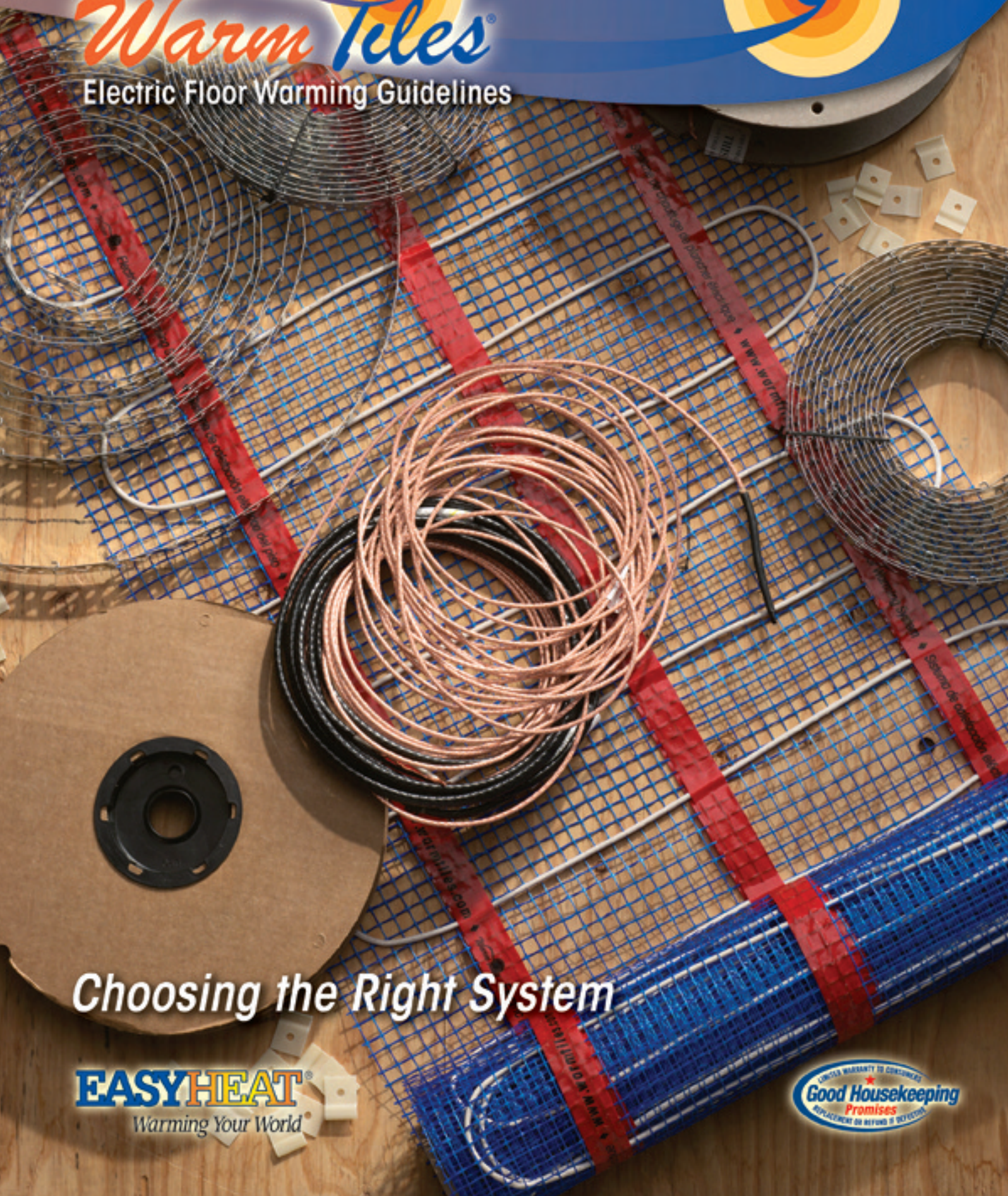




Warm Tiles®

Electric Floor Warming Guidelines



Choosing the Right System

EASYHEAT®
Warming Your World

1 YEAR WARRANTY TO CONSUMER
Good Housekeeping®
Promises
REPLACEMENT OR REFUND IF DEFECTIVE



Floor Warming Cable Kit Includes:

- Warm Tiles Floor Warming Cable
- Strapping • Extra Clips • Warranty Details
- Multi-lingual Installation Instructions
- User's Guide

You Will Need:

Warm Tiles Thermostat Kit, sold separately in Programmable or Non-Programmable models.

You've measured your room. Next, draw your walkable heated area together on the Warm Tiles room layout planner. Now it's time to determine which cable kit is the right one for you!

