



HEATING FILM MANUAL

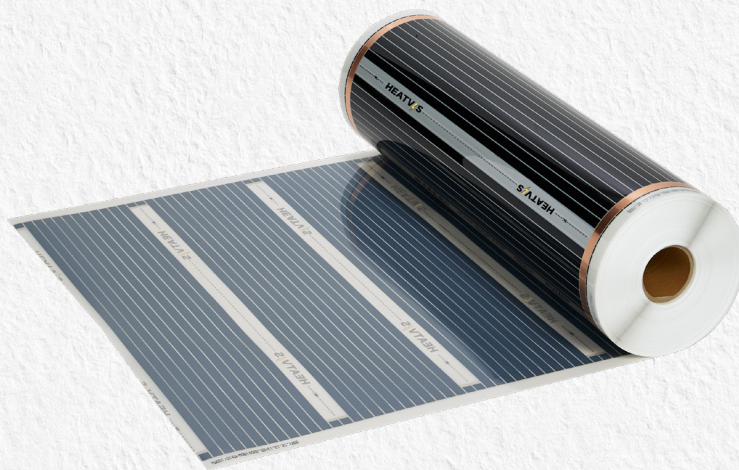


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ADVANTAGE OF HEATVIS HEATING FILM

- Flexible Installation Options

HEATVIS Film can be installed over plywood or solid concrete subfloors, making it suitable for a wide variety of dry room types.

It is also compatible with many floor coverings, including laminate, engineered wood, and solid hardwood floors.

- Safe, Clean, and Maintenance-Free Heating

Installed beneath laminate or wood flooring, HEATVIS Film delivers radiant heat that ensures consistent warmth and comfort-without circulating dust or allergens, unlike traditional convection systems.

The broad heating surface guarantees even heat distribution throughout the space. Once installed, the system requires no ongoing maintenance.

- How Effective Is Heating Under Laminate?

HEATVIS Film is a highly efficient, direct-acting radiant heating system.

It can serve as a primary heating source, replacing traditional radiators, or as a supplementary solution to warm cold floors and provide background heat.

If you plan to use HEATVIS Film as your main or sole source of heat, ensure that the total installed wattage meets your required BTU output.

Note: 1 Watt = 3.412 BTUs



This manual must be read thoroughly and fully understood prior to the installation of your underfloor heating system.

Improper installation, or failure to complete the warranty form and the HEATVIS Film installation plan, will void the 20-year warranty provided by HEATVIS Film, Inc.

This manual, along with original sales receipt, and the provided identification sticker, must be stored near the main power distribution panel for future reference.



SAFETY INFORMATION

IMPORTANT

Please read this manual carefully before using the heating film, and keep it for future reference.

The heating film may be used by children aged 8 and above only under adult supervision and with proper instruction on safe operation.

Children under the age of 8 must not play with or operate the thermostat.

Children must not perform any cleaning or maintenance of the system without parental supervision.

All cleaning and maintenance tasks must be conducted safely and only when the power is turned off.

The system may be used by individuals with reduced physical or mental capabilities, or those with limited experience, provided they have received appropriate instruction and training.

If the power cord or heating film is damaged, the system must not be used or installed and should be properly discarded.

Electrical Requirements

Each room with HEATVIS underfloor heating must have its own dedicated electrical circuit.

A Type B overcurrent protection switch and a residual current device (RCD) must be used.

All circuit breakers and RCDs must be selected by a certified electrician or electrical designer.

 Do not install the heating film under panels in floating floor systems in wet areas (e.g., bathrooms).

CAUTION

If the HEATVIS heating film is damaged during unpacking, do not install it.
Contact your supplier immediately.

! Failure to follow these safety instructions may result in fire, electric shock, property damage, personal injury, or even death

Key Installation Guidelines

What to Pay Attention to During Installation
All installation work must be performed with the power supply turned off.

- Ensure the installation area is clean, dry, and flat, free of sharp objects, dust, or debris that may damage the heating film.

- The heating film must be installed on a dry surface and protected from any contact with moisture or water.

- ✗ Do not install on damp substrates.

- Do not use underlayment materials that may damage the heating film (e.g., aluminum sheets, steel sheets, etc.).

- Avoid using moisture-absorbing materials (e.g., paper, wood, cellulose-based products).

- Do not use metallic or metalized primers under the film.

- Installation in wet rooms (e.g., bathrooms) or under floating floors in such spaces is strictly prohibited.

- A thermostat with a floor temperature sensor is required for safe operation.
 - Exception: 60 W/m² films may be used with air-sensor-only thermostats.

- The heating film must not be connected directly to a power socket. Only connect via the approved installation box.

- During installation, avoid piercing, drilling, or damaging the heating film in any way.

- Do not use nails, screws, or other metal fasteners to secure the heating film.

- Avoid floor coverings that may warp or crack due to heat.

- If the installed heating film's power exceeds 80% of the thermostat's rated capacity, use a contactor or an additional thermostat.

- Electrical supply cables must not be installed on or beneath the heating film.

- Each heating film system must include a Type B overcurrent protection switch and a residual current device (RCD).

- Thoroughly insulate all connections and copper terminals with self-amalgamating tape.

- Do not install heating film under heavy, immovable furniture that blocks airflow (e.g., refrigerators, washing machines, dressers).

- ✓ Furniture must have legs at least 30 mm high to allow proper heat circulation.

- The heating film must be powered by a dedicated electrical circuit, separate from other appliances.

- Do not overlap or double-layer the heating film.

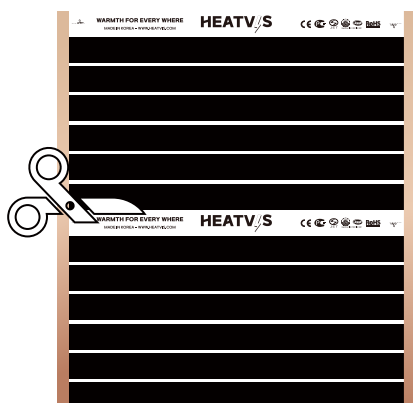
- Only cut the film at designated cut lines, and seal all exposed ends with self-amalgamating tape.

