

PORSCHE

# The new Porsche 911

Press kit

## Contents

<b>Highlights .....</b>	<b>4</b>
The new 911: .....	4
<b>Summary .....</b>	<b>5</b>
The new Porsche 911 .....	5
Inspired by motorsport: innovative performance hybrid .....	5
Optimized chassis.....	6
Dynamically streamlined exterior.....	7
Fully digital cockpit and enhanced connectivity.....	8
<b>Drive technology: engine and gearbox.....</b>	<b>10</b>
Porsche 911 Carrera GTS with efficient performance hybrid system.....	10
The electric turbocharger in the new T-Hybrid system .....	10
Porsche dual clutch transmission (PDK) and electric motor in detail.....	11
The high-voltage battery of the performance hybrid system .....	11
The new 3.6-liter boxer engine .....	12
More dynamic, .....	12
The new 3.0-liter boxer engine .....	13
<b>Exterior: design and body.....</b>	<b>14</b>
Sports car icon with a fresh interpretation .....	14
Porsche Active Aerodynamics in the Carrera GTS.....	15
With HD-Matrix Design LED headlights for the first time.....	16
Dimensions and the Coupé, Cabriolet and Targa body styles.....	17
Exciting shades in a new color system.....	17
As individual as a Porsche.....	18
Nürburgring tested .....	18
<b>Chassis and brakes .....</b>	<b>20</b>
Optimized chassis technology in the new 911.....	20
Unsprung mass: brakes and wheels .....	21
<b>Interior .....</b>	<b>22</b>
Porsche Driver Experience: focus on the driver .....	22
Standard mode switch .....	22
The leather and color range for the 911 .....	23
Unmistakable: the GTS interior .....	24
<b>Infotainment, Connect, assistance systems, equipment .....</b>	<b>25</b>
A more digital experience .....	25
Assistance technology with enhanced functions .....	25
Upgraded equipment .....	26
<b>History of the 911 Carrera GTS.....</b>	<b>28</b>
From a sleek athlete to a technological spearhead.....	28



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## Highlights

### **The new 911:**

- **Innovative performance hybrid system in the 911 Carrera GTS**

Performance-focused T-Hybrid with a 400 volt traction battery, newly developed 3.6-liter six-cylinder boxer engine and electrically assisted exhaust turbocharger in the new 911 Carrera GTS.

- **Further development of the six-cylinder boxer engine in the 911 Carrera**

Optimized 3.0-liter six-cylinder twin-turbo boxer engine with power output of 388 hp in the new 911 Carrera.

- **Streamlined exterior with innovative lighting technology**

Porsche has integrated all lighting functions into the headlights. Matrix Design LED lights as standard, HD-Matrix Design LED lights as an option.

- **Active aerodynamics in the 911 Carrera GTS**

Variable cooling air flaps, continuously adjustable front diffusers and an active rear spoiler reduce the aerodynamic drag of the 911 Carrera GTS.

- **The 911 Carrera GTS shines on the Nordschleife**

Jörg Bergmeister recorded a lap time of 7:16.934 minutes in the new 911 Carrera GTS, beating the predecessor model by 8.7 seconds.

- **911 Carrera GTS with upgraded chassis systems**

Rear-axle steering as standard and optional electro-hydraulic roll stabilization, operated by the high-voltage system, with optional improved-performance front axle lift system.

- **Fully digital cockpit and enhanced connectivity**

For the first time featuring a fully digital instrument cluster, plus an engine start button and mode switch as standard equipment for even fast and intuitive operation.

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## Summary

### **The new Porsche 911**

Porsche has comprehensively upgraded the iconic 911 sports car. The new 911 Carrera GTS is the first street legal 911 equipped with a super-lightweight performance hybrid system. The newly developed, innovative powertrain delivers a significantly enhanced driving performance. The 911 Carrera GTS Coupe models accelerate from zero to 60 mph in 2.9 seconds, and reach a top track speed of 194 mph. The 911 Carrera is also enhanced compared to its predecessor, and is powered by an upgraded 3.0-liter twin-turbo boxer engine producing more power than its predecessor. The new 911 also has a revamped design, with a refreshed interior, upgraded standard equipment, and enhanced connectivity.

With the relaunch of its iconic model, Porsche has updated four of its six model lines within just a few months: Panamera, Taycan, Macan and 911. “Our product portfolio is younger than ever and highly attractive,” says CEO Oliver Blume. “It offers our customers even more customization options and exclusive experiences.”

### **Inspired by motorsport: innovative performance hybrid**

For the new 911 Carrera GTS models, Porsche used knowledge gained from motorsport as the basis for designing the hybrid system. “We developed and tested a wide variety of ideas and approaches to arrive at the hybrid system that would suit the 911 perfectly. The result is a unique drive that fits into the overall concept of the 911 and significantly enhances its performance,” says Frank Moser, Vice President Model Lines 911 and 718.

The lightweight and powerful T-Hybrid system has a newly developed electric exhaust turbocharger. An integrated electric motor positioned between the compressor and turbine wheel spools up the turbocharger to build boost pressure immediately. The electric motor in the exhaust turbocharger can also function as a generator. In this case, the eTurbo generates up to almost 15 hp (11 kW) of electrical power from the energy of the exhaust gas flow. The wastegate-free electric turbocharger enables a single turbocharger configuration – instead of the twin-turbo format previously used – but with even more responsive power delivery.

The powertrain also includes a permanently excited synchronous motor integrated into the new, strengthened eight-speed dual clutch transmission (PDK). It assists the boxer engine from idle with up to 110 lb.-ft. and up to approximately 53 hp. Porsche couples both electric

motors to a lightweight and compact high-voltage battery. It is roughly the same size and weight as a conventional 12-volt starter battery, but stores up to 1.9 kWh of energy (gross) and operates at 400 volts. A lightweight lithium-ion battery is still present to support 12 V onboard electrical systems.

