

CORGI Underfloor Heating Mat Instructions



Testing

You must not apply power to the heating mat 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 mats. 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	Coverage (m ²)	Mat length	Mat width	Ohms Value +/- 10%
UFMAT010	150W	1.0m ²	2.0m	0.5m	384 Ω
UFMAT015	225W	1.5m ²	3.0m	0.5m	256 Ω
UFMAT020	300W	2.0m ²	4.0m	0.5m	192 Ω
UFMAT025	375W	2.5m ²	5.0m	0.5m	145 Ω
UFMAT030	450W	3.0m ²	6.0m	0.5m	128 Ω
UFMAT040	600W	4.0m ²	8.0m	0.5m	96 Ω
UFMAT050	750W	5.0m ²	10.0m	0.5m	77 Ω
UFMAT060	900W	6.0m ²	12.0m	0.5m	64 Ω
UFMAT070	1050W	7.0m ²	14.0m	0.5m	55 Ω
UFMAT080	1200W	8.0m ²	16.0m	0.5m	48 Ω
UFMAT090	1350W	9.0m ²	18.0m	0.5m	43 Ω
UFMAT100	1500W	10.0m ²	20.0m	0.5m	38 Ω

Technical/construction data	
Voltage: 240Vac-50Hz	Compliant: Low EMC, Manufactured in Western Europe
Maximum load: 17 W/m	Wire thickness: 3mm
Wire type: Dual conductor/single coldtail	Power Range: 150W to 1500W
Maximum Mat Temperature: 90°C	IP Rating: IPX7 as required by the 17th Edition
Approvals: CE Marked, Independently Approved, 17th Edition	Approved to: EN 60335-1:1998, EN60335-2-17:1999, IEC 60730

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 mat.
- The connection between the heating mat and the supply lead, as well as the end return of the heating mat, must never be bent and must always be fully encased within flexible tile adhesive or levelling compound.

Do's

- All heating mats 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.
- To provide equal heat over the floor the mats must be spaced evenly.
- Consider using thermal insulation beneath your heating system if the floor base is poorly insulated.

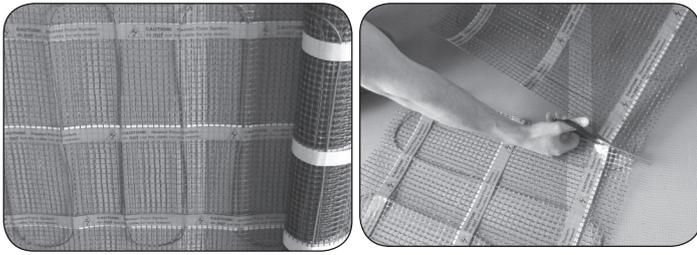
Heating Mat

A 150W/sqm system is suitable to provide full room heating in well insulated rooms on well insulated floor bases or floor heating in less well insulated rooms. If the room or floor base the system is going to be installed on is poorly insulated we recommend installing a concrete faced thermal insulation board directly beneath the underfloor heating system. Insulation installed beneath a heating system will reduce the warm up time of the system and reduce running costs. Systems installed onto badly insulated floors may not meet your expectations. To comply with the latest regulations the thermal resistance between the heating system and the room must not have an insulation value higher than 0.125m²K/W.

Some typical insulation values for floor coverings are listed below:

- Tile, stone and thin vinyl floors are usually up to 0.035 m²K/W.
- Carpets with a hessian backing and low Tog rated underlay are usually up to 0.125 m²K/W
- Parquet and laminate floors up to 18mm thick are normally no more than 0.125 m²K/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 m²K/W.
- Any material used to cover the heating system should have a density of at least 1,500kg/m³ to ensure good heat transfer of at least 1W/m 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 mat the base should be primed with a primer compatible with the tile adhesive or levelling compound you are using.

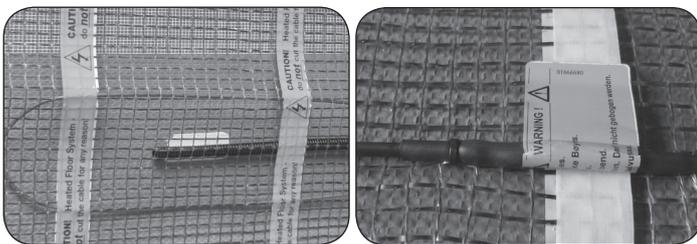
Installing your CORGI underfloor heating mat

It is advisable to draw a plan of how you will lay the heating mats as this will enable you to ensure you have the right combination for your room. You should protect the mats with cardboard or carpet when walking on them. Start laying the mat at a point close to the thermostat to make the connection simple.

Roll out the heating mat with the cable on the underside until you reach the far wall, cut sideways through the mesh carefully avoiding the heating element. This will now allow the mat to be rotated and rolled in the opposite direction.

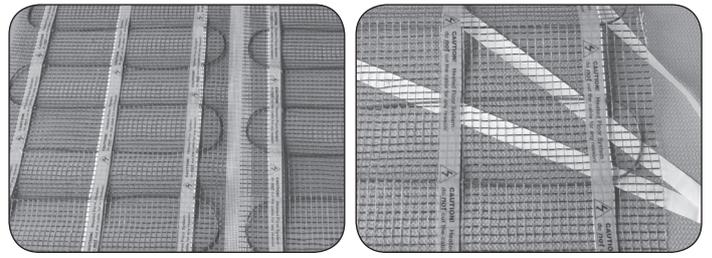
Once you are happy with the position of the mats, the backing paper can be removed from the tape on the underside and secured to the base.

If you have a particularly complicated area to cover, sections of the mesh can be removed to leave the loose cable. The cable should be secured to the base using double sided tape and should be spaced at the same distance as on the mat.



Take care not to crush any of the heating 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. The floor sensors should be installed in a length of close ended conduit 500mm into your room between two heating mats.



Installing the final floor covering

Before covering the heating mat once again check the resistance and continuity of all heating cable and we recommend a visual inspection of the mats 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.

If fitted under tiles we recommend skimming over the mat 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 mat. 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 mat 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 mats are laid.

Warranty

Refer to: 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.