

Vitoplanar EF3
Type EF3.A200.120L to EF3.A1400.840L

Dipole heating mat for floating installation under laminate floors
120 to 840 W

VITOPLANAR EF3



Safety instructions



Please follow these safety instructions closely to prevent accidents and material losses.

Safety instructions explained



Danger

This symbol warns against the risk of injury.

Note

Details identified by the word "Note" contain additional information.



Please note

This symbol warns against the risk of material losses and environmental pollution.

Target group

These instructions are exclusively intended for qualified contractors.

Installation and commissioning as well as repairs and service work may only be carried out by a licensed contractor or a qualified person in compliance with all safety regulations. This person must first check whether the electrical system in the building complies with the applicable standards. The manufacturer's responsibility is limited to the delivery of the appliance.

Regulations to be observed

- National installation regulations
- Statutory regulations for the prevention of accidents
- Statutory regulations for environmental protection
- Codes of practice of the relevant trade associations
- All current safety regulations as defined by DIN, EN, DVGW, TRGI, TRF, VDE and all locally applicable standards
 - Ⓐ ÖNORM, EN, ÖVGW G K directives, ÖVGW-TRF and ÖVE
 - Ⓒ SEV, SUVA, SVGW, SVTI, SWKI, VKF and EKAS guideline 1942

Work on the appliance

- Work on electrical equipment may only be carried out by a qualified electrician.
- Only connect appliances to correctly installed sockets.
- Isolate the appliance from the power supply (e.g. by removing the separate fuse or by means of a mains isolator) and check that it is no longer live.
- Safeguard the appliance against reconnection.

Operation of the appliance



Danger

Damaged equipment poses a safety hazard. Check the appliance for external damage. Never start up a damaged appliance.

Safety instructions (cont.)

- The appliance may only be operated in its original condition without modifications and in perfect technical condition. All protection equipment must work faultlessly and be freely accessible.
- The appliance must not be used below the following types of flooring:
 - Tiles
 - Stone or other ceramic flooring
 - PVC
 - Linoleum
 - Carpet
 - Nailed wooden floors
- The appliance may only be commissioned once it has been installed.

Auxiliary components and individual parts

For replacement, use only spare parts supplied or approved by Viessmann.

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Disposal of packaging



Please dispose of packaging waste in line with statutory regulations.

DE: Use the disposal system organised by Viessmann.

AT: Use the ARA statutory disposal system (Altstoff Recycling Austria AG, licence number 5766).

CH: Packaging waste is disposed of by the HVAC contractor.

Symbols

Symbol	Meaning
	Reference to another document containing further information
	Warning of material losses and environmental pollution

Intended use

The dipole heating mat is a very thin underfloor heating system for the temperate heating of laminate and parquet floors.

The dipole heating mat has been designed for installation directly below wooden floors.

The dipole heating mat must not be used below the following types of flooring: Tiles, stone or other ceramic surfaces, PVC, linoleum or carpet.

The dipole heating mat must not be used below nailed wooden floors.

For other types of flooring or installation, please contact our customer service.

The dipole heating mat is intended exclusively for room heating.

Usage for a purpose other than room heating shall be deemed inappropriate.

Intended use presupposes that a permanent installation in conjunction with permissible components designed for this purpose has been carried out. All other use is deemed inappropriate. Any resulting losses are excluded from the manufacturer's liability.

Any usage beyond this must be approved by the manufacturer in each individual case.

Product information

Vitoplanar EF3

Type	Dimensions in cm	Output in W
EF3.A200.120L	50 x 200	120
EF3.A400.240L	50 x 400	240
EF3.A600.360L	50 x 600	360
EF3.A800.480L	50 x 800	480
EF3.A1000.600L	50 x 1000	600
EF3.A1200.720L	50 x 1200	720
EF3.A1400.840L	50 x 1400	840

Pre-assembled dipole heating mat for temperate heating of parquet, laminate and cork floors, as well as for heating well insulated rooms.

