

# Warmup®

The world's best-selling electric floor heating brand™

## Installation Manual:

# Foil Floor Heating System



**TECHNICAL HELPLINES**

**US: 1-888-927-6333**

**Canada: 1-888-592-7687**

**IMPORTANT**

Read this manual before attempting to install your heater. Incorrect installation could damage the heater and will invalidate your warranty.

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Before installing your new Warmup® foil heating mats, be sure you have the following additional parts:

**Control thermostat** – allows you to control the temperature of the room.

## Digital Ohmmeter

**Hard insulation materials** – used as heat insulator under the foil heating mats in installations with concrete subfloors to provide more efficient heating. The material comes in boards, usually made from foamed Polyurethane or Polystyrene and should have Compressive strength of more than 28PSI (2Kg/cm<sup>2</sup>). An example of this is the Warmup® Insulation Board.

**Soft insulation material** – any soft insulation suitable for wood or laminate. which has a fire rating of B2 or greater.

If these instructions are followed you should have no problems.

However, if you do require help at any stage, please call our 24hr helpline:

**Warmup Technical Helpline: 888 927 6333 (US) / 888 592 7687 (CA)**

You can also find a copy of this manual, wiring instructions, a list of frequently asked questions and more helpful information on our websites:

**US: [www.warmup.com](http://www.warmup.com) / Canada: [www.warmup.ca](http://www.warmup.ca)**

# Before You Begin

## Important Information

Thank you for purchasing the Warmup® Foil Heaters.

This manual contains IMPORTANT information regarding the safe use and installation of your heaters. Please read through the entire manual carefully before you install or use the product.

## Getting Started

Warmup® ULS FOIL Heaters are intended to be installed between the pad and the carpet, or between the pad and the laminate/floating floor. Refer to important notes in this manual in regard to compatible padding.

Warmup ULS FOIL Heaters are for indoor applications only. Although they are completely watertight and grounded, all installation and wiring instructions MUST be followed. The FOIL Heaters are NOT suitable for under tile, stone, or nailed hardwoods.

We want your installation to be a success, so please call us with any questions at (888) 927-6333 when in doubt.

## How to select the correct heater or heater combination

Measure the square feet of your room, length x width = ft<sup>2</sup>

Select the heating mat or combination of mats closest in size to the area you want to heat.

- Heaters cannot overlap
- Heaters have to connect in parallel to the thermostat (each lead goes separately to the same thermostat)

A single thermostat can control up to 300 sq ft of Warmup® FOIL Heaters.

## Sizing Guide

Type - 120V	Wattage	Amps	Heating Mat Sizes (ft)		Ohms
			Length	Width	
ULS-120-10-120	120	1.0	5 ft	2 ft	120.0
ULS-120-16-207	207	1.7	8 ft	2 ft	70.6
ULS-120-36-456	456	3.8	6 ft	6 ft	31.6
ULS-120-50-584	584	4.9	10 ft	5 ft	24.5
Type - 240V					
ULS-240-10-120	120	0.5	5 ft	2 ft	480.0
ULS-240-16-207	207	0.9	8 ft	2 ft	266.7
ULS-240-36-456	456	1.9	6 ft	6 ft	126.3
ULS-240-50-584	584	2.5	10 ft	5 ft	96.0

**QUICK FACTS:** Your Warmup® FOIL Heaters are made of a resistance heating wire laminated into several layers of aluminum mesh. The wire is the heating element and the FOIL mesh allows for an even distribution of heat. The FOIL also serves as the ground for the installation, making the Warmup FOIL Heaters watertight and completely safe.

# Controlling Your System



Warmup highly recommends the use of our PRO-STAT floor sensing controllers in order to accurately monitor the floor temperature and your comfort level. The PRO-STAT series thermostat operates on floor and/or ambient sensors provided with the purchase of the controller.

Several wood and laminate manufacturers further require that you maintain your floors below a certain temperature. The use of the PRO-STAT controllers will allow you to easily comply with those guidelines and safely enjoy your floors for a long time.