Choose the correct system for your application by square footage from the Warm Tiles Product Selection Chart for Cable Kits.

If the square footage of your heated area does not match a Warm Tiles Cable Kit, you will need to adjust your walkable heated areas accordingly.

If total square footage is higher:
then reduce the heated area.

If total square footage is lower:
then tighten the cable space.

The Actual Coverage Chart provides you the exact square footage that each cable kit will cover. Heating Cables **CANNOT BE CUT** and must be embedded completely in mortar beneath the floor finish. Remember to follow the detailed instructions provided to you in each cable kit when installing your system.

Actual Coverage Area

Easy Heat Item No.	Standard 3" Spacing		Alternating 3", 1.5" Spacing	
	ft ²	(m ²)	ft ²	(m ²)
120 VOLT KITS				
DFT 1011	11	(0.98)	8	(0.74)
DFT 1016	16	(1.44)	12	(1.11)
DFT 1022	21	(2.00)	17	(1.58)
DFT 1030	30	(2.81)	23	(2.14)
DFT 1039	39	(3.60)	29	(2.69)
DFT 1048	48	(4.43)	37	(3.44)
DFT 1059	59	(5.46)	44	(4.09)
DFT 1069	69	(6.41)	51	(4.74)
DFT 1079	79	(7.34)	58	(5.39)
DFT 1088	88	(8.18)	64	(5.95)
DFT 1098	98	(9.10)	72	(6.69)
DFT 1108	108	(10.03)	80	(7.43)
240 VOLT KITS				
DFT 2021	21	(1.95)	15	(1.39)
DFT 2031	31	(2.88)	23	(2.13)
DFT 2053	53	(4.93)	38	(3.53)
DFT 2065	65	(6.04)	48	(4.46)
DFT 2078	78	(7.25)	57	(5.30)
DFT 2095	95	(8.83)	70	(6.50)
DFT 2118	118	(10.96)	87	(8.08)
DFT 2137	137	(12.73)	102	(9.48)
DFT 2157	157	(14.59)	116	(10.78)
DFT 2175	176	(16.35)	131	(12.17)
DFT 2195	196	(18.21)	145	(13.47)
DFT 2215	216	(20.07)	160	(14.86)

Select Floor Warming kit voltage, 120V or 240V, to match your power supply. For areas larger than 70 ft² (6.50 m²), the 240V kits may be more economical. Use Standard 3" (7.61 cm) spacing for rooms above heated areas. Use Alternate 3", 1.5", 3" (7.61 cm, 3.80 cm, 7.61 cm) spacing for rooms above unheated areas, concrete slabs or high heat loss areas. All measurements are per kit.

Warm Tiles 120V Cable Kits

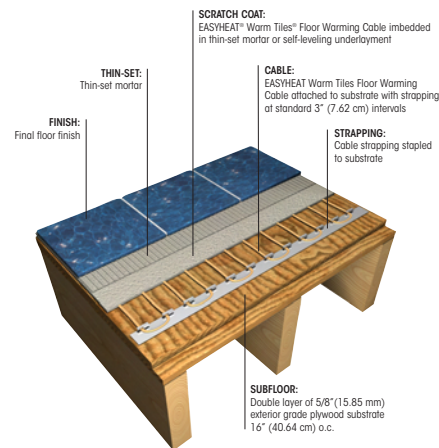
Model No.	Heated Area Standard FT ² (m ²)	Heated Area Alternating FT ² (m ²)	Amps*
DFT 1011 BLUE	9-13 (0.84-1.21)	7-9 (0.65-0.84)	1.1
DFT 1016 RED	14-18 (1.30-1.67)	10-13 (0.93-1.21)	1.6
DFT 1022 GREEN	19-26 (1.77-2.42)	14-19 (1.30-1.77)	2.2
DFT 1030 YELLOW	27-34 (2.51-3.16)	20-26 (1.86-2.42)	3.0
DFT 1039 PURPLE	35-42 (3.25-3.90)	27-33 (2.51-3.07)	4.0
DFT 1048 ORANGE	43-54 (3.99-5.02)	34-39 (3.16-3.62)	5.1
DFT 1059 BROWN	55-65 (5.11-6.04)	40-48 (3.72-4.46)	6.4
DFT 1069 BEIGE	66-72 (6.13-6.69)	49-54 (4.55-5.02)	7.5
DFT 1079 WHITE	73-82 (6.78-7.62)	55-62 (5.11-5.76)	8.5
DFT 1088 PINK	83-92 (7.71-8.55)	63-69 (5.85-6.41)	8.8
DFT 1098 SILVER	93-102 (8.64-9.48)	70-76 (6.50-7.06)	9.6
DFT 1108 BLACK	103-113 (9.57-10.50)	77-85 (7.15-7.90)	10.7

* **CAUTION:** Kit combinations that exceed 10 Amps should be connected by a qualified electrician.

