



CONNECT AND PROTECT

Floor Heating Catalog 2020

Electric Floor Heating Systems


nVent

NUHEAT

About this catalog

This document is for tile and electrical contractors who install or are interested in installing nVent NUHEAT Electric Floor Heating Systems.

This catalog is an excellent resource for installation techniques and for learning how to convey the benefits of electric floor heating to homeowners. It also provides guidance on how to choose the best floor heating system for a particular project and explains how you can grow your business as a contractor installing nVent NUHEAT Floor Heating Systems.

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Exceed your customers' expectations – Add warmth to any floor

As a flooring or electrical contractor, if you are on site installing a new floor or completing electrical work, now is the ideal time to add floor heating to your customer's home.

Exceed your customers' expectations! Add warmth to their new floor. They will love the added comfort that nVent NUHEAT brings to their home.

WHY NVENT NUHEAT FOR HOMEOWNERS?

Comfort is everything, especially in your home. With nVent NUHEAT Electric Floor Heating Systems, you can offer the comfort of a warm floor that is maintenance-free for your customers. nVent NUHEAT Electric Floor Heating Systems are ideal for both new construction or renovation projects and come with a long list of benefits for homeowners...

1. Improved Comfort & Safety

- Even heat distribution throughout the living space, not concentrated near vents, radiators or the ceiling
- Improves indoor air quality by...
 - Facilitating the choice of low VOC surfaces (tile, slate, terrazzo, concrete) that otherwise may be perceived as cold
 - Establishing surface temperatures that prevent growth of mold, bacteria, viruses, and dust mites
 - Not circulating allergens or drying the air like forced air systems
- Is silent, invisible, and takes up no living space unlike baseboards and wall-mounted radiators
 - Furniture can be placed directly against walls
 - Eliminates unsightly heating equipment with risk of trip and fall injuries

2. Peace of Mind

- Maintenance-free and backed by the industry's best warranties, especially when installed by a nVent NUHEAT Certified PRO
- Certified PRO installers can offer the 25-Year Total Care Warranty which covers the entire installation including floor coverings, labor, and repairs
- nVent NUHEAT warranties are not pro-rated, protecting the owner's coverage value over time
- nVent NUHEAT has been manufacturing premium quality Electric Floor Heating Systems since 1989

3. Energy Efficiency

- Offers enhanced comfort at lower ambient temperature
- Doesn't waste energy heating unoccupied space (ceilings & vents)
- The quick warm-up time of nVent NUHEAT Systems enables "zone heating" – heating only the areas in use
- The nVent NUHEAT Signature WiFi thermostat allows you to control and monitor energy use from anywhere

4. Affordability

- nVent NUHEAT Floor Heating Systems add luxury and value to any home for a fraction of other renovation or building costs



Why nVent NUHEAT for Contractors?

Time is money! nVent NUHEAT has focused on supporting professional installers since the beginning and our systems offer several benefits for flooring and electrical contractors...

1. Profitability

- nVent NUHEAT Electric Floor Heating Systems are typically a small portion of building and renovation cost but they provide lasting, tangible benefit (high perceived value) for clients
- nVent NUHEAT offers premium quality and world-class support, meaning you spend more time installing and less time trouble-shooting

2. Expertise

- Our team of experts is here to help – before, during, and after the installation; over the phone; and even on the job site
- The nVent NUHEAT Customer Care Team is available 5 days a week via phone, email, and instant online chat, giving you the support you need in the field

3. Easy Installation

- nVent NUHEAT Systems install quickly and reduce site prep time, adding little additional labor to typical jobs such as bathroom or kitchen renovations
- Mats install quicker than any other system available and require little-to-no site prep, reducing time on-site
- The nVent NUHEAT product line encompasses all major types of electric floor heating systems, allowing contractors to choose the right system for the job and never having to worry about lesser quality on our less expensive solutions
- nVent NUHEAT Floor Heating Systems work with the widest variety of complimentary products and don't require use of certain products to receive complete warranty coverage
- nVent NUHEAT warranties do not require excessive testing or the use of specific mortars or other products for installation, allowing the contractor to decide what's best for the job

4. Quality




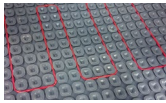

- nVent NUHEAT has set the industry benchmark for quality & features since 1989, giving contractors a product line they can be proud to install and recommend

5. nVent NUHEAT Certified PRO Program

- Certified PRO installers (CPROs) have exclusive rights to offer the 25-Year Total Care Warranty, covering the complete installation, including floor coverings, labor, and repairs
- CPROs get listed on nuheat.com under "Find An Installer", benefitting the heavy web traffic on Nuheat.com
- CPROs gain access to exclusive offers and loyalty benefits

