



PORSCHE



# Press Information

Porsche Boxster Spyder

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The Porsche Boxster Spyder

## **Light and Open, Powerful and Efficient**

Porsche is introducing a new top model in the Boxster Series – the Boxster Spyder weighing just 1,275 kg or 2,811 lb, not just 80 kg or 176 lb lighter than the Boxster S, also the lightest model in the entire Porsche range.

Clearly recognisable at very first sight, this new mid-engined roadster represents the pure form and design of a genuine sports car from Porsche – light, powerful, consistently open, and extremely efficient. Indeed, precisely this is the formula already applied on Porsche's most successful road-going sports and racing cars ranging from the legendary 550 Spyder all the way to the RS Spyder so successful in motorsport today. And now the Boxster Spyder is continuing this philosophy with full homologation for the road, entering the market in February 2010 as the third model supplementing the Boxster and Boxster S.

This new member of the Boxster family stands out clearly at very first sight from the other versions of Porsche's mid-engined roadster. Quite simply because the Boxster Spyder has been developed first and foremost for driving in the open air, the low-slung and light soft top extending far to the back serving merely to protect the driver and passenger from the glaring sun and bad weather.

Together with the even lower side windows and the two striking domes on the rear lid stretching all the way to the passenger compartment, the roof, when closed, gives the Boxster Spyder a sleek and stretched silhouette reminiscent of the Carrera GT.

Lightweight engineering plays a significant role on the new model, with both the doors and the long-stretched rear lid made of aluminium. Sports bucket seats and light 19-inch wheels in special Spyder design also help to reduce the weight of the car. Together with the lower centre of gravity, the brand-new sports suspension lowering the entire body by 20 millimetres or almost 0.8", and the rear differential featured as standard, this makes the Boxster Spyder just as dynamic to drive as it is to behold in its sporting looks.

The Boxster Spyder is powered by a 3.4-litre six-cylinder with Direct Fuel Injection fitted up-front of the rear axle. Maximum output is 320 bhp – 10 bhp more than in the Boxster S.

Featuring the PDK Porsche-Doppelkupplungsgetriebe (Double Clutch Gearbox) and the Sport Chrono Package, the new Spyder, benefiting from Launch Control, accelerates to 100 km/h in a mere 4.8 seconds. Again with optional PDK, fuel consumption is 9.3 litres/100 km (equal to 30.4 mpg imp) in the NEDC New European Driving Cycle. Top speed, finally, is 267 km/h or 166 mph, naturally with the roof open.

In its fundamental concept, the entire Boxster family is acknowledged as the successor to the legendary 550 Spyder built back in 1953, both cars sharing the same mid-engined roadster concept, low weight, the true spirit of back-to-the-roots fun on the road, as well as supreme agility combined with equally supreme driving pleasure.

Porsche presented the 550 Spyder in October 1953 at the Paris Motor Show. This two-seater was indeed the first sports car from Stuttgart-Zuffenhausen developed especially for racing, but was also homologated for road use. In the years to come the 550 Spyder weighing just 550 kg or 1,213 lb scored countless racing wins on race tracks and in the road races so popular at the time. Later it was followed by further extremely successful versions of the Porsche Spyder, such as the 718 RS 60 in 1960.

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The Porsche Boxster Spyder

## **Roadster Motoring at its Best – Light and Agile**

The Spyder is back: The new top version of Porsche's open two-seater with its mid-mounted engine clearly and convincingly visualises the purest form of the genuine Porsche sports car – light, powerful, consistently open, and extremely efficient.

Applying precisely this formula, Porsche has created its most successful road-going sports cars and racing cars over the years, ranging from the legendary 550 Spyder all the way to the RS Spyder so successful in motorsport today. Now the Boxster Spyder is continuing this philosophy with full homologation for road use, entering the market in February 2010 as the third and most powerful model in the range to join the Boxster and Boxster S.

Boxster Spyder 3.4-litre six-cylinder, 320 bhp; rear-wheel drive; six-speed manual gear-box, optional seven-speed Porsche-Doppelkupplungsgetriebe (PDK); acceleration 0 – 100 km/h in 5.1 seconds, with PDK in 5.0 seconds, with Launch Control in 4.8 seconds; top speed 267 km/h (166 mph), with PDK 265 km/h (164 mph); average fuel consumption in the NEDC 9.7 ltr/100 km (equal to 29.1 mpg imp), with PDK 9.3 ltr/100 km (equal to 30.4 mpg imp).

The most outstanding feature of a Porsche proudly bearing the name “Spyder” is light-footed agility. This means minimum weight combined with maximum driving dynamics from the engine. Precisely this is why the doors of the Boxster Spyder are made of aluminium, together approximately 15 kg or 33 lb lighter than the conventional doors of the “regular” Boxster. Two extra-light sports bucket seats reduce the weight of the car by another 12 kg or 26 lb, while the strikingly designed single-piece rear lid likewise made of aluminium ensures a further reduction in weight by 3 kg or 6.5 lb.

