Econergy®

The smarter way to heat water™

Heat Pump Water Heater
User Manual

⚠️ **IMPORTANT: Warranty registration installation declaration form enclosed separately for installer to complete and return. A copy of this information is to be completed by installer on the back of this manual. Please read and retain this manual in a safe place.**

HOT WATER HEAT PUMPS LTD
Advancing Water Heat Pump Technology   SINCE 1980

Contents

Service phone: **0800 ECONERGY (0800 32 66 37)**

Service agents: **www.econergy.co.nz**

Important Information

- This product has a classification of 6.101 for appliances not accessible to the general public

- The appliance is not intended for use by young children or infirmed persons without supervision

- Ensure young children do not have access to the appliance.

- If the supply cord is damaged, it must be replaced by the manufacturer or service agent

- The fuse on the electronic controller is 6A/250V. However this should only be accessed by a qualified Econergy serviceman.

- Warranty and Support – All Econergy Super Efficient Water Heaters are backed by our Auckland factory with an outstanding 6 year warranty on parts and labour. Warranty does not apply in areas with corrosive or hard water unless water softener fitted.

About Your New Econergy® Heat Pump Water Heater

Congratulations on purchasing an Econergy® heat pump water heater. Designed and manufactured in New Zealand, Econergy® heat pump water heaters are being recognised as the best water heating option for your home.

Econergy® heat pump water heater's slash your water heating bill by transferring free renewable energy in the air to heat your hot water. Not only will this save you money while giving you a reliable supply of hot water - by reducing power consumption you'll also be doing your bit for our environment. The Econergy® heat pump water heater uses electricity to drive a heat pump cycle, which takes the energy in the surrounding air and transfers it into the water. The process is quite similar to how a refrigerator or air conditioning unit operates, except the technology has been optimised to produce a steady supply of reliable hot water at minimum cost.

Installing your Econergy® Heat Pump Water Heater

While installation of an Econergy® unit is a straightforward plumbing and electrical job, installation of your Econergy® heat pump water heater is best carried out by Econergy - trained trade certified plumbers and registered electricians in accordance with detailed installation instructions supplied from the factory. This ensures that you will get the best possible performance from your heat pump water heater, irrespective of whether the unit is installed in a new or existing dwelling. It also means you will enjoy the protection of a factory-backed three year parts and labour warranty. (Refer to page 11 for terms and conditions).
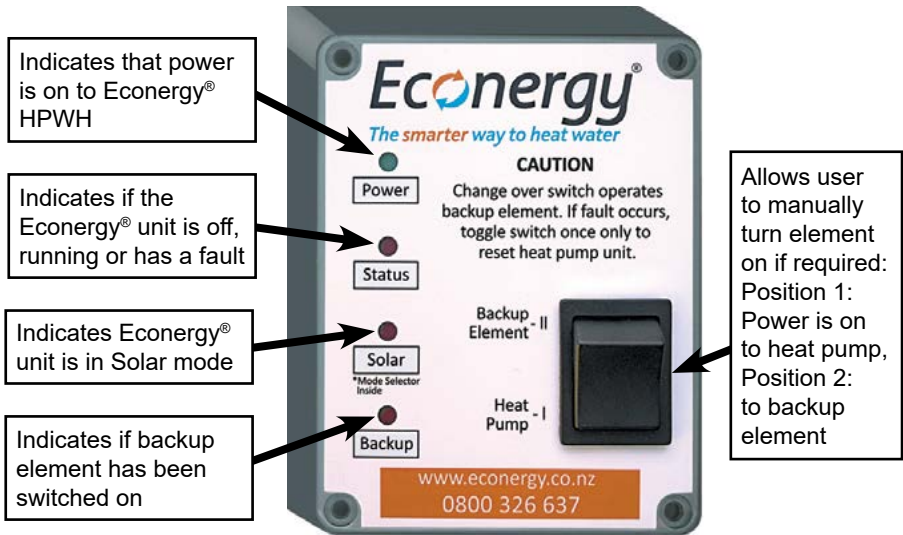
In existing homes, Econergy® heat pump water heaters can be conveniently retrofitted to your existing electric hot water cylinder where the cylinder is post-1988 and in good condition.

For best performance, the Econergy® heat pump water heater can be connected to an Econergy® duplex stainless steel heat pump ready hot water cylinder. This will ensure the last few % savings are achieved and ensure the longest service life of the total system.

Operating your Econergy® Heat Pump Water Heater

Your heat pump water heater is supplied with a status indicator and electric backup unit as shown below.

This small grey box is located adjacent to the hot water cylinder. It informs the user of the status of the heat pump unit and allows the element to be manually switched on if required for any reason.

