Heating Hot water Renewables

aroTHERM plus: air source heat pump

Vaillant Comfort for your home

Air source heat pump

Best suited for:

New build, renovations and replacement

+++ One or more people

2+ Two plus bathrooms

What are the advantages?

- **Higher hot water demand capability**
  High flow temperatures
- **Sustainable**
  Reduce your carbon footprint with a GWP of just three
- **Eligible for government incentives**
  Such as BUS
- **Energy efficient**
  With the highest ErP rating save money on your fuel bill*
- **Designed for a peaceful home**
  With noise levels as low as 54 dB(A)
- **App controlled**
  When installed with VR 900 or sensoNET control

*When compared to replacing an oil system

What is an air source heat pump?

Air source heat pumps extract thermal energy (heat) from the outside air and convert this into heating and hot water for your home. They are designed to work in cold temperatures and are suitable for a range of homes, from a small apartment* to a large detached property. The heat pump needs to be located outside the property: it's very quiet in operation, being no louder than a domestic fridge.

Air source heat pumps do require electricity to operate, and approximately 75% of the energy required is generated from the outside air, with only 25% being required from electricity. This means that 75% of the energy you use will be from a renewable source, which will reduce your emissions and CO_2 impact.

*Air source heat pumps need to be located outside. They must be installed on a solid base or structurally secure wall. A qualified and reputable renewables installer will be able to advise you if your home is suitable for an air source heat pump.

aroTHERM plus

air source heat pump outdoor unit

*Up to seven years when installed by a registered Vaillant Advance Partner

The aroTHERM plus provides heating and hot water from renewable energy. It's perfect for both new build and retrofit properties that demand low running costs, high efficiency, and an environmentally friendly solution.

The aroTHERM plus is an outdoor unit which comes in a variety of outputs to suit every property.

Heat source	Air
Outputs (kW)	3.5, 5, 7*, 10** and 12kW**
Usage	New building, renovation, replacement
Heat emitters	Underfloor heating and/or radiators
House size	Up to 300m²
Decibel level (sound power)	54, 55*, 60dB**
ErP rating	A+++/ A++ (A+++ - D)
SCoP rating	Up to 5.03

The benefits of the aroTHERM plus

- With the aroTHERM plus heat pump you can reduce your carbon footprint and contribute to climate protection by already meeting future building regulations
- The aroTHERM plus system is suitable for a broad range of properties with underfloor heating and/or a radiator system. Depending on the heat demand and living space of your home, it will be suitable for retrofit projects
- Designed for a peaceful home, the aroTHERM plus system has very low sound emissions: reassuring for you and your neighbours
- With sound power as low as 54dB(A) the aroTHERM plus 3.5, 5, 7 and 12 kW outputs have been accredited with the Quiet Mark.
- ErP A+++ rated with a SCoP up to 5.03, your monthly running costs for heating and hot water can be reduced by more than 10% compared to a replaced oil heating system
- Compatible with app-based controls to allow you to control your heating on the go

Indoor unit options

Air source heat pumps have an outdoor and an indoor unit for every installation. The aroTHERM plus has been developed to work in harmony with a variety of indoor units to suit your installation.

The uniTOWER indoor unit is a compact solution with all system components inside one tall unit, ideal for properties with limited space.

The hydraulic module has all hydraulic components inside one unit allowing the heat pump to provide heating. If hot water is required, the hydraulic module can easily connect to a new or existing heat pump hot water cylinder.