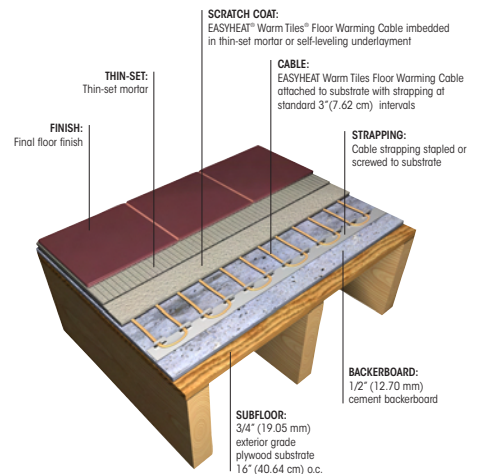
Warm Tiles 240V Cable Kits

Model No.	Heated Area Standard FT ² (m ²)	Heated Area Alternating FT ² (m ²)	Amps*
DFT 2021	18-25 (1.67-2.32)	13-19 (1.21-1.77)	1.1
DFT 2031	26-35 (2.42-3.25)	20-27 (1.86-2.51)	1.6
DFT 2053	48-55 (4.46-5.11)	35-44 (3.25-4.09)	2.6
DFT 2065	60-70 (5.57-6.50)	45-54 (4.18-5.02)	3.3
DFT 2078	71-83 (6.60-7.71)	55-63 (5.11-5.85)	4.0
DFT 2095	90-100 (8.36-9.29)	64-75 (5.95-6.97)	5.1
DFT 2118	110-130 (10.22-12.08)	84-94 (7.80-8.73)	6.3
DFT 2137	131-145 (12.17-13.47)	95-108 (8.83-10.03)	7.5
DFT 2157	146-165 (13.56-15.33)	109-125 (10.13-11.61)	8.4
DFT 2175	166-184 (15.42-17.09)	126-138 (11.71-12.82)	8.8
DFT 2195	185-204 (17.19-18.95)	139-153 (12.91-14.21)	9.6
DFT 2215	205-225 (19.50-20.90)	154-169 (14.31-15.70)	10.7

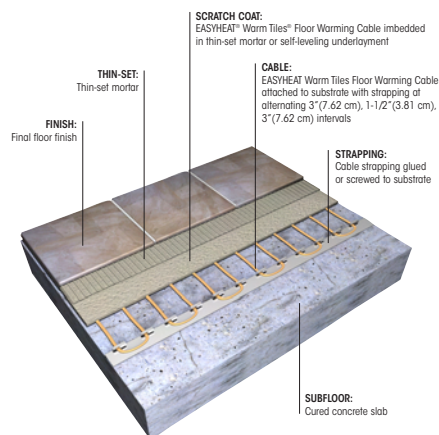
Tile & Stone Over Double Layer Plywood



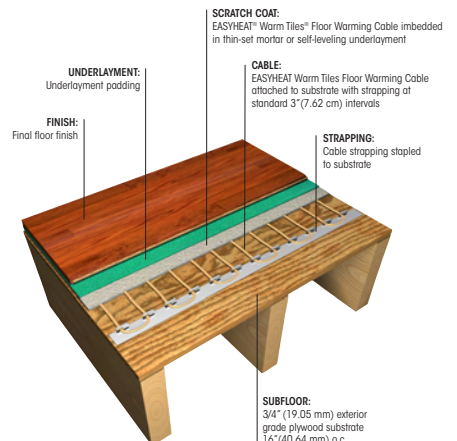
Tile & Stone Over Cement Backerboard



Tile & Stone Over Concrete



Engineered, Floating Wood Floor Over Plywood





Select Floor Warming Kit voltage, 120V or 240V, to match your power supply. For areas larger than about 70 ft² (6.50 m²), the 240V kits may be more economical. All mats are 20" (0.51 m) wide. Multiple Mats may be used to increase heated area ft² (m²) of installation. All measurements are per kit.

Floor Warming Mat Kit Includes:

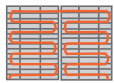
- Warm Tiles® Floor Warming Mat
- User's Guide
- Multi-lingual Installation Instructions
- Warranty Details

You Will Need:

Warm Tiles Thermostat Kit, sold separately in Programmable or Non-Programmable models.