- The system should be started up according to the floating floor manufacturer's guidelines.

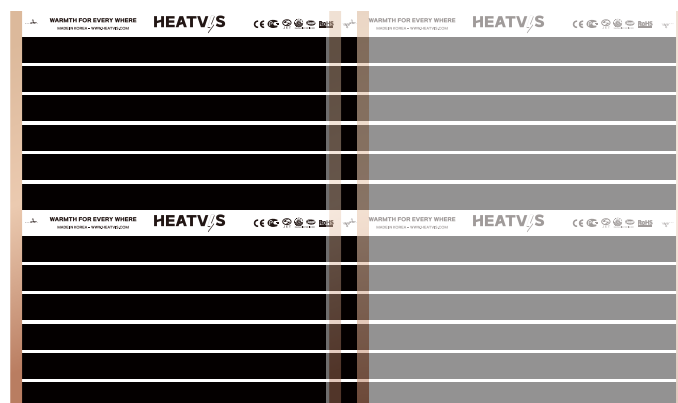
- When installing the top flooring, ensure that the heating film and vapor barrier are not damaged.
- **!** Do not leave sharp objects, plaster, or construction debris on the film during installation.
- Follow the floor covering manufacturer's guidelines.
- **!** The maximum recommended surface temperature for most laminate or panel floors is 28°C (82°F).
- All electrical work and system testing must be performed by a licensed electrician.
- Store the heating film in a dry location at room temperature.
Do not stack more than two rolls on top of each other.
- Installers must wear soft-soled shoes to prevent damaging the film during installation.
- Ensure proper electrical grounding of nearby metal objects such as frames, grates, furniture, and doormats.
- Do not install the heating film at temperatures below 5°C (41°F).
- Always follow all spacing and dimension requirements outlined in this manual.
- The installation manual, completed warranty card, and installation layout design must be retained for future reference, maintenance, or ownership transfer.



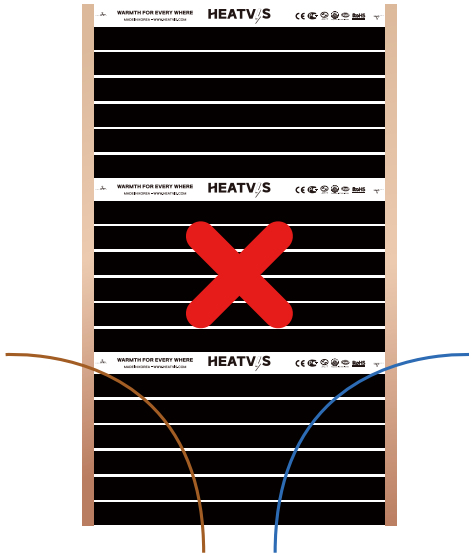
WARNING!
Cut the heating film only in the designated areas every 25cm



WARNING!
Don't overlay the heating film in the overlapping manner.
Use one to 3cm gap between each stripe.



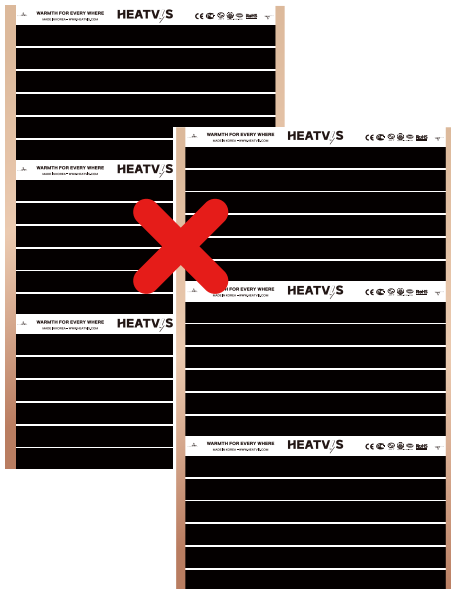
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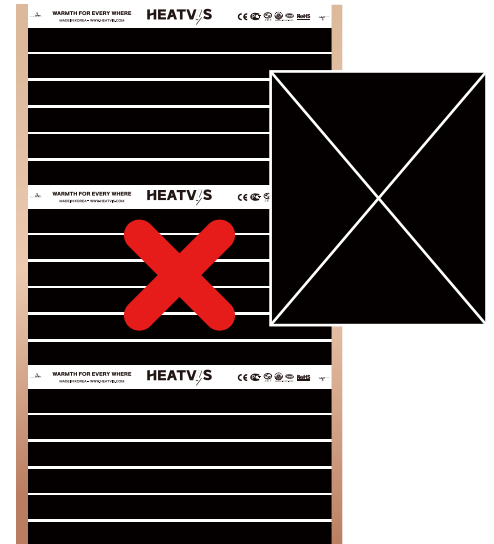
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3



4



1. Electrical connection cables must not be routed on top of or underneath the heating film under any circumstances.

2. The heating film must only be cut at the designated cutting lines. Do not modify or shorten the film at any other location.

3. Do not overlap individual strips of heating film. All strips must be installed side-by-side without contact or layering.

4. The heating film must not be installed in areas that are covered by fixed or heavy furniture or objects with a base diameter larger than 6 cm.

5. Excessive heat buildup beneath such items can result in damage to the flooring material, the furniture or objects placed on top, and ultimately, the heating element itself.

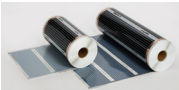
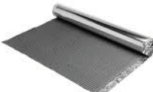
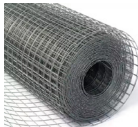
6. If the heating film must be installed beneath furniture, the furniture or objects must:
Be supported on legs or feet with a maximum base diameter of 6 cm, and
Provide at least 3 cm of clearance from the floor to ensure proper air circulation and heat dissipation.

