



WARMLYYOURS
RADIANT HEATING

Installation Manual for your TempZone™ Custom Mat Electric Radiant Floor Heating System



INSTALLATION INSTRUCTIONS FOR WARMLYYOURS CUSTOM MATS

WARNING

READ ALL OF THE INSTRUCTIONS BEFORE BEGINNING INSTALLATION. FAILURE TO OBSERVE THE WARNINGS COULD RESULT IN DEATH OR INJURY FROM ELECTRICAL SHOCK OR FIRE. MAT FAILURE, IMPROPER OPERATION OR FLOOR DAMAGE MAY ALSO BE A RESULT. A MAT WARRANTY IS PROVIDED (PER NOTED TERMS) BASED ON THE INSTALLATION BEING DONE IN ACCORDANCE WITH THESE INSTRUCTIONS. IMPROPER INSTALLATION MAY VOID WARRANTY.

Inspection

Electrical inspection may be required during and or after heating mat installation. BEFORE BEGINNING INSTALLATION contact your local electrical and building inspection authorities for more information. Local codes may require this mat and/or the thermostatic control to be installed or connected by an electrician. WarmlyYours requires all electrical connections be made by qualified personnel and in accordance with the National Electrical Code (NEC) or National Electrical Code (NEC) and all applicable local codes and ordinances.

Application

The WarmlyYours mat has been designed to warm hard surface materials such as ceramic and porcelain tiles, marble, granite, slate, laminate and engineered wood flooring. WarmlyYours mats are designed for use inside residential and light commercial buildings.

DO NOT use the WarmlyYours custom mat for applications other than for embedded indoor floor warming.

DO NOT use the WarmlyYours custom mat with carpet, solid wood, linoleum or vinyl floors.

DO NOT energize the WarmlyYours custom mat until it is embedded in thinset masonry and the masonry has cured per manufacturer's recommendations.

DO NOT cut or modify the WarmlyYours custom mat to fit the area.

DO NOT overlap WarmlyYours custom mats.

DO NOT use staples to hold or secure the cold lead or thermostat sensor wire.

DO NOT attempt to repair a damaged heating mat, call WarmlyYours for instructions before proceeding further.

DO NOT unroll and install mat when it is colder than 0C (32F).

DO NOT cross construction or expansion joints.

WarmlyYours custom mats provide comfort warming. WarmlyYours custom mats are approved to standard C22.2 No 130-03 and carry a –X rating, suitable for indoor embedded floor surface heating, dry locations. Residential kitchens, basements and bathrooms (not shower areas) are considered dry locations. WarmlyYours mats must be connected to a ground fault protection device. WarmlyYours "TH" series thermostats include ground fault protection, if this thermostat is not used the mat must be connected through a separate ground fault protection device.

Planning Ahead

To reduce the potential for tile cracking ensure the subfloor structure is built strongly enough to accommodate the tile (slate, granite, etc.) and tiling method selected. Your local tile retailer may be able to help with such information. The Tile Terrazzo Marble Association of Canada or the Tile Council of America have published standards available which provide detail on recommended methods of flooring construction. If using metal mesh always fully cover the mesh with a layer of thinset prior to laying the mat, the metal mesh is sharp enough to damage the heating mat.

If applying the mat to a floor which is over an unheated area it is recommended that the area below the floor be insulated. If left uninsulated, the finished floor may not be able to achieve comfort temperatures due to heat loss from below.

WarmlyYours recommends that the mat be installed on a dedicated 20amp circuit. There are instances where the load requirements of the mats installed will exceed the dedicated circuit rating. In these instances contact relays (“commonly known as contactors”), devices designed for the control of multiple mats from a single thermostat, are available. Consult your local electrical inspection authority for the appropriate method of installing and wiring these devices.

Ensure mats powered through a relay are protected by a ground fault protection device such as a ground fault breaker. Ensure electrical junction boxes are properly positioned.

Tools required

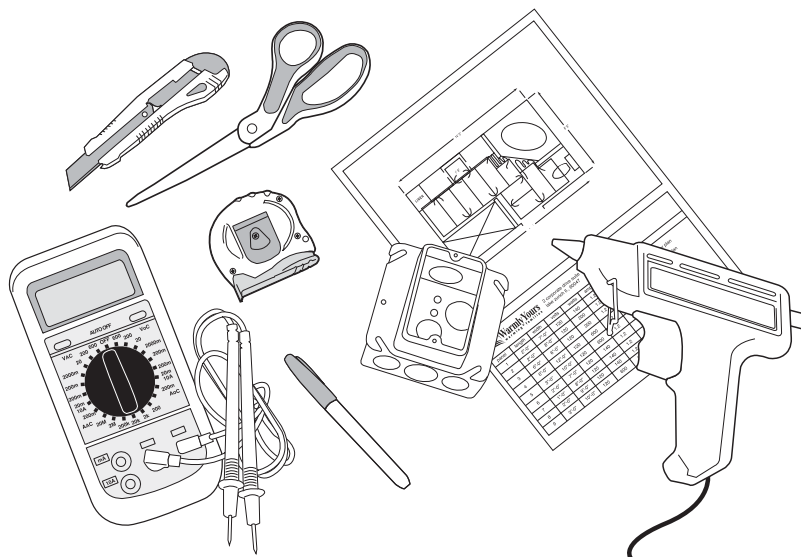
- Square notch trowel, 1/4"x1/4" or larger (e.g. 3/8" x 3/8")
- Rubber grout float
- Tape or hot melt glue
- Electrical and construction tools: (screwdriver, wire stripper, etc.)
- Digital ohmmeter capable of 20 to 20,000 ohms readings

