

- Existing mains supply suitable to power the electric heating cable.
- Heater may be accommodated either in the bedding for the top slab, or a thin screed
- The system can be configured into heating zones which can be individually controlled
- Available for 220 - 240VAC

**APPLICATION**

The principle of floor warming is to utilise the high thermal capacity of the floor slab as a heat reservoir which stores and emits heat on a continuous basis. A warm floor is a low temperature heat source having a large area.

For the most efficient use, heat input to the slab is usually mainly via off peak, low cost electricity, ie. heat input is intermittent.

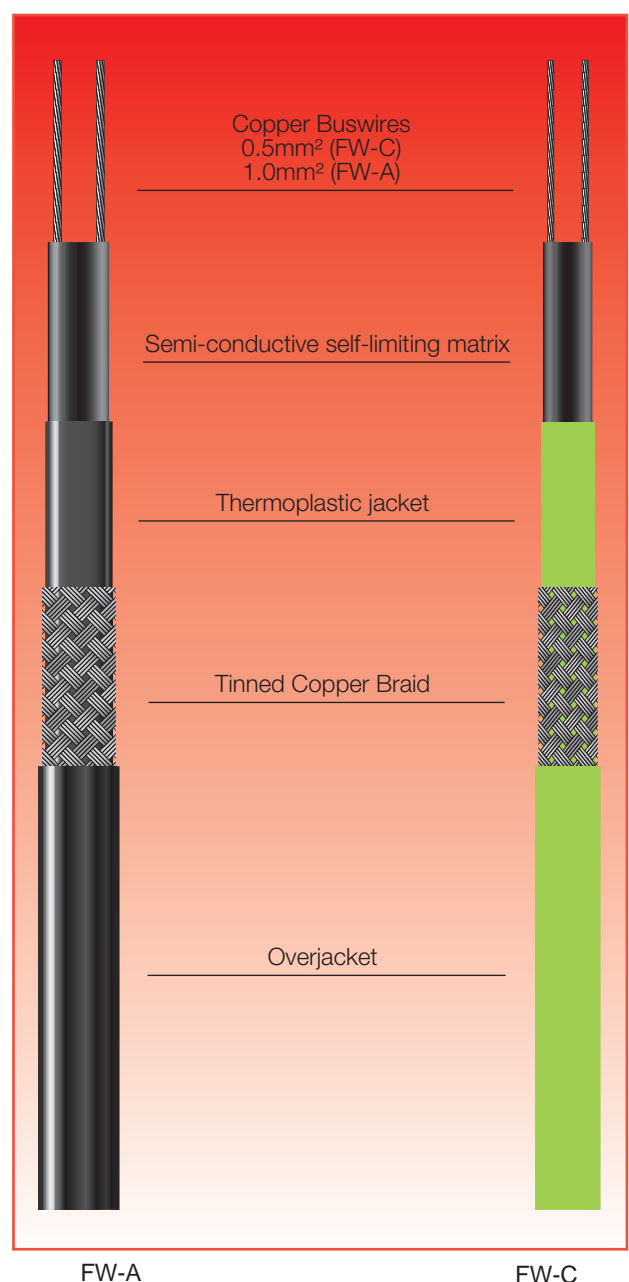
The slab is designed to cool during periods of high electricity tariffs, ie. during week days whilst an internal air temperature swing not exceeding 3°C is often possible, depending on the 24 hour average rate of heat loss.

**SYSTEM CAPABILITY**

- The maximum capability of any floor warming heating system is provided when the floor slab is at its operating temperature. This is usually taken at 25°C - but never more than 30°C (above this level, the floor temperature becomes uncomfortable).
- The installed heating load determines the ability of the system to achieve the floor operating temperature. With an insulated floor, the installed load usually provides an excess, enabling the energy to be inputted to the slab intermittently rather than continuously, thus making possible system operation using off-peak electricity tariffs.
- The floor emits heat at a rate of 5.4W/m<sup>2</sup>°C temperature difference between the slab temperature and the effective air temperature.

FloorWarm Type FW-A is suitable for use with wooden and chipboard floors, whilst Type FW-C is used for concrete floors.

