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Press Information

Panamera S and S E-Hybrid

Contents

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The Porsche Panamera

Panamera S E-Hybrid

The Panamera S E-Hybrid has a powerful electric motor and a high performance battery that supplies more energy and is able be recharged from home or public vehicle charging stations. The electric drive produces 95 hp. The Panamera S E-Hybrid combines efficiency and sportiness with a combined power output of 416 hp (306 kW). It's has a top track speed of 167 mph.

The Panamera S E-Hybrid features an advanced parallel full hybrid system with a powerful electric motor, a high performance battery that supplies energy and the ability to charge the battery externally from the electrical grid. The electric motor produces 95 hp (70 kW). It draws its energy from a lithium-ion battery. When connected to a 240 V outlet, it can be charged in around two and a half hours via the integrated on-board charger and the standard Porsche Universal Charger (AC). The Porsche Universal Changer can also be plugged into a regular household 120 V socket.

An intensive pure electric driving experience is possible without any fuel consumption or local emissions, which is especially advantageous in the urban environment. The Panamera with the new hybrid drive can reach a top track speed of up to 83 mph in electric mode.

The Panamera S E-Hybrid drivetrain combines an internal combustion engine and electric motor, which are mechanically joined to the transmission to ensure quick acceleration and impressive power in the city or on the highway. Acceleration time from a standstill to 60 mph is 5.2 seconds. An improved electric boost function is responsible for the performance, in which the electric motor boosts the combustion engine. Boosting can also be activated by a kick-down switch in the accelerator pedal and is especially useful in overtaking situations. The parallel full hybrid concept developed by Porsche also offers

"coasting" at higher speeds, which allows the engine to turn off to save fuel and engage the energy recovery system, which restores electricity to the lithium-ion batteries.
For the driver, the battery and electric motor mean high electric driving performance: All-electric top track speed is 83 mph. U.S. EPA fuel economy ratings are 50 MPGe, with an all-electric range of 15 miles. Electric-only driving is possible without any fuel consumption or local emissions, which is especially advantageous in city driving. Driving range may vary due to the effects of environmental conditions, terrain, air conditioning and heating use, driving style and other factors.

Optional extensive charging equipment is available for the Panamera S E-Hybrid. This equipment includes the aforementioned mobile Porsche Universal Charger (AC) with two power cables for 120 V and 240 V electrical outlets. The interplay of the supercharged V6 engine and the high torque of the electric motor enables impressive torque at low engine speeds, ideally complementing the internal combustion engine that develops its full torque at higher rpms.

The advanced technology of the Panamera S E-Hybrid also embodies a range of convenience functions, several of which can be activated and controlled via a smartphone app. The Porsche Car Connect app can be used to remotely monitor charge status, remaining driving range, activate the climate control for preheating or cooling of the interior, and even show users the location where the Panamera is parked.
Other functions not specifically related to the hybrid drive are also available as options for the other Panamera models via the Porsche Car Connect smartphone app.
The innovative E-Hybrid drive concept of the Panamera S E-Hybrid can be seen from its exterior. Use of the accent color Acid Green is subtle, but clearly highlights the "e-hybrid" logos on the front doors, and the "Panamera S" model badge at the rear. The brake calipers are also painted in this color and provide additional differentiation from the conventional S model. The needles of instruments in the instrument cluster and of the optional Sport Chrono clock are designed in Acid Green as well.

Three driving modes for customized use of the electric drive

The Panamera S E-Hybrid offers special driving modes that give drivers better every day driving utility. The driver can select them individually to exploit the strengths of the individual hybrid driving states. The E-Power mode enables pure electric driving without having to start the internal combustion engine. Moreover, it is possible to charge the high-voltage battery while driving via the E-Charge mode. Another driver selection option is the Sport mode which offers typical Porsche performance and a sporty accelerator pedal characteristic for more direct response.

Hybrid-specific indicators in the instrument cluster and in the optional Porsche Communication Management (PCM) communicate key information to the driver at all times. The new Power Meter replaces the analog tachometer and informs the driver of the drive power and electrical system recuperation power of the hybrid system. Digital speedometer values are still continually shown in the display of the central round instrument. The Power Meter also communicates other useful information to the driver such as system readiness when the ignition is switched on (Ready indicator), an efficient or especially sporty driving range (efficiency range or boost range) and the activation point of the internal combustion engine when greater power is demanded.

Intelligent charging strategy reduces costs and increases everyday utility

The Porsche Universal Charger (AC) is a standard feature of the Panamera S E-Hybrid, and it is used to connect the vehicle to the electrical grid. The attractively styled charger from Porsche Design includes two standard power cables, one for 120 V household electrical outlets and the other for plugging into 240 V electrical outlets. Depending on the available connection, the customer can instantly switch charging cables depending on the outlet of the power source. Depending on the type of power connection, the Panamera S E-Hybrid may be charged in just 2.5 hours (at 10 Amps).

From the exterior, the plug-in concept of the Panamera S E-Hybrid can be identified by the charging door on the left rear side panel; the vehicle's electrical port for charging the lithium ion battery is located behind this door. The on-board charger for voltage regulation and converting AC to DC power is installed in a space-saving location in the right side wall of the trunk area; it outputs up to 3.6 kW. Optionally available is a 7.2kW on-board charger. Two LED lights integrated in the charge plug inform the user of the charge state of the lithium-ion battery and the connection status. There is also a departure timer for setting the timing of the charging process. Up to three target times can be programmed via the instrument cluster. Then battery charging is per formed so that the battery is fully charged at the defined time point. One benefit is that less expensive night-time electrical power rates might be used.