Check with Warmup or your flooring manufacturers with any questions on maximum temperatures.

## Electrical Connections

While the installation of the FOIL Heaters can be performed by anyone familiar with the installation instructions, the connection of the heaters to the power source must be performed by a licensed electrician. All wiring must be completed in full compliance with the National Electrical Code and when applicable, Local Code. For installations in Canada, refer to sections 12 and 62 of the CEC.

## Limitations

**PADDING** - Warmup® FOIL Heaters must be installed on top of suitable underlayment and cannot lay directly on the concrete slab. Any type of carpet or laminate padding will be suitable as long as they carry a density of minimum 6 lbs per cubic foot. Most common rebounded polyurethane and prime polyurethane pads are 8 lbs and above.

For laminates, it is acceptable to install a vapor barrier under the underlayment. Most 1/4" and 3/8" cork or polystyrene underlayment are suitable for the Warmup® FOIL heaters.

**INDOOR** - All FOIL heaters must be installed indoors and should not be installed in "hazardous locations" or "wet areas" as defined in the National Electrical Code (US) or in the Canadian Electrical Code (CA).

The possibility exists for carpeting to see color alterations over time. The major factors affecting discoloration of the carpet are:

- The nature of the fibers
- the type of coloring process and its application to fibers, yarns, or fabric.
- the colour range from pastels to dark colors
- the temperature level if the heat is trapped under a high level of insulation such as a futon mattress, bean bag or dog bed.
- the length of time the carpet is exposed to higher temperatures

In our experience, the Warmup® FOIL Heaters with an output of 11 - 12 watts/sq ft will not cause carpet discoloration when installed under the conditions of this Installation Manual. Pay particular attention to the furniture guidelines below. However, if excessive insulation is placed for long periods of time over a heated carpet area, some carpets of lighter colors and lower quality will be subject to discoloration.

## Limitations (cont'd)

### R-Values for Carpet Types

Fiber Type	Yarn Type	Style	Pile Height (in)	Pile Weight (oz/sq yd)	R-Value
Nylon	Continuous Filament Yarn	Level Loop	0.125	10	0.68
Nylon	Continuous Filament Yarn	Level Loop	0.109	20	0.65
Nylon	Continuous Filament Yarn	Level Loop	0.192	28	0.67
Nylon	Continuous Filament Yarn	Level Loop	0.125	24	0.55
Nylon	Spun Yarn	Plush	0.25	24	1.12
Nylon	Continuous Filament Yarn	High/Low Loop		24	1.33
Nylon	Continuous Filament Yarn	Shag	1.07	24	1.51
Acrylic	Spun Yarn	Level Loop	0.21	42	0.78
Polyester	Spun Yarn	Plush	0.28	42	0.95
Polyester	Spun Yarn	High/Low Loop		42	1.66
Nylon	Spun Yarn	Saxony	0.552	40	1.96
Nylon	Continuous Filament Yarn	Shag	1.25	43	2.46
Wood	Spun Yarn	Plush	0.487	43	2.19
Acrylic	Spun Yarn	Plush	0.688	53	1.9

#### FURNITURE -

Warmup FOIL Heaters should not be installed under flat-bottom furniture or any permanent fixtures, such as cabinets. Please see below for specific restrictions in regards to furniture use and placement, remembering you have heating mats operating under your carpet and laminate floors.

- NEVER puncture the carpet with nails, staples or other sharp objects
- NEVER use nails or screws in the floor to secure furniture above Warmup FOIL heaters
- Area rugs can be placed over the flooring surface, but the total thickness over the heater (including your flooring) should never exceed 1 ½"
- ALWAYS ensure that chairs, tables and furniture legs are over 1" square or make use of PVC "carpet protectors" or protective sliding pads
- NEVER leave items larger than 6" x 6" permanently over the carpet as they will trap the heat (bean bag, dog bed, etc)
- ALWAYS ensure a minimum of 2" clearance for low lying furniture on legs.

