

Owner's Guide and Installation Instructions



*Model shown 743005F – Filtered model

Electric 743 & 7431 Series Boiling Water Unit



Install a Rheem

Models 3 & 5 litre

*This water heater must be installed and serviced by an authorised person.
Please leave this guide with the householder.*

**Australia Only
Notice to Victorian Customers from the
Victorian Plumbing Industry Commission.**

**This boiling unit must be installed by a licensed person as required by
the Victorian Building Act 1993.**

Only a licensed person will give you a Compliance Certificate, showing that the work complies with all the relevant standards. Only a licensed person will have insurance protecting their workmanship for 6 years. Make sure you use a licensed person to install this under bench pumped water chiller and ask for your Compliance Certificate.

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OWNER – We recommend reading pages 4 to 17.

The other pages are intended for the installer but may be of interest.

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ABOUT YOUR BOILING WATER UNIT

INTRODUCTION

Thank you for choosing our Rheem 743/7431 Series Boiling Water Unit. Please take a few minutes to read this booklet because it contains important information about the correct installation and operation of your Rheem Boiling Water Unit.

The Rheem Boiling Water Unit supplies both boiling water and cold water (both supplies filtered). The tank is made from high quality copper and is designed to be installed indoors, under sinks and in cupboards. The Rheem Boiling Water Unit is supplied with all the required safety valving for installation (not including the isolation valve prior to the water heater). Your Rheem Boiling Water Unit is designed to supply boiling water to the Rheem Boiling Water Dispensing Tap. As an option, your Rheem Boiling Water Unit can also be combined with a Rheem Water Chiller for filtered chilled water.

WARNING

This boiling water unit is only intended to be operated by persons who have the experience or the knowledge and the capabilities to do so. This boiling water unit is not intended to be operated by persons with reduced physical, sensory or mental capabilities i.e. the infirm, or by children. Children should be supervised to ensure they do not interfere with the boiling water unit. Rheem recommend the use of the safety function allowing only two finger operation (see page 14).

This boiling water unit uses 230-240V AC electrical power for operation of the control systems and the electrically operated components. The removal of the jacket will expose 230-240V wiring. The jacket must only be removed by an authorised or qualified person.

HOW HOT SHOULD THE WATER BE?

The system controls will operate to maintain a default water temperature of near boiling point within the boiling unit. This can be adjusted from 70-99°C.

SAFETY

The Rheem Boiling Water Unit is supplied with over temperature cut-outs on the water heating element to prevent element burn out in the event of control failure.

The Rheem Boiling Water Unit is constructed with an integral safe tray with automatic shut off device that complies with ATS 5200.476. A safe tray and/ or safe waste are not required for installation.

If the electrical supply cord to the water heater is damaged, it must be replaced by an authorised person in order to avoid becoming a hazard. Phone your nearest Rheem Service Department or Rheem Service Centre to arrange for an inspection.

For extra electrical protection against power surges and spikes it is recommended that a surge protector is installed prior to the boiling water unit.

WARNING:

The Rheem warranty may not cover faults if any of the installed safety devices are tampered with.

HOW YOUR BOILING WATER UNIT WORKS

TO TURN OFF THE BOILING WATER UNIT

The boiling water unit is supplied with a programmable timer. We recommend the timer is used to conserve energy.

If it is necessary to turn off the boiling water unit:

- Switch off the electrical supply at the isolating switch to the boiling water unit.
- Close the cold water isolation valve on the supply to the boiling water unit.

TO TURN ON THE BOILING WATER UNIT

- Open the cold water isolation valve fully on the cold water supply to the boiling water unit.
- Switch on the electrical supply at the isolating switch to the boiling water unit.

Note: The boiling water unit may not appear to turn on immediately when it is first switched on, as the electronic controller will automatically check the system prior to allowing water into the boiling water unit (this could take up to 10 seconds).

On initial start up, this boiling water unit automatically runs through a set-up cycle to detect the boiling point of water. During this cycle, steam will discharge from the vent pipe several times for a short time. This set-up cycle will take up to 18 minutes, and when completed (once boiling point is determined) the unit will commence incremental filling. It is important NOT to operate the tap during the set-up cycle because it may affect the operating temperature of the unit.

IS THIS BOILING WATER UNIT INSTALLED CORRECTLY?

Installation requirements are shown under Installation (on page 19).

The boiling water unit must be installed:

- by a qualified person, and
- in accordance with the installation instructions, and
- in compliance with Standards AS/NZS 3500.4, AS/NZS 3000 and all local codes and regulatory authority requirements.

In New Zealand, the installation must also conform to Clause G12 of the New Zealand Building Code

DOES THE WATER QUALITY AFFECT THE BOILING WATER UNIT?

The boiling water unit is suitable for most public water supplies, however some water qualities may have detrimental effects on the boiling water unit and fittings. **If you are in a known bad water area** you must first read Water Supplies on page 26. If you are not sure, have your water quality checked against the conditions described on page 26.

HOW YOUR BOILING WATER UNIT WORKS

HOW LONG WILL THE BOILING WATER UNIT LAST?

There are a number of factors that will affect the length of service the boiling water unit will provide. These include the water quality, the water usage pattern etc. However, your boiling water unit is supported by a comprehensive warranty (refer “Warranty” on page 30). The boiling water unit is designed to operate using mains water pressure by connecting directly to the mains water supply. If the mains supply pressure in your area exceeds 1000kPa a secondary pressure limiting valve must be fitted. The water supply pressure is recommended to be greater than 350kPa for the Rheem boiling water unit’s optimum performance. Water pressure lower than 350kPa will reduce the performance of the boiling water unit (and water chiller if installed). A supply pressure as low as 100kPa can be used, however cold water delivery will be reduced.

PRECAUTIONS

The boiling water unit must be maintained in accordance with the Owner’s Guide and Installation Instructions.

If this boiling water unit is to be used where an uninterrupted boiling water supply is necessary for your application or business you should ensure that you have back up redundancy within the building. This should ensure the continuity of boiling water supply in the event that this boiling water unit were to become inoperable for any reason. We recommend you seek advice from your plumber or specifier about your needs and building back up redundancy.

BOILING WATER

The Rheem boiling water unit is electronically controlled to obtain the maximum performance, and incorporates further safety devices to prevent over temperature and over filling.

ELECTRONIC CONTROLLER & TIMER

Your Rheem boiling water unit incorporates smart heating software and an electronic timer to obtain the best efficiency for the energy used. The electronic timer allows the user to program when the unit is on or off and when the sleep mode activates to save energy. Also the unit has the ability to indicate and diagnose any system faults that occur. (Refer “Setting the Timer” on page 8).

ENVIRONMENT

If a chiller unit is installed, at the end of the service life and prior to the chiller being disposed of, a person qualified to work with refrigerants must recover the refrigerant from within the sealed system. The refrigerant must not be vented to atmosphere. Phone your nearest Rheem Service Department or Rheem Service Centre to arrange for an inspection.

