

Minus7 Heating System Method of operation

Introduction

Your property is heated by the Minus7 endothermic micro-district system. This is a low carbon heat source making use of two forms of renewables: Solar thermal and a heat pump.

Heat is collected by a Minus7 roofing product, which looks like a traditional slate roof.



This heat is fed, via the plant, into the two thermal stores, which are situated under the decking in the garden of house 1. The plant, or Solar Energy Processor (SEP), is situated in the outbuilding, also in the garden of house 1. This plant contains the heat-pump employed in the colder periods to generate the heat. It will run only when the thermal store requires heat.

A heat-main circulates the heat contained in the large thermal store to each of the properties. The result is a more efficient system and therefore lower heating bills for you. This means that you may need to run your heating system in a slightly different way to how you may have done in the past.

This heat is delivered to each property by a Heat Transfer Unit (HTU). This is the equivalent to a combi-boiler in a gas central heating system. In other words it delivers space heating and domestic hot water.

The Heat Transfer Unit:

The HTU is situated in a cupboard as indicated in the photograph below:



You will note that there are no user controls on this piece of equipment. This is because it is autonomous and delivers heat on demand.

Below the HTU you will note that there is a silver cylinder with a blue light at each end. This is an ultra-violet steriliser and is fitted to eliminate any bacteria in the domestic hot water supply.

The system monitors how much heat your dwelling draws from the communal supply and allocates electricity in direct proportion to run the plant. In this way you only pay for the heat that you use in your property. A device called SmartSwitch monitors and controls the electrical use from each property on the heat main.

Heating system:

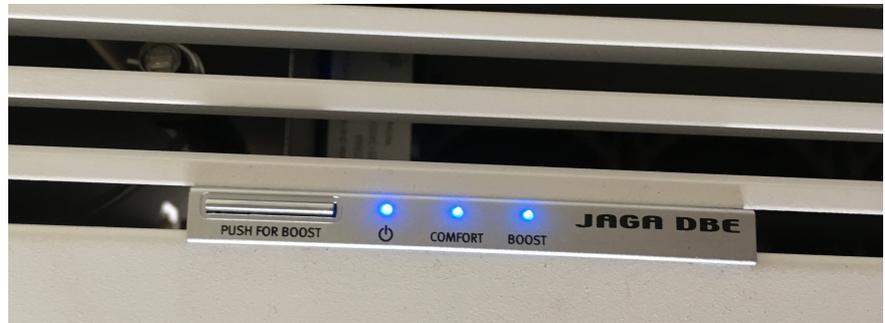
Your property is fitted with Jaga radiators. These are especially designed to work with very low water temperatures and are fitted with small fans. Each radiator is fitted with a thermostatically controlled valve which can be seen at the left of the radiator in the photograph. You will also note that to the right of this radiator in the picture is an electrical wall socket with a small black power supply plugged in. *This should always be left turned on*, as it is the power supply to the radiator. The power consumption of this device is minimal.





The Thermostatic valve is graduated from 1 to 5, with 1 being the frost setting.

On each radiator there is a fan control panel as shown in the photograph. When there is heat available in the radiator circuit, the power light and the comfort light are lit. Pushing the 'boost' button will increase fan speed to get heat into the room faster, if required.



The dwelling is fitted with a single programmable thermostat:

This is sited in the hallway and controls the operation of the heating circuit.

As this is a low temperature heating system it is recommended that you set a comfortable temperature and leave the system on. This type of system has a slightly longer response time to large heating loads, such as heating the building up after turning the heating off. When leaving the property for prolonged periods or for the summer period it is recommended to set the temperature at a 'frost' setting.

When the temperature in the dwelling drops below the required setting the heating pump is turned on and heat is delivered to the radiators.

As this is a relatively small property and there is only one heating zone, it will not be possible to run a big variation in temperature from one room to another.

Please refer to the Honeywell handbook for operation of this device.



Domestic Hot Water

The HTU will generate domestic hot water (DHW) on demand. Therefore when you turn the hot tap on the HTU will take heat from the heat main and raise the temperature of the DHW main before it is again raised to the delivery temperature. The system delivers DHW to the tap at 45°C at a flow rate of 6 litres per minute. The ultra violet steriliser eliminates bacteria in the water.

