# Homeowner’s Manual

ECOGENICA

## Model numbers

Eco-ZR02FC (Outback 5kW)

Eco-ZR03FC (Outback 8kW)

Eco-ZR04FC (Outback 11kW)

Eco-ZR04FC 3 Phase (Outback 16kW)


**PLEASE NOTE:**

***Installation, maintenance and any repairs must be undertaken by qualified persons.***

***Always follow the safety instructions.***

***Adhere to the maintenance schedule and only use genuine spare parts.***

***Failure to comply with the instructions set out in this manual will invalidate the warranty.***

## Thank you for choosing an Ecogenica heat pump!

As a leader in the Australian heat pump market, we are excited to bring our expertise and innovation to the UK and European markets.

We take pride in our dedicated R&D department and state-of-the-art factory, which allow us to create cutting-edge, environmentally conscious products.

The Ecogen290 range operates at maximum efficiency even in temperatures as low as -25°C, ensuring reliable and sustainable heating solutions to meet all your needs.

Our heat pumps use a refrigerant called R290, which is a natural and eco-friendly refrigerant. It has an extremely low Global Warming Potential (GWP) making it the most sustainable refrigerant available.

The use of R290 refrigerant not only ensures optimal performance and energy efficiency but also aligns with global efforts to reduce greenhouse gas emissions and combat climate change.

By choosing Ecogenica you have invested in a system that prioritizes both high efficiency and environmental responsibility.

This heat pump adheres to numerous rigorous design and manufacturing standards to ensure superior quality, exceptional reliability, and versatile functionality.

This manual provides you with the necessary information on how to operate and maintain your system and includes details of the warranty cover you have selected.

Please read this manual carefully. The manufacturer is not liable for injuries or damage resulting from improper installation, troubleshooting, or maintenance procedures that deviate from the guidelines outlined in this manual. All installation, maintenance, and repair work must be performed by qualified persons.

**What to do if you need help:**

Your heat pump system and its warranty are looked after by your installer. They will register the unit for warranty and maintain and support the unit and the heating system for its whole life. In all cases, please contact the installer below for advice on your system.

| | |
|---|---|
| **Serial Number** | |
| **System Type (Open or Multi-Zone)** | |
| **Installer's Name** | |
| **Installer's Phone Number** | |
| **Installer's Email Address** | |

If your installer is unable to assist you, please contact Ecogenica at **info@ecogenica.co.uk** or on **0808 273 5159** and we will suggest a qualified installer local to you who can help you.

## Contents

# 1. Safety


This product contains the combustible refrigerant R290. If the refrigerant circuit leaks, the escaping refrigerant may mix with air to form a flammable atmosphere. If this happens, there is a risk of death from fire and explosion.

A safety zone is defined for the area around this product. The safety zone requires a 300 mm clearance at the back,1500 mm at the front and 300 mm on each side.

The designated safety zone must be free of structural openings, such as windows, doors, light wells, skylights, and ventilation system air inlets or outlets.

R290 refrigerant, being denser than air, tends to sink and accumulate at ground level. Therefore, there must be no depressions or excavations within the safety zone.

The safety zone should not encroach upon intact buildings or public areas.

Once established, the safety zone must not be altered in any way that contravenes established safety regulations.

Ensure that there are no ignition sources, electrical switches or other permanent ignition sources in the safety zone.

Do not use any sprays or other combustible gases in the safety zone. There is a risk of death if the product or the product environment is changed.

Do not make any changes to the:

– product itself
– supply lines
– drain pipework
– expansion relief valve for the heat source circuit
– constructional conditions that may affect the operational reliability of the product

There is a risk of injury and material damage due to maintenance and repairs carried out incorrectly or not carried out at all. Never attempt to carry out maintenance work or repairs on this product unless you are qualified to do so. Faults and damage should be immediately addressed and eliminated by a qualified person.

Adhere to the maintenance intervals specified.

There is a risk of material damage caused by freezing. Ensure that the heating installation always remains in operation during freezing conditions and that all rooms are sufficiently heated. If you cannot guarantee this, have a qualified person drain the heating installation.

# 2. Running Your Unit Efficiently

### Heating

Your unit is designed to heat the house constantly in cold weather.

