PORSCHE

911 Turbo

Variable Turbine Geometry (VTG).
Electronic all-wheel drive.

Constant innovation.

The 911 Turbo

911 Turbo | The 911 Turbo

From a stroke of genius.
From strength to strength.

The 911 Turbo and the 911 Turbo Cabriolet.

In 1905, the Swiss engineer, Dr. Alfred Büchi, filed the first ever patent for a turbocharged piston engine. The fundamental principle, now a century old, remains unchanged to this day: to use the energy latent in the engine's exhaust to increase power and torque.

The exhaust-gas flow drives a radial turbine which in turn drives a compressor in the air intake tract. The rotation of the compressor generates a higher intake pressure which forces more air into the engine. With more oxygen available, more fuel can be burnt, and a higher output can be achieved. The density of the air can be further increased by cooling it prior to combustion using a device known as an 'intercooler'.

The first turbocharged engine was built in 1910 by the firm of Murray-Willat. The concept was embraced by the aviation industry which required a means of compensating for the lower oxygen levels which reduce engine power at high altitude.

Up until the 1960s, the only land vehicles powered by turbocharged engines were diesel locomotives and buses. With its low output at low rpm and rapid onset of power at higher engine speeds, the turbocharged engine was not yet suitable for use in passenger cars. It was, however, ideal for motor racing, where the car is generally driven at full throttle.

Porsche was among the first to recognise the advantages of this technology, including higher output from smaller engines. This would lead to the development of powerful new engines with compact dimensions and low weight.

911 Turbo 3.0 (1974), 911 Turbo (2006)

The first Porsche racing car to feature turbocharged power made its debut in the early 1970s. The 12-cylinder engine in the legendary 917 used a twin-turbo system to achieve a colossal 1,000 horsepower. In 1972, the 917/10 with 5-litre turbo engine claimed the North American CanAm championship. In the following season, the 917/30, developing 1,100 horsepower from a 5.4-litre unit, became the most powerful racing Porsche of all time.

This invaluable race experience inevitably found its way into our production road car development. The first 911 Turbo was unveiled to the world in 1974. Developed in the midst of a global oil crisis, it was a homologation model for FIA Group 4 racing. The maximum boost pressure available from the turbo was restricted for normal road use. Originally conceived as a limited edition of 400 examples, it was the start of the Turbo legend.

This original model featured widened wheel arches as well as specially developed front and rear spoilers. These major aero-dynamic refinements were essential requirements given the increased engine performance. Producing 260 hp, the first 911 Turbo could reach 100 km/h (62 mph) in as little as 5.5 seconds. Maximum torque output of 343 Nm was unprecedented in a 3-litre engine. This exceptional performance necessitated a new gearbox design featuring specially reinforced gears.

The second 911 Turbo, launched in 1977, developed 300 hp from a 3.3-litre intercooled engine. Brake performance was similarly enhanced, combining four-piston aluminium fixed calipers with cross-drilled discs.

In 1987, the 911 Turbo was joined by the 911 Turbo Cabriolet and 911 Turbo Targa.

At that time, opinion was divided on the necessity of an open-top model. For the majority of people, the 911 Turbo was a road-going racing car, which meant a fixed metal roof was essential. Strange, how opinions change. After both models were discontinued in 1989, there was a 14-year wait until the next 911 Turbo Cabriolet.

In 1993, we launched the last 911 Turbo with dedicated rear-wheel drive. Based on the Type 964 platform, it used a 3.6-litre engine to produce 360 hp. Its Type 993 successor, launched in 1995, set a range of new benchmarks in supercar performance. All-wheel drive ensured greater active safety as well as better driving dynamics. The power distribution had a rear-axle bias that retained the familiar Porsche handling characteristics. Twin exhaust turbo-chargers offered better response and a more harmonious build-up of power. The last 911 Turbo to feature an aircooled engine, it offered maximum output of 408 hp from a 3.6-litre displacement.

The first water-cooled 911 Turbo, the Type 996, made its debut in the year 2000. Also equipped with all-wheel drive, it used VarioCam Plus to achieve a drastic reduction in fuel consumption. The engine capacity remained at 3.6 litres, while output rose to 420 hp. Maximum speed was 305 km/h (190 mph) while 0–100 km/h (62 mph) required just 4.2 seconds. The new model was also the first 911 Turbo to have the option of Tiptronic S.

In 2003, the 911 Turbo was offered as a Cabriolet version for the first time since 1989. One of the special features was the fact that its maximum speed could also be achieved with the hood open. For many, it was the ultimate open-top sportscar.

The 911 Turbo S (Type 996), launched in 2004, saw output raised to 450 hp. This evolution was also available in Coupé and Cabriolet versions.

Today, the Turbo is in its sixth generation: the Type 997. Available as the 911 Turbo and 911 Turbo Cabriolet, one thing remains unchanged: it is still in a class of its own.

Combining ultimate performance with comfort and poise, the 911 Turbo is a masterpiece of Porsche engineering.

911 Turbo Cabriolet models from 2003, 1987 and 2007

Pioneering technology, dependable results.

Engineering the 911 Turbo models.

The primary objective for every 911 Turbo is to challenge the limits of technical feasibility. Not only in terms of performance and dynamics, but also when it comes to ride comfort. The result is an accomplished and harmonious whole that, for many, is the ultimate sportscar.

In terms of performance, the 911 Turbo models exceed many expectations. The classic flat-six engine develops 353 kW (480 hp) and 620 Nm of torque from a 3.6-litre displacement.

The twin turbocharger units on the 911 Turbo models feature Variable Turbine Geometry (VTG – see page 42). The main components on this system are the adjustable guide vanes which channel the exhaust flow onto the turbines, enabling higher turbine speeds at lower engine rpm. The most difficult challenge when developing this technology was the high exhaust-gas temperature of around 1,000 °C, which is unique to a petrol engine. This enormous thermal load is considerably greater than the 700 °C typically encountered on a diesel-powered car. It was only possible to bridge this gap using materials developed for aerospace applications. The primary benefits of Variable Turbine Geometry include faster response, higher torque output from lower engine speeds, and greater top-end power. Maximum torque is also available over a wider engine speed range. By eliminating the problem of 'turbo lag', the traditional weakness of the turbocharged engine is now a thing of the past.

This potential is applied to the road with the aid of all-wheel drive featuring Porsche Traction Management (PTM). Using an electronically controlled multi-plate clutch, this intelligent technology provides variable drive to each axle. The front/rear split is continuously adjusted based on current road conditions and driver inputs. Although biased towards the rear, the front receives more power whenever the situation requires. Porsche Traction Management is specifically configured for optimum driving dynamics. The additional traction provided by both the all-wheel drive system and PTM represents a major improvement in active safety, especially in the wet or on snow.

Another benchmark technology is the standard braking system with its front/rear disc diameter of 350 mm. On the optional Porsche Ceramic Composite Brake (PCCB), the front diameter is increased to 380 mm.

Other standard features include a special evolution of Porsche Stability Management (PSM) as well as Porsche Active Suspension Management (PASM) featuring electronic damper control. A limited-slip differential is available for the rear axle as an option.

For even greater performance, the car can be equipped with the optional Sport Chrono Package Turbo. Key features include an 'overboost' function which provides as much as 60 Nm of additional torque under acceleration. When the throttle is fully open, the boost pressure is increased temporarily by approximately 0.2 bar. The electronic throttle map is also adjusted to give a more dynamic response to pedal inputs.

Other modifications when 'Sport' mode is selected include a much higher trigger threshold for Porsche Stability Management (PSM). In addition, the electronic all-wheel drive system (PTM) sends a greater proportion of drive torque to the rear. PASM provides a stiffer suspension setup enabling faster turn-in and better road contact.

An important feature is the car's lightweight construction. The doors and bonnet are made of aluminium to save weight – and therefore fuel. Every gram has been considered over and over. At least three times. This has paid off, as the 911 Turbo with manual transmission weighs just 1,585 kg and the 911 Turbo Cabriolet just 1,655 kg.

Even more impressive are the respective power-to-weight ratios of 302.8 and 290.0 hp per tonne. Fuel economy is also exceptional for a car with such high performance.

This powerful capability is perfectly combined with exemplary ride quality on every type of road.

Open or closed, it comfortably exceeds the highest expectations. In other words: everything you'd expect from a 911 Turbo.

Poised for action, yet always relaxed.

Designing the 911 Turbo models.

The extreme capability of each 911 Turbo model is elegantly enclosed in a highly distinctive exterior. While signalling the powerful athleticism of the car, it remains unmistakably 911.

The aerodynamics are exceptionally well balanced, with downforce generated on the rear axle. The rear wing is automatically deployed at approximately 120 km/h (75 mph) and retracted when the car slows to around 60 km/h (37 mph). The drag coefficient is remarkably low at just 0.31 on both models. The streamlined shape and lightweight build help to lower fuel consumption relative to performance.

The standard Bi-Xenon headlamps with washer system fit compactly into the powerful front end. The lighting system also includes an integrated cleaning system. The high-performance LED indicators are located in the outer air intakes. The compact front fog lights are positioned close to the road on the outer edges of the front apron.

The side air intakes, to the rear of the doors, deliver a high volume of air directly to the intercooler units. Equally efficient are the cooling air ducts for the front and rear brakes which help to maximise brake performance.

The body of the car is much wider across the rear than the front. A broad wheel track is combined with wide-profile tyres to achieve exceptionally high levels of lateral grip. In addition, both models have black plastic side sills that protect the body against stone chips. Among the eye-catching features at the rear of the car are the chrome-plated tailpipes, fully integrated within the rear apron.

The design of the 911 Turbo Cabriolet with the hood closed is based on that of the Coupé, giving a flowing and harmonious line from the roof to the rear. With the hood open, the hood compartment cover emphasises the powerful rear end.

Distinctively styled and, of course, matched to engine output are the 19-inch Turbo forged alloy wheels. Featuring a special weight-saving construction and standard two-tone finish, they come with 235/35 ZR 19 front and 305/30 ZR 19 rear tyres.

The interior design is also a reflection of the 911 Turbo principle: sporty, uncluttered, ergonomically refined, with a carefully considered interior geometry and generous occupant space. The front centre console, incorporating the latest Porsche Communication Management (PCM) with touch-screen, has been redesigned and now features a classic black surround. A special gear lever and leather upholstery complete the standard equipment.

Now in its sixth generation, the 911 Turbo remains in a class of its own. Also when it comes to design.

Rear wing lowered

Rear wing raised

Open to new forms of performance.

The 911 Turbo models.

Model range

Composed, yet passionate. Discreet, yet extreme.
Cultured, yet totally untamed.

The 911 Turbo.

The 911 Turbo is a masterpiece of Porsche engineering. A compelling statement of just how powerful the 911 can be.

Our aim: to create a car in which phenomenal performance is always ready to apply. With an engine that generates power with efficiency. A drivetrain that applies that power with precision. And a chassis with exceptional driving dynamics, stability and active safety. In short: a car in which the sum of the parts is clearly surpassed by the whole.

The rear-mounted six-cylinder boxer engine develops 353 kW (480 hp) at 6,000 rpm. Maximum torque of 620 Nm is available between 1,950 and 5,000 rpm. Thanks to all-wheel drive featuring Porsche Traction Management (PTM), the 911 Turbo travels from 0 to 100 km/h (62 mph) in as little as 3.9 seconds. Equipped with optional Tiptronic S, that time is reduced to 3.7 seconds. The standard sprint to 200 km/h (124 mph) is completed in 12.5 or 12.2 seconds, respectively. Maximum speed is 310 km/h (193 mph).

Standard features include a specially enhanced version of Porsche Stability Management (PSM) as well as Porsche Active Suspension Management (PASM).

As well as providing power when you need it most, the 911 Turbo models offer excellent standards of comfort and day-to-day practicality.

The interior makes an important contribution here. Featuring high-quality materials, it has leather upholstery as standard. As well as a three-spoke sports steering wheel with up to 40 mm axial and vertical adjustment.

Also standard are the new BOSE® Surround Sound System with an output of 385 watts and the new Porsche Communication System (PCM) with GPS navigation module – for the first time with a 6.5-inch touchscreen and MP3-compatible CD/DVD drive. Available as an option are voice control with word-by-word input, and a universal audio interface for connection and easy operation of an iPod®, for example. Intuitive operation goes without saying.

Optional equipment includes sports seats, adaptive sports seats and the race-style sport bucket seats. These sports-style seats provide a racecar-like experience. Also available as an option for the standard seats is seat ventilation. See the chapters ‘Comfort’ and ‘Personalisation’ for details.

911 Turbo. The epitome of efficient performance. A car in which power means peace of mind – because it’s always there when you need it most.

Infinity behind you.
Infinity above.

The 911 Turbo Cabriolet.

There are two schools of thought in sportscar design: in one, the goal is maximum performance; in the other, maximum driving pleasure. With the 911 Turbo Cabriolet, we've combined the two to bring you the best of both these worlds.

Externally, the car shares the same elegant silhouette that defines the Coupé version. It also provides the same immediate access to phenomenal power and torque.

In terms of technical features and engine output, both 911 Turbo models are identical.

The 911 Turbo Cabriolet reaches 100 km/h (62 mph) in 4.0 seconds with a manual gearbox and 3.8 seconds with Tiptronic S. Maximum speed is 310 km/h (193 mph).

Naturally, the car's active and passive safety features reflect its unique capability (see page 85).

The body structure is light yet robust, with exceptional torsional and flexural strength for a two-plus-two convertible. As a result, the car is agile and responsive even at high speed on winding or uneven roads.

The classic fabric hood provides effective protection, all the way to maximum speed. The fabric construction not only reduces weight, it also lowers the car's centre of gravity. When the hood is retracted, it occupies less space than a comparable folding metal roof. When the hood is raised, the curving lines flow smoothly from front to rear. The aerodynamic performance is identical to the Coupé version, which means wind noise is reduced to a minimum.

