



HydraHeat™ Integrated Hot Water Heat Pump

Operation guide

Rinnai

Important

This hot water system shall be installed in accordance with:

- Manufacturer's installation instructions

Current:

- AS/NZS 3000 Electrical Standards
- AS/NZS 3500 Plumbing and Drainage Standards
- AS/NZS 5149 Refrigerating Systems Operation
- New Zealand Building Code Clause G12 Water Supplies

Appliance must be installed, commissioned, serviced, and removed by authorised personnel.

Not suitable as a spa or swimming pool heater.

Not suitable for hydronic applications.

Warning

Improper installation, adjustment, alteration, service or maintenance can cause property damage, personal injury or loss of life.

For more information about buying, using, and servicing of Rinnai appliances call: 0800 RINNAI (0800 746 624).

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Contents

Safety and important messages	4
General information	6
About your HydraHeat hot water heat pump	7
How it works	8
Operation modes	9
Controller interface	10
Maintenance and servicing	14
Error codes	15
Troubleshooting	16
Warranty	18



For reliable operation the Rinnai HydraHeat™ Hot Water Heat Pump should be serviced **every two years**. A typical service would include a firmware update (if required), checking (and replacing if needed) the real time clock battery, examining and clearing the check valve of any debris, accessing the head unit to clean the evaporator, checking and clearing the condensate drain (if necessary), connecting hoses and o-rings, and ensuring there are no water leaks. Regular servicing will help extend the life of the system.

Safety and important messages

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure they do not play with the appliance.

- DO NOT modify this appliance
- DO NOT touch power connections
- DO NOT operate the unit unless the head unit is connected to the cylinder
- DO NOT operate the unit unless the cylinder is full of water
- DO NOT operate unless all covers are secured in place
- DO NOT store items on top of or against the unit
- DO NOT install with any other cylinder except the HydraHeat cylinder
- Avoid touching exposed pipework and fittings connected to the unit as they can be HOT

Maintain the necessary clearances around the unit to ensure continued safe operation.

Warning about hot water

Excessively hot water is dangerous. The Rinnai HydraHeat is set to operate in 'Standard' mode, heating water to 60 °C, and has a tempering valve to ensure hot water is delivered to the outlets at a safe temperature.



Always

- Test the water temperature with your elbow before placing your child in the bath, and feel the water yourself before bathing or showering.
- Supervise children whenever they are in the bathroom.
- Make sure the hot water tap is turned off.

Consider

Installing child proof tap covers or child resistant taps, both will prevent a child from being able to turn on a tap.

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.

Hot pipe work

Care should be taken not to touch the pipe work from the cylinder as this could be very hot.

Risk of fire



The unit uses R290 (propane) refrigerant, a class 3 flammable gas according to AS/NZS ISO 817. The refrigerant can only be handled by a refrigeration technician with the appropriate refrigerant handling license.

- If the refrigerant leaks¹, there is a possibility of a fire with an external ignition source
- DO NOT store chemicals or flammable materials near this unit
- DO NOT place the unit near any ignition sources
- DO NOT use a flammable spray such as hair spray, spray paint etc. near this unit as it may cause a fire

¹ The Rinnai HydraHeat has a sealed refrigerant system, leaks will not be common unless the internal components of the head unit have been punctured. If punctured a hissing sound could occur indicating a leak. Contact your installer or Rinnai as soon as possible if this occurs.

Safety devices

Your Rinnai HydraHeat is fitted with a:

- Temperature & Pressure Relief (TPR) valve that ensures the water remains at a safe pressure and temperature.
- Automatic thermostat to maintain water temperature.
- Temperature override cutout for the heating element.

DANGER

The operation of the thermal cutout can indicate a serious situation. Do not reset the thermal cutout until the system has been serviced by a qualified person.

Do not operate the system unless all the safety devices are fitted and are in working order.

It is also important that you do not tamper or remove any of these devices.

Element cover

Do not remove the element cover as this will expose 230 V wiring. It must only be removed by an authorised person.

Damaged components

If any component is damaged, it must only be replaced by an authorised person using Rinnai replacement parts.

Hydrogen gas

If hot water is not used for two weeks or more, for example after a holiday, a hot water cylinder with an anode can produce hydrogen gas, which is highly flammable. To remove any potential gas buildup it is recommended a hot tap be turned on for two minutes at a sink, basin, or bath. During this procedure there must be no smoking, open flame, or other appliance operating nearby.

Location and positioning

The HydraHeat is designed primarily for an outdoor installation. It may be possible to install the HydraHeat internally if the proposed location is **not an occupied space** as defined by AS/NZS 5149. Please note that internally installed units will need adequate ventilation as the appliance has a cooling effect on the installed space, operating noise should also be considered. Rinnai strongly recommends discussing the installation with a qualified

installer prior to installation.