The power output from the heating tape is sufficiently low to enable the heater to be used with a waterproof membrane in floors subjected to moisture, eg. bathrooms.



## SPECIFICATION

<b>MAXIMUM SERVICE TEMPERATURE</b>	FW-C	50°C (122°F)
	FW-A	65°C (140°F)

<b>MINIMUM INSTALLATION TEMPERATURE</b>	-30°C (-22°F)
-----------------------------------------	---------------

<b>POWER SUPPLY</b>	220 - 240VAC
---------------------	--------------

<b>MAXIMUM RESISTANCE OF PROTECTIVE BRAIDING</b>	18.2 Ohm/km
--------------------------------------------------	-------------

### WEIGHTS & DIMENSIONS

Cat Ref	Nom. Dims. (mm)	Weight Kg/100m	Min. Bending Radius
FW-C	7.9 x 5.6	7.0	20mm
FW-A	10.5 x 5.9	10.0	35mm

### THERMAL RATINGS

Power output varies according to the spacing, voltage and the environment around the heating cable.

Cat Ref	Nominal Heat Density (W/m <sup>2</sup> )	Start Current (A/m) (300 Second Rating)		Heater Pitch at 220/240V (mm)
		0°C	+10°C	
FW-C	135	0.171	0.138	125
FW-A	75	0.071	0.060	125

FW-C Nominal Heat Density rated at 25°C concrete slab temperature  
FW-A Nominal Heat Density rated at 25°C wood surface temperature

### FURTHER INFORMATION

Please consult the appropriate termination instructions and the Heat Trace Installation, Maintenance and Testing Manual (IMEHT010) for further details.

### MAXIMUM CIRCUIT LENGTH vs. CIRCUIT BREAKER SIZE

Cat Ref	Start-up Temp	6A	10A	16A	20A
FW-C	10°C	44	72	102	-
	0°C	36	58	94	102
FW-A	10°C	100	166	184	-
	0°C	86	142	184	-

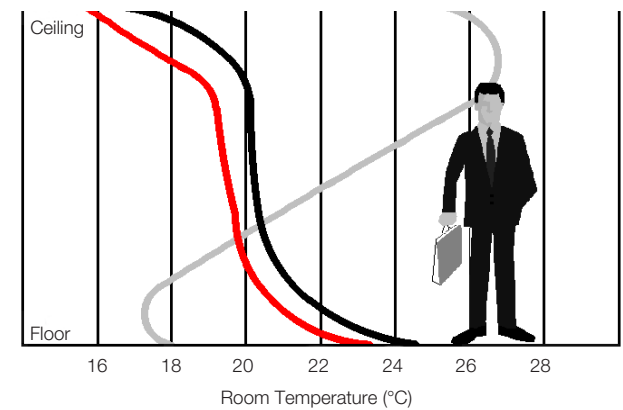
If both ends are connected to the source of supply in the form of a "ring main", then the following Table applies.

Cat Ref	Start-up Temp	6A	10A	16A	20A
FW-C	10°C	44	72	116	144
	0°C	36	58	94	116
FW-A	10°C	100	166	266	334
	0°C	86	142	266	284

Circuit breakers Type C to BS EN50898 or higher.

Note: Every heating circuit should be protected by a Residual Current (earth leakage) Device.

### ROOM TEMPERATURE



Ideal Temperature Distribution Curve  
Curve for Floor Heating  
Curve for Radiator Heating

**HEAT TRACE™**  
SETTING THE STANDARDS LEADING THE WAY

Mere's Edge, Chester Road, Helsby, Frodsham, Cheshire, WA6 0DJ, UK  
Tel: +44 (0)1928 726 451 Fax: +44 (0)1928 727 846 <http://www.heat-trace.com>

The information given herein, including drawings, illustrations and schematics (which are intended for illustration purposes only), is believed to be reliable. However, Heat Trace Ltd makes no warranties as to its accuracy or completeness and disclaims any liability in connection with its use. Users of Heat Trace Ltd products should make their own evaluation to determine the suitability of each such product for specific applications. In no way will Heat Trace Ltd be liable for any damages arising out of the misuse, resale or use of the product.