



Installation Manual

Snug Mat FME

SNUG

UNDERFLOOR HEATING

Quayside Court, Navigation Way
Docklands, Preston, PR2 2RZ

t: 01772 761333

f: 01772 761222

sales@firsttrace.co.uk

www.snugufh.co.uk

Floor Preparation

Before laying your Snug FME Foil Mat, all floors must be prepared to ensure correct installation can take place.

Concrete Floors

When installing directly onto a concrete floor, ensure the floor is fully sealed by using a primer and removing all sharp objects within the floor that could damage the cable during the laying process or once laid.

Wooden Floors

When laying on wooden flooring ensure that the wood is suitable for heating. Unheated-treated wood i.e. chipboard is not suitable for underfloor heating. Marine ply or thermal construction boards must be laid if this is the case.

Installation of Snug Thermal Boards

Thermal construction boards can be laid onto an even, level floor in two ways. Firstly, it can be secured using a non-solvent based flexible tile adhesive. Apply the bed of flexible adhesive to the floor using a notched trowel. Snug Boards should be bedded thoroughly, ensuring that no voids remain beneath them. Lay the boards tightly together in a chequer plate fashion, making sure there are no gaps between the boards. Once the flexible adhesive has dried tape the joints with fibreglass reinforcing scrim tape.

Secondly the Snug boards can be secured with screws and washers, fixing should be 30cm centres. The boards are to be laid in a chequer plate fashion.

6mm boards should not be mechanically fixed.

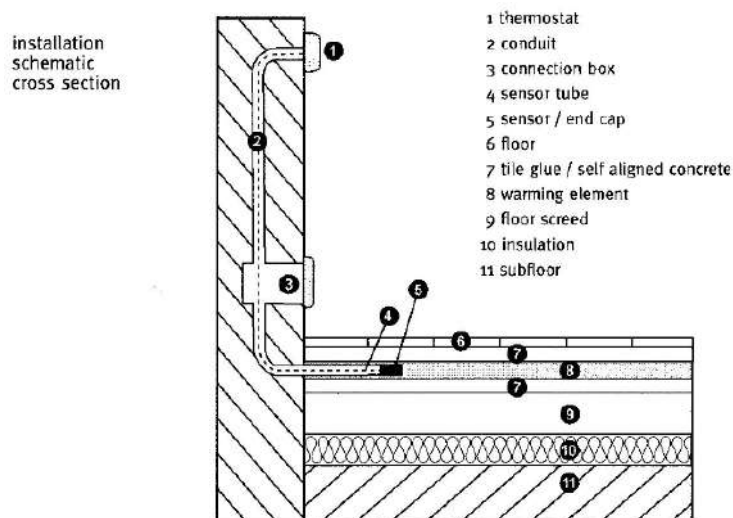
It is important that there are no electrical cables or pipework under the floors that could be damaged by the screw fixings. The correct screw length should be used.

12 Helpful Tips to Correctly Install Your Snug FME Foil Mat

1. Never cut the heating element wire.
2. The heating element must always be protected by an RCD.
3. Never leave excess heating mats rolled up under units or fixtures.
4. Never run the connection leads underneath or across the heating element wires.
5. Never cross or overlap the heating wires.
6. Do not switch the system on for at least 2 weeks after fitting the floor finish; you need to wait for the adhesive / latex / grout to dry naturally.
7. Do not cut or prepare tiles on top of the fitted heating system. When other work is going on in the room, avoid damage by keeping the heating covered until you are ready for the final floor finish to be put down.
8. The cables should never be spaced at intervals closer than 5cm or further than 10cm apart.
9. Only a qualified electrician should connect the heating element to the mains.
10. Install the floor sensor for your thermostat in its tube when fitting the system.
11. When using the Snug Mat FME under wood, do not place any heating beneath areas where a thermal block will be placed on the top floor covering. E.g. Furniture without air gaps or large beanbags could potentially cause the system to overheat.
12. Do not use staples to fix down the floor heating.

Finally, ensure that you set the controller to Air and floor mode to turn on the floor limiter.

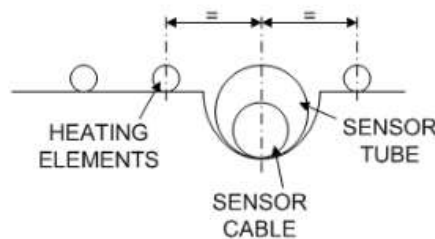
Planning Installation of your Heating Mat



Before laying your heating mat you must plan the installation.

Draw a general view of the room and mark the area that will be covered with the heating elements. Avoid heating under units and sanitary ware as this can cause heat blockage and it is unnecessary to heat these areas anyway. Mark the location of the supply lead- the cold lead wire.

