

RO-800 SMART

SMART AUTOMATIC RO PURIFIER

- Smart digital display • 5 stages: PP+CTO+RO+Post Carbon • LED UV 6W • Tankless
 - 2.1L/min outflow • 800GPD grand forest pump+800GPD membrane • 304 stainless steel faucet
- Auto flush is controlled by Smart computer display with LED UV 6W**



**RO
WATER
PURIFIER**

MULTI STAGE REVERSE OSMOSIS PURIFIER



**MULTI STAGE
PURIFICATION**

POINTS FOR ATTENTION

Product parameters

Voltage	230VAC/50Hz □
Power	120 Watt
Transformer output	24V/5A
Ro membrane	800gpd
Maximum feed tds	<1000 ppm
Maximum chlorine level	<0.2 Ppm*
Min pressure	0.1Mpa
Max pressure	0.4Mpa
Average ro rejection rate	up to 98%*
Feed water temperature	5°C–38°C

PACKING LIST

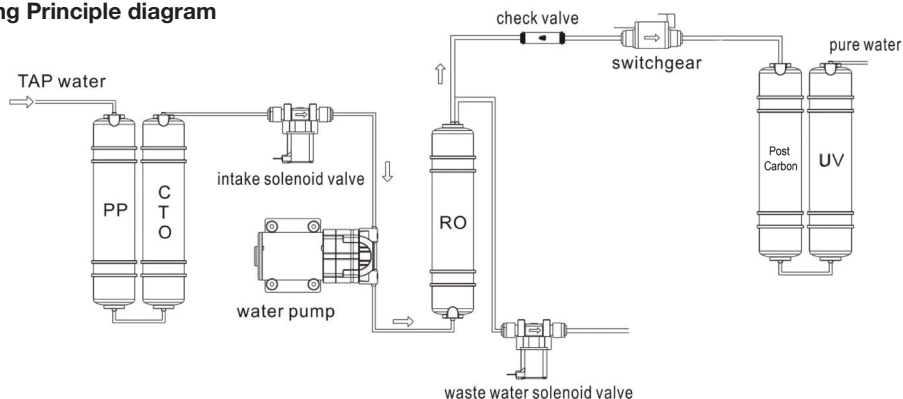
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| 1 | Main Unit | 1 |
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| 4 | Faucet Assembly | 1 |
| 5 | 1/4" PE Tubing | 1 |
| 6 | 3/8" PE Tubing | 1 |
| 7 | RO Membrane Filter | 1 |
| 8 | PP Sediment Filter | 1 |
| 9 | CTO Carbon Block Filter | 1 |
| 10 | Feed Water 3-Way Ball Valve | 1 |
| 11 | 24V Power Adapter | 1 |



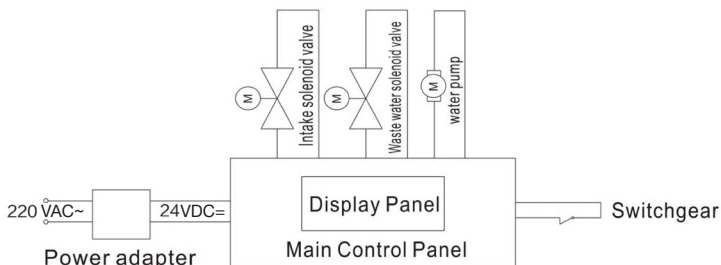
NOTE: Leave enough space at the back of the unit for all water and power connections.

Disclaimer: Limits apply to water quality and quantity that the unit can handle. Have your water tested before installation to ensure that it is the right solution. It is important to note that the volume and quality of water will greatly influence the working of the unit and lifetime of parts.

Working Principle diagram



Electrical schematic diagram



PRODUCT FEATURES

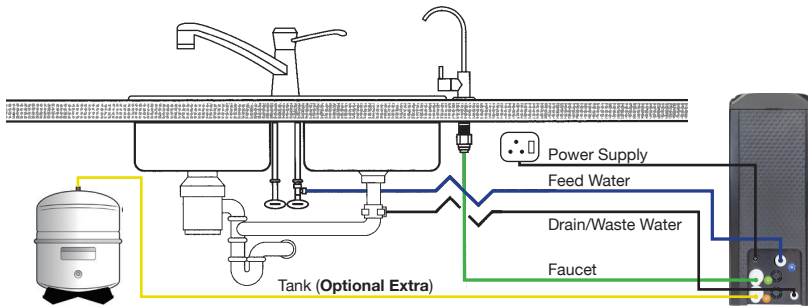
1. Five-stage filtration removes various impurities from water.
2. High-precision reverse osmosis (RO) membrane effectively removes heavy metals, scale, bacteria, chemical residues and other harmful substances from water.
3. Water-contact components are made of food-grade materials, which are safe and reliable.
4. Intelligent design and automatic control system ensure reliable operation of the machine.

