

Warm Tiles™ DFT Cables

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.
- Two different spacing options allow for variable heat output necessary in applications over unheated sub-floors.

Applications

- DFT cables are designed to gently and evenly warm flooring materials such as:
 - Marble
 - Ceramic
 - Glass and porcelain tile
 - Slate
 - Granite
 - Poured or dimensional stone
 - Laminate and certain engineered hardwood products

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 strapping roll(s) and can be cut to any length required.
 - 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.

Accessories

- It is recommended that a floor temperature sensing thermostat be used to control the cable system. See *Warm Tiles™ Thermostats*.
- Relays can be used in conjunction with a thermostat to control large heated areas where the power requirement exceeds 15 amps. We offer relay kits for use with thermostats. See *Warm Tiles™ Floor Warming Accessories*.

Certifications

- UL Listed, CSA Certified and conform to European Directives.
- The installation of the DFT cable in an uncoupling membrane is certified to Canadian standards only.



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 0.344 in (8.74 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 not designed 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).

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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)

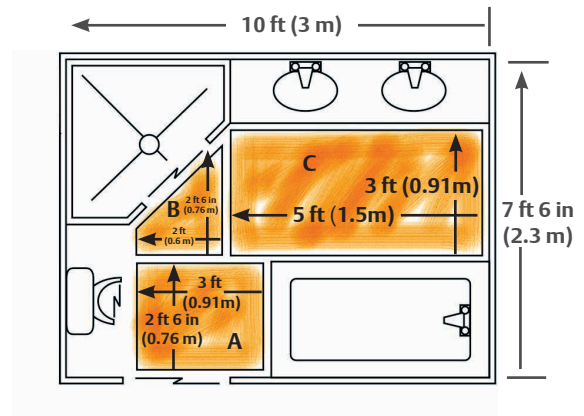
B is 2 ft 6 in x 2 ft ÷ 2 = 2.5 ft² [(0.76 m x 0.61 m) ÷ 2 = 0.23 m²]

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



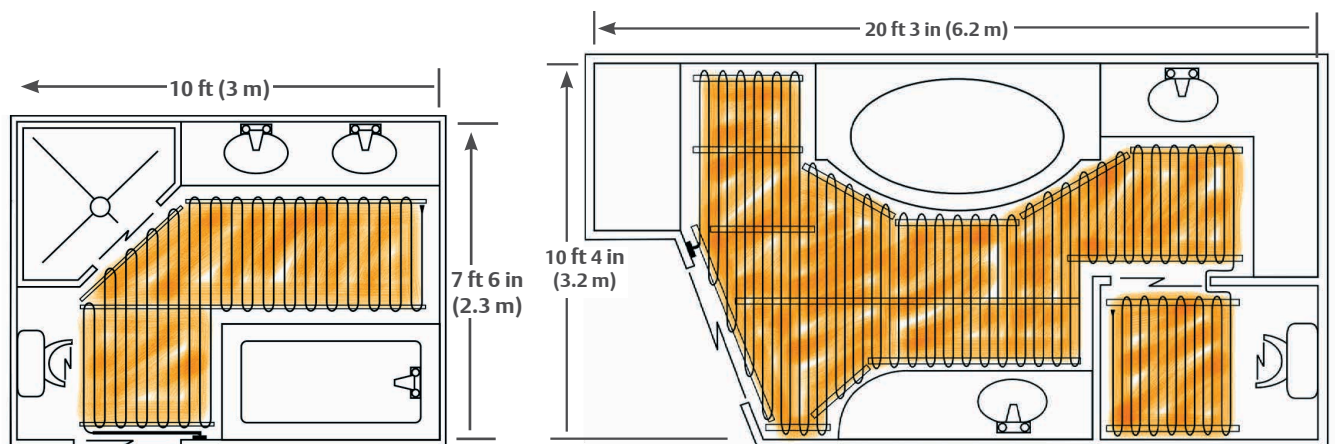
DFT Cable Kit Room Layout Diagram

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.

In this example, you would choose 240 Vac DFT 2118 cable kit for standard spacing or DFT 2157 for alternate spacing.

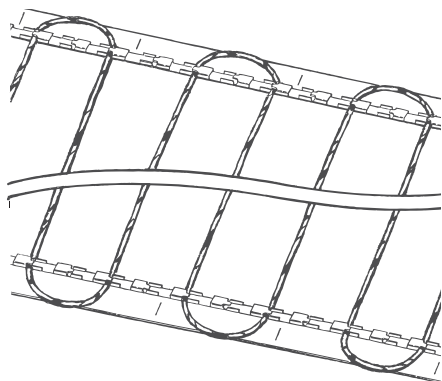


Warm Tiles™ DFT Cables

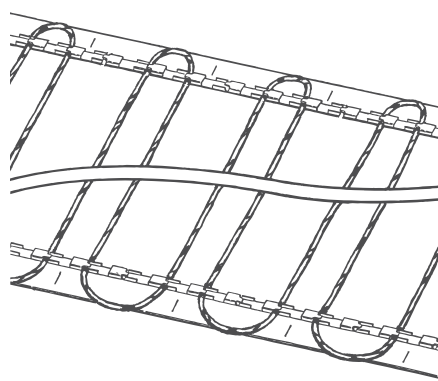
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Considerations For Choosing a Cable

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 – 1-1/2 in – 3 in (76.2 mm – 38.1 mm – 76.2 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. 240 Vac is generally more economical for areas larger than 70 ft² (6.50 m²).



