

Warm Tiles™ DFT Series: Free-form Cable with Plastic Strapping

Floor Warming Cables. For Residential and Commercial Applications.

Product Overview

- Warm Tiles™ Floor Warming Cables (DFT) provide for a custom layout, based solely on walkable area.
- Plastic strapping with two different spacing options allow for the design of oversized heat output for concrete slab floors.

Material Applications

- DFT cables are designed to gently and evenly warm flooring materials such as:
 - Ceramic, porcelain or glass tile
 - Marble, granite or slate
 - Laminate hardwoods
 - LVT (Luxury Vinyl Tile)
 - Stone (poured or dimensional)
- Room Applications:
 - Bathrooms
 - Kitchens
 - Front entrance ways and hallways
 - Basement Rec Rooms
 - Master bedrooms
 - Yoga studios

Features

- Available in 120 and 240 VAC kits.
- Easily installed on subfloor or concrete slab, in thin-set or self-leveling compound materials.
- Supplied with standard 10 ft (3.05 m) cold leads, are designed to supply at least 12 W/ft² – 15 W/ft² when installed per instructions.
- Unlimited design configurations for even the most difficult layouts.
- Low profile cable thickness with minimal increase in floor height.
- Included plastic strapping strips secure the DFT cable and plastic wire clips secure the floor temperature probe.
- Designed for two different spacing options between the cables depending on customer preferences, desired heat output or subfloor material.
- Can also be installed within an uncoupling membrane.
- Use only uncoupling membranes that are rated for +194°F (+90°C) or greater and are approved by the manufacturer for having heating cable installed within them. Contact your local sales representative for details.
- Fifteen year limited warranty.
- Includes floor temperature sensor probe with 15' (3m) lead.
- English, French and Spanish translated Instructions.

DFT Strapping Features

- DFT Cable Strapping is constructed of an all plastic material which does not tear, cut or harm the cable in any way during installation and can help to protect the cable from damage when walked on or from objects dropped onto it.
- Strips come in one foot increments, with mating tabs to connect multiple strip together for an unlimited length run.
- Strapping lays perfectly flat, keeping the cables low to the surface and minimizing any height increases to the floor.
- Our rounded channel design allows the cable to glide smoothly when tensioning and will not bend or cause pinch points.



FLOOR WARMING

Floor Warming Thermostats

Warm Tiles thermostats provide comfort, control and years of trouble-free service. Our temperature sensor, embedded in the mortar just below your tiles, monitors the actual floor temperature to provide you with accurate comfort levels. All thermostats have built-in ground fault protection (GFCI), 15 amp integral relay, operate on 120/240 VAC and come with a 15' temperature sensor. All thermostats are sold separately.

Thermostats			
Model Number	Display/Controls	Key Features	Rating
ESW	Color touch-screen	Wifi enabled, app for remote control, individual 7-day programmability	Best
ES	Color touch-screen	Individual 7-day programmability	Better
FGS	Mono-color display with push-buttons	7-day or 5/2-day programmability	Good
FG	Mono-color display with push-buttons	Manual On/Off only control	Value

Certifications

- UL Listed, CSA Certified and conform to European Directives.

What's included

- DFT cable, plastic strapping, floor temperature probe with 15' (3m) lead, probe/cable clips, tri-language Installation Instructions.

Warm Tiles™ DFT Cable

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Measuring Walkable Area

Warm Tiles™ Warming Cables (DFT) provide 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. Find each floor section's square area by multiplying the length and width of each walkable floor section. Then add each floor section's walkable square area together for the installation's total walkable square area.

DFT Cable Kit Room Measurement Diagram

Shaded areas represent installation area of your DFT cable system.

A is 2 ft 6 in x 3 ft = 7.5 ft² (0.76 m x 0.91 m = 0.69 m²)

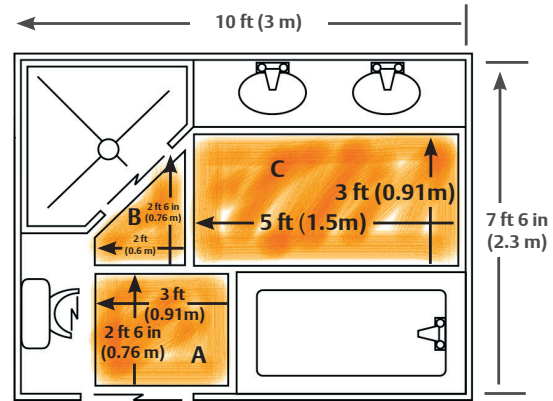
B is 2 ft 6 in x 2 ft ÷ 2 = 2.5 ft² [(0.76 m x 0.61 m) ÷ 2 = 0.23 m²]

