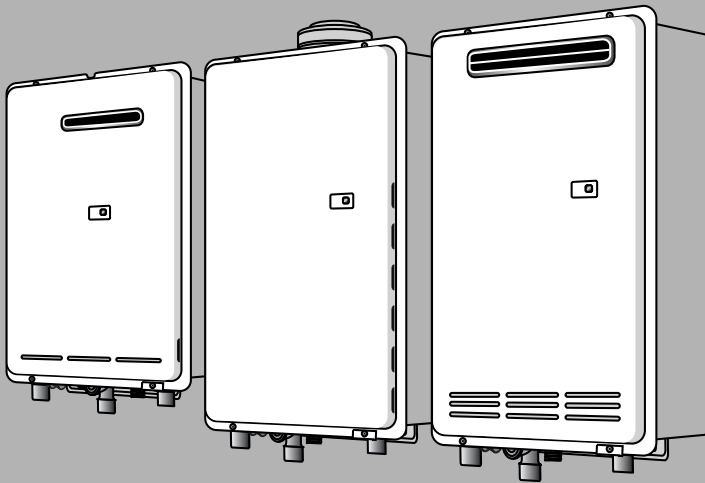


Rinnai

Operation / Installation Manual



To Suit Models:

Infinity 32	REU-V3232W
Infinity 26	REU-V2626W
Infinity 26i	REU-V2632FFU
Infinity 25	REU-2425W
Infinity 20	REU-V2020W
Infinity 18	REU-V2018W
Infinity 16	REU-V1616W
V1200	REU-V1620W
HD 250e	REU-V3232WC
HD 200e	REU-V2632WC
HD 200i	REU-V2632FFUC

A guide on how to use and install, Rinnai continuous flow water heaters

This appliance shall be installed in accordance with:

- Manufacturer's Installation Instructions
- Current AS/NZS 3000, AS/NZS 3500 & AS 5601
- Local Regulations and Municipal Building Codes

This appliance must be installed, serviced and removed by an Authorised Person.



The Australian
Gas Association
All Rinnai gas products
are A.G.A. certified.



N10378



Distributed and serviced in Australia under a Quality
System certified as complying with ISO 9001 by
SAI Global

**Quality
Endorsed
Company**

ISO 9001 Lic 4983
SAI Global

Head Office Certified

Certified
Product



WaterMark
AS3498 Lic W200
SAI Global

REGULATORY INFORMATION

This Appliance must be installed correctly by an authorised person. The installation of gas, water, and electricity must conform to local regulations.

The installation must also comply with the instructions supplied by Rinnai.

Your Rinnai Continuous Flow water heater has been approved by the Australian Gas Association, the A.G.A. Approval Number is shown on Data plate.

Please keep this instruction booklet in a safe place for future reference.

All dimensions referred to in these instructions are in millimetres, unless otherwise specified.

WARNING ABOUT HOT WATER



Excessively hot water is dangerous, especially for young children and the infirm. Rinnai Continuous Flow water heaters allow you to control the temperature of hot water to safe levels.

Water temperatures above 50°C can cause severe burns instantly and may even result in death. Those most at risk are children, disabled, elderly and the infirm. Hot water at 65°C (the average hot water temperature in Australia) can severely burn a child in less than half a second. At 50°C it takes five minutes.

ALWAYS.....

Test the temperature of the water with your elbow before placing your child in the bath, also carefully feel water before bathing or showering yourself.

Supervise children whenever they are in the bathroom.

Make sure that the hot water tap is turned off tightly.

CONSIDER.....

Installing child proof tap covers or child resistant taps (both approaches will prevent a small hand being able to turn on the tap).

Setting your appliance at a maximum temperature of 50°C (Contact Rinnai Australia).

NEVER.....

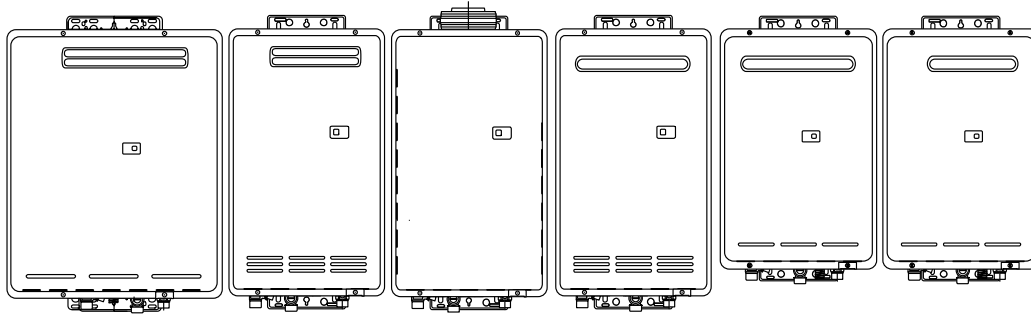
Leave a toddler in the care of another child. They may not understand the need to have the water temperature set at a safe level.

OPERATION MANUAL

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FEATURES AND BENEFITS

Congratulations on purchasing the latest Technology Temperature Controlled Rinnai Continuous Flow water heating system.

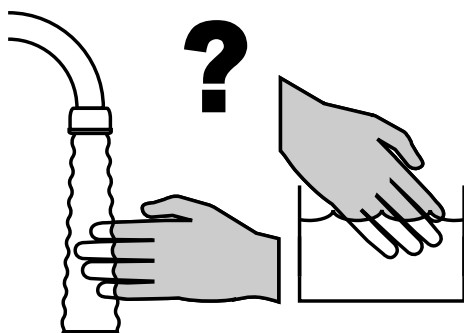


- The Rinnai Infinity and HD products NEVER RUN OUT of hot water. Whilst electricity, water and gas supplies are connected, hot water is available whenever hot water taps are open.
- Built into the main micro-processor is the facility to LIMIT THE MAXIMUM TEMPERATURE of the hot water supplied. The water temperature may be limited to various values. This is particularly useful when the hot water unit is installed where young children or the infirm may be using the hot water.
- The Rinnai Infinity and HD products are power flued appliances. This makes them COMPACT, saving both floor and wall space.
- The temperature of hot water is CONSTANTLY MONITORED by a BUILT-IN SENSOR. If the temperature of the hot water rises to more than 3°C above the selected temperature the burner is turned OFF and only turned ON again when the temperature falls below the selected temperature.
- The burner lights automatically when the hot water tap is opened, and goes out when the tap is closed. IGNITION IS ELECTRONIC, so there is no pilot light. When the hot water tap is off, no gas is used.
- The "Smartstart®" system when fitted can pre-heat the water in the pipework between the water heater and the hot water outlets. This results in water savings and reduces waiting time for heated water at the outlets.
- 'Deluxe' or 'Universal' Temperature Controllers are available as an optional extra. Depending on the models chosen, these offer the following additional features:

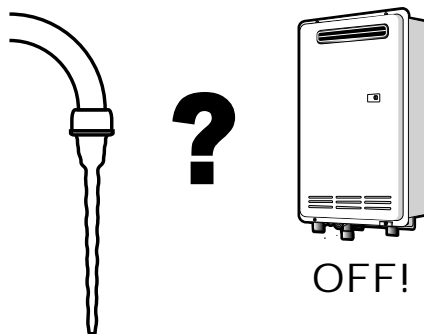
Note

- Bath fill function (Deluxe Bathroom Control Only).
- Voice Prompting (Deluxe Control Only).
- Clock (Deluxe Control Only).
- The Infinity 32, Infinity 26, HD250 and HD200 water heaters can be installed with up to four temperature controllers. See page 5 for the temperature controller options available on your model.
- The Infinity 25, Infinity 20, Infinity 18, Infinity 16 and V1200 water heaters can be installed with up to three temperature controllers. See page 5 for the temperature controller options available on your model.
- Operating NOISE LEVEL IS VERY LOW.
- ERROR MESSAGES ARE DISPLAYED on the Temperature Controllers, assisting with service.

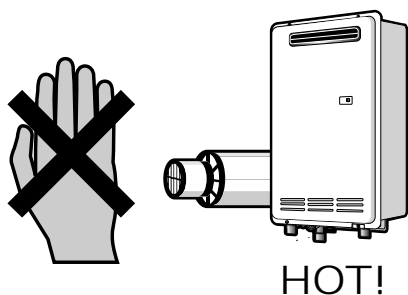
IMPORTANT INFORMATION



Always check water temperature carefully before use. Refer to the **WARNING ABOUT HOT WATER** on "page i" of this manual for important safety information.



At low water flows, the hot water unit may extinguish without warning. Opening the tap further will restart the appliance.



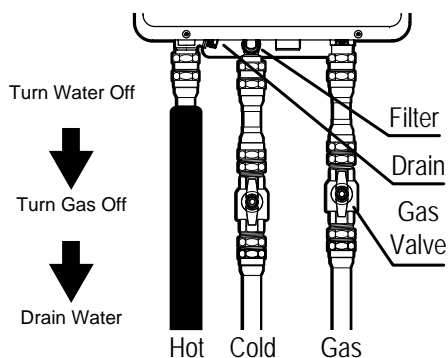
Do Not touch the unit cover or the flue outlet.
Do Not insert objects into the flue outlet.

On colder days steam may discharged from the flue outlet. This condition is normal for high efficiency appliances and does not indicate a fault.

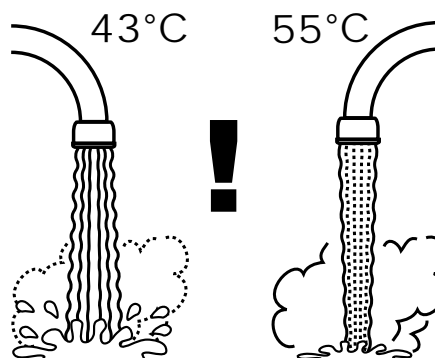


Keep flammable materials, spray cans, fuel containers, pool chemicals, trees, shrubs, etc. well clear of the flue outlet.

Do Not spray water directly into the flue terminal.

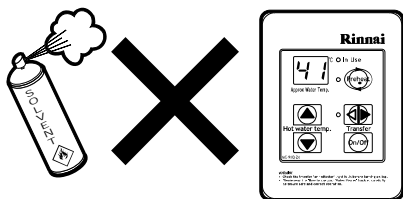


If freezing conditions are expected, turn off water and gas and drain all water from the appliance. If power and the automatic frost protection are connected, freezing will be prevented. (Anti-frost protection is fitted as standard equipment on External units and is available as an optional extra on Internal Units)



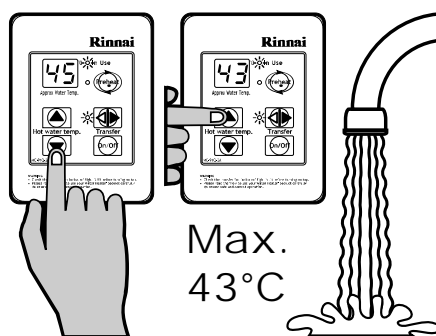
The delivered water temperature is controlled automatically. The flow may vary depending on the delivery temperature selected and the ambient water temperature.

IMPORTANT INFORMATION

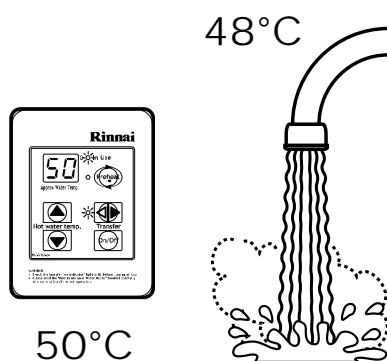


To clean your Temperature Controller(s) use a soft damp cloth with a mild detergent.

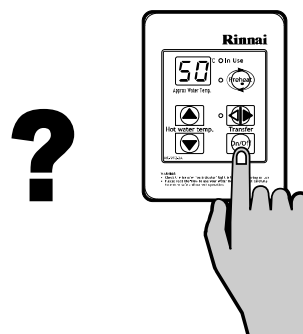
Do Not use solvents!



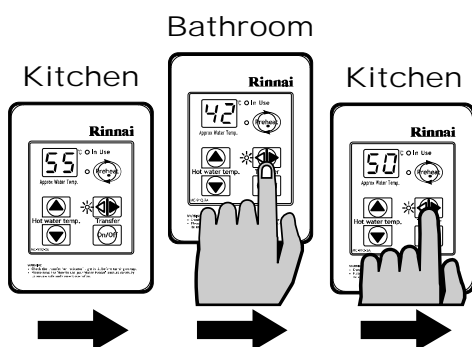
Whilst hot water outlets are open the set temperature may be lowered. However they cannot then be raised above 43°C. In addition transfer of 'priority' between controllers is not possible. These are safety features.



