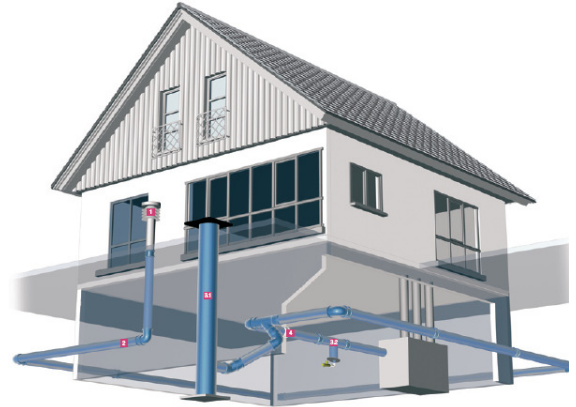


## Ground Energy Pipes

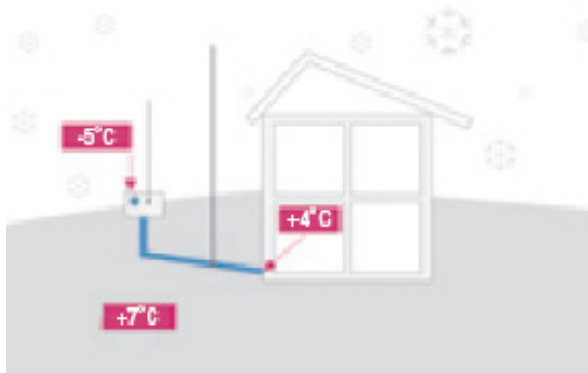
The perfect complement to the basic GreenTec System; Ground Energy Pipes, like Ground Source Heat Pumps, make use of the fact that a little below 1 metre from the surface, the temperature of the ground remains fairly constant all year round.

Produced by our partners Rehau, one of the world's largest producers of polymer-based products, Ground Energy Pipes draw air in through a filter and, after passing it through the energy pipe loop, feed it to the intake side of our ventilation systems.

Without consuming any energy, the passage of air through the pipe raises or lowers the incoming air temperature to be closer to the ideal required for comfortable habitation, reducing the amount of heat / cooling input required.



Here's how it works at extremes of Winter and Summer temperatures:



### ● Winter Heating mode

The temperature of the ground is steady at 7°C, with the outside air at a very chilly -5°C.

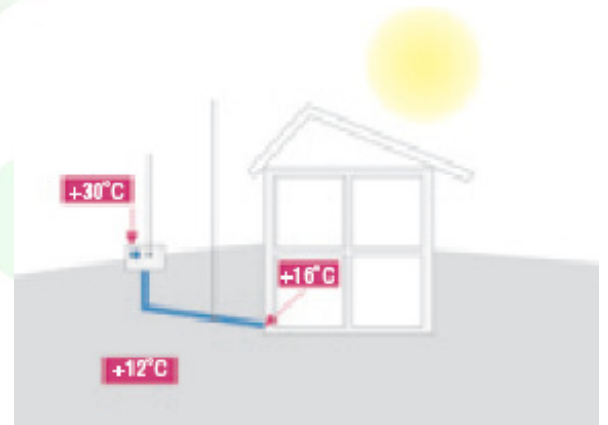
Drawing the intake air through the Ground Energy Pipe can raise its temperature by 9°C. Depending on the severity and duration of the Winter, this simple system can make savings of around 10% on a property's heating bill.

### ● Summer Cooling mode

The blazing sun has brought the air temperature up to 30°C, which has, in turn, raised the ground temperature from its Winter 7°C up to 12°C.

Now the passage of air through the pipe takes heat out, dropping it by as much as 14°C, which greatly reduces the effort needed to condition incoming air.

Couple this with the GreenTec Comfort Cooling system and you have climate control that costs around 1p per hour to run, even on the hottest days.



### ● The Environment wins *and* the Property Owner wins

Homes with a GreenTec System installed have a greatly reduced impact on the environment – which translates as greatly reduced running costs.

Consider, for example, Mulbury House, in East Grinstead, a superb new 3-storey house with 6 en-suite bedrooms and an indoor pool. With a floor area of 850M<sup>2</sup>, the estimated annual heating costs of system based on an oil-fired boiler were £8-10,000. The GreenTec System – which additionally includes Comfort Cooling - was expected to cost £2-2,500 per year. The delighted owners reported that their electricity bill for their second year (2008) was a very lean and green £1,550.