The heart of the T-Hybrid drive is a newly-developed 3.6-liter boxer engine. The high-voltage system allows the air conditioning compressor to be powered electrically. Eliminating the belt drive makes the engine much more compact. Instead of using a separate starter motor, the engine is started by the high voltage system. This also powers the air conditioning compressor electrically. This creates space above the engine, which has a 110 mm lower height than the previous powertrain, to install pulse inverters and DC-DC converters. An enlarged bore of 97 mm and lengthened stroke of 81 mm increase the displacement by 0.6 liters compared to its predecessor. The engine has VarioCam variable valve timing and a valve actuation with roller cam followers. It maintains the ideal air-fuel mixture ratio over the entire map ( $\lambda = 1$ ).

Even without electric assistance, the boxer engine delivers 478 hp (357 kW) and 420 lb.-ft. of torque. In total, the system output is 532 hp and 449 lb.-ft. – a power increase of 59 hp and 29 lb.-ft. compared to the previous 911 GTS models. The new 911 Carrera GTS outperforms its predecessor in acceleration, particularly off the line. The efficient performance hybrid delivers highly dynamic driving characteristics with a significantly lower weight penalty compared to plug-in hybrid vehicles. The curb weight of the 911 Carrera GTS Coupe is just 103 lbs. more than the previous model.

The 911 Carrera continues to be powered by a twin-turbo 3.0-liter boxer engine. This engine, too, has been comprehensively revised. Among the features carried over from the Turbo models is the charge-air cooler, which remains located above the engine directly under the rear grille. The turbochargers in the new 911 Carrera originate from the prior generation 911 GTS models. With these modifications, Porsche achieves an increase in power to 388 hp, and 331 lb.-ft. of peak torque. The new 911 Carrera Coupé accelerates from 0 to 60 mph in 3.9 seconds, or 3.7 seconds when equipped with the Sport Chrono Package, and boasts a top track speed of 183 mph.

### **Optimized chassis**

The chassis of the 911 Carrera GTS has also been comprehensively updated. For the first time, rear-axle steering is standard equipment on all GTS models. It further increases stability

at high speeds and reduces the turning radius. Porsche is integrating the optional Porsche Dynamic Chassis Control (PDCC) roll stabilization feature into the high-voltage system of the performance hybrid. This enables the use of an electro-hydraulic control system, which makes the system even more versatile and precise. Porsche Active Suspension Management Sport (PASM Sport) is standard equipment, lowers ride height by 10 mm compared to the 911 Carrera models and contributes to the very sporty handling characteristics of the GTS models.

A total of seven 19-/20-inch or 20-/21-inch wheel designs are available for the new 911. Available for the first time in the 911 Carrera are Exclusive Design wheels with carbon fiber blades that reduce the drag coefficient and, therefore, increase efficiency. At the rear, the 911 Carrera GTS models feature 21-inch wheels with a width of 11.5 inches as standard, fitted with 315/30 ZR 21 tires. At the front are 245/35 ZR 20 tires on 8.5-inch-wide wheels. In line with the significantly enhanced performance, the 10 mm wider footprint of the rear tires improves the driving dynamics and traction of the new 911 Carrera GTS.

### **Dynamically streamlined exterior**

Porsche has streamlined the exterior design of the 911 with carefully selected updates, many of which improve aerodynamics and overall performance. The changes include new, model-specific front fascia. Porsche is also integrating all frontal lighting functions into the Matrix Design LED headlights of the 911 with their characteristic four-point look, which are now standard equipment. This makes it possible to omit the ancillary front lights and creates space for larger cooling vents in the front of the car.

Each side of the front end of the 911 Carrera GTS models features five vertically positioned active cooling air flaps visible from the outside, as well as an additional, concealed flap. These are complemented by adaptive front diffusers in the underbody paneling, which are controlled in combination with the cooling air flaps. These elements direct the air flow as required: when power requirements are minimal, closed flaps optimize aerodynamics. When power demand is high – for example, on a track – the flaps direct more air to the radiators. The sensors for the assistance systems are now located below the license plate in the center air intake.

An optional Aero kit further enhances the performance of the 911 Coupé. It includes, among other things, a distinctive Sport Design front fascia with a separate front spoiler, matching

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side skirts and a lightweight fixed rear wing. These components reduce lift and improve the grip of the sports car.

As an option, Porsche offers the new headlights with HD-Matrix Design LED technology..

The redesigned light strip with an integrated light arc and 'PORSCHE' lettering makes the rear end of the 911 appear deeper and wider. A redesigned rear grille with five fins on each side combines with the rear window to form a visual unit that merges into the retractable spoiler below. The license plate is positioned higher, with a neatly structured rear bumper. Model-specific exhaust systems blend elegantly into the lower rear section. A Sport Exhaust system is available as an option for the 911 Carrera models. The 911 Carrera GTS models come with a GTS-specific Sport Exhaust system with more centrally mounted tailpipes as standard.

### **Fully digital cockpit and enhanced connectivity**

In the Coupe variants, Porsche has designed the interior of the new 911 as a two-seater as standard. A 2+2 seat configuration is available as an option at no extra charge. In the cockpit, Porsche combines the familiar 911 design DNA with the latest technology: the Porsche Driver Experience control concept focuses on intuitive, fast operation. Essential control elements have been positioned directly on or around the steering wheel. These include the standard mode switch, the redesigned driver assistance lever and – for the first time in a 911 – a start button, as a nod to GT racing cars, located to the left of the steering wheel. The storage compartment in the center console of the new 911 features a tray with wireless charging for smartphones.

For the first time, the 911 has a fully digital instrument cluster. The 12.6-inch curved display fits elegantly into the new control and display concept and can be extensively customized. It offers up to seven views, including an exclusive Classic display based on the traditional design with five round dials, including a central tachometer.

The Porsche Communication Management (PCM) system continues to be operated using the high-resolution central display with a 10.9-inch screen. However, the customization options for the driving modes and the operation of the driver assistance systems have been significantly improved. The upgraded 911 also has new connectivity features. A QR code significantly simplifies the login process to the PCM using a Porsche ID. Apple CarPlay® is



more deeply integrated into the car. If desired, it displays information in the instrument cluster and can facilitate the operation of vehicle functions directly in the Apple® ecosystem, for example, by using the Siri® voice assistant. For the first time, video streaming is also optionally available while parked. Apps such as Spotify® and Apple Music® can be used as native apps in the PCM without a smartphone connected.