In general, beware of large items such as pianos, stands for hi-fi equipment, bookcases and the like. The maximum allowable PSI rating on top of the FOIL heaters is 100 lbs per square inch.

You can obtain the PSI of your furniture by dividing the overall weight of the item by the total contact surface with the floor (if your table has 2" by 2" legs, that is 4" x 2" x 2" = 16" square).

## Important!

Please read carefully before installing your Warmup® FOIL heating mats.

### **DON'T:**

- DON'T** use Warmup® Underfloor Heating with glued locking systems or laminates that have an underpad or cushion material pre-attached to its underside.
- DON'T** install Warmup on stairs.
- DON'T** install Warmup over floors that have traces of moisture, are uneven, have carpets or parquet floor.
- DON'T** leave insulating materials such as bean bags; linen or towels on the floor surface.
- DON'T** overlap heating mats.
- DON'T** fold or wrinkle Warmup® foil heating mats.
- DON'T** place heavy/sharp tools (or any other potentially damaging object) on top of the heating mats.
- DON'T** walk unnecessarily on the foil heating mats.
- DON'T** install mats when the room temperature is below 41°F (-5°C).
- DON'T** install foil heating mats anywhere except inside buildings.
- DON'T** install foil mats under walls or partitions, or in areas under heavy cabinets, closets, or fixtures (toilets, sinks, tubs, etc.).
- DON'T** install foil mats within approximately 1" of any heat conductive building part, such as cold water pipes.
- DON'T** install foil heating mats under wooden floor, if the floor is thicker than 3/4" (20mm).
- DON'T** put acoustic material between the foil heating mats and the wooden floor, installing wooden type floor.
- DON'T** use this heater under any floor covering other than wood, laminate or carpets.
- DON'T** place items on the floor surface which will stop the air flow or not allow heat to rise into the room.

## WARNING

Once the foil heating mat has been installed avoid all traffic over the mat until the floor has been laid.

Do not install the foil heating mat until the floor is ready to be laid. If the floor is not being laid immediately, all heating mats must be protected with two layers of cardboard or hardboard to prevent damage. Immediately prior to the floor being laid, check it has not been damaged in transit.

If you are in any doubt call the **Warmup helpline for US & Canada on: 888 927 6333.**

# Important!

## **ALWAYS:**

- ALWAYS** Check with the manufacturer of your flooring, that their products are compatible with radiant electric floor heating systems.
- ALWAYS** install the underlamine heating mats on top of a polyethylene foam or reconstituted rubber which is at least 1/8 inch (2mm) thick.
- ALWAYS** operate the heating mat with a floor sensor thermostat to ensure the floor does not exceed the maximum temperature of 81°F (27°C), as recommended by leading laminate floor manufacturers.
- ALWAYS** ensure all ground leads are connected to the earth ring.
- ALWAYS** ensure that the system is operated with a Warmup® thermostat with built-in GFCI, or that a GFCI breaker supplies the power.
- ALWAYS** connect all cold wire leads from the Warmup® Underlamine foil heating mats in parallel inside an electrical junction box or boxes.
- ALWAYS** provide each room with a Warmup® FOIL system with its own thermostat. Each Warmup® thermostat has a maximum capacity of 15 Amps. If the amount of Amps in the room is greater than 15 Amps, divide the amperage over several thermostats.
- ALWAYS** consider using insulation under the mats to reduce running costs and warm-up time. Call your Warmup representative for more information on insulation options.
- ALWAYS** ensure that no sharp edges (e.g. metal-edged laminate locking systems) come in contact with the foil heating.
- ALWAYS** fit the floor sensor and ensure that the thermostat is set for the correct heater type and floor finish.

Note: Timber products often have a limitation on the maximum temperature allowed for floor heating- This is usually around 81°F (27°C). Check with your flooring supplier what the limitations are for your preferred floor finish.

