

HEALTHY WARMTH FOR YOUR HOME

Healthy room atmosphere with a feel-good guarantee





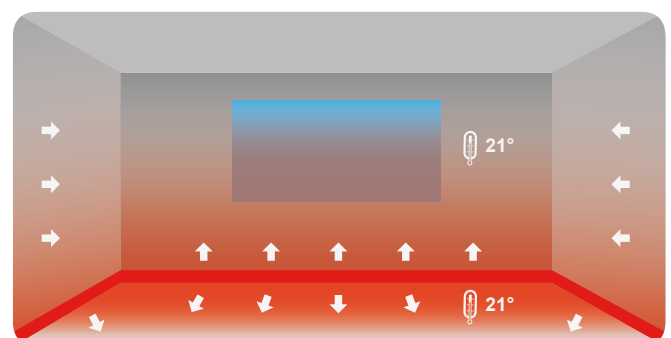
The most natural and comfortable warmth known to humans: Radiant heat is considered soothing and beneficial for health. Long-wave radiation passes through the air without heating it. It only turns into heat when it encounters a solid object (matter) and warms it – this type of energy transfer adheres to the principles of quantum physics.

The room air is only secondarily heated by the bodies warmed by radiation. The radiant heat from the skirting heaters not only ensures a pleasant room climate but also avoids disturbing air circulation and dust swirling, unlike radiators/convection heaters. Energy-com skirting heaters provide this benefit, ensuring a cleaner and more comfortable environment.

The Energy-com skirting heaters generate a heat curtain along the wall, causing the wall

itself to become a source of radiation that evenly spreads warmth throughout the room.

The warmed and thus dry walls prevent thermal bridges and mold growth, creating an ideal climate for dust allergy sufferers. But not just for them: **Everyone feels more comfortable here.**



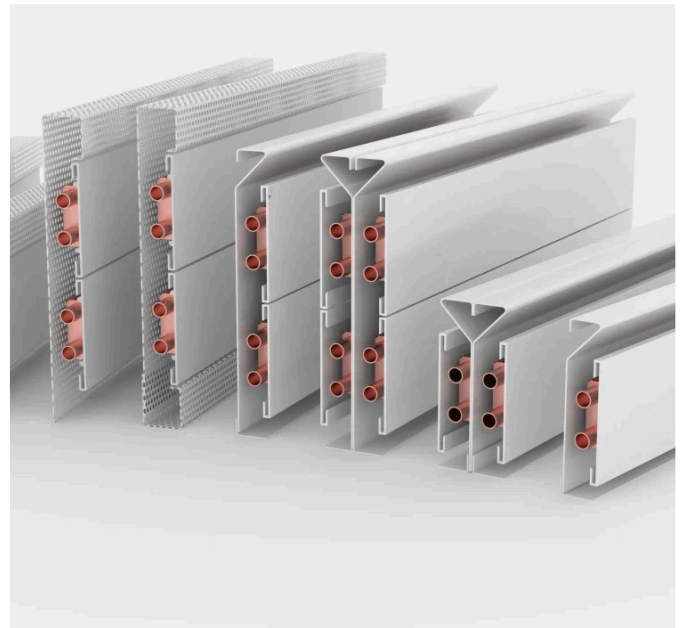
Warm walls radiate an even warmth throughout the room

ENERGY-COM INNOVATION IN CLIMATE TECHNOLOGY

The skirting heater system from Energy-com was developed over 15 years ago in Cloppenburg. Currently, several systems are in use across Europe, from regular houses to churches, museums, castles, office buildings, sports halls, Kindergartens, schools, wellness and pool areas.

References for Energy-com products include basement renovations, old building renovations, private properties, museums, castles, youth centers, town halls, observatories, restaurants, churches, listed buildings, and villas.

When heating residential and commercial spaces, Energy-com products offer numerous advantages over conventional heating systems and excel in new constructions, renovations, and refurbishments.