WATER FILTER

The Rheem Boiling Water Unit incorporates an integral water filter. The water filter improves the quality of water by filtering odours and particles. Over time the water filter could become blocked with particles. Rheem recommends that the water filter be changed at least every 12 months. The boiling water unit controller has an *electronic filter counter that lets the operator know when the filter is getting close to its recommended life. (*If activated by installer)

IMPORTANT

Rheem highly recommends that regular water filter cartridge changes are carried out to ensure the system is performing to a high standard. If the water filter is not regularly serviced and maintained on the recommended intervals, the water filter cartridge can block with the trapped impurities, causing bacterial growth in the filter media and dramatically reducing filtered water flow, affecting the operation of the filtered boiling water unit.

SETTING THE TIMER

Your Rheem boiling water unit is supplied with a programmable 7 day timer which allows the unit to operate in the most efficient fashion to suit your needs. The timer also incorporates a sleep mode which can be set to automatically shut the system down after a set period of time of no use, i.e. 6 hours. The boiling water unit timer will also control a Rheem chiller (if fitted). The Rheem tap features a safety lock function requiring 2 finger operation to protect to users from unintentionally dispensing boiling water when set in this mode (refer to page14).

Function	Mode	Description
A) Clock	N/A	Set clock time.
B) STD/AUTO	STD	BWU 'ON' 24 hours/7 days.
	AUTO	BWU operates according to programmed 'Set ON/OFF Times'.
C) Set ON/OFF Times	N/A	Program ON/OFF times for AUTO mode.
D) Sleep Delay Time	N/A	Program delay-off time from last usage (operates in AUTO mode only).
E) Filter Life	Remaining Life	Displays remaining filter life in litres.
	Filter Reset	Resets filter 'Remaining Life' to 'Set Filter Life' setting. Utilised when replacing filter.
	Set Filter Life	Program filter life start value in litres.
F) Service Menu	Error Codes	Displays alpha error codes (refer to page 11 for error codes and their meanings).
	Boiling Temp	Displays the current boiling water temperature in °C.
	Chiller Temp	Displays the current chiller water temperature in °C.
	Calib. Reset	Reactivates automatic boiling point calibration operation.
	Temp Override	Manually select calibrated temp setting. Selectable from 70 – 99°C.
	Software Version	Displays Timer and Controller software versions (top = Timer, lower = Controller).
	Temp Show ON/OFF	Enable/disable boiling water temperature display on timer screen (in °C).
	TB Treq	Displays boiling water temperatures in °C. (TB = calibrated temp, Treq = maintained temp).
G) Chiller Select IMPORTANT:- Select correct chiller type.	AUTO	Automatically detects type of chiller unit.
	No Chiller	Select if a stand alone chiller is installed.
	Push Thr. Chil.	Select if a push through chiller is installed.
	Pumped Chiller	Select if a pumped chiller unit is installed.
H) Chiller Temp	5°C – 15°C	Set chilled water temperature.
I) Cold tap time	5s – 60s	Set cold tap maximum on time.
J) Hot tap time	5s – 20s	Set hot tap maximum on time.
K) Key lock	Enable/disable key lock function to prevent tampering with timer settings.	

* ON/OFF and Sleep Delay times operate in AUTO Mode.

To select a Timer Mode

Press the **(Prog)** button until the desired mode is displayed on the screen. Press the **(Accept)** button to confirm selection. Pressing **(Cancel)** button at any time returns the unit to the main menu. Any functions previously accepted will be retained.

Note: The display will revert back to main menu from any mode if a button has not been pressed for 1 minute.

A) Setting the clock

Select the clock mode
(Prog>Clock>Accept)

Display Shows: "Set Clock Day".

Press the **(UP)** button until the desired day appears on the screen and press the **(Accept)** button to confirm selection.

Display Shows: "Set Clock HOUR"

Press the **(UP)** button until the desired hour (24 Hour Time) appears flashing on the screen and press the **(Accept)** button to confirm selection.

Display Shows: "Set Clock MIN"

Press the **(UP)** button until the desired minute appears flashing on the screen.

Press the **(Accept)** button to confirm selection and the display reverts to the main menu.

B) Set timer to STD/AUTO mode

Select the Timer STD/AUTO mode (Prog>Timer STD/AUTO>Accept)

Display Shows: "STD"

Pressing the **(UP)** button alternates "STD"/"AUTO" mode. "STD" mode means that the unit operates **24 hours** a day, "AUTO" mode means the unit operates during the preset time periods (7am - 5.30pm, Mon - Fri) on the timer. Press the **(Accept)** button to confirm selection and the display reverts to the main menu. If the timer is in "AUTO" mode, pushing any timer key or lever on the tap will reactivate the unit. The unit will operate normally until the next programmed "Off" time.

C) Programming set on/off times (For use in "AUTO" Mode)

Select the Timer ON/OFF mode

(Prog>Set ON/OFF times>Accept)

Note: To set the unit to be in "Off" mode for an entire day, set the "On" and "Off" times to be the same eg: On = 0:00 Off = 0:00

Display Shows: "SUN" "7:00 – 7:00" "Set ON hour".

Press the **(UP)** button until the desired hour appears on the screen and press the **(Accept)** button to confirm selection.

Display Shows: "SUN" "7:00 – 7:00" "Set ON minute".

Press the **(UP)** button until the desired minute appears on the screen and press the **(Accept)** button to confirm selection.

Display Shows: "SUN" "7:00 – 7:00" "Set OFF hour".

Press the **(UP)** button until the desired hour appears on the screen and press the **(Accept)** button to confirm selection.

Display Shows: "SUN" "7:00 – 7:00" "Set OFF Minute".

Press the **(UP)** button until the desired minute appears on the screen and press the **(Accept)** button to confirm selection and advance to the next day.

Display Shows: "MON" "7:30 – 17:30" "Set ON hour".

Note: Continue with same procedure for Monday through to Saturday.

D) Programming sleep delay time.

Select the Sleep on/off mode (Prog>*Sleep DelayTime*>Accept)

Display Shows: "Sleep Delay Time" "OFF".

The Sleep Delay Function puts the unit in a standby mode after a user defined period (1 - 6 hours). The Sleep Delay Function factory default setting is OFF. Pressing the **(UP)** button increases the sleep delay time up to 6 hours. Press the **(Accept)** button to confirm selection and the display reverts to the main menu. The unit will go into "Sleep" mode if it has **not** been used during the "Sleep delay time" period. To exit "Sleep", push any timer key or lever on the tap. If you activate the Sleep Delay Timer we recommend that you also activate the Temp Show On/Off function.

E) Filter Life

Select the Appropriate Filter Mode (Prog>*Filter life*>Accept)

i) Remaining Life

ii) Filter Reset

i) To Select Remaining Life mode

(Prog>*Filter Life*>Accept>*Remaining Life*)

Display Shows: "Remaining Life" "XXXX litres"

Press the **(Cancel)** or **(Accept)** button to revert back to the main menu.

ii) To Select the Filter Reset mode

(Prog> *Filter Life* >Accept>*filter reset*>Accept)

Display Shows: "Filter Reset"

Press the **(Accept)** button to confirm selection at which time you are prompted "Are you sure?". Press **(Accept)** once more then,

Display Shows: "Set Filter Life" "XXXX Litres".

Pressing the **(UP)** button scrolls from the filter **OFF** selection (this turns the filter count off if a filter is not installed with the boiling water unit) up to 12,000 litres. We recommend a default value of 4,000 litres, until the user knows the filter will last longer. Press the **(Accept)** button to confirm selection and the display reverts to the Filter menu.