Make the Most of Your Mat

The heating cable of your Warm Tiles Mat Kit is adhered in a serpentine pattern onto lengths of mesh. It is quick and easy to cover large areas. These mats can be angled, turned or completely flipped around in order to cover the space by cutting only the mesh, and moving the remaining sections of mats in a new direction. In doing this, you are creating as much walkable heated area as possible.



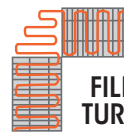
BACK TO BACK TURN

BACK TO BACK: Make a single, straight cut through the entire width of the mesh. Slide the mat around and head the mat back in the opposite direction, keeping the heating cable on top of the substrate, the adhesive side will be on the substrate.



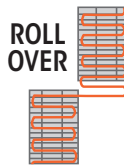
FLIP TURN

FLIP TURN: Make a straight cut on each side of one cable run. Separate the mesh from the cable and rotate the mat so that it continues in a 90 degree direction, keeping the heating cable on top of the mesh, the adhesive side will be on the substrate. Adhere loose cable to the floor with plastic clips provided in your kit.



FILL TURN

FILL TURN: Make a straight cut on each side of two cable runs. Separate the mesh from the cable and slide the mat so that it continues in a 90 degree direction but in a different row, keeping the heating cable on top of the mesh, the adhesive side will be on the substrate. Organize the loose cable between the separated mesh sections into rows. Adhere loose cable to the floor with plastic clips provided in your kit.



ROLL OVER

ROLL OVER: Make a straight cut on each side of two cable runs. Separate the mesh from the cable and slide the mat so that it continues in the same direction but in a different row, keeping the heating cable on top of the mesh, the adhesive side will be on the substrate. Adhere loose cable to the floor with plastic clips provided in your kit.



Warm Tiles 120 V Mat Kits

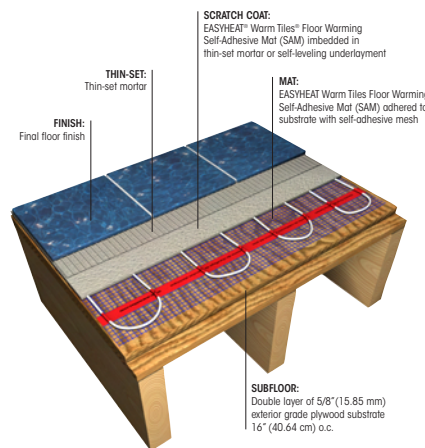
Model No.	Mat Length FT(m)	Heated Area FT ² (m ²)	Amps*
SAM 1010	6.67 (2.03)	12-15 (1.12 - 1.39)	1.3
SAM 1013	8.67 (2.64)	16-19 (1.49 - 1.77)	1.7
SAM 1017	11.33 (3.45)	20-22 (1.86 - 2.04)	2.2
SAM 1020	13.33 (4.06)	23-28 (2.14 - 2.60)	2.5
SAM 1025	16.67 (5.08)	29-36 (2.70 - 3.35)	3.1
SAM 1033	22.00 (6.70)	37-46 (3.44 - 4.28)	4.2
SAM 1042	28.00 (8.53)	47-54 (4.37 - 5.02)	5.3
SAM 1050	33.33 (10.15)	55-66 (5.11 - 6.13)	6.5
SAM 1062	41.33 (12.59)	67-80 (6.23 - 7.44)	8.1
SAM 1075	50.00 (15.24)	81-94 (7.53 - 8.74)	9.7
SAM 1087	58.00 (17.68)	95-106 (8.83 - 9.85)	11.5
SAM 1100	66.67 (20.32)	107-120 (9.95 - 11.15)	13.1

