

# NEOMITIS

Creating innovative solutions for ambient comfort



## INSTRUCTION MANUAL

Installation, operating and maintenance

ELECTRIC UNDERFLOOR/WALL HEATING FOR ADHESIVE TILE

**Mat**



**TO VALIDATE THE WARRANTY:**

**IT IS ESSENTIAL TO FILL IN THE CONTROL CARD  
INCLUDED IN THE INSTRUCTION MANUAL AND SEND IT  
BACK TO THE INDICATED EMAIL ADDRESS**

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Please read these instructions carefully before beginning installation/operating, and make sure that you are aware of all the components required for proper installation. If you have any questions, please contact your installer.

This instruction manual is also available on our website: [www.neomitis.com](http://www.neomitis.com)



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# THANK YOU FOR PURCHASING

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## Electric floor and wall heating systems for underfloor and wall applications

Thank you for your confidence in us, and congratulations on choosing this product.

Our range of electric underfloor/wall heating systems has been designed and developed to be installed under glued floor/wall coverings and controlled by a room thermostat (optional) which can be fitted with a floor/wall sensor (optional). The frames are supplied with a 3 m cold lead for connection to the thermostat or junction box.

Whether for new-build or renovation projects, our electric floor/wall heating systems for glued flooring/walls will bring you comfort and satisfaction!



## WARRANTY TERMS & CONDITIONS

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**Installation must be carried out by a qualified professional in compliance with current regulations.**

The **20-year** warranty for Neomitis **MAT** heating with a surface power of 150W/m<sup>2</sup> will be granted according to the following conditions:

- The completed control form sent to the following email address within 1 month after the end of the installation or 6 months after purchase: [warranty@neomitis.com](mailto:warranty@neomitis.com)
- The warranty claim is in accordance with our general terms and conditions of sale.

**Note: you will find the form to fill (page 24) and you can also download it from our website [www.neomitis.com](http://www.neomitis.com).**



# IMPORTANT INFORMATION, DO'S AND DONT'S

**Any damage resulting from non-observance of these instructions will invalidate the manufacturer's warranty.**



## Do's

- Installation must be done by a qualified professional installer.
- Ensure all joins are flush, using reinforcing tape if necessary.
- Use primer before self-levelling compound or tile adhesive if recommended by the manufacturer.
- Protect the heat mat during installation.
- Position the sensor conduit between 2 runs of heating cable in a representative area of the floor.
- Cover all heating cable and cold tail connections in a layer of tile adhesive or leveller.
- Install conduit as per instructions for sensor probe replacement.
- Install the frames in adhesive mortar under the covering structure.
- Before laying the underfloor heating mat and installing the floor finish, remove the protective film.
- Indicate the presence of electric underfloor heating on site.
- Comply with IEE 18th edition part p regulations for all electrical work.
- Locate the thermostat as per current guidelines.
- Read this document along with instructions for associated accessories like thermostats.
- Check the ohmic (ohms) values of the heating cable before and after installation, and after the covering work is installed.
- Maintain minimum distances from walls, chimneys, and fixed furniture covering the floor.
- Respect the minimum drying time for adhesive mortar.
- Respect the initial warm-up time, use a thermostat equipped with an initial warm-up program.
- This appliance can be used by children aged 8 and over and by people with reduced physical, sensory, or mental capabilities or lacking experience and knowledge, provided that they are supervised, or they have received instructions regarding the safe use of the device and understand the risks involved.



## Dont's

- Do not place the cold tail connection or end termination in a recess in the floor or insulation boards and cover with tape. This causes an air pocket and leads to cable failure.
- Do not position temperature sensor near pipes or external doorways.
- Do not cross or overlap any heating cables.
- Do not wire multiple mats in series.
- Do not turn on system before adhesive or levelling compound is fully cured.
- Do not leave boxes or furniture on heated flooring.
- Do not strain or bend the cold tail end connections.
- Do not install the frames outdoors.
- Never place the frames on a staircase.
- Do not lay frames in zone 0 and 1.
- The frames must not be installed in a screed or in tile adhesive.
- Never cut the heating cable (only the cold connection).
- Never drill into the ground where the frames are present.
- Never place frames under an element covering the floor (fireplace, kitchen cabinet, bathroom cabinet, cupboard, etc.).
- Never place a mattress or rug on the floor.
- Children must not play with the unit. Cleaning and maintenance by the user must not be carried out by unsupervised children.

## • Generalities

Floor heating/wall heating MAT is provided by heating cables mounted on an adhesive fiberglass mesh to facilitate installation. Due to their very thin thickness, they are designed to be installed in the adhesive mortar under the floor or wall covering (residential or tertiary) for applications in new construction or renovation. The heating element consists of two conductors (resistance wire) with fluoropolymer insulation. This material has a high dielectric resistance and a high temperature resistance capacity, which makes the heating cable completely safe. The aluminium shielding tape provides additional mechanical resistance and ensures electromagnetic protection. The cold junction is uniquely designed to make it 100% secure. The MAT heating mats are suitable for small and large surfaces, whether it is a bathroom, a kitchen or a living room. Floor heating emits a soft and homogeneous warmth throughout the room for optimum comfort.



# DIMENSIONAL AND TECHNICAL DATA

## • Surface power 150W/m<sup>2</sup>

References	Width of mat (mm)	Power per mat (watts)	Linear power (w/ml)	Length of the mat (m)	Surface of the mat (m <sup>2</sup> )	Length of the cable (m)	Number of 1/2 turns Installation step (mm)	Installation step (mm)	Ohmic value* (Ω)	Intensity (A)	Cable section (mm <sup>2</sup> )
MAT150-0075A	500	75	12	1	0,5	6,03	12	80	705,33	0.33	1,5
MAT150-0150A	500	150	12	2	1	12,56	25	80	352,67	0.65	1,5
MAT150-0225A	500	225	12	3	1,5	18,59	37	80	235,11	0.98	1,5
MAT150-0300A	500	300	12	4	2	25,12	50	80	176,33	1.30	1,5
MAT150-0375A	500	375	12	5	2,5	31,15	62	80	141,07	1.63	1,5
MAT150-0450A	500	450	12	6	3	37,68	75	80	117,56	1.96	1,5
MAT150-0525A	500	525	12	7	3,5	43,71	87	80	100,76	2.28	1,5
MAT150-0600A	500	600	12	8	4	50,24	100	80	88,17	2.61	1,5
MAT150-0675A	500	675	12	9	4,5	56,26	112	80	78,37	2.93	1,5
MAT150-0750A	500	750	12	10	5	62,8	125	80	70,53	3.26	1,5
MAT150-0900A	500	900	12	12	6	75,35	150	80	58,78	3.91	1,5
MAT150-1050A	500	1050	12	14	7	87,91	175	80	50,38	4.57	1,5
MAT150-1200A	500	1200	12	16	8	100,47	200	80	44,08	5.22	1,5
MAT150-1350A	500	1350	12	18	9	113,03	225	80	39,19	5.87	1,5
MAT150-1500A	500	1500	12	20	10	125,59	250	80	35,27	6.52	1,5
MAT150-1650A	500	1650	12	22	11	138,15	275	80	32,06	7.17	1,5
MAT150-1950A	500	1950	12	24	12	150,71	300	80	29,39	8.48	2,5
MAT150-2250A	500	2250	12	30	15	188,39	375	80	23,51	9.78	2,5

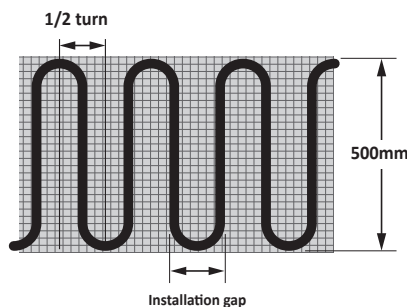
\*Nominal value at 20°C, tolerances: -5%/+10%.