The windscreen glass has a grey top tint that improves visibility in strong sunlight. A wind deflector is included as standard to further reduce turbulence and noise.

To summarise, the power of the 911 Turbo Cabriolet is beyond doubt.

Hood.

Convenience, protection and a lower centre of gravity.

The 911 Turbo Cabriolet stands for the highest technology and performance.

The hood's underlying bow structure, although extremely light, is also highly robust. An integral rain channel system removes standing water to prevent dripping when the doors are opened.

Electrically powered, the hood is opened using a button on the centre console or via the key remote. As the side windows descend, the hood box opens to receive the folding hood. The whole process is fully automatic.

The concertina action ensures optimum protection for the interior lining. The entire operation – be it opening or closing – requires approximately 20 seconds to complete. For added convenience, the hood can be operated while the vehicle is travelling at up to 50 km/h (approx. 30 mph).

The heated rear screen is made from scratch-resistant glass and features the Porsche logo. When the hood is closed, it offers excellent rearward visibility. It is also easy to remove and replace, if required. The interior hood lining is made from a sound and heat-insulating fabric. The resulting noise levels are almost as low as in the Coupé model – even when travelling at high speed. The result: even greater enjoyment of the 911 Turbo sound.

Wind deflector

Wind deflector.

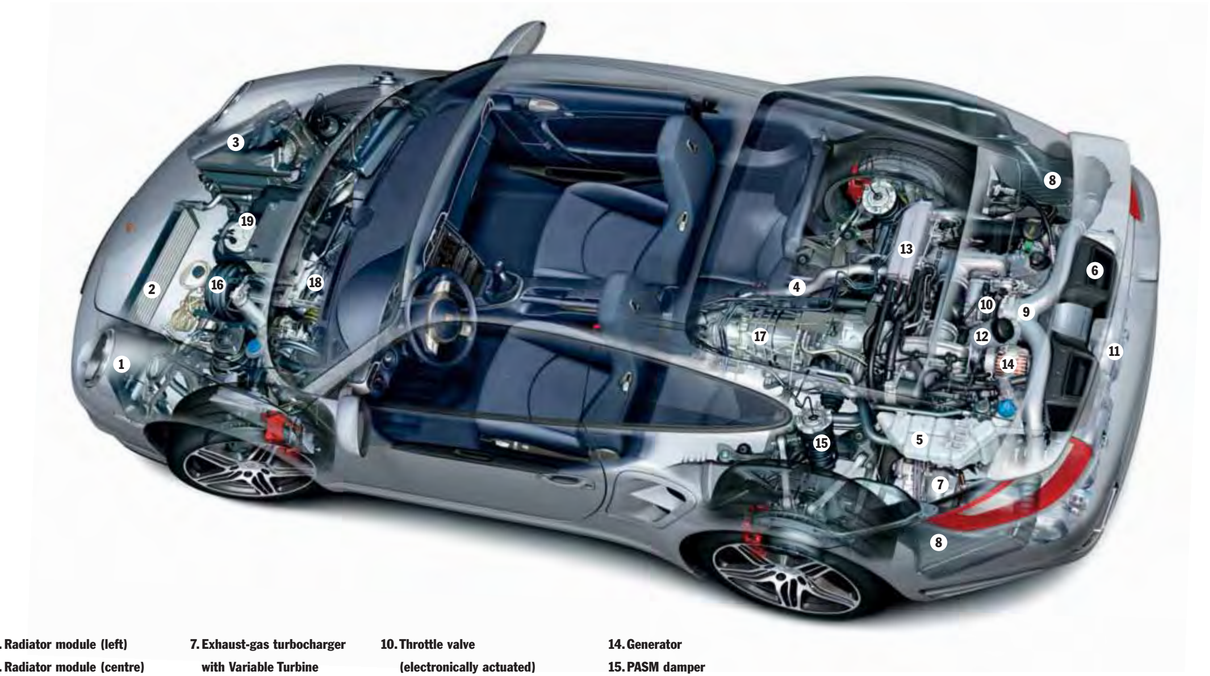
The 911 Turbo Cabriolet comes with a detachable wind deflector as standard. Developed in the Porsche wind tunnel, it reduces turbulence and noise at high speed. It is easy to fit and can be folded and stowed in the luggage compartment.

Hardtop.

Optional equipment includes a tough and lightweight aluminium hardtop, which is also easy to fit (see page 120). The interior is lined with a sound-absorbent fabric that complements the passenger compartment.

Some say power is all about muscle.
For us, it starts with the mind.

Drive



1. Radiator module (left)
2. Radiator module (centre)
3. Radiator module (right)
4. Coolant pipe
5. Coolant expansion tank
6. Air filter
7. Exhaust-gas turbocharger with Variable Turbine Geometry (VTG)
8. Intercoolers
9. Pressure pipe
10. Throttle valve (electronically actuated)
11. Exhaust system
12. Oil filter
13. Engine oil reservoir (dry-sump lubrication)
14. Generator
15. PASM damper
16. Tandem brake booster
17. Six-speed manual gearbox
18. Front differential
19. Fuel tank

1. Oil scavenge pump
2. Oil-pressure pump (obscured)
3. Engine oil reservoir (dry-sump lubrication)
4. Camshaft adjuster (VarioCam Plus)
5. Intake camshaft
6. Tappets (with hydraulic valve clearance adjustment)
7. Valve springs
8. Valves
9. Nikasil-coated cylinder bore
10. Forged aluminium piston
11. Forged connecting rod
12. Crankshaft
13. Camshaft drive chain
14. Camshaft drive chain tensioner with guide rail
15. Single-spark ignition coil
16. Spark plug
17. Exhaust-gas turbocharger with Variable Turbine Geometry (VTG)
18. Main silencer
19. Catalytic converter
20. Pressure pipe
21. Throttle valve (electronically actuated)
22. Plenum chamber
23. Ancillary drive belt
24. Fluid reservoir for power-steering system

Engine.
Heart and soul of the 911 Turbo.

911 Turbo engine

Every 911 – and every 911 Turbo – shares the same fundamental engine principle. The flat-six cylinder layout and rear-mounted installation not only provide exceptional performance, they also enhance the car's traction and driving dynamics.

Equipped with twin turbochargers featuring Variable Turbine Geometry (VTG), the 3.6-litre engine in the 911 Turbo models develops 353 kW (480 hp) at 6,000 rpm.

Weighing 1,585 kg, the standard 911 Turbo (with manual gearbox) has a power-to-weight ratio of 302.8 hp per tonne (911 Turbo Cabriolet: 290.0 hp per tonne). Specific power output is 133 hp per litre of engine displacement.

Maximum torque is a mighty 620 Nm, rising to 680 Nm with the 'overboost' function in the optional Sport Chrono Package Turbo (see page 70). Thanks

to VarioCam Plus and the twin-turbo system, all of that torque is available for use between 1,950 and 5,000 rpm. The result: phenomenal acceleration, particularly when overtaking.

In short: the 911 Turbo engine produces power and torque more easily than ever before. Its running characteristics are comparable with much larger engines with eight or more cylinders.

Lightweight design.

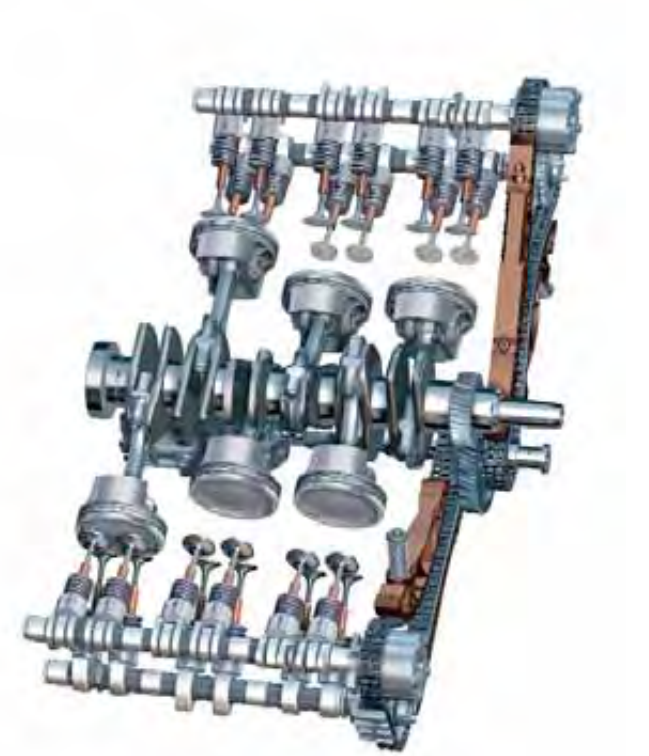
The six-cylinder boxer engine is a compact unit offering excellent cylinder charging and torque-curve characteristics as well as first-rate balance with minimal vibration. The alloy crankcase consists of two main sections, each containing one bank of cylinders. The crankshaft runs in eight main bearings and is driven by forged connecting rods. For optimum durability, we've used forged aluminium pistons running in Nikasil-coated aluminium liners and cooled via individual oil-spray jets. The results: lower frictional resistance and a lengthy service life – even when subjected to heavy use.

The cylinder heads are made from an extremely heat-resistant lightweight alloy. Each cylinder bank has two overhead camshafts driving a set of four valves (two inlet and two exhaust) on each individual cylinder. The valves are arranged in a 'V' formation and have a highly efficient dual-spring closing action enabling higher engine speeds. Performance is enhanced with the aid of both Variable Turbine Geometry (VTG – see page 42) and VarioCam Plus (variable valve timing and lift on the inlet side – see page 48). The benefits are not only greater power and torque, but also better fuel economy and lower emissions.

Dry-sump lubrication.

This racing technology uses a separate oil reservoir to ensure consistent oil pressures throughout the engine, even during prolonged periods of lateral load.

After passing through the engine, every drop of oil is returned directly to the external reservoir. The flow is driven by two scavenge pumps in each cylinder head and a further two pumps in the crankcase. Gas is removed from the returning oil by means of a defoaming device in the reservoir. As a result, the oil level in the reservoir remains virtually constant at all times. The oil is returned to the lubrication points in the engine by means of a dedicated oil-feed pump. With a further scavenge pump in each of the twin turbocharger units, the 911 Turbo has a total of nine separate pumps driving the lubrication system.



Main rotating assembly and valve gear

The oil level can be checked from inside the car via the standard on-board computer. This solution is not only cleaner and more convenient than a conventional dipstick, it is also much more accurate.

Variable Turbine Geometry (VTG).
The ideal turbo for every scenario.

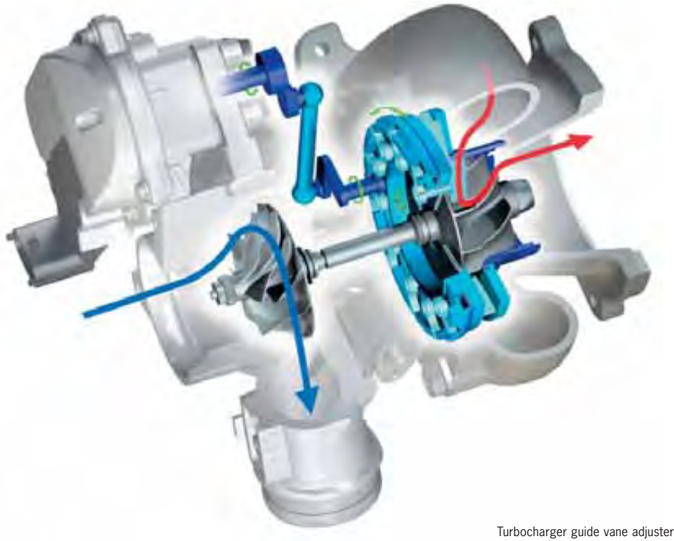
Turbocharger with Variable Turbine Geometry (VTG)

The 911 Turbo has always been synonymous with performance. The latest models are more capable than ever thanks to a twin-turbo system with Variable Turbine Geometry (VTG).

On a conventional turbocharger, the exhaust flow drives a turbine that is connected to a compressor on the intake side. By compressing the incoming air, the amount of oxygen in a given volume is increased. Since compression also causes an increase in temperature, the air must be cooled in a device known as an 'intercooler'. With more oxygen present in each cylinder charge, more fuel can be burnt yielding greater energy. Since higher exhaust pressures generate greater loads on the intake side, the intake pressure must be carefully controlled in order to protect the engine. This 'boost pressure' is usually limited using a 'wastegate' valve that bypasses excess pressure around the turbine.

Another important factor in the system is the size of the turbochargers. Since a smaller turbine has a lower mass, it responds more quickly to increasing pressure, spinning up easily to its optimum speed. The key disadvantage of using a smaller turbo is that the back-pressure generated at higher engine speeds causes a significant reduction in performance. Resistance is caused by the smaller cross-sectional area through which the exhaust is required to flow. Larger turbo units, which create lower back-pressure at higher rpm, take considerably longer to spin up under power due to the large cross-sectional area and relative inertia of the heavier turbine. Generally, this type of turbo will only be effective in the medium rpm range.

This phenomenon, known as 'turbo lag', means there is virtually no turbocharging effect at lower engine speeds.

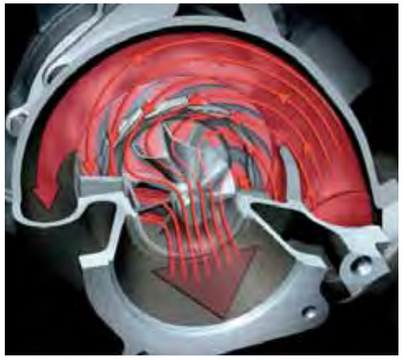


Turbocharger guide vane adjuster

To overcome this problem, the twin water-cooled turbochargers on the 911 Turbo models feature Variable Turbine Geometry (VTG). With this technology, the gas-flow from the engine is channelled onto the turbines via electronically adjustable guide vanes. By changing the vane angle, the system can replicate the geometry in all types of turbo, large or small, and thus achieve the optimum gas-flow characteristics. The guide vanes are controlled by the engine management system.