Find the Floor Heating You Need

THE RIGHT SYSTEM FOR EVERY APPLICATION

	 Custom Mats The thinnest custom-built electric floor heating mat	 Standard Mats The thinnest pre-built electric floor heating mat	 Cable The robust floor heating cable solution	 Cable & Membrane The integrated electric floor heating and uncoupling solution	 Mesh The self-adhesive electric floor heating solution
Ideal Use	Installations where shape of heated area is complex (features angles, curves, or multiple adjacent areas) Low product profile and ease of installation are most important	Square and rectangular shaped areas Low product profile and ease of installation are most important	Installations of all shapes (simple to complex) where on-site flexibility is most important	Tile installations of all shapes (simple to complex) where there is concern of subfloor movement and a risk of tiles cracking	Square and rectangular shaped areas where on-site flexibility is most important
Suitable floor surfaces	Tile, stone, laminate, engineered wood, luxury vinyl flooring	Tile, stone, laminate, engineered wood, luxury vinyl flooring	Tile, stone, laminate, engineered wood, luxury vinyl flooring	Tile and stone	Tile, stone, laminate, engineered wood, luxury vinyl flooring
Power Output	12 or 15 W/ft ²	12 W/ft ²	12 or 15 W/ft ²	10, 12 or 15 W/ft ²	12 W/ft ²
Sizes	Up to 200 ft ² for a single mat	+70 sizes up to 200 ft ²	33 kit sizes 120 V - single kits (14) up to 120 ft ² 240 V - single kits (19) up to 240 ft ²	Membrane roll sizes Small - 54 ft ² / Large - 161 ft ² Cable 33 kit sizes 120 V - single kits (14) up to 120 ft ² 240 V - single kits (19) up to 240 ft ²	32 kit sizes 120 V - single kits (13) up to 120 ft ² 240 V - single kits (19) up to 240 ft ²
Floor Shape	Custom built to fit exact shape of the room	Fixed shape (rectangular or square)	Adjustable on site	Adjustable on site	Adjustable on site
Installation Method	Thinset mortar	Thinset mortar	Secure cable guides on subfloor and affix cable to cable guides	Thinset mortar for Membrane then install Cable	Apply adhesive mesh on subfloor and secure using nails, staples, or hot glue
Self-Leveling Concrete	Not needed	Not needed	Recommended	Not needed	Recommended
Thickness	1/8 in	1/8 in	3/16 in	7/32 in	3/16 in
Uncoupling	No	No	No	Yes	No
Availability	Manufactured in 3 days	Stock	Stock	Stock	Stock

¹ All nVent NUHEAT products are backed by a 25-Year Product Warranty. An additional Total Care Warranty can also be applied if a product is installed by a nVent NUHEAT Certified PRO installer. See page 18 for details.

Standard Mats

THE THINNEST PRE-BUILT ELECTRIC FLOOR HEATING MAT



FAST FACTS

- 150 ft² can be installed on a single 120 V circuit
- 300 ft² can be installed on a single 240 V circuit

Material	Consist of a single-conductor tinned copper braided heating wire sandwiched in a pre-configured pattern between durable, two porous layers of fabric
Operating Voltage	120 V, 208 V, and 240 V
Power Output	12 W/ft ² (standard mats are only 12 W/ft ²)
Maximum Continuous Exposure Temperature	194°F (90°C)
Heating Cable	Single wire with ground braid outer layer
Cold Lead	2-wire, 18 AWG plus ground braid layer; 10 ft (3 m) length

BENEFITS

Easy to install. Standard Mats are pre-built and ready to install right out of the box. The Standard Mat is simply adhered to the subfloor using thinset and flooring can be immediately installed on top.

Error-free. Standard Mats eliminate the need to calculate and experiment with wire spacing during the installation. Consistent wire spacing and heat coverage is guaranteed.

Reduces installation time. Standard Mats shorten the installation process compared to cable and mesh systems because it eliminates the need to manipulate the heating product on site.

Does not raise floor height. Standard Mats guarantee minimal floor height increase. At 1/8 in thick, the ultra low profile of this product reduces the build up on the floor which makes transitions possible without the use of transition strips.

Comprehensive selection of sizes to choose from. Standard Mats are available in over 60 standard sizes in both 120 V & 240 V which provide optimal floor heating coverage in most standard areas.

Available immediately. Find a local distributor near you at <http://www.nuheat.com/where-to-buy>

HOW TO INSTALL

Step 1: Spread modified thinset onto subfloor using minimum 1/4 in x 1/4 in square notched trowel.

Step 2: Place Standard Mat onto fresh thinset, press firmly to create 100% contact between Standard Mat, thinset and subfloor.

Step 3: Secure floor sensor probe between heating wires.

Step 4: Apply a thin layer of thinset and install tile/stone flooring as per manufacturer's instructions.