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## Drive technology: engine and gearbox

### **Porsche 911 Carrera GTS with efficient performance hybrid system**

Each generation of the Porsche 911 becomes a unique source of appeal. The new 911 proves this by introducing a technological milestone into the world of Porsche sports cars: the principle of the performance hybrid drive. The new T-Hybrid in the 911 Carrera GTS models is particularly light and can be smoothly integrated into the architecture of the 911.

This concept is based on a wealth of experience gained in motorsport. Porsche's engineers designed a lightweight drive unit specifically for the 911, consisting of an electric exhaust turbocharger (eTurbo), a compact and lightweight high-voltage drive battery, efficient power electronics, a newly developed 3.6-liter boxer engine, and a strengthened eight-speed dual clutch transmission (PDK) with an integrated electric motor. The combination of these components gives the T-Hybrid system an outstanding balance of high performance and efficiency with low weight.

### **The electric turbocharger in the new T-Hybrid system**

The eTurbo without a wastegate was specially developed for the new 911. Its design includes an electric motor that sits between the compressor and turbine wheel. It is connected directly to the turbine shaft and can bring it up to speed quickly regardless of engine speed or load. This makes a significant contribution to the performance and efficiency of the drive system while achieving low emissions: to guarantee sustained performance with an ideal air-fuel mixture ratio ( $\lambda = 1$ ) in the engine, extensive widening of the exhaust manifold is necessary. But, without remedial measures, these larger flow cross-sections in the exhaust components would result in significant 'turbo lag'. The electric motor drastically shortens the time required for the turbo to spool up, meaning that the full boost pressure is consistently available within a very short time. This helps the 3.6-liter boxer engine maintain the ideal air-fuel mixture and still builds torque quickly. It responds quickly in all driving situations and offers linear power delivery. Even at an engine speed of 1,500 rpm, a system torque output of 368 lb.-ft is produced, and the full torque of 449 lb.-ft. is available below 2,000 rpm.

The eTurbo is designed so that the integrated electric motor can both deliver torque to the turbocharger shaft and generate electrical power from its rotation. As a generator, it produces almost 15 hp (11 kW) of electrical power. It uses this energy to feed the electric motor in the Porsche dual clutch transmission (PDK) or to charge the high-voltage battery.

With its responsiveness and performance capability, the eTurbo makes it possible to dispense with the second turbocharger used on the previous GTS models. The innovative system regulates the boost pressure automatically using the generator function of the electric motor, which means that it isn't necessary to have a wastegate to limit the pressure. The eTurbo is positioned on the right behind the boxer engine. New exhaust manifolds guide the exhaust gases to it from both cylinder banks. The corresponding charge-air cooler is located above the boxer engine. It receives its cooling air through the grilles in the rear above the engine compartment and is more efficient than the system it replaces.

### **Porsche dual clutch transmission (PDK) and electric motor in detail**

Porsche developed a separate PDK specifically for the T-Hybrid. It is based on the gearbox from the previous models but differs in several important aspects. The clutches, gear sets and bevel-gear drive are reinforced in order to cope with the significant increase in system torque. Furthermore, a taller final-drive ratio reduces the engine speed, especially at higher speeds.

A permanently excited synchronous motor is fully integrated into the gearbox housing. It fits into the existing gearbox oil cooling system and is coupled directly to the crankshaft via the dual-mass flywheel. This integration allows a weight-saving design and immediate assistance to the powertrain. The compact module measures just 286 mm in diameter and 55 mm in length. Nevertheless, it delivers a drive torque of more than 110 lb.-ft. from idle and provides a power output of up to 53 hp (40 kW). In generator mode, it can feed up to the same amount of power to the high-voltage battery. This happens, for example, when braking, during recuperation when coasting on flat ground or a downhill gradient, or from the engine (known as load point shifting): the system is able to raise the 'load point' of the combustion engine in order to drive the generator with the excess power. The electric motor also performs the tasks of the starter and alternator, thereby saving weight.

### **The high-voltage battery of the performance hybrid system**

The T-Hybrid system is based on a compact and lightweight 400 V battery with a gross energy capacity of 1.9 kWh. Its weight (approximately 27 kg) and dimensions are roughly the same as a conventional 12-volt AGM starter battery. For reasons of weight distribution, it is located in the front, under the hood in the new 911 Carrera GTS. The battery, which consists of 216 round cells, has a water-cooling system and efficient thermal management to ensure consistently high performance. It monitors and controls the temperatures at cell and module level.

The 12-volt starter battery for the T-Hybrid drivetrain was specially developed for use in the performance hybrid system. With an energy capacity of 40 Ah, the lightweight lithium iron phosphate battery (LiFePO<sub>4</sub>) measures just 90 mm in height and weighs 15.4 lbs.. A standard 70 Ah lead-acid starter battery is around three times heavier. The lightweight battery offers high-voltage stability, better charge acceptance, high cycle stability and a long service life.

### **The new 3.6-liter boxer engine**

The exhilarating combustion engine continues to be the centerpiece of the 911 Carrera GTS. The engineers increased the displacement from 3.0 to 3.6 liters – with a bore enlarged to 97 mm and a stroke increased to 81 mm – and installed the proven VarioCam technology. With precise camshaft control that is matched to the respective speed and load conditions, the drivetrain achieves high power and torque values with optimized fuel consumption. As the electric motor performs the functions of the alternator, and the air conditioning compressor is powered electrically, the serpentine belt otherwise required is no longer necessary. This creates space above the engine to install a pulse inverter and DC-DC converter.

The six-cylinder boxer engine of the new 911 Carrera GTS has adopted the solid roller cam followers used in motorsport. Compared to the bucket tappets in the previous model, they reduce frictional losses and, therefore, improve efficiency. At the same time, they increase the robustness of the valve train at high speeds. Manual adjustment of the valve clearance during maintenance is not necessary.

