

E-ENERGY CARBON

Comfortable warmth at the touch of a button
Innovative heating foils for ceiling, wall & floor



E-ENERGY CARBON

Electric surface heating for ceiling, wall & floor

- ✓ Fast reaction time and great coverage
- ✓ Low investment, installation and consumption costs
- ✓ Low installation thickness – Retrofitting also in inhabited properties
- ✓ Flexible installation on ceiling, wall & in the floor, even behind plasterboard
- ✓ Subsequent installations e.g. down lights in the heating surface are possible
- ✓ 50 years+ Design Life
- ✓ Fit and forget
- ✓ Best embodied carbon levels in its class



Full heating
in the family home



Comfort heating
in bathroom renovation

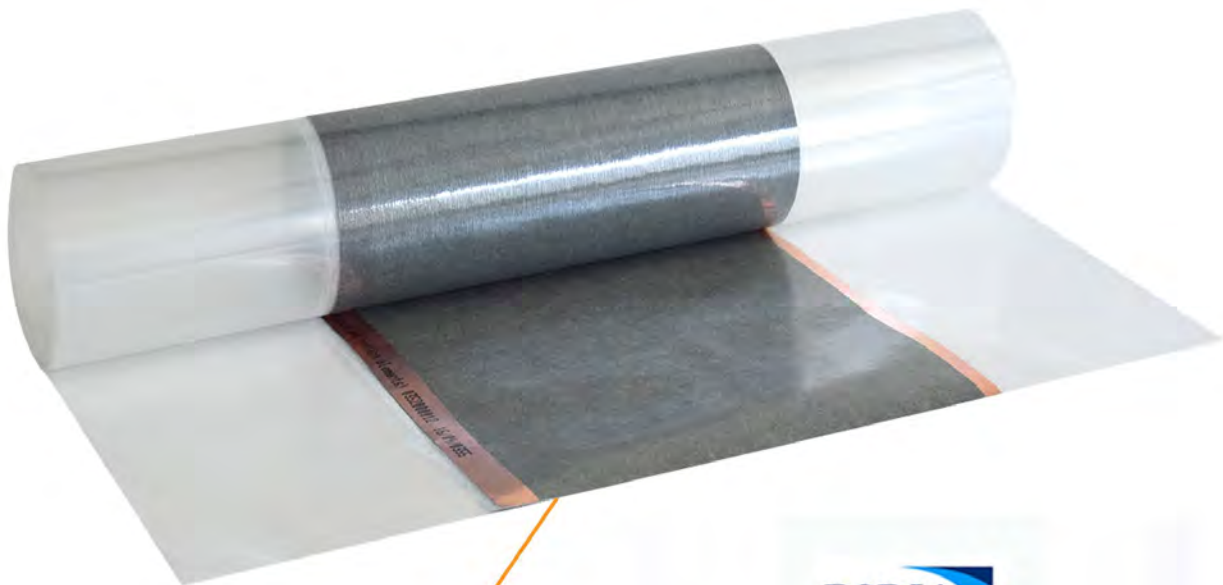


Moisture protection
at the studio

DRYTEC

Comfortable warmth at the touch of a button
Innovative heating Drytec foils for all types of
ceiling & walls

e:nergycarbon
Efficient low carbon heating systems



Tapes or staples neatly and quickly between the
ceiling joists behind the plasterboard



- ✓ **Tested and proven**
Fast reaction time
- ✓ **Tested and proven**
50% ceiling coverage
gives 100% heating coverage.
True MRT
- ✓ **Tested and proven**
Warms occupants,
surfaces and objects up
to 3.5m from ceiling
- ✓ **Tested and proven**
High speed 1st fix installation
by one trade/electrician
- ✓ **Tested and proven**
Safe, low surface temperature,
no damage to any other building
products



E-ENERGY CARBON - CASE STUDY

Electric ceiling heating as a modern new building concept in a low-energy house



» FULL HEATING

Comfortable warmth at the push of a button with E-ENERGY CARBON - the perfect heating system. There are no maintenance costs for this heating systems.