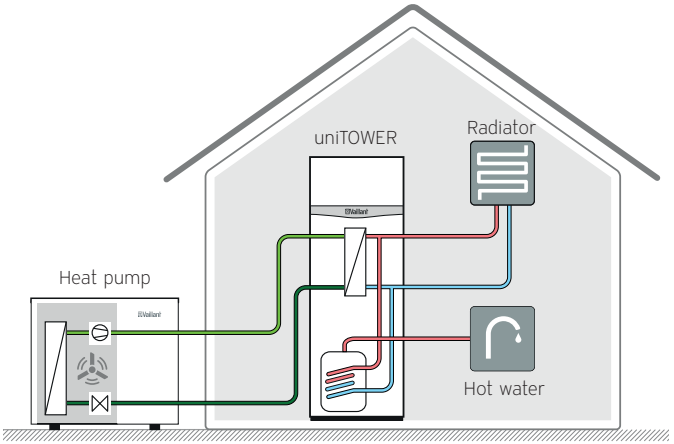
The heat pump interface is ideal for customised applications where the heat pump interface acts as the central point of the system connecting to a back-up heater, expansion vessel, heat exchanger module, and heat pump hot water cylinder if hot water is required.

uniTOWER

Hydraulic module

Heat pump interface

aroTHERM plus with uniTOWER



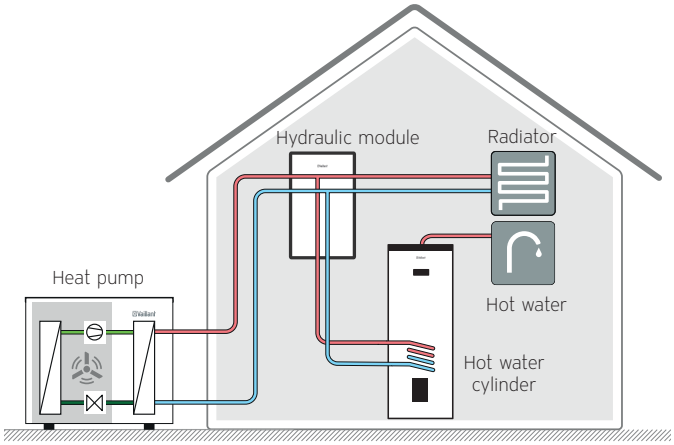
Benefits of aroTHERM plus with uniTOWER

- Heating system components integrated within the uniTOWER
- Thanks to the compact design, the uniTOWER is about the size of a fridge freezer
- 190 litre cylinder capacity delivers up to 380 litres of hot water for up to five people including the use of rainfall showers
- Quick and easy installation within just one-day

Products required for this solution:

1) aroTHERM plus
2) uniTOWER
3) Controls

aroTHERM plus with hydraulic module



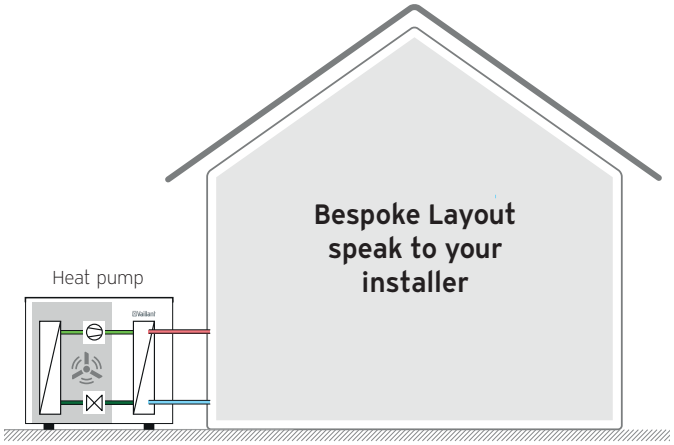
Benefits of aroTHERM plus with hydraulic module

- Heating system components integrated within the hydraulic module
- Easy to connect to uniSTOR heat pump hot water cylinder if hot water is required. uniSTOR heat pump hot water cylinders are available between 150 and 500 litres dependant on your needs
- Can be connected to larger hot water cylinders

Products required for this solution:

1) aroTHERM plus
2) Hydraulic module
3) Hot water cylinder
4) Controls

aroTHERM plus with heat pump interface



Benefits of aroTHERM plus with heat pump interface

- Heating system components installed separately
- Can be connected to larger hot water cylinders and Vaillant components
- Can be connected to existing boiler system for a hybrid heating and hot water solution

Products required for this solution:

1) aroTHERM plus
2) Heat pump interface
3) Choice of heating components as designed by your installer

