



For even more power: New
PowerFrame-Technology



BOSCH

Invented for life

The Bosch battery range: **Power made to measure**



S3-S4-S5: The full range, the perfect choice. With three distinct categories, the comprehensive Bosch range can always offer the right battery for any situation.

What do drivers particularly appreciate about their car? Reliability. The certain knowledge of being able to travel from A to B day in, day out. Good engine starting performance is a key aspect. To satisfy this demand with a consistently high level of starting power, Bosch batteries are tested under extreme temperature conditions – in the heat of Nevada and at the Arctic Circle. The results of the tests set new standards in terms of improving the battery technology, service life and cold starting performance.

The comprehensive Bosch range is tailor-made to suit all customer requirements: The three categories S3-S4-S5 are now available with innovative PowerFrame-technology. The further enhanced quality of the positive grid guarantees even better performance and greater reliability.

Bosch battery S5

Top of the range vehicles demand excellent battery capacity: For the reliable starting of high-power engines and a guaranteed power supply for safety and convenience features.

Bosch battery S4

The reliable starting performance of this powerful energy source meets the increasing demands in all vehicle classes. The 95 % market coverage means that even the special requirements for Asian vehicles can be fulfilled.

Bosch battery S3

Reliability and starting power with good value for money for the compact class and vehicles with fewer electrical convenience features.



A wide range of convenience and safety equipment is becoming a standard feature of more and more vehicles. This in turn means increasing demands on the vehicle battery – no problem for the PowerFrame-technology.

PowerFrame-technology: **More power right from the start**

PowerFrame grid technology represents a revolutionary new development for Bosch batteries, employing a patented stamping process. As compared to the conventional production method, the battery components offer far superior performance and quality.

Motorists enjoy the benefits right from the start:

- ▶ Longer service life thanks to minimum corrosion
- ▶ Reliable starting power through the use of a grid with low flow resistance
- ▶ Optimum performance for a higher energy throughput

The grid is of crucial importance to the power and reliability of a battery. It is responsible for an optimum current flow. The stamped PowerFrame-grid offers the following advantages over conventional types:

1. Rigid grid frame

Prevents grid growth and corrosion at the edges and thus damage to the separator or short circuits caused by the grid making contact with the negative plate.

2. Stamped grid

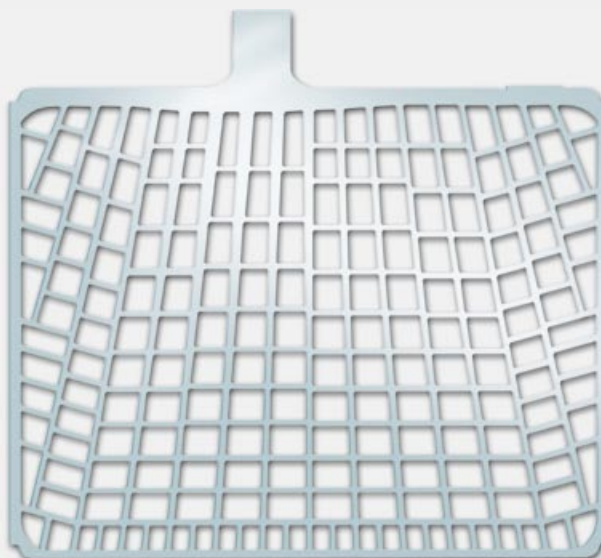
The firm, precision structure ensures excellent adhesion of the active material to the grid and permits low-resistance, rapid charging and discharging of the battery. In contrast to conventional grids, there is no brittleness arising from mechanical deformation during the production process.

3. Optimum grid structure

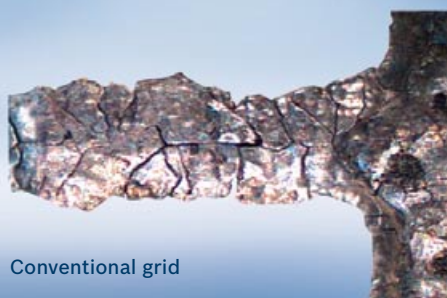
More lead is applied to the areas subject to a higher load: The grid is more hardwearing and resistant to corrosion.

4. Grid designed for optimum flow

With the new concept, the grid bars are connected directly to the plate link. The low flow resistance ensures optimum conductivity and the fastest possible supply of power to the electrical load.



The SAE J240 (75°C) life test shows that the PowerFrame-grid (right) exhibits slight corrosion with virtually no loss of conductivity. With the grid on the left, the material between the alloy grains is subject to corrosion, resulting in a weak flow of current and a shorter service life.



Conventional grid



PowerFrame

The new battery generation: **Power packs full of innovative technology**

Every Bosch battery reflects the wealth of experience of a global leader in the field of automotive technology development and original equipment. The new battery generation can offer more than just higher starting power and a longer service life. It attains an excellent standard of convenience and safety right down to the last detail.

A complete concept, developed with just one aim in mind: To provide powerful starting and a reliable supply of power for the vehicle - no matter how tough the conditions and with an unbeatable service life.