### **More dynamic, with better emission values**

Even without electrical assistance, the boxer engine delivers 478 hp (357 kW) and 420 lb.-ft. of torque. In combination with the high-voltage system, the eTurbo, and the electric motor in the new Porsche dual clutch transmission (PDK), the T-Hybrid achieves a system output of 532 hp (398 kW) and 449 lb.-ft of torque. Compared to its predecessor, the increase in power is 59 hp. The additional electrical power and the drastically reduced response time of the electric turbocharger improve performance, particularly off the line: at full acceleration from a standstill and from idle speed, the new 911 Carrera GTS travels more than 33 percent farther from a standstill in 2.5 seconds than its predecessor; more than a full car length.

The new 911 Carrera GTS Coupe models take just 2.9 seconds to reach 60 mph when using Launch Control and reach a top track speed of 194 mph.

Every component in the drive unit also fulfils other fundamental functions. In combination with its components, the performance hybrid system achieves greater driving performance with minimal additional weight. Compared to its predecessor, the overall curb weight increase of the 911 Carrera GTS Coupe compared to the predecessor is only 103 lbs. During combustion, the drive system maintains the ideal air-fuel ratio in every situation: the lambda value is 1 in all operating modes, even at full load.

The innovative T-Hybrid system of the new 911 Carrera GTS merges seamlessly into the Porsche electrification strategy. “Water cooling, turbocharging, performance hybridization: with the T-Hybrid system, we are taking the next logical step in the continuous, innovation-driven development of our core models. It helps to optimize efficiency and future-proofs the 911 philosophy with even better performance,” as Frank Moser, Vice President Model Line 911 and 718, sums up.

### **The new 3.0-liter boxer engine**

The 3.0-liter six-cylinder twin-turbo boxer engine of the 911 Carrera has been extensively revamped. The lightweight unit builds up power quickly and in a linear fashion: 221 lb.-ft. of torque is produced at engine speeds as low as 1,500 rpm, and peak torque (331 lb.-ft.) from 2,000 rpm to 5,000 rpm.

The powertrain engineers optimized the charge-air system of the boxer engine. The charge-air cooler has been carried over from the previous-generation 911 Turbo models. In the new 911 Carrera, it is located centrally above the boxer engine. The turbochargers have also been carried over from the GTS models of the previous-generation 911. Their improved efficiency enabled an increase in power output by 9 hp (7 kW) to 388 hp (290 kW). The new Porsche 911 Carrera accelerates from zero to 60 mph in 3.9 seconds, or 3.7 seconds if equipped with the optional Sport Chrono Package using Launch Control. Top track speed is 183 mph. This marks an improvement of 0.1 seconds and 1 mph, respectively. Like the 911 GTS models, the 911 Carrera variants are equipped with an eight-speed PDK as standard.

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## Exterior: design and body

### **Sports car icon with a fresh interpretation**

The Porsche 911 is a classic that for eight generations – so far – has been consistently and extensively developed. This applies to the technology as well as to its iconic fundamental shape. Every generation exhibits a design that is a contemporary interpretation of the classic core features of the 911. Committed to tradition and, at the same time, remaining an exciting sports car of its time, the 911 is known for adding innovative accents to its stylistic portfolio with each generation.

The aim of continuously improving driving dynamics is at the forefront of all innovations. The new Porsche 911 takes up this principle with a series of measures that improve its aerodynamic properties and accommodate the additional cooling requirements of the fundamentally revamped drive systems. At the same time, Porsche has succeeded in making it look even more distinctive. Specific features at the front and rear emphasize the width and stature of the sports car. This gives the 911 an even more elegant, striking and commanding appearance on the road.

Porsche integrates all frontal lighting functions into the characteristic headlights of the 911. This enhanced functionality of the headlights makes it possible to dispense with auxiliary lights in the redesigned front end. This enables a cleaner design and larger front air intake sections for cooling the substantially revamped engines. The new position of the license plate holder creates space for additional assistance sensors, which are concealed behind a high-gloss surface below the license plate. Porsche is also differentiating the 911 model variants more distinctively: each has its own unique front section, making it unmistakable. For example, the 911 Carrera has inherited the characteristic horizontal cooling air intakes from its predecessor.

The rear end of the new 911 has a clear and progressive design. Here, too, the focus is on aerodynamic optimization. Porsche has integrated a newly designed light unit with integrated LED light arc into the rear end. The elegant, seamlessly framed line of light stretches from flank to flank. The visually integrated, raised 'PORSCHE' lettering forms an attractive contrast. In the upper section of the rear end, Porsche has reduced the number of cooling air louvers in the rear lid from nine to five per side and has also integrated two additional air intakes.

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The license plate has been moved upward and the rear fascia exhibits a clear structure. Porsche has also integrated an air outlet for the charge-air cooling system. The 911 Carrera GTS has two air scoops. Porsche now finishes the lower rear spoiler in black, achieving a look without visual disruption. The model-specific exhaust system is integrated into the rear section. The tailpipes of the 911 Carrera also have a unique design. An optional Sport Exhaust System with oval tailpipes in black or silver is also available.

### **Porsche Active Aerodynamics in the Carrera GTS**

In the new 911 Carrera GTS, various active aerodynamic elements reduce drag compared to the predecessor model depending on the driving situation. In addition, the cooling air flaps, positioned vertically for the first time, make the new Carrera GTS unmistakable.

Five of the six cooling air flaps on each side are visible, while the sixth flap is located within a duct further inside the front end. The continuously adjustable flaps control the cooling air supply as required depending on the driving situation, outside temperature and power demand. At low loads, they remain almost closed. This optimizes air resistance and reduces fuel consumption. The flaps open under high loads, such as when driving on the racetrack. The new center radiator of the 911 Carrera GTS caters to the increased cooling air requirements of the more powerful drive system.