- Floating installation possible.
- The reinforced aluminium foil guarantees optimum heat distribution and prevents the formation of hot spots.
- Low electrosmog
- Very easy to install thanks to the 1.3 mm thin structure and dipole design
- For use in dry rooms
- Protective measure: RCD 30 mA required
- Connecting cable: 5 m, 2 x 1.0 (2.5) mm² with protective braid
- CE compliant
- Test mark: NEMCO

Heating mat structure

The dipole heating mat consists of a Teflon heating cable welded between two aluminium foil layers.

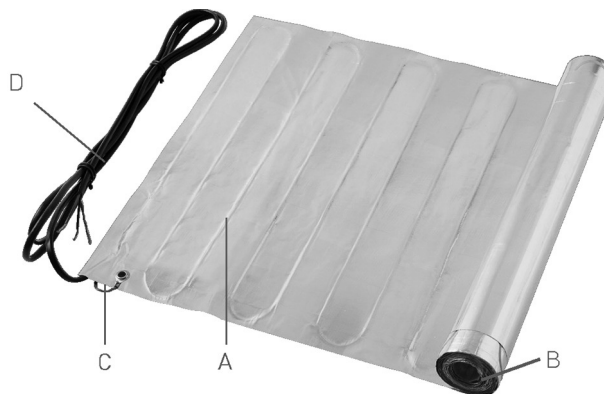


Fig. 1

- A Integrated Teflon heating conductor
- B Special aluminium foil
- C Protective earthing of the heating mat
- D Connecting cable with protective braid

Floor construction

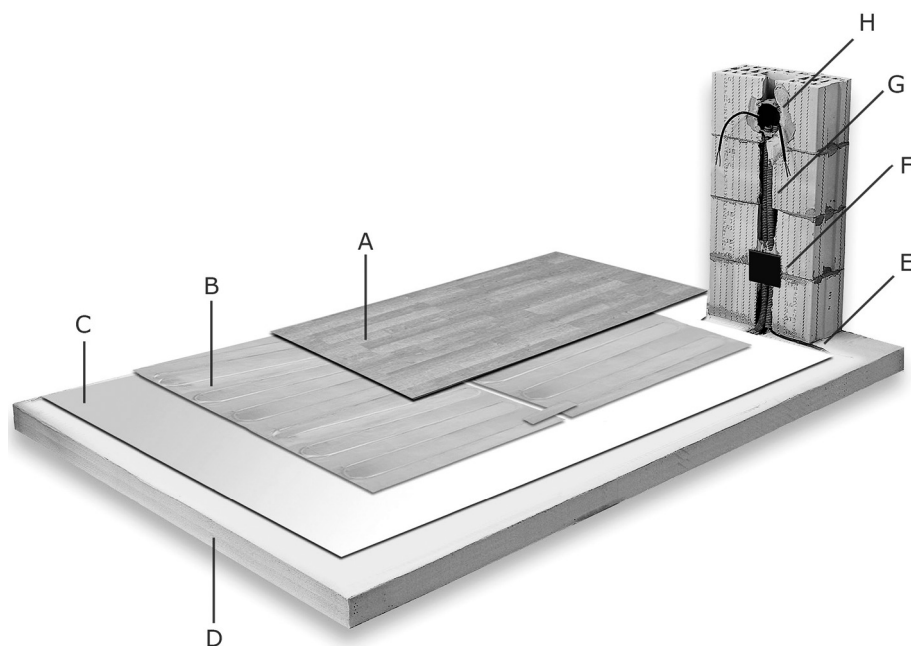


Fig. 2

- A Flooring
- B Heating mat
- C Impact sound insulation, minimum thickness 3 mm
- D Subfloor (e.g. screed, EPS boards)
- E Connecting cable
- F Flush mounted junction box
- G Installation conduit for connecting cable
- H Flush mounted junction box for thermostat

Subfloor

Note

The dipole heating mat must not be laid in the adhesive bed or in direct contact with concrete or screed. There is always a subfloor between the substrate and the heating foil, such as impact sound insulation or insulation. See "Floor construction".

