information.**

INSTALL THE VERTICAL FILTERS

1. Referring to Figure 11, you will install two O-Rings on each filter housing. Install one O-Ring seal on the top outside grove of the filter housing. Gently slide the O-Ring down the outside filter housing surface until the O-Ring is seated into the upper grove. The second O-Ring lays on the top inside end-face of the filter housing. **Note: applying a light amount of food-grade silicone jelly may be used to help the O-Ring seal better.**
2. When placing the filter cartridge into its housing, make sure that the inner hole of the filter cartridge is aligned with the cylindrical boss at the bottom of the filter housing. If not aligned properly, the water filter will leak.
3. Screw the filter housing assembly, with filters installed, to the filter head. Turn the filter housing in a clockwise direction. Once snug to the filter head, use the Filter Housing Wrench to tighten it another ¼ to ½ of a turn. See Figure 12.
4. Follow these steps to install the stage 1 - PP Sediment Filter, stage 2 - Pre-Carbon Filter and Stage 3 - Carbon Block Filter. Refer to Figure 13 for order of filter installation.

Figure 11

Figure 12

1. Post Carbon Filter
2. Reverse Osmosis Filter
3. Fresh Water Storage Tank
4. Support Frame
5. PP Sediment Filter (Stage 1)
6. Pre-Carbon Filter (Stage 2)
7. Carbon Block Filter (Stage 3)
8. Faucet

Figure 13

STEP 5 – Install Fresh Water Storage Tank & Reverse Osmosis System

Your RO system utilizes a pressurized tank to store purified water. Because the Reverse Osmosis process is slow, the fresh water storage tank is pressurized to improve the water flow at the faucet. After water is dispensed from the RO water faucet, the storage tank will refill and repressurize, therefore you may hear water flowing through the filtration system when not in use. The process of purifying water is slow, so water may run for a brief period of time depending on how much water was dispensed. **Note: Be careful not to overtighten the Shutoff Valve.**

Install the Pressure Tank

1. The Fresh Water Tank Shutoff valve is included with your RO System. See Figure 14 or the following illustrations.
2. The shutoff valve on the supply tank will need to be air-tight.
3. Apply Tape Seal to the threads of the at the top of the tank.
4. Tighten the shutoff valve clockwise on the fresh water tank connecting screw, be careful not to cross-thread or overtighten.
5. Connect the “white” PE Tube to the quick connector of the Fresh Water Tank Connector. After you have inserted the white PE tube into the connector, insert the blue PE Tube Lock Clips into the quick connector end.
6. Place the storage tank next to the Reverse Osmosis system. Place the tank upright.

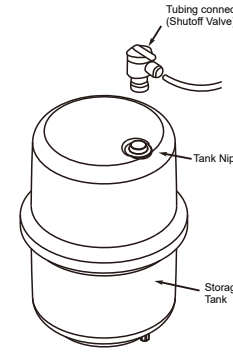


Figure 14

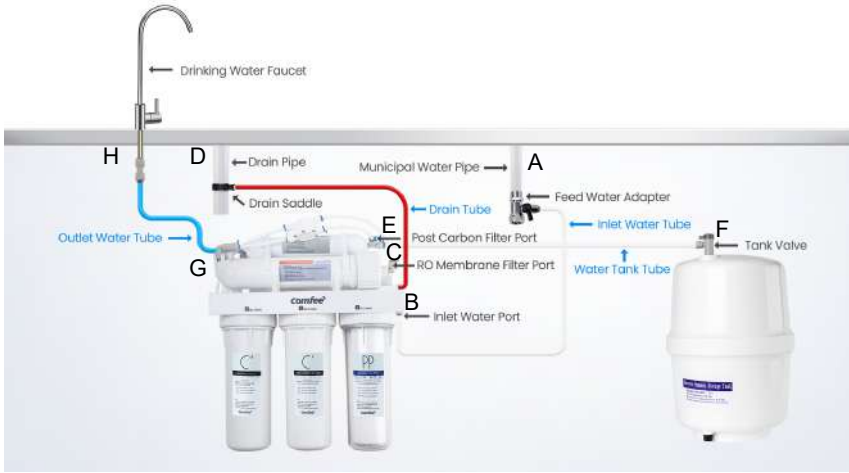
Illustrations

Fresh Water
Tank Connector

STEP 6 – Connect PE Tubing

Now is time to connect the PE the white, blue and red PE tubes to the RO filtration system. Referring to Figures 15, 16, 17 & 18, you will see that the water connections are clearly marked. **NOTE: Please read Step 6 carefully. When all PE tubes are installed, please inspect all connecting tubes of the unit, make sure no tubes are bent and are pushed all the way into the water connections.**

