PORSCHE

The new Porsche Cayenne S E-Hybrid and Cayenne Turbo E-Hybrid

Press kit

Fuel consumption and emissions

Cayenne E-Hybrid: WLTP: Fuel consumption combined (weighted): 1.8 – 1.5 l/100 km; CO_2 emissions combined (weighted): 42 – 33 g/km; power consumption combined (weighted): 30.8 – 28.7 kWh/100 km; electric range (EAER): 66 – 74 km; electric range city (EAER city): 77 – 90 km

Cayenne S E-Hybrid: WLTP: Fuel consumption combined (weighted): 1.7 – 1.4 l/100 km; CO_2 emissions combined (weighted): 39 – 31 g/km; power consumption combined (weighted): 31.7 – 29.1 kWh/100 km; electric range (EAER): 71 – 78 km; electric range city (EAER city): 79 – 90 km

Cayenne S E-Hybrid Coupé: WLTP: Fuel consumption combined (weighted): 1.7 – 1.4 l/100 km; CO_2 emissions combined (weighted): 39 – 31 g/km; power consumption combined (weighted): 31.6 – 29.2 kWh/100 km; electric range (EAER): 71 – 78 km; electric range city (EAER city): 80 – 89 km

Cayenne Turbo E-Hybrid: WLTP: Fuel consumption combined (weighted): 2.0 – 1.7 l/100 km; CO_2 emissions combined (weighted): 45 – 39 g/km; power consumption combined (weighted): 31.7 – 29.9 kWh/100 km; electric range (EAER): 70 – 73 km; electric range city (EAER city): 76 – 82 km

Cayenne Turbo E-Hybrid Coupé: WLTP: Fuel consumption combined (weighted): 2.0 – 1.7 l/100 km; CO_2 emissions combined (weighted): 46 – 40 g/km; power consumption combined (weighted): 31.8 – 30.1 kWh/100 km; electric range (EAER): 70 – 72 km; electric range city (EAER city): 76 – 81 km

Cayenne Turbo E-Hybrid Coupé with GT Package: WLTP: Fuel consumption combined (weighted): 1.9 – 1.8 l/100 km; CO_2 emissions combined (weighted): 43 – 40 g/km; power consumption combined (weighted): 31.1 – 30.2 kWh/100 km; electric range (EAER): 71 – 72 km; electric range city (EAER city): 79 – 82 km

All data refers to the EU model.

Consumption and emission data determined in accordance with the measurement procedure required by law. All new vehicles offered by Porsche are type-approved according to WLTP. Official NEDC values derived from WLTP values are no longer available for new vehicles as of 1 January 2023 and can therefore not be provided.

Further information on the official fuel consumption and official, specific CO_2 emissions of new passenger cars is available in the publication entitled ‘Guidelines on fuel consumption, CO_2 emissions and power consumption of new passenger cars’, which is available free of charge from all sales outlets and from DAT.

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Dr. Ing. h.c. F. Porsche AG
Communications, Sustainability and Politics
Porscheplatz 1
D-70435 Stuttgart

Porsche Newsroom
Media contact

https://newsroom.porsche.com
http://porsche-qr.de/contacts

Highlights

The new Cayenne hybrid models

- **Hybrid trio**
  Porsche is expanding the portfolio of the third model generation of the Cayenne to a total of three drive variants with plug-in hybrid powertrains.

- **Greater electric range**
  A greater battery capacity of 25.9 kWh significantly increases the electric range and enables locally emission-free driving for many everyday trips.

- **Higher charging power**
  A new charger increases the AC charging power of the hybrid models to up to 11 kW. This reduces the charging time at suitable power sources to less than 2.5 hours.

- **Maximum bandwidth**
  The Cayenne S E-Hybrid and Cayenne Turbo E-Hybrid models come as standard with the new air suspension with two-chamber, two-valve technology.

- **Superlative SUV**
  Thanks to a system output of 544 kW (739 PS) and 950 Nm of system torque, the Turbo E-Hybrid is the most powerful Cayenne ever.

