

The tradition behind the GT3 RS models

## **Sporty road vehicles with a racing finish**

For 46 years, Porsche has been bestowing the RS abbreviation exclusively on 911 series-production models that serve as the link between the road-going sports cars and the successful GT racing cars of the brand. The cars are athletes through and through, raising driving precision to new heights with each new generation. A 911 GT3 RS is a model athlete with motorsport DNA – showing its full potential on the race track but also stealing the show in everyday driving. For more than half a century, the engineers at Porsche have held the same ambition when developing a new 911 generation: To be the benchmark for driving dynamics once more.

It was back in 1972. This is when the first 911 RS model made its debut: The 911 Carrera RS 2.7 has long since become an icon of automotive history. A well-maintained example of this model can command a seven-figure price. In its day, this very pure car cost 33,000 Deutsche Marks. It weighed barely 900 kilograms in its road-ready configuration, and delivered 210 hp and a top speed of 240 km/h; it was also the first to feature a fixed rear spoiler. Demand clearly exceeded the 500 units required for sport type approval. Ultimately, Porsche built 1,036 of these vehicles.

It was twelve years before another 911 bore the RS logo on its bonnet: The 911 SC RS saw Porsche unveil a pure homologation model for rally driving, and only 21 were made. It weighed 960 kilograms and boasted a 3.0-litre engine and 250 hp. It was followed in 1991 by the 260-hp 911 RS 3.6, based on the 964 model line. This marked the debut of technology from the Carrera Cup racing car in a series-production vehicle. A 3.8-litre variant with 300 hp followed shortly afterwards. From 1995 onwards, Porsche offered this engine with the identical output in the 277-km/h RS version of the Type 993 911. In turn, this vehicle provided the basis for the Porsche Carrera Cup and Porsche Supercup one-make series. So the direct link with motorsport was never lost.

### **911 (996) GT3 RS, 2003: The first of its kind**

After the 911 GT1 – the series-production version of the Le Mans winner of 1998 – and the 911 GT2, in 1999 Porsche introduced a model that was set to revolutionise the future of motorsport: The 911 GT3 based on the 996 model line triggered a flood of comparable GT models that make for great diversity on today's race track. In 2003, with the first 911 GT3 RS, Porsche took things to the next level. This model used the high-rev 3.6-litre flat engine from the 911 GT3, now with an output of 381 hp, and was available exclusively with a white roll cage. All the exterior lettering was kept in blue or red, in tribute to the famous predecessor. There were also additional components from the later racing version, such as a front apron with integrated ventilation slits, an optimised chassis geometry with special wheel mounts and split wishbones on the front and rear axle, a single-mass flywheel, and targeted measures to ensure lightweight construction: The rear window was made from polycarbonate, and the bonnet and the rear wing from carbon fibre. At 1,360 kilograms, the fully fuelled 911 GT3 RS was a further 50 kilograms lighter than the GT3 Clubsport version. Driving performance was equally impressive: It sprinted from zero to 100 km/h in just 4.4 seconds, and had a top speed of 308 km/h.

### **911 (997) GT3 RS, 2006: The pure gauge**

Compared with the initial GT3 model, the RS version based on the 997 model line took to the grid with the 44-millimetre-wider body of the Carrera 4. The rear axle track was

subsequently 34 mm wider, allowing greater lateral acceleration and increasing the roll stability – and at 1,375 kilograms still weighed 20 kilograms less. This was made possible by features such as the adjustable carbon rear wing and a rear lid and rear window made from plastic. The wishbones on the rear axle were once again split, allowing more precise tuning of the chassis for use on the race track. The highlights of the relatively spartan interior were lightweight bucket seats made from carbon-fibre composite materials, adapted from the Carrera GT, and the roll-over bar fitted as standard. The 415-hp, 3.6-litre engine used in the RS, which had a maximum speed of 8,400 rpm, was taken unmodified from the GT3. The six-speed manual transmission with single-mass flywheel offered narrower step ranges, which resulted in very high revs. With a weight-to-power ratio of 3.3 kilograms/hp, the GT3 RS sprinted from zero to 100 km/h in 4.2 seconds and achieved a top speed of 310 km/h. It conquered the Nordschleife of the Nürburgring in 7:48 minutes.