Standard Cable Spacing
3 in (76.2 mm)
spacing between cable runs



Alternate Cable Spacing
3 in – 1-1/2 in – 3 in (76.2 mm – 38.1 mm – 76.2 mm)
spacing between cable runs

DFT 120 Vac Cable Kits

Model	Heated Area ft ² (m ²)		Amps ①
	Standard	Alternating	
DFT 1011	9-13 (0.84-1.21)	7-9 (0.65-0.84)	1.1
DFT 1016	14-18 (1.30-1.67)	10-13 (0.93-1.21)	1.6
DFT 1022	19-26 (1.77-2.42)	14-19 (1.30-1.77)	2.2
DFT 1030	27-34 (2.51-3.16)	20-26 (1.86-2.42)	3.0
DFT 1039	35-42 (3.25-3.90)	27-33 (2.51-3.07)	4.0
DFT 1048	43-54 (3.99-5.02)	34-39 (3.16-3.62)	5.1
DFT 1059	55-65 (5.11-6.04)	40-48 (3.72-4.46)	6.4
DFT 1069	66-72 (6.13-6.69)	49-54 (4.55-5.02)	7.5
DFT 1079	73-82 (6.78-7.62)	55-62 (5.11-5.76)	8.5
DFT 1088	83-92 (7.71-8.55)	63-69 (5.85-6.41)	8.8
DFT 1098	93-102 (8.64-9.48)	70-76 (6.50-7.06)	9.6
DFT 1108	103-113 (9.57-10.50)	77-85 (7.15-7.90)	10.7

DFT 240 Vac Cable Kits

Model	Heated Area ft ² (m ²)		Amps ①
	Standard	Alternating	
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)	2.2
DFT 2065	60-70 (5.57-6.50)	45-54 (4.18-5.02)	3.0
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)	6.4
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)	8.5
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 (19.5-20.90)	154-169 (14.31-15.70)	10.7

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

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Product Selection

120 Vac						
Catalog Number	Description	Heated Area ft ² (m ²)		Carton Quantity	Carton Weight lb (kg)	UPC
		Standard ①	Alternating ②			
DFT1011	"Blue" cable kit	9-13 (0.84-1.21)	7-9 (0.65-0.84)	2	7.5 (3.4)	01362701611
DFT1016	"Red" cable kit	14-18 (1.30-1.67)	10-13 (0.93-1.21)	2	8 (3.6)	01362701612
DFT1022	"Green" cable kit	19-26 (1.77-2.42)	14-19 (1.30-1.77)	2	9 (4.1)	01362701613
DFT1030	"Yellow" cable kit	27-34 (2.51-3.16)	20-26 (1.86-2.42)	2	9.5 (4.3)	01362701614
DFT1039	"Purple" cable kit	35-42 (3.25-3.90)	27-33 (2.51-3.07)	2	10 (4.5)	01362701615
DFT1048	"Orange" cable kit	43-54 (4.00-5.02)	34-39 (3.16-3.62)	2	12 (5.4)	01362701616
DFT1059	"Brown" cable kit	55-65 (5.11-6.04)	40-48 (3.72-4.46)	2	13 (5.9)	01362701617
DFT1069	"Beige" cable kit	66-72 (6.13-6.69)	48-54 (4.46-5.02)	2	13 (5.9)	01362701618
DFT1079	"White" cable kit	73-82 (6.78-7.62)	55-62 (5.11-5.86)	1	7 (3.2)	01362701619
DFT1088	"Pink" cable kit	83-92 (7.71-8.55)	63-69 (5.85-6.41)	1	7.5 (3.4)	01362701609
DFT1098	"Silver" cable kit	93-102 (8.64-9.48)	70-76 (6.50-7.06)	1	8 (3.6)	01362701608
DFT1108	"Black" cable kit	103-113 (9.57-10.50)	77-85 (7.15-7.90)	1	8.5 (3.9)	01362701607

240 Vac						
Catalog Number	Description	Heated Area ft ² (m ²)		Carton Quantity	Carton Weight lb (kg)	UPC
		Standard ①	Alternating ②			
DFT2021	"A" cable kit	18-25 (1.67-2.32)	13-19 (1.21-1.77)	2	8 (3.6)	01362701621
DFT2031	"B" cable kit	26-35 (2.42-3.25)	20-27 (1.86-2.51)	2	10 (4.5)	01362701622
DFT2053	"C" cable kit	48-55 (4.46-5.11)	35-44 (3.25-4.09)	2	12 (5.4)	01362701623
DFT2065	"D" cable kit	60-70 (5.57-6.50)	45-54 (4.18-5.02)	2	15.4 (7)	01362701624
DFT2078	"E" cable kit	71-83 (6.60-7.71)	55-63 (5.11-5.86)	2	16.2 (7.4)	01362701625
DFT2095	"F" cable kit	90-100 (8.36-9.29 m)	64-75 (5.95-6.97)	2	18.7 (8.5)	01362701626
DFT2118	"G" cable kit	110-130 (10.22-12.08)	84-94 (7.80-8.73)	2	21.2 (9.6)	01362701627
DFT2137	"H" cable kit	131-145 (12.17-13.47)	95-108 (8.83-10.03)	2	22 (10)	01362701628
DFT2157	"I" cable kit	146-165 (13.56-15.33)	109-125 (10.13-11.61)	1	12 (5.4)	01362701629
DFT2175	"J" cable kit	166-184 (15.42-17.10)	126-138 (11.71-12.82)	1	12.7 (5.7)	01362701630
DFT2195	"K" cable kit	185-204 (17.19-18.95)	139-153 (12.91-14.21)	1	13.8 (6.3)	01362701631
DFT2215	"L" cable kit	205-224 (19.05-20.81)	154-169 (14.31-15.70)	1	15.1 (6.8)	01362701632

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.