

Karbonik®



Karbonik is an innovative company that supplies high-quality carbon-based radiant heating systems. We serve the European market from our offices in Rotterdam (sales) and Aachen (R&D).

Karbonik has a showroom at The Innovation Centre for Sustainable Building (in Dutch; **Innovatie Centrum Duurzaam Bouwen = ICDuBo**) (www.icdubo.nl) in Rotterdam where our products are presented. At this location you can experience our underfloor heating films under tiles, laminate and carpet as well as a unique heat emitting wall paint and ceiling mounted infrared panels. The **ICDuBo** is open on weekdays from 9:00 - 17:00. The entrance is free.

Visiting address:

Directiekade 2, 3089 JA Rotterdam

Postal address:

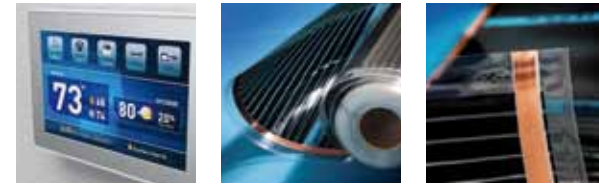
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www.karbonik.nl

Product specifications



Thermostat

By combining a wall mounted thermostat with an underfloor temperature sensor the room temperature can be maintained while limiting the maximum floor temperature. This ensures that every type of flooring can be kept within its individual temperature limits.

Dimensions

Karbonik radiant heating foils are available in widths of 20 to 100 cm and lengths up to 100 m. The heating foil can be cut to the required length with scissors. By laying the individual lanes parallel to each other, every geometry of room surface can be fitted with Karbonik radiant floor heating.

Materials & performance

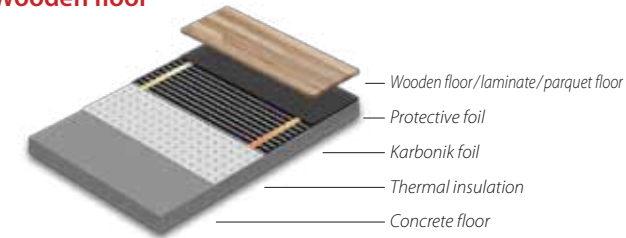
The Karbonik heating foil consists of a Polyester (PET) substrate layer with printed carbon heating stripes. These are contacted with silver coated copper bus bars which are connected to the mains. A second PET layer seals and keeps the entire stack watertight from above. The carbon stripes convert the electric current to infrared heat very efficiently. The Karbonik radiant heating foils can be delivered to customers with performances from 50 to 1000 W/m².

Compatible floor coverings

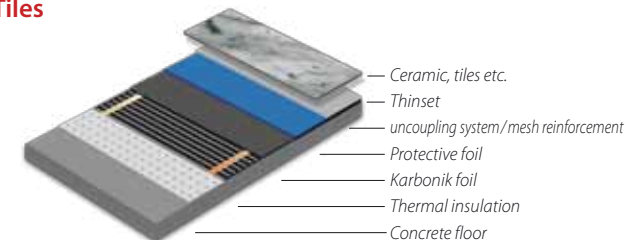
Structure

The radiant heating foil from Karbonik is suitable for all floor coverings. Due to the low profile (<0.5 mm) no door jambs need to be undercut.

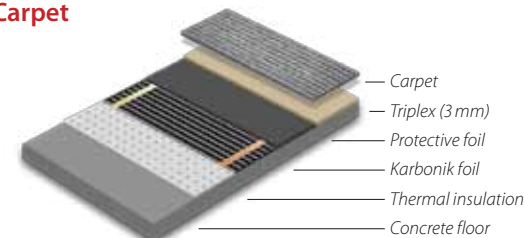
Wooden floor



Tiles



Carpet



Karbonik®



RADIANT FLOOR HEATING



Innovation in thermal engineering

Karbonik®

Radiant floor heating



Karbonik heating foil is an innovative, ultra-thin radiant heat film that is easily installed under any floor covering material. The radiant heat transmitted from the foil will heat all objects & people within the room, but not the air.