- **High-performance Coupé**
  With optimisations and refinements to the powertrain, chassis, appearance and equipment, the Cayenne Turbo E-Hybrid Coupé with GT package takes sportiness to a new level.

Summary

A hybrid hat-trick: performance, efficiency and everyday usability

With the new Cayenne, Porsche is placing an even greater focus on E-Performance with the new Cayenne, and expanding its electric powertrain portfolio to a total of three E-Hybrid models. The first to set the tone after the fundamental revision of the third model generation was the Cayenne E-Hybrid. Now two additional powertrain variants with a total of five different versions are making their debut: the Cayenne S E-Hybrid and the Cayenne Turbo E-Hybrid – each available as an SUV and Coupé – as well as the Cayenne Turbo E-Hybrid Coupé with GT package each have a slightly different focus, but they all have one thing in common: the quintessential Porsche triad of performance, efficiency and everyday usability.

All PHEV models of the Cayenne line share a particularly performance-oriented design of the hybrid powertrain – a foundational philosophy at Porsche established with the 918 Spyder super sports car in 2013. The new hybrid models offer world-class electric range, system power and charging speed. Depending on the model, a larger high-voltage battery compared to the previous generation boosts the all-electric range to up to 70 – 78 kilometres in the combined WLTP cycle or up to 76 – 90 km in the city cycle. The new 11 kW on-board AC charger (previously 7.2 kW) significantly reduces charging time despite the larger HV battery: at a suitable power source, such as a wall charger or a public AC charging station, the battery can be fully charged in less than two and a half hours. A sustainable hybrid strategy fine-tunes charging and discharge phases in different driving modes, taking into account the respective environmental and dynamic requirements.

The new Porsche Cayenne S E-Hybrid extends the model portfolio as a completely new variant. With its innovative powertrain and a system output of 382 kW/519 PS, it combines dynamic inclinations with exeptional comfort and the ability to handle most everyday trips with zero local emissions.

With the Turbo E-Hybrid, Porsche is introducing the most powerful variant of the new Cayenne. It assumes the mantle from the previous Cayenne Turbo S E-Hybrid and significantly surpasses it with a system output of 544 kW (739 PS). Its forte is the remarkably wide spectrum between the performance of its commanding powertrain and its ability to

complete everyday trips with high efficiency. The Cayenne Turbo E-Hybrid with Turbo-specific body features demonstrates its top-of-the-line status. It features an exclusive front-end design, a model-specific exhaust system with two twin tailpipes in brushed stainless steel, and a retractable roof spoiler on the SUV.

The Cayenne Turbo E-Hybrid Coupé with GT package combines the concepts of the Cayenne Turbo E-Hybrid and the Cayenne Turbo GT. It brings numerous GT-specific details to the most powerful Cayenne that alone clearly identify the model as a GT. On the technical side, it features model-specific suspension technology, including a lowering of the body by 10 millimetres, stiffer anti-roll bars on the front axle and steering knuckles exclusive to the model. The package also includes weight-reduction measures that shave off more than 100 kilograms compared to the Cayenne Turbo E-Hybrid Coupé.

The Cayenne S E-Hybrid and Turbo E-Hybrid models already come as standard with adaptive air suspension with two-chamber, two-valve technology. Depending on the driving situation and selected driving mode, it offers outstanding driving comfort or a taut, higher spring rate and therefore an enormous spectrum between sports car performance and travel comfort. The Cayenne Turbo E-Hybrid also comes factory-fitted with Porsche Torque Vectoring Plus (PTV), which lends it even greater agility, particularly when cornering.

The Porsche Cayenne S E-Hybrid and Cayenne Turbo E-Hybrid benefit from the numerous new features introduced in the Cayenne model upgrade presented in early 2023. In addition to the fundamentally revised hybrid system, this includes the new cockpit of the Porsche Driver Experience, extended connectivity with native apps in the Porsche Communication Management (PCM) system, a new passenger display and high-resolution HD Matrix LED headlights.

The hybrid technology in the new Cayenne

Greater range, faster charging, more power

The E-Hybrid models of the Cayenne combine performance and efficiency in innovative ways. It's truer than ever before: comprehensively revamped powertrains enable greater range, higher system output and shorter charging times.

