



## **EasyMat Installation Instructions (TC)**

### **General**

Our product Easy Mat is intent to bring up the floor temperature to a comfortable condition (no cold feet).

Read instructions carefully

- I. **No modifications may be made to the product (do not change the mat size or open the factory splices). Never cut the blue wire. Heavenly Heat mats run in electrical parallel. Do not connect the mats in series.**
- II. **Do not install the mat if the temperature is below -41° F.**

### **Preparations**

- I. All preparations are essential to ensure a quality installation.
- II. Remove all obstacles from the sub-floor and make sure that the sub-floor is free from all dirt, nails, sawdust and other construction residue.
- III. Plan the heating mat layout, thermostat location, rough-in, and power supply from the main panel. The mat should be installed about 1.5 to 3 inches away from the walls (under carpet installation should not be less than 3" away from walls or any other carpet edges), and a minimum of 3 inches away from pipes and drains, always maintain a minimum of 2 inches between heating wires.
- IV. **Each mat has 3 cold leads, two load wires, and a braid shielding as ground connection. (A label at the end of the cold leads cable states the system voltage – 120V or 240V).**
- V. Minimum banding radius (where needed)  $R = 5 \text{ cm}$ .
- VI. Ensure the mat size fits the applicable area in accordance with your plan.



## Installation Steps

1. Mark Thermostat and conduit location.
2. Install thermostat conduit (refer to electrical preparations)
3. Clean floor surface



4. Mark heating mat location on the sub-floor in accordance with the plan. Ensure heating cable does not extend beyond the room or the area for which it was designated

5. Test No. 1: Test the heating mats, before rolling them out, with an ohmmeter (the results should be  $\pm 10\%$  of the tag value). If the resistance is above or below 10% please call us. The calculation the expected resistance is voltage squared divided by the wattage mat. ( $V^2/W = \text{Ohms}$ ).

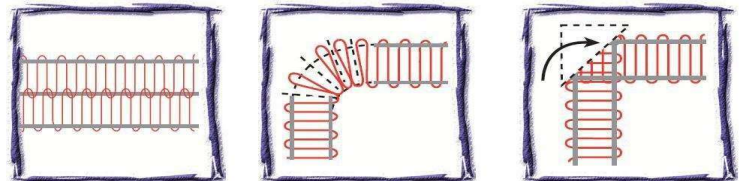


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The heat mat is terminated by three leads (phase, neutral and ground) wires. The wires are 16 or 14 AWG (depends on mat size) and the length is about 8 feet long. If the wires are too long they can be trimmed to the required size. If the length of the wires is not enough, three wires 14 gauge should be brought from the power to the electrical junction box and spliced with the leads of the mat "TYPE NM AND NMC NON-METALLIC SHEATHED CABLE IS NOT SUITABLE FOR INSTALLING THIS PRODUCT".



6. Place Heavenly Heat mats at the marked area and roll out in accordance to the plan. Make sure that the resistant wires of the mat (blue wire) **do not** cross each other (as shown below).



**When installing under carpet, the distance from walls or any other carpet edges should be 3" allowing enough space for carpet tacks nailing not to hit the heating element.**

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Standard approved electrical tools and measuring equipment such as multimeter, cutters, measuring tape, wire stripper, pliers etc. are to be used.

7. Cut the binding tape (**never the cable**) with scissors. Always cut away from the wire. Have a mild solvent on hand to prevent tape adhesive from accumulating on the scissor blades. Modification of resistance wire (blue wire which is providing the heat) is **STRICTLY NOT ALLOWED.**



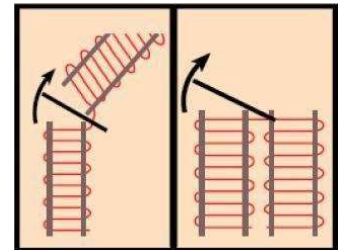
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**WARNING:**

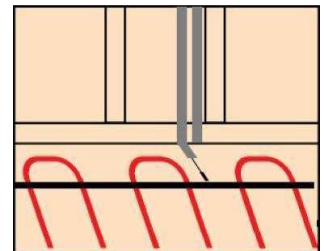
**“RISK OF ELECTRIC SHOCK AND FIRE DAMAGE TO SUPPLY CONDUCTOR INSULATION MAY OCCUR IF CONDUCTORS ARE ROUTED LESS THAN 2 INCHES (51 MM) FROM THIS HEATING PRODUCT. REFER TO INSTALLATION INSTRUCTIONS FOR RECOMMENDED MEANS OF ROUTING SUPPLY CONDUCTORS”.**



8. After cutting Easy Mat tape strips, turn around the heating roll to allow unrolling in the new direction. The straightened loop of wire will naturally set the distance between the old and the new run of mat.