The newly developed ten-spoke wheels in special Spyder design now weigh a total of only about 39 kg or 86 lb, making them the lightest 19-inch wheels throughout Porsche's entire range of wheels.

Last but certainly not least, Porsche's development engineers have saved weight simply by leaving out certain items and features. The side windows, for example, are lower and lighter, the Boxster Spyder in standard trim has neither a radio nor air conditioning, and even the winter-proof soft top has been replaced by a simple soft roof serving merely to keep out glaring sunshine and bad weather. Weighing less than 6 kilos or 13 lb overall, this lightweight roof reduces not only the overall weight of the car, but also, together with other features, serves to lower the centre of gravity of the Boxster Spyder by 25 millimetres or almost 1", ensuring improved driving dynamics and reducing the car's roll angle.

In all, the new two-seater is 80 kg or 176 lb lighter than the Boxster S. With its unladen weight of 1,275 kg or 2,811 lb, the Boxster Spyder is indeed the lightest model within the entire range of Porsche cars, with a power-to-weight ratio beneath the magic limit of 4 kg/bhp. To be precise, the power-to-weight ratio is 3.98 kg/bhp, far less than the power-to-weight ratio of, say, the Carrera S.

In combination with the mid-engine concept, this creates a truly outstanding driving machine. Apart from enhanced driving dynamics, the driver also benefits from an even higher standard of efficiency, with the Boxster Spyder consuming 0.1 litres/100 km less than the Boxster S, despite the extra power of its engine.

#### **Light sunsail instead of a conventional cabriolet roof**

The Boxster Spyder is intended primarily for driving in the open air. Hence, an extra-light low-slung soft roof replaces the usual electrically operated folding soft top on the "conventional" Boxster.

This tight-fitting "cap" serves to protect the driver and passenger whenever required from glaring sunshine and bad weather and is held in position on a carbon frame weighing just about 5 kg or 11 lb, fitting easily and conveniently within a matter of seconds on the roof frame.

A wind deflector made of transparent plastic likewise comes as standard. The roof itself extends into two belt-shaped ends at the rear hooking into lashing points on the open rear lid when pulling up the roof. When closing the soft top, in turn, the rear lid acts as a lever tightening the roof in position.

Top speed is limited with the roof closed to 200 km/h or 124 mph and for reasons of its design and structure the light soft top is not sufficiently tight for washing the car in a car wash.

The two striking domes on the new rear lid extending in one piece all the way to the back of the car and the side windows tapering out to the rear give the Boxster Spyder a sleek and stretched silhouette reminiscent of the Carrera GT.

The third brake light forms a bar between the two domes, the long and stretched-out rear end merging at the back into a spoiler fixed permanently in position and extending beyond the rear lid over the wings of the car to almost fully eliminate any lift forces on the rear axle.

The side air intakes between the doors and the rear axle are protected by a black mesh grid resting on a titanium-coloured frame. The large side intakes at the front are enclosed within titanium-coloured surrounds, with two black bars stretching from one side to the other. The upper of these two bars houses a short and slender LED positioning light. Apart from this special light unit, the Boxster Spyder does not have separate lights at the front incorporating the foglamps or daytime driving lights, as on the other models. Instead, these functions are provided by the halogen headlights on the low beam.

Two black lips on the front spoiler improve the car's aerodynamic balance and, accordingly, its handling. A trim bar proudly bearing the name "Porsche", extending between the front and rear wheel cutouts on the same level as the door bottom, offers a significant token to the history of the Company, since the same bar characterised the Porsche 908 and 909 racing cars back in the 1970s, as the winners of countless races the world over.

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## Engine and Transmission

### **Six-Cylinder with 320 bhp: the Most Powerful Boxster**

The Boxster Spyder is powered by a 3.4-litre six-cylinder with Direct Fuel Injection fitted upfront of the rear axle. Maximum output is 320 bhp – 10 bhp more than on the Boxster S. This extra power comes in particular from the even more consistent utilisation of the high-speed engine concept so typical of Porsche, with the power unit featured in the Boxster Spyder reaching its peak output at 7,200 rpm, 950 rpm above the maximum engine speed of the Boxster S. A further point is that the speed range continues all the way to 7,500 rpm. And while the Boxster S develops its maximum torque between 4,400 rpm and 5,500 rpm, the power unit featured in the Boxster Spyder reaches its peak torque of 370 Nm/273 lb-ft (up by 10 Nm) at 4,750 rpm.