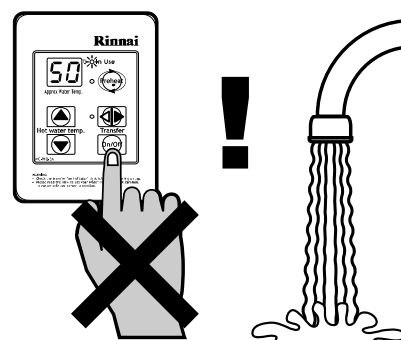
Depending on the weather conditions and the length of the pipe between the hot water unit and the outlet in use, there may be a variation between the temperatures displayed at the Temperature Controller(s) and the temperature of the water at the outlet.



There is no need to turn the Temperature Controller(s) off after use. However, if you prefer to turn the Temperature Controller(s) off, selected temperatures to a maximum of 50°C will be stored in the system memory at all times whilst mains power remains connected.



As a safety precaution, if a Kitchen Controller's temperature is set above 50°C, transferring and then returning 'priority' to the Kitchen Controller will result in a default set temperature of 50°C being selected. This is a safety feature.



Do Not push the ON/OFF button on any Controller when the 'Red' water heater 'In Use' indicator is illuminated as this will turn off the water heater causing the water to go cold. Someone maybe in the middle of having a shower or filling a bath.

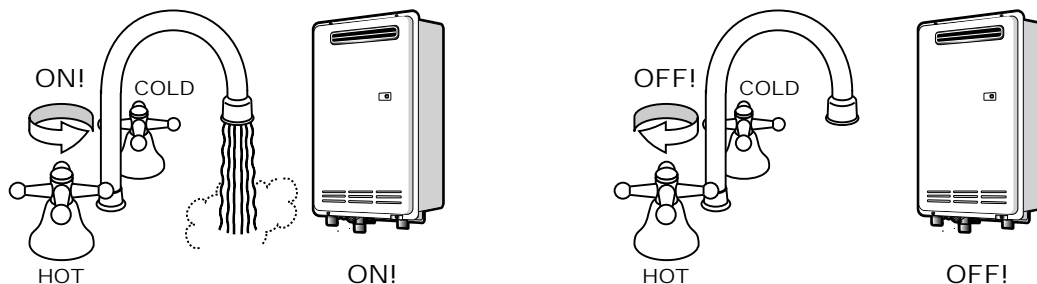
OPERATION WITHOUT CONTROLLERS

Rinnai Infinity and HD Continuous Flow water heater products do not use a pilot light.

When installed and operated without Temperature Controllers, the opening of any hot water tap will automatically start the appliance.

Once water is flowing through the appliance the burner will be ignited by electronic ignition.

When the hot water tap is closed and water flowing through the appliance has stopped the burner flame will extinguish.



Rinnai Infinity water heaters are factory pre-set to a temperature limit of 50°C or 55°C. Rinnai Heavy Duty (HD) series are factory pre-set to a temperature limit of 65°C. Other limits, lower or higher, are available on request for both the Infinity and HD range. Temperature controllers are available to allow precise digital temperature control.

Controllers can be fitted at any time after installation of the hot water unit.



Excessively hot water is dangerous, especially where young children and the infirm are concerned. Rinnai Continuous Flow water heaters allow you to control the temperature of your hot water to safe levels.

Water temperatures above 50°C can cause severe burns instantly, such scalding may even result in death. Those most at risk are children, disabled, elderly and the infirm. Hot water at 65°C (the average hot water temperature in Australia) can severely burn a child in less than half a second. At 50°C it takes five minutes.

ALWAYS.....

Test the temperature of the water with your elbow before placing your child in the bath, also carefully feel water before bathing or showering yourself.

Supervise children whenever they are in the bathroom.

Make sure that the hot water tap is turned off tightly.

CONSIDER.....

Installing child proof tap covers or child resistant taps (both approaches will prevent a small hand being able to turn on the tap).

Setting your appliance at a maximum temperature of 50°C (Contact Rinnai Australia).

NEVER.....

Leave a toddler in the care of another child. They may not understand the need to have the water temperature set at a safe level.

GENERAL TEMPERATURE CONTROL INFORMATION

Temperature Controllers allow precise temperature control by the user. When used correctly, the hot water unit will deliver the selected temperature, even when the water flow is varied, or more than one tap is in use. Each Temperature Controller can be individually programmed, however the water heater unit can only deliver one set temperature at any time. The available temperatures (°C) are as follows:

Kitchen Controller:

37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 48, 50, 55°C* (60, 65°C HD Only)

Bathroom Controller

Hot Water Delivery: 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 48, 50°C

Bath fill Delivery: 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48°C

Whilst hot water outlets are open the set temperature may be lowered. However they cannot then be raised above 43°C. In addition transfer of 'priority' between controllers is not possible. These are safety features.

Suggested temperatures are:

Kitchen 50°C ~ 55°C* Shower 37°C ~ 43°C, Bath fill 39°C ~ 45°C

** Temperature may not be available on all installations*

These temperatures are suggestions only. You may find higher or lower temperatures more comfortable. Maintaining lower temperatures helps save energy. To obtain water temperatures lower than 37°C simply add cold water.

Temperature Controllers are an optional extra. 'Universal' and 'Deluxe' Temperature Controllers can be fitted. Universal Controllers allow temperature selection only. Deluxe Controllers have temperature selection, bath fill and clock functions.

Temperature Controllers allow the water temperature to be set from the various locations where they are installed. The temperature selected will be available to all outlets.

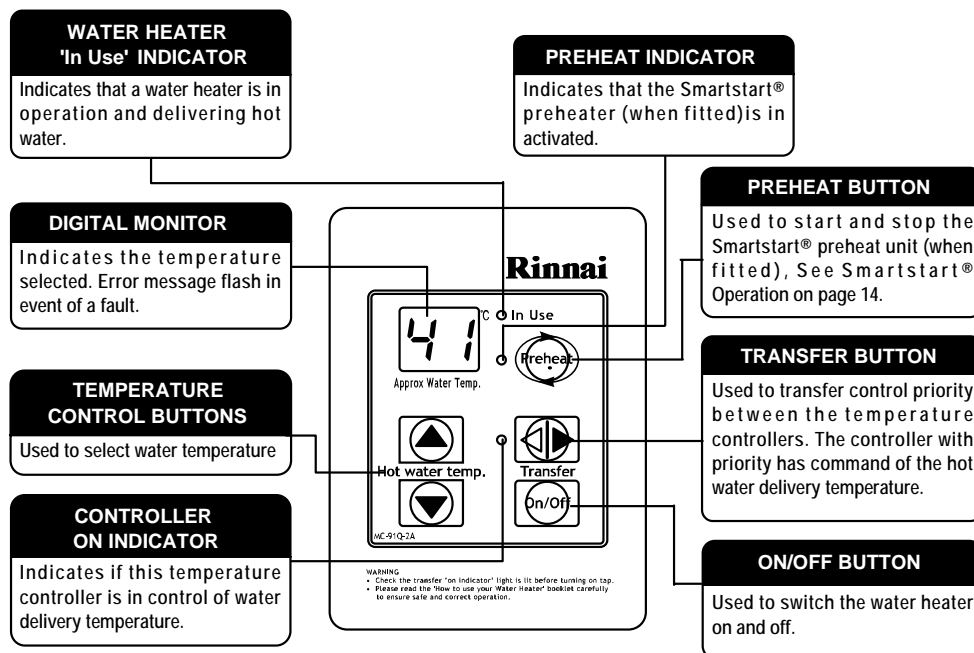
Universal or Deluxe - Controller configurations that are available for the Infinity and HD models

					Infinity			Heavy Duty	
Number of Controllers	Kitchen	Main Bathroom	Ensuite	Laundry or 3rd Bathroom	V1200 16 18 20 25	26 26i	32	200e 200i	250e
1	Universal				✓	✓	✓	✓	✓
2	Universal	Universal			✓	✓	✓	✓	✓
	D.Kitchen	D.Bathroom			✓	✓	✓	✓	✓
3	Universal	Universal	Universal		✓	✓	✓	✓	✓
	D.Kitchen	D.Bathroom	Universal		✓	✓	✓	✓	✓
	D.Kitchen	D.Bathroom	D.Bathroom		✗	✓	✓	✓	✓
4	Universal	Universal	Universal	Universal	✗	✓	✓	✓	✓
	D.Kitchen	D.Bathroom	Universal	Universal	✗	✓	✓	✓	✓
	D.Kitchen	D.Bathroom	D.Bathroom	Universal	✗	✓	✗	✓	✗

Table Key: Universal = Universal (MC-91Q), D.Kitchen = Deluxe Kitchen (MC-70), D.Bathroom = Deluxe Bathroom (BC-70).

UNIVERSAL TEMPERATURE CONTROLLERS

ABOUT THE UNIVERSAL TEMPERATURE CONTROLLER (MC-91Q)



HOW TO USE A SINGLE UNIVERSAL TEMPERATURE CONTROLLER

Turning on the Controller

If the controller is switched off (No digits displayed in the digital monitor window) press the ON/OFF button once.

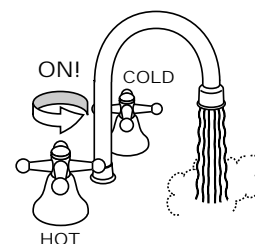
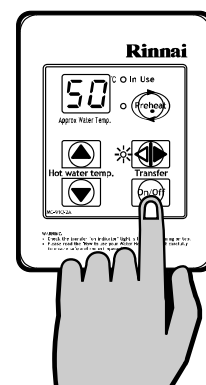
The ON indicator will illuminate, indicating that the hot water unit will be ready to supply hot water once a hot water tap is opened.

Adjusting Temperature

Select the desired temperature using the 'hot water temp' ▲ or ▼ buttons until the required temperature is displayed on the Digital Monitor.

To operate the hot water unit, open any hot water tap. This will automatically light the burner providing hot water. The water heater 'In Use' indicator will illuminate on the Temperature Controller.

Once the hot water is running, if the set temperature is either too hot or cold press the 'hot water temp' ▲ or ▼ buttons until the desired temperature is reached.



CHECK WATER TEMPERATURE BEFORE USE.

A parent should always check the temperature before a child is placed in contact with hot water.



Whilst hot water outlets are open the set temperature may be lowered. However they cannot then be raised above 43°C. In addition transfer of 'priority' between controllers is not possible. These are safety features.

The 'beep' sound can be muted by pressing the Temperature Controller Up ▲ and Down ▼ buttons simultaneously for more than 3 seconds.

UNIVERSAL TEMPERATURE CONTROLLERS

HOW TO USE TWO OR MORE UNIVERSAL TEMPERATURE CONTROLLERS

Turning on Controllers

If the controllers are switched off (No digits displayed in the digital monitor window) press the On/Off button once at any controller.



The ON indicator on the desired controller will illuminate, indicating that the hot water unit will be ready to supply hot water once a hot water tap is opened.

Transferring Priority when the Controllers are already on



An illuminated ON / OFF indicator confirms that the desired controller is in control of the water delivery temperature, if the ON / OFF indicator is not illuminated press the TRANSFER button once.

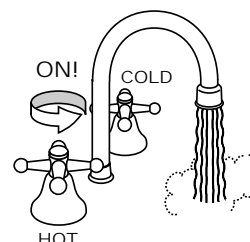
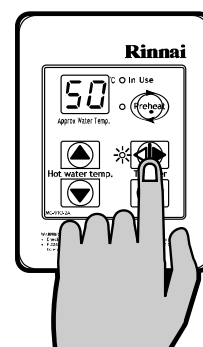
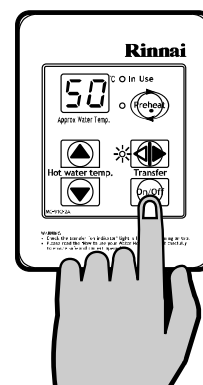
The ON / OFF indicator on the controller will now illuminate indicating that hot water temperature control has now been transferred to this controller and that the hot water unit will be ready to supply hot water once a hot water tap is opened.

Adjusting Temperature

Select the desired temperature using the 'hot water temp'  or  buttons until the required temperature is displayed on the Digital Monitor.

To operate the hot water unit, open any hot water tap. This will automatically light the burner providing hot water. The water heater 'In Use' indicator will illuminate on the Temperature Controller.

Once the hot water is running, if the set temperature is either too hot or cold press the 'hot water temp'  or  buttons until the desired temperature is reached.



CHECK WATER TEMPERATURE BEFORE USE.

A parent should always check the temperature before a child is placed in contact with hot water.