9. Pull the cold lead through the conduit to the thermostat box. Pull the sensor cable from the floor to the thermostat box. The sensor is low voltage and does not go in the same tube as the power leads. (All connections should be performed by a licensed electrician), who is familiar with the construction and operation of the heat mat. Place the sensor between the mat cables **without** allowing the sensor to contact the heating wire.



Installation of this heat mat should be performed in accordance with this installation instruction manual. The installation should be in accordance with Article 424, Part IX, of the National Electrical Safety Code Book.



10. Remove the paper covering the adhesive tape from the beginning of the mat.

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11. Remove the strip. When taping the wire, tighten the stack in both directions to make the wire tight to the floor.
12. Ensure all the adhesive tapes are well glued. If any wire wants to stick up use a small piece of foil tape to hold it down.
13. After the heating mat has been laid out completely, testing the mat(s) for electrical continuity is required. Test according to step 5.

### **Installing under Tiles, Engineered/Floating Floor, or Carpet:**

After the heating mat has been laid out completely, the floor is now ready to be covered by a cement/floor leveling compound layer with minimum  $\frac{1}{4}$ " thickness, applied with a plastic trowel.

14. **A qualified electrician should carry out the following.**

Test No. 3: Test according to step 5.  
Install thermostat in accordance to the manufacture instructions and IEE regulation.  
Carry out the GFCI test.  
Ensure Mat load (Amp) does not exceed the thermostat switching rating.  
Label the panel circuit in accordance with the local code.

**THIS EQUIPMENT SHALL BE INSTALLED ONLY BY QUALIFIED PERSONNEL WHO ARE FAMILIAR WITH THE CONSTRUCTION AND OPERATION OF THE APPARATUS AND THE RISKS INVOLVED.**

**THE INSTALLATION OF THIS HEATING PRODUCT MUST BE INSTALLED IN ACCORDANCE WITH THE MOST CURRENT AND APPLICABLE NEC AND LOCAL ELECTRICAL CODES.**

15. Switch on breaker and thermostat and follow thermostat instruction for programming. Ensure mortar/screed/leveling compound is cured in accordance with the manufacturer's specification prior energizing the mats.
16. After the installation of the mat is completed affix labels to the service panel board and affix labels in each room with heating controls stating "RADIANT FLOOR HEATING"

- **Affix label "WARNING" "RISK OF ELECTRIC SHOCK – ELECTRIC WIRING AND HEATING PANELS CONTAINED BELOW THE FLOOR. DO NOT PENETRATE FLOOR WITH NAILS, SCREWS, OR SIMILAR DEVICES".**
- **Affix the following label adjacent to points of access to canceled areas in which installed heating products are accessible, "CAUTION" "RADIANT HEATING PRODUCTS INSTALLED**

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IN THIS AREA. AVOID ACTIONS WHICH MAY RESULT IN MECHANICAL DAMAGE TO THE PRODUCT”.

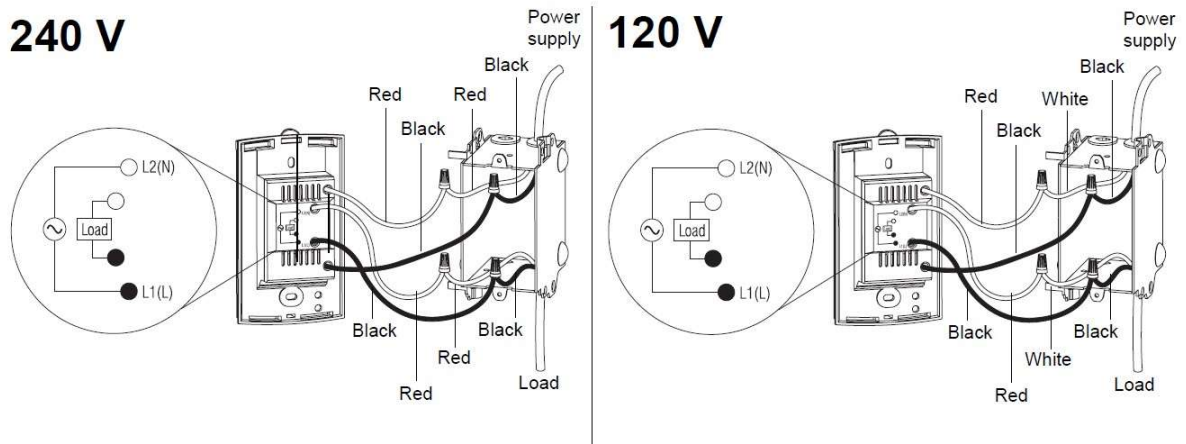
### **Electrical preparation – to be carried out by a qualified electrician**