The heart of the hybrid system in all E-Hybrid is a new electric motor. A coil with an optimised number of turns as well as a new magnet and an increased phase current of the pulse inverter boost the electric power by 30 kW to 130 kW (176 PS). An additional 50 Nm takes the torque up to 450 Nm. Moreover, the new electric motor can convert 30 per cent more braking power into electrical energy in generator mode and store it in the traction battery: The new Cayenne E-Hybrids now recuperate with a capacity of up to 88 kW and at speeds down to 2 km/h. The predecessor braked down to a speed of 14 km/h with the electric motor. The compact unit is integrated in the revamped eight-speed automatic transmission.

A new brake booster further refines the driving experience in all E-Hybrid models. The Cayenne uses the technology to make the transition between the recuperation brake and the friction brake particularly smooth. This results in a consistent pedal feel throughout the braking process and thus to optimal dosing of braking power in both everyday and dynamic driving situations.

Porsche is also equipping all new Cayenne E-Hybrid models with a larger high-voltage battery, with an 8 kWh capacity increase to 25.9 kWh all told. Compared to predecessor models, it thus enables significantly more all-electric trips. A new on-board charger with a maximum charging capacity of 11 kW shortens the charging process at a suitable power source to under two-and-a-half hours.

The driving modes of the new Cayenne are designed to use the available energy as intelligently and efficiently as possible. In the Sport driving programme, the minimum charge level of the traction battery drops from 30 to 20 per cent, and in the Sport Plus driving programme from 80 to 30 per cent. This means the internal combustion engine needs to recharge the battery less frequently, which improves the overall efficiency of the vehicle. Another new feature are the charging strategies in the E-Charge driving programme: When

driving in built-up areas and at speeds of less than 55 km/h, the drive system operates in hybrid mode. The combustion engine and the electric motor share the workload and the charge level stays constant. Outside of town and at higher speeds, the internal combustion engine takes over completely and charges the battery to a maximum charge level of 80 per cent. The revised Hybrid-Auto mode includes environmental and navigation data in the powertrain strategy and enables a higher proportion of the route to be driven on electric power alone in city driving.

Cayenne S E-Hybrid

The Cayenne S E-Hybrid combines the dynamic demands of the Cayenne S with the progressive drive concept of the Cayenne E-Hybrid. In terms of the performance-relevant aspects of powertrain and suspension, Porsche is positioning the new Cayenne S E-Hybrid above the Cayenne S and Cayenne E-Hybrid. In doing so, the sports car manufacturer is creating yet another exhilarating point of access to efficient and advanced hybrid technology.

With 260 kW (353 PS), the three-litre V6 turbo engine in the Cayenne S E-Hybrid has 36 kW (49 PS) more power than the V6 in the Cayenne E-Hybrid. Together with the new electric motor, this results in a system output of 382 kW (519 PS). The SUV and SUV Coupé accelerate from zero to 100 km/h in 4.7 seconds and reach a top speed of 263 km/h. The electric range is up to 90 km (EAER City).

Cayenne Turbo E-Hybrid

The Cayenne Turbo E-Hybrid assumes the mantle of the previous Cayenne Turbo S E-Hybrid as the most powerful model in the portfolio. Both body styles combine superior drive performance with high efficiency. The revised hybrid technology in the new Cayenne supports both the day-to-day usability and the dynamic qualities of the top Cayenne.

The new electric motor works in conjunction with a powerful four-litre V8 twin-turbo engine in the Cayenne Turbo E-Hybrid. The combustion engine alone has an output of 441 kW (599 PS). Together, the two power units deliver an impressive combined power output of 544 kW (739 PS) and a maximum torque of 950 Nm. This amounts to a power boost of 43 kW (59 PS) over the previously offered Cayenne Turbo S E-Hybrid. The performance of the Cayenne Turbo E-Hybrid amply justifies its billing as the top of the line in the sports car of

SUVs. With Launch Control, it crushes the sprint from 0 to 100 km/h in just 3.7 seconds and reaches a top speed of 295 km/h.