The result is a high turbine speed – and therefore higher boost pressure – even at low engine rpm. With more air available, the combustion is increased, yielding greater power and torque. Maximum torque is reached at lower rpm and is retained across a wider rev range. A full 620 Nm is available from as low as 1,950 rpm up to 5,000 rpm. Every throttle input is met with exceptional response and phenomenal acceleration.

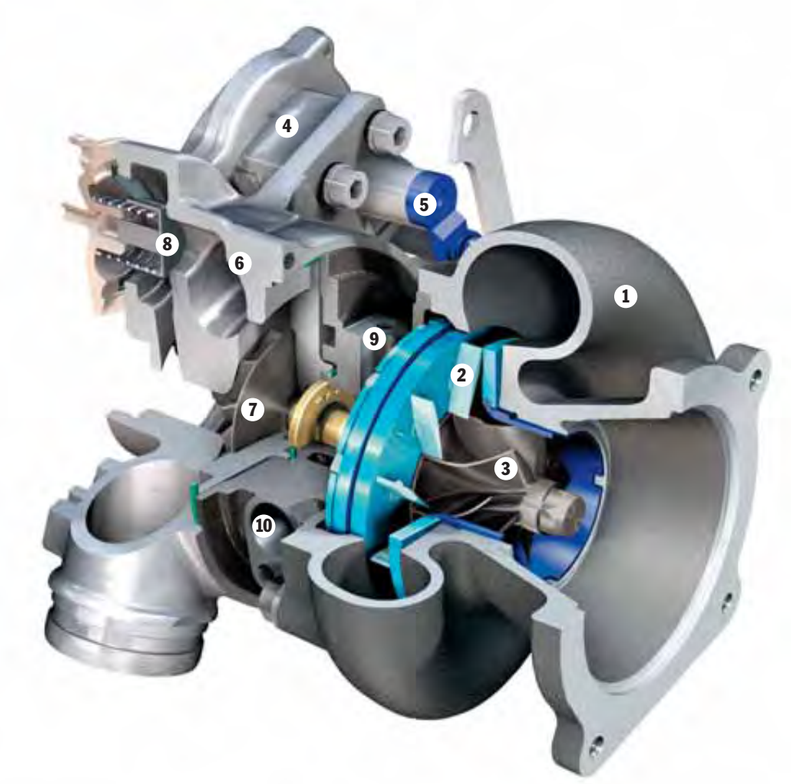
Guide vanes closed



Guide vanes closed

Guide vanes open

Guide vanes open

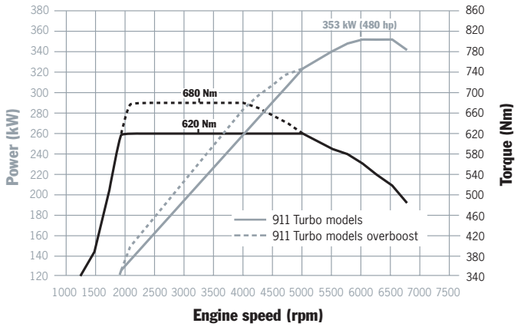


1. **Turbine casing**
2. **Movable guide vanes**
3. **Turbine wheel**
4. **Electric motor for guide vane adjustment**
5. **Guide vane adjuster**
6. **Compressor casing**
7. **Compressor wheel**
8. **Recirculation valve**
9. **Oil inlet**
10. **Coolant inlet**

When the boost pressure reaches its maximum value, the guide vanes are opened further. By varying the vane angle, it is possible to achieve the required boost pressure over the entire engine speed range. As a result, there is no need for excess-pressure valves as found on conventional turbocharged engines.

Engine performance can be further enhanced by selecting 'Sport' mode on the optional Sport Chrono Package Turbo (see page 70). Under full acceleration, the boost is temporarily increased by approximately 0.2 bar. During this phase, the engine develops as much as 60 Nm of additional torque.

Matching the exceptional performance of the car is the efficiency with which it is generated. Despite the increase in power and torque, the 911 Turbo models achieve a further reduction in fuel consumption.



VarioCam Plus.

Optimum valve timing, optimum valve lift, in all load conditions.

VarioCam Plus is a variable valve timing system on the inlet side which also features two-stage valve lift. The benefits it provides include greater power and torque at all engine speeds, as well as smoother running, better fuel economy and fewer emissions.

Essentially, VarioCam Plus makes two engines out of one. The first is geared for normal road driving, the second for high-performance use. The system switches seamlessly between the two as driver inputs change. All operations are controlled by the engine management system. The result: emphatic acceleration and smoother running.

The two-stage lift mechanism on each inlet valve consists of an electro-hydraulically switchable tappet. Each of the 12 tappets consists of two concentric parts – an outer ring and a central shaft – which can be locked together by means of a pin. The system can then vary the valve lift by using two large profile cams on the outer ring or a smaller cam lobe on the central shaft.

The timing of each valve is steplessly controlled by means of an electro-hydraulic rotary vane adjuster at the head of the corresponding camshaft.

To improve responsiveness during warm-up in cold weather, VarioCam Plus will select the higher valve lift setting and retard valve timing.

At medium revs and low engine loads, the lower valve lift setting is selected and timing advanced in order to reduce fuel consumption and emissions. The economy of the engine is particularly enhanced at lower engine speeds. For maximum power and torque, the higher lift setting is selected and the timing of the valves is advanced.

From the driver's perspective, the benefits are obvious: copious torque and exceptional fuel economy, particularly in comparison with much larger engines offering similar power output.

Engine cooling.

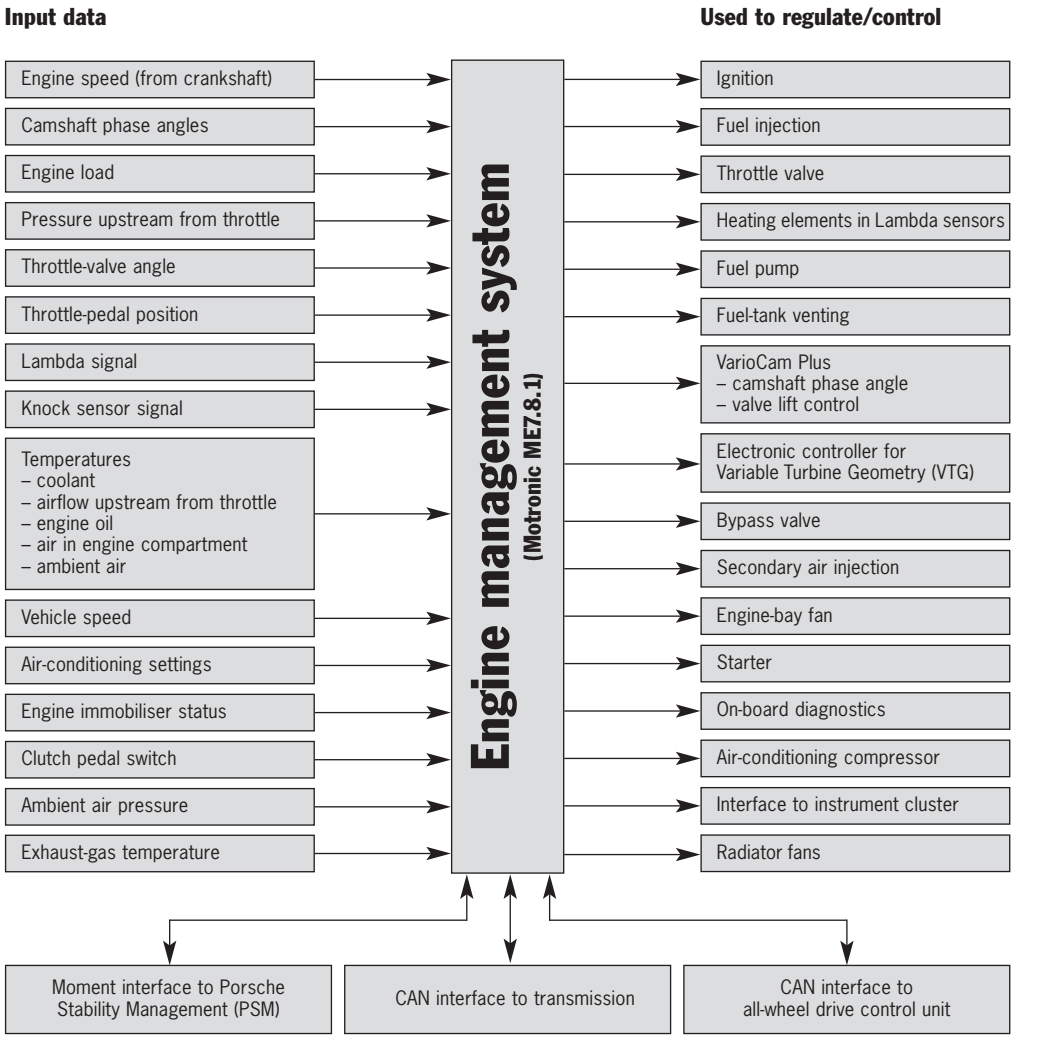
The 911 Turbo engine features cross-flow water cooling with fully integrated coolant management. This technology ensures a consistent flow of coolant to each of the engine's cylinders. Waste heat from the oil is transferred to the coolant via two oil/water heat exchangers. The coolant is routed through twin radiator modules ahead of the front wheels and a centrally placed unit in the nose.

Engine management.

Optimum performance is assured at all times with the aid of the Motronic ME7.8.1 engine management system. This powerful ECU is responsible for all engine-related functions and assemblies (see diagram), e.g., Variable Turbine Geometry (VTG), VarioCam Plus and the electronic throttle system – one of the essential prerequisites for the standard Porsche Stability Management (PSM). The results: optimum economy, emissions and performance, regardless of driving style.

Another important task performed by the engine management system is cylinder-specific knock control. By preventing pre-ignition at high engine speeds, this function can avert costly damage to the pistons and cylinders. Since temperatures tend to vary across the engine, each cylinder is monitored separately. If a risk is detected, the individual ignition timing is adjusted.

The EU-compliant on-board diagnostics system provides continuous fault detection as well as early warning for the exhaust and fuel supply systems. This actively prevents harmful emissions while maintaining consistent rates of fuel consumption.



Fuel injection.

Fuel is supplied to each of the six cylinders using a sequential fuel injection system. The engine management system controls the timing of each injection as well as the volume of fuel supplied to each cylinder bank. Adjustments are based on a range of variables, such as throttle position, engine speed, boost pressure, coolant temperature and exhaust-gas composition. The benefits are optimised combustion and fuel consumption. A hot-film air mass sensor monitors the volume and density of the incoming air to ensure the best possible air/fuel mix, regardless of weather and altitude.

Ignition system.

The 911 Turbo engine has a static high-voltage ignition system. Each individual platinum-electrode spark plug has a separate ignition coil, ensuring perfect combustion every time. The role of distributor is performed by the engine management system, which operates the coils directly. The result: optimum performance with minimal fuel consumption.

Exhaust system.

The stainless steel exhaust system consists of two separate tracts, one for each bank of cylinders. The catalytic converters are extremely heat-resistant, yet quick to reach temperature – and thus optimum performance – when the engine is started from cold.

Twin oxygen sensors in each of the exhausts enable continuous monitoring of the combustion process. An additional pair of sensors* is used to measure the efficiency of the catalytic converters.

Servicing.

Running costs are further reduced thanks to lengthy service intervals for engine oil, air filter and spark plugs. The generator, power-steering pump and air-conditioning compressor are all driven by a single self-adjusting belt that rarely needs to be replaced. The drive chains on the camshafts and auxiliary shafts are entirely maintenance-free.

The specific service intervals on both 911 Turbo models are dependent on a range of factors, including local fuel quality. For details, please consult the current price list for your country/region or ask your Porsche Centre.

* Not in markets with leaded fuel.

Six-speed manual gearbox.
Transmitting power with precision.

The six-speed manual gearbox is specifically adapted to the unique characteristics, including extremely high torque, of the 911 Turbo engine. Designed primarily for sports driving, there's a perfect ratio spread enabling a smooth transition through the gears. The gearshift throw is short and precise, with only minimal effort required. Thanks to a dual-mass flywheel, this performance is achieved without any compromise in comfort. The linkage provides a direct connection with the gearbox unit while insulating the lever from engine vibration.

One final detail – the gear lever design – is exclusive to the 911 Turbo models.

Gear lever exclusive to 911 Turbo models

Tiptronic S.
Manual and automatic in one versatile solution.

Tiptronic S control on steering wheel

The optional five-speed Tiptronic S is a highly versatile automatic transmission with high-speed gearshift action. It also provides the option of temporary manual override as well as full manual control.

In manual mode, you can change gear by hand using gearshift controls on the steering wheel. Simply press up to change up, and down to change down. The clutch function is fully automatic.

In automatic mode, the standard gearshift pattern (designed for maximum fuel economy) can be steplessly varied up to a dedicated 'Sport' configuration for optimum high-performance driving. Each gearshift point is automatically selected based on current driving style and road conditions. Within a short space of time, you'll develop a feel for the system and begin to influence gearshifts using the throttle alone.

The benefits of Tiptronic S are particularly apparent when exploring the car's potential. In automatic mode, the rapid gearshift action ensures excellent agility under power. The immediacy of response, with virtually no interruption in drive, is comparable with a Porsche manual gearbox. In terms of acceleration, it is even better, being 0.2 seconds quicker to 100 km/h (62 mph) than the standard manually equipped car.

While still in automatic, you can change gear by hand using the rocker controls on the steering wheel. If there is no manual input for a period of 8 seconds, the system reverts to automatic mode.

