



Technology with Vision

## SPARK PLUGS

Unleash the POWER



South Africa  
Sub-Sahara Region



HELLA KGaA Hueck & Co.

## Unleash the POWER

### About HELLA

HELLA KGaA Hueck & Co. is a globally positioned company at more than 100 locations in over 35 countries. As a key innovation driver, the company has been developing and manufacturing lighting and electronic components and systems for the automotive industry for more than 100 years. HELLA ranks among the top 50 automotive suppliers globally and operates one of the world's largest aftermarket organizations for automotive parts, accessories, diagnostics and services. Customers include all leading vehicle and system manufacturers as well as the automotive parts aftermarket.

The HELLA brand is synonymous with proven quality and innovative automotive technology. The basis behind HELLA's success lies in its constant pursuit for innovations and design improvements, and constantly creating value to the future of motor vehicles.





## HELLA Spark Plugs

### What is a spark plug?

A spark plug is a device installed at the top of an engine cylinder that generates sparks at the tip of its electrode when a high voltage is applied across its terminal ends, thus igniting the compressed air-fuel mixture in the cylinder. The resulting controlled combustions ensure continuous piston movements that translate to rotational movements of the wheels.

The spark plug plays an important role in achieving optimal performance and reliable functioning of an engine over its entire service life. It has to ensure reliable cold starts, yet preventing misfiring during acceleration. At the same time it must be able to operate continuously for long hours and be exposed to extreme conditions of high temperature, high pressure, vigorous vibration and presence of corrosive chemicals in an engine cylinder. With a greater emphasis on fuel economy and environmental cleanliness today, a spark plug plays an even greater role in ensuring clean and efficient combustion.

### Why HELLA Spark Plugs?

With its OE know-how in electronic ignition devices and engine sensors, HELLA designs its spark plugs for durability, reliability and optimal performance. All HELLA Spark Plugs have copper core center electrodes that provide utmost heat dissipation and conductivity to maintain stable operating temperatures. The metal shell of each plug is nickel plated to offer higher resistance against corrosion. The insulator is made of very high density silicon dioxide compound that gives maximum strength against vibration in the engine cylinder and also prevents current leakage during sparking.

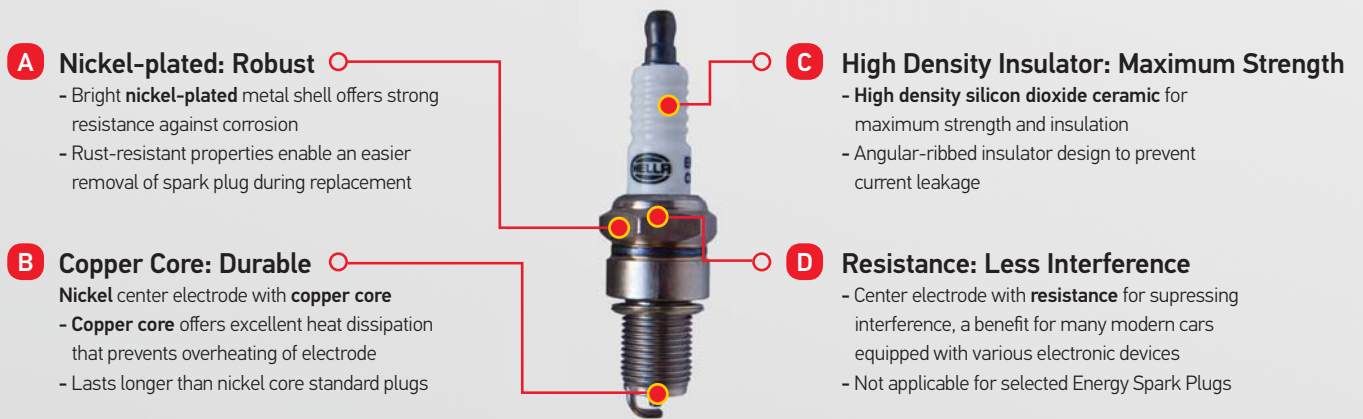
HELLA offers four types of spark plugs. HELLA Energy is an OE equivalent plug for spare part replacement, while HELLA Energy Pro lasts longer than typical OE plugs. The performance series HELLA Platinum and Iridium Pro offer ultimate performance and power over a longer service life, ideal for other spare part replacement as well as for car enthusiasts looking to upgrade their car performance.