Warm Tiles 240 V Mat Kits

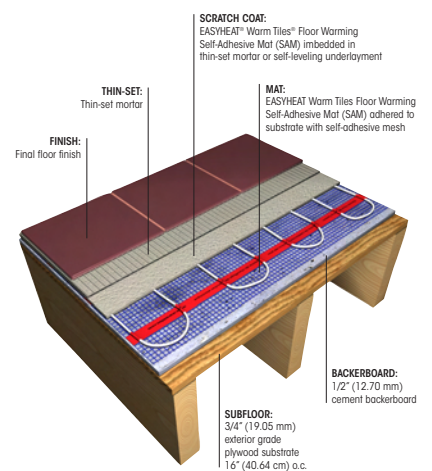
Model No.	Mat Length FT(m)	Heated Area FT ² (m ²)	Amps*
SAM 2010	6.67 (2.03)	12-15 (1.12 - 1.39)	0.6
SAM 2013	8.67 (2.64)	16-19 (1.49 - 1.77)	0.8
SAM 2017	11.33 (3.45)	20-22 (1.86 - 2.04)	1.1
SAM 2020	13.33 (4.06)	23-28 (2.14 - 2.60)	1.3
SAM 2025	16.67 (5.08)	29-36 (2.70 - 3.35)	1.6
SAM 2033	22.00 (6.70)	37-46 (3.44 - 4.28)	2.1
SAM 2042	28.00 (8.53)	47-54 (4.37 - 5.02)	2.8
SAM 2050	33.33 (10.15)	55-66 (5.11 - 6.13)	3.1
SAM 2062	41.33 (12.59)	67-80 (6.23 - 7.44)	4.1
SAM 2075	50.00 (15.24)	81-94 (7.53 - 8.74)	4.8
SAM 2087	58.00 (17.68)	95-106 (8.83 - 9.85)	5.7
SAM 2100	66.67 (20.32)	107-120 (9.95 - 11.15)	6.5

* CAUTION: Kit Combinations that exceed 10 Amps should be connected by a qualified electrician.

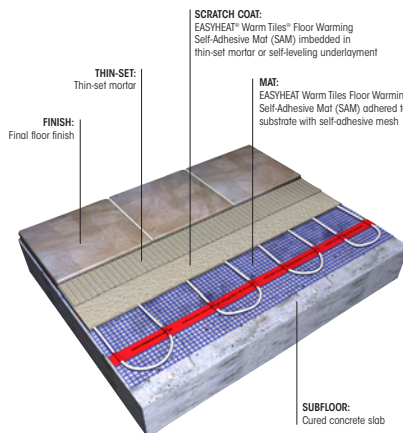
Tile & Stone Over Double Layer Plywood



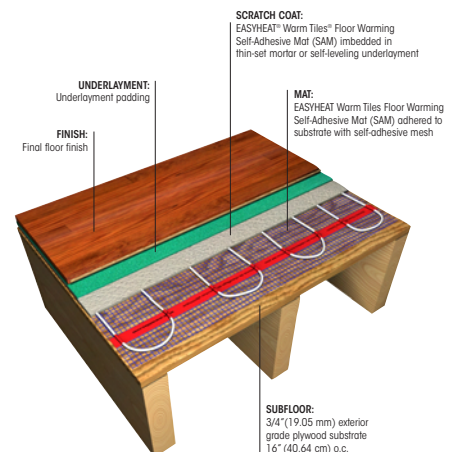
Tile & Stone Over Cement Backerboard



Tile & Stone Over Concrete



Engineered, Floating Wood Floor Over Plywood





Warm Tiles Thermostat Kit Includes:

- 1 Thermostat
- 1 Door without Display Window
- 3 Wire Connectors • 2 Cable Guards
- 1 Screwdriver • 2 #6-32 x 1" screws
- 1 Sensor / Wire Assembly - 10' long
- 1 Pull-Cord • 1 Door Label
- 3 "DO NOT REMOVE" Warning Tags

Warm Tiles Thermostats Provide Comfort, Control and Years of Trouble Free Service

Warm Tiles Thermostats provide consistent comfort and control. Our Floor Sensor is embedded in the mortar just below your tiles, which monitors the actual floor temperature to provide you with accurate comfort levels.

Each model features comfort level programming options as well as a simple off-position selector switch. You may also choose the pre-programmed self-back mode to reduce energy usage by over 50%. Optional decorator doors are available for all Warm Tiles Thermostats.

Warm Tiles ET Model Thermostats offer a simple on/off switch along with a temperature adjustment toggle and accept button.

- Manual operation
- LCD Display
- Built-in ground fault protection**
- Optional decorator door
- Installation accessories included

Warm Tiles FTS model Thermostats offer comfort-level programming options as well as a simple off-position selector switch.

- Preprogrammed for easy setup
- Manual operation setting
- Programmable 7 day or 5/2 day options
- Built-in ground fault protection**
- Optional decorator door
- Installation accessories included

Warm Tiles Floor Warming Thermostat



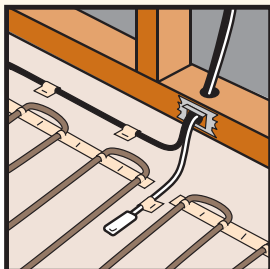
Model	Description	Voltage	Amps*
ET-1	Non-programmable	120V	16
FTS-1	Programmable for 7 or 5/2 days	120V	16
ET-2	Non-programmable	240V	16
FTS-2	Programmable for 7 or 5/2 days	240V	16

* **CAUTION:** Kit combinations that exceed 10 Amps should be connected by a qualified electrician.
 **Per U.S. National Electrical Code - Installation in a bathroom requires that this device be installed on a circuit protected by a separate Ground Fault Circuit Interrupter (GFCI).

