SUNFLOOR

ELECTRIC UNDERFLOOR HEATING

wiper

Dear Client,

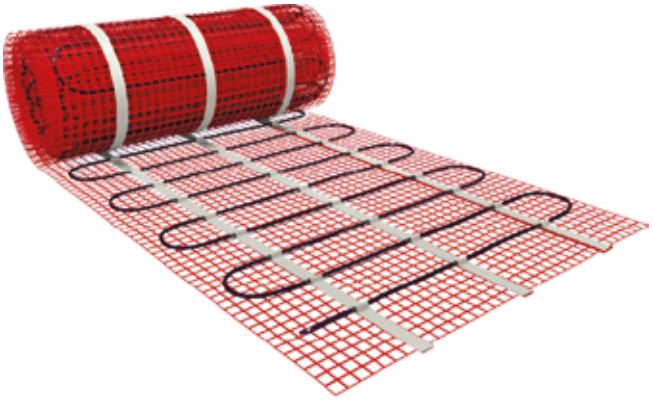
This heating product is manufactured from high quality, durable materials. To guarantee that your product functions optimally there are a few points of attention which are described in the Installation Instructions. We can only offer you the full guarantee if the system is correctly installed in accordance with these Installation Instructions. Carefully read the instructions prior to installation, do not forget the centre page when doing so, and ensure that you have the correct tools and materials. The electrical installation must be carried out by a qualified electrician in accordance with current local regulations.

1. Check:

Check the contents of the box before starting.

- Heating mat with connecting wire
- Inspection card
- Thermostat incl. floorsensor*
- A flexible sensor tube
- Installation instructions

*To be ordered as separate item in some countries.



2. Measurements

Type	Watt	Size	Amp.	Ohm
1 m2	150	0,5 x 2 m2	0,7	353
1,5 m2	225	0,5 x 3 m2	1,0	235
2 m2	300	0,5 x 4 m2	1,3	176
2,5 m2	375	0,5 x 5 m2	1,6	141
3 m2	450	0,5 x 6 m2	2,0	117
3,5 m2	525	0,5 x 7 m2	2,3	100
4 m2	600	0,5 x 8 m2	2,6	88
4,5 m2	675	0,5 x 9 m2	2,9	78
5 m2	750	0,5 x 10 m2	3,3	71
6 m2	900	0,5 x 12 m2	3,9	59
7 m2	1050	0,5 x 14 m2	4,6	50
8 m2	1200	0,5 x 16 m2	5,2	44
9 m2	1350	0,5 x 18 m2	5,9	39
10 m2	1500	0,5 x 20 m2	6,5	35

3. Points of attention:

Check before hand if the heating mat is the right size for the floor area to be heated and that there is sufficient electrical capacity (Amps.) available.

Before installing the mat, the resistance reading should be taken and noted down on the inspection card in the center of this manual. (See point 7).

The connector cable can be extended or shortened, there must always be at least 0.5 meter of connecting wire left. The heating cable, attached to the glass fibre net, cannot be cut. The mats cannot be laid over each other and the heating cables may never cross each other! The cable junction (SPLICE) is the transition of the resistance cable (heating section of the mat) to the power cable (cold connection) is just within the heating mat and is marked.

A distance from the wall of 10 to 20 cm should generally be adhered to. The Heating mat may never be installed under fixed objects like wall units, kitchen units, baths, or showers and must be able to give off its warmth unimpeded. The Heating mat may only be incorporated into the free floor areas. As bathrooms consist mostly of a small free floor area the mat can only be installed as supplementary heating. Please contact your local supplier for information about use as main heating.

All installations must be wired through a suitably rated MCB or RCCD when applicable. All installations in wet areas must be wired through a dedicated RCCD in line with the thermostat. All connections must be made by an approved electrician in accordance with current local regulations.

The Heating mat is 3 to 4 mm thick and must be incorporated in a flexible adhesive or casting mortar suitable for floor heating. Check the manufacturers data.

