



PORSCHE



The 911 all-wheel-drive model range



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Model range

**For every action, there is a reaction.
Good to know that it's the right one.**

A sports car ought to be fast. That's the conventional thinking. It is our belief that a sports car must, first and foremost, be fast to react. Only then can it find the right and immediate answer to the current road condition and your individual driving style. A direct response is required on each straight and in every twist and turn. In other words, a sports car must

have the optimum reaction to each and every action. For whenever one thinks about speed, one must also consider the effects of traction and never disregard the importance of safety.

The 911 all-wheel-drive models put these theories into practice without hesitation. Intelligent all-wheel drive

technologies offer high levels of safety without compromising the car's ability to deliver extraordinary performance. The body is imposing and wide for excellent road holding and driving stability, attributes epitomised by all 911 all-wheel-drive models. The common principle that binds them is what we call Intelligent Performance.



**Rain, sleet, wind.
Perfect conditions for aspiring athletes.**

911 Carrera 4 and 911 Carrera 4S.

What is it that sets the professionals apart? Performance that you can rely on and that is consistent regardless of mood and weather. True professionals rise to any occasion and give their best even when the odds are stacked against them.

The 911 Carrera 4 and the 911 Carrera 4S are two professionals that perform on the road with pinpoint accuracy. The 911 Carrera 4 achieves this with a 3.6-litre horizontally opposed cylinder engine that delivers a power output of 254 kW (345 hp), while the S model is equipped with a 3.8-litre unit

that generates 283 kW (385 hp). The 911 Carrera 4 completes the sprint from 0 to 100 km/h in 5.0 seconds, the 911 Carrera 4S in 4.7 seconds.

This power is transmitted to the road by Porsche Traction Management (PTM), an all-wheel-drive system that seizes the initiative and takes full control of the situation. In conjunction with Porsche Stability Management (PSM), it creates the ideal platform for excellent driving stability and safety as well as outstanding driving dynamics and agility.

Professionals are also distinguished by their commanding presence. The 911 all-wheel-drive models are typified by their particularly imposing body and stance with a wide rear track and broad rear tyres. Another characteristic attribute is the seamless taillight strip and, at the front, the air intake grilles and slats with a titanium-coloured paint finish.

Don't be fooled by their sunny disposition. The 911 all-wheel-drive models are not fairweather sports enthusiasts in any shape or form. They are dedicated, professional performers through and through.

For fuel consumption and CO₂ emissions, please refer to page 75.





**When you're aiming skywards,
you need the reassurance of reliable ground control.**

911 Carrera 4 Cabriolet and 911 Carrera 4S Cabriolet.

There is no better place to experience a sense of total freedom than under a blue sky, breathing in the fresh air and with the sun shining on your face. And there is no more reassuring feeling than having everything under control and being able to react to any situation. The 911 Carrera 4 Cabriolet and the 911 Carrera 4S Cabriolet are open to this way of thinking.

From a technical perspective, both are as focused on performance as the closed-top variants. The 911 Carrera 4 Cabriolet is equipped with a 3.6-litre engine that produces a maximum torque of 390 Nm at 4,400 rpm. The S model has a 3.8-litre

unit that generates its maximum torque of 420 Nm at 4,400 rpm. Excellent road holding is ensured by Porsche Traction Management (PTM) and the mechanically locking rear differential. A safety-enhancing roll-over protection concept provides peace of mind.

The dependable chassis, therefore, is a good starting point and bad weather need not dampen your sense of freedom. The fabric hood of the 911 Carrera 4 Cabriolet models is robust yet lightweight and, like the roof of the Coupé versions, is integral to forming the classic 911 silhouette. At the rear, the design of the Cabriolet models is exactly as you would

expect of an all-wheel-drive 911. The seamless taillight strip is an unmistakable styling feature and the body, track and tyres are sporty and characteristically wide.

In a 911 Carrera 4 Cabriolet, there is no excuse to let the weather hold you back.

For fuel consumption and CO₂ emissions, please refer to page 75.



Hood.

The fabric hood on the Cabriolet models is lightweight and robust. The roof frame is made from a weight-saving construction. The glass rear screen is scratch-resistant and electrically heated to provide excellent rearward visibility. A rain channel on the hood reduces dripping when the doors are opened.