In addition, the new 911 Carrera GTS features adaptive front diffusers, which are located in the front underbody paneling ahead of the wheel arches. They are controlled in combination with the cooling air flaps, with both systems opening and closing in tandem. If the diffuser duct is closed, the air flows past it, reducing drag. When the duct is open, the air flows through the duct into the wheel arch, reducing lift on the front axle while also cooling the brakes. The diffusers thereby compensate for the negative effects on lift and aerodynamic balance caused by the cooling air supply drawn in through the front air flaps. If both systems are closed, their aerodynamic advantages add up.

Porsche has implemented the active aerodynamic systems at the front of the 911 Carrera GTS in a distinct, model specific front fascia. The front spoiler lip is painted in Satin Black. Porsche also differentiates the GTS from the different derivatives in other ways. The high-performance model is fitted with model-specific 20/21-inch (front axle/rear axle) center-lock Carrera GTS wheels painted in Anthracite Grey.

As with its predecessor, the aerodynamic features of the Porsche 911 include an automatically extending rear spoiler. Its position depends primarily on the speed, but also on the charge-air temperature.

At the rear, the paneling of the Carrera GTS has a distinctive lower fascia. Here, the designers have integrated two centrally-positioned oval tailpipe trims in high-gloss black and two air outlets for the charge-air cooling system. A Sports Exhaust system with larger tailpipes is standard. In addition, the 911 GTS features transparent taillight strips and two particularly effective cooling air intakes with longitudinal louvers and black inserts.

### **With HD-Matrix Design LED headlights for the first time**

With the redesign of the headlights on the 911, Porsche has combined an upgraded lighting range with a new design. Matrix Design LED headlights now come as standard. They divide the main beam area into 11 segments, which are faded in or out depending on the situation, supported by camera and navigation data. The result is a glare-free high beam. The headlights feature three-dimensional molded light modules and the quintessential Porsche four-point daytime running lights.

HD-Matrix Design LED headlights are available as an option for the first time in the 911. With more than 32,000 pixels per headlamp, this lighting system generates a high-resolution, digital light image that covers the entire high beam range as well as the main area of the low beam. Each individual pixel can be activated, deactivated or dimmed in 1,024 steps. This creates a homogeneous light field that adapts to the respective driving situation at lightning speed. This technology introduces many new adaptive functions to the 911. The HD Matrix Design LED headlights offer, for example, lane illumination, roadworks and narrow-lane lighting, marker light and a dedicated motorway high beam. Special light modes for driving in rain or fog, at junctions, when turning or on bends also feature in the range of functions.

The HD-Matrix technology is based on HD-Matrix modules with 16,384 individual micro-LED pixels on a surface measuring just under 41 mm<sup>2</sup>. Each headlight contains a module with a wide-angle lens for wide light distribution (40 degrees wide, 10 degrees high) and one with a telephoto lens for long range (20 degrees wide, 5 degrees high). A powerful control unit monitors the dimming, activation and deactivation of the individual pixels. The system calculates changes in just 16 milliseconds.

The HD-modules are located in the lower section of the headlights. The bifunctional modules installed above them provide the courtesy lighting and the auxiliary high beam. If the system



does not detect a vehicle in front or an oncoming vehicle when the automatic high beam is activated, the auxiliary high beam switches on and increases the amount of light from 1,400 to 2,500 lumens. The auxiliary high beam illuminates the road to a distance of more than 1,968 feet. If another vehicle is detected, the system automatically switches back to HD-Matrix mode.

The four modules generate the distinctive Porsche light signature, which is active in the new HD-Matrix LED headlights in all light modes, even when the low beam and high beam are switched on.

Full LED-Matrix functionality (individual operation of 32,000 LEDs) is limited for the U.S. market. Individual LEDs are programmed to operate as a single light source to perform the functions listed above.

### **Dimensions and the Coupé, Cabriolet and Targa body styles**

The 911 has always stood for variety. Which is why Porsche is offering the 911 Carrera and the Carrera GTS in both the Coupe and Cabriolet body variants. In addition to these two body styles, the all-wheel drive version of the GTS is also available as the 911 Targa 4 GTS. The proven roof designs of the two open-topped 911 variants were adopted without any changes to the structure design. Porsche offers four solid color variants for the soft top, and a black roof with gray stripes that extend longitudinally – including onto the hood and luggage compartment lid – is also available for the Cabriolet. The wheelbase of all body variants is 96.54 in., and the width is 80 in. The length of the 911 Carrera is 178.8 in. and 179.3 in. for the GTS models due to the model-specific front and rear fascia. Depending on the model and chassis, the height varies between 51.0 and 51.3 in.

### **Exciting available colors categorized in a new system**

Porsche is reorganizing the range of exterior paint options for the 911 and is introducing new colors. The four color worlds – Legends, Dreams, Shades and Contrasts – each cater to different customer preferences and make it easier to select a personal color preference from the extensive range. The Legends color world stands for extraordinary yet classic style. The paints are particularly high-quality and rich in nuance. Legends includes the color Chalk as well as the new Shade Green Metallic and Slate Grey Neo paints. In the Dreams color world, Porsche combines expressive and vibrant colors such as the elegant Gentian Blue Metallic, Carmine Red and Guards Red. New additions are Lugano Blue and Cartagena Yellow Metallic. The hues grouped together in the Shades color scheme foster understatement,

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with paint tones such as Jet Black Metallic, Vanadium Grey Metallic, GT Silver Metallic and Ice Grey Metallic. Black and White are assigned to the Contrasts category, which expresses a clear and pure aesthetic.

### **As individual as a Porsche**

Selecting a Porsche 911 is always a personal choice. Porsche therefore traditionally offers a wide range of advanced customization options. Additional color variants are available, as usual from Porsche, in the modular programs Paint to Sample and Paint to Sample+, as well as from the Porsche Exclusive Manufaktur special request program. Some of these options can now be selected directly within the online configurator via the personalization icon.

Every Porsche 911 is built on a production line in Zuffenhausen. On average, about 40 percent of all Porsche 911 sports cars are additionally refined by hand in Porsche Exclusive Manufaktur. Almost every Porsche customer orders at least two options from Porsche Exclusive Manufaktur when configuring their vehicle. These include Aero kits, exterior packages and numerous special colors, wood, carbon fiber, or leather trims, individual embossing and hand-stitched leather door panel trims, and interior features from the factory's own saddlery.