C is 3 ft x 5 ft = 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

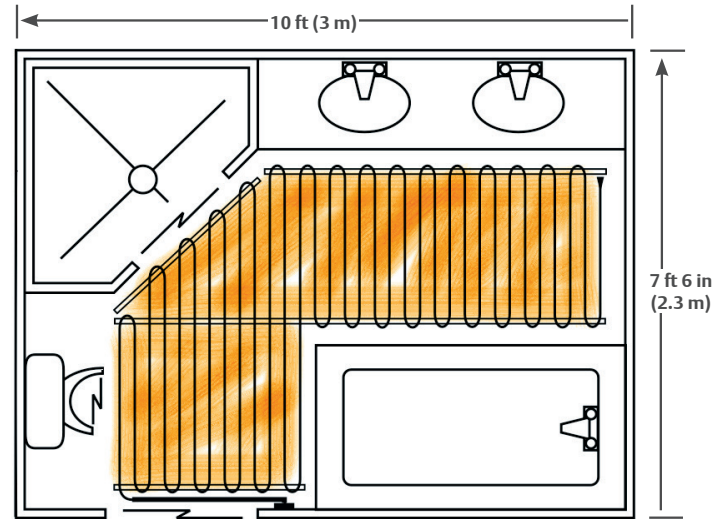


DFT Cable Kit Room Layout Diagram

Choose the product that most closely matches your heated area square footage from the product selection for Warm Tiles™ Cable Kits.

In this example, you would choose 120 VAC 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 your local sales representative.



Warnings and Notes

- Per NEC and CEC requirements ALWAYS use a ground fault protection device (GFCI) to reduce the danger of fire from a damaged or improperly installed heating cable. Electrical fault currents caused by damaged or improperly installed cable MAY NOT BE LARGE ENOUGH to trip a conventional circuit breaker.
- Heating cables must be installed in compliance with all national, state/provincial and local codes. Check with your local electrical inspector for specific details.
- The Warm Tiles™ heating cables must be completely embedded in a cement-based layer of mortar prior to installation of the flooring material. DFT cable with strapping will add approximately 0.21 in (6 mm) to the floor height. If cables are exposed, they could be damaged which would expose live electrical parts and/or cause the cable to overheat.
- Cables are designed as a supplementary heat source and not as a primary source of space heating for any room in which it is installed.
- Floor areas may be warmed with a single cable or by using a combination of cables,

provided the area to be heated is equal to the sum of the coverage area of the individual cables.

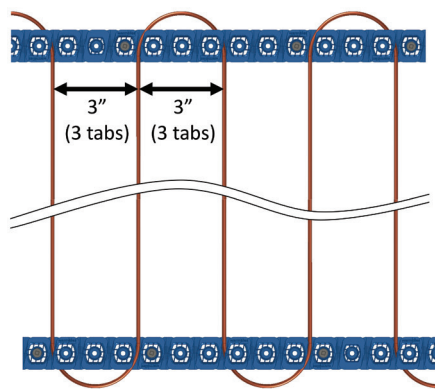
- Heating cable must not touch, cross or overlap itself at any point and cable must not be closer than 1-1/2 in (38 mm) to adjacent cable.
- Do not install heating cable under any type of nailed-down or stapled flooring. Floor nails and staples can damage the cable resulting in exposed live electrical parts and/or result in the cable overheating.
- When installing cable in floors that are routinely expected to be wet, a waterproofing membrane must be installed above the cables to keep them dry.
- Do not bend the heating cable at right angles – this could damage the electrical insulation; minimum bending radius is 3/4 in (19 mm).
- **DO NOT CUT THE HEATING CABLE.** Only the cold lead may be cut to suit hook-up in the electrical connection box (ECB).

Warm Tiles™ DFT Cable

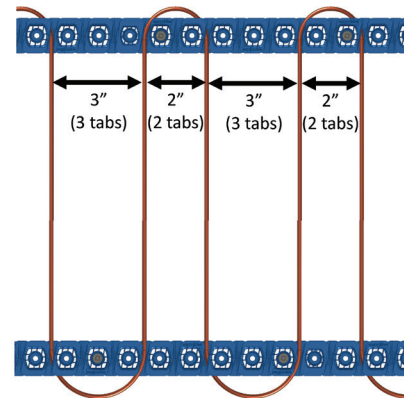
Floor Warming Cables. For Residential and Commercial Applications.

