



fastwarm™

Fastwarm™ Under Carpet / Vinyl Heating System

INSTALLATION MANUAL

-  Ideal for most Carpets and LVT
-  Easy to Install
-  Compliant to latest regulations
-  UKCA Approved
-  Lifetime warranty

These instructions must be read completely prior to installation of the Fastwarm™ Under Carpet / Vinyl Heating System.

They should be read in conjunction with the floor covering manufactures instructions.

This is to ensure a safe installation.

TALK TO AN EXPERT
01268 744479

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Fastwarm™ Under Carpet/ Vinyl Heating Mats have been designed for use with Low Tog Carpets or LVT (Vinyl) flooring.

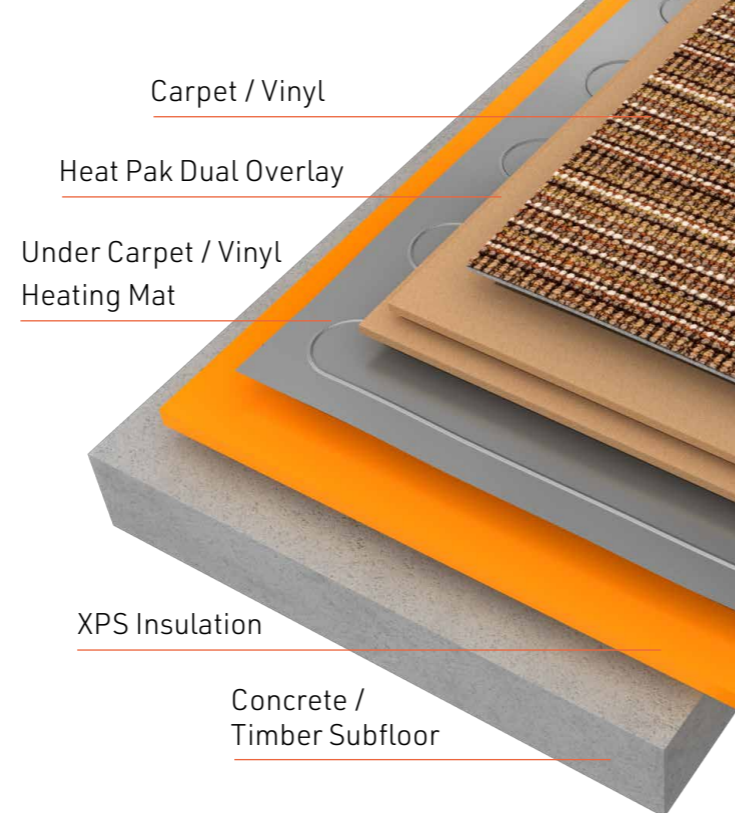
The heating mats are extremely thin (only 2mm) and MUST be used with a 6mm or 10mm XPS/EPS insulation board as a base/underlay and covered with Heat Pak Dual Overlay Panels.

(Do not use a tile backer board below these mats).

The Fastwarm™ Under Carpet Vinyl Mat system is made with an insulated heating cable sandwiched between 2 layers of specialised aluminium foil.

The heating cable is connected to the "cold tail" (Black cable) which exits from one corner of the mat.

The "cold tail" from the mat is a 3-core live/neutral and earth.



Important Information

Fastwarm™ Under Carpet/ Vinyl heating mats are designed for use under carpets and vinyl floor when used above XPS/ EPS insulation and covered with Heat Pak Dual Overlay.

Fastwarm™ Under Carpet / Vinyl mats must be installed as per guideline pointed out in this manual, please ensure floor coverings are suitable and not above the recommended tog value (2.5 TOG).

SUITABLE FOR LINO, LVT, AND LOW TOG CARPETS WITH UNDERLAY

Most LVT, lino and Low tog Carpet with underlay (2.5 TOG) are suitable however it is always recommended to check with flooring manufacture about its compatibility with Electric Underfloor Heating. Note that Gripper rail must be secured to floor and installed with care not to damage the underfloor heating mat.

Do's and Dont's for Installation

- ✓ **Do** read through these instructions fully before starting installation.
- ✓ **Do** follow the testing procedure prior to installing the finished floor.
- ✓ **Do** read the safety information on the last page of this manual.
- ✓ **Do** ensure correct materials are used when installing this system such as EPS/XPS insulation and Heat Pak Dual over.
- ✗ **Don't** cut the heating cable at any point.
- ✗ **Don't** turn on the mat when it is still rolled up.
- ✗ **Don't** place flat bottomed or fixed furniture above the heating mat.
- ✗ **Don't** place cover with floors above 2.5 tog over the system.

