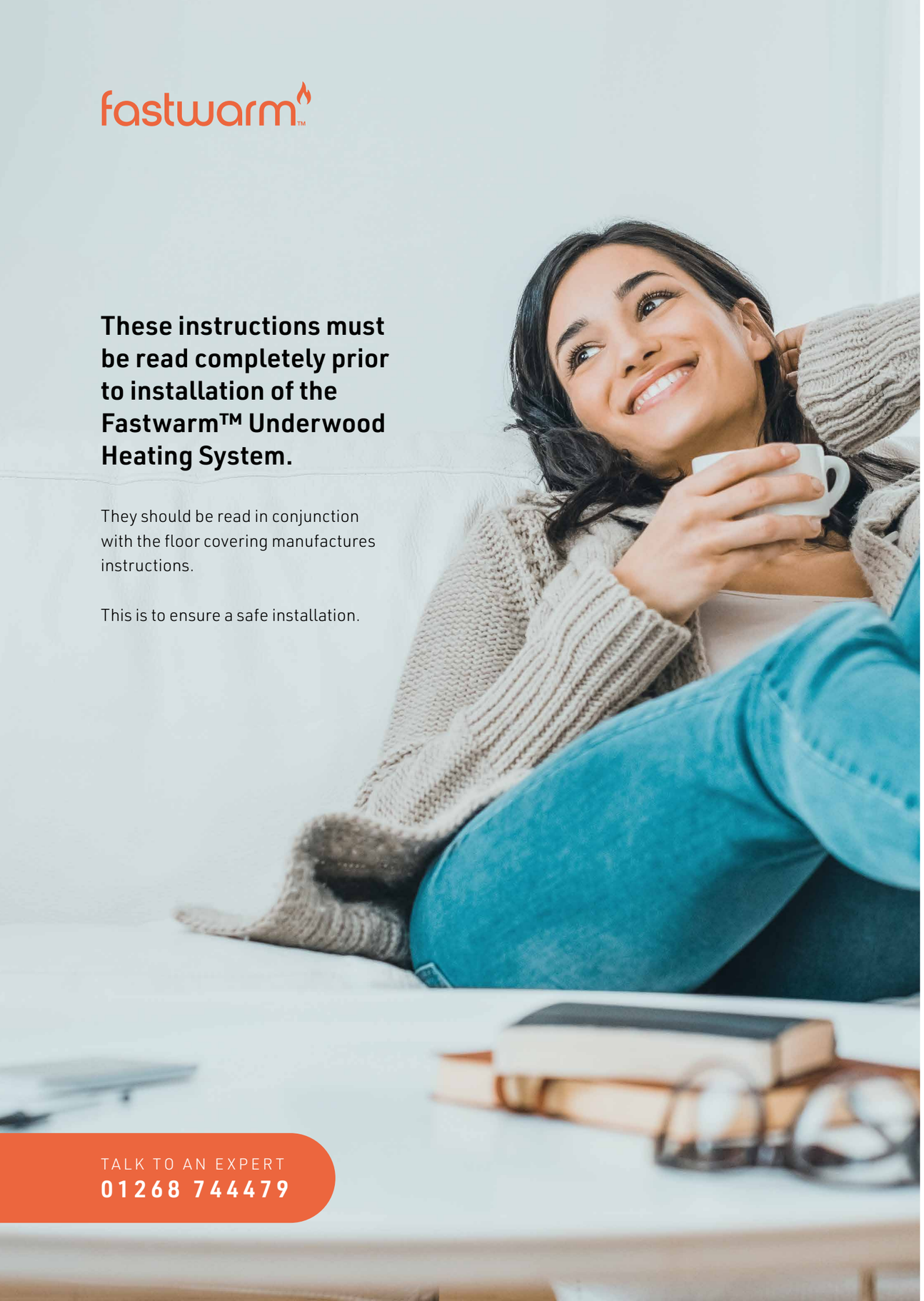
Fastwarm™ Underwood Heating System

INSTALLATION MANUAL

- Ideal for most Engineered Wood and Laminate Flooring
- Easy to Install
- Compliant to latest regulations
- UKCA Approved
- Lifetime warranty



These instructions must be read completely prior to installation of the Fastwarm™ Underwood 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

Contents

Fastwarm™ Underwood heating mats have been designed for use with engineered wood or laminate flooring.

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

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

The Fastwarm™ Underwood 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.

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.