Figure 15 Figure 16 Figure 17 Figure 18



Connection Points	Description	PE Tube Color
A to B	Water inlet from water supply line to the water purifier	White PE Tube
C to D	RO Waste water outlet to drain saddle adapter	Red PE Tube
E to F	RO fresh water outlet to RO storage tank	White PE Tube
G to H	RO fresh water outlet to faucet connector	Blue PE Tube

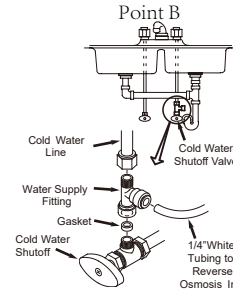
STEP 6 – Connect PE Tubing Continued

ROUTE WHITE TUBE FROM WATER SUPPLY TO RO SYSTEM (POINT A to B)

1. Locate the white PE tube and attach one end to the Reverse Osmosis water inlet connection, Point A, and the other end to the cold-water supply line under the sink, Point B.
2. At Point A, located on the RO system, you will see a blue silicone plug and blue label with the words, “Pure Water Output”. Remove the blue silicone plug by pulling downward. **Note: You may hear air escaping from the water connector. This is normal.**
3. For a professional installation, measure and cut tube square and to length. **Note: To make it easier to move the RO system around, cut the tube a little longer. This will make it easier when replacing the filters.**
4. Insert the white PE tube from Point B into this water connection.

Point A

Point B



Cold Water Supply Connection
(using included water supply fitting)

CONNECT RED TUBE FROM RO SYSTEM TO DRAIN SADDLE ADAPTER (POINT C to D)

1. Locate the red PE tube and attach one end to the Waste Water Output, Point C, and the other end to the Drain Saddle Adapter attached to the drain line under the sink, Point D.
2. At Point C, located on the RO system, you will see a blue silicone plug and blue label with the words, “Pure Water Output”. Remove the blue silicone plug by pulling downward. **Note: You will notice that the water connection has a yellow water connection. This is to help you identify this connection point as the waste water connection point, see Figure 19.**
3. For a professional installation, measure and cut tube square and to length. **Note: To make it easier to move the RO system around, cut the tube a little longer. This will make it easier when replacing the filters.**
4. Insert the red PE tube from Point C into this water connection.

Point C

Point D

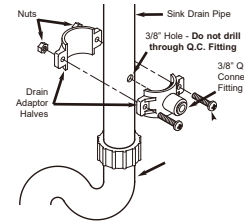


Figure 19

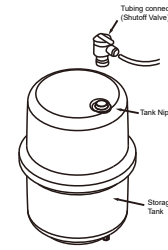
STEP 6 – Connect PE Tubing Continued

1. CONNECT WHITE TUBE FROM RO SYSTEM PURE WATER OUTLET TO FRESH WATER STORAGE TANK (POINT E to F)

2. Locate the blue PE tube and attach one end to the Fresh Water Output, Point E, and the other end to the Fresh Water Storage Tank, Point F.
3. At Point E, located on the RO system, you will see a blue silicone plug and blue label with the words, “Pure Water Output”. Remove the blue silicone plug by pulling out.
4. For a professional installation, measure and cut tube square and to length. **Note: To make it easier to move the RO system around, cut the tube a little longer. This will make it easier when replacing the filters.**
5. Insert the blue PE tube from Point E into this water connection.

Point E

Point F

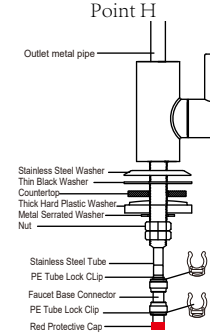


CONNECT WHITE TUBE FROM RO PURE WATER OUTPUT TO WATER FAUCET (POINT G to H)

1. Locate the white PE tube and attach one end to the RO pure water output, Point G, and the other end to the RO faucet, Point H.
2. At Point G, located on the RO system, you will see a blue silicone plug and blue label with the words, “Pure Water Output”. Remove the blue silicone plug by pulling out.
3. For a professional installation, measure and cut tube square and to length. **Note: To make it easier to move the RO system around, cut the tube a little longer. This will make it easier when replacing the filters.**
4. Insert the white PE tube from Point H into the bottom of the RO faucet. **Note: To prevent leaks, please make sure the white PE tube is properly inserted into the water connection.**