In principle, any underlay can be used for the subfloor.

Examples:

- 6 mm cork
- 5 mm impact sound insulation

Flooring

! Please note
Incorrect installation may cause damage to the heating mat.
It is essential to follow the instructions of the flooring manufacturer.
Check the manufacturer's special requirements for electric underfloor heating.
If there are any inconsistencies between the instructions, please contact our customer service.

The dipole heating mat has been designed for installation directly below wooden floors.
The most common 8 to 15 mm thick parquet and laminate flooring for dry rooms can be used.

Note

*Certain types and thicknesses of flooring may not be used.
For other types of flooring or installation, please contact our customer service.*

The dipole heating mat must **not** be used below the following types of flooring:

- Click systems where the connection between the boards is made of metal (risk of damage to the heating mat)
- Parquet and laminate floors with integrated impact sound insulation
- Tiles
- Stone flooring
- Ceramic flooring
- PVC
- Linoleum
- Carpet
- Nailed wooden floors

Installation location

! Please note
Failure to comply with the conditions at the installation site may result in appliance damage.
It is essential to comply with the following conditions:

- Do not place heavy furniture on the heated floor.
- The heated zones must not be obstructed by objects or furniture placed directly on the floor.
- The layout diagram, in which the exact position of the foils and the sensor is shown, must always be kept in the distribution cabinet.

- The dipole heating mat must not be laid on heated screeds.
Exception: The second heating system must be switched off while the dipole heating mat is in operation.
- The dipole heating mat must not be mounted on floors if ceiling heating is installed in the room.

Heating mat adaptation options

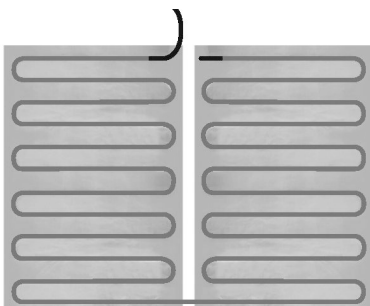


Fig. 3 Rotated 180°

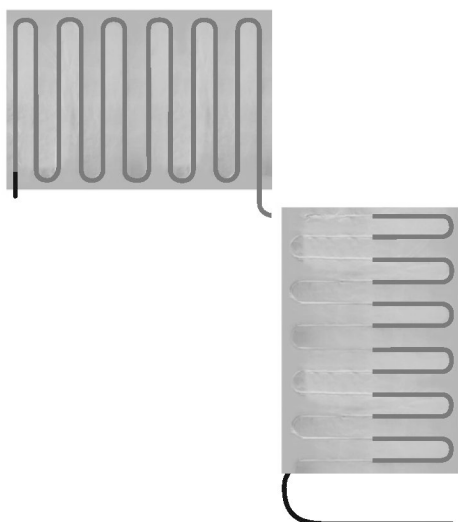


Fig. 4 Rotated 90°



Fig. 5 Adaptation for recesses, obstacles, furniture, etc.



Fig. 6 Adaptation directly downstream of the connecting cable



Please note

Risk of damage!

Where adaptations are made directly downstream of the connecting cable, do not pull the heating conductor into the installation conduit. The heating conductor must not be used to extend the connecting cable.

Laying the subfloor

The substrate must be clean, dry and level.

There must be no objects such as nails, screws or similar on the substrate.

Checking the connecting cable

Check whether the connecting cable extends to the flush mounted junction box.

Note

The connecting cable must be protected against mechanical influences in the wall by a protective pipe or hose.

Note

The connecting cable is routed at the edge of the floor under the edge strip to the junction box. The aim is to avoid zones with frequent footfall. The connecting cable must not be routed under or over the heating mat.