To maximise efficiency and reduce costs, we recommend setting the unit to run at a constant temperature 24 hours a day rather than running it for a few hours and then turning it off. If you do the latter, the unit will have to work very hard to bring the house up to temperature.

The unit is set to adjust the radiator temperature to suit the weather. When it is cold outside, the radiators will be warmer, and as it becomes milder outside, the radiators will drop in temperature. This is the most efficient way to run your system.

Your heat pump system is designed to drip-feed heat into the house and maintain a nice constant temperature.

### Hot Water

Ideally, you should set the unit to heat the cylinder when the electricity is cheapest. A hot cylinder will stay hot all day if not used.

Once a week, usually at night, the cylinder will heat up to 60C in order to protect you from Legionella.

Do not set your cylinder above 50C in normal operating conditions - 50C is far too hot for a bath or shower, and heating the water hotter costs more money.

### Running Costs

Your installer will give you an indication of the total annual running cost. Note that the cost varies enormously throughout the year. It is almost £0 in mid-summer (the heating is off) but much higher in January.

On average, in January, you will use 21% of all your heating energy. December, January and February represent 50% of the whole year’s energy consumption. The heating works hard in winter.

If your heating costs you £10 on a very cold day in January when it is working flat out all day, this does not mean it will cost you £3,650 a year to run. A very cold day in January can easily consume 1% of the total heating energy for the year.

If your run costs are concerning you, measure your heat pump’s electricity consumption regularly and give the data to your installer.

# 3. System Types

We offer 2 standard heating and hot water configurations – Open Zone and Multi-Zone.

You should know your system type – ask your installer if you do not.

Essentially:

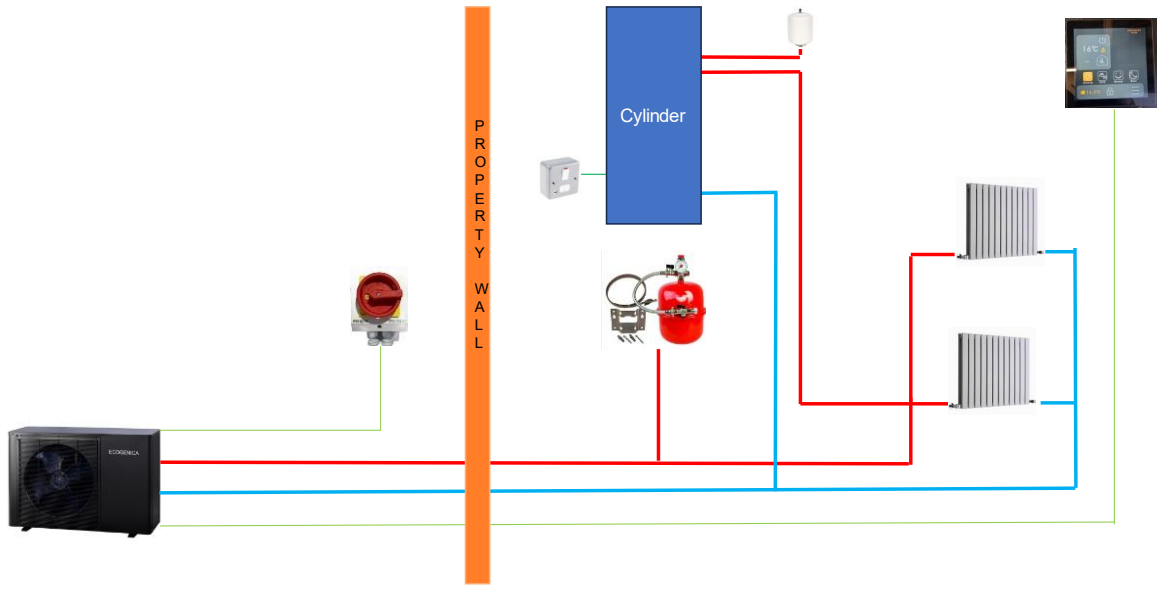
- If you are happy that all the radiators come on together when the heating is running and that you will have no thermostatic radiator valves, an open system is simpler and can offer significant savings in running costs.

