Energy Efficient Radiant Panel Systems

ENERGOTECH

The natural way of heating!

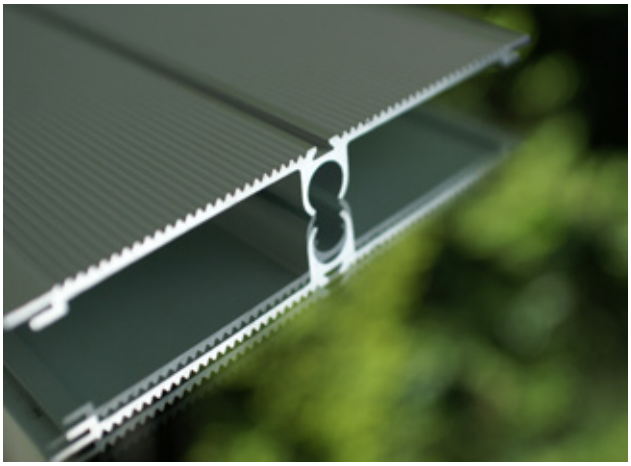
The sun is an amazing energy source, supporting all life on our planet. Radiant heat enables the sun's beams to travel vast distances without loosing any energy along the way. It is first when the radiant beams hit a surface that the energy is released and transformed into heat. Simple - the natural way of heating.

Therefore we have used the sun as a model when we have designed and manufactured our radiant heating panels. As a company, we are technically driven and have experience in the research and development of radiant heating since 1972. Our company is managed with the environment in mind and our products offer a very sustainable and energy efficient option compared to other forms of heating.

We pride ourselves on the quality we provide and our customer's needs and expectations are at the centre of everything we do. Our products are of the highest quality and this is the reason why our customers keep coming back to us.

As well as being energy efficient, Radiant Panels offer superior thermal comfort to other forms of heating. So, energy savings are not made at the expense of excellent indoor climate.

Radiant heating is effective, efficient and quiet. Simple - the natural way of heating.



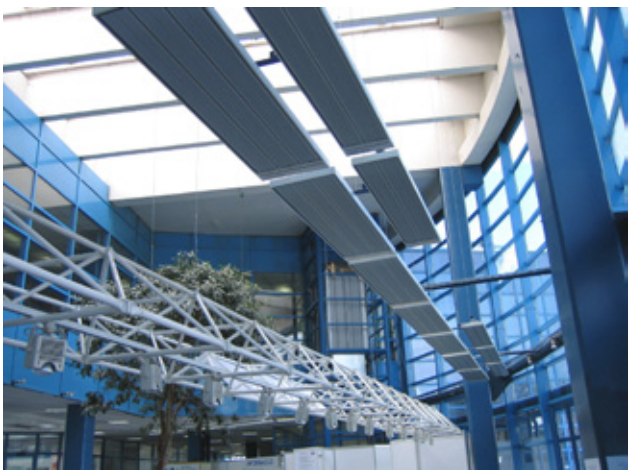
Advantages

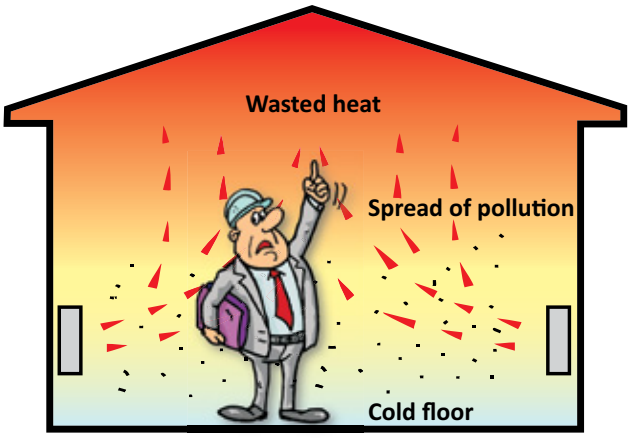
- Energy efficient
- Low running costs
- Competitively priced