Comparison of heating systems	Radiator Convection heater	ENERGY-COM Skirting heater	Underfloor heating
Living comfort	High air and dust movement due to high convection	No air and dust movement due to very low convection	Air and dust movement due to moderate convection
Temperature distribution	Cool below, warm above	Even temperature distribution from floor to ceiling	Very warm floor, heat cushion under the ceiling
Risk of mold	High, as thermal bridges can form	None, as the walls are always warmer than the room air, preventing thermal bridges	Possible, as the walls are cooler than the room air
Reaktionsfähigkeit	Fast	Very fast	Very slow
Responsiveness	High, large radiators under the window must not be obstructed	Low, skirting heaters can be installed as baseboards that match the interior in form and color	Moderate, floor must be completely relaid, locations for large furniture should be determined before
Initial investment	Inexpensive to expensive, depending on the system and control technology	Normal to slightly more expensive depending on the type (water or electric)	Mid-range for new construction, expensive for retrofitting
Operating costs	Varies depending on the system, but always higher than underfloor heating and skirting heaters	Low operating costs (compared to all other heating systems)	More expensive than skirting heaters and less than regular radiators
Maintanance / Subsequent costs	Regular service and maintenance required, easy repair in case of damage	No service and maintenance required, easy repair in case of damage	Needs regular maintenance, major repairs if damaged

Energy-com skirting heaters are offered in two variants: electric heating system or water heating system. In both cases, the skirting heater is identical.

ELECTRICAL SKIRTING BOARD

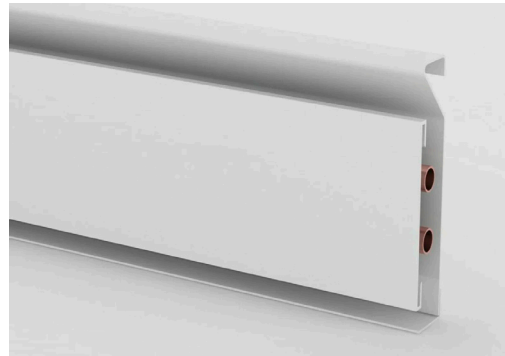
In the electric heating system from Energy-com, a heating rod is inserted into the skirting heater and heated with electricity (230 V).



WATER-FED SKIRTING BOARD

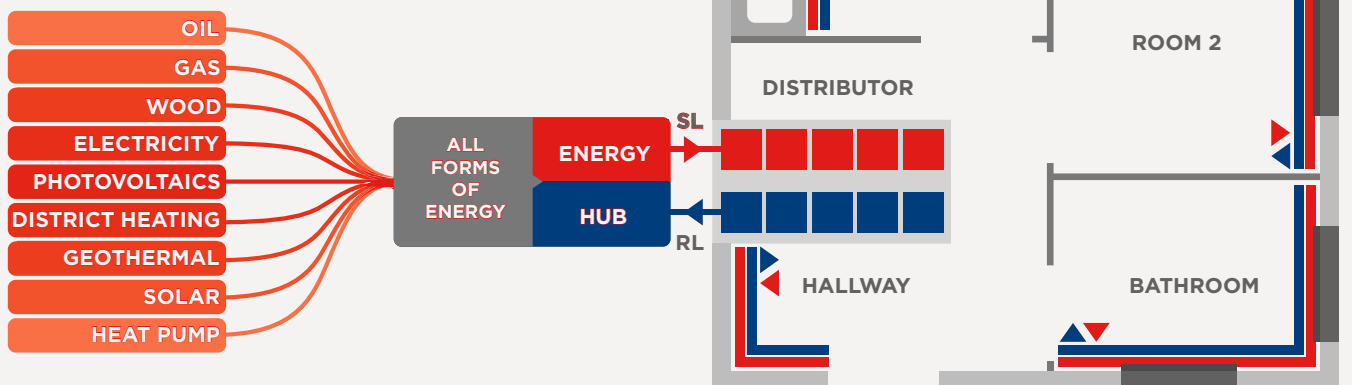
In this installation, water at a temperature of 40 to 60 °C (depending on the water heating system) is circulated through the copper pipes of the skirting heater.

In both heating systems, the generated heat is transferred to the copper pipe, the fins, and the entire skirting heater.



The installation of water-based skirting heaters is very simple and can be connected to any energy source for water heating. The distribution is based on the heating circuit distributor with supply and return (2-10 circuits per distributor possible). Each room can be regulated separately and quickly according to the desired temperature. The temperature differential between the supply (SL) and return lines (RL), known as the spread, is minimal at just 2°C.

Only 8 liters of water are needed for 1,076 sq ft, unlike underfloor heating or radiators.



Installation example

Comparing Radiant Heating Systems

PERFORMANCE DATA OF **ENERGY-COM** SKIRTING HEATERS: UNMATCHED TO DATE

The efficiency of radiant heating systems can differ greatly, as this broad term encompasses a variety of systems. These include electrically heated marble, granite, mirror, glass panels, heating foils, mats, skirting heaters, or water-based systems installed in the floor, wall, or ceiling. In all these radiant heating systems, the surface is heated, which then emits long-wave infrared radiation (similar to the sun) to objects and bodies in the vicinity. This method does not directly heat the air.