ASSEMBLY INSTRUCTIONS FOR THE HEATING FILM

REQUIRED TOOLS

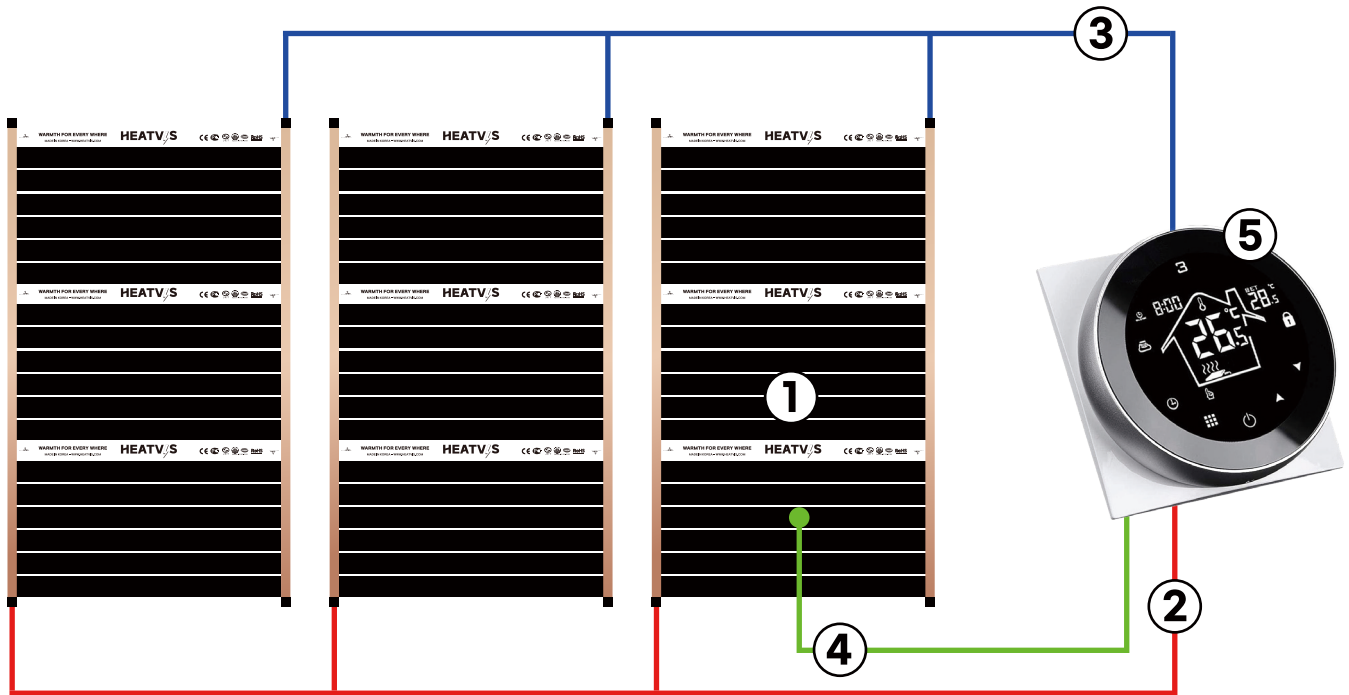
	Universal multimeter		Infrared thermometer
	Scissors		Wire stripper
	Crimping tool		Screwdriver
	Puncher		Gloves
	Measure tape		Drill driver (Required under tiles when build concrete base only)
	Calculator		

REQUIRED ASSEMBLY MATERIALS

	Heating film		Self-adhesive tape
	Insulation underlay		Protective pipe
	Electric wire		Reinforcement steel mesh (Required under tiles when build concrete base only)
	Rivet clips		Mounting stud (Required under tiles when build concrete base only)
	Crocodile clips		Vapour barrier
	Butyl waterproof tape		Protective conductor