Point G

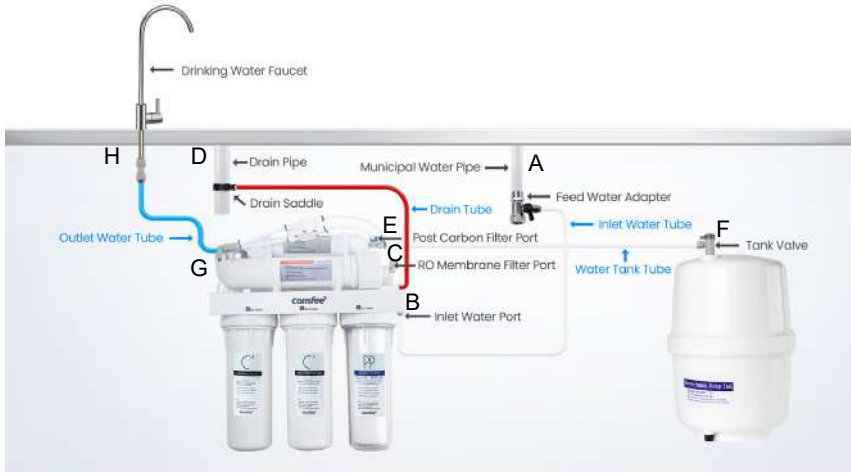
Point H



Maintenance and How To Section

First Time Use – Flushing Stage 1 - 3 Filters

Inspect all connecting tubes of the unit, make sure no tubes are bent. Before using the machine, the first 3-filters (stage 1, 2 & 3) will need to be flushed with fresh water for 3-minutes. This will prevent carbon particles in the activated carbon filter elements from entering the RO filter element. **Note: When you start to dispense water from the RO faucet, you will notice the water output will be cloudy at first and then become clear. Depending on your water pressure, it may take a little longer to flush out all carbon particles. Flushing the first 3-filters will significantly improve the life of your RO filter element. When the flushing procedure is complete, you will then install the RO filter. See the following page for more details on, “How to Install the RO Filter”.**



Flushing Stage 1 – 3 Filter, Steps

Please make sure the person performing this process has clean hands while handling or servicing the inner parts of the filtration system.

1. To begin the flushing process, you will need to make sure the RO fresh water storage tank valve, letter F in the above picture, is in the closed position. **Note: Please make sure the RO filter is not installed during the flushing process.**
2. You will need to open three water valves: 1) open the inlet water supply fitting, letter A in the above picture, and 2) the sink main water inlet valve and 3) the RO faucet.
3. You should start to hear water running through the RO system. **Note: you may hear strange noises and air passing through the RO system, this is normal.**
4. Water will start to flow out from the RO faucet, slowly at first and then once pressure builds the water will start to flow faster. **Note: Make sure the RO faucet is pointed to sink basin, water will start to flow through the filters.**
5. Flush the unit for three-minutes until the water becomes clear. Note: The water will appear cloudy and then will start to clear up. If after three-minutes the water is still cloudy, continue running water.
6. When the water becomes clear, close the inlet water supply fitting, letter A in the above picture. You will need to install the RO filter. Note: Before removing the RO cap, you will need a bucket and towel to capture any water that may be in the RO filter housing. Please make sure all water is removed from the RO filter housing.

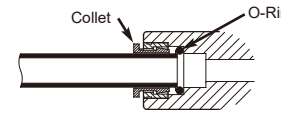
HOW TO INSTALL THE RO FILTER

1. Locate the RO Filter by Referring to Figure 20.
2. To install the RO Filter, first remove the blue PE Tube Locking Clip and white PE tube that is connected to the right side of the RO filter housing.

Figure 20

How to Connect and Disconnect the Tubes

- The white PE tube is inserted into a quick connect housing.
- To remove the white PE tube, remove the blue PE tube locking clip, and press inward on the Collet (dark grey ring) that the PE tube is inserted into.
- Gently pull out the white PE tube from the water connector. See illustration to the right for details.