Safe operation of Fastwarm™ Under Carpet / Vinyl heating systems.

The heating mat must NOT be installed under flat bottomed furniture or furniture that is to be fixed to the floor.

Please ensure any items placed over this system do not exceed 2.5 tog. Items like rugs and bean bags will create thermal block and are not advised to be used above this system.

The mats should not be installed over the top of an in screed or similar heating system. It should not be installed on a floor where radiant ceiling heating has been installed in the room below.

Control Of The System

Fastwarm™ Under Carpet / Vinyl Heating mats must be controlled using a programmable thermostat using a floor temperature sensing probe.

This is to ensure that the temperature below the floor covering does not exceed 28 degrees most directed at a LVT / Lino covering.

This is the temperature most floor manufactures recommend as the maximum.

Check with the manufacture of your flooring as to their recommendations.

Installation By Qualified Person

Any electrical installation presents a risk of fire or electrical shock.

Only a qualified person should test and connect the installation, chase walls and install back boxes for fused spurs and thermostats.

This is to ensure all work conforms to current regulations.

DUE TO THE REQUIREMENTS OF THE CURRENT EDITION IEE REGULATIONS PART P ONLY A QUALIFIED PERSON SHOULD TEST AND MAKE THE FINAL CONNECTIONS TO THE INSTALLATION.

Fastwarm™ electric underfloor heating system must be controlled via an RCD protected circuit. For a system that does not exceed 13 amps a fused spur that has all pole separation can be used. Any larger than a 13 Amp system a suitable protected device must be used. It is sometimes required that a suitable contactor is required which is controlled by the thermostat.

IF IN ANY DOUBT PLEASE CONTACT US.

VERY IMPORTANT

All connections must comply with the Current edition of the Part P IEE regulations.

Contents Of Kit



Fastwarm™ Aluminium foil matt / mats



Aluminium foil Strips (for Earth continuity when mat has been cut)



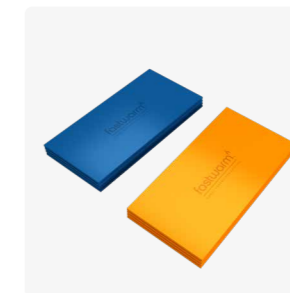
10mm diameter conduit for floor sensor



Adhesive tape



Programmable digital room thermostat inclusive of floor temperature sensor (sold separately)



Suitable insulation boards (sold separately)



Heat Pak Dual Overlay (sold Separately)

Testing The System

The Fastwarm™ Under Carpet / Vinyl Heating mat is tested prior to shipping but it must be tested as follows:

1. After unpacking and prior to installation (record the readings).
2. At this point installing electrician must carry out a 500 Volt DC insulation resistance test (record the readings).
3. Once you have installed it on the Insulation boards (record the readings)
4. Before and After installation of Heat Pak Dual Overlay.

The resistance of the heating element test is a reading in Ohms and can be within a 10% plus or minus of the value shown on the table on Page 8 at a room temperature of 20 degrees. NB hot or cold conditions can cause the resistance to alter.

Product Range and Resistance Values

Length (M)	Watts (W)	Area (m ²)	RESISTANCE (in ohms)	TOTAL WATTAGE (W)
2	140	1.0	378	140
3	140	1.5	252	210
4	140	2.0	189	280
5	140	2.5	151	350
6	140	3.0	126	420
7	140	3.5	108	490
8	140	4.0	95	560
9	140	4.5	84	630
10	140	5.0	76	700
12	140	6.0	63	840
14	140	7.0	54	980
16	140	8.0	47	1120
18	140	9.0	42	1260
20	140	10.0	38	1400
22	140	11.0	34	1540
24	140	12.0	31.5	1680

STEP 1

The heating mats/thermostats require a 230/240-Volt AC supply via a localized isolation point on an RCD protected circuit.

THE INSTALLATION MUST CONFORM TO THE CURRENT IEE EDITION PART P REGULATIONS AND MUST BE CARRIED OUT BY SUITABLY QUALIFIED PERSON.