F) Accessing service menu

The service menu has seven modes to select from (refer to 'timer functions' on page 8). This function allows easy identification of problems occurring with the unit by the service technicians (see details on the Error code table (page 11) for product error codes).

Select appropriate Service Mode

- i. Error Codes
- ii. Boiling Temp
- iii. Chiller Temp (display only)
- iv. Calib Reset
- v. Temp. Override
- vi. Software Version
- vii. Temp Show ON/OFF
- viii. TB Treq

I. Error Codes

(Prog>Service>Accept>Error Codes)

This function allows easy identification of problems occurring with the unit by service technicians.

Error	Code	Error	Code
Hot Thermistor O/C, S/C	A	Low Level Probe Fault	H
Cold Thermistor O/C, S/C	B	High Level Probe Fault	J
Triac S/C	C	Compressor Fault	K
Leak Detected	D	Water Heating Fault	L
Expired Filter	E	Excessive Temperature Rise	N
Calibration Time Out	G		

II. For Boiling Unit Display Temp mode

(Prog>Service>Accept>Boiling Temp)

Display Shows: "XXX °C"

This function displays the current boiling water temperature. Press the (**Cancel**) button to revert back to the main menu.

III. For Chiller Unit Display Temp mode

(Prog>Service>Accept>Chiller Temp)

Display Shows: "XXX °C"

This function displays the current chilled water temperature. Press the (**Cancel**) button to revert back to the main menu.

IV. For Calibration Reset mode

Prog>Service>Accept>Calib.Reset>Accept)

Display Shows: "Calib. Reset"

This function recalibrates the boiling water unit to boiling point. Press the (**Accept**) button to recalibrate the boiling point. Press (**Accept**) again at the "**Are You Sure?**" prompt. Press the (**Cancel**) button to revert back to the Main menu. The timer will now display "**Calibrating Do Not Interrupt**". When calibration is complete the timer display will revert back to the main menu.

V. For Temp Override mode

(Prog>Service>Accept>Temp Override>Accept)

This function allows the user to manually set the required boiling water temperature.

Display Shows: "XX °C"

Press the (**UP**) button until the desired temperature is shown (range is from 70°C to 99°C). Press the (**Accept**) button to activate the selection, then the words "**Are You Sure?**" will flash on the screen. Press the (**Accept**) button to confirm your selection. The words "**Calibrating Do Not Interrupt**" may appear for a short period, this is the unit is checking that it is able to reach the temperature you require. Once the unit has finished checking, the screen will return to normal.

VI. To Display the Software Version

(Prog>Service>Accept>Software Version>Accept)

This displays both the Timer and Controller software versions. The top digits relate to the timer software version, and the lower digits relate to the controller software version.

VII. Temp Show On/Off (Prog>Service>Accept>TempShow ON/OFF)

Display Shows: "Hot XX°C" (no chiller installed), or "Hot XX Cold XX" (with Rheem chiller installed).

This function allows the temperature of the water within the boiling water unit (and chiller if installed) to be displayed permanently on the timer display. Press the **(UP)** button to switch modes between ON and OFF.

Press **(Accept)** to confirm, and the display reverts back to the service menu.

VIII. TB Treq

(Prog>Service>Accept>TB Treq)

This function allows the user to see what temperature the boiling water unit is calibrated to and the temperature the boiling water is maintained to.

The figure below the letters **TB** is the units' calibrated temperature, the figure below the letters **Treq** is the temperature the boiling water is maintained to.

G) CHILLER SELECTION

Select Appropriate Chiller Mode (Prog>Chiller Selection>Accept)

i. Auto

ii. No Chiller

iii. Push Thru. Chil

iv. Pumped Chiller

i) To Select Auto mode

(Prog>Chiller Selection>Accept>Auto)

This allows the unit to automatically detect if any chiller is attached to the unit.

Press **(Accept)** to confirm and the display reverts back to the service menu.

ii) To Select No Chiller mode

(Prog>Chiller Selection>Accept>No Chiller)

This allows the user to attach a stand alone chiller to the boiling water unit. By activating the 'No Chiller mode', the cold lever will deliver filtered tap temp water to either a separate chiller or straight to tap.

Press **(Accept)** to confirm and the display reverts back to the service menu.

iii) To Select Push Thru. Chil mode

(Prog>Chiller Selection>Accept>Push Thru. Chil)

If the unit incorrectly senses the appropriate chiller, the user can manually set the unit to a Push Through Chiller.

Press **(Accept)** to confirm and the display reverts back to the service menu.

iv) To Select Pumped Chiller mode

(Prog>Chiller Selection>Accept>Pumped Chiller)

If the unit incorrectly senses the appropriate chiller, the user can manually set the unit to a Pumped Chiller.

Press **(Accept)** to confirm and the display reverts back to the service menu.

H) CHILLER TEMP

Select Appropriate Chiller Temperature (Prog>*Chiller temp*>Accept)

Display Shows: "XX °C"

Press the (**UP**) button to scroll from 5°C to 15°C.

Press (**Accept**) to confirm and the display reverts back to the service menu.

I) COLD TAP TIME

Select Appropriate Cold Tap Time (Prog>*Cold Tap Time*>Accept)

Display Shows: "XXs"

This allows the user to define the maximum volume of water that can be drawn from the unit in one pour.

Press the (**UP**) button to scroll from 5s to 60s.

Press (**Accept**) to confirm and the display reverts back to the service menu.

J) HOT TAP TIME

Select Appropriate Hot Tap Time (Prog>*Hot Tap Time*>Accept)

Display Shows: "XXs"

This allows the user to define the maximum volume of water that can be drawn from the unit in one tap activation.

Press the (**UP**) button to scroll from 5s to 20s.

Press (**Accept**) to confirm and the display reverts back to the service menu.

K) KEY LOCK

Select Key Lock (Prog>*Key Lock*)

Display Shows: "Key Lock"

This allows the user to lock the timer keys to prevent tampering.

Press the (**Accept**) button to confirm selection and the display will now show "Key Lock Enable" Press the (**Accept**) button again to reconfirm selection and the display reverts to the main menu.

To unlock the Key Lock function, push the "**Prog**" and "**Up**" buttons simultaneously for 10 seconds.

OPERATING THE TAP

The Rheem tap is used to dispense filtered boiling water and filtered cold or chilled water. There are currently two tap styles available, the 743 Series (Aqua) and the 7431 Series (Azure). Both taps have identical functionality. The Rheem tap has 2 levers (hot and cold), a safety lock button (child safety lock) and 3 LED's (orange, red and green). When operating the tap, unless adjusted it will automatically stop the water delivery every 20 seconds. This is to prevent the tap being turned on permanently.

TAP LEVERS

The Rheem Tap has two levers. The hot lever has a red insert, and the cold has a blue insert.

To operate the levers you can:

- a) Pull the lever up to allow for hands free filling of large vessels, or
- b) Push and hold the lever down for cup fills.

SAFETY LOCK BUTTON

The tap also incorporates a safety lock feature. To activate and de-activate the safety lock you must push the safety lock button down for 5 seconds. When the safety lock is activated, the word SAFETY will light up in red on the top of the tap. To operate the boiling water tap when the safety lock is on, press and hold the safety button whilst activating the hot lever (indicated by the red insert). It is not necessary to hold the safety button for cold water delivery.