All work must conform to State and Local Wiring Regulations.

# ABOUT THE PRODUCT & ELECTRICAL CONSIDERATIONS

TECHNICAL SPECIFICATION	
Power Output	12W/sq ft, 120V/240V.
Thickness	Less than 3/16 inch (4mm)
Power Cord	Flat three core white Blue - neutral Brown - live Green/Yellow - ground
Cold Lead Length	10' (3m)

Warmup® FOIL heater mats are made of a metallic heating element, wrapped around a high strength polyester core, covered by a high-temperature PVC coating.

Warmup® FOIL heating mats must be electrically grounded and protected by a dedicated circuit.

The installation must comply with applicable statutory requirements where it will be installed.

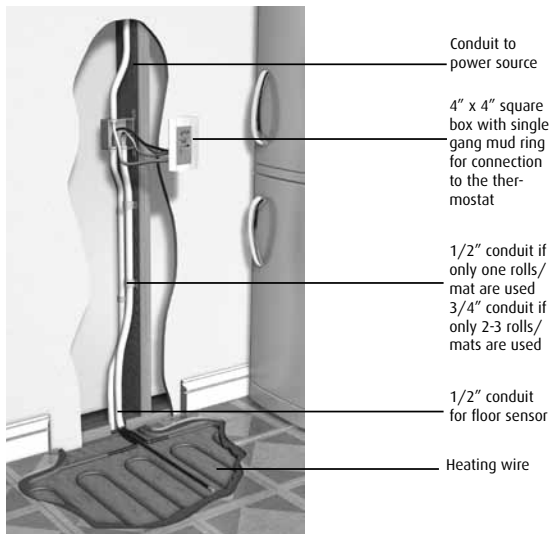
Only a qualified electrician should connect the thermostat for the foil heating mat.

The power cords of the foil heating mats are matched to the rated power of the heater. If more than one heater is connected to the thermostat, make sure that the power cord from the thermostat to the plug / power supply is rated correctly for the total electrical current of the combined heaters. Overloaded cords will overheat, melt and cause a fire.

## ELECTRICAL ROUGH-IN

All Warmup® FOIL Heaters connect to a Warmup programmable thermostat floor/ambient programmable thermostat. When using multiple heaters, you can connect them in parallel to the same thermostat. Check with your installer or call Warmup for circuit sizes and maximum loads.

If you are not using a Warmup thermostat with a built-in GFCI, ensure that the branch circuits that supply your panels are GFCI-protected, or, if possible, a dedicated GFCI is incorporated in each circuit supplying your panels. This requirement is critical to the safe operation of your Warmup FOIL heaters. Warmup® FOIL heaters MUST be connected to the electrical system through a Ground Fault Circuit Interrupter (a "GFCI"). The Warmup PRO-STAT incorporates a GFCI.



# TESTING

Each and every Warmup FOIL Heater is subjected to careful testing before it is shipped from the factory and is packed safely in a tube to protect it in transit. However, damage does sometimes occur in storage or transit, and sometimes during installation. We strongly recommend you test your panels using the digital ohmmeter:

- After unpacking them but before you install them, and
- After you have installed them but before you install the floor covering (i.e. while the panels are still exposed), and
- After installation of the carpet or wood laminate but before the thermostats are connected

Complete a simple visual inspection of the heaters to make sure there is no visible damage. A simple electrical inspection can be done with a digital ohmmeter to ensure the ohms resistance is what it should be. Ohm resistance can vary significantly depending on the ambient temperature and an allowance of +/- 15% from the norm is acceptable.

## TROUBLE SHOOTING - Checking Ohm resistance and continuity

### **CAUTION: TURN OFF THE POWER SUPPLY BEFORE TROUBLESHOOTING**

If the system fails to heat, check that the GFCI (Ground Fault Circuit Interrupter) has not been tripped: you will find that either with a tripped breaker, or simply with the red "test" light on the thermostat. Check for continuity and resistance level with an ohmmeter and record the readings on the back of this manual. Compare the reading with the resistance recorded on the UL label. Make sure the breaker or fuse is delivering power to the system. If the system fails to heat after these checks, call your installer or Warmup. You will need to locate the model information for the heater, either on the product labels you kept, or based on an invoice. While incorrect grounding is the main cause for breaker tripping, we should review your installation in more detail.

