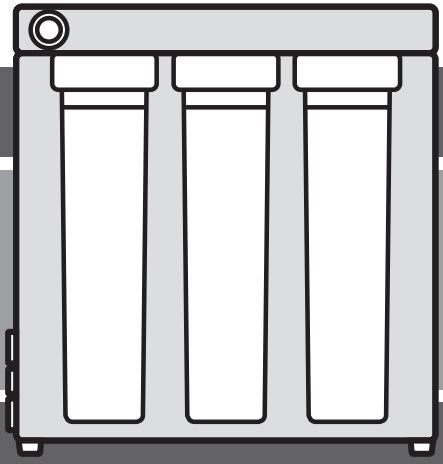
Puricom®



FG

CLS-1200

Compact and Slim
Commercial RO System

USER MANUAL

TABLE OF CONTENTS

Puricom®

INTRODUCTION

We sincerely thank you for purchasing Puricom CLS-1200 commercial RO system. To ensure your safety and satisfaction, please read through this manual before use.

As the environment continues to deteriorate, it is increasingly difficult to obtain a reliable source of clean, pure, healthy drinking water. That is why PURICOM chooses to use RO membranes with the highest quality and other relevant technologies to develop series of versatile and economical RO water purifiers, and thus able to provide pure and healthy water.

CLS-1200 commercial RO System gives the following features:

- Direct flow. Fresh, instant, pure water.
- Big flow design, high speed filtration.
- Quick change filter cartridges, easy to maintain.
- 50% space savings makes this system easy to install anywhere.
- Systematized tubing design, filtration efficiency and easy to install.
- Good for apartment, school, restaurant and social places...etc.

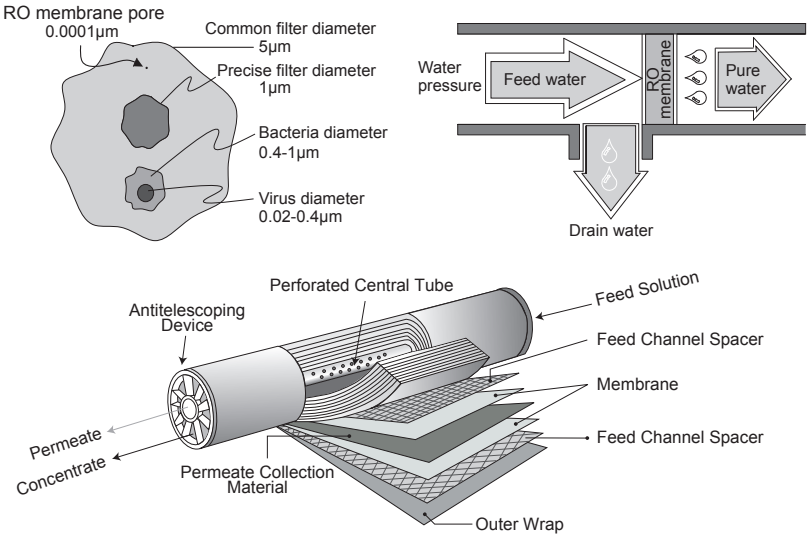
The CLS-1200 commercial RO System is especially suitable for commercial and small scale public usage, such as schools, factories, apartments and restaurants, where pure water demand is greater than the residential environment.

Please read this manual carefully, paying attention especially to maintenance procedures and safety information. With all gratitude, we assure you a constant, sustainable supply of pure healthy water.

■ WHAT IS REVERSE OSMOSIS (RO)

To fully understand the technology of Reverse Osmosis, it is a must to understand normal osmosis. Osmosis is a natural process that occurs in all living things. For instance, osmosis permits water and nutrient absorption through the root system of plants; similarly, nutrition is assimilated from blood to cells in the human body. The drawings below help further explain the principle of reverse osmosis.

As water exerts pressure on the semi-permeable membrane, the purified (or filtered) water passes through the pores of the membrane, while the rejected (or concentrated) is diverted to the drain. When the diameter of the pores is less than 0.0001 microns, only pure water and a balanced quantity of minerals (sodium, potassium, calcium, and magnesium, etc) can pass through; while other substances (such as bacteria, viruses, metals, pesticides, chemical products, etc) are eliminated during the process.