STAGES OF FILTRATION

1. The first stage: PP melt-blown filter removes suspended solids, sediment, rust, insects, colloids and other large impurities.
2. The second stage: Activated carbon filter removes most organic matter in the water, residual chlorine, water disinfection by-products, unpleasant tastes and odours, some heavy metals and other harmful substances.
3. The third stage: Reverse osmosis (RO) membrane filter. The high-precision reverse osmosis membrane, with a filtration pore size of 0.0001 micron, effectively removes organic matter, microorganisms, chemical residues, bacteria, viruses, heavy metals and other harmful substances from the water.
4. The fourth stage: T33 activated carbon filter improves the taste and odour.
5. LED UV Light: Uses ultraviolet (UV-C) light to help inactivate bacteria, viruses and other microorganisms in the water, providing an additional layer of protection.

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QUICK INSTALLATION



INSTALLATION METHOD

After purchasing the RO Water Purifier, the unit should be installed and commissioned by qualified professional installation personnel. Before beginning the installation, check that all accessories supplied with the unit are present and complete.

1. Installation environment requirements.

- 1.1 The unit must be connected to a suitable municipal tap water supply.
- 1.2 A suitable 110 V~ / 220 V~ power outlet must be available near the installation location.
- 1.3 Install the unit in a clean, dry and well-ventilated location. The installation area must be free from contamination and protected from direct sunlight.
- 1.4 Do not install the unit near flammable or explosive materials, or in an area where electrical equipment could create a safety hazard.

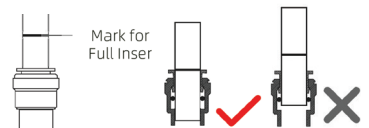
2. How to Install the quick connect fittings

To Connect the Tubing

- 2.1 Cut the PE tubing cleanly and squarely. Ensure the end of the tubing is smooth and free from damage.
- 2.2 Push the tubing firmly into the quick-connect fitting until it is fully inserted.
- 2.3 Gently pull the tubing outward to check that it is securely locked in the fitting.
- 2.4 Once connected, open the water supply slowly and check the connection for leaks.

To Disconnect the Tubing

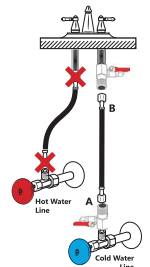
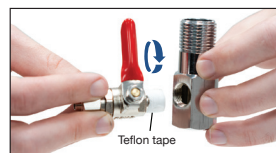
- 2.5 Close the water supply and depressurise the system before disconnecting the tubing.
- 2.6 Press and hold the release ring on the quick-connect fitting.
- 2.7 While holding the release ring in, pull the tubing straight out of the fitting.
- 2.8 Inspect the tubing before reconnecting it. If the end of the tubing is damaged or deformed, cut off the damaged section and make a clean, square cut before reconnecting it.



IMPORTANT: Never pull on the tubing without first pressing the release ring. Doing so may damage the tubing or the quick-connect fitting.

3. Installation of water/inlet tees

- 3.1 The following tools and materials may be required: • Inlet three-way ball valve • PTFE (Teflon) tape / thread seal tape • 1/4" PE tubing • Adjustable wrench • Flat-head and/or needle-nose pliers • Other standard plumbing tools as required
- 3.2 Clean the installation area and close the main water inlet valve. Disconnect and remove the existing pipe connection, faucet connection, or angle/corner valve as required.
- 3.3 Install the inlet three-way ball valve. Ensure that all threaded connections are properly sealed using PTFE (Teflon) tape or an appropriate sealing ring, as applicable.
- 3.4 Connect the inlet tubing between the three-way ball valve and the water inlet port of the main unit using the supplied PE tubing.



