



Innos Heating Film

Under floor heating element



INSTALLATION INSTRUCTION

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Important note

Installation must be performed by qualified personnel, in accordance with local codes and standards. Read these important warnings and all installation instructions prior to installation. Failure to do so can result in fire, shock, property damage, personal injury and/or death.

- 1. When installing Innos Hot-film be careful of moisture.**
- 2. Please do not use adhesives on the heating film.**
- 3. Please confirm the electric capacity and the electric wire capacity with an electrician.**
- 4. Please refrain from use with mortar.**
- 5. We cannot be responsible for damage due to accidentally inflicted damage.
(EX: Damage caused by knives, natural disasters, etc.)**
- 6. When the product is being installed, please explain your knowledge of the product. (Warranty Information)**
- 7. Sure even surface and no other materials to protect curve, bending before construction.**
- 8. Be careful that do not drop things or do not step on film surface by shoes on working.**
- 9. When cut film, the length of a surface is cut not over the value of allowed Watt and opacity of temp controller.**
- 10. Optional work may required.**

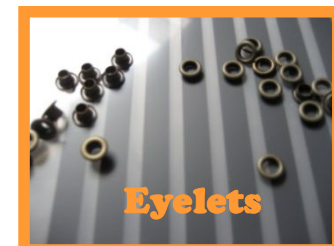
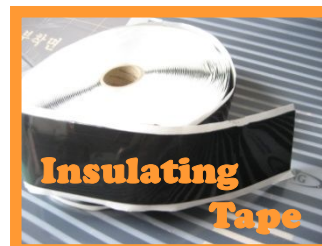
1.Tool,Material and Product Specification

TOOL

No.	Parts Name
1	Stripper
2	Driver (+,-)
3	Eyelet Punch
4	Press
5	Cutting Knife
6	Scissor
7	Electric Tester

MATERIAL

No.	Parts Name
1	Wire (12mm, 14mm)
2	Eyelets
3	Terminal
4	OPP Tape
5	Insulator (5mm)
6	Electric Tape
7	Insulating Tape
8	Thermostats



PRODUCT SPECIFICATION

FILM WIDTH	LENGTH/1ROLL	ENERGY CONSUMPTION/ 10 Sq/ft	Voltage	THICKNESS
1.64 ft.	328.08 ft.	160 W	110V ~ 240V	0.01 inch
2.62 ft.	328.08 ft.	160 W	110V ~ 240V	0.01 inch

EFFECT OF HEATING FILM

1. Convection heating by Far- infrared ray.

*** Rapid hating available by high efficiency method.**

*** Inner heating system without temp difference in a room as convection heating by far-infrared ray.**

2. Installation is simple, convenient and quick.

3. Semi-permanent usability.

*** With semi-permanent usability, this product does not need be maintained or repaired.**

4. Energy saving and green technology.

*** Saved 30% compared to electricity and saving energy by partly heating.**

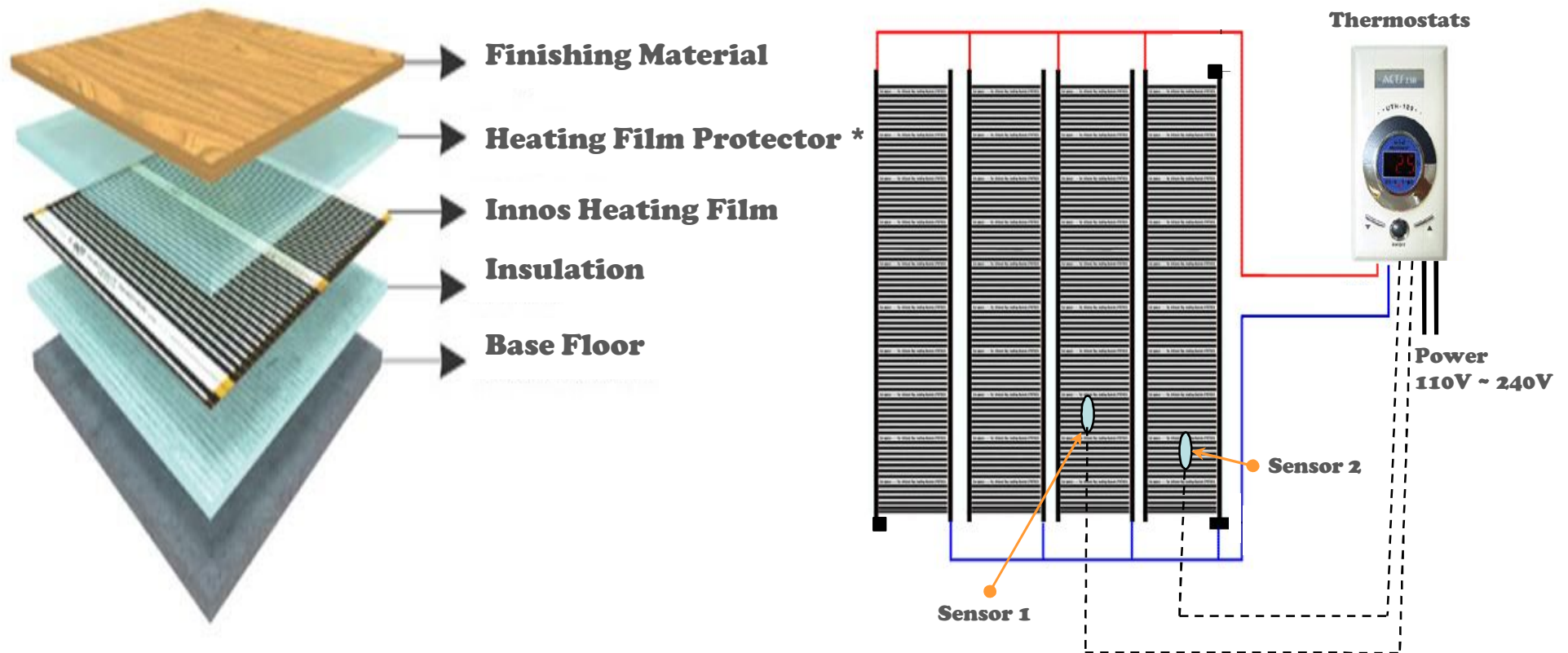
*** Our products do not include metals, such as lead, or PVC they are not harmful to the environment.**

