

## Installation Advice

- Care must be taken to ensure the **radiant heating film** is not damaged during installation. It is advisable to lay the floor immediately after installation.
- **Radiant heating film** must be protected by a layer of polyester vapour barrier.
- **Radiant heating film** is designed to be controlled by the approved range of thermostats, these are rated at 3450W. If the installed load exceeds these figures then a suitable contactor must be installed by the electrician.
- High specification adhesive fixing tape must be used for installation of the thermal insulation, **radiant heating film** and polyester vapour barrier.

### Pre-Installation Check List

#### Products:

- Radiant heating film (pre-wired panels)
- Adhesive fixing tape
- Thermostat + floor sensor + sensor conduit
- Insulation boards - one board covers 1m<sup>2</sup> (6mm x 1250mm x 800mm)
- Polyester vapour barrier
- RCD 30mA (Residual Current Device) if not already fitted

#### Tools:

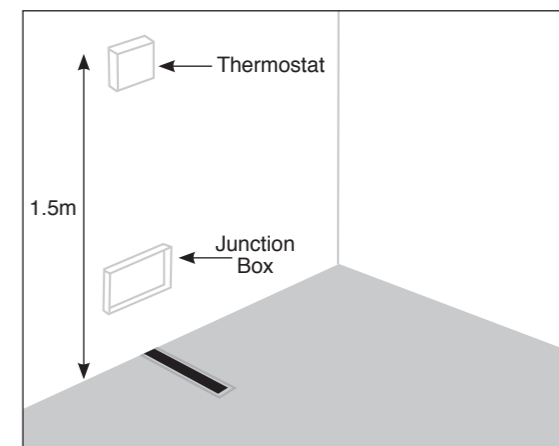
- Multi-meter for checking continuity and resistance
- Measuring tape and marker pen
- Scissors
- Utility knife

## Radiant Heating Film INSTALLATION GUIDE

## Step 2: Planning

Plan your installation using a sketch, marking your heating film laying pattern and the positions for the thermostat and floor limit sensor. It is important to locate the heating film connection leads on the wall nearest the thermostat connection box. It is recommended when planning your room that the heating film panels run in line with the longest room dimension. This keeps heating panels and electrical connections to a minimum making installation quicker and easier. Heating film should NOT be installed in any areas that will be covered with permanently fixed floor furniture such as wardrobes, cupboards, kitchen base units etc as this will lead to thermal blocking of the floor and localised overheating. Allow for at least a 50mm perimeter border from each wall or fixed furniture. Heating film panels should never be overlapped.

## Step 4: Installing the Thermostat



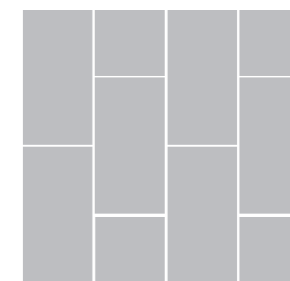
## Step 3: Heating Control

The floor heating film must be controlled by a thermostat with a floor limit sensor. The choice ranges from a sophisticated timer/thermostat with LCD display that can be programmed for convenience to a simple manual thermostat with temperature dial adjustment and an on/off switch. Whatever type you have chosen to install, the thermostat should be installed within the room to be heated. Refer to the thermostat instructions for installation and technical information.

**Please note:** if the installed load exceeds the thermostat rating then a suitable contactor must be used.

## Step 5: Lay the Thermal Insulation Boards

Thoroughly clean the existing floor area taking care to remove any sharp objects. Lay the low profile insulation sheets in "brick work" fashion as illustrated in the drawing alongside. Always remember to cover the total floor area with insulation even unheated areas. Tape along the edges using adhesive tape.

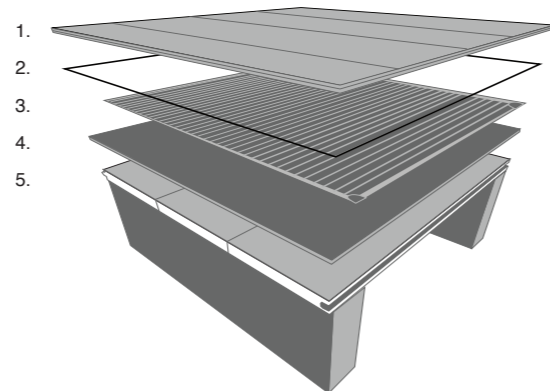


## Installation Advice

## Step 1: Floor Construction

Before laying the radiant heating film on either a suspended wooden floor or a concrete subfloor it is necessary to install a layer of low profile insulation boards (6mm thick).

