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Press Information

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Contents

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Porsche at the 2012 Los Angeles Auto Show

World premiere of the new Cayman

Porsche is celebrating the world premiere of the new Cayman at the 2012 Los Angeles Auto Show. The third generation of the Cayman, which is making its appearance before an international audience at the Convention Center, has been re-engineered from the ground up – it is lower and longer, lighter and faster, more efficient and more powerful than ever. The two-seat sport coupé will be launched on the market in the two classic Porsche versions Cayman and Cayman S. A longer wheelbase, wider track and larger wheels enhance the driving performance of the mid-engine sports car to a level without equal in its competitive class.

Under its lightweight body in aluminium and steel mixed material design, one of two highly efficient flat-six cylinder engines is mounted just in front of the rear axle, which delivers even more propulsive power with even better fuel economy than before. The Cayman is powered by a 2.7-litre engine with 275 hp; with the Sport Chrono package it accelerates from a standstill to 100 km/h in 5.4 seconds, and its NEDC fuel consumption – with the Porsche Doppelkupplungsgetriebe (PDK) – is just 7.7 litres per 100 km. The 3.4-litre engine of the Cayman S produces 325 hp; with PDK and the Sport Chrono package it finishes the 0-100 km/h sprint in 4.7 seconds and has a combined fuel consumption of 8.0 l/100 km.

With its broad rear section, red rear light strip between the rear lights and an all-wheel drive system, the new 911 Carrera 4 is the unmistakable second new product for the US market. The new all-wheel drive 911 comes in four versions – 911 Carrera 4 and 911 Carrera 4S, each as a Coupé and Cabriolet. They offer the same DNA as the rear-wheel drive versions; their lightweight body design and chassis as well as their engines and transmissions are identical with the exception of modifications specific to the all-wheel drive system. The typical Porsche all-wheel drive layout – which emphasizes driving of the rear wheels – guarantees maximum driving performance on a wide variety of road surfaces and in all weather conditions in this latest 911 version.

Another eye-catching model which Porsche is presenting in Los Angeles is the Panamera Platinum Edition. This elegant special edition of the Panamera, Panamera 4 and Panamera Diesel is characterised by subtle, independent platinum-silver metallic design accents combined with extended standard features and exclusive details. Many frequently requested options with high customer value are already standard features in the Panamera Platinum Edition. They include bi-xenon headlights in front and Park Assistant. The new bi-colour combination black / luxor beige creates a particularly elegant interior ambience as well. It is exclusively used in the Panamera Platinum Edition – as a standard part-leather interior or as an optional full-leather interior.

The new Porsche Cayman

Third generation driving artist in bends

It is built for driving through bends like few other sports cars can: the new Porsche Cayman sets new standards in its class for driving performance with a longer wheelbase, all-round new chassis and lower weight. The two-seater, newly developed from the ground up is – after the 911 Carrera and Boxster – the third sports car model series from Porsche to feature innovative lightweight body design. The new Cayman is up to 30 kg lighter, depending on the specific model and equipment, and it consumes up to 15 per cent less fuel per 100 km than the previous model – despite higher engine and driving performance.

An overview of its key data:

Cayman	2.7-litre flat-six cylinder engine with 275 PS (202 kW); rear-wheel drive, six-speed manual transmission, optional seven-speed Porsche Doppelkupplungsgetriebe (PDK); acceleration from zero to 100 km/h in 5.7 seconds, with PDK in 5.6 seconds (5.4 seconds with Sport Chrono package); top speed 266 km/h, with PDK 264 km/h; fuel consumption (NEDC) 8.2 l/100 km, CO_2 192 g/km; with PDK 7.7 l/100 km, CO_2 180 g/km.
Cayman S	3.4-litre flat-six cylinder engine with 325 PS (239 kW); rear-wheel drive, six-speed manual transmission, optional seven-speed Porsche Doppelkupplungsgetriebe (PDK); acceleration from zero to 100 km/h in 5.0 seconds, with PDK in 4.9 seconds (4.7 seconds with Sport Chrono package); top speed 283 km/h, with PDK 281 km/h; fuel consumption (NEDC) 8.8 l/100 km, CO_2 206 g/km; with PDK 8.0 l/100 km, CO_2 188 g/km.

Porsche is also upgrading the Cayman with new optional features. For example, the sport coupé is now available with Adaptive Cruise Control (ACC) for the first time – it controls the distance to the car ahead in traffic and vehicle speed – as well as a specially developed Burmester sound system. Another new feature for the Cayman is the optional Entry & Drive keyless system that can be factory-installed.

Design: new proportions, prominent lines

The new Cayman is more distinctive than ever. Its proportions are new, and yet it is clearly a Porsche sport coupé; an extended wheelbase with shorter overhangs and 18- and 19-inch diameter wheels with larger rolling circumference are identifying visual characteristics of the car's more enhanced driving performance. Its styling is marked by precise lines and razor-sharp sculpted edges. They emphasise the car's low, extended silhouette with the windscreen shifted forward and the roof line that reaches far back. Typical of the more advanced styling is the shoulder line, which runs from the wings – which flare strongly upwards – towards the rear side panels. The door mirrors are now positioned near the top shoulder. Especially expressive and characteristic are the dynamic recesses in the doors, which guide induction air into the distinctive air scoops on the rear side panels and then directly to the engine. This offers the most prominent visualisation of the basic concept of the mid-engine.

From the front end, the new Cayman is marked by its dominant cooling air inlets, which increase in size towards the sides of the car. Integrated in them, far outboard, are the round front lights with four-point daytime running lights or position lights – an unmistakable identifying feature of the new Cayman. Just as unique to the new generation of the sport coupé are the large, low rear lid made of aluminium and the rear section with its wrap-around edges. At the upper end of the rear window, an LED brake light spanning the entire window width warns traffic behind. Mounted directly to the rear lid is the thin blade of the rear spoiler, which – in contrast to that of the Boxster – is higher and deploys at a steeper angle. The overall appearance of the Cayman is more independent than before, and it is well-differentiated from the previous model.

Engine and transmission

Six-cylinder with high-revving concept: the heart of an athlete

Porsche is implementing two exceptional sport engines in the Cayman, which combine ample torque with high power in the upper engine speed range. One consequence of this high-revving concept is that it enabled a 0.2 litre reduction in base engine displacement compared to the previous model, and yet it has a higher power output. With its specific power of 101.6 hp/litre, the 2.7-litre engine is the first Cayman to break the magic 100 hp per litre displacement barrier for sports car engines. Both engines now produce their maximum nominal power at 7,400/min; it was 7,200/min previously. Not only were peak powers increased by 10 hp to 275 hp (202 kW) in the Cayman and by five hp to 325 hp (239 kW) in the S-model; their two power curves also lie above those of the previous engines, which means that overall the six-cylinder engines produce more power at identical engine revs.

The new engines induct their air from the left and right air scoops. In the 3.4-litre six-cylinder engine of the Cayman S, a switching resonance flap improves cylinder fill, providing high torque at low revs as well as a uniform torque curve. Both engines feature variable valve timing and lift (VarioCam Plus) on the intake side for optimal timing in charge changes.

Intelligent efficiency: electrical system recuperation, thermal management, coasting function

The flat-six cylinder engines – positioned in front of the rear axle – make the two-seat Porsche cars prime examples of efficient performance. The engines of both models are up to 15 per cent more fuel-efficient due to their petrol direct injection, thermal management, electrical system recuperation and auto start/stop function.

Key components for improving efficiency are electrical system recuperation and map-controlled thermal management of engine cooling. In electrical system recuperation, the battery is charged more intensively during braking and coasting phases. In turn, alternator charge current can be reduced when the battery is fully charged. This reduces the load of the

internal combustion engine in acceleration phases, because it does not need to output as much power to charge the battery. Thanks to intelligent control of the combined engine and transmission cooling systems, both engines reach their operating temperatures more quickly, which results in better combustion under part-load with less friction.

In conjunction with the PDK transmission, the new Cayman shares a feature with the Boxster and the 911 Carrera that follows the principle of generating engine power only when it is actually needed: the coasting function. The coasting function enables decoupled coasting, in which the engine runs in neutral with low fuel consumption. In practice, this results in optimal savings of up to one litre fuel per 100 km with an anticipatory style of driving.

Standard six-speed manual transmission, PDK is an option

The transmission is also crucial for driving performance, comfort and fuel economy. In the new Cayman models, a standard six-speed manual transmission is employed; its gear ratios are optimally laid out for the engine's unique characteristics. The Porsche Doppelkupplungsgetriebe (PDK) is also available as an option. It offers seven gears and shifting without any interruption in propulsive power, and it enables faster sprints and better fuel economy.

The new Cayman models now offer a Sport button as standard that lets the driver choose between sport-oriented tuning and comfortable tuning that is optimised for fuel efficiency. In Sport mode, the electronic engine management system makes the engine respond even snappier, with more direct dynamic response of the engine. In vehicles with PDK, automatic mode results in later upshifts and earlier downshifts. Moreover, the start/stop function and coasting function are deactivated.

The PDK is precisely tuned to the vehicle dynamics of the new Cayman. One example: in manual mode, it enables controlled drifts with the Porsche Stability Management (PSM) deactivated – assuming a suitably protected roadway. Detection of the yaw angle and steering input angle initiates prevention of upshifting and permits this very special kind of driving fun.

