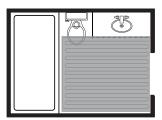
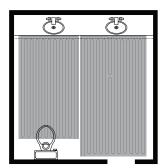
## **NUHEAT MAT**



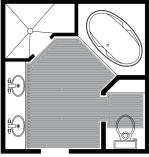
## PRE-BUILT ELECTRIC FLOOR HEATING SYSTEM



Single Standard Mat



Multiple Standard Mats



Custom Mat





## **PRODUCT OVERVIEW**

Pre-built like an electric blanket, nVent NUHEAT Mat is an electric floor heating system that brings soothing heat to the following surfaces:

- Tile
- Stone
- Laminate
- · Engineered wood
- · Luxury vinyl flooring

NUHEAT Mat is a pre-built floor heating system, meaning it does not require any on-site manipulation during installation. Thinset is applied to the subfloor, the pre-built NUHEAT Mat is pressed onto the thinset, and flooring can be installed immediately. NUHEAT Mat is compatible with all standard subfloor material and is only 1/8 in thick, making it ideal for installations where minimal floor buildup is desired. The pre-built aspect of NUHEAT Mat guarantees even heat distribution as the heating wires are evenly spaced during production.

NUHEAT Mat is available in over 70 NUHEAT Standard Mats (squares and rectangles of various dimensions) off-the-shelf. A single Standard Mat can provide adequate floor heat coverage for most standard bathroom and living areas. Installers can also combine multiple Standard Mats to heat the desired area.

When full coverage cannot be achieved with Standard Mats (example: areas with curves, angles, or obstructions), NUHEAT Custom Mats mats are available to provide optimal coverage. Once area dimensions are submitted/confirmed, Custom Mats mats are manufactured in only three days and will fit the exact shape of the area indicated in the submitted drawings. Just like Standard Mats, Custom Mats are pre-built, thereby guaranteeing even heat distribution without cold spots.

NUHEAT Mats are available in 120 V and 240 V and produce 12 W/ft<sup>2</sup> (up to 15 W/ft<sup>2</sup> when required/specified).

## KIT CONTENTS

1 NUHEAT Mat floor heating system

1 Installation instruction manual

## **120 VOLT STANDARD MATS**

	Dimensions (inches)	Ohms	Amps	Watts	Model Number		Dimensions (inches)	Ohms	Amps	Watts	Model Number
Shower Mat*	32 x 32	171	0.7	84	FG0307	8 ft series	96 x 24	75	1.6	192	F2506
3.5 ft series	40 x 27	160	0.8	90	F1006		96 x 30	60	2.0	240	F2508
	40 x 32	135	0.9	107	F1008		96 x 36	50	2.4	288	F2509
	40 x 40	108	1.1	133	F1010		96 x 42	43	2.8	336	F2510
	40 x 48	90	1.3	160	F1012		96 x 48	38	3.2	384	F2512
4 ft series	48 x 24	150	0.8	96	F1206		96 x 60	30	4.0	480	F2515
	48 x 30	120	1.0	120	F1208		96 x 72	25	4.8	576	F2518
	48 x 36	100	1.2	144	F1209		96 x 84	21	5.6	672	F2521
	48 x 48	75	1.6	192	F1212		96 x 96	19	6.4	768	F2525
5 ft series	60 x 24	120	1.0	120	F1506	9 ft series	108 x 24	67	1.8	216	F2706
	60 x 30	96	1.3	150	F1508		108 x 30	53	2.3	270	F2708
	60 x 36	80	1.5	180	F1509		108 x 36	44	2.7	324	F2709
	60 x 42	69	1.8	210	F1510		108 x 42	38	3.2	378	F2710
	60 x 48	60	2.0	240	F1512		108 x 48	33	3.6	432	F2712
	60 x 60	48	2.5	300	F1515		108 x 60	27	4.5	540	F2715
6 ft series	72 x 24	100	1.2	144	F1806		108 x 72	22	5.4	648	F2718
	72 x 30	80	1.5	180	F1808		108 x 84	19	6.3	756	F2721
	72 x 36	67	1.8	216	F1809		108 x 96	17	7.2	864	F2725
	72 x 42	57	2.1	252	F1810		108 x 108	15	8.1	972	F2727
	72 x 48	50	2.4	288	F1812	10 ft series	118 x 24	61	2.0	236	F3006
	72 x 60	40	3.0	360	F1815		118 x 30	49	2.5	295	F3008
	72 x 72	33	3.6	432	F1818		118 x 36	41	3.0	354	F3009
7 ft series	84 x 24	86	1.4	168	F2106		118 x 42	35	3.4	413	F3010
	84 x 30	69	1.8	210	F2108		118 x 48	31	3.9	472	F3012
	84 x 36	57	2.1	252	F2109		118 x 60	24	4.9	590	F3015
	84 x 42	49	2.5	294	F2110		118 x 72	20	5.9	708	F3018
	84 x 48	43	2.8	336	F2112		118 x 84	17	6.9	826	F3021
	84 x 60	34	3.5	420	F2115		118 x 96	15	7.9	944	F3025
	84 x 72	29	4.2	504	F2118		118 x 108	14	8.9	1062	F3027
	84 x 84	25	4.9	588	F2121		118 x 116	13	9.5	1141	F3030