Numerous exterior options for the 911 from Porsche Exclusive Manufaktur are also available directly from the configurator. For the new 911, these include the Carbon Fiber Design Package including matching side skirts, new decorative decal sets in Arctic Blue, tinted HD-Matrix Design LED Main Headlights, Exclusive Design Tail Lights and a sports exhaust system with titanium tailpipes.

### **Nürburgring-tested**

The Porsche Exclusive Manufaktur Aero kit is among the options that were also available for the previous-generation Porsche 911, comprising a range of aerodynamic improvements that enhance the sports car's capabilities on the racetrack. These include a distinctive front fascia with a more pronounced front spoiler, painted side skirts and a striking fixed rear wing with integrated brake light.

All these measures increase the downforce on the front and rear axles and thereby improve traction. The Aero kit is available in body color, Black, and Carbon Fiber – and also in Anthracite for the GTS models. On the legendary Nürburgring-Nordschleife, the new 911 Carrera GTS has already demonstrated its enhanced performance compared to its

predecessor. Jörg Bergmeister set a lap time of 7:16.934 minutes, beating the previous model's time by 8.7 seconds. The sports car was equipped with the Aero kit.

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## Chassis and brakes

### **Optimized chassis technology in the new 911**

From everyday use to grand touring and on the circuit, the chassis of the Porsche 911 has always set standards. With the proven PASM Sport chassis with variable damper system from the predecessor model and the staggered-fitment tires that are also fitted as standard, the new 911 offers the ideal basis for dynamic handling with a high degree of everyday usability.

The new 911 Carrera GTS models benefit from both an upgraded chassis and enhanced suspension options. For the first time, they come with rear-axle steering as standard. Depending on the road speed, electromechanical actuators generate a steering angle at the rear wheels. Below 31 mph, the rear wheels steer in the opposite direction to the front wheels, providing an even more dynamic steering response. Above 50 mph, the rear wheels steer in the same direction as the front wheels, thereby increasing stability when changing lanes. In addition, lateral acceleration develops earlier in corners.

Porsche also offers the optional PDCC (Porsche Dynamic Chassis Control) roll stabilization system (available to order from November, 2024). It minimizes body roll when cornering and reduces lateral swaying on undulating surfaces and when changing direction quickly. Unlike the previous model, an electric motor drives the hydraulic pump. It draws its energy from the high-voltage system. Porsche has also integrated a separate hydraulic accumulator into the PDCC. These changes make the system more responsive and precise. In the GTS models with PDCC, the electric motor and hydraulic pump unit also operate the new lift system on the front axle, which is also available as an option. It now raises the front end significantly faster (within one second). For 911s without PDCC, the front axle lift system from the predecessor is available. Both lift systems are active up to a speed of 37 mph and increase the ground clearance at the front of the vehicle by around 1.5 in. This increases the approach angle and thereby helps to clear obstacles such as speed bumps and driveways.

The GTS models come with the PASM Sport suspension including 10 mm lowering as standard. Firmer springs, specially tuned dampers and GTS-specific anti-roll bars compensate for the additional weight of the hybrid system and further enhance the characteristic Porsche agility and balance. The rear springs of the PASM sports suspension are each equipped with an additional helper spring. It keeps the main spring under tension

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during rebound. This provides increased contact with the road in the rebound phase during dynamic driving and directly enhances the performance of the sports car.

### **Unsprung masses: brakes and wheel choices**

The 911 Carrera receives a larger brake system with the model update. On the front axle are six-piston calipers, instead of the previous four-piston components, and 350 mm brake discs (+20 mm). At the rear, four-piston calipers are fitted, along with 350 mm brake discs (+20 mm).

The Carrera GTS models have adopted the generously dimensioned braking system from their predecessor, which was originally carried over from the 911 Turbo. This is supplemented by the recuperation brake for the hybrid system. Six-piston brake calipers and 408 mm discs are fitted on the front axle. Four-piston calipers and 380 mm discs are installed at the rear.

Porsche has made the optional, circuit-proven Porsche Ceramic Composite Brake (PCCB) system larger than before, thereby offering even greater performance. On the front axle, 10-piston fixed calipers replace the previously used six-piston fixed calipers. At 420 mm, the brake discs are 10 mm larger in diameter than previously. At the rear axle, the engineers opted for brake discs with a diameter of 410 mm (+20 mm).

There is a choice of seven 19/20- and 20/21-inch wheel designs (front/rear axle) for the new Porsche 911. These include new designs that were not available with the predecessor model, which increases the range of customization options even further. For the first time, Porsche is offering an aerodynamically optimized wheel design for the 911: the 911 Carrera Exclusive design wheels with carbon blades help to reduce the drag coefficient.

To accommodate the increase in performance, the GTS models sit on wider wheels at the rear: 315/30 ZR 21 tires optimize traction. They are mounted on the newly designed 11.5-inch-wide center-lock Carrera GTS wheels in Anthracite Grey.

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## Interior

### **Porsche Driver Experience: focus on the driver**

For generations, the Porsche 911 has been characterized by the low seating position typical of a sports car and a clear, efficient operating logic. Inside the new 911, Porsche combines pioneering digital displays with classic controls. Unlike the predecessor model, Porsche delivers the Coupe models as a two-seater as standard. Alternatively, a 2+2-seat configuration with rear seats is available at no extra charge. 911 Cabriolet and Targa models continue to be delivered exclusively as a 2+2 seater.

Typical of the 911 is the dashboard, which extends across the entire width of the interior on two levels. Porsche has carefully integrated elements of the Porsche Driver Experience operating concept into the cockpit. It brings an even greater driver orientation to the 911 by grouping all the important control systems directly on or around the steering wheel. The result is faster and more effective operability.