Electrically powered, the hood opens and closes with a concertina action, which ensures excellent protection for the interior lining in all weathers. The process, which is initiated by a button on the centre console, takes approximately 20 seconds and the function remains operable up to a speed of around 50 km/h.

The interior hood lining is made from a heat-insulating and sound-absorbent fabric. Even at high speed, this ensures that you hear almost nothing other than the characteristic sound of your Porsche.

Wind deflector.

Provided as standard, the wind deflector was developed in the wind tunnel for practically draught-free driving and minimal wind noise. It can be detached and folded compactly for easy storage in the luggage compartment.

Hardtop.

A hardtop is available as an option for your 911 Carrera 4 Cabriolet model. It is made from aluminium and is easy to fit. On the inside, it is lined with a sound-absorbent fabric that has been purposefully designed to complement the interior of your sports car.





To achieve peak performance time after time, you need to have one thing: unwavering belief in your principles.

911 Carrera 4 GTS and 911 Carrera 4 GTS Cabriolet.

The 911 all-wheel-drive models combine excellent safety with outstanding driving dynamics. After all, they observe the fundamental principle respected by any Porsche: the principle of performance. With the 911 Carrera 4 GTS models, we take things to a higher level. Whether it's the closed-top Coupé or the open-top Cabriolet, these are the sportiest all-wheel-drive 911 Carrera models that we've ever created.

Both variants are powered by an uprated 3.8-litre flat-six engine with direct fuel injection (DFI) and VarioCam Plus, which generates 300 kW (408 hp) at 7,300 rpm, or 17 kW (23 hp) more than the all-wheel-drive S models. A top speed of 302 km/h is achieved and the

911 Carrera 4 GTS Coupé completes the 0 to 100 km/h sprint in 4.6 seconds, the Cabriolet in 4.8 seconds.

How do they transmit this power to the road? Directly and, for excellent traction and enhanced dynamic performance, with Porsche Traction Management (PTM), Porsche Stability Management (PSM) and Porsche Active Suspension Management (PASM) including a ride height reduction of 10 mm. The 911 Carrera 4 GTS models always remain true to their principles, and the sports exhaust system fitted as standard gives them an outlet to be heard.

Distinguishing exterior features of the 911 Carrera 4 GTS models include the

dynamically accentuated cooling air intakes in the front apron and the additional spoiler lip painted in black, as well as the wide rear end and rear track. The most significant, however, are the seamless taillight strip and the 'Carrera 4 GTS' logo.

The 911 Carrera 4 GTS models combine excellent precision with top-class traction for uncompromising driving dynamics and performance levels that you would otherwise expect to find only on the racetrack. The principle is simple, but incredibly effective.

For fuel consumption and CO₂ emissions, please refer to page 77.

**Behind glass is an ideal place to keep cherished memories.
Or create some new ones.**

911 Targa 4 and 911 Targa 4S.

At the IAA Frankfurt Motor Show in 1965, Porsche unveiled the first "safety cabriolet" of its kind – the Targa. Even then, it was clear that style and dynamics were not mutually exclusive from safety. They are part of the same cohesive whole, a particularly successful one in our opinion. What's changed since then? Not much, at least as far as the principle is concerned, except perhaps that the 911 Targa models are now even more comfortable and exhilarating to drive than ever before.

Closed or open? The electrically operated glass roof meets your expectations with

millimetre precision. The unit is fully integrated into the bodywork, which ensures a high level of body rigidity and the distinctive 911 silhouette is faithfully preserved. The roofline is further accentuated by the continuous aluminium trim strip, which arcs from the A-pillar to the characteristically pointed rear side windows.

The all-wheel-drive technologies in the 911 Targa 4 unite traction and safety with agility and dynamic performance.

To do this requires a formidable source of power. The 3.6-litre engine in the 911 Targa 4 generates 254 kW (345 hp)

at 6,500 rpm, while the 3.8-litre variant in the S model produces 263 kW (355 hp) at the same rpm. The force is immediate. The 911 Targa 4 achieves 0 to 100 km/h in 5.2 seconds, the 911 Targa 4S in 4.9 seconds.