Option: Sport Chrono package with dynamic transmission mounts

The optional Sport Chrono package offers a very wide spread of gear ratios ranging from sporty tuning – e.g. for circuit courses – to ride comfort in everyday use. It also includes dynamic transmission mounts. It delivers the best possible drive-off acceleration in conjunction with PDK and the Sport Plus button with the Launch Control function. This shortens the sprint from zero to 100 km/h by 0.2 s compared to normal mode. The Sport Plus button also activates the PDK "race course" shifting strategy. For even better driving performance and ride comfort, the Sport Chrono package provides dynamic transmission mounts. They alter their stiffness and damping as a function of the specific driving situation. With a hard setting of the mounts, for example, the drivetrain's moment of inertia is significantly reduced when steering into a bend and in quickly alternating bends, which minimises rear body press. Its effects are similar to those of motorsport cars, in which the engine is rigidly mounted to the body with bolts, resulting in more stable and precise handling.

Chassis and brakes

New chassis system for even better handling

The driving performance of the Porsche Cayman is extraordinary. More than ever, the interplay of the mid-engine concept and chassis tuning assures it the top position in its class. The fundamental geometry creates ideal conditions for this performance: a 60 mm longer wheelbase for greater stability at very high speeds, a wide track width at both axles for additional driving stability and agility in bends and larger diameter tyres for even better road grip up to the limits of performance. Porsche engineers placed high priority on tuning of the Cayman, but not only with the goal of improving driving performance and agility, but to simultaneously improve comfort and everyday practicality as well.

Revised PASM with extended sensors

The new generation of the optional PASM active damping system extends the driving performance range of the Cayman more sustainably than ever. The reason: four additional vertical sensors at the front and rear wheels enable even better and more finely tuned control. Optimally controlled damping improves the vehicle's road grip, offering greater driving stability, more comfort, enhanced performance and shorter braking distances. Just as before, the driver can use the PASM chassis control button on the centre console to choose between the two modes "Normal" and "Sport". The system also acts as a function of the specific driving situation, so that driving fun is not compromised: in smooth motorway driving, for example, only moderate damping forces are required. In a sporty style of driving, on the other hand, high damping forces improve road grip and car body control.

Quick and efficient reactions: two versions of electromechanical steering

Electromechanical power steering is also replacing the previous hydraulic system in the Cayman. Its high performance lets drivers experience the agility of the Cayman even more intensively. At the same time, the new system offers fuel economy benefits compared to conventional steering, reducing fuel consumption by at least 0.1 l/100 km. It also enhances comfort and safety through auxiliary functions. The driver gets direct feedback via the steering wheel, and negative or unnecessary noise is filtered out.

As an option, the power steering "Plus" version of electromechanical steering can be ordered, which enhances steering comfort with extra power assist up to 50 km/h. Parking and manoeuvring in particular are more smooth and comfortable – with lower steering forces. This system improves steering torque and steering wheel return to centre position at lower vehicle speeds.

More traction, better vehicle dynamics in bends: Porsche Torque Vectoring

Building upon the capabilities of the PASM chassis, the optional Porsche Torque Vectoring (PTV) system is able to increase the driving performance potential of the Cayman even further. PTV involves intelligent interaction of a rear differential lock and wheel-selective brake interventions – an auxiliary function of Porsche Stability Management (PSM). Essentially, PTV improves the vehicle's steering response and steering precision by targeted brake interventions at the rear wheel located on the inside of a bend. The braking torque is activated as soon as the steering wheel is turned. The results: improved performance in bends as the turn is initiated. Then the rear differential lock significantly improves traction capabilities when accelerating out of the bend.

Brakes with extra power

Because of the car's enhanced driving performance, the brake system of the Cayman has been made more powerful as well – that goes without saying at Porsche. Along with equipping the system with stiffer front brake callipers, optimising brake pad design and providing a larger brake contact surface, improvements were made in cooling the brake discs as well. Furthermore, the new Cayman S has larger front brake discs that originate from the 911 Carrera. To improve safety in traffic and provide a better warning to vehicles behind, the brake lights of all Cayman models pulsate as soon as ABS control is activated. As in previous models, the exceptionally high-performance Porsche Ceramic Composite Brake (PCCB) system is available as a motorsport-proven option. With this system, 350 mm diameter brake discs are used at the front and rear wheels of all models. The PCCB brake callipers are also painted yellow, and a new six-piston calliper from the 911 Carrera is used at the front wheels.

Larger wheels, low rolling resistance tyres

The new Cayman models ride on wheels and tyres that are now one inch larger in diameter than on the previous model. Standard now are customised 18- and 19-inch Cayman wheels, which give the sport coupés better lateral stability and handling properties. Optional wheels for the new Cayman include the alternative 20-inch Carrera S wheels, 20-inch Carrera Classic wheels in bi-colour look and the new 20-inch Sport Techno wheels from the Exclusive programme. The standard tyres are optimised for low rolling resistance, they feature a typically high level of Porsche performance in terms of handling and braking distance, and they are low in weight. A seven per cent reduction in rolling resistance compared to the previous models contributes towards reducing fuel consumption.

Car body

Lighter, stiffer, sportier

The body of the new Cayman is an entirely new development based on the body-in-white of the Boxster. The bottom line is that innovative lightweight body design with mixed aluminium-steel construction has reduced body-in-white weight by around 47 kg. At the same time, the car's static torsional rigidity was boosted by 40 per cent. In other words, the Cayman drives more precisely than ever before. Extra features, larger glass surfaces and larger wheels offset some of the weight savings, yet the DIN weights of all sport coupés are lighter than those of previous models, and a standard Cayman S weighs 30 kg less.

In its new lightweight body design, Porsche only uses steel where it is essential. On the other hand, wherever lightweight metals can be used, they are the preferred choice. For example, die-cast aluminium, aluminium sheet, magnesium and high-strength steels are used, and all materials are tailor-made for specific purposes in the body, ensuring very high rigidity values while minimising material usage. Around 44 per cent of the new Cayman body-in-white consists of aluminium, e.g. the front body, floor and rear body, the doors and the front and rear bootlids.

Compared to the previous model, aerodynamic lift was further reduced at both axles, which leads to greater driving stability at high speeds. Among other features, a new front spoiler lip significantly reduces front axle lift. At the rear axle, the new rear wing combined with a spoiler lip running across the entire width also makes a crucial contribution towards reduced lift. The wing is optimally integrated in the rear body with a curved shape, and it can be deployed either automatically or manually. With its 40 per cent larger effective area, it generates more groundforce than the spoiler of the previous model, and it offers less resistance to the air flow.

Interior and features

Elegant ambience, new high-class options

The interior of the new Cayman continues along the lines of current Porsche sports car design and adds value to the sport coupé. In its new optional features as well: for the first time, a high-end Burmester sound system can be ordered which is individually tuned for the Cayman. Other new and optional features that overcome class boundaries are Adaptive Cruise Control (ACC) and the keyless Entry & Drive system. An especially exclusive ambience is created by the optional bi-colour leather packages that can be delivered; the base colour agate grey may be combined with lime gold, gravel grey or amber orange.

The centre console that ascends towards the front with its motorsport-like high-set gear shifter gives the driver the feeling of being more fully integrated in the interior. Controls for key vehicle operation functions and settings are arranged in logical groupings on the centre console. They are laid out for quick and intuitive control of individual functions.

New ergonomics support sporty driving

The new ergonomics of the Cayman and its more precise shifting now offer drivers even better conditions for quick and effortless gear shifts. The ascending centre console and the driver's seat position ensure a short distance between the steering wheel and the gear-shift lever. The new gear indicator in the tachometer shows which gear is engaged, and the upshifting recommendation in the instrument cluster gives the driver feedback on a style of driving that optimises fuel efficiency.

The standard CDR audio system with its seven-inch touchscreen – that is centrally located further upwards – is very easy to see and offers convenient access to many different functions. The three classic round instruments of the Cayman model series with a centrally positioned tachometer and an ignition switch to the left of the steering wheel make the connection to a familiar cockpit environment. New is the high-resolution 4.6-inch VGA multi-function screen in the instrument on the right. Along with the most important trip computer functions, it also includes a map display for the optional PCM with navigation module.

The driver and passenger sit on new sport seats. They offer very good comfort for long-distance touring and very good lateral support for a dynamic style of driving. The standard sport seats have mechanical fore-aft and height adjustments, and the backrests are electrically adjustable. The optional sport seat plus system offers even greater lateral support with larger side panels on the seat cushions and backrests and more pronounced sculpting in the shoulder area. Electric sport seats and adaptive sport seats plus are still offered as options – and both include a memory function.

The car's new extended silhouette also increases the practical utility of the Cayman: the larger rear lid offers better access to the rear bootspace, and cargo capacity of the two-seater has been increased by 15 litres to 425 litres when loaded to the roof. An eye-catching feature that is revealed when the rear lid is opened is the new aluminium panel that extends across the engine compartment cover between the two filler caps for coolant and oil. A luggage partition bar that is also made of brushed aluminium laterally spans the space behind the head restraints.

