MYHEAT®

Electric Underfloor Heating Systems

UNDERFLOOR HEATING CABLE KIT
INSTALLATION GUIDE

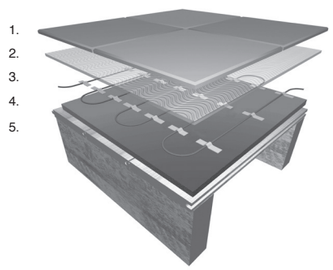
Installation Advice

- All electrical wiring must be carried out by a fully qualified Electrician in accordance with the current IEE wiring regulations.
- The installation must be protected by a 30mA RCD for safe operation (not included).
- Plan your installation carefully. Calculate your actual heated floor area in square metres, Refer to table 1 for cable kit coverage and cable spacings.
- The heating cable must not touch, cross or overlap itself at any point. Ensure a minimum gap between cables of 50mm.
- Consider thermal insulating boards to improve heating efficiency and heat-up times. Especially on concrete subfloors. These boards are usually 10mm thick. On suspended wooden floors always overboard the floor with a surface suitable for tiling. Either tile backer board or WPB plywood.
- Do not install the heating cable directly under permanent fixtures (baths, toilets etc) under carpet or other non-masonary flooring.
- The cold lead is 3m long. It can be cut / extended to suit the location of the mains power connection box.
- Thermostat floor sensor location should be centred between 2 runs of the heating cable.

Step 1: Floor Instructions

Concrete Subfloors: The insulation level of your subfloor will effect the performance and running costs of your floor heating system. For optimum performance it is recommended that an insulated tile backer board is installed on a concrete subfloor before laying the cable. This will minimise heat losses to the subfloor, reducing heat up times and running costs. The cable can be laid directly onto an uninsulated concrete floor, however it is not recommended.

Wooden Subfloors: Should be reinforced and stabilised to prevent flexing and dislodging of tiles. Overboard timber floor boards or chipboard with a surface suitable for tiling, as a rigid base is essential. Either tile backer board or WBP plywood fixed securely.



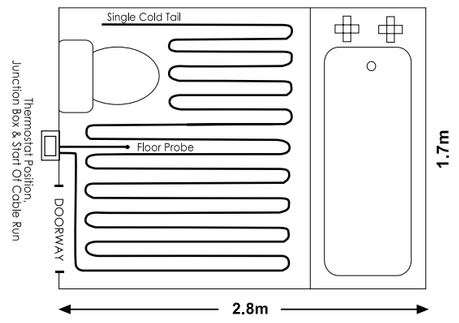
1. Tile / stone floor
2. Tile adhesive / self levelling compound
3. Cable
4. Thermal insulation
5. Concrete / suspended timber floor

Step 2: Planning

Plan your installation using a sketch, marking your laying pattern and the positions for the thermostat and floor limit sensor. This is an important step as you must ensure that all the heating cable is placed under the tiles and that you have the correct cable size to fit the floor and provide even heat distribution.

First measure the “free floor area” that you want heated. When calculating this area do not include the areas under fixed floor furniture like baths, WC’s, cabinets etc. Then allow a minimum perimeter clearance of 50mm around the edge of the room. With this calculated value, check that you have the correct kit size from table 1 and obtain the cable spacing. It is important that this planning is done as the heating cable can never be cut or shortened.

Example of planning sketch



Step 3: Heating Control

The floor heating cable must be controlled by a thermostat with a floor limit sensor. The choice ranges from a sophisticated timer/thermostat with LCD display that can be programmed for convenience to simple manual thermostat with temperature dial adjustment with an on/off switch.

Whatever type you have chosen to install, the thermostat should be installed within the room to be heated.
For bathrooms or shower rooms the thermostat must be placed outside the room but as close to the installation as possible. Control of the heated floor in this application is provided by the floor sensor only.

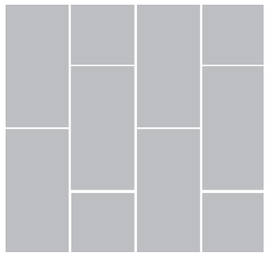
Refer to the thermostat instructions for installation and technical information.

Manual

Programmable

Step 4: Lay the Thermal Insulation

The floor should be level and dust free. New concrete screeds should be well cured and wooden floor boards should be well secured with screw fixings to prevent movement.
Insulation boards should be laid onto a suitable flexible tile adhesive which has been applied with a notched trowel. Lay boards in a staggered pattern. Boards should be thoroughly bedded ensuring no air pockets remain. Joints can be taped with a fibreglass reinforcing tape.