Standard Mats

SELECT STANDARD MAT FOR YOUR PROJECT

STANDARD MATS (120 V)

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

STANDARD MATS (240 V)

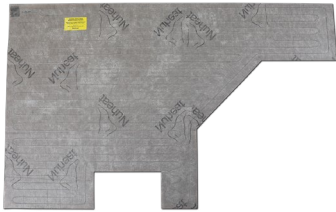
TYPE	DIMENSIONS (INCHES)	OHMS	AMPS	WATTS	MODEL NUMBER
5 ft series	60 x 36	320	0.8	180	G1509
	60 x 42	274	0.9	210	G1510
	60 x 48	240	1.0	240	G1512
	60 x 60	192	1.3	300	G1515
6 ft series	72 x 30	320	0.8	180	G1808
	72 x 36	267	0.9	216	G1809
	72 x 42	229	1.1	252	G1810
	72 x 48	200	1.2	288	G1812
	72 x 60	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
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
12 ft series	118 x 116	51	4.8	1141	G3030
	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

*The Shower Mat has a 5" center drain hole and exterior dimensions of 32" x 32".

Information subject to change at any time. For a complete list of up-to-date specifications, please visit nVent.com/NUHEAT.

Custom Mats

THE THINNEST CUSTOM-BUILT ELECTRIC FLOOR HEATING MAT



FAST FACTS

- 150 ft² can be installed on a single 120 V circuit (120 ft² at 15 watts)
- 300 ft² can be installed on a single 240 V circuit (240 ft² at 15 watts)
- After dimensions are confirmed, custom mats are manufactured in only 3 days.

Material	Consist of a single-conductor tinned copper braided heating wire sandwiched in a pre-configured pattern between durable, two porous layers of fabric
Operating Voltage	120 V, 208 V, and 240 V
Power Output	12 W/ ft ² (15 W/ft ² when required/specified)
Maximum Continuous Exposure Temperature	194°F (90°C)
Heating Cable	Single wire with ground braid outer layer
Cold Lead	2-wire, 18 AWG plus ground braid layer; 10 ft (3 m) length

BENEFITS

Perfect fit for any room. The Custom Mat is custom manufactured based on your floor dimensions to provide 100% heating coverage. Once dimensions are confirmed, a custom mat is manufactured to fit the exact dimensions of your floor area.

Perfect heat distribution. Custom Mats eliminate the need to calculate and experiment with wire spacing during the installation. Consistent wire spacing and heat coverage is guaranteed.

Easy to install. Custom Mats are ready to install right out of the box. The Custom Mat is simply adhered to the subfloor using thinset and flooring can be immediately installed on top.

Reduces installation time. Custom Mats shortens the installation process compared to cable and mesh systems because it eliminates the need to manipulate the heating product on site.

Does not raise floor height. Custom Mats guarantee minimal floor height increase. At 1/8 in thick, the ultra low profile of this product reduces the build up on the floor which makes transitions possible without the use of transition strips.

Higher heat output options. Custom Mats can be manufactured to produce the standard 12 W/ft² (41 BTUs/ft²) or 15 W/ft² (51 BTUs/ft²) for areas where more heat is needed at no additional cost.

Short delivery time. Custom Mats can be manufactured in just three days and ships out to the customer four days after dimensions are confirmed.

Error-free. Custom Mats eliminate the need to calculate and experiment with wire spacing during the installation. Consistent wire spacing and heat coverage is guaranteed.

Custom Mats

THE THINNEST CUSTOM-BUILT ELECTRIC FLOOR HEATING MAT

HOW TO MEASURE YOUR ROOM FOR A CUSTOM MAT

Pick a corner of the room and use that as the starting point for your measurements. Remember that you must return to this starting point at the end of your measurements.

1. Measure and draw the walls of the room on paper and record the measurements.
2. Measure and draw the location of cabinets and vanities, make sure to take the measurement right up to the toe-kick.
3. Measure and draw the location of floor features such as vents and toilet drains (measure from the walls to the center of the toilet drain).
4. Indicate the thermostat location and voltage if known.

An online measuring tutorial is available at: <http://www.nuheat.com/customer-care/how-to-measure>

HOW TO ORDER

1. Obtain an accurately measured floor plan including all perimeter dimensions and any vents or obstacles in the floor. Note the thermostat location. See Mat Measuring for steps to do this correctly.
2. Email your design and all customer and job information to res.customercare@nvent.com
3. Upon design confirmation, you will receive a quote for your project (quote turnaround time is ~24 hours).
4. Have customer confirm all dimensions and have customer sign off on their design. Submit purchase order.
5. Mat will arrive 6-7 business days from the time order is placed.

HOW TO INSTALL

Step 1: Spread modified thinset onto subfloor using minimum 1/4 in x 1/4 in square notched trowel.

Step 2: Place Custom Mat onto fresh thinset, press firmly to create 100% contact between Custom Mat, thinset and subfloor.

Step 3: Secure floor sensor probe between heating wires.

Step 4: Apply a thin layer of thinset and install tile/stone flooring as per manufacturer's instructions.