The eight-cylinder twin-turbo has been extensively revised for use in the new Cayenne to reduce fuel consumption and emissions. The switch from a twin-scroll to a single-scroll turbocharger results in higher exhaust-gas temperatures, which reduces fuel consumption in the highly dynamic range. Increased fuel injection pressure to 350 bar improves efficiency, while electrically controlled wastegates boost engine responsiveness. A new two-stage variable valve lift with two cam profiles per valve on the intake camshaft adjusts the valve train depending on the load condition. At low loads, the engine works with short valve opening times and small valve lift, at high power requirements with long opening times and large lift. The fully variable camshaft control Vario Cam Plus also varies the duration of the valve overlap. This improves performance while further reducing CO_2 emissions. Optimisations to the piston rings and piston cooling also promote the robustness of the powerful eight-cylinder engine.

Cayenne Turbo E-Hybrid with GT package

New top model for maximum road performance

The performance and sporty appearance of the Cayenne Turbo E-Hybrid can be further enhanced: the model with a GT package, which is exclusively available as a Coupé and on a market-specific basis, adopts numerous elements from the Cayenne Turbo GT, which is particularly focused on maximum on-road performance – as well as its claim to offer the best driving performance in the luxury SUV segment.

One reason for this, among others, is the slightly lower centre of gravity: compared to the otherwise usual panoramic glass roof on all Cayenne Coupé models, the carbon roof saves around 22 kilograms at the highest point in the vehicle, thereby lowering not only the overall weight, but also the dynamically important centre of gravity and thus the tendency to roll. This effect is enhanced by the lowering of the body by 10 millimetres compared to the Cayenne Turbo E-Hybrid Coupé. This lays the foundation for outstanding driving dynamics. On this basis, both the passive suspension components and the active control systems were optimised for lateral and longitudinal dynamics and specially configured in terms of their interaction.

On the front axle, the width of the rims has been widened by one inch compared to the standard wheels of the Cayenne Turbo E-Hybrid, or by half an inch, to 10.5 inches, compared to the optional 22-inch GT design wheels of the Cayenne Turbo E-Hybrid Coupé with lightweight sports package. As a result, the 285/40 ZR22 front tyres can transfer more cornering forces. The Turbo E-Hybrid Coupé with GT package delivers more precise steering and allows higher lateral acceleration. This increased grip in corners is supported by up to 0.58 degree negative static camber angle depending on conditions. Power Steering Plus comes as standard. The feedback from the front axle steering has been intensified, so the driver is even more precisely informed about the driving situation and the road. The adapted Porsche Torque Vectoring Plus (PTV Plus) supports steering and provides better traction when accelerating out of corners thanks to the fully variable differential lock. The GT-specific tuning of the Porsche Traction Management (PTM) system further supports this driving-dynamics effect.

The optional rear-axle steering also features GT-specific tuning for more agile steering angles up to a higher speed range. 315/35 ZR22 tyres mounted on the actively steering rear-axle transmit the lion's share of the propulsion forces.

The Cayenne Turbo E-Hybrid Coupé with GT package comes with the new air suspension with Porsche Active Suspension Management (PASM) as well as 2-chamber 2-valve technology and model-specific damper tuning. The Porsche Ceramic Composite Brake (PCCB) system with yellow brake callipers is also installed ex-works. The sporty suspension setup can be supplemented on request with 22-inch Pirelli P Zero Corsa performance tyres as well as the Porsche Dynamic Chassis Control (PDCC) electromechanical anti-roll stabilisation with adapted control software. The system adjusts the torsional rigidity of the stabilisers on the front and rear axles within a few milliseconds and thus actively supports the vehicle body.

Zero to 100 km/h in 3.6 seconds and 305 km/h top speed

The Cayenne Turbo E-Hybrid Coupé with GT package accelerates to 100 km/h in 3.6 seconds and reaches a top speed of 305 km/h. In addition to its exceptional performance, the Cayenne Turbo E-Hybrid Coupé with GT package offers all the versatility and day-to-day usability of the E-Hybrid powertrain and thus achieves the widest spectrum between dynamics and efficiency in the Cayenne model range.

