







# COURAGE TO RETHINK



## >> THE CLIMATE HAS BECOME A CENTRAL ISSUE OF HEATING

Highly efficient and quicker adjustable surface heating systems do not only save energy, but also save the environment, since climate has become a central issue of heating. More and more new technologies and application

areas are being developed for which electricity provides the necessary energy.

Now with the **E-NERGY CARBON** system, electric heating has become an efficient and low-cost option!

#### >> ECONOMIC EFFICIENCY

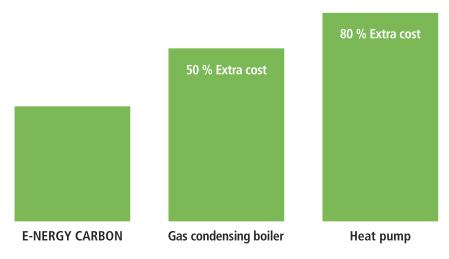
## Future-oriented electric surface heating for new buildings and renovations

Comfortable warmth from ceiling creates a healthy room climate.

E-NERGY CARBON surface heating systems are very energy-efficient and sustainable due to low costs investment and usage. Our system

works on protective low voltage in the heating foil, which is easily controlled through adjustable room thermostats as well as modern Smart Home technology. Combined with regenerative energies like solar power, homeowners save heating costs and the environment. A sustainable alternative to heating systems with fossil fuels.

#### Comparison of investments in heating systems over the course of 20 years\*



\* Example of a single-family house, 2-storey new building with 150 m<sup>2</sup> living space (Efficiency house 55 according to EnEV 2009).

## >> TESTED QUALITY

## » QUALITY & SAFETY

- ✓ Patented production process
- ✓ Homogeneous instead of laminar structure
- ✓ Durable & safe



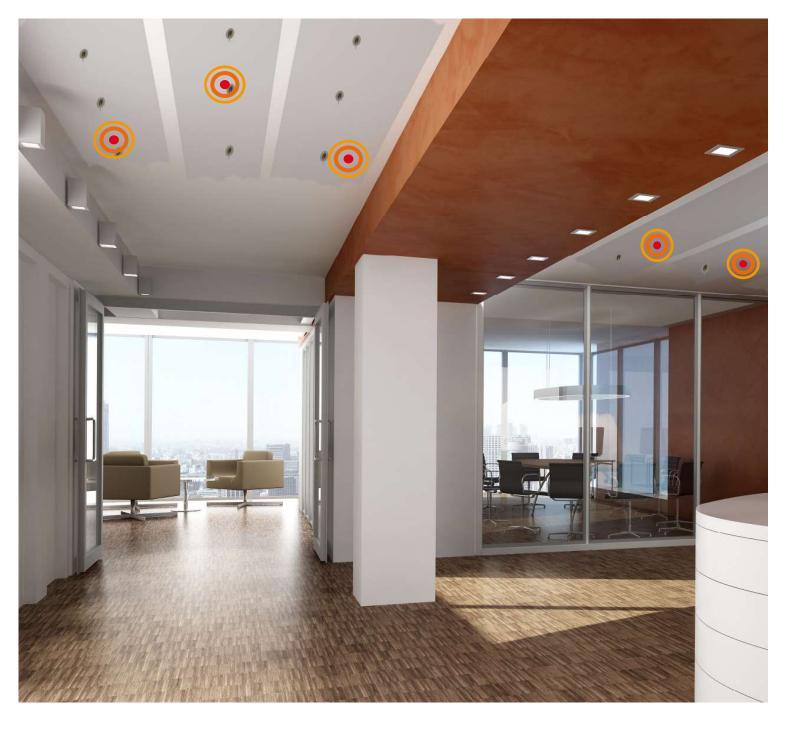












## NEW POSSIBILITIES FOR YOUR CREATIONS

Use the opportunity of creating totally different room concepts – without considering radiators and convectors.

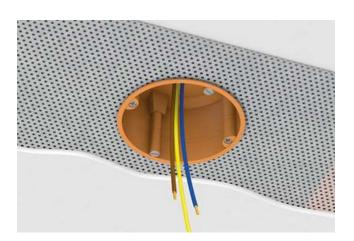
**Create your living space on your own**. Our heating foils enable you to create rooms without wasting space.

Even small rooms can be enlarged when radiators are substitute with **E-NERGY CARBON**.

This is not only an visual improvement, but also contributes to comfort in new buildings as well as renovations.

## » ADVANTAGES AT A GLANCE

- ✓ Low energy, offering significant fuel savings over conventional electric heating
- ✓ Reduced carbon emissions
- ✓ Skimmed under the final plaster coat
- ✓ Invisible as it's hidden in the ceiling
- ✓ Low investment costs and easy installation
- Effective protection against damp spots and mould growth
- ✓ Resistent to damage
- ✓ Safe, low voltage
- ✓ Fast warm up
- ✓ Controllable via apps
- 10 year warranty



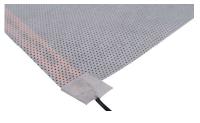


Fitted into the ceiling's surface, the material guarantees an excellent, equal distribution of warmth. After plastering the ceiling can be painted or wall-papered / decorated.