- DO NOT install the unit in a location that may be exposed to combustible gas leaks. If combustible gas accumulates around the unit, it may cause a fire.
- DO NOT install the unit where noise may be a nuisance, such as near bedrooms or neighbouring properties. Do not place any objects on top of the unit, this could cause excessive vibration and increase noise levels.
- DO NOT install the unit where it will be directly exposed to sea wind and salt spray, this will significantly reduce the durability of the unit.

Draining and filling the system

This normally occurs during installation or servicing and must be carried out by an authorised person. Draining water from the heat pump unit is necessary if the power will be shut off to the unit, and snow or frost conditions are expected. Arrange for an authorised person to carry out this task.

Installation by a licensed tradesperson

Only a licensed tradesperson can install, adjust, maintain, and remove this hot water system. Any work carried out by a non-licensed tradesperson is illegal and will void any warranty.

Legionella

The HydraHeat incorporates a built-in automatic disinfection cycle to comply with the legionella¹ requirements of AS 3498². In this cycle, the water in the cylinder is heated above 60 °C for 32 minutes each week. Depending on the mode of operation, this can be achieved using either the electric element, or the heat pump.

During legionella disinfection, 'L' will appear on the main display. This function cannot be switched off or disabled.

Cylinder thermostat

The cylinder thermostat is factory set to 70 °C to ensure proper operation of the 'Element only' mode and disinfection cycles. This setting **MUST NOT** be adjusted—any changes will void the warranty.

¹ Legionella is a bacterium that can cause Legionnaires' disease—a severe form of pneumonia.

² AS 3498: Safety and public health requirements for plumbing products - Water heaters and hot-water storage tanks.

General information

The heat pump **MUST** be installed free-standing on a level and stable base capable of withstanding the weight of a full system.

Where property damage can occur as a result of water leakage, the storage cylinder **MUST** be installed with a safe tray (overflow tray) and drain in accordance with AS/NZS 3500.4.

Unit orientation

The heat pump is designed for open air operation, requiring sufficient air supply to maintain operating efficiency. The air inlet and outlet of the heat pump must be positioned away from prevailing winds, and be provided with sufficient clearances as shown in the installation guide.

Genuine Rinnai parts

Only use the included accessories, and specified parts for installation. Using non-standard parts can cause water leaks, electrical shock, fire, and cause the unit to fail.

Defrost function and freeze protection

The HydraHeat has a defrost function that operates automatically, as long as the appliance is connected to the power supply, to remove ice from the evaporator when the outside air temperature is between -10 and 5 °C. When in defrost, 'D' will appear on the main display.

The HydraHeat also activates freeze protection when temperature sensors detect < 1 °C to stop the pipes from freezing. In Standard and Eco modes, this initiates an additional heat pump cycle to warm the pipe. In element mode, the circulating pump is activated. The pump stops once the sensors detect temperatures above 3 °C.

If you live in a frost-prone area and will be away for an extended period with the power supply disconnected, Rinnai recommends having your system drained by an authorised person. Please note that frost damage is not covered by warranty.

Snow zone locations

If the location is prone to snow the system must be in a covered location. The system will not effectively operate if snow is allowed to build up on top of the appliance.

Disposal guidelines

The head unit of this system contains refrigerant oil and other potentially hazardous materials. Do not dispose of this system as household waste. Contact Rinnai for more information.

Electrical connection

The heat pump is not fitted with a power cord and plug, it **MUST** have the electric terminals connected to an independent, fused AC 230 V 50 Hz power supply. An isolating switch (lockable) installed in accordance with AS/NZS 3000 clause 4.19.

All electrical work and permanent wiring must be carried out by a licensed electrical person in accordance with AS/NZS 3000 Wiring Rules.

Note about water / water blasting

The HydraHeat system has an IPX4 rating which means it's protected against splashing water, for example rain. It is **not protected** from sustained low or high pressure water, for example water blasting.

Power supply disruption

If the power goes off the system will retain all of its settings, including the day and time. When power is restored the system will come back on as normal in the operation mode that was previously set.

Condensation

During normal operation condensation occurs in the heat pump as air across the evaporator is cooled. In high humidity locations a large volume of condensate can be generated. The installer will ensure condensate is plumbed to a suitable drain.

About your HydraHeat hot water heat pump

Designed and made in New Zealand

We hope you love this product as much as we do, and on the off chance that something does go wrong, or if you need help, we're only a phone call away.

Designed in NZ for NZ conditions

Designed to operate efficiently in climates with a wide temperature range of -10 °C to 42 °C.

Easy to use controls

A user-friendly control interface ensuring convenience and ease of use.