- ✕ **Don't** cut the heating cable at any point
- ✕ **Don't** turn on the mat when it is still rolled up
- ✕ **Don't** install an underlay on top of the heating mat
- ✕ **Don't** place flat bottomed or fixed furniture above the heating mat
- ✕ **Don't** place items such as carpet/rugs, bean bags/dog baskets over the heated area.

TALK TO AN EXPERT **01268 744479**

Important Information

Fastwarm™ Underwood heating mats are designed for use directly under engineered wood or laminate flooring. They must sit on a suitable insulation board (not tile backer boards).

Fastwarm™ Underwood mats must NOT be used under ceramic tiles, stone or similar floor coverings. Not installed under nailed or wood flooring that needs to be glued to the sub floor.

SUITABLE ENGINEERED WOOD OR LAMINATE

Most engineered wood or laminate floors are suitable however floors with metallic strips used as a locking system must NOT be used.

Laminate floor systems with a built-in underlay must NOT be used.

Check with the flooring manufacturer that their flooring is suitable for electric underfloor heating.

Engineered wood flooring with a depth of up to 20mm is preferable.

Safe operation of Fastwarm™ Underwood heating systems.

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

Rugs, bean bags or any items that have a value more than 2.5 tog.

As this will cause "thermal blocking" and extreme cases can lead to overheating and fire hazard.

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™ Underwood Heating mats must be controlled using a programmable thermostat using a floor temperature sensing probe.

This is to ensure that the temperature below the engineered wood or laminate floor does not exceed 28 degrees.

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.

TALK TO AN EXPERT **01268 744479**

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)

Testing The System

The Fastwarm™ Underwood 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. Prior to installing the finished floor

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)	Resistance (Ohms)	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

TALK TO AN EXPERT **01268 744479**

STEP 1

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

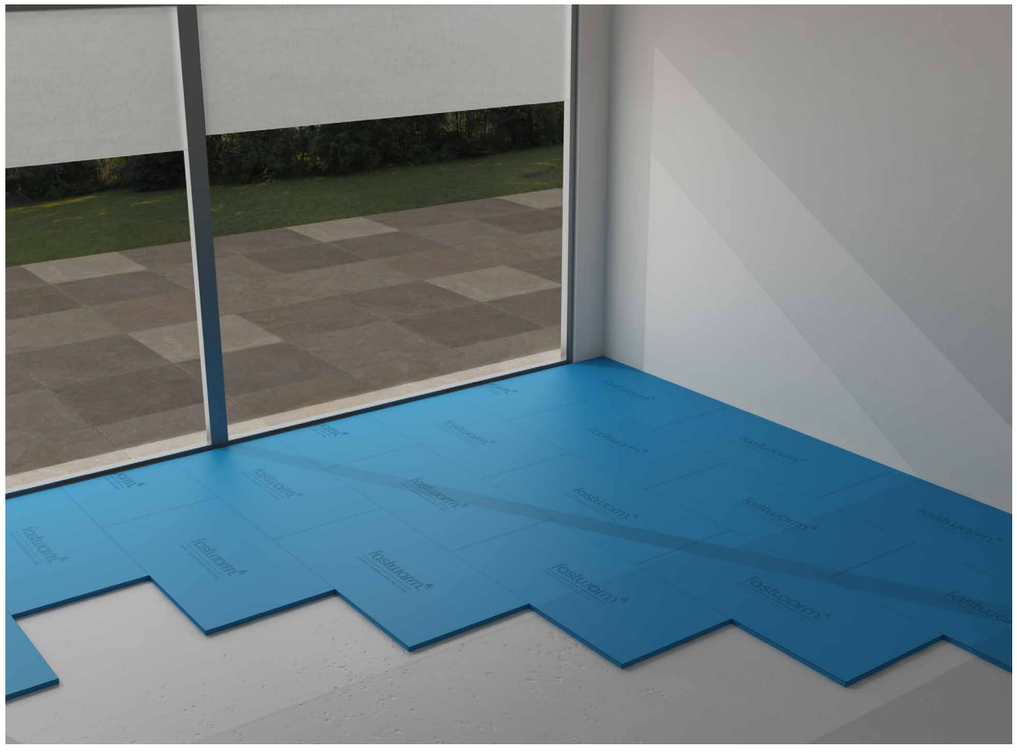
THE INSTALLATION MUST CONFORM TO THE CURRENT IEE EDITION PART P REGULATIONS AND MUST BE CARRIED OUT BY SUITABLY QUALIFIED PERSON.