TAP LED'S

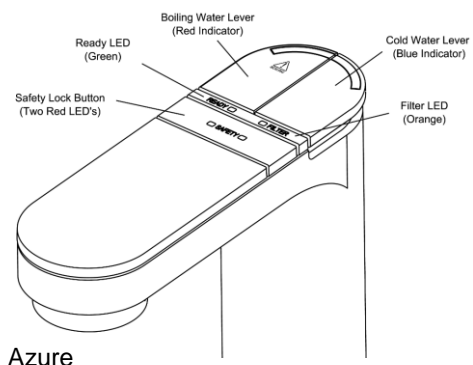
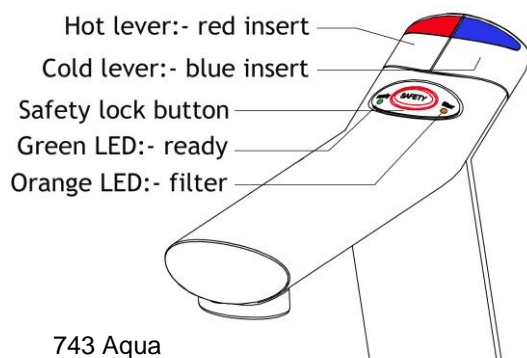
The Rheem tap contains 3 LED's. The LED's are located by the safety lock button.

The green LED (heating or ready) indicates the status of the boiling water unit temperature. If the **green LED is flashing**, the boiling unit is filling and heating. Water may be drawn from the hot lever, however the quantity available may be limited and the water temperature below the set temperature. If the **green LED is solid** it means the unit is at the required temperature.

The orange LED (filter) if flashing, indicates the water filter (if installed) should be replaced. See Setting the Timer, Section E on page 10 for resetting the filter timer.

The red LED (Illuminates the word 'SAFETY') if on, indicates the safety button has been activated. See above for instructions on how to set safety mode.

Also refer to 'Save A Service Call' on page 16 for tap error codes.



CHANGING THE WATER FILTER

IF A WATER CHILLER IS CONNECTED PROGRESS THROUGH ALL STEPS

IF A WATER CHILLER IS NOT CONNECTED DO STEPS 1, 2, 4, 5, 6, 7, 9, 10 & 11

Step 1: Isolate the water supply to the boiling water unit then activate the cold lever to relieve the water pressure.

Step 2: Isolate the boiling water unit from the electricity supply.

Step 3: Disconnect all electrical chiller connections to the boiling water unit

Step 4: Unlock the filter from the housing by rotating the filter body a quarter turn clockwise.



Step 5: Remove filter by lowering from housing. Ensure that minimal water is spilled within the boiling unit when removing filter. We recommend a clean rag is placed below the filter in the unit to ensure no water is left in the base of the unit.



Step 6: Prepare new filter by removing the plastic wrap and taking off the top plastic cover covering the inlet to the filter.

Step 7: Replace water filter by reversing steps 4 and 5.

Step 8: Disconnect chilled water outlet pipe from the water chiller (if connected) and connect it to the chilled water supply connector on boiling unit.

Step 9: Turn water on to the boiling water unit.

Step 10: Turn the electricity to the unit back on.

Step 11: Flush the new water filter by activating the cold button on the tap for a minimum of 5 minutes (note: the continuous draw off time can be increased to 1 minute intervals (see Section I page 12))

Step 12: Once flushing is complete, put the chilled water outlet pipe back onto the outlet connection on the chiller, and connect the chiller inlet supply pipe back onto the chilled water supply connector.

Step 13: Reconnect all electrical connections from the chiller back onto the boiling water unit.

Step 14: Check unit is functioning correctly and dispose of the old filter cartridge responsibly.

SAVE A SERVICE CALL.

Check the items below before making a service call. You will be charged for Rheem attending to any condition or fault that is not related to manufacture or failure of a part

NOT ENOUGH (OR NO) BOILING WATER

Is the electricity switched on?

Inspect the wall power socket to see if it is switched on. Also check the fuse or circuit breaker at the switchboard to see if it is blown or tripped.

Is the timer in the off period?

If the unit has been in an off period and the water is below the optimum delivery temperature, the green LED flashes when the unit is woken. To 'wake' the unit press the hot lever on the boiling water tap or any timer button. The unit will activate the element and reheat the water to the set temperature.

Is the leak sensor detecting there is water with the unit?

There is a leak sensor in the boiling water unit that detects if there is water in the safe tray (error code D displayed on the timer screen, see page 11 section F,1). Phone your nearest Rheem Service Department or Rheem Service Centre to arrange for an inspection.

Are all Tap LED's Flashing? (safety & orange then green)

The tap lever was pushed down too slowly. Reset the tap button to the OFF position and fully activate tap lever. If the LED's continue flashing a fault has occurred with the tap. Phone Rheem Service or a Rheem Service Centre to arrange for an inspection.

Has there been heavy use?

Heavy boiling water usage can result in the tank level dropping below the low level probe. In this situation the boiling water pump is deactivated. The green LED on the tap may also flash due to insufficient temperature as the tank refills. This is normal operation. Wait for a time period to allow the tank to refill and reheat. The green LED will stop flashing as the water heats up to the usable temperature.

WATER NOT HOT ENOUGH?

Heavy usage

You may find that due to heavy boiling water usage the boiling water volume required may be less than what is available. This is due to insufficient recovery time being allowed. If the available water temperature is too low the Green LED will flash until usable temperature is reached.

High altitude

The boiling water unit is fitted with automatic altitude calibration to prevent the water from continually boiling, which is not energy efficient. Different altitudes cause water to boil at different temperatures. If you believe the water temperature is not hot enough, recalibrate the unit (see page 11 section 4).

SAVE A SERVICE CALL

HIGH ELECTRICITY BILLS

Should you at any time, feel your electricity account is too high, we suggest you check the following points:

This water heater has an ON/ OFF automatic timer and a sleep mode. Check to see if these features have been activated. Refer “Setting the Timer” on page 8.

UNIT WILL NOT SWITCH OFF

The electronic timer will only switch the unit on or off when it is in “Auto” mode (See section B on page 9) otherwise the unit will operate 24 hours a day 7 days a week.

NO WATER COMING OUT OF THE TAP

There may have been a large draw off prior. Wait for the unit to fill enough for you to get water out. If water will still not come out of the tap check the timer display. If there is an error message call the Rheem Service Department or a Rheem Service Centre for a service call.

POOR CHILLED WATER DELIVERY

For Rheem 290254 and 290255 series push through and 290250 and 290251 series pumped water chillers the information below will aide in fault detection. For installations using third party chillers please refer to the chiller manufacturers instructions for further information.

Low supply pressure

If the water supply pressure is below 350kPa, lower than acceptable delivery rates may occur.

Blocked filter

Water flow rate will diminish over time as the filter removes particles from the water supply. To change the filter, refer to page 15 or if assistance is required contact Rheem service department or Rheem service centre.

The electronic timer has a filter life counter. The tap will indicate when the filter should be changed by flashing the orange LED on the tap.

