

Guarantee

This is a quality heating product supplied by ENERSAVE PRODUCTS Limited. It carries with it a manufacturers ten year warranty subject to correct installation and operation.

The test certificate is to be signed and given to the house owner.

The heating cable element is tested several times during production, and the final check is the measurement of insulation resistance and conductor resistance.

We recommend that the same measurements are made during and after installation (see enclosed test certificate) in order to detect any faults.

If the heating cable is damaged it has to be replaced by a new cable element before the glue or screed has hardened.

The guarantee is valid for 10 years only when the element is installed according to these installation instructions, and at temperatures not below +5°C, and all measurements are performed and signed at the time of installation.

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TILETHERM Installation Instructions

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Product Description

The main component of the system is the heating element, which is a very slim, single conductor heating cable attached to a flexible fibre-glass grid. The average thickness is approximately 3mm, and the area load is approximately 160 W/m². TileTherm is ideal for renovating or new build purposes, where a warm tiled floor is required. The heating cable has a 0.6mm thick PTFE insulation and a tinned copper braid with an area equal to 1mm². Each end of the heating cable is equipped with 5m cold leads.

TileTherm Undertile Heating - Sizing Chart

Area (m ²)	Mat Size (cm)	Power (Watts)	Resistance (Ohms)
0.75	50cm x 150cm	96	551.0
1.50	50cm x 300cm	192	275.5
2.25	50cm x 450cm	288	183.6
3.00	50cm x 600cm	384	137.7
3.75	50cm x 750cm	480	110.2
4.50	50cm x 900cm	576	91.84
5.25	50cm x 1050cm	672	78.72
6.00	50cm x 1200cm	768	68.88
7.50	50cm x 1500cm	960	55.10
1.50	90cm x 150cm	192	275.5
3.00	90cm x 300cm	384	137.8
4.50	90cm x 450cm	576	91.84
6.00	90cm x 600cm	768	68.88
9.00	90cm x 900cm	1152	45.92
12.0	90cm x 1200cm	1536	34.44
15.0	90cm x 1500cm	1920	27.55
18.0	90cm x 1800cm	2304	22.96

General Safety Precautions

Care must be taken when cutting or adjusting the element to the floor area, so that the heating cable is not damaged in any way.

The element must not be bent in such a way that the heating cable is twisted or overlapped.

Do not install the element in areas where the floor can be permanently covered by fixed furniture ie. kitchen cupboards, vanities etc.

Clean the floor area before starting, removing plaster and paint deposits, the tiler will require a substrate finish that ensures a good bond.

Remove sharp edges or objects from the surface before installing the element, and be careful when walking on the element during installation and the covering operation.

Note: Whilst installation may be carried out by a competent person, connection to the mains supply should only be carried out by an electrician.

Installation

A little planning and thought at this stage will make the installation go smoothly. As each end of the element has a 5m cold tail, plan to start close to the connection point and work out the route for the return cold tail.

Select element and load, and make the necessary adjustments to fit the room shape. The mat can be cut between the cable runs with scissors, and adjusted to different shapes. TileTherm is supplied with the heating element stitched to fibreglass mesh at 80mm spacing to give an even spread of heat. Positioning of the element should cover main walk areas and in front of vanities, showers etc. If need be, vary the offset around the wall area to allow for this. Cable should not be closer than 50mm at any point, or overlap.

The element shall be laid with the **cable side down**. Once the element is shaped and in position the cold tail joint should be set into the floor, using a chisel or masonry drill, so that it is level with the element. This will avoid unnecessary height build-up and excessive use of tile adhesive. Fixing is achieved by gluing with a spray contact adhesive such as Bostik SuperTak or ADOS F2. Clout nails may be used over tile and slate underlay or wooden floors.

Testing the Element

The element should be tested immediately after laying and again when tiling is completed. We do not recommend the use of a 'circuit tester' during laying of tiles as they are not capable of detecting all faults and can give a false sense of security. The only sure way is to use an insulation resistance tester before and after covering the tiles. Care should be taken when laying tiles.

Covering the Element

Most commonly, tile adhesive and ceramic tiles cover the element, after having installed the element and the thermostat sensor (if required). A flexible tile adhesive recommended for warm floors should be used. The tile adhesive is applied by using a tooth shaped trowel. Make sure that the adhesive is properly distributed through the element grid. The tiles are fixed in accordance with the manufacturer's instructions.

Other types of flooring materials can also be used, eg. timber, lino or carpet. In such cases a 6mm layer of self-levelling compound should cover the element.

Control Options

In small areas an OJ Electronic MRC16 regulator may be used for ease of installation and operation. For larger areas requiring a greater degree of control or areas with large solar gain an OJ Electronic MTC-1991 thermostat and floor sensor is recommended. For optimal control, use an OJ Electronic MCC2-1991 timer thermostat and floor sensor. Optional switchboard mounted controllers are available, contact your supplier for further details. Include a time clock in the circuit for optimum use.

Electrical Connections

The cold leads are to be connected to 230V. Heating elements are **not** to be connected together in **series**. Conductor continuity and resistance as well as insulation resistance is to be measured in accordance with the guarantee and recorded on the test certificate supplied with the product. Measurements should be noted **before and after laying of the tiles**.

Note: All electrical connections are to be carried out by qualified registered electrician and comply with current wiring regulations. A residual current device may be required under certain conditions, consult with your electrician.