Bluonics RO Unit

Installation and Maintenance Manual

RO-50G/75G/100G-D02

CONTENTS:

INTRODUCTION

Thank you for purchasing the **D02 Series Reverse Osmosis Unit**. By purchasing this unit, you are well on your way to having cleaner and better taste water. This unit has a fully enclosed pressure tank and features **5 stages** water filtration. These **stages** will remove different substances as outlined below.

First Stage: Spun PP Filter - removes lager particles suspended in water.

Second Stage: Granular Carbon Filter - removes organics, chlorine, odor, and turbidity.

Third Stage: Block Carbon Filter -removes any organics, chlorine, odor and turbidity.

Fourth Stage: RO Membrane removes bacteria, heavy metals, dissolved matter, and salinity.

Fifth Stage: Inline Carbon Filter (post filter) -adjusts the taste of treated water.

Optional Sixth Stage add-ons include:

Mineralized Ball Filter – reincorporates healthy minerals back in to treated water.

Ultraviolet Sterilizer – kills any bacteria, virus, or organisms present in water.

PACKAGE CONTENTS

Reverse Osmosis System	1 pc
Feed Water Valve	1 pc
RO Membrane	1 pc
Tee Fitting	1 pc
Drain Clamp	1 pc
Housing Wrench	2 pcs
Tank Ball Valve	1 pc
Tank	1 pc
Clip	5 pcs

Faucet	1 pc
Faucet Bracket	1 pc
Manual	1 pc
Food Grade Tubing	4 pcs (1 red, 1 white, 1 blue, 1 yellow)

TECHNICAL SPECIFICATIONS

Voltage and Frequency: 110V/220V 50Hz/60Hz

Wattage: 23W-36W

RO Element Capacity (model dependent): 50/75/80/100/125 GPD

Inlet TDS: ≤ 500 ppm

Chlorine Level: ≤ 0.2 ppm

Pressure Tank: 3.2G Steel Tank or 3.0G Plastic Tank

Average RO Rejection Rate: 98%

Inlet Water Pressure (Min/Max):14.5-43.5 psi

Inlet Water Temperature (Min/Max):5℃-45℃

Flush Type: Manual/Auto

BEFORE YOU START

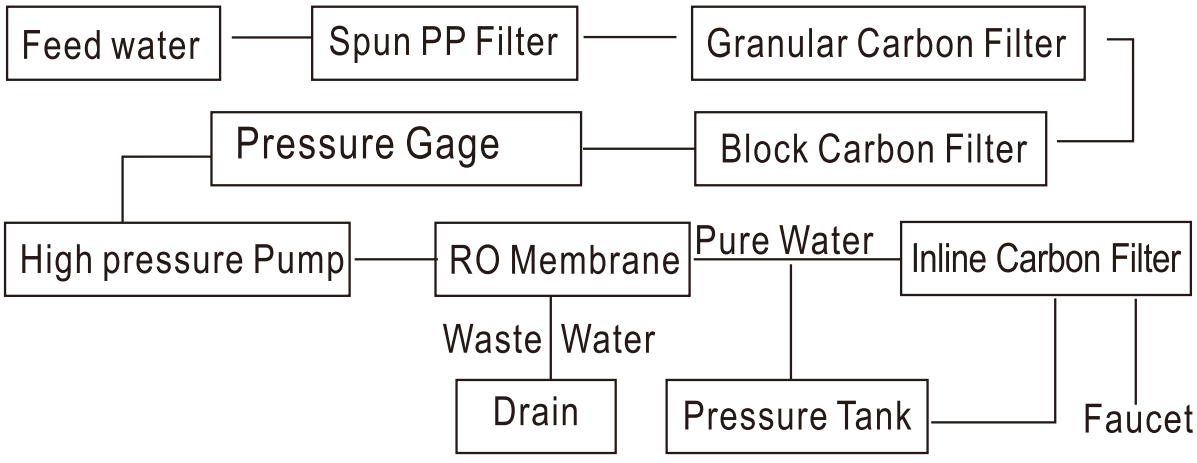
- Read through all instructions before beginning installation and using this system. Follow all steps exactly or risk damaging system/incorrect operation.
- This system contains filters that need to be replaced at certain intervals. Replacement intervals will vary according to use, please contact your local dealer for details.
- Please install system on potable water only . On non-potable water sources, system will not function properly and additional pre-treatment may be needed.
- Ensure source water pressure is between **14.5 - 43.5 psi**. If source water pressure exceeds maximum pressure, a pressure reduction valve may be needed, consult your local dealer.

- Ensure source water temperature is between **5°C - 45°C**. System will not function properly if these temperatures are exceeded. **DO NOT INSTALL ON HOT WATER SOURCE.**
- Do not use system on noticeably contaminated water such raw sewage or well water.
- This unit operates on **110V~240V** power. Please ensure you are using the correct power source.