The exterior of the Cayenne Turbo E-Hybrid Coupé with GT package reprises the impressive appearance of the Cayenne Turbo GT. This is clearly seen on the titanium exhaust system with centrally positioned tailpipes and the carbon rear diffuser. The same applies to the dark-tinted headlights with the innovative HD Matrix LED technology. The lightweight roof, the exterior mirror panels and the sideplates on the roof spoiler are also made of carbon. Also taken from the Lightweight Sport Package of the Cayenne Coupé are the black wheel arch extensions, side sills and rear apron. There are also other weight-saving measures. These include a mechanical steering column lock, reduced insulation and a particularly lightweight lithium-iron-polymer starter battery. Altogether, the weight savings compared to the Cayenne Turbo E-Hybrid Coupé add up to more than 100 kilograms.

The Cayenne Turbo E-Hybrid Coupé with GT package also has a particularly sporty and exclusive interior. Specific features include a high proportion of Race-Tex material, a 360 mm GT sports steering wheel with a yellow 12 o'clock marker, and a red Sport Response Button on the mode switch. The driver and front passenger enjoy standard eight-way adjustable sports seats.

The availability of the Cayenne Turbo E-Hybrid with GT package is limited to the markets in which the Cayenne Turbo GT is no longer available due to local regulations. This applies to the majority of EU markets, as well as Japan, Hong Kong, Taiwan and Singapore (as of October 2023).

Dr. Ing. h.c. F. Porsche AG
Communications, Sustainability and Politics
Porscheplatz 1
D-70435 Stuttgart

Porsche Newsroom
Media contact

https://newsroom.porsche.com
http://porsche-qr.de/contacts

Suspension technology in the new Cayenne E-Hybrid models

Adaptive air suspension for the maximum bandwidth

The Porsche Cayenne S E-Hybrid and the Cayenne Turbo E-Hybrid come as standard with adaptive air suspension in all variants, equipped with the new two-chamber, two-valve technology. The controlled vibration dampers on the front and rear axles of the Porsche Active Suspension Management (PASM) system now feature two valves for damping the body and wheel movements instead of one, which makes it possible to change the rebound and compression stages of the dampers independently of each other. The advantage of the new technology is a significant increase in comfort and in driving safety, thereby achieving an even broader range between the Comfort and Sport Plus characteristics.

Compression and rebound when driving make different demands of the dampers positioned between the wheel and body. This means that any movements by the body must remain as smooth and comfortable for the passengers as possible. The wheel, which in contrast is considerably lighter in weight, still needs to exhibit good damping characteristics in even the worst road conditions to guarantee traction. The new two-valve technology goes a long way to resolving the conflict between the goals of comfort for the passengers and optimal wheel suspension without compromising driving safety. Depending on the situation, the valve for the compression stage can set variable damping forces independently of the valve for the rebound stage, and vice versa. This enables the new Cayenne to offer a clearly noticeable increase in comfort with a smoother vehicle body, better handling performance and improved support for rolling and pitching movements as standard.

The new adaptive air suspension further enhances the driving experience. In combination with the new two-valve technology, a variable spring rate noticeably outperforms the previous air suspension. The variable spring rate is implemented by means of two air chambers that can be connected or disconnected by a valve. When driving slowly and overcoming obstacles, it impresses with a particularly comfortable spring and damper characteristic and enables the new Cayenne to effectively glide over the road surface. At the same time, the more dynamic spring rate of the air suspension and the new two-valve technology significantly improves driving performance and precision while noticeably reducing body movements. Compared to the previous model, the developers of the new

two-chamber air suspension have also increased the spread of the spring rates. This allows both the firmly tuned spring rate of the Turbo GT and the most comfortable spring rate of the previous model to be implemented in every new Cayenne with air suspension.