The Heating mat has 1 connecting cable 3.5 meters in length (Twin Conductor) and has an end seal (loop) at the end of the mat. The end seal CANNOT be broken. The connector cable can be shortened, there must always be at least 0.5 meter of connecting wire left. The power
supply must never be connected during installation.

If multiple mats are installed in a space, they must be wired in parallel and a suitably rated junction box may be incorporated so that only one power cable runs to the thermostat. Maximum capacity of the thermostat is 16 Amperes. If combined area exceeds 23m^2, a Contactor will have to be fitted. The thermostat may only be installed by a qualified electrician.

The sensorcable can be extended or shortened. The sensor must be installed in the middle of a cable loop for optimal temperature registration. Ensure that the sensor is installed well clear (min. 50 cm)
of (hidden) radiator and water pipes, drains and electrical wiring. The sensor must always remain IN the sensor tube. Fit cap to end of the sensor tube. If the sensor ever needs to be replaced it can then easily be removed.

The Heating mat is primarily designed for installation on concrete floors. If laying on a wooden floor, all floors must be sheeted with a cement faced board which is compatible with heated floor systems. Or sheet the floor with 15mm WBP or Marine plywood, fix with screws at 200mm centres and then skim with 2-3mm of flexible tile adhesive and allow to dry, then proceed as installation for concrete base.

4. Guarantee:

The electro technical part of the floor heating is guaranteed for 10 years. The thermostat is guaranteed for 2 years. This does not apply to damage caused by external factors and/or incorrect installation.

5. Necessary materials:

- A heating mat system.
- Flexible tile adhesive or Self levelling ccompound and flexible grout suitable for floor heating.
- Flexible cement and cement gun for expansion joints along the walls.
- Approx. 2m flexible electrical conduit (16mm)
- (Plastic) adhesive comb with approx. 6mm teeth.
- Electrical back box (min 35mm deep, preferably 50mm).
- Earthed power connection.
- A multimeter to test the mat after each installation activity.
- Various tools.

6. Preparations:

Determine where the thermostat must be placed, place a standard electrical back box with a minimum depth of 35mm,
preferably at a height of 1.40 m for ease of operation. Grind/cut the necessary grooves and mount the junction box and electrical conduit.

2 conduits have to be installed; One for the sensor and the other for the power cable from mat. Do not run the power cable and sensor cable through the same conduit. Cut a groove in the floor for the floor sensor pipe (2 cm deep).

TAKE CARE: Never place the sensor in the vicinity of a (hidden) radiator pipe! Never install it passing under a heating cable!

Ensure that the surface where the mat is worked on is flat, clean, and free of dust and grease. In larger spaces, expansion joints along the wall may have to be used.

ATTENTION!

UNDERNEATH THE FLOORING A 230 VOLT HEATING SYSTEM IS INSTALLED! NEVER DRILL OR SCREW INTO THE FLOOR!