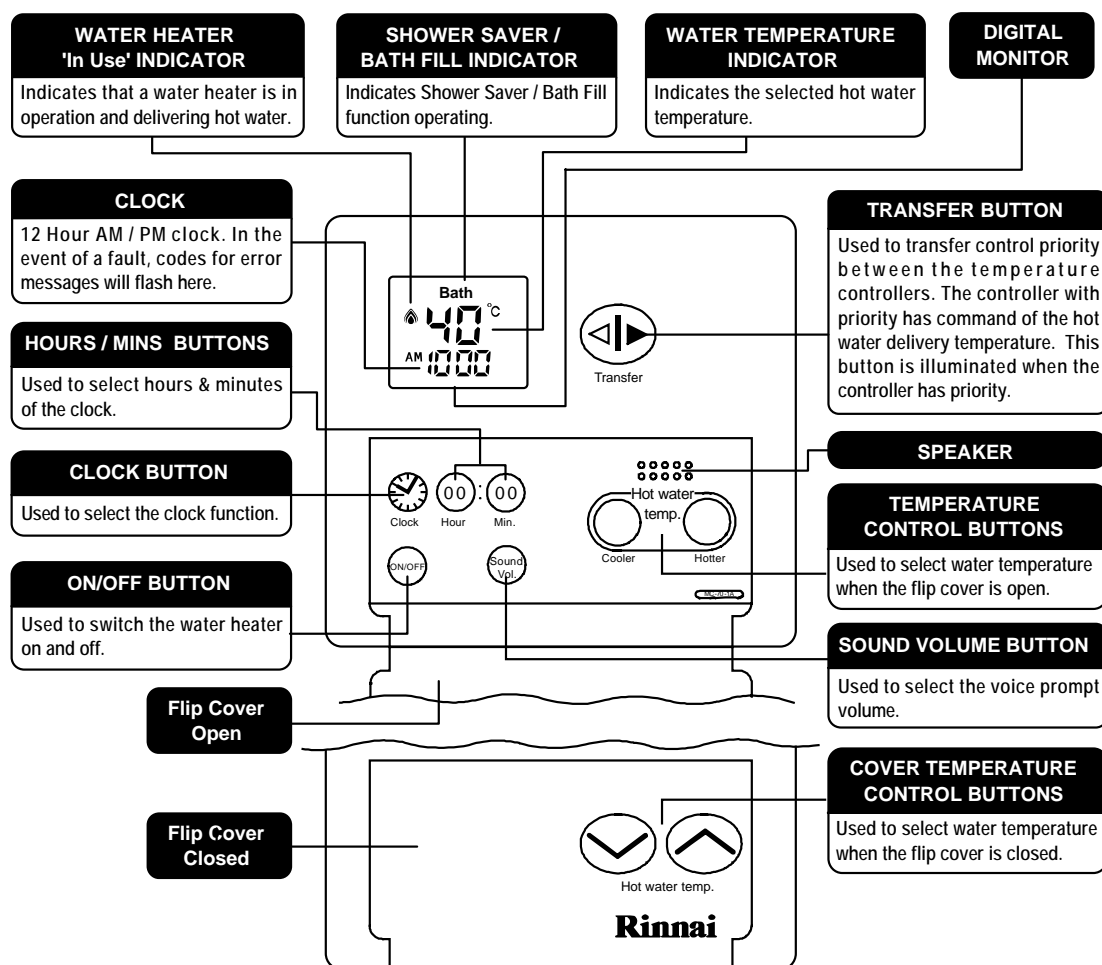
Whilst hot water outlets are open the set temperature may be lowered. However they cannot then be raised above 43°C. In addition transfer of 'priority' between controllers is not possible. These are safety features.

Temperatures higher than 50°C should not be able to be selected on controllers installed in bathrooms, ensuites or toilets. This is to help reduce the risk of burns from hot water. If this is not the case, the controllers have been incorrectly installed. **CONTACT YOUR INSTALLER.**

The temperature of outgoing hot water is constantly monitored by a built-in sensor. If the temperature of the outgoing hot water rises to more than 3°C above the selected temperature shown on the Digital Monitor or the pre-set limit when Temperature Controllers are not fitted, the burner will automatically go out. The 'in use' indicator will also go out. The burner will ignite again once the outgoing hot water temperature falls to that shown on the Digital Monitor (or the pre-set limit of the appliance).

DELUXE TEMPERATURE CONTROLLERS

ABOUT THE DELUXE KITCHEN TEMPERATURE CONTROLLER (MC-70)



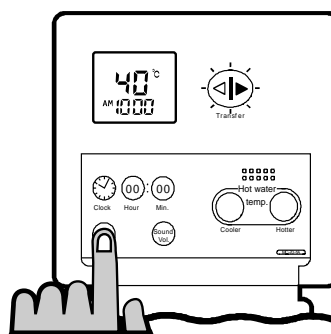
HOW TO USE A SINGLE DELUXE TEMPERATURE CONTROLLER

When using a single Deluxe Temperature Controller, the Deluxe Kitchen Temperature Controller (MC-70) must be fitted.

Turning on the Controller

If the controller is switched off (No digits other than the clock digits displayed in the digital monitor window) press the ON/OFF button once.

The Transfer button of the controller will illuminate, indicating that the hot water unit will be ready to supply hot water once a hot water tap is opened.



NOTE

Each time a button is pressed, a 'beep' will sound. The 'beep' sound and the 'bath fill complete' buzzer can be muted by pressing the Temperature Controller Up and Down buttons simultaneously for more than 3 seconds. To return to original settings, repeat this step.

Avoid getting water in the speaker as this may cause damage.

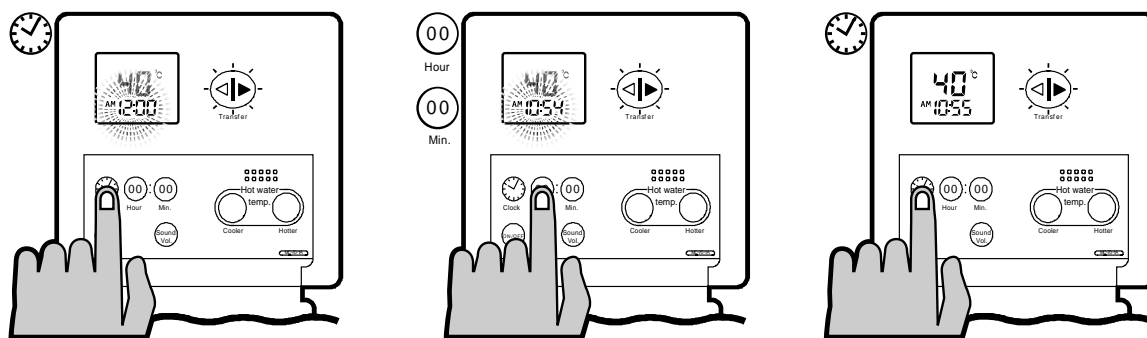
Setting The Clock

The clock is a 12 hour AM/PM style display. To set the time press the 'Clock' button once, the clock digits in digital monitor will flash AM 12:00 in the clock setting mode.

DELUXE TEMPERATURE CONTROLLERS

Set the time with the 'Hour' and 'Min.' (00) buttons. Holding these buttons down continuously cycles the digits. When you get close to the time you wish to set, press the button intermittently to avoid going further than the desired time.

Press the 'Clock' button again to complete setting the clock and return to normal operation.



The time is always displayed regardless of whether the Temperature Controller is turned ON or OFF.

The clock may need to be reset if the power supply to the water heater unit is disrupted by either the power being turned off or due to a power failure.

Setting The Sound Volume

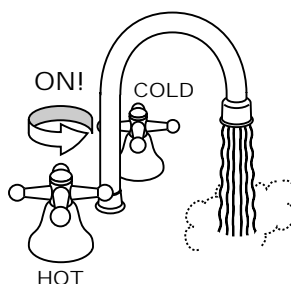
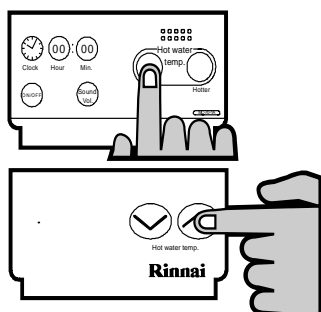
The 'Sound Vol.' button controls the voice prompt volume. Note there are no voice prompts when a single Deluxe Kitchen Temperature controller is installed.

Adjusting Temperature

Simply press the 'hot water temp' (up/down) buttons until the required temperature is displayed on the Digital Monitor.

To operate the hot water unit, open any hot water tap. This will automatically light the burner providing hot water. The red flame of the water heater 'In Use' indicator 🔥 will illuminate on the Temperature Controller.

Once the hot water is running, if the set temperature is either too hot or cold press the 'hot water temp' (up/down) buttons until the desired temperature is reached.



CHECK WATER TEMPERATURE BEFORE USE.

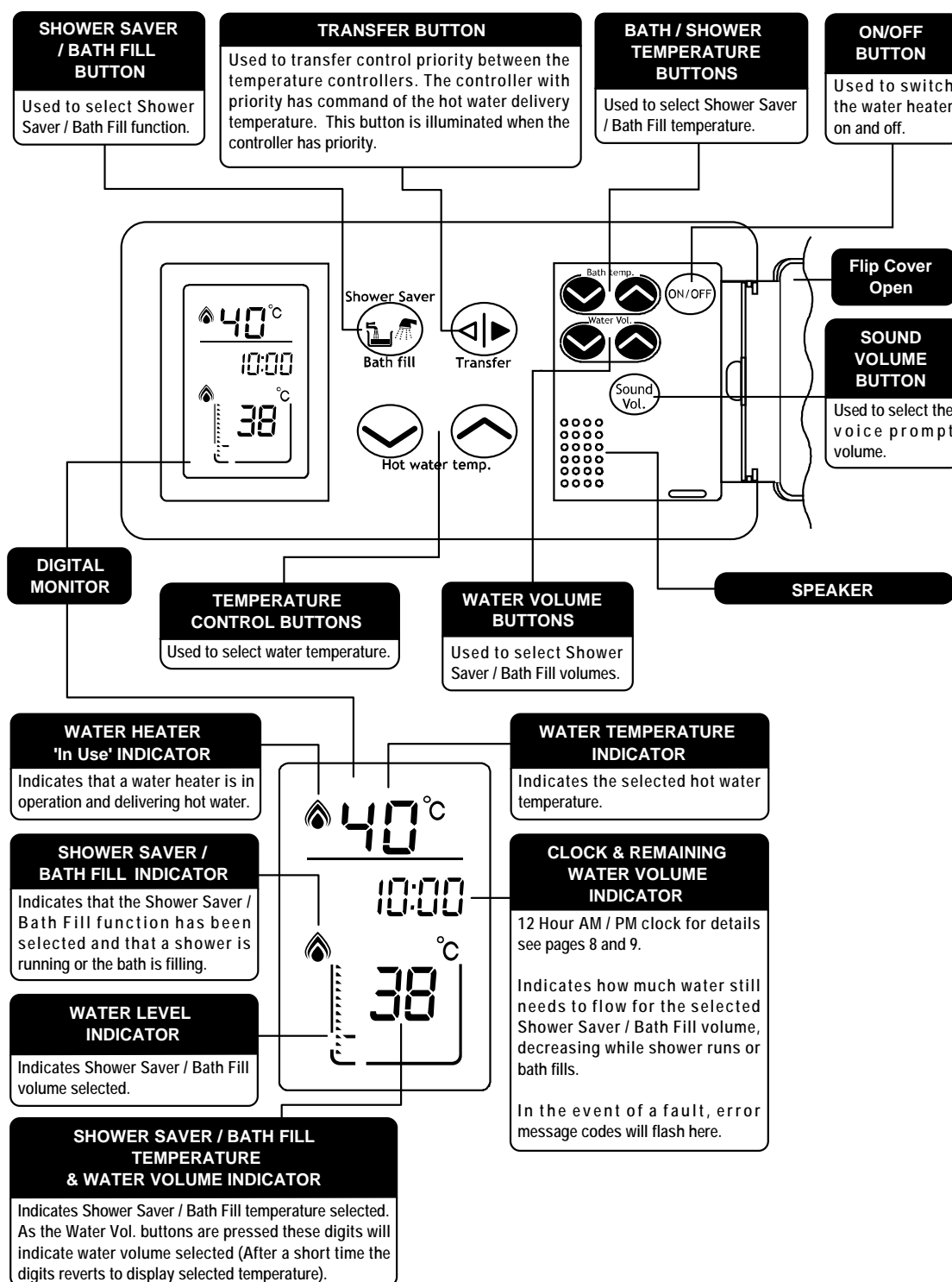
A parent should always check the temperature before a child is placed in contact with hot water.





Whilst hot water outlets are open the set temperature may be lowered. However they cannot then be raised above 43°C. In addition transfer of 'priority' between controllers is not possible. These are safety features.