- I. Install all the necessary rough-in for the thermostat (illustration #1 shows the rough-in for two mats or fewer. For specialized rough-in contact Heavenly Heat Inc.)
- II. Power leads must be protected by local code.
- III. A breaker with G.F.C.I. or thermostat that is equipped with a G.F.C.I. **must protect the circuit.**
- IV. Install and program the thermostat in accordance with the installation instructions. According to the American Society of Heating, Refrigerating and Air-Conditioning Engineers the upper level of comfort is 85° F.1q

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### **Wiring diagram**

**NOTE:** Connect the wires using the provided solderless connectors for copper wires:



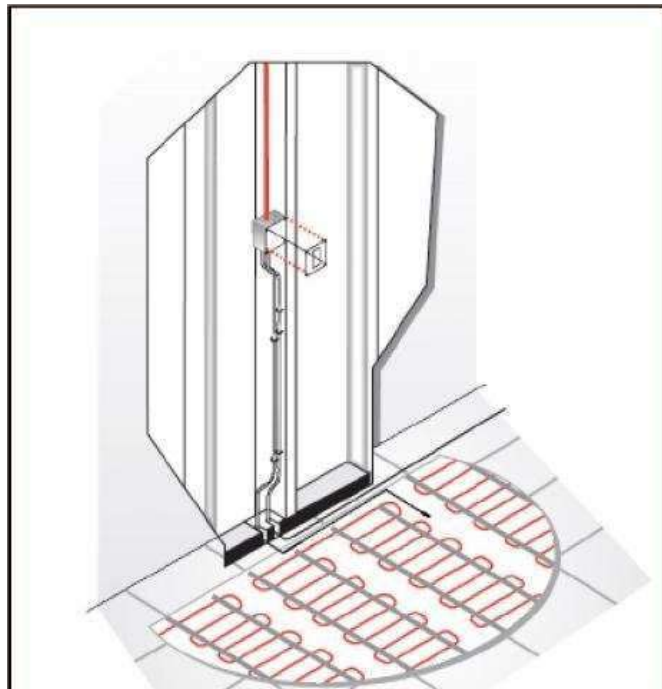
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After Easy Mat is installed on subfloor and tested electronically, then put finished floor or top ¼ inch of thinset it required if floor coverings are combustible. For noncombustible floor covering materials use the necessary amount of thinset.

