

Invented for life



# Leisure and marine batteries

Powerful energy supply for mobile applications



# Leisure and marine batteries

## Overview

Modern mobile applications 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 on land and on water with the energy they need – over long periods.

### Battery expert since 1922

In 1922, the first Bosch battery was produced in Stuttgart-Feuerbach (Germany).

### Grid with special alloy and design

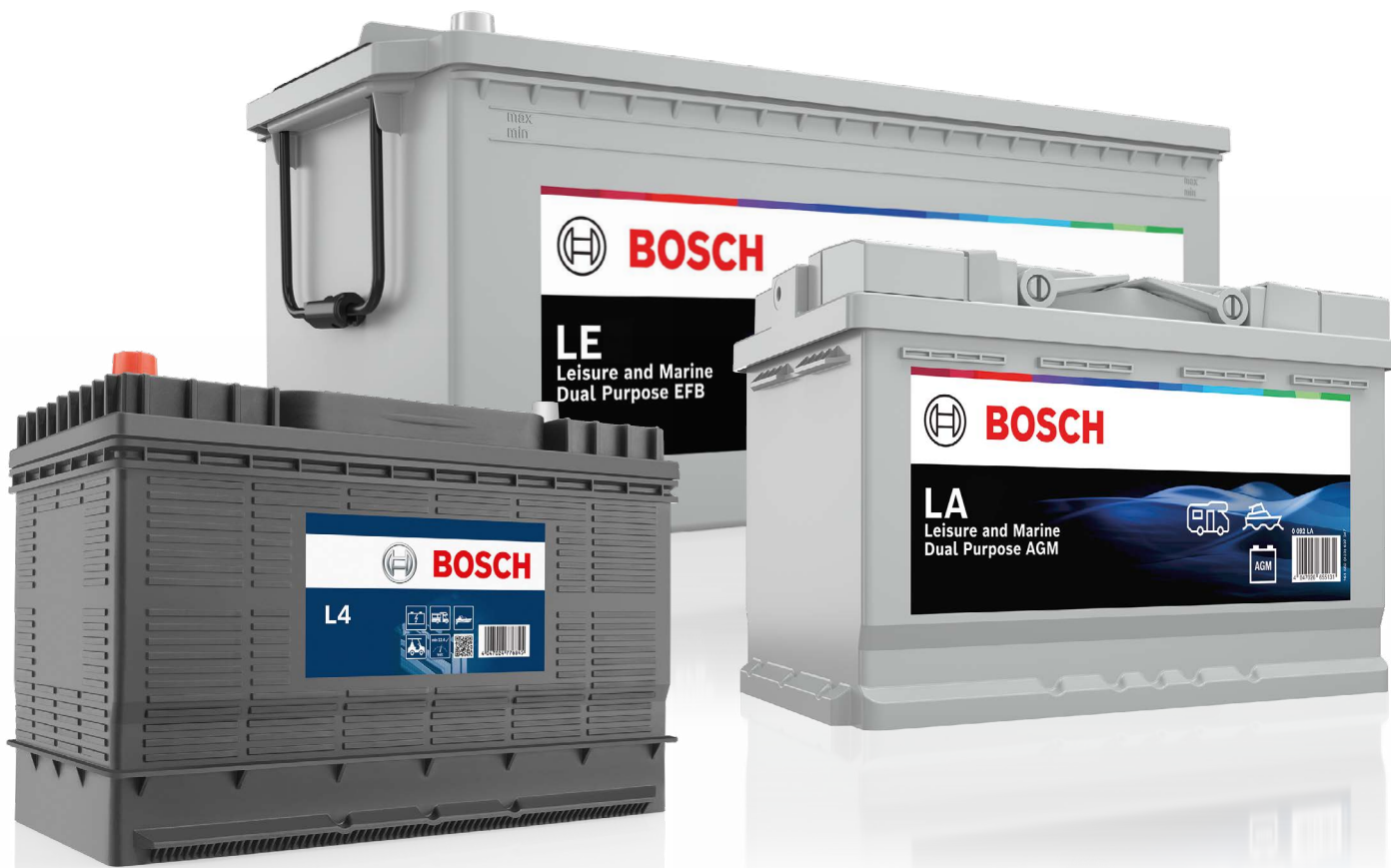
A special alloy ensures high corrosion resistance combined with particularly pronounced conductivity – compared to conventional grids. In addition, the flow-optimized grid design ensures consistently high starting power and a long service life.

