

Richard Mercer meets Cyber Therm, a family-run business taking an innovative approach to keeping us warm

Heating is a hot topic in the current climate. As winter pokes its head around the corner, we are reminded of the extra energy needed to keep our home and work environments warm.

Coupled with increasing energy costs, an international call for reducing greenhouse emissions and a fragile financial system, it is no wonder many people have been looking at innovative ways of insulating homes, reducing energy consumption and saving money.

But it does not end here. We want it all — the energy saving and cost-effectiveness, as well as a living environment that combines functionality and aesthetics.

It is in this climate, and while I was thinking about my own energy consumption, expenses and home decoration, that I first heard about CyberTherm. It is a business taking an innovative approach to keeping us warm, while helping us reduce our energy consumption and still allowing us the flexibility to have the modern interiors that we want.

CyberTherm, based at Long Crendon, near Thame, has developed an ultra-slim heating system designed to warm people by radiant heat transfer.

Normal convection systems heat the air in the room to warm its occupants. Radiant energy is different — it warms the occupants directly.

Managing director Jake Kingsbury said: "CyberTherm Radiant Heating Panels warm a body in the same way that the sun, or a campfire, warms a body.

"Imagine sitting outside on a cold day and the warm feeling you experience when the sun comes out from behind the clouds. You are instantly warmed by the sun's radiant heat, despite the fact that the air around you has not changed temperature."

The benefit for heating is that the air in a room could be between 3°C and 5°C lower than the air in a conventionally-heated room, but its occupant will experience the same thermal comfort.

This has major implications for energy savings. It is estimated that 1°C drop in room temperature equates to about six per cent less energy consumed — even more if the room is poorly insulated.

So a 5°C difference between air temperature and perceived temperature due to radiant heat could give a 30 per cent energy saving. This is a rough calculation, but it shows the potential for massive energy savings.

Another area for potential saving would be a quicker response time between activation and perceived comfort. We would not need to heat a section of the house when it is no longer occupied and would still have the flexibility to make the room comfortable, relatively quickly.

The way the radiant panels distribute heat evenly around the home leads its occupants to experience a feeling of comfort and well-being that is quite unlike that experienced by conventional central heating systems.



Toby and Jake Kingsbury with one of the ultra-thin panels

Invisible solution to a hot topic

The CyberTherm technology has allowed the development of heating panels less than one millimetre thick, which opens up a huge range of installation options.

Panels can be mounted anywhere, in walls, under floors and even in the ceiling. This makes it similar to other hidden heating systems, but with the benefit that a slim design allows the panel to be installed without the need for major structural work.

The surface of the panels can also be decorated and hence it makes for an easy solution to install and hide, reducing installation costs. The panels are simply connected to a standard electrical main and turned on.

Mr Kingsbury and brother Toby founded CyberTherm two years ago, based on technology handed down to them from their father Gerald.

They have worked closely with Wendy Tindsley, the Oxfordshire Enterprise Hub director based at the Cherwell Innovation Centre, Upper Heyford, for several months to build the business.

Mr Kingsbury said: "The Enterprise Hub has been an invaluable resource. We have made some great contacts and it has been really useful in helping us to structure the business.

"As an organisation, we were very focused on product development and research and development. The hub has helped us to now be in a position to commercialise our system."

CyberTherm products are not yet available off the shelf. The team has started small-scale manufacturing to supply niche markets and, once independent tests have verified the high levels of energy efficiency and potential savings, they will start supplying customers.

In the meantime, we can anticipate an innovative and valuable addition to the range of efficient heating options available for our homes and businesses.

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