



Carbontec® A Smarter Way To Heat Your Home

Infrared heating is a comparatively new type of heating, which operates by heating the ceilings, floors, subjects, and objects in the room by a stream of infrared radiant energy.

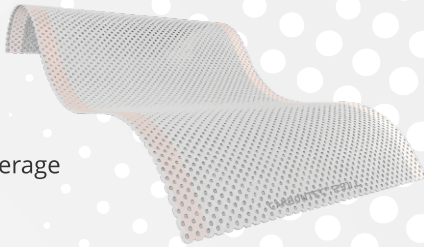
- Our Carbontec® heating system is **compatible with every type of living space or commercial space**, such as apartments, condos, houses, hotel resorts, warehouses, and offices.
- The main advantage of your new Carbontec® system is its **discreet installation design and its space saving potential**. Carbontec® can be installed onto ceilings or floors along with almost all types of construction material, such as wallpaper, paint, plaster, laminate, ceramic tile, linoleum and more.
- The Carbontec® heating system operates at **low voltage through a 24 Volt** step down transformer. UL-Listed thermostats can be used to program your Carbontec® heating system to maximize efficiency. **The warranty for our Carbontec® heating material is 25 years.**

Carbontec® is easy to install and completely hidden from view. Designed to quickly and effectively provide comfortable warmth

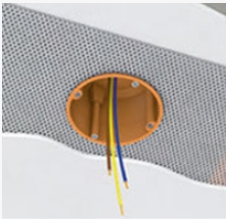
Carbontec® evenly distributes infrared heat throughout your home or office without taking up and space! Carbontec® can be installed under floor coverings, and Carbontec® is the only radiant heat product on the market UL-Listed for ceiling applications.

What is Carbontec®?

- Carbontec® is a UL-listed technology that heats space with radiant energy using a carbon fiber polymer film which is only a mere 0.21 millimeters thick!
- Carbontec® heating systems operate at 98% electrical efficiency and may only require 20%-25% of space coverage depending on your insulation.
- The Carbontec® system was designed to replace inefficient and outdated conventional heating systems at a fraction of the operating and installation cost.



Where can Carbontec® be used?



Heating Ceilings with Carbontec®

The Carbontec® heating film provides the most effective way of distributing heat when it is applied to a ceiling area. Since our Carbontec® heating material is only 0.21 mm thick, your new heating system can be easily applied covered up by paint or ceiling plaster. The subsequent addition of gaps and openings in the Carbontec® heating film is easily possible without the heating function being impaired.



Heating Floors with Carbontec®

The Carbontec® heating film can be combined with almost all surfaces. Subsequent drilling on the Carbontec® heating film surface has no adverse effect on its functionality. This example shows a floating installation under a laminate hardwood.


How does Carbontec® work?

There are only a few components of the Carbontec® system, that distinguishes it from traditional heating systems which makes it very easy to install and operate.



- Two clips connected at either end of the polymer film are attached to copper strips running along the film's edges.
- These strips are connected to a hidden transformer, which reduces the 110-volt incoming voltage down to 24 volts.
- The transformer is then connected to a controller or programmable thermostat, allowing the user to regulate temperature for maximum efficiency.

Product Comparison

	Warm Floor	Low Dust	Compact	No O&M	Efficiency	Easy Install	Green
 Carbontec®	✓	✓	✓	✓	98%	✓	✓
ELECTRIC UNDER FLOOR HEATING	✓	✗	✗	✗	50-60%	✗	✗
WATER UNDER FLOOR HEATING	✓	✗	✗	✗	72%	✗	✗
FORCED AIR CENTRAL HEATING	✗	✗	✗	✗	<30%	✗	✗

Solar like heating in your home

What is Infrared heat?

Infrared heat is a form of electromagnetic radiation that sits just beyond the red end of the visible light range of the electromagnetic spectrum.

- Just like visible light radiation, infrared radiation is 100% safe and even our own bodies emit infrared radiation.
- Infrared heat is the main reason why we feel warm when the sun is shining in the middle of a cold day.
- Heat energy can be transmitted through electromagnetic waves; the same way the sun heats our planet 93 million miles away.
- Our bodies and objects in our home or business absorb these waves, thus creating a warm perception and sensation of our environment.

Carbontec® Heating

- Infrared radiant heating works by transforming electricity into infrared heat energy, which is beamed at solid surfaces such as ceilings or the floor, to warm the room.
- Radiant energy heats objects within your home or business; objects that have a thermal capacity, which allows the room to stay warmer longer.
- Infrared radiant heating is more effective to retain heat and help keep a home or business cozy.
- While using radiant heating the warm feeling will not immediately disappear even with open windows because Carbontec® heats solid surfaces directly.

Conduction, Convection and Radiation

Carbontec® provides infrared heat by 3 methods

- Carbontec® transfers heat by **conduction** because of the physical contact the material has with either your ceiling drywall or your floor covering.
- Carbontec® transfers heat by **convection** because of the layer of air closest to the surface of the material will rise in temperature.
- Carbontec® transfers heat by **radiation** because of the infrared heat emitted from the material that heats up the walls, floors, ceilings, object, and people in the room.

The Electromagnetic Spectrum

The electromagnetic (EM) spectrum is the range of all types of EM radiation. Radiation is energy that travels and spreads out as it goes – the visible light that comes from a lamp in your house and the radio waves that come from a radio station are two types of electromagnetic radiation. The other types of EM radiation that make up the electromagnetic spectrum are microwaves, infrared light, ultraviolet light, X-rays and gamma-rays.