Your Warm Tiles Thermostat will regulate only enough electricity to heat your floor to the desired temperature. When the floor reaches your preset temperature, the electricity will cycle off. Since the electricity is generating warmth about one-third of the time, the cost savings are significant. On average, the operating cost is 1¢ per heated square foot per day, regardless of the size of your installation.

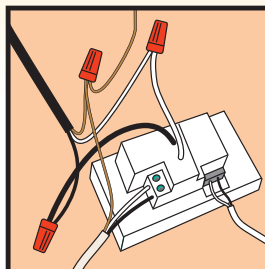
Basic Guidelines for 120 VAC and 240 VAC Floor Warming Kit Combinations Less than 16 Amp Loads

FIG. 1



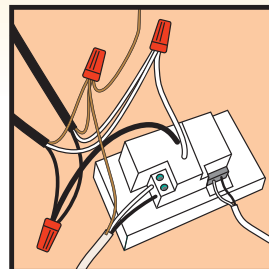
Sensor wire installation tip:
 The sensor wire is located between the cable runs to accurately determine the floor temperature, ensuring that your thermostat will run efficiently.

FIG. 2



Single floor warming kit installation tip:
 The cold lead of your floor warming system will connect directly to the back to the thermostat.

FIG.3



Double floor warming kit installation tip:
 When two or more floor warming systems are used in the same room, both cold leads will connect directly to the back of the thermostat.

Warm Tiles Relay Kits for Electric Floor Warming Systems

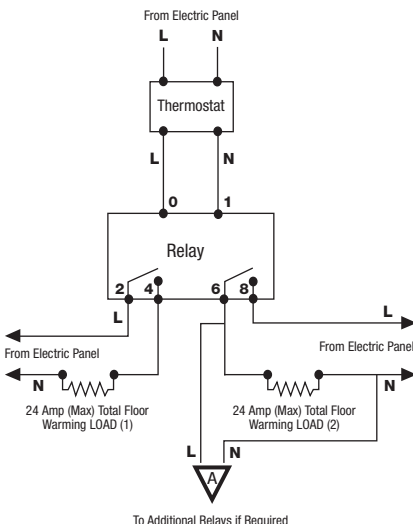
The Warm Tiles Relay Kit allows you to connect two or more floor warming kits in the same room. First you would connect the first line voltage feed to the thermostat. The load connection pigtailed from the thermostat are run to the coil of the relay, which is housed in a separate electrical box. A second line voltage feed is connected to the input

terminals of the relay and the heating cable cold leads are connected to the output terminals. When the thermostat calls for heat, the coil is engaged, connecting the input and output terminals, therefore allowing power to flow to the cables. Remember to follow the instructions provided.

Basic Guidelines for 120 VAC floor warming kit combinations from 16 to 24 Amps requiring the use of a relay.

RK-1 120 VAC Thermostat RELAY KIT

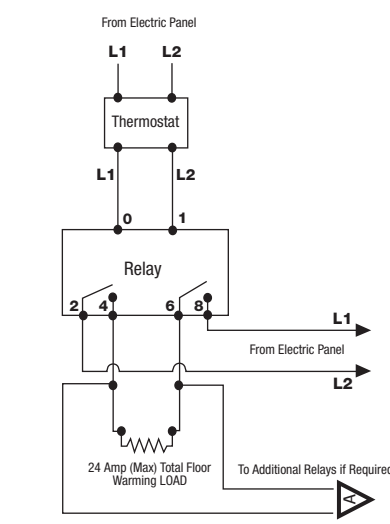
- Provides large area coverage using only 1 thermostat
- Switches 2 separate multiple 120 VAC floor warming systems, each with a total 24 Amp maximum load.



Basic Guidelines for 240 VAC floor warming kit combinations from 16 to 24 Amps requiring the use of a relay.

RK-2 240 VAC Thermostat RELAY KIT

- Provides large area coverage using only 1 thermostat
- Switches multiple 240 VAC floor warming systems with a total 24 Amp maximum load.



Choose the Right System

How do I know which floor warming system to buy?

Warm Tiles® Electric Floor Warming Systems come in two distinct models to suit your application and your budget.