### High capacity, operational reliability

Owners of campers, mobile homes and boats appreciate their independence and the proximity to nature. At the same time, they demand comfort and safety. Mobile devices need large amounts of energy over a longer period of time while having to be recharged quickly. Bosch batteries are perfectly adapted to these specific requirements. They stand out for their high capacity, their outstanding deep-cycle resistance as well as top safety and operational reliability.

### Parts, diagnostics and services

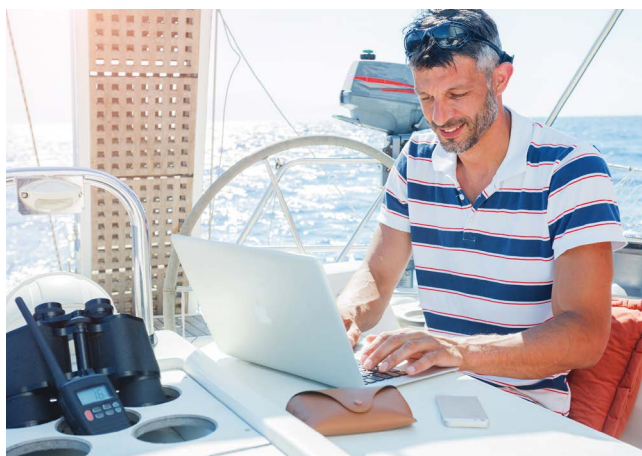
To the battery business of workshops and retailers Bosch offers full support from a single source. This includes a comprehensive range of batteries, efficient diagnostics and reliable services.



# Leisure and marine batteries

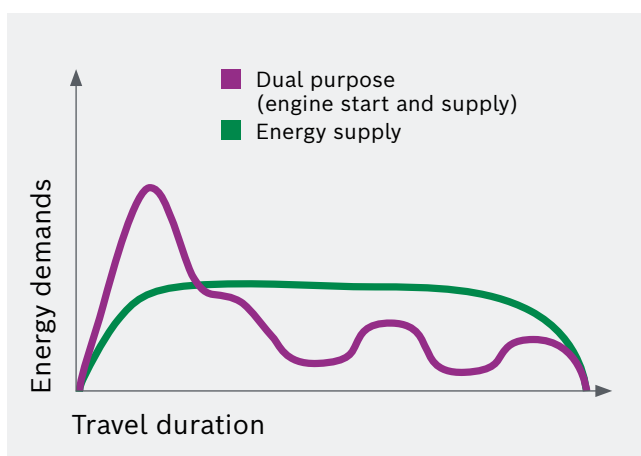
## Engine starts and energy supply

Travelers like to use routes off the beaten path of mass tourism. Meanwhile safety and comfort deeply depend on the functioning of the equipment. The need for energy of laptops, tablets and cell phones as well as of radio, GPS, lighting, heating and cooling on board of campers, caravans or boats is reliably covered by Bosch batteries.



### Energy for engine starting, comfort and emergencies

Bosch batteries continuously supply emergency equipment and comfort equipment. For that they provide high energy output. Thanks to their good charge acceptance, Bosch batteries prevent the risk of deep discharge and failure. If the engine is started while other electrical consumers are supplied, Bosch batteries deliver both particularly high performance and the capacity for demand-oriented power consumption.



