Operator's Manual

RM 50 Washer



Australia Tel: 1300 347 944 | **New Zealand** Tel: 0800 902 054 | **Singapore** Tel: +65 9107 8943

INSTRUCTION MANUAL FOR DISHWASHERS



It is important to keep this instruction manual near the appliance for future consultation.
If the appliance is sold or transferred to another user, make sure this manual remains with the appliance so that the new owner is informed about the warnings and operation of the appliance. These instructions are given for safety reasons and they must be read carefully before installing or using the appliance.

GENERAL INSTRUCTIONS

- The appliance must be connected to water and electrical supplies by qualified tradespersons only and according to local regulations.
- The appliance must be used by adults only. Do not let children play with, or operate this machine.
- Only persons trained to use this dishwasher are permitted to operate it.
- This appliance has been designed to wash food preparation and eating utensils. It has NOT been designed to wash objects soiled with petrol, paint, remnants of steel or iron, corrosive chemical products such as acids, alkalis, or solvents or any item that cannot be immersed in water.
- Do not open the appliance door or lift hood while the appliance is operating. The appliance has a safety device which stops operation if the door or hood is accidentally opened.
- After using the appliance, isolate the electric and water supply.
- Do not attempt to repair the appliance. Repairs made by unqualified persons may cause further damage and will void warranty.
- Repairs and servicing of this appliance must be carried out by Rhima personnel only.

IMPORTANT CUSTOMER INFORMATION

- To request a service, detergents or rinse additive contact your local Rhima Service centre below:

Australia:	**1300 347 944**
New Zealand:	**0800 902 054**
Singapore:	**+65 9107 8943**

ELECTRICAL INSTALLATION

This appliance is intended to be connected to a **15 Amp** electrical supply and **must be earthed**.

PLUMBING INSTALLATION

The installation shall be in accordance with T*he Plumbing Code of Australia (PCA)*.

This appliance should be connected to a hot water supply *(Max 60°C)* in accordance with *Australian Standard AS/NZS 3500.1.* for optimum performance.

The incoming water supply must be maintained at a minimum dynamic pressure of 200 kPa *(29.0 psi)* and flow rate should be at least 10 litres per minute. Where the supply pressure is below 150 kPa, an installation of a rinse booster pump is recommended to ensure optimum rinse performance. If static pressure is higher than 400 kPa *(58.0 psi)* then a pressure reducing valve will be required upstream of the supply line *(not supplied)*.

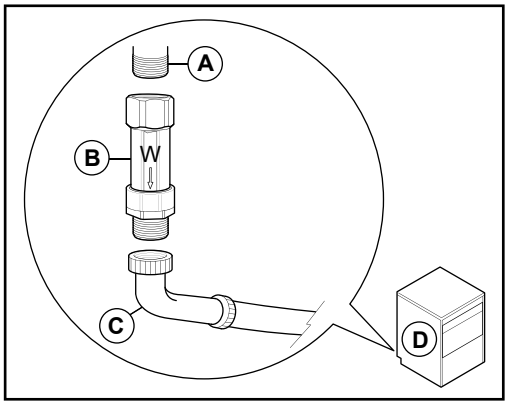
Water hardness should not exceed 90 ppm; where this limit is exceeded, a suitably sized water softening system must be installed to prevent scale formation and maintain equipment efficiency. In locations where the incoming water quality contains elevated levels of sediment, chlorine & chlorides, organic contaminants, or other impurities, an installation of a pre-treatment carbon filtration system is recommended to improve water quality and protect the equipment from premature wear or operational issues.
(Any machine failures or damage caused to machine components due to poor water supply will not be covered under warranty)

IMPORTANT Dual check valve *(Backflow prevention device)*

Please install this external backflow prevention device provided with this machine.

To comply with *ABCB (Australian Building Codes Board) WMTS-101 WaterMark Technical Specification standard*, the supplied external backflow prevention device MUST be installed as below:

- The installation can be vertical or horizontal.
- Make sure all lines are cleaned of any debris before commissioning.
- Connect to the incoming water supply valve **A** to the dual check valve **B** and then to the inlet hose **C** which connects to the dishwasher **D**.
- Ensure that the dual check valve is installed in the proper flow direction. Refer to flow direction arrow on valve nameplate or body.

