

# Heat Mat

## Underfloor Heating

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Heating Mats

## Heat Mat 160W/sqm Heating Mats

### Universal, ultra-thin underfloor heating mats

#### 160W/sqm Underfloor Heating Mats

A professional fast to fit system designed to provide energy efficient floor warming in all rooms, and a full heating system in well insulated areas. This award winning electric underfloor heating mat range has the additional benefit that it can be used beneath virtually any type of floor covering if covered with a levelling compound, ensuring luxurious warm floors whatever your chosen floor finish.

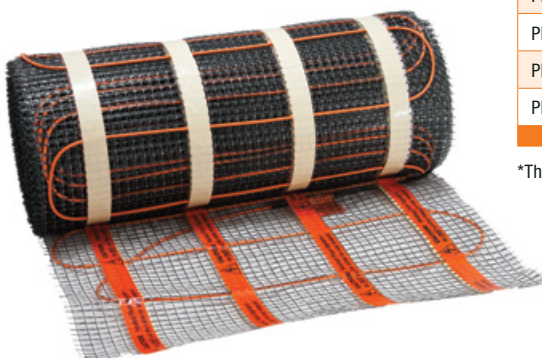
160W mats offer a versatile and fast reacting underfloor heating system which is very simple to operate when used in conjunction with Heat Mat's NGTouch thermostat.

- Designed to provide floor warming in all rooms, and sole source heating in well insulated areas
- Integrated earth shield (unlike carbon films), allowing safe installation in wet areas including bathrooms
- When used with an intelligent thermostat timer, 160W systems react faster, are more energy efficient and cost less to run than lower powered alternatives

- Technologically advanced wire design delivers minimal build height combined with a robust high powered heating cable
- Particularly suitable for large areas, where loose heating cables could take three times as long to fit

Product code	Size in m <sup>2</sup>	Wattage	Resistance
PKM-160-0070*	0.7m <sup>2</sup>	120W	503 Ω
PKM-160-0110	1.1m <sup>2</sup>	179W	315 Ω
PKM-160-0150	1.5m <sup>2</sup>	245W	240 Ω
PKM-160-0200	2.0m <sup>2</sup>	327W	166 Ω
PKM-160-0230	2.3m <sup>2</sup>	380W	155 Ω
PKM-160-0280	2.8m <sup>2</sup>	457W	132 Ω
PKM-160-0310	3.1m <sup>2</sup>	509W	116 Ω
PKM-160-0370	3.7m <sup>2</sup>	601W	97 Ω
PKM-160-0440	4.4m <sup>2</sup>	720W	82 Ω
PKM-160-0520	5.2m <sup>2</sup>	854W	68 Ω
PKM-160-0620	6.2m <sup>2</sup>	1040W	58 Ω
PKM-160-0680	6.8m <sup>2</sup>	1113W	52 Ω
PKM-160-0770	7.7m <sup>2</sup>	1275W	43 Ω
PKM-160-0870	8.7m <sup>2</sup>	1439W	40 Ω
PKM-160-1040	10.4m <sup>2</sup>	1700W	34 Ω
PKM-160-1160	11.6m <sup>2</sup>	1856W	30 Ω

\*The 0.7m 160W mat is currently awaiting BEAB approval



#### 160W Mat Features

- Ideal for tiled floors, and also perfect for use beneath carpet, bonded-wood and vinyl surfaces if first covered with a levelling compound
- Compatible with thermal insulation boards for increased efficiency
- Pre-spaced heating cable for speedy installation and uniform heat output
- Simple cut and turn design enables significantly faster installation than with loose cables
- Ultra-thin fluoropolymer insulated cable ensures minimum build height
- Dual conductor cable design means only one connection lead
- A large range of standard sizes which can be mixed and matched to ensure the perfect fit
- Supplied with a Lifetime Warranty
- Independently BEAB and Semko approved for safety
- Part L Compliant to provide an energy efficient heating system
- Made in Denmark

#### Compatible with



Thermostats



Thermal insulation boards



I-primer



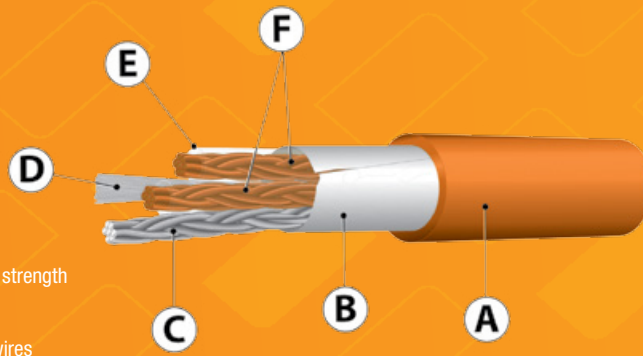
Levelling compound



Additional heating mats

# Only Heat Mat cables include:

- A. Robust PVC (Y) outer insulation
- B. 100% aluminium earth shield for safety
- C. High load earth drain wire
- D. Fibreglass reinforcement cable for tensile strength
- E. Fluoropolymer insulation rated to 200°C
- F. Litzner style twin spiral wound resistance wires