TIMER CLOCK HAS RESET AND/OR LOST PROGRAMS

This unit has a factory fitted battery to retain settings in the event of a power cut or if the unit is turned off. The expected life of this battery is many years, even if power cuts are frequent. If the battery has gone flat or is faulty for any reason, the unit will operate as normal, but may lose the clock and timer program settings in a power cut. It will revert to STD mode rather than AUTO but will still operate normally in continuous 24/7 mode. If the battery needs replacing, contact Rheem Service Department or a Rheem Service Centre.

IF YOU HAVE CHECKED ALL THE ABOVE AND STILL BELIEVE YOU NEED ASSISTANCE, CALL THE RHEEM SERVICE DEPARTMENT OR RHEEM SERVICE CENTRE.

INSTALLATION

THIS BOILING WATER UNIT IS FOR INDOOR INSTALLATION ONLY.

BOILING WATER UNIT LOCATION

The boiling water unit must be installed within 1 metre of the Rheem tap. Ensure that the jackets' air vents are clear of obstructions at all times. The boiling water unit is designed to fit under a standard sink (internal cupboard depth of 550mm). The boiling water unit should be positioned with the timer display facing the front of the cupboard or space for easy viewing.

Clearance must be allowed for servicing of the boiling water unit. The installer must leave at least 50mm clearance on sides that have vents to allow air flow through the boiling water unit.

You must be able to read the information on the rating plate. Remember you may have to remove the entire boiling unit and chiller for servicing.

The installation must comply with the requirements of AS/NZS3500, AS/NZS3000 and water supply by-laws, relevant local authority by-laws, codes (e.g. Building Code) and regulatory authority requirements. In New Zealand, the installation must conform to the New Zealand Building Code.

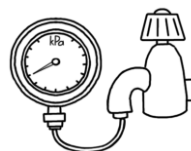
The water heater must not be installed in an area with a corrosive atmosphere where chemicals are stored or where aerosol propellants are released. Remember the air may be safe to breathe, but the chemicals may attack the materials used in the construction of the boiling water unit, or adversely affect the operation of the boiling water unit.

INSTALLATION

MAINS WATER SUPPLY

Where the mains water supply pressure exceeds that shown in the table below, an approved pressure limiting valve is required and should be fitted.

Model	743 series
Max. mains water pressure	1000kPa
Min. mains water pressure	350kPa
Max. mains water temperature	38°C
Min. mains water temperature	2°C



TANK WATER SUPPLY

If the boiling water unit is supplied with water from a tank supply and a minimum water supply pressure of 350kPa at the boiling water unit cannot be achieved, then a pressure pump system must be installed to allow the boiling water unit to operate. The cold water line from the supply tank should be adequately sized and fitted with a full flow gate valve or ball valve, care must be taken to prevent water hammer occurring between the pump and boiling water unit. **Failure to comply can void the warranty.**

THREADED CONNECTION SIZE

- Cold water inlet connection: RP $\frac{1}{2}$ / 15mm

All plumbing work must be carried out by a qualified person and in accordance with AS/NZS 3500.4 and local authority requirements.

INSTALLATION SEQUENCE

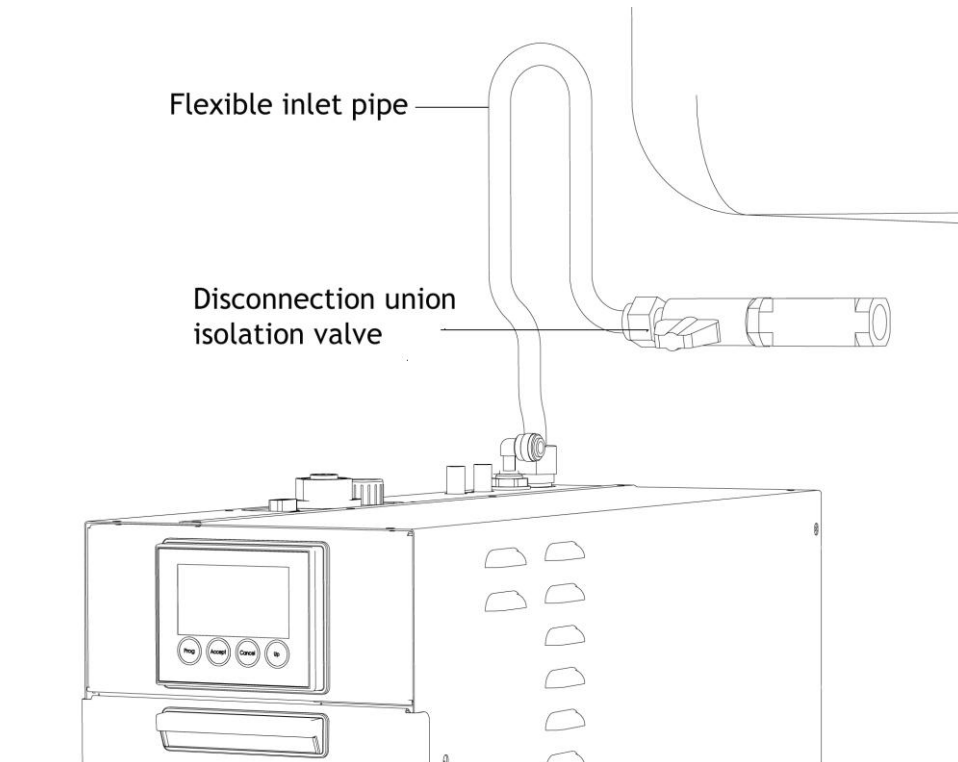
The installation sequence should be as follows:

- Connect cold water mains supply
- Fit Chiller / Fan units
- Install boiling/chilled water tap
- Connect boiling water chilled/filtered water and vent tubes

INSTALLATION

Typical under-bench installation

Mains Water Connection



COLD WATER INLET

The pipe work must be clear of foreign matter before connection and purged before attempting to operate the boiling water unit. All olive compression fittings must use brass or copper olives. Use thread sealing tape or approved thread sealant on all fittings.

It is mandatory for a union isolation valve to be fitted on the cold water supply line to the boiling water unit for removal for servicing.

The internal pressure limiting valve incorporates a dual non-return valve therefore extra non-return valves are not required for installation.

A good quality Watermarked flexible inlet pipe must be installed between the union isolation valve and inlet connector on the unit, suitably long enough to allow the boiling water unit to be moved to the front of the cupboard so as to overhang the cupboard front by 50mm.

Note: A non-Watermarked flexible inlet pipe will deteriorate and affect the water quality entering the unit. Ensure that all flexible inlet pipes are Watermarked and hydrolysis resistant. Note this is mandatory in Australia.

Connect the cold water supply to the fitting marked “Inlet” on the boiling water unit.

INSTALLATION

TAP INSTALLATION

There are currently two tap styles available, the 743 Series (Aqua) and the 7431 Series (Azure). Installation information for the Azure model is provided with the Azure Tap.

