www.heatingfloor.eu

Underfloor Electric Heating Film Kit

- high quality solution for heating of laminate, multi-layer parquet or vinyl floor

Installation Guideline and Warranty Card

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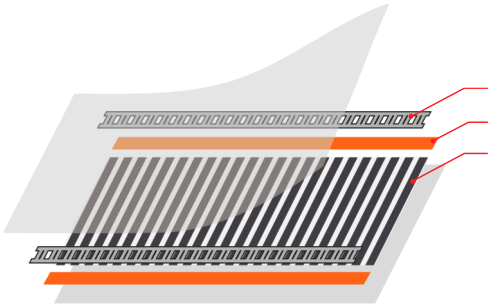
Contact us via WHATSAPP, VIBER, TELEGRAM or our service@heatingfloor.eu and we will answer you as soon as possible.

1– INTRODUCTION

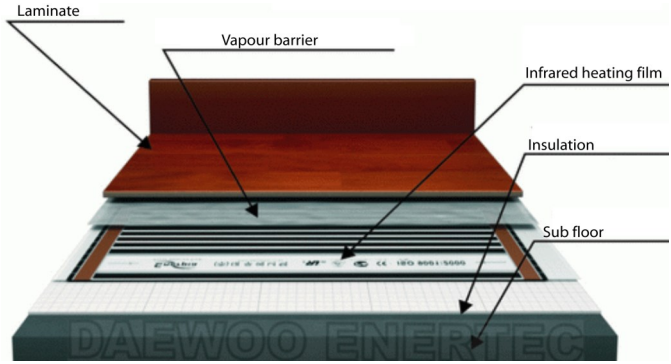
Congratulations on purchasing the underfloor heating kit with infrared heating film "Heating Floor your warm comfort www.heatingfloor.eu ®" ! This is your first step towards a warm and cozy home.
Please pay attention to the specifications of this infrared heating film kit:

- The "Heating Floor your warm comfort® " infrared heating film kit is designed for do-it-yourself installation under laminate, multi-layer parquet or wooden flooring.
- The infrared heating film kit "Heating Floor your warm comfort ®" is designed for dry rooms. For floor heating in wet rooms or areas with high humidity, use other floor heating systems such as a Heating cable kit or X-L Pipe Kit or other heating systems.
- The infrared heating film kit "Heating Floor your warm comfort ®" is easy to install. However, consult a professional electrician.

HEATING FILM STRUCTURE



FLOOR CONSTRUCTION



2– SAFETY INSTRUCTIONS

IT IS FORBIDDEN:

1. To connect and operate an electric underfloor heating based on the heating film without thermostat with external sensor!
2. It is strictly forbidden to control the electric underfloor heating ONLY through the internal temperature sensor in the room.
3. To hummer nails, dowers in the floor surface, which covers underfloor heating.
4. To adjust the temperature of the thermostat to the temperature higher than 26-28C. The upper temperature limit for each flooring is specified in the manu-facturer instructions.
5. To cross the strips of the heating film between them.
6. To cover underfloor heating with objects (pillows, thick rugs, furniture without legs or legs shorter than 5 cm, metal sheets etc.), which prevent the free pas-sage of heat and efficient heat exchange between the laminate and the air.

IMPORTANT:

1 Keep in mind, that temperature of the heating film in places with limited heat transfer reaches high values. Keep this in mind when choosing flooring and placing furniture in the room.

2 Do not cover with carpets, pillows, poufs and other objects that limit heat exchange.

3 Set the thermostat to operate according to the readings of the EXTERNAL SENSOR.

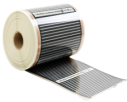
4 If underfloor heating does not work – it is necessary to contact qualified specialist to identify the problem and repair the damage. Intervention by an unauthor-ized person and attempt to repair cancel the warranty for this product, as well as can be dangerous!

