

PTC Waterbed Heater

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Heater configuration

The Calesco PTC Waterbed heater is a brand new type of waterbed heater.

It is a self limiting, earth shielded heater with a thermal insulated bottom side to minimise heat losses as well as electrical and magnetic fields.

The Calesco PTC waterbed heater is based on a robust heater technology with a proven track record from many years in automotive applications. The heating circuit is not only relying on one continuous circuit. The heater consists of several hundred parallel PTC paste heating elements that ensure long lasting performance even if the circuits are locally damaged for some reason.

>> Positive Temperature Control

PTC (Positive Temperature Control) refers to the characteristic of the unique PTC paste used to generate the heat in the Calesco PTC Waterbed heater.

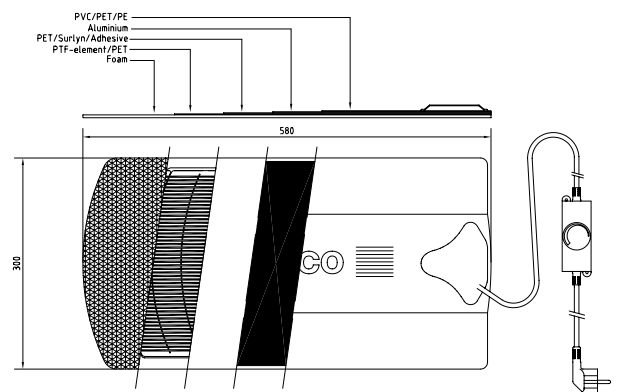
The resistance in the heat generating paste will increase with temperature to such an extent that it is limiting the power efficiently above 30 °C. This means that the heater will give more power when needed at low temperatures and less power as the temperature increases.

The PTC paste is made of a material that has a dramatic change of resistance in the operating range of a waterbed heating element. This is all due to a temperature induced volume change in the paste that will give less conductivity with increasing temperature.

This feature of the PTC paste adds an extra safety to the product that eliminate the risk of overheating. It still require a temperature controller to give the owner a comfortable temperature in the bed.

The nature of the PTC heating elements will give the heater a slightly different characteristics than a conventional waterbed heater. The start power will be higher but will fall quite quickly to some point along the power curve presented to the right. The final value depends on the water temperature as well as the set temperature on the control unit.

The heater is approved by SEMKO according to IEC 60335-2-66.



Thanks to the PTC heating element and the insulating foam on the bottom side, the new Calesco waterbed heater is safe, reliable and energy efficient.

Power characteristics of PTC Waterbed Heating Element