HydraHeat standalone cylinder

Offers the option for standalone operation as a hot water cylinder, thanks to its 'heat pump ready' design, which allows for the addition of the head heat pump unit at a later time. This exclusive feature provides unmatched purchase and installation flexibility.

Innovative modular system

The removable head unit sets it apart from other hot water heat pumps, as it guarantees a consistent supply of hot water during servicing, providing ease of servicing and peace of mind.

Low operating noise

An ideal choice for built-up residential areas due to its low operating sound level of 45 dB(A), making it one of the quietest options available.

NZ MEPS

The HydraHeat cylinder stands out as the sole product in NZ that meets the rigorous requirements of NZ MEPS (Minimum Energy Performance Standards).

Energy efficient performance

HydraHeat boasts an impressive coefficient of performance (COP) of 4.7, resulting in highly efficient water heating that minimises energy consumption and lowers operating costs.

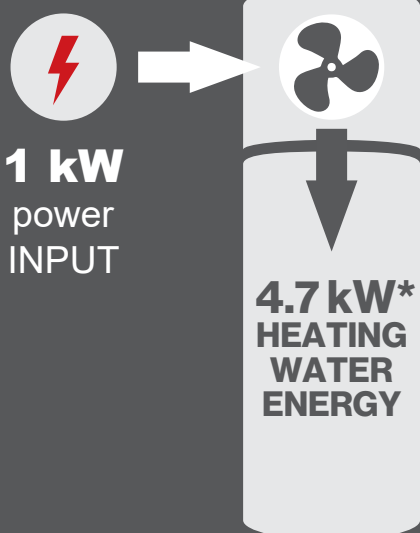


How it works

A heat pump operates by transferring heat from the ambient outside air into the water. Electricity is used to operate the compressor, but not to directly heat the water. Because of this, energy consumption is significantly reduced when compared to a traditional hot water cylinder with an electric element.

The warmer the climate in which the heat pump is installed, the more efficient the heat pump system will be at heating water.

The heat pump unit includes a circulation pump which draws water from the bottom of the storage cylinder and returns it at a higher temperature. Temperature sensors in the top and bottom of the cylinder are used to control the heat pump operation to achieve suitable cylinder temperatures.



* At 19 °C ambient temperature. Water heated from 19-55 °C

Heat pump unit

The top unit is the powerhouse using heat pump technology that extracts thermal energy from ambient air.



Cylinder

The cylinder can operate on electricity or in heat pump mode so you have the freedom to choose the best heating option.

There are seven indicators on the control panel which display the current operational mode / status of the heat pump. These are:

Standard	Water stored at 60 °C	High Usage	Water stored at 70 °C. Heat pump + electric boost
Boost	One-off electric boost to 70 °C	Element only¹	Heat pump turned off, element heats water to 70 °C
Eco 55	Water stored at 55 °C	Shutdown	In standby, heat pump and element are turned off
Eco 50	Water stored at 50 °C		

¹ Element only, factory preset temperature of 70 °C, with a range of 65-75 °C.

Operation modes

Standard (default setting)

The system comes preset to operate in 'Standard' mode, heating water to at least 60 °C.

Boost (one time boost)

The heat pump and the cylinder element heat the water to 70 °C, in a one-off boost so as to heat the water as quickly as possible. Once heating has been completed the system reverts back to the previous mode that was selected.

Eco 50 / Eco 55

Cost saving mode, heating water to at least 50 / 55 °C.

High usage

The heat pump and the element in the tank heat the water to 70 °C. This differs to 'Boost' as the system is continually heating the water (not just a one off boost).

This mode would typically be used if there are extra people in the house all using hot water at a similar time each day.

Element only

Water in the cylinder is heated only by the electric element, the heat pump does not run. This mode would only be used if there was a fault with the head (heat pump) module¹, or if the homeowner wanted the heat pump not to activate at night due to noise (timer to be set). It will still allow the homeowner to have hot water.

Please note: When a fault occurs, the system automatically switches to 'element only' mode until the issue is resolved. Once fixed, it will revert to its previous operating mode.

Shutdown

The system is completely off and in standby mode, ideal for when away on holiday or to prevent the heat pump from activating at night due to noise.

If switched to SHUTDOWN (standby), keep in mind that when the system is turned back on, it may take 4–8 hours to reheat the water, depending on the ambient air temperature.

Summary table

Mode	Temperature (°C)	Heat pump on	Element on
Standard	60	✓ ²	
Boost	70	✓	✓
Eco 55	55	✓ ³	
Eco 50	50	✓ ³	
High usage	70	✓	✓
Element only	70	-	✓
Shutdown	N/A	-	-



We do not recommend switching the system off (without power connected) in areas where frost could occur or in the middle of winter. Damage to the system if not continually connected to the electricity supply is not covered by warranty.

