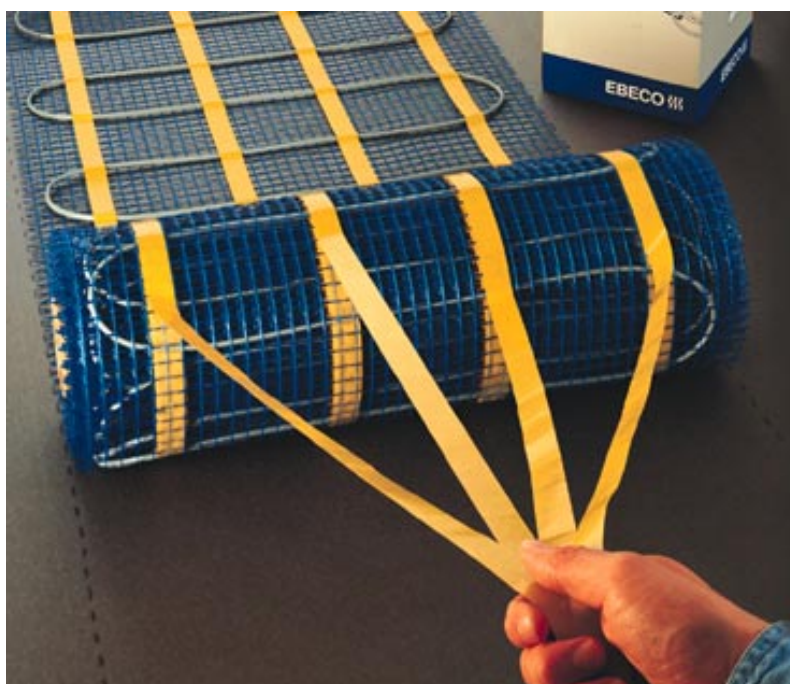


Thermoflex Kit



EBECO ≡

Thermoflex Kit Installation instructions

General instructions

Read carefully through all the installation instructions before starting the installation

Thermoflex heating cable matting consists of a thin heating cable fixed on a mesh. The overall build-in depth is only approx. 4 mm. The matting is designed with a very simple and flexible system for bonding to the floor. Thermoflex is used for heating clinker floors and has a heat output of 120 W/m². Thermoflex has only one connection end. The electric and electromagnetic fields are negligible. Thermoflex shall be connected to 230V via an earth fault RCD 30mA.

- The installation must be carried out in accordance with electrical regulations and under the supervision of a qualified electrician.
- The lowest installation temperature is +18°C. The matting should have room temperature at installation. At lower temperature the adhesive capacity of the tape will decrease.
- The heating cable must not be cut, only the cold connection cable.

- The Thermoflex matting should be controlled by a thermostat recommended by Penguin Europe.
- Measure the insulation and resistance of the matting before laying, after laying and after laying the floor and note the values in a test protocol. Without this protocol and the qualified electrician's signature, the 10 year warranty is not valid.
- Place the warning signs by the distribution box.
- With clinker floors, wait 4 weeks before the heat is connected and increase the heat gradually.
- The heat should not be switched off completely during the summer with concrete floors laid directly on the ground.

Underlay

Make sure the floor is solid, without springiness and clear of any dirt or old flooring residue. Wooden or chipboard flooring with more than 30 cm between floor joists usually needs to be reinforced to prevent cracking and the clinker tiles from releasing. This also applies without floor heating.

Thermoflex Kit (120 W/m ²)			Tolerance ± 10 %		
<u>Art-no</u>	<u>Art</u>	<u>Area (m²)</u>	<u>Size (m)</u>	<u>Effect (W)</u>	<u>Resistance (Ohm)</u>
E 89 602 30	Thermoflex Kit	1,25	0,5 x 2,5	150	350
E 89 602 32	Thermoflex Kit	1,7	0,5 x 3,4	200	266
E 89 602 34	Thermoflex Kit	2,1	0,5 x 4,2	250	210
E 89 602 36	Thermoflex Kit	2,7	0,5 x 5,4	340	157
E 89 602 38	Thermoflex Kit	3,4	0,5 x 6,8	400	132
E 89 602 40	Thermoflex Kit	3,9	0,5 x 7,8	480	111
E 89 602 42	Thermoflex Kit	4,4	0,5 x 8,8	530	100
E 89 602 44	Thermoflex Kit	5,4	0,5 x 10,8	640	83
E 89 602 46	Thermoflex Kit	6,6	0,5 x 13,2	780	68
E 89 602 48	Thermoflex Kit	7,9	0,5 x 15,8	940	56
E 89 602 50	Thermoflex Kit	11,5	0,5 x 23,0	1380	38
WITHOUT THERMOSTAT					
E 89 605 96	Thermoflex	11,5	0,5 x 23,0	1380	38

INSTALLATION

Read through all the installation instructions before you start.

