



ThermaModTM

Product sheet

Modular Frost Heave and Condensation Prevention System

V1.1 version

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Thermatek® is a registered trademark of Safeguard Electronic Systems Ltd.



Certificate No:253422016



Key features

- Heating elements are pre-installed in insulation removing the need for screeding over the heating wire
- Ultra-low voltage system ensures maximum safety combined with high level of efficiency
- Based on 35 years of experience our technical team and consultants advise on the most cost-effective and reliable system for your project
- Individual transformers sized and made in the UK with most popular transformer sizes always held in stock
- Our heating elements are made from 2.64 mm Stainless Steel coated wire designed to last longer than the lifetime of the coldstore / freezer. Projects engineered by Thermatek® have been in the ground for over 30 years
- The ThermaMod™ mat's modular design allows the team to tailor the right solution for your specific requirements; projects range in size from a few square metres up to 9,000sqM+
- Thermatek® is a highly agile business ready to react to our customer's changing needs

Benefits

Time-saving installation

Fast, clean installation that saves time and costs, with no need to wait for the screed to dry

Custom solution

Bespoke designed and engineered solution matching your specific site requirement

Quality assurance

Quality is assured through our ISO9001 Certification

Quick response

Manufacturing in the UK and choosing to make our own transformers allows speedy response for projects with tight timescales

Durability

Durable design ensures the underground heating system lasts a lifetime, preventing future frost heave or condensation damage

Efficient design

Tailored sizing and detailed design drawings for optimal efficiency, ease of installation, and reduced operating costs

Timely delivery

Commitment to meeting and exceeding project timelines to keep your work on track



Product information

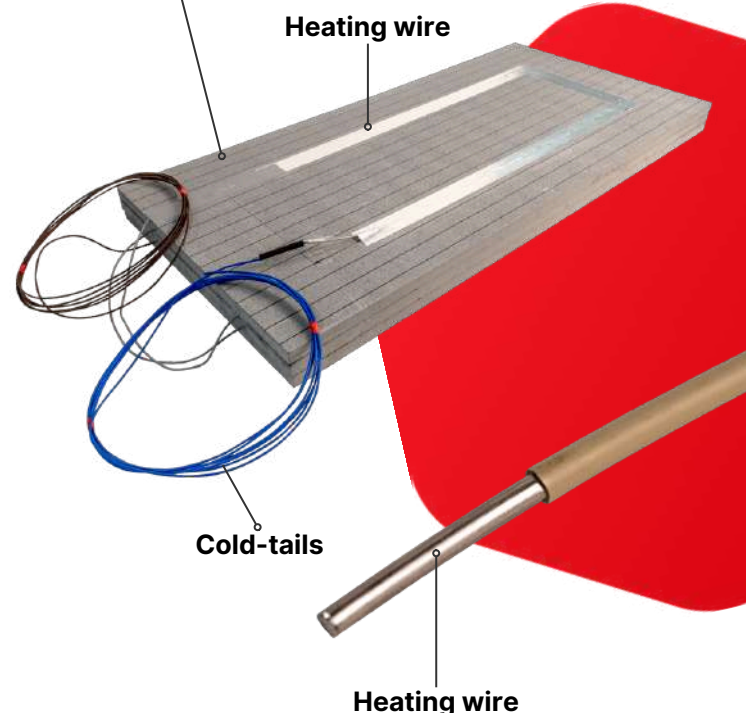
ThermaMod™ by Thermatek® is a reliable, ultra-low voltage heating solution designed to prevent frost heave and condensation beneath cold stores, freezers, and cabinets. This cost-effective and energy-efficient system serves industries such as food storage, catering, and pharmaceuticals. Its versatile Stainless Steel wire heating elements are imbedded in our insulation board for speedy installation with no need for screed, **significantly reducing installation time.**