Indicates that power is on to Econergy® HPWH

Indicates if the Econergy® unit is off, running or has a fault

Indicates Econergy® unit is in Solar mode

Indicates if backup element has been switched on

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CAUTION
Change over switch operates backup element. If fault occurs, toggle switch once only to reset heat pump unit.

Power

Status

Solar
*Mode Selector Inside

Backup

Backup Element - II

Heat Pump - I

www.econergy.co.nz
0800 326 637

Allows user to manually turn element on if required: Position 1: Power is on to heat pump, Position 2: to backup element

Normal Operation

Under normal operation the main power switch (usually a white 20 amp rocker switch located next to the hot water cylinder), and the outdoor switch next to the heat pump unit must be turned on. The two ball valves on the hot water cylinder (on the lines going to and from the heat pump) must be open to allow water to circulate to and from the heat pump water heater.

• If power is on to the hot water circuit, the **power** light on the Status Indicator (shown on page 6) will be glowing green. (NB: if the **power** light is not glowing, the power to the hot water circuit may have been turned off by the power supply authority, this can happen up to 7 hours per day and is perfectly normal)

• The **status** light will be off when the HPWH is not running.

• When the water temperature in the bottom of the tank gets below the pre-set cut-in temperature, by natural heat loss or from running off hot water, the heat pump will start running.

• The **status** light will glow solid red while the heat pump is running.

- When the whole hot water cylinder is heated and hot water is being drawn back to the heat pump unit, the heat pump unit and the **status** light will switch off until heating is required again
- If the ambient temperature drops below -4°C for a period of time then the hot water element and **backup** light will glow red. The hot water element and **backup** light will turn off once the ambient temperature rises above -4°C.

Solar Mode (Optional)

Solar mode is a time-clock software update that can be installed during production to optimise the operating time for photovoltaic (PV) solar power systems. The heat pump will use its lower tank sensor for regular operation during specified daylight hours to do a full cylinder reheat. Outside of the timed hours the upper tank sensor is used (solar mode only works with two sensor systems). When the available hot water at the top of the cylinder gets low the heat pump will switch on for one hour or until the top sensor is satisfied there will be a limited supply of hot water available in the morning.

Maintaining your Econergy® Heat Pump Water Heater

Looking after your Econergy® heat pump water heater is a relatively straightforward job. We recommend the following guidelines be followed:

- Keep the air inlet and outlet (black louvre and grey rear grille) clear of obstructions within a 400mm distance
- Do not place objects on top of the outdoor unit or stand on it
- Switch off and cover the unit temporarily if mowing or edge trimming next to the unit, to avoid debris entering the unit.
- Ensure the condensate drain tray is kept clear of debris
- In coastal areas we recommend coating the unit with a protective coating. This can be supplied from the factory or by your authorized Econergy® agent
- Every 12 months, switch off the unit at the wall and wash the unit with soapy water. The finned evaporator (bluish colour behind rear grille) can be cleaned by spraying a garden hose in between the fins. **NOTE: THE UNIT MUST BE SWITCHED OFF AT THE WALL DURING ANY CLEANING WITH WATER.**

Going Away

If going away for an extended period of time, the Econergy® water heater can be turned off by turning the main isolating power switch off (located adjacent to the hot water cylinder but not to be confused with the hot water back up box pictured on page 6). Upon returning, the main white power switch is simply turned on again and the unit resumes operation automatically.

Note: There may be a time delay of up to 8 minutes until the unit starts heating.

Troubleshooting

If abnormal operation occurs with your Econergy® heat pump water heater, please read the following table to see what action (if any) is required.

If there is no hot water, **remember that if the unit is connected to a ripple supply, or night rate supply, the power company can turn off your hot water supply for up to 7 hours per day!** If the power company is turning off the supply for more than 7 hours per day, or there is a fault with your ripple control relay, please contact your local power company for service.

If an unrecoverable fault occurs with your Econergy® heat pump unit, then the status light will flash on and off and an audible alarm will sound. Before calling your local sales and service agent (refer www.econergy.co.nz for contact details) or the Econergy® Service team (0800 32 66 37), please check the following:

Symptom	Possible Cause	Things to Check
No hot water, but heat pump still running	a) Whole tank has been drawn off	Estimate water flow volume being used (a bucket under the shower head will suffice) and if approximately equal to tank capacity then tank is being dumped. Reduce shower flow or water usage, or install larger storage hot water cylinder.
	b) heat pump has lost refrigerant charge	Alarm will sound after several unsuccessful attempts to heat water. Switch changeover switch to position II (Backup element). Call local service agent www.econergy.co.nz or 0800 ECONERGY (0800 32 66 37)