Distinction of Radiant Heaters

Electrical systems:

- Marble, granite, ceramic, or other stone slabs
- Mirrors and glass surfaces
- Heating foils and mats
- Skirting heaters e.g. Energy-com

Water-fed systems:

- Piping in floor, wall, and/or ceiling
- Skirting heaters e.g. Energy-com

Some systems can have surfaces that reach up to 110°C, which is not without danger. Large surfaces naturally create convection, as the hot surfaces heat the air, causing it to rise and create unwanted air and dust turbulence. Every radiant or infrared heater has some degree of convection. The ratio of radiation to convection is an essential characteristic for quality, efficiency, and a healthy indoor climate.

Differences in the Proportion of Radiation and Convection

With a lighter or match, you can easily determine how much convection a heater has: Hold the flame near the top of a radiant heater – the more it flickers, the more air movement and convection there is.

Efficiency Variations

More and more manufacturers are recognizing that skirting board heating is particularly effective and evenly distributes radiant heat into rooms, especially on exterior wall surfaces. Radiant heaters like marble panels, glass surfaces, or mirrors radiate more pointwise. The various skirting heaters from other manufacturers differ in material alloys, installation details, performance data, and references. Since Energy-com skirting heaters were introduced 15 years ago, there have been many imitators. However, the performance data of Energy-com skirting heaters remain unique and unmatched worldwide.

Advantages of **ENERGY-COM skirting heaters:**

- Maximum radiant heat share: >90%
- No cracking or expansion noises due to unique material alloys
- Curtains and cabinets can be placed 2 cm away from the skirting heater
- Optimal and even distribution of radiant heat acting as a heat curtain along the exterior walls
- No risk of damage when nailing or screwing into walls, which is a common issue with integrated wall heating systems
- No waste of decorative wall space for heating-panels
- The electric variant, up to 65 °C can be measured on the front panel
- The water-fed variant, up to 40-45 °C can be measured on the front panel

TECHNICAL DATA

It makes a considerable difference whether a defined output is delivered in a room by point radiators such as marble panels or by Energy-com skirting heaters: Skirting heaters installed on exterior walls

create an even heat curtain, particularly in problem areas like corners, exterior walls, and windows. This results in an even temperature distribution, which guarantees the prevention of mold and mildew.

TECHNICAL DATA ENERGY-COM SKIRTING BOARD HEATING SYSTEM WATER

Average flow temperature in degrees Celsius	40 ° - 60 °
Temperature differential between supply and return in degrees Celsius	2 ° - 3 °
Water content per linear meter for Energy-com supply and return	0,228 Liter
Max. length for a heating circuit (water skirting heater) ECHL-3 / ECHL3D	12 m / 6 m
Pipe diameter inside/outside	13 mm / 15 mm

Power of the electric Energy-com skirting heater per linear meter: 200 W

The following lengths of heating rods can be combined based on spatial conditions:

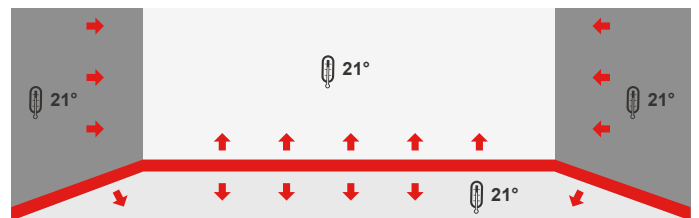
2,5 m = 500 W

1,5 m = 300 W

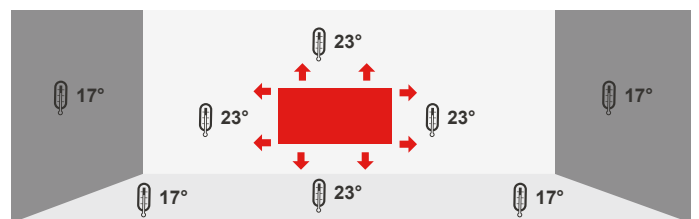
1,0 m = 200 W

0,7 m = 140 W

A later conversion from water to electric or electric to water is possible and can be considered during initial installation



Heat distribution of Energy-com skirting heater 1200 W = 6 m.



Heat distribution of heating plate 1200 watts.

ENERGY-COM SKIRTING HEATERS

Reasons for Healthy Heat

HEALTHY ROOM ATMOSPHERE WITH A FEEL-GOOD GUARANTEE

Radiant heaters warm surrounding surfaces and objects instead of the air. As a result, walls remain warmer than the room air, ensuring a comfortable warmth even with cooler air.