CONNECTION OF HEATING FILM

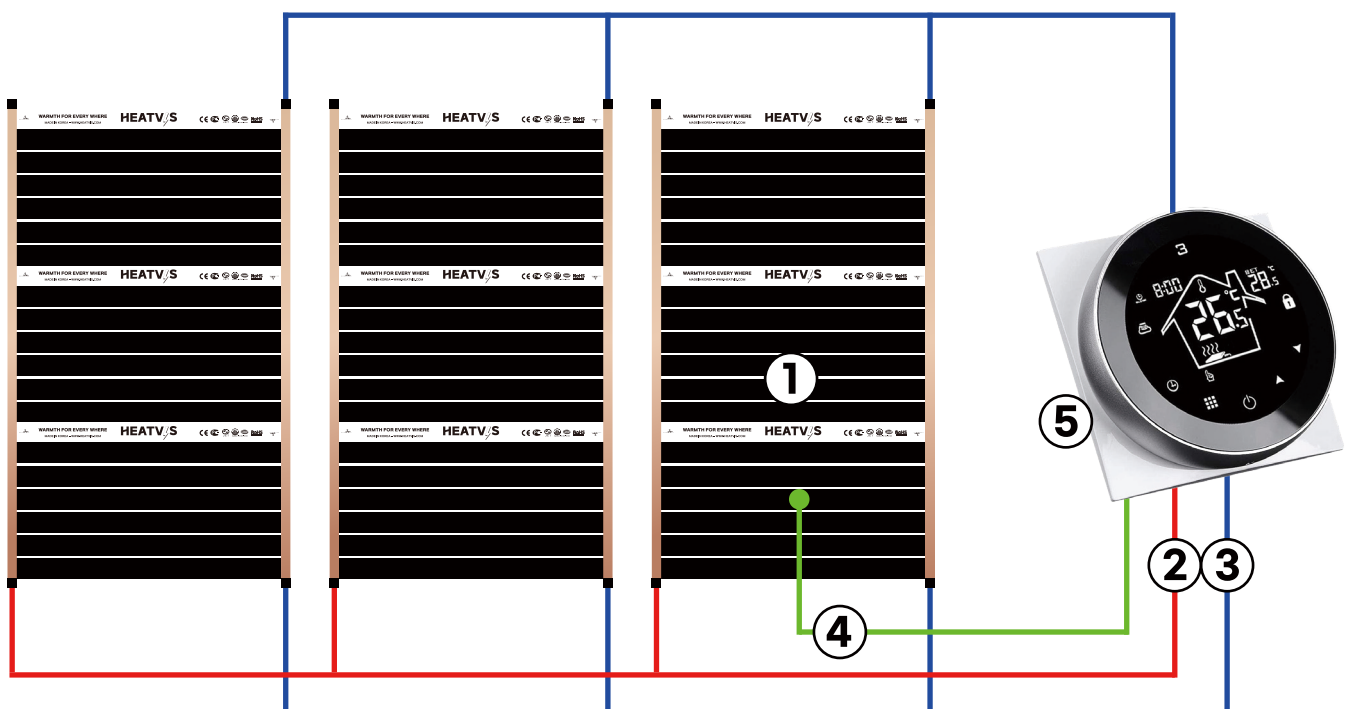
Option 1



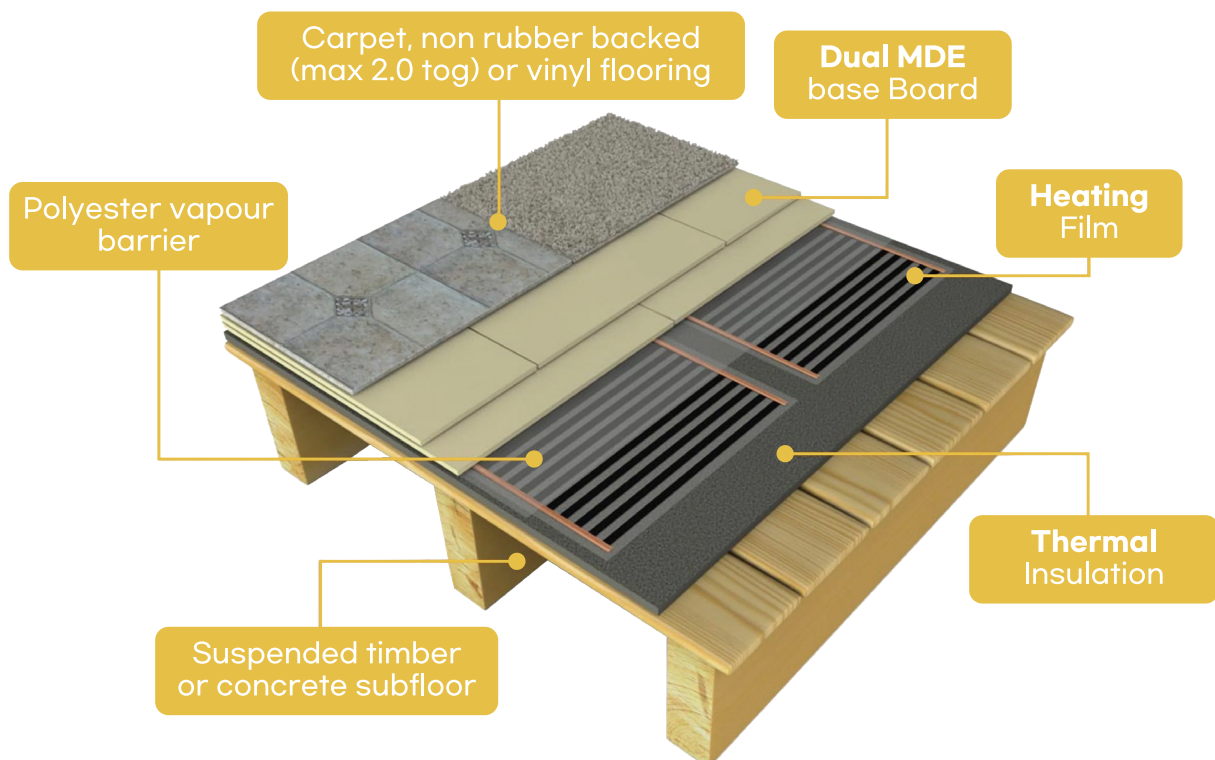
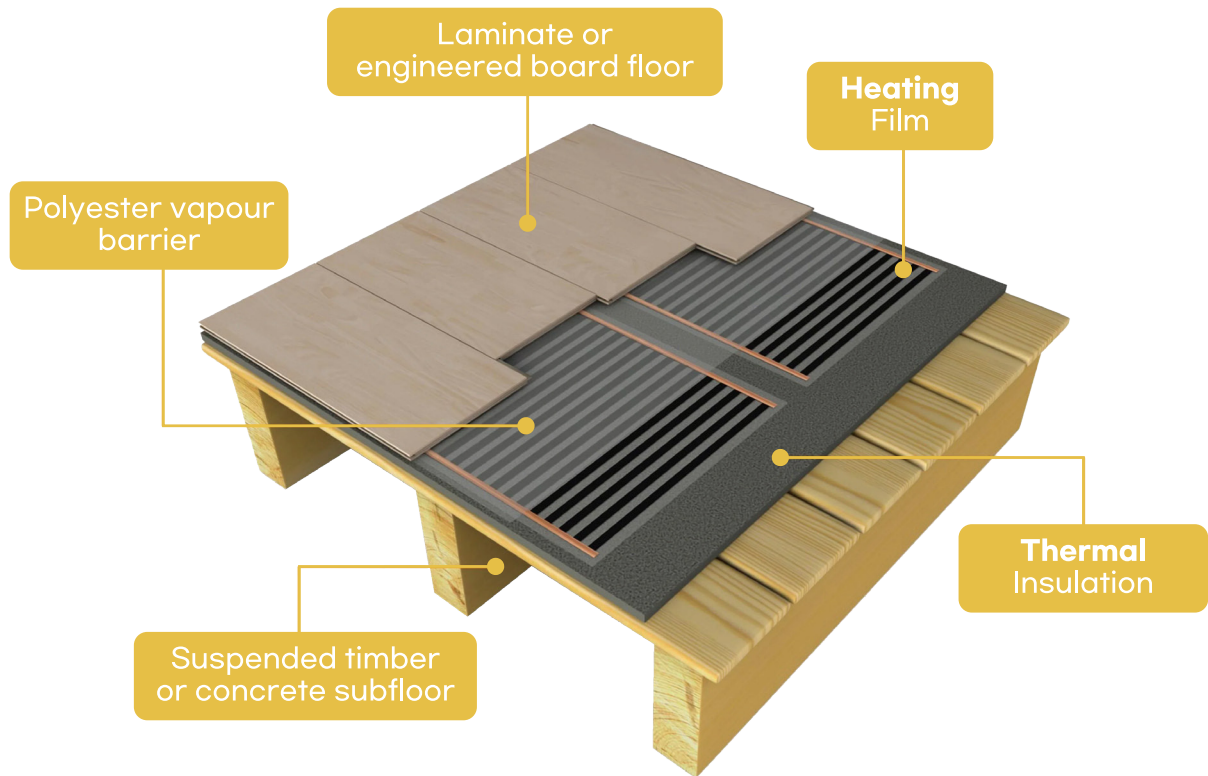
- 1. Heating film
- 2. Connection L - Live
- 3. Connection N - Neutral