Cable

THE ROBUST FLOOR HEATING CABLE SOLUTION

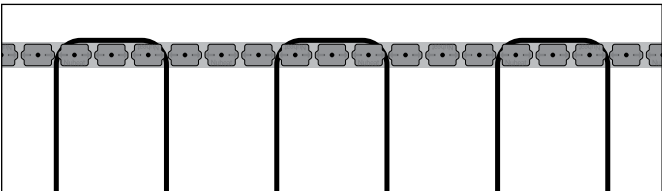


FAST FACTS

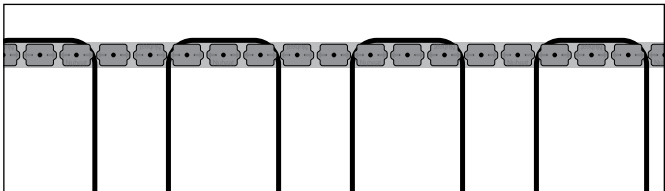
- Compatible with Nuheat Membrane and other integrated heated uncoupling membrane products
- Zero EMF heating cable design

Material	Two single conductor Tefzel-coated resistance wires covered by a tin-plated copper braid and then coated with a durable copolymer (PVC) outer jacket
Operating Voltage	120 V and 240 V
Power Output	12 - 15 W/ft ² depending on wire spacing
Maximum Ambient Temperature	194°F (90°C)
Heating Cable	2-wire, grounded, twisted air with PVC outer jacket
Cold Lead	2-wire, 16-18 AWG plus ground braid layer; PVC outer jacket, 10 ft (3 m) length

Cable spacing examples



3 inch spacing (12 W/ft²)



3/2/3 inch spacing (15 W/ft²)

BENEFITS:

- On-site flexibility.** Cable can easily be adjusted on-site to provide heat coverage where it is desired, on-site adjustment flexibility is ideal for flooring that is complex and has curves and angles.
- Flexible wire spacing and heat output.** Cable provides the installer the ability to adjust the wire spacing and heat output according to the installation needs. Installers only need to know the approximate square footage of the area(s) that need to be heated.
- Compatible with Membrane.** Cable is compatible with Membrane; the integrated floor heating and uncoupling product from nVent NUHEAT. When combined these products reduce stress caused by floor movement between a tile layer and subfloor layer.
- Comprehensive selection of sizes to choose from.** Cable is available in 33 sizes in both 120 & 240 V which allows installers to choose the perfect sized kit for the area they wish to heat.
- Available immediately.** Find a local distributor near you at <http://www.nuheat.com/where-to-buy>.

Cable

THE ROBUST FLOOR HEATING CABLE SOLUTION

HOW TO INSTALL:

- Step 1:** Plan the heating cable installation before securing any part of the floor heating system to the subfloor.
- Step 2:** Install the heating cable according to the Installation Layout Plan.
- Step 3:** Install stabilizing cable guides to ensure the heating cable does not float during the self-leveling process.
- Step 4:** Secure the floor sensing probe. Route the thermostat probe up to the thermostat electrical box.
- Step 5:** Prepare the subfloor using self-levelling compound/thinset mortar as per manufacturer's instructions.
- Step 6:** Install tile/stone flooring.

SELECT CABLE KIT FOR YOUR PROJECT

CABLE (120 V)

SQUARE FOOT COVERAGE					MODEL NO.	LENGTH (FT)	AMPS	WATTS
W/ CABLE GUIDES		W/ MEMBRANE						
3" SPACING*	3"/2"/3" SPACING**	3 PILLARS†	2/3/2 PILLARS†‡	2 PILLARS†				
12 W/FT²	15 W/FT²	10 W/FT²	12 W/FT²	15 W/FT²				
8	6	9	8	6	N1C008	29	0.7	80
12	9	14	12	10	N1C012	47	1.2	138
15	12	17	15	12	N1C015	57	1.4	170
25	20	30	25	21	N1C025	98	2.5	299
30	25	36	31	25	N1C030	120	2.9	343
40	30	45	38	31	N1C040	148	3.7	442
50	40	57	48	39	N1C050	188	4.7	562
60	50	71	60	49	N1C060	234	6.0	719
70	55	81	68	55	N1C070	265	6.8	810
80	65	97	82	66	N1C080	318	7.9	947
85	70	102	86	69	N1C085	334	8.5	1021
95	80	115	97	78	N1C095	377	9.7	1161
110	90	129	109	88	N1C110	423	10.8	1299
120	100	145	122	98	N1C120	474	12.2	1461

Recommended

CABLE (240 V)

SQUARE FOOT COVERAGE					MODEL NO.	LENGTH (FT)	AMPS	WATTS
W/ CABLE GUIDES		W/ MEMBRANE						
3" SPACING*	3"/2"/3" SPACING**	3 PILLARS†	2/3/2 PILLARS†‡	2 PILLARS†				
12 W/FT²	15 W/FT²	10 W/FT²	12 W/FT²	15 W/FT²				
15	12	17	14	12	N2C015	56	0.7	165
20	15	24	21	17	N2C020	80	0.9	224
25	20	31	26	21	N2C025	102	1.3	302
35	30	41	35	28	N2C035	136	1.7	403
45	35	54	46	37	N2C045	178	2.2	523
55	45	63	53	43	N2C055	207	2.6	632
65	50	76	64	52	N2C065	250	3.1	742
70	60	84	71	58	N2C070	277	3.5	842
85	70	102	86	69	N2C085	334	4.3	1020
90	75	109	92	74	N2C090	358	4.6	1102
100	85	120	101	82	N2C100	393	5.0	1211
120	100	145	121	98	N2C120	472	5.9	1427
135	110	162	136	110	N2C135	529	6.8	1621
145	120	172	144	116	N2C145	561	7.1	1704
160	130	193	162	131	N2C160	630	8.0	1914
170	140	204	171	138	N2C170	665	8.6	2054
190	160	233	195	157	N2C190	757	9.6	2314
215	180	261	219	176	N2C215	849	10.8	2589
240	200	293	246	198	N2C240	953	12.1	2905

