



911 GT3 RS 4.0

# A HOT NUMBER

You can see it. You can hear it. A very special edition from the racing department in Weissach is being set loose on the streets: the new 911 GT3 RS 4.0 combines engineering expertise and racing power.

By Eva-Maria Burkhardt  
Photos by Christoph Bauer



*Moving straight into the world of superlatives: level-headed by nature, racing engineers nevertheless quickly succumb to enthusiasm for this car. "500 hp from a high-speed naturally aspirated engine! 125 hp per liter! 83 hp per cylinder! And in a road car! That's a really hot number!"*

**The color serves as camouflage.** White is the color of innocence, and the new 911 GT3 RS 4.0 might well be the car to chauffeur the youngest child to violin lessons or the eldest to the golf course. One glance at the chic white rims and notes its attire would be suitable for an evening at the opera. Of course, all three of these destinations can be reached in comfort with the Porsche 911 GT3 RS 4.0. The new car, however, feels more at home in other milieus. In essence, it is a plaything for the wild at heart who have grown up, for whom social responsibility is not a new concept and who therefore partake of the higher reaches of driving pleasure on race courses. Favored milieus include the Nordschleife of the Nürburgring, once described by Jackie Stewart as the “Green Hell.”

The 911 GT3 RS 4.0 recently clocked a lap time there that causes connoisseurs to sit bolt upright—7:27 minutes on the hilly course of nearly 21 kilometers (13 miles). The car can do this because of its racing genes. Its relatives are the powerhouses in which Porsche factory drivers have won GT championships worldwide, and its direct predecessor is the GT3 RS 3.8—the cult object of a select clientele. The 911 GT3 RS 4.0 was developed by the racing department in Weissach, where pure-blooded and road-going racing cars are created, and where professional racer and qualified engineer Marc Lieb contributes his unique combination of practical and theoretical expertise. And where a thumbs-up from former rally world champion and avowed perfectionist Walter Röhrl serves as a seal of quality.

“If Walter isn’t satisfied with something, we know we’ve got to deal with it,” says Andreas Preuninger, the general project director for GT vehicles. “At the end of the life cycle for the GT3 RS cars, we wanted to do some sort of goodbye edition as a thank-you to our customers, because we weren’t able to meet the high demand when its predecessor, the 911 GT3 RS 3.8, ran out.”

*The 911 GT3 RS 4.0  
serves as suitable attire for the opera.  
But it is made for the racetrack.*



**All or nothing:**  
The cockpit also  
features a pure top-  
grade racing look



**Aerodynamics (I):**  
The flics on the fenders increase the downforce



**Aerodynamics (II):**  
The flics and the double wing combine to provide 200 kg (440 lbs.) of downforce



**In a GT frame of mind:** Andreas Preuninger is Porsche's GT general project director

The most exciting innovation, and also the heart of this limited-edition series of 600 cars, is the engine, which was adapted for the road version directly from the GT racing cars. In light of the brilliant values it achieves, even an experienced expert like Preuninger falls into superlatives. "Five hundred horsepower from a high-speed naturally aspirated engine! One hundred twenty-five horsepower per liter! In a road-going car! And more than eighty-three horsepower per cylinder—that's a hot number. We didn't even think that was possible ourselves."

The crankshaft and titanium connecting rods have come to the four-liter engine unchanged from racing. "These are real racing components," notes Lieb, and adds, "That's awesome." He put in several thousand kilometers in a test version of the 911 GT3 RS 4.0 for amateur sports. Lieb is a level-headed individual, but one would not necessarily infer that from the way

he talks about the GT's engine assembly. "The engine has a very special, unmistakable character. Its mechanical sounds mean that it's always present. It bites at low, medium, and high rpm levels. As a naturally aspirated engine, it has this typical, linear development of power. You can't get enough of its raw, rough tone when it idles, and then its robust sound. It's a dream of an aspirated engine!"