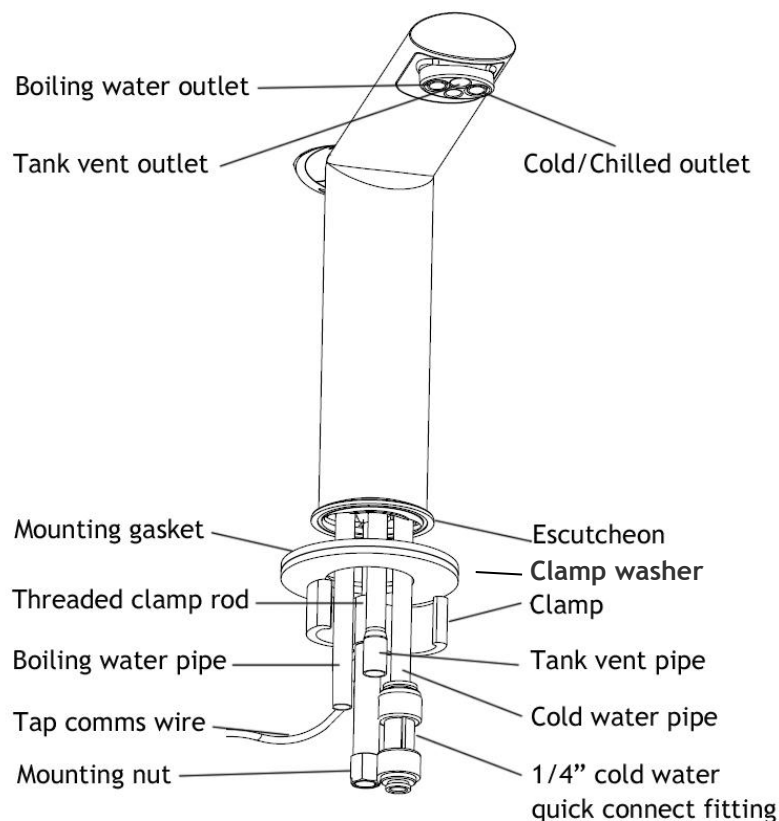
743 SERIES RHEEM TAP

To install the Rheem Tap onto a bench, a 35mm diameter hole must first be cut in the bench top in the desired location (ensure that all burrs and sharp edges are removed prior to fitting the tap). Next remove the adhesive backing from the mounting gasket and stick the gasket to the underside of the bench. The tap (minus the clamp washer, mounting gasket and mounting nut) is then lowered through the hole. Place the clamp washer and clamp over the threaded clamp rod and screw on the mounting nut. Only tighten the mounting nut enough to loosely secure the tap, and ensure the tap is pointing in the preferred direction for usage. Ensure the tap communications lead is free to move and not pinched between the bench and the clamp. For ease of installation, cut the threaded clamp rod to the appropriate length so the mounting nut can be tightened with a screw driver.

TAP EXTENSION KIT

Please refer to Installation Instructions supplied with kit.

Rheem Tap installation



INSTALLATION

BOILING/CHILLED WATER TAP

Connect the silicone tube to the boiling water tap pipe, (the hot pipe is on the hot lever side of the tap) then cut the silicone tube to length so that it slides onto the boiling water outlet on the boiling water unit without kinking or creating low points.

Repeat the above step for the tap vent pipe to the boiling water unit vent.

Fit the quick connect fitting to the cold pipe. Connect the ¼" chilled water outlet pipe to the ¼" quick connect fitting on the outlet line of the chiller, and cut so the chilled water outlet tube inserts into the ¼" quick connect fitting on the Tap without kinking

(Ensure that the chilled water outlet pipe is able to also be connected to the filtered outlet connector on the boiling water unit as this will facilitate flushing the filter when a filter change is required).

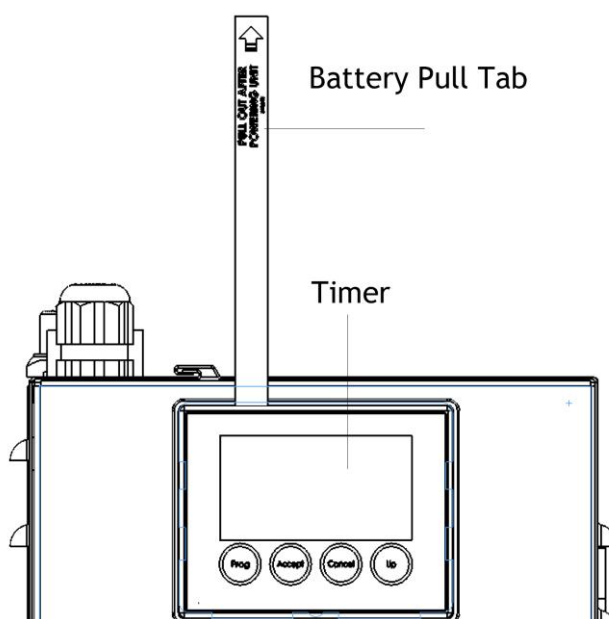
Connect the tap communications cable to the tap/chiller comms plug from the boiling water unit (8 Pin). If a Rheem chiller is fitted in the installation, the other comms cable is to be plugged into the chiller comms plug (4 pin, connectors can only be inserted one way onto the plugs).

⚠ WARNING: ENSURE THAT ALL TUBES ARE CUT TO LENGTH, INSTALLED WITHOUT KINKS OR TIGHT BENDS, AND HAVE CONTINUOUS FALL. FAILURE TO DO SO WILL CAUSE A DETRIMENTAL EFFECT ON THE PERFORMANCE OF THE UNIT AND RENDER THE WARRANTY VOID.

Once the Tap is installed you can open the cold water isolation valve and turn the unit on electrically.

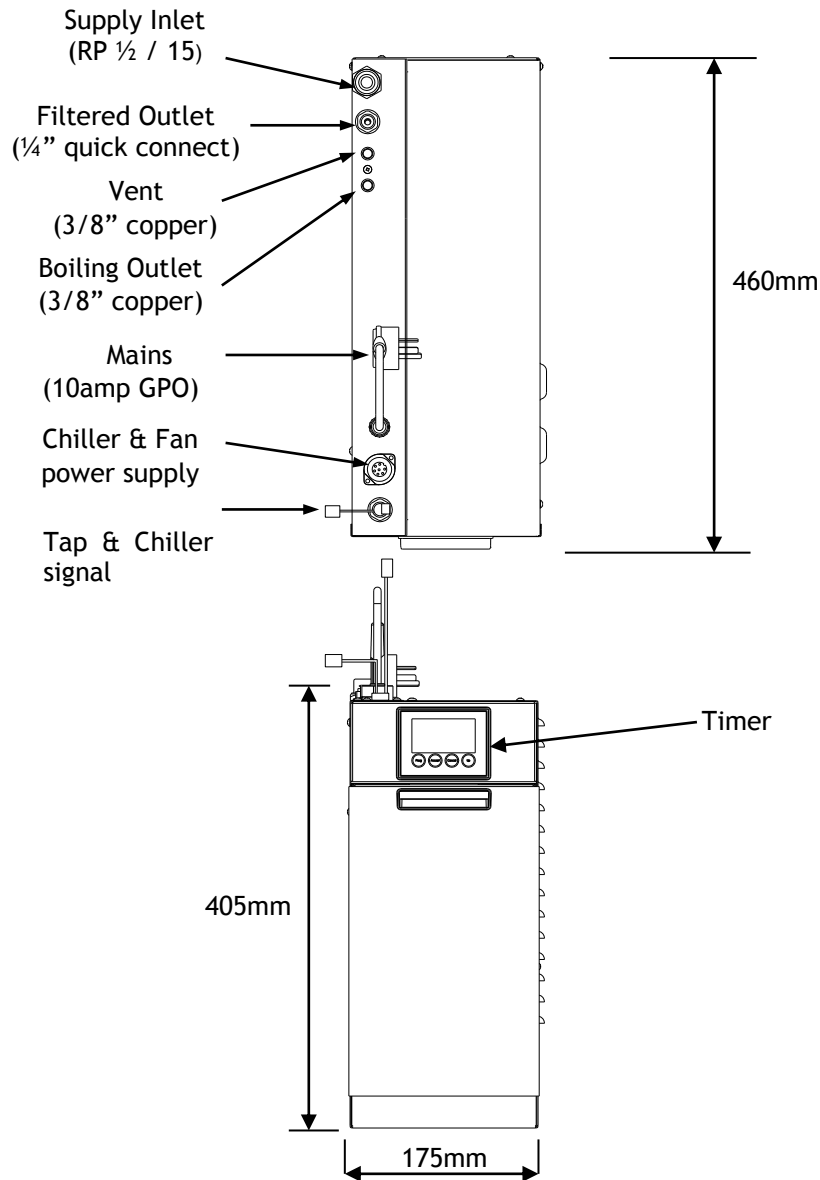
AFTER POWERING THE UNIT UP FOR THE FIRST TIME