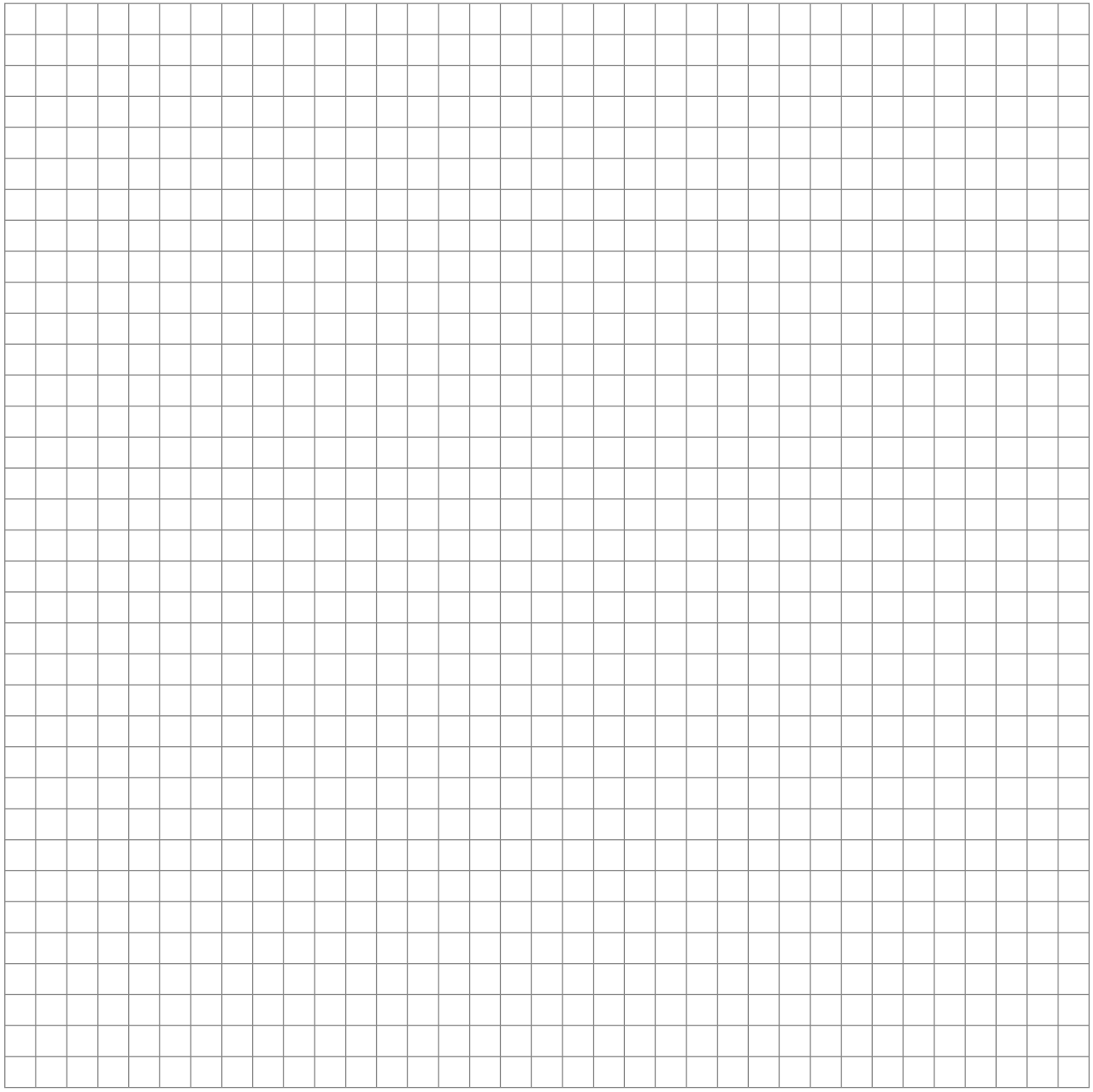
SEE SCHEDULE/PICTURE FOR THE POSITION OF THE HEATING SYSTEM.

ATTENTION!

UNDERNEATH THE FLOORING A 230 VOLT HEATING SYSTEM IS INSTALLED! NEVER DRILL OR SCREW INTO THE FLOOR! SEE SCHEDULE/PICTURE FOR THE POSITION OF THE HEATING SYSTEM.

Floor Heating installed in			
Serial number of the heating cable (As stated on the label of the connection cable)			
Resistance readings	Between centre core wires (within 10% margin!)	Between centre core wire #1 and the earth (Should read "infinite")	Between centre core wire #2 and the earth (Should read “infinite”)
Initial reading	Ohm	Ohm	Ohm
Mat/Cable laid on the floor	Ohm	Ohm	Ohm
After completion	Ohm	Ohm	Ohm

Schedule or pictures of the installation



Installer

Date

		–			–				

Signature

Keep this in a visible place in the meter cupboard!