Designed and built as a classic Porsche engine, the flat-six power unit offers optimum qualities for the Spyder with its consistent focus on driving dynamics: Low weight, a flat engine structure with a low centre of gravity, inner friction reduced to a minimum, and small moving masses ensure high power on low fuel consumption. The crankcase is split up into two sections and comes as a closed-deck structure.

Engine mounts with additional lateral stops and individual levels of graded hardness combine sporting comfort with superior driving dynamics, with the power unit firmly connected to the body and therefore restricting relative movement to a minimum.

#### **Outstanding efficiency: Direct Fuel Injection and VarioCam Plus**

A particular highlight of the 3.4-litre power unit featured in the new Boxster Spyder is Direct Fuel Injection with homogeneous fuel/air mixture formation. This ensures a particularly smooth and consistent distribution of air and fuel within the combustion chamber in the interest of optimum combustion quality at all times. The injectors are located between the two intake valves, facing directly at the two air paths.



This provides an even better mixture of air and fuel within the cylinders as an important prerequisite for a clean and complete combustion process.

Direct Fuel Injection has a positive impact not only on the efficiency of the engine, but also on the characteristics so typical of the power unit in the Boxster Spyder. And this the driver will feel directly and noticeably at all times: with fuel being injected fractions of a second prior to the actual combustion process, the power unit responds directly and spontaneously to even the slightest movement of the gas pedal.

The gas charge cycle in the engine is masterminded by VarioCam Plus camshaft control with adjustment of valve timing on the intake side and variable valve stroke, offering the ability to handle even very high engine speeds and a rapid change in revs. Valve stroke is adjusted by hydraulically switching cup tappets on the intake side of the engine operated by two cams varying in size on the intake camshaft.

VarioCam Plus offers optimum power and torque, on the one hand, together with greater fuel economy, enhanced emission management, and improved running refinement and smoothness, on the other. In conjunction with Direct Fuel Injection, this provides an ideal combination of qualities to increase engine power and torque while at the same time reducing fuel consumption.

The oil pump with on-demand control makes a further contribution to the outstanding efficiency of a Porsche engine. The oil circuit on the new power units follows the principle of integrated drive sump lubrication and is made up of an oil pump with four suction stages and one fully controlled pressure stage. Engine management adjusts the amount of oil delivered to current requirements at all times, using a gear adjustable hydraulically along a shaft in order to vary the width of gear engagement and, as a result, the geometric volume of the gearset in the pressure stage currently engaged. As a result, the oil pump does not consume more energy than required and ensures exactly the right level of lubrication at all times.

**Resonance intake system with switching flaps**

Fresh air is supplied to the 3.4-litre power unit by a resonance intake system with a resonance and distributor manifold between the right and left intake distributor pipe. Switching according to current requirements, the resonance flap serves to adjust the oscillation of air within the intake system to the current level of engine speed, providing high torque at low speed, a smooth and consistent torque curve, and a high level of maximum power. The twin-chamber distributor pipe with its switching flap, in turn, improves torque also at low engine speeds.

**Emission management of an exemplary standard**

The power unit featured in the Boxster Spyder fulfils the EU 5 emission standard in Europe as well as the ULEV (Ultra Low Emission Vehicle) standard in the USA. To offer this efficiency, the 3.4-litre power unit starts in the high-pressure stratified mode when cold and then moves directly to the catalyst heating phase. In this process the exhaust gas temperature is increased by dual injection heating up the catalyst as quickly as possible. The air/fuel mixture is ignited at a very late point, serving to further increase exhaust gas temperature and reduce emissions during the starting period.

Ultimately, the newly developed exhaust system with its two pre-catalysts integrated in the manifolds close to the engine, together with two main catalysts, serves to clean the exhaust gases emitted by the engine with maximum efficiency.

As a clear sign of distinction, the Boxster Spyder bears testimony to its sporting character with a double tailpipe finished in black, reminiscent of the tailpipe on the 911 GT3.

**Six-speed manual gearbox with gear upshift display helping to save fuel**

In standard trim the Boxster Spyder conveys the power of the engine to the rear wheels via a six-speed manual gearbox – and here again, Porsche offers the driver very helpful support for economic motoring by means of a gear upshift display also on the manual gearbox version of the Boxster Spyder. This display comes in the shape of a triangle in the rev counter

to the right of the digital speedometer. As a function of the gear in mesh, engine speed and the position of the gas pedal, the display flashes on to tell the driver when to shift up a gear in order to save fuel. However, this recommendation is provided only if the driver is able to maintain his current speed or acceleration in the next gear when shifting up.