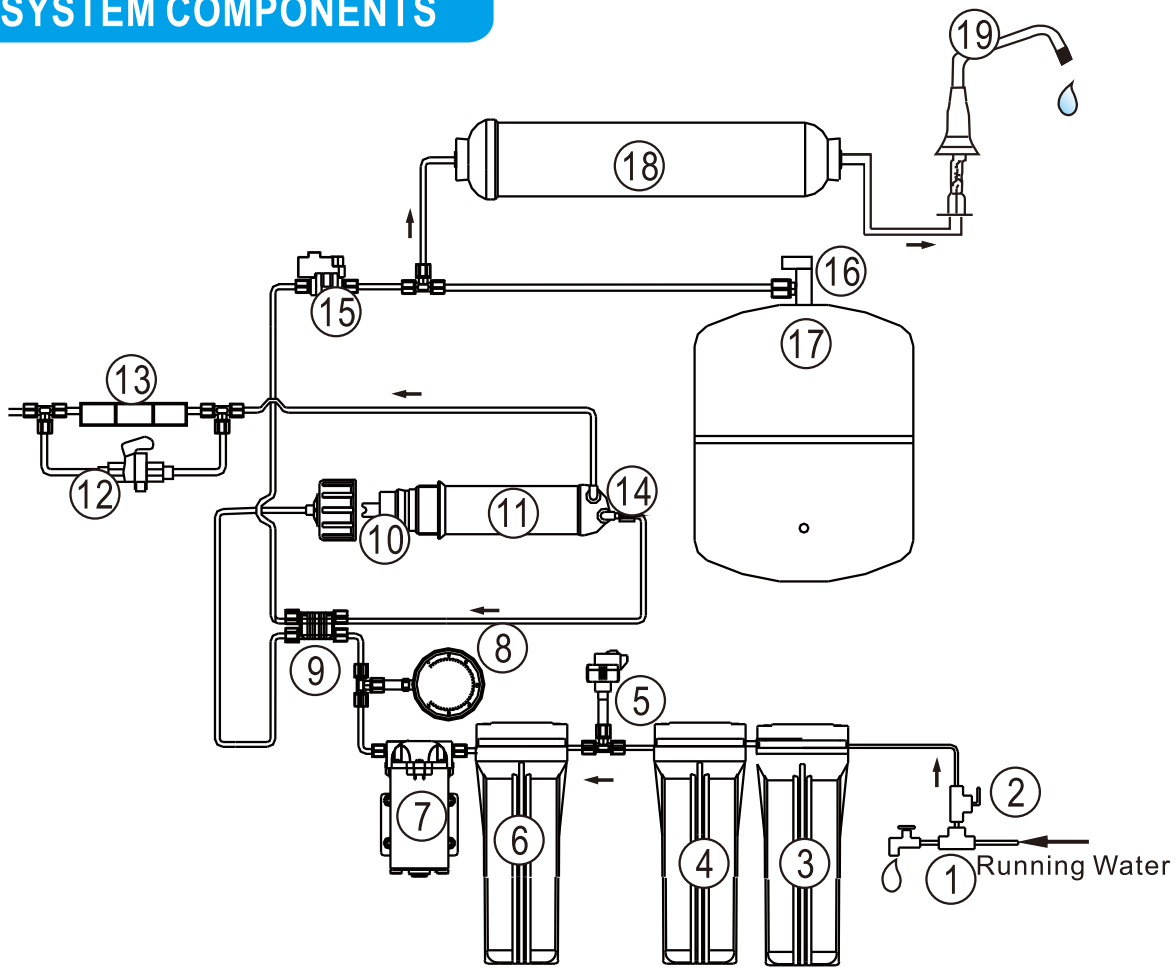
CAUTION:

- Do not disassemble, open, or modify this unit. Tampering with the unit may cause failure or damage and will void warranty.
- Do not cover the unit, as this will prevent proper heat dissipation and can cause damage or fire.
- Do not place objects on top of the unit as this may cause damage to the unit and may cause leaking.
- Follow all recommended operating pressures and temperature, failure to do so will cause damage to the unit and void warranty.
- Avoid contact with corrosive materials.
- Keep away from heat.

HOW YOUR SYSTEMS WORKS



SYSTEM COMPONENTS



1.Tee Fitting
2. Feed Water Valve
3. PP Spun Fiber
4. Granular Carbon Filter
5. Low Pressure Switch
6. Block Carbon Filter
7. Booster Pump
8.Pressure Gage
9.Auto Shut Off Valve(option)
10. Membrane Housing
11. RO Membrane
12. By-pass flush Valve (option)
13. Drain Restrictor
14. Check Valve
15. High Pressure Switch
16. Ball Valve
17. Pressure Tank
18. Inline Carbon Filter
19. Faucet

