



## Far Infrared Heating Solutions



*Far Infrared Heating from Scottish Manufacturers Flexel  
Heating people first since 1978*

# Introduction to Flexel

Flexel have been manufacturing and supplying innovative electric heating systems to the world market since 1978 from our factory in Glenrothes. With our 100,000 sq. foot manufacturing plant, assembly lines, offices and warehouse based all under one roof in Glenrothes, Fife, we supply underfloor heating for both commercial and domestic use.

Our heating systems utilise radiant heat – warming objects in the room rather than using air circulation. This means it is a more efficient and hygienic system than conventional central heating. By using radiant heating, you could reduce your energy bills while you enjoy a heating system that is silent, aesthetically pleasing, zero maintenance and can free up room wall space. Dwindling supplies of North Sea gas, the uncertainty of imported gas supplies, the volatility of oil prices and the commitment to reduce the UK's carbon footprint all point towards electricity as the fuel of the future.



The country is moving towards a low carbon future, with electricity to be generated by nuclear power and sustainable sources. Heating represents 78% of non-transport energy use in the UK. Currently only 9% of heating is powered by electricity, the majority is gas. Currently 37% of all UK greenhouse gas emissions are generated from heating. In order to meet climate change targets the UK has no option but to switch from gas, oil and LPG to electric heating.

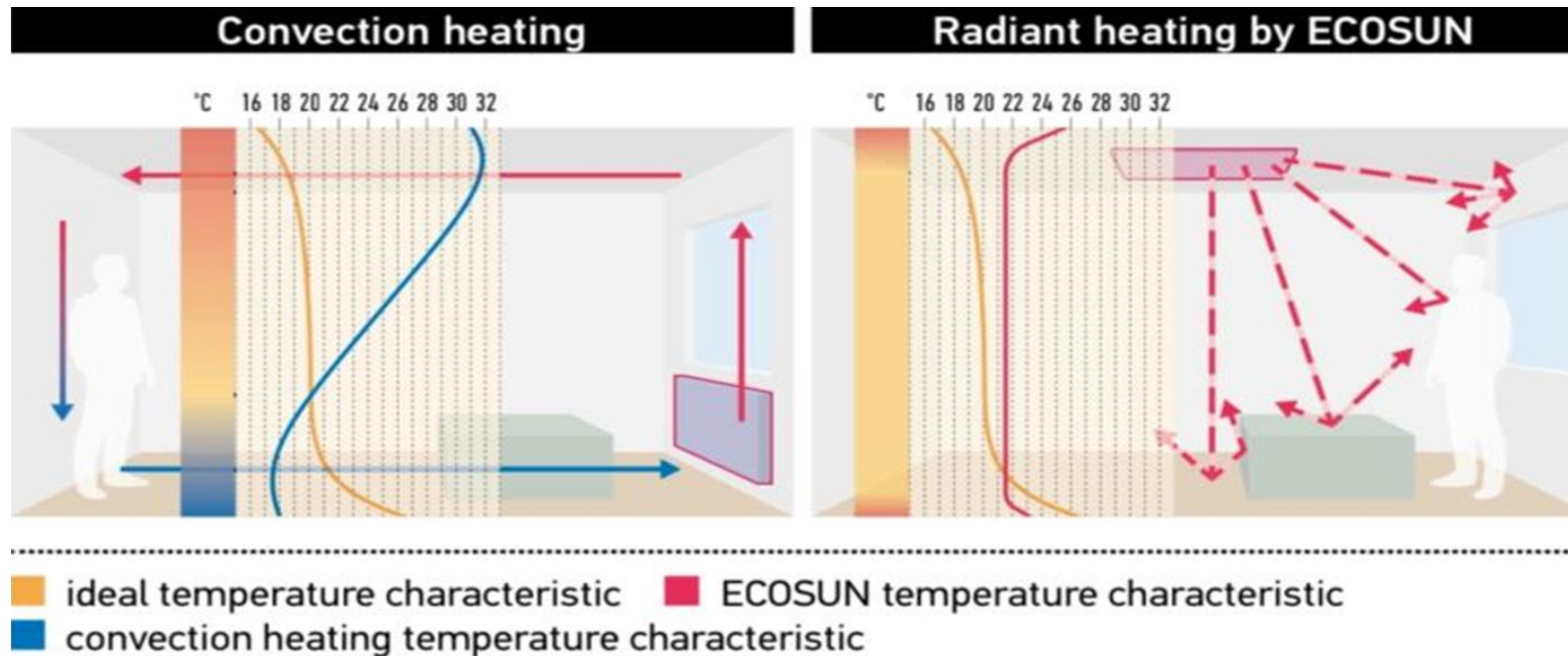
Electric heating can be 100% CO2 free when powered by renewable electricity. The UK electricity grid is rapidly decarbonising and within 5 years electricity will be greener than gas, oil and LPG. The government have already announced the banning of gas boilers in any new builds from 2025. New building regulations (SAP10) which are expected to come in force in June 2022 will be far more favourable to the use of direct acting electric heaters. Electric heating is 100% efficient (1:1) and carbon neutral at the point of use. Electric heating systems are compatible with micro generation technologies. As more low carbon and renewable sources become available, we will increasingly see electric heating favoured over gas. [More...](#)