Draw on the floor how the matting should be laid.

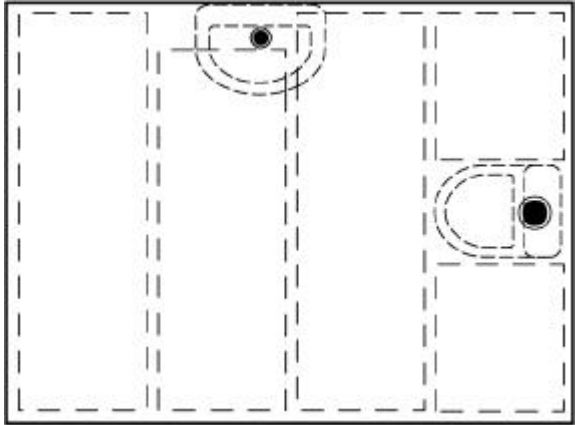


Fig 1

The thermostat sensor should be placed in conduit pipe, min 10 mm. Mill a groove in the floor for the thermostat sensor pipe. Connect the sensor pipe under the heating cable matting in a place that will not be covered by mats, furniture or the like. Tape over the pipe end. Figure 2.

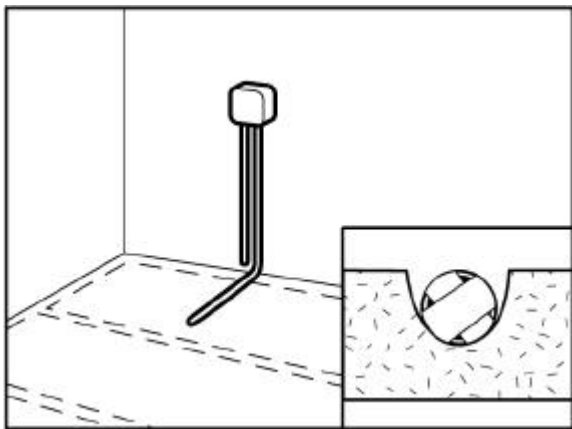


Fig 2.

Priming the floor using Ebeco primer E 89 605 49 or equal will improve the adhesion. Figure 3.

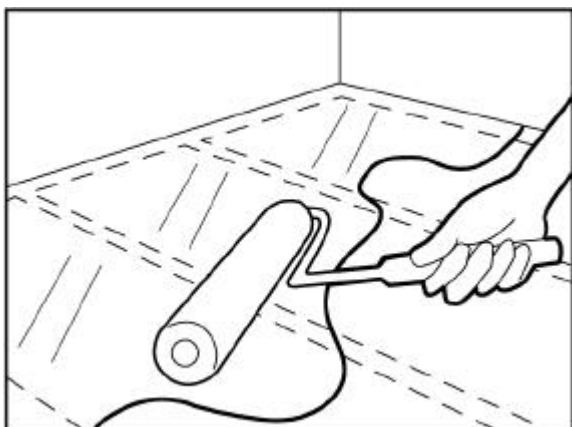


Fig 3

Start fixing the Thermoflex in one corner. If the cold cable is not long enough to reach the connection point/ thermostat, you can cut the matting into as many sections as needed and install the cable along the wall to come closer. The cable splice should be inset in the floor. The matting must not be laid under fixed furnishings, toilets and the like. Note the position of the toilet's screws. Remove approx. 30 cm of the protective paper from the tape (all four pieces of tapes), align the matting and press down the first 30 cm of the matting.