The 911 Targa has captured some wonderful memories since 1965. Now it's looking forward to creating some new ones with you.

For fuel consumption and CO₂ emissions, please refer to page 79.



Roof concept.

A glass surround without a feeling of confinement. An open roof that still provides shelter. The glass roof of the 911 Targa 4 models gives you freedom of choice, whatever the speed. As soon as you operate the switch in the centre console, the glass roof lowers and can be retracted to any position that you prefer. The automatically extending wind

deflector reduces wind turbulence and noise, enabling you to keep the roof down on long journeys even in damp or cold conditions.

The glass roof is made from tinted laminated safety glass. In conjunction with the electrically operated roll-up blind, dual protection against strong sunlight and cold temperatures is achieved.

The glass rear screen is hinged to make it easier to stow luggage in the rear compartment. The screen can be released either from inside the passenger compartment or by use of the key remote. An electric soft closing function facilitates closing.

In short, the 911 Targa 4 models unite dynamic performance with extraordinary functionality and a timeless design.

For us, this is not a contradiction, but the result of a simple principle: Intelligent Performance.



Drive

Technical cause. Emotive effect.

Let us begin by describing the effect. The driving experience in the all-wheel-drive models is characterised by high performance and a direct response. The cause, on the other hand, can be attributed to a series of ingenious technical solutions. At the heart of it all is the engine. The

all-wheel-drive base models are equipped with a 3.6-litre horizontally opposed cylinder engine offering 254 kW (345 hp), while the 3.8-litre unit in the all-wheel-drive S models develops 283 kW (385 hp) and the updated 3.8-litre variant in the 911 Carrera 4 GTS models produces an

even more impressive 300 kW (408 hp). There is then the use of an intelligent lightweight construction and efficiency-enhancing technologies such as DFI and VarioCam Plus.

For fuel consumption and CO₂ emissions, please refer to pages 75-79.



Direct fuel injection (DFI).

Direct fuel injection (DFI) is fitted as standard. With millisecond precision, DFI injects fuel directly into the combustion chamber by means of electromagnetically actuated injection valves. The spray and cone angles have been optimised for torque, power output, fuel consumption and emissions, thus ensuring homogeneous distribution of the air/fuel mixture and, consequently, efficient combustion.

In the direct injection system, the EMS SDI 3.1 engine management system adjusts the injection timing individually for each cylinder and the injection quantity for each cylinder bank. This optimises the combustion process and therefore fuel economy. A hot-film air mass meter takes care of the airflow, so that the combustion chambers contain exactly the right mixture at all times.

For faster heating of the catalytic converters after a cold start and for greater torque in the upper load range, dual injection is implemented at engine speeds of up to 3,200 rpm and triple injection up to 2,500 rpm. The required quantity of fuel is distributed to two or three successive injection processes per cycle.

DFI improves the internal cooling of the combustion chamber by forming the mixture directly in the cylinder. This has made it possible to increase compression (12.5:1), resulting in more engine power and even greater efficiency.

VarioCam Plus.

VarioCam Plus is a variable valve timing system on the inlet side which also features two-stage valve lift. This helps to deliver excellent smooth-running performance and comparatively low fuel consumption and emissions, as well as greater power and torque.

The timing of each valve is steplessly and electrohydraulically controlled by means of a rotary vane adjuster.

This two-in-one engine concept seamlessly adapts in response to driver input. The result is instant acceleration and extremely smooth running.

Lightweight design.

The benefits of a light-alloy engine are reduced weight and lower fuel consumption. The intelligent engine design achieves further weight savings in specific areas. A key example is the complete integration of the camshaft bearing system into the cylinder heads. Fuel economy is additionally improved by consistently low levels of engine friction and the effective design of the oil supply system.

Integrated dry-sump lubrication.

Integrated dry-sump lubrication ensures a reliable supply of oil even when a sporty driving style is adopted. It also has additional cooling functions.

The oil tank is located in the engine, thereby eliminating the need for an external oil tank, which saves both space and weight. To reduce power loss and increase efficiency, an electronically controlled oil pump supplies the lubricating points inside the engine as and when required. This results in an optimised and on-demand supply of oil for comparatively low fuel consumption and exhaust emissions.