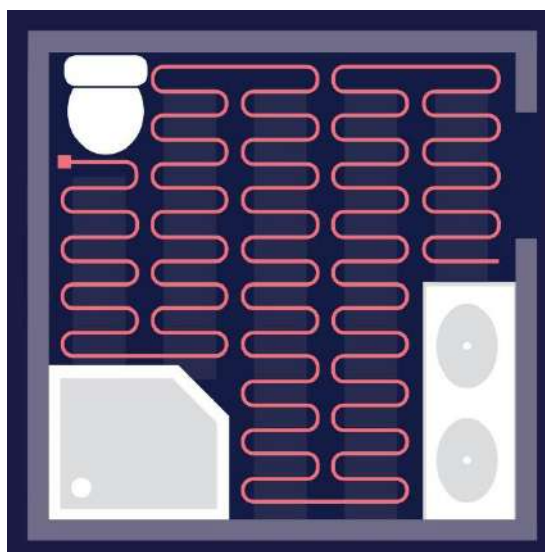
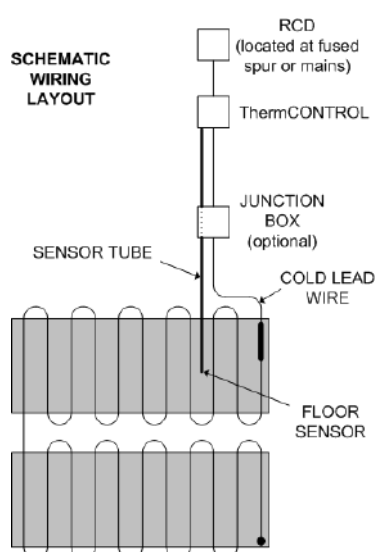
Having decided on this position you can cut a groove in the floor to accommodate the protective floor sensor tube. The sensor must run centrally between two runs of the heating elements so it is important to note where the element will be positioned.



Make sure the sensor tube has a gradual bend when it enters floor level, this will ensure the sensor cable can be easily inserted or withdrawn. The tube can be cut to length to suit, then seal the end of the tube with masking tape.

Joints linking the cold tail to the heating mat must be located on the floor. A small groove might be necessary to ensure the joint is the same height as the heater cable.

Snug Mat FME



Please refer to the floor planning section of this manual before installing your Snug underfloor heating FME mat.

Lay down the 3mm thick close cell insulation making sure that the whole floor is covered with insulation. The insulation can be stuck down using staples or an adhesive. Make sure that the insulation is laid up to each other leaving no gaps on the floor.

Next lay the Snug FME Mat **FOIL SIDE UP** on the floor leaving a 50mm gap around the edge of the room. To ensure the continuity of the earth, use the foil strips provided.

The tape supplied should be laid on top of any heating wires that may have become exposed when cutting the mesh.

If the mat requires fixing down, this can be done by using foil fixing tape.

The cold tails can only be extended by a maximum of 10 metres. However, they cannot be run across the mat in any way as this may result in cable damage.

Once laid you may place your underlay, wood, laminate or carpet directly on top of the heating mat.

(Note: Please ensure that the material going down on top of the mat is suitable for underfloor heating)

Testing

This is a very important stage of the installation and must be done correctly.

There are 3 stages of testing to make the warranty valid. The Snug Mat should be tested prior to being laid, once it has been laid and once the finished flooring has been laid.

When testing the Snug Mat, you must carry out a continuity test as well as an insulation resistance test. To carry out a continuity test set your meter to the lowest ohms reading (usually 200Ω or 2000Ω). Connect one of the test leads to any of the heater cable cold leads, and the other test lead to the one remaining cold lead. Obtain the reading and write it on the warranty card. You might find that the reading is not identical to the sticker on the heater mat. This is still ok as long as it is not too significant (within 10% - 15% is acceptable). You have now completed the continuity test.

For your insulation resistance test switch the tester to 'mega ohms', put one of the test leads onto both heater cold leads and the other test lead onto the earth braid. The reading should be over $10\text{ M}\Omega$ regardless of the length of the element.

Record your reading on the warranty card, the insulation resistance test is now complete.

FAQ

How Safe are Snug Mats and Snug Cables?

Perfectly safe!

All mats and cables have been tested in accordance to National and International Standards for safety. Cables and mats comply with rules regarding the EMC (Electro Magnetic Compatibility) and fulfil the ICNRIP guidelines and regulations with regards to EMF (Electro Magnetic Fields).

Heating elements are produced with THREE layers of electrical insulation and an earth braid, aligned to perfect industry specification. Because of the dual wire construction of the heating element there is only one cold lead to connect and electromagnetic emissions are virtually eliminated making it safe for children to play on the heated floor.

Is it necessary for an expert to install Snug Mats and Snug Cables?

Installation is ideal for either the DIY enthusiast or approved installation contractor.

The electrical supply must be protected by a correctly sized RCD (Residual Current Device), either at the mains or a fused spur.

The system connects to your household wiring and it is recommended the final mains electrical connection is made by a qualified electrician.

What is the temperature of the wood / tile surface?

This is between 25-27°C in accordance with the BSI guidelines for comfort heating. BSI Code of Practice CP: 1018 - Electric Floor Warming Systems specifies a maximum floor surface temperature of 27°C on wood and laminate.

Can the Snug FME Mat be laid anywhere?

When using the Snug FME underneath woods, care should be taken not to place any heating beneath areas where a thermal block will be placed on the top floor covering. Furniture without air gaps beneath them or large beanbags prevent the heat from escaping and can cause the system to overheat.

Set the controller to Air and floor mode to turn on the floor limiter.

On carpets please make sure that no furniture with spikes are placed where the floor heating is.

Can I connect more than one mat to my controller?

Yes, you can combine more than one size of Snug Mat or more than one reel of Snug Cable to cover the total floor space as long as the system doesn't exceed the controller rating (please refer to your controller manual).

Each Snug Mat and reel of Snug Cable comes with a 4m cold lead wire and with multiple circuits the leads must be connected in electrically in parallel.