

Please read these instructions carefully before commencing installation. All electrical connections must be made in accordance with current IEE wiring regulations & should be carried out by a qualified electrician.

If installing on a concrete floor it is recommended that the floor is fully dry (cured) before commencing installation – this will take approx 1 day per mm in normal conditions, so 50mm of new concrete will take 50 days to fully cure!

The under-tile **cable-mat** is a complete floor heating system consisting of a thin heating cable pre-woven to a self-adhesive mat, floor primer & digital thermostat. The system is intended for heating tiled floors but can be used in a latex type screed below carpets & vinyl flooring. The diameter of the cable is just 3mm and as the cable contains a twin-heating element, it only requires connection from one end (the black cable). Multiple mats can be connected together in parallel using a small junction/connecting box. The electrical and electromagnetic fields are negligible & are well within the recommended EU guidelines. Once the mat is fitted it should ideally be covered with a thin latex leveling screed (3-5mm) alternatively the cable mat can be tiled over directly using a slightly thicker tile adhesive mix. The mats can be laid on any sub-floor, which is structurally sound & suitable for tiling – please consult your tiler/specialist shop if you are unsure. To improve warm-up times & reduce running costs, it is an advantage to install on suitable insulated tile backer boards such as Marmox.

- The installation is controlled by a suitable thermostat with floor sensor.
- The system must be connected to a 230/240v supply **via an earth-fault breaker RCD of 30mA**. It is also recommended that it be **connected via a separate fused spur** in order to be able to isolate the circuit if required.
- The matting can be cut **but the “Orange Heating” cable must not be cut**. Only the “Black Cold” cable can be cut.
- **Resistance measurements of the cable must be made & noted before, during, and after laying the mat and flooring**, do not tile if the resistance is more than 10% different to the value shown on the cable. The 10 year warranty could be invalidated without these readings & the signature of a qualified installer or Electrician
- Try to avoid any traffic over the cables while exposed awaiting tiling – protect with cardboard or similar if at all possible.
- After tiling wait at least 1 week before the heating is switched on, increase the heating gradually.
- The floor must not be covered with thick insulating materials or foam backed carpets, seating without air gaps or the like, as this can result in temperatures harmful to the floor.

The floor heating system is a heavy current assembly, which means that the installation must be carried out according to current IEE wiring regulations and under the supervision of a qualified electrician. Electrical pre-installation, single wall mounted back box (20mm) to house the thermostat with a fused spur power supply via an earth-fault breaker (RCD) 30mA. If the circuit is not protected by an RCD, a combined RCD/Fused spur can be used. The thermostat connection is made according to the separate instructions provided with the thermostat. If more than one mat is being used the black ‘cold cables’ should both be connected in parallel to the thermostat & this can be done either directly at the thermostat or at a small junction box before connecting to the thermostat. Resistance value tolerance +/- 10%

Preparation

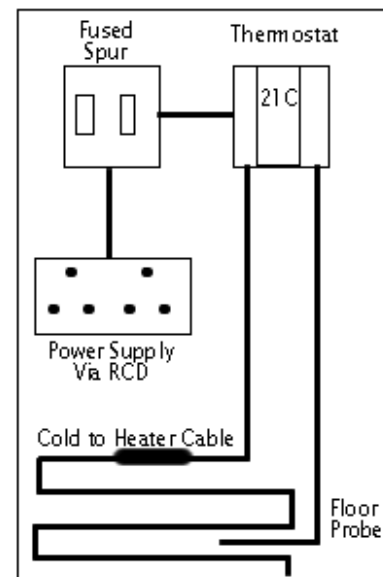
Make sure the floor is solid, without any springiness and clear of any dirt or old flooring residue. Wooden or chipboard flooring with more than 30 cm between floor joists usually needs to be reinforced to prevent cracking and the floor tiles from releasing. This also applies without floor heating. Wood floors can be reinforced with WBP plywood or preferably suitable ‘tile-backer’ insulation boards. Wherever possible insulation boards should be used on top of un-insulated concrete floors as this will reduce both warm-up times & running costs
Recommended boards include Marmox www.marmox.com & Knauf Aqua Panel Thermal, available from your stockiest.

Contents

The kit contains a cable mat, floor primer, primer roller & a digital thermostat with floor sensor.

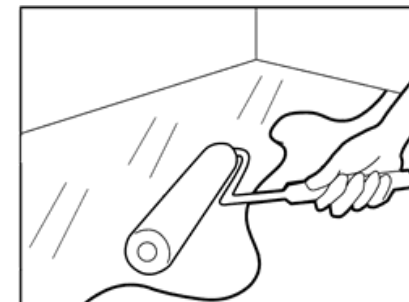
Installation Step 1

Select the desired position of the thermostat & make all provision for first fix electrical installation as per the diagram.