<sup>\*</sup>The Shower Mat has a 5" center drain hole and exterior dimensions of 32" x 32".

2 | nVent.com/NUHEAT NUHEAT-DS-H60111-Mat-EN-1906

## **240 VOLT STANDARD MATS**

	Dimensions (inches)	Ohms	Amps	Watts	Model Number
5 ft series	60 x 36	320	0.8	180	G1509
	60 x 42	274	0.9	210	G1510
	60 x 48	240	1.0	240	G1512
	60 x 60	192	1.3	300	G1515
6 ft series	72 x 30	320	0.8	180	G1808
	72 x 36	267	0.9	216	G1809
	72 x 42	229	1.1	252	G1810
	72 x 48	200	1.2	288	G1812
	72 x 60	160	1.5	360	G1815
	72 x 72	133	1.8	432	G1818
7 ft series	84 x 24	343	0.7	168	G2106
	84 x 30	274	0.9	210	G2108
	84 x 36	229	1.1	252	G2109
	84 x 42	196	1.2	294	G2110
	84 x 48	171	1.4	336	G2112
	84 x 60	137	1.8	420	G2115
	84 x 72	114	2.1	504	G2118
	84 x 84	98	2.5	588	G2121
8 ft series	96 x 24	300	0.8	192	G2506
	96 x 30	240	1.0	240	G2508
	96 x 36	200	1.2	288	G2509
	96 x 42	171	1.4	336	G2510
	96 x 48	150	1.6	384	G2512
	96 x 60	120	2.0	480	G2515
	96 x 72	100	2.4	576	G2518
	96 x 84	86	2.8	672	G2521
	96 x 96	75	3.2	768	G2525

	Dimensions (inches)	Ohms	Amps	Watts	Model Number
9 ft series	108 x 24	267	0.9	216	G2706
	108 x 30	213	1.1	270	G2708
	108 x 36	178	1.4	324	G2709
	108 x 42	152	1.6	378	G2710
	108 x 48	133	1.8	432	G2712
	108 x 60	107	2.3	540	G2715
	108 x 72	89	2.7	648	G2718
	108 x 84	76	3.2	756	G2721
	108 x 96	67	3.6	864	G2725
	108 x 108	59	4.1	972	G2727
10 ft series	118 x 24	244	1.0	236	G3006
	118 x 30	195	1.2	295	G3008
	118 x 36	163	1.5	354	G3009
	118 x 42	140	1.7	413	G3010
	118 x 48	122	2.0	472	G3012
	118 x 60	98	2.5	590	G3015
	118 x 72	81	3.0	708	G3018
	118 x 84	70	3.4	826	G3021
	118 x 96	61	3.9	944	G3025
	118 x 108	54	4.4	1062	G3027
	118 x 116	51	4.8	1141	G3030
12 ft series	144 x 36	133	1.8	432	G144036
	144 x 60	80	3.0	720	G144060
	144 x 72	67	3.6	864	G144072
	144 x 96	50	4.8	1152	G144096
	144 x 108	44	5.4	1296	G144108
	144 x 120	40	6.0	1440	G144120
	144 x 140	34	7.0	1679	G144140
14 ft series	168 x 96	43	5.6	1344	G168096
	168 x 108	38	6.3	1512	G168108
	168 x 120	34	7.0	1680	G168120
	168 x 140	29	8.2	1960	G168140
20 ft series	240 x 120	24	10.0	2400	G240120

NUHEAT-DS-H60111-Mat-EN-1906 nVent.com/NUHEAT | 3

## **NUHEAT CUSTOM MAT - ORDERING DETAILS**

If desired coverage cannot be obtained using one or a combination of NUHEAT Standard Mats, NUHEAT Custom Mats can provide the desired coverage for any area regardless of shape or size.