The standard equipment in the Cayenne S E-Hybrid and Cayenne Turbo E-Hybrid also includes the speed-dependent Porsche Power Steering Plus (Cayenne S E-Hybrid: Coupé only). The Porsche Cayenne Turbo E-Hybrid also comes standard with Porsche Torque Vectoring Plus (PTV) with an electronically controlled, fully variable differential lock. Its further enhanced coordination reduces the number of agile braking interventions while maintaining a high yaw response. The Turbo E-Hybrid also comes with 10-piston callipers on the front axle. Porsche Dynamic Chassis Control and rear-axle steering are available as options in all variants, further improving the Cayenne's manoeuvrability. In addition, the Porsche Ceramic Composite Brake (PCCB) is available as an option for both model variants, as well as newly developed 22-inch performance tyres.

Design and equipment

Powerful look and new Porsche Driver Experience

Both new E-Hybrid variants of the Cayenne benefit from the fundamental upgrades that the model series underwent in early 2023. A new front end has been combined with wings that are more strongly arched, and a new bonnet. This emphasises the car's width. The headlights create a strikingly technical impression. In the rear, the SUV adopts the lower number plate position of the Coupé.

Inside, all the new Cayenne models have an emphatically driver-oriented control concept. Functions with a direct impact on driving are located directly on or immediately next to the steering wheel. The driver now operates the assistance systems via a driver assistance lever on the left side of the steering wheel. The automatic gear selector lever is to the right of the steering wheel on the dashboard.

The new Porsche Driver Experience creates a focused yet digitally enriched driving experience. For the first time, Porsche is offering a 10.9-inch display for the passenger side in the Cayenne. It offers access to performance data, the infotainment system and, depending on the market, the option of streaming videos while on the road. Technical safeguards ensure that this does not distract the driver.

Cayenne S E-Hybrid

The design of the Cayenne S E-Hybrid underscores its positioning. It features the 20-inch alloy wheels from the Cayenne S, with 20-inch AeroDesign wheels available as an option. The model also takes the two twin tailpipes of the exhaust system in brushed stainless steel on the left and right from the Cayenne S. The standard equipment also includes the Silver exterior package in the SUV and the Black exterior package in the Coupé, as well as pedal pads in stainless steel, the Sport Chrono package including a new mode switch for quick selection of driving modes and a central tachometer on a black dial in the digital 12.6-inch instrument cluster.

Cayenne Turbo E-Hybrid

The Cayenne Turbo E-Hybrid SUV and Coupé are clearly recognisable as the top models in the line. Both body variants feature a particularly sporty front-end reserved for Turbo models, with enlarged cooling air intakes and shiny black airblades. Other features of the turbo models include a rear trim panel painted in the exterior colour and wider wings in the exterior colour. This clearly distinguishes the Turbo E-Hybrid models from the other variants of the Cayenne.

The exhaust system used exclusively on the Turbo models, with two twin tailpipes in brushed stainless steel on the left and right of the rear section, further emphasises the model's performance-focused character. The design of the one-piece, 21-inch alloy wheels in the Cayenne Turbo design in Dark Titanium (glossy) is also reserved for the Turbo models. As in all the E-Hybrid variants, there is a choice of Acid Green brake callipers instead of the standard red brake callipers. The standard equipment in the Turbo E-Hybrid models includes the new HD-Matrix LED headlights. Along with the Coupé, the Cayenne SUV also has active aerodynamics: the spoiler on the edge of the roof automatically extends at higher speeds to increase driving stability.

Inside, the most powerful Cayenne underscores its sportiness with aluminium inlays in the dashboard and the door panel trims. The roof lining is made entirely of the particularly sporty Race-Tex microfibre material. The standard equipment also includes a heated GT sports steering wheel, a mode switch for fast and direct selection of the desired driving mode, and 18-way adjustable leather sports seats with the model name embroidered in the headrests. As an alternative to the sports seat, 14-way adjustable leather comfort seats are available. The tachometer with the "Turbo" logo is positioned in the middle of the all-digital dashboard. The high-quality BOSE® Surround Sound system also comes as standard.

