



PORSCHE



The new 911 RSR
Spearhead



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**I am the spearhead
of the family.**



“ Every day that I was challenged. Every hour that I was cornered.
Every hundredth of a second that my limits were exceeded.
They all made me what I am today: the result of 60 years of relentless commitment on the race track.
Honed to cope with the most extreme conditions.
My origin? The Porsche Development Centre in Weissach and the Motorsports Manufaktur in Flacht. I was built entirely by hand. To become the most uncompromising 911 ever to take to the test track. My goal? To master the toughest challenges of international GT endurance racing. On the most demanding race tracks in the world. How? As an all-encompassing concept – with aerodynamics, safety, performance and maintenance efficiency, perfectly coordinated in the earliest phase of my development. I am the result of passion, engineering spirit, a grounded character and meticulous craftsmanship. I am more than just a pedigree race car.

I am the new Porsche 911 RSR. The spearhead of the family.”





**I am progress in
its most extreme form.**



“ I consist of countless components. All part of one great whole. ”

How do you improve the successor to one of the most thriving GT endurance cars in the world? For the project manager overseeing the development of the new 911 RSR, there is no debate: you take on board the lessons learned from four years of track action worldwide and develop it from the ground up.

What distinguishes the new 911 RSR from its predecessor?

With the new 911 RSR, not only have we improved individual components, we have also defined a total concept that takes the requirements of modern GT racing into account more purposefully than ever before. We have fully exploited all the advantages provided by the basis of our standard-production vehicle and all the freedoms afforded by the GT long-distance racing regulations.

How much have the requirements for modern GT endurance vehicles changed in recent years?

You could say that, given the competition out there, there is virtually no room for failure any more. Modern endurance races are sprints that go on for up to 24 hours. To be successful these days, a car must be absolutely reliable and capable of driving at the limit for the entire duration of a race.

What difference does a total concept make for a modern GT endurance vehicle?

Endurance races present their own special challenges. On the one hand, a car has to be thoroughly reliable. On the other hand, it must offer the least stressful working environment possible for the driver. The mechanics and engineers must be able to work on the car efficiently. With the total concept, it is possible to define every factor from the beginning and then approach each one during

development. All individual components must subordinate themselves to the requirements of the overall package. And that, by the way, is a Porsche virtue.

What's different for the driver?

We placed even more focus on the driver and the working environment. Easy drivability and optimum cockpit ergonomics are the result. After a test drive, one of our drivers told me that a double stint in the new car feels much like a single stint in the predecessor.

What's different for the crew – the mechanics and engineers?

For the crew, it's mainly about the efficiency with which they can work on the vehicle and the repairs they can carry out during the race. To this end, we conducted an in-depth analysis early on. One of the results is the modular build, which allows for quick changes to the setup as well as exchanging

complete modules. This, of course, helps to shorten repair times.

What is the critical phase in the development of a GT endurance vehicle?

Roughly speaking, there are three critical phases. First, the vehicle concept is defined. This is critical because it will be the foundation for all other steps and, ultimately, the success. We need to know the production vehicle, which provides the basis for the GT race car, in the same detail as we do the technical rules and regulations.

The second phase is the validation of the concept. This is where we see for the first time whether the vehicle, in principle, lives up to its performance expectations. In other words, whether the concept translates into a real car.

Phase three is the endurance testing. Here, it's about the reliability and the handling of the vehicle for the whole team under real conditions.

**I am part of
a never-ending
mission.**



“ I am the most extreme and technically sophisticated representative of my model line ever to have been sent out onto a race track. And, with every metre, I gather more experience. ”

The spearhead of the family stands for more than its striking appearance. With every race, every meter driven, and every victory or defeat, the new 911 RSR provides us with important insights for the continued development of our ideas. And, by that, for every future Porsche 911. Just like its predecessor – one of the most successful GT vehicles of our recent past – it, too, is shaped by our never-ending mission: to build the sports car of the

future. And, with the new 911 RSR, we've once again given expression to our sports car fascination. In the form of a race car in which every single component, every function and every characteristic marks the fruition of an ingenious total concept. Inside and out. The result: efficient aerodynamics, the even better focus on the driver, the new safety concept and the improved efficiency of maintenance and repairs.

Another step forward for every Porsche. And for a race car capable of meeting the merciless demands of GT endurance racing not only in the here and now, but also in the future.



**I am compromise's
worst nightmare.**





“From the innermost recesses of my soul to the finishing touch on my silhouette, I have been thought through to the very end. From the start. Newly developed from the ground up. Built to last the distance. And sharpened to the most extreme in every component.”

It's no coincidence that its design conveys power. And every centimetre of its bodyshell follows one purpose: to withstand the merciless demands of GT endurance racing. That's why the new 911 RSR has a rear wing mounted swan-neck style as seen on our Le Mans prototype, the 919 Hybrid. Together with the extended rear diffuser and the new side mirrors, this helps to ensure an even better relationship between downforce and drag.

The beating heart of the new 911 RSR is the 4.0-litre naturally aspirated and horizontally opposed engine with direct fuel injection. We've moved it as far forwards as possible and, for the first

time, given its a rotated position. Not only does this improve driving dynamics, it also affords greater setup versatility on the car at the same time. Crucial when configuring for the different conditions in international endurance races. A new six-speed sequential constant-mesh gearbox with magnesium housing and electromechanical gear selection contributes even shorter shift times and helps to minimise all disturbance factors in the gear change process. This not only improves the handling of the car, but also increases the reliability of the entire drivetrain.

