



Bush Nelson Ltd
Stephenson Way
Three Bridges
Crawley
RH10 1TN

Under Floor Heating

FAQs

We hope you find the answers to the following ‘frequently asked questions’ useful. For a complete understanding of the product, they should be read in conjunction with the specification and installation data that can be found at www.bush-nelson.com.

Bush Nelson offers two under floor heating systems, which one is right for me?

The **Warm Tiles** system uses a relatively large diameter cable, which must be covered by a bedding compound or screed with a minimum thickness of 10mm. Assuming the corresponding increase in floor height is acceptable, Warm Tiles offers a very cost-effective way of warming large areas and is ideal for irregular shaped areas.

The **HM** range of heater mats consist of a much smaller diameter cable (approximately 4mm) attached to nylon webbing. Whilst the HM range can also be buried in a screed, it is more commonly installed in the adhesive below a ceramic or stone tiled floor. The HM range is typically used in smaller areas and where an increase in floor height is not acceptable.

WARM TILES

Application

Is a Warm Tiles underfloor heating system designed to warm a floor or heat a room?

The primary use of Warm Tiles underfloor heating system is to maintain a comfortable temperature on the surface of a ceramic or stone floor. In performing this function, the Warm Tiles system will make a significant contribution to the air temperature within the room. In many instances the system will produce enough warmth to mean that additional heating is not required. As a general rule a Warm Tiles system will be sufficient as a sole source of heat in buildings constructed according to current regulations. In older buildings, supplementary heating will probably be required.

Can I use Warm Tiles outdoors?

Although some electric heating cables can be used to provide a heat source under driveways and ramps, Warm Tiles must only be used indoors.

Selecting a Kit

How do I know which kit is best for my room?

Selecting the ideal Warm Tiles kit for a room is very easy. 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.

You will see that each Warm Tiles kit has a stated minimum and maximum floor surface area. The answer to your calculation will fall between the minimum and maximum areas of one of the seven kits – this is the kit for you.

If you are unsure of the exact area to be heated and your estimate falls close to the maximum area of one kit and the minimum area of another, we suggest you select the smaller of the two kits.

What can I do if my room is too large for a single Warm Tiles kit?

It is common practice for two or more Warm Tiles kits to be installed in one area. However we must stress that each kit will need to be controlled by its own controller.

Installation

Who should install a Warm Tiles kit?

Warm Tiles kits are designed to be installed by a suitably qualified, professional trades-person. Warm Tiles is not a ‘Do it Yourself’ product.

Can I install Warm Tiles on a wooden sub-floor?

Warm Tiles kits are frequently installed on wooden sub-floors but in these circumstances we recommend a fire resistant layer be installed between the sub-floor and the cable. This could be a 6mm thick layer of a suitable compound or foil backed insulating board (foil side up).

Can I install Warm Tiles on an asphalt sub-floor?

No. We do not recommend the installation of Warm Tiles directly onto an asphalt sub-floor.

Can I use Warm Tiles under a floating or suspended floor?

No. Warm Tiles cannot be used in any installation where an air gap exists between the heating cable and the floor surface.

Should I insulate the floor?

Insulation below the heating cable, whilst not essential, will greatly enhance the efficiency and economy of the system. If the cable is to be installed directly on to a layer of insulation, it must be a rigid foil-backed board (foil side up). Under no circumstances should insulation be installed above the heating cable.

What type of screed or self-levelling compound can I use?

Warm Tiles has been used successfully with a wide variety of compounds and screeds. If you intend to use a compound other than a cement screed, we suggest its suitability be confirmed by the compound supplier.

How thick should the screed be?

The layer of screed should be thick enough to completely cover the cable with a suggested maximum depth of 20mm.

Can I cut the cold lead?

Yes. The cold lead can be cut or extended to suit the installation.

Can I cut the heating cable?

NO! Under no circumstances should the heating cable be cut. There are three reasons.

1. Cutting the cable will break the electrical circuit that enables the cable to function.
2. Repairs are possible but are difficult to execute and become a potential cause of future failure. Contd..
3. If a section of cable is removed and discarded and the circuit reconnected the remaining cable will operate above design temperatures and would be prone to premature failure.

