

Invented for life



BOSCH

Bosch auxiliary batteries

Support batteries in addition to the main starter battery in dual battery systems



Batteries

Overview

Modern cars are equipped with more and more components running on electric energy. They need to be supplied by reliable sources of energy with high performance. Equipped with modern technology and featuring a corrosion-proof design, Bosch batteries provide different types of vehicles with the energy they need – over long periods.

Passenger-car starter batteries since 1927

Back in 1922, Bosch produced early motorcycle batteries. The first battery for cars was launched in 1927.

Increased energy demand of vehicles

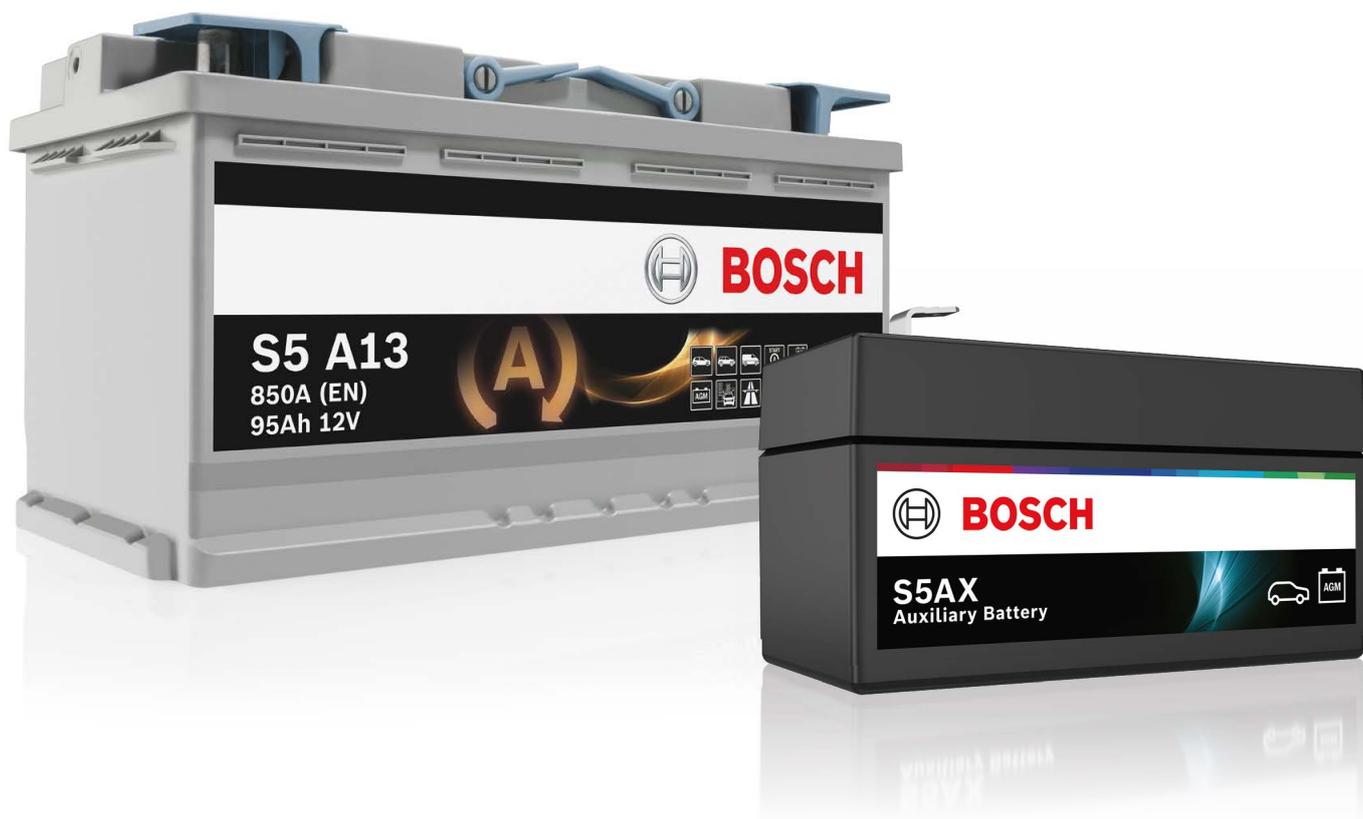
The energy demand of today's motor vehicles is much higher. More and more vehicles – of almost all vehicle segments – are equipped with safety systems, convenience and comfort functions. Dual battery systems are used in vehicles with a particularly large number of consumers. In addition to a broad portfolio of powerful starter batteries as support, Bosch also offers auxiliary batteries with AGM technology.

Grid with special alloy and design

A special alloy ensures high corrosion resistance strength and at the same time particularly pronounced conductivity – compared to conventional grids. In addition, the current flow-optimized grid design continuously generates high starting power and supports a long service life.