DELUXE TEMPERATURE CONTROLLERS

ABOUT THE DELUXE BATHROOM TEMPERATURE CONTROLLER (BC-70)



NOTE

Each time a button is pressed, a 'beep' will sound. The 'beep' sound and the 'bath fill complete' buzzer can be muted by pressing the Temperature Controller Up  and Down  buttons simultaneously for more than 3 seconds. This can be done for each Temperature Controller. To return to original settings, repeat this step.

Avoid getting water in the speaker as this may cause damage.

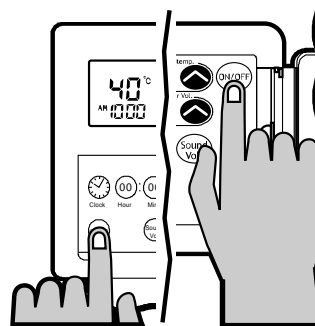
DELUXE TEMPERATURE CONTROLLERS

HOW TO USE TWO OR MORE DELUXE TEMPERATURE CONTROLLERS

When using two or more Deluxe Temperature Controllers, only one Deluxe Kitchen Temperature Controller (MC-70) can be fitted, see page 5 to confirm the maximum number and type of remote controllers that can be fitted to your water heater model.

Turning on the Controllers

If the controllers are switched off (No digits displayed in the digital monitor other than the clock for the Deluxe Kitchen controller) press the ON/OFF button once at any controller. The Transfer Button (◀▶) at the selected controller will illuminate, indicating that the hot water unit is ready to supply hot water when a tap is open.



Setting The Clock (See page 8 to 9 for details on how to set the clock)

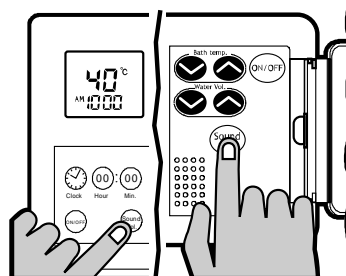


The time is displayed on all the Deluxe Controller(s) when the controllers are on. When the controllers are OFF, the time is only displayed at the Kitchen Controller. After a power failure the clock may need to be reset .

Setting The Sound Volume

The voice prompt sound volume for all Deluxe Temperature Controllers can be set individually. To do this press the 'Sound Vol.' Button (🔊) located behind the flip panel once.

The default voice prompt sound volume is medium, each subsequent press of the 'Sound Vol.' Button will cycle through the available volume settings in the following order: High - Off - Low - Medium.

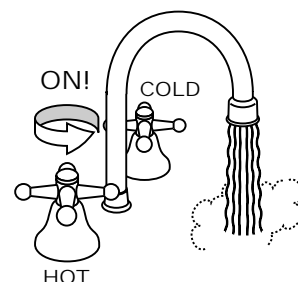
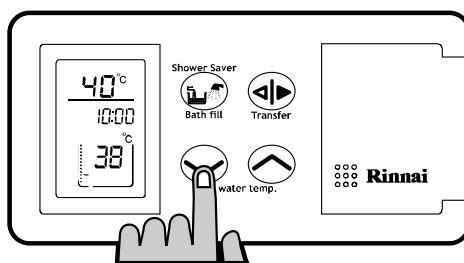
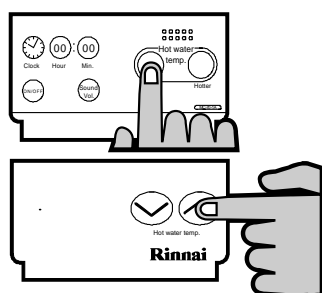


Adjusting Temperature

Simply press the 'hot water temp' (⬆) or (⬇) buttons until the required temperature is displayed on the Digital Monitor.

To operate the hot water unit, open any hot water tap. This will automatically light the burner providing hot water. The water heater 'In Use' indicator (💧) will illuminate on all Temperature Controllers.

Once the hot water is running, if the set temperature is either too hot or cold press the 'hot water temp' (⬆) or (⬇) buttons until the desired temperature is reached.



CHECK WATER TEMPERATURE BEFORE USE.

A parent should always check the temperature before a child is placed in contact with hot water.



Whilst hot water outlets are open the set temperature may be lowered. However they cannot then be raised above 43°C. In addition transfer of 'priority' between controllers is not possible. These are safety features.

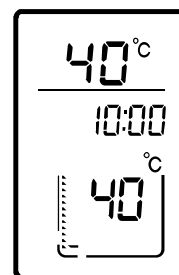
DELUXE TEMPERATURE CONTROLLERS

OPERATING THE SHOWER SAVER / BATH FILL FUNCTION

The 'Shower Saver / Bath fill' function allows a preset water volume and temperature to be selected and run automatically.

Initial Settings

When a deluxe bathroom controller is first turned on, the default shower / bath fill temperature is set to 40°C and the shower / bath volume is set to 100 litres. The shower / bath volume can be lowered to a minimum of 30 litres or raised to a maximum of 400 litres.



Programming Shower / Bath volume and Temperature

With the system on, select a Deluxe Bathroom controller and ensure that it currently has priority. If it does not have priority press the Transfer button once and the Transfer button will illuminate.

To select the desired delivery temperature use the 'Shower / Bath temp.' up or down buttons located behind the flip panel.

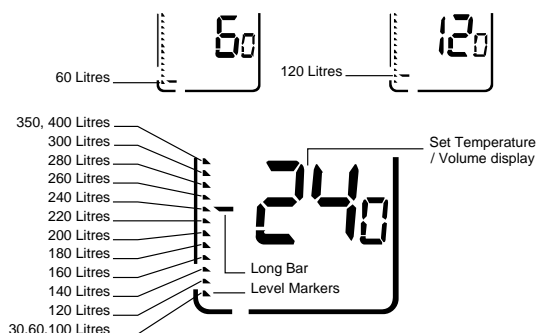
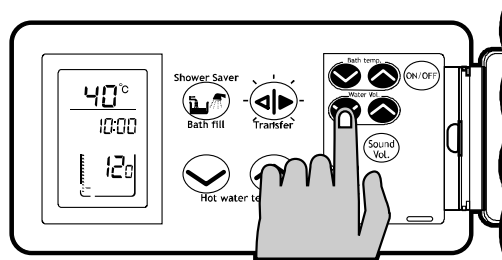
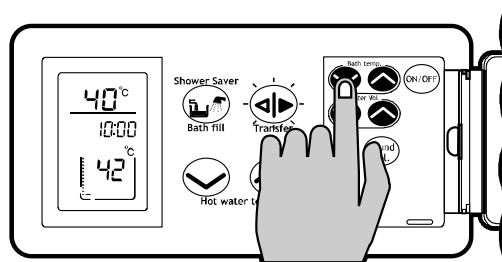
The selected temperature will be displayed at the bottom of the bathroom controller monitor and will remain as the default temperature until it is changed or if the mains power is turned off.

To select the volume of water to be used by the shower / bath use the 'Water Vol.' up or down buttons that are located directly below the 'Shower / Bath temp.' buttons located behind the flip panel.

The selected volume is displayed at the bottom of the controller monitor numerically, and graphically by the long bar against the level markers.

When filling a bath for the first time, it is recommended that a low bath fill volume such as 100 litres or lower be used. During any subsequent bath fills the volume can then be adjusted to suit your known bath volume and or desired fill level.

The long bar and the level markers are used to graphically represent the current shower / bath volume in litres. The examples to the right show shower / bath volumes set to 60, 120 and 240 litres.



NOTE

Remember that the bath level markers on the display are not a true representation of your bath. i.e. the 'half-way' mark on the monitor is not necessarily the 'half-way' point on your bath.


Be careful not to overfill the bath, an average bath volume is 160 litres. It is recommended that when filling a bath for the first time you should:

- Remain by the bath during the filling process.
- Use a low bath fill volume such as 60 litres or less.

When Smartstart® (page 14) is in operation, the Shower Saver / Bath Fill function is unavailable while the water heater 'In Use' indicator is illuminated. Do not press the Preheat button whilst Shower Saver / Bath Fill is in operation


DELUXE TEMPERATURE CONTROLLERS

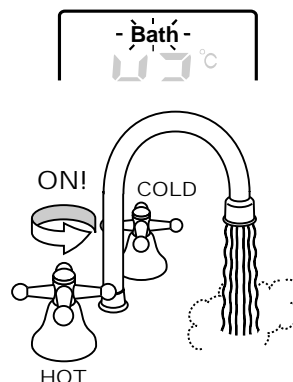
Using Shower Saver / Bath Fill

Press 'Shower Saver / Bath fill'  button once. The 'Shower Saver / Bath fill' button will illuminate and a tone will sound. The 'Bath' indicator will also be displayed in the Kitchen Controller monitor.


The voice prompt will say "The hot water system is ready. Open the hot water tap".

Open the hot water tap for the relevant shower or bath.

The 'In Use' indicator  will illuminate at all Deluxe Temperature Controller(s) and the shower will run or the bath will start to fill.



To Stop Shower Saver / Bath Fill Operation

If you wish to stop the water flow whilst the shower saver / bath fill function is in operation, simply press the 'Shower Saver / Bath fill'  button. The 'Shower Saver / Bath fill' button will flash and the voice prompt will say "Hot water is not available, Turn off all hot water taps and push the 'Bath fill' button". Follow the voice prompt instructions.

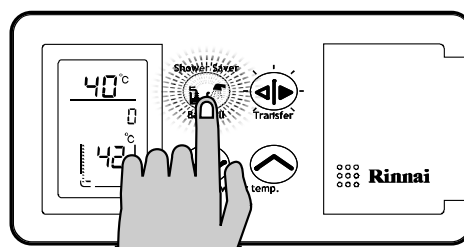
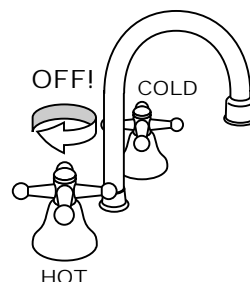
When Shower Saver / Bath Fill Operations Finishes

Once the shower saver / bath fill operation finishes the following events will occur:

1. The flow from the shower / bath hot water tap will cease.
2. The 'Shower Saver / Bath fill' button will flash.
3. The Kitchen Controller 'Bath' indicator will flash.
4. A tone will sound.
5. The voice prompt will say "Bath fill is complete. Turn off the bath hot water tap and push the Bath fill button."

Follow the voice prompts instructions. Note that the hot water unit will not allow hot water to flow from any fixture until the 'Shower Saver / Bath fill' button has been pressed.

6. The 'Shower Saver / Bath fill' button light on the Bathroom Controller and the 'Bath' indicator on the Kitchen Controller monitor will go out.



CAUTION

CHECK WATER TEMPERATURE BEFORE USE.

A parent should always check the temperature before a child is placed in contact with hot water.

NEVER LEAVE YOUNG CHILDREN UNATTENDED IN THE BATH.

When using the 'Shower saver / Bath fill' function, ALWAYS close the hot water tap for the bath or shower after the flow has stopped.



NOTE

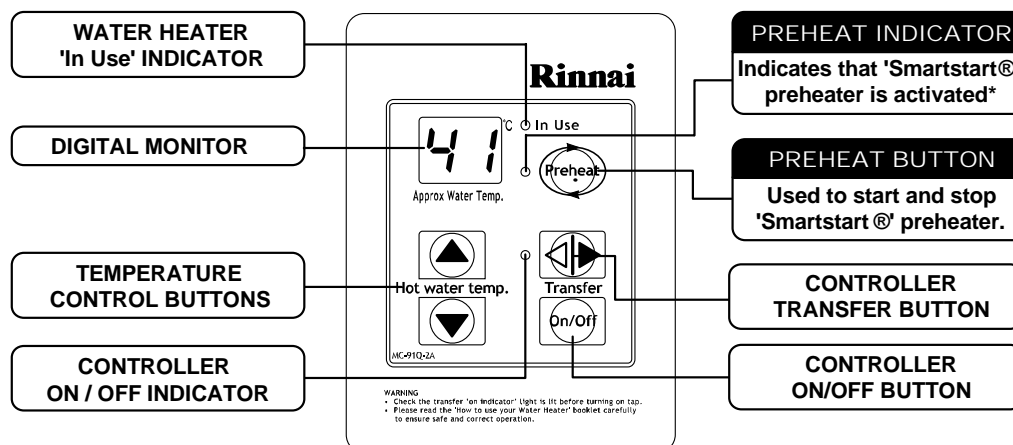
Whilst hot water outlets are open the set temperature may be lowered. However they cannot then be raised above 43°C. In addition transfer of 'priority' between controllers is not possible. These are safety features.

