



# Thermatek®

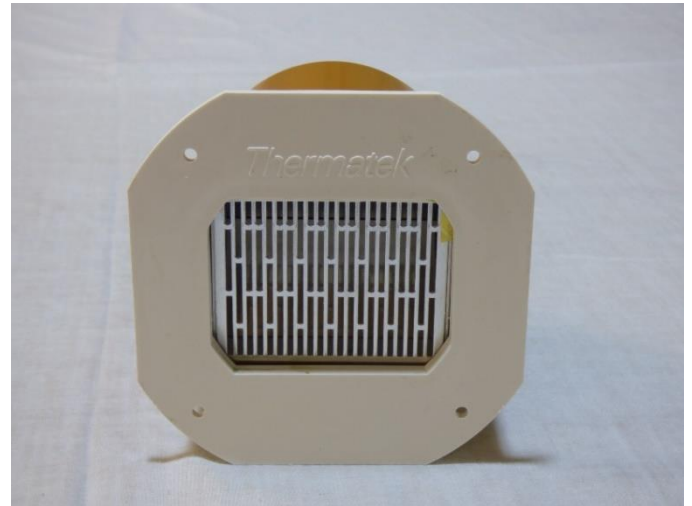
## Thermatek Pressure Equalisation Valves

The Pressure Equalisation Valve (PEV) from Thermatek has been specially designed to equalise the varying internal and external pressures that occur in coldrooms. Changes in pressure occur in a number of circumstances, such as defrosting, bringing the freezer down to final temperature, the opening and closing of doors and changes of ambient temperature. Without using an equalisation valve, it may become impossible to open the doors or, at worst, structural damage to the freezer may occur.

### Innovative Design

Independent tests say “The Thermatek PEV has been scientifically proven to support larger cold stores than other commercially available products due to its higher through flow capabilities”.

Also, the PEV has been designed for ease of both mechanical and electrical installation and is aesthetically compatible with the cold store environment. Being made from moulded ABS (for inside the freezer), stainless steel and aluminium, the PEV is easy to clean, requires minimal maintenance and will not degrade over time.



### Calculating the quantity required

When designing a freezer, allowances need to be made for the pressure differences that will occur. Being so efficient, one PEV from Thermatek can be used for smaller freezers of less than 1000(M<sup>3</sup>). We suggest installing 2 PEV's.

For larger freezers, allow 2 PEV's for every 1400(M<sup>3</sup>). Then add 2 PEV's to the calculated number to allow for fluctuations of external ambient temperature and as a layer of resilience (for example, assuming one or more valves is blocked by product inside the freezer).

**Example:-** Freezer Size = 4200 (M<sup>3</sup>) @ -20°C. PEV's required –  $4200/1400 = 12+2$  (rounded to nearest even number).

Number of PEV's required = 14

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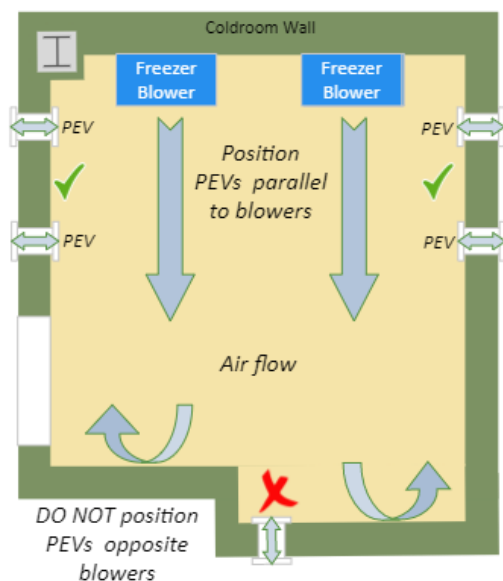
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## PEV Features

The Thermatek PEV has a large (110mm) aperture to maximise air flow. Within the tube is an aluminium box containing the stainless-steel flaps, hanging at different angles to allow air to pass both into and out of the freezer. The aluminium box is heated using 25 watts (220-240V) to prevent icing and ensure a clear airway at very low temperatures.

A **STANDARD PEV** is for walls of **75-100mm** thickness. **EXTENDED PEV's** are available for walls up to **200mm** thick

## Positioning the pressure equalisation valve for optimum operation



Thermatek recommend that the Valves are positioned in the side walls of a freezer, not on the wall where the freezer blower(s) are situated and definitely not on the wall opposite the blowers.

Positioning opposite the blowers risks continuously blowing the valves open, permanently allowing freezing air to escape from the freezer.

The valves should (if possible) be positioned in the first half of the side walls parallel to the blowers drawing?) at about 2 – 2.5M height. This encourages easy routine maintenance.

## Safety and longevity

The Thermatek pressure equalisation valve incorporates design features to enhance safety and performance of the product during operation.

The power connections to the valve are made to the rear of the unit, external to the freezer. The internal face is made from ABS and internal parts from Stainless steel or aluminium, so no paint or rust can fall inside the freezer. Finally, the valve is sealed to the wall inside the freezer by an o-ring, allowing any condensation to drain away externally.



## Next steps

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

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or call +44 1488 684 888.

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