Recommended

For installations where higher heat output is required, alternating 3 in/2 in spacing (15 W/ft²) may be used. * 3 in Spacing - 12 W/ft² ** Alternating 3 in/2 in spacing - 15 W/ft²

†Pillars of the uncoupling membrane ‡Our recommended spacing is alternating 2-3-2 pillar spacing which produces 12 W/ft². If you are installing over a concrete slab and require more heat, we recommend using 2-pillar spacing which produces 15 W/ft².

Membrane

THE INTEGRATED ELECTRIC FLOOR HEATING AND UNCOUPLING SOLUTION

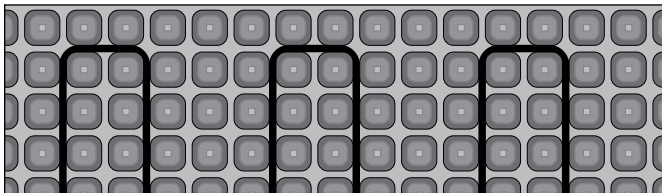


FAST FACTS

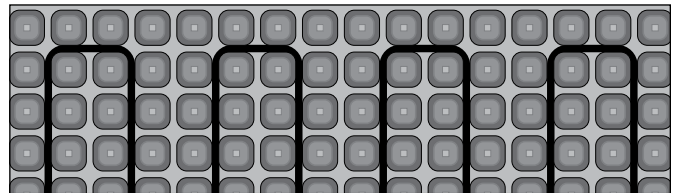
- Thin profile heating cable and electrical lead
- Durable heating cable construction
- Flexible heat output (10, 12, 15 W/ft²)
- Largest 120 V kit covers 120 ft² and largest 240 V kit covers 240 ft², producing 41 BTUs/ft²

Material	Membrane is a polypropylene sheet that is thermo-bonded to a non-woven polypropylene fabric on the underside. It is 0.22 inches thick, 39 inches wide and weighs 840 grams/m ²
Operating Voltage	120 V, 208 V, and 240 V
Power Output	10 - 15 W/ft ² depending on wire spacing. Our recommended spacing is alternating 2-3-2 pillar spacing which produces 12 W/ft ² . If you are installing over a concrete slab and require more heat, we recommend using 2-pillar spacing which produces 15 W/ft ² .
Maximum Ambient Temperature	194°F (90°C)
Heating Cable	2-wire, grounded, twisted air with PVC outer jacket
Cold Lead	2-wire, 16-18 AWG plus ground braid layer; PVC outer jacket, 10 ft (3 m) length

Membrane spacing examples



2/3/2 Pillar spacing (12 W/ft²)



2 Pillar spacing (15 W/ft²)

BENEFITS:

Reduces risk of tile cracks due to subfloor movement. Membrane is an uncoupling membrane which absorbs subfloor movements that can cause tiles to crack. Membrane received the highest 'Extra Heavy' result in Robinson Floor Test (ASTM C627).

Acts as tile underlayment. Membrane can replace plywood/concrete board as the tile underlayment in most tile installations.

Compatible with the Cable floor heating system. Membrane is specifically designed to accept the best-in-class Cable floor heating system. This combined system simplifies the installers' lives, as there is no need for metal or plastic guides and self leveler.

Flexible wire spacing and heat output. When combined with Cable as the floor heating solution, the integrated system provides the installer the ability to adjust the wire spacing and heat output according to the installation needs.

Compatible with modified thinsets for tile setting. Tile/stone floors can be installed on Membrane using modified and unmodified thinsets.

On-site flexibility. Membrane is cut on-site to fit the room. Cable is then installed into Membrane and adjusted on-site to provide heat coverage where it is desired.

Membrane

THE INTEGRATED ELECTRIC FLOOR HEATING AND UNCOUPLING SOLUTION

BENEFITS *CONTINUED*:

Waterproof. Membrane is made from extruded polypropylene and can be used as a waterproofing membrane.

Available immediately. Find a local distributor near you at <http://www.nuheat.com/where-to-buy>

HOW TO INSTALL:

Step 1: Spread thinset mortar to the substrate using a trowel.

Step 2: Roll Membrane onto the thinset mortar and press with a roller or a flat trowel.

Step 3: Snap the Cable into the Membrane.

Step 4: Using flat trowel, cover the membrane with thinset to ensure heating cable is encapsulated with thinset.