COMBINING UNIVERSAL AND DELUXE CONTROLLERS

Universal and Deluxe Controller can be combined and will function as described in other sections of this manual. Refer to the table on page 5 to confirm the maximum number and combination of controllers that can be fitted to your Water Heater model.

SMARTSTART® PRE-HEAT OPERATION

ABOUT THE SMARTSTART® PRE-HEAT SYSTEM



Preheat Function

The “preheat” function on the Universal Controller MC-91Q works in conjunction with various Rinnai Infinity and HD Continuous Flow water heater models and the separately installed and optional Rinnai “Smartstart®” module.

When the “preheat” function is activated and used in accordance with these instructions, water in the pipework connected between the water heater and the hot water outlets in your house is warmed before any outlets are opened. This results in water savings and added convenience.

The preheat function is activated as follows:

1. If the controller is switched off (No digits displayed in the digital monitor window) press the 'ON/OFF' button once. The controller ON / OFF indicator will illuminate, indicating that the hot water unit is ready to supply hot water when a hot water tap is open.
2. Select the desired temperature using the 'hot water temp' or buttons until the required temperature is displayed on the control panel monitor.
3. Press the 'preheat' button once. The 'preheat' indicator next to the preheat button and the water heater 'In Use' indicators will illuminate, indicating that the preheat system has been activated.
4. Wait approximately two minutes before opening an outlet. This will allow the water in the pipework to be warmed.



NOTE

The waiting time may be longer or shorter than one minute depending on your particular installation configuration.

The preheat function is cancelled 5 minutes after activation and the 'preheat' indicator will go out. This is to conserve energy. To reactivate, simply repeat steps 2-4 above.

*** If the 'preheat' button is pressed and the 'SmartStart' preheat unit is not installed, the 'preheat' indicator will still light but there will be no preheat function. The 'preheat' indicator will go out after a short time and will not affect the other functions of the controller or water heater.**

Other Controller Functions

Controller functions such as temperature control and transfer of priority between multiple controllers is not affected by the operation of the preheat. Such functions are described in the applicable sections of this manual refer to the OPERATION MANUAL table of contents on page ii.

TROUBLESHOOTING

Your Rinnai Continuous Flow water heaters has a self diagnostic capability. If a fault occurs, an Error Code will flash on the Digital Monitor if you have Temperature Controllers. This assists with diagnosing the fault, and may enable you to overcome a problem without a service call. Please quote the code displayed when enquiring about service.

ERROR	FAULT	REMEDY
-	Noticeable reduction in water flow.	Inlet water filter needs to be cleaned. Service call.
03	Power interruption during Bath fill (Water will not flow on power reinstatement).	Turn off all hot water taps. Press ON/OFF twice.
10	Air intake or flue blocked.	Service Call.
11	No ignition / No gas supply.	Check gas is turned on at water heater and gas meter or cylinder.
12	Flame Failure / Low gas flow.	Check gas is turned on at water heater and gas meter or cylinder. Check that nothing is obstructing flue outlet. Turn on gas supply to water heater.
14	Remaining Flame Safety Device.	Service Call.
16	Over Temperature Warning.	Service Call.
32	Outgoing Water Temperature Sensor Faulty.	Service Call.
33	Heat Exchanger Outlet Sensor Faulty.	Service Call.
34	Combustion Air Temperature Sensor Faulty.	Service Call.
52	Gas Modulating Valve Faulty.	Service Call.
61	Combustion Fan Failure.	Service Call.
65	Water Flow Control Faulty (Does not stop flow properly).	Service Call.
71	Micro-processor Failure.	Service Call.
72	Micro-processor Failure.	Service Call.

In all cases, you may be able to clear the Error Code simply by turning the hot water tap OFF, then ON again. If this does not clear the Error Code, try pushing the ON/OFF button OFF, then ON again. If the Error Code still remains, contact Rinnai for advice.

Troubleshooting Without Controllers

If you have no Temperature Controllers and experience the following symptoms, carry out the suggestions. If the symptom continues, contact Rinnai for advice.

FAULT	REMEDY
The unit does not attempt to start at all.	Check the power is on at the unit. Check the isolation valves at the unit are open.
The unit starts then shuts down immediately.	Check the power is still on. Check the gas isolation valves at the unit and the gas meter are fully open. Open your hot water tap fully.
The unit starts then the water goes cold.	Check the power is still on. Open your hot water tap further.



Faults caused by insufficient gas supply, insufficient water supply, gas quality, water quality, installation errors or operation errors are not covered by the manufacturer's warranty. Refer to Warranty Conditions pages 16 and 17.

WARRANTY CONDITIONS

WARRANTY TERMS

The benefits conferred by this warranty are in addition to all other rights and remedies in respect of the product which you have under the Trade Practices Act and similar State or Territory Laws. Given installation and application is in accordance with the manufacturers specifications and instructions, Rinnai water heaters and Smartstart® systems are warranted by Rinnai for the cost of labour and components in the event of defects arising from faulty materials and/or workmanship in accordance with the Terms in Table 1 and Warranty Conditions and Exclusions stated in this document and any additional conditions and exclusions stated in the Operating and/or Installation Instructions for the appliance.

Table 1: Warranty Terms

Domestic Application		Infinity Product Range	Heavy Duty (HD) Product Range	Smartstart® water saver
Heat Exchanger	Parts	10 Years	10 Years	NA
	Labour	3 Years	3 Years	NA
All Other Parts	Parts	3 Years	3 Years	3 Years
	Labour	3 Years	3 Years	3 Years
Commercial Application		Infinity Product Range	Heavy Duty (HD) Product Range	Smartstart® water saver
Heat Exchanger	Parts	1 Year	5 Years #	NA
	Labour	1 Year	1 Year	NA
All Other Parts	Parts	1 Year	1 Year	1 Year
	Labour	1 Year	1 Year	1 Year

Water heaters preset to 85 °C or 95 °C ~ 1 Year warranty on Heat Exchanger.
All terms are effective from the date of installation.

DEFINITION OF DOMESTIC USE

The warranty periods that are allocated under "Domestic Use" are based on hot water usage patterns of a typical family. Rinnai "Domestic Use" warranty periods apply to:

1. Water heaters and Smartstart® water saver units installed to supply heated water to domestic dwellings.
2. Water heater(s) and Smartstart® water saver units installed as part of a solar hot water system to Rinnai specifications supplying heated water to domestic dwellings.
3. Either 1.) or 2.) when installed to supply heated water to commercial installations such as motel units, hotel rooms, caravans, mobile homes, nursing homes, retirement village complexes and other care institutions and like accommodation provided that preset temperatures are lower than 75° C and the water heater and Smartstart® water saver unit are not installed as component(s) of centralised bulk hot water systems and the installation does not incorporate building flow and return systems.

DEFINITION OF COMMERCIAL USE

The warranty periods that are allocated under "Commercial Use" are for Rinnai water heater(s) installed at premises such as commercial and industrial buildings, cafes, caravan parks and sporting complexes. "Commercial Use" warranty applies to:

1. Water heater(s) supplying central shower blocks.
2. Water heater(s) supplying kitchens used for the bulk preparation of food.
3. Water heater(s) set to 75° Celsius or higher.
4. Water heater(s) used in commercial or industrial heating processes.
5. Water heater(s) used in hydronic space heating installations.
6. Any application that uses Rinnai water heater(s) in conjunction with building flow & return systems.
7. Water heater(s) installed as component(s) of centralised bulk hot water system(s).

WARRANTY CONDITIONS

WARRANTY CONDITIONS

1. Dated proof of purchase is required to be shown to the attending service technician prior to the commencement of any warranty work.
2. All Rinnai water heaters and Smartstart® systems must be installed in accordance with the Manufacturer's Installation Instructions, current AS/NZS3000, AS/NZS3500 and AS5601, local regulations and municipal building codes.
3. All Rinnai water heaters and Smartstart® systems must only be installed, commissioned and removed by persons Authorised by local regulations to do so. All Rinnai water heaters and Smartstart® systems must only be serviced and repaired by a Rinnai approved service technician.
4. Where the water heater or Smartstart® system has not been sited in accordance with the Installation Instructions or installed such that normal service access is difficult, a service charge may apply. At the discretion of the attending service technician, if access is deemed dangerous service will be refused.
5. Where a failed component is replaced under warranty, the balance of the original appliance warranty will remain effective.
6. Water chemistry and impurity levels must be within the limits specified in Tables 2 below:

Table 2: Water chemistry and impurity limits - Infinity and HD models

TDS (Total Dissolved Solids)	Total Hardness CaCO ₃	Alkalinity (as CaCO ₃)	Dissolved (free) CO ₂	pH	Chlorides	Magnesium	Sodium	Iron
Up to 600 mg/litre or ppm	Up to 200 mg/litre or ppm	Up to 200 mg/litre or ppm	Up to 25 mg/litre or ppm	6.5 to 8.5	Up to 300 mg/litre or ppm	Up to 10 mg/litre or ppm	Up to 150 mg/litre or ppm	Up to 1 mg/litre or ppm

WARRANTY EXCLUSIONS:

The following exclusions may cause the warranty to become void and may incur a service charge and costs of parts (if required):

1. Accidental damage, acts of God, failure due to misuse, incorrect or unauthorized installations, attempts to repair the heater other than by a Rinnai approved service technician.
2. Where it is found that there is no fault with the water heater or Smartstart® system and the issue is related to the plumbing installation or due to the failure of water, electric or gas supplies.
3. Where the water heater or Smartstart® system has failed directly or indirectly as a result of excessive water pressure, negative water pressure (partial vacuum) or water pressure pulsation.
4. Subject to any statutory provisions to the contrary, claims for damage to walls, foundations etc. or any other consequential loss either directly or indirectly due to leakage from the water heater or any other faults.
5. This warranty does not cover the effects of sludge and sediment as a result of connection to a water supply from unfiltered sources such as a spring, dam, bore, river, or the entry of sludge & sediment into the water supply for any other reason.
6. Operating the unit when not completely filled with water.

Rinnai does not accept liability for consequential damage or any incidental expenses resulting from any breach of the warranty.

Please record the following information below for your own records.

Your Retailer : _____

Address : _____ Phone : _____

Purchase Date : _____

Your Installer : _____ Installers License No : _____

Address : _____ Phone : _____

Installation Date : _____ Cert' of Compliance No : _____

Model No : REU-_____ Serial No : _____

Please remember to send in your completed product Warranty Card!

INSTALLATION MANUAL

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GENERAL INSTALLATION INSTRUCTIONS

REGULATIONS

This appliance must be installed in accordance with:

- Current AS/NZS3000, AS/NZS3500 and AS5601
- Manufacturers Installation Instructions
- Local regulations and municipal building codes

Installation, Service and Removal by an Authorised Person only.

APPLICABLE MODELS

These Installation Instructions apply to the following Rinnai Continuous Flow Water heater models:

REU-V3232W	REU-V2626W	REU-V2632FFU	REU-2425W	REU-V2020W	REU-V1616W
REU-V3232WC	REU-V2632WC	REU-V2632FFUC		REU-V2018W	REU-V1620W

APPLIANCE LOCATION

(External Models)

This appliance is designed for 'Outdoor' Installation only. As such, it must be located in an above ground open air situation with natural ventilation, without stagnant areas, where gas leakage and products of combustion are rapidly dispersed by wind and natural convection.

This appliance must be mounted on a vertical structure with the water and gas connections on the underside pointing downwards. For appliances installed on elevated structures or under floors specific requirements apply. Refer to AS5601 Section 5 for details.

This appliance must not be used as a domestic spa or swimming pool heater.

Location of the appliance flue terminal must be in accordance with Section 5 and Figure 5.3 of AS5601. Figure 5.3 is reproduced in the 'Horizontal Flue Terminal Clearances' section of these instructions. Note that AS5601-2004 was current at the time of printing but may have been superseded. It is the installers' responsibility to ensure current requirements are met.

(Internal Models)

This appliance is designed for 'Indoor' installation only. It may be installed 'Outdoors' in an enclosure if the requirements of AS5601 Section 5 are satisfied. An enclosure is defined as a compartment, enclosed area or partitioned off space primarily used for the installing of the appliance. If installed in an enclosure, either Internally or Externally, the location should be ventilated to allow gas to dissipate and provision must be made for the safe disposal of any leaking water to an exposed location.

This appliance must be mounted on a vertical structure with the water and gas connections on the underside pointing downwards. For appliances installed in roof spaces or elevated structures specific requirements apply. Refer to AS5601 Section 5 for details.

This appliance must not be used as a domestic spa or swimming pool heater.

This appliance **MUST** be used with the Rinnai Infinity flueing system only. The use of non Rinnai flueing system may result in a dangerous situation and violates regulations. The maximum flue length is 9 metres with a maximum of three 90 degree bends. Horizontal (wall) or vertical (roof) terminals are available. For detailed information refer to 'FLUEING FOR INTERNAL MODELS' on page 24.