- 1. Provide an accurate drawing of the area including the full on-site perimeter dimensions, voltage, and desired thermostat location with all obstructions identified (vanities, toilets, vents, etc.). Please ensure that the installer or contractor contact information is provided in the event that we need to verify or confirm the dimensions.
- 2. Submit the drawing to the NUHEAT Customer Care Team at **res.customercare@nvent.com**. Customer Care will provide a quote and AutoCAD drawing to confirm the submitted dimensions within 24 hours.
- 3. Once dimensions are accepted by the customer and payment is confirmed, the NUHEAT Custom Mat will be manufactured within three days and shipped to desired location.

## **APPROVALS**



"-W" wet rating for Canada as per Table 1 of C22.2 NO.130-16 and CEC section 62-104.

## **NUHEAT MAT SPECIFICATIONS**

Operating voltage 120 V, 208 V, and 240 V

Power output 12 W/ft² (15 W/ft² when required/specified)

Maximum continuous exposure temperature 194°F (90°C) Minimum installation temperature 50°F (10°C)

Heating cable Single wire with ground braid outer layer

Cold lead 2-wire, 18 AWG plus ground braid layer; 10 ft length

## **ACCESSORIES**

	Catalog number	Description
Signature thermostat	AC0055	WiFi-enabled floor heating thermostat. This programmable thermostat can be controlled using a mobile smart phone app (iOS and Android) or web browser.
Home thermostat	AC0056	Color touchscreen programmable floor heating thermostat with intuitive user interface and energy usage information.
Element thermostat	AC0057	Non-programmable thermostat for simple control of any electric floor heating system.

## **North America**

Tel: 1.800.778.9276 Fax: 1.604.529.4404

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# INSTALLATION GUIDE

Nuheat Mat Pre-built electric floor heating mat



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## 1.1 PRODUCT OVERVIEW

Pre-built like an electric blanket, Nuheat Mat is an electric floor heating system that brings soothing heat to the following surfaces:

- · Ceramic or porcelain tile
- Granite
- Marhle
- · Natural Stone
- · Laminate/Engineered wood floors

Nuheat Mat is a pre-built floor heating system meaning it does not require any on-site manipulation during installation. Thinset is applied to the subfloor, the pre-built Nuheat Mat is pressed onto the thinset, and flooring can be installed immediately. Nuheat Mat is compatible with all standard subfloor material and is only 1/8" thick and making it ideal for installations where minimal floor buildup is desired. The pre-built aspect of Nuheat Mat guarantees even heat distribution as the heating wires are evenly spaced during production.

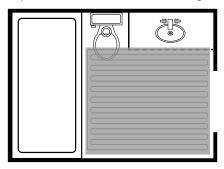
Nuheat Mat is available in over 70 standard mat sizes (squares and rectangles of various dimensions) and are available off-the-shelf. A single standard mat can provide adequate floor heat coverage for most standard bathroom and living areas. Installers can also combine multiple standard mats to heat the desired area.

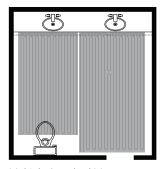
When full coverage cannot be achieved with Nuheat Standard Mats (example: areas with curves, angles, or obstructions), Nuheat Custom Mats are available to provide optimal coverage. Once area dimensions are submitted/confirmed, Nuheat Custom Mats are manufactured in only three days and will fit the exact shape of the area indicated in the submitted drawings. Just like Nuheat Standard Mats, Nuheat Custom Mats are pre-built thereby guaranteeing even heat distribution without cold spots. Nuheat Standard and Custom Mats are available in 120 V and 240 V and produces 12 W/ft² (up to 15 W/ft² when required/specified).

