

# CORGI Undertile Heating Cable Instructions



## Testing

You must not apply power to the heating cable to test it, but should use appropriate test equipment to check that live to earth and neutral to earth show infinity. These tests should be carried out prior, during and after installation of the cables. Live to neutral should show the Ohms value listed below. If the test results are not as expected you should contact your supplier/Corgi Underfloor Heating.

Product Code	Unit Power	Cable Length	Coverage at 150W/sqm	Coverage at 200W/sqm	Ohms Value +/- 10%
UFCAB200	200W	11.8	1.3	1.0	270 Ω
UFCAB300	300W	17.6	2.0	1.5	190 Ω
UFCAB400	400W	23.5	2.7	2.0	140 Ω
UFCAB600	600W	35.3	4.0	3.0	95 Ω
UFCAB800	800W	47.1	5.3	4.0	72 Ω
UFCAB1200	1200W	70.6	8.0	6.0	48 Ω

Technical/construction data	
<b>Voltage:</b> 240Vac-50Hz	<b>Wire thickness:</b> 3mm
<b>Maximum load:</b> 17 W/m	<b>Power Range:</b> 200W to 1200W
<b>Wire type:</b> Dual conductor/single coldtail	<b>IP Rating:</b> IPX7 as required by the 17th Edition
<b>Maximum Cable Temperature:</b> 90°C	<b>Approved to:</b> EN 60335-1:1998, EN60335-2-17:1999, IEC 60730
<b>Approvals:</b> CE Marked, Independently Approved, 17th Edition	
<b>Compliant:</b> Low EMC, Manufactured in Western Europe	

## Basic wiring information

- A qualified electrician should confirm the electrical requirements of the project.
- RCD protection must always be included in the circuit supplying power to the heating cable.
- The connection between the heating cable and the supply lead, as well as the end return of the heating cable, must never be bent and must always be fully encased within flexible tile adhesive or levelling compound.

## Do's

- All heating cables must be connected in parallel not in series.
- Make sure you never cut, shorten, lengthen, strain or cross heating cables.
- You must always ensure the floor sensor is not fitted near another heat source such as a radiator pipe or where rugs, mats or furniture are expected to be placed on top of the floor.
- You should make sure the systems output is between 130W/sqm and 220W/sqm.
- To provide equal heat over the floor the cables must be spaced evenly.
- Consider using thermal insulation beneath your heating system if the floor base is poorly insulated.

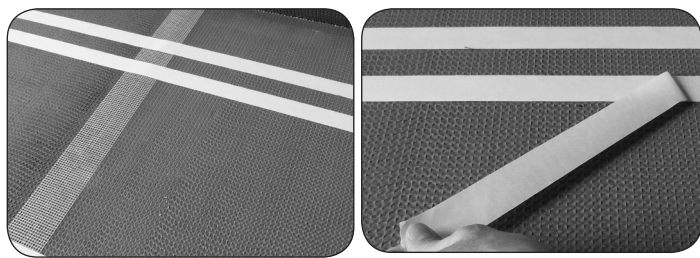
## Cable Spacing

If your room is a high heat loss/poorly insulated area such as a conservatory we recommend installing the cable at 200W/sqm. If your room meets current building regulations 150W/sqm should provide full room heating. To comply with the latest regulations the thermal resistance between the heating system and the room must not have an insulation value higher than  $0.125\text{m}^2\text{K/W}$ .

Some typical insulation values for floor coverings are listed below:

- Tile, stone and thin vinyl floors are usually up to  $0.035\text{m}^2\text{K/W}$ .
- Carpets with a hessian backing and low Tog rated underlay are usually up to  $0.125\text{m}^2\text{K/W}$
- Parquet and laminate floors up to 18mm thick are normally no more than  $0.125\text{m}^2\text{K/W}$ .
- Wood fibre and cork floors and rubber backed carpets or rubber based underlays are not suitable for use with underfloor heating as their insulation value is usually above  $0.175\text{m}^2\text{K/W}$ .
- Any material used to cover the heating system should have a density of at least  $1,500\text{kg/m}^3$  to ensure good heat transfer of at least  $1\text{W/m}^2\text{K}$ . All normal tile adhesives, levelling compounds and screeds conform to this standard.

