MicroHeat®
Hot water just got smarter

Continuous Flow Electric Water Heater

USER MANUAL

Single Phase CFEWH Series 1-10 Premium Model. Extension pipe cover sold separately.

CFEWH SERIES 1-10

AUSTRALIAN MADE AND OWNED

www.microheat.com.au

Contents

Introduction

Congratulations on having the revolutionary, new Continuous Flow Electric Water Heater [CFEWH] fitted.

This User Manual will help familiarise you with your new hot water system, so please just take a few moments to read through and understand how you can get the very best from your appliance.

If you're interested in technical specifications, we've included details about the operational capacity of the unit in the Operational Parameters section at the rear of this manual.

This User Manual covers SERIES 1-10 Premium and Standard models of the Continuous Flow Electric Water Heater [CFEWH].

The photographs below allow you to identify which model you have:

Premium CFEWH

CFEWH SERIES 1-10P

The Exterior Cover includes a Display showing Output Water Temperature and Flow Rate.

Standard CFEWH

CFEWH SERIES 1-10S

The Exterior Cover has only a RED/GREEN Indicator LED.

AS/NZS 3498
Lic: WMKA22136
Standards Australia

IEC 60335.2.35
T120312_S

AS/NZS 60335.2.35
A/13670EA

E1109-0066-1

C-Tick N29465

Patent Cooperation Treaty (PCT) Patent Protected.

Trademarks Protected

About This Product

Hot water just got smarter

About the Continuous Flow Electric Water Heater [CFEWH]

What makes this product so unique and different?

The Continuous Flow Electric Water Heater [CFEWH] uses innovative new technology to deliver hot water instantly … and achieve impressive efficiencies in both water and energy usage.

We'd like to explain how it's so different from other hot water systems – and why it's setting completely new standards.

To fully appreciate the difference – and the substantial benefits – offered by the technology used in this water heater, we need to start off by comparing the main deficiencies of traditional hot water systems.

Heating water the traditional way

Traditional centralised hot water services consume continuous energy to heat water and then maintain it at a defined (thermostat-controlled) temperature, ready for when it's wanted. Typically, the water heater is located away from where the water is wanted, relying on lengths of pipe to deliver the water. Energy is therefore wasted keeping quite a large volume of water at a stable temperature – often at a higher temperature than would ever be used.

But that's not all – water is wasted every time a hot water tap is turned on. That's because you need "to let the water run" until the water held in the pipes has made way for the hot water you want, coming from the water heater.

The overall result is quite inefficient usage of power together with wastage of water.

The MicroHeat difference

The engineers at MicroHeat set out to create something completely different from existing methods of providing hot water: a highly efficient new method of heating water that would address the wastage of valuable resources – energy and water.

The Continuous Flow Electric Water Heater [CFEWH] is a very compact unit, which provides an instant and continuous flow of hot water wherever it's required – delivered through very short lengths of pipe. Water isn't wasted, because you're not leaving it running, waiting for it to get hot. Hot water is always at a stable temperature, despite any fluctuations in water pressure.

You don't need a science degree to understand how the efficiencies and savings are achieved – all you need to do is follow our simple explanation.

The secret of "optimised" energy

The unit intelligently optimises the amount of energy it needs to heat water, depending on how much water you want.

For example, let's assume hot water is required at 45°C.

If you want a fairly fast flow of water – 4 litres a minute – the unit will use its full power – 9.6kW – to heat the water.

However, if you only want a low flow of water – 1.5 litres a minute – the unit will use just 4.2kW to heat the water.

The benefit is the unit can intelligently vary itself between being a 9.6kW and 4.2kW system. The lower flow rate achieves 56% less energy consumption – and that contributes to lowering power bills.

In addition, varying the flow rate of the water contributes to lower water consumption and achieves further savings. Reducing water flow from 4 litres a minute to 1.5 litres a minute lowers water consumption by 66%.

Incoming water temperature makes a difference

The unit also achieves savings in another area – by intelligently varying its power between 9.6kW and 7kW to heat incoming cold water.

Depending on where you're located and what season it is, mains cold water temperature could potentially fluctuate anywhere between 10°C and 25°C.

Let's again assume hot water is required at 45°C and you want a fairly fast flow of hot water – 4 litres a minute.

If the incoming water temperature is a fairly chilly 10°C, the unit will apply its full power of 9.6kW – however, if it's a pleasantly warm 25°C, it will only use 7kW. That's 20% less energy consumption – making a further contribution towards lowering power bills.

We hope you now have a better understanding of how the Continuous Flow Electric Water Heater [CFEWH] is revolutionising hot water.