#### **HOW TO ORDER** 1.2

#### 1.21 NUHEAT STANDARD MATS

- Step 1 Determine perimeter dimensions
- Step 2 Refer to Nuheat Standard Mat table to view available sizes. Determine if one or multiple standard mats can be used to cover the desired area.
- Step 3 Locate a Nuheat distributor using 'Where To Buy' tool on www.nuheat.com.





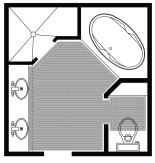
Single Standard Mat

Multiple Standard Mats

#### 1.22 NUHEAT CUSTOM MATS

If desired coverage cannot be obtained using one or a combination of standard mats, Nuheat Custom Mats can provide the desired coverage for any area regardless of shape or size.

- 1. Provide an accurate drawing of the area including the full on-site perimeter dimensions, voltage, and desired thermostat location with all obstructions identified (vanities, toilets, vents, etc.). Please ensure that the installer or contractor contact information is provided in the event that we need to verify or confirm the dimensions.
- 2. Submit the drawing to NUHEAT Customer Care Team at res.customercare@nvent.com. Nuheat Customer Care will provide a quote and AutoCAD drawing to confirm the submitted dimensions within 24 hours.
- 3. Once dimensions are accepted by the customer and payment is confirmed, the Nuheat Custom Mat will be manufactured within three days and shipped to desired location.



Custom Mat

## 1.3 INSTALLATION GUIDELINES

- The installation of this heating product shall be in accordance with the manufacturer's instructions and in accordance with the Canadian Electrical Code Part 1 or the National Electrical Code (US) whichever is applicable.
- This equipment shall be installed only by qualified personnel who are familiar with the construction and operation of the apparatus and risks involved.
- Caution should be taken to guard against risk of electric shock, fire and bodily injury during the installation of this equipment.
- Nuheat Mat should be connected to a dedicated electrical circuit.
- It is mandatory to install a class "A" GFCI or GFCI circuit breaker with each Nuheat Mat installation.

All Nuheat thermostats come equipped with a built-in class "A" GFCI.

- Do not use sharp tools or power tools to clean grout lines. Cleaning grout lines with sharp tools or power tools may damage the Nuheat Mat System and will void the Nuheat warranty.
- Indicate on the electrical panel which circuit is used for the electric floor heating system.
- Subfloor must be prepared in accordance to ANSI specifications.
- Nuheat Mat cannot be overlapped, crossed, cut, shortened or modified.
- The ambient air temperature must be above 10 °C or 50 °F when the Nuheat Mat Floor Heating System is installed.
- For concrete slab subfloors, we recommend insulating the slab prior to installing Nuheat Mat.
   Insulation will improve the upward heat transfer from the mat to the flooring surface and improve heat up time.

## 1.4 BEFORE YOU START

#### 1.41 **ASSEMBLE REQUIRED TOOLS**

- · Multimeter/Ohmeter
- ¼" x ¼" square notched trowel
- · Grouting float/lightweight roller
- Sponge
- · Latex-modified thinset
- Thinset mixer
- · Large bucket
- · Duct tape
- Thermostat sensor probe (included with thermostat)



FIGURE 1.21: Assemble required tools

#### PRE-INSTALLATION GUIDELINES 1.42

Avoid the following activities that may damage the Nuheat Mat:

- · Connecting the mat to power when folded
- Stapling
- Nailing
- · Folding, bending overlapping mats
- Using grout scrapers or utility knives to clean grout lines may damage the mat and void Nuheat warranty.
- · Clean grout lines with a sponge as you go.

#### 1.43 DRY FIT AND ROUTE COLD LEAD PATH

Position Nuheat Mat to fit contours of room. Route a path for the cold lead to the electrical box. The cold lead CANNOT cross over on top of the Nuheat Mat. Nuheat Standard Mats can be flipped in any direction to place cold leads closer to thermostat location.

## 1.5 INSULATION & RESISTANCE TESTS

If insulation or resistance tests do not pass the requirements at any point of the installation, halt installation immediately and contact NUHEAT Customer Care at 1.800.778.WARM(9276) or email res.customercare@nvent.com.