**Even more sporting and efficient:**

**Porsche PDK Doppelkupplungsgetriebe or Double Clutch Gearbox**

For an even higher standard of driving dynamics and all-round economy, Porsche offers the seven-speed PDK Doppelkupplungsgetriebe or Double-Clutch Gearbox also on the Boxster Spyder. In principle PDK is made up of a conventional manual gearbox subdivided into two separate gearbox units and a hydraulic control unit in the middle. It is built around two concentrically arranged, interacting multiple-plate clutches running in an oil bath and operated hydraulically. One clutch acts on the first gearbox unit incorporating the uneven gears and reverse gear, the other clutch is for the second gearbox unit with the even gears. Via a series of pressure valves, the hydraulic control unit operates both the clutches and the shift cylinders activating the desired gear.

The result of this sophisticated technology is a very fast gearshift free of vibration and without any interruption of torque and power, with the clutch on one gearbox unit being opened and the clutch on the other unit closed simultaneously. The big advantage is that gears shift up to 60 per cent faster than on a manual gearbox and converter automatic transmission, simply because they are already in mesh when shifting.

With the selector lever in position D, gears are shifted fully automatically in an extra-smooth and comfortable process. The driver may however also shift gears manually through buttons on the steering wheel or simply by briefly flipping the selector level in the desired direction.

As an option the Boxster Spyder is also available with a three-spoke steering wheel featuring gearshift paddles, the paddle on the right serving to shift up, the paddle on the left to shift down.

Whatever mode the driver chooses, he shifts gears without having to press down the clutch pedal. Gears 1 – 6 come with a sporting transmission ratio, the Spyder reaching its top speed in sixth gear. Seventh gear, in turn, comes with a long transmission ratio to save fuel.

A further advantage of the PDK transmission is the reduction of weight – despite two additional gears, it weighs about 10 kilos or 22 lb less than the former Tiptronic S transmission.

### **Sport Chrono Package with Launch Control and racing gearshift strategy**

Like all Boxsters, the new Boxster Spyder is available as an option with both the Sport Chrono Package and, in conjunction with PCM Porsche Communication Management, the Sport Chrono Package Plus.

Both packages come with an analogue stop-watch on the instrument panel as well as a Sport mode for the engine and PSM Porsche Stability Management activated by the Sport button.

Two other features coming in combination with PCM Porsche Communication Management are the performance display in the instrument cluster and a separate memory. And if the Boxster Spyder is equipped with the PDK Porsche-Doppelkupplungsgetriebe, a Sport Plus button is also included, serving to activate an uncompromisingly sporting gearshift programme for optimum performance on the race track.

The Sport Plus programme also serves to activate Launch Control for optimum acceleration from a standing start. To accelerate like in a racing car from a standstill, all the driver has to do is press down the brake pedal with his left foot and kick down the gas pedal with his right foot, revving the engine up to 6,500 rpm. Then, taking his foot off the brake pedal, he will set off in the car with maximum acceleration. In that case the Spyder accelerates to 100 km/h in 4.8 seconds, that is another 0.2 seconds faster, making the Boxster Spyder the fastest mid-engined Porsche in this discipline.

## Suspension and Brakes

### **Newly Developed Sports Suspension**

The new, specially developed sports suspension is one of the reasons for the exceptional performance the Boxster Spyder has to offer. In its layout and configuration, the sports suspension follows racing principles, one obvious change being that the new top model in the range is 20 millimetres or 0.79" lower than the Boxster S.

This lower position of the body inevitably comes with shorter and stiffer springs as well as modified anti-roll bars both front and rear. Another special feature is the dampers with their harder setting.

Yet a further important point is that the wheel track of the Spyder is 4 millimetres or 0.16" wider at the front and 8 millimetres or 0.32" at the rear, thanks to wheels with modified pressure depth. Extremely low wheel weight, finally, reduces unsprung masses and additionally improves the car's driving precision.

This specific layout and configuration of the suspension, in conjunction with almost perfect 50:50 axle load distribution and the position of the car's occupants as well as the engine between the axles, ensures a very dynamic driving experience in the Boxster Spyder combined with superior driving stability and a high level of lateral acceleration. In practice, therefore, the Spyder is even more agile and precise in its steering qualities than the other models in the Boxster range, with virtually no body roll or dive. At the same time the relatively long wheelbase of the car serves to add further stability, above all when driving in a straight line.

The front suspension is made up of a spring strut axle incorporating longitudinal and track control arms, a configuration ensuring very precise wheel guidance and a high standard of roll comfort all in one. Additional rebound stop springs in the dampers reduce the roll angle, keeping the Boxster Spyder even more stable under high lateral acceleration.

The rear spring struts rest on special spring mounts additionally dampening the transmission of bumps, noise and vibration to the body of the car and improving roll comfort accordingly.

**Rear axle differential lock featured as standard**

A differential lock on the rear axle is clearly a must on a purist roadster with racing car qualities. In this case the differential comes with 22 per cent locking action under power and 27 per cent in overrun, significantly improving both traction and stability for substantial enhancement of the car's agility and performance on winding roads and particularly on the track. A further advantage of equally great significance is even more stable load change behaviour.

