



A Smarter Way To Heat Your Home

## Ceiling Installation Overview



### **The Ideal Partner**

in new construction and renovations  
for efficient space heating



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# Ceiling Installation Overview

## Prepare the substrate with an adhesive bed

The ceiling surface must be smooth and free of any type of ceiling finishes. Ceiling surface area must be stable, dry and free of dust. Apply suitable adhesive (ceiling plaster, or joint compound) with a spatula or, as shown here with a spray gun. Ensure that you apply a uniform layer of adhesive for the Carbontec heat film.



## Unroll Carbontec heat film onto bed of adhesive

Apply the Carbontec heat film onto the ceiling surface allowing the end with the splice connectors to be connected by an electrician in a later step of the installation process. Due to the very low surface weight and very good tackiness of the Carbontec material, applying heat film to the ceiling can be achieved by one person.



## Press the Carbontec heat film into the adhesive bed

To ensure that the heating film adheres to the ceiling it must be pressed evenly with a suitable non-sharp-edged trowel. Kinks, tears, and/or wrinkles should be avoided. The adhesive bed will penetrate through the heat film, which is evenly distributed on the ceiling surface so that the heat film is completely absorbed by the adhesive and forms a good bond. A cover or finishing layer is to be applied later. The end of the material that has the splice connectors must remain accessible for electrical connection.





# Ease of Installation



## Electrical connection

The Carbontec material will now be connected to a 24-volt step-down transformer via crimped splice connectors and 10 AWG wiring. The splice connectors are then wrapped in vinyl electrical tape in order to avoid contact corrosion. Pass through holes are made for heater wire and then connected to the transformer which is mounted in a discreet location (i.e. closet, crawlspace or attic).

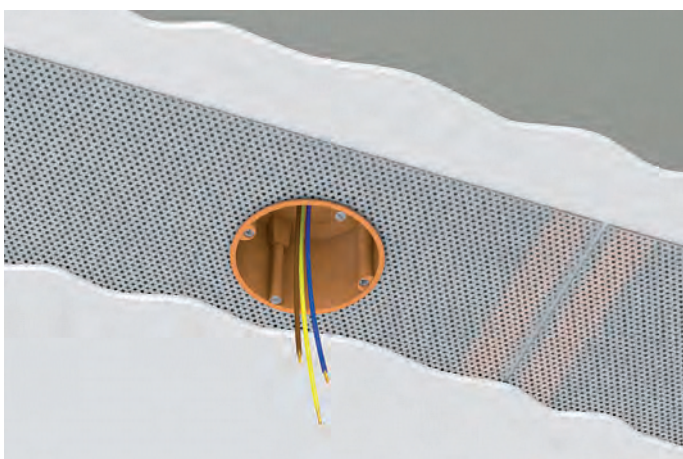


## Fine puttying and plastering

Depending on the surface requirements and design, the ceiling must be provided with the appropriate cover layer. After each plastering layer, the corresponding drying time is necessary.

## Sanding, painting and wallpapering

Finally, the surface can be finished with a surface grinder or by hand with sandpaper to the desired surface finish (texturing finish, paint or wallpapering).

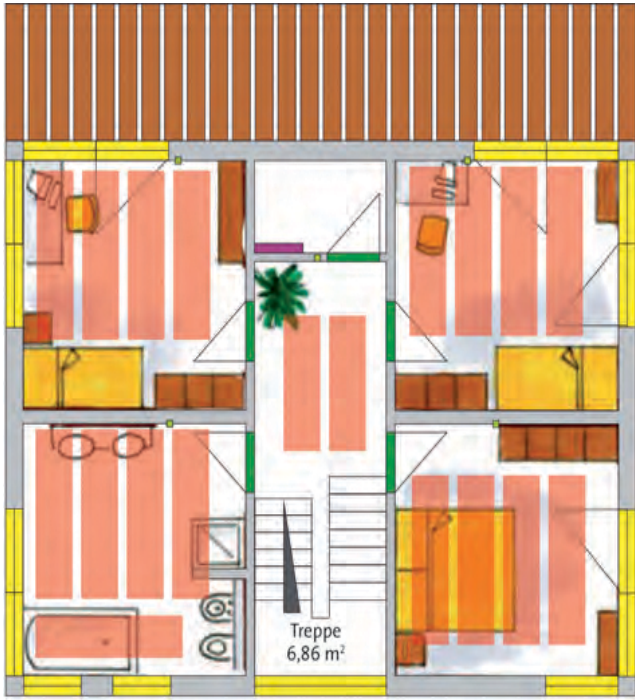


## Subsequent insertion of holes, e.g. for lighting, outlets, or ceiling fans

If subsequent installations within the Carbontec heating surfaces on the ceilings, e.g. as for lighting, sockets, etc. are necessary, they can be introduced later and will not affect the thermal performance of the heater film. The laterally extending copper strips must not be damaged. To locate the copper strips, refer to your pre-installation plan to locate the copper strips or a simple wiring detector or wall stud finder device can be used.

***This booklet does not replace the installation instruction supplied with each system.***

# Carbontec systems are customized according to individual specifications



**Your Consulting  
and Sales Partner**

The pre-installation phase of the Carbontec heat film must be understood and be used as the basis for installation, however, all projects must be adapted and if necessary optimized on site. This includes adjusting heater lengths, heater placement, heater wire lengths, and/or transformer mounting location. The specifications of the operating and installation instructions for Carbontec are exactly the same. Heater wire supply length is carefully considered to ensure that the potential voltage drop does not exceed 3%.



**Your individual calculation and planning for heater placement.**

Each building/space has its own special requirements, due to the design, the room layout, the microclimatic outdoor conditions and last but not least the wishes of the clients. In accordance with these basic parameters and framework conditions, each building/space is precisely calculated so that optimal heat distribution is achieved.



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