Side-mounted links

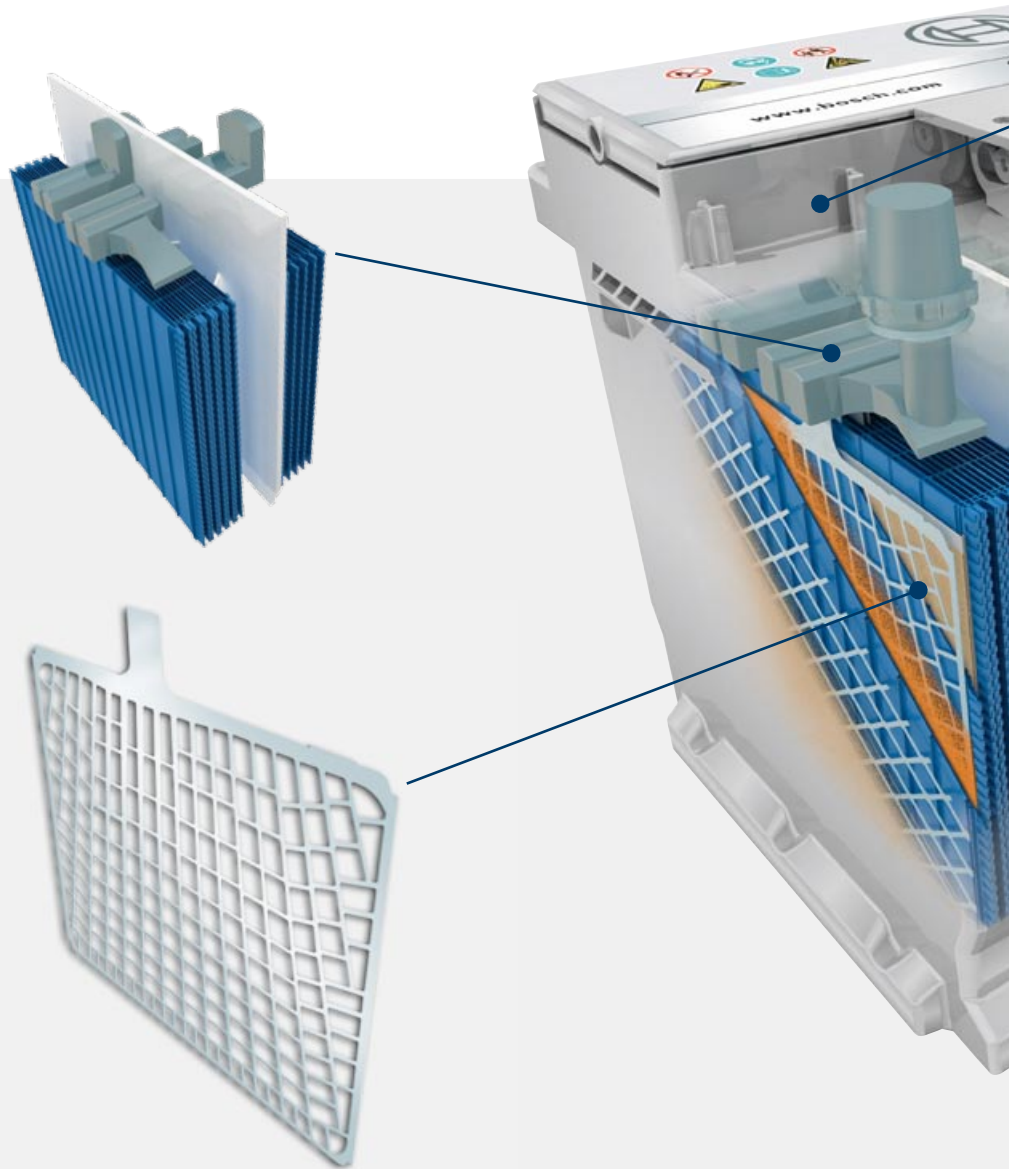
A special welding technique avoids loss of power or broken contacts. The central arrangement increases the stability of the plates, guarantees the supply of power, permits a longer service life and enhances cold starting performance.

Special Bosch alloy

Ensures corrosion resistance and greatly reduces selfdischarge – 100%

Unique grid structure

Grid designed for optimum flow to ensure a consistently high level of starting power and a long service life.

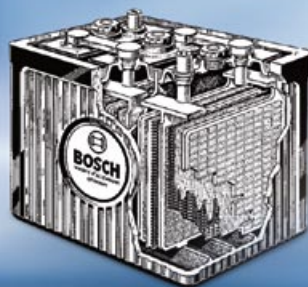


1922

Start of motorcycle battery production in Stuttgart Feuerbach.

1927

Start of car battery production.