INSTALLATION

◎ Tools and Parts Required

Knife

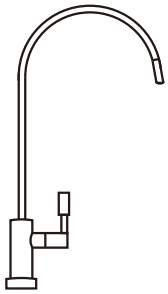
Electric Drill

Seal Tape

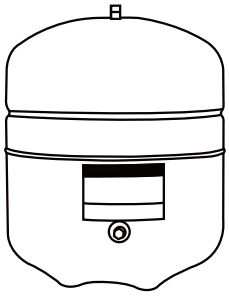
Hammer

Monkey Wrench

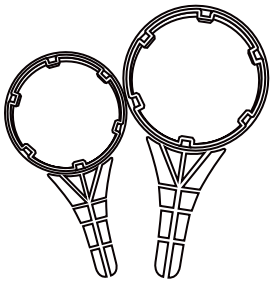
Scissors



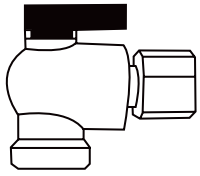
Faucet



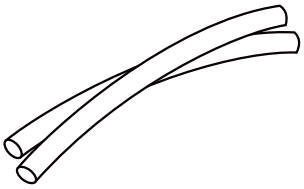
Tank



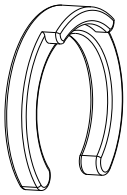
Housing Wrench



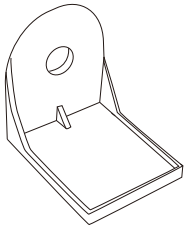
Tank Ball Valve



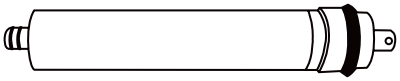
Water Pipe



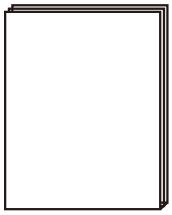
Clip



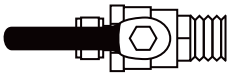
Faucet Bracket



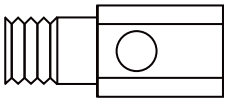
RO Membrane



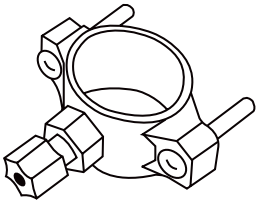
Manual



Feed Water Valve

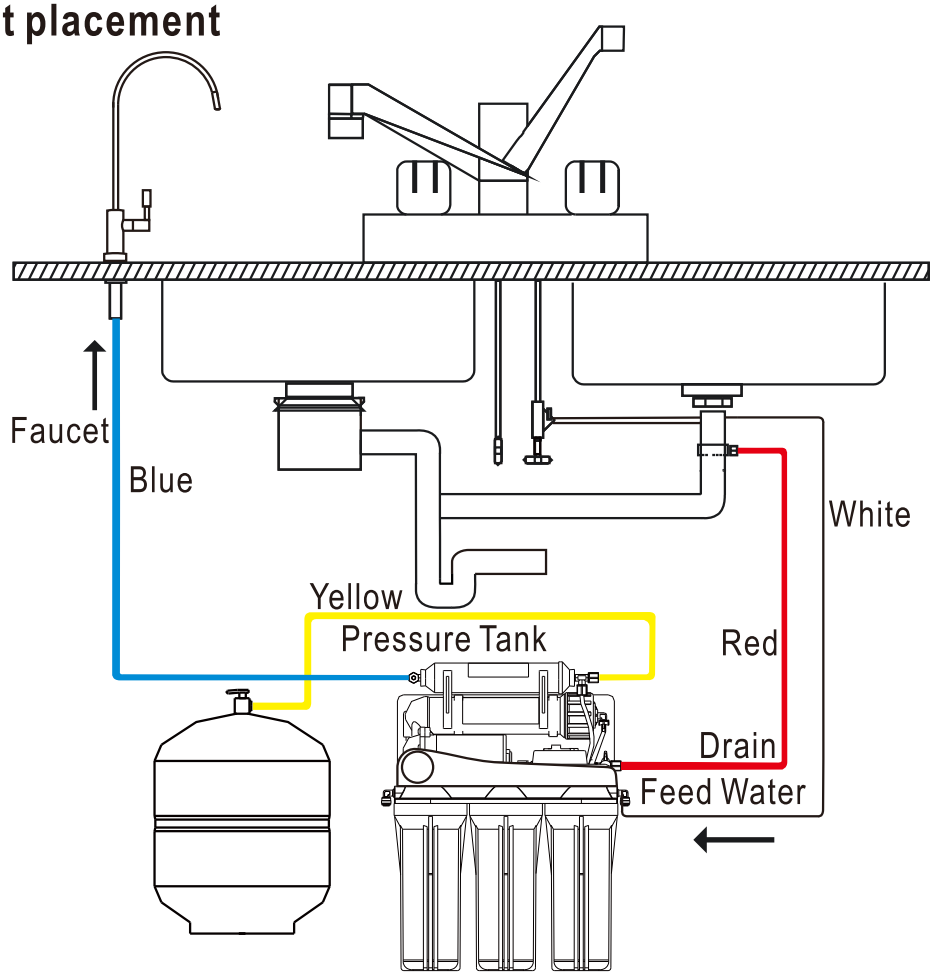


Tee Fitting

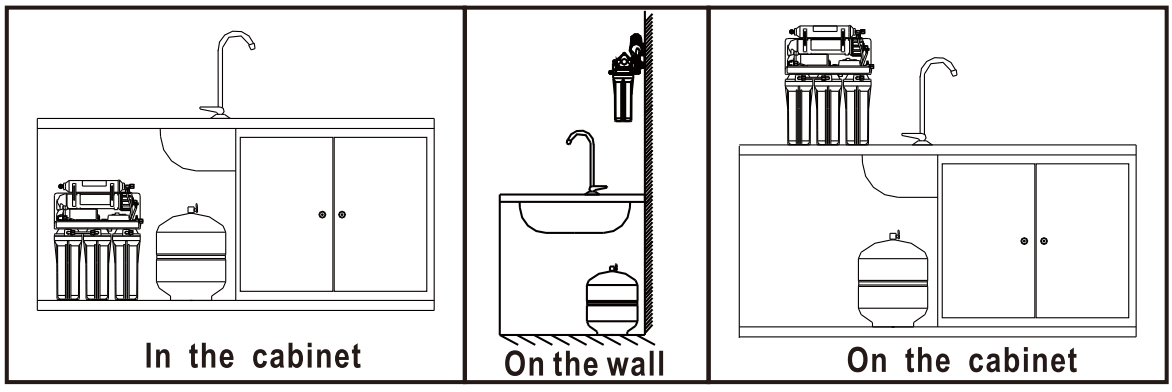


Drain Clamp

◎ Unit placement



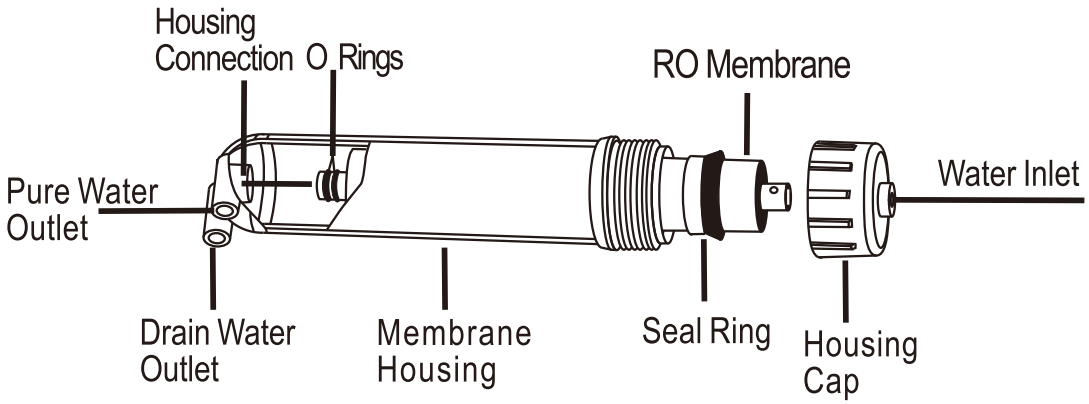