- 4. Temperature sensor
- 5. Thermostat

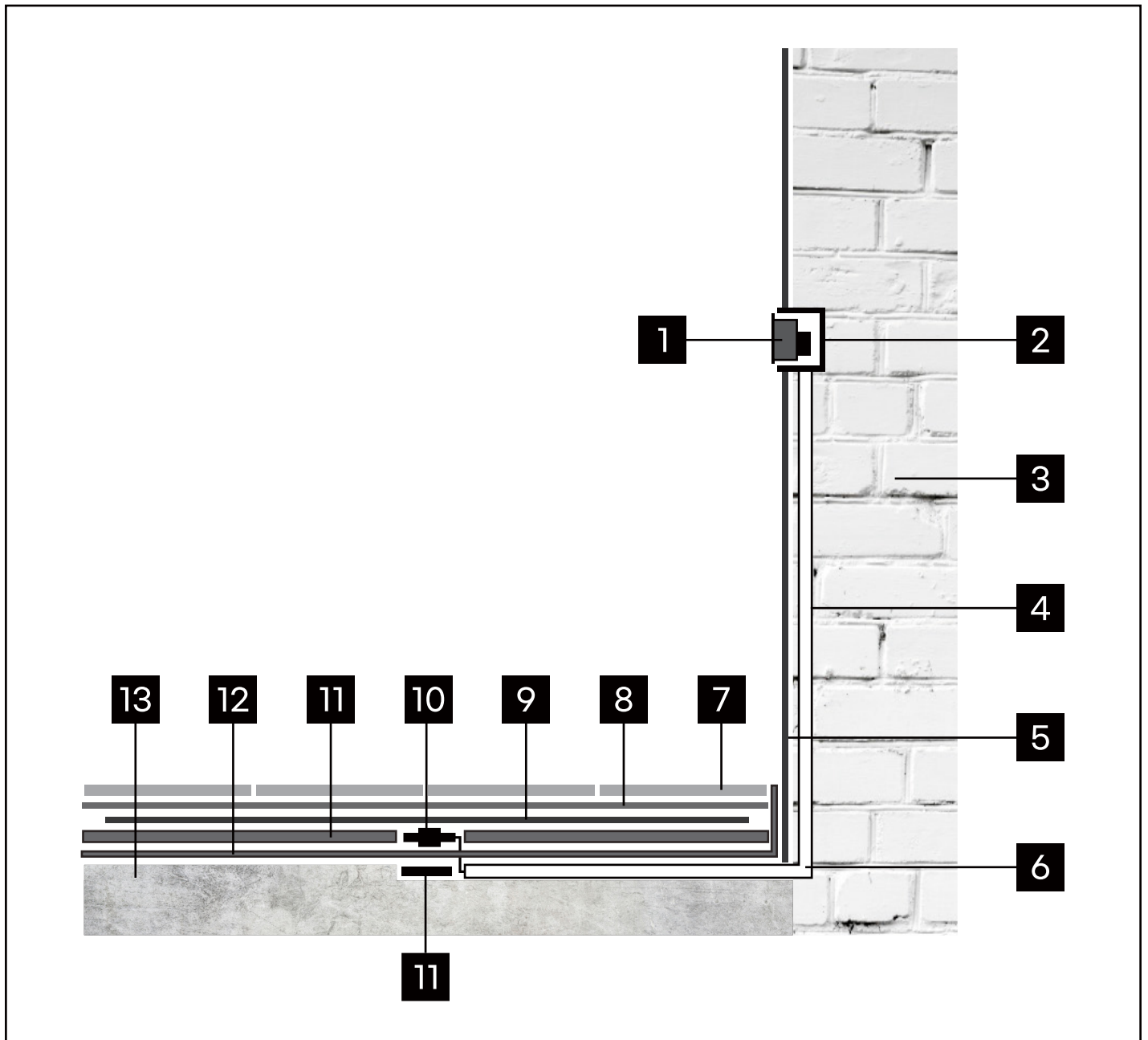
Option 2



CROSS-SECTIONS OF INSTALLATION OF HEATING FILM UNDER LAMINATE/WOODEN FLOOR

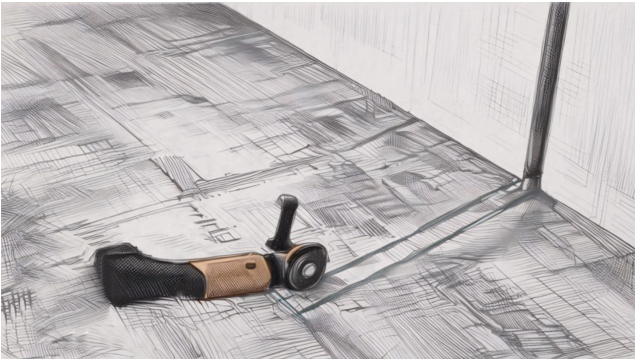


Example Diagram of Heating Film Installation with Built-In Air Temperature Sensor
and Floor Temperature Sensor