### Bosch dual purpose batteries for starting and supply

Bosch dual purpose batteries with AGM or EFB technology are developed for the energy needs of boats and caravans that have to be started and are equipped with many electrical consumers. In addition, they can be combined with other batteries that, for example, supply power to an electric winch, the rudder or auxiliary motors. The reinforced design of the dual purpose battery is together with a good recharging process the key to outstanding results and a long service life.



### Specially developed for marine applications

Batteries in marine use must function flawlessly even when the boat sways. For this reason, the Bosch dual purpose batteries with AGM technology have a particularly robust design. This increases the performance and service life of the batteries. Additionally this allows an installation angle of up to 45° and makes it very vibration-resistant.

# Leisure and marine batteries

## Program



	Dual purpose AGM	Dual purpose EFB	Dual purpose SLI L4
	<b>Powerful Bosch dual purpose battery with AGM technology<sup>(1)</sup> and EFB technology<sup>(2)</sup>, for reliable starts and the high energy consumption of leisure and marine applications</b>		<b>Bosch dual purpose battery with SLI technology<sup>(4)</sup>, designed for long-term discharge and with starting capability of leisure and marine applications with low energy consumption</b>
Technology	 <b>AGM<sup>(1)</sup> and EFB<sup>(2)</sup>: Deep Cycle<sup>(3)</sup></b> <b>Dual purpose:</b> Engine starting and energy supply		 <b>Lead-acid SLI<sup>(4)</sup>: labyrinth lid<sup>(5)</sup>, Dual purpose:</b> Engine starting and energy supply
Applications	 Caravans/mobile homes, electric and motorboats		 Caravans/mobile homes, electric and motorboats
Maintenance	Absolutely maintenance-free		Absolutely maintenance-free
Installation inside the vehicle	Yes		Yes
Cold starting performance	● ● ●		● ●
Number of electrical consumers	● ● ●		●
Deep-cycle resistance	● ● ● ●		● ●
Suitability as supply battery	● ● ● ●		● ●
Vibration resistance	● ● ●		●
Installation angle	Up to 45°	0°	Up to 45°

(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) Deep Cycle: high deep-cycle resistance and power density

(4) SLI (Starting Lighting Ignition) battery

(5) Labyrinth lid: leads condensed vapor back into the battery; integrated central degassing, backfire protection and an additional sealing ring for high operational safety

# Dual purpose AGM batteries

## Product details

Powerful Bosch dual purpose battery with AGM technology, for reliable engine starting and high energy consumption in leisure and marine applications – such as caravans, motorhomes, electric and motor boats



### Advantages at a glance

- **Reliable starting performance combined with high energy supply:** AGM technology delivers high starting currents combined with very good deep-cycle resistance
- **High safety:** ensured by backfire protection and integrated central degassing – the battery is leakproof
- **Absolutely maintenance-free:** very low water consumption as a result of a modern grid alloy and special lid design
- **Ideal for seasonal application:** due to the deep cycle technology the battery is ready for use even after extended downtimes, for example after the winter break

# Dual purpose AGM batteries

## Technology

### Special lid design for high operational safety

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

### Terminal-post covers

provide protection against short circuits.

### Ergonomic handles

For easy transport and installation.

