

First plug-in hybrid with the three-pointed star: the S 500 PLUG-IN HYBRID¹.

A pioneer for efficiency.

Exemplary efficiency = superior performance. Daimler offers proof of this equation with the S 500 PLUG-IN HYBRID¹, a model that once again underscores the Group's leading role in the electrification of premium vehicles. The new luxury sedan from Mercedes-Benz makes a big impression not only with its state-of-the-art hybrid concept but also with the innovations and exclusive appointment details of the S-Class. The centerpiece of the model's plug-in technology is a new high-voltage lithium-ion battery that can be charged externally – using a household power socket, for example. The first luxury sedan certified as belonging to the “three liters per 100 km” category is the third hybrid in the S-Class series and a further key element on the road to emission-free mobility. The first S 500 PLUG-IN HYBRID¹ models were delivered to customers in 2014.



Inspired by F1. Knowledge gained with the Formula 1 drive system was incorporated into the new Mercedes-Benz S 500 PLUG-IN HYBRID¹. This automobile sets benchmarks for efficiency, dynamic handling and comfort.

¹ S 500 PLUG-IN HYBRID: fuel consumption in l/100 km combined 2.8; CO₂ emissions in g/km combined 65; electricity consumption in kWh/100 km 13.5.

“The S 500 PLUG-IN HYBRID¹ is not only the most efficient hybrid in the luxury segment but also the most intelligent. Its predictive operating strategy regulates the interaction between the electric motor and the combustion engine and adjusts it in line with the traffic situation, the route ahead and the battery-charge state.”

From left to right: Dr. Uwe Keller (Project Manager Hybrid Drive), Thomas Ulrich (Hybrid System Testing), Harald Maurer (Head of S-Class Testing)





2.8 |
per 100 km

The S 500 PLUG-IN HYBRID¹ delivers pure driving pleasure with an impressive system output of 325 kW (442 hp), exemplary fuel consumption of 2.8 liters/100 km and CO₂ emissions of 65 g/km.

A+
efficiency class

Use of the electric motor significantly reduces both fuel consumption and CO₂ emissions. The model's top efficiency class rating of A+ is therefore well deserved.

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We are electrifying the premium segment. The S 500 PLUG-IN HYBRID¹ is a further milestone in Daimler's hybrid strategy. Following the S 400 HYBRID² and the S 300 BlueTEC HYBRID³, this extraordinary luxury sedan embodies the ultimate in hybrid technology.



Green light for environmentally friendly hybrids. Daimler is shaping future mobility by combining combustion engines with electric drive systems. Hybrid concepts help reduce fuel consumption and enhance performance. Hybrids also use braking energy to generate electricity to charge the vehicle's battery; this offers the greatest potential for lower fuel consumption. In the S 500 PLUG-IN HYBRID¹, an innovative high-voltage lithium-ion battery and a state-of-the-art braking energy recovery system ensure maximum energy recuperation.

Forward-looking plug-in hybrids. Along with braking energy recuperation, the groundbreaking S 500 PLUG-IN HYBRID¹ also features an onboard charger that enables the vehicle to be recharged using a wallbox or any conventional household socket. The next step on the road to the perfect plug-in hybrid will be inductive wireless charging.

Pioneer for a sustainable hybrid strategy. In 2009, we introduced the Mercedes-Benz S 400 HYBRID² – the world's first hybrid production vehicle with a lithium-ion battery. For quite some time, this predecessor of the S 500 PLUG-IN HYBRID¹ was the most economical luxury sedan with a gasoline engine. With worldwide sales of approximately 20,000 units, it was also the most successful hybrid in its class.

Now Daimler is continuing its hybrid offensive. All in all, we plan to launch ten plug-in hybrid models on the market by 2017.

140 km/h

With a top speed of 140 km/h in the pure electric driving mode, these vehicles will make upper-range driving performance a reality in the hybrid segment.

¹ S 500 PLUG-IN HYBRID: fuel consumption in l/100 km combined 2.8; CO₂ emissions in g/km combined 65; electricity consumption in kWh/100 km 13.5.

² S 400 HYBRID: fuel consumption in l/100 km urban 7.4-6.6/extra-urban 6.5-6.1/combined 6.8-6.3; CO₂ emissions in g/km combined 159-147.