Can I use Warm Tiles with any floor surface?

Warm Tiles was developed specifically for use with ceramic or stone floor surfaces (including slate and marble). Warm Tiles can be used with other floor surfaces such as wood or vinyl but it is most important that you check with your floor surface supplier to ensure compatibility. When Warm Tiles is used with surfaces other than ceramic or stone tiles, our guarantee will only cover faults detected before the floor surface is laid.

Can Warm Tiles be used under carpets?

We would not recommend the use of Warm Tiles under a carpeted area.

How long should I wait before energising Warm Tiles?

From the date that the surface of the floor has been laid, you should wait 28 days before energising the system. This will ensure that the screed is completely dry. **NEVER USE THE WARMTH FROM THE CABLE TO DRY THE SCREED.**

Operation

What does the Warm Tiles' controller do?

The Warm Tiles controller comes complete with a probe, which is installed in the floor. The controller ensures that the floor is kept at the required temperature. The controller is programmable and allows the floor to be maintained at a selected comfort temperature (perhaps 25°C), when the room is likely to be used and a lower 'set-back' temperature (perhaps 19°C) at other times.

How long will Warm Tiles last?

The key to this question is correct installation. Assuming the cable is installed in accordance with the instructions and is not subjected to mechanical damage, it will have a life span similar to standard mains carrying electrical cable.

What do I do if my under floor heating stops working?

If the Warm Tiles system stops working, call a qualified electrician who should make the following checks.

1. Check the supply to the system. The solution may be as simple as resetting a circuit breaker.
2. If the controller is fitted with batteries, check whether the batteries need replacing.
3. Check whether there is an 'error code' on the controller, if there is the controller may need replacing.
4. Disconnect the controller probe from the controller terminal block and using an ohmmeter, check that there is a circuit through the probe. If there is no circuit the probe will need replacing.

5. Disconnect the heating cable from the controller and, using an ohmmeter, check the resistance reading is consistent with the nominal output of the heater. If there is no circuit through the cable, the circuit has been broken and you should check for structural cracking in the floor or for places where screws, bolts or other such fixings have been driven through the floor damaging the cable.

Is my Warm Tiles kit guaranteed?

Assuming correct installation, Warm Tiles will give many years of satisfactory service. In the unlikely event of a malfunction resulting from faulty manufacture, Warm Tiles is guaranteed for 12 months from date of purchase. Contd..

The guarantee covers the full purchase price but not the cost of repairing or replacing the heating cable in the floor.

An Installation Record Form is supplied with each kit. This should be completed at the time of installation and posted to Bush Nelson within 60 days of installation.

Heater Mats – the EHM Series

Application

Is an EHM underfloor heating system designed to warm a floor or heat a room?

The primary use of EHM underfloor heating system is to maintain a comfortable temperature on the surface of a ceramic or stone floor. In performing this function, the EHM system will make a significant contribution to the air temperature within the room. In many instances the system will produce enough warmth to mean that additional heating is not required. As a general rule an EHM system will be sufficient as a sole source of heat in buildings constructed according to current regulations. In older buildings, supplementary heating will probably be required.

Can I use EHM outdoors?

Although some electric heating cables can be used to provide a heat source under driveways and ramps, EHM must only be used indoors.

Selecting your mats

How do I select a mat for my room?

Selecting the ideal EHM mat for a room is very easy. 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 EHM mats to find the mat with a square area slightly lower than your 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 50mm 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 EHM 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.

What can I do if my room is too large for a single EHM mat?

It is common practice for two or more EHM mats to be installed in one area. In these circumstances the mats must be connected in parallel. The maximum combined total output of a group of mats

controlled by one controller is 3.6kW. If you wish to install more than 3.6kW in one area you will need to use more than one controller.

Which controller is best for me?

It is essential to use a suitable controller with your EHM heating mat(s). There are three options.

HMC-1. Use this controller when your primary objective is to maintain a comfortable floor temperature. The HMC-1 is programmable and allows the floor temperature to be maintained at a selected comfort temperature (perhaps 25°C), when the room is likely to be used and a lower 'set-back' temperature (perhaps 19°C) at other times.