Puricom®

SAFETY INFORMATION

Please read this information to prevent property loss and to ensure your safety.

ELECTRICITY SAFETY

1. Be sure the local voltage accords with the system voltage. Electrical shock or fire may occur if not.
2. Do not use a damaged power cord or plug, or loose outlet.
3. Do not pull the cord to unplug or handle the plug with wet hands.
4. Do not bundle the power cord tightly, it may cause damage.
5. If the cord or plug is wet, unplug the unit and let it dry completely before subsequent use.
6. Unplug the unit before repair, inspection, or replacement.
7. Do not plug into an outlet or power strip that is being used by several other appliances. Use a separate outlet for the unit.
8. Shut the main water supply valve and unplug the power cord when not using for a long time.
9. Do not attempt to repair the power cord.
10. Do not repeatedly plug and unplug the unit from the electrical outlet.
11. Do not move the product by pulling the electrical cord.

INSTALLATION SAFETY

1. Keep the product away from inflammable gas or burnable materials.
2. Do not install the unit near heaters.
3. Do not spray with water. Use a damp cloth to clean.
4. The length of the water inlet hose must be shorter than 5 m. If longer, product performance may be degraded.
5. Do not use with hot water. Optimal inlet water temperature is 5℃- 45℃.

6. Inlet water pressure should be 15 - 45 PSI.
7. Do not plug into an outlet or power strip that is being used by several other appliances. Use a separate outlet for the unit.
8. Water analysis TDS should not exceed 1000 PPM . Hardness should not exceed 250 PPM.
9. Ensure the inlet, outlet and drain connections are correct and that the drain point is not blocked.
10. The filtration system installation shall comply with state and local laws and regulations. Do not use with water that is micro biologically unsafe, of unknown quality, or without adequate disinfection before or after the system.

OPERATION SAFETY

1. If water leaks from the product, turn off the supply valve, unplug the system and call Customer Service.
2. Unplug immediately and call Customer Service if the unit makes unusual noise or is not working properly.
3. Use or place the unit on an even surface and do not apply force to the unit.
4. If the system is stored or not in use for a long time,and water is remaining in the tank, drain all water from the storage tank before use.
5. Periodical filter replacement is prerequisite for clean water. If filters are overused, the performance of filters is degraded.
6. After activated carbon filter replacement, a small amount of carbon fines may be introduced to the water. It is activated carbon particles and is harmless to human body.
7. Before using the filter for the first time or after replacement of the carbon filter run water for a few minutes, till the water runs clear, to rinse any carbon fines from the filter.
8. Do not expose the unit to direct sunlight or a high humidity environment. The optimal room temperature for the unit is 4℃ - 40℃.

Puricom®

■ SPECIFICATION:

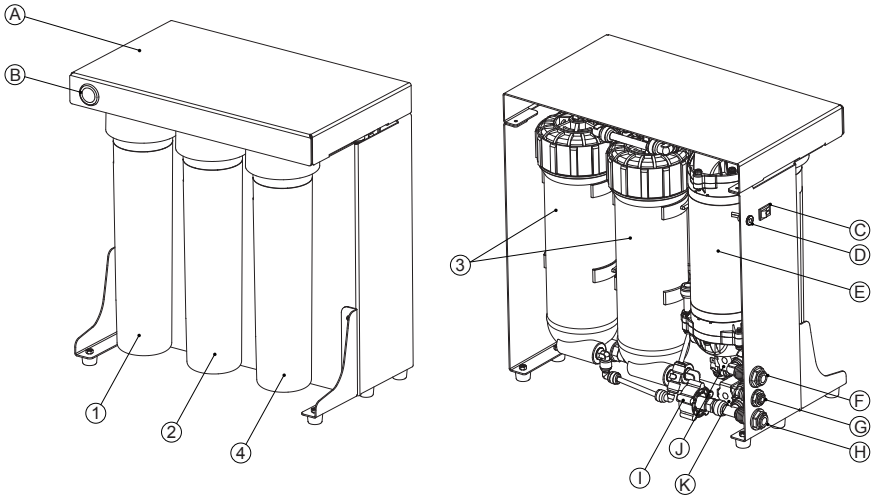
Model	CLS-1200
Type	Compact and slim commercial RO system
Pump	UP-B230
Voltage	100~240 VAC / 50 / 60Hz
Dimensions	D22cm × W38cm × H44.5cm
In/Out Diameter	In3/8” Out3/8” Faucet Outlet3/8”
Pre-filter	11” Filter x2 pcs
RO membrane	600 GPD x2 pcs
Post filter	11” Filter x1 pcs
Capacity	1200 GPD