10 years of the Porsche 918 Spyder

E-Performance pioneer

At the Geneva Motor Show in March 2010, Porsche presented the prototype of a breathtaking super sports car: the 918 Spyder. The concept car combined high-tech racing technology and electromobility in a dazzling spectrum of capabilities: on the one hand, the 918 Spyder was able to glide almost noiselessly through the city without local emissions. On the other hand, it offered the driving performance of a super sports car. The prototype was also the first plug-in hybrid from Porsche to offer a glimpse of the charging technology of the future. Due to an overwhelmingly positive response from the public, the board decided to go ahead with series development that same year. The project team only needed three years of development time to complete the first series 918 and officially present it at the International Motor Show in Frankfurt in autumn 2013.

Even before delivery of the first series vehicle, limited to 918 units, the 918 Spyder demonstrated its capabilities with an impressive record: with a lap time of 6:57, it was the first road-approved vehicle to break the seven-minute mark on the Nürburgring's renowned Nordschleife – not despite, but because of, its hybrid drive. Maximum performance through 652 kW (887 PS) of system output and minimum consumption at three litres per 100 kilometres in the NEDC represented a combination at the limits of what was technically feasible at the time. Depending on the driver's wishes, the 918 Spyder exploited all the possibilities offered by the combined powertrain of the combustion engine and two electric motors. The hybrid drive of the super sports car was designed for optimum efficiency and uncompromising driving dynamics in equal measure. The key to this was the targeted use of a combustion engine and two electric motors, exploiting the specific advantages of each. The driver could choose between five driving modes, which controlled the single-source or mixed drive scenarios with the 4.6-litre V8 engine with 447 kW (608 PS) and the two electric motors with a total of 210 kW (286 PS), depending on the driving profile. The spectrum ranged from all-electric driving for 30 kilometres and more to uncompromising tuning for the track. The 918 Spyder thus lived up to the claim of being a record-breaking machine for top drivers while at the same time being an uncomplicated sports car for everyday life. And all that with impressive driving performance: it could go from a standstill to 100 km/h in 2.6 seconds and reach a top speed of 345 km/h.

The 918's driving dynamics became a tangible reality through the all-wheel drive concept, which featured a combined powertrain of both combustion engine and electric motor on the rear axle, plus a second electric motor on the front axle. The concept was based on experience gained by Porsche while racing with the successful 911 GT3 R Hybrid. The additional, individually controllable front-wheel drive also enabled new driving strategies for extremely high and safe cornering speeds. Added to this was the advanced boost strategy, which intelligently controlled the energy reserves of the electric drive. It ensured that for every burst of full acceleration, the unlimited total output of the 918 Spyder could be deployed by simply flooring the accelerator. The main power source of the 918 Spyder was a tamed racing engine from the LMP2 car, the RS Spyder. The 4.6-litre engine produced 447 kW (608 PS) at 8,700 rpm. In this HSI engine, the exhaust side was inside the cylinder V for the first time. This kept the engine compartment cooler, which was particularly beneficial for the lithium-ion traction battery. The hybrid module was connected to the V8 engine. It essentially consisted of a roughly 115-kW electric motor and a dry separating clutch as the connecting piece to the combustion engine. For the permanently excited synchronous machine, Porsche developed a new cooling concept: the stator, i.e. the stationary inner part of the electric motor, was water-cooled, while the permanent magnets of the outer, rotating part, were air-cooled via a turbine wheel. The second electric drive of the 918 Spyder acted mechanically on the front axle independently of the rear wheels. The 918 Spyder's traction battery was more powerful than any other electric energy source used in hybrid vehicles at the time: with its specific power of 1.7 kW per kilogram, it delivered up to 230 kW. It was also possible to convert far more kinetic energy into electrical energy in the Porsche 918 Spyder than in other hybrid vehicles at the time. The braking torque of the electric motors in generator mode was so high that they decelerated the super sports car with up to 0.5 g. This corresponds to a braking distance of 52 metres at 100 km/h.

With its broad spectrum of capabilities, from all-electric driving over longer distances to uncompromising tuning for the track, tailor-made driving modes and powerful recuperation, the 918 Spyder still serves as a technology platform for the modern, performance-oriented hybrid drives that Porsche has been offering for the Cayenne and Panamera model lines since 2017.