Operator's Manual

CBW50+ & CBW50HR+ Combi Washers

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 available in two options. The CBW50+ is intended to be connected to a single-phase **15 Amp** electrical supply and the CBW50HR+ is intended to be connected to a three-phase **3 x 16 Amps** electrical supply. Both appliances **must be earthed**.

PLUMBING INSTALLATION

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

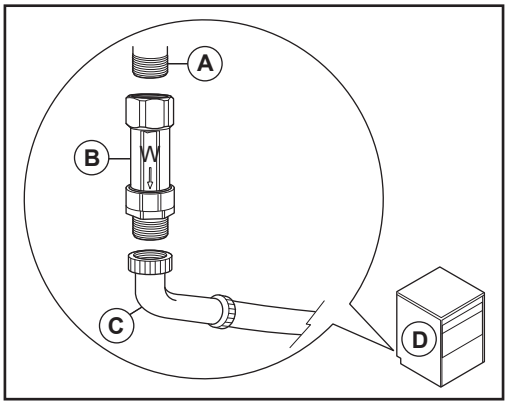
This appliance should be connected to a hot water supply *(Max 60°C)* in accordance with *Australian Standard AS/NZS 3500.1.* for optimum performance.

The water supply pressure should be a minimum 200 kPa at all times and flow rate should be at least 10 litres per minute. A static pressure higher than 400 kPa *(58.0 psi)* requires a pressure reducing valve upstream of the supply line *(not supplied)*. If water pressure is below 150 kPa, the use of a rinse booster pump is recommended.

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-101:2021 WaterMark Technical Specification standard*, the supplied external backflow prevention device MUST be installed as below:

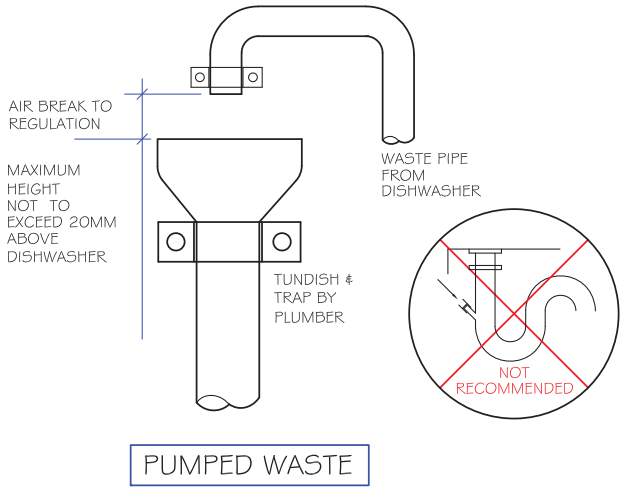


- The installation can be vertical or horizontal.
- Make sure all lines are cleaned of any debris before commissioning.
- Connect to the incoming water supply valve **A** to the dual check valve **B** and then to the inlet hose **C** which connects to the dishwasher **D**.
- Ensure that the dual check 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 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 IS BELOW:



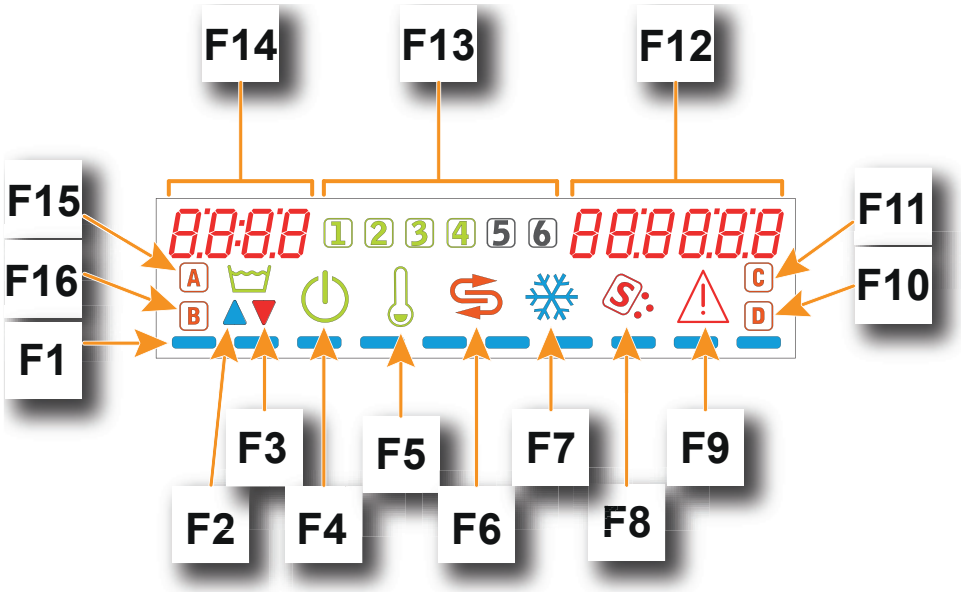
WaterMark
WMTS-101
WM-022203

CONTROL PANEL AND RELATIVE SYMBOLS

Key

A) START key to start up cycle / select cycle
B) Regeneration START button (optional)
C) Extra cold rinse key (optional)
D) Drain key (optional)
E) Switching – On / STAND BY key
F) Display

Display



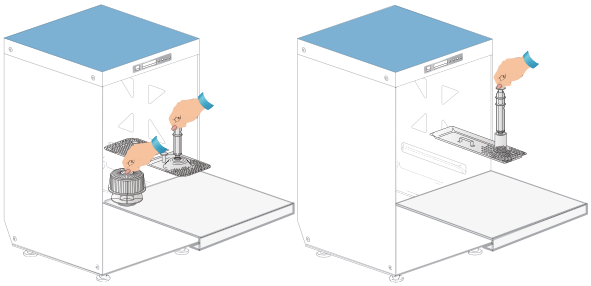
F1) Scrolling bar
F2) Tank filling indicator
F3) Tank draining indicator
F4) Stand by indicator
F5) Heating elements enabled indicator
F6) Regeneration Indicator (Not available)
F7) Cold rinse indicator (Not available)
F8) Salt shortage indicator (Not available)
F9) Alarm indicator
F10) Detergent level indicator (optional)
F11) Inactive
F12) Boiler temperature indicator
F13) Cycle running indicator
F14) Tank temperature indicator
F15) Self-cleaning cycle running
F16) Rinse-aid level indicator (optional)

OPERATION

Machine start-up

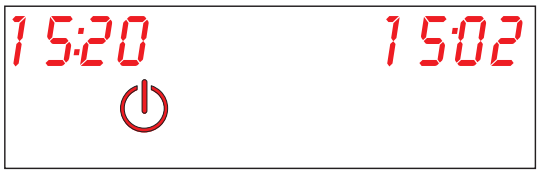
Start-up

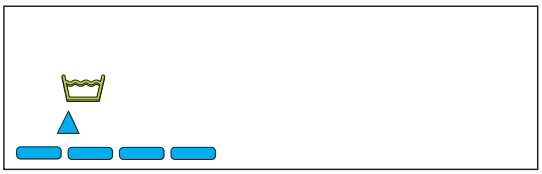
Insert the overflow pipe in the special seat inside the tank. Make sure all the filters are properly fitted in their seats (see Pic. 6). The filters must be cleaned every 30-40 wash cycles and whenever necessary. **Do not use the machine without filters.**



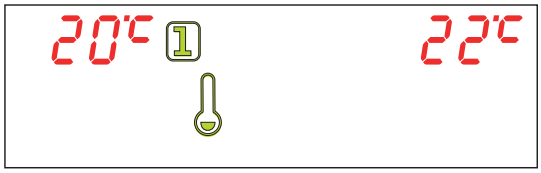
Pic. 6

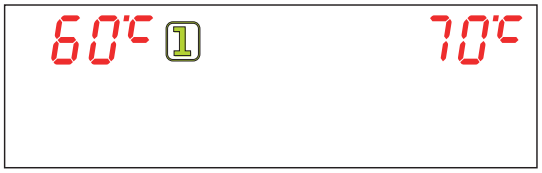
Close the dishwasher door.
Open the water valve.
Turn the main power switch ON.
The machine is on **stand-by**. In the display are shown: the date (dd/mm on the right) and time (hh/mm on the left).
Turn the button **E**.
The machine start will be active when the key Start **A** flashes. After a few seconds the tank filling phase starts. The **F2** indicator and the **F1** temporizer light on (left to right).