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4. INSTALL THE FAUCET

- 4.1 Required Tools and Materials. The following tools and materials may be required: Hand drill
• Appropriate drill bit or hole saw suitable for the countertop material • Pipe cutter
• PTFE (Teflon) tape / thread seal tape • Needle-nose pliers • Purified water faucet kit • PE tubing
- 4.2 Determine the most suitable location for the faucet on the countertop or sink.
- 4.3 NOTE: If a suitable pre-existing hole, is available, it may be used to install the faucet.
- 4.4 Drill a suitable hole using the appropriate hole saw for the countertop or sink material.
- 4.4 Remove any drilling debris and clean the area around the hole.
- 4.5 Remove the mounting nut from the faucet stem. Slide the stainless-steel base plate onto the threaded stem with the flat side to the top, removing any protective film if present. Then slide the large rubber washer onto the stem with flat side to the bottom. Insert the faucet stem through the drilled hole in the counter top or sink.
- 4.6 From underneath the countertop or sink, install the thin rubber washer onto the threaded stem. Secure the faucet assembly by tightening the plastic mounting nut. Ensure that the faucet is firmly secured and does not rotate.
- 4.7 Cut a suitable length of PE tubing. Connect one end of the tubing to the faucet and the other end to the pure water outlet on the main unit using the appropriate quick-connect fittings.



5. CONNECT THE PE WATER TUBING

Before connecting any tubing, ensure that all PE tubing is cut cleanly and squarely. The tubing ends must be smooth and free from damage to ensure a secure connection and prevent leaks.

- 5.1 Pure Water Connection: Connect one end of the PE tubing to the water inlet connection on the drinking water faucet and the other end to the pure water outlet on the purifier.
- 5.2 Water Inlet Connection: Connect one end of the PE tubing to the outlet of the main water inlet ball valve and the other end to the water inlet port on the purifier.
- 5.3 Waste Water Connection: Connect one end of the PE tubing to the waste water outlet on the purifier. Route the other end securely to the drain connection and ensure that it is properly fixed to prevent movement or accidental disconnection.

6. SYSTEM STARTUP AND INITIAL FLUSHING

- 6.1 Open the main water inlet ball valve slowly. Inspect all water connections and fittings to ensure that they are secure and free from leaks.
- 6.2 Open the purified water faucet. Connect the power supply and switch on the purifier. Allow the system to operate and flush for approximately 5 minutes to remove air from the system and flush the protective solution from the RO membrane. NOTE: During the initial flushing process, the water may appear slightly cloudy or contain fine black particles. This may be caused by activated carbon fines from the filtration media and is a normal part of the initial flushing process.
- 6.3 Close the purified water faucet. The purifier will continue operating for a short period and will then automatically stop according to its programmed operating cycle.
- 6.4 Wait approximately 5 minutes, then inspect all fittings, tubing connections and the faucet for leaks. If a leak is detected, immediately disconnect the power supply and close the water inlet valve. Identify and repair the source of the leak before restoring the water and electrical supply.
- 6.5 After completing the initial flushing cycle, allow the purifier to produce water for approximately 10–15 minutes before consuming the purified water.

Discard the initial purified water produced during commissioning to ensure that any remaining preservative solution or manufacturing residues are flushed from the system.



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7. DISPLAY SCREEN DESCRIPTION

- 7.1 Flush / Rinse Mode: When the purifier is connected to the water and power supply, the Flush/Rinse icon flashes during the initial 30-second automatic flushing cycle. Once the flushing cycle is complete, the icon turns off and the system enters Water Production Mode.
- 7.2 Water Production Mode: When the purified water faucet is opened, the Water Production icon flashes while the system is producing purified water.
- 7.3 System Warning / Maintenance Alert: If the purifier operates continuously for 2 hours, the maintenance indicator flashes and an audible alarm sounds. This warning is intended to alert the user to possible continuous operation, such as an open faucet, restricted water flow, or a potential water leak.
- 7.4 Filter Life Indicators: Each filter has a 3-bar filter-life indicator on the display. The number of illuminated bars decreases as the filter approaches its programmed replacement interval. FILTER REPLACEMENT ALERT, When a filter reaches its programmed replacement interval, the corresponding filter indicator flashes and the purifier sounds an audible alarm 10 times. REMINDER CYCLE For the following 30 days, the purifier will sound the 10-beep reminder at the beginning of each water production cycle. If the filter is not replaced and its filter-life indicator is not reset within 30 days, the purifier will display a Maintenance Warning and may automatically stop operating to help protect water quality.
- 7.5 Control Buttons: FLUSH BUTTON. Press the Flush button once to initiate a manual flushing cycle. Press the button again to cancel the cycle. NOTE: The manual flush function is disabled while the purifier is actively producing purified water. FILTER RESET BUTTON. Press and hold the Filter Reset button for 2 seconds to enter filter reset mode. The currently selected filter icon will flash while the other filter indicators turn off. Briefly press the button to cycle through the available filters. When the required filter is selected, press and hold the Filter Reset button for 2 seconds to reset the filter-life timer.