This special insulation must be used at all times. Substitution with an alternative insulation material will invalidate the guarantee. This insulation will minimise heat losses and ensure quicker heat-up times for the floor. It will also act as a means of sound deadening which is required for laminate floors.



1. Laminate / Timber Floor
2. Polyester Vapour Barrier
3. Heating Elements
4. Thermal Insulation
5. Wood / Concrete Sub Floor

## Step 3: Heating Control



Manual



Programmable

## Step 4: Installing the Thermostat

The thermostat should be positioned (see top of page) at a height approximately 1.5m from the floor in an area free from draughts, out of direct sunlight and close to the electrical supply. All thermostats have a floor sensor which is placed in the supplied protective conduit and positioned centrally below one of the heating elements at a distance of approximately 0.5m from the wall.

## Step 6: Floor Sensor Installation

Cut a channel in the subfloor to accommodate the sensor conduit so the top of the conduit will be level with the thermal insulation surface when installed (see fig. 2 below). Tape over the end of the conduit using a small piece of adhesive fixing tape. Place the conduit in the channel and feed the end into the junction box. The conduit can now be cut to length leaving approximately 5cm inside the junction box. Slide the sensor into the conduit until the sensor bulb reaches the taped end. Wrap a piece of tape around the conduit and sensor cable to prevent the sensor being accidentally pulled out. Use adhesive fixing tape to hold the conduit in place in the channel.

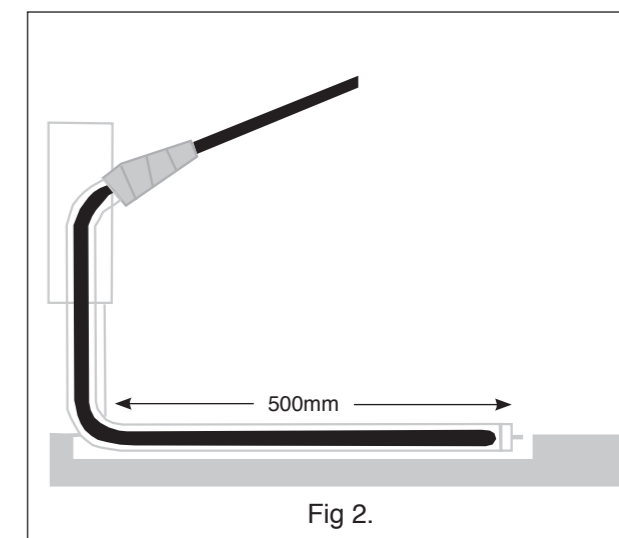


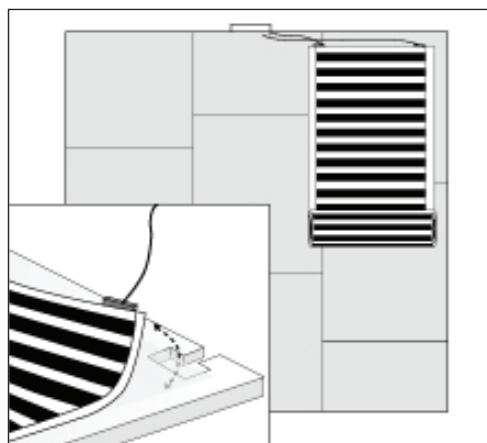
Fig 2.