For fuel consumption and CO₂ emissions, please refer to pages 75-79.



Intake manifold.

The 911 Carrera 4 and 911 Targa 4 models are equipped with a two-stage resonance intake system, which takes engine speed into consideration and increases the intake volume by exploiting the fact that air oscillates as it passes through the intake manifold. This produces

higher low-end torque and a flatter torque curve.

The entire intake system is made from lightweight plastic. In the 3.8-litre engine of the S models, the resonator volume of the air filter housing varies with engine speed to bring added character to the

engine sound, which becomes much more powerful at higher rpm.

The 911 Carrera 4 GTS models feature a variable resonance intake manifold with six switchable, vacuum-controlled valves. These valves enable the system to switch between power- and torque-optimised geometries for all six air intake tracts to

produce even higher torque in the mid-rev range. The cooling system has been adapted to the increased engine output.

Exhaust system.

The stainless-steel exhaust system of the all-wheel-drive 911 models comprises two distinctive and independent exhaust tracts. The catalytic converters are highly temperature-resistant and heat up rapidly for effective emissions reduction. Two Lambda sensors of the stereo Lambda control circuitry regulate the composition of the exhaust gas separately in each exhaust tract, while another pair monitors pollutant conversion in the respective catalytic converters.

A sports exhaust system is fitted as standard in the 911 Carrera 4 GTS models and is available as an option for all other 911 all-wheel-drive models. It enhances the characteristic Porsche sound, making it even more powerful and even more sporty.

Engine management system.

The EMS SDI 3.1 engine management system ensures optimum engine performance at all times.

In particular, it controls the position of the electronic throttle valve (ETC) – a prerequisite for compatibility with the Porsche Stability Management (PSM), which comes as standard. It also regulates all directly engine-related functions and assemblies to achieve comparatively low fuel consumption and emissions as well as high power output and torque whatever the driving style.

Another important function is the cylinder-specific knock control. Since the cylinders never all work under exactly the same conditions, the knock control function monitors each one separately.

The ignition point is shifted individually, as and when necessary, to protect the cylinders and pistons at high engine speeds and loads.

For compliance with EU standards, the on-board diagnostics provide timely detection of any faults and defects that may occur in the exhaust and fuel systems and then notify the driver immediately. This also prevents increased pollutant emissions and unnecessary fuel consumption.

For fuel consumption and CO₂ emissions, please refer to pages 75-79.

Power is meaningless unless you know how to use it.

Transmission.



Six-speed manual gearbox.

Shift up or shift down, with no pause in between. Gear changes should be immediate and extremely responsive. Fitted as standard across the 911 all-wheel-drive model range, the six-speed manual gearbox is the link to each and every gear. The cable-operated gearshift unit is designed for optimum progression through the gears and the gear lever is insulated from the engine and gearbox. With minimal resistance, the gear lever throw is short and precise, enabling a rapid gearshift action and providing an immediate driving experience.

Porsche Doppelkupplung (PDK).

The optional Porsche Doppelkupplung (PDK), with both a manual gearshift and an automatic mode, enables extremely fast gear changes with no interruption in the flow of power. The main advantages are significantly faster acceleration and comparatively low fuel consumption. In total, PDK has seven forward gears at its disposal. Gears 1 to 6 have a sports ratio, with the top speed being reached in 6th gear. The 7th gear has a long ratio and helps to reduce fuel consumption even further. PDK is essentially two half-gearboxes in one and thus requires two clutches – designed here as a double wet clutch transmission.

This double clutch provides an alternating, non-positive connection between the two half-gearboxes and the engine by means of two separate input shafts (input shaft 1 is nested inside the hollowed-out input shaft 2). The flow of power from the engine is only ever transmitted through one half-gearbox and one clutch at a time, while the next gear is pre-selected in the second half-gearbox. During a gear change, therefore, a conventional shift no longer takes place. Instead, one clutch simply opens and the other closes at the same time. Gearshifts are completed efficiently within a fraction of a second.

Porsche Traction Management (PTM).

In a 911 with all-wheel drive, power counts. But so does the ability to transmit it to the road effectively. We do this with Porsche Traction Management (PTM), which is fitted as standard and comprises an active and permanent all-wheel drive system with electronically controlled multi-plate clutch, automatic brake differential (ABD) and anti-slip regulation (ASR).