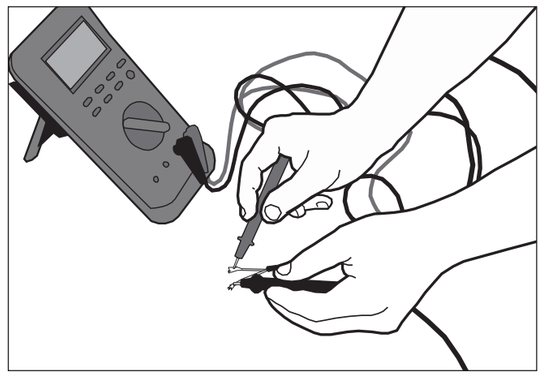
Step 5: Prime the Subfloor

Use the primer and roller contained in the kit to prime the subfloor. Apply primer evenly and allow sufficient time for the primer to dry (usually 1 – 3hrs depending on temperature conditions).
Avoid foot traffic over the floor area, once primed.
For larger areas or absorbent surfaces the primer may need to be diluted with water. See primer instructions on bottle.

Step 6: Test the Heating Cable

Before you start laying the heating cable, test it while it is on the reel. Use a multimeter (Ohm meter) to ensure that the resistance equals the value on the cable label or from table 1. You should plan to check the heating cable resistance regularly during the tiling process.

If the resistance reading varies outwith the tolerance (-5 to +10%) stop immediately and call the technical helpline.



Pre-Installation Check List
Products:
Heating cable drum – ensure correct size before unrolling
Floor primer and roller
Adhesive fixing tape
Thermostat inc floor sensor + sensor conduit
Insulation boards (if required)
RCD 30mA (Residual Current Device) if not already fitted
Tools:
Multi-meter for checking continuity and resistance
Measuring tape and marker pen

Step 7: Lay the Heating Cable

Mark the layout of the heating cable on the prepared subfloor with a fibre tipped pen.

Mark the perimeter of your heated area together with the cable spacing. The cable spacing and perimeter wall clearance must be a minimum of 50mm. Mark the position of your start point. Ensure that this is close to the planned thermostat position. The cable “cold tail” lead is 3m long.

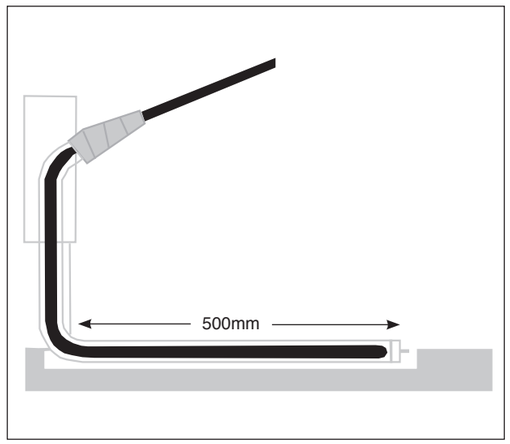
Start unrolling the heating cable, according to your floor markings and lay in parallel loops. Secure the cable to the floor with strips of adhesive tape. At this point only use a minimal amount of fixing tape as you may have to reposition the cables once the whole cable has been installed to achieve the best fit (see diagram below).

The cables must be looped in regular intervals providing the floor with an even cover. If you have excess heating cable at the end of the installation you may have to adjust the cable spacing. If, after adjustment, the heating cable spaces are less than 50mm, do not proceed with the installation as your heating kit is too large for the area.

Once you are satisfied with your cable layout pattern, tape the cable down using the rest of the fixing tape. It is important to securely tape the cable as this offers protection from damage and prevents movement during tiling.

Step 8: Install the Floor Sensor

Install the thermostat floor sensor by threading into the supplied protective conduit. Tape the end of conduit to prevent the adhesive entering. The conduit should be positioned between two cable runs. Ensure that you have sufficient sensor cable to stretch back to the low level junction box. Avoid crossing over any of the heating cable. You will need to recess the conduit into the floor by creating a groove so that it is below the finished level of the heating cable.



Step 11: Wiring Up (Electrician Only)

A fully qualified electrician must now make the final connections to the main supply and install the thermostat. The electrician should check for continuity of the floor sensor and test the resistance of the cable. This reading should be recorded on the installation plan record sheet.

Step 12: Guarantee Certificate

Following installation the guarantee certificate and installation plan record sheet should be fully completed. The installation plan should include a sketch/plan of the cable layout and position of the floor sensor. The guarantee certificate, installation plan and purchase receipt should be permanently fixed near the consumer unit.

Step 13: Switching On

Wait at least 7 days before turning on the system to allow time for the adhesive to dry.
Follow the thermostat instructions to program your heating system.

FAQ’s

Q: Can I reduce the size of the cable?
A: No the cable cannot be shortened. The cable must not be cut. It is important to buy the correct cable size for the area you want heated at the correct heat output. See table 1 for coverage.