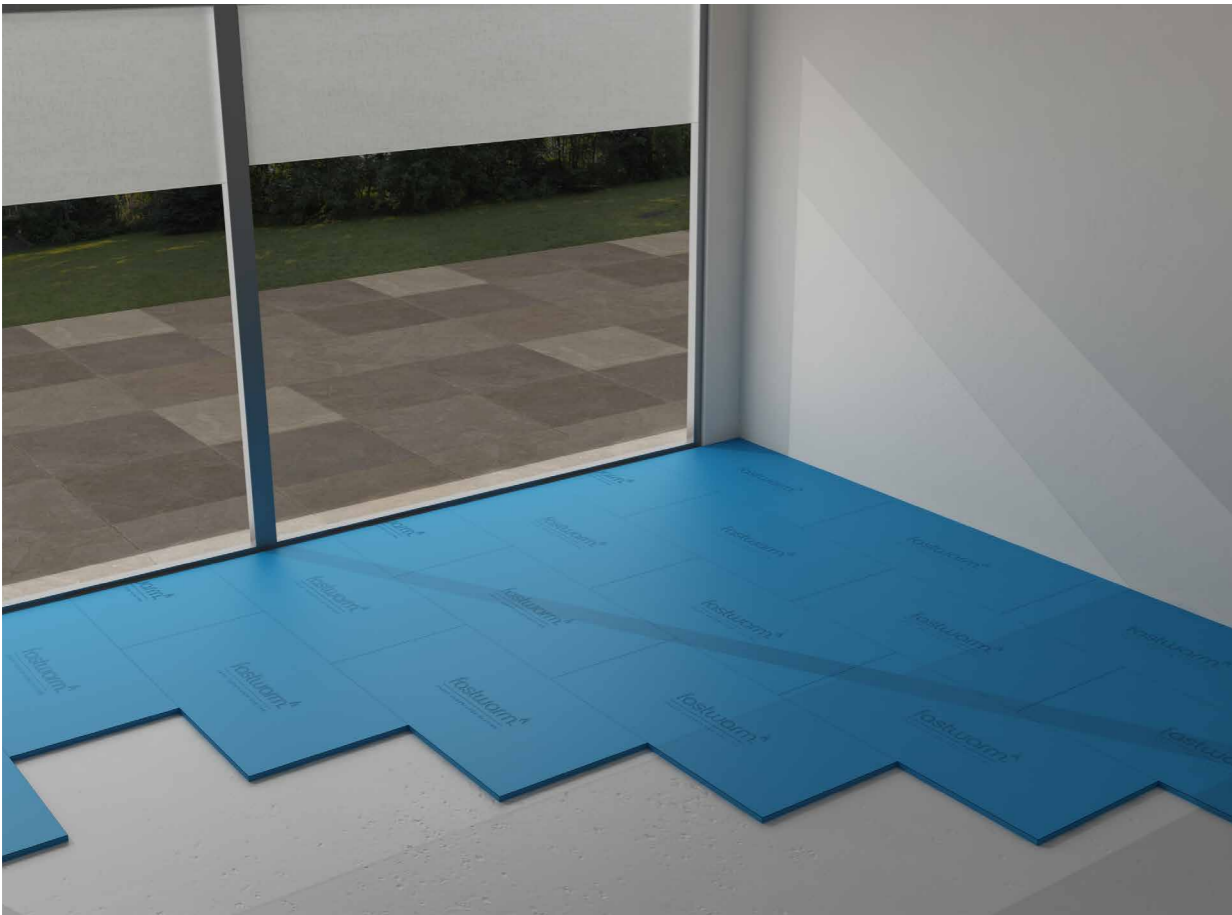
Ensure the sub floor is structurally sound, it should be clean / dry and to prevent damage to heating element ensure that no nails, screws or sharp objects are protruding from the sub floor before the installation is installed. Staple guns should not be used to secure the insulation boards to the sub floor. It is important to keep an accurate record of where the heating mats are installed. It is also a requirement to place a diagram of the mat position next to the distribution board stating where underfloor heating has been installed. This is part of the supplied commissioning record form.



STEP 2

Use a suitable thickness XPS insulation board (minimum 6mm) directly on top of your subfloor (Do NOT use tile backer boards).