When the unit has been turned on for the first time, the battery pull tab located on the timer must be removed by grasping firmly and pulling vertically up. This activates the backup power for the timer to maintain your settings in the event of a power failure.



INSTALLATION

DIMENSIONS AND TECHNICAL DATA



*Specifications are subject to change with ongoing product improvements.

Model	Capacity	Element size	Mass empty	Mass full
743003/F 743103/F	3L	1.5kW	11-12kg	17-18kg
743005/F 743105/F	5L	1.8kW	11-12kg	17-18kg

INSTALLATION

FITTING RHEEM 743/7431 SERIES TO AN EXISTING CHILLER INSTALLATION (For water chillers other than Rheem products)


The Rheem 743 boiling water unit can be installed with an existing stand alone water chiller installation only if the water chiller is a push through type device. The Rheem tap can accommodate the entire system.

- Run water from the filtered outlet on the Rheem 743 product to the inlet point on the stand alone water chiller.
- Run water from the outlet on the water chiller to the chilled water pipe on the Rheem Tap. The chiller comms wire on the tap loom does not need to be attached to the water chiller, as all chilled water controls are housed within the stand alone water chiller.

ELECTRICAL CONNECTION

MAINS POWER ELECTRICAL CONNECTION

The boiling water unit must be connected to a 230-240VAC 50Hz mains power supply via a standard power outlet socket. This device will not draw more than 10Amps when operating under full load including Rheem chiller, if installed. For extra electrical protection against power surges and spikes it is highly recommended that the user install a surge protector prior to the boiling water unit. Note the Rheem chiller draws its power from the boiling water unit.

<p> WARNING: This boiling water unit contains electronic equipment and 500 V insulation tests must only be conducted between active and earth and between neutral and earth.</p>
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COMMISSIONING

TO TURN ON AND FILL THE BOILING WATER UNIT

- Switch on the electrical supply at the isolating switch to the water heater.
- Open cold water Isolating valve
- The unit should begin filling (check for external leaks)
- Set the timer. Refer to “Setting the Timer” on page 8.

On initial start up, this boiling water unit automatically runs through a set-up cycle to detect the boiling point of water. During this cycle steam may discharge from the vent pipe for a short time. This set-up cycle will take up to 18 minutes depending on unit, and when completed (boiling point detected) the unit will commence incremental filling. It is important NOT to operate the tap during the set-up cycle because it may affect the operating temperature of the unit.

Explain to the householder or responsible officer the functions and operation of the boiling water unit. Upon completion of the installation and commissioning of the boiling water unit, leave this guide with the responsible officer.

TO TURN OFF THE BOILING WATER UNIT

If it is necessary to turn off the boiling water unit on completion of the installation, such as on a building site or where the premises are vacant, then:

- Switch off the electrical supply at the isolating switch to the boiling water unit.
- Close the cold water isolation valve at the inlet to the boiling water unit

DRAINING THE BOILING WATER UNIT

To drain the boiling water unit:

- Close the cold water isolation valve.
- Operate the boiling water tap until no water pumps out of the unit, then;
- Turn off the boiling water unit (refer to “To Turn off the Boiling Water Unit” above).
- Remove the unit from the cupboard (the unit should weigh about 13-15kg)
Remove the silicone tubing from the Boiling Water Unit.
- Place a container under the end of the boiling / vent outlets to collect the remaining water being drained off the unit or drain over sink.
- Tip the unit on its side so remaining water drains from the boiling and vent pipes



WARNING: The water contained in the tank may be hot. Take care to avoid scalding.

WATER SUPPLIES

Your boiling water unit is manufactured to suit the water conditions of most Australian and New Zealand metropolitan water supplies. However, there are some known water supplies which can have detrimental effects on the water heater and its operation and/or life expectancy. If you are unsure of your water quality, you can obtain information from your local water supply authority. The boiling water unit should only be connected to a potable water supply.

CHANGE OF WATER SUPPLY

The changing or alternating from one water supply to another can have a detrimental effect on the operation and/or life expectation on a number of components in this boiling water unit.

Where there is a change over from one water supply to another, e.g. a rain water supply, a bore water supply, desalinated water supply, public reticulated water supply or brought in from another supply, then water chemistry information should be sought from the supplier or it should be tested to ensure the water supply meets the requirements given in these guidelines for the manufacturer's warranty to apply.

CHLORIDE AND PH

In a high chloride water supply, the water can corrode stainless steel parts and cause them to fail. Where the chloride level exceeds 250mg/L warranty does not apply to the boiling water unit.

The pH is used as a measure of the water's alkalinity and acidity. In an acidic water supply, the water can attack stainless steel parts and cause them to fail. Where the pH of the water is less than 6.5, the water is acidic and warranty does not apply to the boiling water unit.

SATURATION INDEX

The saturation index is used as a measure of the water's corrosive or scaling properties. In a corrosive water supply, the water can attack copper parts and cause them to fail. Where the saturation index is less than -1.0, the water is corrosive and warranty does not apply.

In a scaling water supply, calcium carbonate is deposited out of the water onto any hot metallic surface. Where the saturation index exceeds +0.80, warranty does not apply to the Boiling water unit unless a water softening device is installed.

WATER HEATERS NOT INSTALLED IN ACCORDANCE WITH THE ABOVE ADVICE WILL NOT BE COVERED BY THE WARRANTY.

END OF LIFE WATER HEATER DISPOSAL

DISPOSAL

Contact your nearest Rheem Service Department or Rheem Service Centre to arrange for disposal of your old Boiling Water Unit.

ENVIRONMENT

If a chiller unit is installed, at the end of the service life and prior to the chiller being disposed of, a person qualified to work with refrigerants must recover the refrigerant from within the sealed system. The refrigerant must not be vented to atmosphere. Phone your nearest Rheem Service Department or Rheem Service Centre to arrange for an inspection.