Materials

- WarmlyYours mat
- Tiling materials (latex/polymer modified thinset mortar, waterproof membranes, tile, grout, etc.)
- Floor-sensing thermostat
- Ground fault protection device (if not part of the thermostat)
- External contact relay and ground fault protection device (for multiple mat installations)
- 4x4 Electrical junction box for thermostat (conduit if required) with single gang mudring.

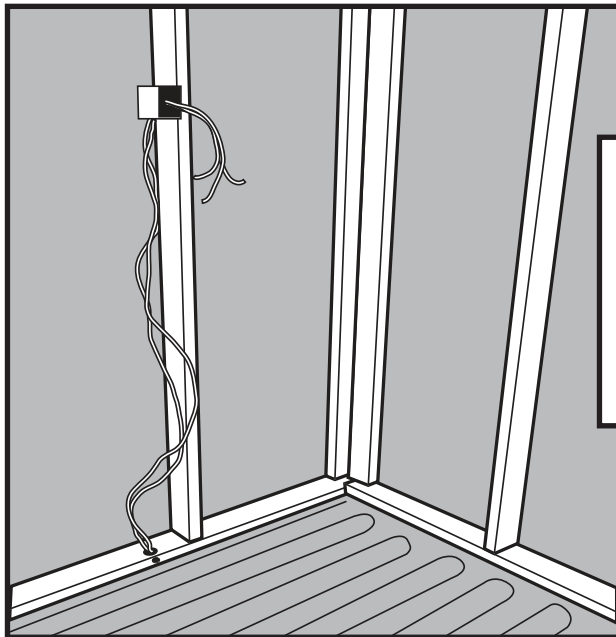
Subfloor Preparation

Before beginning installation ensure the subfloor is clean and free of loose material, any protrusions such as nails or screw heads sticking above the floor level must be removed and ridges levelled smooth. Review and follow the thinset manufacturer's recommended floor preparation requirements.



Dry Fit

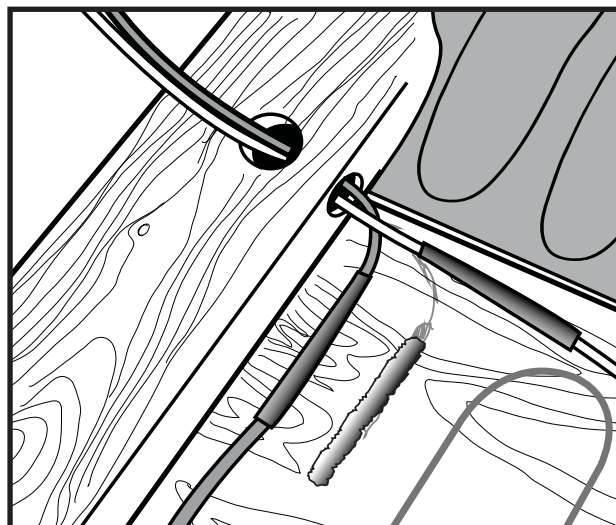
Completely roll out the mat(s) on the floor to ensure it fits the floor space. DO NOT cut or modify the WarmlyYours mat to fit the area, if there is a problem with fit contact WarmlyYours. The cables are on the bottom of the mat and are embedded against the subfloor, the tile is set on top of the fabric. Each mat has 2 cold leads which must be run to an electrical connection box.



Ensure that you have the sensor for the thermostat; it is usually packed in the same box as the thermostat and will be needed prior to tiling or putting on the laminate or engineered wood floors.

Lay out the cold lead and run to the junction box. DO NOT run the cold lead on top of the mat, run along the edge of the mat. Use a marker to trace the cold leads and mark the splice locations on the subfloor. The cold lead and splice are slightly thicker than the mat, some removal of sub-floor material may be required where the splice will set or where the cold leads will run to eliminate any possible interference with the tile.

Drill or cut holes at the bottom wall stud plate for routing the cold lead and thermostat sensor wire to the electrical junction box. The braided cold lead may be installed with or without electrical conduit, confirm conduit requirements with your local electrical and building inspection authorities.