¹ If there is a fault an error code will appear on the display and the unit will beep once every 5 seconds. Refer p.15 for more information.

² Under extremely low ambient air conditions, the element may be briefly used to complete the legionella disinfection heating cycle.

³ Element will be used for the legionella disinfection cycle.

Controller interface

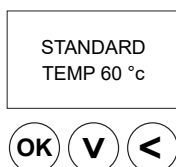
The HydraHeat controller uses a compact OLED display with three capacitive touch buttons to enable easy access to the operation menus. When a button is pressed there will be an audible beep.



Home screen and navigation

To access the home screen press OK for approximately 3-5 seconds. The screen will show the current operating mode, which is set to 'Standard' by default.

The display will automatically turn off after 30 seconds, but can be reactivated again by pressing any of the buttons.



MODES
SET DAY / TIME
SET TIMER
FACTORY RESET



Down button - scrolls through the different menu options



OK button - selects the option

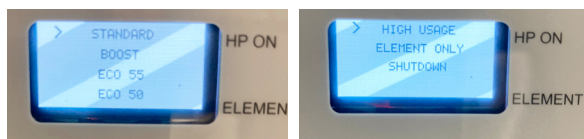


Back button - returns to the previous screen



Operation modes

Press the down button to cycle through the screens to select the mode of operation required. Select OK to confirm. Once the mode is selected, the screen will display the modes in the order shown below. The operation modes are spread over two screens.



STANDARD BOOST ECO 55 ECO 50	STANDARD BOOST ECO 55 ECO 50	STANDARD BOOST ECO 55 ECO 50	STANDARD BOOST ECO 55 ECO 50	HIGH USAGE ELEMENT ONLY SHUTDOWN	HIGH USAGE ELEMENT ONLY SHUTDOWN	HIGH USAGE ELEMENT ONLY SHUTDOWN
OK V <	OK V <	OK V <	OK V <	OK V <	OK V <	OK V <
STANDARD TEMP 60 °C	BOOST TEMP 70 °C	ECO 55	ECO 50	HIGH USAGE TEMP 70 °C	ELEMENT ONLY TEMP 70 °C	SHUTDOWN

Day and time

MODES
SET DAY / TIME
SET TIMER
FACTORY RESET

This only needs to be done during daylight savings, or if the factory set day and time settings are lost, for example if a 'Factory reset' has been done. The clock is a 24-hour clock.



Once in 'Set Day / Time' press and hold the down button to scroll through the day, hour, and minutes to edit, press OK to confirm selection at each stage.

Using the timers

The HydraHeat features two programmable timers that operate within a 24-hour period. You cannot overlap operating times within a 24-hour period. Once programmed, the timers will repeat every day until 'Timer Reset' is selected.

Before setting the timers ensure the day and time are correct, refer previous page.

The timers in most instances are used to stop the heat pump from operating during selected times, or to run the heat pump in another mode, for example in Eco mode. In shutdown mode, while a timer is active, the system remains in standby and will not heat water.

Important



Hot water heat pumps require a continuous power supply for at least 6-8 hours a day to enable the appliance to make sufficient hot water and to allow the legionella disinfection cycle to run and fully complete. If the operating time is restricted, for example only being on during a free hour of power, then there will be limited hot water production. The appliance can only heat as much water as the available operating time allows.

Example 1 – Reducing noise overnight

If the heat pump is located near a bedroom, you may wish to prevent it from operating overnight.

Required timer setting:

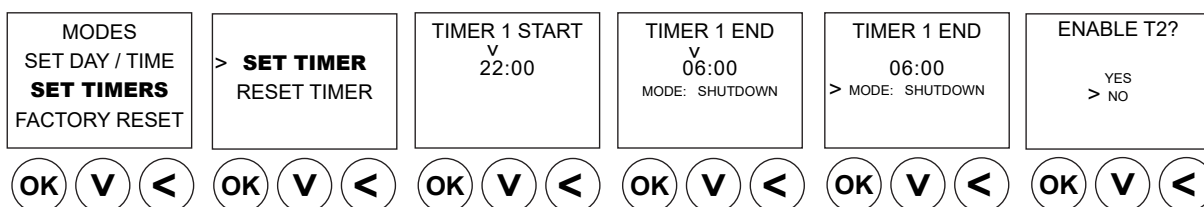
- 10:00 pm – 6:00 am, mode is in shutdown

The heat pump can operate outside these hours as required.

Tip: Always use the down arrow button to navigate and change the times, the back arrow button returns you to the previous screen.

How to set

1. Press and hold OK for three plus seconds to access the home menu.
2. Select SET TIMERS, press OK.
3. Select SET TIMER, press OK.
4. Set the TIMER 1 start time (hours, then minutes), pressing OK after each selection.
5. Set the TIMER 1 end time (hours then minutes), pressing OK after each selection.
6. Select SHUTDOWN as the mode, press OK.
7. When ENABLE T2? is displayed, select no, then press OK.
8. Use the back button to go back to the home menu.