If the car is driven more assertively, the system automatically selects the 'Sport' gearshift pattern, i.e., there is no need to use a kick-down function. Unlike conventional automatic systems, Tiptronic S does not shift up when the throttle is released, enabling optimum acceleration when exiting a corner with no loss of stability due to changes in load. Mid-corner gearshifts are also prevented, thereby enhancing stability and safety. Under heavy braking, the system shifts down, using engine braking to slow the car. The function is enabled during high-performance use when the driver releases the throttle to apply the brake within a period of 1.5 seconds. These active downshifts enhance the car's performance, particularly when braking for a corner. Under prolonged braking, additional downshifts are performed based on the amount of brake force applied.

Tiptronic S gear selector

An incline sensor improves uphill acceleration and makes better use of engine braking on descent. An additional benefit of this function is that the load on the braking system is reduced.

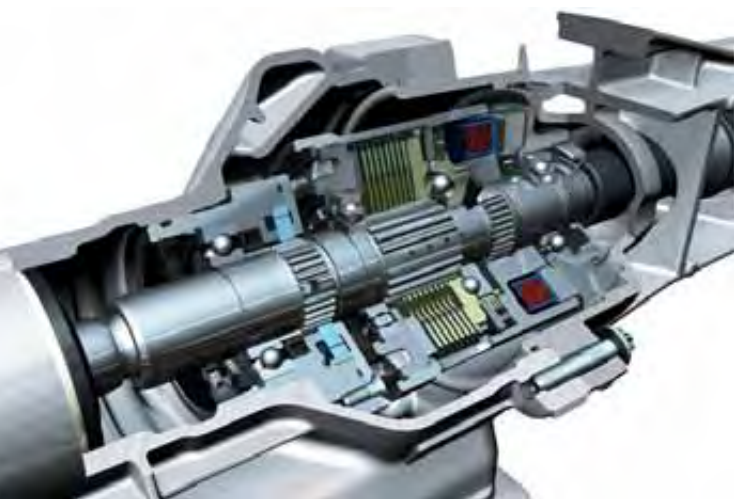
If traction is lost under braking in the wet or on snow, the system automatically changes up to restore lateral grip and bring the car back into line.

Other useful functions include a warm-up programme producing higher rpm and thus faster warm-up on the catalytic converters.

Electronically controlled all-wheel drive with Porsche Traction Management (PTM).
The intelligent application of power and torque.

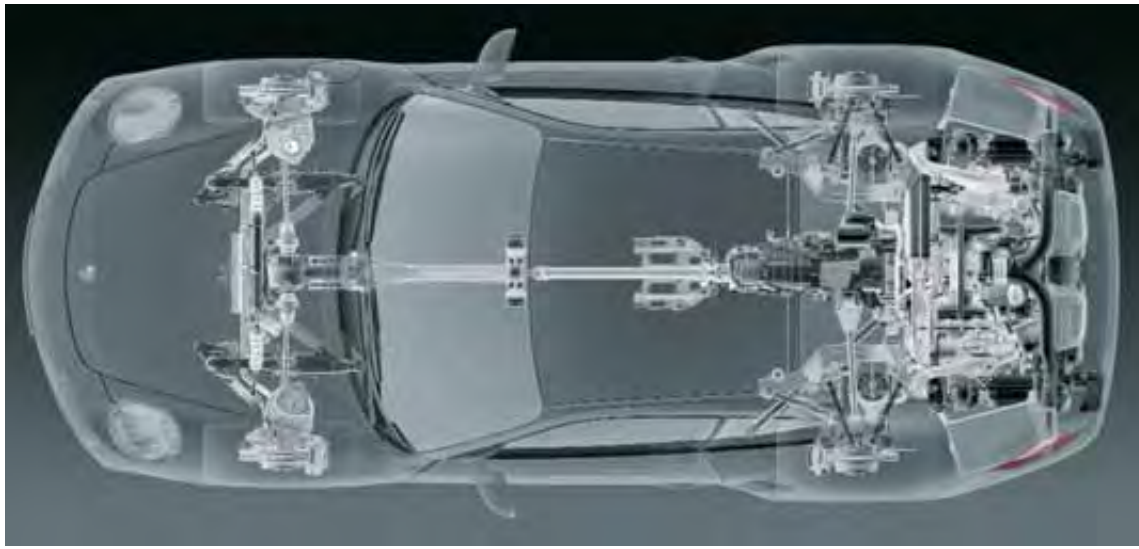
Genuine high performance calls for more than just a powerful engine. It also requires an effective means of applying that power to the road. This is achieved with the aid of permanent all-wheel drive. Or even better: the intelligent Porsche Traction Management (PTM) consisting of permanent four-wheel drive with electronically controlled multi-plate clutch, automatic brake differential (ABD) and anti-slip regulation (ASR).

Instead of having a 'passive' system with a viscous fluid-filled clutch, the 911 Turbo models use an electronically controlled coupling to vary the amount of drive torque that is transmitted to the front axle.



Electronically controlled multi-plate clutch

While viscous fluid systems respond to relative differences in front/rear axle speed, the electronic clutch offers a more immediate response to changing road scenarios. The status of the car is continuously monitored with the aid of on-board sensors. These are used to measure a range of values, including the rotational speed of all four wheels, the lateral and longitudinal acceleration of the car, and the current steering angle. The sensor data are analysed in 'real time', enabling immediate adjustments in front-end drive torque as and when required. If, for example, the rear wheels lose traction under acceleration, a greater proportion of drive torque is automatically transmitted to the front axle. The integral ASR function is also used to minimise wheel-spin. When cornering, the system controls drive to the front wheels in order to maintain optimum lateral grip. On variable-grip surfaces, traction is enhanced using the automatic brake differential (ABD) function. For optimum traction, manual-gearbox cars can also be equipped with an optional mechanical limited-slip rear differential (see page 66).



All-wheel drive

Assisting PTM is a specially uprated version of Porsche Stability Management (PSM – see page 68). Combined, these systems provide optimum torque distribution – and therefore optimum drive – in every road scenario, including high-speed straights, hairpin bends and challenging, variable-grip surfaces.

Under heavy braking where ABS is required, the multi-plate clutch severs all front drive so that each front wheel can be controlled separately by the ABS without being influenced by the rear wheel dynamics.

The benefits of the electronically controlled all-wheel drive are most evident in wet and snowy conditions. In these conditions, the 911 Turbo models offer breathtaking acceleration.

In short, PTM provides greater active safety, greater performance, and even more of the positive handling and agility you'd expect from a 911 Turbo.

Designed to reach the heights of performance.
With all four wheels firmly on the ground.

Chassis

Suspension.
Precision, strength and lightweight design.

Front axle (911 Turbo)

To transmit power with maximum efficiency, the front and rear suspension must be as stable, and as light, as possible. Reducing weight, particularly on the unsprung masses, brings major benefits in terms of driving dynamics.

The 911 Turbo models are equipped as standard with an electronic damping system: Porsche Active Suspension Management (PASM – see page 66).

The independent front suspension combines McPherson-type struts with longitudinal and transverse links. Each front wheel is precisely located, ensuring excellent handling and directional stability. Integral brake spoilers provide efficient cooling for each of the front brake units.

Rear axle (911 Turbo)

The rear axle assembly is a race-proven design featuring multi-link LSA (Lightweight, Stable, Agile) subframe-based suspension. Its lightened construction offers excellent dynamic properties. The axle kinematics improves stability under acceleration by reducing excessive compression. The lightweight strut has an aluminium damper instead of conventional steel to help improve handling and agility.

The resulting suspension enables smooth high-speed manoeuvres in all road and track scenarios. Pitch and roll are reduced to a minimum, as are tyre noise and vibration. Overall, the car offers a level of stability that is equal to the car's performance.

Steering.
Accuracy, comfort and excellent road contact.

The power-assisted steering is not only sensitive and direct, it also offers accurate feedback from the road. Minimal driver effort is required when parking, while the turning circle is a modest 10.9 metres – despite the generous tyre width.

One of the key features of the steering system is the variable-ratio gearing. Around the straight-ahead position, the ratio is less direct, enabling smoother manoeuvres on the motorway. It also reduces the risk of excessive steering inputs which could destabilise the car at high speed. Turn the wheel harder and the ratio becomes more direct, enabling better control through low-speed corners as well as easier parking manoeuvres.

In short: all the precision of a race-designed system, yet perfect for everyday road use.

Wheels.

A high-performance engine and transmission system necessitate high-performance wheels and tyres. Both 911 Turbo models come with 19-inch forged alloys as standard. The front wheel dimensions are 8.5J x 19 with 235/35 ZR 19 tyres. Rear wheel size is 11J x 19 with 305/30 ZR 19 tyres.

Forged aluminium is lighter than cast, which means the unsprung masses are reduced. It also has a higher inherent strength so less material is required. The relatively fine spoke design also enables even better ventilation of the brakes.

Visually, the wheels are further enhanced with a distinctive two-tone look. The sides of each spoke have a titanium paint finish, while the entire front surface, including the lip, has a polished finish.

Tyre Pressure Monitoring (TPM), included as standard equipment, provides early warning of tyre pressure loss. The driver is informed via the on-board computer display as well as a separate indicator light.

A range of optional 18 and 19-inch winter wheels (snow chain-compatible) are available from the Porsche Tequipment range of accessories.

Vehicles equipped with the optional Porsche Ceramic Composite Brake (PCCB) may only be fitted with 19-inch winter wheels.

19-inch Turbo wheel

Porsche Active Suspension Management (PASM). From ultimate comfort to optimum performance, all at the push of a button.

Included as standard equipment, Porsche Active Suspension Management (PASM) is an electronic active damping system. It offers continuous adjustment of the damping force on each wheel based on current road conditions and driving style.

PASM has two driver-selectable setup modes, 'Normal' and 'Sport', which share a minimal degree of overlap. While 'Normal' provides a blend of performance and comfort, the 'Sport' setup mode has a much firmer range of settings. The system responds to changing road conditions and/or driving style by continuously varying the individual damping forces within the parameters defined for the selected setup mode ('Normal' or 'Sport').

PASM uses a series of sensors to monitor the movement of the body, e.g., under acceleration and braking, during cornering manoeuvres as well as on poor road surfaces. The PASM control unit then evaluates these data and modifies the damping force on each individual wheel in accordance with the selected mode. The results are a reduction in pitch and roll as well as consistent road contact on all four wheels.

If 'Sport' mode is selected, the suspension is set to a harder damper rating. If the quality of the road surface falls below a certain threshold, the system immediately changes to a softer rating within the 'Sport' setup range. This adjustment enhances occupant comfort as well as traction and grip. When the road surface improves, PASM automatically reverts to the original, harder rating.

If 'Normal' mode is selected, and the car is driven more assertively, PASM automatically switches to a harder rating within the 'Normal' setup range. As the dampers become stiffer, the car becomes more stable, ensuring higher levels of active safety as well as greater enjoyment from your Porsche.

Limited-slip differential.

Vehicles with a manual gearbox are also available with an optional mechanical limited-slip rear differential. Key benefits include greater rear-end traction on the exit of bends as well as on variable-grip surfaces. It also compensates for changes in load caused by throttle modulation when cornering.

Rebound in 'Normal' mode – damper piston with bypass valve open

Rebound in 'Sport' mode – damper piston with bypass valve closed

Compression in 'Normal' mode – damper piston with bypass valve open

Compression in 'Sport' mode – damper piston with bypass valve closed

Porsche Stability Management (PSM).
Enhanced stability control for the 911 Turbo.

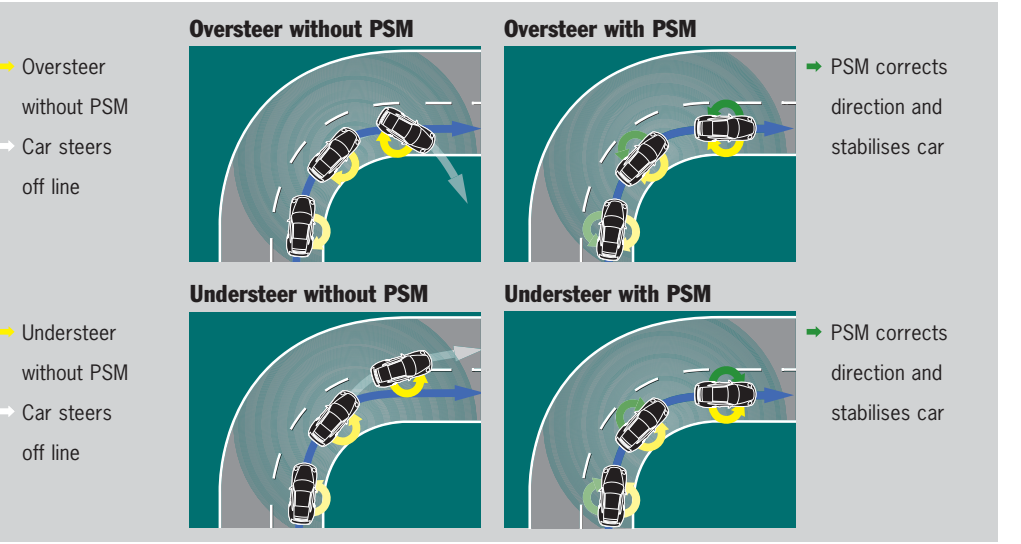
Porsche Stability Management (PSM) is an automatic vehicle stability control system designed to aid the driver in critical road scenarios. Specially revised for the 911 Turbo, it uses a range of sensors to monitor the direction, speed, yaw velocity (speed of rotation around the vertical axis) and lateral acceleration of the car. Using this information, it is possible to calculate the actual direction of travel at any given moment. If the car begins to oversteer or understeer, PSM applies selective braking on individual wheels to restore stability and optimum speed. Whenever PSM is required to intervene, an indicator light in the cockpit flashes.

When accelerating on wet or other low-grip surfaces, PSM combines with PTM and uses the automatic brake differential (ABD) and anti-slip regulation (ASR) functions to maintain traction and stability.