Yet a further point is that the mechanical differential, through its specific function, relieves the ABD Automatic Brake Differential featuring traction control of part of the load it has to bear, by preventing the wheels from spinning on a surface slippery on one side of the car through its locking action.

**Start-Off Assistant on the manual gearbox and PDK**

Porsche's new two-seater comes as standard on both the manual gearbox and PDK versions with a Start-Off Assistant helping the driver under everyday driving conditions by preventing the car from rolling back when starting on a gradient for about two seconds through its automatic hold function and subsequently releasing the brake in a controlled process after the driver has let go of the brake pedal. So without the driver having to pull the handbrake, the Start-Off Assistant enables him to set off on a gradient smoothly and comfortably, without slipping back and without any jolts.

**Tyres with a high-tech compound**

Ultra-modern tyres form part of the car's suspension and its specific set-up, combining supreme performance with a high standard of motoring comfort ensured by reduced tyre pressure.

Porsche recommends tyre pressure of 2.0 bar at the front on the regular tyres measuring 235/35 ZR19 and 2.1 bar at the rear on the 265/35 ZR 19 tyres. The tyres themselves are made of PAH (polycyclic aromatic hydrocarbons)-free rubber compounds containing less pollutants and required by law as of 2010. Both a tyre sealant and an electric compressor come on the Boxster Spyder for the event of a puncture.

### **Precise rack-and-pinion steering**

Like the other models in the Boxster range, the Spyder comes with hydraulically boosted rack-and-pinion steering offering variable power assistance for smooth and superior motoring at all times. This ensures excellent agility on winding roads and, at the same time, superior driving stability at very high speeds.

The steering transmission ratio is greater around the centre position of the steering, that is when the driver moves the steering wheel only slightly in one or the other direction, making the new Boxster Spyder very stable particularly at high speeds. Then, when turning the steering wheel more than 30°, the steering transmission ratio becomes increasingly direct for a significant improvement of agility on winding roads as well as enhanced handling, particularly when turning, in tight bends or when parking. In all, the steering wheel covers about 2 ½ turns from lock to lock.

### **Superior brakes with optional ceramic discs**

Brake discs cross-drilled and inner-vented as standard ensure excellent stopping power at all times. The front brake discs measure 318 millimetres or 12.52" in diameter and are 28 millimetres or 1.10" thick, naturally inner-vented, and feature four-piston aluminium monobloc fixed callipers. Optimum stopping power at the rear is ensured by brake discs measuring 24 millimetres/0.94" in thickness and 299 millimetres/11.77" in diameter, again interacting with four-piston aluminium monobloc fixed callipers.

PCCB Porsche Ceramic Composite Brakes available as an option open up a new dimension in brake technology in the roadster segment. Featuring 350-millimetre/13.78" ceramic discs on all four wheels together with special brake linings, PCCB, in conjunction with yellow-painted six-piston aluminium fixed callipers on the front axle and four-piston aluminium fixed callipers at the rear, ensures a high and very consistent standard of stopping power, with very short stopping distances even under extreme loads.

### **PSM with an even wider range of functions**

The latest generation of PSM Porsche Stability Management featured as standard likewise ensures a high level of active safety. PSM comes with ABS anti-lock brakes, ASR Anti-Slip Control, MSR Engine Drag Force Control, an ABD Automatic Brake Differential as well as the Brake Pre-Filling and Brake Assistant functions.

The pre-filled brake system enhances the brake standby function and helps to shorten stopping distances in an emergency. Whenever the driver abruptly lets go of the gas pedal, which is typical of an upcoming emergency, pressure is built up on the wheel brakes by the PSM hydraulic unit even before the driver presses down the brake pedal, moving the brake pads closer to the brake discs. This significantly improves the response of the brake system as a whole and makes stopping distances even shorter.

The Brake Assistant also serves to shorten stopping distances. As soon as the Assistant notices that the driver is applying the brakes in an emergency – for example when he forces down the brake pedal very quickly and exceeds a certain level of pressure on the pedal – the PSM hydraulic unit will actively provide the brake pressure required for maximum deceleration.

To prevent unwanted application of the Brake Assistant when driving very fast and dynamically, for example on the race track, the Brake Assistant is deactivated as soon as the driver switches off PSM (PSM OFF mode) or presses the Sport Button on the optional Sport Chrono Package



Following its safety function, PSM will intervene in critical situations close to the extreme limit by applying the brakes selectively in order to stabilise the car. This ensures a very high level of active safety combined with the agility so typical of Porsche and, as a result, superior driving pleasure.

To allow agile driving behaviour also in tight bends, PSM cuts in relatively late at low speeds of up to 70 km/h or 50 mph.