Considerations For Choosing a Cable

Floor areas may be warmed with a single cable or by using a combination of cables, provided the area to be heated is equal to the sum of the coverage area of the individual cables. Cables are normally installed using a 3 in (76.2 mm) spacing between cable runs (Standard Heating Cable Spacing). For rooms located above unheated areas, including concrete slabs on grade, the recommended spacing is 3 in – 2 in – 3 in – 2 in (75 mm -50 mm -75 mm -50 mm), etc., between cable runs (Alternating Heating Cable Spacing). The same spacing should be used over the entire installation, as non-uniform spacing will result in areas that are either significantly cooler or warmer than other areas. It is recommended to carefully measure the actual floor area to be heated (Heated Area) and use the product selection chart to verify that each cable is the correct size and voltage. Select 120 Vac or 240 Vac to match your power supply.



Standard Cable Spacing
3 in (75 mm)
spacing between cable runs



Alternating Cable
3 in – 2 in – 3 in – 2 in (75 mm -50 mm -75 mm -50 mm)
spacing between cable runs

FLOOR WARMING

DFT 120 VAC Cable Kits

Model	Heated Area ft ² (m ²)		Amps ①
	Standard	Alternating	
DFT 1011	10 - 13 (0.9 - 1.2)	8 - 10 (0.7 - 0.9)	1.1
DFT 1016	14 - 18 (1.3 - 1.7)	11 - 14 (1.0 - 1.3)	1.6
DFT 1022	19 - 26 (1.8 - 2.4)	15 - 22 (1.4 - 2.0)	2.2
DFT 1030	27 - 34 (2.5 - 3.2)	23 - 28 (2.2 - 2.6)	3.0
DFT 1039	35 - 42 (3.3 - 3.9)	29 - 35 (2.7 - 3.3)	4.0
DFT 1048	43 - 54 (4.0 - 5.0)	36 - 45 (3.3 - 4.2)	5.1
DFT 1059	55 - 65 (5.1 - 6.0)	46 - 54 (4.3 - 5.0)	6.4
DFT 1069	66 - 72 (6.1 - 6.7)	55 - 60 (5.1 - 5.6)	7.4
DFT 1079	73 - 82 (6.8 - 7.6)	61 - 68 (5.7 - 6.3)	8.5
DFT 1088	83 - 92 (7.7 - 8.5)	69 - 76 (6.4 - 7.1)	8.8
DFT 1098	93 - 102 (8.6 - 9.5)	77 - 84 (7.2 - 7.8)	9.6
DFT 1108	103 - 113 (9.6 - 10.5)	85 - 95 (7.9 - 8.8)	10.7

DFT 240 VAC Cable Kits

Model	Heated Area ft ² (m ²)		Amps ①
	Standard	Alternating	
DFT 2021	18 - 25 (1.7 - 2.3)	15 - 21 (1.4 - 1.9)	1.1
DFT 2031	26 - 35 (2.4 - 3.3)	22 - 29 (2.0 - 2.7)	1.6
DFT 2053	48 - 55 (4.5 - 5.1)	40 - 46 (3.7 - 4.3)	2.6
DFT 2065	60 - 70 (5.6 - 6.5)	50 - 58 (4.6 - 5.4)	3.3
DFT 2078	71 - 83 (6.6 - 7.7)	59 - 70 (5.5 - 6.5)	4.0
DFT 2095	90 - 100 (8.4 - 9.3)	75 - 84 (6.9 - 7.8)	5.1
DFT 2118	110 - 130 (10.2 - 12.1)	91 - 108 (8.5 - 10.0)	6.3
DFT 2137	131 - 145 (12.2 - 13.5)	109 - 120 (10.1 - 11.1)	7.4
DFT 2157	146 - 165 (13.6 - 15.3)	121 - 137 (11.2 - 12.7)	8.5
DFT 2175	166 - 184 (15.4 - 17.1)	138 - 153 (12.8 - 14.2)	8.8
DFT 2195	185 - 204 (17.2 - 19.0)	154 - 169 (14.3 - 15.7)	9.6
DFT 2215	205 - 225 (19.1 - 20.9)	170 - 187 (15.8 - 17.4)	10.7

① Caution: Kit combinations that exceed 10 Amps should be connected by a qualified electrician.