HELLA Spark Plugs	Standard Series		Performance Series	
	Energy	Energy Pro	Platinum	Iridium Pro
Technology	Nickel center electrode with copper core	Yttrium center electrode with copper core and U-groove ground electrode	Platinum tip with copper core center electrode	Iridium tip with copper core center electrode and platinum pad on ground electrode
Benefits	<ul style="list-style-type: none"> <li>- Service life of up to 30,000km</li> <li>- Durable</li> </ul>	<ul style="list-style-type: none"> <li>- Service life of up to 40,000km</li> <li>- Durable</li> <li>- Fuel efficient</li> <li>- Smoother combustion</li> </ul>	<ul style="list-style-type: none"> <li>- Long service life of up to 60,000km</li> <li>- Improved durability</li> <li>- Faster response &amp; acceleration</li> <li>- Improved fuel efficiency</li> <li>- Better combustion</li> </ul>	<ul style="list-style-type: none"> <li>- Longest service life of up to 100,000km</li> <li>- Best durability</li> <li>- Superior response &amp; acceleration</li> <li>- Highest fuel efficiency</li> <li>- Superior combustion &amp; power</li> </ul>

## HELLA Energy Spark Plug

Durable

**HELLA Energy** Spark Plug has a nickel center electrode with copper core that increases the thermal conductivity, offering excellent heat dissipation and ultimately making the spark plugs more durable. Selected part numbers come with resistance center electrode that suppresses interference caused during sparking.



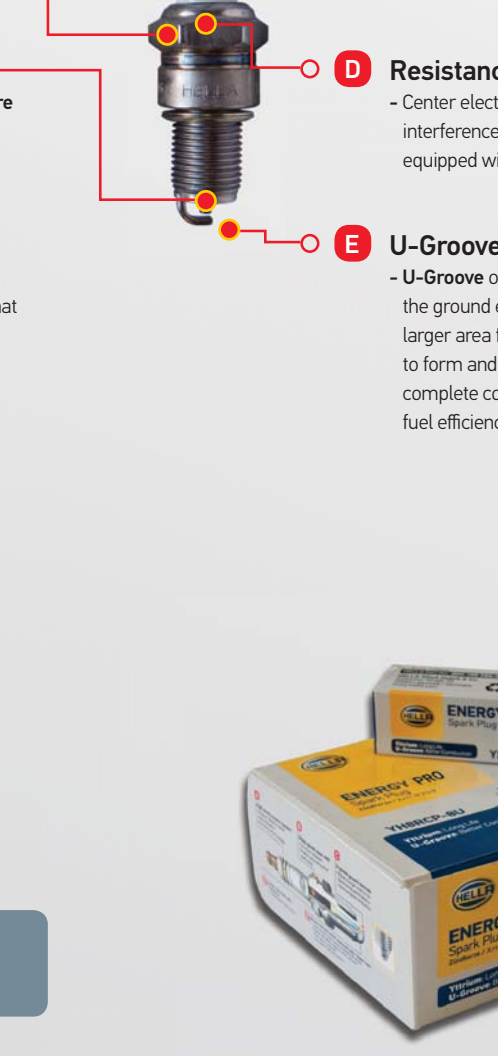
**Recommended Service Interval:**  
Approx. 30, 000 km



# HELLA Energy Pro Spark Plug

Long Life, Better Combustion

**HELLA Energy Pro** features a nickel alloy ground electrode U-groove design that allows a larger area for the flame kernel, enabling more complete combustion leading to better fuel efficiency. Each plug is incorporated with yttrium-enhanced center electrode that lasts longer than typical OE plugs. **HELLA Energy Pro** also comes with resistance added center electrode. For many modern cars with on-board electronic systems and electronic fuel injection, such resistance in the spark plugs greatly suppresses the electromagnetic interference caused during sparking.



**A Nickel-plated: Robust**

- Bright **nickel-plated** metal shell offers strong resistance against corrosion
- Rust-resistant properties enable an easier removal of spark plug during replacement

**B Nickel-Yttrium: Longer Life**  
**Nickel-Yttrium** center electrode with **copper core**

- **Nickel-Yttrium** alloy with higher melting point than typical nickel based standard plugs in the market, means higher durability against wear and tear
- Alloy also enhances resistance of copper core against corrosion
- **Copper core** offers excellent heat dissipation that prevents overheating of electrode
- Lasts longer than typical nickel or copper-core based standard plugs

**C High Density Insulator: Maximum Strength**

- **High density silicon dioxide ceramic** for maximum strength and insulation
- Angular-ribbed insulator design to prevent current leakage

**D Resistance: Less Interference**

- Center electrode with **resistance** for suppressing interference, a benefit for many modern cars equipped with various electronic devices

**E U-Groove: Better Combustion**

- **U-Groove** on the underside of the ground electrode allows a larger area for the flame kernel to form and enables a more complete combustion and better fuel efficiency

**Recommended Service Interval:**  
 Approx. 40, 000 km

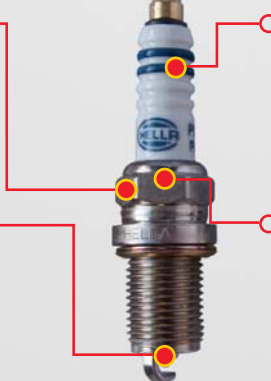


## HELLA Platinum Spark Plug

Better Performance and Longer Life

PERFORMANCE

**HELLA Platinum** Spark Plug offers a platinum center electrode tip that offers high durability and long service life. It lasts longer than typical OE plugs including yttrium enhanced plugs. The fine tip reduces ignition voltage requirement and improves ignitability, giving faster response, faster acceleration and improved fuel economy.

