

FiXXTM HEAT

ELECTRIC UNDERFLOOR HEATING

INSTALLATION AND USER GUIDE



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This document will provide a step-by-step guide to a perfect installation as well as details on the warranty and how to get Technical Support should you need it.

To ensure a safe, hassle-free installation to be proud of please take the time to read this guide in full before you start. We've taken the time to highlight any potential pitfalls and common errors so you can avoid them and get the job done!

This product is covered by a 15 year warranty, subject to terms and conditions. Be sure to keep the receipt as proof of purchase, this will be required to validate your 15 year warranty.

Please complete the Customer Handover section on page 15 in full so that the customer has all the information they need to register their warranty.

If you have any questions about your under floor heating or any of our other products call 01536 419 981 or email technicalhelp@wallsandfloors.co.uk.

It is the installers responsibility to ensure that all products and materials are compatible and suitable for the specific installation and application. All work undertaken as part of this product installation must be carried out by a competent individual in accordance with all relevant local building and electrical regulations. Final electrical connections must be carried out by a professional electrician.

Warranty terms & conditions

The 15 year warranty guarantees FiXX HEAT under floor heating mats to remain free from defects in workmanship and materials under normal use and maintenance, and is guaranteed to remain in full working order subject to the conditions and limitations below:

FiXX HEAT under floor heating mats are guaranteed for 15 years under the floor covering under which it is originally fitted subject to the following conditions. Please pay attention to the exclusions listed at the end of this guarantee.

The 15 year warranty applies:

1. Only if the product is registered, and the registration information is received and documented by Walls and Floors, within 30 Days after purchase. You can register your product by completing the form online at www.wallsandfloors.co.uk. Proof of purchase must be presented to make a warranty claim, so please ensure that you keep a copy of both your invoice and purchase receipt in a safe place. Such invoice/receipt should clearly state the model that has been purchased and be in legible condition so as to aid in identifying the system; and

2. Only if the under floor heating has been properly earthed and protected by a Residual Current Device (RCD) at all times.

This guarantee does not cover any thermostats as these are covered by a separate 3 year warranty from the date of purchase, except as provided below.

All warranties become void if the floor covering under which the FiXX HEAT under floor heating mats is originally fitted is damaged, lifted, replaced, repaired or covered with additional layers of flooring. The 15 year warranty does not cover accidental damage, including but not limited to damage caused by lifting, replacing, repairing the original covering laid after installation.

The guarantee period starts on the date of purchase but the registration is only confirmed only when a letter or email of confirmation is sent by Walls and Floors.

Should it be required, Walls and Floors will arrange for the heating mat to be repaired or (at the discretion of Walls and Floors) have parts replaced free of charge. The cost of repair will only cover the cost of replacement FiXX HEAT under floor heating mat parts and/or repair to damaged FiXX HEAT under floor heating products. Any damage to floor coverings or floors, costs of re-laying or repairing floors or floor coverings are not covered by the Walls and Floors 15 year warranty.

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Heating mat technical data

Code	Size (m)	Area (m ²)	Output (W)	Resistance (Ω)
FXHM-150010	2.0 x 0.5	1.0	150	353
FXHM-150015	3.0 x 0.5	1.5	225	235
FXHM-150020	4.0 x 0.5	2.0	300	176
FXHM-150025	5.0 x 0.5	2.5	375	141
FXHM-150030	6.0 x 0.5	3.0	450	118
FXHM-150035	7.0 x 0.5	3.5	525	101
FXHM-150040	8.0 x 0.5	4.0	600	88
FXHM-150045	9.0 x 0.5	4.5	675	78
FXHM-150050	10.0 x 0.5	5.0	750	71
FXHM-150060	12.0 x 0.5	6.0	900	59
FXHM-150070	14.0 x 0.5	7.0	1050	50
FXHM-150080	16.0 x 0.5	8.0	1200	44
FXHM-150090	18.0 x 0.5	9.0	1350	39
FXHM-150100	20.0 x 0.5	10.0	1500	35
FXHM-150120	24.0 x 0.5	12.0	1800	29