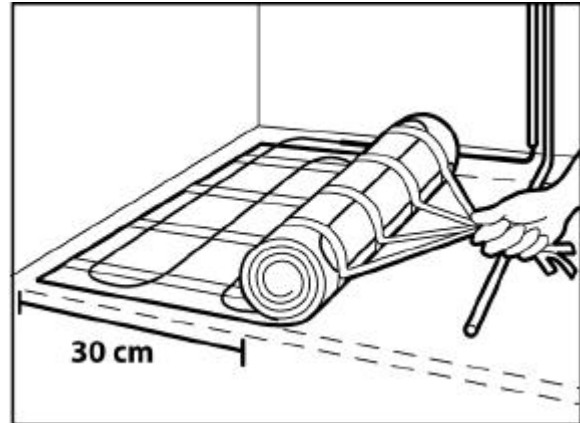


Fig 4

Hold the protective paper from all the tapes. Carefully pull the protective paper. The matting will then roll out and bond to the floor. Press the tape against the floor. Roll out the matting to the opposite wall. Cut the mesh without damaging the cable. Loosen the protective paper and roll the matting back again. The cables should not be closer than 5 cm to each other when cutting the mesh. Figures 5+6.

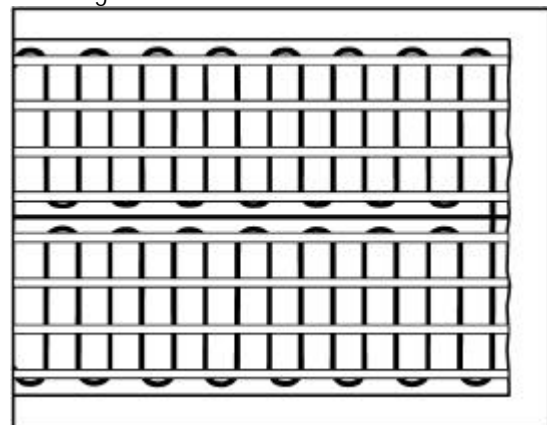


Fig 5

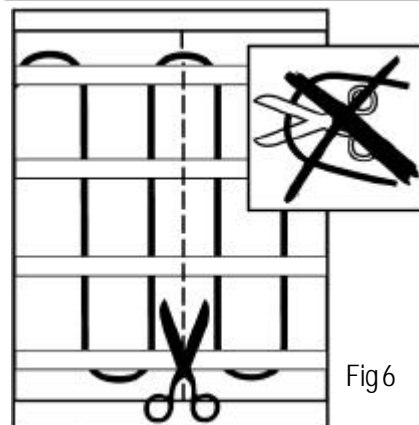


Fig 6

Cut and release a piece of mesh and go round toilets and the like. Figure 7.

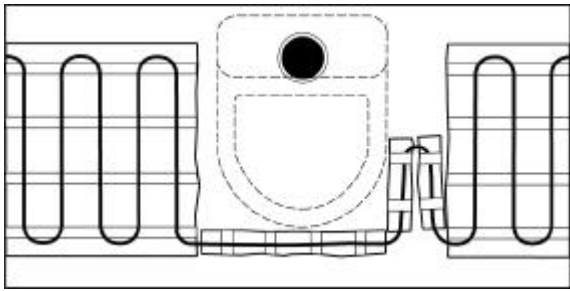


Fig 7

Cut another piece of mesh and place the cable as in figure 7. Now, the matting can be rolled out at the right side, otherwise the installation will be more difficult. When the matting has been laid, go back and press down the tape. The tape is pressure sensitive and adheres better when pressed down well. If you walk on the tape wear shoes with a soft sole or go in bare feet to get a more constant pressure. Figure 8.



Fig 8

To further improve the adhesive qualities the floor can be primed once more using undiluted primer, the matting will then bond very well to the floor. The mesh can also be stapled to plasterboards.

The insulation and resistance of the matting should now be measured. The values should be noted in the test protocol. The position of the matting should be documented on a sketch or photograph and be kept by the distribution box.

The floor is now ready for screeding. For screeding use a screed Ebeco E 89 605 43, Höganäs FB 6000, Casco Multifix or similar. Figure 9.