- 
- A Nickel-plated: Robust**
- Bright **nickel-plated** metal shell offers strong resistance against corrosion
  - Rust-resistant properties enable an easier removal of spark plug during replacement
- B Platinum Tip with Copper Core  
Center Electrode: High Durability and Longer Service Life**
- Laser welded **platinum alloy tip** offers high durability and longer service life
  - Fine tip reduces ignition voltage requirements and improves ignitability
  - Faster response and faster acceleration
  - Improves fuel economy
  - **Copper core** offers excellent heat dissipation that prevents overheating of electrode
- C High Density Insulator: Maximum Strength**
- **High density silicon dioxide ceramic** for maximum strength and insulation
  - Angular-ribbed insulator design to prevent current leakage
- D Resistance: Less Interference**
- Center electrode with **resistance** for suppressing interference, a benefit for many modern cars equipped with various electronic devices



Recommended Service Interval:  
Approx. 60, 000 km



## HELLA Iridium Pro Spark Plug

Superior Performance and Acceleration

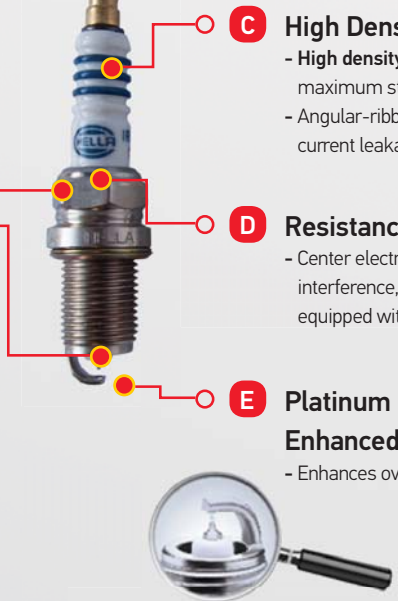
Extreme Long Life

### PERFORMANCE

The spark plug center electrode tip and ground electrode are the areas where most of the wear and tear happens. **HELLA Iridium Pro** offers superb durability at both the center electrode tip with an iridium tip and a platinum pad on the ground electrode.

Iridium is 6 times harder, 8 times stronger, and has a melting point 640 degrees higher than platinum. Advancement in precision laser technology has enabled laser welding of iridium material to create a uniformly precision-cut tip. Put that into a harsh engine cylinder environment and this translates into a spark plug that lasts much longer than any other plug types (nickel, yttrium and platinum).

The super fine 0.6mm center electrode tip reduces the voltage requirements and allows a focused, concentrated spark ignition. This in turn improves ignitability, offers faster response, faster acceleration and better fuel economy.



**A Nickel-plated: Robust**

- Bright **nickel-plated** metal shell offers strong resistance against corrosion
- Rust-resistant properties enable an easier removal of spark plug during replacement

**B Iridium Laser Welded Tip with Copper Core Center Electrode: Superior Performance**

- Laser welded precision cut iridium alloy tip offers high durability and longer service life
- Fine tip of 0.6mm reduces ignition voltage requirement and significantly improves ignitability
- Superior response and outstanding acceleration
- High fuel efficiency
- Copper core offers excellent heat dissipation that prevents overheating of electrode

**C High Density Insulator: Maximum Strength**

- **High density silicon dioxide ceramic** for maximum strength and insulation
- Angular-ribbed insulator design to prevent current leakage

**D Resistance: Less Interference**

- Center electrode with **resistance** for suppressing interference, a benefit for many modern cars equipped with various electronic devices

**E Platinum Pad on Ground Electrode: Enhanced Durability and Longer Life**

- Enhances overall durability of ground electrode

**B+E Extreme Long Service Life**

- Lasts much longer than typical OE plugs including platinum plugs and yttrium enhanced plugs

**Recommended Service Interval:**  
Approx. 100, 000 km



## When do we change spark plugs?

The service life of the spark plug depends on the type of spark plug used, from approximately 30,000km for **HELLA Energy** plug up to 100,000km for **HELLA Iridium Pro**. It is also recommended that you follow the replacement interval listed in your vehicle owner's manual.