Warm Tiles™ DFT Cable

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Product Selection

120 Vac						
Catalog Number	Description	Heated Area ft ² (m ²)		# of Strips Included	Shipping Weight lb (kg)	UPC
		Standard ①	Alternating ②			
DFT1011	"Blue" cable kit	10 - 13 (0.9 - 1.2)	8 - 10 (0.7 - 0.9)	9	4 (2)	013627-01611
DFT1016	"Red" cable kit	14 - 18 (1.3 - 1.7)	11 - 14 (1.0 - 1.3)	12	4 (2)	013627-01612
DFT1022	"Green" cable kit	19 - 26 (1.8 - 2.4)	15 - 22 (1.4 - 2.0)	18	4.5 (2)	013627-01613
DFT1030	"Yellow" cable kit	27 - 34 (2.5 - 3.2)	23 - 28 (2.2 - 2.6)	23	9.5 (4.3)	013627-01614
DFT1039	"Purple" cable kit	35 - 42 (3.3 - 3.9)	29 - 35 (2.7 - 3.3)	23	5 (3)	013627-01615
DFT1048	"Orange" cable kit	43 - 54 (4.0 - 5.0)	36 - 45 (3.3 - 4.2)	41	6 (3)	013627-01616
DFT1059	"Brown" cable kit	55 - 65 (5.1 - 6.0)	46 - 54 (4.3 - 5.0)	41	7 (3)	013627-01617
DFT1069	"Sage" cable kit	66 - 72 (6.1 - 6.7)	55 - 60 (5.1 - 5.6)	44	7 (3)	013627-01618
DFT1079	"White" cable kit	73 - 82 (6.8 - 7.6)	61 - 68 (5.7 - 6.3)	50	7 (3.2)	013627-01619
DFT1088	"Pink" cable kit	83 - 92 (7.7 - 8.5)	69 - 76 (6.4 - 7.1)	50	7.5 (3.4)	013627-01609
DFT1098	"Silver" cable kit	93 - 102 (8.6 - 9.5)	77 - 84 (7.2 - 7.8)	59	8 (3.6)	013627-01608
DFT1108	"Black" cable kit	103 - 113 (9.6 - 10.5)	85 - 95 (7.9 - 8.8)	65	8.5 (3.9)	013627-01607

240 Vac						
Catalog Number	Description	Heated Area ft ² (m ²)		# of Strips Included	Shipping Weight lb (kg)	UPC
		Standard ①	Alternating ②			
DFT2021	"A" cable kit	18 - 25 (1.7 - 2.3)	15 - 21 (1.4 - 1.9)	17	8 (3.6)	013627-01621
DFT2031	"B" cable kit	26 - 35 (2.4 - 3.3)	22 - 29 (2.0 - 2.7)	24	10 (4.5)	013627-01622
DFT2053	"C" cable kit	48 - 55 (4.5 - 5.1)	40 - 46 (3.7 - 4.3)	42	12 (5.4)	013627-01623
DFT2065	"D" cable kit	60 - 70 (5.6 - 6.5)	50 - 58 (4.6 - 5.4)	50	15.4 (7)	013627-01624
DFT2078	"E" cable kit	71 - 83 (6.6 - 7.7)	59 - 70 (5.5 - 6.5)	50	16.2 (7.4)	013627-01625
DFT2095	"F" cable kit	90 - 100 (8.4 - 9.3)	75 - 84 (6.9 - 7.8)	75	18.7 (8.5)	013627-01626
DFT2118	"G" cable kit	110 - 130 (10.2 - 12.1)	91 - 108 (8.5 - 10.0)	75	21.2 (9.6)	013627-01627
DFT2137	"H" cable kit	131 - 145 (12.2 - 13.5)	109 - 120 (10.1 - 11.1)	75	22 (10)	013627-01628
DFT2157	"I" cable kit	146 - 165 (13.6 - 15.3)	121 - 137 (11.2 - 12.7)	100	12 (5.4)	013627-01629
DFT2175	"J" cable kit	166 - 184 (15.4 - 17.1)	138 - 153 (12.8 - 14.2)	100	12.7 (5.7)	013627-01630
DFT2195	"K" cable kit	185 - 204 (17.2 - 19.0)	154 - 169 (14.3 - 15.7)	125	13.8 (6.3)	013627-01631
DFT2215	"L" cable kit	205 - 225 (19.1 - 20.9)	170 - 187 (15.8 - 17.4)	125	15.1 (6.8)	013627-01632

DFT Strapping Kit

Catalog number	Description	Dimensions in (mm)	Package Quantity	Weight lb (kg)	UPC
DFTS	One foot plastic strapping strips with built-in mating inter-connecting male/female connectors	5" x 15" (125mm x 375mm)	10	0.9 (0.4)	013627-00137-0

All DFT cable kits include enough strapping to secure cable for square or rectangular rooms without center runs. *For hallways and non-standard sized rooms, additional strapping strips may be needed (sold separately).*

The DFTS Plastic strapping strip kit gives an installer the additional strapping strips needed for long narrow hallways and non-standard room configurations. These include areas such as:

- Long, narrow hallways
- Irregularly shaped rooms
- Areas with curves, angles, or around the-corner bends
- Kitchens with an island
- Basements with large supporting posts/columns

① Use standard spacing on floors that are located above heated areas.

② Use alternating spacing on concrete slab floors or in rooms with excessive heat loss such as solariums.