- The unit can be placed flat or upright and on top, inside, or under the cabinet.
- Feed Water connection should be as close as possible to unit.



NOTE: *All components and tubing should be located in an area not exposed to freezing temperatures or direct sunlight.*

◎ Install RO Membrane Element

NOTE: Before proceeding with membrane element installation, please flush pre-filters thoroughly. (Instructions on how to perform filter flush provided in next section)

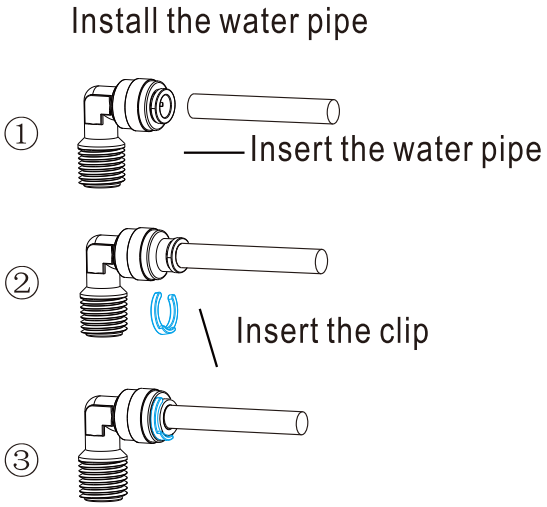


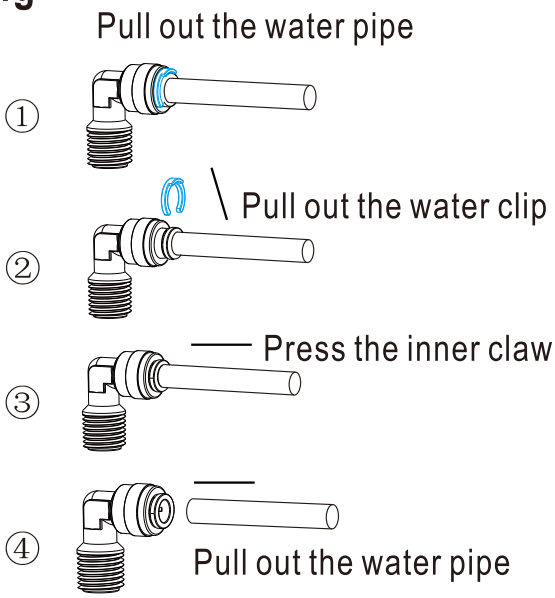
- Remove RO housing cap by using wrench.
- Remove RO element from packaging.
- Insert RO element into housing with the small double O rings facing inward.
- Install membrane housing cap and tighten with wrench provided.

◎ Tubing Connection

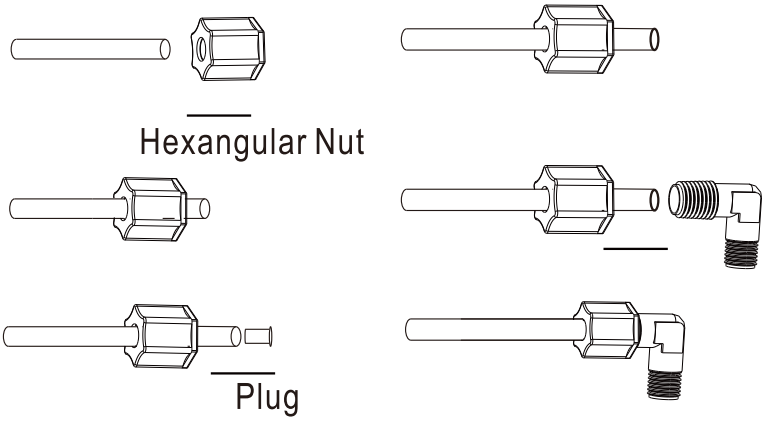
Refer to the following diagram for how to properly install the Quick fittings and JACO fittings.