# What is Far Infrared heat?

FIR heat is a form of radiant heat, similar to the sun. While traditional radiators and Air Source Heat Pumps (ASHP) heat a room through convection heat, FIR heats people and objects, instantly without a warm up period, providing a more efficient and effective way of heating a space. FIR work by converting electricity into radiant heat. The heat is then directly transferred to an object such as a person or surface without heating the air in between. Again, this is very similar to how the sun heats the environment providing a natural and healthy form of heating.

As the FIR heaters will warm up the surfaces in the room i.e. the walls, floors and ceilings, rather than the air in between, we can build up 'Thermal Mass' ensuring that the room will feel warm and comfortable, even if you decided to open a window! Our range of FIR heaters, thermostats and accessories provide a warm, comfortable environment, by utilising FIR heat. FIR systems work by warming people and the colder surfaces in the room first rather than depending on air circulation like traditional convection heating systems such as water based central heating systems, air blowers and traditional high wattage electric heaters.



FIR heaters have a ration of 1:1 (1 Kw of energy produces 1Kw of heat) with no loss or warm up period making them the second most efficient form of heating available next to suitably designed ASHPs.

In certain applications FIR panels can be used for targeted large space heating such as halls, workshops, warehousing and [churches](#) to name a few examples and can still achieve more than 50% savings on heating costs in contrast with standard methods of heating. [More...](#)

# ***Benefits or using FIR***

## **Heats Surfaces, Not the Air**

As mentioned previously, radiant infrared heating heats the surfaces in a room, so if a door or window is opened, you would not lose all the heat from the space. This is especially useful if used in shops and offices where there could be people coming and going regularly and in domestic locations can help prevent dampness in walls.

## **An Instantaneous Heat Source**

Infrared heating is also an instantaneous heat source. It starts getting up to temperature immediately and can reach its required temperature within a few minutes of turning on. When paired with one of our programmable or WiFi-enabled thermostats you can ensure comfortable stable heat without wasting money and energy waiting for your heater to get up to temperature.

## **Easy Installation**

Without the need for pipes and radiators, infrared heaters could not be easier to install. They are simply installed either by wall mounting or on a ceiling and then connected to a thermostat by a qualified electrician, or they can even be fitted with a standard plug and switched on as and when required. This takes out the need for any upheaval caused by lifting floorboards and furniture.

## **Only Heat the Rooms You Need**

Our FIR heaters do not need to be on in every room of your house, so you can just heat the rooms you are using or planning to use shortly. This ensures that you are not wasting money and energy heating empty rooms for no reason. And with some of our advanced thermostats, you can even set heating zones (rooms), so that you can set the times and temperatures that these zones will be heated.

## **Energy Efficient Heating**

As FIR heaters heat the surfaces in a room or area compared to convection heaters that heat the air, FIR heaters ensures that the gathered heat stays in the space rather than dissipating through open windows, doors and the ceiling.



# ECOSUN GS Glass Infrared Heating Panel



## Technical Detail

- ❖ Frameless design
- ❖ 4mm safety glass (6mm for mirror effect)
- ❖ Available in white, black, beige, graphite, platinum, wine red and mirror finishes
- ❖ Suitable for wall and ceiling heating
- ❖ Range of power outputs: 300W, 500W, 600W, 850W
- ❖ 1.9mm power cable
- ❖ Voltage 230V, 50Hz
- ❖ Optional wireless thermostatic controller
- ❖ Class II appliance, with IP44 coverage

ECOSUN GS is an elegant glass heating panel, suitable for both wall and ceiling mounting. The frameless design means the panel is both modern and elegant. It is ideal for both domestic and commercial applications.

The front emitting surface is made of 4mm safety glass (6mm in the mirror effect panel), available in a range of finishes to compliment any interior. [More...](#)



# ECOSUN UB Universal Infrared Heating Panel

## Technical Detail

- ❖ Manufactured from galvanised steel with a semi-smooth powder finish.
- ❖ Maintenance free.
- ❖ Fully insulated rear panel to maximise infrared emissions from the front face.
- ❖ Suitable for wall or ceiling mounting.
- ❖ Includes ceiling mounting frame.
- ❖ Thermal overload-protection set at 80°C
- ❖ 1.0m power cable
- ❖ Available in white (RAL 9010)
- ❖ Mounting heights for ceiling products: 2.5m min to 4.0m max
- ❖ Select from 300w (592x592x30mm) or a double 600w (1192x592x30mm) or a large 850w (1192x800x30mm) unit.