Example 2 – Using two off-peak electricity periods

If your electricity tariff has two off-peak periods:

- Off-peak 1: 11:00 am - 5:00 pm
- Off-peak 2: 11:00 pm - 7:00 am

Set the timer to stop the heat pump during the peak-rate periods. Required timer settings:

- 5:00 pm - 11:00 pm
- 7:00 am - 11:00 am, mode is in shutdown

This allows the heat pump to operate only during the available off-peak periods.

How to set

1. Press and hold OK for three plus seconds to access the home menu.
2. Select SET TIMERS, press OK.
3. Select SET TIMER, press OK.
4. Set the TIMER 1 start time (hours, then minutes), pressing OK after each selection.
5. Set the TIMER 1 end time (hours then minutes), pressing OK after each selection.
6. Select SHUTDOWN as the mode, press OK.
7. When ENABLE T2? is displayed, select yes, then press OK.
8. Set the TIMER 2 start time (hours, then minutes), pressing OK after each selection.
9. Set the TIMER end time (hours, then minutes), pressing OK after each selection.
10. Select SHUTDOWN as the mode, press OK.
11. Use the back button to go back to the home menu.

Modes SET DAY / TIME SET TIMERS FACTORY RESET	> SET TIMER RESET TIMER	TIMER 1 START V 17:00	TIMER 1 END V 23:00 MODE: SHUTDOWN	TIMER 1 END 23:00 > MODE: SHUTDOWN	ENABLE T2? > YES NO
OK V <	OK V <	OK V <	OK V <	OK V <	OK V <

TIMER 2 START V 07:00	TIMER 2 END V 11:00 MODE: SHUTDOWN	TIMER 2 END 11:00 > MODE: SHUTDOWN
OK V <	OK V <	OK V <

Reset timer(s)

1. Select 'SET TIMERS', and press OK.
2. Use the down button to select 'RESET TIMER', and press OK.
3. Confirm 'YES', and press OK. This will reset ALL timers.

Modes SET DAY / TIME SET TIMERS FACTORY RESET	SET TIMER > RESET TIMER	CONFIRM > YES NO
OK V <	OK V <	OK V <

Factory reset

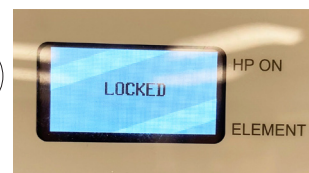
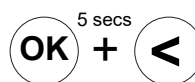
MODES SET DAY / TIME SET TIMER FACTORY RESET	CONFIRM YES NO
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OK V < OK V <

A factory reset clears the date, time, and any set timers, retaining only the default STANDARD mode setting. After a factory reset, you will need to reconfigure the date and time for the timer functionality to work properly.

Locking / Unlocking the screen

To lock the screen press and hold both the OK and Back buttons for more than five seconds. The screen will display 'Locked' and then return to the current operation mode after a short delay. To unlock and access the main menu, press and hold the same two buttons again.



Solar PV smart connection

If a solar PV smart connection has been made directly into the HydraHeat heat pump electronic enclosure, a sun symbol, will at times, show on the display.

When surplus solar energy is being used to power the heating element, a solid solar icon is displayed in the bottom-left corner of the screen. For more information refer to the installation guide.



Sun symbol indicates element is ON as an alternative energy source

Maintenance and servicing



For reliable operation the Rinnai HydraHeat should be serviced every two years. A typical service would include accessing the head unit to clean the evaporator, checking the clock battery, examining and clearing the check valve of any debris, checking and clearing the condensate drain (if necessary), checking the condition of the connecting hoses and o-rings, and ensuring there are no leaks. In addition to this we also recommend the following.

Period	What needs to be done
Every six months	TPR (temperature & pressure relief) operate the easing gear
Year five	Inspection and service of the entire system, including element ¹ . Anode may need replacing.
Every 24 months after year five	Inspection and service of the entire system, including element ¹

¹ In hard water areas the element must be periodically descaled. To do this the cylinder must be drained and the element removed

TPR valve

This valve is located near the top of the cylinder. It is essential for safe operation. The TPR valve works by automatically venting hot water if the temperature or pressure of the water in the cylinder gets too high.

Every six months operate the easing gear to remove lime deposits and to check that it is not blocked. Easing the lever discharges hot water, ensure no one is near the drain line.



DANGER

Failure to operate the relief valve easing gear at least once every six months may result in the water heater exploding.

Continuous leakage of water from the valve may indicate a problem. It is important that you raise and lower the easing gear GENTLY.