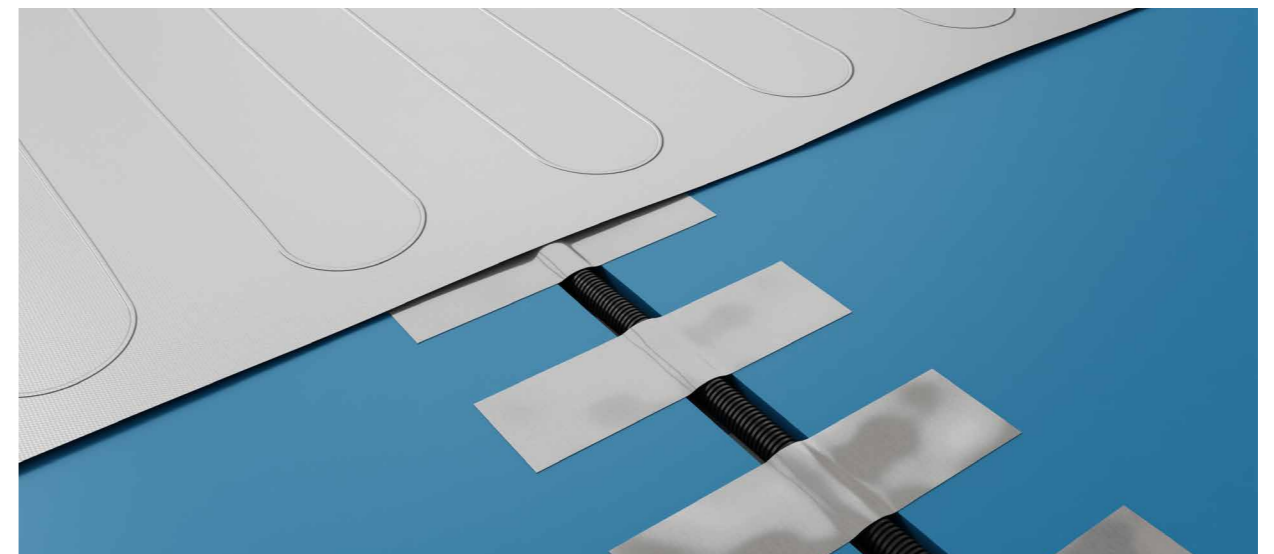
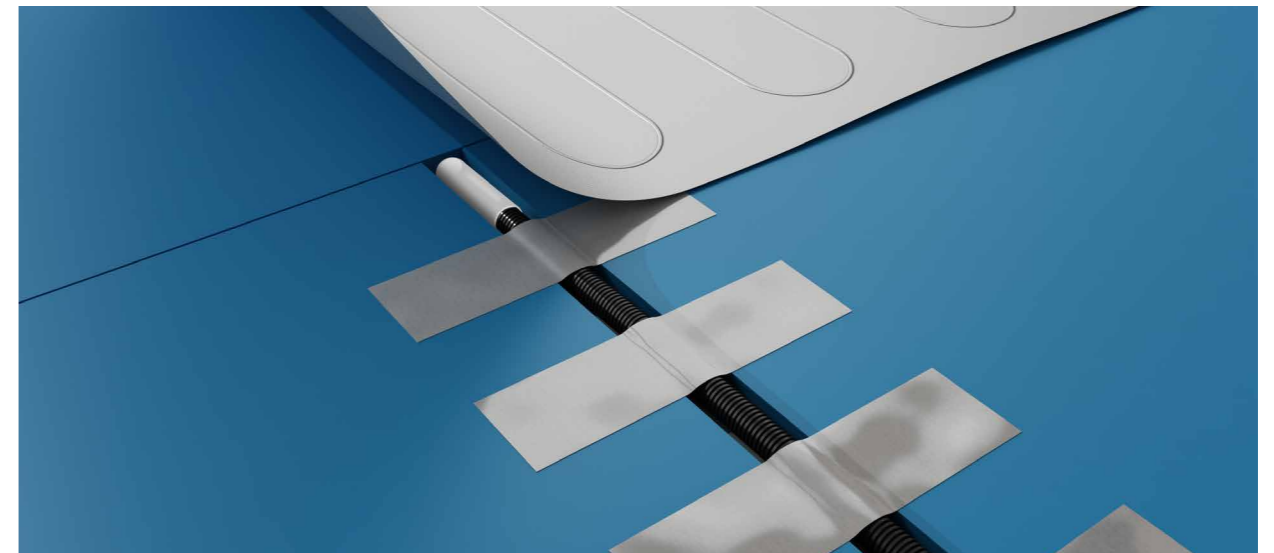
Install the boards in a brick bond and tape along the joints to ensure they do not move when installing the heating mats.