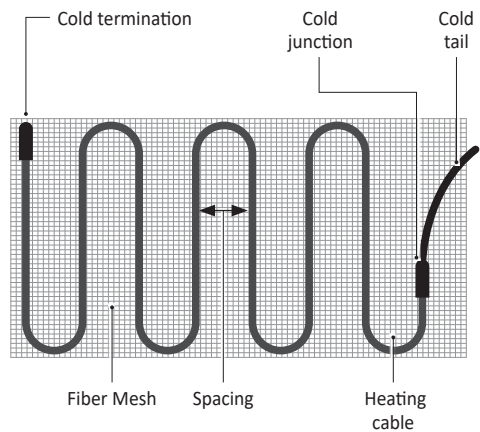
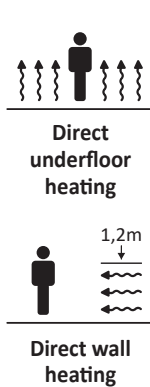
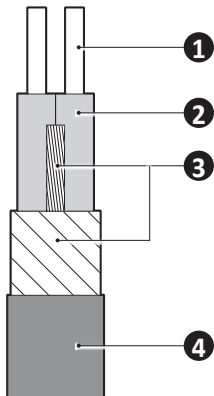
## ABOUT THE PRODUCT

### BENEFITS

- **A range of powers adapted to your needs, ideal for new construction and renovation:**
  - Refit and new built: For a surface power of 150W/m<sup>2</sup>: range from 75W to 2250W.
- **A surface power for each of your needs:**
  - 150W/m<sup>2</sup> with a step of 80mm for moderately insulated houses or bathrooms.
- **Dimensions adapted to the surfaces of the rooms:** with a width of 500mm, from 1 to 30m in length, the heating mats will perfectly adapt to all surfaces.
- **Comfort throughout the house:** radiant heating, uniform and optimal diffusion of soft heat over the entire surface of the room without dust displacement. Heating by the floor, the walls, or the floor and the walls. Comfort is guaranteed for your well-being and tranquillity.
- **Guaranteed savings:** thanks to the energy stored in the adhesive mortar as well as in the covering work returned by its radiation and its average inertia, the electric floor in screed is a real source of savings.
- **Unmatched aesthetics:** completely invisible, installed under the covering work, the Neomitis electric underfloor/wall heating will allow you to arrange your interior as you wish and save space in all rooms.



# SAFETY INSTRUCTIONS, GENERAL INSTRUCTIONS AND RECOMMENDATIONS



The heating cable is laid in a spiral shape so that it is evenly spaced and distributed on the mesh. This allows for surface power thanks to the installation step and the linear power of the cable.

## Construction of electrical cable

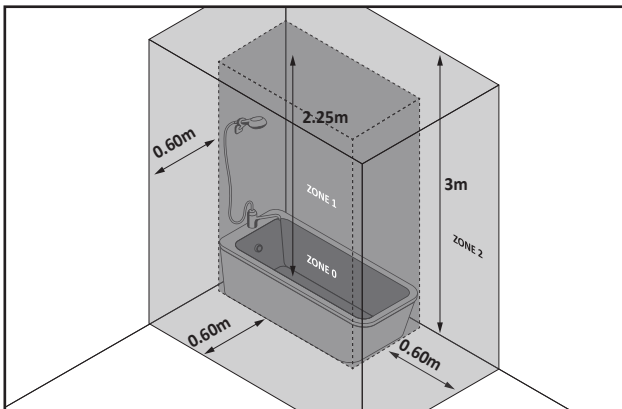
1	Dual core
2	Fluoropolymer insulation
3	Aluminium shielding tape with ground drain to be connected to the ground
4	PVC outer sheath

## • Recommendation

**Important:** all electrical connections must conform to the current BS7671 18th Edition Part P National Wiring Regulations. Final connections to the main electricity supply **MUST** be completed by a qualified electrician.

**Before connecting the heating mat, turn off the electricity at the main circuit breaker.**

The electric heating mats embedded in the floor or walls can be installed in zone 2 or in the space outside the zone, provided that the metallic coating of the heating cable is grounded. The thermostat must be installed in such a way that switches and other control devices cannot be touched by a person who is in the bathtub or under the shower. The power supply circuit of this (these) mat(s) must include an omni polar cut-off device with an opening distance of at least 3 mm (according to the I.E.E Wiring Regulations (BS 7671:2018)). An indication (for example, a layout plan) must be affixed next to the electrical panel to inform about the locations of the heating mats.



**Zone 0**

No electric heating mat.

**Zone 1**

**Zone 2**

Class I and IPX7 electric heating mats protected by a 30mA differential circuit breaker

**Out of zone**



This image is provided for reference only. The installation of the device must be done by a qualified professional installer, in accordance with the standards in force and the rules of the country in which it is installed.

## AREA COVERED, PRE-INSTALLATION INSTRUCTIONS

### • Surface to be equipped

- The mats should cover the maximum floor or wall surface. **The area to be equipped is obtained after deduction:**
  - The areas in Table 1.
  - The areas where fixed equipment rests such as kitchen furniture, bathroom furniture, sanitary or household equipment, cupboard etc... The installation of heating mats in these areas is not allowed.



### • Table 1

#### Minimum distance to be maintained between the heating elements and:

The passage of vertical pipes of all kinds through the floor (water distribution, electrical distribution, etc.)	0,03m
The finished interior surface of the walls	0,10m
The partitions	0,10m
The outer surface of a masonry duct	0,20m
The outer wall of a partitioned or masonry hopper	0,20m
The edge of a hopper	0,20m
The outer wall of a flue pipe	0,20m
A hearth, closed fire appliances and inserts of an interior fireplace	0,40m

### • Instructions before installation

**Before starting the installation, it is important to have the following elements:**

- Necessary equipment for installation: tester, junction box(es), thermostat(s), peripheral strip of 5 mm thickness and 150 mm height, adhesive tape, layout plan, and underlay if necessary.
- The interior and exterior partitions (as well as the doors) must be in place before the installation of the heating mats.
- Check that the references and powers correspond to the needs.
- Visually check if the mat is not damaged in its packaging.
- Check the ohmic (ohms) value of each mat see Tests of the mats below and note it on the control sheet table page 24.
- The heating mats must be separated from other heat sources such as lights and fireplaces.
- The mats must be installed on a healthy floor.
- Only the fiberglass mesh can be cut. Never cut the heating cable.

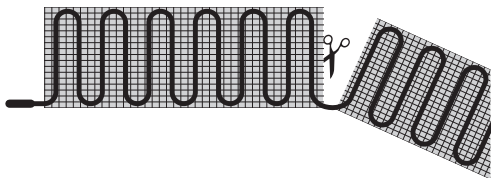


# HOW TO CUT AND RETURN

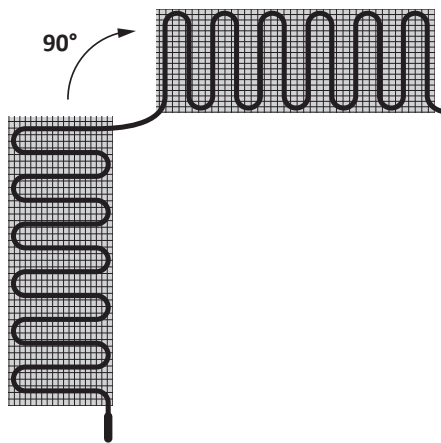
## RECOMMENDED CUTTING AND TURNING OF HEATING MATS

1. Use scissors carefully to cut the mesh without damaging the cable.

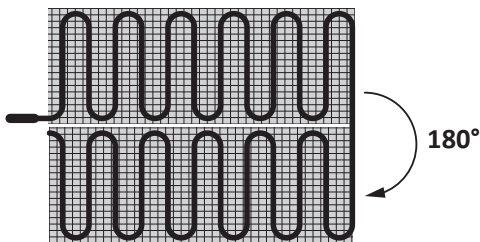
Turn the frame appropriately.