Should the machines be equipped with the WRAS certified Break Tank or fed by an osmotic-water device, the tank-filling phase will be longer.
After filling, the machine automatically starts the heating phase. The phase is displayed by the Start **A** key flashing (green). The tank and boiler indicators **F14** and **F12** switch on. The indicator **F5** switches on.
The machine is ready to wash when the set temperatures are reached. The indicator **F5** switches off. The Start **A** key stops flashing.

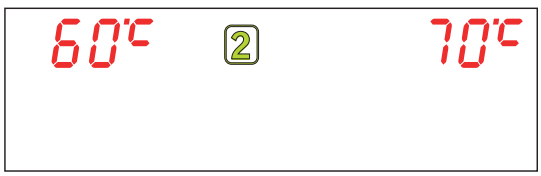




Insert the special green rinse aid dispenser tube in the liquid rinse aid container and check that the quantity is sufficient for the daily requirement. The transparent tube (if present) must be inserted in the detergent container.

Start the wash cycle

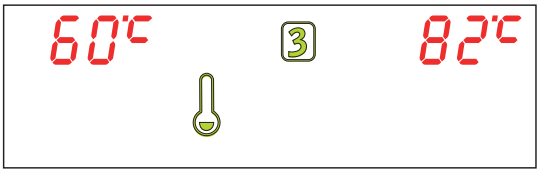
Insert the rack filled with dishes to wash (see paragraph. **Cutlery and crockery loading**). The plates must be correctly placed in the rack.
Close the door.
To select the wash cycle (1, 2, 3, 4) keep pressed the key Start **A**. The display will show in sequence the available programs.
Once the wanted program is displayed, do release the button

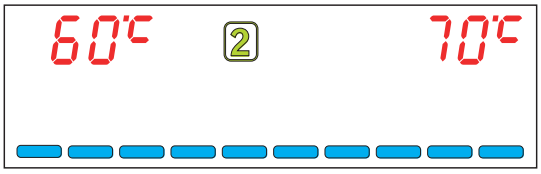


Available programs:

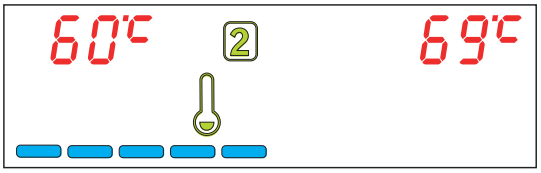
Cycle code	Cycle name	Total time (*)(#)	Wash temperature (°C) (#)	Rinse temperature (°C) (#)	
				Rack 400	Rack 500
1	Cycle 1	60	55	70	70
2	Cycle 2	90	55	70	85
3	Cycle 3	120	55	85	85
4	Cycle 4	180	55	85	85

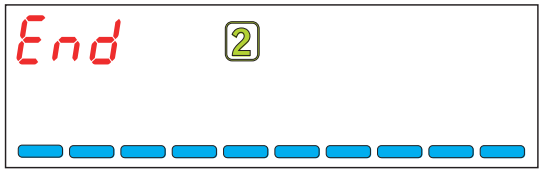
(*): Timing calculated without the intervention of the Thermostop device.
(#): The cycles (1, 2, 3, 4) are a customizable cycles according to the user's needs, to be set by a technician during the machine installation.
The indicator **F5** switches on.
Start the cycle by pressing the key Start **A** (for 1 s maximum). The key Start **A** turns blue on (steady light). The **F1** totalizer displays the time progression from the cycle start.





If during the selected cycle the boiler temperature (indicator F12) drops below the set value, the machine keeps washing until the set temperature is reached (Thermostop).
At the end of the cycle the key Start **A** alternatively flashes in blue/green. The display shows **END** message. The **F1** totalizer is completed.
The appliance is now ready for a new wash.





Note: It is advisable to change the tank water, by means of another filling, at least every 30 washes or twice a day. An alarm flashes when this operation is needed.
Note: The machine does not accept other cycles until the door is opened or the key Start **A**. is pressed for two seconds.

Switching OFF

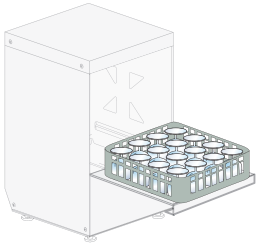
Turn the button **E**. The machine is on **stand-by** (**F4** steady red indicator).
Drain the wash-tank. Take off the overflow pipe. For machines equipped with drain pump: see paragraph. **Drain pump system**.
At the end of the day, clean the machine (see chap. **MAINTENANCE**).
Shut the water valve.
Switch the main power switch OFF.