3. Remove the filter housing cap by unscrewing counterclockwise. Inspect the underside of the housing cap to make sure there is an O-Ring installed. Inspect the filter housing to make sure there is an O-Ring installed. See Figure 21.
4. **NOTE: For your safety, the RO system is wet tested prior to shipment, so you may notice some water drops are still inside the filter housing.**
5. Reference Figure 22, install the RO filter by inserting the "small head" end of the membrane firmly into the housing. **NOTE: one end of the RO membrane has a thick-rubber gasket, this should be inserted towards the filter-cap end.**
6. Before twisting the housing cap back on, make sure the O-Ring is seated at the end of the membrane housing, which is very important to avoid leaking and damage to the O-Ring.
7. Place the membrane housing cap back and pre-tighten it with hand, then tighten it with the housing wrench. Do not over tighten.
8. Reconnect the white PE tube to the quick connect fitting and install the blue PE tube locking clip.
9. Please make sure the white PE tube is fully engaged into quick connect fitting or water will leak from the fitting.

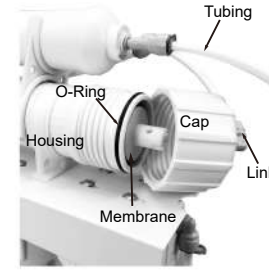


Figure 21

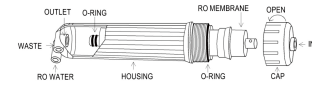


Figure 22

Flushing All Filters in System

Now that Stage 1 – 3 filter are flushed, we will now need to flush out the RO filter membrane. Please read through the following steps.

1. With the RO filter installed, open the RO fresh water storage tank water valve, turn on RO drinking faucet, open the water inlet valve slowly check for water leaks. If so, check for the following:
   - The PE water tube is not completely inserted into the quick connector.
   - O-Ring in the filter housing is not in the proper position or twisted.
   - Filter Housing/cover is not properly tightened or not aligned with threads.
2. Please close the RO fresh water storage tank valve, RO water will slowly drip out of the drinking faucet, keep the drinking faucet draining for at least 15-minutes to flush the whole filter element system. **NOTE: It is important that the RO Fresh Water Storage Tank water valve is in the CLOSED position during the 15-minute flush process.**
3. After 15-minutes, please close the RO faucet and open the shut off valve of the RO fresh water storage tank. The RO fresh water storage tank will begin to fill with fresh RO water. **Note: This process may take 1-2 hours, depending on your water temperature (40F-100F, the higher the temperature, the faster the speed) and source water TDS (max. 750ppm, the lower the TDS, the faster the speed). After the storage tank is full, the unit will automatically shut down.**
4. After the storage tank is full, turn on the RO faucet to completely drain the first storage tank to empty, when no water comes out from the RO faucet, it means the tank is emptied. Then turn off the RO faucet to let the system start producing RO water again.
5. **NOTE: It is very important to check for water leaks every day for the first two weeks after installation to ensure the normal operation of the system.**

Congratulations, you have successfully installed your Comfee Reverse Osmosis Water Filtration System!

Replacement of Filter Elements

Your Comfee CMP10 Reverse Osmosis filtration system is designed for low maintenance.

Stage 1
PP Sediment Filter

Stage 2
Pre-Carbon Filter

Stage 3
Carbon Block Filter

Stage 4
RO Filter

Stage 5
Post Carbon Filter

Replacement of 1st to 3rd-Stage Filter Element

If the flow or quality reduction is found, it should be replaced every 6 months or earlier. The frequency of replacement depends on your water consumption and the quality of source water. In order to protect the reverse osmosis membrane from chlorine and other harmful contaminants, it is necessary to replace the filter element according to its service life.

Stage 1
PP Sediment
Filter

Stage 2
Pre-Carbon
Filter

Stage 3
Carbon
Block Filter

How to Replace 1st to 3rd-Stage Filter Elements:

Please be careful when replacing the filters. To help reduce the water pressure, it is recommended to turn off the main water supply and close the RO fresh water inlet valve. When both valves are off, open the RO faucet to release any pressure. You will need your filter housing wrench for this filter removal process.

1. Close the sink main water inlet valve, the RO water inlet valve and the RO fresh water inlet valve on the RO fresh water storage tank.
2. Please open the RO water faucet to reduce the system pressure, and place a towel under the machine. It is a good idea to have a bucket handy to dump the water in the filter housing. **Note: When you remove the water filter housing, water will be present in the filter housing. Carefully tip the filter housing into your bucket to empty the water.**
3. If the unit is installed under the sink with enough space or hung on the wall, the filter housing may be directly unscrewed to replace the filter element. Or, you will need to remove the unit and replace the filter element. Be careful for all the tubing connections when removing the machine.
4. Unscrew the housing of the filter element counterclockwise with the filter housing wrench.

Note: For more information on how to install the filters, Refer to Step 4 – Install Filters.