■ INLET WATER REQUIREMENT:

TDS Inlet water TDS	< 800 ppm
Inlet water pressure	30 - 60 psi
Total hardness	< 250 ppm
Temperature	4℃- 40℃

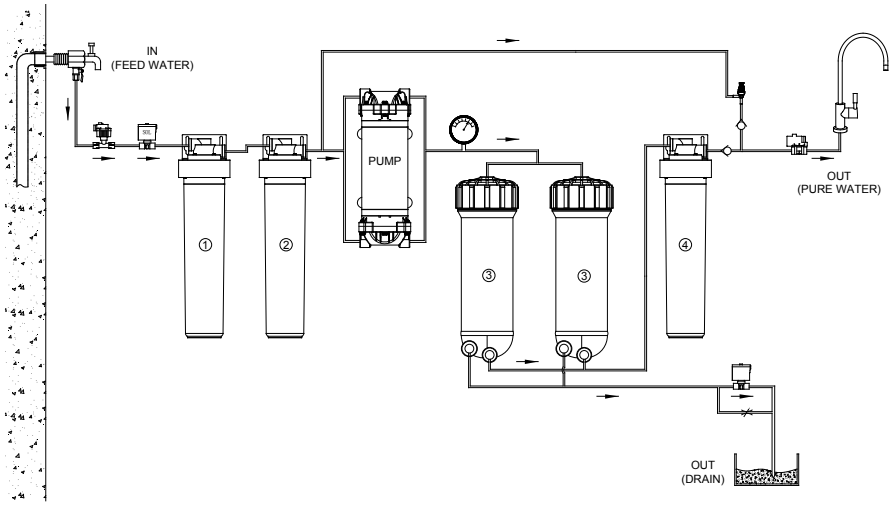
Note:
Please contact technician if inlet water does not comply with requirement.

■ PARTS NAMES:



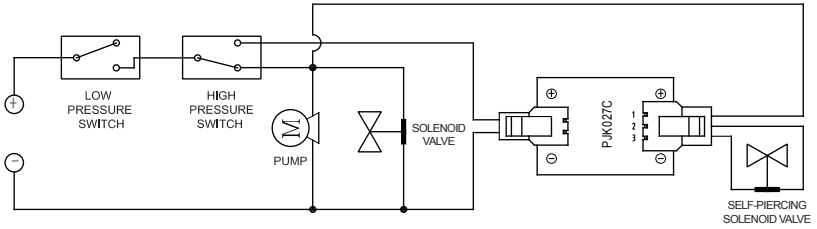
A	Mounting Bracket	I	High Pressure Switch
B	Pressure Gauge	J	Solenoid Valve
C	Power Switch	K	Self-piercing Solenoid Valve
D	Power Socket	1	1st Stage - Pre-filter 5 Micron
E	Booster Pump	2	2nd Stage -CTO Carbon
F	Feed Water In	3	3rd Stage - RO Membrane x2pcs
G	Drain Oulet	4	4th Stage - Post Filter
H	Faucet Outlet		

FLOW CHART:

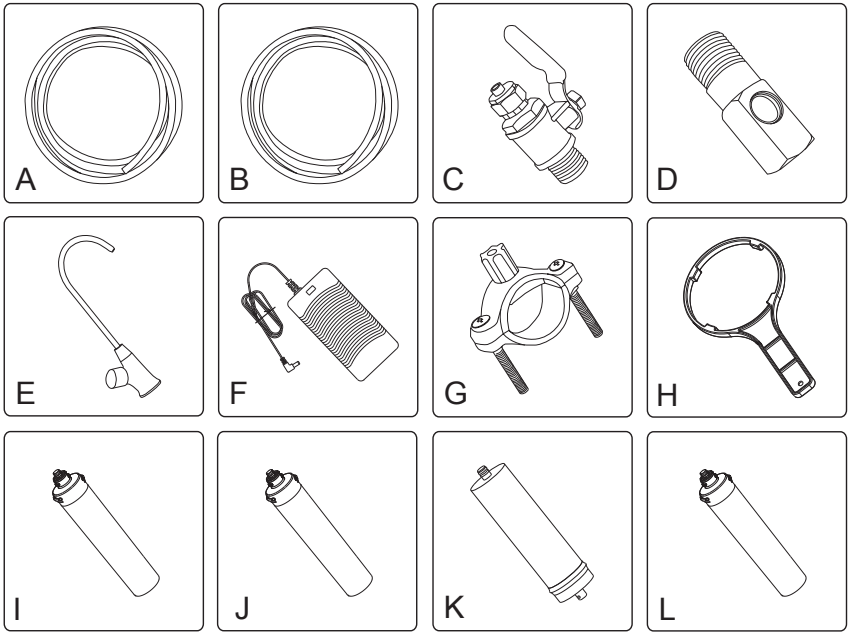


1	1st Stage - Pre-filter 5 Micron	3	3rd Stage - RO Membrane x2pcs
2	2nd Stage - CTO Carbon	4	4th Stage - Post Filter

ELECTRIC DIAGRAM:



■ ACCESSORIES:



● Accessories Pack

A. PE Tube 3/8"(white)
B. PE Tube1/4" (blue)
C. Feed Water Ball Valve
D. Feed Water Connector
E. Faucet (Optional)
F. Transformer
G. Drain Clamp
H. Wrench

● Filters

I. Pre-Filter 5 Micron
J. CTO Carbon
K. RO Membrane x2pcs
L. Post Filter

Puricom®

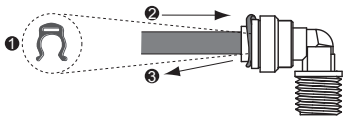
■ FILTER FUNCTION DESCRIPTION & RECOMMENDED FILTER REPLACEMENT:

① Prefilter-PP 5μ filter	3~6 months	Traps dirt, rust, and other impurities.
② Prefilter-CTO Carbon	3~6 months	Removes chemicals and odors, such as chlorine and chemical fertilizer. Set before the RO membrane can protect it from being damaged.
③ R.O. membrane (0.0001μ)	1~2 year	This high technology, semi permeable membrane effectively takes out TDS, viruses, bacteria, slime, heavy metal, pesticides, and chemicals etc. Harmful impurities separated by the RO membrane are diverted to the drain.
④ Mineral Supplement Post Filter	12 months	Adds healthy minerals to the drinking water.

Note:
Water analysis by qualified dealer is required to determine optimal lifespan. Frequent use or bad quality feed water shortens filter lifespan. If water pressure and water quality are not within limits, please contact your distributor to make proper modifications.

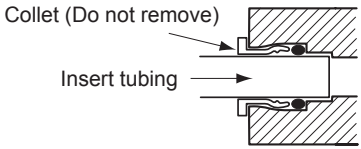
HOW QUICK CONNECTORS WORK:

1 To connect



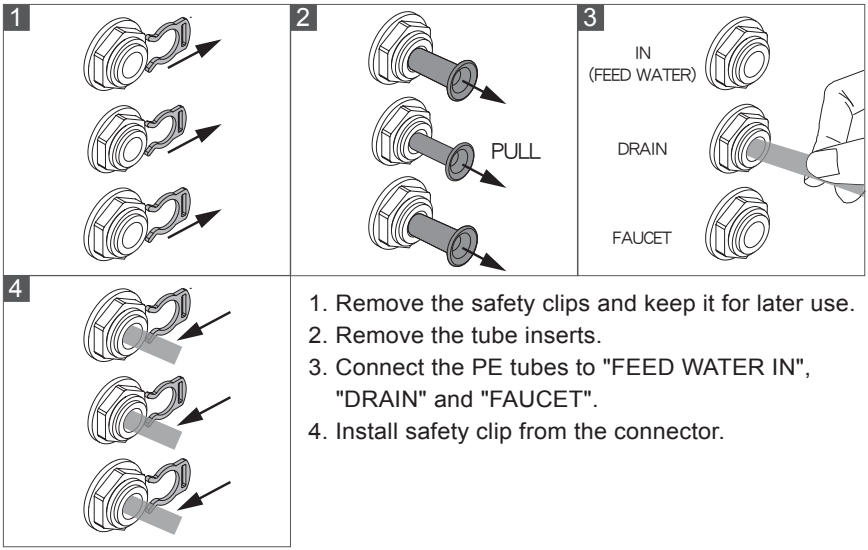
❶ Remove safety clip
❷ Push collet in
❸ Pull tube out