Electric under floor heating important information

-  You must ensure that the entire cold power cable joint (the joint between the heating element and the power cable) is fully encapsulated in tile adhesive or levelling compound and not heating in air.
-  You must ensure that the end termination of the heating cable is fully encapsulated in tile adhesive or levelling compound and not heating in air.
-  You must ensure that the entire heating element is fully encapsulated in tile adhesive or levelling compound and not heating in air.
-  The heating cable, cold power cable joint and end termination must not be covered with tape.
-  The cold tail and end termination must not be placed into a cut out of the insulation or sub floor and covered with tape. This causes an air pocket which can cause overheating and heating cable failure.
-  Do read through the instructions in full and make sure you understand them before you start the installation.
-  Do use flexible adhesives, grouts and levelling compounds suitable for under floor heating.
-  Do test the heating cable before tiling and at the 3 recommended stages in the installation process.
-  Do be careful not to accidentally damage the heating cable during installation and laying the floor finish.
-  Do make sure the heating cables are spaced at least 50mm apart and 100mm from the edge of the room.
-  Do protect the heating cable from foot traffic and any heavy objects before and during tiling.
-  Do wait for the adhesive and levelling compounds to fully cure before switching on the heating.
-  Do read the separate thermostat instructions in full and follow them when installing and commissioning the thermostat.
-  Do ensure that the entire heating element, cold power cable connection and end termination are fully encapsulated within tile adhesive or levelling compound.
-  Do not cut the heating cable under any circumstances.
-  Do not allow the heating cables to touch or cross over each other or any other object or cable.
-  Do not allow excessive foot traffic or heavy objects over the heating before laying the floor finish.
-  Do not cut tiles, flooring or any other material over the heating cable.
-  Do not place any insulating material such as rugs, furniture or bean bags over the top of the heated floor areas.

Substrate preparation and insulation boards

First measure the floor space and calculate how many boards you'll need using the calculation below.

A single insulation board = 1.2m x 0.6m = 0.72m²

$$\frac{\text{Floor space (M}^2\text{)}}{0.72\text{m}^2} = \text{Number of boards}$$

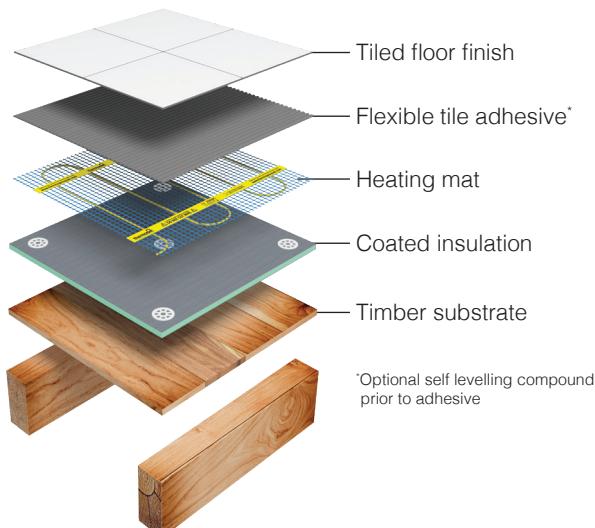
Ensure the substrate is secure, clean and free of dust and loose particles. The substrate must also be safe, stable and ready for tiling.

Set out the insulation boards over the floor in a staggered brick work pattern. Where required, cut the boards with a sharp blade.

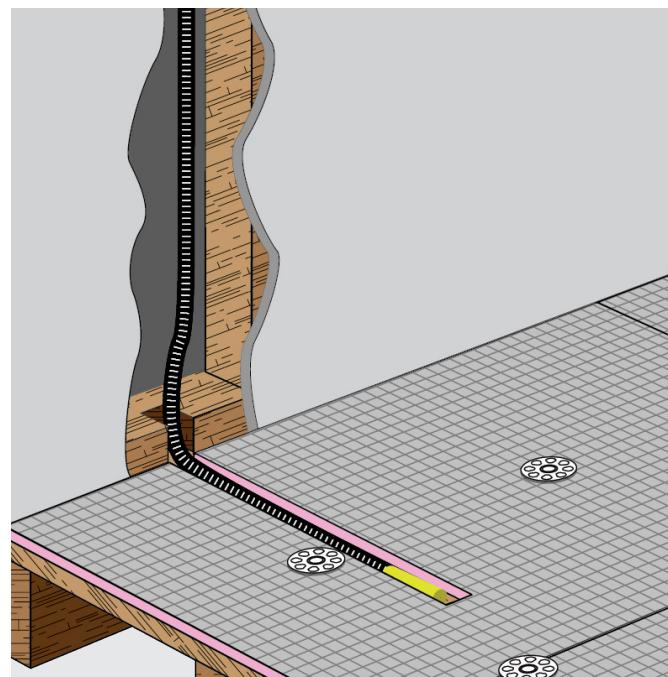
Fixing to a timber substrate: Use 32mm wood screws, and 36mm plastic fixing washers at 30mm spacing around the edge of each board and through the centre line. You can also use tile adhesive under the boards before using the fixings.

Fixing to a concrete substrate: If it is a new screed or concrete slab, make sure the screed/concrete is completely cured and ready for tiling. Mix flexible tile adhesive in accordance with the manufacturer's instructions and spread using a notched trowel creating a full bed of adhesive large enough for one board.

