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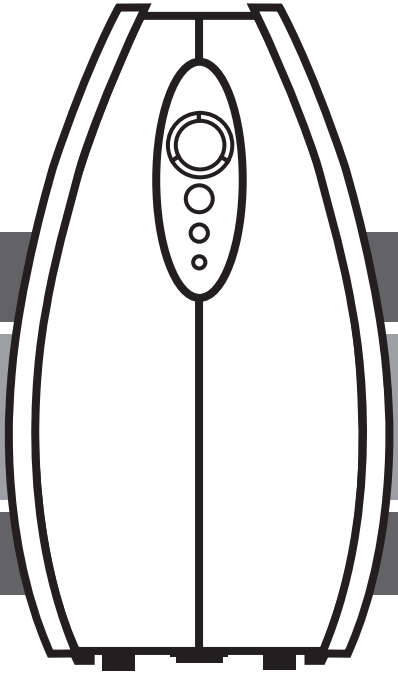

CS

CMW-R3

RO Drinking System

USER MANUAL

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MODEL INTRODUCTION

Thank you for purchasing Puricom CMW-R3 Smart RO Water Purifier. (hereinafter referred to as CMW-R3 water purifier)

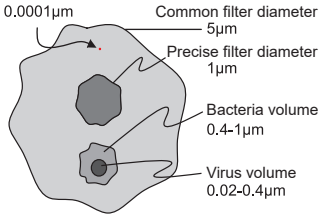
In order to overcome and maintain a good quality of life in today's environment, Pujiakang Water Purification plans the CMW intelligent RO water purifier according to the three demands of "light, thin and short shape", "easy operation of functions", and "high cost performance for maintenance". CMW-R3 water purifier has a neat and simple shape, which increases the application space of cabinets by 70%; the intuitive and friendly user interface allows you to easily grasp the quality of drinking water; the intelligent security guard function ensures the safety of water at home; Your family's drinking water is healthy; the filter replacement reminder function allows you to regularly maintain the filter to maintain water quality; the quick-release DIY maintenance filter design saves time, convenience and money.

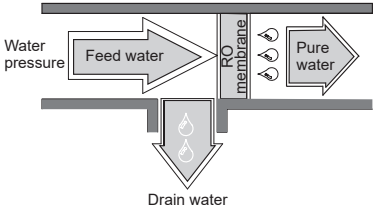
Please read this product manual carefully before use, pay special attention to maintenance procedures and safety information, and keep this manual in a safe place.

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 nutrients absorption through the root system of plants; similarly, nutrition is assimilated from blood to cells in human bodies. The drawings shall help to proceed in further explanation on the principle of reverse osmosis as possibly clear and simple.

As the water exerts pressure on a semi-permeable membrane, the purified (or filtered) part enters through the pores of the membrane, while the rejected (or concentrated) is diverted to the drain. When the diameter of the pores is shorter 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.





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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 as a result.
2. Do not use a damaged power cord or plug, and loose outlet. Electrical shock or fire may occur as a result.
3. Do not unplug by pulling the cord or handle the plug with wet hands. Electrical shock or fire may occur as a result.
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. Electrical shock or fire may occur as a result.
6. Unplug the unit before repair, inspection, or replacement. Electrical shock may occur as a result.
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. Fire may occur as a result.
8. Shut the main water supply valve and unplug the power cord when not using for a long time. Electrical shock or fire may occur as a result.
9. Do not attempt to repair the power cord. Electrical shock or fire may occur as a result.
10. Do not repeatedly plug and unplug the unit from the electrical outlet. Electrical shock or fire may occur as a result.
11. Remove any dust or water if it’ s on the plug. Never use benzene or gasoline to clean the plug. Electrical shock or fire may occur as a result.
12. Do not move the product by pulling the electrical cord.

