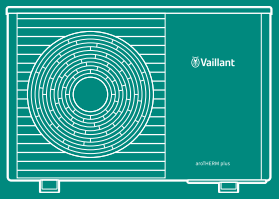
Heating Hot water Renewables

aroTHERM plus

Handover guide



Vaillant

Thank you for deciding on a Vaillant aroTHERM heat pump to heat your home.

Vaillant has over 140 years' experience in heating homes.

All our appliances are designed to provide long lasting, highly efficient, hassle-free and sustainable heating and hot water.

Please take some time to have a read of this document.

It will give you an understanding of how your heat pump system works and what to expect.

About your aroTHERM plus heat pump

The size of your aroTHERM plus was determined by your installer to meet your home's heating and hot water needs.

The aroTHERM plus is an air-to-water heat pump, this simply means the heat pump will use the heat energy in the outside air and convert it into usable heat for your home - heating your radiators or underfloor heating system and keeping your home warm.

Your heat pump is designed to work in heating with a low to medium flow temperature.

The temperature of the water flowing through your heating system will be between 35-55°C, rather than 60-70°C, which would be the case for a traditional fossil fuelled boiler system.

Your radiators will feel cooler to touch compared to a traditional system, but they will be sized to ensure each room stays warm and comfortable, even on the coldest days.

Keeping your heat pump happy

To keep your air source heat pump running efficiently and correctly, please keep the following in mind:

1 Check your heat pump

Particularly in the autumn and winter. A build-up of leaves or snow will affect its operation.

2 Do not stack things against or on top of the heat pump

Such as a bike or fold-up garden furniture - this could restrict the airflow or damage the unit.

3 Keep the area around your heat pump free of clutter and mess

The heat pump will pull heat energy from the air - to do this it will need a clear flow of air down the back and from the side of the heat pump. The cleaner the air flow the more heat it will be able to absorb and use to heat your home.

What is a de-icing cycle?

On colder days you may see steam coming from your heat pump, this is normal. It's called the de-icing cycle.

As the heat pump takes heating energy out of the air, ice can build up on the back of the heat pump.

Once the ice temperature hits a certain level, the heat pump will go into the de-icing mode, heating up and clearing the ice from the back of the unit. When this takes place, you will see steam coming from the unit, and water coming from the bottom of the heat pump.

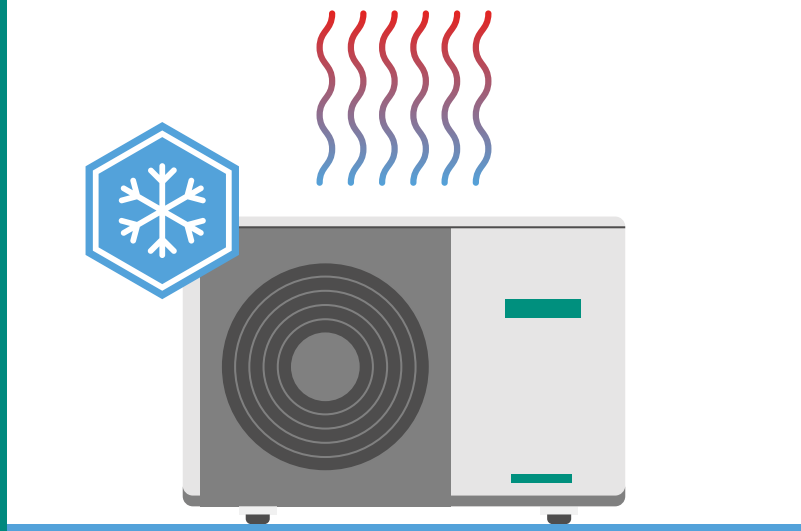
The de-icing cycle should only last a few minutes.

Defrost cycles

It is hard to say how often a de-icing cycle will take place as it depends on several things...

- The humidity of the air
- The amount of energy being taken out
- The period of time the energy is being taken.

The de-icing cycle will happen more often when the outside air temperature is around 2.5°C but will happen less often when the air temperature is below 0°C, as there is less water in the air.



What to do now...

Ensure your heat pump has been registered for its guarantee.

In the first 12 months from installation, the guarantee covers your heat pump against manufacturing defects for both parts and labour. If your heat pump develops a fault, please contact your original installer or contact Vaillant Service, on **0330 100 3540**.

If your heat pump has been installed by either a Vaillant renewable partner or is eligible for an extended warranty, it is the responsibility of the installer to register your heat pump system for the Vaillant guarantee.

Don't forget to check this with your installer.

What to do now...