### **CHECKING FOR BREAKS**

The ohm resistance should be measured between the two conductors without touching the yellow-green wire, which is the ground connection. Set your meter at the lowest scale possible, usually 200. The ohm resistance measurements should come within about 15% of the original measurement indicated by the factory on the UL label (see page 1). Checking for ohm resistance between the two conductor wires ensures there is no break in the cold lead conductor and the heat resistance wire. It does not assure you that there is no electrical short in the circuit. If the measurements between conductors is not satisfactory, call Warmup.

### **CHECKING FOR ELECTRICAL SHORT**

In the construction of the Warmup® FOIL heater, the ground is the foil sheet. In some rare instances, a sharp object can puncture the foil over a heating element and pierce through the insulation of the heater wire, thereby allowing the electricity to flow to the ground through the foil sheet. If this situation occurred it would immediately trip the GFCI (Ground Fault Circuit Interrupter).

To check if you have a short, measure the ohms resistance between:

1. One of the conductors and the ground wire,
2. The other conductor and the same ground wire.

There should be no continuity between these wires and the ohms reading should be infinity (not zero). If your meter shows a particular number of ohms resistance between these wires, your heating panel has an electrical short. Take note of the ohms resistance number and call Warmup at (888)927-6333. Note that depending on your meter model, you may read "kilo-Ohms" probably due to your fingers touching the probes (it's your body's conductivity). Some meters also indicate "0 or zero" instead of infinity. When in doubt, give us a call.

## Step 1: Planning Your Installation - Laminate & Floating Wood Floors

Before installing, draw an installation plan showing the placement of the mats, floor sensor, and junction box or boxes.

The Warmup® FOIL heating mats should cover at least 80-90% of the floor area of your room to be used as a primary heat source\*. Warmup's foil heating mats are available in several convenient sizes. Choose the combination of heating mats that best enables you to cover the recommended 80-90% of your room. Plan to use the larger foil heating mats as much as possible and to use smaller mats only as gap fillers.

**Note: The mats are supplied with 10' (3 metres) of electrical cold leads. If you need longer connection leads, use the appropriate gauge wire (check with your electrician) to reach the thermostat, or ask your electrician about junction boxes.**

\*Depending on insulation, air-flow & overall heat-loss within the room, additional heating may be required.

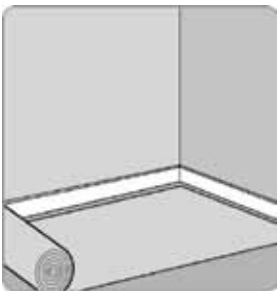
## Step 2: Check and prepare the subfloor



The heating mats may be installed over any subfloor that is approved for carpet or laminate applications, including plywood, backer board and concrete slabs.

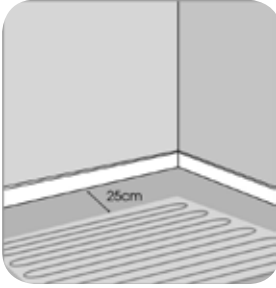
The heating mats CANNOT be installed directly over those surfaces, so a padding or underlayment as provided with your carpet or floating wood floor installation must be laid down first.

Carefully inspect the subfloor and make sure it is clean, free of sharp edges, nails and any other materials that may damage the heating mat.



For Laminate and floating engineered wood floors, you can start with the installation of a vapor barrier or similar. Most carpets with polypropylene, Hessian or jute backings are compatible, but those backed with rubber or foam are unsuitable as they trap the heat.

## Step 3: Laying Out Your Heating Mats



Remove the Warmup® foil heating mat from the packaging, unroll it completely flat and place it in the required position on top of the underpad.