## Selecting the correct sized heating mats

To start with you will need to calculate the free floor area (FFA). To calculate the FFA you should measure the room to find out the total floor area. You should then subtract from this any areas where kitchen or bathroom furniture will be placed, or where furniture without an air gap beneath it will be positioned. Once you have taken off these areas you have your FFA. For rooms of up to 8m<sup>2</sup>, we recommend choosing a combination of heating mats which cover roughly 90% of your FFA, and for rooms larger than 8m<sup>2</sup> we recommend covering around 95% of the FFA.

## Combining multiple units

160W heating mats are designed to be laid together with other 160W mats to ensure the perfect fit every time. The mats are wired into the thermostat or junction box in parallel, but it is important to ensure that any other mats used in the same room are also rated at 160W/sqm.

## Simple and speedy installation

Heat Mat electric underfloor heating mats are incredibly simple to install, and in large areas can take one third of the time a loose heating cable would take to fit. The mats can be cut and turned to ensure that they fit the room perfectly, and for particularly complicated areas the cable can be stripped from the mat and laid as a loose cable. The mats readily affix to the floor with the four strips of double-sided tape, and the strong fibreglass mesh above the cable ensures it is protected during tiling.

## Sub-floor surfaces and insulation board

For the most energy efficient system and the fastest warm up time we recommend laying 160W heating mats onto Heat Mat thermal insulation board. Mats can also be laid onto pre-primed concrete, tile or stone surfaces or suitably secured ply board.

## Suitable for nearly any floor covering

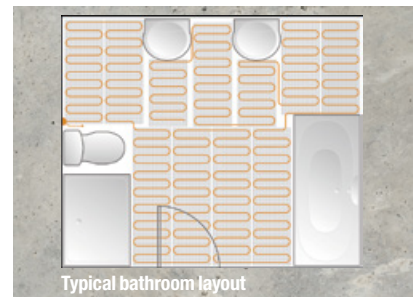
If you are unsure of the final floor covering, 160W mats can be installed and covered with flexible levelling compound. This allows nearly any floor covering to be laid on top including tiles, stone, carpet, laminate, solid wood, Karndean and vinyl.

## Energy efficient solution

160W heating mats are almost 100% efficient at converting electricity into heat and they can easily be powered by locally generated electricity from either photovoltaic or wind power sources. When used with Heat Mat's NGTouch they form a Part L compliant system, and they are also suitable for integration into a home/building automation system.

## Approved and guaranteed

Heat Mat's electric underfloor heating mats are independently BEAB and Semko approved, manufactured in Denmark in our BEAB approved factory, and supplied with a Lifetime Warranty. They are also certified by Semko as having a very low EMC radiation, which is a result of their twin conductor design and 100% aluminium earth shield.



## 160W Heating Mat Technical Specification

Supply Voltage	230V +/- 10
Power output	160W/sqm
Output range	120W - 1856W
Maximum load	17W/metre
Standard range	0.7m <sup>2</sup> - 11.6m <sup>2</sup>
Mat dimensions	0.5m wide x 1.4m to 23.2m
Coldtail lead	2m double insulated cable
Wire thickness	2.7mm - 3.2mm
Cable flexibility	Minimum radius 18mm
IP Rating	IPX7
Inner insulation	Fluoropolymer (FEP Y7) 200°C
Outer insulation	PVC (Y) 90°C
Earth protection	100% aluminium earth shield
Cable reinforcement	Fibreglass strands
Reinforcement mesh	Fibreglass mesh
Fixing materials	4 rows of double-sided tape
Compliant with	Part L, 17th Edition IEE Wiring Regulations, EN 60335-1:1998, EN60335-2-17:1999, IEC 60730

## Wiring

Heating mats must always be controlled by a suitable electric underfloor heating thermostat with floor temperature limitation. Heat Mat thermostats are rated to 16 Amps, and if a system exceeds this loading a suitably rated contactor should be used. The circuit must be protected by a 30mA RCD and suitably rated fuse or circuit breaker.



## About Heat Mat

With more than 1,200,000m<sup>2</sup> of underfloor heating installed, 20 years' experience of the UK underfloor heating market and a wealth of knowledge on Scandinavian ice and snow melting systems, you can rely on Heat Mat to understand your needs and supply the products to satisfy your requirements.

This is why we are the Professionals' Choice, the number one supplier of electric underfloor heating and ice and snow melting systems to the UK's professional installation market.



## Contact us

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