**STEP 3**

Install the black conduit into the wall chase and at least 200mm under the heating mat. It is necessary to cut out a slot in the insulation board. If using a 6mm insulation it will be necessary to cut out a small groove in the sub floor as the conduit is a 10mm diameter.

Install the floor temperature sensor (probe).
Run the floor sensor inside the conduit until it just appears out of the end and tape over.

NB The sensor cable should not cross under or over the heating element but should be in between the heating cable loops. (see illustration).



STEP 4

Install the heating mat

After you have installed the insulation boards carry out a resistance test as per page 7 refer to resistance values for the size of mat as per page 8. Install the cold tail (from the corner of the mat) up to the thermostat back box, a minimum 35mm back box should be used. This will allow sufficient room in the back box.

If using two or more mats it is best to terminate the cold tails in an accessible wall mounted junction box and extend the cold tails using a 3 core 2.5mm cable.

If the cold tail is not long enough to reach the thermostat position (and if the joint has to be made below the finished floor) it is possible to extend the cold tail using a 3 core 2.5mm cable using suitable crimps and heat shrink. A cut out in the insulation board would be necessary.

THIS MUST BE CARRIED OUT BY A PART P QUALIFIED PERSON

The cold tail must not cross the heating element at any time. Position the mat on the insulation boards leaving a 50mm gap from walls and any fixed furniture.

IMPORTANT

1. Unroll the mat from the corner of the room, use scissors to cut the mat avoid the cable never cut the cable.
2. Continue to unroll the mat make sure there is a 5mm gap between each section DO NOT overlap the cables within the mat at any point. Stagger the mat so as to offset the cable loops the mat can be turned at walls by cutting the foil mat and flipping it over if necessary.

If by doing so the heating cable is now showing upwards you must cover the exposed cable with an aluminium foil tape, this is to protect the heating element.

VERY IMPORTANT

You must use the aluminium foil strips provided to join the mats together where it has been cut, this is to maintain the earth continuity and they must be fitted top and bottom (refer to the illustration)

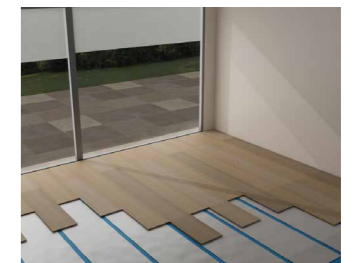
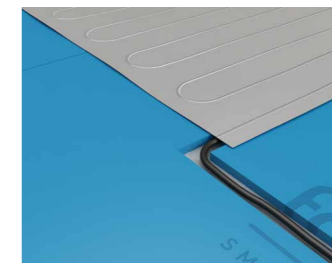
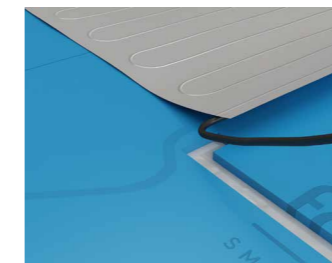
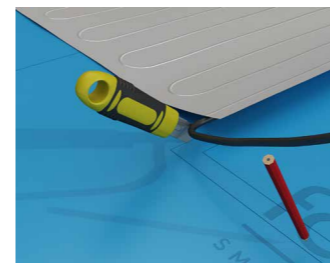


Fastwarm™ Under Carpet / Vinyl Heating Mats.

The heating element must never be cut short to fit into an area that is too small.

Check and measure the area to be fitted in square metres take 10% of this area and that is the size of the mat required. Check this prior to cutting the mat, work out a plan as to how you intend to lay the mat, after deciding the route, usually start from the corner of the room, ensure that the cold tail can reach the thermostat position or extend the cold tail as previously described.

Cut a channel in the insulation board to allow the cold tail to reach the thermostat position, place the cold tail in the channel and tape down. NB depending of the depth of the insulation used it may be necessary to chase out a groove in the sub floor.



If installing two or more mats in the same room, ensure the mats do not overlap.

Once you are satisfied with the position of the mat or mats ensure that the aluminium strips have been placed on the top and bottom of the mat where it has been cut to maintain the earth continuity of the mat.

Tape all the edges down with adhesive tape

Fastwarm™ Under Carpet / Vinyl Heating Mats must be fitted on top of a suitable insulation board (not tile backer boards) and directly under the Carpet / Vinyl.

STEP 5

Installation of Heat Pak Dual Overlay

Every room should be fitted separately, leaving an expansion gap of at least 8 -10 mm and 16mm in door openings when Dual Overlay is continued in the adjoining area.

