Porsche presents Formula E race car 975 RSE

20/04/2026 A new chapter in all-electric motorsport: with the 975 RSE, Dr. Ing. h.c. F. Porsche AG presents its future Formula E race car. The single-seater complies with the regulations for the fourth Formula E vehicle generation and will be used from next season onwards.

The so-called GEN4 delivers the biggest performance leap in electric motorsport to date: 600 kW (816 PS) of power, permanent all-wheel drive, new tyres and significantly increased downforce bring Formula E into the slipstream of the fastest single-seater race cars worldwide.

“The GEN4 shows how far electric vehicles have evolved,” says Thomas Laudenbach, Vice President Porsche Motorsport. “When the championship started in 2014, every driver needed two cars per race. One battery alone was not enough to cover the full race distance. Those days are long gone. Since 2024, we have been developing a race car that puts us on the level of Formula 2 cars. EVs are not only catching up with the standards we are used to; their strengths are becoming increasingly evident – on the track and on the road.”

More downforce for greater performance

For the first time, aerodynamic downforce significantly increases the grip of Formula E cars. Together with new tyres and permanent all-wheel drive, this enables much higher cornering speeds. Olivier Champenois, Technical Project Leader Formula E at Porsche Motorsport: “Within roughly a decade, Formula E has become so fast that aerodynamic downforce is now a necessity. However, downforce always comes with drag and increases energy consumption. To maintain a strong focus on efficiency, we use two different aero packages with distinct bodywork components: a low-downforce package with reduced drag for the races, and a high-downforce package for qualifying, where energy consumption isn't relevant. We are talking about up to 150 percent more downforce compared to the GEN3 Evo.”

Porsche in-house developments: lighter, more durable, more cost-efficient

Already in the current Formula E Porsche, the highly efficient GEN3 Evo-generation Porsche 99X Electric, drivetrain efficiency is well over 97 percent. From the battery to the wheels, less than 3 percent of the energy is lost – for example through friction in mechanical components. “As efficiencies approach perfection, other topics moved higher up the GEN4 development brief, including potential in terms of weight, durability and costs – similar to EVs for the road,” says Champenois. “The 975 RSE produces 71 percent more peak power than its predecessor. At the same time, we were able to reduce the weight of many parts. Although we are developing more components in-house for GEN4 than for GEN3, the total weight of our parts package was only allowed to increase by 5 kilogrammes.”

In Formula E, manufacturers primarily develop the technical components that are also relevant for electric road cars. In-house developments include operating software, pulse inverter, electric motor, gearbox, differential, drive shafts and other drivetrain components on the rear axle, as well as cooling, carrier and suspension components at the rear. With the introduction of GEN4, several additional components are added, including the DC/DC converter and the brake-by-wire system, further electronics and wiring looms, as well as control units for the hydraulic differentials. For cost reasons, the battery remains a standard-supplied component and may not be developed.

Same concept, faster racing

Florian Modlinger, Director Factory Motorsport Formula E: “The concept remains the same: the regulations force us to maximise the efficiency of our cars in every respect – because that makes us relevant for the road. The races should become even more attractive, as the new cars are considerably faster. The acceleration is impressive, and we expect top speeds of up to 335 km/h. I'm very curious to see how the fans will react.”

The Porsche 975 RSE follows on from the current 99X Electric. Porsche's most successful Formula car to date has won four world championship titles over the past three seasons. It will contest its final race in August at the season finale in London, where Porsche aims to fight for further titles. The 975 RSE is expected to make its race debut in December. Its name references the 75th anniversary of Porsche Motorsport in 2026 – a success story that is set to be increasingly shaped by electric racing in the future.

For now, Porsche Motorsport has until October to develop its most extensive hardware package for Formula E to date as far as possible. After that, the focus will shift to the continuous optimisation of the software. The Porsche customer team will also test the new car before the FIA homologates the specification in the autumn. The 975 RSE first took to the track in November 2025 and had completed 1,860 test kilometres by early April. Porsche presents the new vehicle as the reigning Formula E Manufacturers' World Champion.

Further comments on the new car

Pascal Wehrlein, Porsche factory driver: "The new Porsche 975 RSE is a really cool race car. The GEN4 is extremely fast and great fun for us drivers. I believe it will be a real eye-opener for many fans and critics. I also like the look of the 975 RSE. The aerodynamics make the car look uncompromising, and our livery for the test runs looks pretty good."

Nico Müller, Porsche factory driver: "The 975 RSE and its competitors are a massive step forward for the sport. I'm a big fan of how aggressively you can drive. Especially in qualifying, when everyone is pushing to the limit, it should be spectacular – particularly because of the strong acceleration out of the corners. I'm glad I was involved in the simulator work from the beginning. Pascal and I share the testing duties. That's good, because it allows us to tailor the 975 RSE precisely to our needs."

Provisional technical data – Porsche 975 RSE

Drive power
- Normal mode: 450 kW (612 PS)
- Attack Mode: 600 kW (816 PS)

Power transmission
- Permanent all-wheel drive

Acceleration
- 0–100 km/h: approx. 1.8 s

Energy recovery
- Up to 700 kW recuperation power (brake energy recovery)

▪ Approx. 40 to 50 % of the drive energy per race comes from brake energy recovery

Brakes
▪ Regenerative braking system: up to 350 kW electrical braking power on both the front and the rear axle
▪ Depending on brake pressure: additional deceleration through friction brakes (brake-by-wire system)
▪ Brake disc outer diameter front and rear: 275 mm

Tyres
▪ Bridgestone tyres for dry and wet conditions (two sets per race weekend and per car, three for double-headers)
▪ Bridgestone wet-weather tyres for heavy rain (one set per race weekend and per car, second set possible for double-headers)

Rechargeable energy storage system (RESS)
▪ Lithium-ion accumulator
▪ Standard-supplied component
▪ Usable energy capacity: 51.25 kWh

CCS charging system (Combined Charging System)
▪ Designed for extremely fast charging with up to 600 kW charging power

Weight and dimensions
▪ Weight: 954 kg without driver
▪ Length: up to 5540 mm, width: up to 1800 mm, height: up to 1150 mm
▪ Wheelbase: 3080 mm
▪ Front track: 1482 mm
▪ Rear track: 1443 mm

Aerodynamics
▪ Two packages with aerodynamic elements for higher and lower downforce and drag

Key in-house developments
DC/DC converter, pulse inverter, electric motor, gearbox, electronics and wiring looms, front and rear differentials including control units, drive shafts and further drivetrain components on the rear axle, as well as cooling, carrier and suspension components on the rear axle, brake-by-wire system, operating software

Key standard components
Chassis and bodywork, wheels and tyres, drivetrain, cooling and suspension components on the front axle, accumulator

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Video

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