

About Cosytoes® Underfloor Heating

Cosytoes® is a British company and all our products are manufactured to the highest standards for quality and safety.

Key Features

- Control units will make your floors warm just when you need it.
- Our systems keep energy costs to a minimum.
- When heating a modern home, TradeMat+ uses approximately 1p/hour, per square metre.
- Our products are simple to install, extremely tough, resilient and truly exceptional quality.

Help and Assistance:

Should you need any assistance, please contact us

Phone Support: 0113 2577 588

Email Support: cs@cosytoes.co

Sales Tel: 0113 2577 588 | Fax: 0113 236 2300

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Heating Mats and Cables

Important- Things to Avoid*

- Under no circumstances should the heating cable be cut to shortened or lengthened.
- Heating cables should be no closer than 5cm to each other and under no circumstances should they cross.
- The joint between the cold connection wire and the heating cable should be installed flat and level and should not be bent i.e. to go up the wall.
- The heating mat should not be installed on an uninsulated concrete floor. Insulate insulated concrete floors for quicker a heat up time.
- Cement boards soak up the heat and cause a longer heat up time.
- The heating cable should not be installed under fixed objects where the heat cannot escape.
- Don't forget to fit the floor probe – it's in the Timerstat box.
- Don't connect a rolled-up mat or cables to the mains – it will be fatally damaged.

Loose Cable



For Awkward Areas

Cosytoes® Loose Cable is ideal for irregular shaped floor areas, such as a small bathroom.

Note: The electrical and general installation requirements for Loose Cable are similar to Trade Mat+ so please read both sets of instructions before commencing work.

Technical Information

Product/Length (Metres)	Output	Area Covered (Sqm)	Resistance
A150	150w/0.7amps	0.75-1.25	353 Ω
B300	300w/1.3amps	1.5-2.5	176 Ω
C450	450w/2.0amps	2.25-3.75	118 Ω
D600	600w/2.6amps	3.0-5.0	88 Ω
E750	750w/3.3amps	3.75-6.25	71 Ω
F900	900w/4.0amps	4.5-7.5	59 Ω

Loose Cable Installation

Use Cosytoes Loose Cable where the floor area to be heated is an awkward shape and not easily accommodated by a heating mat. The floor and electrical preparation are similar to that for a mat installation, the only difference is that the heating cable needs to be fixed down along its entire length. Always remember that it

is important to achieve consistent cable spacing for an even heat over the floor surface and to avoid hot and cold spots. Under no circumstances should any cable be closer than 50mm to its neighbour to avoid long term overheating and deterioration.

Planning the installation

	Spacing (mm)	100	95	90	85	80	75	70	65	60	55
Product Output (Watts)	Cable Length (Metres)	Area Covered (Square Metres)									
A150 - 150w	13	1.25	1.20	1.15	1.10	1.05	1.00	0.93	0.87	0.81	0.75
B300 - 300w	26	2.50	2.40	2.30	2.20	2.10	2.00	1.88	1.75	1.63	1.50
C450 - 450w	41	3.75	3.60	3.45	3.30	3.15	3.00	2.94	2.75	2.44	2.25
D600 - 600w	54	5.00	4.80	4.60	4.40	4.20	4.00	3.75	3.50	3.25	3.00
E750 - 750w	68	6.25	6.00	5.75	5.50	5.25	5.00	4.69	4.38	4.06	3.75
F900 - 900w	83	7.50	7.20	6.90	6.60	6.30	6.00	5.63	5.25	4.88	4.50
	Watts/sqm	120	126	132	138	144	150	163	175	188	200

To calculate the free area available for heating, simply allow for a 100mm (0.1 metre) margin around the full perimeter of your room and any fixed objects and deduct the sum of this from the total area. You should then choose a cable size or a combination of cable sizes that is equal to or less than this figure. (Remember that heating cables cannot be shortened). The cable should not be laid over or close to any existing hot water service or

central heating pipes and bear in mind that the heating cable should be laid approximately 80mm apart or as the following spacing chart. Remember that areas under fixed objects, such as baths, toilets, shower trays, kitchen units, cookers etc. are not normally heated and thought should be given to the final fixing of kitchen units and sanitary ware etc., to avoid damaging the heating element.