New sound experience: Cayman introduces Burmester sound system to the class

The new top option among the sound systems is a special "made in Germany" system that Porsche developed for the Cayman together with Burmester. Based on experience acquired from systems in the Panamera, Cayenne and 911 Carrera, this new system attains a total acoustic power and sound quality that are excellent for the sports car segment. This is impressively demonstrated by the system's performance figures: twelve individually controlled loudspeakers, including an active "body-in-white" subwoofer with a 140 mm diameter diaphragm and integrated 300 Watt Class-D amplifier, and twelve amplifier channels with a total output power of over 800 Watt.

Greater comfort and safety: ACC with Porsche Active Safe

For Cayman models with Doppelkupplungsgetriebe (PDK), Porsche now offers a new upgrade option for driving convenience and safety: Adaptive Cruise Control (ACC) that includes the safety function Porsche Active Safe (PAS). ACC operation is based on a radar sensor located in the middle of the front body panel, which acquires objects in the driving lane over a

range of up to 200 metres. ACC maintains a speed-dependent distance to a vehicle ahead in traffic over four preselectable stages, and it automatically adjusts driving speed – up to a vehicle stop. This relieves the workload of drivers in traffic jam situations and in slow-moving traffic.

PAS builds on this system and can help to avoid front-end collisions – even when ACC is switched off. It uses the front radar system to continually monitor traffic for much slower vehicles ahead. If the system detects an impending hazardous situation, the brake system is preconditioned, and the brake assistant is sensitised. If the situation becomes more critical, PAS outputs visual and acoustic warnings, and the driver is alerted to the need to intervene by a jolt in the brake pedal. If the driver does not react with appropriate braking, the system can increase braking pressure up to hard braking, depending on the situation.

Driving without car keys: Porsche Entry & Drive

Porsche Entry & Drive is being offered for the first time in the class of the Cayman. The system enables keyless and convenient unlocking and locking of the doors and bootlid as well as engine starting. As soon as the driver touches the door handle, the Porsche Entry & Drive queries an access code that is saved in the key. If it is correct, the door is unlocked. Similarly, when the driver approaches the sensor zone at the front or rear of the car, the boot lid in that zone is unlocked and can be opened.

Porsche 911 Carrera 4 and 911 Carrera 4S

Greater dynamics and agility

Porsche is doubling its range of driving fun in the new 911 generation by launching the all-wheel drive 911 Carrera 4 on the market in four model versions. The new sports cars with their uniquely powerful proportions combine the excellent traction and driving stability of the active Porsche Traction Management (PTM) system with the benefits of lightweight design, new engines and additional assistance systems – traction and dynamics to the fourth power. Despite enhanced engine and driving performance, all four models consume significantly less fuel than their respective previous models; in some cases the savings add up to as much as 16 per cent. So, the new all-wheel drive 911 is consistently following the same course as the 911 Carrera Type 991 presented in 2011. The Carrera 4 takes top efficiency and performance to an even higher level.

Overview of the new models:

911 Carrera 4	3.4-litre boxer engine with 350 hp (257 kW); seven-speed manual gearbox, optional seven-speed Porsche Doppelkupplungsgetriebe (PDK); active all-wheel drive Porsche Traction Management (PTM); acceleration from zero to 100 km/h in 4.9 seconds (PDK: 4.7 seconds; Sport Chrono: 4.5 seconds); top speed 285 km/h (PDK: 283 km/h); fuel consumption (NEDC) 9.3 l/100 km, CO_2 219 g/km; (PDK: 8.6 l/100 km, CO_2 203 g/km).
911 Carrera 4 Cabriolet	3.4-litre boxer engine with 350 hp (257 kW); seven-speed manual gearbox, optional PDK; PTM; acceleration from zero to 100 km/h in 5.1 seconds (PDK: 4.9 seconds; Sport Chrono: 4.7 seconds); top speed 282 km/h, (PDK: 280 km/h); fuel consumption (NEDC) 9.5 l/100 km, CO_2 224 g/km; (PDK: 8.7 l/100 km, CO_2 205 g/km).

911 Carrera 4S	3.8-litre boxer engine with 400 hp (294 kW); seven-speed manual gearbox, optional PDK; PTM; acceleration from zero to 100 km/h in 4.5 seconds (PDK: 4.3 seconds; Sport Chrono: 4.1 seconds); top speed 299 km/h, (PDK: 297 km/h); fuel consumption (NEDC) 9.9 l/100 km, CO_2 234 g/km; (PDK: 9.1 l/100 km, CO_2 215 g/km).
911 Carrera 4S Cabriolet	3.8-litre boxer engine with 400 hp (294 kW); seven-speed manual gearbox, optional PDK; PTM; acceleration from zero to 100 km/h in 4.7 seconds (PDK: 4.5 seconds Sport Chrono: 4.3); top speed 296 km/h, (PDK: 294 km/h); fuel consumption (NEDC) 10.0 l/100 km, CO_2 236 g/km; (PDK: 9.2 l/100 km, CO_2 217 g/km).

The most distinctive identifying feature of the 911 with all-wheel drive is still the wide rear section. Thanks to Porsche Traction Management, the new generation of 911 Carrera sport cars is able to optimally transfer its high performance potential to the road at all times. Via a multiplate clutch, it actively controls the distribution of power between the front and rear wheels within fractions of a second. This system can deliver greater driving stability, more agile traction or more agile handling, depending on the driving situation. Expressed in another way: even more safety with even more driving fun.

Indicator shows torque distribution: all-wheel drive made visible

In the new 911 Carrera 4, this special driving fun is being made visible for the first time: as a new standard feature, an indicator can be called up on the instrument cluster display that shows how the PTM all-wheel drive is distributing engine power. A bar indicator with ten segments per axle continually informs the driver of the drive torque available at the main transmission output as well as its current distribution to the front and rear axle.

Prominent identifying feature: 44 mm wider rear section

The new all-wheel drive 911 is easy to recognize at first glance: Compared to the two-wheel drive 911 Carrera models, the wheel arches of the rear axle are more flared, each extending an additional 22 mm to the sides, while the rear wheels are each ten millimetres wider. This increases the track width of the 911 Carrera 4 by 42 mm and that of the S model by 36 mm. The impressive view at the rear is underscored by the exclusive tail-light panel with parking light and rear light functionality. The light panel runs directly beneath the spoiler edge, and it visually combines the two rear lights. For one, this emphasises the powerful termination of the vehicle, while also giving the all-wheel drive models a unique and clearly differentiated night design. When the light is activated, the illuminated light panel visually joins the rear lights; at night this also signals to cars behind that a new all-wheel drive 911 is driving ahead. The car's independent image is rounded out by the black recessed sill panels in side view and by the modified front end with lateral air inlet screens in trim form in the front view.

New: ACC with Porsche Active Safe helps avoid front-end collisions

With the debut of the 911 Carrera all-wheel drive models, Porsche is introducing a new assistance system, new functions and features into its 911 sports cars. For example, the optional Adaptive Cruise Control (ACC), which controls distance and speed in traffic, was extended for vehicles with a Doppelkupplungsgetriebe by adding the safety function Porsche Active Safe (PAS). PAS helps to avoid front-end collisions – even when ACC is deactivated. It does this by using its front radar system to continually monitor traffic for significantly slower vehicles ahead. If the system detects the risk of a front-end collision, the brake system is preconditioned, and the sensitivity level of the brake assistant is increased. If the situation becomes critical, PAS outputs a visual and an acoustic warning, and the driver is alerted to the need to intervene by a brake pedal jolt. If the driver does not react with appropriate braking, the system increases brake pressure up to full braking force according to the situation. The driver can choose to deactivate PAS in the instrument cluster.

PAS is based on ACC functions. Its radar sensor in the centre panel of the front end has a range of up to 200 meters in the driving lane in front of the vehicle. ACC maintains a predefined speed-dependent distance to a vehicle ahead over four stages that the driver can preselect, and it automatically adjusts vehicle speed as necessary – up to a vehicle stop. When the vehicle in front drives off again, the driver can follow in controlled ACC mode again by activating the Resume function on the steering column stalk or by tapping the accelerator pedal. This offers relief to the driver, especially in stop-and-go traffic.

More transparency upwards: new sliding glass sunroof

Porsche is offering a new sliding glass sunroof as an optional feature for the 911 Carrera Coupé. Like the metal sliding sunroof, it opens towards the exterior. It is combined with a wind deflector and a sunshade. The roof modules in front of and in back of the sliding glass sunroof are painted in high-gloss black and make the sliding glass sunroof an eye-catching feature.

Change of generation: previous models set technological milestones

The new all-wheel drive models are replacing a very successful previous generation that has sold a total of about 24,000 units. This represents a 34 per cent share of second generation 997 models. In 2008, this generation introduced one of the greatest advances in powertrain technology ever made in the 911 with all-wheel drive: the cars offered engines with petrol direct injection, the Porsche Doppelkupplungsgetriebe (PDK) and the electronically controlled Porsche Traction Management (PTM). In July 2011, Porsche crowned the model series with the 911 Carrera 4 GTS, whose 3.8-litre engine was performance enhanced to 408 hp (300 kW).

