

CARRAR

Battery Systems for Commercial Electric Vehicles

TOP PERFORMANCE
LOWER COST



Carrar develops and produces exceptionally durable battery systems for electric vehicles that significantly lower the total cost of owning commercial EVs by extending battery lifetime.

Carrar Lowers the Total Costs of Owning Commercial Vehicles



A smaller battery capacity and size Achieve the same range and work time thanks to slower battery degradation.



Replace less battery packs With batteries that last up to three times longer.



More than 7% range/work time increase between charges thanks to greater energy efficiency of the TMS.



Cuts idle time with ultrafast charging support.

Superior Battery Performance

Longer Battery life

The battery system supports over 1.5 million kilometers insert with ultrafast charging.

Ultrafast Charging

Our system enables ultrafast charging (up to 6C) with almost no battery degradation over the battery lifetime.

Extended Range and Work Time

- A 7% increase in range/work time per duty cycle thanks to lower parasitic electricity consumption.
- Maintain high capacity over more charging cycles than regular battery systems.

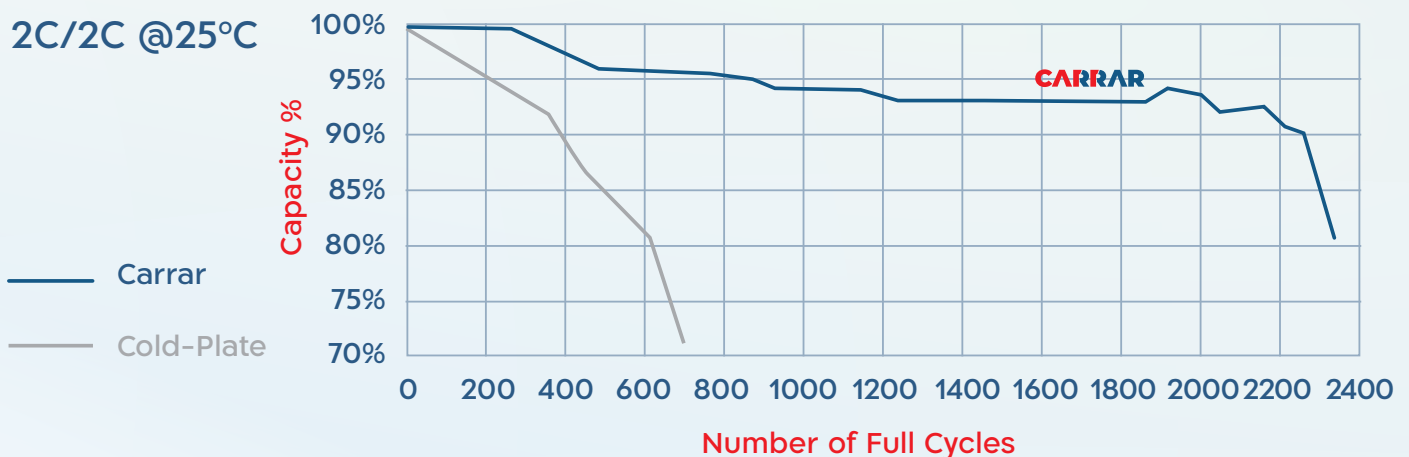
Enhanced Safety

Prevents thermal runaway, propagation and fire during an exothermic event.

Future proof

Our battery system works with any battery chemistry, packaging, density, architecture, and electricity current.

2C/2C @25°C



Technology

The Carrar thermal management system (TMS) leverages a novel two-phase immersion cooling technology with enhanced nucleation, providing unprecedented heat dissipation, temperature control, and uniformity throughout the battery pack.