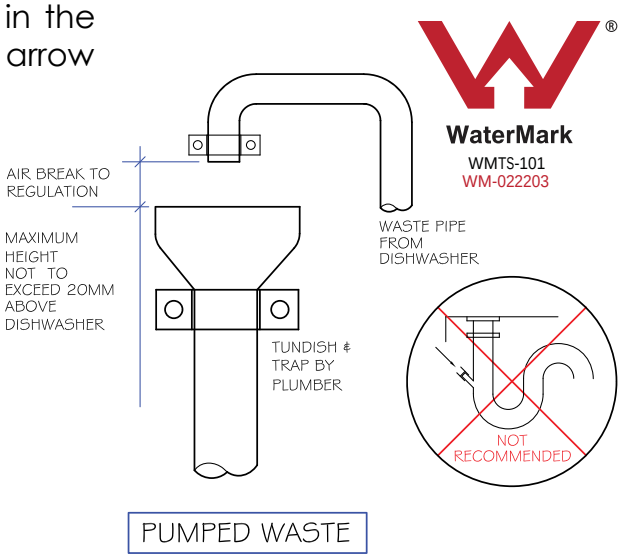


This appliance is designed to drain into a tundish.

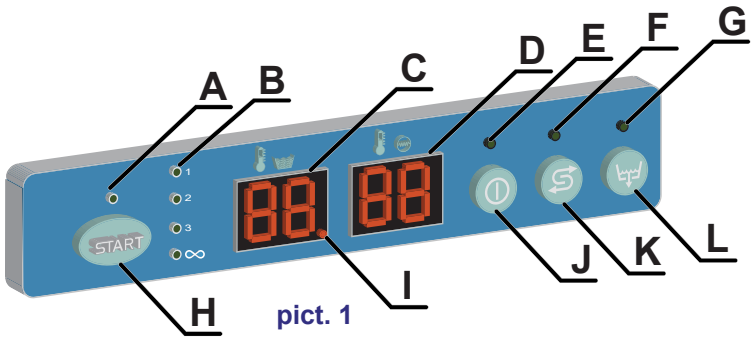
Waste connection to a spigot is not recommended and may cause draining issues. The drainpipe should withstand 70°C (158°F) in continuous duty conditions.

The grey water drain hose must have a fixed watertight seal above the tundish in accordance with the Australian Standard AS/NZS 3500.2.

A DIAGRAM SHOWING THE CORRECT METHOD OF WASTE INSTALLATION IN ACCORDANCE WITH THE AUSTRALIAN STANDARD AS/NZS 3500.2

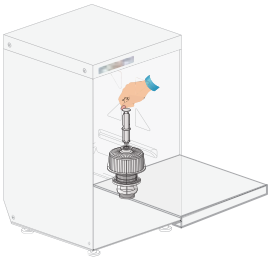


CONTROL PANEL AND RELATIVE SYMBOLS



pict. 1

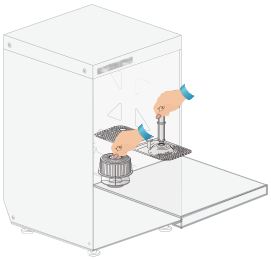
A) Cycle light indicator
B) Selected cycle indicator
C) Tank temperatur display
D) Boiler temperature display
E) ON / OFF indicator
F) Regeneration indicator (Not Available)
G) Drain indicator
H) START push-button to start up cycle / select cycle
I) Cool extra indicator
J) Switching – On / STAND BY button
K) Regeneration push-button (Not Available)
L) Drain push-button (optional)



OPERATION

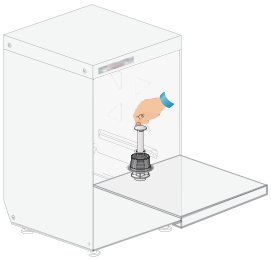
Machine start-up

Start-up

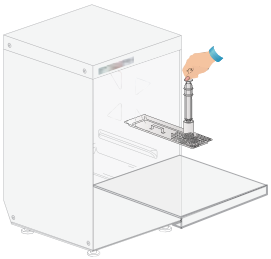


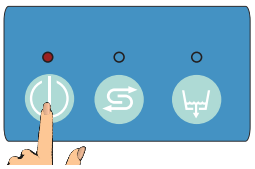
- Insert the overflow pipe in the special seat inside the tank. Make sure all the filters are properly fitted in their seats (see pict. 2). The filters must be cleaned every 30-40 wash cycles and whenever necessary.