Planning and laying the heating cable

Following on from the floor preparation for installing mats, once the primed floor is completely dry, you can plan and mark out the layout of the heater cable. Having

already calculated the floor area and chosen the cable size, use the following table to work out your cable spacing.

Cable spacing and heater output

Adjusting the space between the cable runs will vary the output of the heating cable per square metre. For example, spacings of 100mm give an output of 120 w/sqm, 75mm gives 150 w/sqm and 55mm gives 200 w/sqm.

Note: These are the preferred outputs and spacings, but on no account should the cable be laid with spacings less than 50mm which can cause overheating and deterioration of the cable.

For Example: - your heated area is 5.00 square metres and the product is an E750. From the table the spacing is 75mm to give 150w/sqm. Or if the product is D600, the spacing is 100mm to give 120w/sqm* (The heated area is the total floor area minus fixed objects and 100mm - perimeter strip).*

Note: The dimensions shown in the chart are approximate and may change slightly due to the configuration of the room and the way that the cable is laid. Any surplus cable can be run around the perimeter of the room.

Marking the layout

Having decided on the required spacing, using a marker pen, mark a perimeter line 100mm in from the edge of the room and any fixed objects. Then starting at the closest

corner of the room, adjacent to the timerstat, (the starting point), mark out the spacing intervals for the heater cable. Endeavour to keep all spacing as uniform as possible.

Laying the heating cable

Once you have completed marking the floor, the heating cable can now be laid out. Gently unwind the power supply cable from the cable reel until the joint with the heating cable is reached, this should then be taped to the floor at the start point using the adhesive tape supplied. At this point it is a good idea to check the electrical resistance of the cable, so as to ensure that there is a circuit,

In the unlikely event that there is a fault. The reading should be approximately similar to that on the ratings label on the reel, or as shown in the chart. Now lay the cable in parallel lines, back and forth across the floor area, following the spacing marks and fixing it lightly at intervals with short pieces of adhesive tape. Continue to the end of the cable and adjust cable if necessary. Any excess

cable can be run along the centre of the perimeter space ensuring that equal spacing is maintained between cable runs. Ensure that the heating cables are never allowed to touch or cross, are not twisted, knotted, kinked or coiled and are not shortened or modified in any way. Also, the heating cable should not be laid up stairways or wall areas. Please contact the technical help line if you need assistance. When the layout has been completed and any adjustments made, the entire length of cable should now be taped to the floor to provide protection during tiling. Ensure that it is straight and in full contact with the floor and by running your thumb and forefinger along the tape either side of the cable, remove any air gaps. Now remove any debris and unless the floor is to be tiled immediately, it should be covered to protect the heating cable.

Installing the timerstat and floor probe

The floor probe is packaged with the timerstat. The timerstat will not work with a probe from a different model. The floor probe has a 3m lead attached, that can

be shortened or lengthened with suitable wire. Tape the probe end down to the floor midway between 2 heating wires and run the cable up to the timerstat back-box.

Test the heaters

Before completing the electrical installation, it is advisable to check that the heater is working correctly. This can be

done by temporarily wiring the heater cable to a 3-pin plug as per the installation for mat installation.

Decoupling Mat Cable



For Small to Large Areas

A new range of heating cable specially designed to fit cable carrier decoupling mat for installation in small to large areas including conservatories.

Technical Information

Length	Output	Resistance	Centres/Area Covered			
			95mm	80mm	65mm	50mm
12.5m	150W/0.7A	353Ω	1.2m ²	1.0m ²	0.8m ²	0.6m ²
25.0m	300W/1.3A	176Ω	2.4m ²	2.0m ²	1.6m ²	1.3m ²
37.5m	450W/2.0A	118Ω	3.6m ²	3.0m ²	2.4m ²	1.9m ²
50.0m	600W/2.6A	88Ω	4.8m ²	4.0m ²	3.3m ²	2.5m ²
62.5m	750W/3.3A	71Ω	5.9m ²	5.0m ²	4.0m ²	3.1m ²
75.0m	900W/4.0A	59Ω	7.1m ²	6.0m ²	4.9m ²	3.8m ²
87.5m	1050W/4.6A	50Ω	8.3m ²	7.0m ²	5.7m ²	4.4m ²
100.0m	1200W/5.2A	44Ω	9.5m ²	8.0m ²	6.5m ²	5.0m ²
112.5m	1350W/5.9A	39Ω	10.7m ²	9.0m ²	7.3m ²	5.6m ²
125.0m	1500W/6.5A	35Ω	11.9m ²	10.0m ²	8.1m ²	6.3m ²
150.0m	1800W/7.8A	29Ω	14.3m ²	12.0m ²	9.8m ²	7.5m ²
			125 W/m ²	150 W/m ²	185 W/m ²	250 W/m ²

Laying the Cable by Taping to the Floor

If you wish to install this cable by taping it down to the sub-floor, then you should follow the instructions for the

Loose Cable. Use 25mm cloth tape for sticking it down along its entire length.