- If, however, you want to divide the house into more than one heating zone and so have more than one thermostat, you must use a buffer tank and the Multi-Zone system.

### Open Zone Heating and Heat Water

In Open Zone systems, the controller is the only thermostat for the system, and no thermostatic radiator valves (TRVs) can be used on the radiators. There is no need for a buffer tank in an Open Zone system.

The basic configuration of an Open Zone system is as follows (red lines for hot water flows, blue for cold and green for electrical connections):

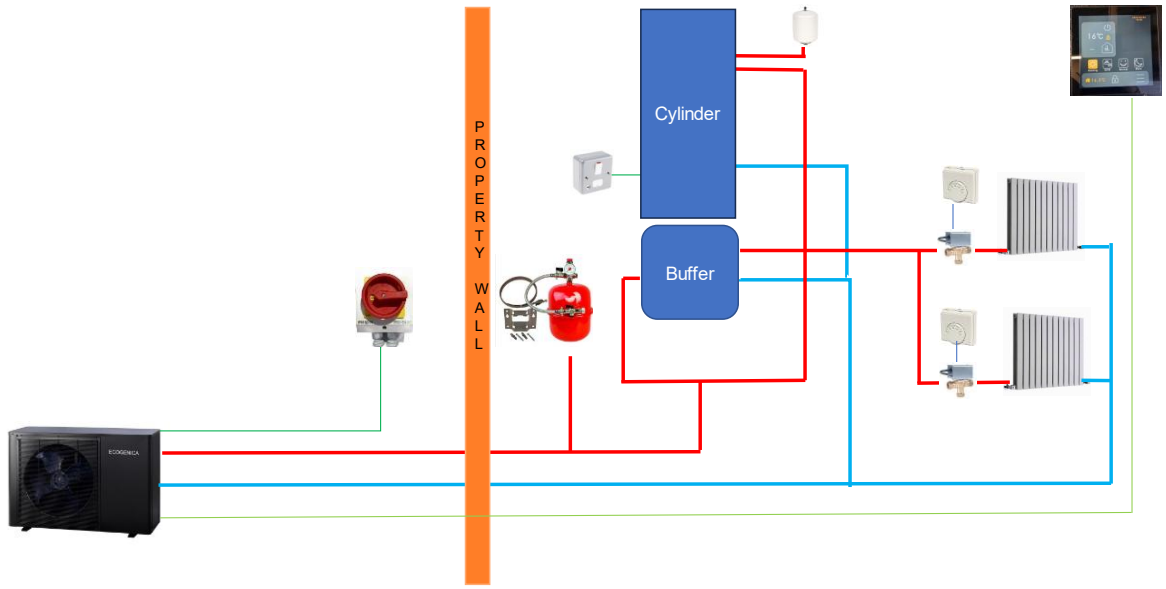


**Multi-Zone Heating and Hot Water**

If you want to zone the house or heat one floor, room or area at a time, you will need more than one thermostat, in which case you must have a buffer tank and a Multi-Zone system.

In the Multi-Zone system, the controller cannot be the room thermostat - room thermostats need to be installed, and thermostatic radiator valves are allowed on the radiators.

The basic configuration of the Muti-Zone system is as follows (red lines for hot water flows, blue for cold and green for electrical connections):



# 4. Operating Your System – Open Zone

In an Open Zone system, the controller should be located in a heated room within your home as it is your thermostat and time clock.

The controller will also have been programmed so it can see the hot water cylinder and should look like the below, with the heating on the left and the hot water on the right:


**Heating**

Press the power button on the left-hand side to switch the heating on/off.

Note the picture of the house and the temperature, in this case 14C.

When the unit is off, it shows the current room temp, when it is running, it displays its target temperature.

The unit takes 2 minutes to start. Once it's running the house icon will go orange to tell you it is in heating mode.

The current room temperature is displayed at the bottom of the controller screen in orange – 15.1C in the above.

To increase the room temperature press **+** and to reduce it press **–.**

At the top of the controller screen a circle with a triangle will appear, this tells you the water pump is on.

After 3 minutes the compressor will appear top left in orange  , now the heating is running.

Ensure the radiators are balanced properly i.e. they are all the same temperature. If any are cold you need to call the installer back to balance the system.

