Sovereign Network Group

Daikin Altherma air-to-water heat pump User Guide

An Air Source Heat Pump (ASHP) works very differently to the gas central heating systems you might be used to, it provides an ambient temperature instead. They can be efficient but don't respond as quickly as traditional heating.

This information should help you get the most out of the system in your new home.

- Your property has a dual zoned heating system which has a thermostat located upstairs and downstairs. Each radiator will have a valve on it (a TRV) as a means of controlling the temperature in that room - apart from the rooms which have the thermostat.
- The radiators will be warm but NOT hot to touch like you might be used to from gas heating systems. This is perfectly normal for an ASHP system.
- The installers will have set your home temperature to an ambient temperature between 19 and 21 degrees. If it goes higher than this, then it puts more stress on the ASHP system and becomes more costly. To increase the temperature, you should only do so by a degree every 24hrs.
- It is recommended you should not switch the system off, even in the summer, but just reduce the temperature.
- At night the recommended temperature should be dropped to 16 degrees.
- DO NOT switch off the immersion heater – this stays on for system to disinfect
- Your water is set around 50 degrees and the system has been set so that providing domestic hot water has priority over the heating system. This means that, when the water is being heated up, it will take from the radiators.
- There is a programmer to set the heating and hot water schedule. See this YouTube link on how to use it: https://youtu.be/R1hPpRqy7wQ
- There is a black controller, which we have several You Tube links on how to use it – information displayed on your home screen, see the YouTube link on how to use it: https://youtu.be/xE0GGD8QN5U
  -Identify an error and activate emergency mode: https://youtu.be/54t4Q0GbG5A
  -How to navigate the controller menu: https://youtu.be/zFbz6hV8R-c
- This link shows you how to repressurise the system if you need to do this: https://youtu.be/huCvOF8lt8w?si=mEo0OFvs9wkaaTK8

The isolator switch for the compressor is situated on the external wall, near the compressor:

- DO NOT SWITCH IT OFF
- DO NOT SMOKE OR LIGHT A BBQ NEAR THE COMPRESSOR
- DO NOT COVER OR PLACE ANYTHING ON TOP OF THE COMPRESSOR
- REGULARLY CLEAN THE TOP OF THE COMPRESSOR

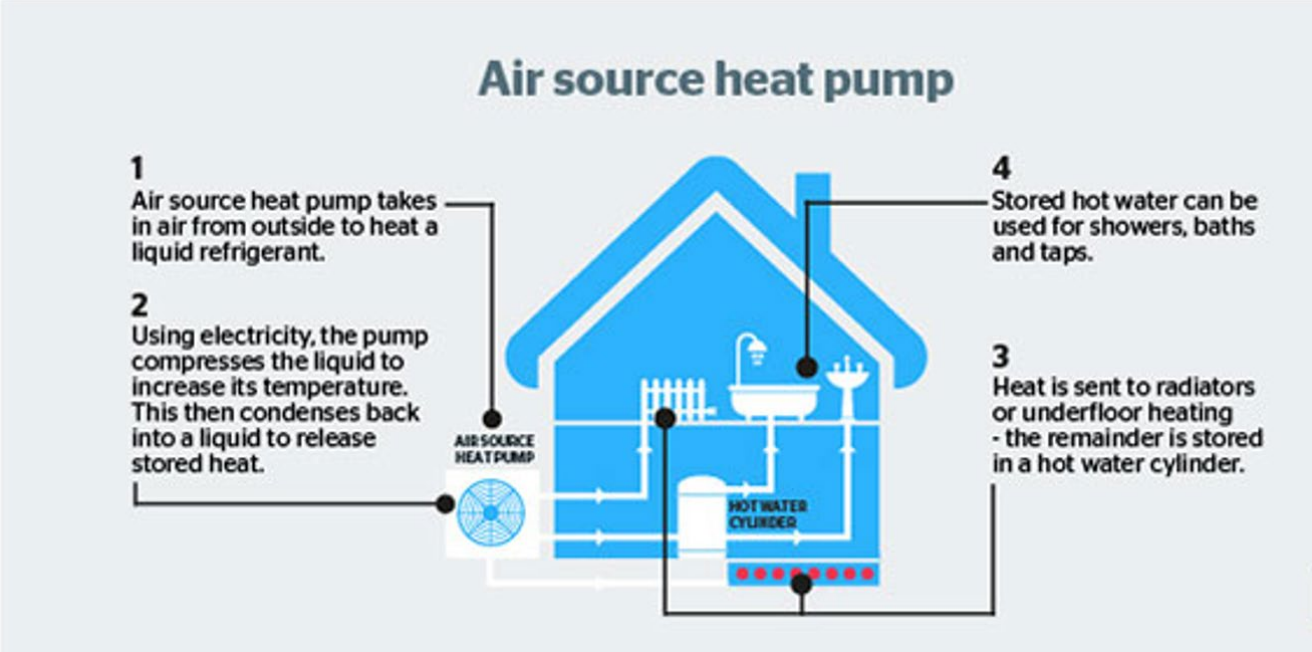
For a general advice guide on how to use ASHP, please follow the information on our website:

- https://www.sovereign.org.uk/advice-and-guides/repairs/maintenance-guides/using-your-ashp

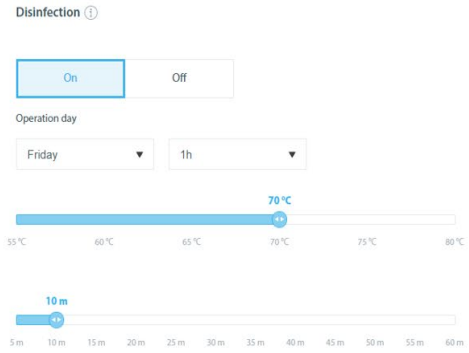
If you do experience any faults in the system and it has stopped working, please contact SNG on 0300 5000 926.

Below is some additional advice from Daikin about using your system.

How Does A Heat Pump Work



How to disinfect the system



[A.4.4.1] [2-01]: Disinfection
[A.4.4.2] [2-00]: Operation day
[A.4.4.3] [2-02]: Start time
[A.4.4.4] [2-03]: Temperature target

The disinfection function disinfects the domestic hot water tank by periodically heating the domestic hot water to a specific temperature.
The disinfection function settings MUST be configured by the installer according to the applicable legislation.

Daikin heat pumps have a disinfection function

- The domestic hot water tank is periodically heated to a specific temperature. The disinfection function settings must be configured by the installer according to the applicable legislation and the site requirements. The installer is able to:
  - Set the disinfection function to operate daily or weekly
  - Program the time when the disinfection should start
  - Set the set point temperature for the disinfection cycle
  - Define the time period for how long the disinfection set point temperature should be maintained

After the disinfection cycle, the high domestic hot water temperature can pose a scalding risk and precautions should be carried out e.g. install a mixing valve at the hot water outlet connection of the domestic hot water cylinder.

Very Important →

This switch should always be left on to ensure tank disinfection.

What to expect

In most cases the radiators will be larger than what you will see when used with a Gas Boiler. This is because the water running through is a lower temp and requires a larger surface area to get to the desired temps so they will not feel as hot to touch.

Most radiators are fitted with Thermostatic Radiator Valves (TRV's) which allow you to control the temperature in each room independently.

Outdoor unit

The heat pump is outside. This extracts heat from the air, even below 0°C and uses this heat to heat the water passing through the central heating and hot water cylinder.

The outdoor unit pulls in air from the rear, extracts the heat in the air, and blows the cooled air out the front. This is done automatically, and there is no need to set or adjust it.

If the rear of the outdoor unit gets clogged up with leaves or debris, the efficiency of your heating system can be reduced, this should be checked regularly and cleaned with a soft brush. Similarly, don't block the front of the unit up by leaning anything against it.

When it's cold, your heat pump will automatically run a cycle to clear any built-up ice . It's actually steam, not smoke, and a bit of melted ice. So it might look a bit dramatic, but it's actually a sign everything's working as it should be.

Hot water

Your Hot Water and what to expect.

The hot water cylinder will be set at around 50°C to maximise both comfort and efficiency.

The hot water will automatically reheat when required. The heat pump may need to do this at night which is perfectly normal.

The hot water cylinder will go through a disinfection process once a week and heat your cylinder to 60C. You will notice on one day a week your hot water will be hotter than usual.

Very Important →

This switch should always be left on to ensure tank disinfection.