During the operation, if the valve does not discharge water when the easing gear is lifted, or does not seal again when closed arrange for an authorised person

to come and inspect the system immediately.



During servicing of your cylinder the TPR valve needs to be checked and/or replaced. This needs to be done by an authorised person at intervals not exceeding five years, or more frequently in areas where the water is classified as hard.

A TPR valve must not be replaced with one that has a higher pressure rating than that specified for the cylinder.

Anodes in enamel tanks

Storage tanks manufactured from enamel can be susceptible to corrosion. The combined effects of water pressure, temperature and water chemistry can create an aggressive environment for corrosion of some materials. For this reason anodes are placed in enamel tanks so as to corrode first. Anodes should be changed every five years, or more

frequently in hard or aggressive water areas.

Clearing debris and pooling water

Ensure that water does not pool around the cylinder base, and that debris around the base is regularly cleared and does not build up.

Regular visual inspection

Regularly check your system to ensure there is no buildup around or on top of the unit, and that there are no water leaks. The exterior needs to be kept clean.

Maintenance and servicing

Rinnai has a maintenance, service and spare parts network, with personnel who are fully trained and equipped to give the best advice on your Rinnai product. Regular maintenance and servicing is not covered by the Rinnai warranty.

For help locating a service person in your area call 0800 RINNAI (0800 746 624).

TPR position - top of cylinder

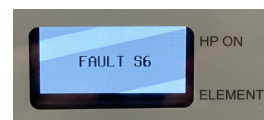


How to operate the easing gear



Error codes

The unit has built-in self-diagnostic electronics that monitor its operation. If a fault/warning occurs, an event code will appear on the display and the unit will beep once every five seconds. In most cases, the system will automatically switch to 'Element Only' mode until the issue is resolved. This mode keeps hot water available, but only uses the electric element.



Take a note of the code and contact Rinnai or your installer.



'Element Only' mode works like a standard electric hot water cylinder. If the fault isn't fixed promptly, your power bill may be higher than normal.

During legionella disinfection, and when in defrost, 'L' and 'D' will appear on the main display—these are not fault codes.



To mute the beeping, press and hold the Back button on the display for three seconds.

Code	Description
Fault	
T1	Condenser over temperature
T2	Evaporator under temperature
T3	Low superheat
T4	Low water temperature
T6	Discharge temperature fault, refrigerant or compressor
F1	Fan not rotating (mechanical jam, fan motor, harness)
F2	Fan overspeed (imbalance, PCB, harness)
P1	Pump not rotating
P2	Pump overspeed (PCB control failure)
C1	Compressor cont running (faulty PCB or compressor fault)
E2	Electric backup heater primary relay coil fault (or stuck)
E3	Electric backup heater secondary relay coil fault (or stuck)
E4	High electric heater power consumption
S1-S6, S8-S9	Sensor faults
S7	Evaporator fault
Warnings	
E1	Electric element not running
Blinking sun symbol	Solar PV smart connection. A contact signal is detected continuously for more than 24 hours—solar connection needs to be checked.

Troubleshooting

Do not attempt to carry out any work other than that mentioned in this troubleshooting section. If you have any other faults or problems, please contact your installer, or contact Rinnai.

INSUFFICIENT OR NO HOT WATER	
Heat pump unit not powered	Check there is power to the cylinder. Check to ensure the electric isolating switch at the switchboard, usually marked 'Hot water' or 'water heater' is turned on. Note: The compressor will not start up for five minutes after the power is turned on.
Excessive hot water consumption	Often people are surprised at the amount of hot water used, especially when showering. If the amount of hot water used during the day exceeds the storage capacity of the cylinder, it is likely there will be insufficient hot water.
Temperature & Pressure Relief (TPR) valve continually discharging water	It is normal that this valve allows a small quantity of water to be discharged during the heating cycle. If it discharges more than a bucket of water during a 24 hour period or discharges continuously there may be another problem. If the valve dribbles continuously, try easing the valve gear for a few seconds as described on p.12. This may dislodge any foreign matter and alleviate the problem. If the valve discharges at high flows, especially at night, it may be as a result of the water pressure exceeding the design pressure of the system. Contact your installer about fitting a Pressure Limiting Valve (PLV).
Expansion Control Valve (ECV) continually discharging water	It is normal that this valve allows a small quantity of water to be discharged during the heating cycle. If it discharges more than a bucket of water during a 24 hour period or discharges continuously there may be another problem. If the valve dribbles continuously, try easing the valve gear for a few seconds. This may dislodge any foreign matter and alleviate the problem. If this does not solve the problem contact your installer or Rinnai.
Ambient conditions too hot	It is not recommended to operate the heat pump outside its maximum operating temperature of 43 °C. Doing so may limit the lifespan of the product.
Ambient conditions too cold	To protect the components of the heat pump unit, it may not operate when the ambient temperature is less than -10 °C. The heating element will operate if water heating is required, but may take longer to heat the water.
NO WATER FROM THE TAP	
Restriction in the hot tap or failure of the cold water supply to the water heater	Check for water flow at the other taps and that the cold water isolation valve is fully open.
HIGH ELECTRICITY BILLS	
Excessive hot water consumption	Refer 'Insufficient or no hot water'.
High electricity tariffs	The electricity tariff will determine the running costs of the system. Refer to your latest bill or contact your electricity provider to confirm what plan you are on and what you are paying.
Higher cylinder element usage	In extremely cold conditions the cylinder element may be operating more than normal.
WATER FLOW FLUCTUATIONS	
One or more taps opened at the same time	More than one or two hot taps in use at the same time may cause a decrease in the hot water flow. Is there more than one or two hot taps open, or are appliances such as a dishwasher or washing machine, in use at the same time.

