INSTRUCTIONS FOR:-
HEATING MATS
M SERIES

Thank you for purchasing a BN Thermic product. Manufactured to a high standard this product will, if used according to these instructions and properly maintained, give you years of trouble free performance.

IMPORTANT: PLEASE READ THESE INSTRUCTIONS, NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS, AND CAUTIONS. USE THIS PRODUCT CORRECTLY, AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE AND/OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY.

INSTALLATION AND OPERATING INSTRUCTIONS

Retain these instructions for future reference.

1. Personnel.

   The M Series Mats should be installed by a suitably qualified, professional builder and/or electrician. M Series Mats are not a 'do it yourself' product. It is most important that the installer completes the Installation Record Form that is part of this booklet.

2. Check the suitability of sub-floor.

   These mats can be installed onto concrete or wooden sub-floors. We do not recommend installation onto asphalt sub-floors or any insulation material other than rigid boards.

3. Check the suitability of the tile adhesive.

   M Series is designed to sit in a layer of adhesive below ceramic or stone tiles. M Series has been used with a wide variety of tile adhesives. We suggest that the suitability of any given adhesive be confirmed by the adhesive supplier.

   If preferred M Series can be buried in a layer of screed. If you intend to use a compound other than a cement screed, the suitability of the compound should be confirmed by the compound supplier.

4. Check the suitability of the floor surface.

   M Series is generally used with ceramic and stone floors, including slate and marble. When used with other floor surfaces such as vinyl or carpet you should always confirm suitability with your flooring supplier.

5. Check that you have the correct M Series mat

   Firstly you must calculate the area of floor to be heated. This will be the total floor area minus the area occupied by fixtures such as cupboards, sinks, baths etc. Refer to the schedule of mats to find the mat with a square area slightly lower than you calculated figure. This is likely to be the mat for you.

   To double-check your selection, draw a sketch of the free area. Leaving a space of 30mm between mat runs and 80mm between the mats and the wall, draw the mat runs onto your sketch. Remember you can cut the mat at any point along its length but you cannot alter its width.

   If you are unsure whether there is quite enough space to install a particular M Series mat, you should consider using a slightly smaller mat. REMEMBER ALTHOUGH YOU CAN CUT THE MAT AT ANY POINT YOU MUST NOT CUT THE HEATING CABLE.

6. Check the suitability of the controller

   Ensure that the total installed load does not exceed the switching capacity of the selected controller. Larger loads can be switched using a suitably rated contactor.

   NEVER APPLY POWER (Voltage) TO THE MAT WHILE IT IS ROLLED UP

7. Check

Before starting installation and before unrolling the mat, the resistance of the cable should be measured and recorded on the Installation Record Form. Ensure that the reading taken is consistent with the nominal output of the cable.

An insulation resistance reading should also be taken between either end of the cold lead conductor and the earth braid using a 500V dc Insulation Resistance Meter (Megger). Readings in excess of 20 meg-ohms are acceptable. Again the reading should be recorded on the Installation Record Form.

8. Check and preparing the sub-floor

Ensure that the surface of the sub-floor is clean and free from any debris or sharp objects and suitable primer should then be applied.

9. Cutting a groove for PVC pipes

Both the controller probe and cold lead should be run through a plastic pipe of an appropriate diameter (typically 10mm diameter plastic hose). This is particularly important where the probe or cold lead pass from the floor to the wall. To keep the floor level as low as possible, grooves can be cut into the sub-floor to accommodate these pipes.

10. Positioning the controller probe

The controller probe should be mounted in a plastic pipe. The end of the probe should be a minimum of 500mm from the wall and 30mm from a heating cable. Remember to seal the end of the plastic tube with tape to prevent ingress of the adhesive.

11. Laying the M Series mat

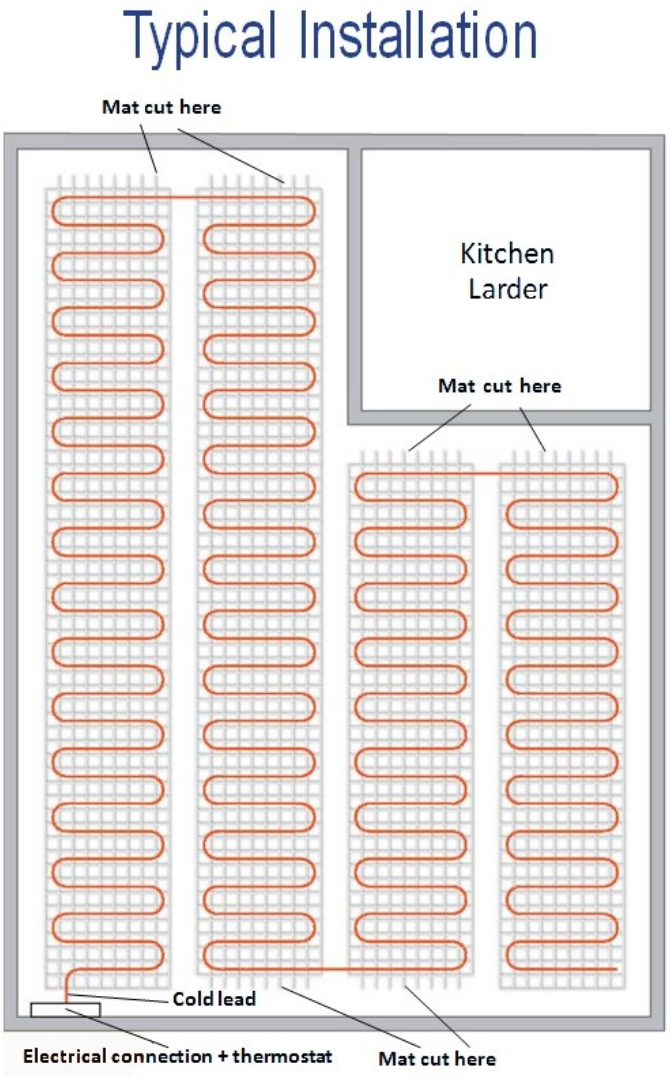
An M Series mat has four strips of tape running along its length. The two outside strips are double sided and these should be used to fix the mat to the primed sub-floor with the cable side up.