The driver also has the option to switch off PSM, so that the system is only activated again when he applies the brakes – and even then PSM is only reactivated when pressing down the brake pedal really hard, exceeding the ABS control threshold at least on one front wheel. This gives the sporting driver greater freedom at the wheel, since PSM will not intervene when the driver applies the brakes lightly, enabling him to brake the car smoothly and in a neutral trajectory when entering a bend.

## Body and Equipment

### **Stable, Safe, Sophisticated**

The body of Porsche's roadster is one of the best in its segment of sports cars when it comes to torsional stiffness and safety. The bulkhead frame at the front, for example, is made of particularly strong steel. The front and rear longitudinal arms, in turn, are put together out of tailored blanks, that is individual sections formed by fine plates of different types of steel and thickness welded together by a laser. This helps to reduce the weight of the car and precisely define the individual crash zones.

The "upper load path", as it is called, is of particular significance on vehicles without a fixed roof, serving to stiffen the passenger cell in a head-on or offset collision. In the Boxster the upper load path guides the forces acting on the body of the car in the event of a crash very effectively from the front end across the door to the rear. To provide this function, the doors are reinforced at the top by an additional steel profile plate and come to rest in the event of a collision on a stable side structure. A support tube made of high-strength steel leading directly to both the body crossbar and the A-pillar makes the passenger cell even stronger and stiffer, particularly in an offset collision.

With its reinforced windscreen frame and rollbars finished in black, the Boxster Spyder is perfectly prepared even for a rollover. The rollbar itself is made of a special stainless-steel alloy fulfilling the strictest requirements in terms of strength and stiffness. It is constructed in what is called an internal high-pressure moulding process with the steel pipe being placed in a negative die and moulded to the desired shape under hydraulic pressure.

### **Head airbags: the Porsche Boxster pioneering the way towards passive safety**

The enthusiast wishing to drive in sporting style also wishes to enjoy optimum safety and protection on the road. Precisely this is why the Boxster Spyder comes with all the passive safety components which make a Porsche sports car so very special.

Just one example is that the Boxster was the first roadster to set new standards in passive safety by introducing head airbags for the first time in an open car. These head airbags protect the occupants in a collision from the side in addition to the side impact protectors in the doors by inflating out of the sills beneath the side windows.

Supplementing this safety function, thorax airbags are inflated on the outer part of the seat backrests, so that together with the two full-size front airbags operating in two stages as well as belt latch tensioners and belt force limiters, the Porsche roadster offers a very high standard of passive safety all round.

### **The interior: concentrating on the essential**

The interior of the Boxster Spyder consistently reflects the purist style and flair of the car, with the range of equipment being restricted to the essential for reasons of weight alone.

The radio featured as standard on the other models in the Boxster range gives way in the Boxster Spyder to a storage box on the dashboard, while the door compartments have been dropped altogether and cupholders are available only as an option. The metal levers for opening the doors generally featured in a Porsche are replaced on the Spyder by light fabric slings in the inner lining.

The binnacle above the circular instruments with their black faces has also been dropped on the Spyder, with the centre console and ornamental trim on the dashboard finished in body colour.

The standard interior colour is black, together with striking details to form appropriate contrasts. The gearshift pattern on the shift lever, the door opening slings and the seat belts, finally, all come in brilliant red.

**Diversity: numerous options for personal customisation**

It almost goes without saying that the Boxster Spyder offers the customer a wide range of choice in tailoring Porsche's new two-seater to his individual wishes and requirements. Precisely this is why nearly all of the usual options available on the Boxster are also available for the Spyder, ranging from automatic air conditioning through seat heating all the way to complete leather upholstery.

As an alternative to the extra-light sports bucket seats featured as standard, the customer may also order Porsche's regular sports seats as a no-cost option.

The CDR-30 audio system, finally, is likewise available as an optional extra at no extra cost, featuring an easy-to-read five-inch monochromatic screen. And last but not least, the integrated CD player will also play music in the MP3 format.

PCM Porsche Communication Management including a navigation module is available as yet a further option, serving as the central control unit for all audio, communication and navigation functions. The main component in this case is the 6.5-inch touchscreen.

PCM also allows the user to mastermind external audio sources such as an iPod® or USB stick. The single-CD/DVD player featured as standard, finally, may be replaced as an option by a six-DC/DVD player integrated in the PCM unit within easy and convenient reach of the driver.

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Heritage and Motorsport

## **The Legendary Heritage of the Porsche Spyder**

Through their fundamental concept, all models in the Boxster range are acknowledged as the successors to the legendary 550 Spyder built back in 1953: The philosophy of these Porsche sports cars is based on a mid-engine roadster concept, low weight, purist technology and style, as well as superior agility combined with truly unique driving pleasure.

Introducing the 550 Spyder in October 1953, Porsche not only presented the first sports car built in Stuttgart-Zuffenhausen specifically for motorsport, but also set the foundation for a long series of spectacular racing wins.