Spark plug service life cannot be guaranteed because of the performance of the spark plug is dependent on several varying factors. These factors include driving habits, type of fuels leading to varying amount of corrosive substances in the cylinders, differences in the tolerance or accuracy of various components including sensors in each engine system and the overall performance of the engine itself.

a general guideline is to inspect the spark plugs when you send your car for a thorough servicing each year. If you experience frequent engine knocking with a significant drop in fuel economy, it could mean that it is time to replace your spark plug.

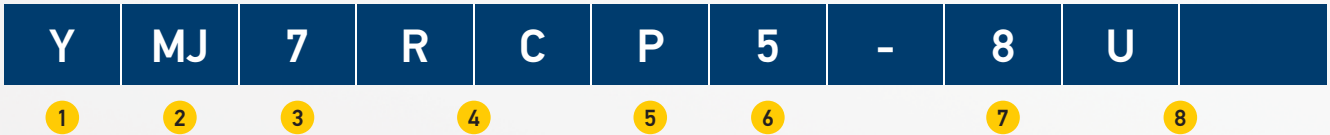
## Installation Guide:

1. As always, check the car manual to see what is the plug type indicated, Typically, the car manufacturer states the engine type and the plug type in the manual.
2. Allow the car engine to cool down.
3. Use the plug specification as recommended by the engine manual.
4. Remove and install one plug at a time to avoid connecting the wrong cable to the wrong plug. This is critical as each plug is fired at a specific timing sequence set by the car manufacturer.
5. Before removing the existing plug from each cylinder, gently brush off any debris around the plug to prevent dirt from getting into the cylinder during removal of the plug.
6. Use a torque wrench to fasten the plug into the cylinder.
7. Apply the correct torque value accordingly as indicated in the table below. These torque values should only apply to new plugs without lubricant on the thread. If the thread is already lubricated, the torque value should be reduced by one third.

Spark Plug Type Flat Seat - with gasket Taper Seat - without gasket	Iron Cover		Aluminium Cover	
	Nm	Kgfm	Nm	Kgfm
<b>10mm Flat Seat</b>	10 - 15	1.0 - 1.5	10 - 15	1.0 - 1.5
<b>12mm Flat Seat</b>	15 - 25	1.5 - 2.6	15 - 25	1.5 - 2.6
<b>14mm Flat Seat</b>	20 - 40	2.0 - 4.1	20 - 30	2.0 - 3.1
<b>14mm Taper Seat</b>	10 - 20	1.0 - 2.0	10 - 20	1.0 - 2.0
<b>18mm Flat Seat</b>	35 - 45	3.6 - 4.6	30 - 40	3.1 - 4.1
<b>18mm Taper Seat</b>	20 - 30	2.0 - 3.1	20 - 30	2.0 - 3.1

8. Ensure wrench and plug are coaxial.
9. Connect the spark plug cable to the terminal at the top of the plug securely and move on to the next plug, repeating the entire process again.





**1 Center Electrode**

- I - Iridium tip with copper core center electrode
- P - Platinum tip with copper core center electrode
- Y - Yttrium-Nickel center electrode with copper core
- C - Nickel center electrode with copper core

- 4 R - Resistance
- C - Copper Core

**2 Metal Shell:**

	Shell Type	Thread Length	Hexagon Size	Flat / Taper Seat
H	M14 x 1.25	19mm	20.8mm	Flat
M	M14 x 1.25	19mm	16mm	Flat
S	M14 x 1.25	17.5mm	16mm	Tapered
FM	M12 x 1.25	19mm	17.5mm	Flat
MJ	M14 x 1.25	26.5mm	16mm	Flat
NF	M12 x 1.25	26.5mm	14mm	Flat

- 5 P - Projective Nose
- S - Surface Gap
- Default - Projective

- 6 5 - 5mm Nose Size
- 4 - 4mm Nose Size
- Default - 3mm

- 7 **Spark Gap:**
- 7 - 0.7mm
- 8 - 0.8mm
- 9 - 0.9mm
- 10 - 1.0mm
- 11 - 1.1mm

**3 Heat Range:**

HELLA	
4	* For the HELLA range, the higher the index, the cooler the plug.  (Different manufacturers may use different index measuring scales to reflect their spark plugs heat range.)
6	
7	
8	
9	
10	
11	
12	

- 8 U - U-groove ground electrode
- D - Double ground electrode
- P - Platinum pad on ground electrode



Lined area for taking notes, consisting of multiple horizontal blue lines on a light gray background.



A series of 18 horizontal grey bars, each with a thin blue line underneath, serving as a template for text entry.



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