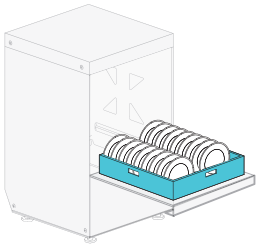
Cutlery and crockery loading

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

WARNING: 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 bottles, cups, glasses, 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.
- Do not wash trays horizontally.
- 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.

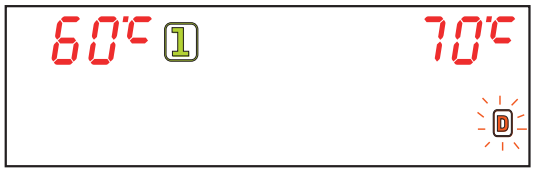
Not suitable for dishwasher:

- 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 objects.
- 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.
It is mandatory to repeat the washing cycle if at the end of the cycle the objects are not well clean or if there are washing residues (baskets, pots, pans, bowls, etc. with liquid inside).

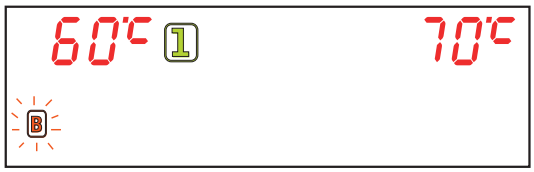
Use of detergent

The machine has a standard detergent dispenser. The machine will automatically take the needed detergent amount.
The detergent must be of good quality, of NON-FOAMING type, specific for the mechanical washing of dishes.
The use of liquid detergents is recommended.
The dosing has to be done following the recommendations of the detergent manufacturer and in accordance with the water and dishes characteristics.
A correct amount of detergent is very important for a successful wash.
Should the detergent lack the indicator on the display flashes (only with optional "Probes lack of detergent/rinse aid").



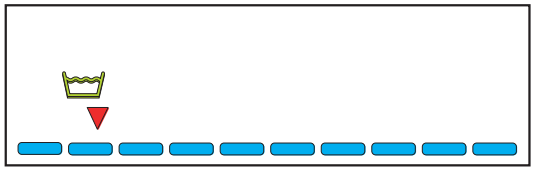
Use of rinse aid

The machine is equipped with a rinse aid dispenser. The machine automatically draws the rinse aid chemical.
The dosing has to be done following the recommendations of the rinse aid manufacturer and in accordance with the water characteristics.
Should the rinse-aid chemical lack the indicator on the display flashes (only with optional "Probes lack of detergent/rinse aid").



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:
Remove the overflow pipe.
Close the door. Turn the button **D**. The tank draining indicator **F3** and the totalizer turn on for the time set by the Program.
After the draining is complete, the machine turns automatically in **stand-by** mode.
This operation is also possible with machine in stand by-mode. Once finished, the machine returns to the initial mode.
if an alarm appears. see chap. **Alarms**.
Note: The machine must not be switched ON during the emptying phase.
IMPORTANT: Always turn the main wall switch off and close the water valve at the end of use.