There should not be any thermostatic radiator valves on your radiators (although in some instances, a maximum of one TRV for every five radiators is permissible).

**Hot Water**

Press the power button  on the right-hand side to switch the hot water on/off.

Note the picture of the (hot) water tap  and the temperature, in this case 17C. This tells you the current water tank/cylinder temperature.

When the unit is off, the screen shows the current cylinder temperature. When it is running, it displays the target temperature.

The unit takes 2 minutes to start. Once it's running the (hot) water tap icon will go orange  to tell you it is in hot water mode.

To increase the cylinder temperature, press **+** and to reduce it press –. We recommend setting this to 50C.

Note the unit's priority is hot water - if the cylinder falls 5C in temperature, it will automatically re-heat. It cannot do heating and hot water at the same time so in hot water mode the heating is stopped.

Lastly, please note the hot water in the cylinder needs to heat up to 60C once a week to prevent Legionella and the immersion heater in the hot water cylinder is programmed to do this.

# 5. Operating Your System – Multi-Zone

In a Multi-Zone system, the controller does not have to be in a heated room since it is operating as the thermostat for your heating.

The installer will have given you room thermostats throughout the house to drive the heating.

If you try to use the controller, it will let you press on/off, but 10 seconds later, it will go back to where it was before.

Once you turn up any of your room thermostats, the unit takes 2 minutes to start. Once it's running, the house will go orange to tell you it is in heating mode.

At the bottom of the controller in Orange is the current room temperature - 15.1C in the photo below.


The controller will also be programmed to see the hot water cylinder.

It should look like the above, with the heating on the left and the hot water on the right.

**Heating**

Turn any thermostat up in the house to signal the unit to start heating.

Note the picture of the house  and the temperature, in this case 14C.

When the unit is off, it shows the current room temp, when it is running, it displays its target temperature.

The unit takes 3 minutes to start. Once it's running the house icon will go orange  to tell you it is in heating mode.

The current room temperature is displayed at the bottom of the controller screen in orange – 15.1C in the above.

At the top of the controller screen a circle with a triangle will appear  , this tells you the water pump is on.

After 3 minutes the compressor will appear top left in orange  , now the heating is running.

Ensure the radiators are balanced properly, i.e. they are all the same temperature. If any are cold you need to call the installer back to balance the system.

**Hot water**

Press the power button  on the right-hand side to switch the hot water on/off.

Note the picture of the (hot) water tap  and the temperature, in this case, 17C. This tells you the current water tank/cylinder temperature.

When the unit is off, the screen shows the current cylinder temperature. When it is running, it displays the target temperature.

The unit takes 2 minutes to start. Once it's running the (hot) water tap icon will go orange  to tell you it is in hot water mode.

To increase the cylinder temperature, press **+**, to reduce it press –. We recommend setting this to 50C.

Note the unit's priority is hot water - if the cylinder falls 5C in temperature, it will automatically re heat. It cannot do heating and hot water at the same time so in hot water mode the heating is stopped.

Lastly, please note the hot water in the cylinder needs to heat up to 60C once a week to prevent Legionella and the immersion heater in the hot water cylinder is programmed to do this.

# 6. Setting The Clock, Controller and Timers

### Clock

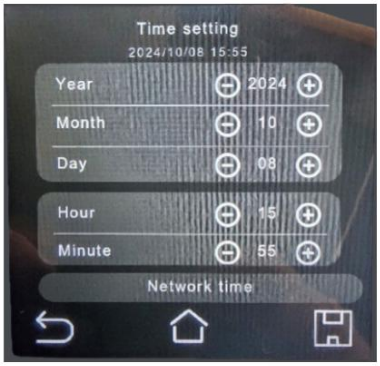
Press Menu .

Then press Schedule .

Then press Timer .

Now, adjust year, month, day, hour and minute.

Press the floppy disk to save, then press home to exit.




### Controller

Press menu .

Press Display .