All-wheel drive

Advanced development of Porsche Traction Management supports coasting

The new all-wheel drive 911 cars are equipped with the latest generation of Porsche Traction Management (PTM). It is based on the system of the 911 Turbo, Type 997 and was especially optimised in its control strategy with a special focus on improving efficiency and fuel economy. The system recognises a fuel-efficient style of driving based on the driving situation and reduces the transfer of drive torque to the front axle. This reduces power losses. PTM also supports the typical Porsche "coasting" function of the 911s equipped with PDK. The PTM clutch is opened while the vehicle is coasting without drive power. This reduces the braking torque of the all-wheel drive system, which in turn improves fuel economy.

PTM combines typical Porsche driving fun of a rear engine and rear-wheel drive with even greater driving stability, traction and agile handling. In every driving situation, PTM accomplishes this by directing the optimal share of engine torque to the front wheels via a multi-plate clutch, and this distribution the driver can now see on the display. With a maximum switching time of 100 milliseconds, PTM is quicker than the engine's reaction to load change and quicker than the driver can perceive. In practical terms, this means a high level of agility on narrow country roads, excellent traction even on slippery surfaces and top-notch driving safety even during extreme driving manoeuvres in the high-speed range. These properties make Porsche Traction Management one of the highest performance and yet lightest all-wheel drive systems on the market.

Dynamic tuning of the all-wheel drive system is rear drive dominant in its basic layout. However, power is distributed with full variability depending on the specific driving situation and the slip friction value. Parameters such as wheel slip, longitudinal acceleration and transverse acceleration as well as oversteer and understeer are used to detect the slip friction value. Drive forces are quickly and precisely distributed between the front and rear axles in response to steering angle and accelerator pedal inputs, according to the specific driving situation.

Engine and transmission

More power, better fuel economy

With the generation change, the all-wheel drive models of the 911 Carrera now have new engines with 3.4 litres and 3.8 litres of engine displacement. To increase their efficiency, the boxer engines feature electrical system recuperation and map-controlled coolant thermal management. In electrical system recuperation, the battery is charged more during braking and coasting phases. When the battery is fully charged, the generator's charging current is throttling down, which in turn relieves load on the internal combustion engine during acceleration phases, because the generator does not need to output as much power to charge the battery. Meanwhile, the shared, intelligently controlled cooling system for the engine and transmission of the thermal management system ensures that both drive units reach their operating temperatures quicker. This improves efficiency in part-load conditions due to less friction without any disadvantages in full-load operation. Porsche also introduced the auto start/stop function in the new 911 Carrera generation for all transmission versions – including the manual transmission. Other measures that improve fuel economy are friction minimising actions in engine design, reduced rolling resistance with new generation tyres and the introduction of electro-mechanical power steering.

The principle of only calling up engine power when it is actually needed has led to a new feature for sports cars in the new 911 cars with PDK: coasting. In this case, the term refers to coasting without any engine propulsion, which enables idling fuel consumption over specific segments of the driving route. Coasting is good for fuel economy, because the vehicle is able to use its kinetic energy for certain sections of the driving route. In practical terms, this results in fuel savings of up to one litre per 100 km with an anticipatory style of driving in everyday operation. Coasting is initiated by slowly releasing the accelerator pedal or by a manual upshifting pulse while in the highest gear for the currently selected driving profile. Coasting is ended by accelerating, braking or manually shifting.

Sound Symposer intensifies acoustic driving fun

The new generation Porsche 911 Carrera also offers the driver even sportier driving fun in its acoustics. The Sound Symposer – a standard feature in all models – produces an even more full-bodied and sporty engine sound in the interior and is operated by the standard Sport or optional Sport Plus control button.

The Sound Symposer is a passive system; it does not generate any artificial engine sound, rather it directs the unmistakable sound of the new boxer engines into the interior at the push of a button. An acoustic channel absorbs the air induction vibrations between the throttle valve and the air filter. A membrane is integrated in this acoustic channel, which transmits the vibrations in the area of the package tray in the interior. A controlled flap located in front of the membrane activates or deactivates the Sound Symposer at the press of a button.

Sport exhaust system boosts power and enjoyment

A sport exhaust system is also available as an option for the new all-wheel drive models. It not only dethrottles the exhaust at the press of a button, but also merges the two exhaust lines. Pressing the sport exhaust system button on the centre console gives the six-cylinder boxer engine a more full-bodied sound paired with optimal performance. The acoustical effect offers even more emotional appeal, especially since the sound symposer flap is simultaneously activated. The sport exhaust system is visually distinguished by two twin tailpipes with unique styling.

Transmissions: seven speeds for dynamics and efficiency

The Porsche strategy for realising efficient performance includes two transmissions that deliver uncompromising sportiness as well as long gear ratios that improve fuel economy: the world's first seven-speed manual gearbox in passenger car production and the Porsche Doppelkupplungsgetriebe (PDK), which also has seven gears. This means that drivers of the 911 Carrera with a manual gearbox can enjoy the same fuel economy advantages that the PDK is known to deliver: up to 19 per cent lower revs at the same vehicle speeds, which improves fuel economy by up to ten per cent in constant speed driving. A special aspect of the manual transmission is the shift gate lock to seventh gear. This prevents the driver from unintentionally shifting to seventh gear when quickly upshifting from fourth to fifth gear. The engaged gear is shown on the gear indicator in the instrument cluster.

Chassis and control systems

Chassis with larger track width ensures superior stability in bends

In developing the new 911 Carrera generation, preparations were already made in tuning the chassis for the additional driving of the front wheels in the new all-wheel drive 911. That explains why the vehicle is largely based on the rear-wheel drive version. A significant exception is the wider track of the rear axle. On the 911 Carrera 4 it is 42 mm wider, and it is 36 mm on the 911 Carrera 4S. Together with PTM all-wheel drive, this offers even higher stability in bends, even with powerful acceleration.

As in all 911 models, the longer wheelbase – lengthened by 100 mm compared to the previous model – provides for significantly better driving stability at high speeds. Other systems that guarantee top driving performance – some standard and some optional depending on the model – are the further advanced Porsche Active Suspension Management (PASM), dynamic engine mounts, Porsche Dynamic Chassis Control (PDCC), innovative electro-mechanical power steering, Porsche Torque Vectoring (PTV), a high-performance brake system and the car's wheels and tyres.

PASM sport chassis with downforce at the rear axle

The PASM sport chassis – which sports a ride height lowered by 20 mm and an aerodynamic package – is also offered in the new 911 Carrera 4 models. For one, the independent design of the front spoiler lip that is included in the package has been aerodynamically optimised. For another, the rear spoiler deploys further than in models without a sport chassis. This aerodynamic tuning results in less lift at the front axle and even provides downforce at the rear axle. In sum, the lift is zero. As a result, a 911 Carrera 4 with PASM sport chassis delivers exceptionally good road contact at high speeds and reacts very spontaneously and directly to steering inputs. The results: further enhancement of circuit driving performance.

Precision and feedback: electro-mechanical steering

Porsche introduced electro-mechanical power steering in the new 911 Carrera generation, which assumes a top position in terms of its high performance and precision. The primary benefit compared to hydraulic power steering is that it reduces fuel consumption by at least 0.1 l/100 km. In addition, auxiliary functions enhance convenience and safety. The system gives feedback to the driver via the steering wheel and filters out negative or unnecessary disturbances.

Even at low speeds, active steering wheel return automatically brings the steering wheel back to the centre position. When braking on roadways with different friction values for different wheels, a steering pulse at the steering wheel indicates the direction to steer, to make it easier for the driver to stabilize the car and stay in the desired driving lane. Delivering additional comfort is the optional power steering plus, which simplifies manoeuvring, for example, by stronger servo boosting at speeds below 50 km/h.

Driving through a bend faster and safer: Porsche Torque Vectoring

Offering even further enhanced agility in the new 911 cars is Porsche Torque Vectoring (PTV), which is standard in the 911 Carrera 4S and is available as an option in the 911 Carrera 4. There are two versions of the system: PTV with mechanically locking differential for cars with a manual gearbox and PTV Plus with electronically controlled, fully variable differential lock for PDK vehicles. Essentially, when driving through a bend PTV/PTV Plus uses specific brake interventions at the inside rear wheel to improve agility and steering precision with a highly dynamic style of driving, and the differential lock improves the car's acceleration potential coming out of a bend.

Even sportier at the press of a button: from Sport button to Sport Chrono package

All 911 Carrera cars already have a Sport button as standard. It lets the driver choose tuning optimised for comfort and fuel economy or tuning that emphasises sporty performance. The optional Sport Chrono package with the additional Sport Plus button enables an even wider spread between sporty tuning and ride comfort in everyday driving. Besides configuring all relevant systems and functions for maximum performance, the Sport Chrono package also has controlled dynamic engine mounts.

When the Sport Plus button is pressed, both the transmission and, with PDK, the PSM intervene later to permit greater agility and driving performance. The optional PASM, PTV Plus, PDCC and dynamic engine mounts switch over to sport mode for stiffer and sportier damping and chassis control settings. Other functions are activated by the standard Sport button as well: the accelerator pedal characteristic is modified for more direct response, and the auto start/stop and coasting functions are deactivated. Moreover, the Sound Symposer and optional sport exhaust system are activated, and the optional Porsche Dynamic Light System is preconditioned for quicker reactions.