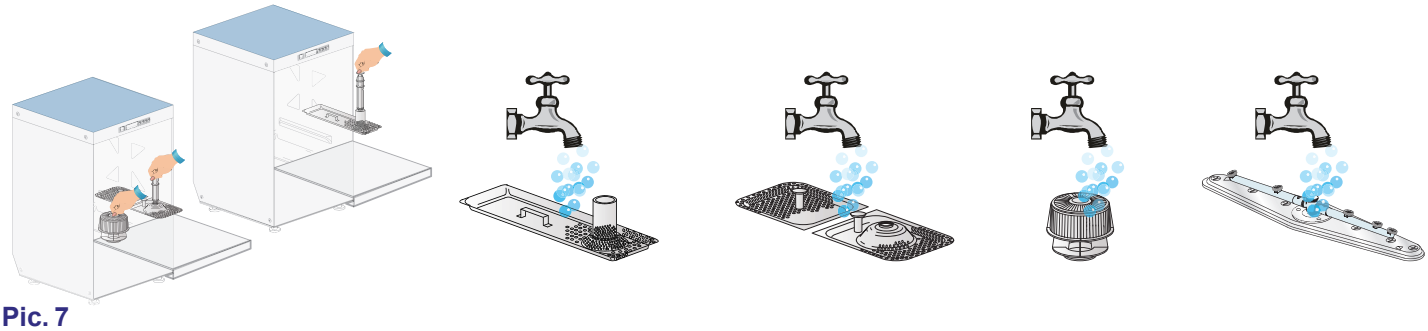
MAINTENANCE

WARNING: Do not use any jets of water, high pressure or steam cleaning equipment, to clean the machine.
Contact your cleaning products retailer for detailed instructions on the methods and products to use for periodic sanitizing of your appliance.
DO NOT use bleach or chlorine-based detergents for cleaning the appliance.

Regular Maintenance

In order to ensure perfect performance, the appliance must be completely cleaned at least once a day in the following way:

- Turn the machine in **STAND-BY** mode, by pressing the key **E** (see chap. **CONTROL PANEL AND RELATIVE SYMBOLS**).
- Remove the surface filters and clean them under running water. Drain the sump water (see paragraph. **Switching OFF**).
- Remove the pump filter and clean with a brush and a water shower (see **Pic. 7**).
- Remove the arms by loosening the fixing screws, and thoroughly clean them, and the nozzles under running water (see **Pic. 7**).



Pic. 7

- Refit all the parts and arrange the impellers in their seats, securing them with the relative fixing screw. 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 tub thoroughly using specific products.
- At the end of the day, it is advisable to leave the dishwasher door/hood open.
- Shut off the water supply valve.
- Turn 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). An automatic cycle of 1 minute will start, after this the machine will be **STAND BY**-mode.

- Shut off the water supply valve.
- Turn off the machine by switching the main power switch OFF.

Special Maintenance – by qualified Service Personnel only

Once or twice a year have a **qualified technician** inspect the machine:

- Clean the electrovalve filter.
- To remove residual deposits.
- To check the watertight of the seals for water loading and unloading connections.
- Check the perfect state and/or wear of the components. If a component is damaged or oxidized replace it immediately with genuine spare parts only.
- Check the efficiency of the dispensers.
- Check the efficiency of the door safety switch.
- Tighten firmly all electrical connections.

Perform maintenance with the wall-mounted main switch turned OFF.
Every 3-4 years of machine use, double-check the tightening and the efficiency of all electrical contacts, with special attention to the contacts of starters and relays.
Increase controls frequency if the machine is operating in heavy or intensive conditions.

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

- 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.
- Scrape food from the dishes carefully in order not to clog the filters, nozzles and pipes.
- Unload the wash tub and clean the filters at least twice a day.
- Check that the amount of detergent and rinse aid dispensed is correct (as suggested by the supplier of the product). In the morning, before starting the machine, check that the quantity of chemicals in the canisters is enough for daily supply.
- Always clean the support floor of the dishes.
- Extract the rack with clean hands or gloves to avoid finger marks.
- Do not dry or polish the dishes with non-sterilized cloths, brushes, or dusters.

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.

Alarms

The alarms are displayed, based upon their meaning.
If an alarm occurs the machine stops.

TYPE OF ALARM	CAUSE
B1	BOILER NOT FILLED
B2	BOILER SENSOR FAILURE
B3	BOILER NOT HEATED
B4	FAILURE IN RINSING
B5	BOILER OVERTEMPERATURE
B9	BOILER SAFETY THERMOSTAT
E1	WASH-TANK NOT FILLED
E2	WASH-TANK SENSOR FAILURE
E3	WASH-TANK NOT HEATED
E5	WASH-TANK OVERTEMPERATURE
E6	TANK DRAINING FAILURE
E8	TANK SAFETY THERMOSTAT
Z6	TANK LOW LEVEL:
Z9	REGENERATION FAILED
Z10	BREAK TANK HIGH LEVEL

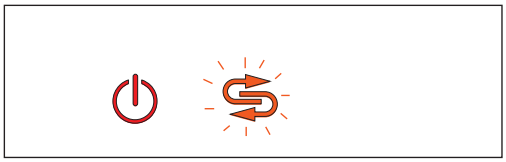
Tab. 1

SIGNALS AND ALARMS

Signals

The signals messages are displayed, based upon their meaning.