Quick Fitting



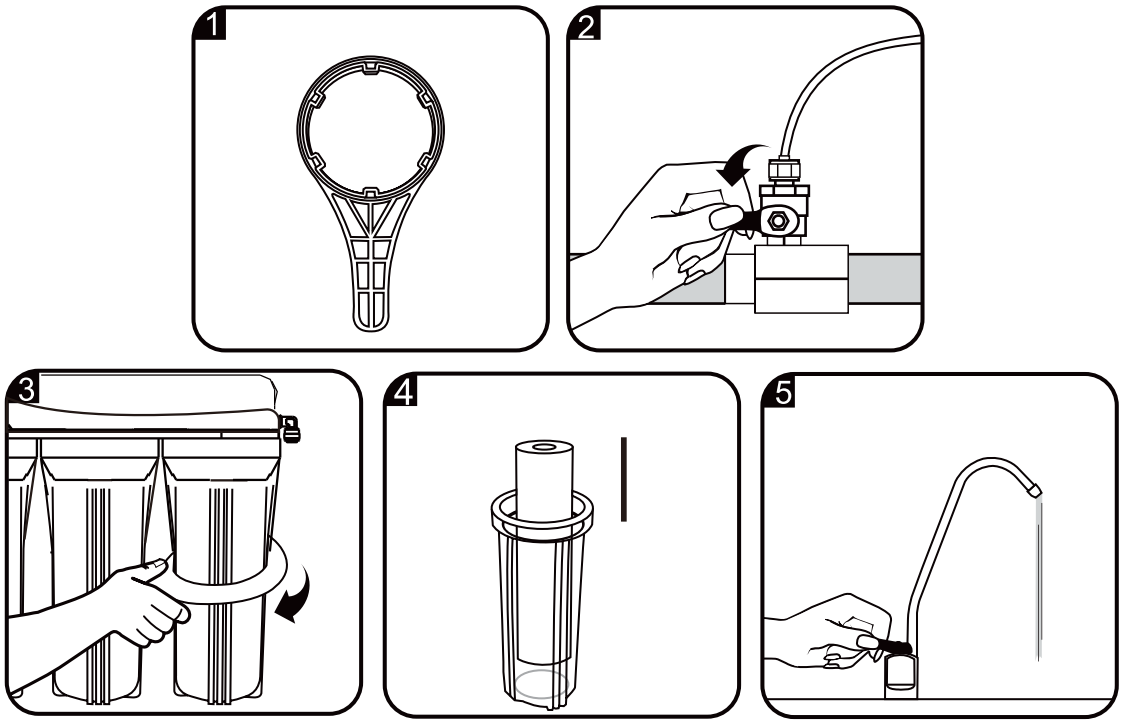


JACO Fitting



◎ Install Pre-Filters

- Remove Pre-Filters from packaging.
- Place filters in appropriate housings according to labels and install filter housing from right to left in the following order: PP, GAC, CTO.
- Tightening housings with wrench provided.



◎ Feed Water Valve and Tee Fitting

Install Tee Fitting and Feed Water Valve as per diagram.

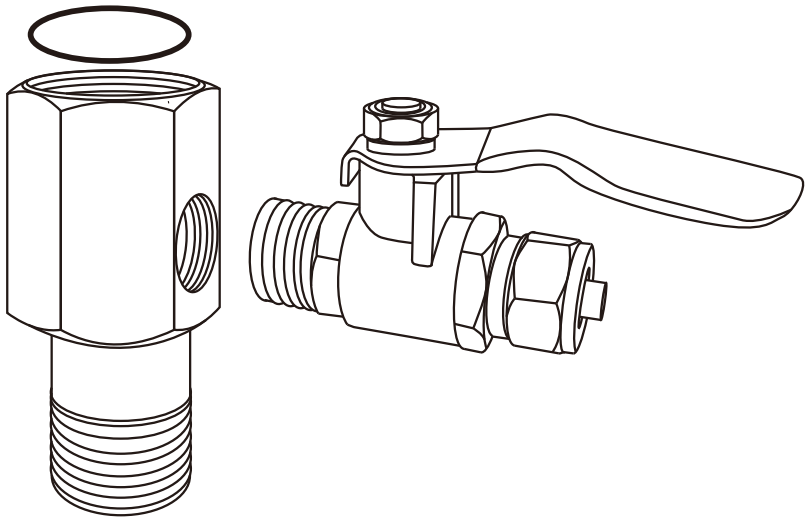
Wrap threads of Feed Water Valve and Tee Fitting with Teflon tape.

Connect White Feed Water Tubing from unit to Feed Water Valve.

Install the Feed water valve

Install the Feed water valve Tee fitting, and then connect to source water.