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.



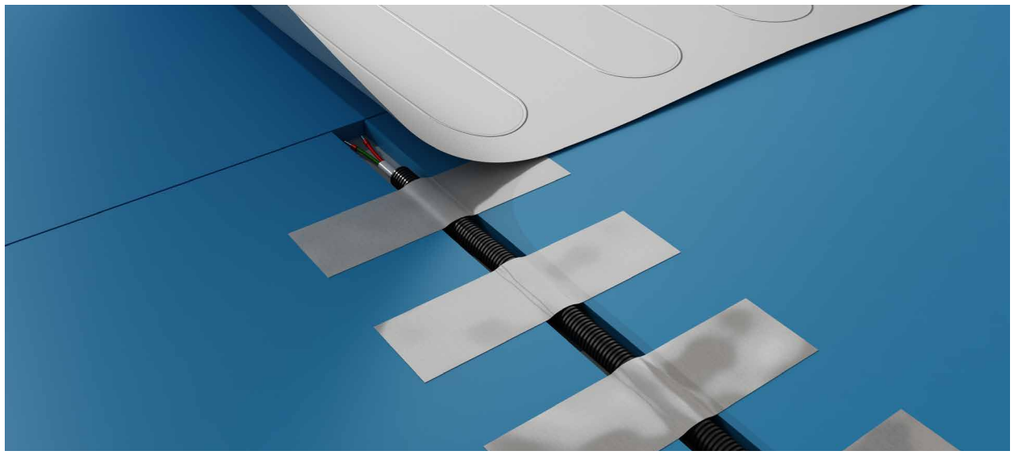
TALK TO AN EXPERT **01268 744479**

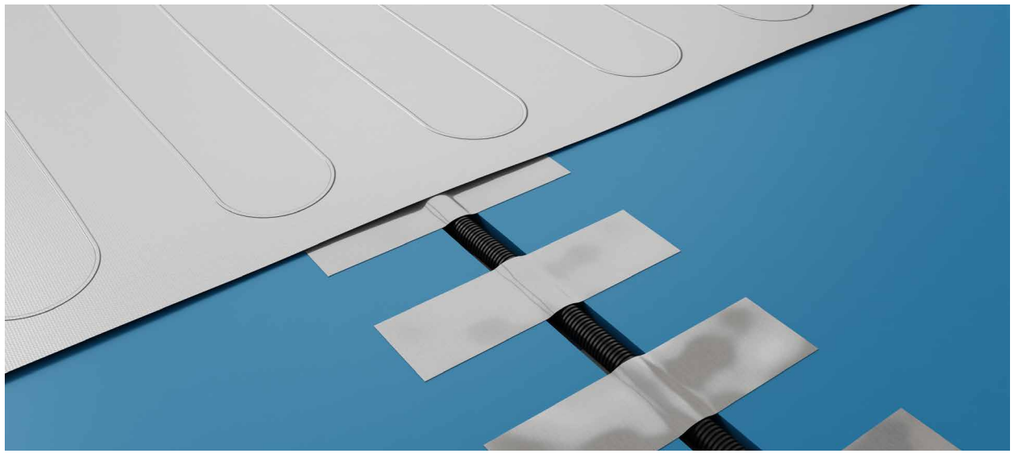
STEP 3

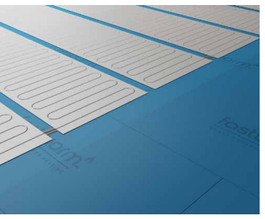
Install the black conduit into the wall chase and at least 200mm under the heating mat. It is necessary to cut out a slot in the insulation board. If using a 6mm insulation it will be necessary to cut out a small grove in the sub floor as the conduit is a 10mm diameter.

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)

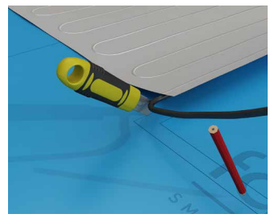
TALK TO AN EXPERT **01268 744479**

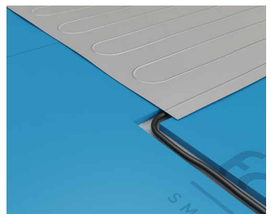
Fastwarm™ Underwood heating mats.

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 your 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 grove in the sub floor.