EcoSun UB is a highly efficient heater. It offers a comfortable environment at a lower temperature when compared to traditional heating systems. The slim line heater are designed to complement any environment and can be used in domestic and commercial environments. It can be used as a spot heater for individual areas or as a complete heating system.



Ceiling mounting frame comes with the units and additional 'flush mounting kits' are also available to allow the panel to be flush with the ceiling. [More...](#)



# ECOSUN C+ Infrared Heating Cassettes

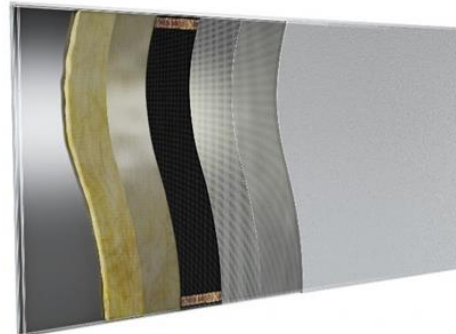


## Technical Detail

- ❖ 22 gauge galvanized steel radiating surface with white powder coated finish.
- ❖ Carbon impregnated glass cloth heating element for excellent heat distribution and long life.
- ❖ Mounting height 2.4m min to 4.0m max
- ❖ Single unit mounting brackets included.
- ❖ Can be suspended on chains.
- ❖ Available in 300w and 600w outputs.
- ❖ Thermal Overload protection set at 130°C

Our ECOSUN C+ unit is a ceiling mounting heights between 2.5m - 4.0m designed for UK Ceiling Grid System or to be ceiling mounted with our optional brackets. Available in 2 sizes in white.

Optional mounting bracket available. These UK manufactured radiant ceiling cassette panels are designed to replace standard 600mm x 600mm UK ceiling tiles in offices, corridors, toilets, canteens, classrooms and any other location with low ceiling grid system and tiles in place. [More...](#)





# ECOSUN TH High Output Space Heater

## Technical Detail

- ❖ Min installation height is 1.8m above the floor (lower edge of panel)
- ❖ For wall installation there must be a min. gap of 30cm between the ceiling and the upper edge of the panel
- ❖ 2m heat resistant cable attached
- ❖ Protection: Cable gland to IP44
- ❖ Tillable brackets included with large field of effect.
- ❖ Available in 1000 Watt and 1500 Watt versions.
- ❖ Thermal Overload protection set at 180°C

Our ECOSUN TH unit is ideal for directional heating from wall or ceiling mounting heights between 1.8m - 4.0m. Available in 2 sizes in anti-glare black. Mounting bracket and protection grills available.

The ECOSUN TH is a no glare, medium wavelength, infrared heater. Constructed from powder coated black profile, its modern clean and elegant design allows it to be easily fitted in a multitude of domestic or commercial environments where heat is required without the glare.

Ideal for enclosed terraces, conservatories, reception areas, churches, cafes, restaurants, shops, zoos and many more. Optional protective grills and multi-unit brackets. [More...](#)





# ECOSUN S+ High Output Space Heater



## Technical Detail

- ❖ Attractive powder coated casing (RAL9002 off white) & grey radiating faceplate.
- ❖ Fully insulated galvanised casing with class O foil backed 25mm thick insulation
- ❖ Radiant surfaces ( up to 260 C ) 1000mm
- ❖ These electric heating panels are designed to work with our range of air sensing thermostats
- ❖ Protection: Class1 , IP x 4, Cable gland to IP44
- ❖ Thermo crystal high emissivity heating panel
- ❖ Infrared heating does not cause air convection currents, therefore minimising dust movement and provides a clean, draft free environment.

Our ECOSUN S+ unit is ideal for large space heating with ceiling mounting heights between 5.0m - 8.0m or they can be used for localised spot heating mounted on a wall at between 3.5m – 4.5m. Available in 6 sizes in white with grey panels. Mounting bracket and protection grills are available separately.

EcoSun infrared panels are an ideal way of providing thermal comfort in commercial and industrial buildings. They are specifically designed for high level mounting. They can be horizontally ceiling mounted with an auxiliary frame or suspended on drop rods or chains. They are only 60mm deep and typical applications include large volume spaces where conventional warm air convection heating systems would be uneconomic. These include Supermarkets, Gymnasiums, Showrooms, Factories and Warehouses. [More...](#)

# ECOSUN CH Pew Heating Panel

## Technical Detail

- ❖ Available in 260 Watt, 400W and 600 Watt versions.
- ❖ Thermal Overload protection set at 80°C.
- ❖ Localised heating – heat only the areas required
- ❖ Includes protective grilles to prevent direct contact with the heating surface
- ❖ Matt black finish
- ❖ Designed for horizontal mounting under pews.