E-ENERGY CARBON makes heating with electricity a sensible alternative - ecological and economical! Plus With E-ENERGY CARBON you don't need a boiler room and you gain additional living space.

» QUALITY

Made
in
Germany



BDH
Bundesverband der
Deutschen Heizungsindustrie



» PLANT CONCEPT ACCORDING TO EnEV

» FACTS

Together with the TU Dresden, the plant concept was developed according to EnEV specs– **E-ENERGY CARBON** is 100% compliant with the standard.



	VARIANT A	VARIANT B
Plant engineering	Surface heating E-ENERGY CARBON + instantaneous water heater + Controlled ventilation of living space + PV system	Surface heating E-ENERGY CARBON + Domestic hot water heat pump + Controlled ventilation of living space + PV system
	EnEV energy saving regulation	EnEV energy saving regulation
KfW Efficiency House 55	●	●
KfW Efficiency House 40	●	●
KfW Efficiency House 40 plus	●	●

- ✓ 15 years application experience
- ✓ Comprehensive system warranty
- ✓ Future-proof, maintenance-free technology
- ✓ Boiler room becomes living space
- ✓ Patented production process
- ✓ 50+ Years Design Life

Further information:
www.energy-heating.com



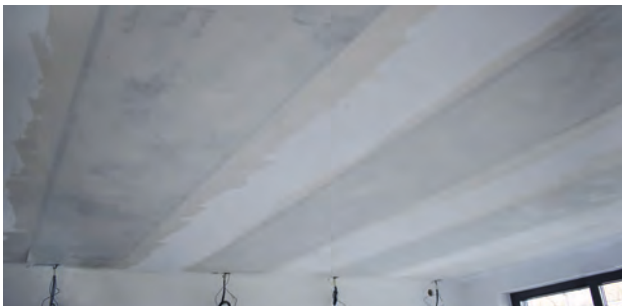
» HEATING FOIL E-ENERGY CARBON –Monthly energy costs under £35 in a single family house

"You don't heat with electricity" and "you don't heat on the ceiling". This was before the heat demand of the buildings was reduced and electricity could be produced regeneratively. In 2017 this was put to the test. The electrical heating foil **E-ENERGY CARBON** was installed invisibly as ceiling heating in a KfW 55 house. Heat generation, heat transfer, heat control, all in one product.

In the new building with 140 m² living space the 0.4 mm thin 36 Volt carbon heating foil was installed. Thanks to the patented production process, **E-ENERGY CARBON** is insensitive to damage. Holes can be drilled, spots and sockets inserted or screws fastened, even retrospectively. A flat perforation and an adhesion-optimising fleece lamination ensure a secure connection to the substrate on the ceiling, as the filler can press through the perforation during installation. The same principle is used for installation on walls, floors or roof slopes on the upper floor.

The ceiling heating system had an occupancy rate of 50% (70 m² active heating surface for 140 m² living space) and this is sufficient to generate a comfortable radiant heat that also pleasantly warms the floor. The installation close to the surface ensures rapid heating and efficient operation. The complete installation in the project has an output of 4.53 kW. The EnEV-compliant system technology was supplemented by a photovoltaic system and a central ventilation system with heat recovery. Electric instantaneous water heaters were installed for hot water preparation.

The annual energy costs of the 4 person household are impressive. Less than £35 / month (UK equiv) for heating, hot water and auxiliary energy. **E-ENERGY CARBON** provides an innovative and cost-effective heating solution for the 21st century. Low operating costs, low investment costs and no ongoing follow-up costs due to the maintenance-free system technology. Modern buildings need modern technology.