Keep the heating mat at least 10" (25cm) from the edges of the room.

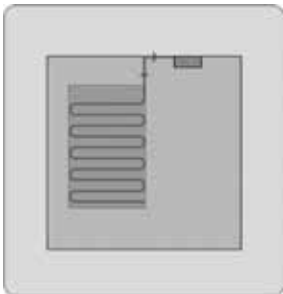
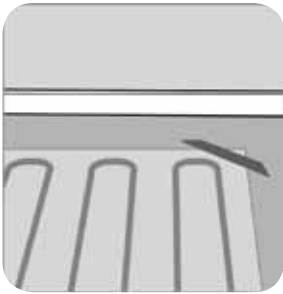
Position it in such a way that the power cord will be able to reach the point where the thermostat will be connected.

The Warmup® foil heating mats can be laid either way up.

When fitting more than one Warmup® foil heating mat in a room, the heating mats must not overlap, as overheating will result.

Smooth out the Warmup® foil heating mats and fix the corners to the underpad with masking tape or box tape, ensuring that the heater remains uncreased and completely flat.

The Warmup® foil heating mats must not be used folded and care should be taken not to fold or crease them at any time during installation.



Mark out the line that supply cord will take from the Warmup® foil heating mat to the edge of the room, wherever possible running at right angles to the wall and avoiding high-traffic areas.

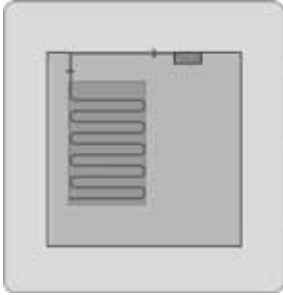
Cut a 1/2" (10mm) wide channel in the underpad and place the supply cord into this channel.

Secure in position with masking tape or box tape. You may also need to remove some of the underpad under the heating mat at the point where the cord enters the heating mat, to prevent a high spot on the surface.

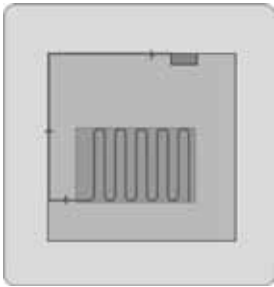
NEVER run the cord under the heating mat.

NOTE: It may be necessary to cut a channel into the floor to recess the cord to prevent high spots under the flooring.

## Step 3: Laying Out Your Heating Mats (cont'd)



Take the cord along the edge of the underpad, between the wall and the underpad to a point directly below the thermostat point.



Allow sufficient cord to reach the thermostat, cutting off any excess if necessary.

Take care when fitting the baseboard that nails do not puncture the cord. Secure the cord to the floor with masking tape or box tape to prevent it from moving during the installation of the floor.

**NOTE: Never join the power supply cables under the carpet. Do NOT make a daisy chain or connect one panel to another. A qualified electrician MUST connect the power supply cables to the thermostat**

## Step 4: Install the thermostat floor sensor



The floor sensor is used for temperature regulation of the floor surface.

Tape the sensor down with masking or box tape, positioning it in-between element wires on the heating mat. The sensor tip must not be placed directly under or onto an element wire.

This is to ensure that the average heating temperature is measured and not the temperature of the heating element.

Run the sensor cable off the heater and back to the thermostat in the same channel as the power supply cords. The sensor wire (included with the Warmup thermostat) can cross over the FOIL heater wires. The sensor probe must use a jacketed wire, this wire needs to be rated 176°F (80°C) minimum. If using conduits to route the wires to the thermostat, do not use the same conduit for the lead wires and the sensor.

**Note: All electrical connections must be performed by a fully qualified and certified electrician.**

## Step 5: Install the carpet or laminate floor



Before fitting the floor covering switch on the heating mat to check that it is working - warmth should be noticeable on the surface of the heating mat within minutes.