Step 2

Prime the floor with supplied floor primer to ensure good adhesion of the mat. Allow the primer to dry before the next step (2-4 hrs depending on conditions)

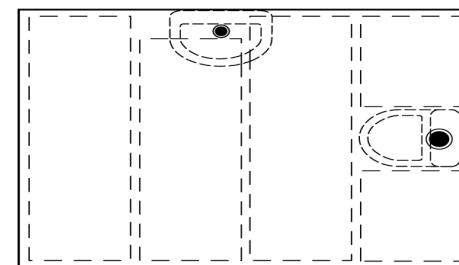


Step 3

Before installing the mat measure the resistance of the cable with an ohm meter or multi-meter and record the values. (They should be approximately equal to the resistance printed on the cable)

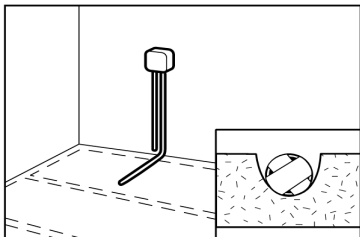
Step 4

Mark the floor at 50cm intervals to calculate the number of individual runs, and then measure each of them to confirm the maximum length of cable mat that will fit into the room. The mat length is shown on the packaging & if you think you have the wrong size **STOP** Do not start to install or cut the mat unless you are sure it will fit into your room, as the mat cannot be returned if it has been cut.



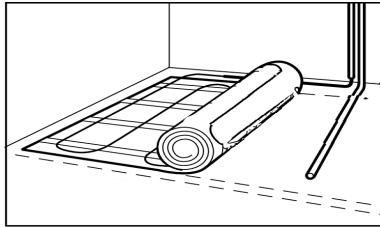
Step 5

Chisel out a groove in the floor & locate the floor sensing probe as per the diagram below

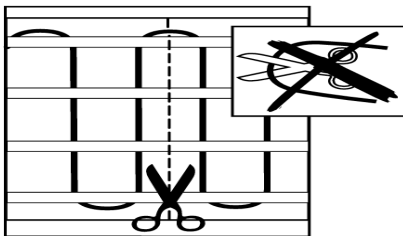


Step 6

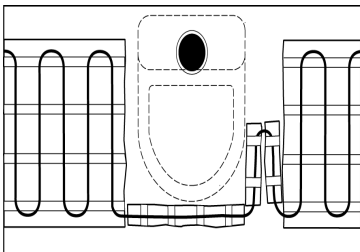
Locate the mat at the starting point a few centimeters from the edge of the room & roll out the mat across the room, lightly pressing the mat onto the floor.



When you reach the opposite wall carefully cut through the mesh, **but not the orange cable** & turn the mat through 180 degrees.



Roll the mat in the opposite direction until you reach the starting wall & then cut & turn again. Repeat this procedure until all the mat is used up taking care to route the mat around any fixed objects



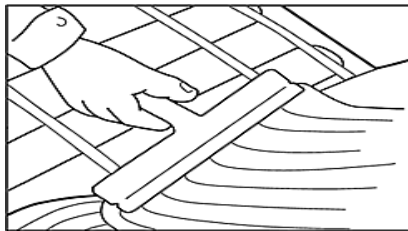
When the entire mat is used, adjust the spacing if required to give an even coverage of the room. When you are happy with the positioning, carefully apply pressure to the matting with your hand to ensure a good adhesion to the floor.



Measure the resistance of the cable once again and record the readings. Document the position of the cable with sketches or photographs and keep these next to the main distribution box.

Step 8

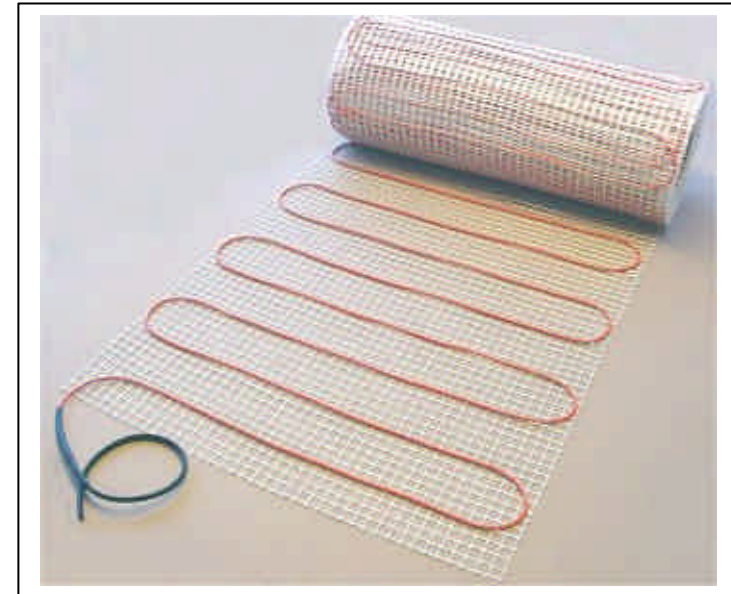
Wherever possible cover the mat with a suitable leveling screed (latex mix, or one with a polymer additive are the most suitable) before tiling as this will help protect the cables & provide a level floor on which to tile. Alternatively you may tile directly over the mat using a thicker bed of flexible tile adhesive.



After tiling wait at least **one week** before turning on your heating. Note the heating may be slow to react at first, but this will improve as the screed & adhesives fully cure & dry out.

Please refer to applicable industry regulations or manufacturer's directives for floor structures, filling, sealing layer, tiling, grouting, etc – details of the most suitable products to use are available from your

Handy Heat Ltd



Cable Mat installation manual

Please read these instructions carefully before commencing Installation.

Contents:

- / Cable mat
- / Floor Primer
- / Primer roller
- / Thermostat with floor sensor