ThermaMod – product information

ThermaMod is a low profile, modular system that is ideal for installation in new freezers and cold stores. ThermaMod is highly effective at preventing damage from frost heave and condensation beneath cold stores, freezers and cabinets.

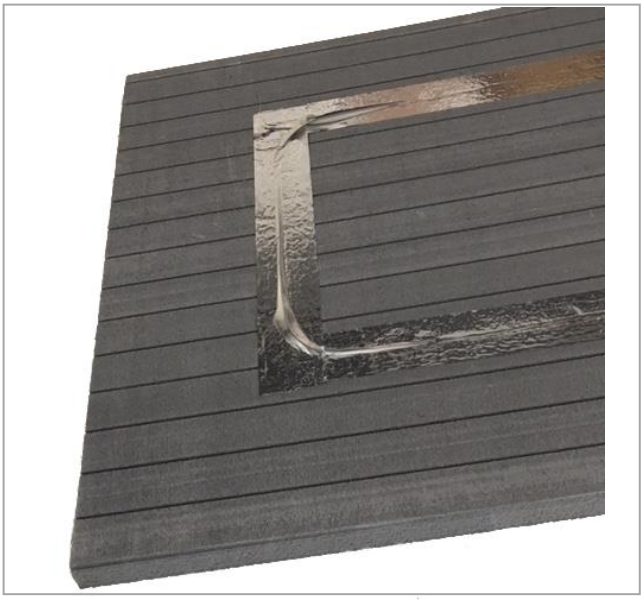
Thermatek design, produce and supply everything required to install a ThermaMod system including the Modular Heater mat, Transformer, Control panel and sensors.

Modular, heated insulation pads

ThermaMod pads are high quality flooring insulation with integrated, low voltage stainless steel heating elements. To maximise efficiency, heating is controlled thermostatically via sensors set in one or more of the pads.

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.

They are laid on the subfloor with slab insulation and final flooring laid directly on top. The standard product is 25mm thick and a 13mm version is also available, making ThermaMod an ideal solution where height is limited.



Custom product, ready to install

Thermatek® design and customise the ThermaMod solution for each installation, with pads and power supply optimised for the size, temperature and situation of the cold store or freezer. We supply a complete installation kit, including:

- ThermaMod heating elements and sensors integrated into insulation pads.
- External cold tail cables attached ready for connection to the Control box after installation.
- Low voltage transformer
- Electronic controls
- Fitting instructions, with scale diagram of the installation and electrical diagram
- Customer maintenance instructions

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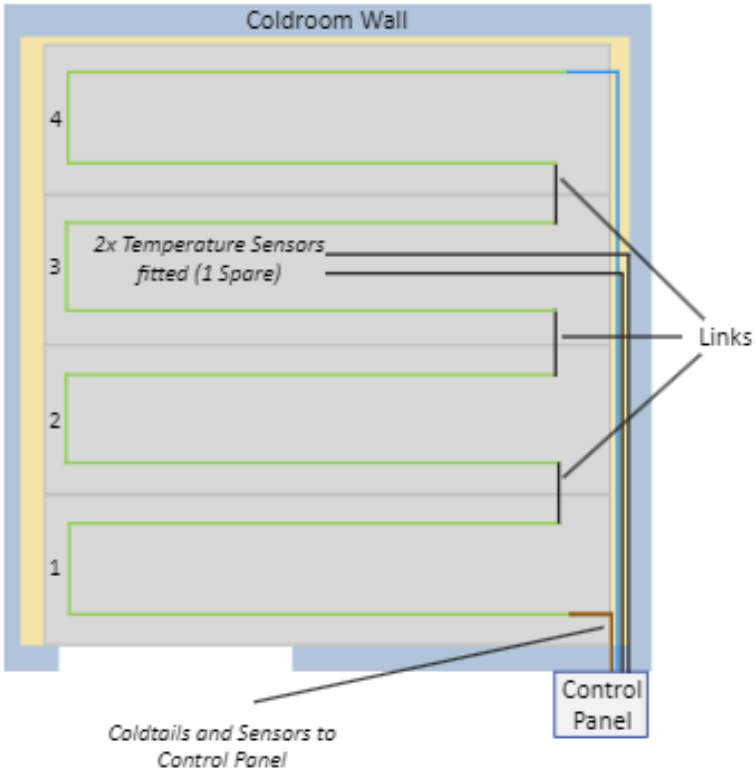
Highly efficient control system

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.

A typical ThermaMod installation

The diagram below shows a typical installation with custom-sized ThermaMod pads laid edge to edge, protecting the entire surface area of the sub-floor.



The control panel (with low voltage transformer) is fitted in a suitable position outside the cold store or freezer.

Connection is made by simply routing the cold-tails and sensors to the Control Panel which is mounted outside of the freezer or cold room.

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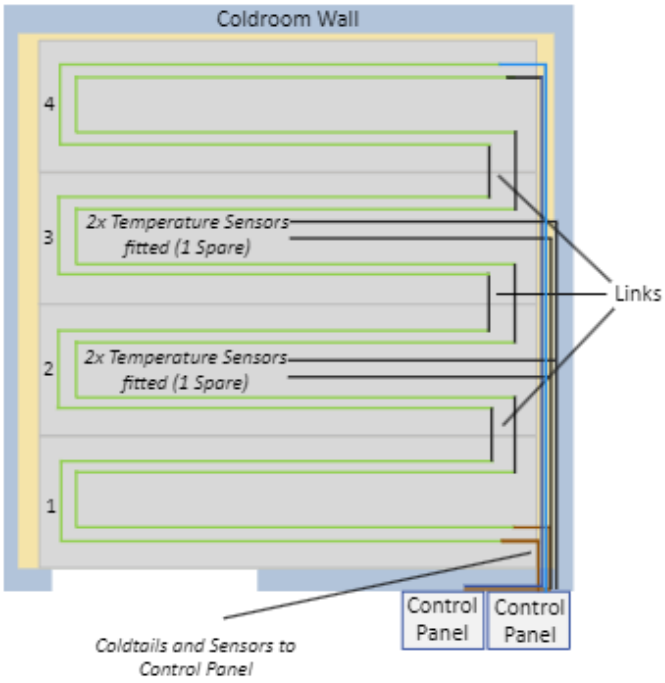
Backup Options

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 ThermaMod solution installed alongside the operational system.

A ThermaMod installation may become unintentionally damaged (for example, by drilling into the floor). Maybe the freezer is repurposed and adjusted to a lower temperature, causing a heating requirement beyond designed parameters. 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 that alternative elements can be used in the unlikely event that the first elements become unavailable.

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.



Next steps

To enquire about or order any of our products or to hear about our expert design service, please:

Email **sales@thermatek.co.uk**

or call **+44 1488 684 888.**

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Specification of insulation pads

Properties	Standard	Unit	Value	CE-Code
Cell content			HFC	
Density (typical value)	EN 1602	kg/m^3	40	-
Thermal conductivity declared (λ_D)	EN 13164	W/(m.K)	0,029 [1)]	λ_D
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 [2)]	EN 826	kPa	400	CS(10\Y)
Tensile strength [2)]	EN 1607	kPa	900	TR
Shear strength	EN 12090	kPa	400	SS
Compressive creep after 50 years ≤ 2% deformation under stress ϭC [2)]	EN 1606	kPa	140	CC(2/1,5/50) ϭc
E-Modulus [2)]	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	-
Width	EN 822	mm	600	-
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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