



The World Best

ENERPIA Co.,Ltd.

Installation instructions

Heating Film Kit

Before installation, carefully read this manual and prepare the required products.

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Heating Film Kit Installation instructions

1 Product Name - Heating Film Kit

2 Heating Film Kit includes



■ Heating Film



■ Connection Cables



■ Connection Crimps



■ Tape for damp-proofing



■ Flexible Conduit



■ Manual

*Option



■ Thermostat



■ Insulation



■ Terminal Press Pliers

3 Technical Information

Subflooring	Concrete, Plasterboard, Chipboard
Floor Material	Wood, Laminate, Plastic matting
Room Type	Only Dry Rooms
Heating Film Thickness	0.338mm
Width	500mm
Output	220W/m ²
Connection voltage	220V

4 Product Specification

Model no.	Voltage	Power per meter	Squaremeter(w ² l)	Output
EP220FM1.0	220V	110W/m	0.5m * 2m = 1.0m ²	220Wh
EP220FM1.5	220V	110W/m	0.5m * 3m = 1.5m ²	330Wh
EP220FM2.0	220V	110W/m	0.5m * 4m = 2.0m ²	440Wh
EP220FM2.5	220V	110W/m	0.5m * 5m = 2.5m ²	550Wh
EP220FM3.0	220V	110W/m	0.5m * 6m = 3.0m ²	660Wh
EP220FM3.5	220V	110W/m	0.5m * 7m = 3.5m ²	770Wh
EP220FM4.0	220V	110W/m	0.5m * 8m = 4.0m ²	880Wh
EP220FM4.5	220V	110W/m	0.5m * 9m = 4.5m ²	990Wh
EP220FM5.0	220V	110W/m	0.5m * 10m = 5.0m ²	1100Wh

• For technical customization, please contact us.

5 Installation instructions

1) Preparing to lay the heating film

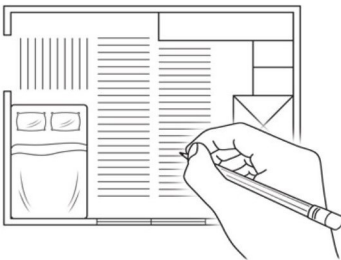
- General instructions
 - Check that the heating film is labelled for 220V and 220W/m².
 - Heating film must only be installed in dry areas.
 - The heating film must be laid with the copper strips facing down.
 - The Heating film must be protected from damage. The floorcovering must be laid immediately after the heating film has been laid.
 - Crimping tool must be used, otherwise the guarantee will be invalid.
 - The Heating film must not be laid under fixed fittings such as kitchen units, wardrobes, internal walls, etc., since this leads to overheating, and not close to stoves or other heat sources.
 - Insulating interior furnishings such as thick carpets or floor cushions must not be used.
 - Measure the resistance and isolation values of the heating film following the laying out and after the floor covering.

2) Remove any material and clean the floor.

- Make sure that the floor is firm and free from dirt and old floorcovering material.

3) Planning how to lay the heating film

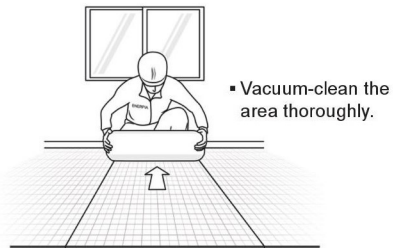
- Make an accurate sketch of the floor and draw in the positions of the lengths of heating film. Points to think of when drawing the sketch:



- The position of the thermostat should take account of the power supply. Do not position the thermostat where it will be in direct sunlight at any time.
- The lengths of heating film must be butted edge-to-edge. The Heating film must cover as large an area as possible, but the lengths of heating film must not be pulled apart, since the differences in temperature will be noticeable.
- It's important to ensure optimum cover where you will often stand, for example in front of the kitchen units.
- To avoid draughts, plan for the Heating film to be laid right up to outside walls.