Spare parts, diagnostics and services

Bosch provides workshops and retailers with full support for their battery business – from a single source. This includes a complete battery range, efficient diagnoses and reliable services.



S5 AX with AGM technology

Program and product details



S5 AX

The reliable Bosch auxiliary battery with AGM technology supports starter batteries in dual-battery systems

Technology	 AGM: Absorbent Glass Mat ⁽¹⁾
Scope of application	 Recent upmarket vehicle models with many electrical consumers
Service life	● ● ●
Cold cranking performance	● ● ●
Deep-cycle resistance	● ● ●
Number of electrical consumers	● ● ●
Suitability for short distances	● ● ●
Maintenance	Absolutely maintenance-free
Installation inside the vehicle	Yes

(1) AGM (Absorbent Glass Mat): acid absorbed by micro-fiberglass mat allows more energy to pass through

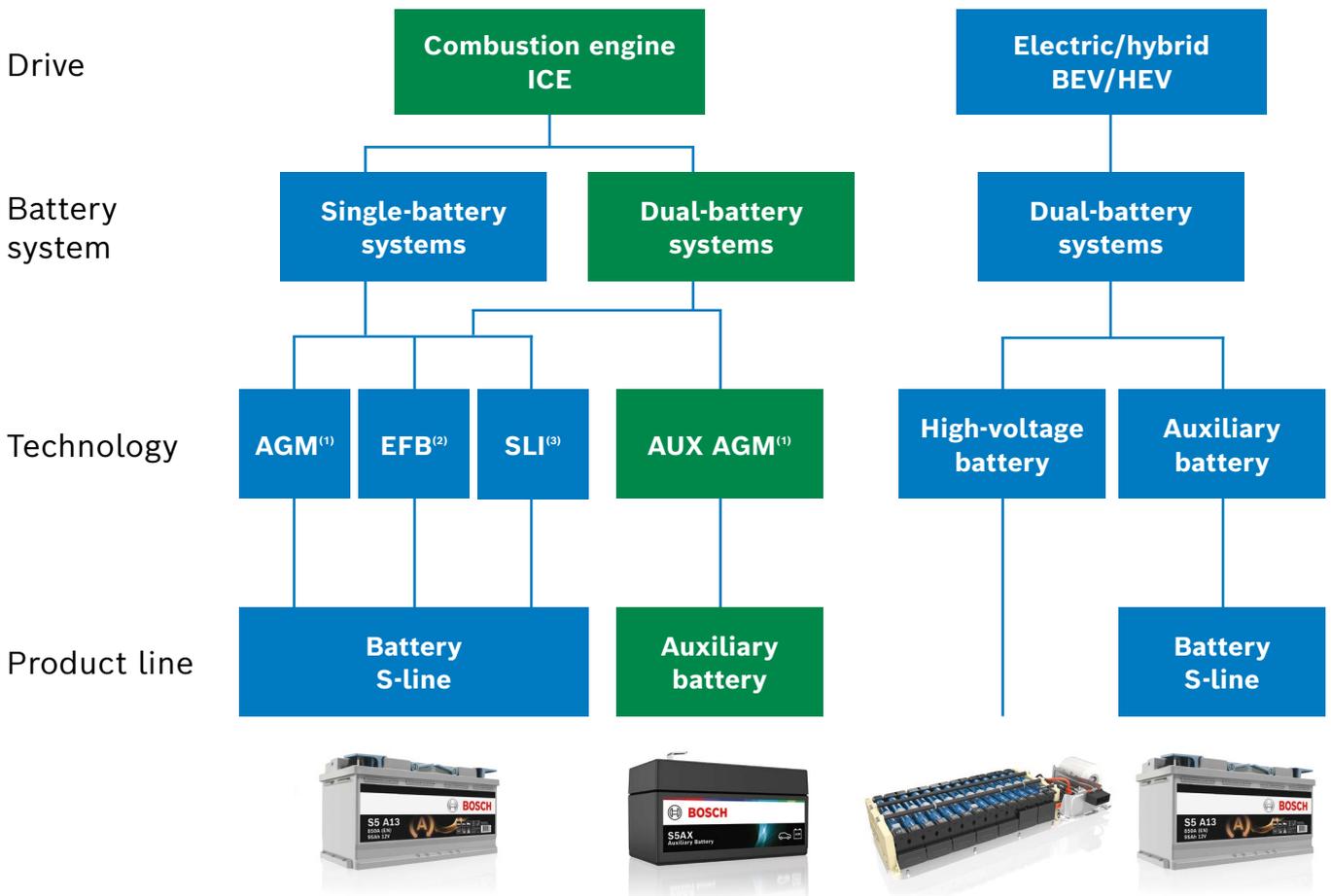
Advantages at a glance

- **Reliable power even for load peaks caused by very high consumption:** stabilizing the 12 V on-board network and extending the start-stop moment
- **Reliable starting even under extreme temperatures and with several electrical consumers:** ensured by even acid distribution preventing stratification
- **Longer service life and up to 4 times higher deep-cycle resistance than conventional starter batteries:** in case of AGM technology, the acid is absorbed by micro-fiberglass mats thus keeping the self-discharge rates low
- **Absolutely maintenance-free:** the special lid design keeps condensed water in the battery thus reducing the water consumption
- **Particularly good charge acceptance and corrosion resistance:** optimized grid design and production process for better current-flow and reduced corrosion

Energy supply systems

Technology

The increasing number of electrical consumers in modern cars requires reliable energy sources for its supply. Bosch offers powerful starter and auxiliary batteries for single and dual battery systems in vehicles with combustion engines as well as electric and hybrid drives.



- (1) AGM (Absorbent Glass Mat): acid bonded in micro-fiberglass mats for longer service life and higher deep-cycle resistance
 (2) EFB (Enhanced Flooded Battery): positive plate is equipped with a poly-inlay, which provides additional support to the active material
 (3) SLI (Starting Lighting Ignition) battery

S5 AX with AGM technology

Technology

Sealed lid and very low water consumption