New in the Sport Chrono package: downshifting with double declutching

The Sport Chrono package includes an analogue and digital chronometer; the optional PCM also has a performance indicator with memory function. Another new feature of the optional Sport Chrono package is that for vehicles with a manual gearbox it has been extended to automatically double declutch during downshifts in Sport Plus mode. In quick shifting, this better adapts engine speed to the lower gear, letting the driver utilise the engine's power or braking ability more effectively.

In conjunction with PDK, other functions are added. Launch Control, for example, supports the best possible drive-off acceleration when the Sport Plus button is pressed. This shortens the sprint from 0 to 100 km/h by 0.2 seconds. The Sport Plus button also activates the PDK "race course" shifting strategy with quicker shifts and optimal shift points for maximum acceleration and performance.

Porsche Dynamic Chassis Control for impressive performance gains

Making a decisive contribution towards impressive performance gains in the new 911 generation is Porsche Dynamic Chassis Control (PDCC) – an optional feature of the 911 Carrera 4S. With this system, the 911 attains a new level in terms of lateral acceleration and handling. Body roll of the vehicle is nearly fully compensated by the variable stabiliser system up to maximum lateral acceleration, e.g. when steering into a bend, driving through

a bend or quickly changing lanes. Because of the reduced roll angles, the tyres are always optimally aligned to the road surface, so that they can transmit maximum force in any direction. This boosts potential vehicle speeds when driving through bends. The System also offers more direct steering feeling and higher steering precision. The intelligent control of the PDCC system is also able to drive the hydraulic actuators individually according to the driving situation. This affects self-steering effects and in turn improves vehicle stabilisation.

Body and roof

Lightweight design in perfected form

The innovative lightweight body of the new 911 Carrera range was developed for top driving characteristics in both the Coupé and Cabriolet – and for rear-wheel and all-wheel drive versions – with just minor modifications. All models share the weight advantages of the aluminium-steel construction with substantially improved rigidity, supplemented by local reinforcement elements in the soft-top 911s. The idea behind this concept of intelligent lightweight design is to use the right material at the right place. Despite slightly increased vehicle dimensions, the sum of all design measures has led to significantly lower weights compared to previous models: The new 911 Carrera cars with all-wheel drive are up to 65 kg lighter than previous models.

911 Cabriolet: unique fabric roof hood with coupé properties

An eye-catching feature of the soft-top all-wheel drive 911 cars is the panel bow top – a new development by Porsche. This innovative technology has succeeded in creating a previously unattainable coupé-like roof arch of the soft top when it is up, and this leads to aerodynamic advantages as well. In addition, the weight of the entire top nearly matches that of the previous model, despite being longer and offering significantly improved comfort. The hood can be opened or closed in about 13 seconds – up to a speed of 50 km/h as in the previous models. It is operated by a button on the centre console or from outside by RF remote control.

When the hood is up, occupants enjoy climate and noise comfort that approaches that of the Coupés more than ever. There is an insulation layer under the entire surface of the exterior fabric. The panel bows, which are made of magnesium, are covered on the inside by form-stable roofliner trim pieces which convey a pleasant feeling in the interior space. The side panels are also fully covered with a fabric liner, so that none of the mechanical parts are visible when the top is up. Head room is also similar to that of the Coupé interior.

Another innovation in all soft-top 911 Carrera cars is the integrated and electrically deployed wind deflector. Installing and removing it are now a thing of the past.

Interior and features

More refined driving

The interior of the new all-wheel drive 911 cars that is making its appearance is based on the new generation concept. The central design element is the centre console that rises towards the front. It provides excellent ergonomics that integrate both the driver and front passenger. The operating concept permits uncomplicated and intuitive control of key vehicle functions.

The dashboard has a classic layout. The typical five round instruments of the 911 provide all key information on the 911's operating status. On the 4.8-inch high-resolution TFT colour monitor in the instrument cluster to the right of the central tachometer, a comprehensive list of configurable display options are provided: all-wheel drive, vehicle status, audio, telephone, navigation, map display, trip computer and tyre pressure indicator. In conjunction with the optional Sport Chrono Package, users can call up the G-Force display which graphically illustrates the longitudinal and transverse acceleration on the multifunctional display. In vehicles with a manual transmission, a shifting assistant display is also implemented for performance-optimised driving. The standard running lights assistant can automatically switch from the daytime running lights to dipped beam under darkening conditions or during tunnel passages.

Sport seats for dynamic driving and long distances

The interiors of all 911 Carrera cars are equipped with a standard sport seating system with electric backrest angle and seat height adjustment. The optional sport seats with electric 14-way adjustment add electric adjustment of the longitudinal position, seat cushion angle and depth and four-way adjustment of the lumbar support. Another option is adaptive sport seats plus with 18-way adjustment and prominent side supports; the side supports are adjusted on the seat surface and backrest for optimal lateral support in every driving situation. Both versions include the memory package and electric steering column adjustment. Seat ventilation is also available for all sport seat versions in conjunction with the optional seat heating.

New: lightweight sport shell seats made of fibre-reinforced polymer

For 911 Carrera drivers with very sporty performance standards, Porsche offers new especially lightweight sport shell seats with folding backrests, integrated thorax airbag and manual longitudinal adjustment. The seat shell is made of glass-reinforced and carbon-reinforced polymer with a visible carbon surface. A special feature is the pivot point of the backrests, which lies high in the side supports. The lateral support that is characteristic of race car shell seats is thereby also assured in the pelvic area. However, the folding backrest still enables convenient loading of the luggage compartment in the rear.

Sound Package Plus with nine loudspeakers as standard

Acoustic information and entertainment are provided by the standard CDR-31 audio system; when combined with the Sound Package Plus it incorporates nine loudspeakers. The main feature of this audio system generation is a seven-inch TFT display with touchscreen. With the exception of the loudness setting, all other functions of the CDR-31 can be selected by touching the colour display. However, nearly all functions can also be operated in classic fashion by the rotary push switch on the right side – this is simply a matter of user preference. The standard universal audio interface offers the option of connecting an external audio source over the AUX interface.

Options: Top sound systems from Burmester and BOSE

Porsche developed its top sound system – specifically designed for the 911 Carrera – in cooperation with Burmester. Utilising its experience from systems of the Panamera and Cayenne, which have received numerous awards, this new system realises levels of overall audio power and sound quality never before attained in the sports car segment. The system has twelve individually controlled loudspeakers including what is known as an active “body-in-white” subwoofer with 140 mm cone diameter and integrated 300 Watt Class D power amplifier; the system has 12 amplifier channels with a total output power of over 800 Watt.

The BOSE Surround Sound System is also still being offered as an option. It also has twelve loudspeakers including a body-in-white integrated 100-Watt active subwoofer with a Class-D power amplifier and 130 mm cone diameter which delivers an impressive sound experience. This system offers a total audio power of 445 Watt.

Patented subwoofer concept: less weight, lots of effect

The highlight of the optional sound systems from BOSE and Burmester is the patented body-in-white subwoofer solution. In this development, the previous separate subwoofer boxes are replaced, and the body-in-white body structures of the cowl frame are used. This solution saves four to five kg in system weight, reduces the required installation space and at the same time improves bass performance.

Upon request: Porsche Dynamic Light System with extended functions

The Porsche Dynamic Light System (PDLS) provides for even better illumination of the roadway at night. It includes a dynamic cornering light and speed-dependent running light control, which adjusts the lighting pattern and light intensity as a function of the driving speed for better visibility. The dynamic cornering lights are activated starting at a speed of about four km/h. The lighting control unit swivels the main headlamp into the bend by up to 15 degrees as a function of steering angle and vehicle speed. In conjunction with the optional Sport Chrono Package, the dynamic cornering light now adapts quicker to the driver's steering inputs. The cornering light remains active even while the main beam is turned on, and this improves visibility.

An "inclement weather" light is still integrated, which is switched on when the rear fog lights are activated. It reduces glare in poor weather conditions, such as thick fog, by swivelling the left headlamp eight degrees towards the outside, and producing a horizontal light distribution. In addition, the headlight power is reduced to 33 Watt, and the cornering lights are deactivated.

Option: Park Assistant – front and rear – with Top View

Along with the rear Park Assistant, which is standard in the 911 Carrera Cabriolets and has an acoustic distance warning, there is now a Park Assistant front and rear with Top-View that is optional in the 911 Carrera models. Besides an acoustic warning, it also has a visual display of the distance in front of and in back of the vehicle via a colour display of the immediate surroundings in a view with vehicle outlines in top view in the central monitor.

Driving without a key: Porsche Entry & Drive

The optional Porsche Entry & Drive system lets drivers conveniently unlock or lock the doors and the boot as well as start the vehicle's engine. As soon as the driver touches the door handle, Porsche Entry & Drive queries an access code that is stored in the electronic key. If it is correct, the door is unlocked. Similarly, the boot lid is also unlocked when the driver approaches a sensor mounted at the front end, and it can then be opened. The vehicle engine is started or stopped by the user control in the electric ignition switch. All that is required to lock the doors is to press the lock button located in the door handles or the button on the remote key. To lock the vehicle from the outside, the key must be outside the vehicle and within receiving range. Otherwise, the doors might not be locked.