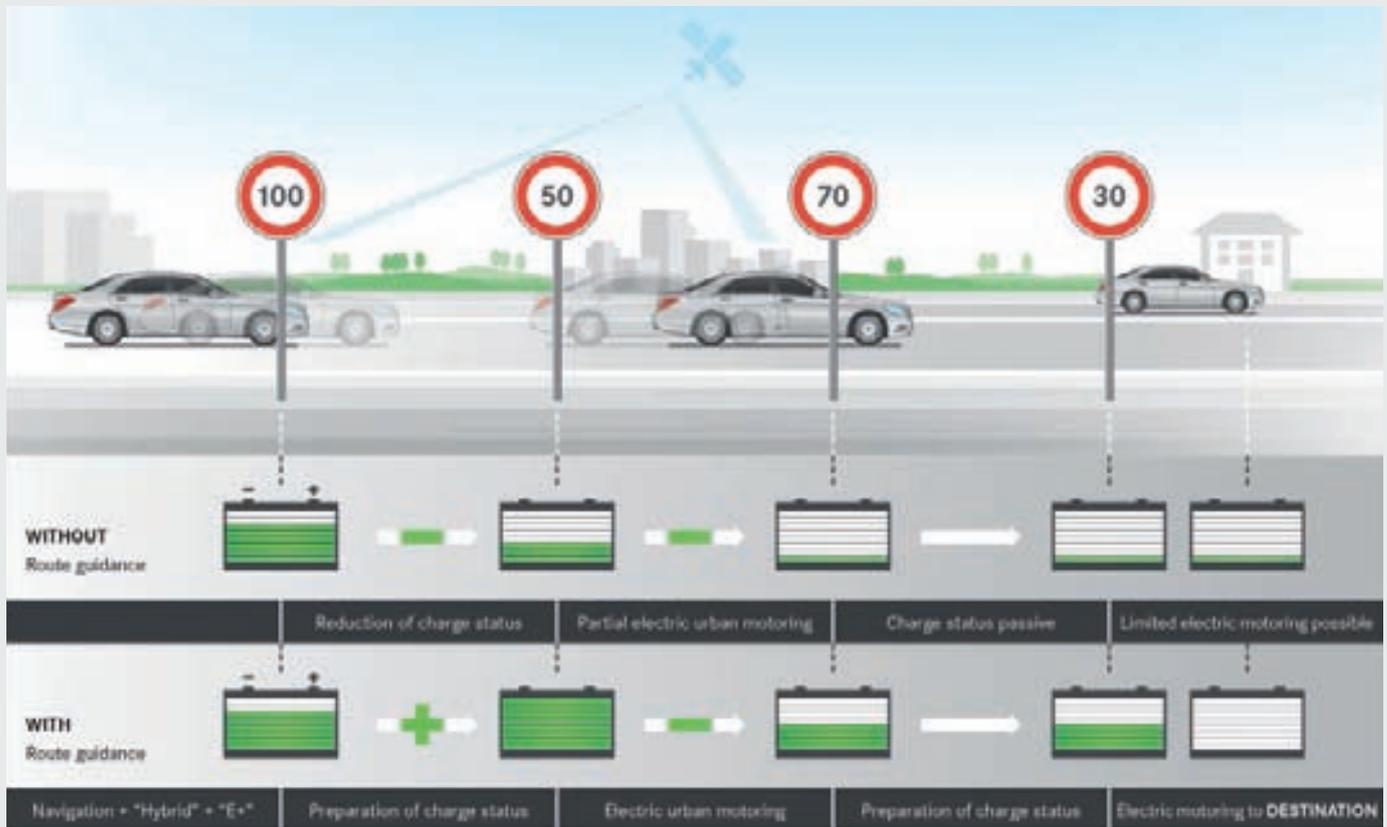
³ S 300 BlueTEC HYBRID: fuel consumption in l/100 km urban 4.8-4.7/extra-urban 4.6-4.3/combined 4.7-4.4; CO₂ emissions in g/km combined 124-115.



2 h

The high-voltage battery of the S 500 PLUG-IN HYBRID¹ can be recharged in just two hours – using a wallbox (400V/16A), for example. In the future, inductive charging technology will make it possible to recharge batteries without cables or sockets, as shown above.

Route-based operating strategy.



Efficiency at the push of a button. The intelligent strategy employed in the S 500 PLUG-IN HYBRID¹ enables automatic selection of the ideal combination of combustion engine and electric motor based on the battery-charge state, the traffic situation or the route ahead, depending on the driver's preference. Interaction between the hybrid drive components can also be regulated manually.

The route-based operating strategy selects for the driver an operating sequence optimally aligned with the route ahead. Once the destination has been entered

into the COMAND Online navigation system, battery charging and discharging processes are selected to ensure optimal energy utilization throughout the trip. One of the goals of the operating strategy is to use the energy in the battery going uphill and then recharge the battery through recuperation on downhill stretches. In addition, the operating system will charge the battery as much as possible before the vehicle reaches a city so as to ensure the car can drive electrically and emission-free on city streets. COMAND Online also provides predictive data on route profiles and speed limits.