Step 5: Install tile/stone flooring.

SELECT CABLE KIT & MEMBRANE FOR YOUR PROJECT

CATALOG NUMBER	PART NUMBER	DESCRIPTION	DIMENSIONS	STANDARD PACKAGE	
				WEIGHT (lbs)	SIZE (in)
NUMEM161	AC0105	Membrane - Large Roll (161 ft ²)	3'3 in x 49.5 ft	30 lbs	39 in x 14.5 in
NUMEM054	AC0106	Membrane - Small Roll (54 ft ²)	3'3 in x 16.5 ft	10 lbs	39 in x 9.5 in
PRBPE 1505	AC0107	Waterproofing Seam Tape - 6 in x 16 ft	6 in x 16 ft	6 lbs	16 in x 6 in x 12 in
PRBPE 1530	AC0108	Waterproofing Seam Tape - 6 in x 98 ft	6 in x 98 ft	13 lbs	16 in x 6 in x 12 in
NUMEM250	FG0800	Membrane - 10.6 ft ² Sheets (25 sheets per box)	3'3 in x 3'3 in	45 lbs	40 in x 40 in x 8 in

CABLE (120 V)

MODEL #	SQUARE FOOT COVERAGE			LENGTH (FT)	TOTAL WATTS
	3 PILLARS*	2/3/2 PILLARS*†	2 PILLARS*		
	10 W/FT ²	12 W/FT ²	15 W/FT ²		
N1C008	9	8	6	29	80
N1C012	14	12	10	47	138
N1C015	17	15	12	57	170
N1C025	30	25	21	98	299
N1C030	36	31	25	120	343
N1C040	45	38	31	148	442
N1C050	57	48	39	188	562
N1C060	71	60	49	234	719
N1C070	81	68	55	265	810
N1C080	97	82	66	318	947
N1C085	102	86	69	334	1021
N1C095	115	97	78	377	1161
N1C110	129	109	88	423	1299
N1C120	145	122	98	474	1461

Recommended

* pillars of the uncoupling membrane

† Our recommended spacing is alternating 2-3-2 pillar spacing which produces 12 W/ft². If you are installing over a concrete slab and require more heat, we recommend using 2-pillar spacing which produces 15 W/ft².

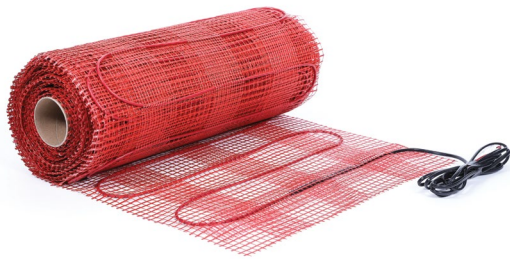
CABLE (240 V)

MODEL #	SQUARE FOOT COVERAGE			LENGTH (FT)	TOTAL WATTS
	3 PILLARS*	2/3/2 PILLARS*†	2 PILLARS*		
	10 W/FT ²	12 W/FT ²	15 W/FT ²		
N2C015	17	14	12	56	165
N2C020	24	21	17	80	224
N2C025	31	26	21	102	302
N2C035	41	35	28	136	403
N2C045	54	46	37	178	523
N2C055	63	53	43	207	632
N2C065	76	64	52	250	742
N2C070	84	71	58	277	842
N2C085	102	86	69	334	1020
N2C090	109	92	74	358	1102
N2C100	120	101	82	393	1211
N2C120	145	121	98	472	1427
N2C135	162	136	110	529	1621
N2C145	172	144	116	561	1704
N2C160	193	162	131	630	1914
N2C170	204	171	138	665	2054
N2C190	233	195	157	757	2314
N2C215	261	219	176	849	2589
N2C240	293	246	198	953	2905

Recommended

Mesh

THE SELF-ADHESIVE ELECTRIC FLOOR HEATING SOLUTION



FAST FACTS & ELECTRICAL DETAILS:

- Zero EMF cable design
- 32 kit sizes; largest 120 V covers 120 ft² and largest 240 V covers 240 ft²
- Thin, cold lead and connection joint

Material	Two single conductor Tefzel-coated resistance wires covered by a tin-plated copper braid and then coated with a durable copolymer (PVC) outer jacket. Heating cable is attached to a self-adhesive fiberglass mesh material.
Operating Voltage	120 V, and 240 V
Power Output	12 watts per square foot
Maximum Continuous Exposure Temperature	194°F (90°C)
Heating Cable	2-wire, grounded, twisted air with PVC outer jacket
Cold Lead	2-wire, 18 AWG plus ground braid layer; 10 ft (3 m) length

BENEFITS:

On-site flexibility. Mesh is adjusted on-site to provide heat coverage where it is desired. Installers only need to know the approximate square footage of the area(s) that need to be heated.

Easy to layout. Mesh comes in a self-adhesive roll which is pressed onto the subfloor and adjusted on-site to provide heat coverage where it is desired.