- | | |
|---|--|
| 1. Thermostat | 7. Floor panels |
| 2. Installation box | 8. Vapor barrier film |
| 3. Wall | 9. HEATVIS heating film |
| 4. A tube (conduit) with
power wires from heating film | 10. Floor temperature sensor |
| 5. Plaster | 11. HEATVIS insulating mat |
| 6. Pipe (conduit) of the floor sensor | 12. Vapor barrier foil |
| | 13. Cement spout/
OSB/MFP board structure |

INSTALLATION OF HEATING FILM



1. Prepare the Floor

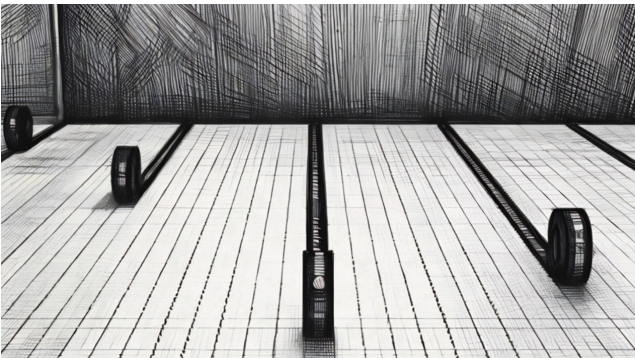
Before installation, ensure the floor surface is **completely clean and dry**. Check the flatness of the subfloor and cut a groove for the protective corrugated pipe (used for the sensor).



2. Install the Floor Sensor

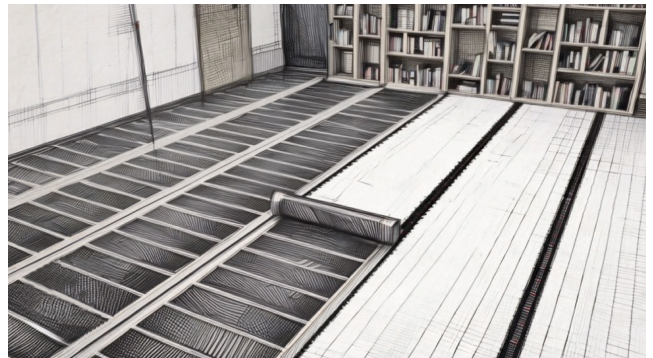
Clean the surface again and install the **NTC temperature sensor** inside the protective pipe.

Note : The NTC sensor must not be placed under rugs, furniture, or any items that may interfere with temperature detection.



3. Lay the Underlay Insulation

Spread the insulation material **across the entire floor area**. Join the insulation sections using **the tape** or equivalent.

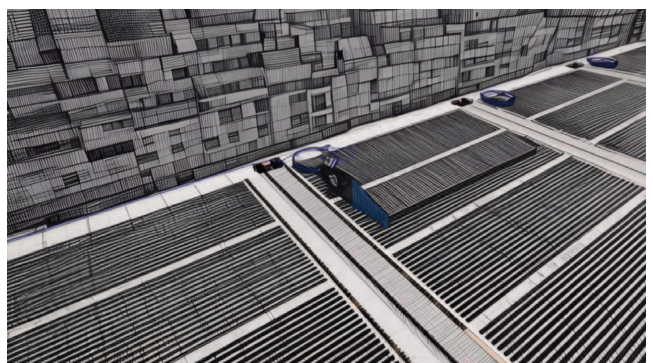


4. Place the Heating Film

Lay the heating film over the insulation and cut it **only at the designated points** to match the space.

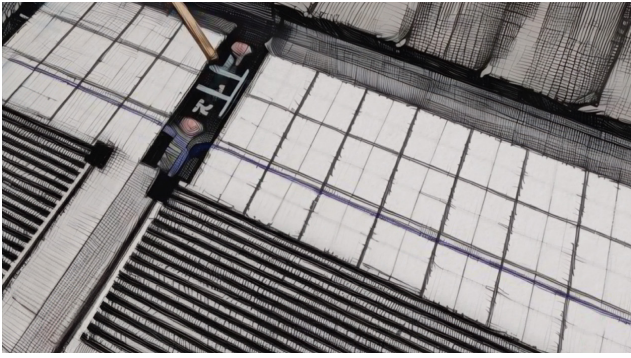


Do **not** install the heating film under **heavy, fixed furniture** or other immovable components. It is acceptable to install the film under **movable furniture**.



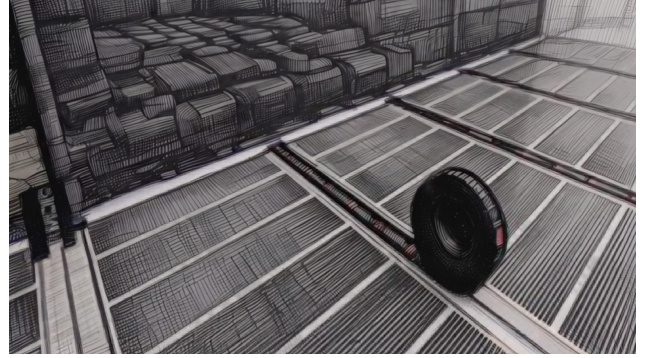
5. Connect the Heating Film

Use proper tools to **attach the connection clips** to the heating film according to the manufacturer's instructions.



