

The 911 Turbo generations

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1st generation:

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In the year of the first oil crisis, visitors of the Frankfurt International Motor Show in September 1973 were able to view a silver 911 Coupé. The 'Turbo' logo, resplendent on the rear wing, revealed that this was the prototype of a planned turbocharged version of the 911. And yet, another year would pass before series production began. Even within the company there were doubts as to whether a range-topping model like this made sense in view of the oil crisis. Enthusiastic customers, on the other hand, did not hesitate for a second. The driving dynamics of the high-performance sports car, derived from motorsport technology and enriched with an exceptionally comfortable and luxurious interior, were simply too alluring. Porsche originally planned the 911 Turbo as a prestigious limited-run series, but the sales figures exceeded all expectations. In the first three years of production, Porsche produced 2,850 units of the 911 Turbo 3.0 – the model which was known internally as the 930 and which was the first of its kind with a boost pressure-controlled turbocharger. The 191 kW (260 PS) sports car took many

details from racing car construction to the road, including the rigid wheel hubs from the 917, and the kinematics of the front and rear axles from the 911 Carrera RSR. In 1974, the driving performance of the first Turbo was at the limit of what was conceivable at the time. It could sprint from 0 to 100 km/h in 5.4 seconds At over 250 km/h, the top speed was also practically unimaginable. Given the explosive power delivery of the turbocharged engine, a little extra concentration didn't do any harm. The 911 Turbo of the first generation quickly earned the reputation of being a sports car for 'real men'. Which is perhaps exactly why many women were also counted among the Turbo's customers. First and foremost, Louise Piëch, who was given the first 911 Turbo by her brother Ferry Porsche in 1974. On her 70th birthday, on behalf of all the company's employees, he presented her with a special edition with a narrow body and a turbocharged 2.7-litre experimental engine.

One of the secrets of the success of Porsche is its continuous technical development of the models. Always with the goal of getting a little closer each time to the ideal of a perfect sports car. The ideal towards which Ferry Porsche worked his entire life. In the 1977 model year, a boost pressure gauge, 16-inch wheels and power brakes were added to the 911 Turbo.

2nd generation:

Greater displacement and a world first

For the second Turbo version of the 911, in the 1978 model year, Porsche increased the displacement to 3.3 litres and positioned a charge-air cooler below the rear spoiler. This was a world first in a production car, again derived from motor racing practices. To achieve the maximum power output of 221 kW (300 PS) at 5,500 rpm and maximum torque of 412 Nm, lowering the intake temperature of the charge air was vital. A lightweight alloy brake system with internally ventilated brake discs derived from the Porsche 917 brought the range-topping model to a halt. Tried and tested in motorsport, this system was also an appropriate solution for the road in a car with a top speed of 260 km/h. Each year up to 1989, the sports car manufacturer improved details of this second-generation 911 Turbo, (which was still known internally as the 930). As with its predecessors, car enthusiasts celebrated the 911 Turbo 3.3 as a unique combination of performance and luxury. At the end of the 1970s, Porsche responded to the demand for customisation options with its comprehensive Sonderwunsch programme. From 1983, for example, customers could order a Slantnose variant of the Turbo body with the pop-up headlights from the 944 – a look reminiscent of the production-based Porsche 935 racing car. Another option was a power increase of 22 kW (30 PS) which, in combination with the Slantnose variant, gave the 911 Turbo a potential top speed of 275 km/h. In the spring of 1987, Porsche unveiled the first 911 Turbo Cabriolet, which together with the 911 Turbo Targa became the flagship model of the company's range. An electrically powered convertible roof was available as a no-cost option. Another secret of the success of Porsche: the amalgamation of power and luxury in the Turbo.