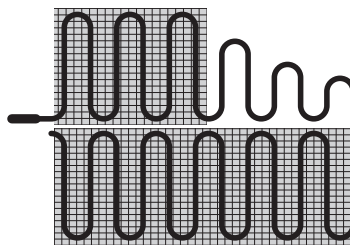
2. Rotate 90 degrees.



3. Rotate 180 degrees.



4. For other shapes, detach the cable from the mesh at the required length and lay only the cable. The cable must be attached to the insulation using aluminium adhesive tape.

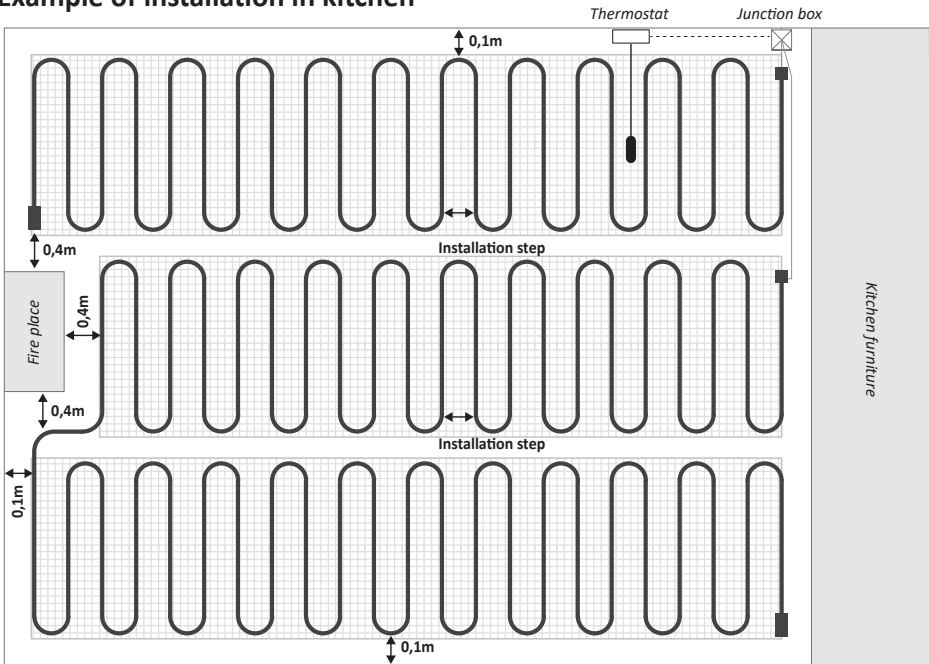


- Test the mats according to the chapter 'Mesh Tests' on page 18.
- Connect the cold connection to the junction box or thermostat (see 'Electrical Connection' on page 18).
- Install a limiting or regulating floor probe (optional, sold separately, for bathrooms) (see 'Thermostat' chapter on page 18).



## EXAMPLE OF INSTALLATION

### • Example of installation in kitchen



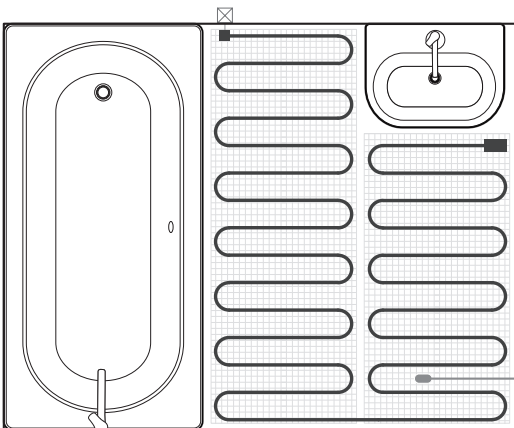
#### Example

No installation: 80 mm

- Cold junction
- Termination joint
- Floor probe

- Heating cable
- Cold tail
- Mesh

### • Example of installation in bathroom

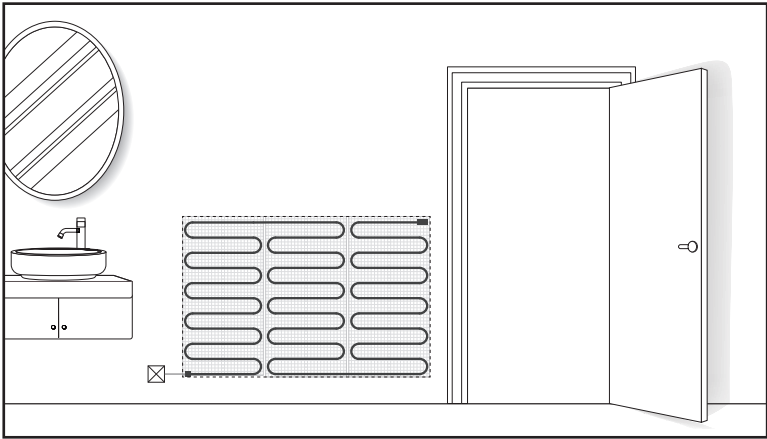


#### Example

- ⊠ Junction box
- Cold junction
- Termination joint
- Floor probe
- Heating cable
- Cold tail
- Mesh

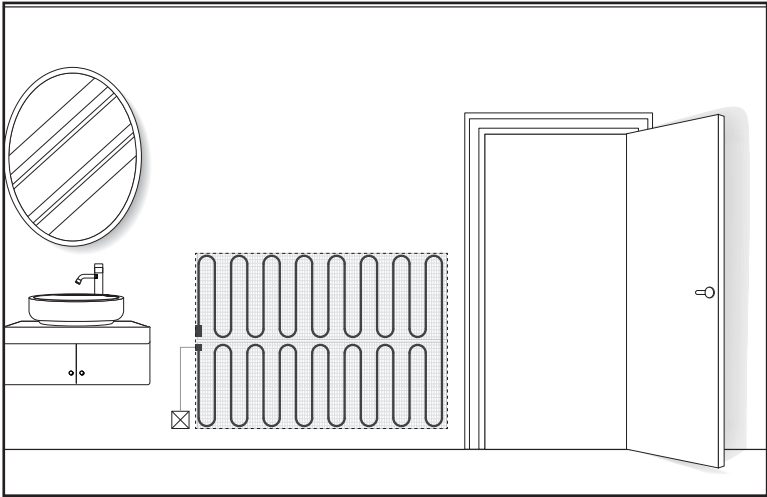
**Example of vertical installation**

Equipped wall: 2,5 m x 1 m (ht)  
Mat surfaces: 2.5 m²



**Example of horizontal installation**

Equipped wall: 2,5 m x 1 m (ht)  
Mat surfaces: 2.5 m²



**Example**



Junction box



Cold junction



Termination joint



Heating cable



Cold tail



Mesh



# FLOOR PLAN

Draw a plan showing the layout and location of the heating mat/cable(s).

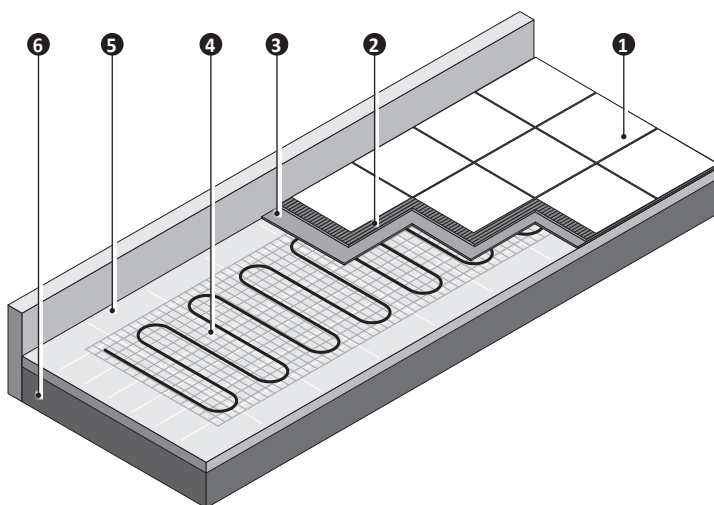
A large, empty grid of squares, intended for drawing a floor plan. The grid is composed of 20 columns and 30 rows of squares.