- Even heat distribution
- Minimal air velocities
- Quiet and draft free heating
- Helps to prevent spread of pollution

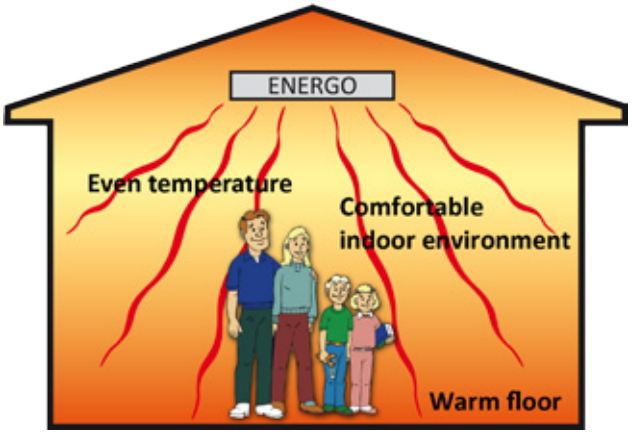
- Easy installation
- Ceiling mounting - free wall/floor spaces

- No moving parts
- Long lifespan
- No maintenance or service required

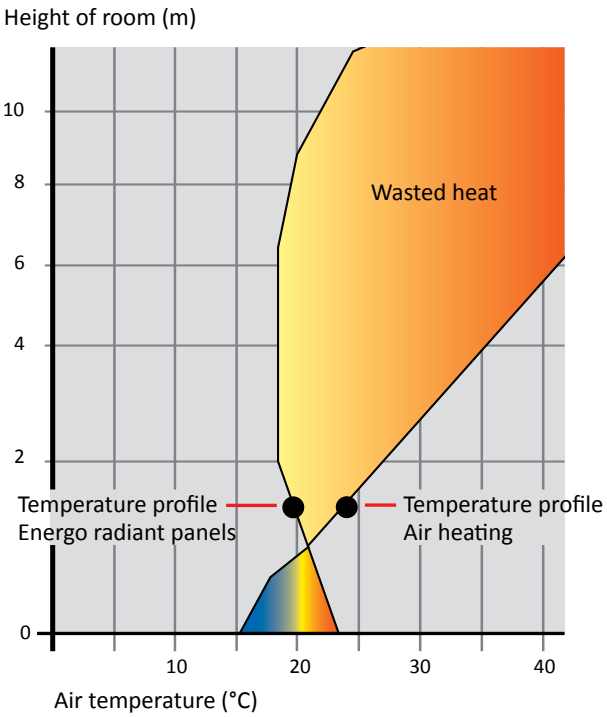




Air heating



Energo radiant panels



The Problem

To heat and ventilate a large building can prove to be a challenge and the traditionally used warm air convective systems can cause various problems with uneven temperatures, drafts and wasted energy.

When using warm air to heat a space, you would normally add air at a temperature of 10-15° C above the ambient temperature, which will lead to problems being created.

As the warm air rises in the cooler environment you will create a temperature difference between the ceiling area (where the heat will naturally travel to), and the occupied zone. To provide sufficient heat to the occupied zone it is therefore necessary to heat the air to a higher temperature than required to counteract the waste of heat above head height. This will lead to more energy being used and the running cost increasing with it.

You should demand a good indoor climate as well as economical running from a complete heating solution. This means that it is not preferable to use a ventilation system for heating, but leaving this to handle the air quality which is was primarily designed to do.

The Solution

The solution to heating a large area is to select separate heating and ventilation systems.

As radiant heating do not cause any air movements, it will not affect any form of ventilation thus making it ideal in buildings where you want to keep drafts to a minimum.

Radiant heating will also provide an even temperature, with minimal differences between air temperatures near the ceiling or temperatures in the occupied zone. Energotech's panels can be used at installation heights up to 40 m.