Included as standard equipment, PSM assists with high-precision inputs that enhance the agility of each model. When 'Sport' mode is selected on the optional Sport Chrono Package Turbo (see page 70), the PSM threshold is raised higher still to enable greater driver involvement – particularly at speeds of up to 70 km/h (44 mph).

PSM includes ABS to help minimise braking distances. System inputs are smooth and precise for greater driver comfort. Active safety is further enhanced with the aid of two additional brake functions: electronic brake prefill and brake assist.

The prefill function is automatically enabled whenever the throttle pedal is suddenly released. The pressure in the brake lines is marginally increased, bringing each of the pads into light contact with the corresponding disc. If the driver then decides to use the brakes, the system can apply the maximum force with virtually no delay.



The brake assist function is specifically designed for use in emergency stops. When the pressure on the brake pedal exceeds a predefined threshold, the PSM hydraulics automatically apply the necessary pressure to achieve maximum deceleration. The result: shorter braking distances.

If you'd rather drive without PSM, the system can be manually disabled. PSM remains present in the background and will only intervene under heavy braking where at least one front wheel requires ABS assistance. The automatic brake differential (ABD) remains active at all times. In 'Sport' mode on the optional Sport Chrono Package Turbo, PSM will only respond when ABS assistance is required on both front wheels.

Sport Chrono Package Turbo.
Increasing performance. Measurably.

The 911 Turbo is a prime example of the ongoing evolution of Porsche engineering. For another step up in all-round performance, there's the optional Sport Chrono Package Turbo. This integrated system provides simultaneous enhancement for engine, chassis and optional Tiptronic S transmission.

Key features include a digital and analogue timer located centrally on the dashboard, a 'Sport' select button on the centre console, a performance display in the standard Porsche Communication Management (PCM – see page 104), a personal memory function in PCM, and a special 'overboost' function unique to the 911 Turbo models.

When 'Sport' mode is selected, the engine management system creates a much more aggressive response to pedal inputs. To do this, it implements an alternative throttle map which relates the pedal position in the footwell to a wider angle of opening in the throttle body. In the higher gears, it uses a hard rev-limiter to protect the engine under power.

Under full acceleration, the 'overboost' function provides a temporary increase in available boost pressure of approximately 0.2 bar. The overboost is applied across the medium rev range, briefly raising the standard 620 Nm of torque to as much as 680 Nm.

In addition to the engine, 'Sport' mode is enabled in the standard PASM suspension. The dampers become firmer, enabling faster turn-in as well as better contact with the road.

On vehicles with Tiptronic S, the basic gearshift pattern is automatically switched to high-performance mode. The gearshift action is virtually instantaneous, while the shift points are timed for maximum acceleration. Lift off the throttle – even at high revs – and the system automatically shifts down to apply engine braking. There are no unwanted upshifts in manual mode when approaching the engine rev limit. Since the driver has control over every upshift, the handling of the car is smooth and assured, particularly when braking for a corner.

PSM is also adapted, with the intervention threshold raised. As a result, the car has a more natural response to lateral and longitudinal forces. Cornering agility is greatly enhanced, both when braking to turn in and applying power on exit – particularly in low-speed bends. For even greater driving pleasure, the all-wheel drive system applies a greater proportion of drive torque to the rear.

'Sport' button on centre console

For maximum manoeuvrability, PSM can be partially disabled while the car is still in 'Sport' mode. PSM simply monitors the forces acting on the car and will only intervene in the most critical scenarios, e.g., when ABS assistance is required on both front wheels.

To help you quantify this increased performance, the Sport Chrono Package Turbo includes a swivel-mounted timer on the dashboard. Functions are accessed via the control stalk for the on-board computer. Analogue dials measure hours, minutes and seconds, while a separate digital field displays whole seconds, tenths and one hundredths of a second. The digital field runs in parallel with a second display which is conveniently located in the instrument cluster.

Individual lap times can be viewed, stored and analysed using a special 'performance display' added to Porsche Communication Management (PCM). Available information includes the time and distance travelled on the current lap, as well as the number of laps completed and the respective times. The system can also display the current fastest lap and remaining range till empty. Driving times can be recorded for any stretch of road and benchmark times defined. Other useful features include a memory function accessible via PCM. This can be used to store a range of personal preferences, such as daytime driving lights, 'Welcome Home' light function, air conditioning, rain sensor activation and door-lock mode.

What is the secret of
uncompromising performance?
Always putting safety first.

Safety

Active safety: lighting system.
Bright ideas for the darkest night.

The standard lighting system on the 911 Turbo models uses the latest Bi-Xenon gas-discharge technology to achieve a light quality similar to daylight. The compact main headlights provide a broad and uniform swathe of light that increases active safety in all road scenarios.

Each headlight unit contains a gas-discharge lamp featuring dynamic range control. This automatic adjustment of the light-beam angle prevents hazardous dazzling of oncoming vehicles due to undulations in the road or the loading of the car. The brightness of the lights is approximately twice as great as that of a halogen lamp. The system also includes a headlight cleaning function as standard.

The horizontal indicators in the outer front air intakes use high-performance light-emitting diodes (LEDs) to increase brightness and visibility.

The separate front fog lights on the front apron moulding are another distinctive design feature on the 911 Turbo models.

At the rear of the car, the high-level third brake light is also equipped with high-speed LEDs.

Two additional lights on the inside of each door offer greater convenience and safety at night. The white kerb light improves visibility when exiting the car, while the red safety light warns traffic approaching from the rear that the door is open.

Standard Bi-Xenon headlight

High-level third brake light

Active safety: braking system.
Slowing faster – as standard.

Power, torque, acceleration, flexibility: in every respect, the 911 Turbo challenges the limits of performance. Which is why we also place so much importance on developing brake technology.

The standard braking system on both 911 Turbo models features six-piston fixed calipers at the front and four-piston fixed calipers at the rear.

Standard front brake (911 Turbo)

The red-painted calipers have a monobloc (one-piece) aluminium construction offering greater stability, better 'bite' characteristics under heavy braking and a further reduction in unsprung weight. The brakes are quick to apply and release, while the pedal travel is short and the bite point precise and consistent.

The front and rear discs have a generous diameter of 350 mm. All four discs are cross-drilled for better performance in the wet. The distinctive drill-hole pattern enables a faster response by allowing rapid dispersal of the water vapour generated under braking. The discs are also internally vented for better heat dispersal. The result: excellent stability in all conditions.

Other features include ABS with a smooth, low-pulse action. Cooling air is directed onto the brakes to further improve performance. A powerful 9-inch tandem brake booster unit enables easier pedal inputs.

Braking distances are further reduced with the aid of two functions in a special evolution of the standard Porsche Stability Management (PSM): electronic brake prefill and brake assist (see page 68).

Porsche Ceramic Composite Brake (PCCB).
When it comes to brake technology, nothing holds us back.

PCCB

If required, we can provide a braking system which has already proved it can withstand the toughest conditions on the track: the Porsche Ceramic Composite Brake (PCCB).

On the 911 Turbo models, the ceramic discs have a diameter of 380 mm at the front and 350 mm at the rear. The discs are made from a specially treated carbon-fibre compound that is silicated in a high-vacuum process at 1,700 °C. The resulting material is not only much harder than metal, it is also more resistant to heat.

Even at high temperatures, the thermal resistance of the PCCB disc ensures excellent dimensional stability. The ceramic material is totally resistant to corrosion and offers excellent acoustic 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.

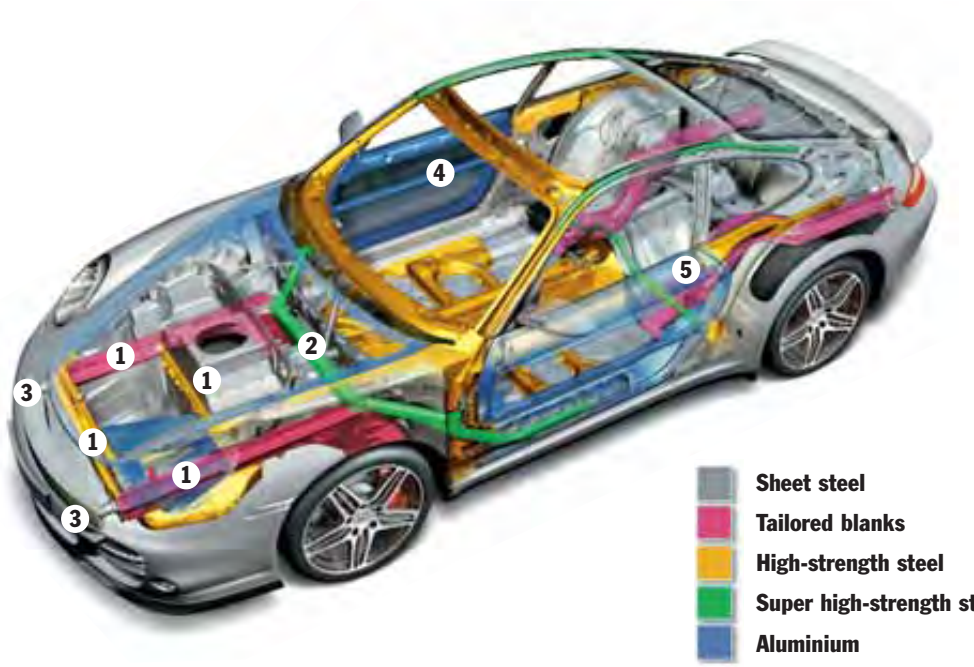
The pedal response is fast and precise with only moderate input required.

PCCB enables shorter braking distances in even the toughest road and race conditions. Excellent fade resistance ensures greater balance when slowing from race-track speeds.

The key advantage of PCCB is the total weight saving of approximately 50% over metal discs with similar construction and dimensions. As well as enhancing performance and fuel economy, this represents a major reduction in both the unsprung and rotating masses. This, of course, produces additional benefits in terms of comfort and road-holding on uneven road surfaces as well as general handling and agility.

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.

Passive safety: bodyshell structure.
Adding strength, reducing weight.



Sheet steel
Tailored blanks
High-strength steel
Super high-strength steel
Aluminium

The 911 Turbo models comply with all statutory requirements worldwide in respect of frontal, side, diagonal and rear impact protection.

The reinforced bodyshell contains a highly resilient passenger cell offering exceptional crash protection. At the front of the car, the cell is protected by a patented system of longitudinal and transverse members (1). In the event of an accident, energy is absorbed by three separate load paths, one above the other, which disperse the force of impact and minimise deformation of the passenger cell.

Additional features include an ultra-rigid bulkhead cross-member (2) made from super high-strength steel. This element is designed to absorb impact forces from the longitudinal members and thus protect the front footwells. In a minor collision, a system of easily replaceable impact absorbers (3) prevents costly damage to the underlying bodyshell structure.

The reinforced doors (4) also contribute to the overall rigidity of the car. An additional load path (5) is used to channel energy through the upper part of the shell and thus further protect the passenger cell.

In 1985, we began using super high-strength steel elements inside each door to increase side impact protection. On the 911 Turbo models, this integral reinforcement is made from tough yet lightweight aluminium. By increasing the proportion of aluminium alloys and high-strength steel, we've also improved the power-to-weight ratio. In all, approximately 20% of each model is made from aluminium.

Another important but perhaps less obvious safety feature is the high-quality surface protection. More than 30 years ago, we became the first manufacturer in the world to use a hot-dip galvanised steel shell. This exacting process remains fundamental to the legendary durability of our cars. It also ensures a consistently high standard of crash protection, even after many years on the road.

The result? A ten-year anti-corrosion warranty, a three-year warranty on the paintwork and a two-year warranty on the entire vehicle.

Passive safety: the 911 Turbo Cabriolet.
Even when the hood is open, you're never exposed.

Whether you like to drive steadily or sportily, hood up or hood down – the safety of the 911 Turbo Cabriolet matches its performance. Not only is it one of the world's fastest convertibles, it is also one of the most secure.

Torsional rigidity and flexural strength are exemplary for a two-plus-two convertible. Body flexing is minimal even on the most poorly surfaced roads, ensuring better handling and greater active safety.

The occupants are protected if the car overturns by an automatically deploying roll-over system (see illustration). Two spring-loaded roll-over bars are neatly incorporated behind each of the rear seats. The roll-over sensor – part of the airbag control unit – continuously monitors the car's pitch and roll, contact with the road, as well as lateral and longitudinal forces. If the car overturns, the top-padded bars are instantly deployed.

Passive safety: airbags.
Added side protection with intelligent deployment.

The 911 Turbo models have a unique passive protection system featuring six separate airbags. The full-size front airbags for driver and front passenger have a two-stage inflation capability. In the event of an accident, the airbag control unit measures the force and direction of impact (e.g., frontal or diagonal) before inflating each airbag accordingly. In a low-speed crash, the airbags are only partially inflated, thereby minimising discomfort to the occupants.

The airbag control unit is located in the centre tunnel where it receives additional information from a pair of impact sensors near the headlights. This arrangement allows faster and more accurate crash evaluation and thus better airbag deployment.

In addition, each model is equipped as standard with the latest generation of Porsche Side Impact Protection (POSIP). This comprehensive package features two additional airbags on each front seat instead of the usual one. A thorax airbag is located in the side of each backrest, while a head airbag is incorporated within each door. Each airbag has an approximate volume of 8 litres, ensuring excellent protection in the event of side impact. The POSIP package also includes side impact protection beams in the doors.

The head restraints for driver and front passenger form an integral part of each seat. Other standard features include an energy-absorbing steering column, three-point seat belts with height adjustment (911 Turbo only), front seat-belt pre-tensioners and force limiters, energy-absorbing elements in the dashboard, and flame-retardant materials throughout the interior.

At Porsche, we believe that less is more.
Less fuel, more performance.
Less noise, more sound.
Less servicing, more time on the road.

Environment

The 911 Turbo is dedicated to performance.
Also with respect to the environment.