## 1.51 INSULATION TEST

To ensure the heating wire is fully insulated:

- 1. With digital multimeter, set it to measure resistance/ohms. If using an ohmeter, set it to the 200 ohm setting.
- 2. Place one multimeter clip on the metal braid wire (ground). Place the other multimeter clip on the white wire (red wire for 240 V Nuheat Mats).
- 3. Confirm the reading on the multimeter/ohmeter is OL or infinity (open circuit).
- 4. Repeat steps 2-3 to check the reading between the metal braid wire (ground) and the other wire (black).

### 1.52 RESISTANCE TEST

To ensure the heating wire is fully insulated:

- 1. With digital multimeter, set it to measure resistance/ohms. If using an ohmeter, set it to the 200 ohm setting.
- 2. Place one multimeter clip on the white wire (red wire for 240 V Nuheat Mats). Place the other multimeter clip on the black wire.
- 3. Confirm the reading on the multimeter/ohmeter is within +10% / -5% of the factory resistance listed on the white tag that is attached to the cold lead. The white tag contains information including factory resistance readings, model number, manufacture date and amperage ratings.
- 4. Record the resistance test readings in the table on page 7.



Nuheat Mat must be tested before, during and after installation to validate the warranty.

#### MAT RESISTANCE LOG 1.6

#### 1.61 MAT RESISTANCE LOG

For warranty and troubleshooting purposes, the mat resistance log must be completed and remain with the end user

### **MAT RESISTANCE LOG**

Mat Model Number

Factory Measured Resistance

Resistance Test Ohms Reading (Before Installation)

Resistance Test Ohms Reading (During Installation)

Resistance Test Ohms Reading (After Installation)

Failure to record resistance tests in the above table will void the NUHEAT warranty. To submit your warranty, visit www.nuheat.com and fill out the online warranty card.

#### 1.62 FLOOR SENSOR PROBE TEST

To ensure the floor sensor probe is not damaged:

- 1. With a digital multimeter (or ohmmeter), set the device to the 20KΩ (Kilohms) setting.
- 2. Place a multimeter clip on each of the wires. It does not matter which clip is attached to which wire. Some multimeters do not have the 20K $\Omega$  (Kilohms) setting. Find a suitable multimeter that has this setting.
- 3. Confirm the reading on the device is between  $8-12K\Omega$  (Kilohms) at room temperature.
- 4. If test readings do not pass requirements at any point of the installation, halt installation immediately and contact NUHEAT Customer Care at 1.800.778.WARM(9276) or email res.customercare@nvent.com.

## 2.1 SECURING MAT TO THE SUBFLOOR

## 2.11 SECURING MAT TO THE SUBFLOOR

- 1. Prepare thinset mixture.
- 2. Spread thinset onto subfloor.



Use  $\mbox{\ensuremath{\upomega}{1}}$  in square notched trowel to spread  $\mbox{\ensuremath{\upomega}{1}}$  in layer of acrylic/latex modified thinset onto subfloor. Work on one manageable section at a time.



FIGURE 2.12: Spread thinset onto subfloor

3. Place Nuheat Mat onto fresh thinset.



FIGURE 2.13: Place mat onto fresh thinset

4. Press Nuheat Mat into thinset.



Press Nuheat Mat firmly into thinset with grout float or lightweight roller. Create 100% contact between Nuheat Mat, thinset and subfloor. Press out air bubbles underneath mat. Route cold lead(s) to electrical box.

#### SECURING MAT TO THE SUBFLOOR 2.1

#### 2.11 **SECURING MAT TO THE SUBFLOOR (CONTINUED)**

- 5. Perform insulation and resistance test on page 6.
- 6. Secure floor sensor probe.



Duct tape the floor sensor probe on top of the Nuheat Mat. The probe's tip should be between the heating wires. Ensure the probe's tip is located in an area that can represent the overall floor temperature and away from other heating/cooling sources (ie. heat ducts vents, direct sunlight, drafts caused by large windows/doors, areas covered by rugs or fixed furniture). The probe wire can cross on top of the heating wire(s).



FIGURE 2.16: Secure floor sensor probe

## 2.2 INSTALL FLOORING - TILE & STONE

## 2.21 INSTALL FLOORING - TILE & STONE

1. Apply thin layer of thinset.

Use ¼ in x ¼ in square notched trowel to spread minimum ¼ in layer of acrylic/latex modified thinset on top of Nuheat Mat as per manufacturer's instructions.