Switch off the heating mat and disconnect the thermostat from the supply when fitting the carpet or laminate flooring.



Take care not to damage the heating mats when fitting the carpet or laminate flooring and do not drive nails or screws into the floor or cut the floor planks on top of the heater.

Be careful not to pinch the heating mats when using blocks to hammer the laminate in place. Always keep cardboard or similar handy to place underneath as you move forward in the room. Never make cuts to the planks over the heating system.

## Step 6: Connect the thermostat and Controlling Your System



Laminate Heating:

Once the flooring has been installed, connect the thermostat ensuring that it is set to reach a maximum temperature of 81°F (27°C).

Warmup highly recommends the use of our PRO-STAT floor sensing controllers in order to accurately monitor the floor temperature and your comfort level.

**We recommend that the connection of the thermostat is completed by a qualified electrician.**

### **WARNING:**

This product must be used with a Warmup GFCI-protected controller, or supplied with a GFCI protected breaker at the panel. A 5Ma trip level GFCI is required.

# PLANNING YOUR INSTALLATION - Laminate and Carpet

The FOIL heating mats may be installed over any subfloor that is approved for carpet or laminate applications, including plywood, backer board and concrete slabs.

The FOIL heating mats CANNOT be installed directly over those surfaces, so a padding or underlayment as provided with your carpet or floating wood floor installation must be laid down first.

Carefully inspect the subfloor and make sure it is clean, free of sharp edges, nails and any other materials that may damage the FOIL heating mat.

If necessary you can start with the installation of a vapor barrier or similar. Most carpets with polypropylene, Hessian or jute backings are compatible, but those backed with rubber or foam are unsuitable as they trap the heat. (see R-Value table on page 4).

## WARMUP 5 YEAR WARRANTY

Models:

120/240Volt Foil Heaters (ULS) heaters sold by Warmup, Inc.

THE WARMUP 5 YEAR WARRANTY DOES NOT EXTEND TO THERMOSTATS, WHICH ARE COVERED BY A ONE-YEAR WARMUP WARANTEE FROM THE DATE OF ORIGINAL PURCHASE.

GOVERNING LAW. Unless otherwise governed by applicable state law, this warranty shall be interpreted and enforced in accordance with the laws of the State of Connecticut.

This 5 Year Warranty applies:

1. Only to the original homeowner(s) from the date of purchase
2. Only if the unit is registered with Warmup within thirty (30) days after purchase. Filling out the online warranty in its entirety will complete registration. In the event of a claim, proof of purchase is required, i.e.: invoice and receipt. Such invoice and receipt should state the exact model that was purchased; and
3. Only for the duration of the Lifetime of the floor covering under which it was originally installed if the purchaser of the heater remains the owner of the residence in which it is installed.
4. Only if the heater is protected by a GROUND FAULT CIRCUIT INTERRUPTER (GFCI) at all times.

### COVERAGE

- 1) The warranty period begins on the date of purchase. Registration is effective only when a letter of confirmation is sent by Warmup Inc.
- 2) Warmup's FOIL heater is guaranteed by WARMUP INC. ("Warmup") to be free from defects in material and workmanship under normal use and maintenance for thirty (30) years, provided the product is installed in accordance with the accompanying Warmup installation manual, any special written design or installation guidelines by Warmup, Inc. for a particular project, the National Electrical Code (NEC) in the USA and the Canadian Electrical Code (CEC) in Canada, and all applicable local building and electrical codes; and
- 3) Provided Warmup heaters are installed under laminates and carpet.
- 4) During the period of Warranty, Warmup will arrange for the heater to be repaired or (at its discretion) have parts replaced free of charge. The costs of repair or replacements are your only remedy under this Warranty. Such cost does not extend to any cost other than direct cost of repair or replacement by Warmup and does not extend to costs of relaying, replacing or repairing any floor covering or floor.
- 5) If Warmup, Inc. determines the repair of the product is not feasible; we will replace the product with equal or similar features and functionality at Warmup's sole discretion. (see over for "Exclusions").