Our ECOSUN CH unit is ideal for low temperature close proximity personal heating under pews and benches. Available in 3 sizes in anti-glare black. Supplied with mounting bracket and protection grill.

These infrared heating panels are ideal for churches which have fixed pews in place. The panel fits under the pew therefore does not waste energy heating the air in a large building such as a church. Instead the panels directly heat the people in the immediate vicinity. [More...](#)





# ECOSUN K+ Heating Panel



## Technical Detail

- ❖ Zinc coated steel radiating surface
- ❖ Fully insulated rear panel
- ❖ 1.9m power cable
- ❖ Available in brown (RAL 0240)
- ❖ Voltage: 230V, 50Hz
- ❖ Localised heating – heat only the areas required
- ❖ Maintenance free
- ❖ Lightweight for easy installation
- ❖ 100W, 200W, 270W, 330W and 400W outputs available



Our ECOSUN K+ unit is ideal for low temperature close proximity personal heating for mounting under office desks, reception desks, counters, supermarket tills or church pew fronts. Available in 5 sizes in brown.

The EcoSun K+ is a great choice for heating desks or churches with fixed pews in place. The heating panel fits to the front panel of a pew or desk. It is designed to heating people in the immediate vicinity. Each panel can be operated independently, which keeps heating costs to a minimum.

The radiant heaters also provide almost instantaneous heat, so the panels can be switched on just moments before the congregation or staff arrive.

EcoSun K+ panels are extremely unobtrusive. They are painted dark brown and when fitted to the front of a traditional pew or desk, they are barely noticeable. [More...](#)

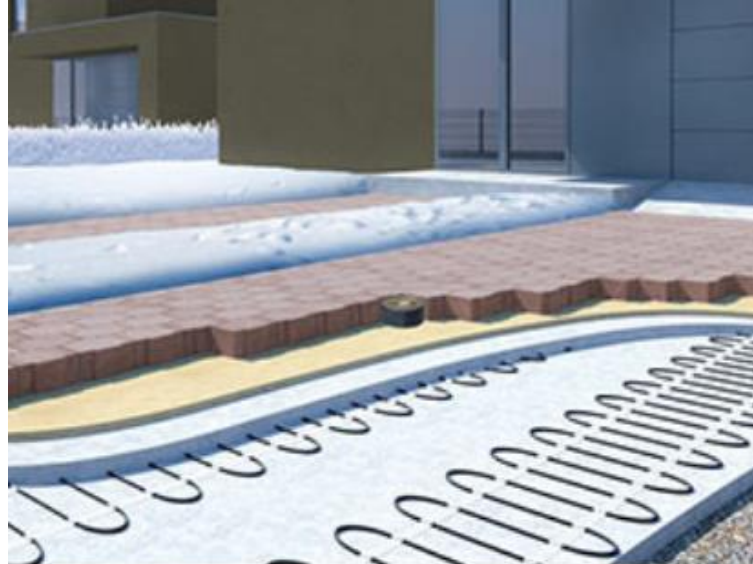
## Our Other Products...



### Underfloor Heating

Whether you want a primary source of heat, or simply want to take the chill off floor tiles, our range of floor heating systems will meet your needs.

[More...](#)



### Outside Applications

Electric underfloor heating is at the heart of Flexel International, but this has inspired a whole range of products.

[More...](#)



### Mirror Demister Pads

Mirror Demisters are the simple and safe answer to steamed up mirrors in areas such as bathrooms and shower rooms

[More...](#)

**ECOFILM<sup>PRO</sup>**  
professional underfloor heating kit

**ECOFLOOR**  
underfloor heating mat

**ECOFLEX**  
underfloor heating cable kit

**ECOFOIL**  
underlamine aluminium foil mats

**ECOSUN**  
high output radiant panels

**demista<sup>®</sup>**  
Clearly Perfect



# *Looking for more information?*

If you wish to receive information about any of our radiant heating products please contact us via our [online enquiries](#) form

Alternatively you can contact us directly at:

- ❖ Flexel International Ltd, Telford Road, Glenrothes KY7 4NX
- ❖ 01592 760 928
- ❖ [enquiries@flexel.co.uk](mailto:enquiries@flexel.co.uk)
- ❖ [www.flexel.co.uk](http://www.flexel.co.uk)
- ❖ [www.linkedin.com/company/flexeluk](http://www.linkedin.com/company/flexeluk)