Setting your heating for comfort

To get the best from your new heat pump heating system, the controls and settings are very important. Your installer will already have set up the detailed control setting for you and your home, in line with the heating design.

It's important that you do not change these settings as they will impact the operation of your heat pump and heating system.

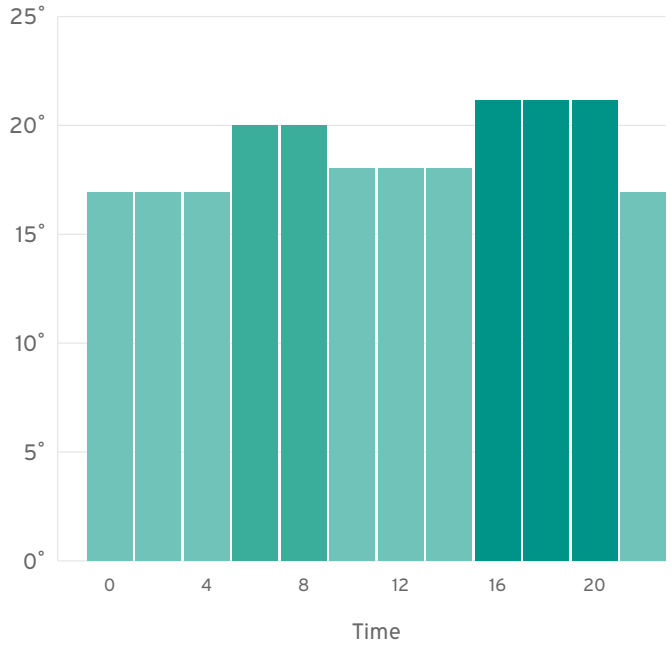
Time and temperature control

Heat pump heating systems should not be turned off completely, if your home cools down it will require more energy to heat your home back to a comfortable level.

Your new heating system control will have a "Comfort" temperature and "Set-back" rather than with a traditional heating system which may have been "on or off".

We recommend that you select your comfort temperature. For example, if you set at 21°C, you can select your set-back temperature to be your comfort temperature, take away 3 or 4°C, so the temperature will be set at 18 or 17°C.

This setting will ensure you are getting the best performance from your heat pump, whilst keeping your home warm and comfortable.



Weather compensation control

Your Vaillant heat pump system will have weather compensation control as standard.

When the weather outside is warmer, the flow temperature in the radiators and/or underfloor heating will be lower. They will feel cooler to touch but they will keep your home warm and comfortable, whilst also making sure the heat pump is working as efficiently as possible.

When the weather is cooler, the flow temperature will increase meaning your radiators will get hotter as the temperature outside gets colder.

Annual service

There is a requirement to maintain your heat pump product warranty, however, regular servicing will ensure your system keeps running effectively and efficiently and can solve any issues before they cause a breakdown.

An annual service can be completed by either an installer or by Vaillant.

A well-maintained heating system will give you hassle-free, peace of mind operation, whilst ensuring you are getting the best performance from your heat pump.

Hot water

Heat pump systems require a hot water cylinder to be able to provide your hot water needs. Your installer will set the temperature for hot water storage as per your home's need.