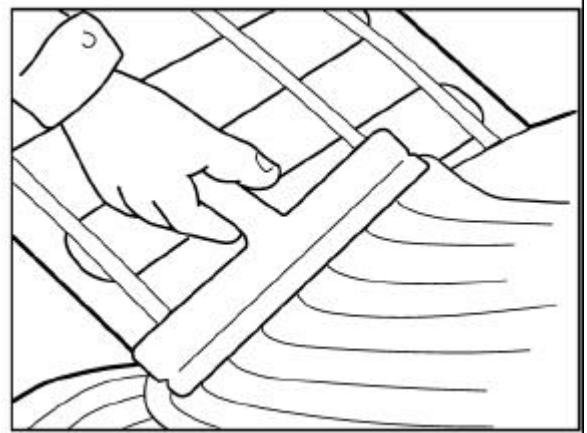
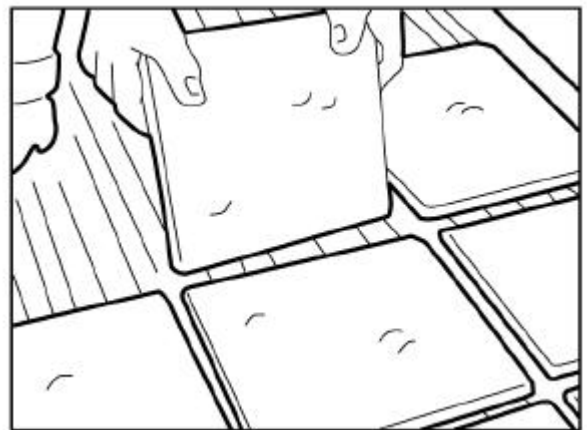


Fig 9

The floor is now ready for the tiling. Follow the manufacturer's instructions with regard to the waterproof membrane. Lay the new flooring according to the manufacturer's instructions. Use flexible fixing and jointing compound. Figure 10.



The completed floor must not be covered with thick insulating mats, beanbag-seating or the like, as these can cause about temperatures harmful to floor.



GUARANTEE CERTIFICATE

GB

030618

Cable Kit, Multiflex, Thermoflex Kit

The guarantee is only valid on condition that an authorised electrical contractor does the installation. To make the guarantee valid, the guarantee slip has to be filled in with the test report together with the specification of material or the contractor on completion of the work signs invoice sheet.

The guarantee covers faults in material for 10 years concerning heating cable/mat(s) and 2 years for other components.

Faults are to be reported to and verified by the authorised electrical contractor. The guarantee slip and appertaining invoice/delivery slip are to be presented in connection with guarantee claims.

Faults covered by the guarantee are repaired or replaced by EBECO without charge to the purchaser regardless of whether it is a question of repairs or replacement of material.

Other costs in addition to this are not covered by the guarantee.

The guarantee is invalid if faults are caused by damage, interference with previous approved assembly or action that is contrary to current regulations.

EBECO AB
Ebbe Larsson, VD

Electrical installation by

.....
According to enclosed specification of material.

Date:

Sign:

Test report

Min. insulation value 10 Mohm.

Product:	<i>Before laying</i>		<i>After fixing</i>		<i>After floor laying</i>	
	Resistance-value	Insulation-value	Resistance-value	Insulation-value	Resistance-value	Insulation-value
E-nr: Cable / Mat 1						
E-nr: Cable / Mat 2						
E-nr: Cable / Mat 3						
E-nr: Cable / Mat 4						
E-nr: Cable / Mat 5						
E-nr: Cable / Mat 6						
E-nr: Cable / Mat 7						

Mark your drawing with the respective number

PRODUCT: _____
 IS INSTALLED IN THE FOLLOWING PREMISES:

NOT PERMITTED TO DRILL, SCREW OR FIT MAT EDGES TO THE FLOOR IN THESE PREMISES!

If flooring is to be replaced, the new material must be suitable in conjunction with underfloor heating. Consult your electrical contractor. Do not place insulating material or furnishing fixed to the floor on the surfaces where underfloor heating is installed, this would otherwise reduce heat transfer to the room and cause elevated temperature.

Product	E no	Length /Size m / m ²	Power / Voltage
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Electrical contractor, signature: _____

Schematic view:

A detailed sketch showing exact positions of cables and any electrical points and rated power is to be posted on the distribution board. A photograph should suitably document the installation. Also note the length and rated power of the heating cables on the schematic sketch. Mark the drawing with the respective number from the test report.

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