Madoka Thermostat

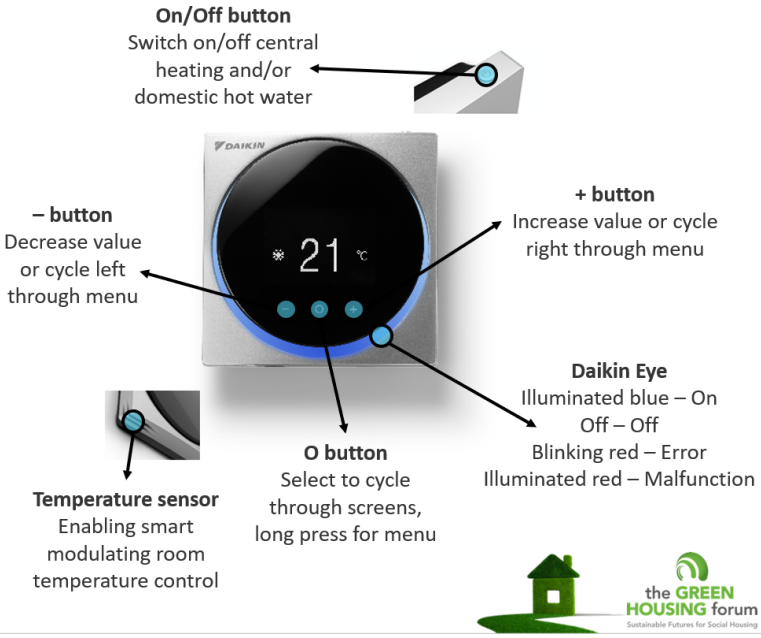
- Daikin's own thermostat with simpler menu compared to most 3rd party thermostats
- Daikin app available to download

End-User Benefit

Gives the occupier more control of their heating system and also ensures all the main components of the heating system are supplied by one manufacturer. This helps if there are any after-sales issues

Top tips

- Remember slow and low
- Leave it on!



Thermostat and Flow temperatures

- System designed to reach 21c room temp @ -4c outside temp
- Lower radiator flow temperatures - 45-55c degrees
- UFH flow temperatures – 35-45c degrees
- Room Thermostat temps 18-22c recommended
- Set Day and Night settings (avoid on/off schedules)
- Use rad valves to adjust room temperature
- Hot water tank 45-60c (blended down to a maximum of 41ºC as per NHS recommendations)
- Reheat left ON recommended

Top tips

- Remember slow and low
- Please leave it on for energy and cost saving

Energy for Change

Do’s, don’ts and what to expect when living with an ASHP

DO

- Set Room Thermostat temps 18-22c (no big fluctuations)
- Set Day and Night settings (avoid on/off schedules)
- Leave the system on for efficiency and energy saving
- Get the unit serviced on a yearly basis
- Control your room temperature off your TRV’s

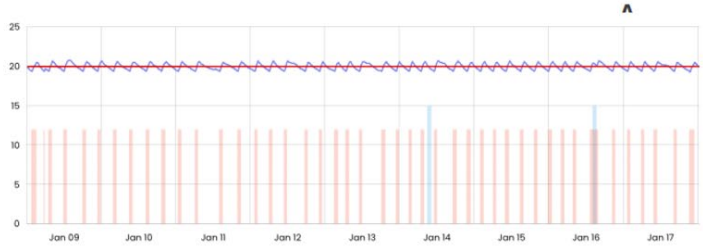
Don’t

- Switch the heating off and on
- Cover or block the air flow on the Outdoor Unit i.e do not box the unit in

What to expect

- The Outdoor Unit is designed to freeze and will go through a defrost cycle when this happens
- The unit will give off steam and condensation – this is not smoke
- Cold air will blow through the front of the machine all year as it controls the heat and hot water.

Usage patterns matter



Two neighbouring properties, both have heat pumps

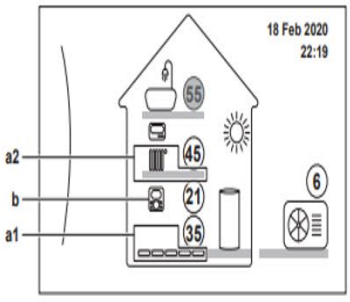
Property A leaves the controls alone at 20°C

Property B changes temperature regularly and achieves an average of 21.5°C

Man Machine Interface (MMI)

Controller

Home Screen



a1 Heat emitter of the main zone (in this example `Underfloor heating`)
a2 Heat emitter of the additional zone (in this example `Radiator`). If no icon is displayed, there is no additional zone.
b Room thermostat type of the main zone:

8.1 To display the help text in case of a malfunction

In case of a malfunction, the following will appear on the home screen depending on the severity:

- Error
- Malfunction

You can get a short and a long description of the malfunction as follows:

1	Press the left dial to open the main menu and go to `Malfunctioning`. **Result:** A short description of the error and the error code is displayed on the screen.	
2	Press **?** in the error screen. **Result:** A long description of the error is displayed on the screen.	?

8.2 To check the malfunction history

Conditions: The user permission level is set to advanced end user.

1	Go to [8.2]: `Information` > `Malfunction history`.	

You see a list of the most recent malfunctions.