

EV/HEV PTC Air Heating



CALIENTÉ
HEATING

CALIENTÉ PRICE AND PERFORMANCE FOR ELECTRIC VEHICLES

As the electric and hybrid vehicle market has evolved, many have become aware of how critical battery heating is at low temperatures. Issues of slow charging and/or drastically reduced range led Calienté to develop PTC (positive temperature coefficient) air heaters specifically for liquid cooled electric and hybrid vehicle market HVAC systems.

Calienté EV/HEV immersion heaters can be used to maintain the thermal mass of the batteries at an optimal performance temperature as ambient temperatures drop, and/or to precondition a vehicle for cold weather starting and charging, and can also be used to precondition the cabin.

There are several advantages to Calienté EV/HEV PTC air heaters. The heaters take advantage of the existing air cooled infrastructure. The elements can be custom configured to deliver a lot of heat in a very small area. Built with self-regulating PTC (positive temperature coefficient) elements, the heaters offer built in over-temperature protection and product safety.

Calienté also offers heater solutions for coolant (heater pads) and liquid cooled (immersion heaters) systems--contact Calienté today for a solution that best fits your EV/HEV application!

BENEFITS:

- **Self-Regulating PTC Technology** – resistance increases as temperature increases, lower current draw and heater power
- **Safety** – electrically insulated fins with leakage current $\leq 5\text{mA}$ @ 1.8 kV
- **Environmental Protection** – IPX7 rated
- **Energy Efficient** – EER $\geq 95\%$
- **Instant Heat** – For passenger and driver comfort
- **Wide Power Range** – 5KW to 22KW



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Technical Specifications

ELECTRIC VEHICLE HEAT

Model	Application	Input Voltage (VDC)	Power (W)	Dielectric Strength	IP Rating	EER
EV-5000-500	Passenger comfort electric vehicle	300-500	5000	<5mA at 1.8KV	IPX7	>95%
EV-5500-580	Passenger comfort electric vehicle	400-580	5500	<5mA at 2.2KV	IPX7	>95%
EV-9000-640	Defrost heater for electric bus	400-640	9000	<5mA at 2.25KV	IPX7	>95%
EV-22000-640	Passenger/Driver comfort for electric bus	400-640	22000	<5mA at 2.25KV	IPX7	>95%

ELECTRIC VEHICLE HEAT

Model	Dimensions
EV-5000-500	10.5" x 8.25" x .0875" 285 x 200 x 30mm
EV-5500-580	11.25" x 7.75" x .5" 270 x 210 x 30mm
EV-9000-640	12.9" x 6.29" x 1.18" 330 x 160 x 30mm
EV-22000-640	27.16" x 6.37" x .98" 690 x 162 x 25mm



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