### Illustration 1



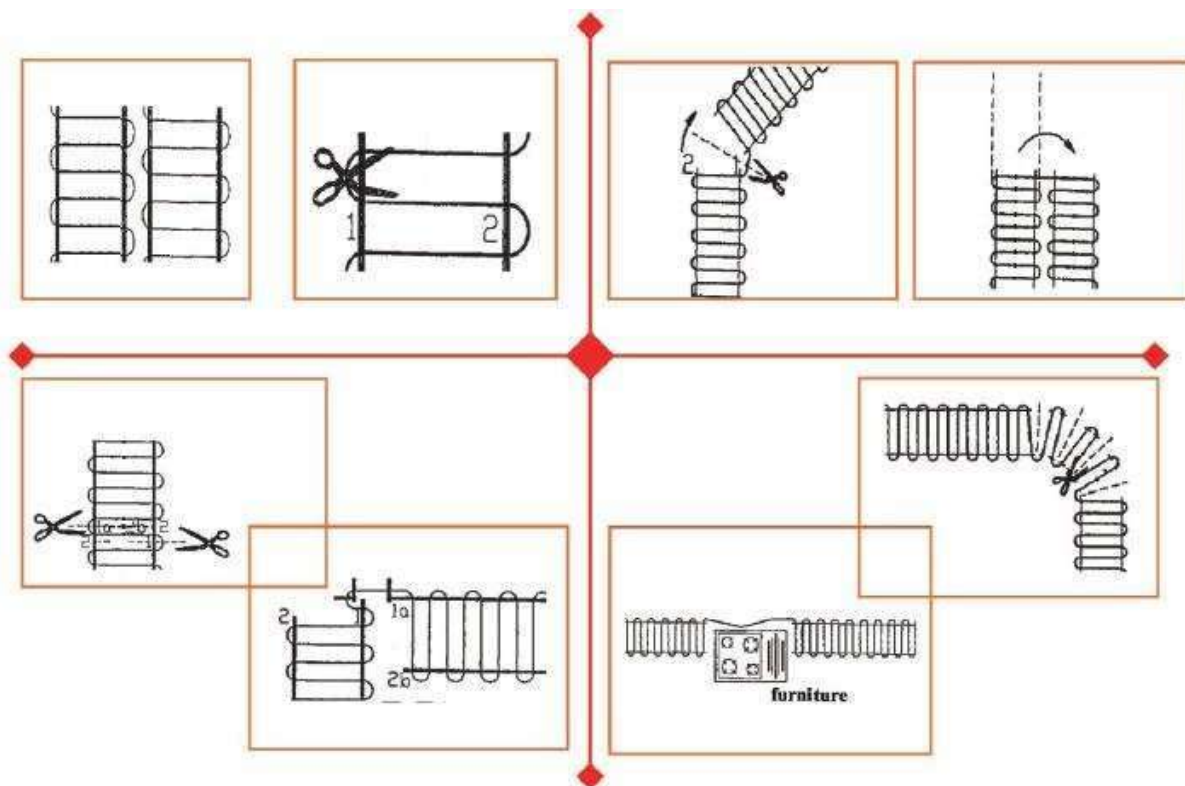
**Warning:** Ensure heating mat is not connected to the power supply until all installations are completed and tested.

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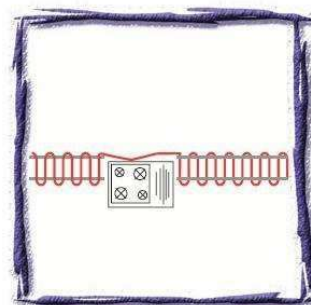
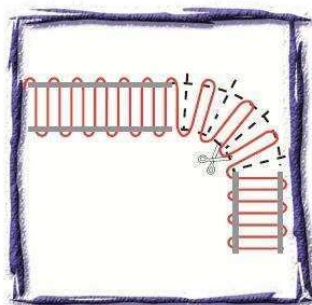
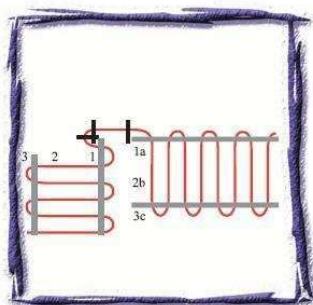
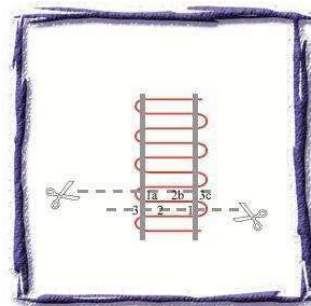
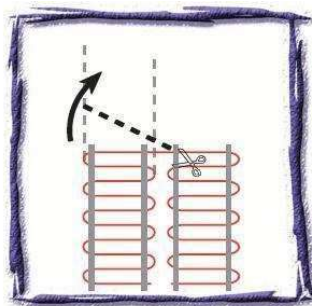
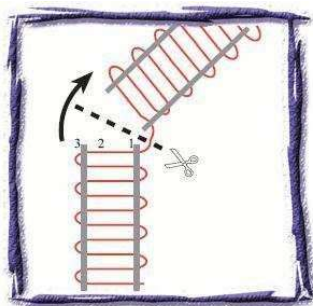
**When installing always maintain minimum 2 inches spacing  
between heating leads**