Modular, heater insulation pads

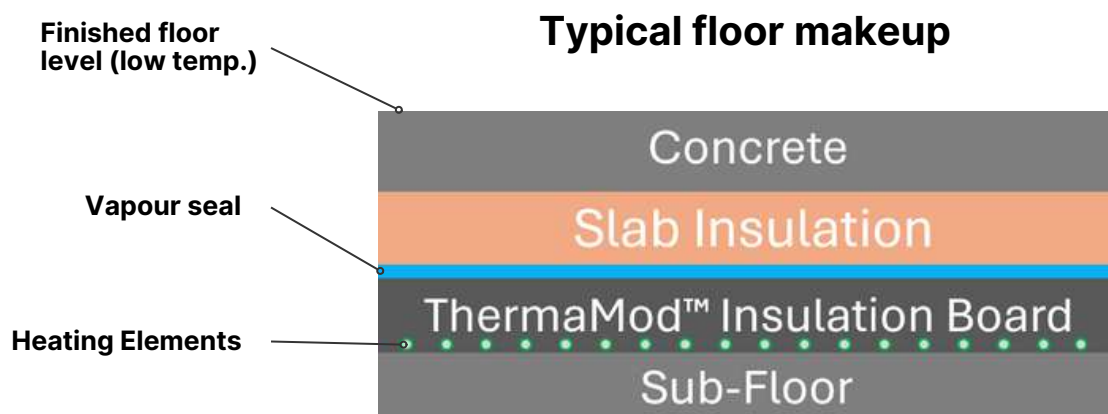
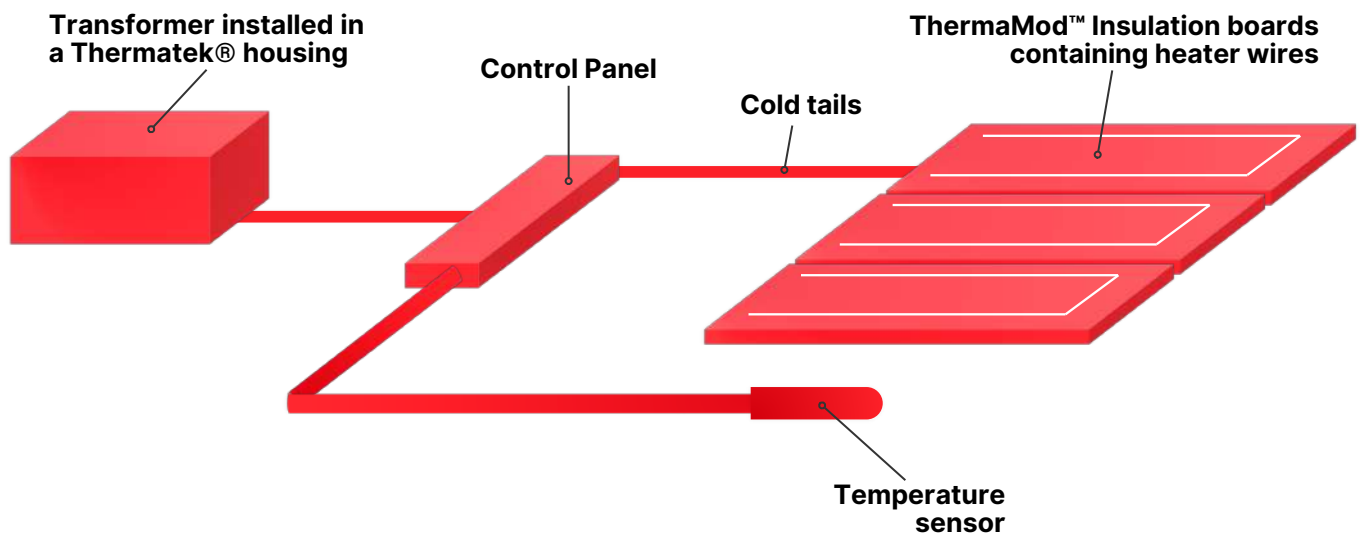
ThermaMod™ pads are made using high quality flooring insulation with integrated, ultra-low voltage stainless steel heating elements. To maximise efficiency, heating is controlled thermostatically via sensors set in one or more of the pads. Our insulation pads are 13mm and 25mm as standard.

ThermaMod™ is delivered as modular pads, linked together, which are tough, long-lasting, fire and moisture resistant, as well as being very quick and easy to fit. Installation therefore is very efficient as the pads are laid on the sub-floor, the cold-tails are run between them and then brought out to the control panel. There's little more to it than that! Slab insulation can then be laid on top to the required thickness, no screeding is required saving costs and valuable time.

ThermaMod™ insulation board



The ThermaMod™ individually designed heater mat systems typically include:



Highly efficient control systems

All ThermaMod™ systems are driven by our innovative Control Panel. It includes a smart energy system which provides just enough heat to maintain the protective thermal barrier, while minimising energy usage.

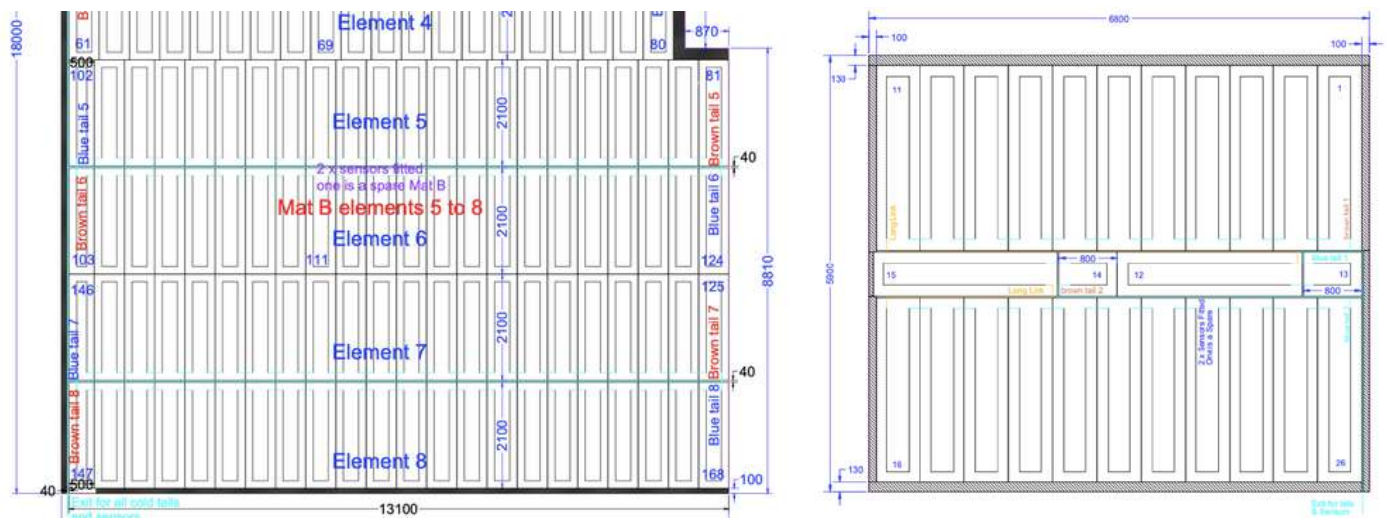
The Thermatek® control panel has visual indicators to show the system is working properly and to display the current temperature of the heating pads. If required, the control panel can also be interfaced to building management systems for remote alarm detection.