Caution: The water supply to your unit **MUST** be from **COLD WATER LINE.**



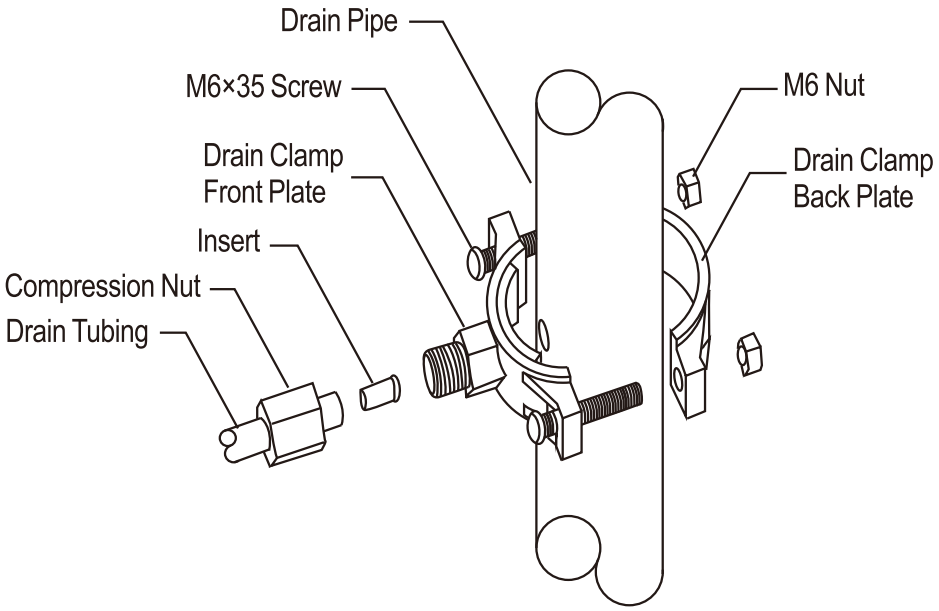
NOTE:

Use only a cold potable water supply as Feed Water, hot water will damage your unit. Softened Feed Water will extend the life of the RO Membrane .

◎ Drain Clamp Installation

- Position drain clamp on drain pipe above the drain trap and tighten securely.
- Using the drain clamp as a guide, drill a **6mm** hole, enough for the **1/4”** tubing to pass through one side of the drain pipe. **DO NOT** drill through both sides.
- Connect **Red Waste Water Tubing** from unit to Drain Clamp.

DRAIN CLAMP ASSEMBLY

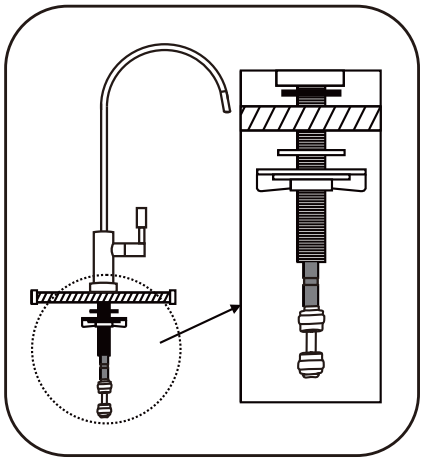


NOTE: When cutting the tubing, make clean, square cuts, failing to do so results in poor connection and possible leaks.

CAUTION: The lowest point of the line should be the point of connection to the Drain Clamp. There should be no sag in the line as this may cause excessive noise as the reject water is flowing to drain.

◎ Faucet Installation

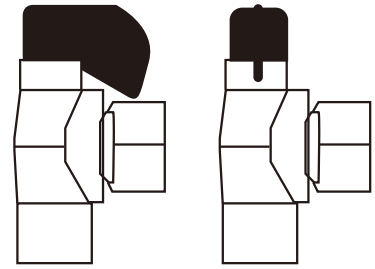
- Select a convenient location near your sink to place the faucet.
- Drill a hole **12mm** in diameter in counter top.
- Place washers, plates, seals and nuts in order as per diagram and tighten on to counter.
- Attach **Blue Pure Water tubing** to the bottom of faucet and connect tubing to unit.



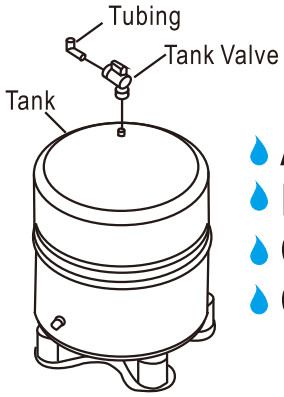
◎ Pressure Tank

- Keep Pressure Tank within 10 feet of faucet.
- If longer length of tubing is needed, use 1/4" tubing only to prevent pressure drop.

- Tank can weigh up to 30lbs when full, find firm and level flooring.
- Install Ball Valve by screwing Valve on to Tank and apply Teflon tape to prevent leaking.
- Connect Red tubing from post filter to Pressure Tank.



Tank ball valve



- Apply teflon tape to nozzle on top of tank.
- Install and hand tighten tank valve.
- Connect yellow tubing from system.
- Check if tank ball valve is open.