Verify the mat voltage is correct; 120V mats have black and white leads, 240V mats have red and black leads. Confirm the leads are long enough to reach the electrical junction box and can extend a minimum of 6" beyond the box.

Electrical Tests

Check the resistance of the mat. The resistance for 120V mats is measured between the black and white conductors; the resistance for 240V mats is measured between the red and black conductors. The resistance value measured should be +/- 10% of the resistance value noted on the rating label.

Test insulation integrity by connecting a resistance meter across the black lead and the ground braid. The value should be infinite; depending on the type of meter used, the screen may be blank or display OL.

Measure the resistance across the two conductors of the temperature sensor, the resistance value will change with temperature, as such it may read anywhere from 8,000-14,000 ohms.

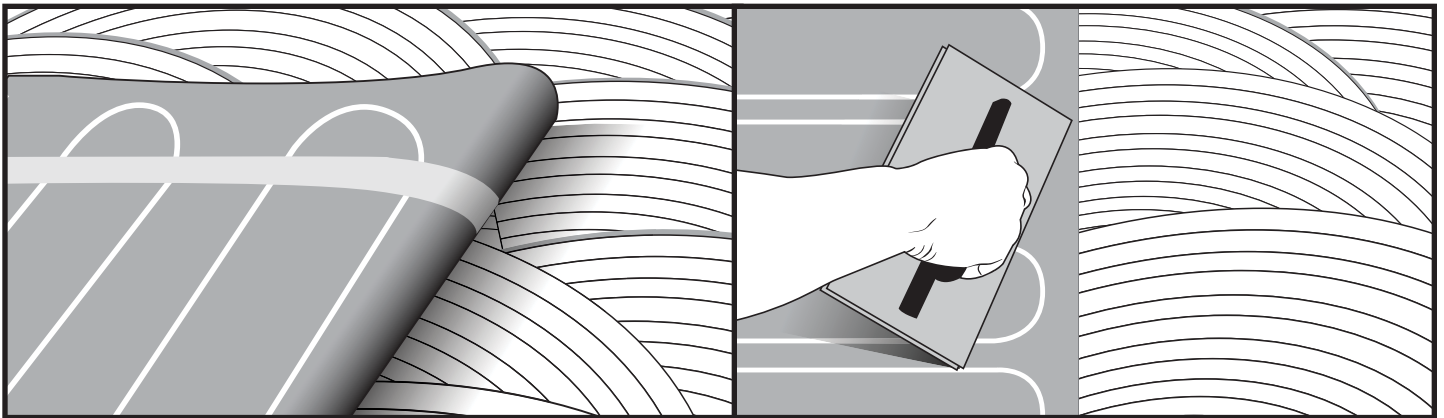
If there are problems with any of these tests, contact WarmlyYours before proceeding further. Once the above is complete, carefully roll the mat back up and have ready for the next step

Installing the Mat

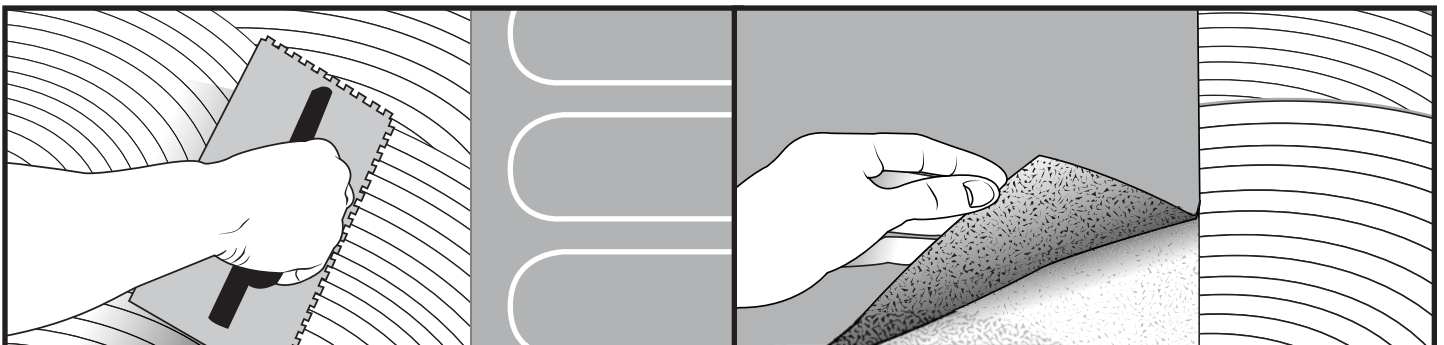
IMPORTANT

Take care not to damage the mat during installation, avoid placing heavy equipment or pails of mortar on the mat.

Using square notch trowel, 1/4" x 1/4" or larger (e.g. 3/8" x 3/8") apply a layer of thinset to the subfloor area which will be covered by the WarmlyYours mat. If the subfloor area is particularly large, it may be necessary to apply the thinset in sections. Carefully roll the mat onto the thinset layer.