2 To disconnect

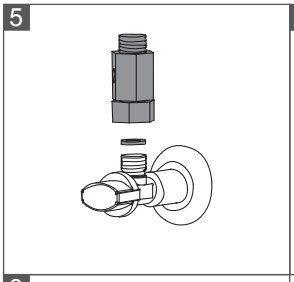


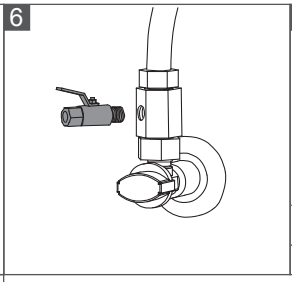
1. To remove tubing from the connector: Remove the safety clip from under the collet, push in the collet, and pull the tube out. (fig. 1)
2. Installation. Ensure the tube is clean and free of burrs. Push the tube into the connector until it stops. (fig. 2)
3. Pull tube out a little bit, and replace the safety clip.

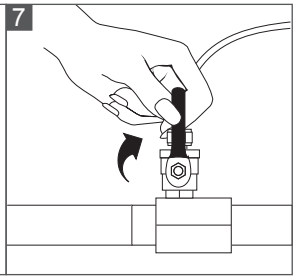
INSTALLATION:

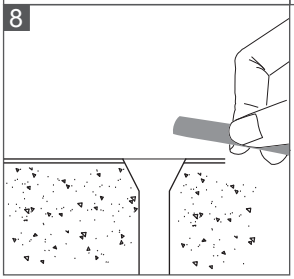


1. Remove the safety clips and keep it for later use.
2. Remove the tube inserts.
3. Connect the PE tubes to "FEED WATER IN", "DRAIN" and "FAUCET".
4. Install safety clip from the connector.



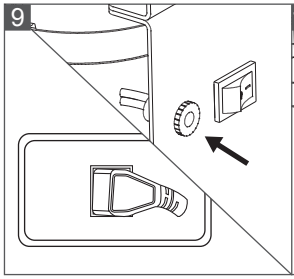


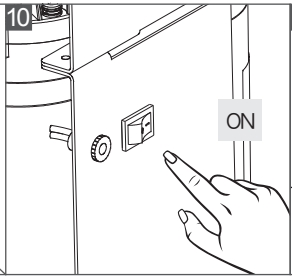


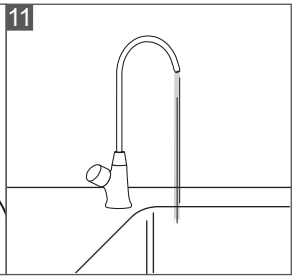


5. Wrap several turns of seal tape on the new feed water connector and install it with the black washer on the existing cold water supply valve.
6. Reinstall the existing cold water line on the new feed water connector. Wrap several turns of seal tape on the ball valve and install it on the new feed water connector.