Although the Continuous Flow Electric Water Heater [CFEWH] is very safe to use, 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 that they do not play with the appliance.

IMPORTANT

The unit does not contain any user-serviceable parts. In case of malfunction, please contact us on 03 9681 7088 and arrange for a trained MicroHeat Technician to rectify the problem.

Getting Started – Premium model

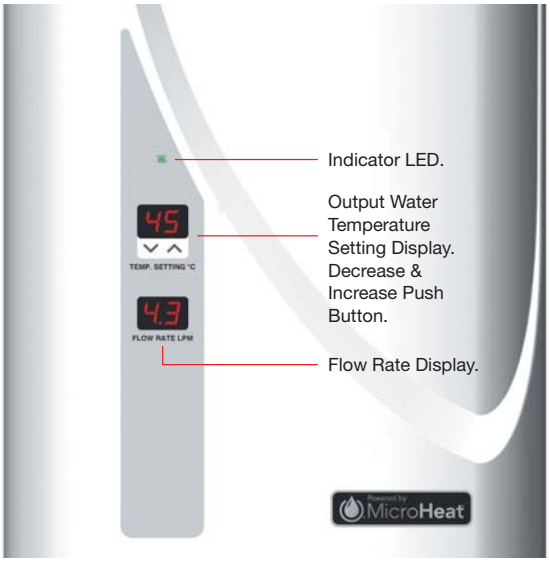
Guided Tour of the Premium model

If you have had a chance to look at your unit and you recognise that it's the Premium model, we'd like to give you a short guided tour.

The unit will automatically begin operating when you turn on a hot water tap, and water is flowing faster than 1.5 litres a minute.

The first step is to understand how to set the output water temperature.

You can vary the temperature manually between a minimum of 20°C and the maximum factory set temperature of either 50°C, ***OR*** Other Specified Maximum Setting <50°C.



Want to increase the water temperature?

By pushing the UP arrow of the TEMP SETTING, you will increase the temperature by 1°C – you can give this one push at a time to do this, or keep it pressed and the temperature will rise continuously until you reach the temperature you want. Remember – the maximum temperature is 50°C ***OR*** Other Specified Maximum Setting <50°C.

Want to decrease the water temperature?

By pushing the DOWN arrow of the TEMP SETTING, you will decrease the temperature by 1°C – you can give this one push at a time to do this, or keep it pressed and the temperature will decrease continuously until you reach the temperature you want. Remember – the minimum temperature is 20°.

COLD Setting

By pushing the DOWN arrow of the TEMP SETTING, one push at a time, or continuously, you'll eventually reach 20°C. This is the COLD setting, where the output water temperature will not be heated to above 20°C.

How do I use the WATER FLOW RATE?

The display shows the water flow rate in litres per minute (LPM in technical jargon). The minimum flow rate that can be displayed is 0.1 LPM and the maximum displayed is 99 LPM.

The unit is a fully optimised water heater and will maintain a consistent water temperature even if there is fluctuating water pressure or changes in temperature of the incoming water. This avoids the hot and cold water taps being constantly adjusted, and reduces the duration of usage.

If you are concerned about using hot water as energy-efficiently and cost-efficiently as possible, you should keep flow rates and usage of water to a minimum.

Getting Started – Premium model

To optimise your energy usage with this unit, we suggest you follow these guidelines, which are based on the cold water entering the unit at 10°C:

Temperature: **45°C**
Flow rate: **4 LPM**

You'll find a full chart in the Operational Parameters section at the rear of this Manual.

What does the LED indicator tell me?

The LED indicator on the Exterior Cover indicates the operational status of the unit, based on these options:

LED indicator not illuminated:
No electricity is being supplied to the unit.

Slow flashing GREEN:
Standby mode, waiting for water to be turned on.

Fast flashing GREEN:
The unit is operating and water is being heated.

Flashing RED:
The unit is self-diagnosing an error that it will attempt to resolve. When the error has been resolved, the LED will return to slow or fast flashing GREEN.

RED continuously showing:
Mechanical Lockout Mode (Irresolvable Error). This means you'll need to contact us on 03 9681 7088 and arrange a MicroHeat Service Technician to rectify the problem.

What happens if there's an error code showing on the LED indicator?

If the unit experiences some type of malfunction, the LED indicator will also display an error code. You will see **Er** appear in the TEMP SETTING window and then an alpha-numerical code in the WATER FLOW RATE window.

For example – this shows error code A6:

The error codes are used by a MicroHeat Service Technician to accurately diagnose the cause of a malfunction.