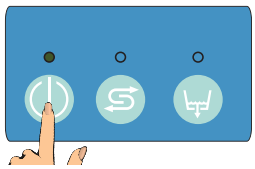
  Do not operate the machine without filters and in particular the pump suction filters.



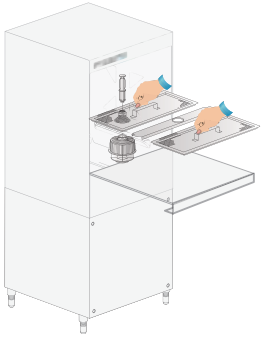
- Close the door.
- Turn the water valve “open”.
  Turn the main power switch ON.
  Turn the button **J** (see pict. 1).
  The machine start will be active when the **E** indicator will light green. After a few seconds the tank filling phase starts. Should the machines be equipped with the WRAS certified Break Tank, the tank filling phase is extended.







- After filling, the machine automatically starts the heating phase.
- The machine will be ready for washing only when the boiler and tank thermometers **C** and **D** indicate that the required temperatures have been reached, which are 82°C for boiler and 55°C for the tank.



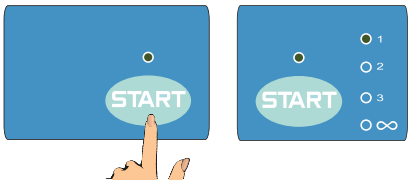
pict. 2



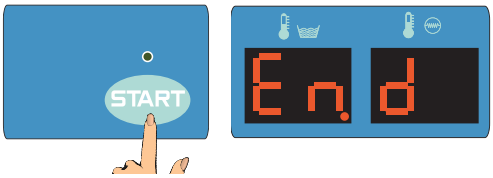
- Insert the special green rinse aid dispenser tube in the liquid rinse aid container and check that that the quantity is sufficient for the daily requirement.
  The transparent tube (if present) must be inserted in the detergent container.

Operation

- Insert the rack filled with dishes to wash. The plates must be correctly placed in the rack (see par. **Cutlery and crockery loading**).
  Close the door.
- Select the wanted washing cycle (1, 2, 3, ∞) by pushing the button **H** (see pict. 1). The display will show in sequence all available programs.
  Once the wanted program is displayed, do release the button.
  The green LED **B** of the selected cycle lights up (1, 2, 3, ∞).



- Start the cycle by pushing the button **H** for not more than 1sec (see pict. 1).
  Starting of the cycle is signalled by the indicator of the selected cycle flashing. At the end of the cycle the indicator stops flashing and the message **END** appears on the display.



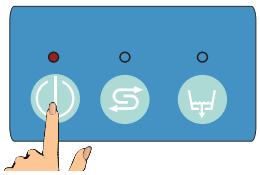
- The machine is ready for a new wash.

It is advisable to change the tank water, by means of another filling, at least every 40-50 washes or twice a day.

N.B.: the machine does not accept other cycles until the door is opened or the button **H** is pressed twice (see pict. 1).
The cycles (1, 2, 3, ∞) are factory-set.

Switching OFF

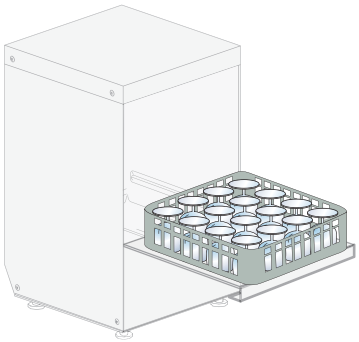
- Turn the button **J**. The machine will turn in **STAND-BY** mode (the red LED **E** comes ON).



- Drain completely the wash-tank. Take off the overflow pipe. For machines equipped with drain pump see par. **Drain pump system**.
- Switch the main power switch OFF.
- Shut the water valve.
- At the end of the day, clean the machine (see chap. **MAINTENANCE**).

Cutlery and crockery loading

Before cutlery and crockery loading in the machine, coarsely clean them from the leftover food. It isn't necessary to rinse the cutlery an crockery under water.