The Warm Tiles Cable System provides unlimited design configurations for even the most difficult shaped room. The Warm Tiles cable allows you to install full floor warming coverage by lacing the cable on the floor wherever you require a heated area. Two different spacing options enable these extremely flexible cables to be installed virtually anywhere. In a typical room above a heated area, simply space the cable 3" (7.61 cm) apart. For a room above an unheated area, on concrete slabs or a high heat loss room such as a solarium, alternate the spacing from 3" (7.61 cm) apart, then 1.5" (3.80 cm) apart, then 3" (7.61 cm) apart and so on. Simply snap the cable into the strapping included in your Cable Installation Kit and follow the Cable installation instructions.

The Warm Tiles "SAM" Self-Adhesive Mat System provides a quick and easy pre-fabricated installation that saves you time and labor cost. The self-adhesive mesh allows you to place the mat on the substrate and have it stay put while you embed the mat in thin-set or self-leveling underlayment.

How do I know how much floor warming to buy?

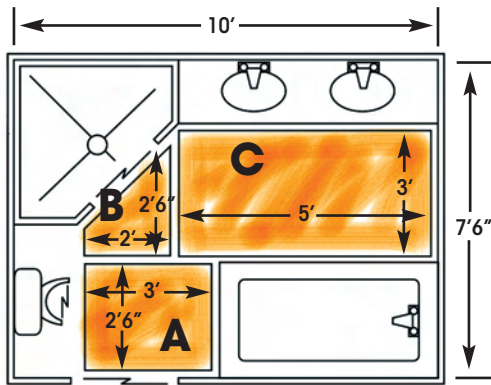
There is no need to install floor warming systems under base cabinets or plumbing fixtures, within 2"– 8" (5.08–20.32 cm) of baseboards and 6" (15.24 cm) from the toilet flange.

- Accurately measure the length and width of the walkable heated areas of your room in sections, as shown on the Warm Tiles® room measurement diagrams.
- Add the walkable heated areas together to determine the total square footage of floor warming that will be needed.
- Choose the correct system for your application by square footage from the Warm Tiles Product Selection Charts.

Warm Tiles Cable Kit Room Measurement Diagram

Colored shaded areas represent where you would install your Cable System.

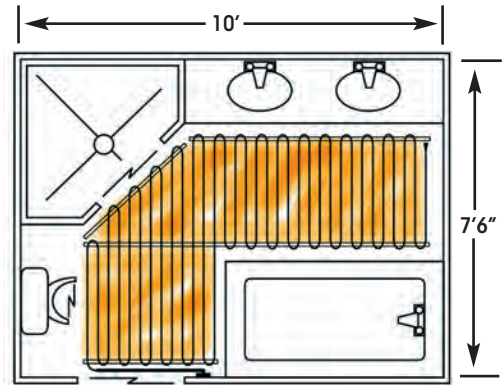
- A** is 2'6" x 3' = 7.5 ft² (0.76 m x 0.91 m = 0.69 m²)
- B** is (2'6" x 2') ÷ 2 = 2.5 ft² [(0.76 m x 0.61 m) ÷ 2 = 0.23 m²]
- C** is 3' x 5' = 15 ft² (0.91 m x 1.52 m = 1.39 m²)
- A + B + C** = ft² (m²) total walkable heated area
7.5 ft² + 2.5 ft² + 15 ft² = **25 ft²**
(0.69 m² + 0.23 m² + 1.39 m² = **2.31 m²**) total heated area



Warm Tiles Cable Kit Room Layout Diagram

Choose the product that most closely matches your heated area square footage from the Product Selection Chart for Warm Tiles Cable Kits. In this example, you would choose 120V DFT 1022 Cable Kit for Standard Spacing or DFT 1030 for Alternate Spacing.

For additional layouts or help in choosing the right product for your project, contact technical services at 800-523-7636 or go to www.warmtiles.com



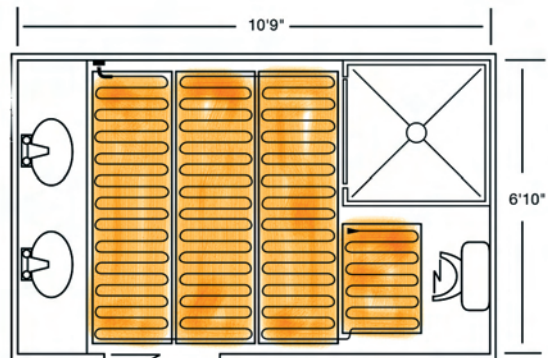
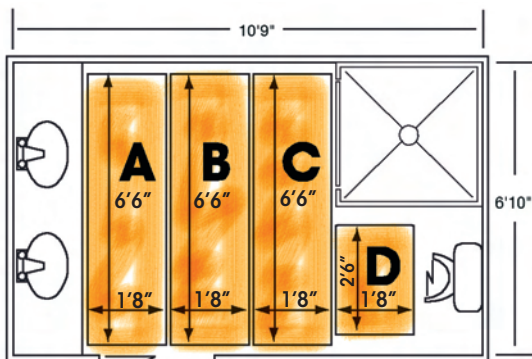
Warm Tiles Mat Kit Room Measurement Diagram

Shaded areas represent installation areas of your Mat System.