5. Heating method with benefits.

•This is the most suitable heating system to be used with fan heating, with the effects of far infrared it is very pleasant.

*** There is no need for a separate space for machinery (such as a boiler or heater unit).**

2. Installation Diagram



***Optional Work**

Covering Film Protector on the Innos Heating Film

- According to the close material used, work may require special film protector.

3. Install Guide



❏ To check before installation

- Check the yield and electric power consumption for heating load
heating load = 160w/h/10 Sq/ft.
- Installation Square Feet
 $W(\text{Electric power consumption}) = R(\text{Resistance})/V(\text{Voltage})$



❏ Floor cleaning



❏ Adhesion for waterproof sheet

Protecting humidity, production of humidity and dew condensation to install vinyl sheet on the floor



To install insulation on the floor

Should pay attention to select insulation material because insulation has the effects to keep warm from generating heat on film, affect electric efficiency and cost.

To cut up the insulation material to fit the corner of floor area

To complete it as taping between insulation of floor to be spread and insulation area



❑ **To install Innos heating film on the insulation to be spread**

- **The film is installed, must install the film with bare feet.**



❑ **Cut up the Innos heating film to fit the corner of floor area, when cut up, must cut up the center area of P.E.T. surface without the carbon band.**



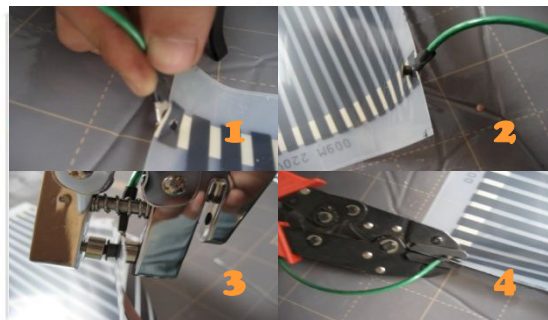
❑ **Do not install it without overlapping between films**



- Fix it with tapping the attached heating film on the insulation material



- Connect electric wires to the terminal by the press



- After connecting the terminal to electric wires, Make a hole for Eyelet with Eyelet Punch and then connect the terminal surface of film



- Yield the electric power consumption by measuring total resistance value of lines connected in series



- Do insulation process to all the terminal areas as attaching insulation tape to connected connector



- Put the completed area by insulation tape with cutting the insulation and inner area of the surface cutting insulation wires without the protrusion



- Complete insulation wires and terminal with taping



- Connect the power connector to supply the power to the Thermostats



- Connect 2 terminals in left side of 4 terminals on Thermostats to power supply. And connect the rest 2 terminals in right side to the wires from Innos heating film



- Complete the installation of temperature controller after connecting the power after attaching the temperature controller on the wall



- Complete the process as installing strengthened wooden floor of floor paper after attaching the film protector like non woven fabric, art board and etc. on the completed film

4. Manual of Heating Controller

- 1) This temperature controllers go to market with basic set up. Use them after setting up according to the installation place.**
- 2) When you push '▲,▼' button more than 5 second at the same time, It starts function with displaying 'HH' mark. Then whenever you push each button, the function will be changed. You can fix the temperature after adjusting by pushing '▲,▼' button at the same time . Then you will move another function automatically. When you set up 'over heating prevention' stage, present temperature will be displayed and operation starts. work.**

Function	Display	Basic set up	Set up range	Remark
Heating/Cooling	H-C	HH	HH,CC	HH-Heating, CC - Cooling
Minimum range	t-L	70°F	-4°F~250°F	Minimum set up range
Maximum range	t-H	180°F	-4°F~250°F	Maximum set up range
Temp. deviation	dIF	35°F	35°F~-23°C	On or Off between this sep up Temp.
Display delay time	dLy	20 sec.	1sec ~60sec	Delaying operation time when On, Off
Over heating change	Oht	200°F	-4°F~200°F	Power cut when over heating

- 3) Set exactly according to the table above for best operation and safe use. The over heating prevention function should be less than 120 °F for safety.**
- 4) You could be burned when you set the temperature more that 120 °F.**
- 5) Set up the Temp. deviation on 38°F for electricity saving and reducing relay noise.**
- 6) Installer must set up the controller on his/her own. Then train the users not to change the set up and not to pile up clothes or thick bed quilts on the place far from the over heating sensor.**

5. Warranty

This warranty is only valid under the following conditions

- **All electrical connections were connected by a qualified electrician.**
- **The warranty covers faults in material for 10 years for Innos heating film and 1 year for other components from the date of purchased.**
- **The completed warranty and proof of purchase must be presented in connection with warranty claims.**
- **The warranty covers the repair/replacement of goods found to be faulty and does not cover secondary charges relating the repair/replacement of any floor covering.**
- **The warranty does not cover faults resulting from incorrect design or installation or damage caused by others.**