# STEPS OF INSTALLATION AND TESTING

## OVERVIEW OF IMPLEMENTATION IN RENOVATION

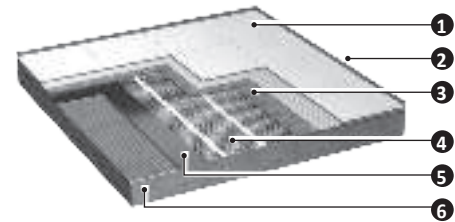
① Floor Covering	Glued floor covering
② Adhesive Mortar	Type C2S adhesive mortar approved for electric underfloor heating
③ Self levelling	Coating flexible adhesive mortar or self-levelling
④ Heating Mat	Heating mat embedded in the adhesive mortar or in a self-levelling
⑤ Optional Thermal Insulation	Optional thermal insulation or underlay depending on the configuration
⑥ Support Floor	Insulated screed, support floor, raw slab



The described implementations are:

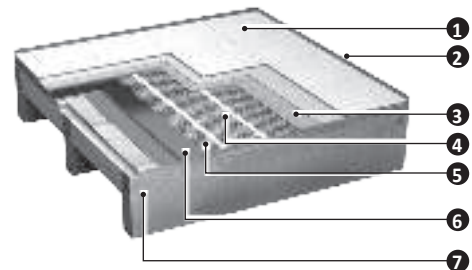
- **Type 1A** - Installation with adhesive tile
  - Implementation on a concrete slab
  - Case of the insulator on a wood subfloor
- **Type 1-B** - Installation with adhesive tile on a wood subfloor
- **Type 2** - Installation with other floorings

**Type 1-A - Installation with adhesive tile on a concrete slab**



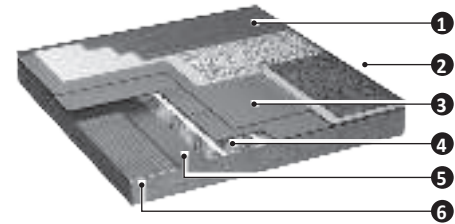
- 1 Ceramic tile
- 2 Perimeter band
- 3 Adhesive mortar or self-levelling (5mm)
- 4 Heating mat
- 5 Insulation board
- 6 Adhesive mortar

**Type 1-B - Installation with adhesive tile on a wood subfloor**



- 1 Ceramic tile
- 2 Perimeter band
- 3 Adhesive mortar or self-levelling (5mm)
- 4 Heating mat
- 5 Screws and washers
- 6 Insulation board
- 7 Adhesive mortar

**Type 2 - Installation with other floorings**

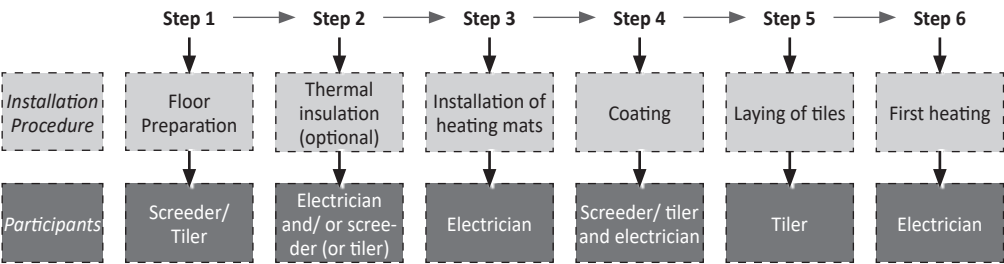


- 1 Other Flooring\*
- 2 Perimeter band
- 3 Self-levelling (10mm)
- 4 Heating mat
- 5 Insulation board
- 6 Adhesive mortar

*\*Refer to the type of flooring and its industrial for its application under the electric underfloor heating (glued, floated, tapped...)*

**• Implementation type 1 - Renovation for tile installation**

The installation procedure must comply with the current IEE Electrical Regulations BS 7671 :2018 / THE 18TH EDITION WIRING REGULATIONS and Part P of the Building Regulations.



# INSTALLATION OF FLOOR HEATING MATS



Before the installation of the heating mats, the building must be waterproof and airtight, equipped with doors, bay windows, and windows.  
The installation must be carried out by a qualified professional installer.

## Step 1: Floor Preparation

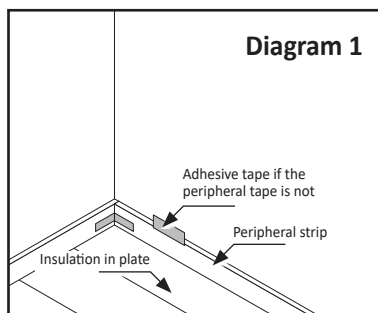
It is necessary to check beforehand the room, the level. Remove any dust from the floor to lay down insulation and the mat. The support must be free of deposits, waste, plaster films or other materials before the installation of the underlay or heating mats.

## Step 2: Thermal insulation and the case of the wood subfloor (refer to Type 1-B)

Before the installation of the insulation board (optional), a peripheral strip (not included) can be affixed all around the wall as illustrated in 1. This strip should extend at least 2 cm above the finished floor. The insulation should be laid down in a staggered pattern using flexible adhesive tile, as shown in **Diagram 5** on page 20. The insulating material is arranged in staggered rows using adhesive.

### WARNING

In the case of installation on a flexible subfloor, it is mandatory to use adhesive tiles and screws with washers on the boards in 5 points.



## Step 3: Installation of heating mats

**Important recommendations before starting the installation:** During the installation of the heating mats, precautions must be taken to avoid any damage to the cable, such as falling sharp objects or walking on the heating cable. The placement of the heating elements requires the prior establishment of an installation plan. It is carried out in accordance with the current IEE Electrical Regulations BS 7671 :2018 / THE 18TH EDITION WIRING REGULATIONS and Part P of the Building Regulations., based on the plans provided by the project manager. This installation plan must take into account:



- The heated area (which excludes areas on which fixed elements i.e. kitchen, sanitary and household equipment, wardrobes, dressings...).
- **Installation of the mats (see Installation example on page 9):**
  - Make sure the surface is clean before laying down the mat.
  - Draw a plan showing the layout and location of the heating mat/cable(s) according to table 1 page 11.
- Unroll the mats on the support respecting the installation plan and the above recommendations.
- The mats can be turned 90° and 180° by cutting the mesh. Cutting tools must be used. DO NOT cut the heating cable.
- When cutting returning or removing the cable from the mesh, please follow the instructions in the chapter How to cut and return page 8.
  - Never disconnect the cable from the mesh.
  - Never cut the cable if it is too long (make it run).
  - Respect the initial installation pitch.
- Consider a gap of 50 to 100mm from the wall to the mat on the perimeter of the room.
- Fix the cold tail and the floor sensor on the floor and back to the electrical box.
- At the end of the installation of the mat please proceed to a test of the resistance of the systems.

---

## Step 4: Covering of the heating mat

**Important recommendations before starting the covering:** The installer of the heating mats must be present during the covering of the heating cables. He ensures that the mortar or self-levelling covers the mating system as per the type of flooring and proceeds a second test of the resistance making sure that the system is not damaged. During the flooring operation, if any damage happens the installation must be stopped in order to repair or test.



