



ThermaTradTM

Product sheet

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

- 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 the 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
- Bespoke detailed design for each project is carried out and full drawings and installation instructions are supplied
- Thermatek® is a highly agile business ready to react to our customer's changing needs

Benefits

Custom solution

Bespoke designed and engineered solution matching your specific site requirements

Quality assurance

Quality is assured through our ISO9001 Certification

Quick response

Allows speedy response for projects with tight timescales

Durability

Safe in the knowledge that the critical components of our heating mat system — installed beneath the ground and inaccessible — are engineered for lifelong durability, our customers can confidently eliminate concerns about future risks of frost heave or condensation damage.

Efficient design

Installation is made simple with detailed, project-specific design drawings. These precise plans clearly indicate the exact placement of the heating wires on the cold store subfloor, ensuring accuracy and ease during installation.

Timely delivery

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



Product information

ThermaTrad™ 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 can be shaped to fit any space, making it ideal for large or irregularly shaped cold stores.

Thermatek's traditional heating system

ThermaTrad™ is our traditional heating solution, featuring ultra-low voltage heavy-gauge stainless steel heating elements. Designed for durability and efficiency, the system utilizes temperature sensors strategically placed within the subfloor to ensure precise, energy-saving control.

Every ThermaTrad™ system is fully customized to suit the unique requirements of each installation. The heating elements and power supply are carefully optimized for the cold store's size, temperature range, and operational conditions.

ThermaTrad™ is supplied as coils of durable, 2.64mm diameter heating wire, pre-cut to the exact lengths required and complete with customer-specified lengths of cold tails for seamless installation. The wire's protective sheath ensures robustness, allowing it to be fixed directly to the cold store subfloor as per the provided design drawings.

**Larger
transformer
enclosures**



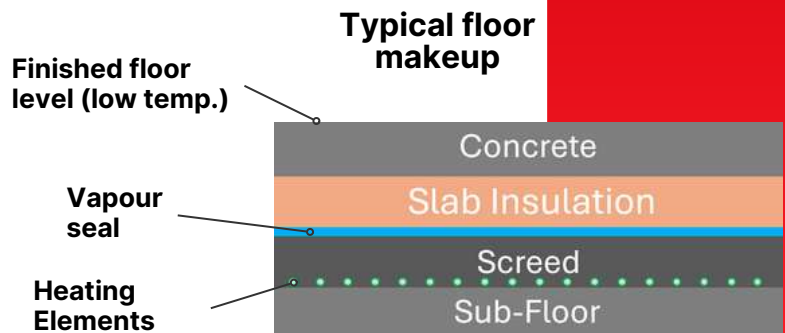
**Robust 2.64mm
Stainless Steel
heater wire**

The heating wire has a protective sheath and at 2.64mm is durable enough to be fixed straight to the cold store sub-floor. The wires should be installed in the exact locations as set out in our design drawings.



Shipped as coils of Stainless Steel heater wire with coldtails attached

Once installed, a screed layer is typically poured over the wires to provide mechanical protection. Additional layers, including a vapor seal, insulation, and final flooring materials, complete the installation to create a fully protected and efficient subfloor heating system.