At Porsche, we're exploring every possibility to improve the environmental compatibility of our cars: modern materials, reduced fuel consumption, cleaner emissions, fewer pollutants and better recyclability. This commitment is a Porsche tradition that began in the 1960s. With the latest 911 Turbo models, the rewards are even greater than ever.

Exhaust emission control.

The 911 Turbo models easily comply with the stringent EU4 exhaust emissions standard as well as LEV II regulations in the United States. Every Porsche currently in production combines high performance with low emissions compared with other cars in their class. As a result, the 911 Turbo is not only one of the most exciting cars on the road, it is also one of the cleanest.

This is achieved using a range of technologies, including twin catalytic converters and stereo Lambda or oxygen sensor circuits. One pair of sensors is used to measure the oxygen levels in each of the twin exhaust tracts. An additional pair of sensors – again, one in each tract – enables the engine management system to monitor the efficiency of the catalytic converters.*

Recycling.

Lightweight construction, long-term durability, exceptional recyclability: just three of the techniques employed by Porsche to improve the environmental compatibility of our cars.

On the 911 Turbo models, we've used weight-saving design and lightweight materials to achieve excellent fuel economy.

All materials and manufacturing processes have been carefully selected and specially adapted to minimise any impact on the environment. The twin exhaust system, for example, is made entirely from stainless steel. All lightweight materials are easily recyclable, while the variety of synthetic components has been reduced. Recycled plastics are used in all areas of the car where they meet our exacting technical requirements. To simplify processing, all materials are labelled for separate recycling. In all, approximately 85% of today's 911 Turbo is compatible with current recycling techniques.

Water-based paints are used throughout the car, thus reducing dependence on chemical solvents in both production and subsequent servicing. All areas of the vehicle are free from asbestos, CFCs, and components manufactured using CFCs. The result is a car in which environmental protection is an integral part of the design.

* Not in markets with leaded fuel.

Noise.

The 911 Turbo models comply with all current noise regulations – without resorting to engine encapsulation. To do that, we've eliminated noise at source: engine components are more rigid, moving parts lighter, and tolerances reduced to a minimum. High-efficiency silencers in durable stainless steel help to minimise noise throughout the life of the car. All that remains, both inside and out, is the 911 Turbo sound.

Servicing.

Longer service intervals are not only more convenient, they are also easier on resources. As well as benefiting the wider environment, there are two obvious advantages for you: a lower cost of ownership and more time on the road with your Porsche.

For full details of service intervals, please refer to the price list.

Fuel.

The current Porsche sportscar model range is already compatible with fuels that have an ethanol content of up to 10%. A 'biofuel' made from naturally replenishing materials, ethanol has a positive impact on the carbon dioxide balance since the plants grown for its production also absorb carbon dioxide from the atmosphere.

Fuel system.

In the fuel supply system, we've minimised the evaporation of hydrocarbons. This is achieved through a combination of active carbon filter and special fuel-tank coating. All fuel lines are made from aluminium, while those carrying vapours are made from multi-layer plastic.

Uncompromising performance deserves
to be enjoyed.
Which is why we never compromise
on comfort.

Comfort

Interior.
For the pure enjoyment of performance.

The interior design combines sporting style with the very highest standards of ergonomics, comfort and quality. The seats, dashboard, doors and rear side panels have a leather finish as standard. The standard gear lever is exclusive to the 911 Turbo models.

Other standard features include a three-spoke sports steering wheel offering 40 mm of adjustment for both height and reach. A three-spoke multifunction steering wheel – available as optional equipment – provides direct access to audio, navigation and optional telephone functions.

The front centre console now features a classic black surround. The latest Porsche Communication Management (PCM) with touch-screen is fitted as standard, as is the integral GPS navigation module with hard disk navigation (see page 104).

The air-conditioning system is fully automatic and includes a high-efficiency active carbon filter. This added convenience gives you greater freedom to enjoy the driving experience.

The tinted front glass and generous rear screen (glass rear screen on 911 Turbo Cabriolet) offer excellent fore-and-aft visibility. The front side windows have a water-repellent finish, which automatically disperses moisture and dirt. The result: optimum visibility in poor weather conditions.

Instruments.

The classic Porsche grouping of five round instruments offers a clear overview of all key information.

The digital display in the centre-left dial (speedometer) provides main and trip odometer readings. The central rev counter, featuring the ‘turbo’ logo, includes the standard on-board computer display. This multipurpose field contains a permanent digital speedometer as well as the following optional information: boost pressure, average speed, average fuel consumption, tyre pressure, current radio station, navigation instructions and remaining range till empty.

When ‘Sport’ mode is selected on the optional Sport Chrono Package Turbo, the temporary increase in torque is clearly indicated using an arrow symbol in the boost pressure display. The third display, in the centre-right dial, shows the time and external temperature.

Standard seat

Adaptive sports seat

Sport bucket seat

Standard seats.

The standard comfort seats feature full electric adjustment of fore/aft position, height, backrest angle, squab angle and lumbar support. The high side bolsters provide excellent lateral support, without restricting occupant comfort.

The generous range of adjustment options on the standard seats means that virtually every driver can find the ideal position, regardless of physical build. A memory function stores personal preferences for seat position, lumbar support and exterior mirrors.

Sports seats.

Available as a no-cost option, these mechanical sports seats offer firmer upholstery as well as higher side bolsters on the backrest and squab for added lateral support. The fore/aft position and height are manually adjustable, while the backrest is electrically controlled.

Adaptive sports seats.

This alternative seat option offers full electric adjustment of fore/aft position, squab height, backrest angle, lumbar support, squab side bolsters and backrest side bolsters. By varying the side bolsters, you can maximise comfort on long-distance journeys or lateral support on the racetrack. The additional memory function covers both exterior mirrors and all seating positions on the driver's side, including the positions of the side bolsters.

Sport bucket seats.*

For the ultimate sports experience, choose the new sport bucket seat featuring a folding backrest, integral thorax airbag and manual fore/aft adjustment. The backrest shell is made from glass/carbonfibre reinforced plastic and has a stylish carbon-weave finish. Unusually, the pivot points of the seat backrest are positioned high in the side bolsters, guaranteeing lateral support – characteristic of racing bucket seats – in the pelvis area too. Unlike conventional bucket seats, the folding backrest enables easy access to the rear luggage area.

Seat ventilation.

As an option, seat ventilation is available for the standard seats when fitted in combination with heated seats. Active ventilation of the seat centre pad and backrest, along with passive ventilation on the side bolsters, generates a flow of air. This evaporates perspiration moisture to provide a comfortable seating environment, even in the hottest weather. The intensity of the ventilation can be set individually to three levels. Simultaneous ventilation and heating can also be selected.

Rear seats.

The rear seats are surprisingly comfortable for a sportscar. The seat backrests fold down, giving you a generous rear luggage area of 190 litres (155 litres in the 911 Turbo Cabriolet).

Child seats.*

Child seats with and without ISOFIX mountings can be fitted to the front passenger seat of all seating options except the sport bucket seats. The Porsche Tequipment accessory range includes the necessary fittings and a deactivation function for the passenger airbag.

*Child restraint systems may not be used in conjunction with sport bucket seats.

Glove compartment

Storage compartments.

The 911 Turbo is not only a powerful performer, it is also extremely versatile. Added to the comfort and ergonomics of the interior are a range of practical features.

The storage compartments in the doors and centre console have matching upholstered lids. These are positioned at precisely the same height to form comfortable armrests on longer journeys. Beneath the front passenger airbag, behind a fold-down trim, is a pair of cup holders for the driver and front passenger. Beneath the cup holders is a lockable glove compartment with CD storage.

Two 12-volt sockets (including the cigarette lighter) provide power for a range of electrical devices. An optional fire extinguisher is also available, installing neatly out of sight but always within reach directly ahead of the driver's seat.

'Welcome Home' lighting.

This standard lighting function provides comfort and safety when using the car after dark. When the car is locked or unlocked using the key remote, the fog lights are automatically illuminated. The lights remain illuminated for a predefined period, lighting your way to or from the car. This delay is user-adjustable via Porsche Communication Management (PCM) on vehicles with the optional Sport Chrono Package Turbo.

ParkAssist.

This optional parking aid is automatically enabled whenever you select reverse gear. Move too close to a stationary object and a warning signal is emitted. Continue to reverse and the tone increases in frequency. The ultrasonic sensors are neatly concealed in the rear bumper.

Cruise control.

This convenient option has an effective speed range of 30–240 km/h (20–149 mph). The system is operated using a separate control stalk on the steering column and can even be used in first gear.

HomeLink®.

This optional garage door opener is freely programmable and integrated within the cockpit. It offers remote control for up to three garage, gate, home lighting and/or alarm systems. Compatible with virtually all garage and gate systems.

Rear wiper.

The optional rear wiper for the 911 Turbo (Coupé version) has a flat and streamlined wiper blade that blends with the exterior of the car.

Automatically dimming mirrors.

An auto-dimming function is included as standard for the interior and exterior mirrors. Also included is an integrated rain sensor for the front wiper system.

Slide/tilt sunroof.

This electrically operated and steplessly adjustable slide/tilt sunroof is available as an option on the 911 Turbo (Coupé version). In the tilted position, it provides pleasant ventilation of the passenger compartment, even when travelling at high speed.

Slide/tilt sunroof

Luggage compartment with PTS Aluminium trolley case M from Porsche Design Driver's Selection

Luggage compartment.

In addition to the rear luggage area, the 911 Turbo models have a boot capacity of 105 litres. The amplifier of the standard BOSE® Surround Sound System is housed below the bulkhead cover. The entire luggage compartment is lined with high-quality scratch-resistant materials.

Roof transport system.

This optional roof carrier system for the 911 Turbo (Coupé version only) is both aerodynamically efficient and elegantly styled. Made from lightweight aluminium, it is also easy to fit. The system can be combined with a range of attachments available from Porsche Tequipment, including a roof box and carriers for bikes, skis and snowboards. Maximum roof load is 75 kg.

Anti-theft protection.

The 911 Turbo models have an engine immobiliser with in-key transponder as well as a powerful alarm system featuring contact-sensitive exterior protection and radar-based interior surveillance.

Vehicle tracking system.

Both 911 Turbo models can also be equipped with an optional factory-fitted preparation enabling future installation of a vehicle tracking system obtainable from Porsche Tequipment. This system allows a stolen vehicle to be traced throughout most of Europe. The package includes a special wiring loom and a high capacity battery. A tilt sensor for the alarm system is also required.

Roof transport system

Porsche Communication Management (PCM).
Want to make the most of every journey?
Let PCM show you the way.

Porsche Communication Management (PCM)

The 911 Turbo models are fitted with the latest PCM as standard. As the central control unit for audio, navigation and communication, it is now even more powerful and multifunctional, and yet easier to operate, while retaining the basic logic of the menu system.

The main feature is the new 6.5-inch touchscreen for intuitive control. Naturally, you can also choose to operate the PCM via the button controls. The screen display is very clear with a maximum of five list entries per page. A help function is displayed at the foot of the screen.

For radio listeners, there are up to 48 memory presets, an FM twin tuner with RDS which constantly scans for the best signal for the selected station, and up to four radio aerials for optimum reception.

The integrated single CD/DVD drive, in combination with the standard BOSE® Surround Sound System, can now replay music from audio and video DVDs in 5.1 Discrete Surround Format. As an option, a six-disc CD/DVD autochanger can also be integrated in the PCM.

A TV tuner, available as an option, receives both analogue and digital television.

Navigation system.

The standard GPS navigation module now has a hard drive with map data for most European countries, allowing for considerably faster route calculation with a choice of three alternative routes.

A touchscreen allows rapid destination input and gives information on traffic or special points of interest (POI) by simply touching the symbols on the map. Route diversions can be easily and quickly included in the current route guidance.

When viewing a map, it is possible to select either a new 3D perspective or the familiar 2D display. At motorway exits, graphical turn indications are displayed for better orientation. In split screen mode, you can choose to display not only the current map overview, but also a list of icons that represent dynamic route guidance.

Electronic logbook.

The optional electronic logbook enables automatic recording of mileage, route distance, date and time, starting point and destination for each journey. Once you have downloaded the logbooks from the PCM via Bluetooth® or via the optional USB interface, the data can be analysed on your home PC using the software supplied. The software complies with all statutory requirements for automatic logbooks as specified by the German revenue authorities.

TV tuner.

A TV tuner, available as a option, receives analogue and digital television broadcasts (DVB-T) to provide entertainment between journeys. For your safety, the TV picture cannot be displayed while the vehicle is in motion.

TV tuner

Voice control system.

Almost all of the functions of the PCM can be controlled via the latest optional voice control system. The menu item is read aloud exactly as it is displayed on the screen and the voice control system recognises commands or number sequences, irrespective of the speaker. It gives audible feedback and guides you through the functions. There is no need to 'train' the system. Phone book entries can be retrieved, a radio station selected or the navigation destination entered directly by speaking whole words, rather than dictating one letter at a time.

Telephone module.

The optional GSM telephone module offers convenience and excellent reception. By inserting a SIM card directly into the PCM's integral SIM card reader, calls can be made using either the hands-free facility or the optionally available cordless handset. For even more convenience, the Bluetooth® capability of a mobile phone can be used to make calls via the SIM Access Profile (SAP)*. Once automatic pairing is complete, the mobile phone's aerial is switched off to conserve battery charge and the phone operates via the car aerial. Depending on the mobile phone model, this gives access not only to the numbers on the SIM card, but also to the phone's internal memory. Also, depending on the phone, it can be controlled using the PCM, the multifunction steering wheel or the voice control system, without it ever leaving your pocket.

Mobile phone preparation.

As an option, the mobile phone preparation kit (with or without bracket) is available for Bluetooth® connection of mobile phones which only support the hands-free profile (HFP). For connection by HFP, the PCM acts merely as a hands-free system. Here, too, the mobile phone can remain tucked away. Only the basic phone functions can be operated using the PCM. The GSM connection is established via the aerial of the mobile phone.**

Universal audio interface.