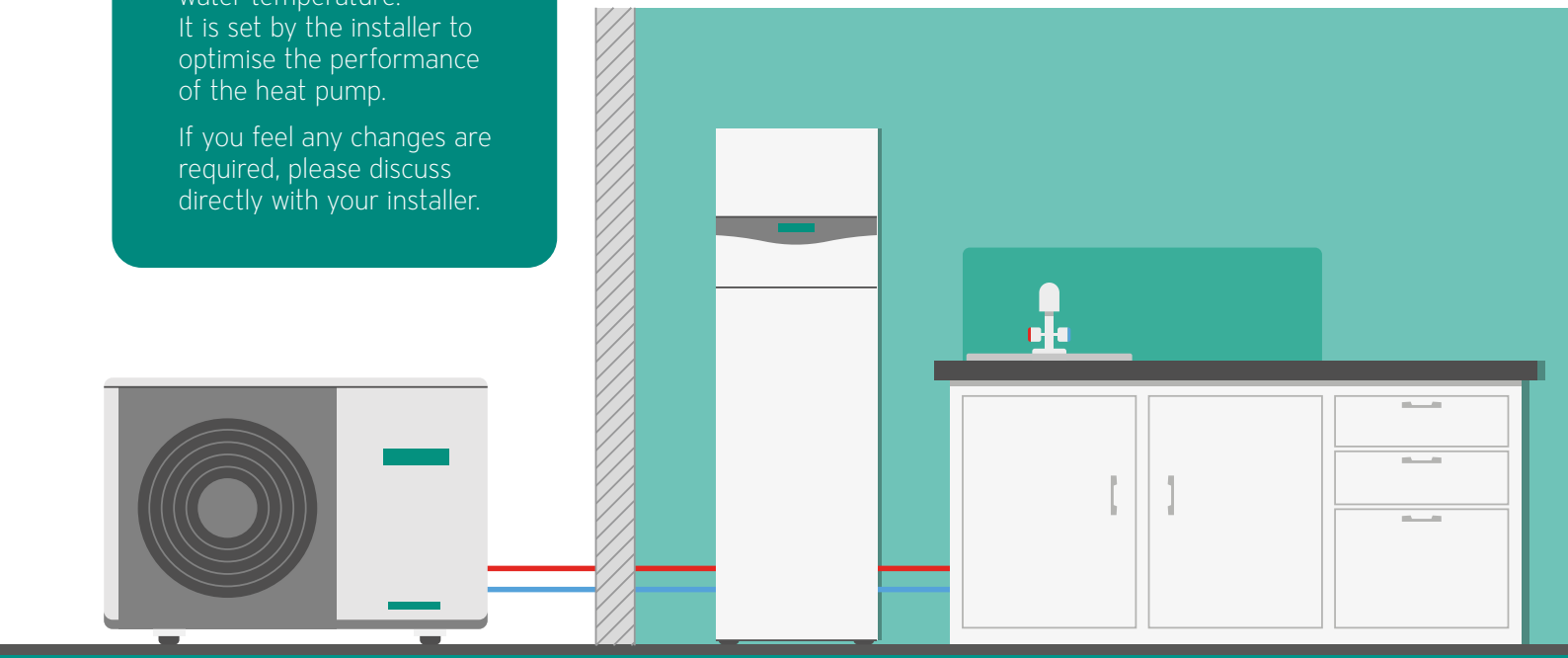
Your installer will have set your hot water temperature. It is set by the installer to optimise the performance of the heat pump.

If you feel any changes are required, please discuss directly with your installer.

Remember, if the temperature of the tap reaches over 43°C, there is a high risk of scalding.

Storing your hot water between 50-55°C will ensure a plentiful supply of hot water for showers, baths, and the kitchen sink.

We recommend timing the hot water between 12 noon and 2pm as this is normally when the day is warmest, however, if you have a tariff has that has a lower electric price you may want to take advantage of that.



Understanding your energy usage

As seasons change, the way you use your heat pump system will also change.

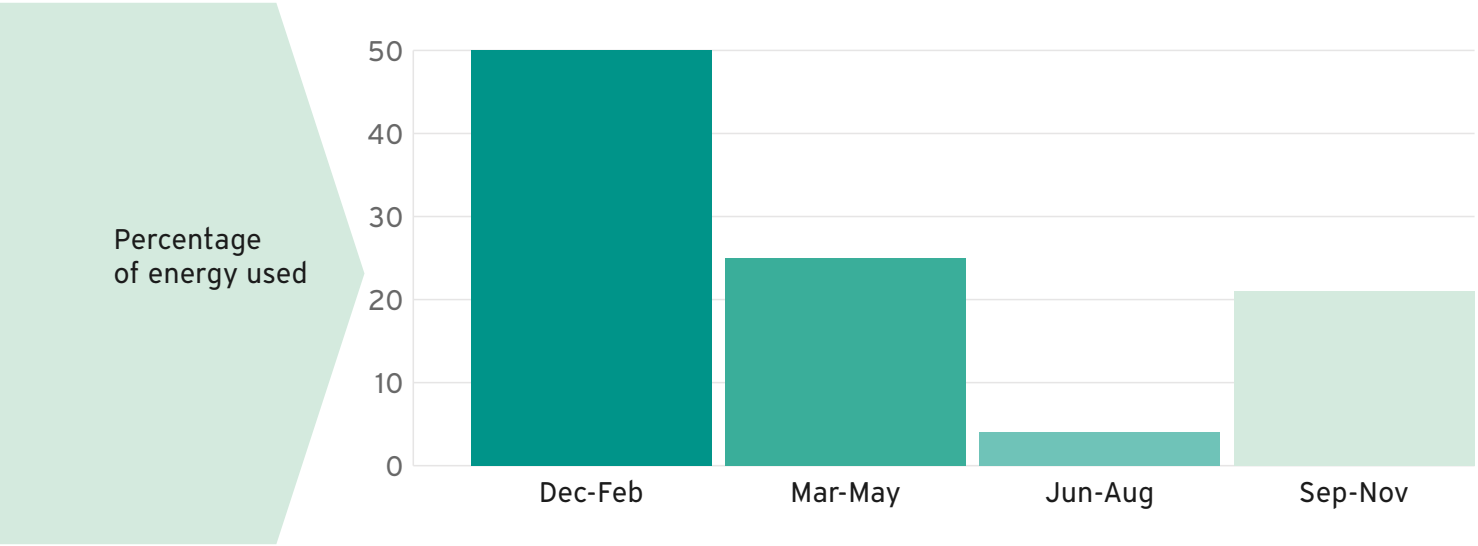
In the summer it will provide hot water and very little heating. In the winter months, it will be mostly heating with hot water on top.