### Set of plates with particularly robust connection

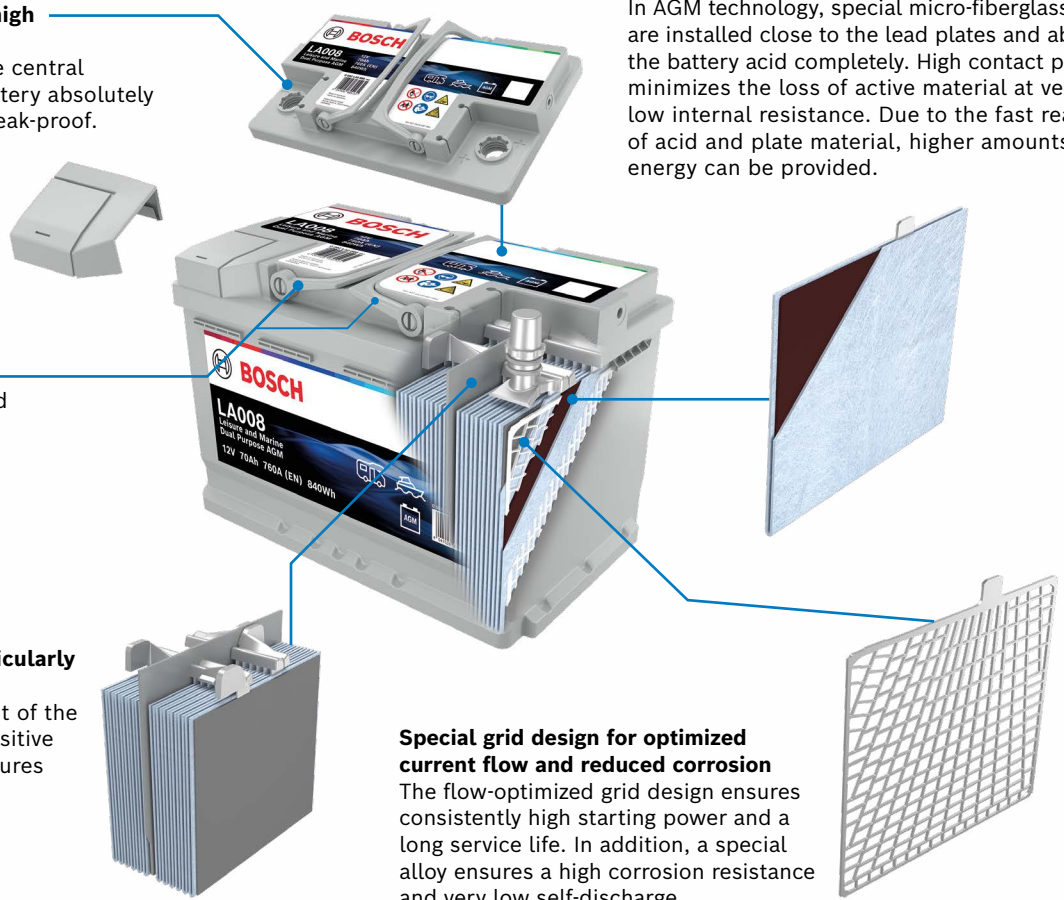
The central arrangement of the connectors between positive and negative plates ensures additional stability.

### Special grid design for optimized current flow and reduced corrosion

The flow-optimized grid design ensures consistently high starting power and a long service life. In addition, a special alloy ensures a high corrosion resistance and very low self-discharge.

### 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 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.



### High energy requirements

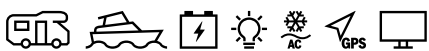
#### Dual purpose AGM battery: powerful battery for particularly high requirements

The number of electrical consumers is also increasing on board of campers, caravans and boats. In addition to the load of starting the engine, the powerful dual purpose AGM batteries from Bosch reliably cover the energy requirements of laptops, tablets and cell phones as well as radio, GPS, lighting, heating and cooling.

# Dual purpose EFB batteries

## Product details

Powerful Bosch energy supply battery with EFB technology, developed for leisure and marine applications with high energy consumption.



### Advantages at a glance

- **Reliable starting performance combined with high energy supply:** EFB technology delivers high starting currents combined with very good deep-cycle resistance
- **High safety:** ensured by backfire protection and integrated central degassing – the battery is leakproof
- **Absolutely maintenance-free:** very low water consumption as a result of a modern grid alloy and special lid design
- **Ideal for seasonal application:** due to the deep cycle technology the battery is ready for use even after extended downtimes, for example after the winter break

# Dual purpose EFB batteries

## Technology

### Labyrinth lid

The double lid with labyrinth design returns condensed water to the battery. As a result, LE batteries are absolutely maintenance-free and leakproof. They consume very little water. The integrated central degassing, backfire protection and an additional sealing ring ensure high operational safety.