Lay the insulation board onto the adhesive taking care to squeeze out any air pockets in the adhesive. We recommend back buttering the insulation boards to help adhesion and coverage. For a high quality finish make sure all boards are flush and tape over the seams using fibreglass reinforcing tape. Allow the tile adhesive to dry before you continue with the installation.



Running cables, conduits and a floor sensor probe



Before installing the under floor heating, it is important to make sure all of the first fix electrical requirements are met. You will need to make sure there is a 230 Volt power supply fed from an RCD protected circuit.

The under floor heating mat should be connected to the existing circuit via a suitably rated fused spur.

Drill a hole in the wall at the base to allow cable to be passed from the floor into the wall cavity. If you do not have a cavity, you will need to chase a channel out of the wall and make good after the installation is complete and tested.

You will need to position an extra deep electrical back box in the wall approximately 1.2m from the floor. This is where you will install the thermostat.

Run the power supply cables to the back box and install a conduit from the back box down to the floor. This is for the floor temperature probe and the end should extend at least 500mm into the floor space. Chase a channel out of the insulation board or floor substrate and tape the conduit in place.

Make sure that the conduit end (floor sensor probe position) is in a clear area of the floor that will not be covered by insulating materials such as mats, sanitary. This will affect the operation and efficiency of the heating system.

Feed the sensor probe into the conduit and push it right down to the end of the conduit cap. Leave the end in the back box ready for connection to the thermostat.

Resistance and electrical insulation test procedure



One of the most important steps when installing an electric under floor heating system is the testing. Most issues are prevented by proper testing during the installation. **You must test the under floor heating at least 3 times:**

1. As soon as it comes out of the box to make sure the heating cable is not damaged before installation starts.
2. When the under floor heating mat or cable has been laid. This test makes sure that no damage has been done to the cable while the mesh is being cut and installed.
3. After the floor finish has been laid to make sure that no damage occurred during the installation of the flooring.

Once these tests are done the results should be recorded on the table on page 7 and handed to the homeowner. The homeowner can then use this information to register the warranty.

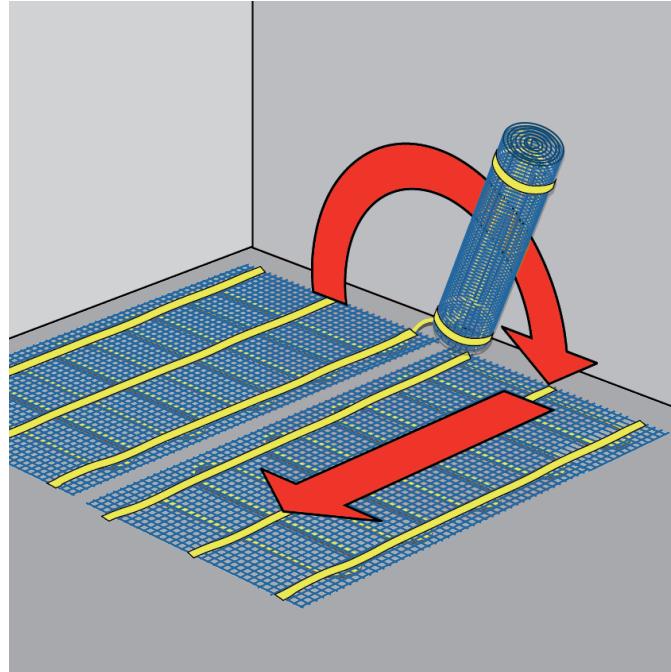
Resistance test: This resistance test makes sure that the resistance value of the heating cable is within the tolerance of the factory test results. Before you start, reference the manufacturer readings on the product label.

Set your meter to the Ohms setting and if it is not auto ranging, select the right range for the expected reading. Connect the Live cable to one probe and the Neutral to the other. The reading should be within -5 to +10% of the expected reading to pass the test.

Insulation test: This test makes sure that there are no breaks in the insulation of the heating elements by checking that there is no detectable resistance on the earth wire.

Set your insulation tester to Ohms and 500V. Connect the Live and Neutral cable to one of the clips and connect the Earth to the other. Press the test button. If the meter reads any resistance there is a leak to earth and the mat should be replaced before continuing with the installation.

Roll out the heating mat over the heated floor area



Starting near the thermostat wiring point, roll the mesh out over the floor. When you reach the end of the room, carefully cut the mesh taking extra care not to cut or damage the heating cable.

We recommend using scissors to cut the mesh as they are less likely to slip and damage the heating cable insulation.

Now turn the mesh over and roll out in a new row parallel to the first. Repeat this process until the desired heated area is covered.

Irregular areas: If you have irregular areas that mean you can't use the full width of the mat, it is possible to remove the mesh from the heating cable and arrange the cable in these areas. You can use the pieces of self adhesive mesh that you removed from the cable to stick it down in these areas.