WARNING

In accordance with AS 3500, this appliance will not deliver temperatures exceeding 50°C.

Water temperatures greater than 50°C can cause scalding. Care should be taken with children and people with limited sensory, physical, and/or mental capability.

IMPORTANT

The unit does not have any user-serviceable components internally, and must not be opened.

If an irresolvable error condition is present and an error code is displayed please call a MicroHeat Service Technician on 03 9681 7088.

Getting Started – Standard model

Guided Tour of the Standard model

If you have had a chance to look at your unit and you recognise that it's the Standard model, we'd like to give you a short guided tour.

The unit will automatically begin operating when you turn on a hot water tap, and water is flowing faster than 1.5 litres a minute.

The output temperature of the water has been pre-set to maximum of 50°C ***OR*** Other Specified Maximum Setting <50°C and this cannot be adjusted.

There are no manual controls – the LED indicator will provide information to you about the operational status of the unit.

What does the LED indicator tell me?

The LED indicator on the Exterior Cover indicates the operational status of the unit, based on these options:

LED indicator not illuminated:
No electricity is being supplied to the unit.

Slow flashing GREEN:
Standby mode, waiting for water to be turned on.

Fast flashing GREEN:
The unit is operating and water is being heated.

Flashing RED:
The unit is self-diagnosing an error that it will attempt to resolve. When the error has been resolved, the LED will return to slow or fast flashing GREEN.

RED continuously showing:
Mechanical Lockout Mode (Irresolvable Error). This means you'll need to contact us on 03 9681 7088 and arrange a MicroHeat Service Technician to rectify the problem.

WARNING

In accordance with AS 3500, this appliance will not deliver temperatures exceeding 50°C.

Water temperatures greater than 50°C can cause scalding. Care should be taken with children and people with limited sensory, physical, and/or mental capability.

IMPORTANT

The unit does not have any user-serviceable components internally, and must not be opened.

If an irresolvable error condition is displayed, please call a MicroHeat Service Technician on 03 9681 7088.

Operational Parameters

Location

The appliance has an IP44 rating, which means that the appliance is adequately protected from the ingress of water. However, it is required that the appliance be installed within a dwelling or construction where there is a decreased likelihood of water entering the cover of the unit.

Temperatures

As the unit is intended for internal installation, it should not be in an environment where there is a possibility of the ambient temperature dropping below 5°C.

IMPORTANT

Where the ambient temperature is likely to approach freezing – ie: less than 5°C – **the unit must be drained of water** to prevent frozen water damage occurring.

Failure to comply with the installation and operating instructions or improper use voids the warranty.

If a drop in temperature below 5°C occurs, or is considered likely to occur, please call a MicroHeat Service Technician on 03 9681 7088.

Maintenance

The unit is designed to provide long and reliable service. Actual life expectancy will vary with water quality and use. The unit itself does not require any regular maintenance.

However, to ensure consistent water flow, it is recommended that a licensed plumber should periodically remove scale and dirt that may build up in the Inlet Filter of the unit, the faucet or in the shower head.

IMPORTANT

Other than the inlet filter, the unit does not contain any user-serviceable parts. In case of malfunction, please call a MicroHeat Service Technician on 03 9681 7088.

Operational Parameters

Optimised Energy Usage

The table below shows the flow rate in litres per minute (ltr/min), related to deliverable output water temperature (°C) and optimised electrical energy usage (kW).

The table shows you the results that can be achieved by varying the water flow and temperature.

The optimum operational capability of the unit is shown in **RED**.

CFEWH SERIES 1-10 240VAC								
Input water temperature @ 5°C								
Warm water flow rate ltrs/min	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
Deliverable output water temperature °C	50.0	50.0	50.0	50.0	42.0	39.5	35.5	32.5
Optimised energy usage – kW	4.7	6.3	7.8	9.4	9.5	9.6	9.6	9.6
Input water temperature @ 10°C								
Warm water fow rate ltrs/min	1.5	2.0	2.5	3.0	4.0	4.35	4.5	5.0
Deliverable output water temperature °C	50.0	50.0	50.0	50.0	45	42	40.5	37.5
Optimised energy usage – kW	4.2	5.6	7.0	8.4	9.6	9.6	9.6	9.6

Warranty

WARRANTY FOR MICROHEAT TECHNOLOGIES PTY LTD CONTINUOUS FLOW ELECTRIC HOT WATER HEATER (CFEWH) SERIES.

For the MicroHeat Technologies Pty Ltd Continuous Flow Electric Water Heater SERIES ("CFEWH"), MicroHeat will repair or, if necessary, at its sole discretion, replace the CFEWH, which falls within the Warranty Periods and Territory specified below, subject to the warranty conditions and the warranty exclusions.