BE AWARE:

1. Use thermostats intended for electric underfloor heating. These thermostats must be with an external sensor, which is installed directly under the infrared heating film (the sensor must touch the film!)
2. When setting the underfloor heating thermostat, it is necessary to select the mode of controlling the underfloor heating via the EXTERNAL TEMPERATURE SENSOR, installed directly under the heating foil, or a combined mode of controlling the underfloor heating via the external and internal temperature sensors, which measure the temperature in the room. **It is strictly forbidden to control the electric underfloor heating ONLY via the internal temperature sensor in the room.**
3. It is mandatory to set a maximum temperature limit of the floor sensor for underfloor heating to 30 degrees.
4. Underfloor heating system should be installed in accordance with applicable national rules, standards and technical requirements. Please consult a profession-al electrician for electrical questions.
5. In case of floor flooding or other contact with water, underfloor heating should be immediately shut down and dried carefully.
6. It is forbidden to use underfloor heating to dry wet surfaces.
7. In case of heating elements damage, it is necessary to carefully insulate all damaged areas.
8. When you are absent for a long time in a cold weather it is recommended to allow underfloor heating to work at a minimal level.
9. Keep in mind that temperature on the thermostat display corresponds to the temperature measured with sensor installed on the surface of heating film. It differs from the temperature of floor covering. Usually, the difference between these temperatures is 2-4°C and it depends on the type of floor covering and base sur-face.
10. Keep in mind that thick base surface or flooring and carpets may serve as a good thermo insulator, which in its turn may cause a big difference in temperature above and below the floor covering.
11. Note that in rooms with high heat losses, the top layer of the floor cools down rapidly, what may also cause increase in temperature difference above and below the floor covering.
12. This appliance is not intended for use by people whose physical and mental capacity or lack of experience and knowledge can prevent them from using the appliance safely, if they are not supervised or were not instructed on how to use the appliance by the person responsible for their safety. It is necessary to look after children to ensure they are not playing with the appliance.

3– CHECK-LIST

YOU WILL NEED:

"Heating Floor your warm comfort ®" film kit contains:		**Required tools:**	
Professional electric underfloor heating film ENERPIA DAEWOO, (made in South Korea) width 50, 80 or 100cm, power 150 or 220W/sq. m, 220-240V.		Pliers or special tools for crimping terminals.	
Damp proofing bitumen-based insulation tape		Utility knife	
Connecting clamps (compressor terminals)		Measuring device (for measuring resistance and current)	
Electrical flexible cable, 1.5 sq. mm, non-toxic insulated, two colors.		Screwdriver set	
Adhesive mounting (scotch) tape		Scissors	
Installation guideline			

- The specific contents of your kit can be found on the packing list.

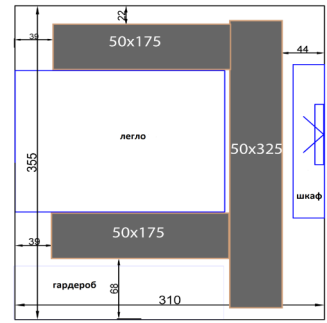
Depending on the kit configuration	**Additional materials to buy:**
Thermostat with Wi-Fi and external sensor	Insulation sheets with (flexible thermal insulation, heat-reflecting insulation, insulation for laminated parquet) thickness over 5mm
Thermostat and external sensor	Moisture protective gasket made of polyethylene
Mounting box	Junction box (if required)
Socket for thermostat installation	
Flexible conduit with a diameter, 3m	
Electrical mounting terminals	

4 – INSTALLATION

A DRAFT

Make a layout (draft) of infrared heating film:

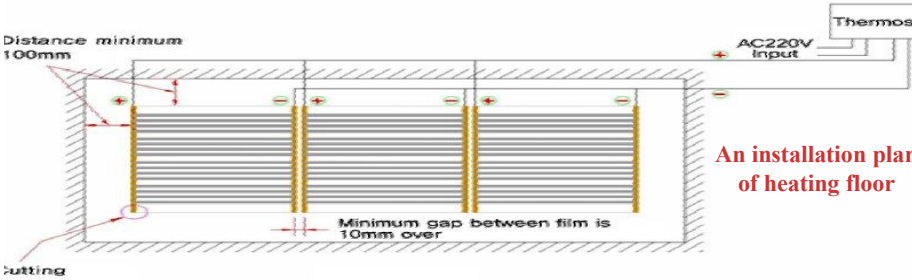
1. Draw a diagram of the room.
2. Mark the location of the furniture on the diagram. You are only interested in furniture without legs, or with legs less than 5-7 cm.
3. Place the heating film between the furniture in a free area.
4. Mark the places on the heating film where you will connect the terminals.