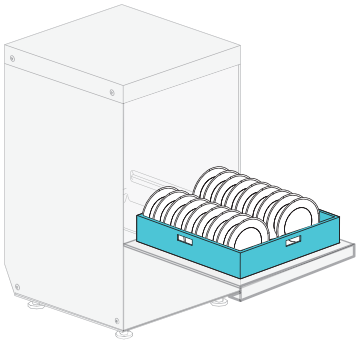


pict. 3

ATTENTION: Do not wash articles polluted with petrol, paint, chips of steel or iron, ash, sand, wax, lubricant grease. These substances damage the machine. Do not wash fragile objects or material not resistant to the washing process.

Note the following recommendations:

- Crockery and cutlery should not be inserted inside one another, covering each other.
- Place the crockery in order to all surfaces can be reached by water; otherwise the dishes are not washed.
- Make sure all the crockery are in a stable position and that the hollow containers don't overturn (cups, glasses, bowls, etc.) .
- Place in the rack all the hollow containers such as cups, glass, etc. **upside-down**.
- Place the crockery with deep hollow with upper face downwards, so that water can flow out.
- Make sure the smaller crockery do not fall from the rack.
- Check all the wash arms runs freely and they are not blocked by too tall or too prominent crockery. Eventually, run a manual rotation of the arms to check it.



pict. 4

Some foods, such as carrots, tomatoes, and others, may contain some natural dyes substances, that in large amounts, can alter the crockery and plastic parts colors.
Any discoloration does not mean that the plastic is not heat resistant.

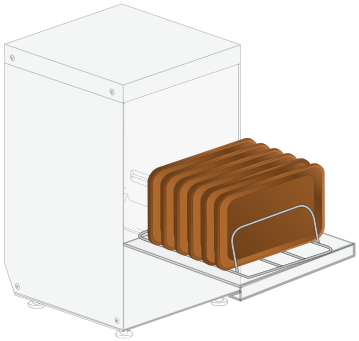
Crockery and cutlery not suitable for dishwasher

Not suitable for dishwasher:

- Wooden crockery and cutlery or with wooden parts; water at high temperature causes deformation to wood. Also the adhesives used are not suitable for treatment in the dishwasher; a consequence could be the handles detachment.
- Crafts, precious vases or decorated glasses.
- Not heat-resistant plastic crockery.
- Copper, brass, pewter or aluminum objects: they may become discolored or opaque.
- The decorations on glass, after a certain number of washes, can lose gloss.
- Fragile glasses or crystal items, if often washed, can become opaque.

We recommend to buy exclusively crockery and cutlery suitable for dishwashing.

After several washes, the glass can become opaque.



pict. 5

It is mandatory to repeat the washing cycle if at the end of the cycle the crockery are not well clean or if there are washing residues (glasses, cups, bowls, etc. with liquid inside).

Detergent use

The detergent shall be the NO FOAM type, suitable for industrial dishwashers.
The use of good quality liquid detergents is recommended.
The detergent must be introduced in the tank. The amount is recommended by the manufacturers according to the water hardness.
By request the dishwasher can be equipped with an electric detergent dispenser (always recommended).
1cm. of the product drawn into the tube is equal to about 0.15 g. A correct amount of detergent is very important for a successful wash.
Should the detergent lack, the display will show **NO DE** (only with optional "Sensor for Chemicals Low Level").

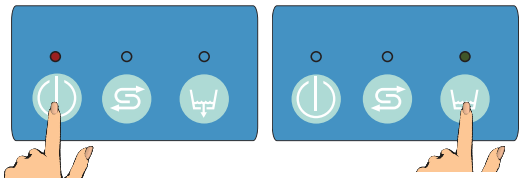
Rinse aid use

The machine has a standard rinse aid dispenser. The machine automatically sucks the product.
The rinse-aid chemical, shall be suitable for professional glass and dishwashers.
Should the detergent lack, the display will show **NO RI** (only with optional "Sensor for Chemicals Low Level").

Drain pump system

The cycle drain pump works in an automatic and independent way.
At the end of the day, to completely empty the tank:

Press the button **J**. The machine will turn in **STAND-BY** mode (LED lights up).
Remove the overflow.
Close the door. Press the button **L**; the green tank drain indicator comes ON for the programmed set time.
After emptying the machine will turn in **STAND-BY** mode.
If a alarm appears, see chap. **SIGNALS AND ALARMS**.