INSTALLATION SAFETY

1. Keep the product away from inflammable gas or burnable materials. Electrical shock or fire may occur as a result.
2. Do not install the unit near heaters. Fire may occur as a result.
3. Do not spray water or wipe product with benzene when cleaning. Electrical shock or fire may occur as a result.
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 is 15-45 PSI.
7. Max. working pressure is 100 PSI.
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 microbiologically unsafe, of unknown quality, or without adequate disinfection before or after the system.

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OPERATION SAFETY

1. Cut off the supplying valve and unplug, then call the Customer Service when any water leaks from the product. Electrical shock or fire may occur as a result.
2. Unplug immediately and call the Customer Service if the unit makes a strange noise or odd smell. Fire may occur as a result.
3. Use or place the unit on an even surface and do not apply force to the unit. Injury to the user or damage may occur as a result.
4. Do not put candles, cigarettes or any other flammable objects on the product. Fire may occur as a result.
5. When water is stored or the product is not in use for a long time, drain all water from the storage tank before use. Stored water may be contaminated.
6. Periodical filter replacement is prerequisite for clean water. In case filters are overused, the performance of filters is degraded.
7. Use with Puricom filter products to maintained expected product lifespan and performance.
8. After activated carbon filter replacement, a certain amount of fine dust may be introduced to the water. It is activated carbon particles and is harmless to human body.
9. At first time usage and immediately after replacement of activated carbon filters, to eradicate any carbon dust, which may present,flush water through the system continuously until the water runs clear.
10. Do not expose the unit to direct sunlight and high humidity environment. The optimal room temperature for the unit is 4℃ -40℃ .

■ SPECIFICATION

CMW WITH PUMP

Model	CMW-R3
Input Voltage	100~240 VAC / 50 / 60Hz
Capacity	50 GPD
Storage Tank	8L
Size	D21.5cm × W41.5cm × H41cm

CMW WITHOUT PUMP

Model	CMW-R3
Capacity	50 GPD
Storage Tank	8L
Size	D21.5cm × W41.5cm × H41cm

■ INLET WATER REQUIREMENT

Inlet water TDS	< 1000 ppm
Inlet water pressure	10 - 40 psi
Total hardness	< 250 ppm
Temperature	5℃- 45℃

Remark:
If the water source used does not meet the water inlet conditions, please contact the customer service center.

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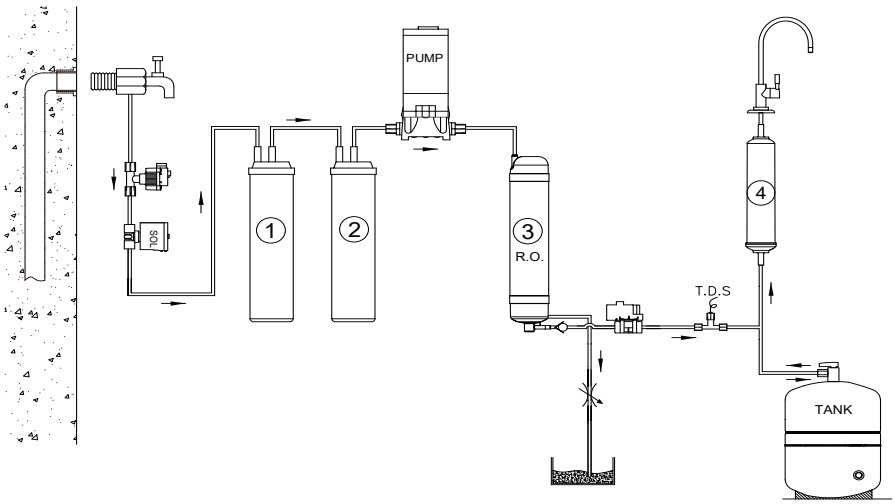
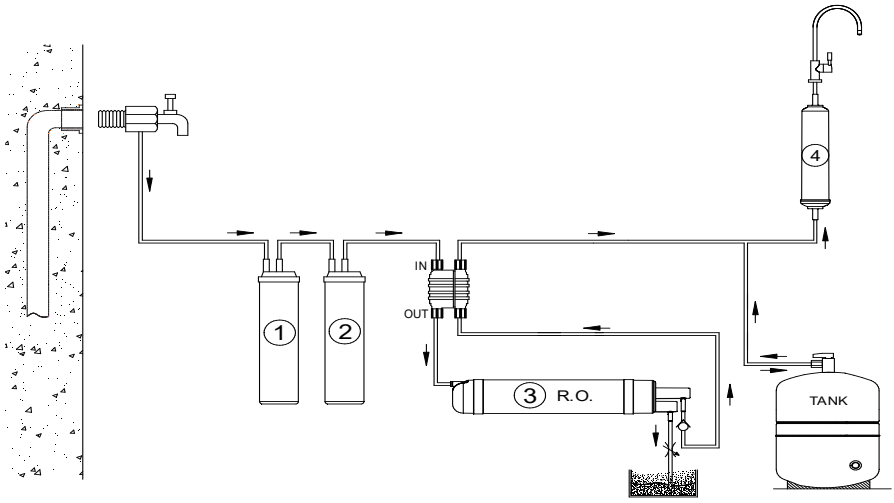
■ FLOW CHART