Positioning the sensor

Note

It is best to position the sensor in front of a door so that it cannot later be covered with furniture.



Fig. 7

1. Route the sensor lead in an installation conduit.
2. Lay the installation conduit in the screed (or other subfloor).

Note

*The sensor **must** be located between two heating conductors.*

The sensor must not be located directly below a heating conductor.

Positioning the sensor (cont.)

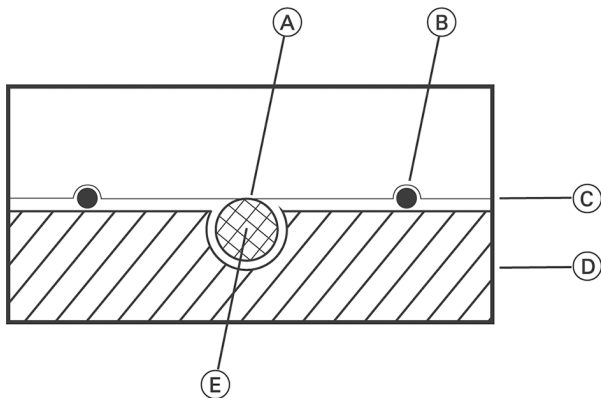


Fig. 8

- (A) Full-surface contact
- (B) Heating conductor
- (C) Heating mat
- (D) Floor
- (E) Protective pipe

3. Fit a protective aluminium or copper pipe at the end of the installation conduit. The sensor must be located in this protective pipe. The protective pipe must only be laid at a depth that ensures it is in contact with the heating mat along its entire length.
4. Connect the protective sensor pipe.

Laying impact sound insulation

Laying the heating mat

- !** **Please note**
Risk of overheating
- Never lay heating mats on top of each other.
 - The distance between heating conductors must not be reduced!
- Only lay the heating mat stretched out. Avoid the formation of creases.

Roll out and press down the heating mat starting at the junction box.

Note

The sensor **must** be located between two heating conductors.

The sensor must not be located directly below a heating conductor.

Adapting the heating mat

The heating mat can be tailored to the floor plan by cutting the aluminium foil to size.
See "Heating mat adaptation options".

- !** **Please note**
Damaged heating conductors can lead to accidents due to electric shock.
Do not damage or sever the heating conductor!

Adapting the heating mat (cont.)

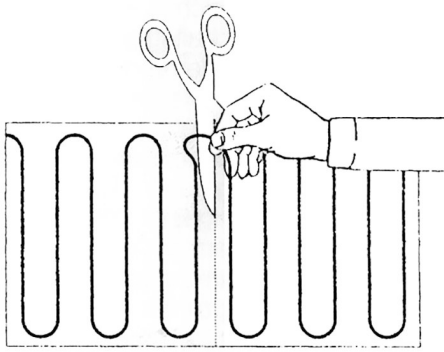


Fig. 9 Correct cutting

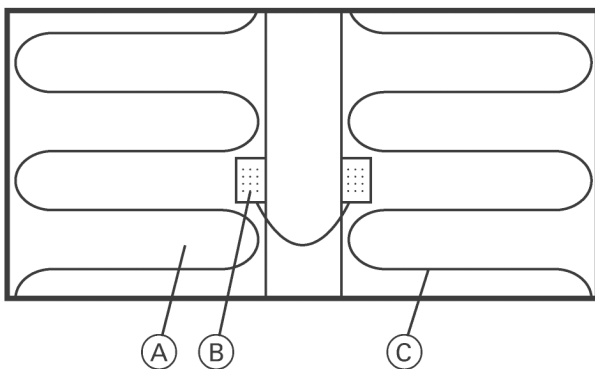


Fig. 10

- (A) Heating mat
- (B) Earthing connector
- (C) Heating conductor

1. Cut through the aluminium foil with a pair of scissors or a knife and rotate the heating mat.
2. Fix the heating mat to the floor with aluminium adhesive tape to prevent it from slipping.