This appliance must be located so that the flue terminal exits the building at a suitable point.

If a horizontal (wall) terminal is used, the location must be in accordance with Section 5 and Figure 5.3 of AS5601. Figure 5.3 is reproduced under 'HORIZONTAL FLUE TERMINAL CLEARANCES' on page 22 of this manual.

If a vertical (roof) terminal is used, the location must be in accordance with Section 5 of AS5601 and the 'FLUEING FOR INTERNAL MODELS' on page 24.

Note that AS5601-2004 was current at the time of printing but may have been superseded. It is the installers' responsibility to ensure current requirements are met.

GENERAL INSTALLATION INSTRUCTIONS

(All Models)

This appliance must be placed as close as practicable to the most frequently used hot water outlet or outlets to minimise the delay time for hot water delivery. For installations where the distance between the water heater and the outlets is considerable, a flow and return system or the Rinnai Smartstart® system can be used which minimise the waiting time for hot water delivery. Alternatively, multiple appliances can be strategically placed to serve outlets with minimal delay time. Contact Rinnai for further information.

An AC240V, 10 Amp, earthed power point must be provided adjacent to the appliance. For outdoor installations this power point must be weather proof. It must be clear of the gas and water connections to the appliance and also the flue exhaust and water pressure relief valve. The power cord of the appliance is 1.5 Metres long.

All appliances must be installed to ensure access can be gained without hazard or undue difficulty for inspection, repair, renewal or operational purposes. Sufficient clearances shall allow access to, and removal of, all serviceable components. Appliances should not be mounted higher than 3.5 metres above the ground or floor level unless the customer can arrange permanent and safe access or can another means of access, for example, by means of scissor or boom lifts.

PIPE SIZING

See Table 1 page 21 for appliance gas consumption. If the gas pipe sizing is insufficient the customer will not get the full performance benefit. Gas pipe sizing must consider the gas input to this appliance as well as all the other gas appliances in the premises. The gas meter and regulator must be specified for this gas rate. An approved sizing chart such as the one in AS5601 should be used.

Water pipe sizing and layout should be performed in accordance with AS/NZS3500. All hot water pipe-work should be insulated to optimise performance and energy efficiency.

WATER SUPPLY

See Table 1. page 21 for applicable water pressures. Approved pressure limiting valves may be required if the 'Maximum' rated water supply pressures in Table 1 are exceeded. To achieve the rated flow, the 'Minimum' water supply pressures in Table 1 must be supplied. The water heaters will operate at lower pressures but will not achieve the rated flow. Contact Rinnai for 'gravity fed' or 'low pressure' installations.

Water chemistry and impurity limits are detailed under 'Warranty Conditions'. Most metropolitan water supplies fall within the requirements. If you are unsure about your local water quality, contact your water authority. If sludge or foreign matter is present in the water supply, a suitable filter or strainer should be incorporated in the water supply to the water heater.

HOT WATER DELIVERY TEMPERATURE

Local regulations and or the requirements of AS/NZS 3500.4 must be considered regarding the temperature limitations of hot water supplied to areas used primarily for personal hygiene. The temperature of water to these areas may be limited to 50° C or less. To ensure these regulations and or requirements are met the system MUST be installed in accordance with the 'Water Heater and Controller Installation Configurations' Section of this document.

WATER HEATER AND CONTROLLER INSTALLATION CONFIGURATIONS

If the appliance is marked to state that it delivers water not exceeding 50°C, local regulations may permit it's installation without a Temperature Limiting Device. Installations without a Temperature Limiting Device are shown in Diagram 1. If you are unsure about your local regulations contact your regulating authority or Rinnai.

If the appliance is **NOT** marked to state that it delivers water not exceeding 50°C, or your local regulations require installation with a Temperature Limiting Device then install the appliance in accordance with Diagram 2.

IMPORTANT:

If the appliance is to deliver water primarily for the purposes of personal hygiene in an early childhood centre, primary or secondary school, nursing home or a similar facility for the care of young, aged, sick

GENERAL INSTALLATION INSTRUCTIONS

or disabled persons as defined in AS/NZ3500.4 a Temperature Limiting Device (TLD), such as a Tempering Valve, may be required even if the appliance is set to 50° C or less. For these types of applications contact Rinnai.

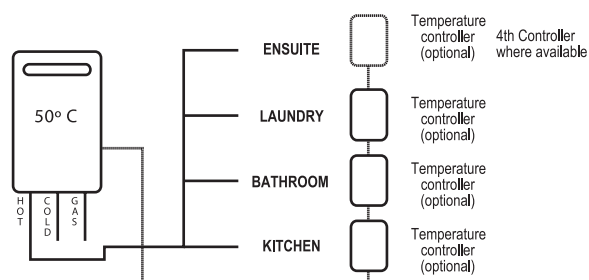


Diagram 1 - 50° C Appliance

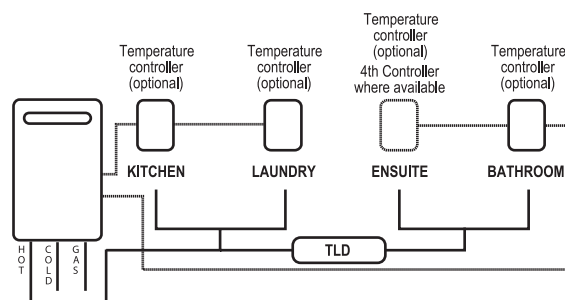


Diagram 2 - Not a 50° C Appliance
Note: TLD = Temperature Limiting Device

MOUNTING THE APPLIANCE

See Table 1. page 21 for individual appliance weights. The wall or structure on which the units are to be mounted must be capable of supporting these weights and the associated pipe-work.

Ensure that suitable fixing screws or bolts are used to secure the units to the wall, in accordance with AS5601 section 5. Wooden plugs shall not be used.

The top bracket has a keyhole slot so that the appliance can be positioned by hanging it on one screw, then the other screws can be secured.

SERVICE CONNECTION POINTS

See Table 1. for page 21 for individual appliance connection / fitting dimensions. Note that these dimensions are NOT an indication of the pipe sizes required.

An Approved full flow isolation valve and disconnection union **MUST** be fitted to the cold water inlet. A non return valve is not required unless dictated by local regulations.

Isolation Valves must not be fitted directly to the appliance.

If may be necessary to fit a temperature limiting device for delivery to areas used primarily for the purposes of personal hygiene. Refer to the 'Water Heater and Controllers Installation Configurations' Section of this document.

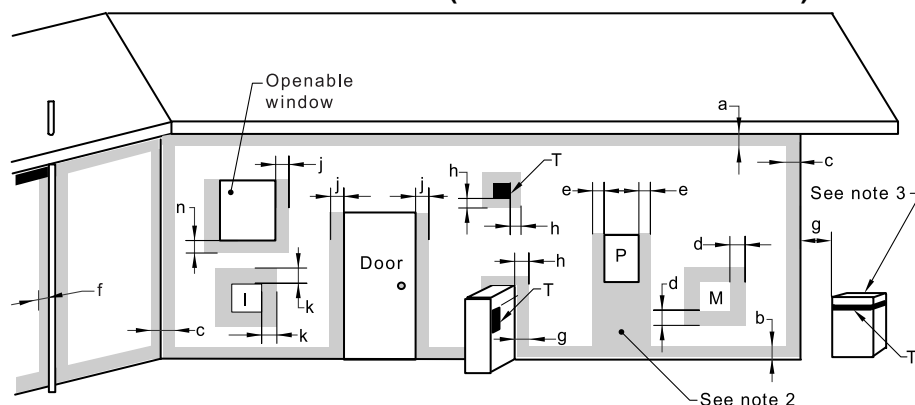
Purge gas and cold water supply lines to remove air and swarf before final connection of the appliance. Swarf in either the gas or water supplies may cause damage.

Model:	Gas Consumption MJ/h	Water Supply kPa		Weight kg	Fittings		
		Min.	Max.		Hot	Cold	Gas
REU-V3232W / WC	250	180	1000	29	R ¾ (20mm)	R ¾ (20mm)	R ¾ (20mm)
REU-V2626W / REU-V2632WC	199	140	1000	21	R ¾ (20mm)	R ¾ (20mm)	R ¾ (20mm)
REU-V2632FFU / FFUC	195	140	1000	21	R ¾ (20mm)	R ¾ (20mm)	R ¾ (20mm)
REU-2425W	188	200	1000	18	R ¾ (20mm)	R ¾ (20mm)	R ¾ (20mm)
REU-V2020W / REU-V2018W	160	130	1000	15	R ½ (15mm)	R ½ (15mm)	R ¾ (20mm)
REU-V1616W / REU-V1620W	125	130	1000	15	R ½ (15mm)	R ½ (15mm)	R ¾ (20mm)

Table 1.

GENERAL INSTALLATION INSTRUCTIONS

HORIZONTAL FLUE TERMINAL CLEARANCES (Extract from AS5601 - 2004)



LEGEND:

T = Flue terminal
I = Mechanical air inlet

M = Gas meter
P = Electricity meter or fuse box

Shading indicates prohibited areas for flue terminals

Ref .	Item	Minimum clearances (mm)	
		Natural draft	Fan assisted
a	Below eaves, balconies and other projections:		
	• Appliances up to 50 MJ/h input	300	200
	• Appliances over 50 MJ/h input	500	300
b	From the ground, above a balcony or other surface †	300	300
c	From a return wall or external corner †	500	300
d	From a gas meter (M) (see 4.7.11 for vent terminal location of regulator)	1000	1000
e	From an electricity meter or fuse box (P)	500	500
f	From a drain pipe or soil pipe	150	75
g	Horizontally from any building structure † or obstruction facing a terminal	500	500
h	From any other flue terminal, cowl, or combustion air intake †	500	300
j	Horizontally from an openable window, door, non-mechanical air inlet, or any other opening into a building with the exception of sub-floor ventilation:		
	• Appliances up to 150 MJ/h input	500	300
	• Appliances over 150 MJ/h input up to 200 MJ/h input	1500	300
	• Appliances over 200 MJ/h input up to 250 MJ/h input †	1500	500
	• Appliances over 250 MJ/h input †	1500	1500
	• All fan-assisted flue appliances, in the direction of discharge	-	1500
k	From a mechanical air inlet, including a spa blower	1500	1000
n	Vertically below an openable window, non-mechanical air inlet, or any other opening into a building with the exception of sub-floor ventilation:		
	• Space heaters up to 50 MJ/h input	150	150
	• Other appliances up to 50 MJ/h input	500	500
	• Appliances over 50 MJ/h input and up to 150 MJ/h input	1000	1000
	• Appliances over 150 MJ/h input	1500	1500

† Unless appliance is certified for closer installation

All distances are measured to the nearest part of the terminal.

Prohibited area below electricity meter or fuse box extends to ground level.

See Clause 5.13.6.6 for restrictions on a flue terminal under a covered area.

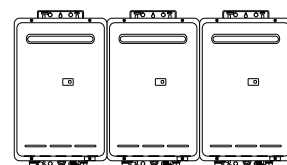
See Appendix J, Figures J2(a) and J3(a), for clearances required from a flue terminal to an LP Gas cylinder. A flue terminal is considered to be a source of ignition.