WATER HAMMER	
Hot and cold water plumbing in the premises	Have a plumber check clipping of hot and cold water pipe work and install a pressure limiting valve and water hammer arrestor as required.
HEAT PUMP ICING UP	
Defrosting function	The heat pump has an inbuilt defrost function which will operate when temperatures drop below 6 °C to remove any ice. Normally the inbuilt defrost function will remove ice every 30 minutes. If ice buildup becomes excessive, and affects the operation of the heat pump, call Rinnai Service for advice.
HEAT PUMP ERROR INDICATOR	
LED indicator is flashing on the display	This will flash if an error is detected with the heat pump, contact Rinnai for assistance.
WATER LEAK FROM TOP OF CYLINDER	
Possible heat exchanger fault	Turn the unit off and contact your installer or Rinnai for assistance.
ERROR CODE AFTER A POWER DISRUPTION	
Error code appearing after a power disruption	If there is a power cut while the unit is running an error code may appear on the display. If this occurs try powering off the system, wait for approximately ten seconds, then turn on again. If the error code reappears contact Rinnai for assistance.
TIMERS NOT WORKING	
Date and time not showing	Perform a factory reset. If this does not fix the problem then the coin cell battery in the PCB may be flat. Contact Rinnai for assistance as replacing the battery requires an authorised person. The PCB battery has an expected life of approximately ten years.
DISPLAY NOT VISIBLE	
Timeout may have occurred, press the OK button. If this doesn't work the screen may be 'locked' in the operation mode, press and hold both the OK and Back and buttons for 5 seconds to unlock.	

Limited Warranty - HydraHeat



Rinnai HydraHeat Integrated warranty summary

	HydraHeat head unit	HydraHeat cylinder	All other parts ¹
Product	Residential - 5 years Commercial - 1 year	Residential - 7 years Commercial - 3 years	Residential - 5 years Commercial - 3 years
Labour	1 year	1 year	1 year

All terms of the warranty are effective from the first date of installation. Proof of installation will be required. Where the date of installation is not known or cannot be proven, the warranty will be based on the date of manufacture. Any warranty claim must be made within a reasonable time of discovery of the potential fault or defect.

¹ All other parts include, but are not limited to; sensors, thermostats, valves, electric heating elements, anodes.

General warranty terms

Rinnai reserves the right to make modifications and change specifications and its parts without notice.

For the purposes of the Consumer Guarantees Act 1993, Rinnai only guarantees the availability of repair facilities and spare parts for the express warranty periods recorded in the Rinnai warranty summary table.

If the Rinnai HydraHeat is being acquired for personal, domestic or household use*, this warranty does not limit any consumer rights or guarantees that may apply under the Consumer Guarantees Act 1993. If the product is being acquired for the purposes of a business, the provisions of the Consumer Guarantees Act 1993 do not apply and no other warranties (either express or implied by law), apart from those stated in this warranty, apply.

*A residential application is defined as an installation where the water heater, with the thermostat set at 70 °C and below, delivers hot water to a single family dwelling, not used for commercial purposes. Examples where a residential dwelling is used for commercial purposes: hair salon, catering kitchen, communal care facility etc. These installations would be considered commercial applications. An exception would be an accommodation business such as a motel, where the water heater serves the equivalent of a single family dwelling, this would be a residential application.

Warranty terms and conditions

- All terms of this warranty are effective from the date of first installation. The attending service person reserves the right to verify this date.
- All Rinnai appliances must be installed, commissioned, serviced, repaired and removed in accordance with the manufacturer's instructions, local regulations, and municipal building codes by persons authorised by local regulations to do so.
- All appliances must be operated and maintained in accordance with the manufacturer's operating instructions.
- This warranty applies only to the components supplied by Rinnai. It does not apply to components supplied by others, such as, isolating valves, electrical switches, pipe work, electrical cables, fuses, but not limited to these.