3rd generation:

More than 85 per cent of all parts were new

Anniversaries often usher in a new era. At Porsche, the 25th birthday of the 911 in November 1988 marked the beginning of a new chapter: the sports car manufacturer presented the all-wheel-drive Porsche 911 Carrera 4 of the generation known internally as the 964, and once again proved that it remained highly competitive. The main requirements during development were greater performance and compliance with the strictest emissions standards. By the time of the car's world premiere, Porsche had reworked more than 85 per cent of all components of the 911 . With the 964, the Turbo was once again the pinnacle of the 911. From 1990, the top-of-the-range model was available with 235 kW (320 PS). It had a redesigned 3.3-litre turbo engine with a three-way metallic catalytic converter as standard. One special feature was the bypass tailpipe equipped with a catalytic converter and exhaust silencer. The exhaust gases directed through the bypass no longer had to go through the regular catalytic converter, thus avoiding any additional (and restrictive) back pressure. Two years later, Porsche increased the displacement again, this time to 3.6 litres – to deliver 265 kW (360 PS). The development of the engine focused mainly on generating more torque at lower revs, in particular for driving in urban traffic or on country roads. The increased displacement also enabled the boost pressure to build faster, with the result that the turbocharger activated more smoothly, unleashing its characteristic thrust at even moderate engine speeds. The 911 Turbo had a top speed of 270 km/h. The 20-millimetre-lower chassis and retuned suspension made steering movements feel even more direct. The typical Turbo look was modified with red brake callipers and a new centre section at the rear. Despite the reworking of 85 per cent of parts, one thing remained: the Porsche DNA that unites all 911 models.

4th generation:

A completely redefined idea of performance

Porsche used the provocative slogan 'Kills bugs fast' to advertise the 993-generation 911 Turbo in the US. Almost three decades later, these words still bring a smile to the faces of Porsche enthusiasts. In March 1995, the sports car manufacturer revealed the 911 Turbo at the Geneva Motor Show, once again showcasing the company's capacity for innovation. Its development team had reduced turbo lag during acceleration to an unprecedented minimum. This was made possible by replacing the single large turbocharger with two smaller ones. Equipped with these, the 3.6-litre engine had power-delivery characteristics similar to that of a large-displacement naturally aspirated engine. Even at just 2,000 rpm, this high-performance sports car's engine would develop an abundance of power. The Turbo also impressed with its sophisticated aerodynamics and all-wheel drive, which came as standard. The latter ensured greater driving safety at high speeds and on slippery surfaces. In extreme situations, the engine torque delivered to the front wheels increased from five to 40 per cent. The car could sprint from 0 to 100 km/h in 4.5 seconds and had a top speed of 290 km/h. However, the real revolution for this sports

car, which was sold from 1995 to 1998, was the combination of 300 kW (408 PS) of power and 540 Nm of torque. Porsche further improved the dynamics by lowering and stiffening up the chassis. A new wing stabilised the rear end while weighing only half as much as the wing of the previous-generation Turbo. For the first time, Porsche installed 18-inch aluminium wheels with hollow-spoke design. This was a world first that saved three kilograms per wheel. From 1995 to 1998, Porsche built 6,015 examples of the Turbo. The final words of the advertisement also drew attention to the unassailability of the Turbo – a car at the cutting edge of its segment: 'Porsche. There is no substitute.'

5th generation:

Water cooling – a novelty in the Turbo timeline

This time, everything was new. From the first bolt to the very last. For the first time, a 911 was driven by a water-cooled, four-valve, flat-six engine. For the first time, it had an optional five-speed Tiptronic S automatic transmission and Porsche Ceramic Composite Brakes (PCCB). The sports car manufacturer unveiled the 996-generation Porsche 911 Turbo at the Frankfurt International Motor Show in 1999 – a car with 309 kW (420 PS) and 560 Nm of torque. Right on time for the 25th anniversary of the Turbo, Porsche impressed both fans and journalists with the car's performance and power. The numbers speak for themselves: 4.2 seconds from 0 to 100 km/h – which made it faster than a 911 GT3.When it went on sale at the start of the 2000s, this was the fastest roadgoing 911 that had ever been produced. And from summer 2003, Porsche offered a 911 Turbo Cabriolet for the first time since 1987. Porsche installed all-wheel drive as standard in order to best transfer the car's enormous power to the road. With a top speed of 305 km/h, the 911 Turbo joined the elite club of 300 km/h sports cars. The design of the Turbo differentiated it clearly from the Carrera, and not just with typical features such as the wide wings and the extravagant rear spoiler. The greater engine power meant that the total area of the cooling radiators was 50 per cent bigger than that of the naturally aspirated 911 engine – as implied by the three large cooling air intakes with dark trim in the front bumper. To perfect the look of the car from behind, Porsche installed a new extendable wing and fitted the rear with air outlets – like those of the 959 super sports car. It didn't take long for demand for this model to exceed all expectations in Zuffenhausen. During the first year of production Porsche increased the planned production run from 2,500 to 4,000 units. In total, the sports car manufacturer had built 20,499 units up to and including model year 2005.