### Two possibilities of coverings:

#### 1- Covering with adhesive mortar:

The heating mats can be covered by a flexible adhesive mortar for underfloor heating and approved of a thickness of 5 mm for tile and 10mm for wood floors. The adhesive mortar must be spread and smoothed in the direction of the width of the mats, embedding the heating cable and its cold tail. The coating layer must be smooth and regular. Allow to dry for a minimum of 24 hours. After covering, test the mats according to the chapter Tests of the mats on page 18.

#### 2- Covering with fibered self-levelling:

The mats must be covered by a fibered self-levelling compound for use with electric underfloor heating of a thickness of 5 mm for tile and 10mm for wood. For drying time, refer to the specification of the self-levelling compound. After covering, test the mats according to the chapter Tests of the mats page 18.

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## Step 5A: Laying tile flooring

- The laying of the flooring can be done 24 hours after for tiling and 48 hours for wood.
- The laying of the flooring cannot be carried out during a heating period.
- The thermal resistance of the flooring must be less than 0.15m<sup>2</sup> K/W.
- Authorized floorings: ceramic tiles, marble mosaic tiles and slabs, slabs of natural materials (limestone, marble and granite).

## Step 5B: Laying other flooring with Glued i.e. Wood, LVT, Textile, PVC, and carpet

**Type 2** - Following step 3 and the laying of the mats, a coating of 10MM of fibered self-levelling must be applied on top of the mat.

Please respect the drying time according to the thickness of the self-levelling.

According to the type of flooring listed above please refer to its specification in terms of installation and glue or any other way of installation according to the specification of the industrial.

After the coating, test the mats according to the chapter Tests of the mats page 18.

In the case of the use of glue, make sure it is compatible for electric underfloor heating:

- The implementation of the wooden floor glued, is carried out by respecting a hygrometry less than 3% of the self-levelling.
  - In the case of floating installation type laminate or engineered parquet, we recommend the Neomitis Soft underfloor heating product, we invite you to see the features and conditions of this product in the Neomitis Soft manual, downloadable on the Neomitis website.
- 

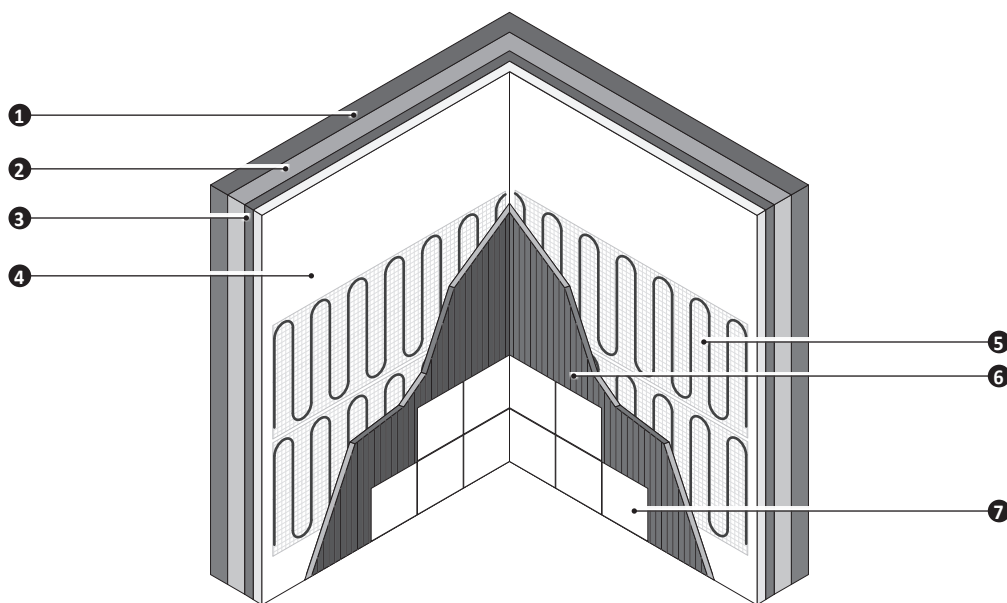
## Step 6: First Heating

The first heat up time of the mat must be done by the installer. The operation can start 48 hours after the flooring has been laid. The first heat up program can be done by a thermostat equipped with a program for progressive first heating.

# INSTALLATION OF WALL HEATING MATS

## • Overview

1 Exterior wall	
2 Insulation	
3 Plasterboard	Plasterboard or NEOMITIS insulation board
4 Interior wall	
5 Heating mat	Heating mat that can be installed horizontally or vertically
6 Adhesive mortar	Adhesive mortar approved for electric underfloor heating
7 Wall covering	Ceramic tiles, mosaic tiles, slabs (limestone, marble and granite)

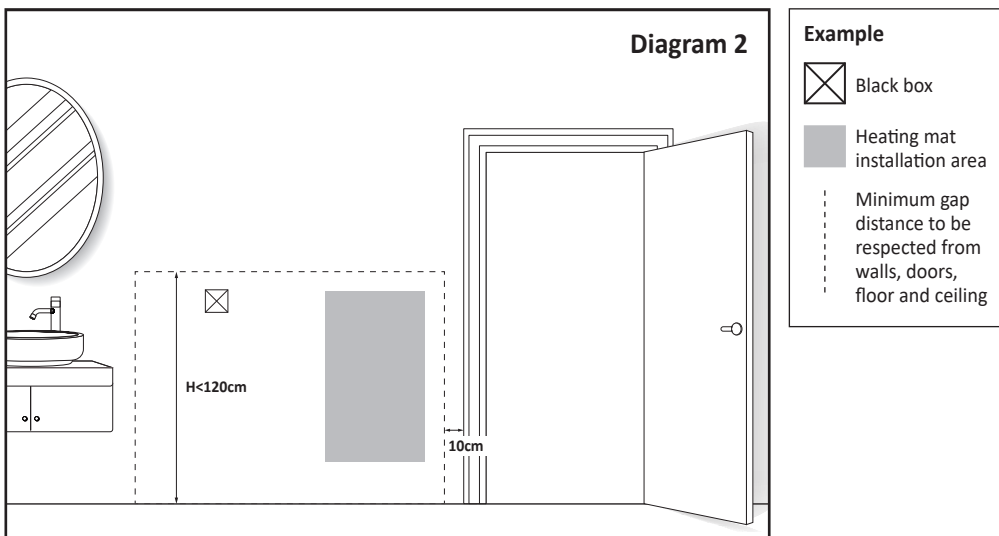


## • Installation Steps:

### Step 1: Wall preparation (only in the bathroom)

- Plan for the electrical supply, back boxes, and positioning of the wall sensor (sold separately).
- Draw on the walls the heating mat installation area.
- Mark the minimum gap distances to be respected between the heating mat and the walls, doors, windows: 10cm.
- The maximum installation height must be less than 120 cm from the floor. The supporting wall must be clean and free of any deposits, (dust, wallpaper, screws...) before the installation of the heating mat.





## Step 2: Installation of the mesh

### Important recommendations before starting the installation:

- Cover the largest possible surface for better comfort with a maximum installation height less than 120cm from the floor.
- Plan for a groove in the support (walls, partitions) for the cold connection if needed (or the junction), the cold connection must be embedded in the adhesive mortar, a groove can be planned for the installation of the wall sensor.
- Plan for aluminium adhesive tape to help hold the mats if needed.
- The maximum installation height must be less than 120 cm from the floor.

### Installation of the mats (see Installation example on page 9):

- Unroll the mats on the support respecting the markings of Step 1.
- The mats can be turned 90° and 180° by cutting the mesh, DO NOT cut the cable.
- Never separate the cable from the mesh.
- Never cut the cable if it is too long (let it run).
- Respect the initial installation plan.
- Fix the mat on the wall with its adhesive mesh, if needed you can use an aluminium tape.
- Install the wall sensor (for bathrooms).
- Test the mats according to the chapter Testing the mats on page 18.
- Electrical connection (see Electrical connection on page 18) of the cold tail to the junction box or directly to the thermostat.