As with all domestic heating systems, the running costs will always be greater in the winter months. It is estimated that 60-70% of your annual energy usage will be between November to February.

Below is a visual estimation of annual home energy usage.

All properties have differing demands depending on a range of factors including occupancy, location, usage, and more.

Running costs can therefore vary from neighbour to neighbour.



Understanding your energy usage

CoP and SCoP

CoP stands for **Co-efficiency of Performance**; this is the efficiency of the heat pump at a single set test point, similar to MPG with a car.

Typically, you will see a CoP at A7/W35, which means when the outside air temperature is 7°C, the heat pump is creating 35°C hot water.

SCoP is **Seasonal Co-efficiency of Performance**; this is a calculated value based on 6 test points at a minimum of 2 flow temperatures. This data is then used to calculate the performance of the heat pump over 12 months. The heat pump will perform above and below the SCoP value depending on the time of year.

To get an estimate of your CoP use this formula:

$$\frac{\text{energy yield + power consumption}}{\text{power consumption}} = \text{estimated CoP}$$

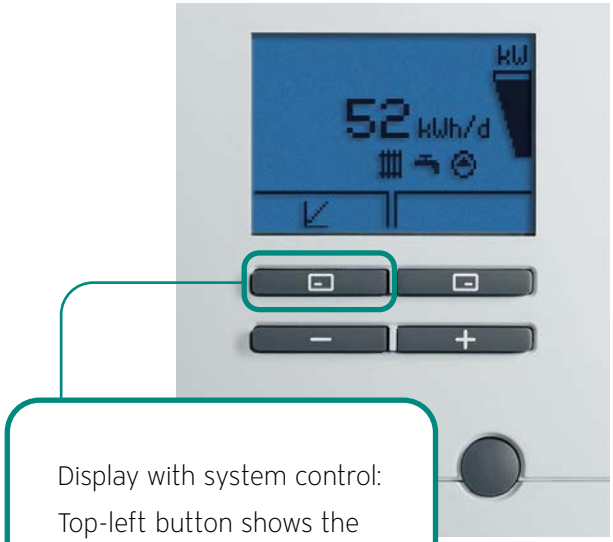
Using the example values of **23 energy yield** and **7 power consumption** we get:

$$\frac{\text{23 (EY) + 7 (PC)}}{\text{7 (PC)}} = \frac{30}{7} = \text{estimated CoP } \mathbf{4.2}$$

Energy yield

The Vaillant heat pump interface will display something called energy yield. This is a calculation of the amount of heat energy that has been absorbed from the air by the heat pump.

This is not the heating performance of the heat pump. This figure is used as part of the calculation to give the heating power and the efficiency of the heat pump. You can view this if you are using the Vaillant app.



Display with system control:

Top-left button shows the environmental yield display

Heat pump not working?

What is the heat pump display showing me?

You can operate the heat pump using the selection buttons and the plus/minus keys. The two selection buttons function as soft keys. This means that their function can be changed.

Use the right-hand selection button to:

- Confirm a set value
- Go one selection level lower in the menu

Use the plus and minus buttons to:

- Navigate within the menu between the individual points on the list of entries
- Increase or decrease a set value

Use the left-hand selection button to:

- Go directly to the yield query
- Cancel a change to a set value
- Go one selection level higher in the menu

You can use the reset button to reset the heat pump from the fault condition to standby.

If your system shows a fault code on the display, make a note of the reference and give us a call on **0330 100 3540** to identify the next course of action.

Vaillant

Heating Hot water Renewables

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www.vaillant.co.uk

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Useful contacts

Technical Enquiries

For technical assistance and renewable service:

- Telephone: **0330 100 3540**
- Email: aftersales@vaillant.co.uk

General Enquiries

If you have a general enquiry our friendly reception staff will happily point you in the right direction:

- Telephone: **0345 602 2922**

Fault codes can be found in the user manual and can be addressed with Vaillant's Technical team.

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