Unique comfort: remote control by Porsche Car Connect smartphone app

With the new Panamera, Porsche introduces remote control of the vehicle via a smartphone app called Porsche Car Connect, which satisfies growing customer needs for connectivity. In the Panamera S E-Hybrid, the networking of vehicle and driver via a smartphone plays a special role, because it makes special functions such as external charging of the high-voltage battery more transparent. The driver can access and control key information about the vehicle using the app, including battery charge status with remaining charge time and the current driving ranges for both electric driving and combustion engine driving. The electric driving range is also shown on a navigation map. The "Charge timer" function can be programmed to optimize electricity costs.

In the Panamera S E-Hybrid, electrification of the climate control system has created the right conditions for another option: auxiliary climate control. The charge timer may be used to activate the climate control system so that the passenger compartment has the preset desired climate at a planned departure time. The vehicle interior is either heated or cooled accordingly to 73 degrees. In the winter, heating power is also generated by an auxiliary high-voltage heater.

Engines and Drives

Panamera S 3.0-liter twin turbo V6 engine

Porsche developed an entirely new engine for the current generation Panamera S and Panamera 4S. In the Panamera S and Panamera 4S, 3.0-liter V6 twin turbochargers let the engine develop 420 hp. The engine also impresses with a maximum torque of 384 lb.-ft. available between 1,750 and 5,000 rpm, which offers instantaneous torque in most driving situations.

To preserve the balance and smoothness of the 3.0 liter V6 twin turbo engine for the Panamera S and 4S on the same high level of the eight-cylinder engine in the previous model, a balance shaft offsets the imbalances caused by moments of inertia inside the engine. Compared to the Porsche V8 engines, the crankshaft has a shorter stroke, this makes the engine very rev-friendly. Two fast-responding turbochargers feeding the engine compress air to as much as 17.4 psi (1.2 bar). Two intake valves per cylinder with different strokes ensure that the air flows into the combustion chambers in the most efficient manner possible for complete combustion, resulting in improved performance and efficiency. The VarioCam Plus intake camshafts also have variable timing and adapt the valve stroke to engine load and speed. The V6 twin turbo is also the first V engine from Porsche to have camshafts with variable timing on the exhaust side. Fuel delivery is handled by a new fuel injection system with 2,900 psi (200 bar) high pressure and direct injection via multi-hole injectors.

Sportiness and comfort

More comfort with options

The interior of the current generation Panamera unites sports appeal and comfort with four bucket seats and variable cargo space for a high level of everyday utility. The two-tone combination of black/carrera red emphasizes the sporty character of the vehicle.

Seeing better: LED headlights with PDLS Plus

Bi-Xenon™ headlights are standard for all new Panamera models. As an alternative, Porsche is offering LED headlights as an option for the first time, standard on Turbo models. This package consists of the Porsche Dynamic Light System Plus (PDLS Plus) with high and low beam headlights as well as an auxiliary main beam and four-point daytime running lights in LED technology. The dynamic high beam headlight system detects the light sources of oncoming vehicles and vehicles ahead of the car via a camera that is mounted at the base of the rearview mirror and continually adapts the lighting range between low beam and high beam. This optimally exploits lighting potential without blinding other vehicles in traffic. Visually, the LED headlights differ considerably from Bi-Xenon™ headlights. Instead of a cone-shaped light housing with round projection lenses and auxiliary lamps with visible reflectors, the LED headlights consist of two tubular light stacked on top of each other with lens contours sculpted at the top and bottom.

Porsche Car Connect App: connecting to the Panamera by smartphone

Porsche offers access to various vehicle information and functions via a smart phone with its new Porsche Car Connect app. Porsche Car Connect is available as an option for all new Panamera models and as a standard feature of the Panamera S E-Hybrid. The services that are offered can be subdivided into three categories: Remote Services, Porsche Vehicle Tracking Services and hybrid-specific E-Mobility Services. Remote Services is used to access vehicle information for any Panamera model such as the odometer reading, remaining driving range or vehicle location and is free for six months.

The app also lets users control various vehicle functions such as folding of the door mirrors.

New assistance systems based on camera and radar.

Two optional camera-based assistance systems are lane departure warning and Surround View. The lane departure warning system detects lane markings and warns the driver by signal tone if the vehicle inadvertently leaves the driving lane. The system becomes active at a speed of 40 mph, and it can be deactivated by a separate pushbutton on the center console.

Surround View refers to a 360 degree view of the surroundings; it transmits images from four high-resolution cameras to the PCM monitor. The system assists in maneuvering the vehicle by displaying a realistic photographic view of the vehicle's surroundings as a top view of the vehicle. It offers many different detailed views that simplify maneuvering in special situations – such as approaching a curb, driving out of narrow driveways and in front of obstacles.

The adaptive cruise control system with Porsche Active Safe (PAS) is based on radar detection. It regulates the preset vehicle speed and distance to vehicles ahead. In addition, when approaching a vehicle ahead too fast, PAS uses an acoustic and a visual signal as well as a brake jolt to indicate the need for intervention. If the driver reacts with insufficiently strong braking, the system boosts the brake pressure according to the situation – within technological limits and up to hard braking.