» CONSTRUCTION STRUCTURE CEILING

- | | |
|----------------------------|--------|
| 1 Ceiling covering | |
| 2 Plaster system min. 2 mm | 2 mm |
| 3 E-ENERGY CARBON FLEECE | 0.4 mm |
| 4 Plaster | 2 mm |
| 5 Paint | |
- 5 mm



AT A GLANCE

I.R



v

A.S.H.P



- ✓ Fastest Reaction time
- ✓ Zero Maintenance
- ✓ Future proof
- ✓ Low cost install
- ✓ Silent
- ✓ Electrical cupboard
- ✗ Separate hot water
- ✓ Ceiling, wall, floor
- ✓ Wind or Solar
- ✗ No RHI
- ✓ Safe for environment
- ✓ No Water
- ✓ Cost of install is £4k-£8k
- ✓ Energy efficient
- ✓ Will fit to any future controller
- ✓ Improved Air quality
- ✓ Clean wall space
- ✓ No need for specialist trades
- ✓ Embodied Carbon of just 10kgs of CO₂ for a 3 bed house

- ✓ 1x Unit = 3 x Units
- ✗ Yearly Maintenance
- ✗ Connected to old style system
- ✗ High install cost
- ✗ Collective noise element
- ✗ Outdoor siting
- ✓ Can be used for hot water
- ✗ Ideally under floor install
- ✓ Wind or solar
- ✗ RHI Will end
- ✗ Refrigerant
- ✗ Potential water Leaks
- ✗ Cost of install £8-18K
- ✓ Energy efficient
- ✗ Over heating
- ✗ Air quality issues
- ✗ Over sized radiators
- ✗ Shortage of trained engineers
- ✗ Embodied Carbon of 1,563kgs of CO₂ for a 3 bed house



Benefits of Far Infrared heating

- ✓ I.R has the fastest reaction time of all heat sources
- ✓ No heating empty rooms
- ✓ Fastest time to comfort warmth in room
- ✓ Instant switch off to avoid overheating
- ✓ No transferring heat from heat source to each room
- ✓ Heat objects in room not the air to reduce heat loss through air ventilation
- ✓ Reduction in thermostat by up to 2°C to achieve 21° C comfort level results in 12% energy saving
- ✓ No runaway costs each zone has a set amount of controllable energy
- ✓ Easy to install
- ✓ No specially trained engineers
- ✓ Fit and forget
- ✓ No maintenance
- ✓ Any failure only effects one zone not complete heating system
- ✓ Improved air quality
- ✓ Reduced room to room heat transfer
- ✓ Solar and wind compatible
- ✓ Low carbon foot print
- ✓ In line with 'the future homes standard'
- ✓ Planet saving Whole Life Carbon (WLC) level



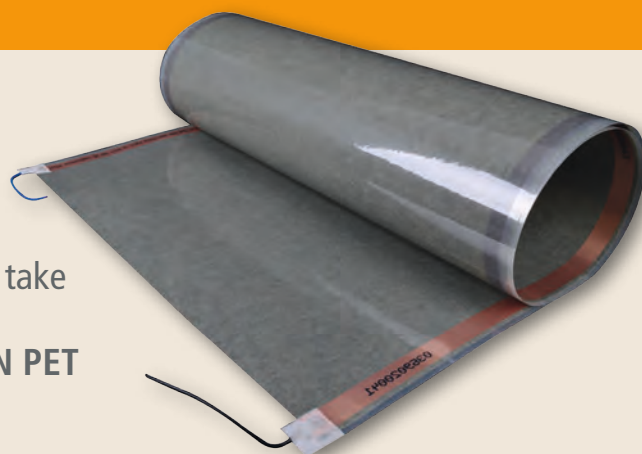


Reliability
optimized through
perforation –
E-ENERGY CARBON FLEECE

**ULTRA-THIN.
ONE OF A KIND.
PATENTED.**



Installation video
**E-ENERGY
CARBON**



For under the floor take
a look at our –
E-ENERGY CARBON PET

Energy Carbon Ltd

Kemp House,
152 - 160 City Road,
London EC1V 2NX

Tel+44203 507 1659

hello@energycarbon.co.uk