In technical terms the fast and agile Spyder stood out from the start through its independent suspension as well as a pendulum rear axle and torsion bar springs. Apart from the car's excellent driving qualities, lightweight construction was of course the topmost commitment of Porsche's engineers, overall weight of the 550 Spyder amounting to just about 550 kg or 1,213 lb. But contrary to many assumptions, the "550" model designation has nothing to do with the weight of the car – rather, it specifies the production number 550 given to the project by the Porsche Engineering Office, which incidentally dates all the way back to the year 1931.

The power unit featured in the 500 Spyder known to this very day as the "Fuhrmann engine" is almost as legendary as the car itself: The first drawings of this brand-new model developed under the guidance of Porsche's Senior Engineer Ernst Fuhrmann were completed on the drawing board in 1952. Destined to become the President and Chief Executive Officer of Porsche AG in 1976, Fuhrmann used all the options of modern racing engine technology in designing and building this 1.5-litre light-alloy four-cylinder: Technical features such as four overhead camshafts with side shaft drive, double ignition, a crankshaft running in four bearings and eight-litre dry sump lubrication gave the engine reliable maximum output of 110 bhp at 7,800 rpm. And in the years to come maximum power of this engine code-named the 587 was to be increased even further to 180 bhp.

The Porsche 550 A Spyder resting on an even lighter and much stiffer tubular spaceframe instead of a flat frame and boasting engine output of 135 bhp made its debut in 1956. Indeed, it was the 550 A which gave Porsche the Company's first overall win in a race for the Manufacturer's World Championship, with Italian driver Umberto Maglioli sensationally bringing home victory in the Targa Florio, at the time the most challenging road race in the world, in May 1956.

The 550 was followed by other extremely successful versions of the Spyder such as the Porsche 718 RSK raced for the first time in 1957. Standing out as a dynamic performer against bigger competitors, the Porsche 718 RSK Spyder was indeed very successful in numerous World Championship races not only in the 1.5- or 2.0-litre class, but also in the top 3.0-litre class, frequently leaving even much more powerful competitors far behind.

In response to new FIA regulations for racing cars requiring a closer connection with their production counterparts, the 718 RS 60 developed for the 1960 season on the basis of the 718 RSK received not only a larger 1600-cc power unit, but also features such as a larger windscreen, a fully functioning roof and even a luggage compartment behind the 160-bhp four-camshaft four-cylinder power unit, that is components quite unusual on a racing car. From outside the new Spyder was recognisable through its round and low-slung front end, at the rear it boasted a bulge tapering out towards the back of the car.

On the track the 718 RS 60 quickly scared the competition, giving Porsche the greatest success the Company had achieved so far particularly in long-distance racing: In the car's very first event, the 12 Hours of Sebring, the 718 RS 60 came first and second with Gendebien/Herrmann and Holbert/Sheckter at the wheel. Overall victory in the 44th Targa Florio also went to Zuffenhausen in 1960, with Joakim Bonnier and Hans Herrmann crossing the finish line more than six minutes ahead of the three-litre Ferrari. And a second place in the 1,000 Kilometres or Nürburgring rounded off this unique story of success.

With Swiss racing driver Heini Walter at the wheel, the 718 RS 60 soon also proved its qualities in hill-climbing, bringing home the third and fourth European Hill-Climb Championships in a row in 1960 and 1961.

In 2004 and 2008, finally, Porsche dedicated a special version of the Boxster proudly bearing the name “Spyder” to this legendary racing car, while the new Boxster Spyder now entering the market is a regular series model further enhanced and upgraded to an even higher standard.

The current Porsche RS Spyder was developed in 2005 as a completely new car from the ground up for LMP2 (Le Mans Prototype 2) racing regulations. In the 34 races held in the American Le Mans Series up to the end of 2008, the RS Spyder entered by the Penske Racing Team brought home a total of 24 class and 11 overall victories.

Scoring this kind of success, the Porsche RS Spyder also won the Manufacturer’s, Team and Driver’s Championships in the LMP2 class in 2006, 2007 and 2008. In 2007 and 2008, to mention yet another outstanding example, the RS Spyder was the superior winner in its category in the 24 Hours of Le Mans. And last but certainly not least, this sports prototype from Weissach also proved unbeatable in the 2007 Le Mans Series, winning all the races in the season and, obviously, the Championship itself.

The RS Spyder has also won the Michelin Green X Challenge several times as the car with the highest level of overall efficiency, that is the best balance of lap times, on the one hand, and fuel economy, on the other.

Precisely this brings the entire story full circle, with the new Boxster Spyder likewise offering a supreme standard of efficiency all round as a genuine winner right from the start.