With this optional feature, the storage compartment in the centre console will contain three connections: one for your iPod®, one for a USB stick/MP3 player and one as an AUX interface for any chosen compatible audio source. The iPod® or USB stick can be operated conveniently and safely via the PCM, the multifunction steering wheel or the voice control system. The USB connection can also be used to download data from the performance display of the Sport Chrono Package Turbo and the electronic logbook.

Cordless handset for telephone module

*/** Note: see page 127.

BOSE® Surround Sound System.
One powerful sound experience meets another.

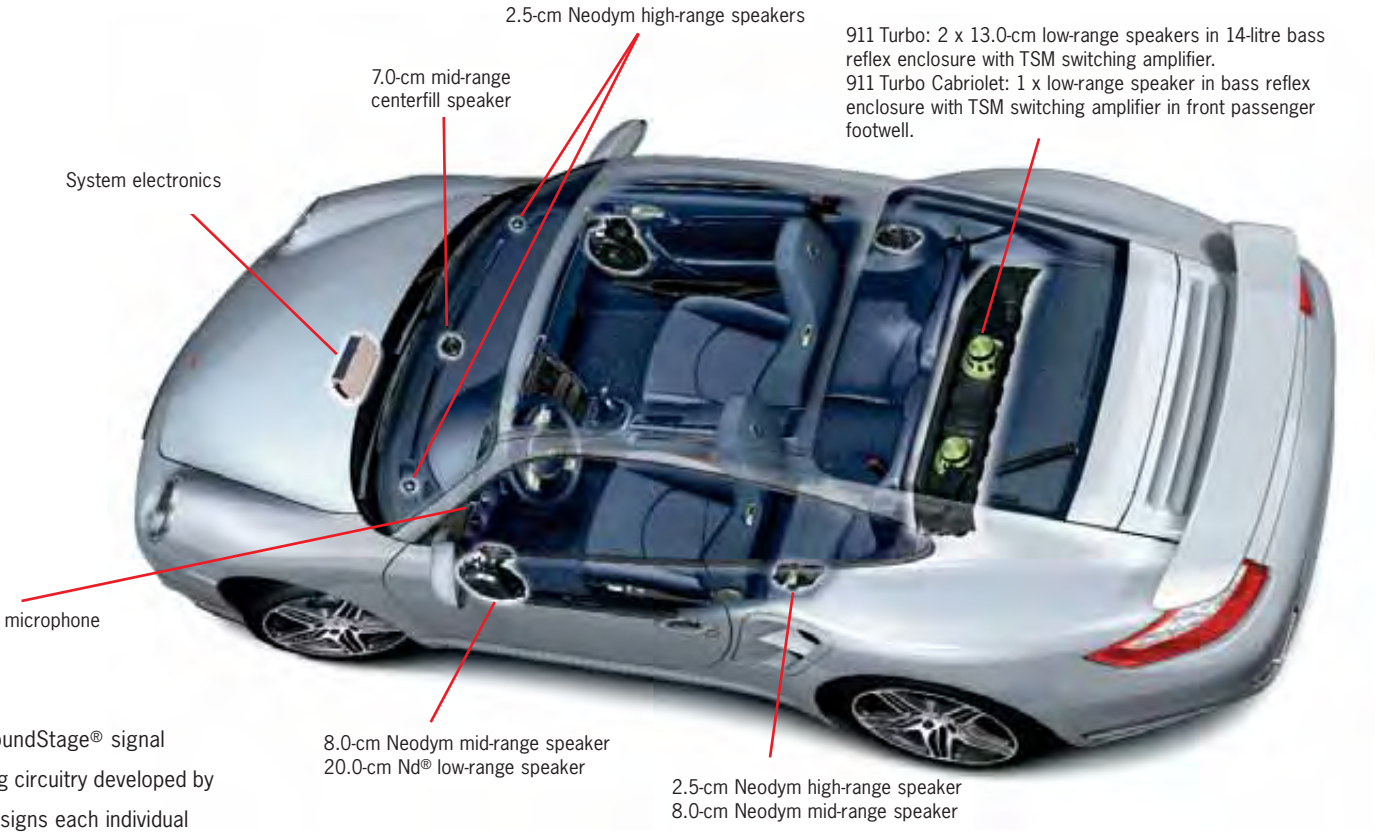
Mid-range speaker in door

The standard BOSE® Surround Sound System was specially developed for the 911 Turbo and is therefore optimally matched to its specific interior acoustics. A total of 13 loudspeakers (12 in the 911 Turbo Cabriolet) including an active subwoofer and central speaker, and a seven-channel digital amplifier with a rated output of 385 watts, to create an impressive sound experience.

When playing music from audio or video DVDs, the system now has the impressive sound spectrum of digital 5.1 recording. For music in the 5.1 format, the sound has already been recorded in a multi-channel format and is faithfully reproduced exactly as the original.

Five dedicated audio channels (front left, front right, centre, surround left, surround right) and a power channel for the bass frequencies deliver a sound that is as authentic as it is natural. The 5.1 Discrete Surround Sound is balanced, lifelike and crystal clear. A 360-degree sound experience that is as close to a live performance as you could imagine.

Naturally, you can also play conventional CDs, either in stereo or in one of the surround modes generated by the BOSE® Centerpoint® technology. The new algorithm of Centerpoint® II extracts an even more precise and realistic sound from the stereo signal.



The SurroundStage® signal processing circuitry developed by BOSE® assigns each individual audio channel, whether sourced from a DVD or generated by Centerpoint®, to a selected combination of loudspeakers and thus delivers an optimally balanced surround sound experience to all seat positions.

To complement these features, the BOSE® Surround Sound System offers a comprehensive selection of equaliser presets for customised sound. The dynamic loudness function emphasises the bass notes as the volume decreases to compensate for the diminishing sensitivity of the human hearing at these frequencies. In addition, the AudioPilot® Noise Compensation Technology uses a microphone to continuously measure the ambient noise inside the vehicle and adapts music playback automatically, to give a constant sound quality in all driving conditions.

BOSE® and Porsche: two legends in sound, perfectly combined in the 911 Turbo models.

Our only limits:

The ones that you set.

Personalisation

Colours.

The 911 Turbo is a powerful expression of character and individuality. One of the most important considerations in this respect is, of course, your choice of colour.

Exterior options range from four solid and eight metallic colours to five ‘special’ paint finishes. On the 911 Turbo Cabriolet, there are four hood colours available. Both models have a choice of 12 interior colours.

If you can’t find the colour you’d like, we can probably mix it for you. After all, when a car is this special, it should look exactly the way you want it to. For more information, see the Porsche Exclusive 911 catalogue.

To see how the available colours would look on your car, visit www.porsche.com and use the online Porsche Car Configurator.

Solid exterior colours.*

Black

Guards Red

Carrara White

Speed Yellow

Metallic exterior colours.*

Basalt Black Metallic

Macadamia Metallic

Arctic Silver Metallic

Meteor Grey Metallic

Midnight Blue Metallic

Aqua Blue Metallic**

Ruby Red Metallic

Porsche Racing Green Metallic

Special exterior colours.

Cream White

Nordic Gold Metallic

GT Silver Metallic

Atlas Grey Metallic

Malachite Green Metallic

Hood colours.

Black

Stone Grey

Metropole Blue

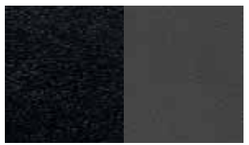
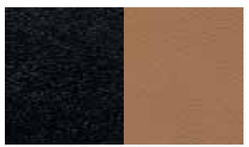
Cocoa

* Solid and metallic colours are all no-cost options.
** Available at the earliest from 09/2008.

Standard interior colours.

Leather/soft-touch paint.[1]	Carpet.	Rooflining.[2]
 Black	 Black	 Black
 Stone Grey	 Stone Grey	 Stone Grey
 Sand Beige	 Sand Beige	 Sand Beige
 Ocean Blue	 Ocean Blue	 Ocean Blue

Special/two-tone[3] interior colours.

Leather/soft-touch paint.	Carpet.	Rooflining.[2]
 Terracotta[4]	 Terracotta	 Black
 Cocoa[4]	 Cocoa	 Black
 Black and Terracotta[5]	 Terracotta	 Black
 Black and Stone Grey[6]	 Stone Grey	 Black
 Black and Sand Beige[6]	 Sand Beige	 Black

Natural leather interior.

Leather/soft-touch paint.	Carpet.	Rooflining.[2]
 Dark Grey[7]	 Dark Grey	 Black
 Natural Brown[4]	 Natural Brown	 Black
 Carrera Red[4]	 Carrera Red	 Black

See price list for recommended colour combinations.

[1] Soft-touch paint in interior colour; sun visors and inner door-sill guards with film finish in interior colour.
[2] Rooflining in Alcantara (911 Turbo) or black fabric (911 Turbo Cabriolet).
[3] Two-tone interior: black leather finish on dashboard upper section including instrument shroud, dashboard forward section including front passenger airbag cover, steering wheel rim and airbag module, door upper panels, rear side panel upper sections, A-pillar/windscreen top trim, B/C-pillar trim (911 Turbo only). All other surfaces in chosen combination colour.
[4] Soft-touch paint in interior colour; sun visors and inner door-sill guards with black film finish.
[5] Soft-touch paint in interior colour or black; sun visors and inner door-sill guards with black film finish.
[6] Soft-touch paint in interior colour or black; sun visors with black film finish, and inner door-sill guards with film finish in interior colour.
[7] Soft-touch paint in black; sun visors and inner door-sill guards with black film finish.

We've realised so many dreams with the 911 Turbo.
Now it's time for yours.

The 911 Turbo and 911 Turbo Cabriolet have a comprehensive standard specification. They also offer exceptional scope for your own personalisation ideas.

With the wide range of options presented here, you can make your Porsche unique. Combined, they enhance the individuality of your car – inside and out – as well as its performance and comfort.

Over the following pages, you'll find the full range of options listed by category. For more information on individual items, please refer to the 911 Turbo price list.

For the ultimate in personalisation for the 911 Turbo, ask about Porsche Exclusive factory-fitted modifications. You can also continue to enhance your car with Porsche Tequipment accessories.

For more information, please consult your Porsche Centre.

911 Turbo Cabriolet with Carrera Red leather and sport seat backrests in exterior colour from Porsche Exclusive

911 Turbo Cabriolet with hardtop

Exterior.

Option	911 Turbo	911 Turbo Cabriolet	I no.	Page
• Special colours	○	○	Code	115
• Deletion of model designation	W	W	498	
• ParkAssist (parking aid at rear)	○	○	635	100
• Aerokit Turbo	○	–	XAF	121
• Rear wiper	W	–	425	101
• Grey top tint on windscreen	○	•	567	
• Electric slide/tilt sunroof	○	–	650	101
• Hardtop	–	○	550	31, 120
• Roof transport system	○	–	549	102

The vehicles pictured in the chapter on personalisation may include additional options not featured in this catalogue.
For information on these options, please consult your Porsche Centre.
For information on the options featured in this catalogue, please refer to the price list.
– not available ○ extra-cost option • standard equipment W no-cost option

Engine, transmission and chassis.

Option	911 Turbo	911 Turbo Cabriolet	I no.	Page
• Tiptronic S	○	○	249	56
• Porsche Ceramic Composite Brake (PCCB)	○	○	450	80, 121
• Sport Chrono Package Turbo	○	○	640	70
• Limited-slip rear differential (mechanical)	○	○	220	66

Aerokit Turbo plus various options from Porsche Exc

Floor mats

Cruise control

Interior.

Option	911 Turbo	911 Turbo Cabriolet	I no.	Page
• HomeLink® (freely programmable garage door opener)	○	○	608	101
• Cruise control (automatic speed control)	○	○	454	101, 122
• Preparation for vehicle tracking system	○	○	674	102
• Sports seats	W	W	P77	98
• Adaptive sports seats with driver memory	○	○	P01	98
• Sport bucket seats	○	○	P03	99
• Heated seats	○	○	342	
• Seat ventilation	○	○	541	99
• Fire extinguisher	○	○	509	100
• Floor mats	○	○	810	122

The vehicles pictured in the chapter on personalisation may include additional options not featured in this catalogue.
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For information on the options featured in this catalogue, please refer to the price list.
– not available ○ extra-cost option • standard equipment W no-cost option

Interior: leather.

Option	911 Turbo	911 Turbo Cabriolet	I no.	Page
• Soft ruffled leather on seats	○	○	982	126
• Leather interior package				
– in special colour	○	○	Code	
– in two-tone combination	○	○	970	48
– in natural leather	○	○	998	123
• Three-spoke steering wheel in smooth-finish leather	W	W	459	
• Three-spoke multifunction steering wheel in smooth-finish leather	○	○	431	

Natural leather interior in Carrera Red leather plus various options from Porsche Exclusive

Macassar interior package, three-spoke multifunction steering wheel in macassar plus various options from Porsche Exclusive

Interior: macassar (dark wood with satin finish).

Option	911 Turbo	911 Turbo Cabriolet	I no.	Page
• Macassar interior package	○	○	801	124
• Three-spoke multifunction steering wheel in macassar	○	○	451	124

The vehicles pictured in the chapter on personalisation may include additional options not featured in this catalogue.
For information on these options, please consult your Porsche Centre.
For information on the options featured in this catalogue, please refer to the price list.
– not available ○ extra-cost option ● standard equipment W no-cost option

Interior: carbon.

Option	911 Turbo	911 Turbo Cabriolet	I no.	Page
• Carbon interior package	○	○	803	125
• Three-spoke multifunction steering wheel in carbon	○	○	453	125

Carbon interior package, three-spoke multifunction steering wheel in carbon plus various options from Porsche Exclusive

Three-spoke multifunction steering wheel in Aluminium Look plus various options from Porsche Exclusive

Interior: aluminium.

Option	911 Turbo	911 Turbo Cabriolet	I no.	Page
• Three-spoke multifunction steering wheel in Aluminium Look	○	○	XPV	126
• Gear/handbrake levers in aluminium I	○	○	ECA	

Audio and communication.