Torque is distributed between the front and rear axes actively by an electronically controlled multi-plate clutch. This enables a much more rapid response in comparison with a viscous multi-plate clutch, where clutch regulation is not initiated until there is a difference in speed between the front and rear axes.

Through continuous monitoring of the driving conditions, the electronics are able to respond to a variety of situations. Sensors check, among other variables, the rotation speeds of all four wheels,

the longitudinal and lateral acceleration of the vehicle, and the steering angle. By evaluating the sensor data, the system can quickly adjust the distribution of drive force to the front axle in order to achieve optimum balance. If the rear wheels threaten to spin under acceleration, a greater proportion of drive force is distributed to the front

by a more powerful engagement of the multi-plate clutch. At the same time, ASR prevents the rear wheels from spinning. When cornering, the front wheels only ever receive as much drive force as is necessary to prevent lateral instability. On road surfaces with varying grip, the mechanically locking rear differential, which is fitted as standard, combines with ABD to improve traction even further.

In this way, PTM, in conjunction with Porsche Stability Management (PSM), provides excellent torque distribution – and therefore outstanding performance – in all driving conditions.

PTM is particularly impressive on ice and snow, where it reacts extremely swiftly and maintains excellent accelerative performance.

In short, PTM provides a high level of safety and outstanding performance, implemented in the most intelligent manner.

Mechanically locking rear differential.

A mechanically locking rear differential with asymmetrical lock factor is fitted as standard across the all-wheel-drive model range. It further enhances the traction of the driven rear wheels on road surfaces with varying grip and when accelerating out of tight bends, for example. This is accomplished by the damping of load-change reactions during fast cornering.



Chassis

Balanced relationships. The optimum prerequisite to top-class performance.

What is there left to do when everything is running smoothly and ticking over nicely? Put your feet up? That's one option. Another is to give absolutely

everything and squeeze out every last drop of potential. This can be achieved with a chassis that consents to every manoeuvre, such as Porsche Stability

Management (PSM), and with an all-wheel-drive system that responds decisively like Porsche Traction Management (PTM).



Front and rear axles.

The independent front suspension of the 911 all-wheel-drive models combines McPherson-type struts with longitudinal and transverse links and reinforced wheel bearings. Each front wheel is precisely located, ensuring absolute directional stability and superior handling.

At the rear, the wider body of the 911 all-wheel-drive models widens track for improved dynamic performance and driving stability as well as the ability to withstand faster lateral acceleration when cornering.

The rear axle has a motorsport-derived multi-link suspension, following the LSA concept (Lightweight, Stable, Agile) for exceptional driving dynamics. Acceleration squat is significantly reduced by the axle kinematics. Agility is further increased by lightweight struts with aluminium dampers.

This purposeful lightweight construction keeps the vehicle gross weight and the weight of the unsprung masses low, while the suspension itself allows even high-speed manoeuvres to be executed smoothly and safely. Pitching of the body when pulling away and braking is minimal, as is body roll in corners. Tyre noise and vibrations are similarly reduced.

Porsche Stability Management (PSM).

Integrated as standard, PSM is an automatic control system that stabilises the vehicle at the limits of dynamic driving performance. Sensors continuously monitor driving direction, speed, yaw velocity and lateral acceleration. Using this information, PSM computes the actual direction of motion. If this direction deviates from the desired course, PSM can initiate braking interventions targeted at individual wheels in order to stabilise the vehicle.

Under acceleration on road surfaces with varying grip, PSM improves traction using the ABD (automatic brake differential) and ASR (anti-slip regulation) functions. The control interventions are smooth and precise, giving an agile response. For a purer driving experience, PSM can be deactivated but it will automatically reactivate if necessary for safety.

PSM comes with two additional functions: precharging of the brake system, enabling maximum braking power to be achieved much sooner; and brake assist, for maximum deceleration in a critical situation.





Porsche Active Suspension Management (PASM).