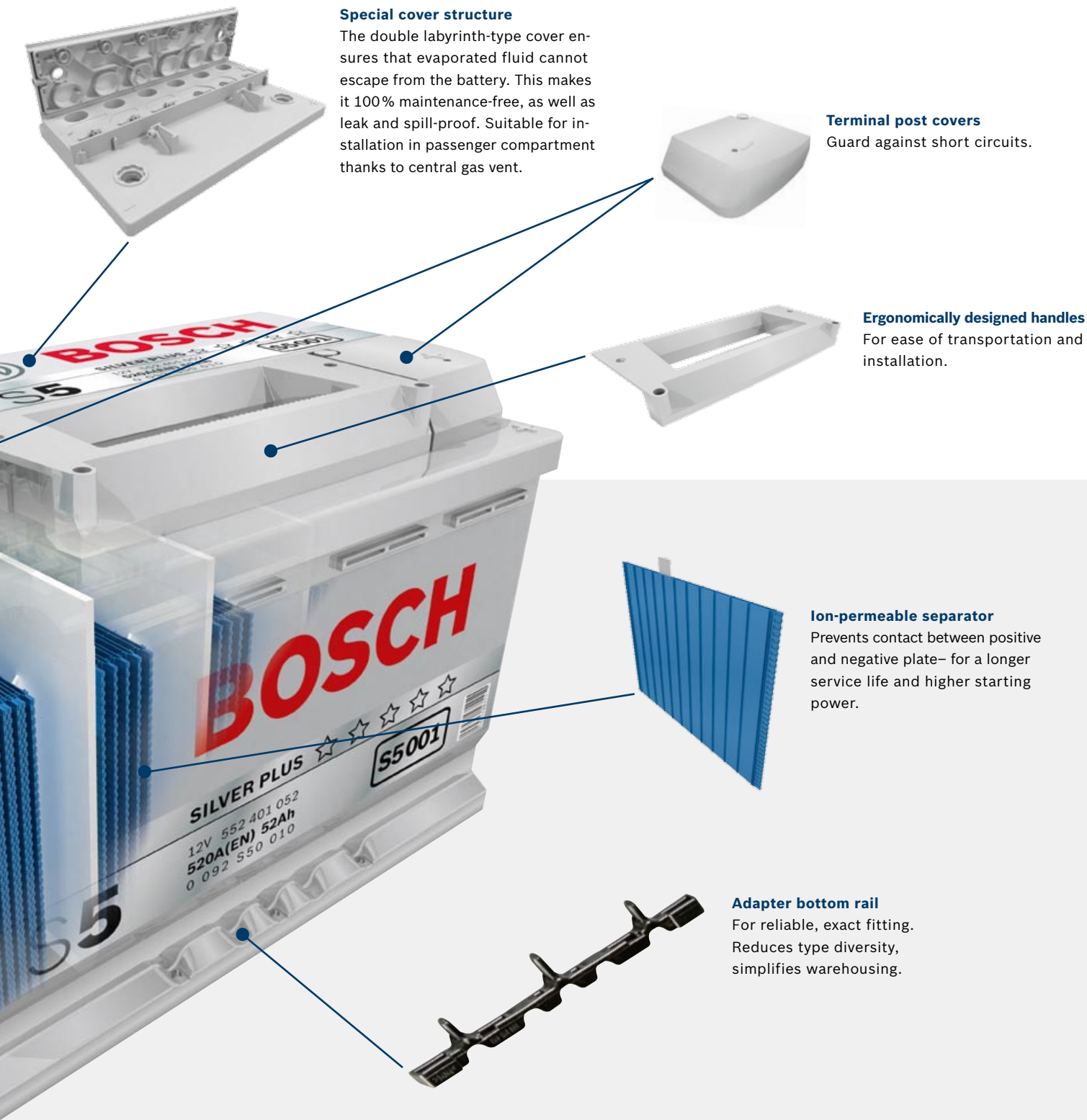


1960s

12 V drive battery with charge indicator in polystyrene case.

1970s

12 V starter battery with diagnostic connector for battery checking. Introduction of low-maintenance passenger vehicle batteries.



Special cover structure

The double labyrinth-type cover ensures that evaporated fluid cannot escape from the battery. This makes it 100% maintenance-free, as well as leak and spill-proof. Suitable for installation in passenger compartment thanks to central gas vent.

Terminal post covers

Guard against short circuits.

Ergonomically designed handles

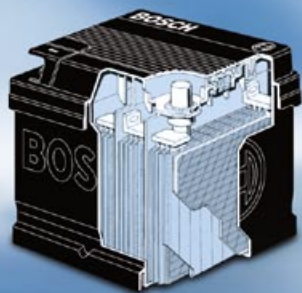
For ease of transportation and installation.

Ion-permeable separator

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

Adapter bottom rail

For reliable, exact fitting. Reduces type diversity, simplifies warehousing.



1980s

Introduction of fully maintenance-free passenger vehicle batteries as per DIN 43539. Introduction of lead-calcium technology.

1990s to the present day

Introduction of maintenance-free Bosch Silver technology with labyrinth-type cover. Bosch AGM technology, with electrolyte bonded in glass mat. Revolutionary PowerFrame- technology.



A powerful impetus for your battery business

PowerFrame-technology: Higher starting power, longer service life, absolutely no maintenance and outstanding reliability. Even the most critical motorist will be convinced. Announce the arrival of a new quality standard for starter batteries with the red PowerFrame label.

New technology:
Bosch PowerFrame



For further information visit:
www.bosch.com



Battery trolley



Poster



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