## Step 3: Covering of the heating mat

**Important recommendations before starting the covering:** The installer of the heating mats must be present during the covering of the heating cables. He ensures that the adhesive mortar covers the mating system as per the type of tile wall and then proceeds with a second test of the resistance making sure that the system is not damaged. During the flooring operation, if any damage happens the installation must be stopped in order to repair or test.

### Covering with adhesive mortar:

The heating mats can be covered by a flexible adhesive mortar for wall/underfloor heating, approved to a thickness of 5 mm. The adhesive mortar must be spread and smoothed in the direction of the width of the mats, embedding the heating cable and its cold tail. The coating layer must be smooth and regular. Allow to dry for a minimum of 24 hours. After covering, test the mats according to the chapter Tests of the mats on page 18.



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## Step 4: Laying tile wall

- The laying of the wall can be done 24 hours after for tiling and 48 hours for wood.
  - The laying of the wall cannot be carried out during a heating period.
  - The thermal resistance of the wall must be less than  $0.15\text{m}^2 \text{ K/W}$ .
  - Authorized wall: ceramic tiles, marble mosaic tiles and slabs, slabs of natural materials (limestone, marble and granite).
- .....

## Step 5: First Heating

The first heat up time of the mat must be done by the installer. The operation can start 48 hours after the wall has been laid. The first heat up program can be done by a thermostat equipped with a program for progressive first heating.



## MESH TESTS, ELECTRICAL CONNECTION, CONTROL

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Only a qualified electrician should connect the system to the thermostat and/or the electrical power circuit. All these connections must comply with current regulations.

### • Resistance tests

Tests of the heating elements must be carried out before and after laying the mat system and after the installation of the flooring. During the laying of the flooring, the electrician must be present and check during the covering operation that the system is not damaged. The following checks must be carried out according to the current IEE Electrical Regulations BS 7671 :2018 / THE 18TH EDITION WIRING REGULATIONS and Part P of the Building Regulations.: Resistance control must comply with manufacturer's data in  $\Omega$  with a tolerance of  $-5/+10\%$  (refer to table range page 5).

Insulation control: the measurement values must be filled in the control card and warranty form on page 24. The warranty must be registered. If this is not done within 30 days following the end of the installation and six months after the purchase, the warranty will be void.

### • Electrical connection

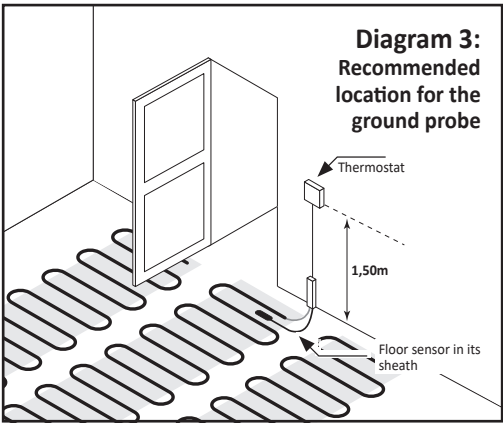
The cold junction is embedded in the same way as the heating cable in the adhesive mortar. The cold junction must be coated in the adhesive mortar. Cold connections must be installed to avoid any overlap with the heating cables. Only the part of the cold connection between the edge of the covering and the junction box will be placed under a conduit embedded in the wall (see **Diagram 3** below).

Electrical connections must comply according to the BS 7671: 2018 current standard as per the protection of each circuit, as per the residual current differential device must be installed per 7.5kW of power in 230V single-phase. The heating system must be earthed.

In wet rooms (bathrooms) the heating elements must be connected to the 30mA RCD protection.

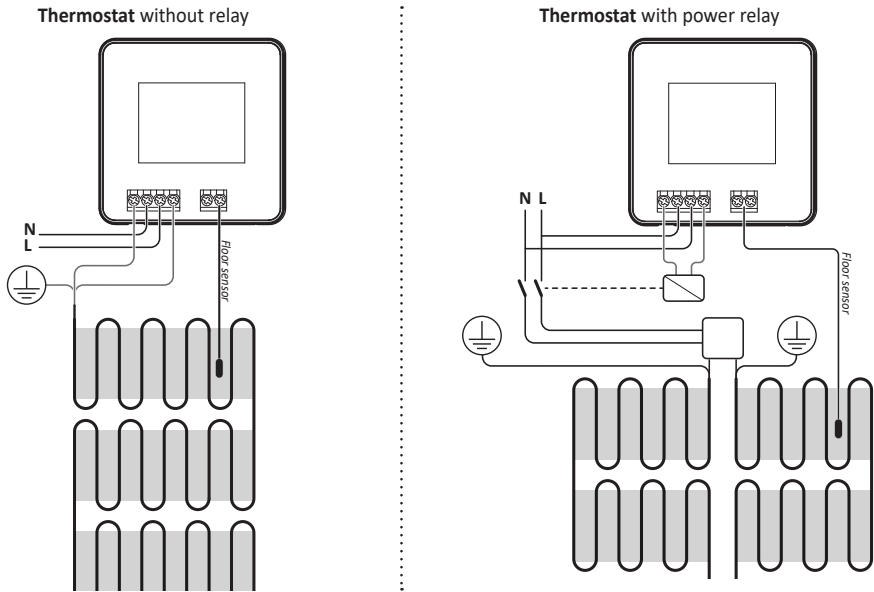
### • Thermostat (not included, sold separately)

The control temperature in each room will be ensured by a room thermostat (not provided, sold separately) positioned 1.5 m above the floor at a suitable location of the area to be controlled (see **Diagram 3** below). The thermostat should not be positioned on a wall equipped with a heating mat. The temperature regulation in the bathroom can be done by the floor (or wall) sensor (optional) avoiding interferences with a towel heater. If the installed power of the mats is greater than the switching capacity of the thermostat, a power relay must be installed (see **Diagram 4** below).



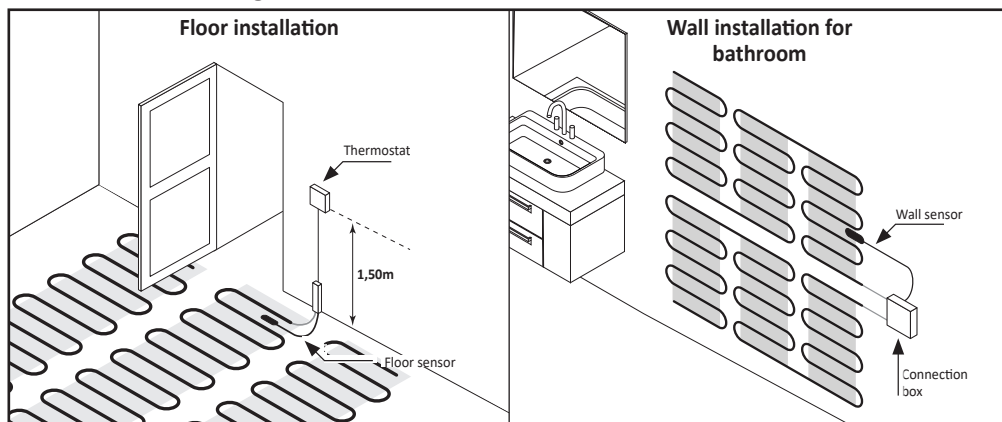
**IMPORTANT:** To control the heating mats using a thermostat, please refer to its instruction manual.  
If the installed power of the mats is greater than the amperage relay of the thermostat, a power relay must be installed.

**Diagram 4:** Wiring of the room thermostat to the heating mats



A floor sensor (optional) will be placed below the mat as per **Diagram 5**. The cable of the sensor can be tapped to fix it. The sensor itself is free of tape and embedded on the mortar. The sensor is placed on the loop at equal distance from each resistance avoiding crossing the resistance as per the diagram.