Porsche launches a special Gran Turismo series

Exclusive and elegant: the Panamera Platinum Edition

Starting at the end of November Porsche is offering a particularly exclusive and elegant version of the Panamera: the Platinum Edition. The elegant special edition Panamera, available as Panamera 4 and Panamera Diesel, stands out thanks to their subtle, independent design features in platinum silver metallic combined with expanded standard features and exclusive details.

The lower half of the side view mirrors, the air-inlet grille lamellas, the air vent grille on the side designed specifically for the turbo model, the trim on the trunk lid and the rear diffuser are all in platinum silver metallic. The interplay with one of the Edition's five. Solid exterior colours are offered in black or white as well as the options of exterior finish colours results in an especially harmonious and elegant appearance metallic basalt black, metallic carbon grey and metallic mahogany lacquer finishes. The black glossy finish used for the side window strips creates a convincing overall exterior appearance.

Delivering considerable benefits to the customer, many frequently requested extras are now coming as standard equipment with the Panamera Platinum Edition. These include the Bi-Xenon main headlights and front parking assist. The automatically dimming interior and exterior mirrors reduce glare from traffic behind you, and the 19-inch Panamera Turbo alloy wheels with the red, black and gold Porsche crest highlight the sporty elegance of the vehicle.

New bi-color combination exclusive to the Panamera Platinum Edition

The new black/luxor beige bi-colour combination also creates an especially sumptuous interior ambience. Exclusively for the Panamera Platinum Edition a part-leather interior package comes as standard, with a full leather package optionally available. Compared to the previous bi-colour detailing, the new bi-colour combination patterns have been revised. Thus, along with the upper part of the dashboard and the door trim, the footwell and the back of the front seats as well as the loadspace cover are in black, while the remainder of the interior is in luxor beige. Other highlights include the standard sport design steering wheel and the distinctive Porsche crest on the front and rear headrests as well as the insignia "Platinum Edition" on the front door trim strips.

In addition, Power Steering Plus as well as front seat heating come as standard. The standard Porsche Communication Management (PCM) with navigation module keeps Platinum Edition drivers on track. With a high-resolution 7-inch TFT touchscreen and eleven loudspeakers with a combined output of 235 watts, the Porsche Communication Management with built-in navigation unit not only gives assistance with dynamic route guidance, but also ensures optimal audio sound in the vehicle.

Specifications Porsche Cayman*

Body:	Two seat Coupé; lightweight body in aluminium-steel construction with doors, boot and bonnet lids made of aluminium; two-stage driver and front passenger airbags; side and head airbags for driver and front passenger.	
Aerodynamics:	Drag coefficient C_d:	0.30
	Frontal area A:	2.00 m^2
	C_d x A:	0.6
Engine:	Water-cooled flat-six engine; aluminium engine block and cylinder heads; four overhead camshafts, four valves per cylinder, variable inlet valve timing and lift (VarioCam Plus); hydraulic valve lifter; direct petrol injection; one three-way catalytic converter per cylinder bank, each with two oxygen sensors; engine oil 10.1 litres; electronic ignition with solid-state ignition distribution (six active ignition modules); thermal management for coolant circulation; auto start/stop function.	
Bore:	89 mm	
Stroke:	72.5 mm	
Displacement:	2,706 cm^3	
Compression ratio:	12.5:1	
Engine power:	202 kW (275 hp) at 7,400/min	
Max. torque:	290 Nm at 4,500/min – 6,500/min	
Power output per litre:	74.6 kW/l (101.6 hp/l)	
Maximum revs:	7,800/min	
Fuel type:	Super Plus	
Electrical system:	12 Volt; alternator 2,100 W; battery 70 Ah, 450 A; electrical system recuperation.	

* Specifications may vary according to markets

Power transmission: Engine and transmission bolted together to form a single drive unit; rear wheel drive; six-speed manual transmission; optional seven-speed Doppelkupplungsgetriebe (PDK)

Gear ratios	Manual transmission	PDK transmission
1st gear	3.67	3.91
2nd gear	2.05	2.29
3rd gear	1.46	1.65
4th gear	1.13	1.30
5th gear	0.97	1.08
6th gear	0.84	0.88
7th gear	–	0.62
Reverse	3.33	3.55
Final drive ratio	3.89	3.25
Clutch diameter	240 mm	202 mm /153 mm

Suspension: Front axle: Strut suspension (MacPherson type, Porsche optimised) with wheel-guiding strut and wheels independently mounted on transverse and longitudinal control arms; twin-tube gas-pressure dampers; electro-mechanical power steering.

Rear axle: Wheels independently guided on transverse control arms with longitudinal control arms, tie rods and suspension struts (McPherson type, optimised to Porsche requirements); cylindrical coil springs with internal dampers; anti-roll bar.

Brake system: Dual-circuit brake system with separate circuits for front and rear axles; Porsche Stability Management (PSM); tandem vacuum brake booster; brake assistant; electric duo-servo parking brake; auto-hold function.

Brakes:	Front axle: Four-piston aluminium monobloc brake callipers, perforated and internally ventilated brake discs with 315 mm diameter and 28 mm thickness.			
	Rear axle: Four-piston aluminium monobloc brake callipers, perforated and internally ventilated brake discs with 299 mm diameter and 20 mm thickness.			
Wheels and tyres:	front	8 J x 18	with	235/45 ZR 18
	rear	9 J x 18	with	265/45 ZR 18
Weights:	Kerb weight, DIN			1,310 (1,340) kg
	Permissible gross weight			1,655 (1,685) kg
Dimensions:	Length			4,380 mm
	Width			1,801 mm
	Height			1,294 mm
	Wheelbase			2,475 mm
	Track width		front	1,526 mm
			rear	1,536 mm
	Luggage comp. capacity		front	150 l
			rear	162 l
	Fuel tank capacity			64 l

Performance:	Top speed	266 (264) km/h
	Acceleration:	
	0 – 100 km/h	5.7 (5.6) s
	(with Sport Plus and PDK*	5.4 s)
	0 – 200 km/h	21.0 (20.9) s
	(with Sport Plus and PDK*	20.6 s)
Consumption (NEDC):	Urban	11.4 (10.6) l/100 km
	Extra-urban	6.3 (5.9) l/100 km
	Combined	8.2 (7.7) l/100 km
CO_2 emissions:		192 (180) g/km
Emissions class:		Euro 5

Values in brackets refer to vehicles with PDK transmission

*In conjunction with the optional Sport Chrono package.

Specifications Porsche Cayman S*

Body:	Two seat Coupé; lightweight body in aluminium-steel construction with doors, boot and bonnet lids made of aluminium; two-stage driver and front passenger airbags; side and head airbags for driver and front passenger.	
Aerodynamics:	Drag coefficient C_d:	0.30
	Frontal area A:	2.00 m^2
	C_d x A:	0.6
Engine:	Water-cooled flat-six engine; aluminium engine block and cylinder heads; four overhead camshafts, four valves per cylinder, variable inlet valve timing and lift (VarioCam Plus); hydraulic valve lifter; direct petrol injection; one three-way catalytic converter per cylinder bank, each with two oxygen sensors; engine oil 10.1 litres; electronic ignition with solid-state ignition distribution (six active ignition modules); thermal management for coolant circulation; auto start/stop function.	
Bore:	97 mm	
Stroke:	77.5 mm	
Displacement:	3,436 cm^3	
Compression ratio:	12.5:1	
Engine power:	239 kW (325 hp) at 7,400/min	
Max. torque:	370 Nm at 4,500/min – 5,800/min	
Power output per litre:	69.6 kW/l (94.6 hp/l)	
Maximum revs:	7,800/min	
Fuel type:	Super Plus	
Electrical system:	12 Volt; alternator 2,100 W; battery 70 Ah, 450 A; electrical system recuperation.	

* Specifications may vary according to markets

Power transmission: Engine and transmission bolted together to form a single drive unit; rear wheel drive; six-speed manual transmission; optional seven-speed Doppelkupplungsgetriebe (PDK)

Gear ratios	Manual transmission	PDK transmission
1st gear	3.31	3.91
2nd gear	1.95	2.29
3rd gear	1.41	1.65
4th gear	1.13	1.30
5th gear	0.95	1.08
6th gear	0.81	0.88
7th gear	–	0.62
Reverse	3.00	3.55
Final drive ratio	3.89	3.25
Clutch diameter	240 mm	202 mm / 153 mm

Suspension: Front axle: Strut suspension (MacPherson type, Porsche optimised) with wheel-guiding strut and wheels independently mounted on transverse and longitudinal control arms; twin-tube gas-pressure dampers; electro-mechanical power steering.

Rear axle: Wheels independently guided on transverse control arms with longitudinal control arms, tie rods and suspension struts (McPherson type, optimised to Porsche requirements); cylindrical coil springs with internal dampers; anti-roll bar.

Brake system: Dual-circuit brake system with separate circuits for front and rear axles; Porsche Stability Management (PSM); tandem vacuum brake booster; brake assistant; electric duo-servo parking brake; auto-hold function.

Brakes:

Front axle: Four-piston aluminium monobloc brake callipers, perforated and internally ventilated brake discs with 330 mm diameter and 28 mm thickness.