N.B.: The machine must not be switched ON during the emptying phase.

IMPORTANT: Always turn the main wall switch off and close the water tap at the end of use.

H.A.C.C.P. AND HYGIENE REGULATIONS

- When starting the machine ON, no wash-cycle will be starting until the set boiler and wash-tank temperatures are reached. During operation, the machine will not start the rinse cycle till the set boiler temperature is reached.
- Remove carefully all solids from the objects to be washed, to avoid obstruction of filters, nozzles and piping.
- Drain the wash tank and clean the filters at least twice a day.
- Check if the detergent and rinse-aid dosage are correct (as recommended by the manufacturer). In the morning, before starting the machine, check that the quantity of chemicals in the canisters is enough for daily supply.
- Keep your working tables clean.
- Extract the rack with clean hands or gloves to avoid finger marks.
- Do not dry or polish the washed objects with cloths, brushes or rags that are not sterile.

ECOLOGICAL ASPECTS

Recommendations for optimal use of energy, water and additives

Chemical dosing: A pre-set (by the manufacturer) quantity of Chemical is injected in the resins at each cycle.

Use the machine fully loaded when possible: This shall prevent detergent, rinse aid, water and energy consumption waste.

Detergent and rinse-aids: Use detergents and rinse-aid chemicals with high biodegradability, to best respect the environment. Verify proper dosage in relation to water hardness at least once a year. Excess product pollutes rivers and seas while an insufficient dose results in unsatisfactory objects washing and/or hygiene.

Boiler and Wash-Tank temperatures: The boiler and tank temperatures are set by the manufacturer in order to obtain the best washing results with detergents on the market. The temperatures can be reset by the installer in relation to your detergent.

Pre-washing: Carefully pre-wash with a moderate amount of water at room temperature to facilitate the removal of animal fats. To remove encrusted materials warm water soaking is recommended.

Note: Wash objects as soon as possible to avoid deposits from drying and compromise effective washing.
For effective washing routine dishwasher cleaning and maintenance is advised (see chap. **MAINTENANCE**).

Disregarding the points listed above and of any the information contained in this manual can cause energy, water and detergent waste with a subsequent increase in running costs and/or performance reduction.

MAINTENANCE

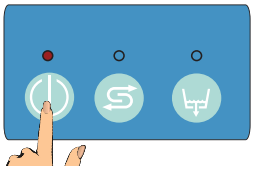
Routine maintenance

WARNING: The machine is not protected against pressurized water jets. Do not use pressure cleaning system against the machine.

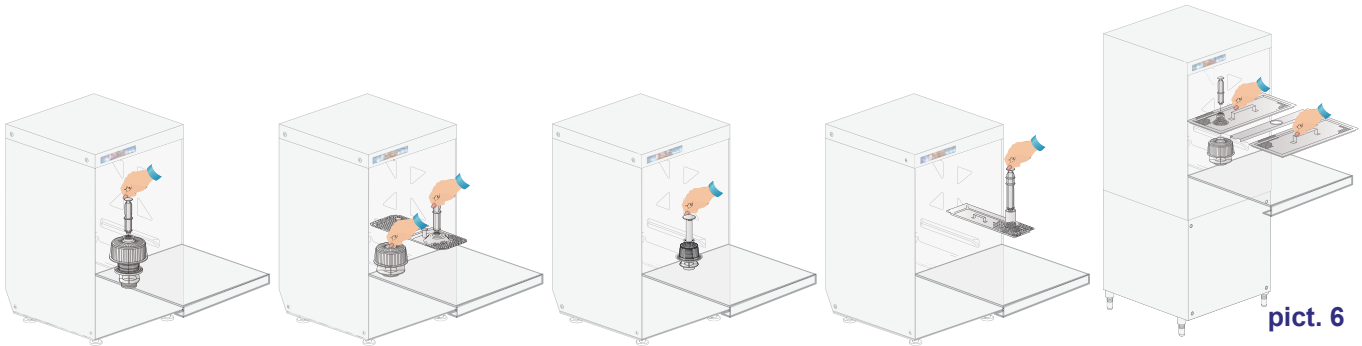
It is recommended to contact the seller of chemicals for proper cleaning instructions, in order to have detailed indications on methods and products for the correct periodical machine sanitation.