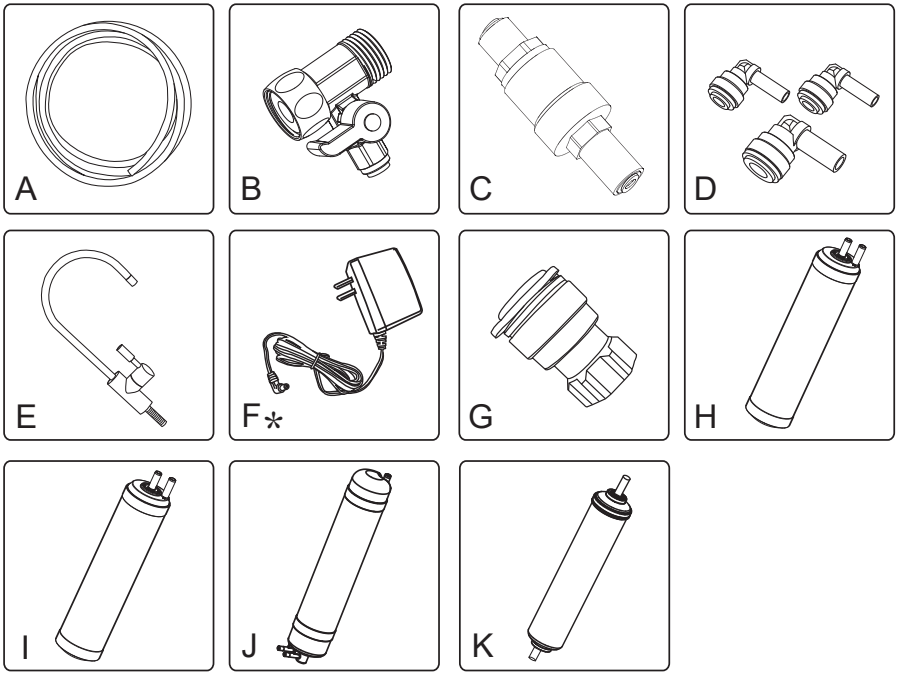
CMW WITH PUMP



CMW WITHOUT PUMP



■ INCLUDED PARTS AND MATCHING FILTER ELEMENT



- Accessories Pack(* for with pump)

A. PE tube	B. Three-way water inlet ball valve	C. Pressure relief valve
D. Inlet connector	E. Faucet	F. Adaptor
G. Faucet connector		