The safety concept has also been fundamentally revised. The new bucket

seat has been moved further towards the centre, which gives the driver extra protection in the event of an impact. Combine that with the newly developed cage in the interior and the new 911 RSR is safer than ever before. Integrated into a Porsche GT endurance vehicle for the first time: the electronic collision avoidance system for an even broader picture of the racing action.

We've optimised the new 911 RSR for efficiency beside the track too. The latest generation enables the fast exchange of complete bodyshell segments for the first time. And that saves valuable seconds over the course of the race.

**My destiny is
the race track.**



“ I am timeless and, yet, I am timed for each hundredth of a second. I am more than 60 years of tradition and, still, I am a piece of the future. I am the spearhead of the 911 family and I carry the genes of legends. ”

It is said that, at Porsche, a distinction between sports cars and race cars doesn't exist. It is said that every Porsche is ready for the race track. And that, within every Porsche, there is the spirit of a race car. What you suspect the instant you see the new 911 RSR is confirmed by its face. It is not by chance that a large part of our success in motorsport was achieved with the Porsche 911. With principles not founded on superior power alone, but on intelligent overall concepts.

Developed and sharpened for the demands of each race. With all-encompassing vehicle concepts that unite important qualities: performance, safety, lightweight construction and endurance. That's what makes motorsport the fundamental component of our DNA. And that of every Porsche 911. It is all the less coincidental that the new 911 RSR – in spite of its sharpened contouring – is clearly recognisable as a Porsche 911. For, when we take this extreme athlete to

the toughest endurance races in the world, we do one thing above all: we bring a Porsche 911 back to where it was born – on the race track.





**I tread the path
of a warrior.**



“ I know where I come from. I know what lies ahead.

And like every one of my predecessors, I too will have to prove

I am up to the challenge.”

The 911 RSR is an extreme athlete tailor-made for GT endurance racing. The same has applied to all generations.

With its predecessor, we competed as a factory team in the FIA World Endurance Championship (FIA WEC) and the North American United SportsCar Championship (USCC). In four years of action, not only did we win the GT class at the 24h of Le Mans plus seven championship titles, including the 24h of Daytona, the 12h of Sebring and the 10h of Petit Le Mans

(overall victory 2015), we participated in the most important and iconic races in motorsports.

But we won't be resting on our laurels. The new Porsche 911 RSR knows no compromise – as it is set to prove against strong competition in 2017. In action for our factory teams. In the toughest long-distance series in the world: the FIA WEC including its showpiece event, the 24h of Le Mans, as well as the IMSA WeatherTech

SportsCar Championship (IWSC) in North America.

For us, even the spearhead of the family must endure thousands of kilometres to prove that it has earned the right to wear the digits 911.

**I am more than the
sum of my parts.**



My technical data.

Concept

Single-seater race car for the LM-GTE category

Weight/dimensions

Weight:	ca. 1,243 kg (basic weight per regulations)
Length:	4,557 mm (without splitter, rear wing, diffuser)
Width:	2,042 mm (front axle)/2,048 mm (rear axle)
Wheelbase:	2,516 mm

Engine

Water-cooled six cylinder boxer, positioned in front of the rear axle; 4,000 cm³, stroke 81.5 mm, bore 102 mm; ca. 375 kW (510 hp) depending on restrictor; four-valve technology; direct fuel injection; dry sump lubrication; single mass flywheel; power output limitation via restrictor; electronic throttle.

Transmission

Six-speed sequential constant-mesh gearbox; two-shaft longitudinal layout with bevel gear; shifting via electronic shift actuator; shift paddles on steering wheel; magnesium gearbox casing; multi-disc self-locking differential with visco unit; three disc carbon race clutch.

Body

Weight-optimised chassis in combined aluminium steel design; removable roof hatch for cockpit access; lifting bushes integrated in the roof; FT3 fuel cell in front of the car; welded-in roll cage; seat pursuant to FIA 8862-2009; rigidly mounted to the chassis; six-point safety harness for use with HANS®; longitudinally adjustable pedalry; bodywork made of CFRP, quick-change; rear wing with “swan neck” mounts; four-post air jack system with safety pressure valve; electronically activated fire extinguisher system; heated windscreen.

Suspension

Front axle: double wishbone front axle; four-way vibration damper; twin coil spring setup (main and helper spring); anti-roll bars, adjustable by blade positions; electro-hydraulic power steering

Rear axle: integrated rear axle subframe with double wishbone axle; four-way vibration damper; twin coil spring setup (main and helper spring); anti-roll bars, adjustable by blade positions; electro-hydraulic power steering; tripod drive shafts.

Brakes

Two independent brake circuits for front and rear axle, adjustable via balance bar.

Front axle: One piece aluminium six-piston racing callipers with quick coupling; internally ventilated steel brake discs, 390 mm diameter; race brake pads; optimised brake cooling ducts.

Rear axle: One piece aluminium four-piston racing callipers with quick coupling; internally ventilated steel brake discs, 355 mm diameter; race brake pads; optimised brake cooling ducts.

Wheels/tyres

Front axle: One piece forged light alloy wheels, 12.5Jx18 offset 25 with centre lock nut; Michelin slick 30/68-18.

Rear axle: One piece forged light alloy wheels, 13Jx18 offset 37 with centre lock nut; Michelin slick 31/71-18.

Electrical system

Cosworth Central Logger Unit; CFRP multi-functional steering wheel with integrated display; shift paddles and quick release; Collision Avoidance System; controlled alternator in connection with LiFePO₄ battery; LED headlights; LED taillights plus rain light; illuminated car number and leader light system; black light inside cockpit; electric adjustable wing mirrors with memory function; tyre pressure monitoring system (TPMS); drink system; air conditioning system; membrane switch panel on centre console with fluorescent labelling.



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Edition: 11/16
WSRZ160115S220