For appliances not addressed above acceptance should be obtained from the technical regulator

FIGURE 5.3 (in part) MINIMUM CLEARANCES REQUIRED FOR BALANCED FLUE TERMINALS, FAN-ASSISTED FLUE TERMINALS, ROOM-SEALED APPLIANCE TERMINALS OR THE TERMINALS OF OUTDOOR APPLIANCES

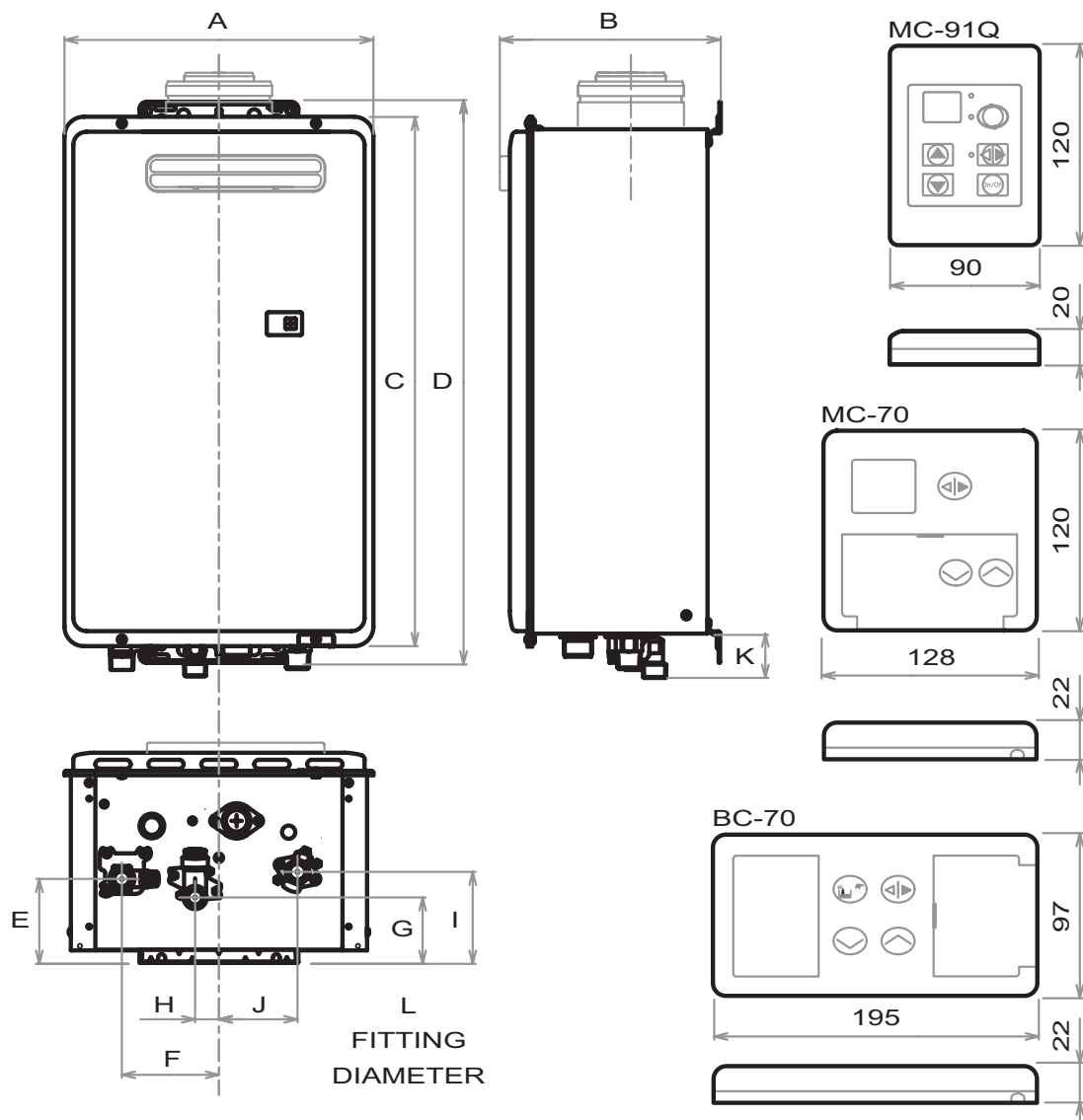
MULTIPLE INSTALLATIONS OF EXTERNAL MODELS

Dimension 'h' above does not apply when multiple Rinnai external water heaters of the same model are installed on the same vertical face with flue terminals at the same height. Under these conditions appliances can abut each other as shown. The total gas consumption of all appliances applies when determining other clearances.



GENERAL INSTALLATION INSTRUCTIONS

APPLIANCE DIMENSIONS



Dim'	Description	REU-V3232W REU-V3232WC	REU-V2626W REU-V2632WC	REU-V2632FFU REU-V2632FFUC	REU-2425W	REU-V2020W REU-V2018W REU-V1616W REU-V1620W
A	Width	470	350	350	350	350
B	Depth	244	251	234 ~ 274	194	194
C	Height - Unit	600	600	600	600	530
D	Height - Including Brackets	644	636	641	636	571
E	Hot Water outlet (from wall)	115	96	91 ~ 131	99	87
F	Hot Water outlet (from centre)	61	110	110	105	105
G	Cold Water inlet (from wall)	99	75	70 ~ 110	69	68
H	Cold Water inlet (from centre)	52	27	27	0	10
I	Gas Connection (from wall)	61	104	99 ~ 139	79	77
J	Gas Connection (from centre)	110	89	89	88	83
K	Gas: Length Gas Connection (from base)	41	41	41	41	40
	Cold: Length Gas Connection (from base)	51	51	51	49	50
	Hot: Length Gas Connection (from base)	42	42	42	42	39
L	Gas: Fitting Diameter	20	20	20	20	20
	Cold: Fitting Diameter	20	20	20	20	15
	Hot: Fitting Diameter	20	20	20	20	15

REMOTE CONTROLLER INSTALLATION

REMOTE CONTROLLERS

Remote Controllers are available as an optional extra. Universal and Deluxe Controller can be used together and will function as described in the Operation Section of this manual. Please refer to the table on page 5 to confirm the maximum number and combination of controllers that can be fitted.



Other manufacturers' controllers are NOT compatible with this appliance.

POSITIONING OF CONTROLLERS

Controllers must be installed in shaded and clean locations. They should be fitted out of reach of children (suggested height from floor to be at least 1500mm). Controllers are water resistant, however, durability is improved when positioned outside the shower recess or at least 400mm above the highest part of a sink, basin or bath.



DO NOT INSTALL CONTROLLERS:

Near a heat source, such as a cook top, stove or oven. Heat, steam, smoke and hot oil may cause damage.

In direct sunlight.

Outdoors unless protection from dust ingress and sunlight are provided.

Against a metal wall unless the wall is earthed in accordance with AS3000.

REMOTE CONTROLLER CABLES

Remote controls operate at extra low voltage (12 Volts DC) which is supplied from the water heater. Controllers come supplied with 15 m of electrical cable. The appliance end of the controller cables are fitted with spade terminals. Extension cabling is available from Rinnai.



Alternatively, a two core sheathed (double insulated) flex with minimum cross-sectional area of 0.5 mm² may be used. Maximum individual cable runs not to exceed 50 m.

FITTING THE 'UNIVERSAL REMOTE' CONTROL (MC-91Q)

1. Determine the most suitable position for the Remote Control.
2. Drill 3 holes as shown in Fig. 1, two for the securing screws and one to provide cable access.
3. When running cable through the access hole ensure the connector end of the cable is located nearest to the controller. (Fig.2)
4. Carefully remove face plate from Remote Control, using a screw driver. (Fig. 3)
5. Connect the cable to the remote controller.
6. Fix the controller to the wall using the appropriate fixings as shown in Fig. 4.
7. Remove protective plastic film from the controller face as shown in Fig. 4 and replace face plate.

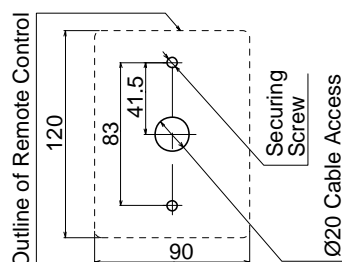


Fig. 1

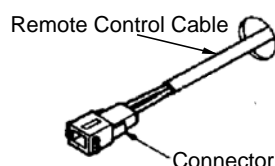


Fig. 2

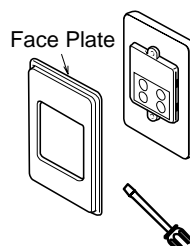


Fig. 3

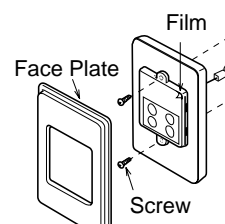


Fig. 4

REMOTE CONTROLLER INSTALLATION

OPTIONAL PROGRAMMING FOR THE 'UNIVERSAL' REMOTE CONTROL (MC-91Q)



1 Are 4 controllers connected ?

IF NO: (You have 3 controllers or fewer), go to Question 2.

IF YES: You will need to activate the fourth controller as follows:

STEP 1: For the controller in the KITCHEN only, press and hold the 'Transfer' and 'On / Off' buttons simultaneously (see Fig. 5) until a 'beep' is heard (approximately 5 seconds).

STEP 2: Check that the display on ALL FOUR controllers is lit and displaying a temperature when 'switched on'. If any ONE of the controller displays two dashes (see Fig. 6) repeat STEP 1.

This completes the activation procedure for the fourth controller, you may ignore Question 2.

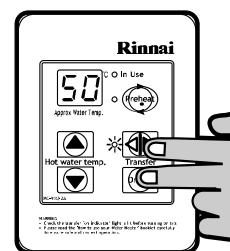


Fig. 5



Fig. 6



2 Is the water heater marked to state it delivers water not exceeding 50°C ?

IF YES: No further action required.

IF NO: You will need to program the kitchen controller to enable selection of temperatures higher than 50°C.

STEP 1: For the controller in the KITCHEN only, press and hold the 'Transfer' and 'On / Off' buttons simultaneously (Fig. 7) until a 'beep' is heard (approximately 5 seconds).

STEP 2: When the controller fitted in the KITCHEN is switched On, it should be possible to select temperatures higher than 50°C. If not, repeat STEP 1.

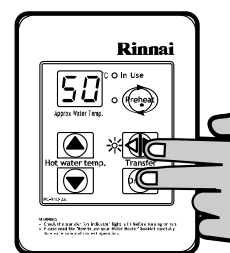


Fig. 7



NOTE If the kitchen controller is replaced, repeat STEP 1 above for the replacement controller.

If the kitchen controller is swapped with another controller (for example, the controller fitted in a bathroom), repeat STEP 1 for the controller moved from the kitchen to the bathroom. Then perform STEP 1 for the controller moved from bathroom to the kitchen.

FITTING THE 'DELUXE KITCHEN' REMOTE CONTROL (MC-70)

1. Determine the most suitable position for the Remote Control.
2. Using the wall mounting bracket as a template mark and drill 3 holes. Locate the cable access hole as shown in Fig. 1.
3. Fix the mounting bracket to the wall using the appropriate fixings.
4. Run the control cable through the hole in the wall.

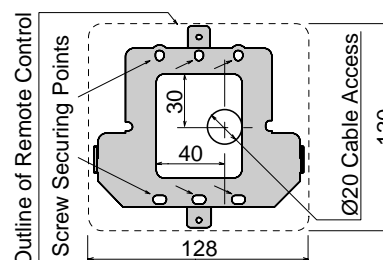


Fig.1

REMOTE CONTROLLER INSTALLATION

- Carefully remove face plate from Remote Control, using a screw driver. (Fig. 2)
- Connect the cable to the kitchen remote control as shown in Fig 3. At this point cables from other controllers (if fitted) may also be connected to the kitchen remote terminals eliminating the need to have multiple cable runs directly to the hot water heater, controllers are not polarity sensitive.



If the cable cannot be run in the wall cavity, remove the plastic 'knockout' lugs as shown in Fig. 3.

- Fasten the controller to the wall as shown in Fig. 4.
- Remove the protective plastic film from the controller face as shown in Fig. 5.
- Replace the face plate and close the flip panel.

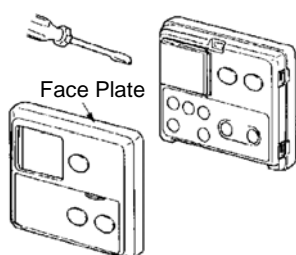


Fig. 2

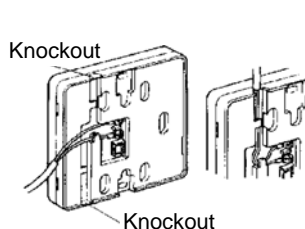


Fig. 3

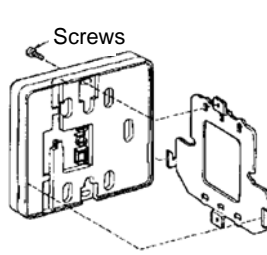


Fig. 4

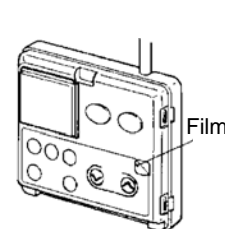


Fig. 5

FITTING THE 'DELUXE BATHROOM' REMOTE CONTROL (BC-70)

- Determine the most suitable position for the Remote Control.
- Drill 3 holes in the wall, as shown to the right in Fig. 1, one for the cable and two for the securing screws. Drill holes to ensure controller position will be level when installed.
- When running cable through the access hole ensure the connector end of the cable is located nearest to the controller. (Fig. 2)
- Carefully remove the face plate from the Remote Control, using a screw driver. (Fig. 3)
- Connect the cable to the bathroom remote controller.
- Fix the bathroom controller to the wall using the appropriate fixings as shown in Fig. 4.
- Remove the protective plastic film from the controller face as shown in Fig. 4.
- Replace the face plate and close the flip panel.