Smart control options

To control your heating and hot water system, you will need a system control where you can program your heating and hot water. You have a choice of Vaillant controls with either the sensoCOMFORT or VRC 700 which both come in wired or wireless options. Your local installer can advise on the right option to suit your requirements. Plus, you can also control your device with our smartphone app.

sensoCOMFORT

VRC 700

Smartphone app

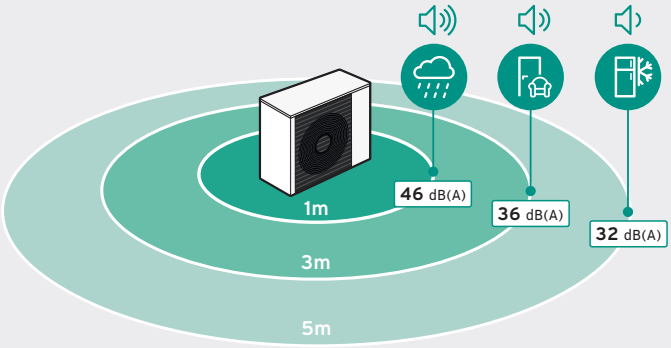
Cylinder options

If you require hot water in your property, you have the option to use the indoor uniTOWER unit or a hot water cylinder. Vaillant uniSTOR hot water cylinders are available in a range of sizes for heat pumps and hybrid systems.

Speak to your installer to choose the correct cylinder for your needs.

Key terms explained

What is sound power?



Sound emission from the aroTHERM plus

5kW heat pump, free standing

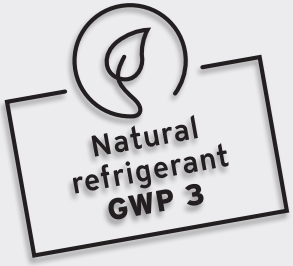
Sound power

This is the rate at which sound energy is emitted from a unit. The sound power of all heating products like heat pumps and boilers are displayed on the ErP product label.

Sound pressure

This is the volume of sound you hear as the sound travels through the air. So the further away you move from the sound source, the lower the lower the volume of sound you hear. Sound pressure values are always lower than sound power values. An example of the sound pressure value would be 46dB(A) the (A) shows that is a sound pressure value.

What is Global Warming Potential (GWP)?



GWP is a comparative value that indicates the greenhouse effect of a greenhouse gas, such as a refrigerant, if it were to be released into the environment. The higher the value, the worse the impact on the climate. The aroTHERM plus has a very low impact on the environment, with an outstanding GWP of just three.

Coefficients Of Performance (CoP)

CoP is the efficiency ratio of heating output compared to the energy input required to power the unit depending on the air and flow temperatures. The higher the CoP figure, the more efficient the heat pump is. Air source heat pump units usually have a CoP of around 3 - 4, the aroTHERM plus has a CoP up to 5.2, making it highly efficient.

Seasonal Coefficient Of Performance (SCoP)

SCoP is a value that describes the efficiency of the output of the heat pump. It's derived from analysing the data from a combination of tests taken over the course of a year (to allow for seasonal variation). A SCoP value is used to calculate the running cost of your heat pump; the higher the SCoP value, the more efficient the heat pump and the lower the running costs of your heating system.

What is Boiler Upgrade Scheme (BUS)?

The Boiler Upgrade Scheme (BUS) provides upfront grants to support the installation of heat pumps in homes in England and Wales.

MCS CERTIFIED

All Vaillant heat pumps are MCS accredited and eligible for BUS.

Service

Rely on Vaillant for sound advice

With its first-rate service, Vaillant can make life more comfortable before your new heating system has even been installed.

The first person to contact is, of course, your renewable heating engineer who will provide expert advice on all of the technical aspects. To find a Vaillant renewable heating engineer near you, please visit: **vaillant.co.uk/findaninstaller**

If you would like details of the latest products and comprehensive information about heating in general, you can visit us online at any time: **vaillant.co.uk**

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