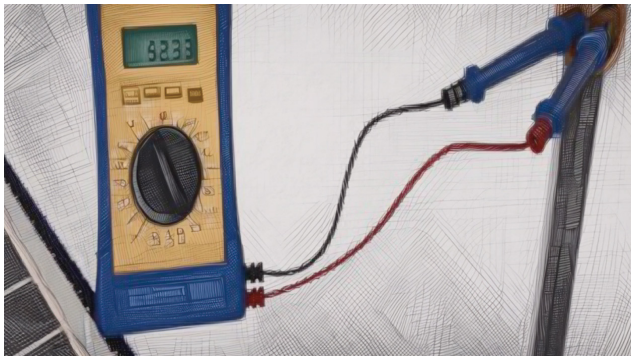
6. Prepare Cable Routing

Cut out the insulation at the point where the **heating film will be connected to the power cables**, following the planned cable layout.



7. Fix the Film

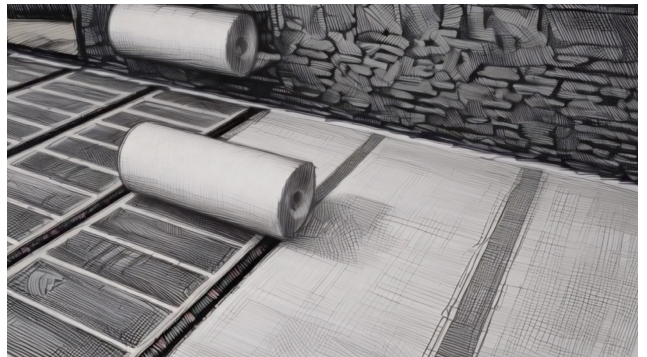
Secure the heating film to the insulating underlay using the **tape**.



8. Safety Check & Resistance Measurement

Before powering on the system:

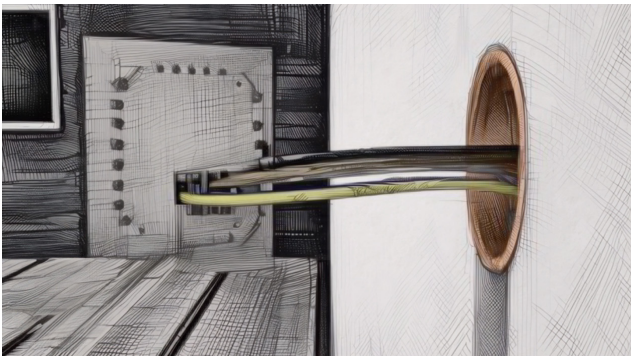
- Carefully inspect all connections.
- Measure the resistance of the heating film.
- Record the values on the warranty form.
- Important: If you skip this measurement, your warranty may be void.



9. Install the Vapor Barrier

Lay the **vapor barrier sheet (yellow/black side)** across the entire floor area.

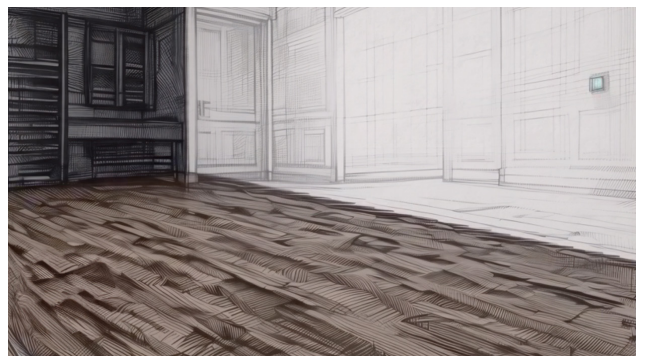
Secure it in place using **Self-Adhesive Tape**



10. Connect to the Thermostat

Connect the heating film to the **thermostat (thermoregulator)** according to the manufacturer's instructions.

Power on the system to confirm functionality.



11. Final Floor Installation

Finish the installation by laying the final floor covering (e.g., laminate flooring).

If you are using **tiles or other types of flooring**, please follow the alternative instructions provided in the next section.

INSTALLATION HACKS

1. Connecting the Heating Film

- Insert the flat side of the crocodile clip between the two copper layers of the heating film.
- Ensure the clip is positioned so that it makes direct contact with copper.
- Tighten the clip using a crimping tool or low-voltage press tool.
- Secure the connection with black sticky butyl tape
- Cut a groove in the insulation layer where the connection is made, so the clip can sit flat.
- For thicker points (like connections), use additional insulation under the film to level the surface.
- Where power lines cross, create a groove in the base layer (e.g. plywood or concrete) to maintain even floor height.

2. Installation Under Laminate Flooring

- Install insulation across the entire floor area.
- Be sure to leave an expansion gap between the laminate panels and the walls (as per standard laminate installation practices).

3. Installation on Concrete Base

- Use reinforcing mesh, and connect each mesh sheet with copper wire.
- Ground the entire mesh and connect it to the main differential switch.
- Use only adhesives approved for underfloor heating:
 - Flexible tile adhesive
 - Self-leveling compound

4. Thermoregulator (Thermostat & Sensor Installation)

- Use a separate protective conduit for the floor temperature sensor.
- Ensure that the sensor is not crushed by the floor and that it has room to detect heat changes.
- Properly position the sensor between the heating film strips, not under the wires or adhesive.
- It is recommended to place the sensor inside a groove filled with graphite or thermal paste for accuracy.
- Do not place the thermostat in an area exposed to sunlight during the day.
- Mount the thermostat approximately 1.2 meters above the floor level.

Important!

When installing carbon heating film, always use appropriate floor insulation to prevent downward heat loss. The system operates significantly more efficiently when combined with insulation materials that include reflective aluminum layers (not metallic foils).

A vapor barrier is also highly recommended beneath both the subfloor and the heating film to prevent moisture accumulation.

We recommend HEATVIS Insulation, which offers excellent thermal properties and built-in vapor barrier protection. It also reflects infrared radiation to enhance efficiency.

OPERATING MANUAL

The operation of your HEATVIS heating system is similar to that of conventional heating systems.