Do not use bleach or chlorine based detergents.

Daily cleaning is needed to ensure that the machine runs perfectly. The following shall be carried out:

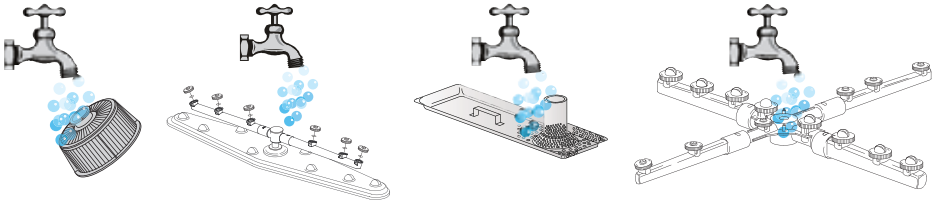


- Turn the machine in **STAND-BY** mode, by pressing the push-button **J** of the control panel.
- Remove the surface filters and clean them under running water (see pictures 6). Drain the sump water (see par. **Switching OFF**).
- Remove the pump filter and clean with a brush and a water shower.
- Remove the arms by loosening the fixing screws, and thoroughly clean them, and the nozzles under running water.

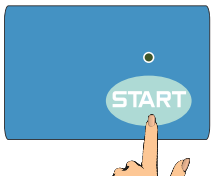


pict. 6

- Reassemble the parts and reposition the wash pipes firmly in place. Take extreme care to re-assemble the nozzles in the right position (open and / or closed nozzles) and that the arms are installed with the right axial angle.



- Clean the tank very carefully, using a water shower.
- It is recommended to leave the machine door open at the end of the day.
- Shut the water valve.
- Turned off the machine by switching the main power switch OFF.



Automatic cycle of machine self-cleaning/rinsing: recommended at each day end.

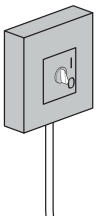
- The machine should be in **STAND-BY** mode (without filter, without overflow pipe and machine door closed). Push **Start** button **H**; an automatic cycle of 60 seconds will start, after this the machine will be in **STAND-BY** mode.
- Shut the water valve.
- Turned off the machine by switching the main power switch OFF.

Extraordinary Maintenance – by qualified Service Personnel



Once or twice a year have the machine inspected by a qualified technician, in order to:

1 Clean the solenoid-valve(s) filters;
2 Remove scale from the heating elements;
3 Control the status of the seals;
4 Control for components integrity and/or consumption;
5 Control the dispenser(s) efficiency.



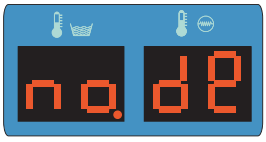
A qualified electrician, should check all electric connections inside the machine, at least once a year.

SIGNALS AND ALARMS

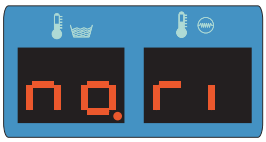
Signals

The signals messages are visualized, based upon their meaning.

When flashing **NO DE** (alternated to the tank and boiler temperatures and with machine on stand-by mode), add detergent in the detergent tank (only with optional "Sensor for Chemicals Low Level").



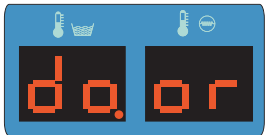
When flashing **NO RI** (alternated to the tank and boiler temperatures and with machine on stand-by mode) add rinse-aid chemical in the rinse-aid tank (only with optional "Sensor for Chemicals Low Level").



When displaying **NO SA** (alternated to the tank and boiler temperatures and with machine on stand-by mode) add salt in the container in the wash-tank (only with optional water softener).



When displaying **DOOR** means that the open door does not allow the maneuver tried, or a wash cycle was in progress, when lifting the door.



Alarms

The alarms messages are visualized, based upon their meaning.