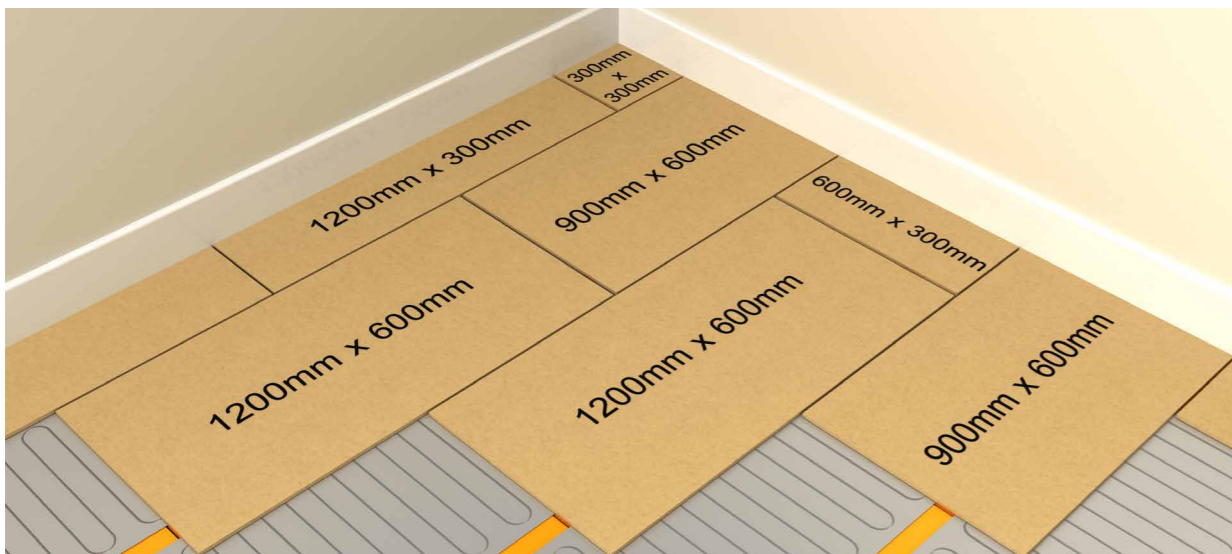
If the floor covering is to be glued onto the total surface and should not exceed the edges of the Dual Overlay Boards

This method of installation will provide a stable surface for the floor finish to rest on and avoid any joints showing through the final floor finish.

Baseboard 3mm cellophane covered

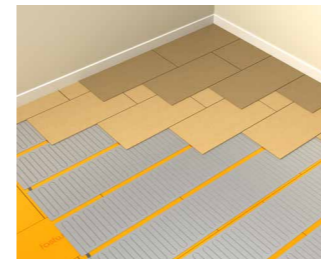
Please ensure the Baseboard layer is correctly laid with cellophane side as the surface walked upon, this cellophane remains in place until entire base layer is laid, and top board layer is ready to be installed.

1. The first Baseboard is cut to 1/2 of its width (300mm) and 3/4 of its length (900mm) using a concaved blade and a straight edge, laying the panel so both cut edges facing against the walls in the corner of the room.



2. Continue to 1/2 panels in width (300mm) to complete first run ensuring any cut edge are facing the walls.

3. Leave an expansion gap of 10 mm around the perimeter and fixed objects such as pipe work, this also applies to the top board, floor finish and gripper rail for carpet.
4. Boards in the second row are laid out in the same direction as the first run of panels and started by cutting a Baseboard to 1/4 of its length (300mm) and laid with the cut end to the wall, next to the previously laid run of panels.
5. Continue to lay full baseboard end to end with it and alongside the first run, using the large off-cut piece will be used to start the third row of baseboards.
6. Repeat steps 4-5 until the entire floor is covered, Do not remove the protective film at this stage to keep the Baseboard layer clean and free from dust.