Radiant Panels

Radiant Panels works by emitting safe heat radiation, or in other words the exchange of energy which happens between two surfaces of differing temperatures. The heat radiation passes through the air, only releasing energy when it comes in contact with a surface.

The panels provides a high proportion of radiant heat and low proportion of convective heat, which makes it possible to heat large spaces with high ceiling heights without unnecessary heat losses.

A seldom recognised advantage with radiant panels is the warm floor it provides; often 2-3° C warmer than then surrounding air.

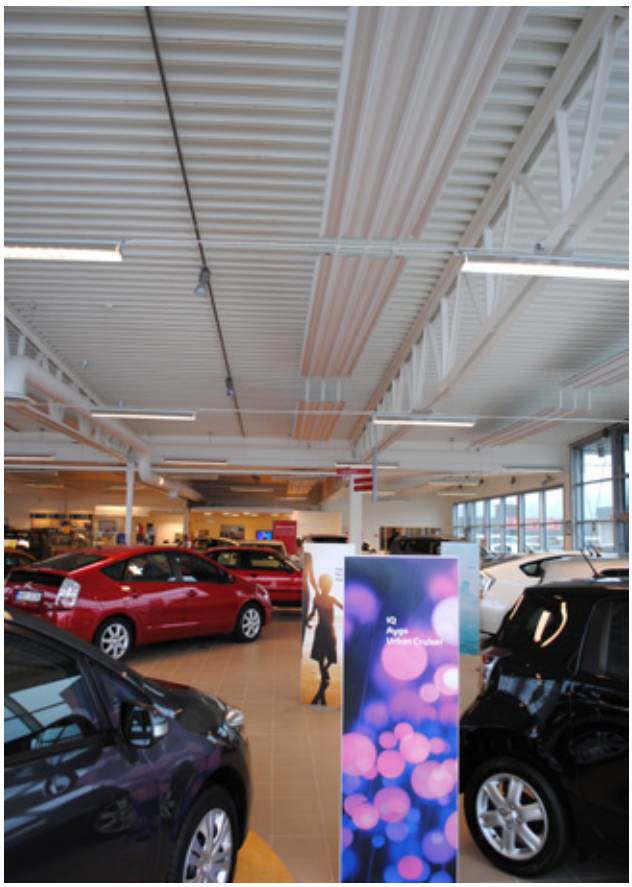
A common reason for choosing to use radiant panels is the practicalities of them not being “in the way” which means no one has to take them into consideration when making plans of where to put machinery, furnishings or other equipment. Being mounted out of the way, the panels do not take up any valuable floor or wall space.

Panels are complete units, and can be moved around with relative ease should this be required in the future to accommodate for layout changes.

Operative Temperature

The operative temperature is a way of taking into account radiant heating from surrounding areas as well as the air temperature. By combining these two factors a more accurate measurement of how warm a space feels can be achieved than if just measuring the air temperature.

Radiant Ceiling Panels will increase the temperature of surfaces leading to radiant heat being distributed, not only from the panels themselves, but also from all surrounding surfaces. This means that the operative temperature will be higher than the air temperature. So, you will achieve the same operative temperature with a lower design air temperature leading to energy savings.



Energy Savings

As a general rule, you could save around 5-6% of your energy consumption for every 1° C decrease in indoor temperature.

When using radiant panels you can use a 2-3° C lower design temperature than if using an all air system whilst maintaining the operative temperature in a space.

Add to this the decreased temperature differences between floor and ceiling compared to convective heating systems.

Using a convective heating system will lead to a zone of hot air nearest to the ceiling leading to great heat losses through the roof.

The energy savings compared to a convective system will depend on what type of building and comparative heating system you are working with. Radiant Heating will work excellent in buildings with ceiling heights over 3 m where energy savings of 20-40% are common.