- Filters

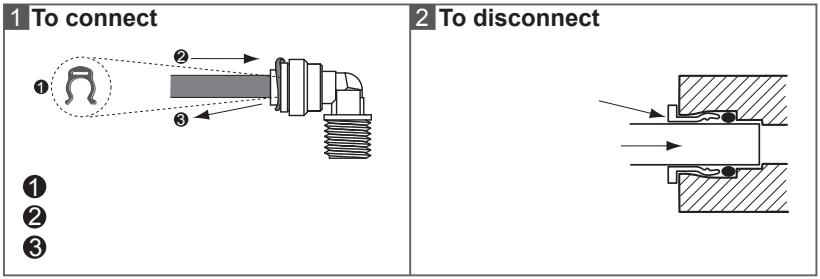
H. 1st Stage- FU-S PP 5 μ filter
I. 2nd Stage- FU-S Carbon filter
J. 3rd Stage- RO membrane
K. 4th Stage- FP-D Post carbon

■ FILTER FUNCTION DESCRIPTION & RECOMMENDED FILTER REPLACEMENT

① Prefilter-PP 5 μ filter	3~6 months	Traps dirt, rust, and other impurities.
② Prefilter-Carbon filter	3~6 months	This filter removes chemicals and odors, such as chlorine and chemical fertilizer, thus protecting the RO mem-brane from being damaged.
③ R.O. membrane (0.0001 μ)	1~3 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 mem-brane are diverted to the drain.
④ Post filter	6 months	Drinking water enters this filter after the storage tank. It is used as the final polishing filter before use.

Note:
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.

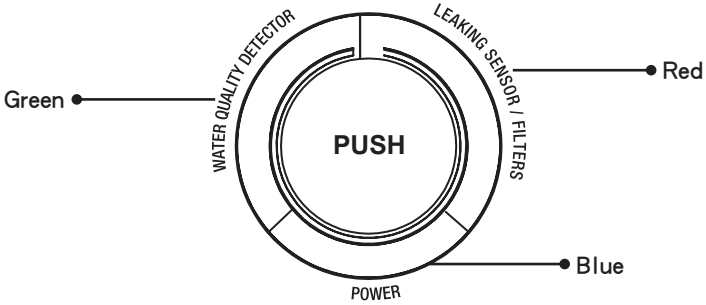
HOW QUICK CONNECTORS WORK



1. To 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.

■ LED DISPLAY DESCRIPTION

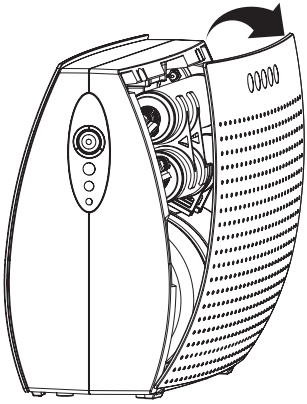
No pump, no this function.

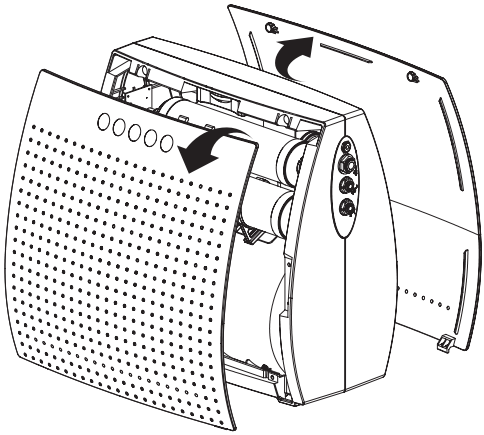


Lights and functions	Explain
Power	When there is power, the blue light is always on.
Leaking Sensor/Filters	1. When you hear the buzzer warning sound on the circuit board and start to beep and the red light flashes, it means that the machine is leaking. Please notify the maintenance personnel. 2. When you see the red light twinkle, it is the warning before the filter element is replaced. When the red light is constant and the buzzer warning sound on the circuit board starts to beep, it means the time for filter element replacement is up. Please notify the maintenance personnel .
Water Quality Detector	When the PUSH button is pressed and held for 3 seconds, when the water quality is pure, the green light is always on; when the water quality is poor, the green light flashes, and the buzzer warning sound on the circuit board starts beeping, please notify the maintenance personnel at this time.