◎ Install Ultraviolet Sterilizer(for the unit with UV Sterilizer)

A. UV CHAMBER

B. GLASS TUBE

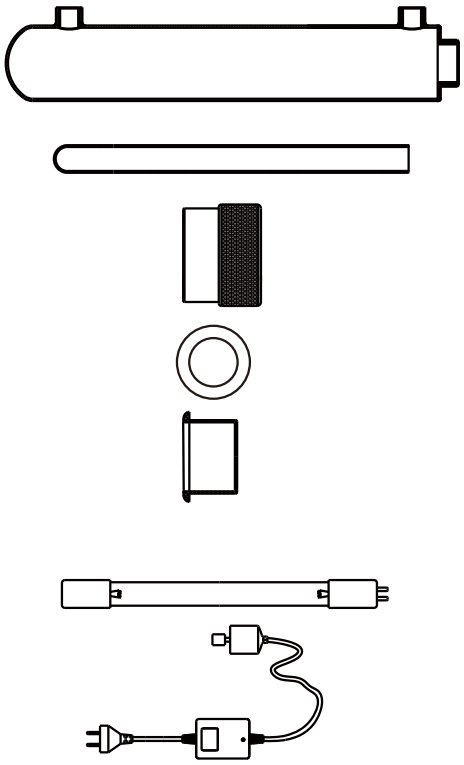
C. ALUMINUM NUT

D. SILICONE STOPPER

E. SILICONE SEAL

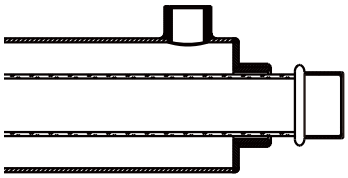
F. UV LAMP

G. ADAPTOR

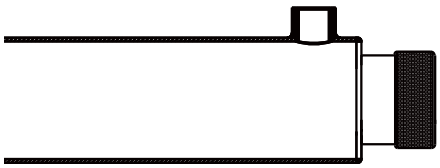


Step 1. Place **The Silicone Stopper** or **Silicone Seal** (Item D **OR** E) at the tip of **Glass Tube** (Item B). See Figure 1.

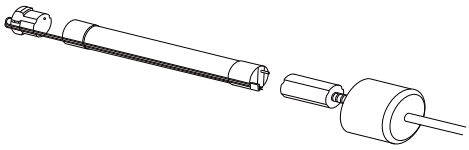
Step 2. Slide-in the **Glass Tube** (Item B) into the **UV Chamber** (Item A).See Figure 2.



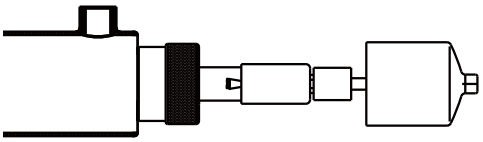
Step 3. Fasten the **Aluminum Nut** (Item C) to seal the **UV Chamber** (Item A). See Figure 3.



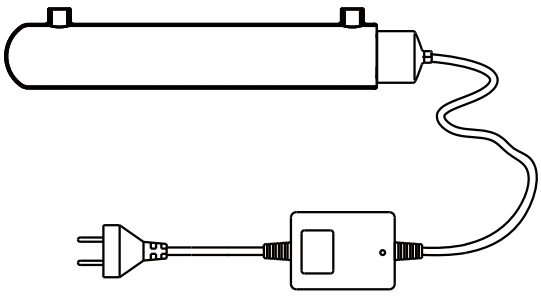
Step 4. Plug the **Adaptor** (Item G) to the **UV Lamp** (Item F). See Figure 4.



Step 5. Insert the **UV Lamp** (I tem F) into the **UV Chamber** (Item A). See Figure 5.



Step 6. Seal it up with the Rubber Stopper that is already attached to the **Adaptor** (Item G). See Figure 6



WARNING!!!

Do not watch the ultraviolet rays emitting out of the UV lamp without protection since they will cause serious burn for naked eyes. Unplug the electrical ballast when maintaining the system.

WARNING!
Protect eyes & Skin
from direct
UV radiation

OPERATION AND MAINTENANCE

◎ Pre-filter Flushing (Initial Setup)

Prepare system for operation by flushing pre-filters:

- Disconnect RO element inlet tube on element housing cap. Open water main and inlet valve and allow system to run through the 2 pre-filters.
- Discard output water into container or drain.
- Continue flushing until output water is visibly clean. Reconnect tube

Note: Pump and membrane may be severely damaged if system is running without flushing pre-filters. Discard all water from flush, it is not suitable for use or consumption.

- After flushing pre-filters open all valves to start operation.
- Wait approximately 2 minutes before opening faucet.
- Allow system to flush for first 10-15 minutes with tap on.
- Do not use water from unit at this time. When water becomes clear, it is ready for use.

◎ Flushing the Pressure Tank

- After flushing the Pre-Filters, allow the unit to operate and fill the Pressure Tank.
- Tank will take approximately 3.5 hours to fill. Once tank is full, discharge Pressure Tank by leaving faucet open.
- Once Tank is completely empty, close faucet and allow tank to fill again.

After flushing the system is ready to use.

◎ Regular Operation

Once system has been set-up and has been plugged into a power source, it will operate and begin treating water automatically the faucet is open. Once the faucet is closed, the unit will switch off automatically. After use, the unit will flush automatically if equipped with auto flush function.

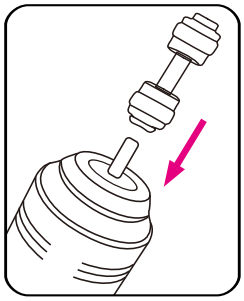
◎ Filter Maintenance

To ensure the unit operates at its optimum level, routine maintenance is required. The frequency of maintenance depends on the feed water quality . The following are some guidelines for scheduled filter changes, keep in mind that the frequency of filter changes may vary. If in doubt, contact your local dealer or service technician.