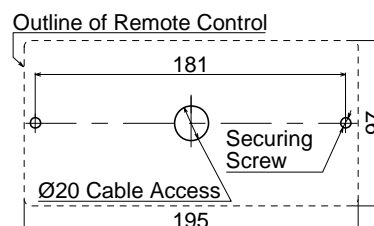


Fig. 1

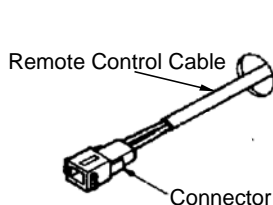


Fig. 2

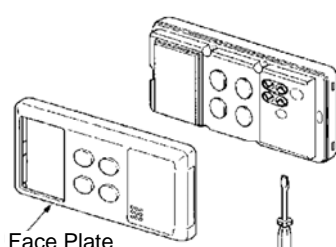


Fig. 3

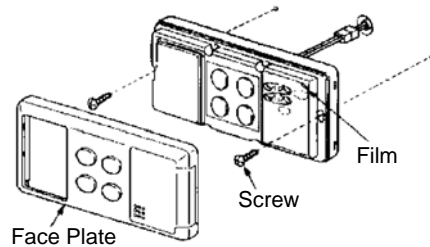


Fig. 4

REMOTE CONTROLLER INSTALLATION

CONNECTING REMOTE CONTROL CABLES TO THE WATER HEATER



DO NOT ATTEMPT TO CONNECT THE REMOTE CONTROL CABLE TERMINALS TO THE APPLIANCE WITH THE POWER TURNED ON DUE TO RISK OF ELECTRICAL SHOCK !



1. Isolate the power supply.
2. Remove the appliance front cover (4 screws) as shown in Fig. 1.
3. Thread the cable(s) through the cable access hole at the base of the appliance.
4. Locate the position of the terminals (Fig. 2), Connect the spade connectors to the terminals on the P.C.B. (Fig. 2). Polarity is not important. Either wire colour can be connected to either terminal. See remote control terminal location below.
5. Replace cover of the Appliance. Ensure that the special screw is placed at the bottom right hand corner for earthing purposes.

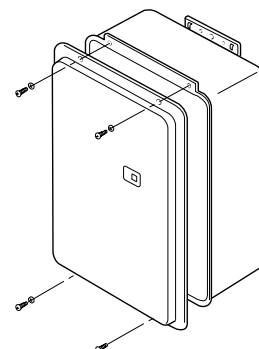


Fig. 1

Location of Remote Control Terminals.

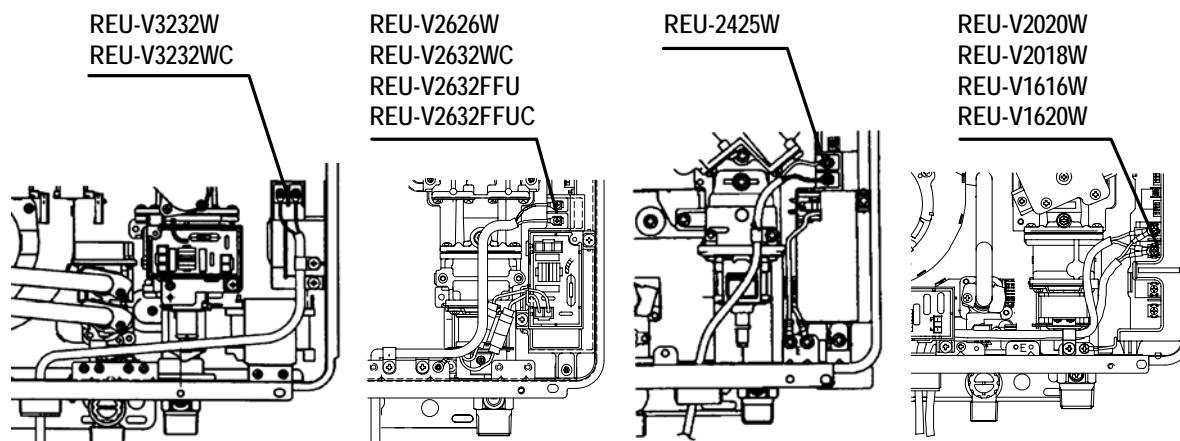


Fig. 2

Connecting Three Or More Controllers

1. Isolate the power supply.
2. Remove the appliance front cover (4 screws) as shown in Fig. 1.
3. Cut the spade connectors from 2 of the controller cables to be connected to the appliance (4 spade connectors should be cut off) and discard. Connect the wires from these two cables and terminate into two new spade connectors as shown. Spade connectors are available from your local electrical component retailer. (Fig. 3)
4. Thread the cable(s) through the cable access hole at the base of the appliance.
5. Locate the position of the terminals (Fig. 2), Connect the spade connectors to the terminals on the P.C.B. (Fig. 2). Polarity is not important. Either wire colour can be connected to either terminal.
6. Replace the appliance cover. Ensure that the special screw is placed at the bottom right hand corner for earthing purposes.

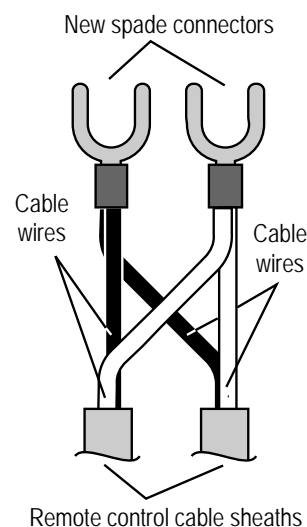


Fig. 3

COMMISSIONING

TESTING

1. Before final connection of the water heater purge gas, hot water and cold water supply lines. Swarf in either the gas or water supplies may cause damage.
2. Turn on gas and cold water supplies.
3. Test for water leaks and gas escapes near the unit.
4. Isolate gas supply. Remove test point screw located on the gas inlet connection and attach pressure gauge.
5. Turn the power 'on' at the power point socket and turn on gas.
6. If remote controllers are fitted, turn the controller 'on', select the maximum delivery temperature and open ALL available hot water taps including the shower. If remote controllers are not fitted, simply open all available hot water taps. (CAUTION: Ensure building occupants do not have access to hot water outlets during this procedure.)
7. Operate ALL other gas appliances at their maximum gas rate, in accordance with manufacturers instructions.
8. With all gas appliances in operation at maximum gas rate, the pressure should read between 1.13 - 3.0 kPa on Natural Gas. On LPG the pressure should be 2.75 - 3.0 kPa. If the pressure is lower, the gas supply is inadequate and the appliance will not operate to specification. It is the Installers responsibility to check the gas meter, service regulator and pipe work for correct operation/sizing and rectify as required. Note that the gas regulator on the appliance is electronically controlled and factory pre-set. Under normal circumstances it DOES NOT need adjustment during installation.
9. Close hot water taps including the shower.
10. Inspect and clean the strainer located on the cold water inlet connection. This procedure may need to be repeated to ensure the strainer remains clear, especially on new installations.
11. If Temperature Controllers are fitted, it is necessary to test their operation through the complete range of functions (refer to the Operation sections of this manual).
12. Confirm the hot water delivery temperature(s) using a thermometer. If controllers are fitted, ensure temperatures exceeding 50° C cannot be selected on bathroom or ensuite controllers.
13. After testing is completed, explain to the householder the functions and operation of the water heater and temperature controllers (if fitted). Ensure the 'Customer Record' on page 17 of this manual is filled in and that the booklet is handed to the customer. Reminding the customer to complete the Warranty Card and forward to Rinnai.

GAS PRESSURE SETTING

The regulator is electronically controlled and factory pre-set. Under normal circumstances it does not require adjustment during installation. Make adjustments only if the unit is not operating correctly and all other possible causes for incorrect operation have been eliminated. Instructions for Gas Pressure Setting are to be found in the instruction pocket located inside the appliance front cover.

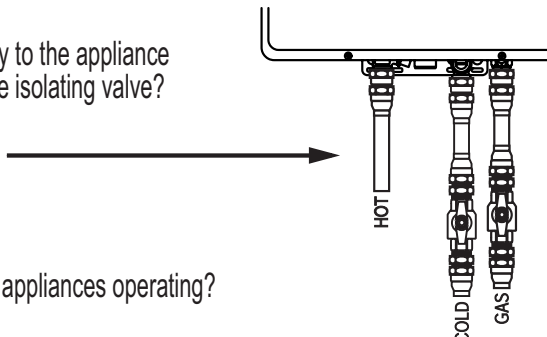
COMMISSIONING CHECK LIST

A commissioning check list is provided to enable the installer to step through the correct commissioning procedure when installing a Rinnai Continuous Flow water heater. The check list can also assist the installer to identify potential installation errors that may prevent the appliance from operating correctly.

For your convenience a copy of the commissioning check list has been provided on the following page.

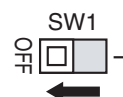
COMMISSIONING CHECK LIST

Attention Installer - have you checked!

- ☒ Gas supply pipe is purged of foreign matter before connection.
- ☒ For Hot and Cold cross connections i.e. Capped breaches / Shower Mixers, taps closed and reversed 'Flick Mixer' connections?
- ☒ That isolating valves are not connected directly to the appliance and there is a means of disconnection after the isolating valve?
- ☒ That plumbing connections are correct? 
- ☒ Have you turned on the power?
- ☒ Is appliance inlet gas pressure correct with all appliances operating?
- ☒ Do the Kitchen and Bathroom Controllers (if fitted) operate correctly?
- ☒ Tempering Valve (if fitted) - Is it an RMC Heat Guard 15/20HP or equivalent for continuous flow water heaters?
- ☒ Have you checked water temperature at all outlets?
- ☒ Have you cleaned cold water inlet filter?
- ☒ Have you shown the customer how to operate the Temperature Controllers? (If fitted)
- ☒ Have you explained to the Customer the Benefits of Controllers (if not fitted) and that they can be added later?
- ☒ Have you explained to the customer the minimum flow rate required to operate the unit?
- ☒ Have you checked the flue clearances and installation and as per AS5601?

For Internal (FFU) models only

- ☒ Have you used only Rinnai FFU flueing components?
- ☒ If flue length exceeds 2m, dip-switch 1 of SW1 is to be switched to the 'OFF' position as shown.



PLEASE NOTE:

That warranty may be voided and a service charge may be incurred as a result of Rinnai staff attending to a problem related to installation.

Project: 04-112/FFU (Nov 2004)

ACCESSORIES

Recess Box:

When installing an Rinnai Continuous Flow hot water heater in a new home or renovation, it is a great idea to allow for a recess box to be included at the construction stage. These boxes allow you to literally recess the appliance into the cavity of the wall saving precious space. In addition they virtually hide your hot water system altogether. Brick wall cavities vary in depth, as do the sizes of our water heater models, so Rinnai provide a range of box options with both fully recessed (flush to the wall) and semi recessed (approx 70mm proud of the wall). All recess boxes are supplied with a cover to conceal unsightly plumbing work, and one model incorporates a cover to hide the hot water unit as well (suits INFINITY 26, 32 and HD 250e, 200e models only). All boxes and covers are suitable for painting to blend in with the exterior of your home.

Pipe Cover:

Pipe covers are recommended as the finishing touch to an Rinnai Continuous Flow hot water heater installation. Basically the covers are designed to hide the plumbing pipework and valves. These are particularly popular in installations where the unit is permanently visible to the occupants of the house. The cover can be easily attached to the appliance and two pipe covers can be joined together for longer pipework if necessary.

Security Cage:

The Rinnai cage is available to protect the unit from theft and damage if the Rinnai Continuous Flow hot water heater is located in an exposed area.

Security Bracket:

Prevent theft by securing your Rinnai Continuous Flow hot water heater with our custom security bracket, easily installed it covers the lower mounting bracket of the appliance to create a tamper proof installation.

Rinnai Smartstart® Water Saver

How much water is wasted everyday in Australian households waiting for the shower to get hot? Previously a smart house design with the hot water system installed close to bathrooms was the only way to reduce this wastage.

Introducing the new Rinnai Smartstart® water saver.

Designed specifically to reduce the water wasted in hot water dead legs, the Rinnai Smartstart® is installed with a Rinnai Continuous Flow water heater and a hot water ringmain to all 'wet areas' of the home.

Contact Rinnai for further information about our accessory range and model suitability details.

NOTES

Rinnai

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Rinnai has a Service and Spare Parts network with personnel who are fully trained and equipped to give the best service on your Rinnai appliance. If your appliance requires a service, please call our Hot Water Service Line. Rinnai recommends that this appliance be serviced every 3 years.

Internet: www.rinnai.com.au E-mail: enquiry@rinnai.com.au

National Help Lines

Spare Parts & Technical Info

Tel: 1300 366 388*
Fax: 1300 300 141*

**Cost of a local call Higher from mobile or public phones.*

Hot Water Service Line

Tel: 1800 000 340

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