The entire mat must be in contact (embedded) with the thinset layer. To ensure complete contact use a rubber grout float to press the mat into the thinset. To check the bond between the mat and thinset peel up an edge of the mat, the mat should look at least 90% covered with thinset material. Check that the splices and cold leads are in the proper positions.



Level any adjacent thinset areas not covered by the mat with a trowel. To avoid subsequent tiling problems, the adjacent areas must be level with the top of the mat surface.

If there is more than one mat being installed, ensure the edges of the mats are butted up against each other, this ensures even heating across the floor. Run the cold leads into the electrical junction box and protect at the sill plate with a guard plate. Conduct electrical tests as previously described. If there are any problems contact WarmlyYours before proceeding further. Your installation may require inspection at this point; consult with your local building and electrical inspection authorities.

Installing the Floor Covering

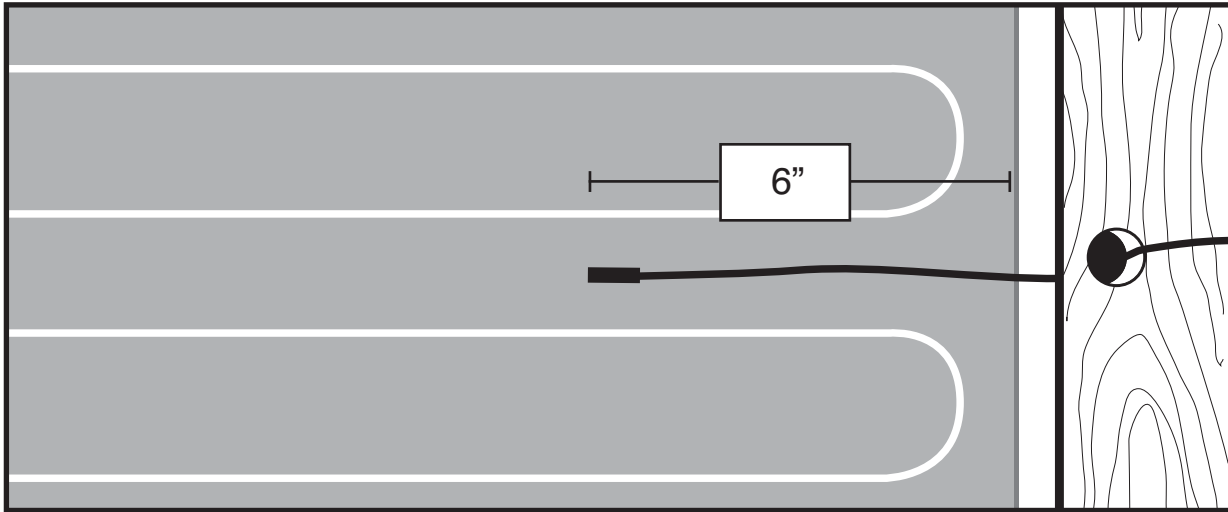
1) TILE

Before starting, read the tile flooring manufacturer's installation instruction, review any specific instructions they may have with regard to the use of their product with electric radiant heating.

After the mat is secured in the first layer of mortar apply the tile on top of the mat in the normal manner. The thickness of the thinset layer must be in accordance with the tile and thinset manufacturer's recommendations.

IMPORTANT

If a thermostat employing a floor sensing bulb is to be used, the floor sensor must be installed prior to setting the tile in place. Secure the sensor probe on top of the mat with tape or hot glue. The sensor must be positioned in the middle of two heating cable runs. The sensor should be 6" from the edge of the mat. Run the sensor wire back into the junction box. Don't place the sensor where it will be in direct sunlight. Do not place the sensor wire in the same conduit as the cold lead.



Clean grout lines carefully, scrapers can penetrate and cut into the heating mat below possibly resulting in death or injury from electrical shock or fire, mat failure, improper operation or floor damage.

Do not drill into floors with WarmlyYours mats; drills can cut into the heating mat below, possibly resulting in death or injury from electrical shock or fire, mat failure, improper operation or floor damage.

Conduct electrical tests as previously described, if there are any problems contact WarmlyYours before proceeding further.

Thinset and grout materials have cure times, review the recommended cure time from each manufacturer and do not energize the mat until the materials have fully cured. This cure time may be as long as 28 days.

2) Waterproofing Membrane

Use WarmlyYours mats in conjunction with membranes that, as a minimum, meet American National Standard for Load Bearing, Bonded, Waterproof Membranes for Thin-Set Ceramic Tile and Dimension Stone Installations (ANSI A118.10) and are suitable for the intended application.

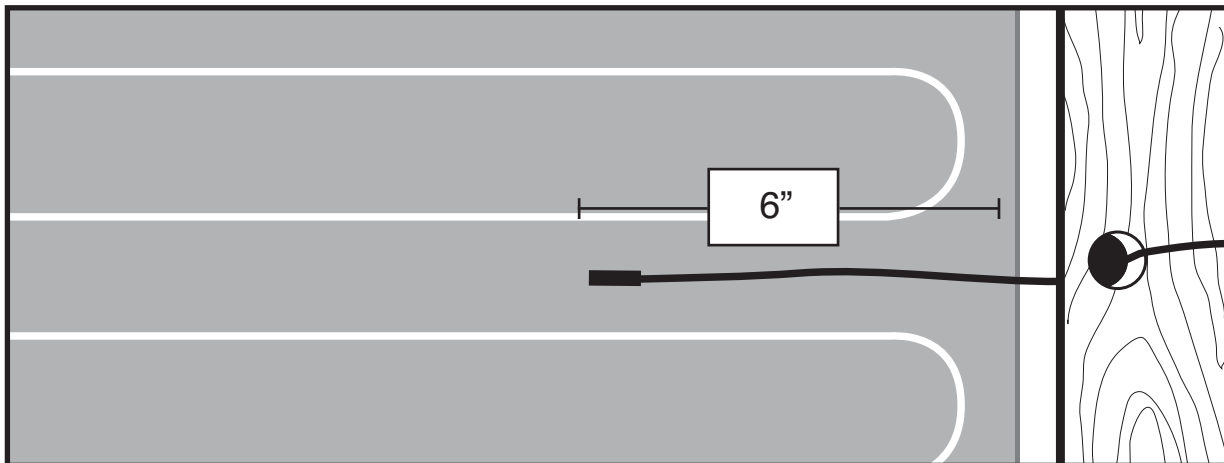
Before starting, read the waterproofing membrane manufacturer's installation instructions and the tile flooring manufacturer's installation instructions. Review any specific instructions either may have with regard to the use of their products with electric radiant heating.

The MAT, consisting of HEATING WIRE, SPLICE CONNECTIONS and COLD LEADS, as well as any THERMOSTAT SENSOR, must be FULLY COVERED by a waterproofing membrane when in wet locations.

After the mat is secured in the first layer of mortar, apply a second layer of mortar (minimum 1/4" x 3/16" V-notched trowel or a 1/8" x 1/8" square-notched trowel) to secure the waterproofing membrane. The mat, and any extending cold leads must be fully embedded in this covering layer of mortar.

IMPORTANT

The mats must be installed on a GFCI (personnel protection, 5 milliamp trip level) protected circuit. If a thermostat employing a floor sensing bulb is to be used, the floor sensor must be installed prior to installing the waterproofing membrane. Secure the sensor probe on top of the mat with tape or hot glue. The sensor must be positioned in the middle of two heating cable runs. The sensor should be 6" from the edge of the mat and must be covered by the waterproofing membrane. Run the sensor wire back into the junction box. If using conduit, do not run the sensor wire in the same conduit as the cold lead.



After the mat is secured beneath the waterproofing membrane, install tile on top as per the manufacturer's recommended method.

Clean grout lines carefully, scrapers can penetrate and cut into the heating mat below possibly resulting in death or injury from electrical shock or fire, mat failure, improper operation or floor damage.

Do not drill into floors with WarmlyYours mats; drills can cut into the heating mat below possibly resulting in death or injury from electrical shock or fire, mat failure, improper operation or floor damage.

Conduct electrical tests as previously described, if there are any problems contact WarmlyYours before proceeding further.

Thinset and grout materials have cure times, review the recommended cure time from each manufacturer and do not energize the mat until the materials have fully cured. This cure time may be as long as 28 days.

3) Floating Laminate or Engineered Wood Floors

Before starting, read the laminate or engineered flooring manufacturer's installation instructions, review any specific instructions they may have with regard to the use of their product with electric radiant heating.

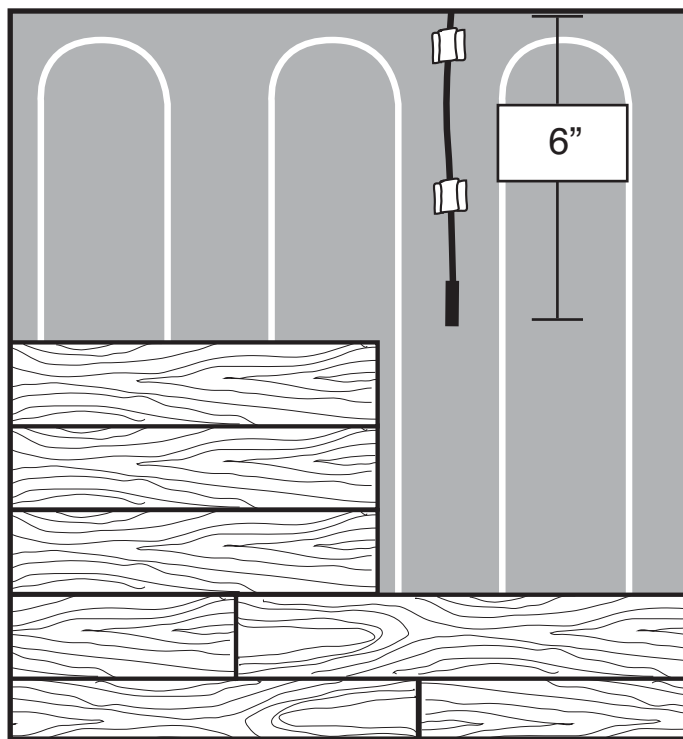
After the mat is secured in the first layer of mortar, cover with at least ¼" of thinset or self leveling compound. Ensure the thinset or self leveling compound is smooth and level as an uneven finish may result in a poor floor fit. Allow the compound to cure as per the manufacturer's instructions.