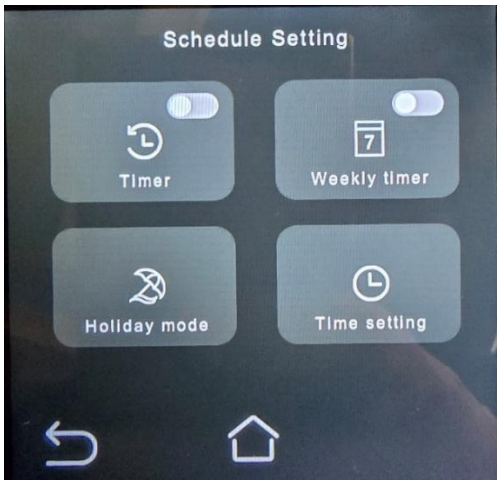
In this screen, you can adjust the brightness, sound level and how long the screen stays on after being touched.

Press the floppy disk to save, then press home to exit.


### Timers

Press menu .

Press Schedule . Press .



Set the top timer (Timer 1) first.

Note you can have as many timers as you need (Timer 1, Timer 2 etc.).


Each timer can have heating or hot water or both. In the above example, note the top timer is active and so is orange (use the slider to activate (or deactivate) it) and is for both heating and hot water.

To adjust each timer simply select it.


You can adjust the start or boot time, the shutdown or off time.

Note which zone of heating you are controlling – in the above it is Zone 1  .

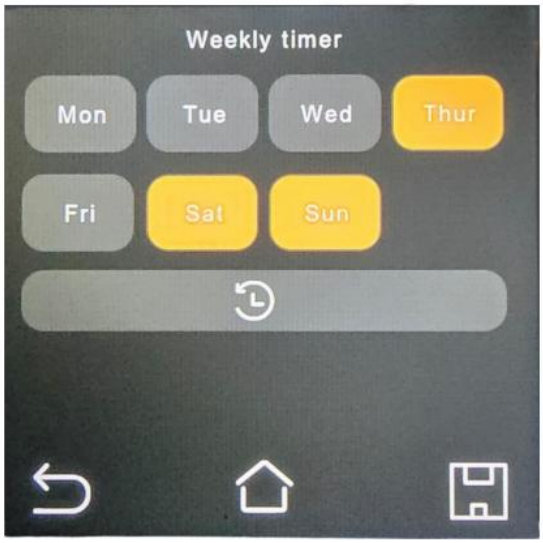
Make sure it is on heating - it shows a sun symbol  not an icicle  .

Set the temperature you want to achieve.

Likewise you can turn on the hot water and set its temperature too.

Press save before exiting.

If you want to have different timers on different days, go to **Schedule Setting** and press the **Weekly timer** and you will be able to set times by each day of the week.

# 7. Checking Performance

Press menu then press Setting **.**

Press **Operating parameters.**


003 Sv3 is the position of the 3-Way Valve - off is heating, on is hot water.

Press the right arrow twice.

Look at 014 T5, this is the flow temperature.

Look at 015 water flow, this is the flow rate.

1.2 $m^3$ per hour is ideal for the Ecogen290-5 unit, 1.6 $m^3$ per hour for the Ecogen290-8, and 2.4 $m^3$ per hour is ideal for the Ecogen290-11.

**Energy Consumption**

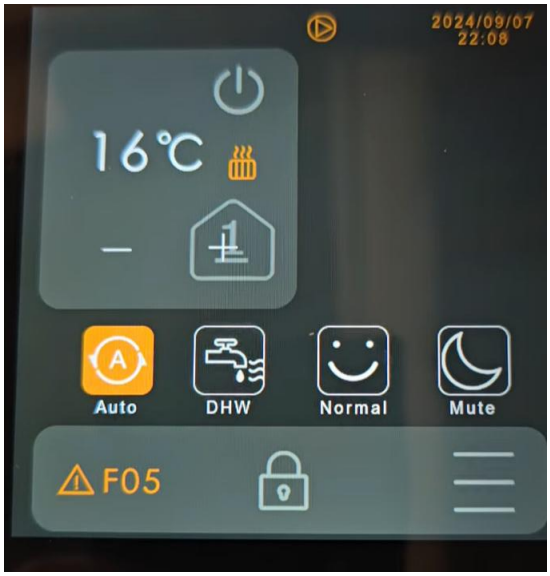
Press Menu , then press **Consumption** .

