

Carbon Fiber Electro Heating System

Carbon is an element:

- Durable
- There is no thermal expansion
- It keeps the same efficiency at any temperature condition
- Do not oxidize
- It's flexible
- It has a thermal efficiency significantly higher than other heating cables

Heating systems with components in Carbon Fiber

- Innovative systems for floor, wall, ceiling heating, producing custom made or modular
- Radiating elements such as radiators, towel warmer, radiant panels, platforms
- Cables and heating bands in technical textiles

TT Heating systems offer:

- Reduce the installation and management costs
- No Maintenance
- Adaptability to install, ideal for special solutions
- Do not require technical rooms, chimneys, pipes
- There are no moving parts subject to wear

Indoor floor



Radiant Panels



Modular Panels



Outdoor



Radiators



Radiant Platforms



1 – Interior floors

In floor heating spreads the heat radiation, so widespread, are absent convection and require ambient temperatures lower than all other systems.

The system of floor and wall heating has been designed to meet various requirements for new buildings and renovations, both in the civil, industrial and marine. Due to its versatility is applicable in any situation: homes, offices, laboratories, gymnasiums, schools, churches, museums, and outdoor pathways.

The system is formed by a net system or heating pad made of carbon fiber resistors. This system has a thickness of only 4 mm and can therefore be installed in new or refurbished buildings occupying an area far less than any other system.

It comes pre-sized sheets in each room to be heated. The installation is very simple and fast.

Possibility of installation under the floor made by concrete marble slabs, wood, carpet etc.

All systems on the floor are designed to be regulated by a simple thermostats.

The cost of the installation, its ease of installation and use, the total lack of maintenance, are the strengths of the system.

The system produces no harmful emissions into the atmosphere. Greatest economic benefit if combined with photovoltaic power plant and "Energy Account".

HEATING MATTRESS

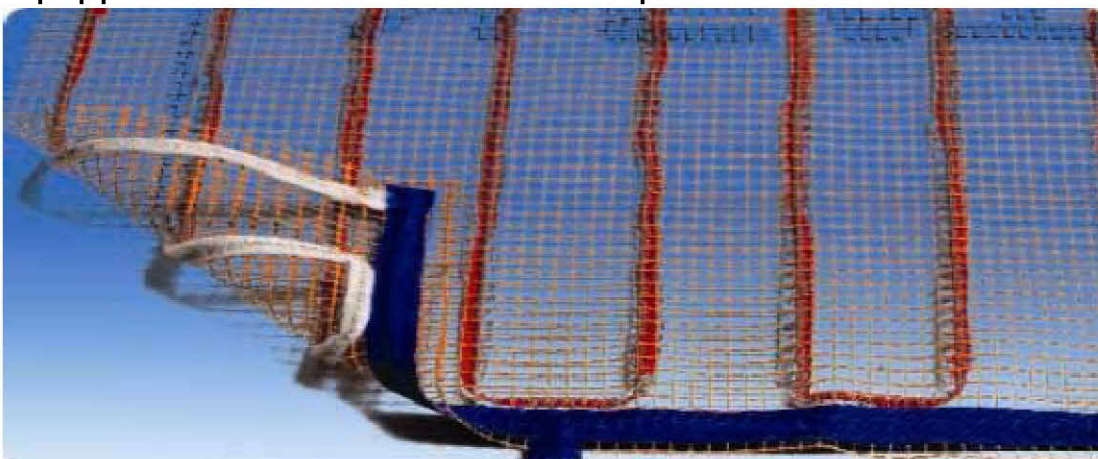
The heating pad allows a uniform spread of heat and all pointing upwards, thanks to its composition of insulating layers, thermo reflective. It can be installed under the slab, which thanks to its thermal inertia, keeping the temperature of the room after turning off the system.



This system is ideal for new construction, also where it is used floor with an high thick layer (eg marble), where it was chosen for environments the installation of a prefinished floor (eg parquet), for those special situations where there is the 'need to maintain the existing floor and covered with a new floor or the need to install a heating system that is not visible (eg religious sites or museums).