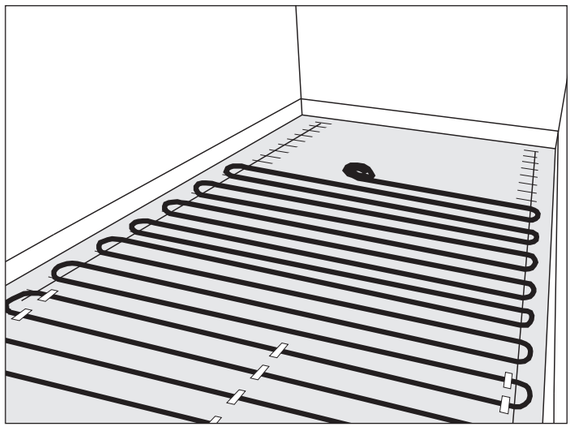
Q: Can I install the heating cable myself?
A: Heating cables are easy to install by following these simple instructions. Only the final connection to the mains supply and installation of the thermostat must be carried out by a suitably qualified electrician.

Q: What if I accidently damage the cable during installation?
A: The cable can, in most cases, be simply repaired by using a cable repair kit available separately.

Q: Can I use the underfloor heating as the sole source of heating in my room.
A: If you are considering the heating cable as the sole source of heating in a room you need to ensure that you allow sufficient heat input to cover the heat losses. Take advice from your Architect or Heating Engineer to calculate the heat input (cable size) required.

Q: Why can’t I turn on the heating system immediately after tiling?
A: Turning on the heating system before the tile adhesive has fully cured will accelerate the drying out process. This may cause micro cracking of the material which could be detrimental to it’s long term performance.

Step 7: Lay the Heating Cable



Step 9: Test the Heating Cable

Before commencing tiling. The heating cable should be tested again to ensure that it has not been damaged during installation.

Step 10: Complete Your Installation

Using Tile Adhesive
Use flexible tile adhesive suitable for use with underfloor heating. Ensure the heating cable is fully taped and fixed in position. The cable should initially be covered with a layer of tile adhesive applied with a rubber backed trowel or similar taking care not to dislodge or damage the cable. Ensure the cable is completely covered with no gaps or air pockets. Once dry, another layer of adhesive can then be applied carefully using a notched plastic trowel to comb the adhesive before laying the tiles.

Using Self Levelling Compound
This method provides a smooth surface to tile on while protecting the heating cable when tiling. It is the recommended method for all but the smallest installation. A flexible self levelling compound that is suitable for underfloor heating must be used. Mix the compound and pour the self levelling compound over the installed cable to a depth that the cable is completely covered with no air pockets or voids. Allow to completely dry before laying tiles using a flexible tile adhesive suitable for underfloor heating.

Technical Information

Table 1.

Area to be Covered m^2	Cable Length (m)	Power (w)	Current (a)	Resis-tance (Ohms)	130w/m^2 c-c=77mm Area(m^2)	150w/m^2 c-c=67mm Area(m^2)	200w/m^2 c-c=50mm Area(m^2)
0.3-0.5m^2	6.6	65	0.3	813.8	0.5	0.4	0.3
0.6-0.9m^2	11.4	120	0.5	440.8	0.9	0.8	0.6
0.9-1.5m^2	18.9	200	0.9	264.5	1.5	1.3	0.9
1.2-1.8m^2	23.6	250	1.1	211.6	1.8	1.6	1.2
1.6-2.4m^2	31.6	320	1.4	165.3	2.4	2.1	1.6
1.8-2.8m^2	36.9	400	1.7	132.3	2.8	2.5	1.8
2.3-3.5m^2	45.7	450	2.0	117.6	3.5	3.1	2.3
2.5-3.8m^2	49.6	520	2.3	101.7	3.8	3.3	2.5
3.2-4.9m^2	63.9	600	2.6	88.2	4.9	4.3	3.2
3.8-5.8m^2	75.8	750	3.3	70.5	5.8	5.1	3.8
4.4-6.7m^2	87	950	4.1	55.7	6.7	5.8	4.4
5.5-8.8m^2	114.5	1100	4.8	48.1	8.8	7.7	5.5
6.6-10.0m^2	131.3	1300	5.7	40.7	10.0	8.8	6.6
7.9-12.0m^2	158.8	1700	7.4	31.1	12.0	10.6	7.9
10.0-15.0m^2	194.5	2000	8.7	26.5	15.0	13.0	10.0

Contact Information

Please contact us if you have any problems with the installation of your heating cable.

Technical helpline: 0800 954 8862

Fax: 0800 954 8863

Email: sales@myheat.co.uk

Address:
MyHeat
Telford Road, Glenrothes KY7 4NX

For information about our products visit our website at www.myheat.co.uk