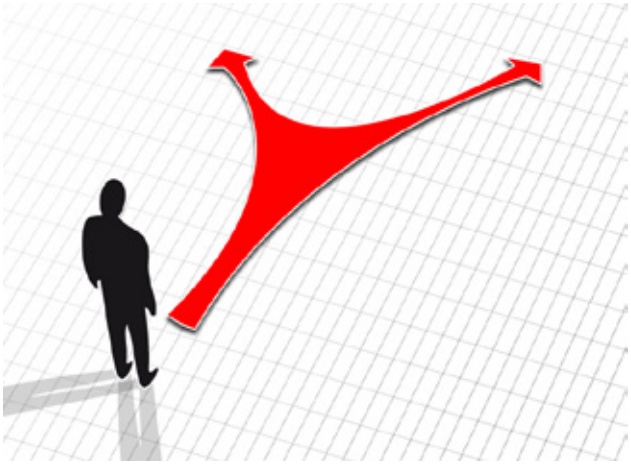
Usage

Total Heating
To provide the most comfortable and energy efficient way to quickly heat and maintain an optimal indoor climate.

Zone Heating
To provide different temperatures in different areas in a building, maybe to concentrate heat in an occupied zone or work area whilst maintaining a lower temperature in infrequently used areas.

Protection against downdrafts
Where there are problems with cold surfaces i.e. large windows cooling the surrounding air Radiant Panels offer an efficient protection providing heat where it is most needed.

Your Decision



Energy consumption throughout the world has doubled since 1970 and is on track to treble by 2030. The result will be higher competition for energy and increased prices.

To prioritise energy efficiency today will secure the future. As the debate around global warming gets more intense, so the interest for energy efficient alternatives to traditional forms of heating is increasing.

A lot of focus and investment is put into new technology, but let's not forget the technology which already exists and has been tried and tested for years with excellent results. Radiant Panels offers an economical solution whilst not compromising on comfort.

Your Choice

To choose and decide on what type of heating to use is not always straightforward. With energy efficiency and sustainability now becoming a priority in most developments, Radiant Panels offer an excellent alternative.

Energotech has long experience in heating and energy, so you should feel safe to work with us. We have spent years developing and manufacturing the best electric and water supplied radiant panels on the market. All our products are manufactured in Sweden to the highest quality standards.

Energotech is happy be of help wherever we can; we will be pleased to provide technical support, energy and heat loss calculations, layout designs and any other assistance you may require.

When choosing Radiant Heat, you are choosing the right heat.


Ford
Multexim
zawsze najlepsza oferta
www.multexim.pl
Multexim
POWER

Products

EnergoStrip
A flexible electric radiant panel which can be mounted from 2-40m. Can be used from the smallest room to large industrial buildings. 8 different models to suit any installation, 600-3600W.

EnergoCassette
Designed to integrate into a suspended ceiling, but can equally be mounted on the underside of a ceiling. For ceiling heights up to 4m and approved for use in dry, damp, wet and fire hazardous areas. 300W or 600W.

EnergoInfra
An aesthetically pleasing infrared heater suitable for terraces, conservatories or patios. Also an excellent choice for zone heating applications. 500W, 1000W or 1500W.

EnergoInfra Industry
An ideal product for total or zone heating in larger areas with ceiling heights above 3m. Also suitable for outdoor use, for example in loading bays or stadiums. 3000W, 4500W or 6000W.

EnergoLine
Underbench heating offers a discreet heating system for churches, schools, waiting rooms etc. Can also be ceiling mounted up to 3m. Slim and elegant heater in two models, 150W or 220W.

EnergoAqua Industry
Water supplied Radiant Panels for heating large areas such as manufacturing or storage facilities, sport halls, tennis courts or workshops. Suitable for most ceiling heights and available in two widths with an output of up to 500W/linear m.

EnergoAqua Line
Water supplied Radiant Panels for heating or cooling. Can be used free-hanging, surface mounted or integrated in a suspended ceiling. Would suit any commercial, retail or education application. EnergoAqua Line is available in 3 different widths with an output of up to 700W/linear m.