FIGURE 2.21: Install tie/stone flooring

- 2. Install tile/stone as per manufacturer's instructions.
- 3. Clean grout lines.

Do not use sharp tools or power tools to clean grout lines; doing so may damage Nuheat Mat.



FIGURE 2.23: Clean grout lines

- 4. Perform insulation and resistance test on page 6.
- 5. Make electrical connections.

Before activating Nuheat Mat, ensure setting compound has fully cured. Refer to setting compound manufacturer's specifications for cure times. Installation of Nuheat Mat is now complete.

## **INSTALL FLOORING - LAMINATE/** 2.3 **ENGINEERED WOOD**

#### 2.31 **INSTALL FLOORING - LAMINATE/ENGINEERED WOOD**

1. Apply smooth layer of thinset.



Use smooth trowel to spread minimum ¼ in layer of acrylic/latex modified thinset on top of Nuheat Mat. Ensure thinset layer is level and smooth. Self-leveling compounds may also be used. Allow thinset or self-leveller

to cure as per manufacturer's instructions.

- 2. Perform insulation and resistance test on page 6.
- 3. Install laminate/engineered wood flooring.



Install vapor barrier, if applicable, and underlay as per manufacturer's instructions. Install laminate/engineered wood floor as per manufacturer's instructions.

4. Make electrical connections.



Before activating Nuheat Mat. ensure setting compound has fully cured. Refer to setting compound manufacturer's specifications for cure times. Installation of Nuheat Mat is now complete.

## 3.1 ELECTRICAL CONNECTIONS

### 3.11 ELECTRICAL CONNECTIONS

- 1. Connect the tin plated copper ground braid/wire of the Nuheat Mat to the ground screw or ground conductor inside the electrical box using approved wire connectors.
- Attach corresponding lead wires to electrical box using CSA Certified/UL Listed cable fittings. Make electrical connection only after flooring is complete.
- Nuheat Mat must be connected to minimum 14AWG supply conductors. Supply conductors shall be suitable for residential wiring according to local and national electrical code.

When controlling multiple mats with one thermostat, all mats may be connected directly to the thermostat provided the total amperage does not exceed the 15-amp maximum load of the Nuheat thermostat. Alternatively, the mat cold leads can be run to a separate electrical box and connected to the Nuheat thermostat using suitable electrical house wiring. Consult with your electrician to determine the best method for your installation.

In all cases, ensure the electrical box can easily fit all of the connections.



Risk of electric shock and fire. Damage to supply conductor insulation may occur if conductors are routed less than 2 in (51 mm) from heating wire. Refer to installation instructions for recommended means of routing supply conductors

- 4. Affix supplied orange label to panel board beside appropriate circuit indicating branch circuit supplying power to Nuheat Mat.
- 5. Affix the supplied "Concealed Area Warning" label to adjacent points of access to concealed areas in which installed heating products are accessible.
- 6. Affix the supplied "Radiant Floor Heating" sticker to the room control for the Nuheat Floor Heating System.

## **ELECTRICAL CONNECTIONS**

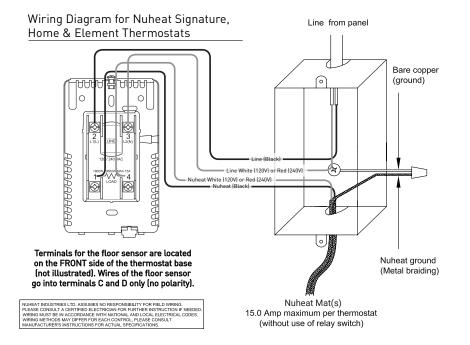
#### 3.11 **ELECTRICAL CONNECTIONS (CONTINUED)**

All wiring must follow specifications set out in Part 1 of Canadian Electrical Code, or Article 424 of the National Electrical Code ANSI/ NFPA 70, or whichever is applicable to local electrical inspection regulations and authorities. All Nuheat thermostats are equipped with built-in Class "A" GFCI protection. If Nuheat Mat is connected directly to a Nuheat thermostat, a non-GFCI equipped breaker should be used. If the Nuheat Mat is controlling an external relay for a separate circuit, it is mandatory to install a Class "A" GFCI or GFCI circuit breaker for the external/separate circuit.

The cold leads of Nuheat Mat may need to be routed inside suitable conduit according to local electrical codes. Check with the local authority having jurisdiction to determine requirements.