- Change Spun PP Filter and Granular Carbon Filter every 3-6 months or as required.
- Change Block Carbon Filter every 6-12 months or as required.
- Change RO Membrane every 18-24 months or as required.
- Change Inline Carbon Filter every 6-12 months or as required.

If you will be away or not using the unit for an extended period of time, please disconnect unit from power supply. If the unit has been shut down and not used for an extended period of time, perform the same flushing procedure as in the initial set-up.

◎ Filter Replacement

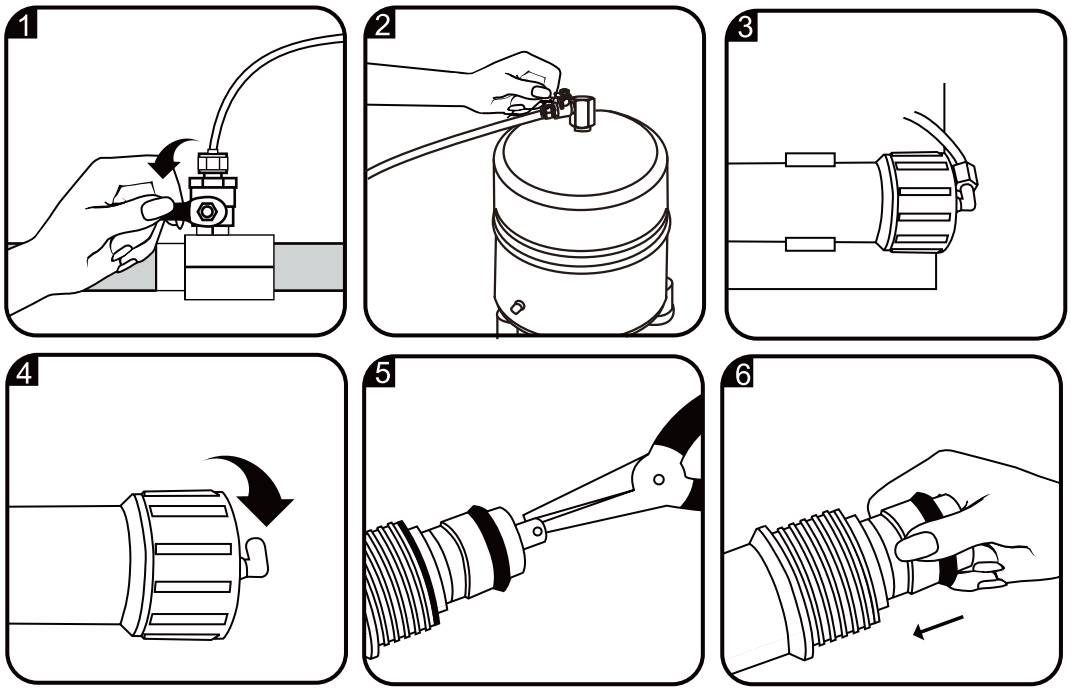


- Close Feed Water Valve.
- Open Faucet and drain any remaining water from system.
- Disconnect quick connect filters.
- Replace filters, reconnect, and open valves.
- Perform pre-filter flush after filters have been changed.

Note: Diagrams on how to connect using quick connect fittings can be found in the installation section.

◎ Membrane Replacement

- Close Feed Water Valve.
- Close Tank Ball Valve on Pressure Tank.
- Open Faucet and drain any remaining water from system.
- Open membrane housing and remove used membrane.
- Follow the same procedure as RO membrane installation to replace RO membrane.



TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
No product water	Water supply is off	Turn on feed water
Not enough product water	Water supply is blocked	Clear restriction
	Feed water valve is plugged	Open valve or unplug
	No drain flow	Clear or replace check valve
Pump not running	Low feed water pressure	Check source water supply
	No power supply or loose connection	Turn on power supply
	Transformer burnt out	Replace
Pump is running but system is not producing water	Pre-filters plugged	Replace filter cartridges
	Inlet solenoid valve not working	Repair or replace valve
	Transformer burnt out	Replace
System does not shut off	Auto shut off switch not working	Repair or replace switch
Abnormal pump noise	Pre-filters plugged	Replace

PROBLEM	CAUSE	SOLUTION
No drain water	Plugged drain flow restrictor	Replace
Tubing leaks	Tubing connection incorrect	Check/reinstall tubing
	Defective or damaged tubing	Replace section of tubing

SAFETY INSTRUCTIONS

This appliance is intended to operate and function as per the instructions in this manual. It is not designed to operate outside of the specifications listed and any attempt to do so or tampering with the unit can cause damage to the unit and/or bodily harm. This unit is not a toy, keep out of reach from small children. If the unit requires service or repair, please contact your local service technician or sales representative.

- Please ensure feed water temperature is over 4°C. Using water below 4°C can cause ice to form and damage the unit.
- Please ensure power source is correct before connecting unit. Incorrect voltage could result in damage to unit and/or fire hazard.
- Do not cause damage to or use unit if the power cord is damaged. A damaged power cord could cause an electrical shock or fire hazard. If power cord is damaged, unplug and discontinue use immediately.

BLUONICS

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