IMPORTANT:

Cables must always be at least 50mm apart to avoid overheating.

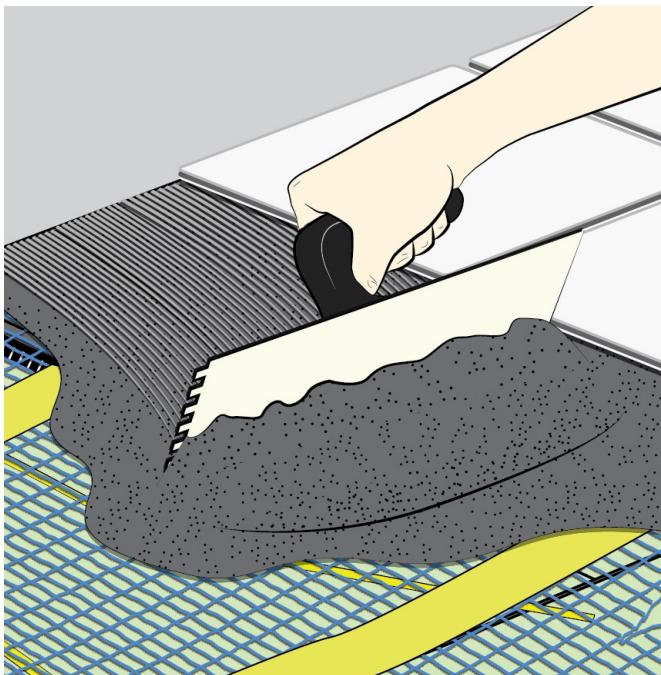
Do not cover the heating cable, end termination or connection to the cold power lead with tape. This causes an insulating effect that makes the cable overheat and fail.

Do not place any section of heating cable, the cold power lead connection or end termination in the wall or floor cavity. This causes an insulating effect that makes the cable overheat and fail.

Do not cut the connection to the cold tail into the insulation and cover with tape. This causes an insulating effect that makes the cable overheat and fail.

Do not run heating under areas that are going to be covered with permanent furniture or sanitary ware. These areas should be left unheated.

Tiling directly over the heating mat



Before you tile you must remove all protective film from the under floor heating and make sure the mesh is tuck down to the sub floor.

If any areas have not adhered well, you can use sections of tape over the mesh (not the cable!) to hold the mesh in position while you tile.

You can tile directly over the heating cables with a full bed of flexible tile adhesive. You must take extra care not to snag the heating cables with the trowel.

Mix a flexible tile adhesive suitable for use with under floor heating according to the manufacturer's instructions.

Spread the adhesive over the heating mesh using a plastic notched trowel. Apply adhesive to the back of the tile to ensure complete coverage.

When you've finished tiling you must leave the adhesive to fully cure before turning the heating on. Consult the adhesive manufacturers guidelines for curing times.

IMPORTANT: Make sure 100% of the heating cable, the connection to the cold power cable and the end termination are completely covered and embedded within the tile adhesive. Failure to do this can result in overheating and failure which is not covered under the warranty.

Self levelling compound and other floor finishes



If you prefer, you can encapsulate the heating mat in a layer of flexible self levelling compound before tiling. Doing this protects the heating cable during tiling and provides a flat surface to tile on. Adhere to the levelling compound manufacturers guidance on mixing ratios and depth.

If you are laying any floor finish that is not ceramic tiles you must cover the electric floor heating in a 10mm layer of self levelling compound before installing the floor finish.

This layer encases the heating cables and provide a mass to conduct the heat away from the cables and up into the floor.

Failure to lay a self levelling compound layer under other floor finishes and running an under floor heating mat in free air is dangerous and will cause overheating and cable failure. This damage is not covered by the warranty.

You must lay a 10mm self levelling compound layer over electric floor heating mesh before laying floor finishes other than tiles including:

- Carpet and underlay (mat combined tog rating 2.5)
- Engineered timber (floating or bonded)
- Laminate (floating or bonded)
- LVT (floating or bonded)
- Vinyl or linoleum (floating or bonded)
- Resin flooring

Resistance test results record and customer handover

INSTALLER: The installer must complete the full test procedure and complete this page in full and give it to the home owner to keep in case of a warranty claim.

HOME OWNER: Use this information to register your warranty with Walls and Floors. You must also keep this document for your records in case of a warranty claim.

Stock No	Manufacturer's Values	Before installation	After cable installation	After floor finish
Resistance measurement of the electric heating cable				
Insulation resistance test (Two conductors and earth braid)				
	Infinity (I) or Overload (OL)			
Floor temperature sensor test				

Manufacturer's test log	Installer details
To the installer: Fix manufacturer test results label from inside the product box here. Staple multiples.	Name: Company: Email: Phone: Address: Postcode: Part P number: Date: Signature:

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