7. Connect the PE tube of "FEED WATER IN" to the ball valve.
8. Connect the PE tube of "DRAIN" to drainage point.

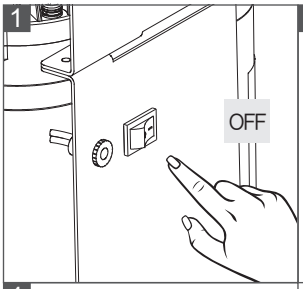


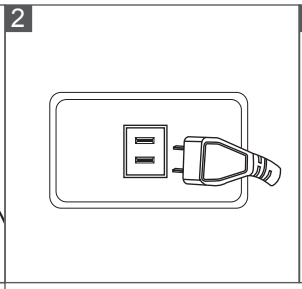


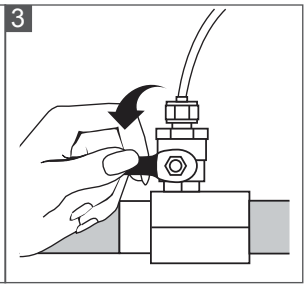


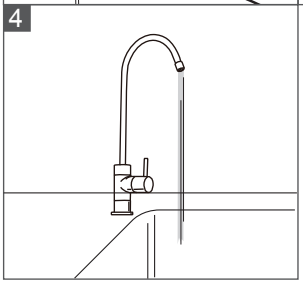
9. Plug the transformer wire into the power socket of the CLS-600. Plug the electric cord into a wall socket.
10. Turn on the power switch.
11. After installation is complete, allow the system to flush for 5 minutes before use.

■ FILTER REPLACEMENT (FOR 1st, 2nd and 4th STAGE)

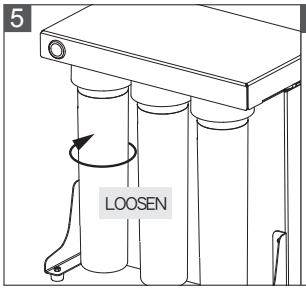


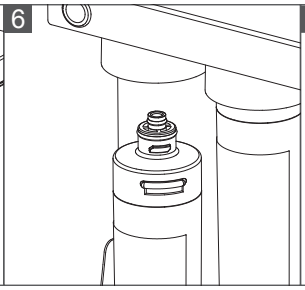


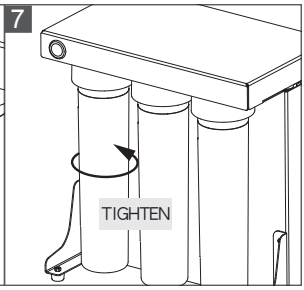




1. Turn off the power switch.
2. Unplug.
3. Turn off feed water at the feed water valve.
4. Turn on the faucet to release pressure from the tubing.

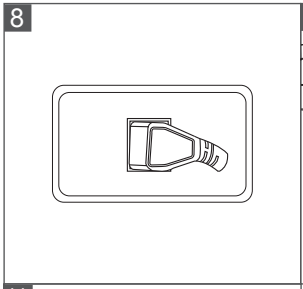


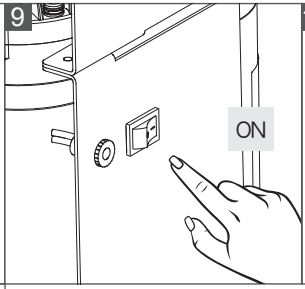


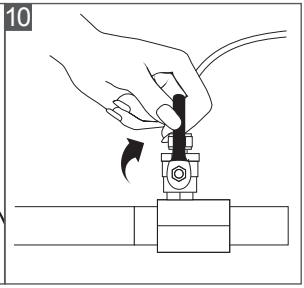


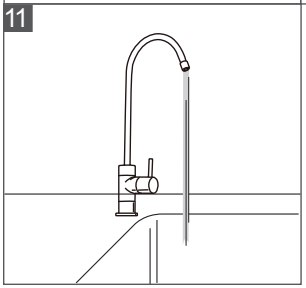
5. Follow the direction to unscrew worn filter cartridge.
6. Replace the new filter.
7. Follow the direction to screw back the new filter cartridge.