**Diagram 5: Recommended location for the floor/wall sensor**



## ? TROUBLESHOOTING

**The heating mats do not heat up:**

- Check the position of the power supply circuit breaker on your electrical panel.
- Make sure your thermostat is in comfort (heat) mode (refer to its instruction manual).

**The ambient temperature is not high enough, the mats do not heat enough:**

- Check the operating mode of your thermostat.
- Check the temperature setting of your thermostat, increase it.
- Check if you have not placed a rug more than 5mm thick or a mattress on the floor, remove furniture placed on top of the underfloor heating.
- If the heating has just been turned on, wait a few hours (medium inertia heating).

**The system heats continuously, and the ambient temperature is high:**

- Check the temperature setting of your thermostat, lower it.
- If the problem persists, have your thermostat checked.

**If the problem persists, contact your after-sales service.**



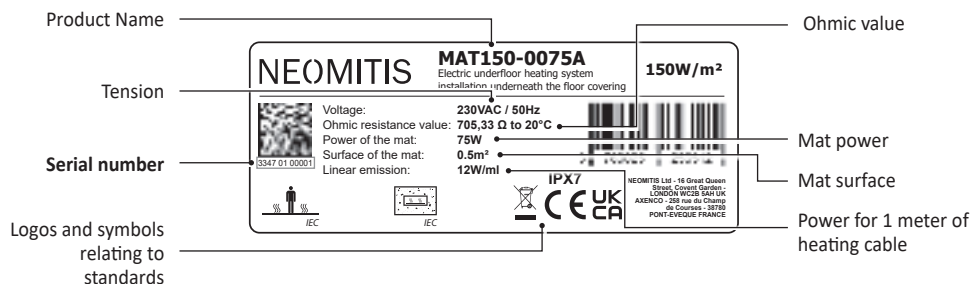
## TECHNICAL INFORMATION

### MAINTENANCE

The heating MAT system requires no maintenance. If an intervention needs to be made on the heating cable, turn off the installation.

## PRODUCT LABEL AND CONTROL SHEET

The product label is the identity card of your heating mat. It contains all the information necessary for its traceability over time.



**IMPORTANT:** The serial number allows the manufacturer to identify your electric heating mat. The control sheet can be a substitute if the product label has not been kept. The control sheet must be kept after the installation of the work until the end of the warranty, see control and warranty sheet on page 24.

## TECHNICAL SPECIFICATIONS

Technical specifications	MAT150-00XXA - 150W/m²
Voltage	230 V +/-10% AC 50Hz
Width	500 mm
Cable spacing	80 mm
Cold wire	3 ml
Minimum installation temperature	0°C
Type of heating cable	Dual core
Outer sheath	PVC diameter 3.2 mm
Inner sheath (cores)	Crosslinkable polymer
Electrical protection	Class I - IPX7

Direct floor heating



Installation in concrete or similar material



**UKCA declaration of conformity:** Hereby, NEOMITIS Limited declares that MAT is in compliance with Safety Regulations 2016 (2016 No.1101), EMC Regulations 2016 (2016 No.1091) and RoHS Regulations 2012 (2012 No.3032).

The full text of the UK declaration of conformity is available at the following internet address:

<https://www.neomitis.com/UKCA-declaration.html?lang=en>

**UK  
CA**

Neomitis Ltd: 16 Great Queen Street, Covent Garden, London, WC2B 5AH UNITED KINGDOM - [contactuk@neomitis.com](mailto:contactuk@neomitis.com)


### Simplified EU declaration of conformity:

Hereby, AXENCO, declares that the products mentioned in this manual are in compliance with Directives 2014/35/EU, 2014/30/EU, 2011/65/EU and 2009/125/CE..



The full text of the EU declaration of conformity is available at the following internet address: <https://www.neomitis.com/CE-Declaration-2126.html?lang=en>



The symbol , affixed on the product indicates that you must dispose of it at the end of its useful life at a special recycling point, in accordance with European Directive WEEE 2012/19/EU. If you are replacing it, you can also return it to the retailer from which you buy the replacement equipment. Thus, it is not ordinary household waste. Recycling products enables us to protect the environment and to use less natural resources.

## LEGAL GUARANTEE (EXTRACT OF TERMS AND CONDITIONS)

### Clause 6 - Guarantee:

**6.1. Guarantee of patent defects - Principle:** Our products must be verified by the customer upon delivery. Any and all claims, reservations or disputes regarding missing items and patent defects must be submitted in the manner set forth in these General Terms and Conditions.

In the event of patent defects, the defective parts shall be replaced by us, subject to verification of the alleged defects.

We shall not be held responsible for patent defects or missing parts of which the purchaser was aware before entering into the sales agreement.

The customer shall have to provide any and all evidence as to the reality of the defects noted (paperwork, photographs, etc.), and our company reserves the right carry out, directly or indirectly, any and all checks and verifications, notably on site.

Notice of the missing items or of the patent defects which were noted at the time of delivery, and those discovered after acceptance and intake of the products, shall have to be provided by the customer in writing within twenty-four hours following the date on which the latter discovered the said missing item or defect. No notice shall be taken into account if it is provided more than eight full days following delivery of the products. Once said timeframe has expired, the customer shall no longer be able to put forward as a ground non-conformity of the products as regards patent defects or missing items, or raise said non-conformity in a counter-claim in its defence at the time of legal proceedings regarding the collection of monies owed brought by our company.

**6.2. Guarantee of hidden defects:** Our company guarantees its products against the hidden defects which existed on the date on which products are delivered, in accordance with the law, under the terms set forth hereinafter.

Our guarantee only applies to products which have lawfully become the property of the purchaser. It only applies to products which were manufactured in full by our company. Our guarantee covers hidden defects. Since our customers are trade professionals, a hidden defect is defined as an unacceptable manufacturing defect affecting a product which renders the latter unfit for the intended use thereof which is not liable to be detected by the purchaser before it is used. "Unfit for the intended use thereof" means that the defect prevents the piece of equipment from operating. Thus, the design of the product is not covered by the hidden defects guarantee – our customers are deemed to have received all of the technical information regarding our products. We do not guarantee against malfunctions or damage or wear and tear arising out of adaptations or fitting of our products which are special or unusual or usual. Likewise, allegations regarding occasional or variable malfunctions, a lack of comfort, unhappiness regarding the results obtained, aesthetic defects, in particular, are not covered by the guarantee against hidden defects. A defect is not hidden if, despite the fact that the purchaser was not aware of it in good faith, it could have been discovered by carrying out basic verifications.

Our guarantee is limited to the replacement or repair of defective

parts. It does not give rise to compensation.

**6.3. Contractual guarantee:** A specific contractual guarantee can be provided by our company for such equipment. In such case it shall be strictly limited to the stipulations set forth by us.

**6.4. Terms covering the application of guarantees:** Any and all requests for coverage in respect of the guarantee must be made using our After-Sales Service Return Request Form. All claims must be made by the Customer to the Supplier's After-Sales Service Department, given that no direct claims by the user shall be taken into account. The guarantee request shall be taken into account upon production of a dated purchase receipt.

It is the responsibility of the purchaser who alleges a defect, regardless of the defect in question, to provide proof of the existence and of the nature thereof. An application is for-warded by the purchaser to our staff. Likewise, any and all guarantee requests shall have to be accompanied by evidence that it does not fall under one of the said exclusion cases. The purchaser must do his or her utmost to enable said defects to be officially recorded and remedied. He or she must further-more absolutely abstain from replacing the products or have said replacement carried out by a third party, failing which guarantee coverage shall not be provided.