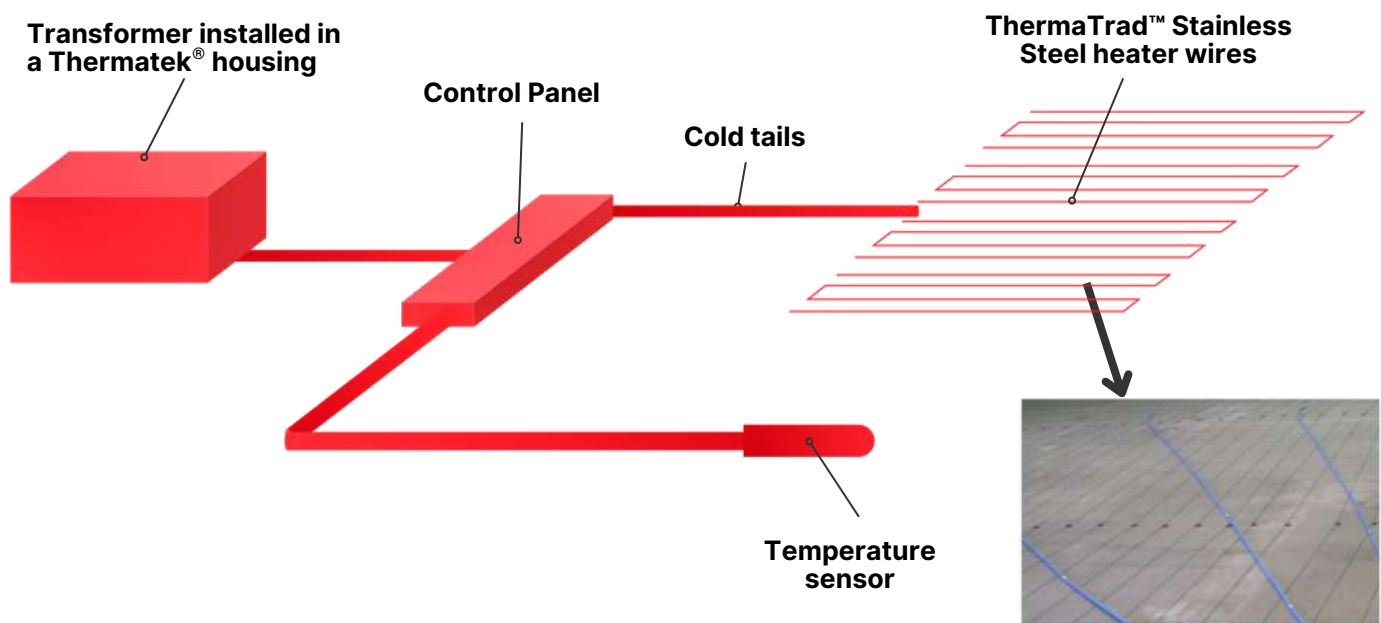


Highly efficient control system

Our ultra low voltage system is powered by Thermatek's innovative control panel, which uses a smart energy system to deliver just the right amount of heat to maintain a protective thermal barrier while minimizing energy usage. The control panel features visual indicators for system operation and real-time temperature monitoring. For enhanced functionality, it can also interface with building management systems, enabling remote alarm detection.



The ThermaTrad™ individually designed heater systems typically include:

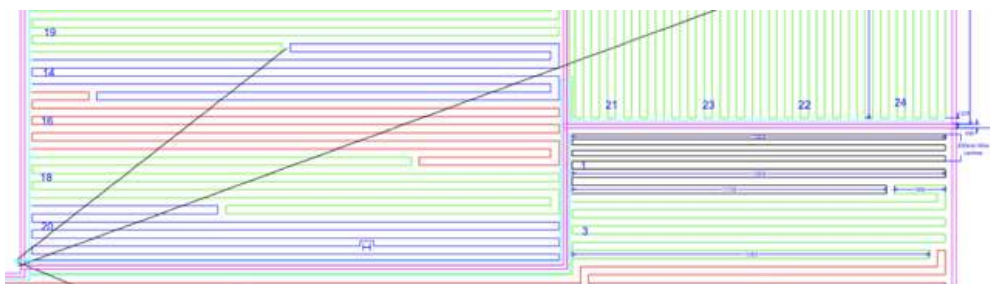


Detailed design for each project



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 ThermaTrad™ design

Backup options

ThermaTrad™ systems are built to last well over 35 years, as demonstrated by our long-standing installations. However, in cases where the primary system may be compromised or altered, we offer a range of backup solutions to ensure uninterrupted operation.

Basic Backup Solution

Additional heating elements are installed alongside the primary system during initial installation. This provides a safety net, ensuring business continuity in rare failure scenarios.

Comprehensive Backup Solution

A fully independent backup system, complete with sensors and control panels, operates in parallel with the primary system. This live backup can either assist the primary system during high-demand periods or take over entirely if needed.

Both options provide peace of mind, protecting your operations and maintaining a reliable thermal barrier under any circumstances.

Heater wire Specification

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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