Laying the Heating Cable Using a Proprietary De-Coupling Carrier Mat

Check the centres on the decoupling carrier mat before choosing cable length required. The decoupling mat should be installed on the subfloor following the

manufacturers instructions. From the start point, carefully push the cable into the matrix. Ensure that the heating cables are never allowed to touch or cross.

Installing the Timerstat and Floor Probe

The probe is packaged with the timerstat. The timerstat will not work with a probe from a different model. The probe has a 3m lead attached, that can be shortened or

lengthened with suitable wire. Tape/fix the probe end down midway between 2 heating wires and run the cable up to the timerstat back-box.

Test the Heating Cable Before Tiling

Before tiling is commenced do a resistance test to ensure that no damage has occurred to the heating cable

Decoupling Carrier Mat

Loose cable underfloor heating systems are suitable for installation with a decoupling carrier mat. As soon as the decoupling matting has been installed and the adhesive has cured, the electrical heating system can be installed to

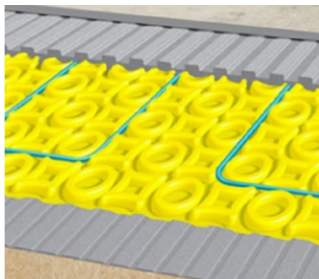
the manufacturer's instructions. For general room heating we recommend that cables be installed in the membrane at 75-80mm.

Important Information:

It is of vital importance that the installation of any underfloor heating system is pre-planned. Care must be taken to understand the requirements of the heating

system of your choice. The heating cable layout must be pre-planned to avoid any "cross overs". The positioning of sensors and the power supply must be predetermined.

Electric Underfloor Heating Decoupling Carrier Mats



The professionals choice for loose cable installations

Technical Information

The installation of the underfloor heating should be pre-planned to avoid any “cross-overs”. The positioning of sensors and the power supply must be considered. For general room heating we recommend that cables should be installed in the carrier decoupling mat with approximately 75 mm spacings. The sub floor must be free of any loose material that could impair adhesion and must be level and able to bear weight. Any floor levelling

must be completed before the carrier decoupling mat is installed. The adhesive should be chosen dependent on the nature of the sub floor and be capable of bonding to the sub floor surface and to the backing fleece of the carrier decoupling mat. The stud pattern alignment should be ‘matched’ and the whole of the floor should be covered. Cover with walk-boards to protect the carrier decoupling mat from damage.

Adhesive

For most surfaces a water-based thin bed adhesive (C2 quality) can be used. The adhesive is applied to the sub

floor using a serrated trowel (6x6mm).

Installation

In wet areas it is advised to seal junctions between mat sections with WPFB tape. Preformed corner sections can be used for internal and external corners.

As soon as the carrier decoupling mat has been installed and the adhesive has cured, the electrical heating system can then be installed.

Tiles can then be installed using a thin bed adhesive appropriate to the flooring. Practically, it is advisable to apply adhesive in one operation, embedding the heating

cables in that process. Install the tiles after pre “buttering” the underside.

The tiles must be embedded in the adhesive to achieve solid bedding. The depth of the serrations on the trowel must be appropriate to the tile format. Make sure this is all done while the adhesive is still fresh and within its “open time”.

Where movement joints are required, follow professional guide lines - BS 5385 - TTA guide lines.

Notes

Material: Polypropylene

Roll Length: 5m

Width: 1m

Colour: Yellow

Thickness: 6mm

Due to unavoidable trimming of the material to ensure the production pattern is maintained the width may be reduced by up to 25 mm.

Note: These instructions give a general idea on the installation of carrier decoupling mats. There are a number of different makes on the market and you should always refer to the manufacturer's instructions.