Replacement of the 4th Reverse Osmosis Filter Element

Generally, the RO membrane is replaced every 2-3 years, and the TDS value is checked at least once a month to monitor the performance of the system. Under normal circumstances, the desalination rate of the unit will be greater than 90%.

How To Replace The RO Membrane Filter Element

1. Your Reverse Osmosis membrane usually has a useful life of about 2-3 years. The useful life of filter membrane depends on the quality of source water, household water consumption and the frequency of replacing 1st to 3rd filter element. **NOTE: In order to ensure the performance of the system and the purity of water, please replace the 1st to 3rd filter element as planned.**
2. Please open the RO water faucet to reduce the system pressure, and place a towel under the machine. It is a good idea to have a bucket handy to dump the water in the filter housing. **Note: When you unscrew the filter cap from the RO membrane filter housing, water will be present in the filter housing. Place a water bucket close to the RO filter cap to capture any water which may spill.**
3. Remove the PE tube from the RO filter housing and unscrew the filter housing counter-clockwise with the housing wrench.
4. It may be necessary to remove the RO filter membrane with a pair of pliers. Carefully pull on the filter end to slide the filter out of the filter housing. **Note: The RO filter has a very tight fitting inside the RO filter housing. Pulling out the RO filter membrane can be difficult.**
5. Inspect the inside of the RO filter housing. Please rinse the inside of RO filter housing thoroughly with warm soapy water. Use a small amount of dishwasher detergent to clean the inside of the RO filter housing.
6. Open the vacuum-tight package of the new reverse osmosis membrane, remove the RO membrane and insert it into the filter housing. **Note: Please try to avoid touching the filter membrane with your bare hands. Using a paper towel to wrap around the end of the filter to help you install the filter.**
7. Inspect the filter cap O-Ring and internal O-Ring. Make sure both are present and installed correctly. **Note: We recommend replacing the O-Ring every 3-years to prevent water leaks caused by an aging O-Ring.**
8. Install the RO membrane housing cap and pre-tighten it by hand, and then tighten it by 1/4-½ turns with a housing wrench, without over-tightening.

Replacement of the 5th Stage Post Carbon Filter Element

Note: Please replace the post carbon filter element every 12 months. To help you remember when the filter was installed, mark the outside of the filter housing with the installation date.

1. Remove all tubes connected to the post carbon filter housing.
2. Replace the whole filter (including the housing) with a new one, then reconnect the tubes.

Filter Element Parameters

Filter Element Name	Recommended Life	Function
Stage 1 - Sediment Filter (PP)	4 ~ 6 Months	Reduces sand, silt, scale, and rust particles in residential tap water. The filter is made of spun polypropylene fibers for resistance to chemicals and bacteria.
Stage 2 - Pre-Carbon Filter	6 ~ 12 Months	Reduces fine sediment, chlorine taste and odorin residential tap water
Stage 3 - Carbon Block Filter	6 ~ 12 Months	Reduces fine sediment, chlorine taste and odor in residential tap water
Stage 4 - Reverse Osmosis Membrane Filter Element	24 ~ 36 Months	Filtration precision effective: 0.001-0.0001um. Reduction of harmful substances in water such as pesticides, bacteria, viruses and heavy metal ions.
Stage 5 - Post Carbon Filter	6 ~ 12 Months	Eliminates unpleasant smells from water and enhance water flavor.

Trouble Shooting

Problem	Possible Causes	What To Do
Flow reduction of pure water outflow	Blocked filter element	Need to flush or replace the filter element
	The filter element exceeds life requirements	Replace the filter element
	The main water supply inlet valve or RO inlet valve or RO fresh water storage tank valves are not fully open	Check condition of all valves to make sure they are fully open
	The water in the pressure tank is run out	RO is refilling RO fresh water tank and water pressure is low. Once RO fresh water tank is filled, water pressure should return to normal.
High TDS in RO water	Failure in the RO membrane filter element	Replace the RO membrane filter element
	The unit is out of service for a long time (3 Months)	Allow RO faucet to flush for 3-5 minutes
	High TDS in Municipal tap water	The system will provide a 90%+ TDS rejection rate when working properly. Meaning if your Municipal tap water is 500ppm, then the purified water is less than 50 ppm.
Water Leakage	Poor assembly of O-Ring seal between filter housing and the cap	Need to reassemble O-Ring between the housing and housing cap and lock it with the filter housing wrench
	Poor tubing connections	Check the PE tube connections to make sure the tube is seated all the way into the water connection.

The product is subject to change without notice.
Please keep this manual properly.