

The right battery for 48 V hybridization

The primary function of the 48 V battery is to store the recovered brake energy and supply this energy boost to the vehicle while accelerating. The energy can also be used to power the vehicle's electric drive system. Vehicle manufacturers reduce CO₂ emissions by up to 15 % at very low cost.

Up to
15 %

CO₂ reduction thanks to the 48 V system

Attractive
costs

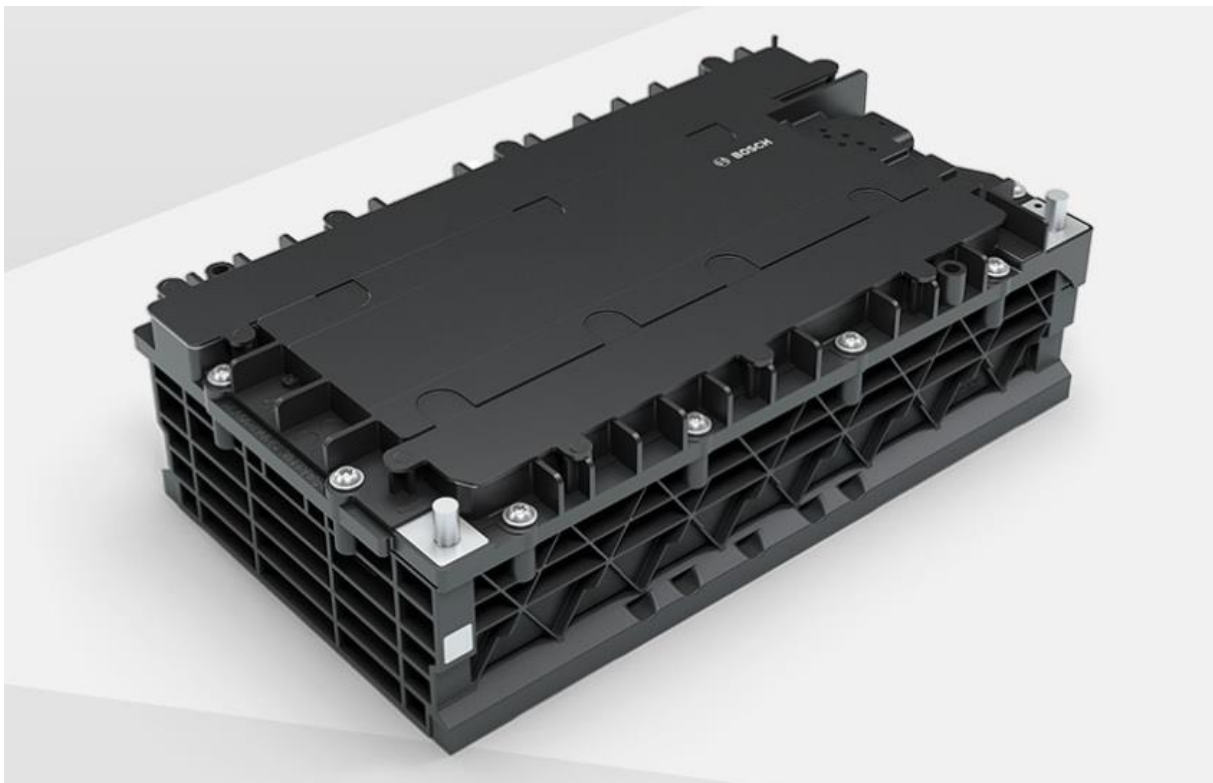
for maximum benefits

Easy
integration

into the vehicle thanks to compact design

Functional
safety

with ASIL C



Product variants at a glance

48 V battery standard

The sophisticated cooling and design concept that enables an optimal balance of cost-effectiveness and CO₂ reduction on the vehicle level is the key to the battery's success. The battery is small and cost-effective due to passive cooling while still contributing to CO₂ reduction. The component has two different housing options: aluminum and plastic. The challenge of a plastic-encased battery is to handle the load while cells expand over the battery's lifetime. Bosch achieves this through a unique arrangement of the cells within the housing. This ensures that the battery operates smoothly for the duration of its life.

- Cooling: passive cooling
- Peak power: 14 kW
- Nominal energy: 360 Wh
- Weight (plastic housing / aluminum housing): <6 kg / <7 kg
- Dimensions: 300 x 175 x 90 mm

Fewer CO₂ emissions, more efficiency, and driving fun

With the 48 V hybrid solutions, Bosch facilitates entry to powertrain electrification for passenger cars. The solutions enable electric driving modes for coasting, traffic jam assist or highly-automated parking. This helps to considerably reduce fuel consumption and local emissions. Electrical energy, which is gained through recuperation, is utilized to supply the electrical 48 V power net as well as charge the 48 V battery.

PRODUCT BENEFITS

- The batteries' compact design allows flexible integration in all vehicle segments
- Thanks to passive cooling and a compact design, the 48 V battery standard enables flexible integration in all vehicle variants, because no additional cooling is required
- 48 V battery standard operates quietly due to passive cooling
- The 48 V battery performance enables automated driving functions and ensures the safety of the 12 V battery's board net