Traditionally, the instrument cluster is the highest point on the dashboard of a Porsche. The new 911 represents the first time that a fully digital 12.6-inch curved display is being used. It presents driving information, performance data and media information in a clearly organized and even more streamlined way than before. Depending on the car's equipment, the driver can choose between seven designs. Exclusively for the 911, these include a special Classic view with a design featuring five round dials, including a central rev counter and a 3D driving assistance display that shows perspective maps and 3D navigation data. In rev counter mode, the scale is rotated so that the needle is in the 12 o'clock position at redline – as is the case in many historic Porsche racing cars.

### **Mode switch as standard**

A new feature of the 911 Carrera is the mode switch, which is now included as standard and can be used to easily and simply change between all driving modes. In the 911 Carrera, there are the Normal, Sport and Wet driving modes; if the optional Sport Chrono Package is installed (standard in the GTS), the Sport Plus driving mode with the Launch Control and Sport Response performance functions is added. The previous Individual driving mode is no longer available in the new 911, as all driving modes – with the exception of Normal – can now be individually configured. This is done directly in a pop-up window or in the Drive menu of the PCM.

There is also a toggle button on the steering wheel, which can be used to switch between the different displays and functions of the instrument cluster.

The optimized control lever for the driver assistance systems is located to the left of the steering wheel. It enables quick access to the most important assistance functions and other settings using context-sensitive pop-ups in the instrument cluster.

Of course, a Porsche is started on the left of the steering column. In the new 911, this is done by using an engine start button, as in Porsche GT racing cars. This is the first time it has been used in this form in the 911. The light switch next to it is now also easier to operate. The new 911 has inherited the five-key switch panel in the center console from the predecessor model. As the mode switch on the sports steering wheel is now part of the standard equipment, the buttons have been reconfigured. The exact assignment varies according to the specific equipment in the vehicle.

The central display is and remains the control center of the PCM infotainment system. The high-resolution 10.9-inch display controls media services such as radio and streaming, navigation, and numerous vehicle and comfort functions. In the new Carrera GTS models, the specific displays for the T-Hybrid drive such as charge level, battery temperature, energy flow and power output of the electric motor are visible there. Porsche has integrated these displays into the Performance menu.

### **The leather and interior color range for the 911**

Porsche offers a wide range of design options for the interior of the new 911, with the primary focus being on additional two-tone options. Four of the seven leather trims and one of the three club leather trims are now available with a two-tone option. As an alternative to the black part-leather trim, the contrast combination Black/Limestone Beige is available as standard. The two-tone leather trim options are Dark Night Blue/Chalk, Black/Limestone Beige, Black/Bordeaux Red and Slate Grey/Chalk. Dark Night Blue is also available as a solid color. The elegant club leather, a deluxe milled nappa leather, remains available in Truffle Brown, while the Basalt Black and Basalt Black/Classic Cognac versions are new. The Club Leather option includes cross-stitching applied to the instrument panel and door panel trim, while various decors and accents further enhance the interior of the 911. The range of decors is complemented by numerous offerings from the Porsche Exclusive Manufaktur. These include Carbon matt, Palado Wood, Leather, and Aluminum Anthracite.

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**Unmistakable: the GTS interior**

The 911 Carrera GTS is and remains an extremely powerful sports car with exceptional everyday usability. This is why the 911 Carrera GTS has dispensed with some of its sound insulation, thereby saving weight and creating a particularly intense sound experience. The interior design of the 911 Carrera GTS also has its own character, with a GT Sport steering wheel trimmed in Race-Tex as standard. Porsche also finishes the center panels of the seats, door handles, armrest and the lid of the storage compartment in the center console in Race-Tex. Trim elements and accents on the 911 Carrera GTS feature a uniform finish in brushed, black anodized aluminum.

Two optional interior packages are available specifically for the Carrera GTS. A choice of contrasting colors (Carmine Red or Slate Grey Neo) in numerous areas of the interior creates a sporty ambiance. The contrasting color can be found on the dials of the stopwatch of the Sport Chrono package, which comes as standard in the GTS; the digital tachometer; the seat belts; and on the seams of the sports seats and floor mats, as well as on the 'GTS' lettering on the sports seats. Other dynamic accents are provided by carbon inserts in the instrument panel, the center console and the door panel trims.



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## Infotainment, Connect, assistance systems, equipment

### **More connectivity, more of a digital experience**

Numerous digital innovations in the new Porsche 911 link the personal digital ecosystems of smartphone and vehicle even more closely. The integration of the My Porsche app into Apple CarPlay® enables vehicle functions to be controlled directly from the smartphone ecosystem, for example with the Siri® voice assistant or by using tiles in CarPlay® – allowing the driver to change radio stations, control the air conditioning or adjust the ambient lighting. In addition, the My Porsche app and Apple CarPlay® now offer a standardized design, including a visual representation of the linked vehicle. Vehicle functions such as climate, seat and audio settings can be grouped into predefined programs in the My Porsche app and activated manually or by using Siri®. These programs are actively suggested by the vehicle depending on the situation.

A new feature in the 911 is a smartphone tray with wireless charging function. Cooling allows the charging power to be increased to 15 watts. Setting up a connection between car and smartphone using Porsche ID is now even easier: all you need to do is scan the QR code displayed in the PCM. There is no need to enter a Porsche ID and password. Once linked, the personal account is available in native apps directly in the vehicle. This allows, for example, music from Spotify® or Apple Music® to be streamed from the PCM without the car being connected to the smartphone. As an alternative to Apple CarPlay®, Android Auto™ is available as standard for mirroring smartphone content to the PCM.

A new feature of the Porsche 911 is the ability to stream videos in the car to the PCM central display. The Screenhits app, which integrates numerous popular streaming services, is available for this purpose. Screenhits requires a separate subscription. For safety reasons, in-car video is only available in the 911 when the car is stationary.

### **Assistance technology with enhanced functions**

Advanced assistance technology in the 911 enhances comfort and the dynamic driving experience without compromising performance. Porsche is restructuring the range of assistance functions in the new 911. A number of options that were previously available only at extra cost are now included as standard, and new functions have been added.

