STARTER GUIDE

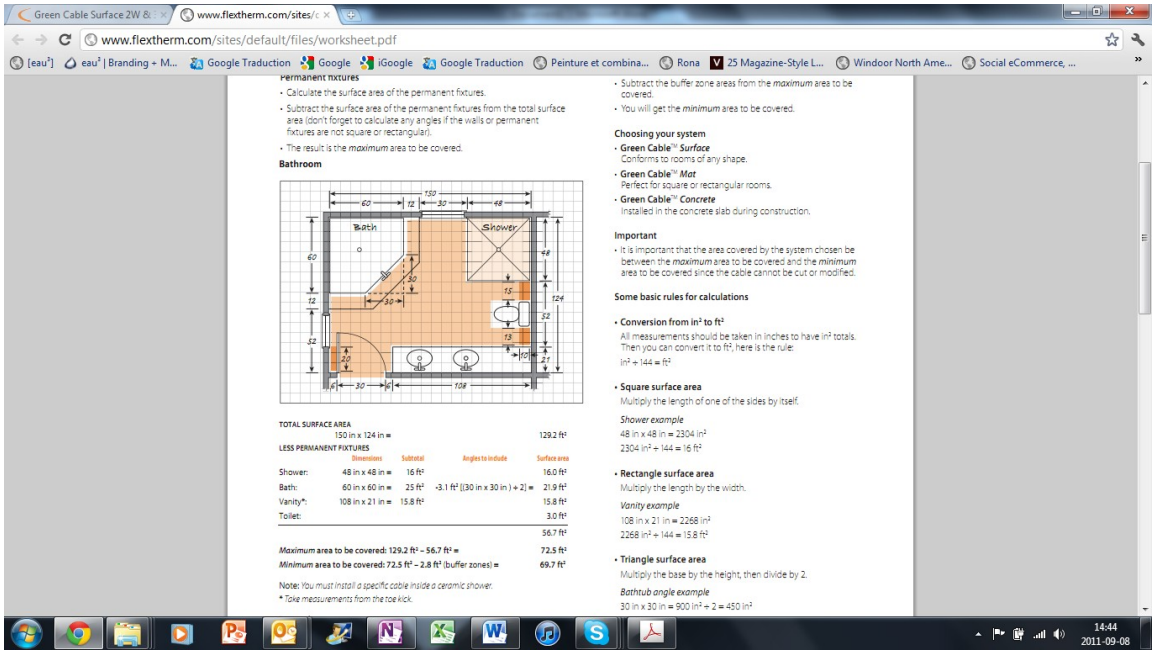
Which product to choose?

COMFORT~ONE HEATED FLOORS	Indoor use. Installation while laying the floor covering. Ideal for all surface shapes. Optimum solution for main or auxiliary heating.
COMFORT~ONE HEATING MATS	Indoor use. Installation while laying the floor covering. Ideal for rectangular or square surfaces. Optimum solution for main or auxiliary heating.
COMFORT~ONE SUBFLOOR CABLE	Indoor use. Installation without laying a floor covering. Installed between the floor joists. Optimum solution for auxiliary heating.
COMFORT~ONE SNOW MELTING CABLE	Outdoor use. Installation while laying the floor covering. Ideal for all surface shapes. Optimum solution for melting snow and ice.

Calculating the surface to be covered

1) Produce a scale plan.
2) Calculate the total surface (length x width).
3) Calculate the surface occupied by the fixed elements.
4) Calculate the angles to be covered.
5) Subtract the surface of the fixed elements from the total surface.
6) Multiply the result by 0.96 to obtain the total surface to be covered.

Example:



Total area	Length	Width	Subtotal	Angle to be covered	TOTAL

Bathroom	150 in	124 in	18,600 in^2 ÷144 = 129.2 ft^2	-	129.2 ft^2

Fixed elements	Length	Width	Subtotal	Angle to be covered	TOTAL
Shower	48 in	48 in	2,304 in^2 ÷144 = 16.0 ft^2	-	16 ft^2
Bath	60 in	60 in	3,600 in^2 ÷144 = 25 ft^2	(30 in. x 30 in. ÷ 2) ÷ 144 = 3.1 ft^2	21.9 ft^2
Vanity	108 in	21 in	2,268 in^2 ÷144 = 15.8 ft^2	-	15.8 ft^2
Toilet	21 in	21 in	441 in^2 ÷144 = 3.1 ft^2	-	3.1 ft^2
Total					56.8 ft^2

Maximum surface to be covered: 129.2 ft^2 – 26.8 ft^2 = 102.4 ft^2 x 0.96 = 98.3 ft^2

PRO TIPS

- Take all the measurements in inches to ensure a more precise calculation.
- Do not install the cables under cabinets or sanitary facilities, or inside a wall.
- Do not install the cables in small cabinets or other confined spaces.
- Install the cable about 3.8 to 5.08 cm (1 1/2 to 2 in.) from a counter or a vanity.
- Do not install the cables less than 15.2 cm (6 in.) from each side of the wax bowl rings and less than 30.5 cm (12 in.) from the front and back of the toilet bowl.
- In open areas, such as solariums or sunrooms, install the cables 6.35 cm (2.5 in.) from the perimeter of the room.

Important!