HMC-2. Is a similar device to the HMC-1 but without the programmable feature. Instead it has a simple 'on/off' switch.

HMC-3. This is the controller to use when your primary objective is to maintain a comfortable room temperature. This device has a built-in air sensor as well as a floor mounted sensor. Primary control is by the air sensor with secondary control function limiting the floor temperature to prevent any chance of the floor becoming uncomfortably warm. The HMC-3 is fully programmable.

In bathroom applications the controller is normally located outside the room with the controller probe located in the bathroom floor. For this reason it is not normally possible to use the HMC-3.

Installation

Who should install an EHM heater mat?

EHM heater mats are designed to be installed by a suitably qualified, professional trades-person. EHM is not a 'Do it Yourself' product.

Can I install EHM Mats on a wooden sub-floor?

EHM mats are frequently installed on wooden sub-floors but in these circumstances we recommend a fire resistant layer be installed between the sub-floor and the cable. This could be 6mm thick compound or foil backed insulating board (foil side up).

Can I install EHM mats on an asphalt sub-floor?

No. We do not recommend the installation of EHM mats directly onto an asphalt sub-floor.

Can I use EHM mats under a floating or suspended floor?

No. EHM mats cannot be used in any installation where an air gap exists between the heating cable and the floor surface.

Should I insulate the floor?

Insulation below the heating mat, whilst not essential, will greatly enhance the efficiency and economy of the system. If the cable is to be installed directly on to a layer of insulation, it must be a rigid foil-backed board (foil side up). Under no circumstances should insulation be installed above the heating cable.

What type of tile adhesive can I use?

EHM mats have been used successfully with a wide variety of tile adhesives. We suggest the suitability of any given adhesive be confirmed by the adhesive supplier.

How thick should the adhesive layer be?

The layer of adhesive should be thick enough to completely cover the cable.

Can I cut the cold lead?

Yes. The cold lead can be cut or extended to suit the installation.

Can I cut the heating cable?

NO! Under no circumstances should the heating cable be cut. There are three reasons.

1. Cutting the cable will break the electrical circuit that enables the cable to function.
2. Repairs are possible but are difficult to execute and become a potential cause of future failure.
3. If a section of cable is removed and discarded and the circuit reconnected the remaining cable will operate above design temperatures and would be prone to premature failure.

Can I use EHM mats with any floor surface?

EHM mats have been developed specifically for use with ceramic or stone floor surfaces (including slate and marble). We do not recommend the use of EHM mats with floor surfaces such as wood or vinyl.

Can EHM mats be used under carpets?

We would not recommend the use of EHM Mats under a carpeted area.

How long should I wait before energising my EHM mats?

From the date that the surface of the floor has been laid, you should wait 28 days before energising the system. This will ensure that the screed is completely dry. ***NEVER USE THE WARMTH FROM THE CABLE TO DRY THE ADHESIVE.***

Operation

How long will EHM mats last?

The key to this question is correct installation. Assuming the mat is installed in accordance with the instructions and is not subjected to mechanical damage, it will have a life span similar to standard mains carrying electrical cable.

What do I do if my under floor heating stops working?

If the under floor heating system stops working, call a qualified electrician who should make the following checks.

1. Check the supply to the system. The solution maybe as simple as resetting a circuit breaker.
2. Check whether there is an 'error code' on the controller, if there is the controller may need replacing.
3. Disconnect the controller probe from the controller terminal block and using an ohmmeter, check that there is a circuit through the probe. If there is no circuit the probe will need replacing.

4. Disconnect the heating cable from the controller and, using an ohmmeter, check the resistance reading is consistent with the nominal output of the heater. If there is no circuit through the cable, the circuit has been broken and you should check for structural cracking in the floor or for places where screws, bolts or other such fixings have been driven through the floor damaging the cable.

Is my EHM system guaranteed?

Assuming correct installation, EHM will give many years of satisfactory service. In the unlikely event of a malfunction resulting from faulty manufacture, EHM is guaranteed for 12 months from date of purchase. The guarantee covers the full purchase price but not the cost of repairing or replacing the heater mat in the floor.

An Installation Record Form is supplied with each mat. This should be completed at the time of installation and posted to Bush Nelson within 60 days of installation.