4) Getting started

- Make space for the flexible conduit
 - Cut or chase a channel for the flexible conduit. The end of the flexible conduit must be positioned centrally under a Heating film. The bend in the flexible conduit must not be too sharp or it will be difficult to insert the floor sensor. Feed the sensor into the flexible conduit and tape off the end.
- Lay the insulation board



- Lay the insulation sheets butted edge-to-edge. Leave a gap of about 1 cm at the wall on the connection side. To get a level surface, lay the insulation board over the entire floor, even where no heating film will be laid. Fix the insulation board sheets with tape to stop them moving around while you are working. Cut away the insulation board above the flexible conduit.
- Measure up the heating film and cut it

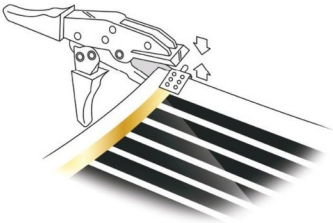


- Roll out the heating film to the correct length. On the connection side, end the heating film about 4-5 cm from the wall. Using scissors, cut the heating film square along the broken lines. DO NOT cut into the black areas. The distance from the cut edge to the black area must never be less than 5 mm. Use fixing tape to tape the long sides of the heating film together.

- Cut out for connection crimps and make space for the connection cable

- Mark the insulation board where connection crimps will go. Make a cutout of about 3 x 6 cm in the insulation board. Connection crimps and the cables should be placed lower than the upper surface of the insulation board. Important! Never apply mechanical load to the cables.
- Cut out and Make a space in the floor or at the bottom of the wall for the connection cable.

- Fit connection crimps



- Slip connection crimps on to the Heating film and center it on the copper strip. Squeeze connection crimps firmly with your fingers. Crimp connection crimps from both sides at an angle of 45° across the perforated part.

- Connect the heating film together



- Connect the heating film together.

- Run the cable

- Fix the connection cables with tape etc in the cavity. Cables can cross over in this cavity. Important! Never apply mechanical load to the cables.

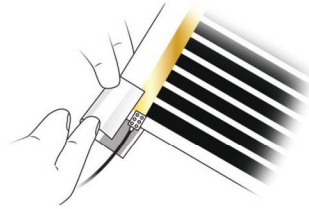
- Connect the cables

- Connect the lengths of heating film together with the cables supplied. Strip off about 6 mm of insulation and insert the wire into connection crimps. If there is only one cable, bend the stripped wire double.

NOTE that the cables are double-insulated and that both insulation layers have to be removed.

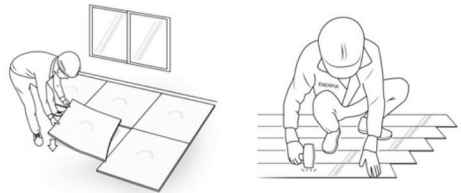
Crimp connection crimps to the cable with the crimping tool.

- Insulate connection crimps



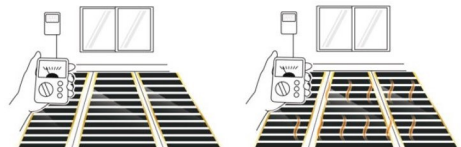
- Use pieces of tape for damp-proofing. Pull off the backing paper. Center one piece of tape under connection crimps and one over connection crimps. The tape must extend at least 5 mm beyond the end of connection crimps. Press the tape for damp-proofing firmly together with your fingers. Do not apply mechanical strain or load to connection crimps.

- Cover with plastic film and lay the floorcovering



- Cover the heating film with plastic film, at least 0.2mm. When adding the next piece of plastic film overlap at least 200 mm. Then lay the floorcovering immediately, in accordance with the arrangements. The floorcovering should be chosen with the guidance of the flooring supplier.

- Test and connect the installation



- After laying the floorcovering, test the heating film. Connect the thermostat.