- **Radiant heating film** is designed to be used under laminate and engineered hardwood flooring with a maximum thickness of 15mm (or thickness equivalent to a maximum thermal resistance of 0.15m<sup>2</sup>K/W). When underlay is specified by the manufacturer this may reduce the thickness of flooring permitted. Always check to ensure the flooring is suitable for use with underfloor heating systems.
- **Radiant heating film** operates on a standard 230 volts mains electrical supply. Please check all film panels are the correct voltage and power rating. Maximum loading 130W/m<sup>2</sup> for standard product
- **Radiant heating film** is designed for simple "do it yourself" installation, however all electrical connections must be done by a qualified electrician and the complete installation must comply with BS 7671:2008 (IEE Wiring Regulations) and Part P of The Building Regulations.
- **Radiant heating film** must be protected by a 30mA RCD (residual current device) and a suitably rated fuse or MCB (miniature circuit breaker).
- **Radiant heating film** must only be installed in dry locations. Kitchen and laundry areas are classified as "dry locations". Bathrooms and shower rooms are classified as "wet" and not suitable for radiant film.
- Ensure the floor is clean, dry and free from sharp objects
- **Radiant heating film** must not be installed below fixed pieces of solid furniture, cupboards, wardrobes etc as this could lead to a local increase in temperature. Thick rugs, dog beds, bean bags etc must not be laid on the heated floor as this may cause localised overheating and damage the floor covering.

## Step 7: Lay the Radiant Heating Film

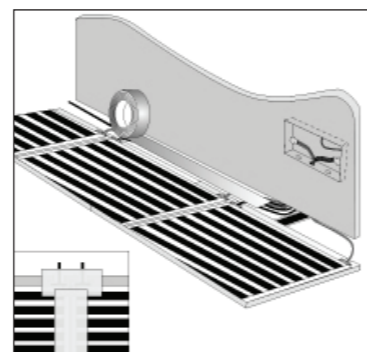
Before commencing, check the labels on each of the heating film panels to ensure they are the correct sizes and power rating.

Following the plan prepared at the ordering stage and working from one side, roll out the first panel copper side down with the connection leads closest to the thermostat wall and leaving a minimum 50mm gap from walls. Apply light finger pressure on the cable connection covers to leave an imprint on the thermal insulation. Move the element to avoid damage and using a sharp knife remove the insulation to allow the cable connection cover to sit flush with the insulation (See below).



## Step 9: Fixing Radiant Heating Film

Once happy with the positions of the cut lengths of heating film, tape them to the floor insulation using adhesive tape. This will prevent movement of the film during final floor covering installation. It is important that the film is fixed in position as individual lengths should never be allowed to overlap as this would potentially lead to "hot spots" and localised overheating. (See below).



## Step 10: Recessing the Wiring Harness

The power supply wiring should be recessed into the floor by cutting channels into the insulation using a utility knife. Run the cable in the channel to the low level junction box below the thermostat. Once positioned the cables should be fixed in position with adhesive tape. Take care not to allow the power supply cable to pass under the heating film.

## Step 13: Wiring Up (Electrician Only)

A fully qualified electrician must now make the final connections to the main supply & install the thermostat. The electrician should check for continuity of the floor sensor & test the resistance of each of the heating panels. These readings should be recorded on the installation plan record sheet. The radiant heating panels are connected together in parallel in the low level junction box. A separate commoning connector is used for the Live (brown) and Neutral (blue) connections. A suitable cable (maximum 2.5mm<sup>2</sup> solid) will be required to connect the commoning blocks to the output of the thermostat. Refer to the thermostat instructions for installation and technical information

## Step 14: Guarantee Certificate

Following installation the guarantee certificate & installation plan record sheet should be fully completed. The installation plan should include a sketch/plan of the film panel layout & position of the floor sensor. The guarantee certificate, installation plan & purchase receipt should be fixed near the consumer unit.

## Step 15: Switching On

Follow the thermostat instructions to program the heating system taking time to check and adjust the floor sensor limiting temperature if required. Depending on the final floor covering do not be tempted to turn the system fully on immediately, other than for a short operation check. If the floor covering is engineered hardwood please allow sufficient time for the wood to acclimatise (see manufacturers guidelines). Bring the system up to temperature gradually in stages over several days using the floor limit sensor setting.

## FAQ's

**Q:** What is the minimum floor level build-up height I will have when I use heating film under my floor?  
**A:** The total height build-up including insulation is 7mm.

**Q:** Do I have to use the special 6mm low profile insulation material under the heating film?  
**A:** Yes it must be used. Substitution with an alternative insulation will invalidate the guarantee.

**Q:** Can radiant film be used in a bathroom?  
**A:** Heating film should not be used in bath or shower room applications classified as zone 2 or lower. Consider using cables or mats in these applications.