Install a vapor barrier (if necessary) and any underlayment as per manufacturer's instructions.

IMPORTANT

It is recommended that a thermostat employing a floor sensing bulb and set to limit the maximum floor temperature the laminate or engineered wood floor manufacturer's recommendations.

Secure the sensor bulb on top of the under pad with tape. The sensor must be positioned over the heated area 6" from the edge of the mat. Run the sensor wire back into the junction box. Don't place the sensor where it will be in direct sunlight. If using conduit, do not run the sensor wire in the same conduit as the cold lead.



Thinset and self-leveling materials have cure times, review the recommended cure time from each manufacturer and do not energize the mat until the materials have fully cured. This cure time may be as long as 28 days.

Install the laminate or engineered wood flooring as per the manufacturer's instruction. Allow the flooring time to acclimatize to the room's temperature and humidity levels before using the floor heating (1-3 days).

Do not drill into floors with WarmlyYours mats; drills can cut into the heating mat below possibly resulting in death or injury from electrical shock or fire, mat failure, improper operation or floor damage.

Conduct electrical tests as previously described, if there are any problems contact WarmlyYours before proceeding further.

4) Glue Down Laminate or Engineered Wood Floors

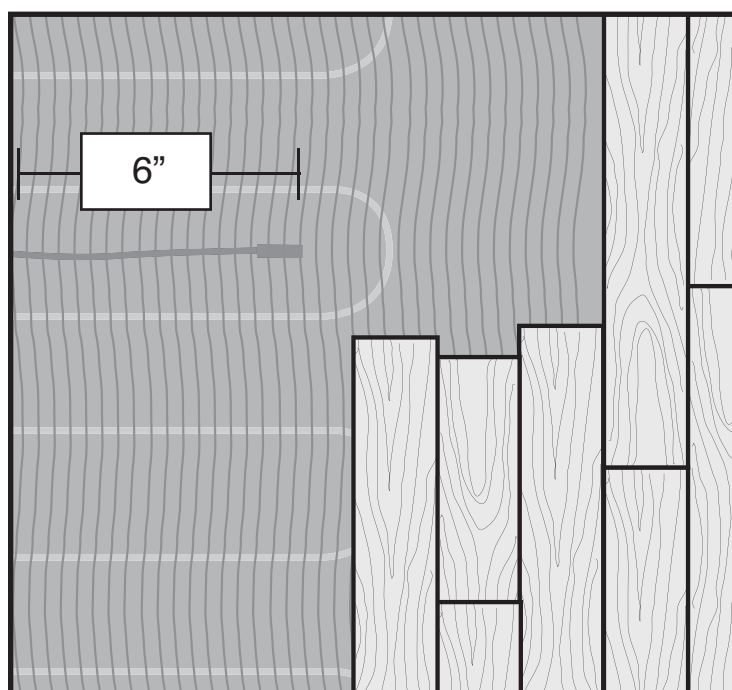
Before starting, read the laminate or engineered flooring manufacturer's installation instructions, and the adhesive manufacturer's installation instructions. Review any specific instructions either may have with regard to the use of their product with electric radiant heating.

After the mat is secured in the first layer of mortar cover with at least ¼" of thinset or self leveling compound. Ensure the thinset or self leveling compound is smooth and level as an uneven finish may result in a poor floor fit. Allow the compound to cure as per the manufacturer's instructions.

IMPORTANT

It is recommended that a thermostat employing a floor sensing bulb and set to limit the maximum floor temperature to the laminate or engineered wood floor manufacturer's recommendations.

Secure the sensor bulb on top of mortar layer with tape or hot glue. The sensor must be positioned over the heated area 6" from the edge of the mat. Run the sensor wire back into the junction box. Don't place the sensor where it will be in direct sunlight. If using conduit, do not run the sensor wire in the same conduit as the cold lead.



Thinset and self-leveling materials have cure times, review the recommended cure time from each manufacturer and do not energize the mat until the materials have fully cured. This cure time may be as long as 28 days.