Puricom®





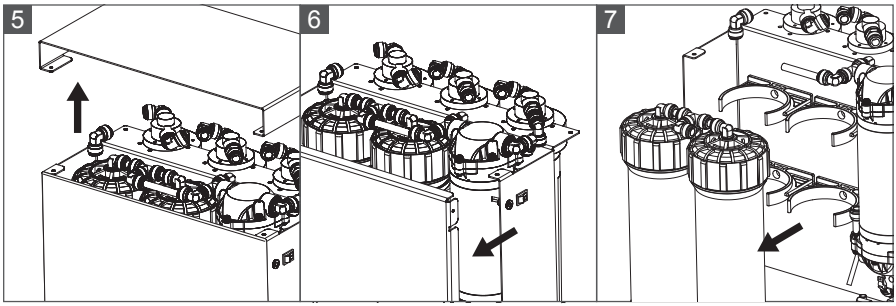




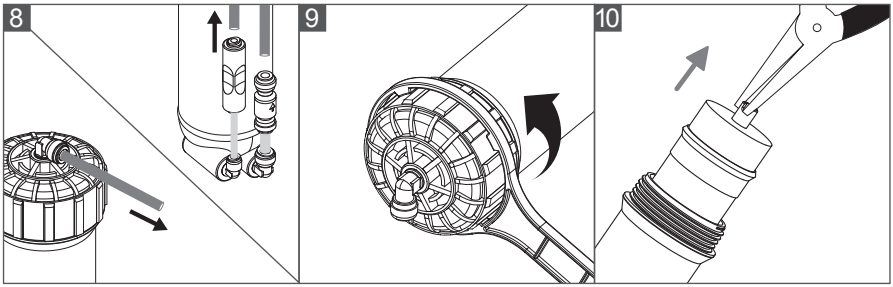
8. Plug in.
9. Turn on the power switch.
10. Turn on feed water at the feed water valve.
11. Allow water to rinse through the system for about 5 minutes to clean the filters.

■ RO MEMBRANE REPLACEMENT:

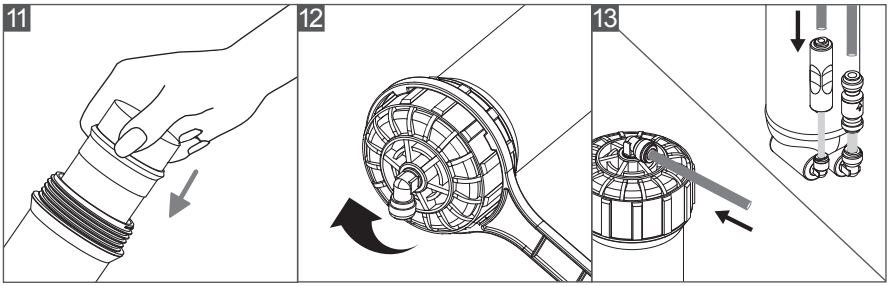
Please follow the instructions of steps 1~4 of Prefilter Replacement on p.12, before proceeding with RO membrane Replacement.



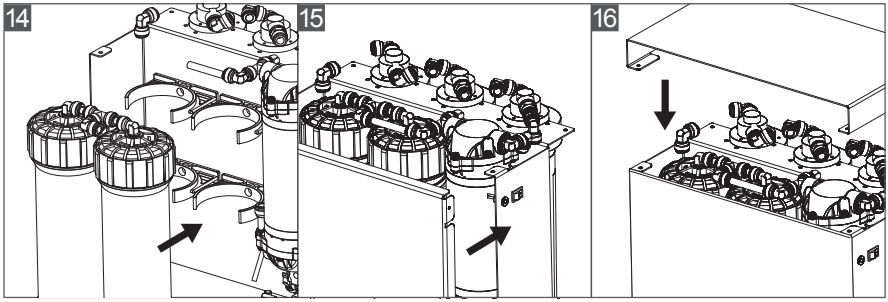
5. Unscrew the screw and remove the upper cover.
6. Unscrew the screw and remove the back cover.
7. Pull the RO housing out from the bracket.



8. Remove the PE tubes.
9. Follow the direction and use tool to unscrew the cap of the RO housing.
10. Use a pair of pliers to remove the worn RO membrane. Then wash the housing to clean.



11. Put the RO membrane into the housing.
12. Use the tool to screw the cap back onto the RO housing.
13. Connect the PE tubes.



14. Put the RO membrane housing back into the bracket.
15. Lock the back cover screws.
16. Lock the upper cover screw.
17. Please follow the instructions of steps 8~11 of Prefilter Replacement on p.13, before use.