You can control the system using the programmable room thermostat.

Set the thermostat to your desired temperature and adjust it as needed for comfort and efficiency.

See the thermostat manufacturer's manual for detailed operation and settings instructions

1) Following installation of your HEATVIS heating system there are several precautions you should take on initial start - up of the heating system.

Do not be tempted to turn the system on immediately after laying the finished floor.

Depending on the floor covering please allow sufficient time for the wood to acclimatise.

Bring the system up to temperature gradually in stage 1

1. Initial Startup

- To ensure safe activation of the HEATVIS heating system, observe the following precautions during initial startup or after the floor has been laid:
- Wait until all construction and flooring work is fully completed and cured before activating the system.
- Depending on the floor covering type, refer to the flooring manufacturer's recommendations on the minimum wait time before applying heat (especially for materials like concrete or self-leveling compounds).
- Gradually increase the temperature over several days to avoid thermal shock or damage to the floor finish.

2. Heating Usage Guidelines

- Use the thermostat to set your desired room temperature.
- Do not raise the thermostat temperature excessively in hopes of faster heating-this will only cause the system to overheat later.
- Each room should have its own thermostat for optimal control.

3. Energy-Saving Tips

- Lower the temperature setting when the space is unoccupied or during nighttime hours.
- Rooms not in regular use can be kept at a reduced temperature to save energy.

4. Flooring Temperature Limits

- Most flooring manufacturers recommend a maximum surface temperature of 28°C (82°F).
- Always refer to the floor covering supplier's technical guidelines to ensure compatibility with underfloor heating over the next few days using the floor limit sensor temperature setting.

2) Each room installed with an HEATVIS heating system will have its own thermostat.

This means that you can individually set the room temperature based on the use of the room.

If the room is rarely used, turn the thermostat down to a lower level to conserve energy.

3) Your HEATVIS heating system is a direct acting system. However depending on the subfloor and the floor covering installed there may be a certain amount of thermal lag in the system (heat-up and cool down periods). Please anticipate these when switching your system on and off. Careful time clock control of on/off periods ensure maximum comfort at minimum cost.

4) Although your radiant heating system is less effected by air change/ventilation losses than a traditional convection heating system, it is good practice to minimise drafts from open doors or windows as these can make occupants feel cold.

5) Set the thermostat to your desired comfort level and leave it.

Setting the thermostat to a high temperature will not make the room get to temperature quicker. It will merely over heat the occupants once the set temperature is reached.

6) The thermostat is fitted with a floor limit sensor.

The temperature of the actual floor can be varied to suit different applications and tastes.

We recommend a maximum floor temperature setting of 28°C for optimum comfort conditions.

TERMS OF WARRANTY

Warranty Period :

- The warranty period for products sold by the Guarantor begins on the purchase date, and is as follows:
- Heating film: 20 Years (Standard), 40 Years(Premium)

Warranty Coverage :

Defects or damage occurring during the warranty period must be reported to the Guarantor no later than 7 days from the date of occurrence. The Guarantor is responsible for any physical defects found in the product sold. The warranty does not cover defects caused by other factors, and specifically excludes the following Incorrect use of the product.

- Improper installation or failure to adhere to the installation guidelines.
- Mechanical, chemical, thermal, or other damages caused to the product during use.
- Failure to follow the manufacturer's recommendations regarding product care and use.
- Damage caused by accident, improper flooring, electrical issues, fire, or flooding.
- Malfunctions resulting from incorrect operation, modifications, or unauthorized repairs.

Exclusions from Warranty :

- The warranty does not cover parts subject to normal wear, or parts and consumables such as Couplings or fuses.
- Any product that cannot be identified as purchased from the Guarantor.
- In addition, the buyer guarantees that no further modifications will be made to the product without prior approval.

Warranty Claim Process :

- Acceptance of warranty claims is conditional upon meeting the following requirements:
 - The Buyer must submit a complaint via email or fax, including:
 - Product name, catalog number, purchase date, and a detailed description of the issue.
 - Photographs documenting the defect or damage related to the product.
- In cases where the defect or damage is deemed valid under the warranty, the product will be returned to the Buyer after the cost of shipping has been settled.

Important!

To ensure warranty coverage, measure the resistance value of the heating film system using a resistance measuring device (multi-meter) as the heating film's resistance should be within the acceptable range.

If the resistance measurement is not correct, the warranty will not be valid.

WARRANTY CARD

BUYER NAME:

ADDRESS:

DATE OF PURCHASE:

DATE OF INSTALLATION:

ORDER NO:

INSTALLATION DATA

ROOM	MODEL & POWER OF HEATINGFILM	Quantity of Square Meters Installed in the Room	HEATING FILM RESISTANCE [Ohm]

PLEASE NOTE!

THE WARRANTY CONDITION IS PROPERLY FILLING IN THE WARRANTY CARD. READ THE WARRANTY TERMS.

Head Office

8F, 136, Sejong-daero, Jung-gu, Seoul Republic of Korea 04520

UK Office

Office Suite 1, Independent House,
Independent Business Park Imberhorne Lane,
East Grinstead, West Sussex, United Kingdom

Name Signature of Installer

PLAN OF LAYING THE HEATING FILM

Room 1

A full-page sheet of graph paper. The background is a very light gray. Overlaid on this is a uniform grid of thin, medium-gray lines. The grid consists of small squares, approximately 10 units wide by 10 units high, though it extends slightly beyond these counts at the edges. There are no margins, text, or other markings on the page.

Room 2

[illegible]

Room 3

This image shows a full page of blank graph paper. The grid consists of thin, light gray horizontal and vertical lines that intersect to form a series of small, uniform squares across the entire surface. There are no margins, text, or other markings on the paper.

Room 4

A full page of blank graph paper with a uniform grid of small squares. The grid consists of 20 columns and 20 rows, creating a total of 400 squares. The lines are thin and gray, set against a white background. There are no margins or additional markings on the page.