Install the adhesive and laminate or engineered wood flooring as per the manufacturer's instruction. It may be necessary to weigh down the floor in the spot over the sensor to prevent lifting or poor adhesion. Allow the flooring time to acclimatize to the room's temperature and humidity levels before using the floor heating (1-3 days).

Do not drill into floors with WarmlyYours mats; drills can cut into the heating mat below possibly resulting in death or injury from electrical shock or fire, mat failure, improper operation or floor damage.

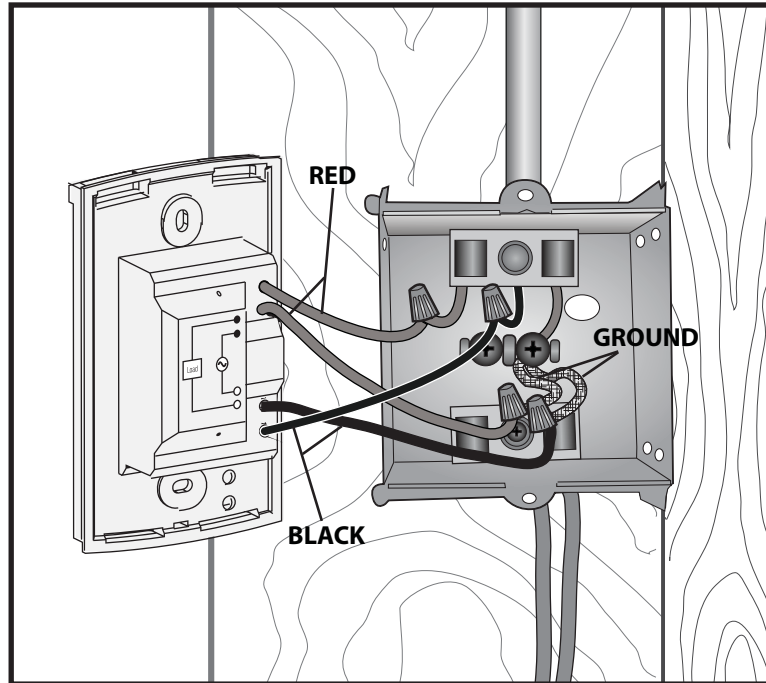
Conduct electrical tests as previously described, if there are any problems contact WarmlyYours before proceeding further.

Thermostat Connection

Consult the thermostat manufacturer's instructions for proper wiring detail.

IMPORTANT

WarmlyYours requires all electrical connections be made by qualified personnel and in accordance with the Local Electrical Codes or National Electrical Code (NEC) and all applicable local ordinances. Each cold lead is covered with a grounding braid. Ensure that the cold lead braids are directly connected to electrical ground – **DO NOT CUT THE GROUND BRAIDS**. If the ground braids are not connected to electrical ground there will be a risk of electrical short circuit, overheating or electrical shock.



We recommend installing the thermostat into a 4x4, 2 gang, metal box with a single gang mud ring. A circuit protected by a ground fault protection device must be used to power mats connected through a relay.

Only connect the mat to the rated voltage. **DO NOT** use higher voltages as the increased current will cause the mat to overheat possibly resulting in death or injury from electrical shock or fire, mat failure, improper operation or floor damage.

Thinset and grout materials have cure times, review the recommended cure time from each manufacturer and do not energize the mat until the materials have fully cured. This cure time may be as long as 28 days.

OPERATIONAL NOTES

The wire spacing on each WarmlyYours mat is custom designed, power output will vary from 12-14.5 W/ft². Each floor is unique and will heat at a different rate, as such, it may take 1-3 hours to reach the optimum temperature, possibly longer under certain conditions.

WarmlyYours recommends using a thermostat to regulate floor temperature. WarmlyYours offers a programmable thermostat which allows the mats to be automatically shut off at night or when you are away from home.

If the overall floor surface feels unusually hot when the system is energized, or if the circuit breaker trips when the system is energized, the mat may be damaged. De-energize the system immediately and contact WarmlyYours. **Never bypass a tripped ground fault device.**

Warranty Information

Please complete and return the Warranty Card
(online or you may send/fax this form)

Thank you for purchasing your new WarmlyYours TempZone™ floor warming system. To register your system, go online to www.WarmlyYours.com/warranty, or simply complete, detach and mail the Warranty Card within 30 days of date of purchase to: WarmlyYours, 2 Corporate Dr., Suite 100, Long Grove, IL 60047. For your convenience, you may also fax this card to (800) 408-1100.