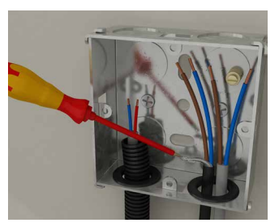
If installing two or more mats in the same room, ensure the mats do not overlap.

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™ Underwood heating mats must be fitted on top of a suitable insulation board (not tile backer boards) and directly under the engineered wood or laminate flooring.

They are not recommended for use with solid wood flooring.



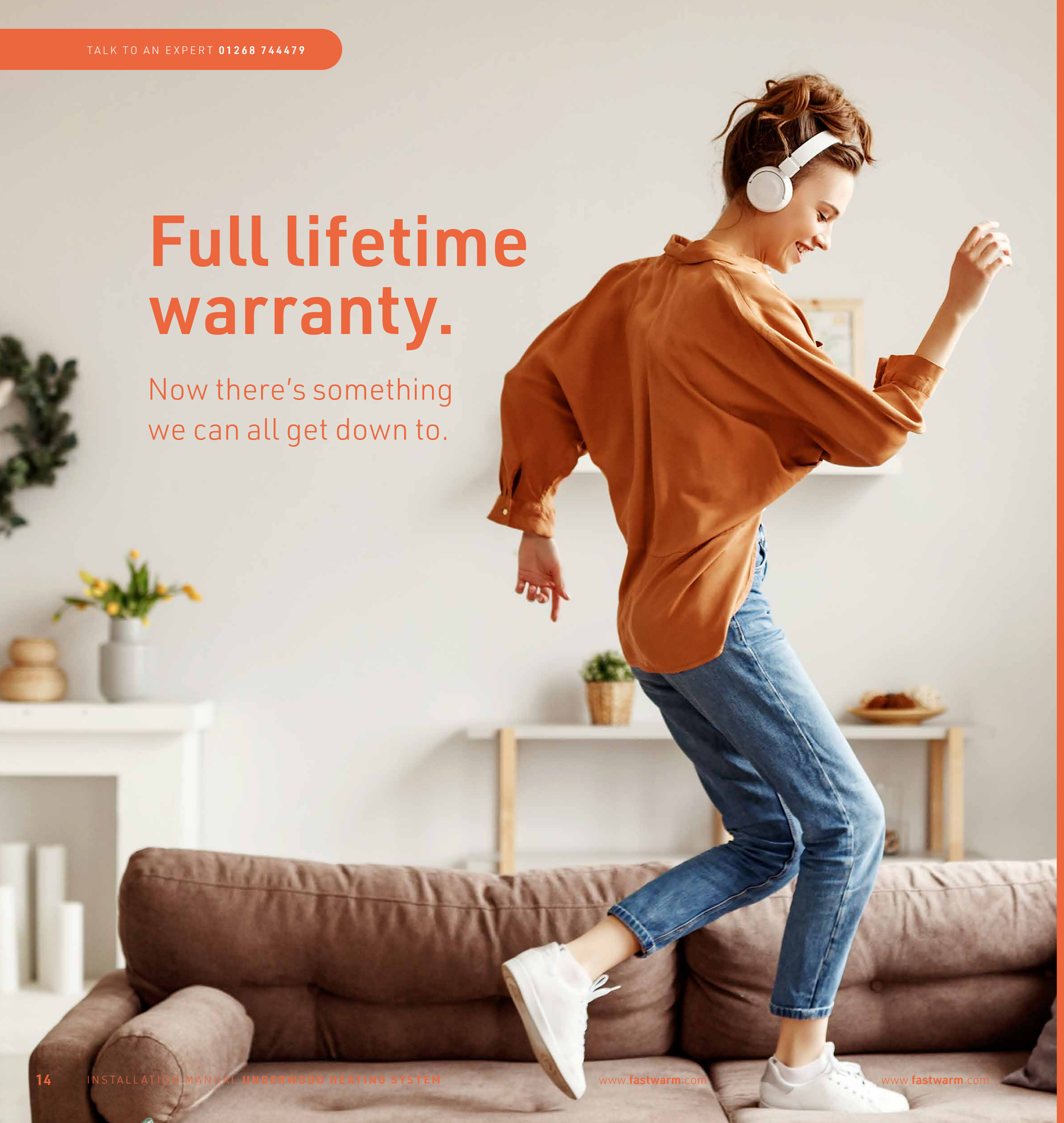
STEP 5

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.

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™

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

www.**fastwarm**.com