Example of room plan

When designing (installing), consider the following rules:

1. The heating film is cut in multiples of 25 cm.
2. The heating film lines must not intersect.
3. The minimum distance between the heating film lines should be 1cm
4. The minimum distance of the heating film line from the wall is 10 cm.
5. The heating film is not installed under densely standing furniture, or with legs less than 5-7 cm - to avoid overheating.
6. The terminals must be installed on the side of the film where people don't usually walk - outside the normal movement of people in the room.



An installation plan of heating floor

INSTALLATION OF THE THERMOSTAT (REGULATOR) AND MOUNTING BOX

1. Install the thermostat at a height of 50 - 130 cm from the floor.
2. If the thermostat has only an external sensor, then the installation height of the thermostat above the floor level is not limited.
3. If the thermostat has an internal temperature sensor and an external floor sensor, it is recommended to install the thermostat at a height of 110-130 cm from the floor level.

4. Install the junction box below the thermostat.
5. See installation diagram.

CLEANING

- Clean the floor, make sure the floor is flat, has no sharp spikes and other similar things, which could hurt the film.
- The requirements for the floor are the same as for installing laminate flooring.

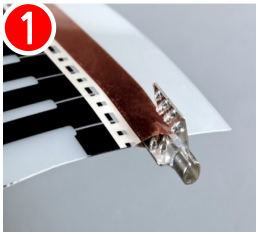
INSULATION

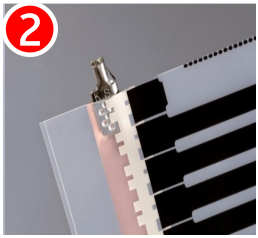
-Measure and cut the necessary insulation and then attach it to each other with mounting adhesive tape.
- It is necessary to lay insulation over the entire floor area of the room.

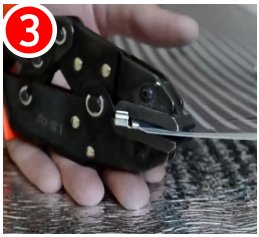
INSTALLATION—Laying of infrared heating film

1. Cut heating film with a knife or scissors by the dashed line.
2. Lay heating film on the insulated floor. Do not overlap the film sheets. Leave an interval of 1-2cm between them. The interval to the walls must be at least 10cm. Fix the edges of the film with scotch tape for fixation.
3. Connecting clamps with power supply cables:

3.1 Separate the copper strip from silver strip in order that you could insert one of the edges of the clamp. (See photos and videos at the link: Key elements of the installation of infrared heating film DAEWOO ENERPIA, page 16)
3.2 Fix properly the clamp onto copper-silver strip, so that one of its edges is put on the top of the strip and the one is inserted inside between the two layers of the strip (silver and silver).
3.3 Press it firmly with pliers. This should be done with two diagonal applications.





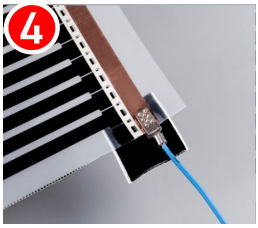


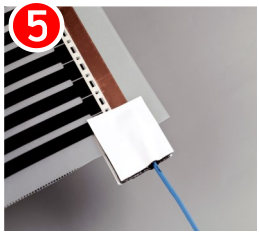
4. Connect clamps with power supply cables. **If it is not fixed properly it may occur contact resistance, so be careful.** Check the resistance between cables with a tester. The resistance reading must be equal to the calculated resistance.