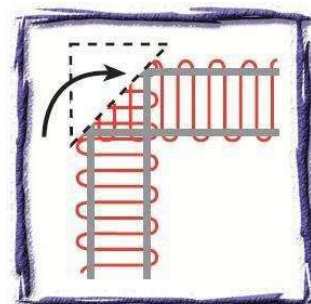
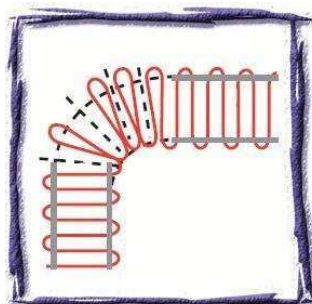
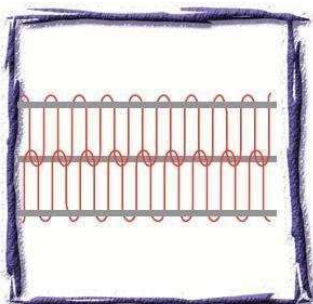
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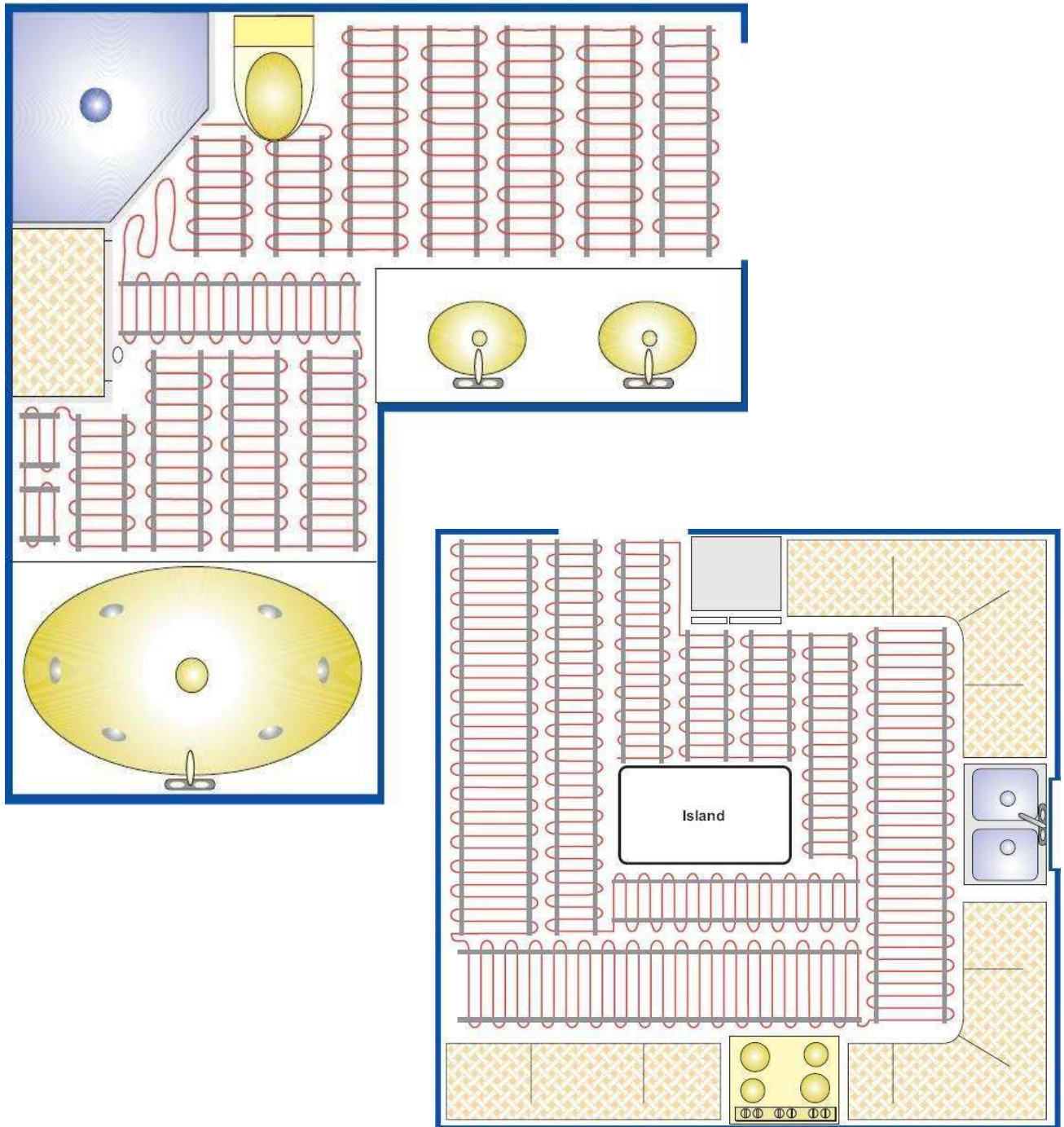




Do not install as shown in three diagrams below







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