Comprehensive selection of sizes to choose from. Mesh is available in 32 sizes in both 120 & 240 V which allows installers to choose the perfect sized kit for the area they wish to heat.

Available immediately. Find a local distributor near you at <http://www.nuheat.com/where-to-buy>

Mesh

THE SELF-ADHESIVE ELECTRIC FLOOR HEATING SOLUTION

HOW TO INSTALL:

Step 1: Roll Mesh onto the subfloor with the wire side down. Start the Mesh installation from one corner of the room.

Step 2: Lay out and secure Mesh onto subfloor. To make a turn, cut the Mesh as required (be careful not to cut/damage the heating wire). Separate heating wire from Mesh to maintain heating coverage in small, angled, or difficult areas (if necessary).


Step 3: Embed Mesh in mortar (self-leveling compound or latex-modified thinset).

SELECT MESH KIT FOR YOUR PROJECT

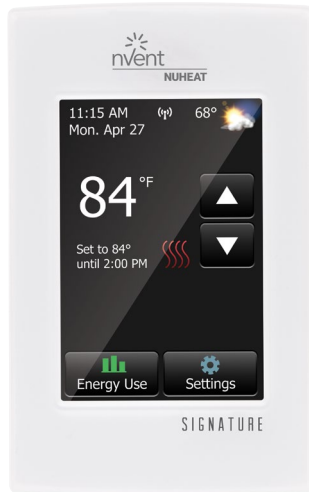
CATALOG NUMBER	FT ² COVERAGE*	DIMENSIONS	WATTS	AMPS	RESISTANCE
120 V Mesh					
N1M012	12	20 in x 8 ft	139	1.2	103
N1M015	15	20 in x 9 ft	170	1.4	85
N1M025	25	20 in x 15 ft	300	2.5	48
N1M030	30	20 in x 19 ft	344	2.9	42
N1M040	40	20 in x 23 ft	442	3.7	33
N1M050	50	20 in x 29 ft	563	4.7	26
N1M060	60	20 in x 36 ft	720	6.0	20
N1M070	70	20 in x 41 ft	809	6.7	18
N1M080	80	20 in x 49 ft	947	7.9	15
N1M085	85	20 in x 52 ft	1022	8.5	14
N1M095	95	20 in x 58 ft	1161	9.7	12
N1M110	110	20 in x 65 ft	1299	10.8	11
N1M120	120	20 in x 73 ft	1461	12.2	10
240 V Mesh					
N2M015	15	20 in x 9 ft	165	0.7	349
N2M020	20	20 in x 13 ft	224	0.9	258
N2M025	25	20 in x 16 ft	302	1.3	191
N2M035	35	20 in x 21 ft	403	1.7	143
N2M045	45	20 in x 28 ft	523	2.2	110
N2M055	55	20 in x 32 ft	632	2.6	91
N2M065	65	20 in x 39 ft	742	3.1	78
N2M070	70	20 in x 43 ft	842	3.5	68
N2M085	85	20 in x 52 ft	1020	4.3	57
N2M090	90	20 in x 55 ft	1102	4.6	52
N2M100	100	20 in x 61 ft	1211	5.0	48
N2M120	120	20 in x 73 ft	1427	5.9	40
N2M135	135	20 in x 82 ft	1621	6.8	36
N2M145	145	20 in x 87 ft	1704	7.1	34
N2M160	160	20 in x 97 ft	1914	8.0	30
N2M170	170	20 in x 102 ft	2054	8.6	28
N2M190	190	20 in x 117 ft	2314	9.6	25
N2M215	215	20 in x 131 ft	2589	10.8	22
N2M240	240	20 in x 147 ft	2905	12.1	20

* Square foot coverage based on square room with 2 in unheated border.

Accessories

	PART NUMBER	DESCRIPTION
Mat Sense Pro 	AC0100	The Mat Sense Pro is an electrical fault indicator that monitors hot, neutral and ground wires simultaneously during Mat or Cable installation. Mat Sense Pro produces an audible alarm if the heating wire is damaged during installation.
Thermostat Probe	AC0008 – 15 ft lead wire	The Thermostat Probe is installed under the flooring surface and connects to nVent NUHEAT thermostats. It is included with all nVent NUHEAT thermostats and provides a temperature reading of the floor.
Repair Kits – Mat & Cable	AC0014 – Mat Repair Kit: AC0016 – Lead Wire Repair Kit for Mats 120 V AC0017 – Lead Wire Repair Kit for Mats 240 V AC0040 – Cable Repair Kit	The Mat Repair Kit and Cable Repair Kit contain all the materials needed to fix Mats or Cable if they have been damaged during installation.
Mechanical Relay	AC0006 – Relay 120 V input & load relay 25 Amps AC0007 – Relay 240 V input & load relay 25 Amps	Relays are used to control multiple circuits with a single thermostat. They are typically used in large installations where the total amperage of the system exceeds the 15A limit of nVent NUHEAT thermostats.
Extra Cable Guides for Cable System – 12pc	AC0038	Extra cable guides for the nVent NUHEAT Cable floor heating system.
Waterproofing Seam Tape	AC0107 – 6 in x 16 ft AC0108 – 6 in x 98 ft	Waterproof seam tape for nVent NUHEAT Membrane installations where waterproofing is necessary.

