

Greater driving precision, driving dynamics and driving comfort

02/12/2024 Greater driving precision, driving dynamics and driving comfort

Until now, the base Taycan was fitted with steel-spring suspension. Now all Taycan models come as standard with adaptive two-chamber air suspension. It enhances driving precision, driving dynamics and driving comfort and the individual driving modes now cover a broader bandwidth between comfort and performance. The standard chassis features automatic self-levelling, which keeps the vehicle height constant regardless of the load condition. Depending on the driving mode, the body is lowered by up to 22 millimetres when travelling above certain speeds. This reduces drag and increases driving stability and range, particularly at higher speeds. The customer can also manually select a lower or higher level in the PCM.

For wheel control, Porsche uses a double-wishbone suspension with forged aluminium wishbones and hollow-cast aluminium lightweight swivel bearings. On the rear axle, a multi-link suspension with forged upper aluminium wishbones and hollow-cast lower aluminium wishbones guides the wheels.

The two-chamber air springs work with two-valve dampers. The two valves continuously control the damper rate. One valve is responsible for the rebound stage and one for the compression stage. They react quickly and precisely to changing driving conditions or altered driving modes.

The new Porsche Active Ride suspension is available as an option for the Taycan.[1] This system outperforms other suspension system designs in all relevant parameters and offers an unprecedented range between driving comfort and driving dynamics. The basis for this are newly developed active shock absorbers – with two-valve technology – each connected to an electronically operated hydraulic pump. This generates a volume flow in the damper according to demand and can therefore build up forces between the body and wheels in a lightning-fast, highly precise and targeted manner, which counteract and almost completely compensate for suspension forces resulting from uneven road surfaces.

The suspension keeps the body of the Taycan level at all times, even during dynamic braking, steering and acceleration manoeuvres. With a smooth ride, the system absorbs bumps almost completely. In dynamic driving situations, the Porsche Active Ride suspension ensures a perfect connection to the road thanks to a balanced distribution of wheel loads (see separate chapter for further details).

Porsche Torque Vectoring Plus (PTV Plus) is still available separately – or as standard on the Taycan Turbo and Taycan Turbo S. For better traction and more agility, PTV Plus uses an electronically controlled differential lock on the rear axle.

The optional rear-axle steering (standard on the Turbo S) operates as before with a maximum steering angle of 2.8 degrees. This further improves comfort, driving safety and driving dynamics. The car steers without delay and builds up lateral acceleration at the rear axle significantly sooner. The result is impressive steering precision. At the same time, manoeuvring is easier as the turning circle is shortened.

The brake portfolio is based on the proven state-of-the-art technology in the Taycan. However, the systems have been further improved in detail: residual brake torques were reduced with optimised brake pads, among other measures. This reduces rolling resistance immediately after braking. Range and efficiency benefit from the fact that the pads do not rub against the discs and create unnecessary friction. Positive side effect: the brakes are also cooled more effectively and, therefore, offer better performance.

Porsche modified the range of wheels for the Taycan with a focus on efficiency. All variants now come as standard with aerodynamically optimised wheels and reduced-rolling-resistance tyres. New 21-inch wheels and tyres were specially developed for the purpose.

Those who seek even more engaging driving dynamics and agility in the Taycan Turbo or Turbo S can choose the optional dynamics package. In addition to the Porsche Active Ride chassis, it includes 21-inch wheels with performance tyres and rear axle steering on the Turbo.

[1] Only for the 4WD versions.

MEDIA ENQUIRIES



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Consumption data

Taycan Turbo (WLTP)*: Electrical consumption combined: 20.0 – 17.7 kWh/100 km; CO_2 emissions combined: 0 g/km; CO_2 class: A

Taycan (WLTP)*: Electrical consumption combined: 19.1 – 16.1 kWh/100 km; CO_2 emissions combined: 0 g/km; CO_2 class: A

Taycan 4S Sport Turismo (WLTP)*: Electrical consumption combined: 21.0 – 18.4 kWh/100 km; CO_2 emissions combined: 0 g/km; CO_2 class: A

Taycan Turbo S (Predecessor model)

*Further information on the official fuel consumption and the official specific CO_2 emissions of new passenger cars can be found in the "Leitfaden über den Kraftstoffverbrauch, die CO_2-Emissionen und den Stromverbrauch neuer Personenkraftwagen" (Fuel Consumption, CO_2Emissions and Electricity Consumption Guide for New Passenger Cars), which is available free of charge at all sales outlets and from DAT (Deutsche Automobil Treuhand GmbH, Helmuth-Hirth-Str. 1, 73760 Ostfildern-Scharnhausen, www.dat.de).

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