Symptom	Possible Cause	Things to Check
No hot water, lights off on status indicator	a) No power to hot water cylinder	Check all switches are on, there is power to house and circuit breaker marked "Hot Water" is ON
	b) Ripple control activated	Wait several hours until peak load time is over. If ripple remains out, contact power company to address the problem. If hot water is immediately required contact electrician to override ripple control
Water temperature too low	a) temperature valve set incorrectly or malfunctioning	Remove cap from top of tempering valve and screw in to increase water temperature. Call plumbing installer if temperature fluctuating or too low
	b) partial loss of refrigerant or other sealed system malfunction	Call local sales and service agent (see www.econergy.co.nz for local agent or 0800 ECONERGY (0800 32 66 37)
Hot Water supply OK but alarm buzzer operating and status light flashing	a) Unit fault has occurred and element is on	Reset heat pump unit by switching main (white) switch off and on again. Green light should be lit and unit should start heating again normally. Check that ball valves are open. If fault occurs twice in succession, switch changeover switch to position II (backup) and call sales and service agent refer www.econergy.co.nz or 0800 ECONERGY (0800 32 66 37)
Heat Pump is not running, status light off and backup light is on	a) ambient temperature below -4 degrees Celsius	No action required. Wait unit temperature rises above -4 deg C and heat pump operation will recommence
Water is dripping from rear of unit (behind finned evaporator)	a) This is normal as the unit will remove moisture in the air above 70% RH (relative humidity)	No action required.

Econergy® HP Series Water Heater Specifications

General	HP4000LT
Height	520 mm
Width	490 mm
Depth	550 mm
Weight	50 kg
Noise rating @ 1.5m	52 dBA
Circuit Breaker	16 amps
Rated Current RLA	4 amps
Refrigerant	R-134a
Refrigerant quantity	590 gm
Ambient Air Temperature	-5 to 40°C

Performance Specifications **	HP4000LT
Heat output	3600 W
Rated input	1000 W
Recovery rate	67 L/hr
Efficiency (COP)	3.8 W/W

Water / Connections	HP4000LT
Min Supply Pressure	50 kPa
Max Supply Pressure	800 kPa
Min/Max Inlet Water Temperature	5 - 50°C
Flow/Return Connections	RP1/2" / 15mm
Condensate Drain	15 mm
Max Total Disolved Solids	250 mg/L
Max saturation index -	+0.80
Zone 1	3-8 people
Zone 2	2-6 people

**Rated at EN255 Conditions (15˚C / 15˚C / 60˚C /70%)*
(Cold water/ Ambient Air/ Hot Water/70%RH)

Heat Pump Water Heater – Six Year Warranty Information

Congratulations on your purchase of a quality Econergy® heat pump water heater.

The Econergy® heat pump water heater has a limited 6 year warranty which operates concurrently with the 6 year performance guarantee.

The warranty takes effect from the date of the original installation. This warranty is voided if the heat pump water heater is not installed as per our instruction and certified as correctly installed and commissioned by the installer.

The warranty covers parts and labour and is an onsite warranty for 3 years and a back to base warranty for a further 3 years. Back to Base requires you to deliver to and collect your unit from, our premises at your expense.

In order for this warranty to take effect, the owner must send in the completed "**Installation Declaration Form**," supplied with this manual, to:

Hot Water Heat Pumps Ltd, PO Box 21 586, Henderson, Auckland 0650
or email: info@waterheating.co.nz

Warranty Service Exceptions:

a) Travelling costs for repairs in excess of one hour's drive from the service agent's designated place of business.

b) Consequential loss arising from failure of the product.

c) Additional cost of access to the unit, where it has been installed in an unusual location.

d) Vandalism, accident or Acts of God.

This warranty does not apply to:

a) Defects or failures due to incorrect or faulty installation. Please read the installation instructions in the Installation manual and ensure these are followed.

b) Defects or failure of the heat exchanger caused by hard or corrosive water.

c) Defects or failure caused by blockage of the unit due to foreign material such as dust or debris e.g. Dog hair, grass, moss etc.

d) Damage to equipment caused by accessory or component used that is not specified by Econergy®.

e) Inadequate electrical supply, voltage fluctuations, incorrect external wiring.

f) The product has been relocated to another property.

Econergy®

_____
Owners Name

_____   _____
Product Serial Number   Installation Date

_____

_____
Installation address

Declaration: I have installed and commissioned this Econergy water heater at the above address in compliance with the manufacturer's instruction manual.

COC No: _____

_____
Installer Company Name/ Trading Name

_____   _____
Installer Name   Installer email address

_____   _____
Signed   Date

_____
Secondary Installer Company Name/ Trading Name

_____   _____
Secondary installer (electrician or plumber)   Installer email address

_____   _____
Signed   Date

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