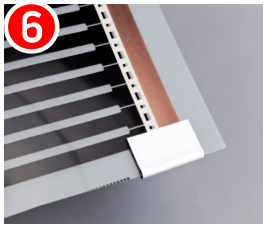
- **Be sure to use flexible multi-core cables (with non-toxic insulation) of two colors to connect the film.**

5. Insulate connections of power supply cable with clamps using the bitumen-based insulation tape. Then fix the cables with scotch tape. Piece of insulation tape should be at least 40mm x 50mm. Leave at least 5mm between the end of the clamp and the end of the insulation tape piece.
6. Insulate all exposed sides of the copper strip. (See photos and video)

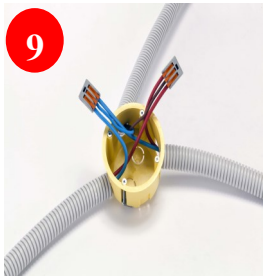
- **In case of purchase of Electric underfloor heating kit with connected cables, you can skip points № 3, № 4, № 5, № 6**







5. Cut out the insulation under the joints of the film and terminals.
6. Then fix the cables and the film with tape to the insulation.
7. Run cables from each piece of infrared heating film to a wall box.
8. Connect the cables in parallel using the mounting terminals.

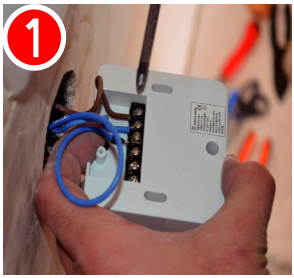


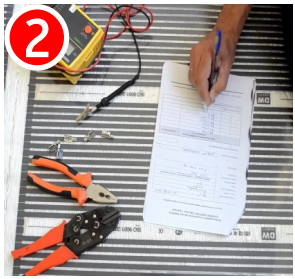
ATTACHING THE TEMPERATURE SENSOR

1. Put the temperature sensor (thermo sensor) on the bottom of the infrared film, in the middle of the line. Fix it with scotch tape.
2. Below the sensor cut a slot into insulation. If necessary, cut a hole (place) for the sensor in the base of the floor.
3. Install the sensor in a location where there is less foot traffic.

THERMOSTAT CONNECTION

1. Install the thermostat using manufacturer's instructions.
2. Check the total resistance of the heating system with a measuring device. This indicator should be approximately equal to the calculated number.
3. When connecting the heating system, make sure that the obtained electrical parameters (current, resistance, power) correspond to the calculated parameters.
4. The heating system must be connected with an electrical cable to the general system of the house, the technical parameters of the cable must be sufficient for a safe connection.
5. Please write down in the installation protocol the obtained electrical parameters of the heating system, thermostat type, sensor resistance.





IMPORTANT!

1. When choosing a thermostat, consider its maximum allowable power (maximum load or maximum current)
2. If the installed output of the heating system exceeds the maximum output of the thermostat, a contactor must be used.
3. When using a thermostat with two sensors - "internal" and "external" for under-floor heating, it is necessary to set the thermostat so that it works in one of two modes:
   - "External" sensor.
   - Both sensors: "internal" and "external" sensors.
4. It is forbidden to operate a warm floor when the Thermoregulator operates with an “internal” air temperature sensor!
5. It is necessary to set the overheat temperature to no more than 30 degrees Celsius.

Please, consult a professional electrician for electrical connections.

LAYING OF VAPOR BARRIER

1. Roll out the vapor barrier (polyethylene film), cut the necessary length, lay it on the heating film.
2. Fix vapor barrier with scotch tape. Cover only heated areas.

The next step is putting of floor covering - laminate, multi-layer parquet or vinyl floor.

5– WARRANTY

WARRANTY CARD

- This document enables you to use a 10-year warranty on our products.
- Correct completion of this document ensures full and free removal of all defects and/or damages covered by this warranty.
- We are obliged to replace each item and/or segment of our heating system, which has shown a defect and/or does not function according to the specifications that relate to it within and under the warranty conditions.
- In order for our warranty to be valid on a product you have purchased, it has to be mounted and/or installed by a person who has necessary knowledge and skills in accordance with the applicable national regulations, standards, and specifications.
- We note, that our products are extremely easy to install.
- The person who has committed the installation/mounting of our products must indicate his/her data in the warranty card, thus certifying the warranty itself. The warranty period starts from the date of purchase.
- Please note that improper installation and/or mounting of the product may result in the loss of warranty.