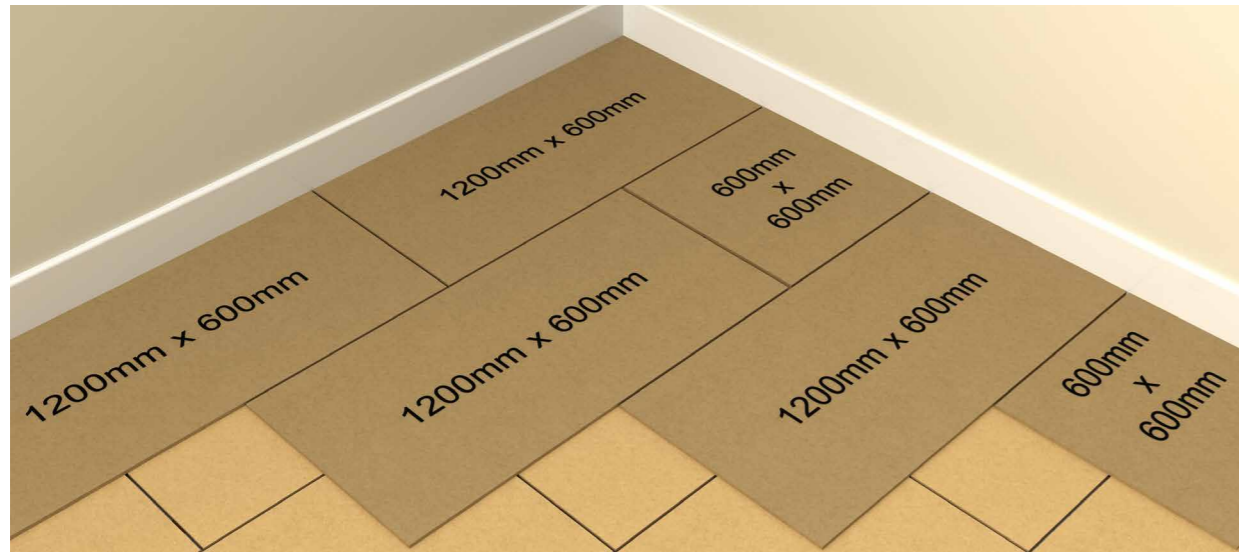
STEP 6

Top Boards Finish

The top board is laid in the same direction as the baseboards in an overlapping brick bond fashion with the adhesive side down. Avoid removing cellophane and sticky top board to baseboard until panels are checked they align correctly and that there are no gaps.

1. Lay first top board into corner of room using a full panel, this will overlap the 1st and 2nd rows of baseboard.
2. Lay each panel non adhesive side down on cellophane to ensure panels do not need trimming down, lay correctly and that there are no gaps in baseboard layer.
3. Remove cellophane and lay first panel onto base board ensuring to keep the 8mm-10mm gap around the perimeter of the room.
4. Once in place tap down with rubber mallet to bond both layers together.





5. Start second row of top board use a panel 1/2 in length (600mm) ensure the cut edge is facing the wall and butted up to first panel with no gaps. Repeat step 4.
6. Continue laying top board layer ensure not to remove too much cellophane and working into the room using a diagonal method, this will assist in reducing potential gaps in both layers of panels.
7. Repeat the above steps until the entire floor is laid, you must lay a floor covering above this surface within 48hr to ensure panels are not compromised.

NB The sensor cable should not cross under or over the heating element but should be in between the heating cable loops. (see illustration).

STEP 7

Test the system as per page 7-8 to ensure the system is fully working.



