



**BOSCH**

Invented for life

Driven by

**MILLISECONDS**

**Always subject to high voltages:  
Bosch spark plugs**

# Motorsport technology for road use

## Efficient mobility with Bosch spark plugs



Around the world, motorsport teams rely on Bosch spark plugs. Racing innovations and experience is implemented at the production of spark plugs for series-production passenger cars as well. At these vehicles, they provide outstanding engine performance and ensure reliable and efficient everyday mobility for millions of people.



### Competence and know-how

Bosch holds comprehensive know-how and a wealth of experience in the field of gasoline injection and ignition technology. In close cooperation with the vehicle manufacturers, Bosch develops original-equipment spark plugs geared to the specific requirements of each engine. Innovative motorsport spark plugs are also used for road vehicles – although in modified versions.



### Spark-plug technology for numerous applications

Modern engines place high and highly differing demands on spark plugs. At the production of the latter, Bosch thus uses different electrode alloys with specific advantages to be able to meet exactly the specific requirements of the respective engine. And yet Bosch does not only offer matching spark plugs for series-production passenger cars. Its range also includes spark plugs for small engines and even for industrial applications.



### Innovations for the future

Back in

# 1902

Bosch presented its first spark plug together with a high-voltage magneto ignition system thus marking a milestone on the path to the rapidly growing motor vehicle production of the following decades.

# Spark plugs

## Overview

Modern vehicle engines need to meet increasing demands. They are judged based on factors such as fuel economy, low emissions and fun to drive. Many vehicle manufacturers rely on the high quality, reliability and performance of Bosch spark plugs for their vehicles' original equipment.

### System and component developer

Thanks to its close cooperation with vehicle manufacturers, Bosch gained outstanding know-how – concerning components such as spark plugs as well as gasoline injection systems. It allows Bosch to offer a comprehensive range of spark plugs and ignition components matching the specific requirements of different engines on the aftermarket.

### Technological competence

The aftermarket also benefits from motorsport and original-equipment innovations. Future trends and technologies are implemented at the production of spark plugs for series-production passenger cars and are often even further developed before being launched onto the workshop and retail markets.

### High market coverage

With a high worldwide market coverage, Bosch supplies matching spark plugs for almost any vehicle – and geared to the specific requirements of the respective engine.

### High quality

Following the first Bosch spark plug launched in 1902, several other patents have also been filed. These include, for instance, the Continuous Wave (CW) laser welding method clearly increasing the durability of the welded connection on the center electrode. Innovative alloys such as nickel, yttrium and precious metals ensure a long service life. Production procedures such as the heat-shrink assembly, nickel-coated spark plug housings and threads ensure a high reliability and a long service life.



# Precious-metal spark plugs

## Product range & details



	Bosch Platinum	Bosch Double-Platinum	Bosch Iridium	Bosch Double-Iridium	Bosch EVO
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Scope of application Bosch spark plugs are designed for a permanently reliable ignition performance in the respective engine. They are developed and produced with the same quality as original equipment spark plugs.

Application					
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### Advantages at a glance

- ▶ Outstanding engine protection due to nickel-plated housing and thread
- ▶ First-class ignitability for high performance due to specifically developed precious metals or alloys of the center electrode
- ▶ Hassle-free spark plug replacement due to factory-set electrode gap
- ▶ High wear resistance due to highly heat-conductive electrodes
- ▶ High gas tightness and stable heat value through heat shrink assembly

**Pin-to-pin spark plugs**

Bosch pin-to-pin spark plugs are tailored to gasoline engines with demanding ignitability characteristics, e.g. at high exhaust gas recirculation rates or lean air/fuel mixtures. Two particularly thin precious-metal electrodes ensure high energy transfer rates and a reliable ignition.





# High-performance spark plugs

## Technology



**Improved head bending strength**  
of the insulator

**Special ceramic material**  
with high dielectric strength

**Special nickel coating**  
of housing and thread for  
improved corrosion protection

**Aligned and welded ground electrode**  
(in combination with solid washer) for  
an exact positioning in the combustion  
chamber

**Solid washer**  
non-compressible

**Newly developed design**  
of the insulator nose

**Extremely fine precious-metal  
pin** welded via CW laser welding  
method on the center electrode

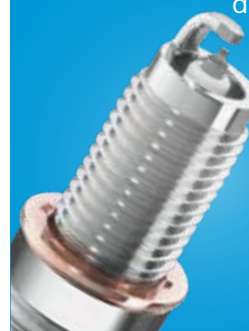
### Cup terminal

Engines with reduced displacement or with less cylinders (downsizing) and increased boost pressure need a higher ignition voltage. For these purposes, Bosch developed spark plugs featuring a longer insulator for improved flashover resistance. For length compensation, they are equipped with a so-called cup terminal.



### Solid washer



In case of engines with modern gasoline direct injection systems, the ideal spark plug alignment towards the injection valve decides about accurate ignition of the fuel mixture. For the precise positioning within the combustion chamber, Bosch spark plugs are equipped with a solid and non-compressible washer and a specifically oriented thread.



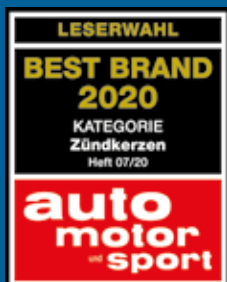
# Spark plugs without precious metals

## Product range & details



	Bosch Nickel	Bosch Super 4
Scope of application	<b>Bosch Nickel spark plugs</b> are equipped with a ground electrode made of nickel alloy. They provide outstanding spark plug technology and are available for a wide range of applications.	<b>Bosch Super 4 spark plugs</b> provide particularly high protection against carbon fouling thanks to their surface air gap technology. They are an alternative recommendation for older passenger car models.
Application		
Advantages at a glance	<ul style="list-style-type: none"> <li>▶ Outstanding engine protection due to nickel-plated housing and thread</li> <li>▶ Smooth engine operation and steady acceleration due to a high heat conductivity of the ground electrode made of nickel alloy</li> <li>▶ Hassle-free spark plug replacement due to factory-set electrode gap</li> <li>▶ High wear resistance due to a highly heat-conductive center electrode with copper core</li> <li>▶ High gas tightness and stable heat value through heat shrink assembly</li> </ul>	<ul style="list-style-type: none"> <li>▶ Outstanding engine protection due to nickel-plated housing and thread</li> <li>▶ Lag-free acceleration due to first-class ignitability by means of four thin electrodes with long spark gaps</li> <li>▶ Outstanding protection against carbon fouling due to surface air-gap technology</li> <li>▶ Hassle-free spark plug replacement due to factory-set electrode gap</li> <li>▶ High gas tightness and stable heat value through heat shrink assembly</li> </ul>

### Best Brand 2020 readers' poll



„auto motor und sport“, issue 07/2020

#### Bosch spark plugs were voted “best brand”

For the 15<sup>th</sup> time already, the readers of “auto motor und sport” (a famous German motor magazine) chose the best brands in the areas of automotive accessories, suppliers and services at the renowned “BEST CARS” readers’ poll (issue 07/2020).

Besides Bosch batteries, filters, wiper blades, workshop chains and tools, Bosch spark plugs were also voted “best brand”.

### Available packaging

**Bosch spark plugs** are available on the aftermarket featuring different packaging sizes, tailored to the market needs.



# Spark plugs for special applications

## Product range & details



	Bosch spark plugs for small engines	Bosch industrial spark plugs
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Scope of application

**Bosch Nickel spark plugs for small engines** are equipped with a ground electrode made of nickel alloy. They are available for a wide range of applications.

**Bosch industrial spark plugs** are available as Bosch Double-Platinum or Double-Iridium spark plugs. They are used in stationary gas engines.

Application		
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Advantages at a glance

- ▶ Outstanding engine protection due to nickel-plated housing and thread
- ▶ First-class starting behavior due to spark plug technology which is engineered to the requirements of the respective engine
- ▶ Hassle-free spark plug replacement due to factory-set electrode gap
- ▶ High wear resistance due to a robust, solid center electrode made of nickel
- ▶ High gas tightness and stable heat value through heat shrink assembly

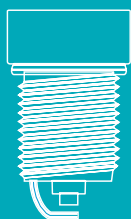
- ▶ Outstanding engine protection due to nickel-plated housing and thread
- ▶ First-class ignitability for high performance due to specifically developed alloys at the center and ground electrode
- ▶ Hassle-free spark plug replacement due to factory-set electrode gap
- ▶ High wear resistance due to a highly heat-conductive center electrode
- ▶ High gas tightness and stable heat value through heat shrink assembly



### Workshop tip

#### Installation:

1. Take the spark plug out of the packaging. Do not grease or lubricate the thread.
2. Screw the spark plug into the cylinder head by hand until it is seated.
3. Tighten the spark plug with a spark plug wrench.
4. Observe the mandatory and type-specific torque e.g. 23 Nm.



### Service tool for industrial spark plugs

The **Bosch re-gapping tool** is a professional tool for accurate readjustment of the electrode gap of Bosch M18 Iridium industrial spark plugs.



# What drives you, drives us

Bosch technologies are used in most vehicles world-wide. 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 continue to work on our unique combination of solutions for spare parts, diagnostics and workshop services:

- ▶ Solutions for efficient and effective 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 technical support
- ▶ Comprehensive educational and training offers
- ▶ Targeted sales and marketing support

Find out more at:  
[boschaftermarket.com](https://boschaftermarket.com)

**Robert Bosch GmbH**  
Automotive Aftermarket

Auf der Breit 4  
76227 Karlsruhe  
Germany