NEC/CEC rules state that the cold lead tag must remain on the cold lead. The tag contains critical information necessary for testing, warranty and troubleshooting purposes. Do not remove the tag for any reason.



## 3.2 ELECTRICAL GUIDELINES

### 3.21 ELECTRICAL GUIDELINES

- The installation of this heating product shall be in accordance with the manufacturer's instructions and in accordance with the Canadian Electrical Code Part 1 or the National Electrical Code (USA), whichever is applicable.
- This equipment shall be installed only by qualified personnel who are familiar with the construction and operation of the apparatus and risks involved.
- Caution should be taken to guard against electric shock, fire and bodily injury during the installation of this equipment.
- De-energize power circuits before installation or servicing.
- Nuheat Mat should not be connected to power until the Nuheat Mat is fully installed and covered by flooring material.
- Subfloor must be prepared in accordance with ANSI specifications.
- The heating portion of the Nuheat Mat shall not touch, cross over, or overlap itself.
- Do not install Nuheat Mat in direct contact with or within 0.25 in (6.5 mm) of any combustible surfaces or materials (excluding wood-based substrates).
- The minimum bending radius of the cold lead is 2 in (51 mm) and heating wire is 0.625 in (16 mm).
- The ambient temperature must be above 10°C or 50°F when Nuheat Mat is installed.
- As per National Electrical Code (US) and Canadian Electrical Code (CAN), Nuheat Mat must be installed on a dedicated circuit for heating appliances/devices (additional Nuheat Mats, baseboard heaters, electric fireplaces, etc.).
- Nuheat Mat is designed for indoor floor heating applications in general use (-X) in US and Canada and in wet (-W) areas in Canada.
- Minimum distance of 1.5 in (38.1 mm) between adjacent heating devices.
- Total combined R-values of all floor coverings must not exceed R-2.5.
- · Nuheat Mat should not be altered.
- Nuheat Mat is not for installation in pool and spa areas, nor outdoor use.
- Do not place objects directly on top of the floor that could impede/trap heat emanating from
  the floor heating system including but not limited to flush-to-floor furniture, rubber or memory
  foam mats, and mattresses. These objects could cause unsafe temperatures to be reached
  underneath these objects which may cause damage
  to the object and/or the flooring material.

### 3.22 TROUBLESHOOTING

Should you have any questions or difficulties installing or controlling your Nuheat Mat, please consult our comprehensive troubleshooting FAQ section at www.nuheat.com.

## WARRANTY INFORMATION







#### 4.11 WARRANTY INFORMATION

NUHEAT offers a 25-Year Limited Product Warranty and/or 25-Year Limited Total Care\* Warranty when installed by a nVent NUHEAT Certified PRO Installer.

The online warranty registration form must be completed at www.nuheat.com within thirty (30) days from the date of installation and kept by the homeowner, together with a copy of the commissioning report, relevant invoice, and photographs, showing the product(s) in their entirety after installation but before the installation of the flooring material.

\*Total Care Warranty is an upgrade of our standard product warranty and additionally covers repair or replacement of the Product and restoring the floor in its original state or, if not possible, to an equivalent standard, at no cost to the Buyer. In order to remedy the defect, nVent must have access to 1 m<sup>2</sup> (10 ft<sup>2</sup>) of the floor covering material.

#### **THERMOSTATS & CONTROLS** 5.1



## **Nuheat Signature**

Wi-fi - Enabled Floor Heating Thermostat

- WiFi-enabled
- 3.5" Color touchscreen
- · Energy usage monitor
- 7-day programmability
- Dual-voltage (120 V & 240 V)



### **Nuheat Home**

Universal Floor Heating Thermostat

- 3.5" Color touchscreen
- Energy usage monitor
- 7-day programmability
- Dual-voltage (120 V & 240 V)



### **Nuheat Element**

Non-programmable Thermostat

- · Manual temperature control
- Dual-voltage (120 V & 240 V)



## Mat Sense pro electric fault indicator

The Mat Sense Pro is an electrical fault indicator that simultaneously monitors the hot neautral and ground wires during your Nuheat Mat or Nuheat Cable Installation. Use an electric fault indicator to ensure a correct Nuheat Mat or Cable installation every time.

## **North America**

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