

Ground Source Heat Pump



Ground source heat pumps extract heat from the earth for use in a building. Ground source heat pump units are usually placed in an outbuilding or utility area and are about the size of a fridge freezer.

HOW DO GROUND SOURCE HEAT PUMPS WORK?

Ground source heat pumps convert low grade heat (not very warm air) from a wide surface area into high grade heat (hot air) for a smaller space. Coils are installed horizontally in shallow trenches beneath the surface of the ground or vertically in deeper boreholes. Fluid circulating through the coils collects heat and then transfers it into the property. Systems typically provide heat for radiators, under-floor heating systems or domestic hot water.

HOW MUCH HEAT CAN BE GENERATED?

In general heat pumps are 400% efficient, producing 4kW of heat output for every 1kW of electricity used. This makes them ideal for properties which are not supplied by mains gas or rely on heating oil.

A well designed heat pump will provide all your heating and hot water requirements. It is essential that a design survey is carried out on your building to establish the heating requirements of the building and therefore the size of the heat pump required.

Futurum will undertake a property survey and recommend the most suitable unit for your needs.

WHERE CAN GROUND SOURCE HEAT PUMPS BE FITTED?

Ground source heat pump units are usually placed in an outbuilding or utility area due to their size. Sufficient land space will also be required for excavation work to be carried out so that coils can be buried beneath the ground. The amount of space available will determine whether to use horizontal loops or vertical boreholes. Once the pipes are laid the ground is returned to normal with piping hidden.

WILL IT BE SUITABLE FOR MY PROPERTY?

Ground source heat pumps are only appropriate for

properties with a garden or surrounding land space. The ground also needs to be suitable for digging a trench or borehole and accessible to digging equipment. Combining the installation with other building work is often beneficial to minimise the disruption.

COST, SAVINGS & MAINTENANCE

The cost will depend on how the collectors will be installed as drilling boreholes into the ground will be more costly than digging trenches. As a guide the cost of a borehole installation for a domestic property is between £10,000 - £15,000.

As well as savings on your annual energy bills, heat pump installations benefit from the Renewable Heat Incentive (RHI). This means that the government will pay you to generate your own heating and hot water.

Heat generating technologies will require an annual service and in some cases, this is an essential element of maintaining any Government incentive payment. Our team can provide you with this service - either as an integral part of a new installation or to support any existing technologies you may have.

ARE THERE ANY RESTRICTIONS TO THE RHI PAYMENTS?

To qualify for the RHI you must own the property or have approval from the owner. There may be other requirements, such as an acceptable level of insulation within the property. To receive these payments the system you install must be certified under the MSC (Microgeneration Certification Scheme) and the installer must also be MCS registered. You may also be required to ensure that the system is adequately maintained to continue to receive the RHI.

HOW CAN YOU BE SURE OF THE QUALITY OF THE INSTALLER AND PRODUCTS?

All Futurum installers are registered and where required certified under the Microgeneration Certification Scheme (MCS) and we are bound by the REAL Assurance Consumer Code which is your guarantee of best advice and high standards of service. Details of these requirements can be found at www.realassurance.org.uk

If you have any further questions or queries please contact the Futurum team on **01305 755700** or email us at sales@futurumltd.co.uk