# Installation instructions



## Preparing your floor

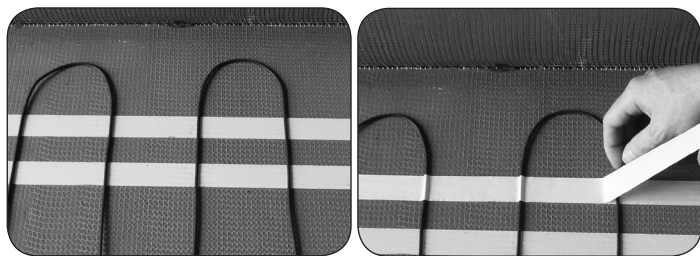
The floor base must be firm, level, and free of dust, dirt and oil and suitably firm for your chosen floor covering/levelling compound. If the floor is not a uniform construction you should use a tile-backer board to equalise it. Before installing the cable the base should be primed with a primer compatible with the tile adhesive or levelling compound you are using.

## Installing your CORGI undertile heating cable

You should protect the cables with cardboard or carpet when walking on them.

Strips of double-sided tape should be laid across the room in the opposite direction to the heating cable. They should be spaced about 1m apart with two runs close together at the edge of the room.

Start laying the cable at a point close to the thermostat to make the connection simple. Continue to lay your heating cable at the desired spacing taking care not to place any cable closer than 30mm to conductive parts or other heating cables.

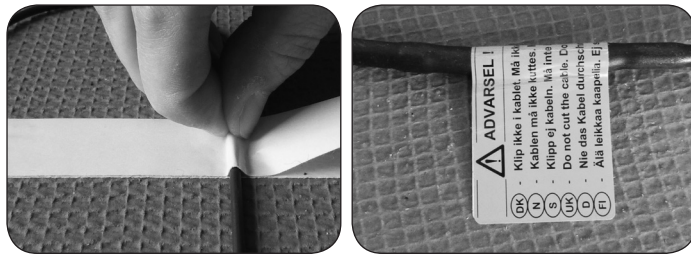


Take care not to crush any of the cable or connections during installation. You must not leave any air pockets around the cable when it is being covered with tile adhesive or levelling compound as this will cause it to overheat.

It is common that the cold-tail connection will have to be chased into the sub floor, and if you do this you must line the groove with tile adhesive or levelling compound.

Masking tape should be used to secure the heating element to the floor - this should be laid along the existing runs of double sided tape and pinched around the cable.

The floor sensors should be installed in a length of close ended conduit 500mm into your room between two heating cables.



## Installing the final floor covering

Before covering the heating cables once again check the resistance and continuity of all heating cables and we recommend a visual inspection of the cables should be carried out as any damage to the outer insulation may not show up on electrical checks. If any damage is found your supplier can supply a cable repair kit.

We recommend skimming over the cables with tile adhesive or covering with levelling compound and allowing it to dry before laying your final floor covering with a full bed of adhesive if required.

Floor coverings including mosaic tiles, carpets, vinyl and wood will require at least a 12mm thick covering of suitable flexible levelling compound over the cables. Please seek advice from the manufacturers of all tile adhesives, grouts and levelling compound to ensure they are suitable for use with electric underfloor heating.

When cleaning out grout lines be particularly careful not to snag or catch the heating cable and you must never use the heating system to speed up the drying out process of the wet trade. The heating system must not be turned on until all wet trade is fully cured.

## Electrical connections

All installations must comply with the current electrical regulations and a Part 'P' certificate should be issued for each installation. The thermostat should be supplied by a suitably rated fuse spur or circuit breaker and the power supply must be protected by a suitable RCD.

## Thermal blocks

When you lay any item onto a heated floor it will trap the heat. This may cause damage to both the underfloor heating system and the floor covering if the temperature becomes too high. Thermal blocks can be caused by items such as beanbags, rubber backed rugs and furniture without air gaps. You should not place these items above areas where underfloor heating cables are laid.

## Warranty

Refer to: [www.corgiunderfloorheating.co.uk](http://www.corgiunderfloorheating.co.uk)  
for details of the warranty and distribution board documents

*CORGI Underfloor Heating accept no liability, either express or implied, for any losses suffered (including consequential losses) as a result of this CORGI Underfloor Heating System being installed in a method that does not follow the installation guidelines contained in this booklet.*