3. **!** **Please note**
Insufficiently earthed heating mats can lead to accidents due to electric shock. After the heating mat has been rotated, the individual parts must be connected using the earthing connectors supplied. This ensures complete earthing of the heating mat.

- !** **Please note**
Damaged heating conductors can lead to accidents due to electric shock.
 - Do not attach the earthing connectors to the heating conductors.
 - Do not damage the heating conductors when installing the earthing connectors.

Routing the connecting cable

Note

The connecting cable is routed at the edge of the floor under the edge strip to the junction box. The aim is to avoid zones with frequent footfall. The connecting cable must not be routed under or over the heating mat.

1. Use a knife to cut a 6 mm wide strip in the underlay where the connecting cable runs. Place the connecting cable in the strip so that it does not create any extra height. Also cut a recess below the connection point of the heating element.
2. Draw the connecting cable into the protective pipe.

Checking the heating mat

See "Test report".

Laying the flooring

Lay the flooring according to the manufacturer's instructions.

Checking the heating mat

See "Test report".

Electrical connection



Danger

Incorrect wiring can lead to serious injury from electrical current and result in appliance damage.

The connection must only be made by a qualified contractor.



Danger

Damaged connecting cables can lead to electric shock and short circuits.

Check the connecting cable for damage before installation.

The appliance must be disconnected from the mains across all poles over an isolating distance of at least 3 mm.

The power supply must be protected by an RCD not exceeding 30 mA.



Danger

Incorrect core assignment can lead to serious injury from electrical current and result in appliance damage.

Never interchange cores "L" and "N".

Note

Requirement from VDE 0100 Part 520:

The connecting cable of the heating mat (cold end) must be routed in an installation conduit.

Note

The heating mats are intended for permanent connection in a flush mounted junction box.

Control

The heating mats must be controlled and limited by a thermostat with a remote sensor.

For additional safety, a capillary thermostat can be used as a maximum temperature limiter.

The maximum temperature of 28 °C must not be exceeded on the surface of the wooden floor.

We recommend installing the thermostat in a plaster box at a height of 150 cm.

Total power consumption

All heating mats are connected in parallel; take the total power consumption into account.

If the total current exceeds the max. switching current of the thermostat, a contactor must be used. The thermostat then only switches the control current to the contactor.

An additional junction box must be installed for this purpose.

Connection without contactor

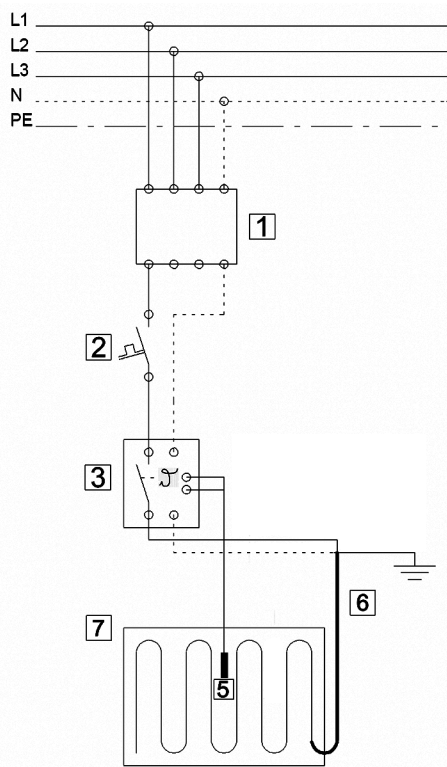


Fig. 11

- 1 RCD 30 mA
- 2 Circuit breaker
- 3 Thermostat, e.g. eTouch
- 4 Contactor
- 5 Sensor
- 6 Connecting cable
- 7 Heating mat