Porsche Active Suspension Management (PASM) is an electronic active damping system, offering continuous adjustment of the damping forces at each wheel according to driving style and road conditions. PASM is included as standard equipment in all S and GTS models of the all-wheel-drive model range and is available as an option for models with the 3.6-litre engine. In addition, the suspension is 10 mm lower than that of the 911 Carrera 4 base models. For the 911 Carrera 4S and 911 Carrera 4 GTS, an option to lower the body by 20 mm is also offered.

At the press of a button, the driver can select between two different modes: 'Normal', which is a blend of performance and comfort, and 'Sport', where the setup is much firmer. The two setup modes

overlap only ever so slightly so that the distinction between comfortable and uncompromisingly sporty is achieved more effectively than with a conventional chassis. Depending on the mode selected, therefore, PASM can be sportier or more comfortable than the standard chassis of models with the 3.6-litre engine. The PASM control unit evaluates the driving conditions and modifies the damping force on each of the wheels optimally in accordance with the selected mode.

Sensors monitor the movement of the vehicle body, for example, under heavy acceleration and braking or on uneven roads. The control unit tunes the dampers to the optimum hardness for the selected mode to reduce roll and pitch and to increase contact between each individual wheel and the road.

Sport Chrono Package Plus.

The Sport Chrono Package Plus is available as an option for all 911 all-wheel-drive models. It offers an even sportier tuning of the chassis and engine setup, and delivers even greater driving pleasure as a result.

Key features include a digital and analogue stopwatch, the SPORT button, a performance display, a personal memory function in the Porsche Communication Management (PCM), and – in combination with PDK – the SPORT PLUS button, and an additional display in the steering wheel which informs the driver if the SPORT or SPORT PLUS buttons and Launch Control have been activated.

When the SPORT button on the centre console is selected, the EMS SDI 3.1 engine management system adapts for sportier performance driving. In response

to pedal input, a more dynamic throttle map opens the throttle valve wider than would be the case in 'Normal' mode. The throttle response is significantly more immediate and a harder rev-limiter is also applied in the higher gears.

Also influenced by 'Sport' mode is the Porsche Active Suspension Management (PASM). The dampers become firmer, enabling faster turn-in as well as better contact with the road. A harder rev-limiter is also applied in the automatic mode of the optional PDK, while the gearshift points are delayed until the upper rev range. The shift times are shorter, the gear changes sportier. PDK responds to the slightest deceleration – even at high engine speeds – with a swifter brake-induced downshift. In manual mode, gear changes are faster and more dynamic.



In 'Sport' mode, the trigger threshold for PSM is raised for increased longitudinal and lateral dynamics. Agility is enhanced when braking for corners with PSM enabling greater manoeuvrability under braking and exit acceleration, especially at low speeds. The result? Increased driving pleasure.

For even greater dexterity, PSM can be set to standby while the car is still in 'Sport' mode. For safety, it is set to intervene automatically when ABS assistance is required at the front wheels.

In combination with PDK, the Sport Chrono Package Plus has two additional functions that are activated by pressing the SPORT PLUS button, for a sporty drive that borders on a motorsport experience.

The first is 'Launch Control', which can be used on the track to achieve the best possible standing start – a racing start.

The function works like this: press the SPORT PLUS button when the transmission is in 'D' or 'M'. Then, with your left foot, press the brake pedal and accelerate fully with the right foot. The car recognises 'Launch' mode from the accelerator kickdown action and adjusts the engine speed to the optimum level, which

is around 6,500 rpm. At the same time, engine torque is increased and the clutch is applied lightly. 'Launch Control' now appears in the steering wheel display.

Now release the brake as quickly as you can and get ready to experience all the acceleration power your car has to offer.

The second function is the 'motorsport-derived gearshift strategy'. Using this, Porsche Doppelkupplung (PDK) is geared up for extremely short shift times and

optimum shift points for the maximum acceleration available. This combination of uncompromising and involving performance is ideal for the racetrack.

Another key component of the Sport Chrono Package Plus is the stopwatch mounted on the dashboard. Porsche Communication Management (PCM) has a special performance display to view, store and evaluate lap times or other driving times. It shows the total driving time, lap distance, lap number and lap times recorded so far. You can view the current fastest lap and the remaining range until empty. Travelled distances can be recorded and benchmark times defined.

