

Operation & Installation Manual

RO Mini Reverse Osmosis Unit



IMPORTANT WARRANTY INFORMATION

Thank you for purchasing one of our appliances. This product has been designed and built according to the latest technological innovations and with correct installation, daily cleaning, and regular maintenance, it should provide many years of reliable service in commercial environments.

TAKING DELIVERY OF YOUR RHIMA DISHWASHING EQUIPMENT



When taking delivery of your appliance, please take careful note of any damage to the packaging, or if the 'TIP 'n' TELL' indicates a fall has occurred during transportation. Take photographs of any damage and/or the 'TIP 'n' TELL' indicator, alert the delivery driver and refuse delivery if appropriate as Rhima Australia will not be held responsible for damages caused by third parties during transport or caused whilst unloading and placement of the appliance.

WARRANTY CONDITIONS AND COVERAGE

Your Rhima appliance is warranted against defects in materials or workmanship for a period of 12 calendar months from date of purchase, unless additional warranty has been purchased at time of sale, or if the appliance is covered by a Service Agreement that includes a warranty extension component. In order to prevent potential premature failure of components, the appliance must be cleaned daily by the operator and serviced regularly by a Rhima technician or Rhima authorised service agent.

The following conditions and limitations apply in Rhima's sole judgement, to Warranty service:

1. To obtain a warranty service, purchaser must contact the Rhima Service department in your region quoting the model and serial number of your appliance.
2. Repairs or adjustments by unauthorised persons may void warranty and under no circumstances will Rhima be held liable to reimburse a third-party or the owner for un-authorized repairs carried out on this product.
3. Warranty does not include travel time to customer sites if located more than 75kms outside of capital cities. Travel time will be quoted depending on customer location. Rhima may, at its discretion, choose not to charge travel time if an authorised service agent is located within 75km of the customer site.
4. Warranty service is only performed during business hours (*Mon-Fri 08.30-17.00 hrs*) excluding public holidays. If Warranty service is required outside of the normal business hours, additional costs will be applicable and advised at time of booking.
5. Warranty does not include any regular preventative maintenance services required. A preventative maintenance program/agreement can be quoted on request to ensure your appliance is operating safely, efficiently and reliably.
6. Warranty does not include rectification of issues due to incorrect installation, incorrect water supply pressures or temperatures, blocked building drains, unsuitable detergents/chemicals being used, physical damage, electrical surges, or other acts of god.
7. Warranty does not include adjustments to wash or rinse temperatures, detergent concentration, or rinse additive dosage.
8. Warranty does not include rectification of issues due to foreign objects in drain pumps, failure of water inlet valves, or failure deemed due to fair wear and tear.
9. Warranty does not include issues found to be due to incorrect use, operational issues, or lack of cleaning or maintenance.

For a full list of warranty conditions, inclusions and exclusions, please refer our website in the applicable region by scanning the supplied QR code below.



Rhima Australia



Rhima New Zealand



Rhima Singapore

GENERAL

The *Rhima RO Mini* Reverse Osmosis unit is the ideal companion to your *Rhima High Sparkle* dishwasher and together will provide you with an efficient, streak-free, polish-free system that will eliminate labour-intensive, hand polishing of glasses and cutlery. By reducing the TDS (*Total Dissolved Solids*) in the water supplied to the dishwasher to a negligible level, glasses, cutlery, and anything being washed will dry spot and streak free.

INSTALLATION OF THE REVERSE OSMOSIS EQUIPMENT

1. PRECAUTIONS

- 1.1 The installation of your *Rhima RO Mini* Reverse Osmosis unit must be carried out by a suitably qualified tradesperson.
- 1.2 The temperature of the water supplied to the RO unit must not exceed 38° Celsius to prevent reduction in performance and the life of the RO membrane.
- 1.3 The incoming water pressure must be between 100kPa – 400kPa to prevent malfunction or damage to the unit.
- 1.4 The unit must not be installed laying down or on an angle as the leak sensor may be activated.
- 1.5 The unit must not be installed next to a heat source, for example a refrigerator or hot water service.

2. INSTALLATION

- 2.1 The unit should be installed according to **Fig. 1** below. The bypass allows the dishwasher to continue to operate if the RO unit needs to be removed for servicing or membrane/filter replacement.