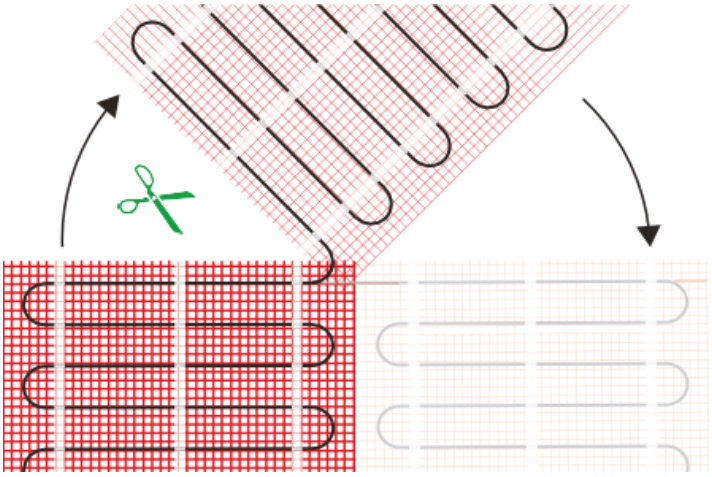
7. Resistance readings:

Before installing the Heating mat, the resistance reading should be taken and noted down on the inspection card in the center of this manual. The reading should be taken during the installation and on final completion. These readings should be as per the technical information (Point 2). Take measurements both between
the resistance wires and between the resistance wire and the earth cladding.

Keep this inspection card in the meter cupboard in a visible place! This forms part of your guarantee.

8. Measuring out the mat:

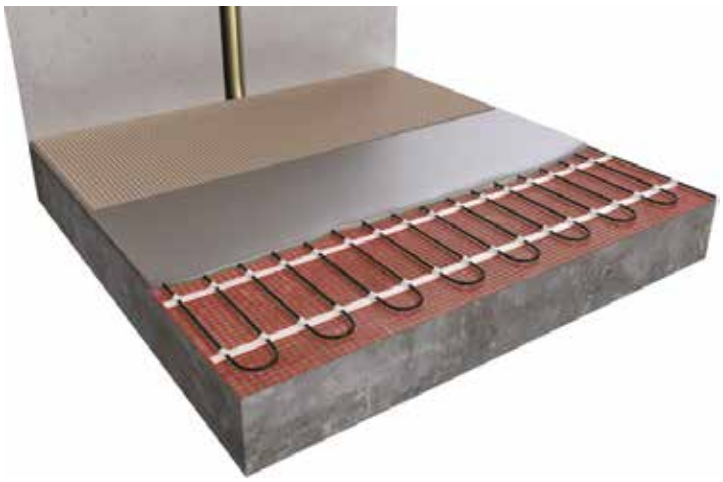
Allow for a distance from the wall of 20 to 30 cm when rolling out the matting in larger areas. This does not apply to glazed walls where extra heating is required. If the Heating mat is to long, the mat can be cut into a long length and laid round the periphery of the mat. The loose cables must be looped at least 5 cm from each other. They may not touch or cross each other. Take the resistance readings of the mat when it has been laid.



9. Tile cement method:

Unroll the heating mat with the heating cable down so that only the glass fibre netting is visible.