WARRANTY CONDITIONS

- The customer is obliged to complete accurately and clearly mandatory test report after mounting, carefully following the rules described in the installation instructions.
- Removal of damage caused due to improper transportation, storage, use of the product and/or improper laying of the flooring upon the installation or inappropriate preparation of the surface upon which the product is to be installed, which resulted in physical damage and respectively in product failure, shall be performed at the expense of the customer.
- In case of replacement of the product and/or product part, warranty shall be extended to the time necessary for repair of damage. This is a manufacturer's warranty.
- Cases when unforeseen circumstances and/or force majeure lead to product failure will not be considered as warranty events.
- The warranty does not cover damages caused by war, unrest or acts of military nature, riots, civil unrest and of that ilk; terrorist act; earthquake or atomic and nuclear explosions, radioactive products and contamination, radiation (ionizing) emission; intentional or unintentional criminal actions.
- In case of a manufacturing defect of the product, the customer does not pay transportation costs.
- In all other cases, transportation costs are borne by the customer.
- Without duly completed test report warranty shall be declared void.

6 – WARRANTY CARD

Please, complete these forms after installation to ensure validity of your 10-year warranty.

Owner's data	
Name	
Surname	
Contract No	
E-mail	
Address	
Date of purchase	

Installation's data	
Name	
Surname	
Contract No	
E-mail	
Address	

Electrical Engineer's data	
Organization name	
Name	
Surname	
Contract No	
E-mail	
Address	

7– TEST REPORT

Please, complete these forms after installation to ensure validity of your 10-year warranty. Keep in mind, that a completed warranty card with test report and proof of purchase must be presented in connection with warranty claims.

General information			
System installed for:	☐ Primary heating	☐ Secondary heating	
Thermostat type:			
Room dimensions:		Heated area:	
Insulation type:			
Type of flooring:			
Measuring device (brand, No):			

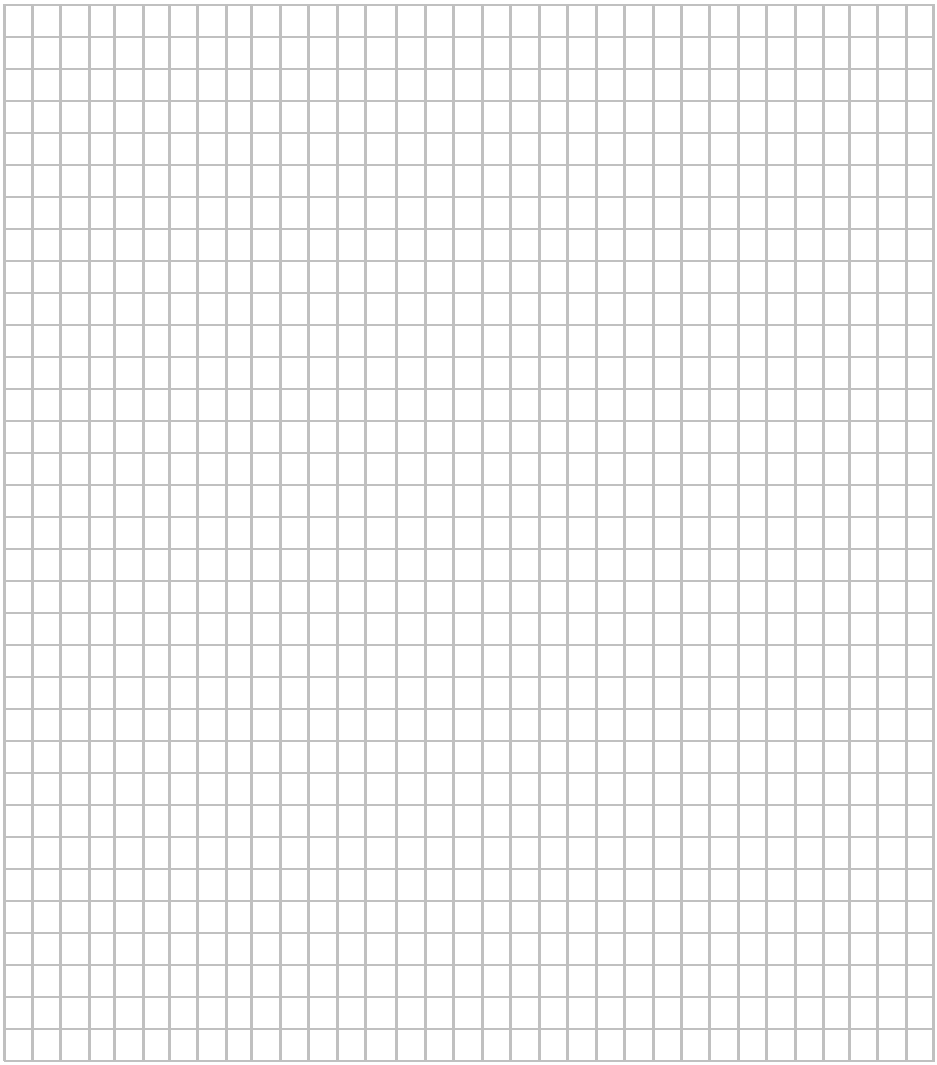
No	Length of the installed film		Resistance	
1		m		Ω
2		m		Ω
3		m		Ω
4		m		Ω
5		m		Ω
6		m		Ω
7		m		Ω
Total resistance: Ohm				Ω
Total load of system:				W
Floor sensor resistance : kOhm				kΩ W