### **911 (997 II) GT3 RS, 2009: Nothing but the truth**

The 911 GT3 RS introduced in 2009 continued the series production of uncompromisingly sporty 911 derivatives. It was based on the facelifted 997 model line and now offered a 3.8-litre, six-cylinder flat engine. Boasting 450 hp instead of 435 hp, the naturally aspirated engine was for the first time more powerful than the one offered in the 911 GT3, and with its specific output of 118 hp/litre it set new standards for series-production vehicles. The top speed was 8,500 revs. The Sport button on the centre console increased torque in the mid range by 35 Nm to up to 465 Nm. To benefit the lateral dynamics, the track of the GT3 RS was also widened at the front axle; the vehicle also had a large brake system with aluminium brake chambers and a specifically tuned PASM chassis. Porsche adapted the PSM vehicle stability system accordingly: Its independent control algorithm, which could be disengaged in two stages, was developed specifically for use on the race track. Lightweight components such as the titanium rear silencer and the single-mass flywheel that had been reduced in weight by a further 1.4 kilograms reduced the unladen weight compared with the narrower 911 GT3 by 25 kilograms to 1,370 kilograms. The vehicle's weight was reduced a further 10 kilograms by using the optional lithium-ion battery, which replaced the heavy lead battery in race track operation. The 911 GT3 RS with a top speed of 310 km/h tackled the Nordschleife in 7:33 minutes. The vehicle demonstrated its race track potential in 2010 during the 24-hour race at the Nürburgring: This series-production model rose to the epic challenge in the Eifel region and crossed the line in an impressive 13th place overall – including arrival and departure on public roads.

### **911 (997 II) GT3 RS 4.0, 2011: Maximum discipline**

2011 saw the debut of the third GT3 RS development stage of the Type 997 911. It had a limited production run of 600 units and was the first series-production 911 to have a 4.0-litre engine. The vehicle featured thoroughbred racing technology: The crankshaft was straight from the six-cylinder engine in the 911 GT3 RSR racing car, and titanium connecting rods joined it to the forged pistons. The result was peak performance of 500 hp at 8,250 rpm and a new specific naturally aspirated engine best value of 125 hp/litre. The bonnet, the front wings and the bucket seats were made from ultra-lightweight carbon as standard. With a fully fuelled weight of 1,360 kilograms, the 911 GT3 RS 4.0 with a weight-to-power ratio of 2.27 kilograms/hp cracked the magic limit of three kilograms per hp. The progress in figures: From zero to 100 km/h in 3.9 seconds, Vmax 310 km/h and a Nordschleife lap in 7:27 minutes. These figures make the GT3 RS faster than the Carrera GT super sports car.

### **911 (991) GT3 RS, 2015: Limits pushed**

The next 911 GT3 RS was launched in 2015, with the 991 new model generation. It featured the same 500-hp, 4.0-litre engine as its predecessor, but for the first time combined it with the seven-speed PDK transmission, including paddles on the steering wheel and the wide body of the 911 Turbo. The RS model once again set new standards for lightweight construction and aerodynamics: The front fenders and luggage compartment lid were made from carbon fibre and the roof – an important focal point – was even made from magnesium and characterised by a 30-cm wide depression that also shapes the bonnet. Another characteristic feature was the wheel arch vents – louvre vents – in the front wings: Just like in a pure racing car, they optimise downforce at the front axle. The chassis was designed for maximum driving dynamics and precision, and benefitted from the new rear-axle steering and Porsche Torque Vectoring Plus with fully variable rear differential lock. The 310-km/h 911 GT3 RS accelerated from zero to 100 km/h in just 3.3 seconds and completed the Nürburgring Nordschleife in 7:20 minutes.