The AGM technology results in extremely low water consumption. This is because the hydrogen and oxygen formed during the charging process recombine to water. The improved grid alloy also plays a role. This makes the battery absolute maintenance-free.



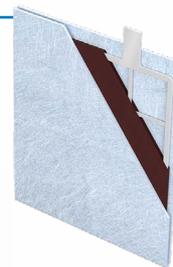
Set of plates with robust connection

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

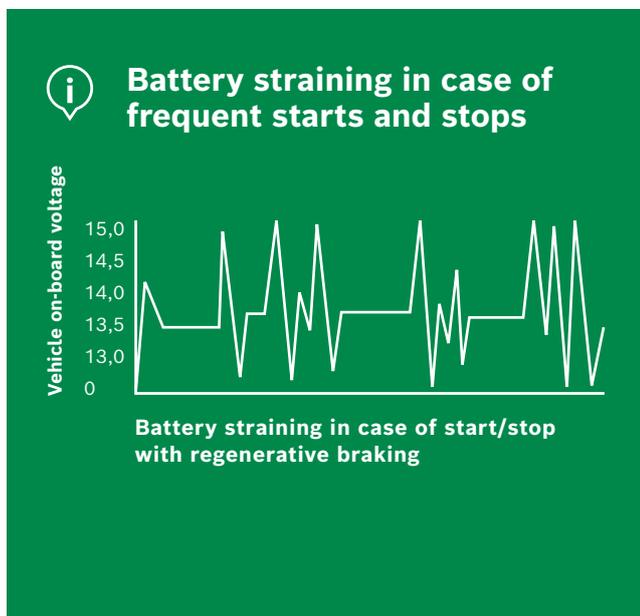


AGM (Absorbent Glass Mat) – acid absorbed by micro-fiberglass mats

In AGM technology, special micro-fiberglass mats are installed close to the lead plates and completely absorb the battery acid. High contact pressure minimizes the loss of active material with very low internal resistance. Due to the fast reaction of acid and plate material, higher amounts of energy can be provided.



Current-flow optimized grid design for reduced corrosion, increased cold start power and for a particularly good charge acceptance.



Did you know?

Today, battery service places high demands on the test equipment used.

During the charging process, no voltage peaks may occur that could cause sensor malfunctions.

 A photograph of a Bosch battery charger, which is a green and black device with red and black cables attached. It is shown from a three-quarter perspective.

Bosch battery chargers allow starter batteries to be charged gently even when installed.

Requirements of Bosch batteries

Quality and performance tests

As a battery expert, Bosch carries out stringent quality and performance tests for all batteries in its range, ensuring consistently high quality. After all, there can be no compromises when it comes to the safety and reliability of Bosch batteries.

Electrical performance tests

Capacity tests **+++**

These tests check the capacity of the battery to ensure that it reaches the specified performance.

Cold start tests **+++**

This test checks the power of the battery at particularly low temperatures. This is very important in winter and in colder regions, as reliable starting is essential in these situations.

Charge conservation test **++**

This test is relevant for batteries in vehicles that are rarely moved, e.g. vintage cars, or vehicles that are often stationary for long periods, for instance due to remote working.

Vibration-resistance test **+**

This test is relevant for vehicles that are frequently used on poor surfaces. The vibration resistance of the battery is tested.