### Additional stabilization for vibration resistance (V4 according to EN-standard)

### Mixing elements

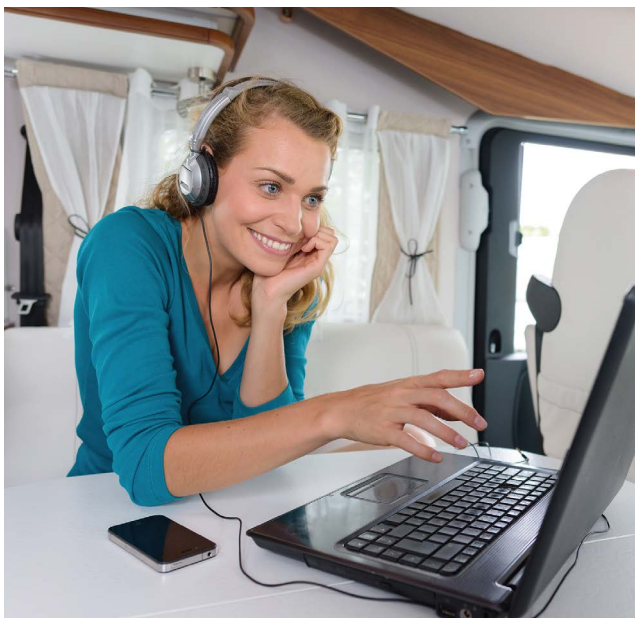
improve electrolyte mixing and prevent acid layering – thus expanding the service life and improving the deep-cycle resistance.

### Special grid design for optimized current flow and reduced corrosion

The special grid-stamping technique makes this battery particularly corrosion-resistant and durable. The flow-optimized grid design ensures consistently high starting power. This results in a very low self-discharge rate.

### EFB (Enhanced Flooded Battery) technology

At EFB (Enhanced Flooded Battery) technology, the positive plate is coated with a polyester scrim (fleece). It ensures additional retention of the active material on the battery plates doubling the deep-cycle resistance in comparison with conventional batteries. The specially glued polyester fleece reliably keeps the battery plates in position. As a consequence, the battery remains operational even if subject to strong and lasting vibrations.



### Safety and comfort

#### Dual purpose EFB batteries:

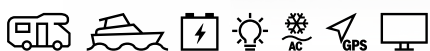
#### reliably ensure for high energy reserves

For safety reasons, campers and boats are equipped with special navigation and emergency technologies. To increase comfort at the same time, campers and boats often offer access to additional electrical aids (heaters, stoves, refrigerators, water pumps). Bosch dual purpose EFB batteries power the on-board systems alone or in addition to the starter battery – even when fully equipped.

# Dual purpose SLI battery L4

## Product details

Bosch SLI L4 batteries are designed for mobile applications with few electrical consumers and specifically laid out for long-term discharge. They allow full recharge in a short time and also function as a starter batteries, for example for boats and motorhomes.



### Advantages at a glance

- **Powerful and comfortable on the road:** flow-optimized and corrosion-resistant grid for high starting power and durability
- **High cycle resistance:** short charging times and a long service life
- **High safety:** due to backfire protection and a labyrinth lid, that leads condensed vapor back into the battery
- **Absolutely maintenance-free after EN, spill- and tilt-proof up to 45°:** thanks to the double-lid with labyrinth construction

# Bosch C-line battery charger

## Overview

Sooner or later, extended stationary periods, frequent short-distance driving, temperatures way below zero degrees Celsius and a large number of convenience functions take even the best battery to its limits. Bosch battery chargers provide reliable starting power and increase the battery service life. Buying a Bosch battery charger for home use thus pays off quickly for any driver – no matter whether boat, motorhome, motorcycle, car or commercial vehicle driver.