INSTALLATION NOTES

INSTALLATION NOTES

RHEEM WARRANTY

Rheem Boiling Water Unit Warranty New Zealand & Australia

In addition to your legal rights, Rheem New Zealand Limited makes the following promise to the owner. We will repair or, if necessary, replace a defective boiling water unit or part of it, which has failed due to faulty manufacture on the following terms and conditions:

1. THE RHEEM WARRANTY – GENERAL

- 1.1 This warranty is given by Rheem Australia Pty Limited ABN 21 098 823 511 of 1 Alan Street, Rydalmere New South Wales or Rheem New Zealand Limited of 475 Rosebank Road as applicable..
- 1.2 Rheem offer a trained and qualified national service network who will repair or replace components at the address of the boiling water unit subject to the terms of the Rheem warranty. Australia Only:- Rheem Service, in addition can provide preventative maintenance and advice on the operation of your boiling water unit. The Rheem Service contact number is available 7 days a week on Australia 131 031 with Service personnel available to take your call from 8am to 8pm daily (hours subject to change).
- 1.3 For details about this warranty, you can contact us on Australia 131 031 or New Zealand 0800 657 335 or in Australia, by email at warrantyenquiry@rheem.com.au (not for service bookings), or at rheem@rheem.co.nz in New Zealand.
- 1.4 The terms of this warranty are set out in section 2 and apply to boiling water units manufactured after 1st January 2013.
- 1.5 If a subsequent version of this warranty is published, the terms of that warranty will apply to boiling water units manufactured after the date specified in the subsequent version.

2. TERMS OF THE RHEEM WARRANTY AND EXCLUSIONS TO IT

- 2.1 The decision of whether to repair or replace a faulty component is at Rheem's sole discretion.
- 2.2 Where a failed component or cylinder is replaced under this warranty, the balance of the original warranty period will remain effective. The replacement does not carry a new Rheem warranty.
- 2.3 Where the boiling water unit is installed outside the boundaries of a metropolitan area as defined by Rheem or further than 25 km from either (Australia only) a regional Rheem branch office or an Accredited Rheem Service Agent's office, (New Zealand Only) a Rheem service centre, the cost of transport, insurance and travelling between the (Australia only) nearest branch office or Rheem Accredited Service Agent's office, or (New Zealand Only) a Rheem service centre and the installed site shall be the owner's responsibility.
- 2.4 Where the boiling water unit is installed in a position that does not allow safe or ready access, the cost of that access, including the cost of additional materials handling and/or safety equipment, shall be the owner's responsibility. In other words, the cost of dismantling or removing cupboards, doors or walls and the cost of any special equipment to bring the boiling water unit to floor or ground level or to a serviceable position is not covered by this warranty.
- 2.5 This warranty only applies to the original and genuine Rheem boiling water unit in its original installed location and any genuine Rheem replacement parts.
- 2.6 If the boiling water unit is not sized to supply the hot water demand in accordance with the guidelines in Rheem's boiling water unit literature, any resultant fault will not be covered by Rheem's warranty.
- 2.7 The Rheem warranty does not cover faults that are a result of:
 - a) Accidental damage to the boiling water unit or any component (for example: (i) Acts of God such as floods, storms, fires, lightning strikes and the like; and (ii) third party acts or omissions).
 - b) Misuse or abnormal use of the boiling water unit.
 - c) Installation not in accordance with the Owner's Guide and Installation Instructions or with relevant statutory and local requirements in the State or Territory in which the boiling water unit is installed.
 - d) Connection at any time to a water supply that does not comply with the water supply guidelines as outlined in the Owner's Guide and Installation Instructions.
 - e) Repairs, attempts to repair or modifications to the boiling water unit by a person other than Rheem Service or a Rheem Accredited Service Technician.
 - f) Faulty plumbing or faulty power supply.
 - g) Failure to maintain the boiling water unit in accordance with the Owner's Guide and Installation Instructions.
 - h) Transport damage.
 - i) Fair wear and tear from adverse conditions (for example, corrosion).
 - j) Cosmetic defects.
- 2.8 If you require a call out and we find that the fault is not covered by the Rheem warranty, you are responsible for
 - Australia Only:-our standard call out charge,
 - New Zealand only, the cost of the call out charge by the agent.If you wish to have the relevant component repaired or replaced by Rheem that service will be at your cost.
- 2.9 Subject to any statutory provisions to the contrary, this warranty excludes any and all claims for damage to furniture, carpet, walls, foundations or any other consequential loss either directly or indirectly due to leakage from the boiling water unit, or due to leakage from fittings and/ or pipe work of metal, plastic or other materials caused by water temperature, workmanship or other modes of failure.

RHEEM WARRANTY

Rheem Boiling Water Unit Warranty New Zealand & Australia

3. WHAT IS COVERED BY THE RHEEM WARRANTY FOR THE BOILING WATER UNIT DETAILED IN THIS DOCUMENT

- 3.1 Rheem will repair or replace a faulty component of your boiling water unit if it fails to operate in accordance with its specifications as follows:

Notes: ** Refer to items 2.3 and 2.4 of warranty conditions.

This Rheem warranty covers residential, commercial and industrial installations.	Warranty Period	Warranty Cover
What components are covered	The period in which the fault must appear in order to be covered	What coverage you receive
All Components (from date of installation) All installations / All models	Year 1 & 2	New component or boiling water unit (at Rheem's sole discretion), free of charge, including labour**.
Inner Tank Only	Year 3-5	Where an inner tank fails it will be supplied free of charge, installation and labour cost will be charged to the owner.

RHEEM WARRANTY

Rheem Boiling Water Unit Warranty New Zealand & Australia

4. ENTITLEMENT TO MAKE A CLAIM UNDER THIS WARRANTY

- 4.1 To be entitled to make a claim under this warranty you need to:
- Be the owner of the boiling water unit or have consent of the owner to act on their behalf
 - Contact Rheem Service without undue delay after detection of the defect and, in any event, within the applicable warranty period.
- 4.2 You are **not** entitled to make a claim under this warranty if your boiling water unit:
- Does not have its original serial numbers or rating labels.
 - Is not installed in Australia or New Zealand.

5. HOW TO MAKE A CLAIM UNDER THIS WARRANTY

- 5.1 If you wish to make a claim under this warranty, you need to:
- Contact Rheem in Australia on 131 031 or Rheem in New Zealand on 0800 657 335 and provide owner's details, address of the boiling water unit, a contact number and date of installation of the boiling water unit or if that's unavailable, the date of manufacture and serial number (from the rating label on the boiling water unit).
 - (Australia Only) Rheem will arrange for the boiling water unit to be tested and assessed on-site.
 - (New Zealand Only) A Rheem service centre will arrange for the boiling water unit to be tested and assessed on-site.
 - If Rheem determines that you have a valid warranty claim, Rheem will repair or replace the boiling water unit in accordance with this warranty.
- 5.2 Any expenses incurred in the making of a claim under this warranty will be borne by you.

6. THE AUSTRALIAN CONSUMER LAW (AUSTRALIA ONLY)

- 6.1 Our goods come with guarantees that cannot be excluded under the *Australian Consumer Law*. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.
- 6.2 The Rheem warranty (set out above) is in addition to any rights and remedies that you may have under the *Australian Consumer Law*.

Note: Every care has been taken to ensure accuracy in preparation of this publication. No liability can be accepted for any consequences, which may arise as a result of its application.

RHEEM
www.rheem.com.au
www.rheem.co.nz

FOR SERVICE TELEPHONE
131 031 AUSTRALIA
0800 657 335 NEW ZEALAND
or refer to your local Yellow Pages