Connection with contactor

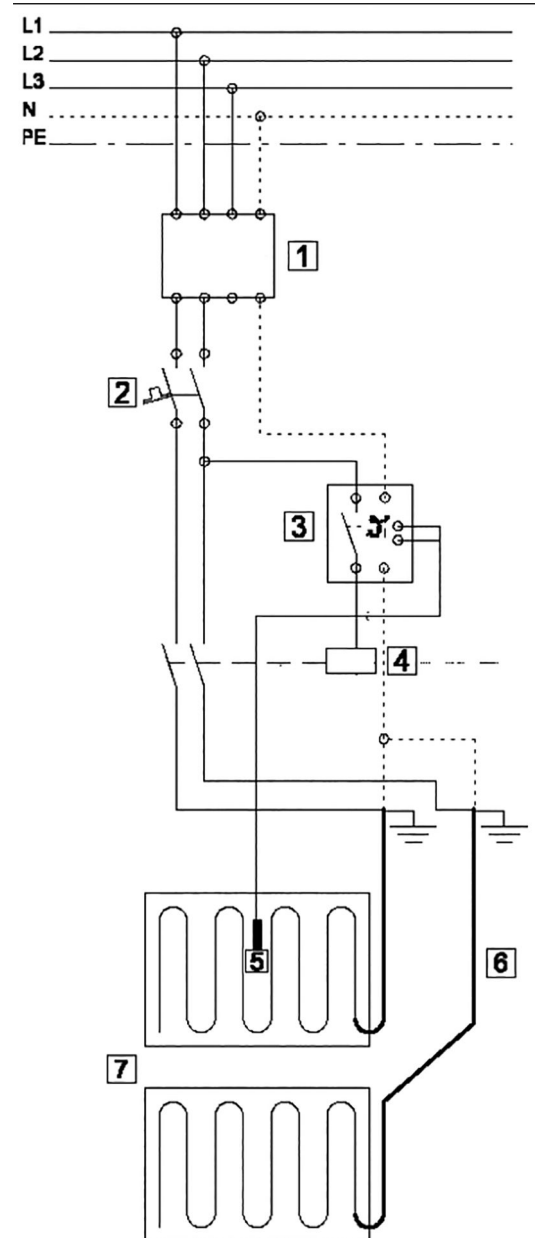


Fig. 12

Warning sign

The label "Caution underfloor heating" must be permanently affixed in the distribution cabinet.

Commissioning and instructing the user

Commissioning and user instruction must be carried out by the contractor performing the installation. The user must be instructed as to how the appliance works.

The following documents must be handed over to the user and always kept in the distribution cabinet:

- Mat cards/rating plates
- Layout diagram
- Completed test report

Specification

Output	W/m ²	120
Nominal temperature	°C	90
Heating conductor insulation		PFA
Thickness of aluminium foil	mm	1
System construction according to		IEC 60335
IP rating		IP X7

Energy consumption data

In conjunction with the Vitoplanar switch mounting thermostat, the product data corresponds to the EU regulations of the directive on the environmentally sound design of energy related products (ErP).

Final decommissioning and disposal

Viessmann products can be recycled. Components and substances from the system are not part of ordinary household waste.

For decommissioning the system, isolate the system from the power supply and allow components to cool down where appropriate.
All components must be disposed of correctly.

Declaration of Conformity

Using the serial number, the Declaration of Conformity can be found on the following website:

www.viessmann.co.uk/eu-conformity

Test report

After the heating mat has been laid and the flooring has been finished, the heating mat must be checked for continuity, resistance and isolation value, and compared with the resistance value on the rating plate. Enter the values in the test report:

Note

Carry out the isolation value test with min. 500 V, max. 1000 V test voltage.

Resistance and isolation value test

Date

Created by

Heating mat	Target resistance	After laying			After completing the flooring		
		Resistance	ISO value	Date	Resistance	ISO value	Date

Permissible deviations:

- Resistance: -5 % to +10 %
- Minimum isolation value: 2 MOhm

**This report must be kept carefully with the layout diagram and the mat cards.
Otherwise the warranty claims will be invalidated!**

Specialist dealer's stamp



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