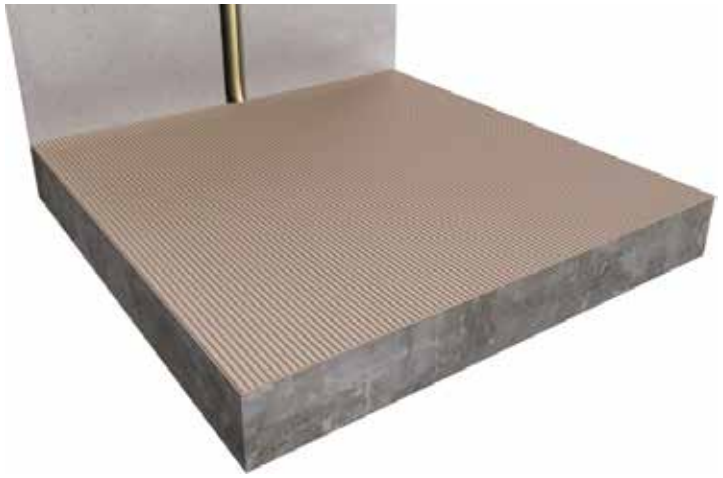
- Position the mat as described in Point 8.
- Take the resistance readings.
- Pull the end of the connecting cable through the electrical piping to the thermostat.
- Apply a first layer of Flexible tile adhesive
- 0,4 cm to 0,6 cm thick and approx. 55 cm wide.
- Roll the mat out over the tile cement with the cable facing downwards.
- Softly push the mat down with a wooden spatula or gloves and spread the tile cement that oozes through the mat.
- Smooth it over and allow it to dry.
- Take the resistance readings of the mat again.
- Then apply a second solid layer of flexible tile adhesive taking care to avoid air bubbles and use a plastic tile cement comb to avoid damaging the mat. (DO NOT SPOT TILE!).
- Press down the tile with a light sliding motion.



10. Self-Levelling method:

Unroll the heating mat with the heating cable facing upwards.

- Position the mat as described in Point 8.
- Pull the end of the connecting cable through the electrical piping to the thermostat.
- Take the resistance readings.
- First read the instructions of the self-levelling mortar, check that the product is suitable for floor heating and follow the instructions of the manufacturer to the letter.
  The self-levelling effect must usually be assisted somewhat using a squeegee. Observe the drying time before applying the floor covering.
- Take the resistance readings of the mat again.
- Then apply a solid layer of flexible tile adhesive taking care to avoid air bubbles and use a plastic tile cement comb to avoid damaging the heating mat. (DO NOT SPOT TILE!). Press down the tile with a light sliding motion.

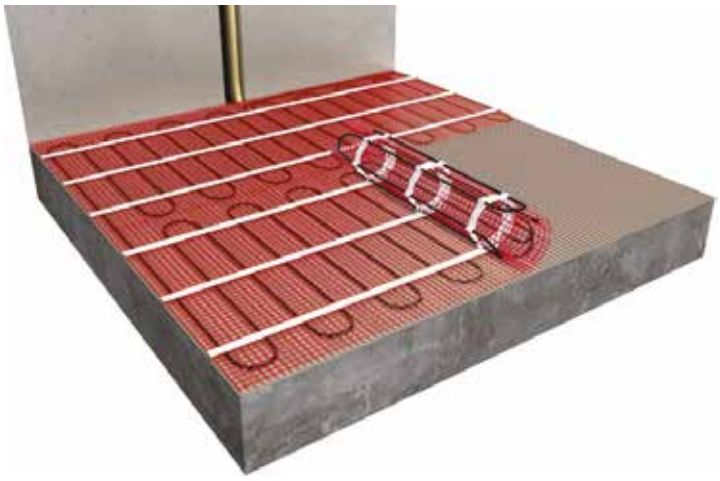


TAKE CARE: Do not apply more than 1 self levelling layer. Please follow manufacturers instructions.

11. Connecting the thermostat:

Installation needs to be done by a qualified electrician in accordance with all current wiring and building regulations. Before installation or re-installation of the thermostat always isolate the power to the thermostat.

To install and set up the thermostat, please use the manual that is included with the thermostat.



12. Using the system for the first time:

Depending on the drying time specified for the Flexible adhesive or self-levelling compound, however not sooner than 21 days after installation due to the natural expulsion of moisture from the floor.
Turning on the system sooner can damage the floor.