Register your Warmup® Warranty online at [www.warmup.com](http://www.warmup.com) or [www.warmup.ca](http://www.warmup.ca)

# EXCLUSIONS

Warmup, Inc. shall in no event be liable for incidental or consequential damages, including but not limited to extra utility expenses or damages to property. This Warranty is null and void if

- 1) The floor covering over the heater(s) is damaged, lifted, replaced, repaired or covered with subsequent layers of flooring.
- 2) The heater fails due to damage caused during installation or flooring installation, unless damage is caused directly by an employee of Warmup. It is therefore essential to check that the heater is working (as specified in the installation manual) prior to flooring installation.
- 3) Damage as a result of floods, fires, winds, lightning, accidents, corrosive atmosphere or other conditions beyond the control of Warmup, Inc.
- 4) Use of components or accessories not compatible with Warmup heaters
- 5) Warmup products installed outside North America.
- 6) Parts not supplied or designated by Warmup, Inc.
- 7) Damage or repair required as a result of any improper use, maintenance, operation or servicing.
- 8) Failure to start due to interruption and/or inadequate electrical service
- 9) Any damage caused by frozen or broken water pipes in the event of equipment failure.
- 10) Changes in the appearance of the product that does not affect its performance.
- 11) The owner, or his/her designated representative, attempts to repair the product without receiving prior authorization from Warmup. Upon notification of a repair problem, Warmup, Inc. will issue an Authorization to Proceed under the terms of this Warranty.

If Warmup is required to inspect or repair any defects caused by any exclusions referenced above, all work will be fully chargeable at Warmup's inspection and repair rates then in effect.

WARMUP, INC. DISCLAIMS ANY WARRANTY NOT PROVIDED HEREIN, INCLUDED ANY IMPLIED WARRANTY OF THE MERCHANTABILITY OR IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. WARMUP, INC. 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 THAT EXTEND BEYOND THE FACE OF THIS DOCUMENT. NO AGENT OR REPRESENTATIVE OF WARMUP, INC. HAS ANY AUTHORITY TO EXTEND OR MODIFY THIS WARRANTY UNLESS SUCH EXTENSION OR MODIFICATION IS MADE IN WRITING BY A CORPORATE OFFICER.

DUE TO DIFFERENCES IN BUILDING AND FLOOR INSULATION, CLIMATE AND FLOOR COVERINGS, WARMUP, INC. MAKES NO REPRESENTATION THAT THE FLOOR TEMPERATURE WILL ACHIEVE ANY PARTICULAR TEMPERATURE OR TEMPERATURE RISE.

C-UL STANDARD LISTING REQUIREMENTS LIMIT THE HEAT OUTPUT OF WARMUP UNDER FLOOR HEATING, AS SUCH, USERS MAY OR MAY NOT BE SATISFIED WITH THE FLOOR WARMTH THAT IS PRODUCED. WARMUP DOES WARRANT THAT ALL HEATERS WILL PRODUCE THE RATED WATT OUTPUT LISTED ON THE HEATER NAMEPLATE, WHEN OPERATED AT THE RATED VOLTAGE.

## TERMS AND CONDITIONS

### Shipping Discrepancies:

Incoming materials should be inventoried for completeness and for possible shipping damage. Any visible damages or shortages must be noted prior to accepting the material. Any discrepancy concerning type or quantity of material shipped, must be brought to the attention of your Warmup® reseller within 15 days of the shipping date entered on the packing slip for the order.

### Miscellaneous:

The terms of this Limited Warranty are exclusive and supercede any other warranty or terms and conditions relating to the subject matter whether included in a purchase order for this product or in any other document or statement.

Complete and submit the warranty form online at  
[www.warmup.com](http://www.warmup.com) (US) or [www.warmup.ca](http://www.warmup.ca) (CA)

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### Resistance Test Results

Heater Number								
Size of Mat								
Reading 1								
Reading 2								
Reading 3								