Signed by			
Electrician's full name:			
Date of installation:		Signature	

8– INSTALLATION PLAN

Please provide a detailed plan of installed elements, including position of junction box and position of thermostat. Don’t forget to number the elements of the diagram.

- We recommend you to take photos and videos for better visualization and control.
- Save this plan, test report and photos in an easily accessible place near the electrical panel.



Congratulations!

You have successfully installed
"Heating Floor your warm comfort www.heatingfloor.eu ®" Film Kit !
From now on, you will enjoy warm comfort of your home or other property.
If you still need assistance with installation, do not hesitate to contact us and request a callback.

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You can find video guide on "Heating Floor your warm comfort ®" Film Kit installation on our YouTube channel TEZOLTD

https://www.youtube.com/watch?v=TNKLU-0Aaic

If you liked our product, we'll be grateful if you share this information with your friends and leave a feedback on our website.

www.facebook.com/heatingflooryourwarmcomfort/

www.heatingfloor.eu

Additional information:

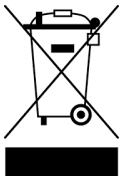
Assembled the set: «Heating Floor your warm comfort www.heatingfloor.eu®»: "TEZO" OOD, Bulgaria, Varna 9000, Vasil Aprilov Street 28, apartment. 2, www.heatingfloor.eu

Importer of ENERPIA DAEWOO heating foils for the EU: TEZO OOD, Bulgaria, Varna 9000, Vasil Aprilov Street 28, Apt. 2, www.heatingfloor.eu

Heating foil manufacturer: ENERPIA DAEWOO: ENERPIA Co., LTD, 20-35, Gukgasandanseo-ro 71 gil, Guji-myeon, Dalseong-gun, Daegu, South Korea, www.enerpia.com

«Heating Floor your warm comfort www.heatingfloor.eu ® » is a trademark of "TEZO" OOD, Bulgaria, Varna 9000, Vasil Aprilov Street 28, Apt. 2

TEZO OOD reserves the right to modify the quantitative and technical parameters of the kits.



The "crossed out wheelie bin" symbol means that electrical items should not be put with normal household rubbish.The product must be disposed of in an appropriate recovery and recycling structure. This type of waste concerns WEEE (waste electrical and electronic equipment).

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