Rear axle: Four-piston aluminium monobloc brake callipers, perforated and internally ventilated brake discs with 299 mm diameter and 20 mm thickness.

Wheels and tyres:				
	front	8 J x 19	with	235/40 ZR 19
	rear	9.5 J x 19	with	265/40 ZR 19

Weights:		
	Kerb weight, DIN	1,320 (1,350) kg
	Permissible gross weight	1,665 (1,695) kg

Dimensions:			
	Length		4,380 mm
	Width		1,801 mm
	Height		1,295 mm
	Wheelbase		2,475 mm
	Track width	front	1,526 mm
		rear	1,540 mm
	Luggage comp. capacity	front	150 l
		rear	162 l
	Fuel tank capacity		64 l

Performance:	Top speed	283 (281) km/h
	Acceleration:	
	0 – 100 km/h	5.0 (4.9) s
	(with Sport Plus and PDK*	4.7 s)
	0 – 200 km/h	17.2 (17.1) s
	(with Sport Plus and PDK*	16.9 s)
Consumption (NEDC):	Urban	12.2 (11.2) l/100 km
	Extra-urban	6.9 (6.2) l/100 km
	Combined	8.8 (8.0) l/100 km
CO_2 emissions:		206 (188) g/km
Emissions class:		Euro 5

Values in brackets refer to vehicles with PDK transmission

*In conjunction with the optional Sport Chrono package.

Specifications Porsche 911 Carrera 4 Coupé*

Body:	Two-plus-two seat Coupé; lightweight body in intelligent aluminium-steel construction with wings, doors, boot and bonnet lids made of aluminium; two-stage driver and front passenger airbags; side and head airbags for driver and front passenger.	
Aerodynamics:	Drag coefficient C_d:	0.30
	Frontal area A:	2.05 m^2
	C_d x A:	0.62
Engine:	Water-cooled flat-six engine; aluminium engine block and cylinder heads; four overhead camshafts, four valves per cylinder, variable inlet valve timing and lift (VarioCam Plus); hydraulic valve lifter; direct petrol injection; one three-way catalytic converter per cylinder bank, each with two oxygen sensors; engine oil 10.0 litres; electronic ignition with solid-state ignition distribution (six active ignition coils); thermal management for engine and gearbox coolant circulation; auto start/stop function.	
Bore:	97 mm	
Stroke:	77.5 mm	
Displacement:	3,436 cm^3	
Compression ratio:	12.5:1	
Engine power:	257 kW (350 hp) at 7.400/min	
Max. torque:	390 Nm at 5,600/min	
Power output per litre:	74.8 kW/l (101.9 PS/l)	
Maximum revs:	7,800/min	
Fuel type:	Super Plus	
Electrical system:	12 Volt; alternator 2,100 W; battery 70 Ah, 450 A; electrical system recuperation.	

* Specifications may vary according to markets

Power transmission: Engine and transmission bolted into combined drive unit; active all-wheel drive with electronically controlled, map-controlled multi-plate clutch (PTM); seven-speed manual transmission, optional seven-speed Doppelkupplungsgetriebe (PDK).

Gear ratios	Manual transmission	PDK transmission
1st gear	3.91	3.91
2nd gear	2.29	2.29
3rd gear	1.55	1.65
4th gear	1.30	1.30
5th gear	1.08	1.08
6th gear	0.88	0.88
7th gear	0.71	0.62
Reverse	3.55	3.55
Final drive ratio, rr. axle	3.44	3.44
Final drive ratio, fr. axle	3.33	3.33
Clutch diameter	240 mm	202 mm/153 mm

Suspension: Front axle: strut suspension (MacPherson type, Porsche optimised) with wheels independently suspended by transverse links, longitudinal links and struts; cylindrical coil springs with internal dampers; electromechanical power steering.

Rear axle: multi-link suspension with wheels independently suspended on five links; cylindrical coil springs with coaxial internal dampers.

Brake system: Dual-circuit brake system with separate circuits for front and rear axles; Porsche Stability Management (PSM); vacuum brake booster; brake assist; electric duo-servo parking brake; auto-hold function.

Brakes:

Front axle: four-piston alum. monobloc brake callipers, perforated and internally ventilated brake discs with 330 mm diameter and 28 mm thickness.

Rear axle: four-piston alum. monobloc brake callipers, perforated and internally ventilated brake discs with 330 mm diameter and 28 mm thickness.

Wheels and tyres:

Front	8,5 J x 19	with	235/40 ZR 19
Rear	11 J x 19	with	295/35 ZR 19

Weights:

Kerb weight (DIN)	1,430 (1,450) kg
Permissible gross weight	1,845 (1,865) kg

Dimensions:

Length		4,491 mm
Width		1,852 mm
Height		1,304 mm
Wheelbase		2,450 mm
Track widths	front	1,532 mm
	rear	1,560 mm
Luggage comp. capacity	front	125 l
	rear	260 l
Fuel tank capacity		68 l

Performance:	Top speed	285 (283) km/h
	Acceleration:	
	0 – 100 km/h	4.9 (4.7) s
	(with Sport Plus and PDK*	4.5 s)
	0 – 200 km/h	16.7 (16.4) s
	(with Sport Plus and PDK*	16.1 s)
Consumption (NEDC):	Urban	13.2 (11.7) litre/100 km
	Extra-urban	7.1 (6.8) litre/100 km
	Combined	9.3 (8.6) litre/100 km
CO_2 emissions:		219 (203) g/km
Emissions class:		Euro 5

Values in brackets refer to vehicles with PDK transmission

* In conjunction with the optional Sport Chrono package

Specifications Porsche 911 Carrera 4 Cabriolet*

Body:	Two-plus-two seat Cabriolet; lightweight body in intelligent aluminium-steel construction with wings, doors, boot and bonnet lids made of aluminium; two-stage driver and front passenger airbags; side and head airbags for driver and front passenger.	
Aerodynamics:	Drag coefficient C_d:	0.31
	Frontal area A:	2.05 m^2
	C_d x A:	0.64
Engine:	Water-cooled flat-six engine; aluminium engine block and cylinder heads; four overhead camshafts, four valves per cylinder, variable inlet valve timing and lift (VarioCam Plus); hydraulic valve lifter; direct petrol injection; one three-way catalytic converter per cylinder bank, each with two oxygen sensors; engine oil 10.1 litres; electronic ignition with solid-state ignition distribution (six active ignition modules); thermal management for coolant circulation; auto start/stop function.	
Bore:	97 mm	
Stroke:	77.5 mm	
Displacement:	3,436 cm^3	
Compression ratio:	12.5:1	
Engine power:	257 kW (350 hp) at 7,400/min	
Max. torque:	390 Nm at 5,600/min	
Power output per litre:	74.8 kW/l (101.9 hp/l)	
Maximum revs:	7,800/min	
Fuel type:	Super Plus	
Electrical system:	12 Volt; alternator 2,100 W; battery 70 Ah, 450 A; electrical system recuperation.	

* Specifications may vary according to markets

Power transmission: Engine and transmission bolted to form one drive unit; active all-wheel drive with electronically controlled, map-controlled multi-plate clutch (PTM); seven-speed manual transmission, optional seven-speed Doppelkupplungsgetriebe (PDK).

Gear ratios	Manual transmission	PDK transmission
1st gear	3.91	3.91
2nd gear	2.29	2.29
3rd gear	1.55	1.65
4th gear	1.30	1.30
5th gear	1.08	1.08
6th gear	0.88	0.88
7th gear	0.71	0.62
Reverse	3.55	3.55
Final drive ratio, rr. axle	3.44	3.44
Final drive ratio, fr. axle	3.33	3.33
Clutch diameter	240 mm	202 mm/153 mm

Suspension: Front axle: strut suspension (MacPherson type, Porsche optimised) with wheels independently suspended by transverse links, longitudinal links and struts; cylindrical coil springs with internal dampers; electromechanical power steering.

Rear axle: multi-link suspension with wheels independently suspended on five links; cylindrical coil springs with coaxial, internal dampers.

Brake system: Dual-circuit brake system with separate circuits for front and rear axles; Porsche Stability Management (PSM); vacuum brake booster; brake assist; electric duo-servo parking brake; auto-hold function.

Brakes:

Front axle: four-piston alum. monobloc brake callipers, perforated and internally ventilated brake discs with 330 mm diameter and 28 mm thickness.

Rear axle: four-piston alum. monobloc brake callipers, perforated and internally ventilated brake discs with 330 mm diameter and 28 mm thickness.