At the top is the instantaneous energy consumption, this is best ignored as it varies all the time.

Below it however is the total energy the unit has consumed since new, the heat it has produced and the COP (Coefficient Of Performance). The COP indicates the system's efficiency - if your COP is over 3 that's good, over 4 is amazing.

# 8. Fault Codes

If the system detects a problem, a fault or error code will show in the bottom left of the controller, for example, F05 in the below:




**F05** is one of the most common fault codes and means that the water is not moving quickly enough around the system. This could be because the filters are dirty, there is air in the system or there is not enough water pressure. Have you recently bled the radiators? If so, this could be the cause of the fault code appearing, and you must top up the pressure in the system. Check all of the above and restart the unit to see if the fault code has disappeared.

For a full list of fault codes, their meaning and recommended actions, please see https://ecogenica.co.uk/products/.

How do you clear a fault code after the fault has been rectified? Some faults can be cleared by switching the controller off and on again. If this does not work, reset the power, switch it off for 15 seconds, then switch it on again.

In the event that you cannot rectify the problem and the fault code remains on the display, we suggest you call your installer who will be able to advise you on the appropriate next steps.

To see a full history of the fault codes that your unit has reported, press menu then press Setting and **Fault code**.

Other non-fault code problems that may occur with your heat pump system include:

- There is no display on the controller - check that the 32 Amp isolator outside is switched on and check if any fuses have tripped. Once the power is restored to the controller, it will return to its last settings.
- There is no hot water or heating - make sure the heat pump is switched on at the remote controller. If it is off, the heat pump cannot heat the water or the house.

# 9. Warranty

At Ecogenica, we stand by the quality of our heat pumps. Every heat pump and controller is supplied with a manufacturer's warranty designed to protect your investment and give you confidence in your purchase.

Ecogenica offers 2 warranties:

**Standard Warranty**

This is included in the purchase price of the heat pump. The standard warranty provides a 2-year parts warranty which covers the replacement of any parts deemed by Ecogenica to be defective due to a manufacturing fault.

The Standard Warranty is activated by the installer on registering the heat pump at Ecogenica's Product Registration page (https://ecogenica.co.uk/warranty). Product registration must be completed by the installer and must include the following photos:

1. Nameplate on the side of the unit stating model type, date of manufacture etc.
2. Outdoor unit installed including feet.
3. Drainage area for the unit.
4. Pipework behind the unit.
5. Hot water cylinder.
6. Heat pump controls wiring.
7. Pipework going to cylinder.
8. Weather compensation curve setting on the controller.
9. Hot water setting on the controller.

If the photos are not acceptable, the installer will be asked to re-take and re-submit them.

The warranty cover will only be activated once these photos have been submitted to the required quality and no issues are detected.

Lastly, to comply with warranty requirements, the heat pump should be serviced once a year by the installer or an Ecogenica approved heating engineer and the homeowner should keep a log of all servicing work in the event of any warranty claim (see section 13).

**Premium Warranty**

For added peace of mind, you can extend the Standard Warranty by a further 3 years to a total of 5 years for a non-refundable and non-transferable charge of £350. The upgrade to Premium Warranty needs to be paid within 2 weeks of the heat pump commission date.

**Scope of Cover**

Both warranties apply only to the heat pump and controller and cover only parts resulting from a manufacturing fault identified by Ecogenica. It does not cover therefore:

- Ancillary items such as pipework, valves, filters, brackets, seals, cages, or third-party accessories such as cylinders, tanks, radiators etc.
- Issues caused by incorrect installation, misuse, lack of servicing, or contaminated water.
- External damage (power supply, weather damage, flooding, fire, vandalism, etc.).

**Making a Claim**

If you believe your heat pump is not working as it should:

1. Contact your installer or Ecogenica's Technical Support Team to identify a qualified heating engineer.
2. If a product fault is confirmed to be defective due to a manufacturing fault, Ecogenica will provide the replacement parts free of charge.
3. If the issue is due to a problem with the installation, misuse or any accessories or ancillary items, a call-out fee will be charged and if requested, a quote can be given to rectify the issue.

**Warranty Status**

To check the activation date and type of warranty cover, please email warranty@ecogenica.co.uk.