1. HOMEOWNER INFORMATION		
Company Name		Phone
Address	Email	
City	State	Postal/Zip
Fax		
2. FLOOR INSTALLER INFORMATION		
		Check here if homeowner installed <input type="checkbox"/>
Company Name		Phone
Address	Email	
City	State	Postal/Zip
Fax		
3. ELECTRICIAN INFORMATION		
Company Name		Phone
Address	Email	
City	State	Postal/Zip
Fax		
4. HEATING SYSTEM INFORMATION		
Install Date		
Installed Under: <input type="checkbox"/> Tile <input type="checkbox"/> Stone		
<input type="checkbox"/> Laminated Wood <input type="checkbox"/> Other		
(Please specify other) _____		
Sub Floor Material		
Set In		
Total Rolls Installed		
	Roll Size	Final Ohm Reading
Roll 1		
Roll 2		
Roll 3		
Roll 4		
Roll 5		
Roll 6		
Roll 7		

WarmlyYours, Inc. warrants the WarmlyYours TempZone™ electric floor warming system rolls ("the Product") to be free from defects in materials and workmanship for 25 years from the date of manufacture, provided that the Product is installed in accordance with the WarmlyYours product installation guide, any special written or oral design or installation guidelines provided by WarmlyYours for the specific project that the Product is intended, the provisions of the National Electric Code (NEC), and all applicable local building and electrical codes. If the Product is determined to be defective in materials and workmanship, and has not been damaged as a result of misuse, misapplication or improper installation, WarmlyYours will reimburse the cost for location of the fault, repair of Product, and any labor and materials required to perform the repair. If repair of the Product is not feasible, WarmlyYours will replace the Product or refund the original cost of the Product. Controls sold under the WarmlyYours name are warranted for specific coverage periods. Please see www.WarmlyYours.com for the length of warranty coverage for each control. Should the control be defective or malfunction, return the control to WarmlyYours and it will be repaired or replaced (at WarmlyYours option). The warranty does not cover removal or reinstallation costs. See entire warranty in packaging.

WarmlyYours Inc. assumes no responsibility under this warranty for any damage to the Product prior to or during installation by anyone, including, but not limited to trades people or visitors to the job site, or damage caused as a result of post installation work. Call our toll free number, (800) 875-5285, if you have any questions about installation. The Limited Warranty is null and void if the Product owner or his representative attempts to repair the Product without receiving authorization. Upon notification of an actual or possible problem, WarmlyYours will issue an Authorization to Proceed under the terms of the Limited Warranty.

Warranty Subject to the Following Conditions: 1. The warranty of the warming system must be registered by completing and returning the attached 'System Warranty Registration' card to WarmlyYours, Inc. within thirty days of date of purchase. Please keep your invoice, as proof of date of purchase will be required in the event of a claim. 2. The warming roll must be installed flat under tile, stone, resilient flooring or laminate wood in a latex modified thin-set or a portland-based cement. 3. The warming system must be electrically grounded and protected by a GFI (Ground Fault Interrupter). 4. The installation must comply with all national and local electrical and building codes, as well as any other applicable statutory requirements. 5. The manufacturer hereby reserves the right to inspect the installation site at any reasonable time. 6. The warranty is not automatically transferred with change of ownership, but the manufacturer may, on application, transfer the warranty for the period remaining. This transfer is solely at the discretion of the manufacturer. 7. The warming system should be used strictly in accordance with the following: 7.1 Hard wire the warming system rolls to a dedicated circuit. The voltage of the circuit should match the voltage of the warming system, and the size of the circuit should be such that the warming system does not occupy more than 80% of the circuit capacity. 7.2 Should you feel no warmth on the floor within 60 minutes, verify that there is power to the control or thermostat. Contact WarmlyYours after verifying that there is power

through the load wires. Under no circumstances should you or anyone else tamper with or attempt to repair the warming system - this will render the warranty null and void. 7.3 Switch the warming system on and off as you would any conventional electric heater, although timers or thermostats may be used if preferred. 7.4 Use reasonable care in the operation of the warming system. Do not drop heavy articles on the flooring or pierce the flooring with sharp objects. 7.5 All restrictions and warnings detailed in the installation guide must be strictly followed.

WARMLYYOURS, INC. DISCLAIMS ANY WARRANTY NOT PROVIDED HEREIN, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. WARMLYYOURS FURTHER DISCLAIMS ANY RESPONSIBILITY FOR SPECIAL, INDIRECT, SECONDARY, INCIDENTAL, OR CONSEQUENTIAL DAMAGES ARISING FROM OWNERSHIP OR USE OF THIS PRODUCT, INCLUDING INCONVENIENCE OR LOSS OF USE. THERE ARE NO WARRANTIES, WHICH EXTEND BEYOND THE FACE OF THIS DOCUMENT. NO AGENT OR REPRESENTATIVE OF WARMLYYOURS HAS ANY AUTHORITY TO EXTEND OR MODIFY THIS WARRANTY UNLESS A CORPORATE OFFICER MAKES SUCH EXTENSION OR MODIFICATION IN WRITING.

RETURN POLICY

Product will be accepted for return if it is in "resalable" condition. The product must be in exactly the same condition as when we shipped it to you.