At this stage it is good practice to take a photograph of the floor. This will be a useful record should you need to carry out any work on the floor (for example drilling holes).

The tile adhesive can then be applied in the normal way taking care to ensure that the heating cable is completely covered and surrounded by the adhesive. Before applying the tiles and before the adhesive dries, carry out the second electrical check (see below).

It is essential to avoid mechanical damage to the heating cable. If it is impossible to avoid walking on the cable, use soft-shoes and/or crawling boards.

When you have finished laying the mat, you simply stop. There is no requirement to return the end of the cable to the connection point. The hot/cold junction must be in the floor itself and not in free air. It is most important that the cables are not allowed to touch each other or cross.



12. Second electrical check

    Once the mat has been laid onto the sub-floor and before the adhesive dries, the following checks should be performed. All results should be recorded on the Installation Record Form.

    Ensure that the resistance reading (ohms) is as recorded after the first electrical check Measure the insulation resistance between either end of the cold lead conductor and the earth braid using a 500V dc Insulation Resistance Meter (Megger), ensure that the insulation resistance is still in excess of 20 meg-ohms.

13. Apply the tiles

14. Third electrical check

    Once the tiles have been applied, the following checks should be performed. All results should be recorded on the Installation Record Form.

    Ensure that the resistance reading (ohms) is as recorded after the first electrical check Measure the insulation resistance between either end of the cold lead conductor and the earth braid using a 500V dc Insulation Resistance Meter (Megger), ensure that the insulation resistance is still in excess of 20 meg-ohms.

15. Electrical connection

    Follow the electrical connection instructions supplied with the controller.

16. Energising

    The system should NOT be energised within until the floor is completely dry. This can take up to 28 days. To do so may damage the heating cable.

This product conforms to EU Directive 2002/96/EC.
This appliance bears the symbol of the crossed waste bin. This indicates that, at the end of its useful life, it must not be disposed of as domestic waste, but must be taken to a collection centre for waste electrical and electronic equipment. It is the user's responsibility to dispose of this appliance through the appropriate channels. Failure to do so may incur penalties established by laws governing waste disposal.

NOTE: *It is our policy to continually improve products and as such we reserve the right to alter data, specifications and component parts without prior notice.*

IMPORTANT: No liability is accepted for incorrect use of this product.

WARRANTY: Your BN Thermic product is guaranteed for ten years from date of purchase. This guarantee is validated by the Installation Record form which is supplied with every underfloor heating product being fully completed by the qualified installing contractor at the time of installation and returned to BN Thermic Ltd within 60 days of installation. This guarantee covers the full purchase price of the product only. Control devices carry the manufacturers 1 year warranty. This guarantee in no way prejudices your rights under common law and is offered as an addition to consumer liability rights.

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M SERIES HEATER MAT INSTALLATION RECORD FORM

Please complete this form at the time of installation and post to BN Thermic within 60 days of installation. We strongly advise you to retain a copy for your records. Warranty claims will not be considered if the form has not been completed and returned to us within the required time.

Name of property owner	
Address	
Telephone number	
Purchased from: (Name and location of Wholesaler)	
Date of purchase	
Name of company who installed the system	
Installer's telephone number	
Date of installation	
Date the system was energised	
M Series Model Number	
Model number of controller	
Room (bathroom, kitchen etc)	
Dimensions of room, excluding permanent fixtures such as cupboards and baths. (if the room is of a complex shape you may prefer to make a dimensioned sketch and attach it to this form)	
Surface on to which the heating cable or mat was laid	
Type of bedding compound or adhesive used	
Thickness of bedding compound or adhesive	
Type of floor surface	
Thickness of floor surface	

Electrical Checks – Refer to the Installation Instructions

First electrical check	
Resistance (ohms)	
Insulation resistance (meg-ohms)	
Second electrical check	
Resistance (ohms)	
Insulation resistance (meg-ohms)	
Third electrical check	
Resistance (ohms)	
Insulation resistance (meg-ohms)	

Assuming correct installation, BN Thermic underfloor heating systems will give many years of satisfactory service. In the un- likely event of a malfunction resulting from faulty manufacture, the systems are guaranteed for a period of 10 years from date of purchase. The guarantee covers the full purchase price but not the cost of repairing or replacing the heater in the floor. Control devices carry the manufacturers 1 year warranty only.

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