Wheels and tyres:

Front	8.5 J x 19	with	235/40 ZR 19
Rear	11 J x 19	with	295/35 ZR 19

Weights:

Kerb weight (DIN)	1,500 (1,520) kg
Permissible gross weight	1,900 (1,920) kg

Dimensions:

Length		4,491 mm
Width		1,852 mm
Height		1,300 mm
Wheelbase		2,450 mm
Track widths	front	1,532 mm
	rear	1,560 mm
Luggage comp. capacity	front	125 l
	rear	160 l
Fuel tank capacity		68 l

Performance:	Top speed	282 (280) km/h
	Acceleration:	
	0 – 100 km/h	5.1 (4.9) s
	(with Sport Plus and PDK*	4.7 s)
	0 – 200 km/h	17.6 (17.3) s
	(with Sport Plus and PDK*	17.0 s)
Consumption (NEDC):	Urban	13.5 (11.9) l/100 km
	Extra-urban	7.2 (6.9) l/100 km
	Combined	9.5 (8.7) l/100 km
CO_2 emissions:		224 (205) g/km
Emissions class:		Euro 5

Values in brackets refer to vehicles with PDK transmission

* In conjunction with the optional Sport Chrono package

Specifications Porsche 911 Carrera 4S Coupé*

Body:	Two-plus-two seat Coupé; lightweight body in intelligent aluminium-steel construction with wings, doors, boot and bonnet lids made of aluminium; two-stage driver and front passenger airbags; side and head airbags for driver and front passenger.	
Aerodynamics:	Drag coefficient C_d:	0.30
	Frontal area A:	2.04 m^2
	C_d x A:	0.61
Engine:	Water-cooled flat-six engine; aluminium engine block and cylinder heads; four overhead camshafts, four valves per cylinder, variable inlet valve timing and lift (VarioCam Plus); hydraulic valve lifter; direct petrol injection; one three-way catalytic converter per cylinder bank, each with two oxygen sensors; engine oil 10.1 litres; electronic ignition with solid-state ignition distribution (six active ignition modules); thermal management for coolant circulation; auto start/stop function.	
Bore:	102 mm	
Stroke:	77.5 mm	
Displacement:	3,800 cm^3	
Compression ratio:	12.5:1	
Engine power:	294 kW (400 hp) at 7,400/min	
Max. torque:	440 Nm at 5,600/min	
Power output per litre:	77.4 kW/l (105.3 hp/l)	
Maximum revs:	7,800/min	
Fuel type:	Super Plus	
Electrical system:	12 Volt; alternator 2,100 W; battery 70 Ah, 450 A; electrical system recuperation.	

* Specifications may vary according to markets

Power transmission: Engine and transmission bolted into combined drive unit; active all-wheel drive with electronically controlled, map-controlled multi-plate clutch (PTM); seven-speed manual transmission with mechanically locking rear differential and Porsche Torque Vectoring (PTV); optional seven-speed Doppelkupplungsgetriebe (PDK) with controlled rear locking differential and PTV Plus.

Gear ratios	Manual transmission	PDK transmission
1st gear	3.91	3.91
2nd gear	2.29	2.29
3rd gear	1.55	1.65
4th gear	1.30	1.30
5th gear	1.08	1.08
6th gear	0.88	0.88
7th gear	0.71	0.62
Reverse	3.55	3.55
Final drive ratio, rr. axle	3.44	3.44
Final drive ratio, fr. axle	3.33	3.33
Clutch diameter	240 mm	202 mm/153 mm

Suspension: Front axle: strut suspension (MacPherson type, Porsche optimised) with wheels independently suspended by transverse links, longitudinal links and struts; cylindrical coil springs with internal dampers; electromechanical power steering.

Rear axle: multi-link suspension with wheels independently suspended on five links; cylindrical coil springs with coaxial internal dampers.

Porsche Active Suspension Management (PASM) with electronically controlled dampers; two manually selectable maps.

Brake system: Dual-circuit brake system with separate circuits for front and rear axles; Porsche Stability Management (PSM); vacuum brake booster; brake assist; electric duo-servo parking brake; auto-hold function.

Brakes: Front axle: six-piston alum. monobloc brake callipers, perforated and internally ventilated brake discs with 340 mm diameter and 34 mm thickness.

Rear axle: four-piston alum. monobloc brake callipers, perforated and internally ventilated brake discs with 330 mm diameter and 28 mm thickness.

Wheels and tyres:

Front	8.5 J x 20	with	245/35 ZR 20
Rear	11 J x 20	with	305/30 ZR 20

Weights:

Kerb weight (DIN)	1,445 (1,465) kg
Permissible gross weight	1,875 (1.895) kg

Dimensions:

Length		4,491 mm
Width		1,852 mm
Height		1,296 mm
Wheelbase		2,450 mm
Track widths	front	1,538 mm
	rear	1,552 mm
Luggage comp. capacity	front	125 litre
	rear	260 litre
Fuel tank capacity		68 litre

Performance:	Top speed	299 (297) km/h
	Acceleration:	
	0 – 100 km/h	4.5 (4.3) s
	(with Sport Plus and PDK*	4.1 s)
	0 – 200 km/h	14.9 (14.4) s
	(with Sport Plus and PDK*	14.1 s)
Consumption (NEDC):	Urban	14.2 (12.7) litre/100 km
	Extra-urban	7.5 (7.0) litre/100 km
	Combined	9.9 (9.1) litre/100 km
CO_2 emissions:		234 (215) g/km
Emissions class:		Euro 5

Values in brackets refer to vehicles with PDK transmission

* In conjunction with the optional Sport Chrono package

Specifications Porsche 911 Carrera 4S Cabriolet*

Body:	Two-plus-two seat Cabriolet; lightweight body in intelligent aluminium-steel construction with wings, doors, boot and bonnet lids made of aluminium; two-stage driver and front passenger airbags; side and head airbags for driver and front passenger.	
Aerodynamics:	Drag coefficient C_d:	0.31
	Frontal area A:	2.05 m^2
	C_d x A:	0.64
Engine:	Water-cooled flat-six engine; aluminium engine block and cylinder heads; four overhead camshafts, four valves per cylinder, variable inlet valve timing and lift (VarioCam Plus); hydraulic valve lifter; direct petrol injection; one three-way catalytic converter per cylinder bank, each with two oxygen sensors; engine oil 10.1 litres; electronic ignition with solid-state ignition distribution (six active ignition modules); thermal management for coolant circulation; auto start/stop function.	
Bore:	102 mm	
Stroke:	77.5 mm	
Displacement:	3,800 cm^3	
Compression ratio:	12.5:1	
Engine power:	294 kW (400 hp) at 7,400/min	
Max. torque:	440 Nm at 5,600/min	
Power output per litre:	77.4 kW/l (105.3 hp/l)	
Maximum revs:	7,800/min	
Fuel type:	Super Plus	
Electrical system:	12 Volt; alternator 2,100 W; battery 70 Ah, 450 A; electrical system recuperation.	

* Specifications may vary according to markets

Power transmission: Engine and transmission bolted into combined drive unit; active all-wheel drive with electronically controlled, map-controlled multi-plate clutch (PTM); seven-speed manual transmission; optional seven-speed Doppelkupplungsgetriebe (PDK); Porsche Torque Vectoring (PTV) including mechanically locking rear differential; in conjunction with PDK, PTV Plus including controlled rear differential lock.

Gear ratios	Manual transmission	PDK transmission
1st gear	3.91	3.91
2nd gear	2.29	2.29
3rd gear	1.55	1.65
4th gear	1.30	1.30
5th gear	1.08	1.08
6th gear	0.88	0.88
7th gear	0.71	0.62
Reverse	3.55	3.55
Final drive ratio, rr. axle	3.44	3.44
Final drive ratio, fr. axle	3.33	3.33
Clutch diameter	240 mm	202 mm/153 mm

Suspension: Front axle: strut suspension (MacPherson type, Porsche optimised) with wheels independently suspended by transverse links, longitudinal links and struts; cylindrical coil springs with internal dampers; electromechanical power steering.

Rear axle: multi-link suspension with wheels independently suspended on five links; cylindrical coil springs with coaxial internal dampers.

Porsche Active Suspension Management (PASM) with electronically controlled dampers; two manually selectable damping programmes.

Brake system: Dual-circuit brake system with separate circuits for front and rear axles; Porsche Stability Management (PSM); vacuum brake booster; brake assist; electric duo-servo parking brake; auto-hold function.

Brakes: Front axle: six-piston alum. monobloc brake callipers, perforated and internally ventilated brake discs with 340 mm diameter and 34 mm thickness.

Rear axle: four-piston alum. monobloc brake callipers, perforated and internally ventilated brake discs with 330 mm diameter and 28 mm thickness.

Wheels and tyres:	Front	8.5 J x 20	with	245/35 ZR 20
	Rear	11 J x 20	with	305/30 ZR 20

Weights:	Kerb weight (DIN)		1,515 (1,535) kg
	Permissible gross weight		1,935 (1,955) kg

Dimensions:	Length		4,491 mm
	Width		1,852 mm
	Height		1,294 mm
	Wheelbase		2,450 mm
	Track widths	front	1,538 mm
		rear	1,552 mm
	Luggage comp. capacity	front	125 l
		rear	160 l
	Fuel tank capacity		68 l

Performance:	Top speed	296 (294) km/h
	Acceleration:	
	0 – 100 km/h	4.7 (4.5) s
	(with Sport Plus and PDK*	4.3 s)
	0 – 200 km/h	15.8 (15.3) s
	(with Sport Plus and PDK*	15.0 s)
Consumption (NEDC):	Urban	14.4 (12.9) l/100 km
	Extra-urban	7.6 (7.1) l/100 km
	Combined	10.0 (9.2) l/100 km
CO_2 emissions:		236 (217) g/km
Emissions class:		Euro 5

Values in brackets refer to vehicles with PDK transmission

* In conjunction with the optional Sport Chrono package