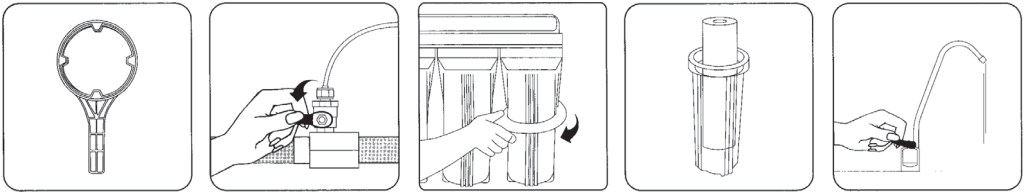
8. MAINTENANCE

- 8.1 Filter Replacement Intervals Over time, filters collect impurities and their filtration performance and water flow may decrease. To maintain water quality and optimal system performance, filter elements must be replaced at regular intervals. Based on typical municipal tap water quality, normal operating water pressure, and an average daily consumption of approximately 10 litres, the recommended replacement intervals are:

Filter	Recommended Replacement Interval
PP Sediment Filter	3–6 months
CTO Carbon Filter	3–6 months
RO Membrane	18–24 months
T33 Post-Carbon Filter	6–12 months

IMPORTANT: Actual filter life may vary depending on incoming water quality, water pressure, daily water consumption and operating conditions. Filters should be replaced sooner if water flow decreases, water quality changes, or the purifier indicates that replacement is required.

- 8.2 Filter Replacement Procedure
 - A. Disconnect the power supply and close the water inlet ball valve.
 - B. Remove the outer cover. Follow the filter removal procedure specified for the installed filter assembly. Remove the used filter cartridge and install the correct replacement filter.
 - C. Slowly reopen the water inlet valve and restore the power supply. Inspect all filter connections and fittings carefully for leaks.
 - D. Run the purifier through its required flushing cycle before consuming the purified water. Confirm that the replaced filter is correctly recognised and reset its filter-life indicator according to the procedure described in Section 7.5.



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TROUBLESHOOTING COMMON FAULTS

Issue / Symptom	Possible Cause	Recommended Solutions
No Output / Low Water Flow	PE tubing is kinked or pinched	Inspect and straighten out the PE tubing.
	Feed water 3-way ball valve is closed	Fully open the feed water 3-way ball valve.
	Feed water supply is shut off	Check and restore the incoming main water supply.
	Filter cartridge (PP/Carbon) is clogged	Replace the affected filter cartridge.
	Feed water temperature is too low	Normal behavior (RO membrane production slows in cold water).
	Insufficient feed water pressure/ flow	Ensure incoming water supply pressure meets minimum requirements.
Unit Does Not Operate	Power failure or disconnected power cord	Check wall socket, plug, and main power source.
	Low water protection activated (water shortage)	Check feed water supply and inlet pressure.
	Faulty 24V power adapter	Replace the power adapter.
Unpleasant Water Taste / Odor	System unused for an extended period	Flush system for 5–10 minutes. If taste persists, replace active carbon filters.
		Flush the purifier for 5–10 minutes before use.
	Filters overdue for replacement	Replace filter cartridges (CTO block / T33 post-carbon).
Abnormal Noise During Operation	Unstable or incorrect power supply voltage	Verify supply voltage meets unit specifications.
	Insufficient feed water flow/pressure	Increase feed water volume and line pressure.
	Water leak near electrical components	Disconnect power immediately. Contact a technician for service.
	Internal booster pump failure	Contact technical support/ pump repair or replacement.

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