



PEVs

Product sheet

Pressure Equalisation Valves

V1.1 version

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Certificate No:253422016



Key features

- Our 110mm large-flow aperture ensures maximum airflow capacity and, through independent testing, has been proven to deliver industry-leading performance
- Dual-Function Stainless steel flaps inside an aluminium housing facilitate bidirectional airflow
- Thermatek standard PEV fits walls 75–100mm thick with an extended PEV for walls 200mm giving flexibility to match the cold store design
- Anti-Icing 25W heating element (220–240V) prevents icing, ensuring consistent operation at very low temperatures
- Based on 35 years of experience our technical team and consultants advise on the most cost-effective and reliable system for your project
- Thermatek® is a highly agile business ready to react to our customer's changing needs

Benefits

Cost savings

The proven high-volume airflow capability allows for fewer PEVs to be installed, reducing both installation time and resource requirements

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

The robust design of the PEV guarantees reliable performance, ensuring the cold store or freezer operates seamlessly as intended over the long term

Timely delivery

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



Product information

Thermatek® Pressure Equalisation Valves (PEVs) are essential components for maintaining the structural integrity and functionality of cold rooms and freezers. Designed to equalize internal and external pressures, PEVs prevent common issues such as doors becoming impossible to open or structural damage caused by pressure imbalances.

Pressure fluctuations can occur due to various factors, including defrost cycles, temperature changes during freezer operation, door usage and ambient temperature variations. Thermatek® PEVs efficiently manage these changes, ensuring reliable and safe cold storage operations.

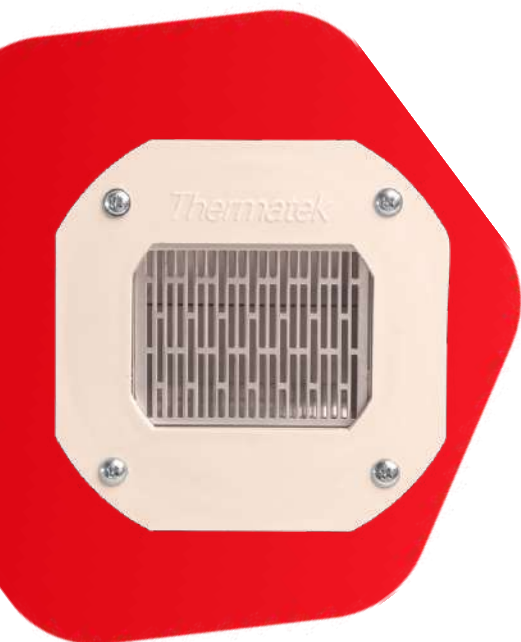


Innovative design

Independent testing has confirmed that the Thermatek® PEV outperforms other commercially available products, supporting larger cold stores due to its superior airflow efficiency.

Key design features:

- **Simple installation:** designed for effortless mechanical and electrical installation, ensuring seamless integration into cold store environments.
- **Durable construction:** crafted from high-quality ABS (for freezer interiors), stainless steel, and aluminum, the PEV is built to withstand harsh conditions, requires minimal maintenance, and is easy to clean.
- **Sleek design:** engineered for aesthetic compatibility, its clean, modern design complements the professional appearance of any cold store.



Optimal sizing and installation

To ensure effective pressure equalization, the number of Thermatek® PEVs required is calculated based on freezer volume:

Small freezers (<1000m³): one PEV is sufficient.

Larger freezers: install two PEVs for every 1400m³. Add two additional valves for resilience and to accommodate external fluctuations (e.g., blocked airflow).

Example calculation:

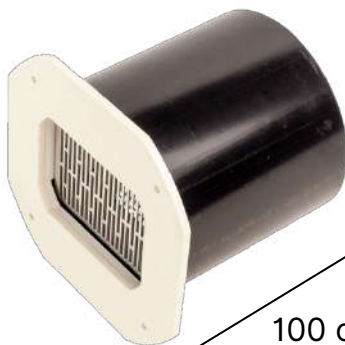
For a freezer of 4200m³ at -20°C:

Required PEVs = $(4200 \div 1400) + 2 = 3 + 2 = 5$ PEVs



130mm

130mm



100 or
200mm



200mm

120mm

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

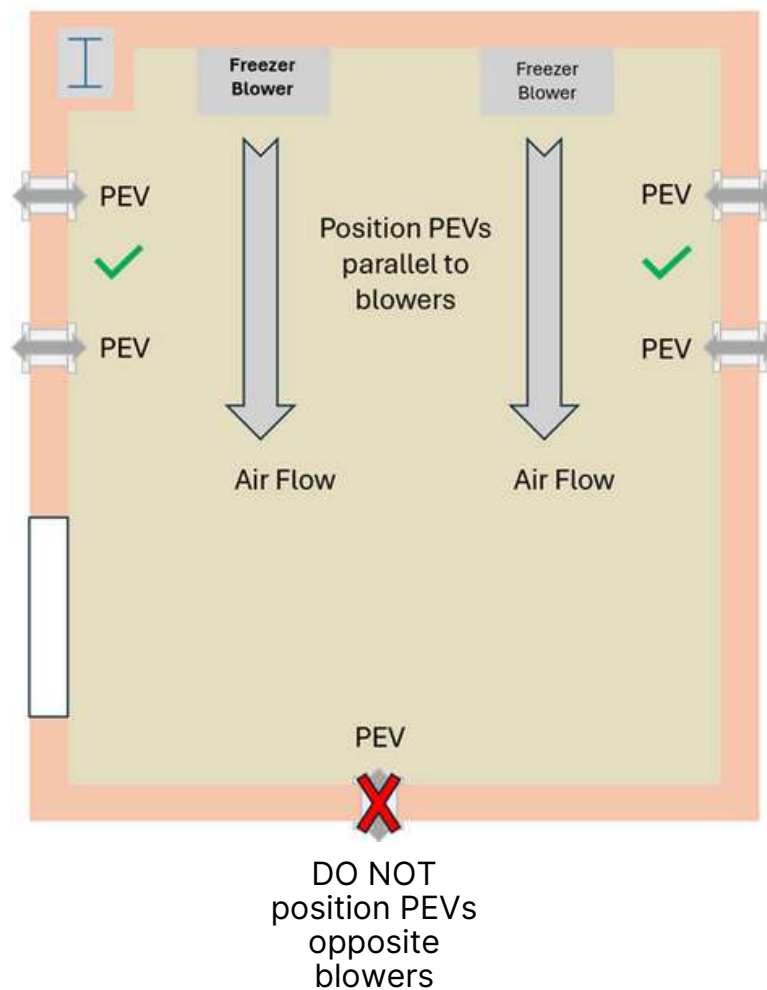
Safety and longevity

Thermatek® PEVs are designed with safety and durability in mind:

- **Secure power connections:** connections are made externally, at the rear of the unit, for improved safety and ease of access
- **Hygienic materials:** the internal face is crafted from ABS, and internal components are stainless steel or aluminum, eliminating the risk of rust or paint contamination
- **Effective sealing:** an O-ring seals the unit to the freezer wall, allowing any condensation to drain externally and maintaining a clean, dry interior

Thermatek® Pressure Equalisation Valves combine innovative design, robust materials, and precise engineering to ensure dependable performance and long-term value.

PEVs recommended positioning





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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