The personal memory function of the Sport Chrono Package Plus can also be used to store personalised settings for a range of systems, including the orientation lighting or air conditioning.

Wheels.

The 911 Carrera all-wheel-drive models and the 911 Targa 4 are equipped as standard with 18-inch Carrera IV wheels. These wheels are characterised by their classic sporty design.

The S models come with 19-inch Carrera S II wheels. The visual effect is sporty and dynamic.

The all-wheel-drive GTS models are equipped with 19-inch RS Spyder wheels with central locking device – a clear reference to the world of motorsport. The centre spokes and rim wells are painted in black. The wheels are designed to display the four-piston aluminium monobloc fixed calipers and promote efficient ventilation of the brake system.

Tyre Pressure Monitoring (TPM).

Tyre Pressure Monitoring (TPM) sends warnings to the on-board computer's display screen in the event of low tyre pressure or a gradual or sudden loss of pressure. The driver can check the pressures of all four tyres from the instrument cluster. Each time the tyres are re-inflated, or whenever a wheel has been changed, the updated tyre pressures are displayed quickly – for increased comfort and safety.



18-inch Carrera IV wheel



19-inch Carrera S II wheel



19-inch RS Spyder wheel with central locking device

Safety

Attack or defend? A controlled offensive.

What should you do when a storm is on the horizon or when the outlook is uncertain? We believe that the correct response is to take action. To proceed without hesitation, but with purpose and

sound judgment. This is particularly true when it comes to safety. One example is a brake system that responds swiftly at top speed. Another is an innovative lighting concept. Only in this way can we

keep things under control in any situation. It is not by chance that, for us, safety is worth more than performance figures alone.





Standard brake system on 911 Carrera 4/911 Targa 4



Standard brake system on 911 Carrera 4S/911 Carrera 4 GT/911 Targa 4S



Porsche Ceramic Composite Brake (PCCB)

brake booster for reducing pedal effort, and integral air spoilers for enhanced air flow in the brake cooling ducts.

Porsche Ceramic Composite Brake (PCCB).

Motorsport is the ultimate test of braking performance. On request, we can provide you with a brake system that has already proved that it can cope with the harshest requirements on the racetrack: the Porsche Ceramic Composite Brake (PCCB).

The ceramic discs have a diameter of 350 mm front and rear. The discs are made from a specially treated carbon-fibre compound that is sintered in a high-vacuum process. The resulting material is not only much harder than metal, it is also more resistant to heat.

PCCB is characterised by its low thermal expansion, which prevents deformation under heavy braking. Furthermore, the ceramic brake discs are totally resistant

Brake system.

Porsche brakes are widely renowned for their stability, performance and stopping power. They are designed to cope with extreme forces and offer a commensurately high level of safety.

All-wheel-drive models with the 3.6-litre engine are equipped front and rear with

four-piston aluminium monobloc fixed calipers with a black anodised finish. The calipers are extremely stiff thanks to their enclosed construction. All brake discs have a diameter of 330 mm for outstanding braking performance.

The S and GTS models have four-piston aluminium monobloc fixed calipers that are larger, reinforced and have a striking

red painted finish. The front axle has larger brake pads and thicker brake discs.

All brake discs across the all-wheel-drive model range have a cross-drilled design, which improves braking in wet conditions. The discs are also internally vented for better heat dispersal. Other features include a powerful nine-inch vacuum

to corrosion and offer more favourable noise-damping properties.

The pads are mounted in six-piston monobloc aluminium fixed calipers at the front, with four-piston units at the rear. The resulting brake forces are both extremely high and remarkably consistent. The pedal response is fast and precise with only moderate input required.

The key advantage of PCCB is the extremely low weight of the ceramic brake discs, which are approximately 50% lighter than standard discs of similar design and size. As well as enhancing performance and fuel economy, this represents a major reduction in unsprung and rotating masses. The consequence of this is better road holding and increased comfort, particularly on uneven roads, as

well as greater agility and improved handling.

Please note that circuit racing, trackday use and other forms of performance driving can significantly reduce the service life of even the most durable pads and discs. As with conventional high-performance braking systems, we recommend that all brake components

be professionally inspected and replaced where necessary after every track event.



For fuel consumption and CO₂ emissions, please refer to pages 75-79.

