

heatrite

Electric Underfloor Heating Kit

INSTALLATION MANUAL

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Thank you for investing in our industry leading Heatrite underfloor heating system

This instruction manual contains important information regarding the safe installation and operation of your heating mat/s.

These installation instructions are not intended to replace or supersede the installation instructions provided by the manufacturers of your floor coverings but to supplement them.

Both sets of installation instructions should be complied with, (always check with the floor manufacturer if you are in any doubt that our heating mat/s are suitable).

Our mats are extremely strong but care must be taken when installing them, please follow the step by step guide to ensure a carefree installation.

Heatrite

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CE approved systems

Our heating cables are CE approved, certified and manufactured to the highest standards using state of the art Teflon coated cables. All our cables are designed to be 17th Edition Part P complaint and the instructions we supply with them include as much information as possible to ensure that all installations comply with them (please contact us if you are in any doubt).

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Before you begin Installing

Please read through these instructions carefully and check that you have all components required.

Heatrite electric heating systems are designed for installation below most tile/stone floor coverings, it may also be installed below engineered/laminate wood floors, vinyl and low tog thin carpets but in these cases the heating mat/s must be first covered with an 8-10mm thick suitable latex based levelling compound.

Always check with the floor covering manufacturer for suitability of use with electric underfloor heating systems, also check the suitability of any adhesive/latex compounds that are intended to be used with both the floor coverings and the heating system.

Installation Notes

- The system requires a mains voltage 230/240v and **must be connected by a qualified electrician.**
- The cold lead on the mat is coloured black or blue and is a twin core and earth cable, or in some instances it may have a silver earth braiding wrap around the twin cores. The heating element also contains a built in return meaning that it only has to be connected to the thermostat from one end.
- For larger areas, if two or more mats are supplied, these can usually be connected together at the thermostat (max 2 mats).
- The system is suitable for installing on any sub-floor which is sound and suitable for tiling, in the main this will be concrete, plywood or cement faced tile-backer boards. Some water resistant composite boards may also be suitable, but it is not recommended to tile directly onto hardboard, MDF or standard grade chipboard as these substances absorb moisture and subsequent swelling could cause tiles to crack or dislodge.
- NOTE: If installing on a newly finished concrete screed the required minimum drying out or 'curing' period should be followed before installing (this is typically 1mm per day in good conditions)
- The electrical and electromagnetic fields generated are negligible and well within all recommended European and international guidelines.
- The heating mats must not overlap and the heating cable **MUST NOT** be cut or cross at any point.

The joint between the heating cable and cold tail **MUST** be located under the floor.

Professional Electrical Installation

The installation of electrical systems presents risks of fire and electrical shock which can result in personal injury. Caution should always be taken to guard against each such risk. Only a qualified electrician should connect the heating mat/s to the thermostat and to the electrical supply circuit.

Carry out all electrical work required to install, ie., chase walls and install back boxes for fused spurs and thermostat position. Please make sure all works conform to the current regulations.

Caution:

Only a qualified person who is familiar with the construction and operation of the apparatus and the hazards involved shall make the final connections to the electricity supply and test the installation.

Heatrite Electric Underfloor Heating

Must be controlled via an rcd protected circuit, for systems not exceeding 13 amps a fused spur that has contact separation in all poles that provides full disconnection under Cat 3 conditions can be used, for systems larger than 13 amps a suitable protective device that complies with regulations must be used (please contact us for technical assistance or consult a fully qualified approved electrician). If you are in any doubt about the electrical installation then please contact our technical advice centre.

IMPORTANT

All such connections **MUST** be in accordance with your local wiring regulations.

Note: when installing thermostats in bathrooms they should always be located outside the room and use the floor probe supplied, always check with a qualified electrician that all electrics are in safe and suitable zones.

Testing

Each and every Heatrite mat is carefully tested before it is shipped from the factory and is packed suitably to avoid damage during transit. However, damage does sometimes occur in storage or transit, and sometimes during installation. We strongly recommend you test your mats:



- After unpacking them but before you install them.
- After you have installed them but before you install the floor covering (i.e. while the mats are still exposed).
- After installation of the floor covering but before the thermostat is connected.