The inspiration comes from nature, with the sun acting as a radiant source. Since the air is not constantly being heated and rising, which would create air currents and dust movement, fewer dust particles are stirred up and inhaled. This absence of air and dust movement results in a healthier indoor climate, making it particularly friendly for allergy sufferers.

WARM WALLS WITHOUT THE RISK OF MOLD

Radiant heat warms the surfaces of solid objects such as walls and furniture. This radiation exchange continues until all surfaces reach the same temperature. As a result, exterior walls remain dry and warmer than the air, preventing moisture from condensing on the walls and leading to mold formation.

EVEN TEMPERATURE DISTRIBUTION

In convection heating systems, the warmed air rises from the bottom to the top and accumulates under the ceiling. This is not the case with radiant heat: it maintains a pleasantly even temperature from floor to ceiling. This ensures a more comfortable and consistent warmth throughout the entire room.

COMPACT DESIGN WITH AN ELEGANT LOOK

Energy-com skirting heaters require minimal space: they are installed at the base of the wall and can be flush with the wall if needed. With a depth of 3.2 cm and a height of 15 cm, the skirting heaters are compact and unobtrusive. Furniture and curtains can be placed directly in front of them. Any flooring, whether carpet, parquet, tiles, cork, or natural stone, is suitable.

QUICK AND ACCURATE TEMPERATURE REGULATION

The thermostats can be adjusted separately for each room. If multiple people enter the room, the thermostat detects body heat and quickly lowers the heating, thereby saving energy. Sudden sunlight through the windows, which leads to warming, is immediately registered, and the heating reduces its output instantly. This ensures efficient energy use and maintains a comfortable indoor climate.

In a 100 square meter living area, Energy-com's water-based skirting heaters contain only 8 liters of water in the heating circuit. In contrast to the 200 to 300 liters used in underfloor heating systems, this smaller volume of water can be regulated and heated much more quickly, resulting in more efficient and responsive heating.

COST-EFFECTIVE HEATING, EASY INSTALLATION

Built to Last: Energy-com systems are practically maintenance-free

Optimal installation options without additional annual costs

The water-based Energy-com skirting heaters function with all known energy sources (oil, gas, district heating, solar, geothermal, photovoltaic, and heat pump) at water supply temperatures of 40-60°C. Additionally, an energy saving of up to 30% compared to other heating systems is a nice side effect for a comfortable indoor climate.

ENERGY-COM SKIRTING HEATERS: WOULD YOU LIKE TO KNOW MORE ABOUT HEALTHY HEAT?

Our specialists are happy to provide detailed information and advice about our skirting heaters and related accessories. Upon request, we can create an exact heat demand calculation for the optimal design of the heating system for your property. We explain the details of the calculation and provide a list of all required materials and associated costs. Transparent, competent, and comprehensible.

ENERGY-COM SKIRTING HEATERS: ENSURING TOP QUALITY

At Energy-com, we place great emphasis on quality and customer satisfaction. Our skirting heaters are not only efficient and durable but also easy to use. We are with you every step of the way, from the initial consultation to the final installation, ensuring that you feel completely comfortable. Trust in our expertise and experience for sustainable and healthy heat in your home..

ENERGY-COM SKIRTING HEATERS: WHAT ARE THE INSTALLATION COSTS

For a detailed and free heat demand calculation, we need some information about your project/property. Please visit our contact page on our website (www.energy-com.de/contact) or email us.

General statements about services and costs are, in our view, unreliable and usually disadvantageous for builders. A cost comparison (purchase costs and ongoing operation) of two completed properties (House 1: single-story with 100m² living space, House 2: 200m² living space on two floors) with different heating systems can be found here: www.energy-com-heizleisten.de

ENERGY-COM SKIRTING HEATERS: HOW IS THE WARMTH SUPPLIED TO YOUR HOME?

If you decide to purchase Energy-com skirting heaters, we also handle the installation. Our technicians ensure professional and proper installation of the skirting heaters at your location.

No further service or regular maintenance work on the skirting heaters is necessary.

ENERGY-COM SKIRTING HEATERS: HOW TO REACH US

If you are interested in detailed planning and calculation or want to inquire about Energy-com skirting heaters, please contact us:

Energy-com GmbH
Porscheweg 37-39 , D-49661 Cloppenburg
Telefon: +49 4471 900 28 55
Fax: +49 4471 900 45 06
Mobil: +49 160 96 40 95 89
E-Mail: info@energy-com.de
www.energy-com.de

ENERGY-COM HEIZLEISTEN