STEP 8

Wiring of the thermostat

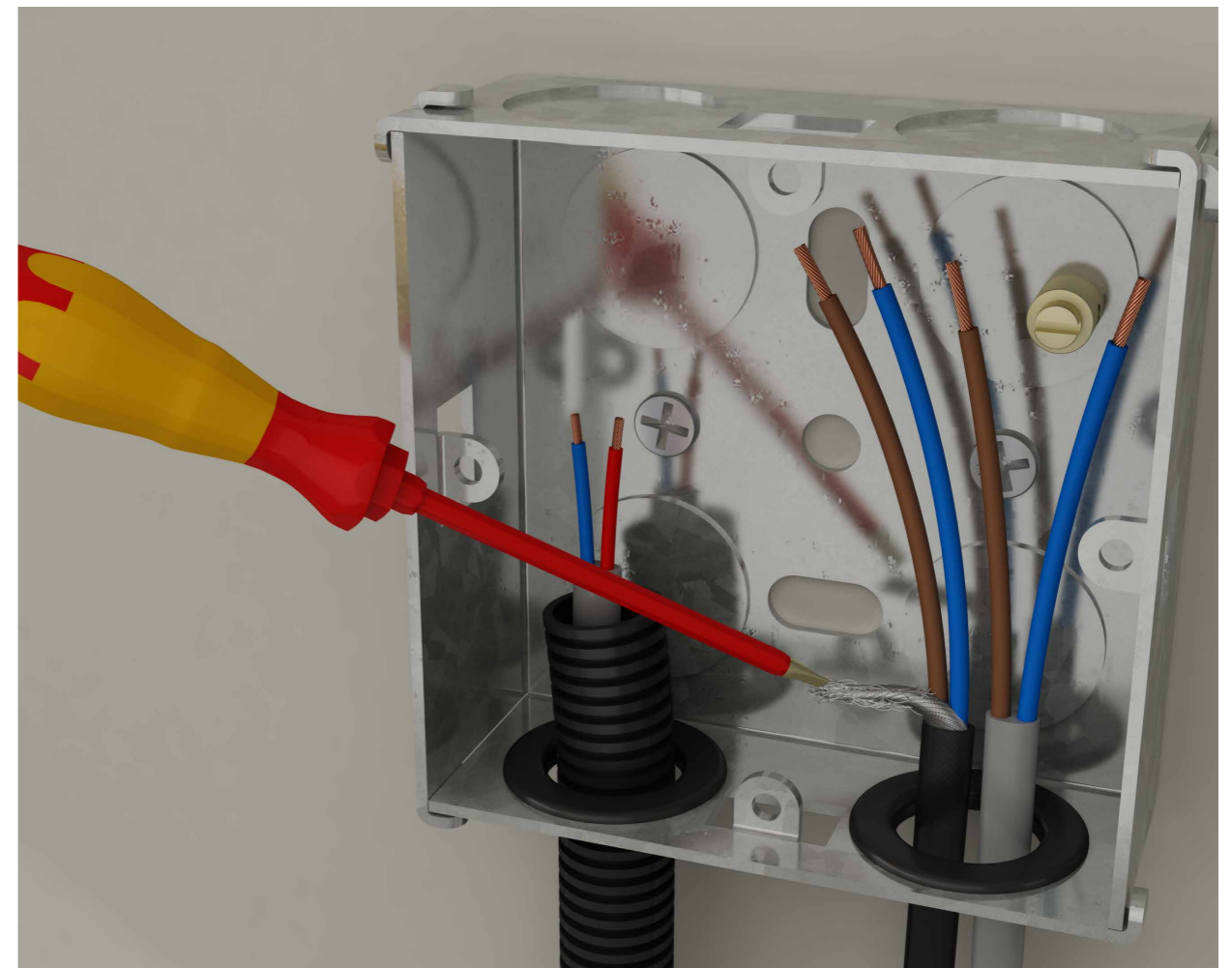
The cold tail from the mat has an earth which is a braided wire. If it is necessary to shorten the cold tail, at the thermostat, then the earth braid must be 'unpicked' with a small screwdriver or similar tool.

IT MUST NOT BE CUT ALONG ITS LENGTH as this will cause it to become unravelled. It should then be twisted back together and connected to the incoming earth on the power supply.

Install flooring cover above as per floor manufactures guidelines.

Turn system on and gradually building up the heat to reduce any movement.

You must ensure the thermostat is set to floor temperature or has a floor temperature limit set (28°C).



Full lifetime warranty.

Now there's something we can all get down to.



Fastwarm™ floor heating mats come with a full lifetime warranty.

The warranty does not cover installations made by unauthorized persons or faults caused by incorrect design by others / misuse / damage caused by others / damage in transit / incorrect installation and any other subsequent damage that may occur. Replacement will be fully chargeable if the damage is because of any of the above reasons.

Please visit website for full terms & conditions.
www.fastwarm.com

fastwarm™

Safety Guidelines

IMPORTANT

This installation manual has been designed for your safety. For a successful installation please make sure you have understood the guidelines and adhered to all the instructions

Flat bottomed furniture **MUST NOT BE** placed over areas where the heating mat/cable is installed as this can restrict airflow to the floor, causing thermal blocking, and in extreme cases may lead to the cable overheating causing a possible fire hazard. This also includes rugs, bean bags, or any item which has a tog value greater than 2.5.

The supplied Commissioning Record **MUST BE** completed, including a floor plan sketch, to indicate heated areas, which must be permanently fixed in or near the distribution/fuse board as required by the 18th Edition BS7671 amendment 3.



MATTRESSES



BEAN BAGS



ANIMAL BEDS



THICK RUGS



FLAT BASED FURNITURE

CONTACT US

01268 744479

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