The previously optional Traffic Sign Recognition, Lane Keep Assist and the warning and brake assistant including pedestrian protection are also included as standard, as are

ParkAssist with reversing camera and a fatigue detection system. The optional Porsche InnoDrive system with Adaptive Cruise Control (ACC) has additional functions: it regulates driving speed, based on navigation data as well as radar and video sensors, and adapts it automatically and predictively. Speed limits and the road topography, such as corners and gradients, are taken into account. Porsche InnoDrive looks up to 1.8 miles ahead and helps to provide a harmonious and efficient journey. The pre-set speed can be changed manually and overridden with the accelerator pedal. If the currently permitted maximum speed is exceeded, the assistant issues a visual and audible warning. Another additional function of the Porsche InnoDrive is Active Lane Keeping, which takes pressure off the driver by continuously assisting with steering angle. This is particularly helpful in congestion, in slow-moving traffic and on monotonous highway journeys. The function can be activated on well-maintained country roads and highways. Other optional assistance systems are also available. These include Lane Change Assist, which has been upgraded to include additional functions. It now warns of approaching traffic when reversing out of a parking space. The warning is signaled visually, acoustically and with physical feedback. It is supplemented by an Exit Warning that warns of approaching vehicles when the door is opened.

ParkAssist, which comes as standard and includes a reversing camera, helps with parking. Expanding on this, Surround View with active parking assistant is available as an option. The system automatically recognizes suitable parking spaces and takes care of longitudinal and lateral control when moving into them. The option of remote-controlled parking with monitoring by smartphone can be configured using Remote ParkAssist. Night Vision Assist is available as an option.

### **Upgraded equipment**

Porsche has expanded the standard equipment in the Porsche 911 and added popular features. Matrix Design LED headlights are fitted as standard for the first time in the Porsche 911. They illuminate the road selectively and adapt the light to the traffic and road conditions. The illumination is even more precise with the optional HD-Matrix Design LED headlights, which represent the current state of the art in lighting systems.

Another new feature in the Porsche 911 is the air quality system, which helps to filter particles and pollutants coming from the outside air. It includes the tried-and-tested particulate filter and the new GPS air recirculation function as standard, which automatically recognizes tunnel entrances and activates the air recirculation in the car in a timely manner,

to help reduce unpleasant odors and exhaust fumes. As an option, a particulate matter sensor continuously measures the air pollution outside and inside the vehicle and automatically switches to recirculated air when necessary. In addition, the polluted air is filtered. The optional ionizer, known from the predecessor model, helps to clean the air of germs and pollutants.

As before, there is a choice of three sound systems for the Porsche 911. The sports car comes with the Sound Package Plus with eight speakers and 150 watts of power as standard. A BOSE® surround sound system with 12 speakers, subwoofer and 570 watts as well as the premium Burmester® 3D High-End Surround Sound System with 13 speakers, 915 watts and 300-watt active subwoofer, are available as options.

In addition to the Matrix Design LED headlights, the extended assistance package and Ambient Lighting are now also included as standard. Electrically folding exterior mirrors, an automatically dimming interior mirror with an integrated rain sensor for the reversing camera, and the 12.6-inch curved display are also included as standard. The same applies to the mode switch. The Sport Chrono package including Track Precision App, tire temperature display and Launch Control is available as an option on 911 Carrera models. It also includes an analogue and a digital stopwatch. It is included as standard in the Carrera GTS. The 911 Carrera GTS is also equipped with a Race-Tex headliner as standard.

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## History of the 911 Carrera GTS

### **From a sleek athlete to a technological spearhead**

The history of the GTS (Gran Turismo Sport) abbreviation at Porsche is as old as that of the iconic 911 number sequence: 1963, the same year that the 911 was born, was the first time a Porsche sports car bore the three letters. However, the Porsche 911 has only featured the GTS abbreviation since 2010. Shortly after the major model upgrade to the 997 generation, Porsche introduced the 911 Carrera GTS as an additional derivative. This was a particularly high-performance Carrera that was more suitable for everyday use than the purist GT3 and GT2 models but was noticeably more purposeful than the traditional Carrera variants.

Even at its debut in 2010, the 911 Carrera GTS made an impression with its exclusive details. These included black accents on the bodywork; a model-specific front fascia; Alcantara® upholstery on the sports seats, steering wheel rim, gear lever and handbrake lever; adaptive suspension; and an optimized 3.8-liter boxer engine with a special intake manifold, a higher rev limit of 7,500 rpm and an output of 408 hp. In addition, there are many details that were previously reserved for the dynamic, top-of-the-range RS models. In the 911 Carrera GTS, Porsche combined the 44 mm-widened bodywork from the all-wheel drive models with rear-wheel drive as standard and fitted 19-inch center-lock RS Spyder wheels that were painted black.

Its international success secured the Carrera GTS a permanent place in the 911 portfolio. The 991 generation that followed also received a GTS derivative with its time-tested characteristics and even greater individuality. The GTS once again positioned itself at the top of the Carrera portfolio, initially with 430 hp and later with 450 hp. It retained its black accents, wide body with separate front end, center-lock wheels, and its attractive price. New features included bi-xenon headlights as standard, the Sport Chrono package (also standard), an exclusive aerodynamic setup for reduced lift, and a wheel design carried over from the Turbo range.

With the model change to the current 992 generation, Porsche streamlined the 911 Carrera GTS even further. Its 473 hp six-cylinder boxer engine sounded even more exciting thanks to a sports exhaust system, specially developed for the GTS, and reduced interior insulation. The Carrera GTS inherited the high-performance braking system and the chassis setup with helper springs on the rear axle from the 911 Turbo, which generated optimum pre-tensioning in all driving situations. An optional lightweight package was available for the first time:

lightweight bucket seats, lightweight glass, a lightweight battery, and many other details reduced the vehicle weight by 55 lbs.

In 2024, the 911 Carrera GTS assumes a pioneering role in its model series and is becoming a technological spearhead. It is the first road-approved Porsche 911 with a performance hybrid drive and is even more agile and faster, but hardly any heavier despite the major technological leap forward. With its innovative drive system, it emphasizes its special position in the 911 portfolio as a particularly attractive blend of everyday practicality, driving dynamics and technological excellence.