

# **Advantages of the range extender battery cabinet**





## Overview

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What is a range extender EV?

A range extender is an auxiliary power unit (APU) that provides the vehicle with additional energy to complement the primary battery in propelling the vehicle. According to the 2012 Amendments to the Zero Emission Vehicle Regulations, a range-extended battery EV should comply, among others, with the following criteria :

What is a range extender?

In simple terms, the range extender is an auxiliary power unit consisting of a small internal combustion engine coupled with an electric generator which is used to re-charge the battery pack. MAHLE Powertrain recognised the potential benefits in the application of range extenders and set out to design and develop its own unit in-house.

How do electric range extenders work in hybrid vehicles?

In hybrid vehicles, the internal combustion engine works in tandem with the electric motor to power the vehicle, often switching between or combining both sources for optimal performance. In contrast, range extenders only activate when the battery needs recharging, ensuring that the electric motor remains the primary source of propulsion.

Do electric vehicles have range extenders?

Electric vehicles with range extenders have specific advantages. Like plug-in hybrids, REEVs also have a socket for charging, but they additionally feature on-board power generation. It recharges the drive battery while on the move, which means the battery can be smaller. This reduces vehicle weight and the purchase price.



## Advantages of the range extender battery cabinet

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Understanding Electric Vehicle Range Extenders for ...

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MAHLE Compact Range Extender Engine

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### The Science Behind EV Range Extenders - Pedal Commander®

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### Extending Range in Electric Vehicles

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