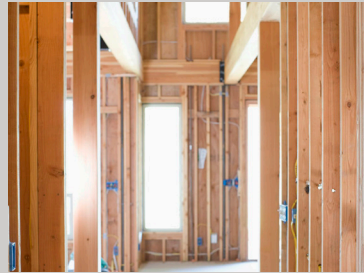
A simple test is a visual inspection to make sure there is no visible damage to the heater, and in particular to the cable component in the heater. A simple electrical inspection can be done with an Ohm metre to make sure that the ohm resistance is what it should be (see pg. 6). Ohms resistance can vary significantly depending on the ambient temperature and an allowance of -5% to +10% from the nominal value is acceptable. At this point an insulation resistance test should now be carried out.

Please see table on pg. 6 for the values you should see when testing the mat.

Installation Notes

STEP 1 - ROUGHIN

A qualified electrician is to install mains power to the position of your thermostat during electrical rough in.



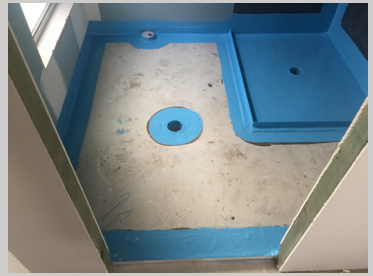
We highly recommend installing a conduit in the wall during rough in so that the electrical cable and floor sensor can be easily and quickly be drawn up during the laying of the electric heat mat.

STEP 2 – MEASURE

Laying of the electric undertile heating mat occurs after water proofing.

It should be installed to open walking areas only, and not within a shower

To make sure you have the right size kit calculate the area of the room, and subtract each location the mat can't be installed such as under a toilet/ vanity/bath/shower etc. We recommend rounding down to the closest kit size as you **CAN NOT CUT THE MAT WIRE**



STEP 3 – SET UP & TEST

Remove the mat from its packaging and test it before doing anything else by using the test alarm kit provided ensuring it has charged batteries.

ALARM = PROBLEM
SILENTS = OK



Draw the main power cord up to your thermostat and reconnect the test alarm. Ensuring there is no heat cable inside the wall cavity you can now start to lay the mat.

STEP 4 – LAY

The electric heating mat is 500mm wide so plan out how you'll roll it out. Cutting the white adhesive backing will allow you to turn the roll around and continue laying.

Very difficult areas may require you to remove the blue heat wire entirely from part of the adhesive backing.

NEVER Cut the blue heat wire

PRO TIP A glue gun greatly assists with the trickiest areas where the heat wire won't lay flat on the ground



CAUTIONS

Do NOT Lay while connected to power

Do NOT cut the heat wire

Do NOT cross the heat wire

Do NOT lay wire closer than 50mm



STEP 5 – SENSOR

The sensor cable that comes with the thermostat should be installed between two runs of the heat wire and up to your thermostat position.



STEP 6 – COVER

TILE - While it is possible to tile directly over the wire we recommend pouring a compound to cover and protect it.

It also ensures best heat transfer from the heat wire to your tile and to warm your room.

OTHER COVERINGS -If a floor finish like engineered boards, carpet or similar is being used we recommend a minimum cover of 8mm using a levelling compound.

STEP 6 – COMMISSIONING

The thermostat should be connected by a qualified electrician. Wait at least 1 week after tiling to allow sufficiency drying time. Heating may be slow in the beggining due to being a new build.

Do's & Dont's for Installation

- DO read through these instructions carefully before beginning work
- DO use flexible adhesives and grouts
- DO test the cable before tiling
- DO be careful not to damage or dislodge the cable during tiling
- DO ensure the cable is spaced no closer than 50mm between loops
- DO try to protect the cable during tiling
- DO wait at least 7 days before turning on the system
- DO read the separate installation and operating instructions for the thermostat
- DO ensure the joint between the cold lead and heating cable is beneath the tiles
- DON'T attempt to cut the heating cable at any point
- DON'T allow the wires to cross or touch
- DON'T allow excessive foot traffic over the wire before tiling
- DON'T cut tiles over the heating cable
- DON'T place tools or stacks of tiles on top of cable
- DON'T place any bean bags or fixed furniture over the floor covering
- DON'T place cable closer than 100mm near any pipes
- DON'T turn on the heating mat/cable while it is rolled up or still on the drum

IMPORTANT

Please ensure that the cold lead joint (the join between the heating cable and flexible supply lead) is fully encapsulated in adhesive or levelling compound underneath the floor covering. Please ensure that the end joint (the join at the end of the cable which is black or blue) is also fully encapsulated in the tile adhesive or levelling compound.

Both the cold lead joint and end joint **MUST NOT** be placed into a cut out of insulation or sub floor and just covered with tape, this can cause the cable to overheat and eventually fail!

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