Thermostats

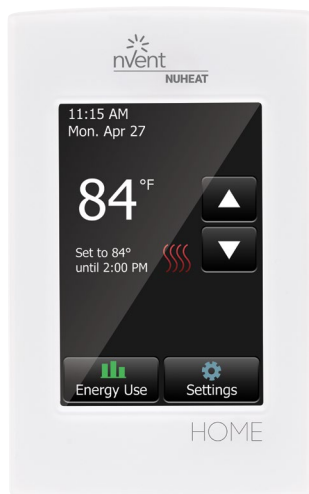


SIGNATURE THERMOSTAT

The WiFi-enabled nVent NUHEAT Signature thermostat is the most connected floor heating control available today.

FAST FACTS

- WiFi-enabled
- Works with Amazon Alexa®, the Google Assistant®, IFTTT®, and more! Full list here: nuheat.com/connected-home
- iOS® and Android® apps
- Open API for custom integrations
- Local weather forecast
- Plus all features of the nVent NUHEAT Home thermostat
- 3-year limited warranty

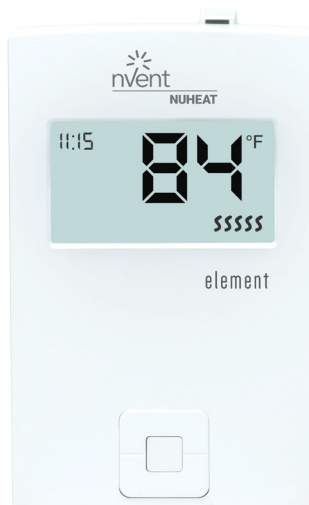


HOME THERMOSTAT

Easy and intuitive programmable thermostat with a high resolution touchscreen interface.

FAST FACTS

- 7 day programmable floor heating thermostat
- Built in on/off switch
- 3.5 in color touchscreen
- Energy use monitor
- Floor sensing and ambient air sensing
- 3-Year Warranty
- Dual-voltage (120 V & 240 V)



ELEMENT THERMOSTAT

Basic electronic thermostat – simplified functionality for ease of use.

FAST FACTS

- Non-programmable floor heating thermostat
- Offers basic control and features for energy usage info and physical on/off switch
- Energy efficient
- Floor sensing and ambient air sensing
- 3-Year Warranty
- Dual-voltage (120 V & 240 V)

nVent NUHEAT Certified PRO



If you are a licensed electrician or tile installer, you can become a nVent NUHEAT Certified PRO. As a Certified PRO installer, you will receive in-depth training that includes:

- An overall understanding of floor heating applications
- How to install all nVent NUHEAT Products
- Floor heating installation best practices, tips and tricks

Be the first to discover new products, innovations and have the opportunity to further deepen your professional expertise and add to your credentials.

The Certified PRO Program will recognize you as a dedicated installer who is trained to the highest industry standards in electric floor heating. Your certification is a reassurance to homeowners that they are hiring a true craftsman who has received best-in-class training for nVent NUHEAT Products.

BENEFITS OF MEMBERSHIP

- Become accredited
- Obtain exclusive rights to offer the nVent NUHEAT 25-Year Total Care Warranty* on your floor heating installations
- Get listed on the Certified PRO installer search tool on nVent.com/NUHEAT
- Take advantage of exclusive promotions and discounts
- Attend exclusive events

Interested? Visit our website <http://www.nuheat.com/certified-pro> to learn more.

Warranty

We believe in the superior quality of our products. That's why we offer a nVent NUHEAT 25-Year Product Warranty on all nVent NUHEAT Floor Heating Systems. We also offer a 25-Year Total Care Warranty for installations completed by Certified PRO installers.



25-Year Product Warranty

- 25-Year Warranty for the value of replacing any nVent NUHEAT floor heating product including Standard Mats, Custom Mats, Cable, Membrane, and Mesh

3-Year Warranty for the value of replacing nVent NUHEAT Thermostats, including Signature, Home, and Element. In order to qualify for this warranty, you must keep a copy of the tests report, relevant invoice, installation photographs and sketches. You must also complete an online warranty registration form within 30 days of installation.



25-Year Total Care Warranty*

- STANDARD PRODUCT WARRANTY PLUS:
 - i. Cost of floor heating repair and installation
 - ii. Cost of floor covering material
 - iii. Cost of installation of floor covering

*Total Care Warranty is an upgrade of our Product Warranty and is offered exclusively and at no additional cost for all installations completed by nVent NUHEAT Certified PRO installers. Learn more about how to become a nVent NUHEAT Certified PRO Installer at nVent.com/NUHEAT

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res.customercare@nvent.com

Our powerful portfolio of brands:

CADDY ERICO HOFFMAN RAYCHEM SCHROFF TRACER



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