



ELECTRIC UNDERFLOOR HEATING

**FOR UNDER:
TILES • CARPET • WOOD
AMTICO & VINYL**

Electric underfloor heating; A heating solution for your whole home



Easy & quick to Install

Electric underfloor heating is quick and easy to install as there are only 3 major components; the insulation, the heating mat and the thermostat.

A team of two competent installers can lay on average 120m² of insulation and matting a day. To wire a system, an electrician can wire up to 7 zones on average a day. Most people find this system quicker and more cost effective to install than radiators and warm water underfloor heating.

Running Costs

A hot topic in electric underfloor heating is the running cost. The table below shows the average running cost of different rooms within a family home.

The calculations are based on an average cost of 10p per kWh and the room being insulated up to building regulations including the appropriate floor insulation.

Average daily costs are based on keeping a room warm for 16 hours and with a 25% duty cycle. Matting is based on a 150W/m².

Room	Bedroom 1	Bedroom 2	Bedroom 3	Bathroom & Hall	Living Room & Kitchen
Room Area	12m ²	16m ²	18m ²	12m ²	26m ²
Heated Area	10m ²	12m ²	14m ²	10m ²	22m ²
Running Cost/hr	15p	18p	21p	15p	33p
Average Daily Cost	60p	72p	84p	60p	£1.32

Why Electroflex Solutions?

Electroflex Solutions supply advanced German engineered electric underfloor heating systems. We use the experience and suggestions of our UK trade customers to constantly update the products to ensure they are installer friendly as well as having the highest level of build quality.

The Webtech systems are engineered in Germany, designed specifically for under tiles, Amtico & vinyl.

The Rayoflex systems engineered in Germany, designed specifically for under hessian backed carpet and wood.

What Electroflex Solutions has to offer:

- 1 German engineered systems
- 2 Next working day delivery*
- 3 Supplies only to the trade
- 4 Free design service
- 5 Free technical advice
- 6 Competitive prices

Electroflex Solutions strive to provide the best quality systems at affordable prices whilst giving full technical support to ensure a trouble free installation.



*Delivery to Highlands is often 3-5 days.

Misconceptions of Underfloor Heating

1 Difficult to Install

Our electric heating systems are extremely simple to install. The preparation of the floor and laying the mats can be done by anyone, it is only the wiring that needs to be done by a qualified electrician. Electroflex Solutions make it even simpler by offering a free mat layout diagram service for all projects that require one.

2 Expensive to Run

As the heating mats are thermostatically controlled and installed directly under the flooring, warm up time is not only fast but running costs are much less than what is perceived.

3 Less efficient than water systems

Unlike radiators, underfloor heating produces even heat where you need it [see figure 1 & 2]. Warm water underfloor heating and radiators rely on boilers, where even modern condensing models are fairly inefficient and require regular maintenance.

4 Cannot provide primary heating

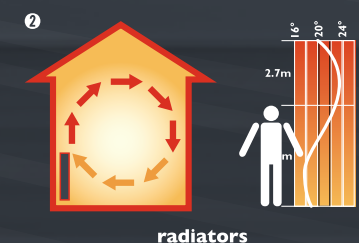
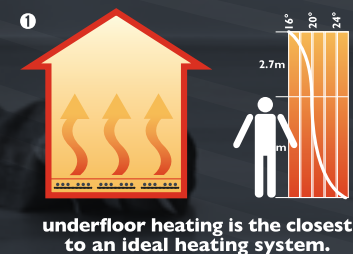
In most rooms, Electroflex Solutions electric mats can be the sole source of heating.

5 Cannot be laid under carpet or wood

The Rayoflex Mat can be laid directly under hessian backed carpet and wood.†

6 Cannot be used in wet rooms

All Electroflex Solutions systems are earthed and can be installed in both dry and wet rooms.



†Maximum Carpet tog 1.7, Underlay tog 0.8. Ideal wood thickness up to 18mm, anything more will slow warm up time and may reduce output. Wood cannot be nailed or stuck down.

Webtech: For Under Tiles, Karndean, Vinyl & Amtico

Highest quality electric underfloor heating engineered in Germany for under tiles, Karndean, vinyl and Amtico.



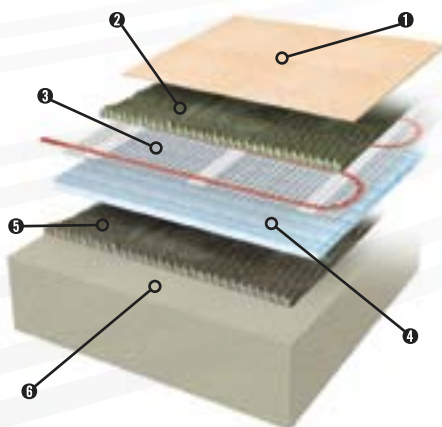
System Advantages

- Easy to install with sticky underside
- Low cost
- Minimal wiring and earth shielded
- Primary Heating – The powerful output is enough to provide complete heating in most rooms - 150W/m²
- Ultra thin & fast response time
- 16 year manufacturers warranty

Available Mat Sizes	Please note that all mat sizes have a standard width of 0.5m													
Length (m)	2.0	3.2	4.2	5.4	6.8	7.8	9.6	11.4	13.6	15.8	18	22	25.4	28.0
Area (m²)	1.0	1.6	2.1	2.7	3.4	3.8	4.8	5.7	6.8	7.8	9	11	12.7	14
Watts	145	240	320	420	510	595	710	890	1015	1130	1335	1650	1840	2175

Under Tiles

- 1 Tiles
- 2 Flexible Tile Adhesive 8mm
- 3 Heating Cable Mat
- 4 Insomax, Marmox or Equivalent Insulation
- 5 Flexible Tile Adhesive
- 6 Floor Slab



Under Vinyl/ Karndean/Amtico


Simply pour 8-10mm latex based self-levelling compound on top of the cable and insulation before glueing the vinyl or Amtico on top.

Basic Installation Method*

Ensure all mats are working by testing the cables using a multi-meter.

1. Prepare sub-floor by removing all dust and debris.
2. Fix Insomax insulation to the sub-floor using a flexible tile adhesive. Ensure that the whole surface is covered. [\[image a\]](#)
3. Once the insulation is fixed, unroll and correctly position the Webtech Mats. [\[image b\]](#)
4. Cut the mesh to make turns in the mat. Be careful not to cut the wire itself! [\[image c, d, e\]](#)
5. Run the cold cable to the thermostat.
6. Re-test the mats to ensure none have been damaged during installation.
7. Lay the thermostat floor sensor in the conduit and place between mat turns.
8. With the system turned off, tile directly on top using a flexible tile adhesive. If the final flooring is vinyl or Amtico, use 8-10mm latex based self-levelling compound and lay the final flooring once dry.

Specification

Mat Thickness : 4mm
Output Rating 150W/m² - 240V
Double Conductor Cabling
16 Year Warranty
Engineered in Germany 

* This is not an installation guide.
Please read the full installation manual before installing.



Rayoflex: For under Carpet & Wood[†]

Highest quality electric underfloor heating engineered in Germany for under hessian backed carpet and wood.



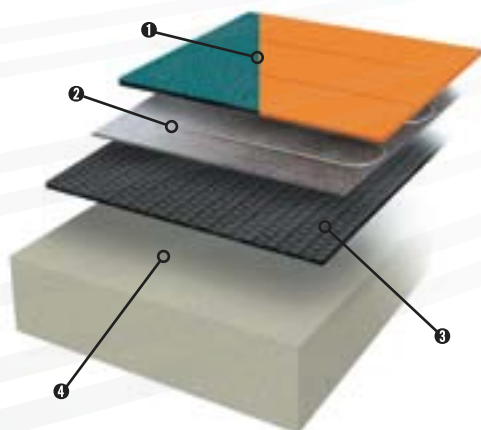
System Advantages

- Easy to install with sticky underside
- Low cost
- Primary heating – The powerful output is enough to provide complete heating in most rooms. 150W/m²
- Minimal wiring, earth shielded, no self levelling or adhesive required
- Ultra thin and robust
- Even heat distribution with fast response time
- 16 year manufacturers warranty

Available Mat Sizes	Please note that all mat sizes have a standard width of 0.5m										
Length (m)	2.0	3.0	4.0	6.0	8.0	10	12	14	16	18	20
Area (m ²)	1.0	1.5	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10
Watts	150	225	300	450	600	750	900	1050	1200	1350	1500

Installation Under Carpet and Wood

- 1 Hessian Backed Carpet with Underlay or Floating Wooden Floor[†]
- 2 Rayoflex Foil Heating Mat
- 3 6mm Softboard/ Palziv Insulation
- 4 Floor Slab/ Suspended Wooden Floor



[†]Maximum Carpet tog 1.7, Underlay tog 0.8. Ideal wood thickness up to 18mm, anything more will slow warm up time and may reduce output. Wood cannot be nailed or stuck down.

Basic Installation Method*

Ensure all mats are working by testing the cables using a multi-meter.

1. Prepare sub-floor by removing all dust and debris.
2. Fix Palziv insulation to the sub-floor using a double sided tape or glue spray. Ensure that the whole surface is covered. [\[image a\]](#)
3. Once the insulation is fixed, unroll and correctly position the Rayoflex Mats. [\[image b, c\]](#)
4. Every time the mat is cut and turned, close the gap between the mat and cover the cable with the foil tape provided. [\[image d\]](#)
5. Cut a small groove into the insulation so the cold cable connectors lay flush and run them back to the thermostat. [\[image e\]](#)
6. Lay the thermostat floor sensor in the conduit and place between mat turns.
7. Re-test the mats to ensure none have been damaged during installation.
8. With the system turned off, either lay the wood flooring or the carpet underlay and carpet.

Specification

Mat Thickness : >2mm
Output Rating 150W/m² - 230V
Double Core Wiring
16 Year Warranty
Engineered in Germany

* This is not an installation guide.
Please read the full installation manual before installing.



The Conservatory Range

The Webtech Conservatory Range is a variety of 200W/m² underfloor heating mats designed specifically for high heat loss rooms such as conservatories and orangeries. A simple solution for rooms that need an extra boost.

The Conservatory range are to be laid directly under tiled/ stone flooring, but can also be installed under wood and carpet with the use of a 8-10mm latex based self-levelling compound.

Available Mat Sizes	Please note that all mat sizes have a standard width of 0.5m				
Length (m)	8.0	10	14	18	22
Area (m ²)	4.0	5.0	7.0	9.0	11.0
Watts	800	1000	1400	1800	2200



Mirror Demister

The Mirror Demister is a foil heater intended for preventing the formation of condensation on mirrors in bathrooms. The mirror demister is normally connected to the lighting circuit, so when switched on, the system gently heats the mirror keeping it mist free allowing you to carry on with getting ready for the day straight after you shower/bathe!

Two sizes are available : 400mm x 500mm & 550mm x 600mm

The Ultra thin wire is made of double-layer polyester fibre with a conductor inside, The heater is connected to a 230V AC power Supply.

Features

- Designed for the high humidity premises
- Connection to the mirror light
- Does not require maintenance
- Easy Installation
- Highest electrical safety

Specification

- Operating Temperature : 40° C
- Maximum Temperature : 80°C
- Connection cable : 1.2m



Controls

Electroflex Solutions offers two models of thermostatic controls to operate both the Webtech and the Rayoflex systems.

Both the below controls are supplied with a floor sensor and conduit tube ensuring protection of your floor.



Dial Thermostat with Floor Sensor

- The dial thermostat simply controls temperature and is manually set
- It uses the floor probe to measure the temperature of the floor and comes with a basic on and off switch and comfort setting
- 16 Amps



Digital Programmable Air & Floor Thermostat

We are currently giving all our digital thermostat customers free upgrades to our new state of the art, incredibly easy to use, touch screen programmable thermostats.

- Large back-lit LCD touch screen
- Clean cut aesthetics designed to be unobtrusive on your wall
- Built-in air sensor & external 3m floor protection probe
- Manual and energy saving daily programming modes (5+2)
- Incredibly easy controls for easy programming and less confusion
- Flush mounting

Insulation

The use of insulation reduces warm up time and running costs.

Palziv X-linked insulation for under wood and carpet

Palziv X-linked is manufactured from cross-linked closed polyethylene foam and has:

- Excellent thermal insulating properties
- Water repellent (i.e. rot and mould resistant).
- Sound insulating, creating a "quieter" floor to walk on.
- Softer feel to wooden and carpeted floors when walking on top of adding to the luxurious feel
- Use a thinner carpet underlay but get the impression of an expensive thick version
- Up to 50% faster to install when compared to conventional foam board insulation

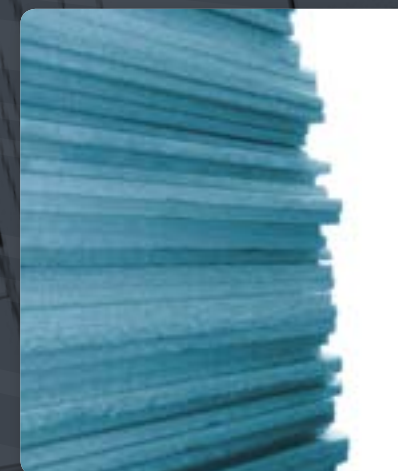


The use of electric underfloor heating insulation must be used in all projects. Not only does it speed warm up time cutting running costs, but it also protects the system ensuring it an extra long life. Palziv X-linked insulation is not a suitable electric underfloor heating insulation for under wooden or carpet flooring that needs to be stuck down.

Insomax Ultimate Insulation Boards for under tiles, Amtico and Karndean

Properties of Insomax Ultimate electric underfloor heating ultra high density insulation boards:

- Lightweight & easy to work with. It can be cut with a sharp knife!
- Fantastic insulating properties making it perfect for badly insulated concrete floors
- Excellent structural strength and compression resistance (30 tonnes/m²) - withstanding both short term and long term static loads.
- Highly resistant to water absorption and rot resistant.
- Available in 6mm and 10mm thicknesses



I'm Interested, What do I do next?!

There are two ways that you can obtain an estimate, please ensure you state your final floor covering for each room:

- 1 Provide the room dimensions or floor plans to your local Electroflex Solutions Wholesaler

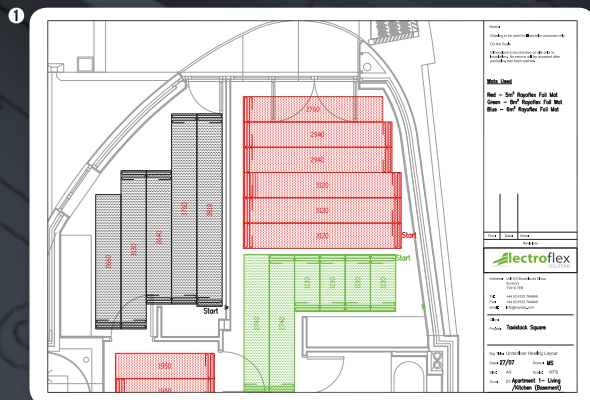
Or

Email your floor plans/room dimensions to:

info@electroflexsolutions.co.uk

- 2 A full estimate will then be emailed to you, including details such as power output and optional extras such as insulation and tape
- 3 Place an order with your local Electroflex Solutions dealer
- 4 If required, a free design will be drawn* [see figure 1]

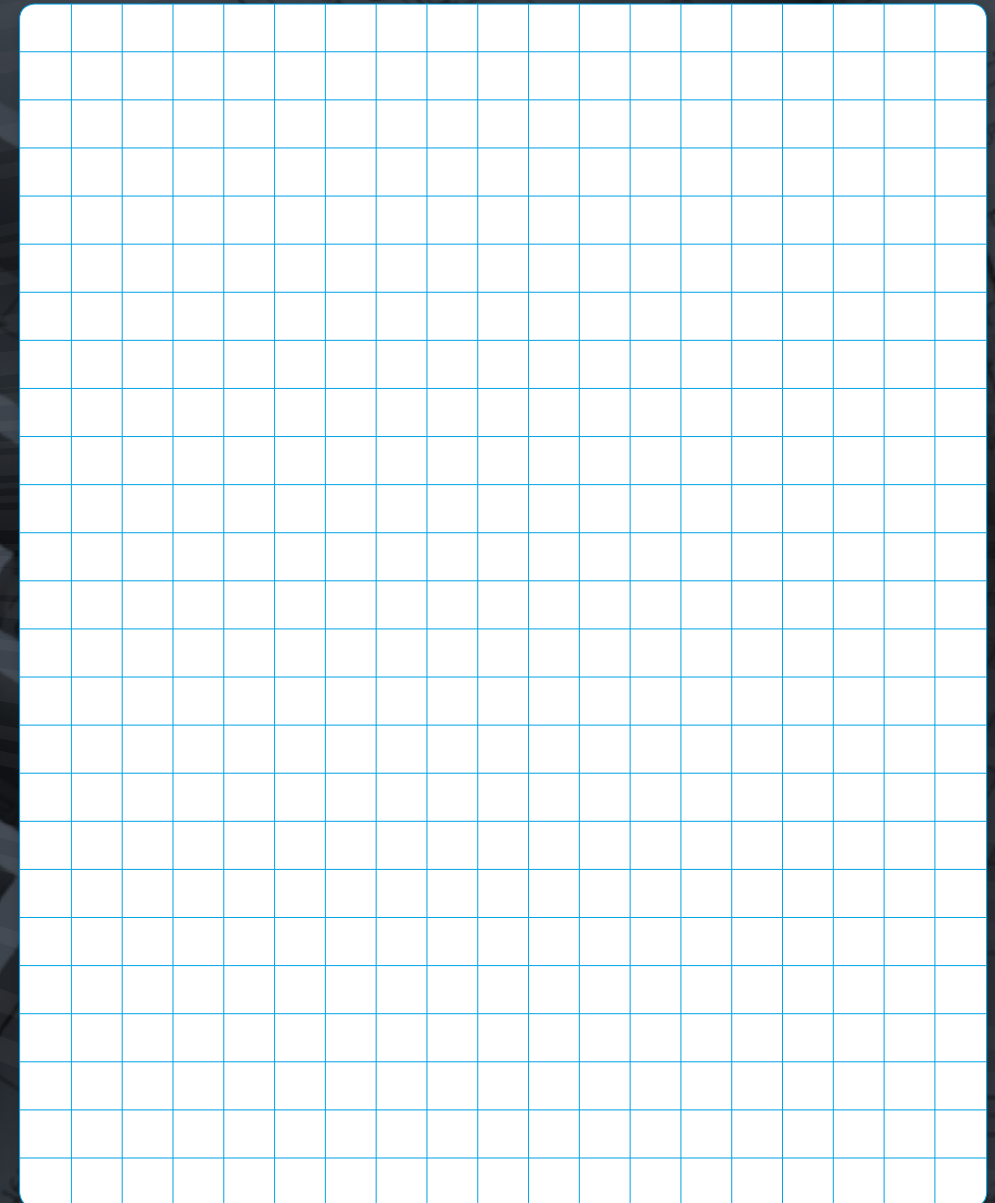
If you have any technical questions please call our Electroflex Solutions Tech Line on **01932 769 990**



*Subject to conditions

Floor Planner

Use the below space to sketch your rooms



LOCAL AUTHORISED DEALER



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