■ CASE DISASSEMBLY

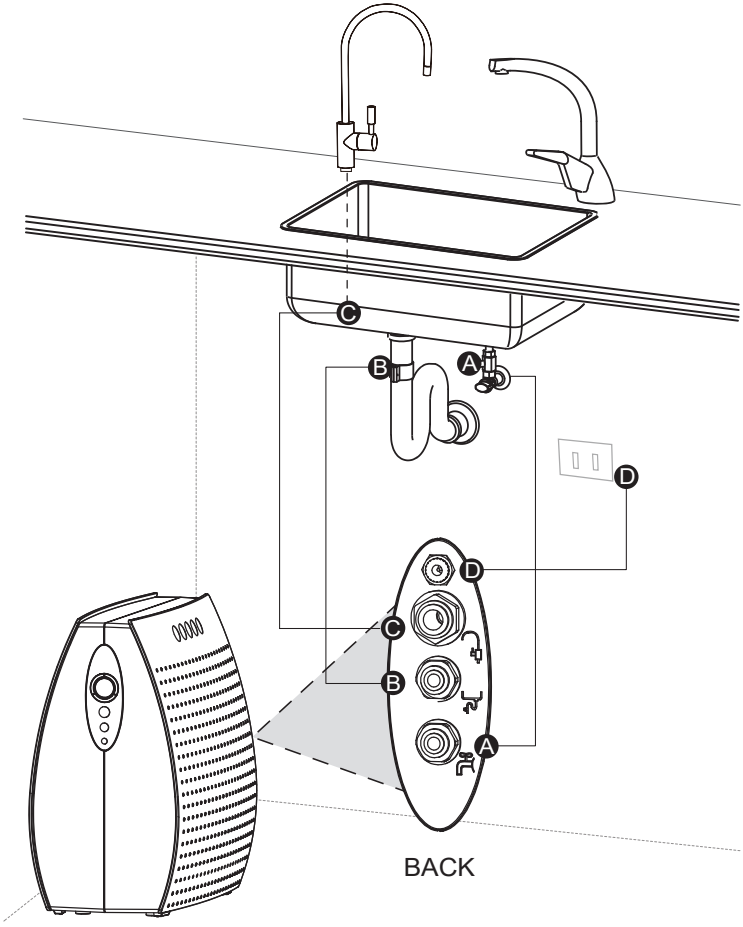
Open the side covers on both sides to the left and right to release.





■ INSTALLATION DIAGRAM

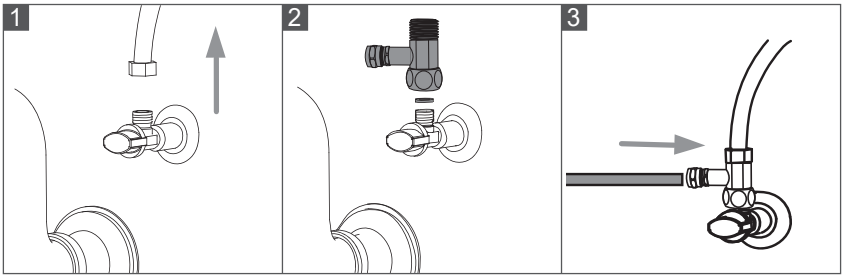
For the version without pump, please refer to A-C.



Ⓐ Feed water Ⓑ Drain Ⓒ Pure water Ⓓ Power supply

INSTALLATION

A. Installation of the Swivel Union Three-Way Valve (Water Inlet Source)



1. Turn off the water supply. Loosen the fitting on the water inlet pipe.
2. Take the swivel union three-way valve from the parts package and attach it.
3. Insert the PE tube and connect it to the water inlet of the machine to complete the installation of the swivel union three-way valve.