HEATING NET

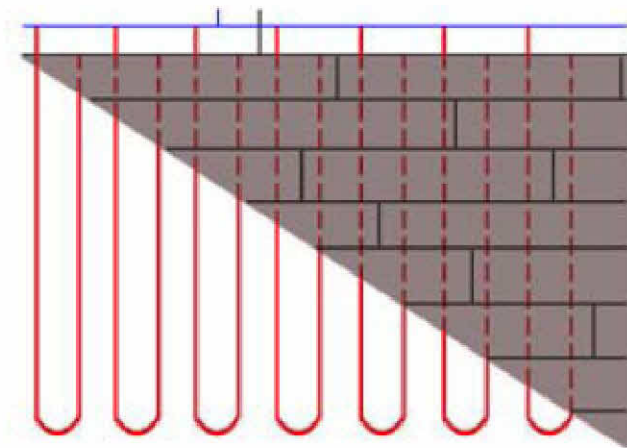
The net consists of heating carbon fiber conductors insulated in accordance with regulations, the glass fiber net as support for the cable, which is equipped with thermal insulation strips to reduce heat loss down.



Ideal for rooms to be heated rapidly and where the operation had to be adjusted dynamically. Thanks to the reduced mass of the system thermal inertia times are significantly reduced, this makes it particularly suitable for environments where heat intermittently (second homes, offices, shops, hotel rooms, etc. ...). The net is placed between the heater substrate (or an existing floor) and the floor. The installation is simple and needs a shave with elastic glue to anchor the network to the screed before laying the floor.

Technical details

Arrangement of Carbon: Resistors, anchored to the network or embedded in the mattress, slide along the surface and are attached to a side pillar. This keeps the system running even in the event of damage by the user.



The consequences are so much less irritating than traditional floor heating systems (eg loss of fluid in the case of water systems).

Power installed

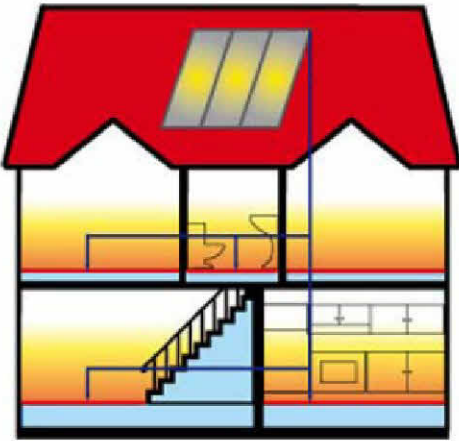
The power that is prepared for a correct use of the system depends on several factors: size of the area to be heated, thermal insulation of the building, type of materials used for construction, display, especially from different climates and different needs.

Must run a specific size and then the power is planned to be used which can vary from 50 to 70 watts per square meter, or may even be increased in case you want a faster response or reduced if the building has low dispersions. In normal applications using a power of 55 watts / m which corresponds, in terms of consumption, about 22 Watts / h m for an average of 14 hours.

Application where yachts must be guaranteed comfort, marble bathrooms example, power can be raised up to 100/150 watts / sqm

The photovoltaic and its integration with electric heating

The photovoltaic system produces electricity cleanly and contributes to safeguarding the environment.



The electronics and thermoregulation

All carbon fiber heating systems are designed to be regulated by thermostats and can be enriched by an electronic control that regulates the power allowing you to customize the use and not to take additional powers which involve the application of increased energy delivered by the managing of resources.

The optional electronic control can manage up to 8 zones and goes to the thermostat that regulates each area (we recommend using a thermostat for each room).

This additional control allows you to limit the energy input and can also be set not to exceed a certain maximum number of watts. So, besides having the advantage of monitoring consumption, can leave more than enough power available for use any other appliances or electrical equipment.