Since 2011 our products have proven themselves in numerous buildings. Karbonik foil is exclusively distributed in Europe by Karbonik B.V.

Why more and more people choose Karbonik radiant floor heating:

Comfortable & healthy

Warm feet contribute considerably to overall thermal comfort. By the uniform distribution of the gentle radiant heat, transmitted by the entire surface of the floor, all other surfaces and objects including furniture will be heated subsequently. No dust is circulated by convection. Mold or mildew cannot occur since there is no condensation of humidity on cold surfaces. The number of house dust mites is verifiably lower when using floor heating compared to conventional air convection heaters. The Karbonik radiant floor heating systems are therefore ideally suited for people with allergies or asthma since they improve the indoor air quality.

Simple installation

Generally the Karbonik radiant floor heating foil is simply rolled out on a thermally insulated subfloor and covered with an additional protective foil before the flooring is installed. The electrical mains are then easily connected.

Energy-efficient

During conversion of electricity to thermal heat, there is virtually no energy loss, contrary to central heating systems operating through the combustion of gas or oil – during which 40 % of the heat vanishes by exhaust fumes, heat transfer in piping, radiation and convection. Furthermore, studies have shown, that with the use of a

Karbonik radiant floor heating system, an ambient room temperature of 19 °C is considered just as comfortable as the same room heated to 21 °C by traditional convection heaters. This reduction in ambient temperature results in an extra energy saving of 12 %.

More flexible layout of living space

No central furnace or boiler, piping, radiators or convector heaters are necessary for using Karbonik radiant floor heating. You save space and gain flexibility in designing your living space. The Karbonik radiant heating foil is thinner than 0.5 mm and lays directly underneath the floor covering.

Environmentally friendly

The Karbonik radiant floor heating foil is 100 % recyclable and produced in accordance to the EN ISO 14001 norm. You can reduce your personal CO₂ footprint considerably by using renewable energy, such as solar cell modules, in combination with Karbonik radiant floor heating systems.

Durable & safe

The Karbonik radiant floor heating foil is 100 % maintenance-free and extremely durable. The electric heating foil complies with the stringent fire safety test standards EN IEC 60695-2-12 & EN IEC 60695-2-13 and is resilient against industrial and domestic cleansers. We offer a 10 year limited warranty on our heating foil.

Comparison between electric radiant heating & conventional systems:

+ Less energy consumption

Karbonik consumes considerably less energy to achieve the desired comfort than traditional heating.

+ Durable & environmentally friendly

Karbonik radiant heating foil is electric and thus more durable and more economical than traditional hydronic based heating systems.

+ Fast & even heating

The Karbonik radiant heating foil provides even heat distribution across the entire floor surface. The room feels warm very quickly due to the direct contact of the heating film with the flooring. Depending on the type of floor construction, the floor can heat up within 15-20 minutes instead of several hours.

+ Silent & maintenance free

The Karbonik heating foil produces no noise and needs no maintenance.

+ Faster & easier to install

Without the need for architectural adjustments, the installation is faster and more economical.

+ No water damage possible

Compared to hydronic systems, electricity is used instead of water. No water damage can occur.

+ Easy to zone with remote control

The Karbonik radiant heating foil is easy to zone, meaning that it is easy to heat one portion of the living space but yet keep a zone, that is not occupied as much, at a cooler level. Furthermore, the Karbonik heating foil is easily programmed via a thermostat or, if desired, remotely through a remote controlled system, i.e., using a smartphone.

+ Tailored heat according to requirements

The heat transmission is adjusted to the requirements of the customer, taking into account the local conditions and flooring materials.

+ Very low volume

Due to its low height of <0,5 mm, Karbonik will fit in any application. However, the volume of a recommended thermal insulation might need to be taken into consideration.