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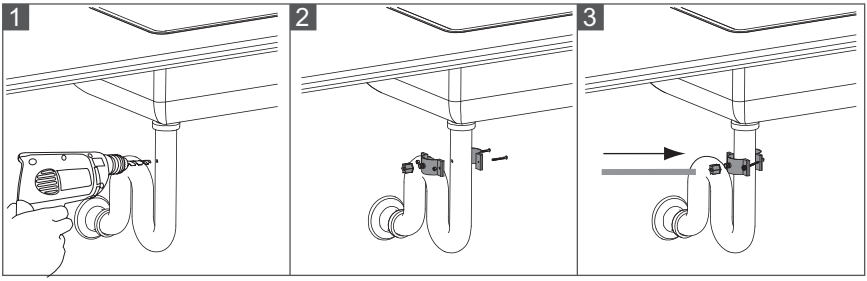
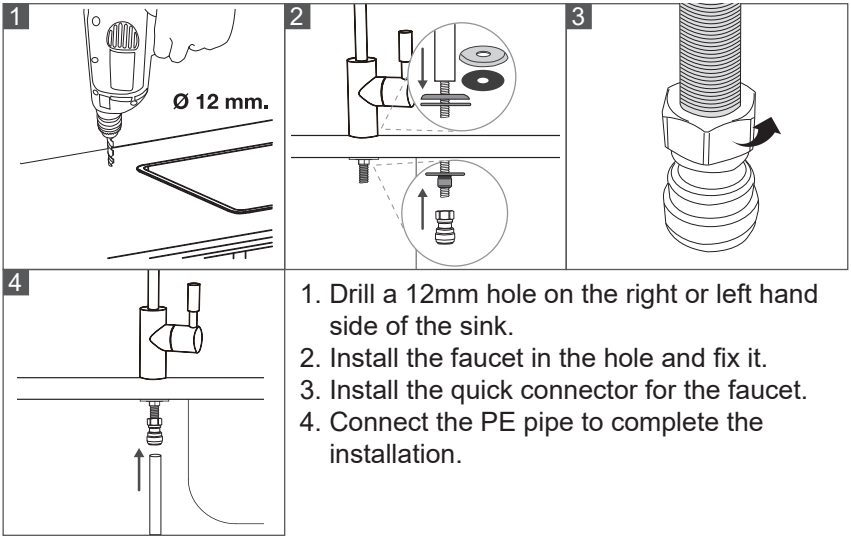
B. Drain Clamp Assembly



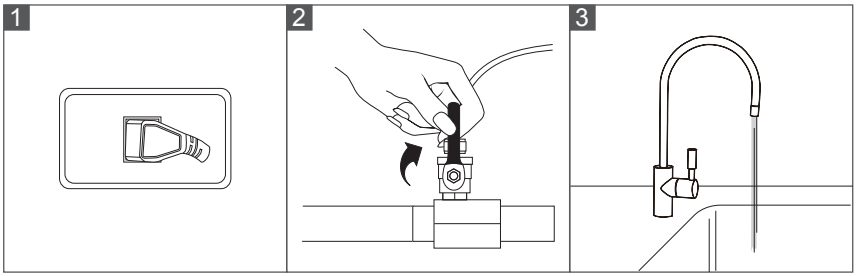
1. Drill a 6mm hole on the existing drain pipe.
2. Tighten the drain clamp evenly on both sides.
3. Connect the PE tube and complete the drain clamp assembly.

C. Faucet Assembly



1. Drill a 12mm hole on the right or left hand side of the sink.
2. Install the faucet in the hole and fix it.
3. Install the quick connector for the faucet.
4. Connect the PE pipe to complete the installation.

D. POWER



1. Plug in power at system end.
   (Ignore this step for pumpless version.)
2. Open the Three-way water inlet ball valve .
3. Allow a tank of water to rinse through the system before first time 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	Possibility	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 prevents 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.	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	Possibility	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 andcauses 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.

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