Option	911 Turbo	911 Turbo Cabriolet	I no.	Page
• Electronic logbook	○	○	641	105
• Voice control system	○	○	671	106
• Telephone module*	○	○	666	106
• Cordless handset for telephone module	○	○	669	107
• Mobile phone preparation*/**	○	○	619	107
• Mobile phone preparation with bracket*/**	○	○	618	107

* For information on compatible mobile phones, please contact your Porsche Centre or visit www.porsche.com.

** Mobile phone preparation: The use of a mobile phone inside a vehicle may cause an increase in the interior electromagnetic field strength and, accordingly, in the electromagnetic radiation to which passengers are exposed. If a cradle is used to mount the mobile phone, the field strength inside the vehicle can be reduced by connecting to the exterior aerial (depending on how specific mobile phones connect to the cradle). For more information about the availability of a cradle for your mobile phone, please contact your Porsche Centre. Use of the telephone module for PCM prevents exposure to electromagnetic radiation as only the vehicle's exterior aerial is used.

The vehicles pictured in the chapter on personalisation may include additional options not featured in this catalogue.
For information on these options, please consult your Porsche Centre.
For information on the options featured in this catalogue, please refer to the price list.
– not available ○ extra-cost option ● standard equipment W no-cost option

Universal audio interface

Audio and communication.

Option	911 Turbo	911 Turbo Cabriolet	I no.	Page
• Six-disc CD/DVD autochanger*	○	○	693	105
• Universal audio interface	○	○	870	107, 128
• TV tuner	○	○	676	106
• External aerial	W	W	461	

* May be incompatible with some copy-protected audio CDs/DVDs.

The vehicles pictured in the chapter on personalisation may include additional options not featured in this catalogue.
For information on these options, please consult your Porsche Centre.
For information on the options featured in this catalogue, please refer to the price list.
– not available ○ extra-cost option ● standard equipment W no-cost option

Porsche Exclusive

State of the art.
And just as you want it.

Over and above the personalisation options listed in this catalogue, you also have the option of making your Porsche even more special with the Porsche Exclusive range. From the factory. As personal and exclusive as you like, both visually and technically, inside and outside, in the best materials and with customary Porsche quality. The many design options offered by Porsche Exclusive are given in the separate Exclusive 911 catalogue. Your Porsche Centre will be pleased to give you further information on Porsche Exclusive.

Alternatively, you can call the Customer Centre in Zuffenhausen on +49 (0)711 911-25332. Please note that some Porsche Exclusive items may not be available for immediate delivery.

Factory collection

You won't be able to sleep the night before.
The night after, you won't want to.

Where better to experience the first moments with your Porsche than at the place where it all began. With factory collection, you can enjoy the pleasure of Porsche ownership even before your car leaves the factory.

Almost 60 years ago, our first series production models were crafted by hand in a modest red-brick building here in Stuttgart-Zuffenhausen. From those humble beginnings, the factory has evolved into one of the most advanced production facilities in the world. Today, all Porsche engines are constructed here along with all 911 models. You can also take delivery of any model in the Boxster or Cayman range.

Our factory collection programme offers a unique insight into the origins and making of your Porsche. Like your car, a visit to Zuffenhausen is an absorbing blend of past and future. To take advantage of this exclusive opportunity, please inform your Porsche Centre when placing your specification. A collection date can then be arranged when final information regarding the build of your car has been confirmed. Your Porsche can be collected on any working day* (Monday to Friday) at a time that suits your requirements.

The easiest way to travel from outside Germany is to fly to Stuttgart or Frankfurt and then continue by train, taxi or hire car (which we can return on your behalf).

Please note that there are a number of formalities that must be completed when you take delivery of your Porsche. For full details, please consult your Porsche Centre, who will also be happy to assist when it comes to planning your trip.

* Please note that collection is not possible during the factory shutdown periods.

Vehicle presentation area in Stuttgart

Everything about a Porsche is more intense.
Especially the anticipation.

Your visit to Zuffenhausen is also an opportunity to explore the origins of your Porsche. Our factory tour provides a fascinating insight into the various production processes. These range from engine assembly and the preparation of upholstery, to the 'marriage' of powertrain/chassis and body – one of the key moments in the construction of any car. The factory tour is one of our oldest traditions and is always conducted by a Porsche enthusiast with extensive knowledge of the marque.

Next, you can visit the Porsche Museum, where you'll find a remarkable range of Porsche models from every era of our history. A new Porsche Museum – scheduled for late 2008 – will offer even more exhibits, even more historical interest and even more of the Porsche experience.

For lunch, you can choose from a three-course menu in our exclusive guest restaurant.

If there's time, you can enjoy some additional refreshments in the customer lounge or browse in the Porsche Design Driver's Selection shop.

The moment you've been waiting for.

The highlight of your visit will undoubtedly be the moment when you take delivery of your Porsche. The keys will be presented by a member of the Factory Collection Team who will explain everything you need to know about the car.

When you step inside and start the engine, you'll finally experience what it means to own your own Porsche.

All that remains is the journey home – which is sure to live long in the memory.

VIP restaurant

Porsche Design Driver's Selection shop

Porsche Centres
Your Porsche Centre can assist you with every aspect of purchasing and owning your Porsche. You will also find a wide range of products and services, including genuine Porsche parts and accessories.

Porsche Assistance
Enjoy peace of mind with our exclusive breakdown and accident recovery service. Membership is free when you buy a new Porsche.

Porsche Financial Services
Our innovative suite of financial services is specially tailored to the needs of Porsche owners. Products range from attractive finance and leasing options to vehicle insurance and the Porsche Card.

Porsche Exclusive
Realise your vision of the perfect Porsche with our factory customisation programme. From styling enhancements to performance upgrades, all modifications are uniquely handcrafted for your Porsche.

Porsche Tequipment
Personalise your Porsche at any time after purchase with the Tequipment range of approved accessories. Designed exclusively for your car, every product is fully guaranteed.

Porsche Design Driver's Selection
With products ranging from fashion and accessories to tailored luggage, this unique collection combines quality and style with everyday practicality.

Service

Porsche Online
For all the latest news and information from Porsche, go to www.porsche.com.

Porsche Used Car Programme
Porsche Approved is the simple way to find the perfect pre-owned Porsche, anywhere in the world. Every car is rigorously tested and comes with a comprehensive vehicle warranty.

Porsche Classic
Your specialist source for genuine Porsche parts and technical documentation as well as servicing, repair and restoration for all types of classic Porsche. Find out more at www.porsche.com/classic.

Christophorus
Our bi-monthly magazine for Porsche owners has news, interviews and a wide variety of features from throughout the world of Porsche.

Porsche Clubs
Since the first Porsche Club was founded in 1952, their number has grown to 607 with a total of 120,000 members worldwide. To find out more, call +49 (0)711 911-78307 or go to www.porsche.com.

Porsche Driving Experience
1. Porsche Travel Club.
Exclusive driving holidays and incentive ideas combining luxury and adventure, worldwide. To find out more, call +49 (0)711 911-78155.
E-mail: travel.club@porsche.de

2. Porsche Sport Driving School.
Develop your skill and explore your Porsche with the Porsche Sport Driving School. To learn about events at some of the world's most famous racing venues, call +49 (0)711 911-78683.
E-mail: sportdrivingschool@porsche.de

Ask your Porsche Centre for the latest brochures from Porsche Exclusive, Porsche Tequipment, Porsche Design Driver's Selection and the Porsche Driving Experience.

For every cubic centimetre,
even greater power and torque.

For every extra horsepower,
even lower weight.

For ultimate performance
and driving pleasure.

The 911 Turbo.

Summary

Technical data

	911 Turbo
Engine	
Cylinders	6
Displacement	3,600 cm^3
Max. power (DIN)	353 kW (480 hp)
at	6,000 rpm
Max. torque	620 Nm (with overboost: 680 Nm)
at	1,950–5,000 rpm (with overboost: 2,100–4,000 rpm)
Compression ratio	9.0:1
Transmission	
Layout	All-wheel drive with electronically controlled multi-plate clutch
Manual gearbox	6-speed
Tiptronic S (optional)	5-speed
Chassis	
Front axle	McPherson strut suspension
Rear axle	LSA multi-link suspension
Steering	Variable steering ratio, power-assisted (hydraulic)
Turning circle	10.9 m
Brakes	6-piston monobloc aluminium fixed calipers at front, 4-piston monobloc aluminium fixed calipers at rear, discs internally vented and cross-drilled
Vehicle stability system	Enhanced PSM (with ABS 8.0)
Anti-lock braking system	ABS 8.0
Wheels	Front: 8.5J x 19 ET 56
	Rear: 11J x 19 ET 51
Tyres	Front: 235/35 ZR 19
	Rear: 305/30 ZR 19

	911 Turbo
Weights	Manual gearbox/Tiptronic S
Unladen weight (DIN)	1,585 kg/1,620 kg
Unladen weight (EC)*	1,660 kg/1,695 kg
Permissible gross weight	1,950 kg/1,980 kg
Performance	Manual gearbox/Tiptronic S
Top speed	310 km/h/310 km/h (193 mph/193 mph)
0–100 km/h (0–62 mph)	3.9 secs/3.7 secs
0–160 km/h (0–99 mph)	8.4 secs/7.8 secs
0–200 km/h (0–124 mph)	12.5 secs/12.2 secs
Flexibility (80–120 km/h) (50–75 mph)	3.8 secs/3.5 secs (5^{th}/4^{th} gear)
in second highest gear	
Fuel consumption/emissions**	Manual gearbox/Tiptronic S
Urban in l/100 km (mpg)	18.8 (15.0)/19.8 (14.3)
Extra urban in l/100 km (mpg)	9.5 (29.7)/9.6 (29.4)
Combined in l/100 km (mpg)	12.8 (22.1)/13.6 (20.8)
CO_2 emissions in g/km	307/326
Dimensions/aerodynamics	
Length	4,450 mm
Width	1,852 mm
Height	1,300 mm
Wheelbase	2,350 mm
Luggage compartment volume	105 litres
Tank capacity	67 litres
(refill volume)	
Drag coefficient	0.31

* Weight is calculated in accordance with the relevant EC Directives and is valid for vehicles with standard specification only. Optional equipment increases this figure. The figure given includes 68 kg for the driver and 7 kg for luggage.

** Data determined for standard specification in accordance with the 80/1268/EEC measurement method. The data do not relate to an individual vehicle nor do they constitute part of the offer. They are intended solely as a means of comparing different vehicle types. Further information on the individual vehicles is available from your Porsche Centre.

	911 Turbo Cabriolet
Engine	
Cylinders	6
Displacement	3,600 cm^3
Max. power (DIN)	353 kW (480 hp)
at	6,000 rpm
Max. torque	620 Nm (with overboost: 680 Nm)
at	1,950–5,000 rpm (with overboost: 2,100–4,000 rpm)
Compression ratio	9.0:1
Transmission	
Layout	All-wheel drive with electronically controlled multi-plate clutch
Manual gearbox	6-speed
Tiptronic S (optional)	5-speed
Chassis	
Front axle	McPherson strut suspension
Rear axle	LSA multi-link suspension
Steering	Variable steering ratio, power-assisted (hydraulic)
Turning circle	10.9 m
Brakes	6-piston monobloc aluminium fixed calipers at front, 4-piston monobloc aluminium fixed calipers at rear, discs internally vented and cross-drilled
Vehicle stability system	Enhanced PSM (with ABS 8.0)
Anti-lock braking system	ABS 8.0
Wheels	Front: 8.5J x 19 ET 56
	Rear: 11J x 19 ET 51
Tyres	Front: 235/35 ZR 19
	Rear: 305/30 ZR 19

	911 Turbo Cabriolet
Weights	Manual gearbox/Tiptronic S
Unladen weight (DIN)	1,655 kg/1,690 kg
Unladen weight (EC)*	1,730 kg/1,765 kg
Permissible gross weight	2,000 kg/2,035 kg
Performance	Manual gearbox/Tiptronic S
Top speed	310 km/h/310 km/h (193 mph/193 mph)
0–100 km/h (0–62 mph)	4.0 secs/3.8 secs
0–160 km/h (0–99 mph)	8.6 secs/8.1 secs
0–200 km/h (0–124 mph)	12.8 secs/12.6 secs
Flexibility (80–120 km/h) (50–75 mph)	3.9 secs/3.6 secs (5^{th}/4^{th} gear)
in second highest gear	
Fuel consumption/emissions**	Manual gearbox/Tiptronic S
Urban in l/100 km (mpg)	19.2 (14.7)/20.2 (14.0)
Extra urban in l/100 km (mpg)	9.5 (29.7)/9.6 (29.4)
Combined in l/100 km (mpg)	12.9 (21.9)/13.7 (20.6)
CO_2 emissions in g/km	309/328
Dimensions/aerodynamics	
Length	4,450 mm
Width	1,852 mm
Height	1,300 mm
Wheelbase	2,350 mm
Luggage compartment volume	105 litres
Tank capacity	67 litres
(refill volume)	
Drag coefficient	0.31

* Weight is calculated in accordance with the relevant EC Directives and is valid for vehicles with standard specification only. Optional equipment increases this figure. The figure given includes 68 kg for the driver and 7 kg for luggage.

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The models featured in this publication are approved for road use in Germany. Some items of equipment are available as extra-cost options only. The availability of models and options may vary from market to market due to local restrictions and regulations. For information on standard and optional equipment, please consult your Porsche Centre. Details of design, supplied equipment, appearance, performance, dimensions, weight, fuel consumption and operating costs and other product information are correct to the best of our knowledge at the time of going to press. Porsche reserves the right to alter specifications and colours which may differ from those illustrated. Errors and omissions excepted.

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Dr. Ing. h.c. F. Porsche AG
Porscheplatz 1
70435 Stuttgart
Germany
www.porsche.com

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