# **Batteries – EFB & AGM** Overview, features and benefits

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- Superior durability to cope with increased number of vehicle starts and faster recharge cycle
- Exceptional cold cranking up to 30% more than conventional batteries
- Sealed spill and leak proof

### S4 Enhanced Flooded Battery & S5 Absorbent Glass Mat – for vehicles with start/stop systems

There has been a significant increase in the use of start/stop systems over recent years and the technology is no longer just for luxury vehicles. There are now a significant number of 'mass market' vehicles on the road with start/stop systems and the estimate is that more than half of new vehicles registered in Europe this year will have the technology. People may try to cut corners on the replacement of EFB & AGM batteries as they can be up to twice the price of a standard lead acid battery. Bosch recommends like for like replacement.



Failure to install the correct battery can result in vehicle systems breakdown. You cannot replace an EFB or AGM battery with a conventional battery.

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### AGM technology (Absorbent Glass Mat)

► AGM – acid absorbed by micro-fiberglass mats In AGM technology, special micro-fiberglass mats are installed close to the lead plates and absorb the battery acid completely. High contact pressure minimizes the loss of active material at very low internal resistance. Due to the fast reaction of acid and

plate material, higher amounts of energy can be provided. Special lid design for high operational safety

The safety valve and the central degassing make the S5 A absolutely maintenance-free and leak-proof.

**Terminal-post covers** Provide protection against short circuits.

Set of plates with particularly

The central arrangement

of the connectors between

positive and negative plates

ensures additional stability.

robust connection

**Ergonomic handles** For easy transport and installation.

Patented PowerFrame® (grid) for optimum current flow and reduced corrosion The flow-optimized grid design of the PowerFrame® guarantees consistently high starting power and a long service life. In addition, a special alloy ensures a high corrosion resistance and significantly lower self-discharge.

### EFB technology

(Enhanced Flooded Battery)

# Set of plates with particularly robust connection

The central arrangement of the connectors between positive and negative plates ensures additional stability.

#### ► EFB - with positive plate coated with polvester scrim

In EFB technology, the positive plate is coated with a so-called polyester scrim providing additional retention of the active material on the plate. The S4 E battery therefore features an improved deep-cycle resistance compared to conventional batteries and remains operational even if there are strong vibrations.

### Labyrinth lid for high operational safety

The double lid with labyrinth design ensures that evaporated liquid remains inside the battery. This makes the S4 E battery absolutely maintenance-free and leak-proof.

**Terminal-post covers** Provide protection against short circuits.

> **Ergonomic handles** For easy transport and installation.

#### Ion-permeable pocket separator

Prevents contact between positive and negative plate – for longer service life and higher starting power.

## Patented PowerFrame® (grid) for optimum current flow and reduced corrosion

The flow-optimized grid design of the PowerFrame® guarantees consistently high starting power and a long service life. In addition, a special alloy ensures a high corrosion resistance and significantly lower self-discharge. Universal adapter bottom rail with high degree of vehicle compatibility For safe, precisely fitting installation. Reduced type variations simplify stockkeeping.

## S4 EFB & S5 AGM Batteries Summary:

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