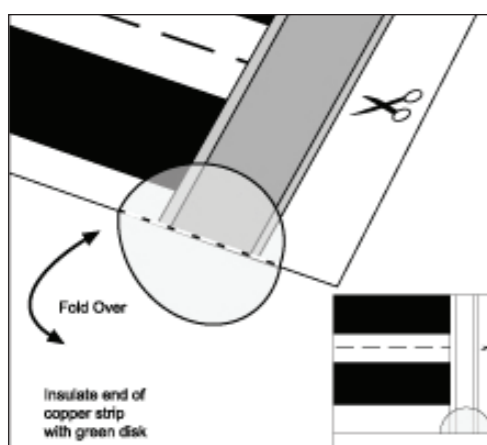
**Q:** Why do I have to cover the heating film with a vapour barrier?  
**A:** The vapour barrier acts as an additional layer of electrical insulation, provides additional mechanical protection and acts as a vapour barrier between the subfloor and the finished floor surface. It must be installed.

## Step 8: Adjusting the Radiant Heating Film

Radiant heating film is available in standard lengths from 2.0m to 10.0m in 0.5m increments. Should the elements require to be shortened in length, this can be easily done by cutting along the marked cutting line using scissors and insulating the edge mounted copper conductor strips using the insulating green polyester tape discs (4 off supplied with each heating element) as shown in the diagram.

Care should be taken not to cut closer than 3mm from the edge of the black heated area.

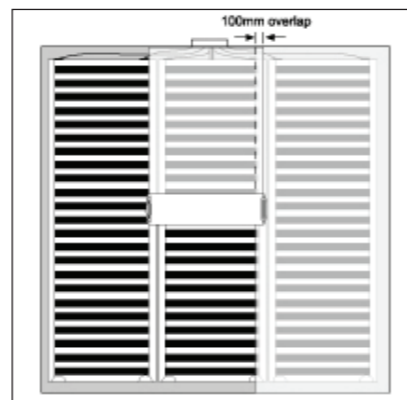
Roll out the next heating film panel parallel to the first. The heating panels edges can be butted together but **MUST NEVER** overlap. (See below).



## Step 11: Laying the Polyester Vapour Barrier

The installed radiant heating film must be covered with polyester vapour barrier to provide optimum moisture and additional mechanical protection. Polyester Vapour Barrier is available in 1m x 25m rolls which will cover approximately 22m<sup>2</sup> when installed.

To install, roll out the vapour barrier, cut to length and overlap adjacent pieces by a minimum of 100mm (See below). Tape along the entire length of the overlap using adhesive fixing tape (1 roll of vapour barrier will require approximately 25m of fixing tape). Always remember to cover the entire floor with the vapour barrier, even unheated areas (See below).



## Step 12: Lay the Finished Floor Covering

The finished floor covering should be installed as soon as possible to prevent damage to the heating film.

## Technical Information

Table 1.

	300mm Wide Radiant Film		500mm Wide Radiant Film		1000mm Wide Radiant Film	
Length (m)	Output (w)	Resistance (Ohms)	Output (w)	Resistance (Ohms)	Output (w)	Resistance (Ohms)
2.0	70	756	122	434	252	210
2.5	88	601	153	346	315	168
3.0	105	504	183	289	378	140
3.5	123	430	214	247	441	120
4.0	140	378	244	217	504	105
4.5	158	335	275	192	567	93
5.0	176	301	306	173	631	84
5.5	193	274	336	157	694	76
6.0	211	251	367	144	757	70
6.5	228	232	397	133	820	65
7.0	246	215	428	124	883	60
7.5	263	201	458	116	946	56
8.0	281	188	489	108	1009	52
8.5	298	178	519	102	1072	49
9.0	316	167	550	96	1135	47
9.5	333	159	580	91	1198	44
10.0	351	151	611	87	1261	42

## Contact Information

Please contact us if you have any problems with the installation of your heating film.

Technical helpline: 0800 954 8862

Fax: 0800 954 8863

Email: [sales@myheat.co.uk](mailto:sales@myheat.co.uk)

Address:  
**MyHeat**  
Telford Road, Glenrothes KY7 4NX

For information about our products visit our website at [www.myheat.co.uk](http://www.myheat.co.uk)