Warranty Period within Australia, New Zealand and Papua New Guinea is 3 years from the date of purchase by the consumer as defined by the Competition and Consumer Act 2010 (Cth).

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

It is the responsibility of the consumer to provide proof of purchase within the Territory.

WARRANTY CONDITIONS

1. This warranty is applicable only for CFEWH appliances.

2. The CFEWH must be installed in accordance with the MicroHeat CFEWH Installation Instructions, to be supplied with the CFEWH water heater, and in accordance with all relevant statutory and local requirements of the Country or State in which the CFEWH is installed.

3. Where a failed component or CFEWH is replaced under warranty, the balance of the original warranty period will remain effective. The replaced part or CFEWH does not carry a new warranty.

4. Where a failed component or CFEWH is replaced or repaired under warranty, MicroHeat will incur all associated costs. However, where the CFEWH is installed outside the boundaries of a metropolitan area to be defined by MicroHeat or further than 35 km from an Accredited Service Agent, the cost of transport, insurance and travelling costs between the nearest MicroHeat Accredited Service Agent's premises and the installed site shall be the owner's responsibility.

5. Where the CFEWH is installed in a position that does not allow safe, ready access, the cost of accessing the site safely, including the cost of additional materials handling and/or safety equipment, shall be the owner's responsibility.

6. The warranty only applies to the CFEWH and therefore does not cover any plumbing or electrical parts supplied by others and not an integral part of the CFEWH, e.g. pressure limiting valve; tempering valves; isolation valves; shut off valves; electrical switches; electrical cabling; pumps or fuse.

7. The benefits of this warranty are in addition to other rights and remedies of the consumer under laws in relation to the goods and services to which the warranty relates.

8. The CFEWH must be sized to supply the hot water in accordance with the guidelines in the MicroHeat CFEWH literature.

PROCEDURE FOR HONOURING WARRANTY

1. To initiate a claim for a warranty against defects, the consumer shall contact:

MicroHeat Technologies Pty Ltd
Unit 6, 38-42 Sabre Drive
PORT MELBOURNE VIC 3207
AUSTRALIA
Phone: (03) 9681 7088

2. The process will then follow the MicroHeat Product Warranty Flow Chart to assess whether the product is under warranty.

WARRANTY EXCLUSIONS

Repair and replacement work will be carried out as set out in the MicroHeat warranty. However, the following exclusions may cause the MicroHeat warranty to become void and may incur a service charge and/or cost of parts:

1. Accidental damage to the CFEWH or any component, including: Acts of God; failure due to misuse, abuse, fire or flood damage; incorrect installation; damage as the result of transportation, removal or storage; attempts to repair the CFEWH other than by a MicroHeat Accredited Service Agent, the MicroHeat Service Department or a repairer not approved by MicroHeat.

2. Where it is found there is nothing wrong with the CFEWH water heater; where the complaint is related to circumstances where there is no flow of hot water due to faulty plumbing; where water leaks are related to plumbing and not the CFEWH or CFEWH components; where there is a failure of electricity or water supplies; where the supply of electricity or water does not comply with relevant standards, codes or acts, MicroHeat may then charge the consumer a nominal service charge if inspection reveals no fault with the CFEWH unit or its installation.

3. Where the CFEWH or CFEWH component has failed directly or indirectly as a result of excessive water pressure in excess of 10bar; incorrect pressure limiting valves; incorrect tempering valve settings; temperature input in excess of 85ºC and/or excessive thermal input; blocked outlet; corrosive atmosphere; foreign matter in the water supply; or ice formation in the pipe work to or from the CFEWH water heater.

4. Where the CFEWH is located in a position that does not comply with the MicroHeat CFEWH Installation Instructions or relevant statutory requirements, causing the need for major dismantling or removal of cupboards, doors or walls, or use of special equipment to bring the CFEWH to a serviceable position.

5. Repair and/or replacement of the CFEWH due to the effects of either corrosive water or water with a high chloride or low pH level caused by unnatural circumstances or when the CFEWH has been connected to a water supply with water conductivity levels that are outside the range of water conductivity outlined in the Installation Instruction Manual.

Subject to any rights you have under Australian Consumer Law or other statutory provisions to the contrary, this warranty excludes any and all claims for damage to furniture, carpets, walls, foundations or any other consequential loss either directly or indirectly due to leakage from the water heater, or due to leakage from fittings and/or pipe work of metal, plastic or other materials caused by water temperature, workmanship or other modes of failure.

For technical support or more information

phone 03 9681 7088

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