Safety tests

Electrolyte retention test **+++**

In conventional batteries, the liquid inside the battery moves while the vehicle is in motion – for instance when braking or accelerating. For safety reasons, the battery must be sealed to the extent that no acid can leak out. The electrolyte retention test checks the tightness of the battery.



Relevance for consumers (Bosch internal expert evaluation)

+++ = very high

++ = high

+ = moderate

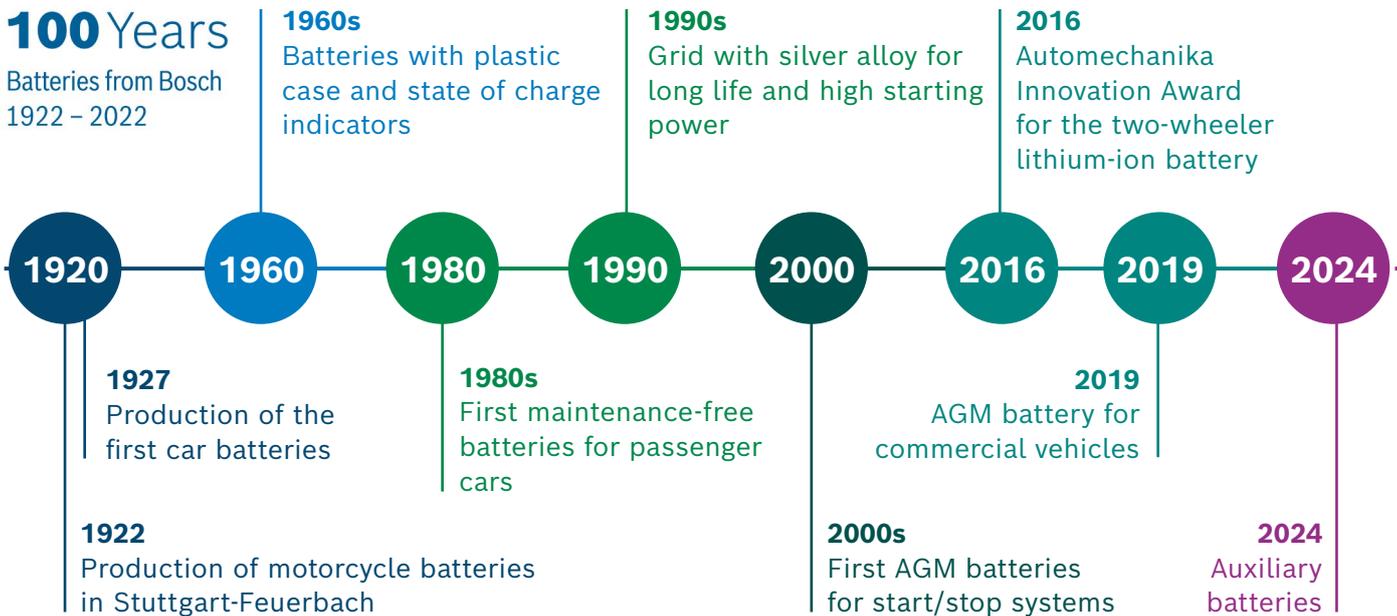
Bosch batteries since 1922

History

Inventive spirit with a century of history: Since 1922, Bosch has continuously developed and expanded its range of high-performance batteries. Today, in addition to conventional batteries, it also includes batteries with AGM and EFB technology for passenger cars, commercial vehicles, two-wheelers and recreational vehicles such as motor homes and campers.

100 Years

Batteries from Bosch
1922 – 2022



Bosch batteries – 100 years of performance improvement

Bosch began producing motorcycle batteries in 1922. In 1927, the first Bosch battery for passenger cars was launched. Numerous further developments and innovations followed. Over the years, Bosch has expanded its range and continues to adapt it to changing market requirements and new technological possibilities.



Did you know?

For many classic cars, Bosch offers batteries in classic design, equipped with modern battery technology



What drives you, drives us

Bosch technologies are used in most vehicles worldwide.
People, and assuring their mobility, is what we are focused on.

Therefore, we have dedicated over 130 years of pioneering spirit
and expertise in research and manufacturing to achieving this.

We provide the aftermarket and workshops worldwide with modern diagnostic and workshop
equipment and a wide range of spare parts for passenger cars and commercial vehicles:

- solutions for efficient vehicle repairs
- innovative workshop equipment and software
- one of the world's most comprehensive ranges of new and exchange parts
- large network of wholesale customers, for quick and reliable parts supply
- competent hotline support
- comprehensive educational and training offers
- targeted sales and marketing support

Find out more at:
boschaftermarket.com

Robert Bosch GmbH

Auf der Breit 4
76227 Karlsruhe
Germany