TYPE OF ALARM	CAUSE	REMEDIES
B1	BOILER FILLING FAIL	Open the water supply tap and varify a proper water supply flow. Contact the Rhima Service Department.
B2	BOILER PROBE FAIL.	Contact the Rhima Service Department.
B3	BOILER HEAT. ALARM	Contact the Rhima Service Department.
B4	RINSING FAILED TIME OUT RINSE	Contact the Rhima Service Department.
B5	BOILER OVERHEATING	Contact the Rhima Service Department.
E1	WATER LOAD FAILED	Open the water supply valve. Contact the Rhima Service Department.
E2	TANK PROBE FAIL.	Contact the Rhima Service Department.
E3	TANK HEATING ALARM	Contact the Rhima Service Department.
E5	TANK OVERHEATING	Contact the Rhima Service Department.
E6	TANK DRAINING FAIL.	Check the overflow pipe
Z6	TANK LOW LEVEL	Drain and load the tank. Contact the Rhima Service Department.
Z9	REGENERATION FAIL	Feature not available.
Z10	ALARM SL8 - BREAK TANK HIGH LEVEL *	Contact the Rhima Service Department.
	ALARM SL8 - BREAK TANK FILLING FAILURE **	Contact the Rhima Service Department.

*** On atmospheric boiler versions only**
**** On pressure-boilers only**

TROUBLESHOOTING



Type of Problem	Possible Causes	Cure
The machine does not load water.	Water tap shut.	Open the hot and/or cold water tap.
	Rinse area nozzles or solenoid-valve filter blocked and/or scaled with limestone.	Clean the rinse arm nozzles, piping and solenoid-valve filter. Check that the water hardness is <10°f.
	Defective pressure-switch.	Contact the Rhima Service Department.
The water drains very slowly from the machine	Scarce water supply pressure	Check the water supply pressure.
	Rinse booster pump blocked (if installed)	Contact the Rhima Service Department.
START button **A** flashing (red colour)	See chapter **Alarms**.	---
Washing results are unsatisfactory.	The washing nozzles are obstructed or the rack does not rotate.	Clean the nozzles carefully, and check the right positioning of the wash-arm, tightening firmly.
	Foam is present.	Use no-foam detergents or reduce the dose in use. Check the rinse-aid dosage.
	Fats or starches not removed.	Insufficient detergent concentration.
	Filters are dirty.	Remove filters, clean with brush under a jet of water and replace in original position.
	Check tank temperature (which must be between 55°C and 60°C).	Contact the Rhima Service Department.
	Wash time insufficient for the type of dirt.	Select a longer wash-cycle, if possible, otherwise repeat the wash cycle.
	Wash water is dirty.	Drain the tank water, clean the filters; refill the tank and replace the filters correctly.
Glasses or dishes are not properly dried.	Not enough rinse aid.	Increase dosage. Contact the Rhima Service Department.
	The rack is not suitable for the objects.	Use the suitable rack which gives the objects an inclined position so that water can rinse away.
	The washed items may have been sitting in the wash chamber too long.	As soon as the cycle stops, remove the rack with objects so that they can dry more quickly in the air.
	Rinse temperature under 80°C.	Contact the Rhima Service Department.
	Surface of dishes and glasses too rough or porous for material wear.	Replace type of dishes and glasses used. If the dirt on the dishes is dry and old, soak before washing.
Streaks and spots on glasses and dishes.	Streaks and spots on glasses and dishes.	Reduce the rinse aid amount. Contact the Rhima Service Department.
	Too hard water.	Check the water quality. Water must not exceed 8°f in hardness.
The machine stops during the wash stage and starts refilling water.	The previous day's water was not changed.	Drain the tank totally and refill.
	Excessive water temperature in tank.	Contact the Rhima Service Department.
	Defective pressure switch.	
Machine will not drain.	Object stuck in drain pump*.	Contact the Rhima Service Department.
	Blocked drain.	Check sink's drain correctly. If not contact licenced plumber.

* If drain pump is supplied.

Australia Tel: 1300 347 944
New Zealand Tel: 0800 902 054
Singapore Tel: +65 9107 8943

Version 1.2

DETERGENTS

To request detergents or rinse additive contact your local Rhima Service centre below:

Australia: **1300 347 944**
New Zealand: **0800 902 054**
Singapore: **+65 9107 8943**



Mediwash

5 Litre

For washing glass & instrument washing



Final rinse

5 Litre



Superwash

5 Litre

For all other washing