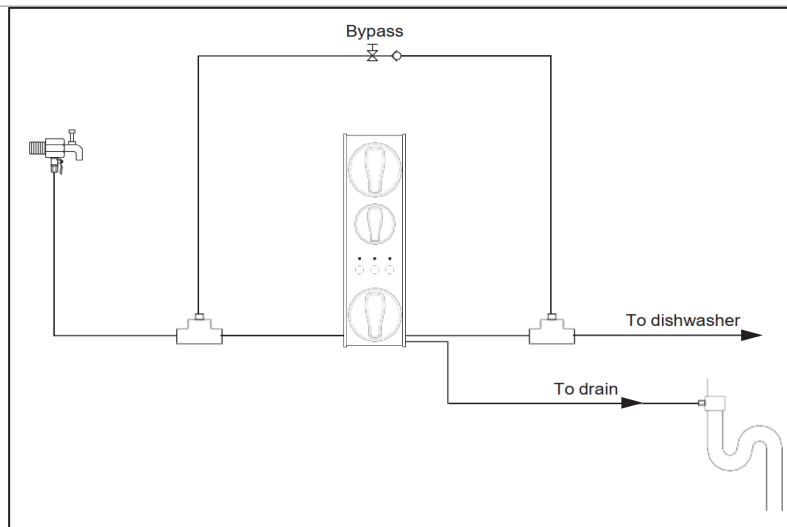


Fig. 1

Note: Depending on the situation and local plumbing regulations, additional plumbing fittings may be required to those supplied.

- 2.2 This unit contains a Pre-Filter (CF), an RO Membrane (RO), and a Post-Filter (CB). If not already installed when received, the 3 filters must be installed according to the following instructions:
 - 2.2.1 Remove the rubber plugs on the 3 filters according to **Fig. 2** below:

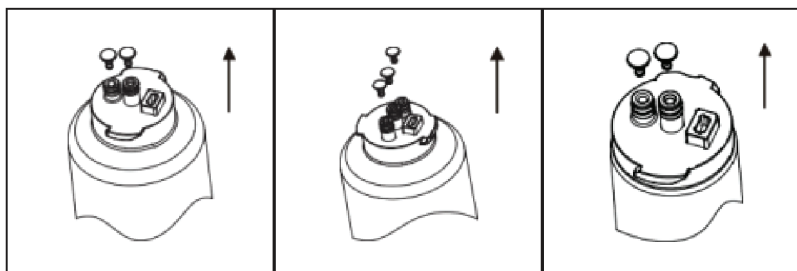


Fig. 2

- 2.2.2 Rinse the Pre-Filter (CF) under cold running water to remove any carbon dust that may block the RO Membrane (RO) when first turned on.
- 2.2.3 Install the RO Membrane (RO) into the upper position, the Post-Filter (CB) into the middle position and the Pre-Filter (CF) into the lower position.

To install the filters, align the filter with the handle in a horizontal position, as shown in **Fig. 3** below. Insert firmly and turn the handle 90 degrees clockwise to lock into position as shown in **Fig. 4** below. Ensure the watertightness of the filter seals before use.

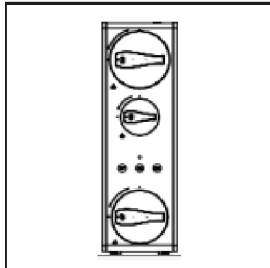


Fig. 3

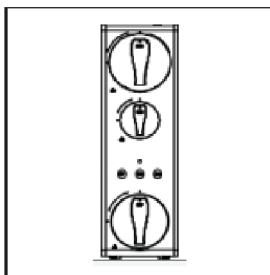
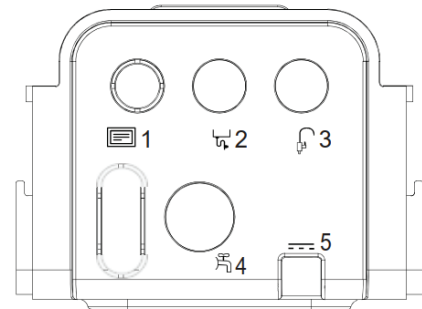


Fig. 4

Rear Panel



1. Data interface (Optional)
2. Drainage
3. Outlet
4. Inlet
5. Power

MAINTENANCE

The filters and RO Membrane in your *Rhima RO Mini* Reverse Osmosis unit are considered consumable items and as such, have a limited lifespan. The frequency of replacement will depend on the quality of the local water supply, and the frequency of usage. Extending the replacement intervals past those recommended will result in poor performance and wash results, and in some cases, the unit may breakdown entirely requiring service intervention to rectify.