Opt for a cable that will cover an area equivalent to or smaller than your surface to be covered. If you do not find the length that corresponds to your surface, choose a length one size smaller. The cables must never be cut, crossed or modified. A scale plan shows your best tool to calculate the surface to be covered.

Quick Reference

Area of a square

Multiply the length of one of its sides by itself.

Shower example:

48 in. x 48 in. = 2304 in^2

Area of a rectangle

Multiply the length by the width.

Vanity example:

108 in. x 21 in. = 2268 in^2

Area of a triangle

Multiply the base by the height and divide by 2.

Bathtub angle example:

30 in. x 30 in. = 900 in^2

Conversion to ft^2

$in^2 \div 144 = ft^2$

Choosing the right spacing

When you order the cable, you must know the type of room in which your system will be installed. It is also important to know the subfloor. This data has a direct effect on the spacing to be maintained between cable runs, and thus on the cable length to be ordered.

The spacing may also vary according to the room's insulation, the floor covering and the type of heating determined.

PRO TIP

Never place the cables less than 6.35 cm (2.5 in.) apart, because this will create a very hot area that could cause damage.

TECHNICAL SPECIFICATIONS

Installation surface	Floor covering							
HEATING CABLE **Suggested spacing**	Ceramic	Natural stone	Engineered wood*	Vinyl*	Floating floor*	Linoleum*	Parquet*	Carpeting**
Plywood	3	3	3.5	3.5	3.5	3.5	3.5	3.5
Smooth concrete	3	3	3.5	3.5	3.5	3.5	3.5	3.5
Concrete panels	3	3	3.5	3.5	3.5	3.5	3.5	3.5
Ceramic	3	3	3.5	3.5	3.5	3.5	3.5	3.5
Acoustic membrane	3	3	3.5	--	3.5	--	3.5	3.5

Anti-fracture membrane	3	3	3.5	--	3.5	--	3.5	3.5
Mortar bed	3	3	3.5	3.5	3.5	3.5	3.5	3.5
Scratch coat (preglazed mesh)	3	3	3.5	3.5	3.5	3.5	3.5	3.5
Sunroom / Solarium	2.5	2.5	3.5	3.5	3.5	3.5	3.5	3.5

*(preglazed mesh subfloor)

**(without rubber backing or underpad)

TYPICAL SPACING BY ROOM

Living area	**Spacing**
Bathroom	2.5 or 3
Kitchen	2.5 or 3
Living room	2.5 or 3
Solarium-*	2.5
Corridor	3 or 3.5
Entrance	3 or 3.5
Large rooms with low heat loss	3 or 3.5

* Solarium: The Comfort~One heating system's performance is never guaranteed because of construction and climate differences. We recommend that you insulate the subfloor to avoid heat loss.

Calculating the necessary template

Comfort~One templates are designed to simplify installation and maintain uniform spacing

between the cables.

In all, 4 models are offered to meet your project's specific spacing needs: 2.5 in., 3 in., 3.5 in. and 4 in.

A box of 25 linear ft of template material covers a surface of 40 ft^2. To ensure that you order enough template material, calculate the number of boxes according to the number of ft^2 to be covered.

Template – 7.6 m (25 linear ft) per box	Surface covered
1 box	40 ft^2
2 boxes	80 ft^2
3 boxes	120 ft^2
4 boxes	160 ft^2
5 boxes	200 ft^2
10 boxes	400 ft^2
25 boxes	1,000 ft^2

WARNING

- **NEVER** cut a heating cable.

— **NEVER** use nails, staples or other similar assembly parts to attach the heating cable to the floor.

— **NEVER** strike the heating cable with a trowel or any other tool.

Be careful not to snag, cut or pinch the cable. This could damage it.

— **NEVER** install cables under cabinets or other recessed furnishings.
Excessive heat will form under these furnishings and could cause damage.

— **NEVER** install the cable inside the walls, on walls or partitions extending up to the ceiling, or in cabinets.

— **NEVER** extend the heated part of the cable beyond the room or the area where it starts.

— **NEVER** try to repair a damaged cable.
Contact our support service for assistance.

— **NEVER** overlap the heating cables.
This would cause dangerous overheating.

— **NEVER** allow a conductor wire or a sensor wire to cross a heating cable.

— **NEVER** use adhesives designed for laminates or vinyl floors to fasten cables. Only use a polymer-modified mortar or a self-smoothing cement.

— **NEVER** apply the wrong voltage to a cable.

— **NEVER** use spacing of less than 6.35 cm (2.5 in.).

— **ALWAYS** embed the heating cable and the factory-made connection completely in the mortar.

— **ALWAYS** use copper for power conductors to the control and to the cable. Do not use aluminium.

— **ALWAYS** pay attention to the voltage and amperage requirements on the circuit-breaker, the control and the cable system.

— **ALWAYS** test the resistances of the cables and record them in the Sensor and Cable Resistance Log.

PRO TIP

Entrust electrical installation to a certified electrician. The local codes may require the cable or the thermostat control to be installed or connected by an electrician, in order to comply with the local building codes and the U.S. National Electrical Code (NEC), especially section 424, Part IX, and section 62 of the Canadian Electrical Code (CEC), Part 1.

IMPORTANT!

- Select between 120 VAC or 240 VAC, depending on the available current.
- DO NOT mix voltages.
- DO NOT place more than 15 A per control.