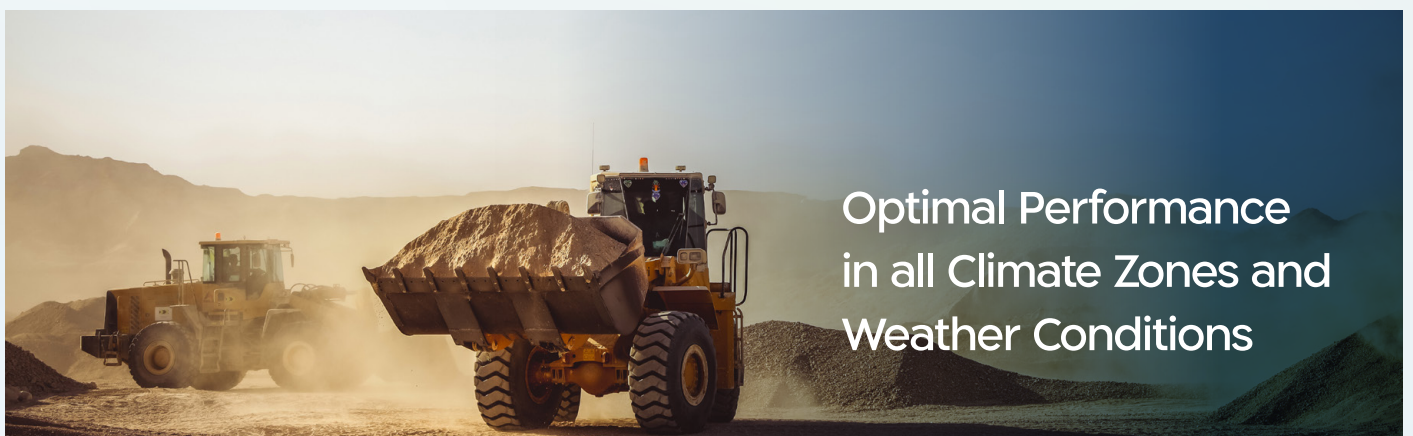
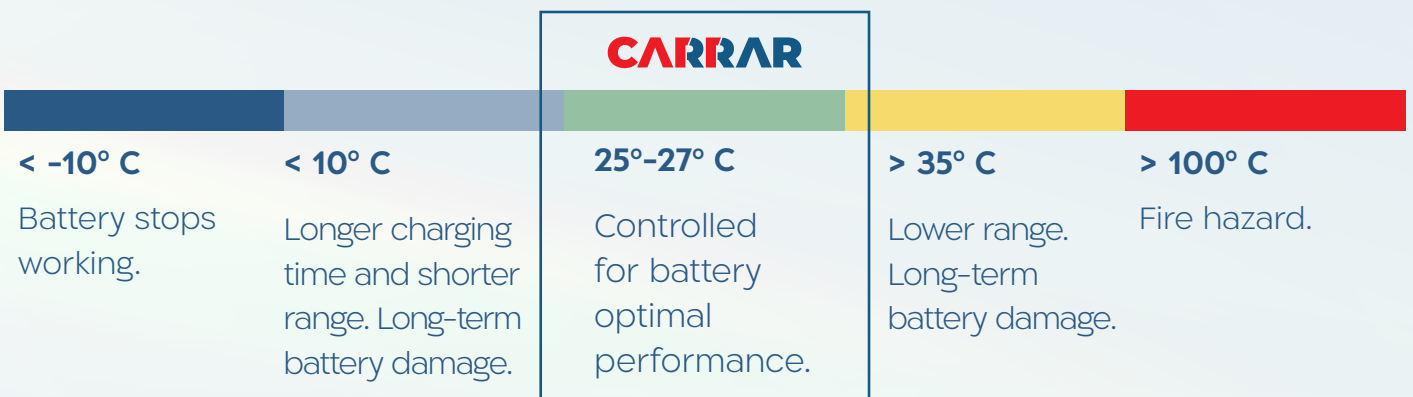
A unique patented nucleation material enhances the effectiveness of the thermal system, achieving unified temperature across the complete cell circumference - within the cell, along the cell walls, and across the whole battery pack.

When a cell malfunctions, causing an exothermic event, the system prevents temperature spirals, effectively preventing thermal runaway, propagation, and battery fires.



Continuous Optimal Temperature

The Carrar thermal management system dynamically adjusts heat dissipation to external conditions (such as climate) and heat generation within the battery (such as charging/discharging), keeping the battery at the optimal temperature at all times.



**Optimal Performance
in all Climate Zones and
Weather Conditions**

Carrar Works with All Commercial Vehicles

Including long-haul trucks, mining equipment, agricultural equipment, buses and more.



Reducing the Environmental Impact of Electric Vehicles

Carrar Cuts the Environmental Impact of Battery Production



Lowers manufacturing, raw material extraction, rare metal mining, GHG emissions, and waste generation by extending battery life.



Our batteries reach second life with almost no heat damage and perform better for longer.



Facilitates a faster transition to eMobility by reducing the total cost of ownership, helping to reduce the use of fossil fuels.

Carrar adheres to UNSDG:



Capabilities:

- Development: In-house design and full battery testing facilities
- Production: Building prototype and volume manufacturing
- Quality: Implementing IATF 16949 and ISO 9001

Partners and projects:

VOLVO

Röchling

HYUNDAI

LG Energy Solution



GENTHERM



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