The *Rhima RO Mini* Reverse Osmosis unit has indicator lights on the front panel that change colour indicating the life remaining in the filters. Refer to **Table 1** below:

Table 1: LIFETIME DISPLAY OF THE FILTERS

LIFESPAN	LIFE REMAINING (DAYS)	CAPACITY OF REMAINING LITRES	DISPLAY INDICATOR	ALARM
Normal.	> 15	> 150	Permanent blue .	No alarm.
There is little left.	$0 < X \leq 15$	$0 < Y \leq 150$	Permanent lilac .	Double beep when filter life is short.
Exhausted.	≤ 0	≤ 0	Permanent red .	Beeps when water is dispensed.

The recommended replacement intervals indicated below are a guide only, and as stated above, will depend on a number of specific local factors.

Pre-Filter (CF) – Every 12 months minimum

RO Membrane (RO) – 12-24 months

Post-Filter (CB) – Every 12 months minimum

Replacement filters and membranes are available from *Rhima spare parts department*.

Note: *The use of non-original spare parts, consumables, or improper installation may result in your warranty being invalid.*

OPERATION

1. Cleaning for first use.	The RO membrane will be washed by the machine for 5 minutes. Afterwards, open the outlet for 30 minutes.	During the wash, the water quality light is shown flashing red at 1Hz. After 6 minutes, the waterquality light will return to the live measurement state.
2. Cleaning when the machine is switched on.	Whenever the system is turned on, it will wash the RO membrane for 20 seconds. If the user opens the tap, the machine will stop washing and go into normal mode.	When washing is in progress, the water quality light shows the previous on state.
3. Cleaning when running time is reached.	Each time the cumulative working time reaches 2 hours, the system will wash the membrane for 20 seconds. If the user opens the tap, the machine will stop washing and go into normal mode.	When washing is in progress, the water quality light shows the previous wash status.
4. Daily cleaning.	When the machine has been out of operation for 24 hours, the system will wash the membrane for 20 seconds. If the user opens the tap, the machine will stop washing and go into normal mode.	When washing is in progress, the water quality light shows the previous wash status.
5. Cleaning after changing filters.	<p>CF: When changing the CF prefilter and restarting its use counter, the system will start a wash of the CF filter and RO membrane for 5 minutes.</p> <p>RO: When changing the RO membrane and resetting its usage counter, it must be washed by opening the tap for 30 minutes.</p> <p>CB: When changing the CB postfilter and resetting its use counter, the filter should be washed by opening the tap for 15 minutes. If all filters are changed and restarted at the same time, the system will wash the CF filter and RO membrane for 5 minutes. Then open the tap for 30 minutes to wash the CB postfilter.</p>	<p>When the RO membrane is being washed, the water quality light is shown in red and will flash at 1Hz.</p> <p>When any other filter is washed, the water quality light displays real-time water quality data and flashes at 1Hz.</p>
6. Opening of the outlet.	The system is put into normal operation.	<p>For the first 30 seconds, the water quality light shows the latest quality status and is always on.</p> <p>For the next 30 seconds, the water quality light displays realtime quality data and is always on.</p>
7. Closing the outlet.	The system stops producing water and is put into standby mode.	The water quality light turns off.
8. Switching on the system.	The system starts.	<p>After the power is turned on, a beep sounds and all the lights turn on and off at the same time, changing from blue to lilac to red.</p> <p>Each color is displayed for 1 second.</p>

MANUAL WASHING MODE

Press the three buttons CF, RO and CB simultaneously for 3 seconds to activate the manual wash mode. After a beep, the system washes the CF filter and RO membrane for 5 minutes. If during these 5 minutes the three buttons are pressed again at the same time for 3 seconds or if the tap is opened, the system will automatically return to normal mode.

FAULTS

1. Lack of water pressure at the inlet.	Fault-light is in red, CF light is in blue.	3 beeps.	When the water pressure at the inlet returns, the system also returns to its normal state, and the alarm is turned off.
2. Leakage inside the machine.	Fault-light is in red, RO is in blue.	Beeps for 3 minutes.	
3. Pump time protection.	Fault-light in red, CB light in blue.	4 beeps.	When the leak is repaired, the alarm is deactivated and the system returns to its normal state. Since then the pump has been working between 30 and 33 minutes. Disconnect and reconnect the electrical connection.
4. Pump start/stop protection.	Fault-light is in red, CF and RO light is in blue.	5 beeps	Disconnect and reconnect the electrical connection.
5. Low temperature protection.	Fault-light is in red, CB and RO light is in blue.	6 beeps.	Disconnect and reconnect the electrical connection.