The guarantee coverage is limited to merely exchanging or repairing the defective part. If it proves indispensable, after examination by the Supplier's Technical Staff, replacement of the appliance in full shall be carried out as a temporary measure. Said replacement measure, taken as a temporary measure, under no circumstances howsoever constitutes an acknowledgment of responsibility on our part. In the event of replacement of the defective part or of the appliance as a whole, transport, removal and fitting costs are excluded from the guarantee. In the event of immediate replacement as a temporary measure, the defective equipment shall have to reach our staff within fifteen calendar days of the replacement thereof. Failing which, the replaced equipment shall be invoiced.

All returns shall be carried out in suitable packaging, with the equipment properly wedged. The cost of the return shall be borne by the customer. No returns of parts shall be accepted unless approved beforehand by our After-Sales Service Department. The customer shall receive an assessment carried out by our After-Sales Service Department in the event that the latter concludes that the return was unjustified.

The guarantee coverage excludes any and all compensation in respect of damages. The installer must be insured against any eventual damage.

Moreover, our guarantee automatically ceases to apply when our customer has not notified us of the alleged defect within a timeframe of thirty full days from the date of the facts cited as justifying the claim for guarantee coverage.

The onus is on the customer to provide evidence of the dates referred to in the claim.

**6.5. Specific exclusion in respect of apparent defects:** Defects and damage to the products delivered consecutive upon circumstances relating to carriage, to storage and/or to preservation conditions at

the customer's premises, in particular in the event of an accident of any type howsoever, shall not give rise to an entitlement under the guarantee provided by our company.

The guarantee does not apply to equipment already resold by our purchaser.

**6.6. General exclusions in respect of the all the guarantees:** All guarantees are invalid as soon as our products have been used under usage or performance circumstances for which they were not intended or which do not constitute normal usage.

The guarantees do not apply if the following conditions have not been complied with, to wit notably:

- Storage away from sources of humidity and the effects of bad weather.

- Set-up and installation in accordance with best practice.

- Utilisation with a 230V domestic power supply.

- Utilisation compliant with the Supplier's instructions for installation and use.

The guarantees do not apply to any eventual damage which is the consequence of overvoltage or other faults which occur in power supply and distribution circuits.

The guarantees apply to corrosion defects only if the appliances are used in accordance with the usual circumstances which apply in a single housing unit or in the tertiary sector; in particular they must not be:

- Subject to intensive and continuous ambient humidity (from swimming pools, etc.);

- Cleaned using acidic substances which are liable to affect their properties.

The development of a shade of colour over time is a natural phenomenon and cannot give rise to a guarantee claim. The guarantees do not come into play if the acquirer cannot provide evidence of full payment for supplies and/or if the installation and usage instructions provided by the vendor were not complied with, and less specifically in the event that the damage caused arose out of the actions of the purchaser or of the servants thereof, out of force majeure circumstances or out of unforeseen circumstances. The guarantees do not apply in the event of a defect originating either in the components supplied by the purchaser and in the event of a design having been required by the purchaser, without the vendor having taken part in said end design process, or if the product did not meet aims determined by the customer of which the vendor was not notified. All points not mentioned in writing in the order are not guaranteed. All damage caused by normal wear and tear is also excluded from the guarantee.

The guarantees only apply to products produced in production runs, to the exclusion of prototypes and samples.

**6.8. Guarantee period:** The guarantee period for missing parts and patent defects varies depending on the nature of the defect in question and on the type of equipment in question:

- As regards electric radiators, electric and dual-fuel towel rails and accessories: a guarantee lasting 30 months from delivery of the appliance up to a maximum of 36 months after its manufacturing date in the case of a non-compliance defect ;

- As regards spare parts: 2 years from the exchange.

The guarantee for hidden defects is provided for duration of 30 months from delivery.

The spare parts vital for the use of the machine or equivalent spare parts continue to be available for five years from the date of manufacture of the appliance.

Work carried out under the guarantee does not have the effect of extending the duration of the guarantee.

- For electric underfloor heating, the warranty periods are as follows depending on the type of product:

- Electric underfloor heating: 20 years.

- Underfloor heating with glued-down covering: 20 years.

- Electric underfloor heating with floating parquet: 15 years.

These warranties take effect from the date of purchase of the product and apply under the following conditions:

- If the inspection and guarantee form has been correctly filled in and returned within 1 month of installation and six months after purchase, the ohmic value and insulation value tests must be carried out before installation, after installation of the product and after installation of the covering.

- If the installation complies with the rules in force mentioned in the installation instructions, in the Cahier de Prescription Technique of February 2013 and the BS7671 18th Edition Part P National Wiring Regulations.

- If the electric heating mats are not diverted from their intended their primary function as intended by NEOMITIS.

The warranty will lapse in the following cases:

- If the floor covering above the electric underfloor heating system has been damaged, repaired, replaced or covered by one or more successive coverings.

- If the floor covering above the electric floor heating system is covered by furniture or carpets on the floor, which could damage the heating cable.

- If the underfloor heating system is fed continuously as a result of a thermostat fault or a high temperature demand or when operating without a thermostat.

- If a voltage error occurs, even momentarily.

- If any modification is made to the heating element (cold junction, termination or if the heating cable has been shortened or lengthened).

The warranty is limited to the replacement or repair of parts found to be defective by the Neomitis after-sales service and excludes any service and all labour, travel or transport costs as well as any compensation for damages, in the case of a factory defect in the product.

- The guarantee period for the frost-free electric cable is 5 years.

This warranty takes effect from the date of purchase of the product and applies under the following conditions:

- If the inspection and warranty form has been correctly filled in and returned within 1 month of installation and six months six months after purchase, the ohmic value and insulation value tests must be carried out before installation, after installation of the product and after the pipe insulation has been installed (in the case of pipe piping).

- If the installation complies with the rules in force mentioned in the installation instructions and the BS7671 18th Edition Part P National Wiring Regulations.

- If the frost-free electrical cables are not diverted from their primary intended by NEOMITIS.

The warranty will lapse in the following cases:

- If the frost protection cable has suffered external mechanical damage.

- If a voltage error occurs, even temporarily.

- If the heating element is modified (cold junction, thermostat or if the thermostat or if the frost protection cable has been shortened or lengthened).

The warranty is limited to the replacement or repair of parts found to be defective by the Neomitis after-sales service and excludes any service and all labour, travel or transport costs as well as any compensation for damages, in the case of a factory defect.

## INSPECTION AND WARRANTY CARD

Installation must be carried out by a qualified professional, in accordance with applicable regulations.

The **20-year** warranty for Neomitis **MAT** heating with a surface power of 150W/m<sup>2</sup> will be granted according to the following conditions:

- The completed control form sent to the following email address within 1 month after the end of the installation or 6 months after purchase: [warranty@neomitis.com](mailto:warranty@neomitis.com)
- The warranty claim is in accordance with our general terms and conditions of sale.

**NB: the card to complete can be found below or on our website [www.neomitis.com](http://www.neomitis.com)**

## INSPECTION AND WARRANTY CARD

## Details of installer and work location:

Company: ..... Order no: .....

Customer no:..... Work project reference:.....

Address: ..... Work location address: .....

Post code: ..... Date of order: .....

Town: .....

Email address: .....

☐ 150W/m<sup>2</sup>

☐ 150W/m<sup>2</sup>

[illegible]



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## **SITE MARKING**

During the building site phase, the installer must post the following notice in each room equipped with underfloor heating to raise the awareness of those working on the site: **WARNING! Electric underfloor heating - Do not drill.**

Example:

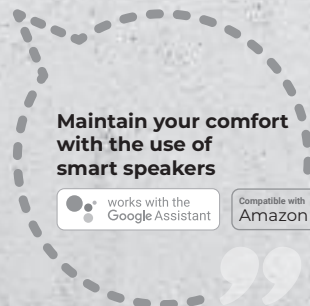


# myneo *Stat*

**Programmable, wired, smart and  
connected digital room thermostat**



**IOS/Android free app**



**Maintain your comfort  
with the use of  
smart speakers**

works with the  
Google Assistant

Compatible with  
Amazon Alexa



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