Machine in stand-by mode:



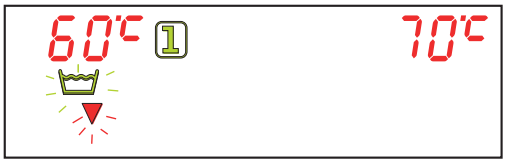
Total regeneration warning (optional).
When the **F6** indicator flashes on the display it means that a total regeneration is needed (only on machines equipped with the optional Water Softener).

Drain tank warning.
When **drain tank** scrolling message appears on the display it means that you are trying an operation that cannot be done with the wash tank full.

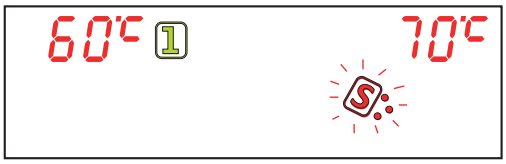
Machine switched on or in stand-by mode:

Door open warning.
When **door** appears on the display it means that you are trying an operation that cannot be done with the open door.

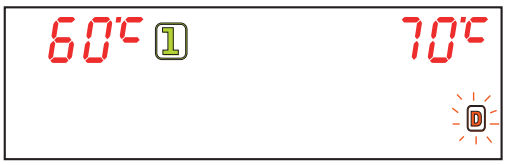
Machine switched on:



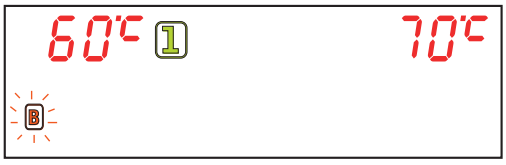
Draining tank warning.
When the **F3** indicator flashes on the display it means that it is necessary to change the tank water.



Salt level warning (optional).
When the **F8** indicator flashes on the display it means that the salt level in the bowl is low (only on machines equipped with the optional Water Softener).

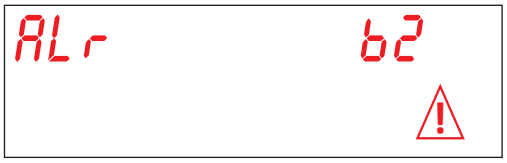


Detergent level warning (optional).
When the **F10** indicator flashes on the display it means that the detergent is over (only on machines equipped with the optional "Probes lack of detergent/rinse aid").



Rinse-aid level warning (optional).
When the **F16** indicator flashes on the display it means that the rinse-aid is over (only on machines equipped with the optional "Probes lack of detergent/rinse aid").

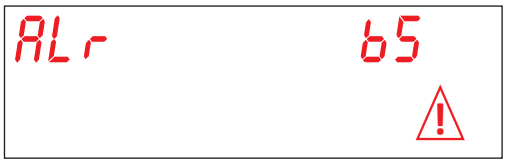
B1 BOILER NOT FILLED:
Cause:
The machine boiler fill-up was not achieved in the maximum foreseen time limit.
Remedies:
Open the water supply valve and verify a proper water supply flow. Contact the Rhima Service Department.



B2. BOILER PROBE FAILED:
Cause: The circuit board does not detect the boiler sensor.
Remedies: Contact the Rhima Service Department.

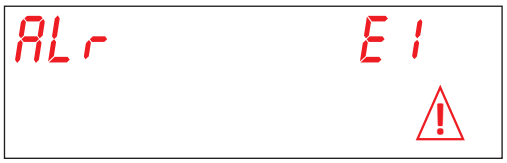
B3. BOILER HEATING ALARM:
Cause: The factory-set boiler temperature was not achieved in the maximum foreseen time limit.
Remedies: Contact the Rhima Service Department.

B4. FAILURE IN RINSING:
Cause: The rinse water was not used during the rinse cycle.
Remedies: Contact the Rhima Service Department.



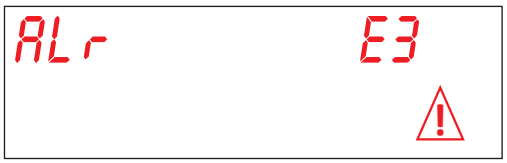
B5. BOILER OVERHEATING:
Cause: The water temperature in the boiler exceeded 105 °C.
Remedies: Contact the Rhima Service Department.