# Battery charger C30, C70 und C80-Li Program



	C30	C70	C80-Li
	<p><b>Fast, efficient and versatile battery charging:</b> The C30 battery charger services 6–12 V lead acid, AGM, GEL, EFB and Open batteries in scooters, motorcycles, cars, mobile homes and motorboats. The charger allows an easy one-button operation.</p>	<p><b>The robust, modern battery charger C70</b> charges 12–24 V lead acid, AGM, GEL, EFB and Open batteries in cars, mobile homes, commercial vehicles and motorboats. The charger allows an easy one-button operation.</p>	<p><b>The modern C80-Li battery charger</b> charges 12 V lithium-ion (LiFePO<sub>4</sub>) and 6 V/12 V lead acid batteries (AGM, EFB, GEL and Open batteries) in motorcycles, cars, mobile homes and motorboats. The bright LED display and the one-button operation ease the charging process.</p>
Types of batteries	<p>6 V/12 V; Lead acid, AGM, EFB, GEL and Open</p>	<p>12 V/24 V; Lead acid, AGM, EFB, GEL and Open</p>	<p>12 V LiFePO<sub>4</sub> and 6 V/12 V; AGM, EFB, GEL and Open</p>
Scope of application			
Max. charging power	3.8 A (±10%)	10 A (±10%)	15 A (±10%)
One-button operation	●	●	●
Automatic charge control	●	●	●
Protection against sparks	●	●	●
Trickle charging	●	●	●
Short-circuit/reverse-connection protection	●	●	●
Overheating protection	●	●	●
Memory function	●	●	●
Back-up charging mode		●	●
Dust/splash-water protection (IP 65)	●	●	●
Regenerative function	●	●	●

# 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 **+**

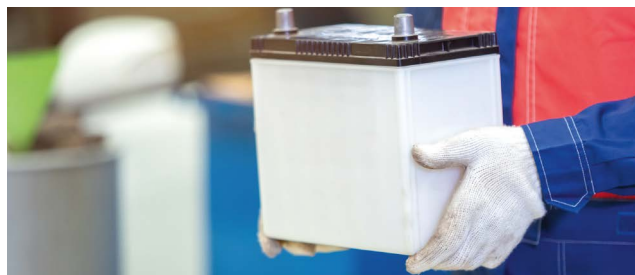
This test is relevant for vehicles that are frequently used on poor surfaces. The vibration resistance of the battery is tested.



### 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.



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Relevance for consumers (Bosch internal expert evaluation)

**+++** = very high

**++** = high

**+** = moderate

# Requirements of Bosch batteries

## Quality and performance tests

### Lifetime tests

#### Deep-cycle resistance test +++

A deep-cycle resistant battery is particularly important in city traffic with numerous start/stops or for vehicles that have many electrical consumers or are mainly used for short-distance trips. High deep-cycle resistance is a prerequisite for a long battery life.

#### Charge acceptance test ++

Even under heavy loads, it must be possible to charge the battery quickly while driving – this prevents the risk of failure due to deep discharge. This is relevant for longer stationary periods, as in times of remote working.

#### Corrosion tests ++

These tests check the battery's resistance to internal corrosion at high temperatures. This is because internal corrosion leads to loss of battery power.

#### Water consumption tests ++

Low water consumption ensures total freedom from maintenance and longer battery life.



### The EN standard

All function and performance tests are carried out on the basis of the high technical standards of the respective markets. In Europe this is the

#### EN 50342-1.

These tests are very demanding and simulate the extreme demands to which batteries can be exposed.



### Did you know?

The EN standard as a basis serves as a minimum requirement for Bosch batteries. This is regularly verified at Bosch by an independent and certified laboratory. Whether a battery meets the EN requirements can be easily seen on the label.



(EN)

# 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:**  
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