Detailed design for each project

Each project is individually designed to the customer's specific needs. Design drawings are initially made and shared with the client for approval before the order is sent to our workshop for manufacture.

Each system is then handmade including the transformers which gives the greatest flexibility in terms of reduced operating costs and speed of manufacture ensuring Thermatek® ThermaMod™ is great value for money.





Example Design Drawings for ThermaMod™ Projects

ThermaMod can be designed with backup options to suit business requirements.

A ThermaMod™ system can remain operational for over 30 years (as our experience has shown). However, occasionally an installation may become compromised or altered meaning that the primary system may not be able to deliver to its designed capacity. In order to mitigate this risk, some clients opt to have a backup wire solution installed alongside the operational system.

Backup solutions can be designed so that, should these unlikely scenarios apply, business continuity is assured. In a basic backup scenario, additional elements are installed when the pads are made, providing peace-of- mind.

A further backup option is available where Thermatek provide a 100% backup solution (including sensors and control panels). The backup system is live, ready to begin heating, either to assist the primary system or to assume primary duties if required.

Specifications

Insulation pads

PROPERTIES	STANDARD	UNIT	VALUE	CE-CODE
Cell content	-	-	HFC	-
Density (typical value)	EN 1602	kg/m ³	40	-
Thermal conductivity declared (λD)	EN 13164	W/(m.K)	0.029	λD
Thermal conductivity for 60 days old foam – mean value at 10°C	EN 12667 / EN 12939	W/(m.K)	0.025	λ-mean, 60d
Compressive stress/ compressive strength @ 10% deformation	EN 826	kPa	400	CS(10\Y)
Tensile strength	EN 1607	kPa	900	TR
Shear strength	EN 12090	kPa	400	SS
Compressive creep after 50 years ≤ 2% deformation under stress 6C	EN 1606	kPa	140	CC(2/1.5/50) 6C
E-Modulus	EN 826	MPa	17	-
Water vapor diffusion resistance factor (tabulated value)	EN ISO 10456	-	150	-
Long term water absorption by total immersion	EN 12087	%	1.5	WL(T)
Dimensional stability under specified temperature (70°C) and humidity conditions (90%rh)	EN 1604	%	5	DS(70,90)
Deformation under specified compressive load (40kPa) and temperature (70°C) conditions	EN 1605	%	5	DLT(2)5
Capillarity	-	%	0	-
Coefficient of linear thermal expansion (typical value)	-	mm/(m.K)	0.07	-
Reaction to fire – Euroclass	EN 13501-1	-	E	-
Temperature limits	-	°C	-50/+75	-
Dimensions - Thickness	EN 823	mm	25/13	-
Dimensions - Width	EN 822	mm	600	-
Dimensions - Length	EN 822	mm	2500	-
Designation Code: XPS-EN 13164-T3-CS(10\Y)400-CC(1,5/2/50)140-DS(70,90)-DLT(2)5-WL(T)1,5-TR900-SS400				

Notes: 1) Pending certification. 2) Measured in thickness direction. 3) 1 N/mm² = 10³ kPa; 1 kPa = 10⁻³ MPa.

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Stainless Steel Heater Wire

ANNEALED & PVC COATED STAINLESS STEEL WIRE 1.4307							
C.	Si.	Mn.	P.	S.	Cr.	Ni.	N.
0,19	0,315	1,457	0,035	0,002	18,399	8,695	0,054

CORE SIZE	2.64mm
TENSILE	653N/mm2
ELONGATION	65%

You can find all the standards we adhere to in producing our products on thermatek.co.uk/standards



About us

Based in the UK, Thermatek® specialises in **bespoke frost heave and condensation prevention systems, designed and manufactured in the UK** to meet the unique demands of each client. With almost 35 years of experience, 14,000 installations and **ISO9001-certified** quality, our durable, ultra low-voltage systems are trusted by high-profile clients around the world. Our solutions offer unmatched fit-and-forget reliability ensuring cold stores run smoothly and carefree.

>14,000 projects



+2°C to -80°C



10sqM to > 9,000sqM



35 years



ISO 9001



International



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