## Specifications Porsche Boxster Spyder\*

<b>Body:</b>	Two-door roadster; monocoque, fully hot-galvanised lightweight steel body with aluminium doors and rear lid; driver and passenger frontal airbags operating in two stages; side and head airbags for driver and passenger; manual roadster roof with additional weather deflector.
<b>Aerodynamics:</b>	Drag coefficient $C_d = 0.30$ Frontal area $A = 1.95 \text{ m}^2$ $C_d \times A = 0.585$
<b>Power Unit:</b>	Water-cooled horizontally-opposed six-cylinder; engine block and cylinder heads made of aluminium; four overhead camshafts; four valves per cylinder; valve time variable on the intake side and valve stroke adjustment (VarioCam Plus); hydraulic valve play compensation; resonance intake system operating in two stages; DFI Direct Fuel Injection; integrated dry sump lubrication with on-demand operation of oil pump; two three-way catalytic converters on each row of cylinders, each with two oxygen sensors; 10.0 litres/2.2 gals of engine oil; electronic ignition with solid-state distributor (six ignition coils).
<b>Bore:</b>	97.0 mm/3.82"
<b>Stroke:</b>	77.5 mm/3.05"
<b>Capacity:</b>	3436 cc
<b>Compression:</b>	12.5:1
<b>Max Output:</b>	235 kW (320 bhp) at 7200 rpm
<b>Max Torque:</b>	370 Nm/273 lb-ft at 4750 rpm
<b>Output per Litre:</b>	68.4 kW/93.1 bhp
<b>Max Engine Speed:</b>	7500 rpm
<b>Fuel Grade:</b>	Premium Plus
<b>Electrical System:</b>	12 V; 2100 W three-way alternator; Battery 60 Ah/280 A

\* Specifications may vary according to markets



**Power Transmission:** Engine and gearbox bolted together to form one unit; drive power transmitted by double pivot shafts to the rear wheels.

Gear ratios:	Manual	PDK
1 <sup>st</sup>	3.31	3.91
2 <sup>nd</sup>	1.95	2.29
3 <sup>rd</sup>	1.41	1.65
4 <sup>th</sup>	1.13	1.30
5 <sup>th</sup>	0.95	1.08
6 <sup>th</sup>	0.81	0.88
7 <sup>th</sup>	–	0.62
Reverse	3.00	3.55
Final drive ratio	3.89	3.25

Clutch diameter      240 mm      153 mm / 202 mm

**Suspension:** Front: spring-strut axle in McPherson design optimised by Porsche, independent wheel suspension on track arms, longitudinal arms, tie-bars and spring struts; conical stump springs with inner-mounted vibration dampers; hydraulic twin-sleeve gas-pressure dampers.

Rear: spring-strut axle in McPherson design optimised by Porsche, independent wheel suspension on track arms, longitudinal arms, tie-bars and spring struts; cylindrical coil springs with inner-mounted vibration dampers; hydraulic twin-sleeve gas-pressure dampers.

<b>Brakes:</b>	Two-circuit brake system split front-to-rear. Front axle: four-piston aluminium monobloc brake callipers, cross-drilled and inner-vented brake discs measuring 318 mm/12.52" in diameter and 28 mm/1.10" thick. Rear axle: four-piston aluminium monobloc brake callipers, cross-drilled and inner-vented brake discs measuring 299 mm/11.77" in diameter and 24 mm/0.94" thick. Porsche Stability Management (PSM); vacuum brake servo; Brake Assistant.		
<b>Wheels and Tyres:</b>	front	8.5 J x 19	on 235/35 ZR 19
	rear	10 J x 19	on 265/35 ZR 19
<b>Weight:</b>	Unladen, DIN:		1275 (1300) kg
	Max permissible:		1555 (1580) kg
<b>Dimensions:</b>	Length		4342 mm/170.9"
	Width		1801 mm/70.9"
	Height		1231 mm/48.5"
	Wheelbase		2415 mm/95.1"
	Track	front	1490 mm/58.7"
		rear	1530 mm/60.2"
	Luggage capacity	front	150 litres
		rear	130 litres
	Tank capacity		54 litres

Figures in brackets apply to cars with PDK.

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<b>Performance:</b>	Top speed	267 (265) km/h (166/164 mph)
	Acceleration	
	0 – 100 km/h	5.1 (5.0*) sec
	0 – 200 km/h	17.5 (17.3) sec
<b>Fuel Consumption (NEDC) to EU 5:</b>	urban	14.2 (14.0) litres/100 km
	extra-urban	7.1 (6.6) litres/100 km
	combined	9.7 (9.3) litres/100 km
	<b>CO<sub>2</sub> Emissions to EU 5:</b>	228 (218) g/km

Figures in brackets apply to cars with PDK.

\* In combination with the optional Sport Chrono Package and PDK acceleration from zero to 100 km/h improves by 0.2 to 4.8 seconds.