- Where the appliance has not been sited in accordance with the installation instructions or installed such that normal service access is difficult, a service charge will apply. If at the discretion of the attending service person the installation is deemed illegal or access is dangerous, service will be refused. Any work required to gain access to the appliance will be chargeable by the attending service person (for example, removal of walls, or the use of special equipment to move components, but not limited to these).
- Where a failed component is replaced under warranty, the balance of the original appliance warranty will remain effective. The replacement part or appliance does not carry a new warranty.
- Rinnai reserve the right to transfer functional components from defective appliances if they are suitable.
- Rinnai reserve the right to have installed product returned to the factory for inspection.
 - The decision of whether to repair or replace a faulty component of the heat pump unit is at the sole discretion of Rinnai.
 - Where Rinnai determines that the heat pump unit needs to be removed for repair, Rinnai may undertake such removal and may permanently replace the defective heat pump unit with a substitute unit that is in the reasonable opinion of Rinnai, in a better or equal condition to the repaired unit.
- Where the heat pump is installed outside the metropolitan area or further than 40 km from a Rinnai authorised service centre, travel costs shall be the owner's responsibility.

Warranty exclusions

The following exclusions may cause the warranty to become void and will result in a service charge and costs of parts (if required).

- Accidental damage, defects or failure caused by acts of nature (fire, wind, lightning, flood, storm, hail storm fallout), vandalism, earthquake, war, civil unrest, pests, animals, insects, or entry of foreign objects or matter into the product such as dirt, debris or moisture.
- Defects or failure due to environmental damage such as corrosion.
- Failure due to abuse or misuse, improper maintenance or improper storage.
- Failure due to incorrect or unauthorised installations.
- Failure or damage caused by alterations, service or repair work carried out by persons other than a Rinnai service person or service centre.
- Where the heat pump or cylinder has failed directly or indirectly as a result of poor water quality outside the limits specified (refer next page).
- Where it is found that there is no fault with the appliance and the issue is related to the installation or is due to power failure.
- Subject to any statutory provisions to the contrary, Rinnai does not accept:
 - Liability for consequential damage or any incidental expenses resulting from any breach of the warranty.
 - Claims for damage to buildings or any other consequential loss either directly or indirectly due to leaks from the heat pump or any other faults.

Water quality

Water chemistry has a direct impact on hot water heaters, affecting corrosion protection measures, or causing scale buildup.

Water quality MUST:

1. Meet the Water Services (Drinking Water Standards for New Zealand) Regulations 2022 and the Aesthetic Values for Drinking Water Notice 2022, or the water standards as statutorily defined at the time; AND
2. Be within the limits shown in the table below.

Water quality outside these limits will void this warranty.

Water quality and impurity limits

TDS (Total Dissolved Solids)	<600 mg/L	Manganese	<0.01 mg/L
Total Hardness CaCO₃	<200 mg/L	Sodium	<150 mg/L
Alkalinity	150-200 mg/L	Iron	<0.1 mg/L
Dissolved (free) CO₂	<25 mg/L	Sulphate	<100 mg/L
pH	6.8-7.5	Nitrate	<11 mg/L
Chlorides	<150 mg/L	Alkalinity/Sulphate ratio	>1
Free Chlorine	<1 mg/L	LSI¹	-1.0-0.8 @20 °C
¹ Langelier Saturation index—scaling potential of water.			

Water quality warranty guidelines

Filtration

Where there is discolouration, debris, or silt present in the water, an inline filter must be fitted into the water supply to protect the copper in the HydraHeat head unit from corrosion. Particulates and deposits in hot water systems are corrosive to copper and stainless steel and can lead to premature pitting. The filters must be periodically replaced to maintain the integrity of the system.

Stagnation

Leaving water stagnant in the system will promote corrosion. It is recommended that systems, if not in use, are flushed on an eight week cycle.

Bore and tank water

Bore and tank water supplies should be considered to be corrosive and should be tested prior to using the system. Bore and tank water must meet the water quality parameters stated in the above table.

Purchase details

Record your purchase details below

		ATTACH YOUR PROOF OF PURCHASE HERE:
Retailer: _____		
Retailer address: _____ _____ _____		
Date of purchase: _____		
Product details: _____ _____ _____ _____		
Please keep these details in a safe place for future reference.		Register your system online: www.rinnai.co.nz/register/ for service reminders, product updates, and special offers. You can unsubscribe at any time.

Installer details

Company name: _____	
Installer name: _____	
Address: _____ _____ _____	
Phone: _____	Mobile: _____
Signed: _____	
Date: _____	

Rinnai.co.nz

Tel: 0800 746 624

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