# 10. Maintenance

The heat pump should be serviced **ONCE A YEAR** to comply with the warranty.

The installer should provide you with evidence of all servicing so that you can keep a log in the event of any warranty claim.

Maintenance should be covered by the installation contractor. If the installer is not available, another Ecogenica-qualified contractor can take over the maintenance and warranty.

The annual service should include the following:

1. Stop the unit, clean the Magnetic Filter and replace the strainer.

2. If Glycol or an anti-freeze is in the system, test the level using a Glycol tester - the level should be 25%. If you don't have a glycol tester, a glycol tester/refractometer can be bought from your heat pump supplier or online.

3. Refill the unit, pressure should be 0-3 bar, then open all valves.

4. The operation of the unit against the hot water cylinder needs to be tested. First, draw off 50 litres of water - run a couple of taps for 5 mins to achieve this. The unit should start up automatically in hot water mode, but if it does not, press the DHW power button on the controller. In 3-4 mins it will start heating the cylinder, and a compressor symbol will show at the top of the remote controller. The heat pump should be able to achieve 50C cylinder temperature without using the immersion heater.

5. While running, check the outdoor unit for damage and debris.

6. Clean the coil. We recommend using an approved air conditioning or heat pump cleaning chemical - your distributor will stock this. Instructions are given on the bottle.

7. Clean and polish the outside casing - we recommend car wax or ACF50 to do this.

8. Measure the temperature of the flow using the remote controller (See Section 10).

9. Measure the flow rate from the flow meter (See Section 10).

10. With the unit running flat out, measure the air temperature as it enters the coil and the air in the garden. They should both be the same. Check that cold air is not recirculating.

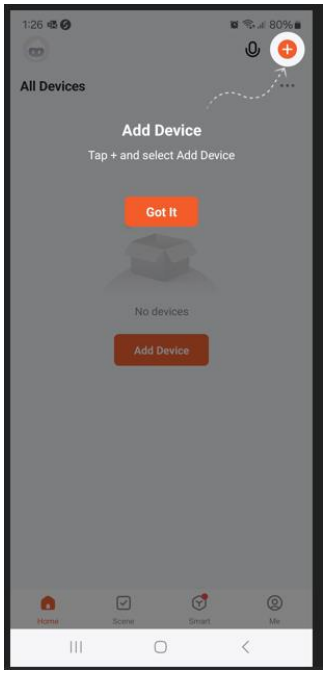
# 11. Wi-Fi App

The App is called TuyaSmart and can be found on the App Store or Google Play.

Once downloaded you need to find your heat pump.

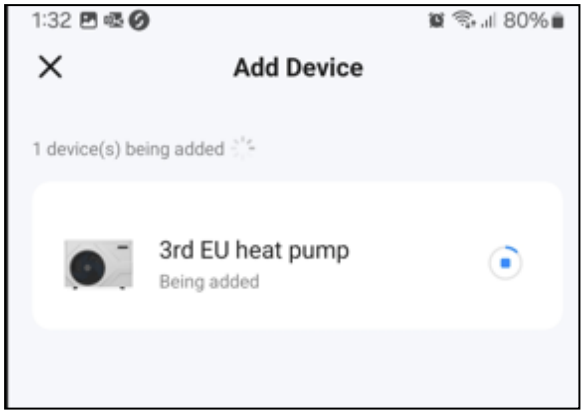
First turn the power off to your heat pump for 30 seconds – it is only in pairing mode after the power is restored.

On the App start searching for a new device by pressing the orange +.




Important: On the heat pump controller, press , press Wi-Fi then **Reset**.

The App will now show you a list of the units it can see. You are looking for a 3rd EU heat pump.




Once you have successfully paired the unit to the phone, click on it. Now enter the Wi-Fi password and hold your phone near the heat pump so it will be added to the network.

The App will search again, and once it is found, press Done.

Then you are away and can start, stop, set temperatures, etc.


**Contact Us**

Should you have any questions or require further information or support, please do not hesitate to contact us at:

Email: info@ecogenica.co.uk
Phone: +44 116 409 1869

Unit 4 Orton House Farm
Norton Lane
Orton-On-The-Hill
Atherstone CV9 3NR