Simply cut up to 70mm for the fitting of lights, smoke alarms, speakers etc. with no problem



## >> E-NERGY CARBON FLEECE



**E-NERGY CARBON FLEECE** is a diffusion-open, fleece. Due to its perforation it is optimal for plaster systems on the ceiling.



Material

Data

Danie wasterial	PET film with carbon fibres and fillers
Basic material	PET film with carbon fibres and fillers
Mains voltage	230 V AC
Power	110 W/m² (E-NERGY 36-110) 220 W/m² (E-NERGY 36-220)
Output per running metre	65 W/lfm (E-NERGY 36-110) 130 W/lfm (E-NERGY 36-220)
Secondary voltage	36 V
Protective measure	FI protection circuit 30 mA
Max. permissible ambient temperature	+70 °C
Minimum processing temperature	+5 °C
Minimum bending radius	R10 mm
Dimension	36-110: width 59 cm, length 2   3   4 m 36-220: width 59 cm, length 1.5   3 m

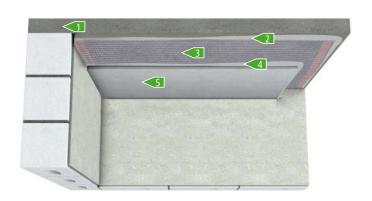
#### Construction ceiling

#### E-NERGY CARBON FLEECE

- 1 Bare ceiling
- 2 Plaster
- 3 E-NERGY CARBON FLEECE
- 4 Plaster
- 5 Drywall panel

1 mm 0.4 mm 1 mm

3 mm



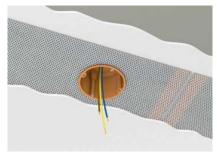
## >> INSTALLATION













## » ADVANTAGES AT A GLANCE

- Non-woven laminated and adhesion-optimised through perforation
- Optimized for plaster systems and fillers
- High heat conduction and rapid heat-up

## CONTROLLER





### >> E-NERGY ROOM THERMOSTAT





Neat, digital and easy-to-use. The **E-NERGY CARBON** room thermostat provides energy-saving: Fast heating when it is cold and instant shut down when the desired warmth has been reached.

- Comfort through sensors for optimal well-being
- Recognition of open windows prohibits high energy costs
- Energy saving modus for simple night usage

Data

Voltage	100-240 V
Max. Backup	16 A
Colour	pure white
Output	max. 16 A
Terminal cross section	1.5-2.5 mm <sup>2</sup>
Standby-Power input	0.4 W
Degree of protection of enclosure	IP21
Size	H/ 82, B/ 82, T/ 40 mm
Display	176x220 Pixel TFT – Touch
Switch frame	enclosed   optionally suitable for common switch frames 55x55
App operation (WiFi only)   WiFi	iOS oder Android   IEEE 802.11 b/g/n - 2.4 GHz

## CONNECTION



Diagram shows wall installation for ease of explanation - in fact the product is installed into the ceilings

## >> E-NERGY WIRING DIAGRAM





The installation is completely safe because of the **E-NERGY CARBON** transformer with safety extra-low voltage (SELV). The internal surveillance of temperature is part of the system as well as the application of a floor sensor and a wireless chip for using a wireless controller.

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Input voltage	230 V +/- 10% AC, 50/60 Hz
Output	400 W to 2,000 W (400 W steps)
Minimum requirement	Circuit breaker 16 A C / Fuse 16 A slow blow
Degree of protection	IP 00
Output voltage per heating circuit	36 V AC
Further connections	Room thermostat, floor sensor, Antenna, Master/Slave
Attachment	Mounting in wall box with mounting plate   Control cabinet mounting
Maximum ambient temperature	60 °C
Dimensions (L x W x H)	246 x 265 x 86 mm (with 1,200 W) 246 x 265 x 87 mm (with 1,600 W) 246 x 265 x 87 mm (with 2,000 W) 182 x 212 x 52 mm (with 400 W) 246 x 265 x 76 mm (with 800 W)

## **Technology improves many things**

For your wallet. For your comfort. For the environment. For the climate.

It is not laws that prohibit waste of energy, but your responsibility. New technologies help you realise it. Modern E Energy heating can be used in renovations as well as in new buildings. They can not be beaten for fast installation, low energy consumption and speed of reaction.

Improve your old building, make it more beautiful and usable and save energy costs decades to come . Save money on your heating and make your contribution to reducing the impact on Climate Change.

Authorised distributor:









