

# TERMOFOL

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## INSTALLATION INSTRUCTIONS



Energy efficient  
heating system



[www.termofol.co.uk](http://www.termofol.co.uk)

TECHNOLOGY IS LIFE,  
QUALITY IS OUR PRIDE

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## What you should find in your package?

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- 1 Heating film
- 2 Electric wire
- 3 Self-amalgamating black butyl tape
- 4 Crocodile clips
- 5 Optional thermostat with Protective pipe for external sensor
- 6 Termofol adhesive tape
- 7 Vapor barrier film
- 8 Warranty card



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## Required tools

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- |                           |  |
|---------------------------|--|
| 1 Scissors                | 8 Stripper for removing electric wire insulation |
| 2 Crimping tool           | 9 Utility knife                                  |
| 3 Measuring tape          | 10 Vacuum cleaner                                |
| 4 Screwdriver             | 11 Grinder                                       |
| 5 Ohmmeter                | 12 Safety glasses                                |
| 6 Infrared thermometer    | 13 Safety gloves                                 |
| 7 Thermostat mounting box |  |



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## Important!

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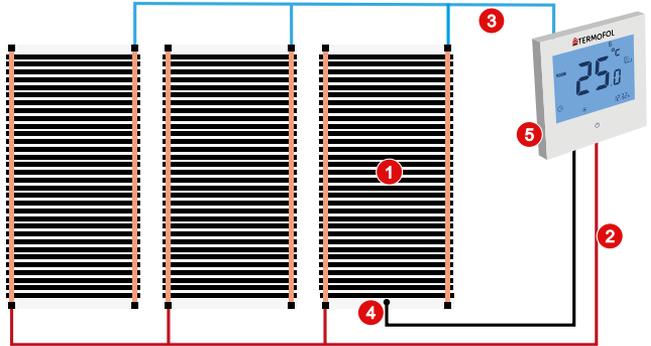
When installing carbon film make sure you have appropriate floor insulation to prevent your floor from absorbing heat. System works much more efficiently when insulation with reflective aluminium layer is used. Vapour barrier is recommended be twin sub floor and heating film.

Our dedicated TERMOFOL Insulation has excellent thermal properties and reflect infrared radiation, also it has build in vapour barrier.

# CONNECTION OF HEATING FILM

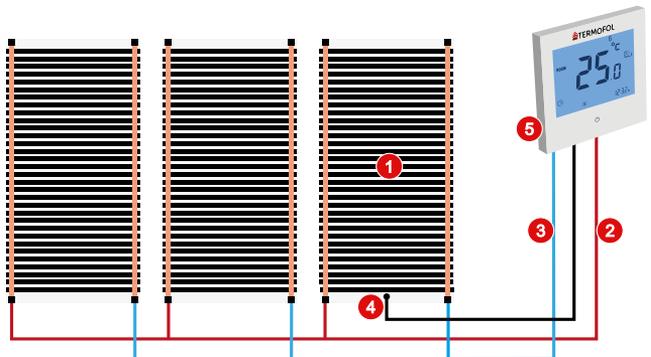
## 1) Method

- 1 Heating film
- 2 Connection N Zero
- 3 Connection L Phase
- 4 Temperature sensor
- 5 Thermostat



## 2) Method

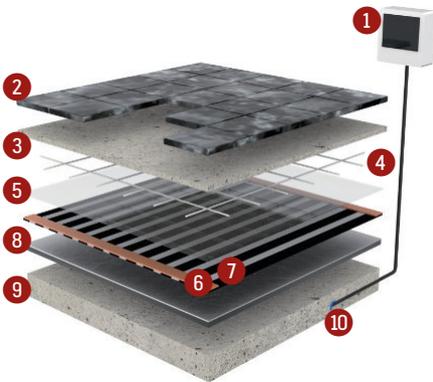
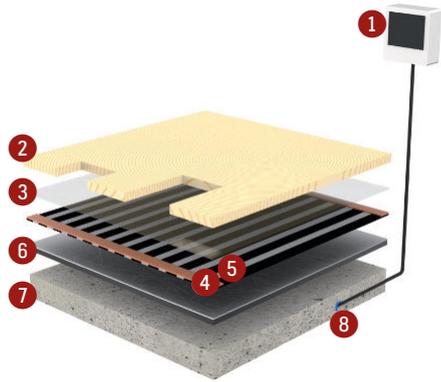
- 1 Heating film
- 2 Connection N Zero
- 3 Connection L Phase
- 4 Temperature sensor
- 5 Thermostat



# CROSS-SECTIONS OF INSTALLATION OF HEATING FILM

## LAMINATE/WOODEN FLOOR

- 1 Thermostat
- 2 Laminate floor
- 3 Vapour membrane
- 4 Steel reinforcing mesh
- 5 Heating film
- 6 Insulation
- 7 Base floor
- 8 Temperature sensor

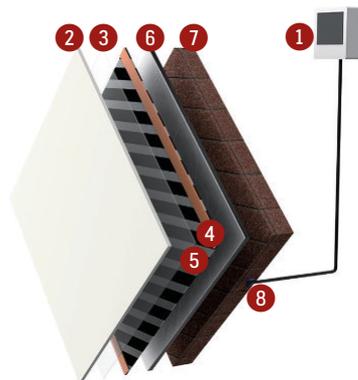


## CERAMIC TILES

- 1 Thermostat
- 2 Ceramic tiles
- 3 Concrete
- 4 Rainfold
- 5 Vapour membrane
- 6 Steel reinforcing mesh
- 7 Heating film
- 8 Insulation
- 9 Base floor
- 10 Temperature sensor

## WALL

- 1 Thermostat
- 2 Plaster board
- 3 Vapour membrane
- 4 Steel reinforcing mesh
- 5 Heating film
- 6 Insulation
- 7 Wall
- 8 Temperature sensor



## INSTALLATION

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Confirm parameters of the electrical wiring system, ensure that a demand for electric power is sufficient. If the parameters are not sufficient, you should increase their values. Check humidity of the base floor. If it exceeds by 2%, use damp proof insulation.

Plan a distribution of the heating film according to maximum lengths of one strip of the heating film, according to the table below.

MODEL	POWER	FILM WIDTH	MAXIMUM LENGHT
3025T	55W/m	25cm	25 running meters
305T	110W/m	50cm	12 running meters
310T	220W/m	100cm	6 running meters
305TL	70W/m	50cm	18 running meters
310TL	140W/m	100cm	9 running meters
310TT	80W/m	100cm	16 running meters
310TR	180W/m	100cm	7 running meters
305ET	200W/m	50cm	6 running meters

## INSTALLATION MANUAL FOR HEATING FOIL

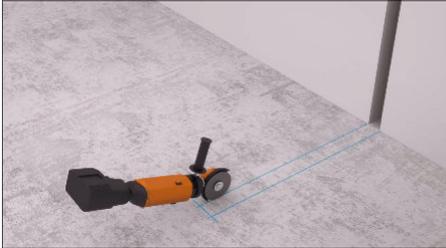
**WARNING! IF THE POWER OF THE INSTALLED HEATING FOIL EXCEEDS 80% OF THE LOAD OF THE THERMOREGULATOR, APPLY SAFETY SWITCH!**

**WARNING! THE HEATING FOIL INSTALLED MUST HAVE AN RCD SWITCH  $\leq 30$  mA IN THE ELECTRIC CIRCUIT**

**WARNING! CONNECTING THE HEATING FOIL MAY ONLY BE CARRIED OUT BY AN ELECTRICIAN WITH CURRENT AUTHORISATION.**

# INSTALLATION MANUAL FOR HEATING FOIL

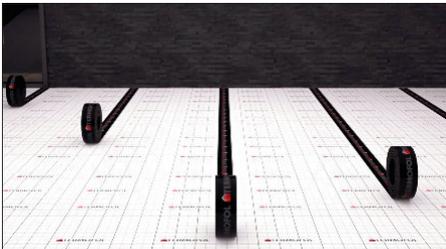
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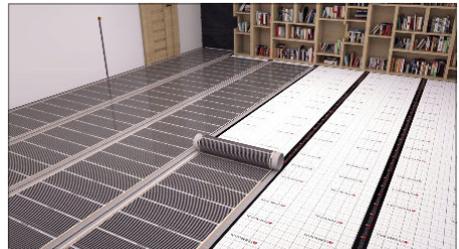
1. Before an installation carefully dry out and clean floor surface. Check fatness of the ground. Make a groove for a protective corrugated pipe.



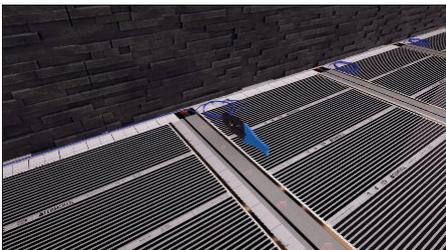
2. Clean the floor and install a protective NTC sensor pipe.



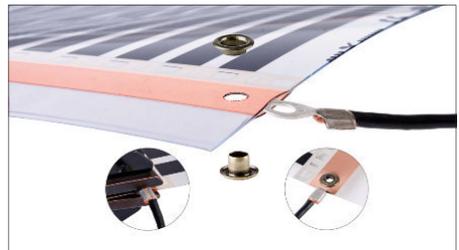
3. Place the insulation under the entire floor surface and secure with TERMOFOL tape. Spray glue is permitted.



4. Distribute the heating film. Heating film will work both sides the same. Leave distance of approximately 50 mm from each wall, and at least 10 mm between strips.



5. Using adhesive tape connect and secure heating film to insulation pads. Using appropriate tools attach clips to heating mat.

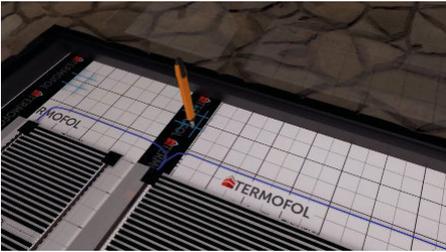


**NOTE** joining clips should go between 2 layers of heating mat hot mat are solid and secured.

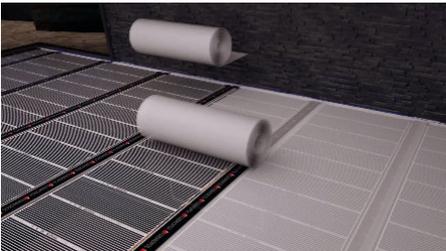
Make sure all connections are solid and secured. Incorrect connections are not cover by warranty and may result in system failure. Inspect connections and electric circuit.

# INSTALLATION MANUAL FOR HEATING FOIL

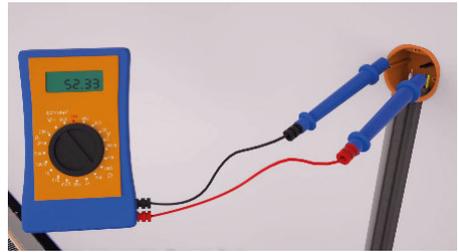
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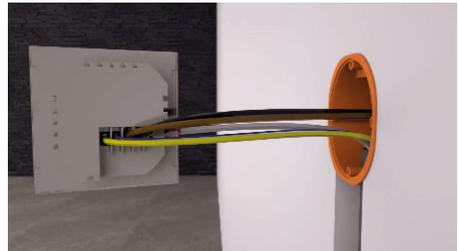
7. Secure all electrical connections with black, sticky butyl tape this include copper part on the other end.  
Secure electric wires and hearing film with Termofol adhesive tape.



9. Lay down vapour barrier and secure with Termofol adhesive tape.



8. Make a subsequent measurement of a resistance using an ohmmeter. Draw a diagram a position of each strips electric wiring and temperature sensor.  
**Important note result to assembly data sheet.**



10. Connect the electric wires to the thermostat according to the thermostat instructions. Turn on system and verify its operation by infrared thermometer. inspect manually if it warms up. Low heating film power need few hours to warm up. Be patient.

**Note strip position and signature of authorised electrician**

# INSTALLATION MANUAL FOR HEATING FOIL

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## COMMENTS

- Use only TERMOFOL original parts and tools.  
Walking on heating element is permitted, installer should have shoes with a soft, clean surface during assembly, be careful do not damage heating element during installation thermostat sensor cannot be crush after final floor installation and need to be install under heating film in protective convoluted tube insulation needs to be lay out on total floor area.
- Keep a workplace clean
- Check bottom-side panels & floor boards – if there are any irregularities, remove them. wear safety gloves. install heat film only with a thermoregulator.
- Laminate panels should be design for under floor heating systems
- Do not exceed panels maximum temperature.
- Max temp for carpets floors 25 °C depend on carpet quality we do not recommend carpets with rubber bottom,
- Do not overlay the heating foil in an overlapping manner!
- Electric cables must not be installed on or under the heating foil
- Do not install the heating foil under large or heavy items! (e.g. wardrobe, washing machine, sideboard)
- Cut the heating foil only in the designated areas during the system installation be careful not to damage the heating foil
- Warning! heating film can be turned on after 30 days from the date concrete spout
- Need to be install under heating film in protective Convoluted tube Insulation needs to be lay out on total floor area.

# THERMOSTATS

**Our thermostats are tested and calibrated for max energy savings.**

Install heating film only with thermostat.

Important most heating thermostats are 16Amp it is equal 3600 W.

HEATING FILM POWER	MAXIMUM HEATING FILM AREA THAT CAN BE CONNECTED TO ONE CONTROLLER
80 W/m <sup>2</sup>	43m <sup>2</sup>
140 W/m <sup>2</sup>	23m <sup>2</sup>
180 W/m <sup>2</sup>	17m <sup>2</sup>
220 W/m <sup>2</sup>	14m <sup>2</sup>
400 W/m <sup>2</sup>	7m <sup>2</sup>

Installation under ceramic tiles



Installation under laminate panel



**WARNING ! It is forbidden to screw the screws, hammer nails, drill in a floor, wall heated by heating foil! WARNING ! The connection of the heating foil must be performed by a qualified electrician in accordance with the safety regulations.**

MODEL	WIDTH	THICKNESS	POWER CURRENT METER	POWER SQUARE METER	LENGTH ON THE ROLL	MAXIMUM TEMPERATURE	VOLTAGE
310T	100cm	0.33mm	220 W	220 W/m <sup>2</sup>	100 m	55°C	AC 230 V
305T	50cm	0.33mm	110 W	220 W/m <sup>2</sup>	150 m	55°C	AC 230 V
3025T	25cm	0.33mm	55 W	220 W/m <sup>2</sup>	150 m	55°C	AC 230 V
310TR	100cm	0.33mm	180 W	180 W/m <sup>2</sup>	100 m	50°C	AC 230 V
310TL	100cm	0.33mm	140 W	140 W/m <sup>2</sup>	100 m	40°C	AC 230 V
305TL	50cm	0.33mm	70 W	140 W/m <sup>2</sup>	150 m	40°C	AC 230 V
3025TL	25cm	0.33mm	35 W	140 W/m <sup>2</sup>	150 m	40°C	AC 230 V
310TT	100cm	0.33mm	80 W	80 W/m <sup>2</sup>	100 m	30°C	AC 230 V
305TT	50cm	0.33mm	40 W	80 W/m <sup>2</sup>	150 m	30°C	AC 230 V
310TH	100cm	0.33mm	60 W	60 W/m <sup>2</sup>	100 m	29°C	AC 230 V
305TH	50cm	0.33mm	30 W	60 W/m <sup>2</sup>	150 m	29°C	AC 230 V
303DC12V	30cm	0.33mm	67 W	220 W/m <sup>2</sup>	150 m	55°C	DC12 V
303DC24V	30cm	0.33mm	67 W	220 W/m <sup>2</sup>	150 m	55°C	DC24 V
305-ET	50cm	0.33mm	200 W	400 W/m <sup>2</sup>	150 m	75°C	AC230 V

# TERMS OF WARRANTY

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The warranty period for products sold by the Guarantor shall be counted from the purchase date and applies to

- Heating foil 6 years
- Thermostats 24 months

Defects or damage found during the warranty period should be reported immediately to the Guarantor, not later than within 7 days from the date of their occurrence.

The Guarantor is responsible to the Purchaser for any physical defects caused by the product sold. The warranty does not cover defects resulting from other causes, and particularly as a result of

- Incorrect use of the product,
- Incorrect product selection for the conditions at the installation site,
- Incorrect assembly, maintenance, storage or transport of the product,
- Mechanical, chemical, thermal or deliberate damage to the product and the resulting defect. -
- Product damage resulting from the use of materials which are non-original or non-compliant with the manufacturer's recommendations,
- Damage caused by accident, force majeure (fire, flood, lightning, etc.)
- Malfunctioning devices affecting the operation of the product.

The warranty does not cover parts subject to normal wear, or to parts and consumables such as couplings, or fuses.

The guarantee does not cover any product which cannot be identified as a product purchased from the Guarantor on the basis of the submitted documents and features of the product.

In addition, the buyer loses guarantee rights to the product in the event of

- Any modification to the product,
- Interference of unauthorised persons,
- Any attempt at repairs carried out by unauthorised persons,

## **The complaint acceptance for consideration is conditioned on meeting all of the following conditions:**

- The Buyer's submitting the complaint in writing, or possibly by fax or e-mail, including the product name, catalogue number, purchase date, and a detailed description of the fault, along with any additional information related to the defects of the product and photographs of the defective product.
- Presenting the original invoice or receipt purchase for the advertised product.
- In the event of the non-acceptance of the complaint, the product will be returned to the advertiser at his / her request, provided that he / she has previously covered the cost of shipping the item to the Buyer.

Uncollected goods after a period of 60 days will be disposed of.