In addition to detailed work inside the engine, its periphery was also the object of special attention. "The engine is a system in which all the parameters have to be mutually adjusted," says Preuninger. He opens the hood and points all but theatrically to a large carbon component. "This is a real racing filter whose modified flow conditions enhance air intake. To achieve the car's high performance levels, we had to change the entire aspirating side of the engine." Short pause for effect. With a wink of his eye, he then gives a



**All in white:** Painted rims accentuate the special 911 flair

down-to-earth account of a matter as crucial as it is complex: “Where power goes out, air’s got to come in!” The shape of the housing was designed with great care such that optimum air flow into the engine is ensured. “We’ve succeeded in reducing the pressure loss between the intake and clean-air sides,” explains Preuninger, “which allows us to bring more air into the engine. That’s state of the art for this area.”

Is everything the same as in a real racing car? “Yes and no,” says Lieb with a smile. “The GT3 RS is extremely close to a racing car, but everything was designed in a

*A crucial principle explained:  
“Where power goes out,  
air’s got to come in!”*

much more extreme manner in the pure-blooded 911 GT3 R and RSR. If you look at the exhaust system, for example, there aren’t any sound absorbers inside; or if there are, then they’re very, very small. This means the cars are loud, but have up to 30 more horsepower.” No compromises were made in the weight. And in a pure-blooded racing car there are no carpets or insulating materials. Unadorned metal dominates the cockpit. As Lieb observes, “Everything that’s not necessary is cut out.” The hood, fenders, bumper, and front section as well as the rear bumper are made of carbon; the rear and side windows are made of plastic; and the doors of carbon fiber. Creativity and attention to detail were key to reducing the weight of the road version. In its lightest variant, the new 911 GT3 RS weighs 1,360 kilograms (3,000 lbs.) with a full tank of fuel. The fenders, front hood, and rear wings are also made of carbon. The rear window was already made of polycarbonate in the GT3 RS predecessor, but now the rear side windows are too. This alone cuts the weight by one kilogram (2.2 lbs.).

Lighter springs and a number of aluminum components in the suspension also have a positive influence on the baseline weight of the 911 GT3 RS 4.0—while also contributing to driving precision. “In our GT3 models a certain number of the suspension elements have always had uni-ball bearings,” says Preuninger by way of background information, “because from generation to generation we’ve found ways to counter the negative effects.” Another milestone for a 911 road version, however, is that the entire lower steering level for the rear axle has uni-ball bearings, as

does the bearing system for the suspension struts on the front axle. This gives the new car an adjustment philosophy that is even closer to that of a racing car.

The aerodynamics are also more strongly tuned toward circuit driving. Elements known as “flics” are present for the first time on a road version of the 911 (narrow carbon vanes on the front fenders), which increase the downforce on the front axle. “In terms of type characteristics that was very difficult,” says Preuninger with pride, “because these parts protrude to the fore. Fortunately, we found a solution, because they’re great for letting us influence the aerodynamics.” The double spoilers on the rear form the counterpart to the flics, and normally are adjusted to an angle of nine degrees. Together, these auxiliary components ensure that the 911 GT3 RS 4.0 generates a world-class downforce of 200 kilograms (440 lbs.) at high speeds. This type of downforce amplifies driving pleasure on racing courses.

If the spoilers were set to six-degree angles and the flics were removed, a higher peak speed would be possible, but not desirable. “It’s not a development objective just to drive faster on the autobahn,” says Preuninger. “The 911 GT3 RS is a car for the racetrack that guarantees a purist and passionate driving experience. Once you get in, you won’t want to get out.”

The fact that the 911 GT3 RS 4.0 comes in a limited edition of only 600 cars was not designed to inflate desire for it on the part of customers. Higher production figures would simply exceed capacity at the Zuffenhausen plant. The engine line for GT assembly there had already been dismantled. But the people in Weissach raved about the phenomenal four-liter assembly and the very special goodbye edition. That convinced the factory heads, and the engine line was reinstalled. ●

#### 911 GT3 RS 4.0

Engine: Six-cylinder boxer  
 Displacement: 3,996 cc  
 Power: 500 hp (368 kW)  
 Maximum torque:  
 460 Nm at 5,750 rpm  
 0–100 km/h: 3.9 sec.  
 Top track speed: 310 km/h (193 mph)  
 CO<sub>2</sub> emissions: 326 g/km  
 Fuel consumption  
 – City: 20.4 l/100 km  
 – Highway: 9.9 l/100 km  
 – Combined: 13.8 l/100 km