■ TROUBLESHOOTING:

Problem	Possible Cause	Troubleshooting
Pump not working.	1. No power supply.	1.Check the power supply.
	2. Transformer is burnt out.	2.Replace transformer. (A possible reason is a pump leak causing the bearing to jam, so the transformer burns out. The pump and the transformer should be checked at the same time.)
	3.Pump bearing jammed.	3.Replace pump.
	4.Bad wire connection.	4.Check wire connection.
	5.Bad electrical connection inside pump.	5.Replace pump.
	6.High / low pressure switch is damaged	6.Replace high/ low pressure switch.
Pump switches on and off repeatedly.	1.Low pressure switch switches on and off repeatedly because of low feed water pressure.	1.Increase feed water pressure. (If you are sure of a consistent feed water pressure, a short circuit around the low pressure switch could be made.)
	2.Bad electrical connection inside pump.	2.Replace pump.
	3.Bad wire connection.	3.Check all wire connection.
Pump keeps running.	1.Air in the tubes causes the pump to not reach sufficient pressure to shut off the pump.	1.Disconnect the outlet tube of the pump to discharge air and recon-nect to run with water in the tube.
	2.The torque of the pump has decreased, so suffi-cient pressure cannot be reached to turn off the high pressure switch.	2.Replace pump.
	3.High pressure switch is damaged.	3.Replace high pressure switch.
	4.The check valve cannot close properly, thus pressure cannot reach shut off point.	4.Replace check valve.

Problem	Possible Cause	Troubleshooting
Pump is leaking.	1.Diaphragm seal is worn or split.	1.Replace pump.
	2.Feed water pressure is too high (> 40psi).	2.Install a pressure regulator or shut off pump to allow the system to run at natural feed water pressure.
Pump is noisy.	1.RO membrane or post filter is clogged.	1.Replace RO membrane or post filter.
	2.Pump bearing is worn.	2.Replace pump.
TDS value of permeated water is rising (rejection rate is lower than 90%).	1.Working pressure is lower than 40 psi.	
	(A)Air in the tubes pre-vents pump from reaching sufficient pressure to permeate properly.	1.(A)Disconnect the outlet tube of the pump to discharge air and reconnect to run with water in the tube.
	(B)RO membrane or post filter is clogged.	1.(B)Replace RO membrane or post filter.
	2.The ratio of permeate water to drain water is less than 1:3.	2.Flow restrictor is clogged. Clean it, or replace it.
	3. RO membrane is worn.	3. Replace RO membrane.
Output of permeate water decreases.	1.RO membrane is clogged.	1.Replace RO membrane. (If clogging is frequent, increase the drainage ratio of the flow restrictor or install a softener to extend the lifespan of the RO membrane.)
	2.Pump is worn, decreasing the working pressure.	2.Replace pump.
No permeate or drain water is produced.	1.The solenoid valve coil is burnt out.	1.Replace solenoid valve.
	2.Bad electrical connection in solenoid valve.	2.Replace solenoid valve.
	3.Solenoid valve is clogged inside, thus unable to turn on.	3.Replace solenoid valve.
	4.Shut-off valve is worn.	4.Replace shut-off valve.

Problem	Possible Cause	Troubleshooting
System drains at full tank when pump is not running.	1.Feed water pressure is too high to turn off the shut-off valve.	1.Install a pressure regulator.
	2.The shut-off valve or solenoid valve is clogged.	2.Clean the valve or replace it.
	3.Check valve is worn and causes permeatewater in the storage tank to reverse flow to drain.	3.Replace check valve.
Solenoid valve is noisy.	1.The solenoid valve coil is not in place.	1.Fix the coil in its place.
	2.Feed water pressure is too low, causing the low pressure switch and the solenoid valve to turn on and off repeatedly.	2.Increasefeedwater pressure. (If you are sure of a consistent feed water pressure, a short circuit around the low pressure switch could be made.)
System does not run.	1.High / low pressure switch is worn.	1.Replace high / low pressure switch.
	2.Feed water pressure is lower than 5 psi.	2.(If you are sure of a consistent feed water pressure, a short circuit around the low pressure switch could be made.)
	3.No power.	3.Check power source.
	4.Pump or transformer is worn.	4.See trouble shooting for pump.
System runs at full tank when faucet is turned off.	1.Check valve is worn and-causes permeate water in the storage tank to reverse flow to the drain. The high pressure switchsenses pressure decrea se and turns on.	1.Replace check valve.
	2.High pressure switch is worn.	2.Replace high pressure switch.

Puricom®

DEMO

DEMO

2020.07

Puricom Water Industrial Corp.

www.puricom.com
service@puricom.com
+886-4-23359968
+886-4-23359967

Member,
Water Quality
Association