- A** is 1'8" x 6'6" = 10.86 ft² (0.51 m x 1.98 m = 1.01 m²)
 - B** is 1'8" x 6'6" = 10.86 ft² (0.51 m x 1.98 m = 1.01 m²)
 - C** is 1'8" x 6'6" = 10.86 ft² (0.51 m x 1.98 m = 1.01 m²)
 - D** is 1'8" x 2'6" = 4.18 ft² (0.51 m x 0.76 m = 0.39 m²)
 - A + B + C + D** = ft² (m²) total walkable heated area
10.86 ft² + 10.86 ft² + 10.86 ft² + 4.18 ft² = **36.78 ft²**
(1.01 m² + 1.01 m² + 1.01 m² + 0.39 m² = **3.42 m²**) total heated area
- Choose the product that most closely matches your heated area square footage from the Product Selection Chart for Warm Tiles Mat Kits. In this example, you would choose SAM 1033 Mat Kit.

Choose the product that most closely matches your heated area square footage from the Product Selection Chart for Warm Tiles Mat Kits. In this example, you would choose SAM 1033 Mat Kit.

For additional layouts or help in choosing the right product for your project, contact technical services at 800-523-7636 or go to www.warmtiles.com



Choosing And Installing Your Warm Tiles® Electric Floor Warming System

Why not enjoy the feel of your floor!

Did you ever notice that if you're feet feel warm, the rest of your body is comfortable? Warm Tiles creates a floor that is comforting, providing an even temperature while hidden under your floor finish.

Warm Tiles comfort costs less than a penny per square foot per day and can operate on ordinary electric current. Warm Tiles radiates this warmth through a network of low profile warming cables, hardware and electrical controls for an economical and long lasting floor warming system.

The system may be installed directly on plywood, concrete or cement backerboard substrates by simply placing the system in the mortar just below the floor finish.

UL Listed and CSA Certified, Warm Tiles provides a clean, energy efficient floor warming system that only draws as much energy as is needed to maintain your predetermined temperature on the floor surface.

The Warm Tiles Systems can be installed by professional electricians, tile installers, general building contractors or skilled Do-It-Yourselfers who have adequate knowledge of flooring and electrical wiring. All installations must be in accordance with all applicable national (CEC and NEC) and local electrical and building codes, regulations and inspection procedures. Electrical inspection may be required during and/or after system installation. Check with your local electrical inspection department before beginning installation. When installing your tile or stone, follow standard tiling procedures of the Tile Council of America for the United States or by the Terrazzo, Tile and Marble Association of Canada.

Worldwide Availability and On-Site Technical Assistance

Our extensive nationwide production facilities and network of local distributors assure the timely availability of the EASYHEAT® Warm Tiles® Electric Floor Warming System regardless of where the project is being constructed. Representatives are available to provide specification assistance, job site technical support and post-installation service. EASYHEAT technical resources, such as instructional installation videos and on-line tutorials, are available in three languages, facilitating proper installation techniques.

Advantages of the Warm Tiles System

- Industry Leader for over 40 years
- Providing warmth under tile, stone, laminates and engineered wood* floors
- Easy and quick to install
- Under 2 hours to install an average floor warming system
- Energy and cost efficient
- Only 1¢ per heated square foot per day
- UL and CSA approved
- 15 year Limited Warranty

Recommended for interior use only, the Warm Tiles System can be used over a variety of substrates.

- Exterior Grade Plywood**
- Concrete/masonry
- Cement Mortar Beds
- Existing Ceramic Tile
- Cement Backer Board†
- Cement Terrazzo
- Properly prepared Vinyl
- Non-soluble cut-back adhesive

A wide variety of final finishes are ideal for use with the Warm Tiles System.

- Ceramic
- Porcelain
- Terrazzo
- Glass mosaics
- Natural Stone
- Agglomerates
- Engineered wood and laminates*

* For use under engineered, floating wood floors only. Not approved for nail-down installations.

** Interior use only.

† Consult cement backerboard manufacturer for specific installation recommendations.



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