B9. BOILER SAFETY THERMOSTAT:
Cause: The boiler safety thermostat is tripped.
Remedies: Contact the Rhima Service Department.



E1. WATER LOAD FAILED:
Cause: The machine wash-tank was not filled in the maximum foreseen time limit.
Remedies: Open the water supply valve and verify a proper water supply flow. Contact the Rhima Service Department.

E2. TANK PROBE FAILED:
Cause: The circuit board does not detect the wash-tank sensor.
Remedies: Contact the Rhima Service Department.



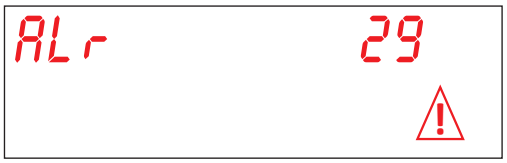
E3. TANK HEATING ALARM:
Cause: The factory-set wash-tank temperature was not achieved in the maximum foreseen time limit.
Remedies: Contact the Rhima Service Department.

E5. TANK OVERHEATING:
Cause: The wash-tank temperature exceeded 90 °C.
Remedies: Contact the Rhima Service Department.

E6. TANK DRAINING FAILED:
Cause: The draining of the wash-tank was not completed within the maximum foreseen time limit.
Remedies: Contact the Rhima Service Department.

E8. TANK SAFETY THERMOSTAT:
Cause: The tank safety thermostat is tripped.
Remedies: Contact the Rhima Service Department.

Z6. TANK LOW LEVEL:
Cause: The tank pressure-switch detects a too low level of water in the tank.
Remedies: Check the overflow pipe. Contact the Rhima Service Department.



Z9. REGENERATION FAILED (on machines equipped with the optional Water Softener):
Cause: The salt sensor does not work properly.
Remedies: Check if there is salt in the special container. Contact the Rhima Service Department.

Z10. BREAK TANK HIGH LEVEL:
Cause: The Break Tank safety pressure-switch detects a high level.
Remedies: Contact the Rhima Service Department.

10. TROUBLESHOOTING

Type of Problem	Possible Causes	Cure
The appliance does not start	The main switch is turned off	Turn on the switch
The appliance does not load water	The water supply tap is closed	Open the water supply tap
	The rinsing arm nozzles or the electrovalve filter are clogged and/or caked with lime deposits	Clean the rinsing arm nozzles, the pipes and the electrovalve filter.
	Faulty pressure switch	Contact the Rhima Service Department
The machine loads water very slowly	Scarce water supply pressure	Check the water supply pressure
	Rinse booster pump blocked (if installed)	Contact the Rhima Service Department

Type of Problem	Possible Causes	Cure
Unsatisfactory washing results	The washing nozzles are clogged or the washing arms do not rotate	Unscrew and clean the nozzles and the rotating column, refit them correctly in their positions.
	Unremoved grease or starch	Detergent concentration too low.
	The filters are too dirty	Remove and clean the filters with a brush under a jet of water then refit them in their positions.
	Check tank temperature (which must be between 50 °C and 60 °C).	Adjust the thermostat or check correct heating element operation.
	Length of washing cycle inadequate for type of grime build-up	Choose a longer cycle if possible, otherwise repeat wash cycle.
	Wash water is too dirty	Drain the tank water, clean the filters; refill the tank and replace the filters correctly.
Presence of foam	Use of unsuitable products	Only use recommended commercial detergents.
	Tub temperature too low	Contact the Rhima Service Department.
The objects are not dried properly	Insufficient rinse aid	Increase the rinse aid amount. 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 the objects so that they can dry more quickly in the air.
	Rinse water temperature is less than 75 °C - 80 °C	Contact the Rhima Service Department.
	Surface of objects too rough or porous for material wear	Replace type of the objects used.
Streaks or smears on the objects	Too much rinse aid	Reduce the rinse aid amount. Contact the Rhima Service Department.
	The water is too hard	Check the water quality. Water must not exceed 8 °f (5 °d) in hardness
The appliance suddenly stops during the cycle	The appliance is connected to an overloaded circuit	Connect the appliance separately. Contact the Rhima Service Department.
	A safety device has been activated	Contact the Rhima Service Department.
The washing pump doesn't work	The pump is blocked	Contact the Rhima Service Department.
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

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