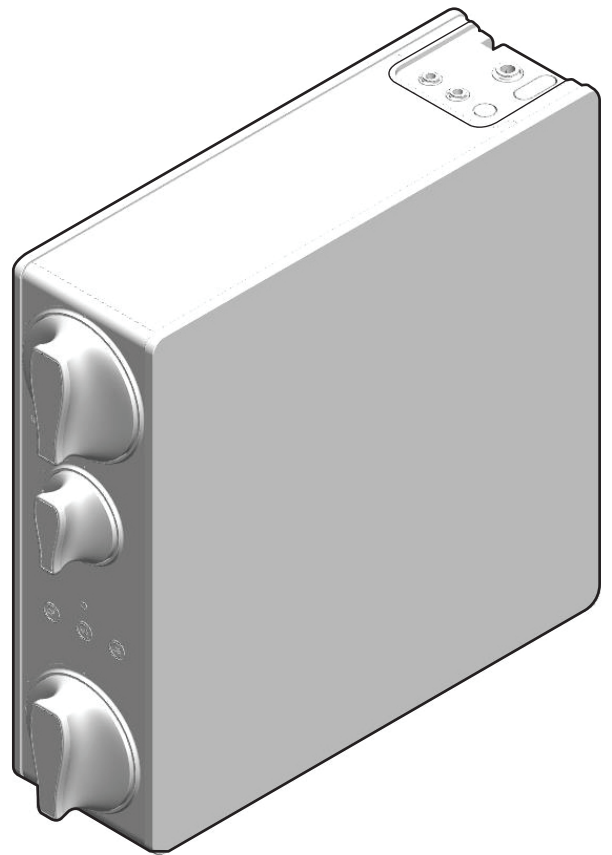
When you detect that the unit is in one of the states listed above, contact the Rhima service department to make an appointment to perform the required maintenance.

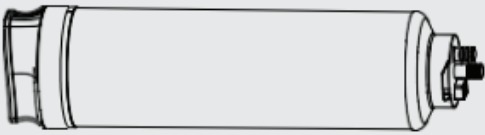

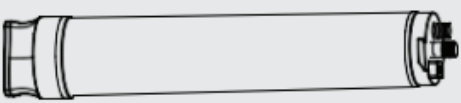
TROUBLESHOOTING

1. External leakage of the equipment.	Several possible causes.	Call the Rhima Service Department.
2. No production.	1. No water supply. 2. No power supply. 3. Leak sensor activated.	1. Allow the supply to return. 2. Check your power supply. If the problem is still not solved, call for service. 3. Leak sensor activated. If the leak is undetected, wipe the bottom of the equipment together with the leak sensor. If it keeps happening, call for service.
3. Low production.	1. Power key partially closed 2. Filters / membrane in poor condition or exhausted.	1. Open completely. 2. Call the Rhima Service Department.
4. Excessive production.	Several possible causes.	Call the Rhima Service Department.
5. Unpleasant smell.	Several possible causes.	Call the Rhima Service Department.
6. Whitish water color.	Air in the system. Micro air bubbles that disappear after a few seconds.	It is not a problem. The appearance will fade as the air inside the equipment is removed.
7. Continuous dripping noise in drain.	Several possible causes.	Call the Rhima Service Department.
8. Equipment does not start.	1. No water supply. 2. No power supply. 3. Leak sensor activated.	1. Check the condition of the general key and the entrance of the equipment. 2. Check the general power supply. If the problem is not solved, call for service. 3. If the leak is not detected, dry the bottom of the equipment along with the leak sensor. If it recurs, call for service.
9. The equipment stops and starts constantly.	Several possible causes.	Call the Rhima Service Department.
10. Equipment constantly carries water down the drain.	1. Deteriorated inlet solenoid valve. 2. Anti-return of deteriorated production.	1. Check and replace. 2. Check and replace.

TECHNICAL DATA SHEET

Water pressure (min/max):	100kPa – 400kPa
Water TDS (max):	1500ppm
Water temperature (min/max):	5-38°C
Dimensions (W x D x H):	414 x 130 x 455mm
Weight:	12.5 KG
Water Inlet Connection:	3/8"
Water Discharge Connection:	1/4"
Outlet Connection:	3/8"
Drain Collar:	Tube Clamp



PART NO.	DESCRIPTION	QTY
RO Mini CF Prefilter	Combined sediment/carbon.	1
		
RO Mini RO Membrane	600 GPD membrane.	1
		
	Flow rate of osmosed water: 1,6 lpm. Optimum working pressure: 2 bar.	
RO Mini CB Postfilter	Postfilter carbon.	1
		





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Version 1.0