6th generation:

Familiar everyday usability and more powerful than ever

The sixth-generation Turbo was launched in June 2006 with 353 kW (480 PS). Known as the 997 generation, this model of 911 Turbo was the first petrol-engine production car in the world to feature turbochargers with Variable Turbine Geometry (VTG). This technology enabled the entire exhaust gas flow to be used optimally for the turbocharging at all engine speeds. This explained the additional power

of 44 kW (60 PS) compared to the previous model, even with an unaltered displacement of 3.6 litres. Torque also increased by 60 Nm, from 560 to 620. In combination with the optional 'Sport Chrono Package Turbo', it was possible to activate a so-called overboost at full acceleration at the push of a button. This increased the torque by another 60 Nm to 680 Nm for up to 10 seconds, while the boost pressure at medium engine speeds rose by 0.2 bar. In this mode, the car could sprint from 80 to 120 km/h in 3.5 seconds – 0.3 seconds faster than in the manual 911 Turbo in 'normal' mode. Fitted with a six-speed manual transmission, the turbocharged 997-generation 911 took 3.9 seconds to go from 0 to 100 km/h. Just one year after the car was launched, Porsche unveiled the 911 Turbo Cabriolet, whose fabric roof could open and close in less than 20 seconds. After the model update in 2010, the 3.6-litre engine was replaced by a 3.8-litre engine producing 368 kW (500 PS). The product update also brought a maximum torque increase of 30 Nm to 650. For the first time, Porsche offered the seven-speed dual clutch transmission (PDK) as an alternative to the six-speed manual transmission. Like its predecessors, the Turbo of the 997 generation combined the best of all the previous models with technical evolution and a vision of the future.

7th generation:

With rear-axle steering for even more dynamic cornering

For the Turbo models of the 991 generation, Porsche aimed to take the driving dynamics to yet another new level, once again outdoing itself. Thus, in 2013, active rear-wheel steering became a feature of the 383 kW (520 PS) 911 Turbo, which made the car even more agile when cornering and even more stable at high speeds on the motorway. At speeds above 80 km/h, the front and rear wheels steered in the same direction, while below 50 km/h they steered in opposite directions. Porsche also reworked the seven-speed dual clutch transmission (PDK) to make even faster gear changes possible. A multi-stage extendable front spoiler and a rear wing with adjustable height and angle of attack contributed to the improved aerodynamics of the 911 Turbo, while making the downforce of the high-performance 991-generation sports car particularly effective. The model update also gave the 911 Turbo 15 kW (20 PS) more power than its predecessor. It could go from 0 to 100 km/h in 3.0 seconds and had a top speed of 320 km/h. The engine featured a dynamic boost function, which holds boost pressure when the accelerator is only briefly released. The engine then can respond virtually instantaneously when the accelerator is pressed again after a load change. The Sport Response Button was a new feature in the Sport Chrono Package, for which Porsche drew on motor racing for inspiration. The responsiveness of the engine and the transmission could be adjusted at the push of a button, allowing the Turbo to accelerate optimally for up to 20 seconds, for example when overtaking. Meanwhile, a countdown in the instrument cluster told the driver how much time remained.

8th generation:

No ifs or buts

The most important secret of the success of a Turbo model from Zuffenhausen has always been technical evolution. Porsche enthusiasts were delighted, if hardly surprised, when the latest 911 Turbo (**911 Turbo** (Predecessor model)), of the 992 generation, dipped 0.2 seconds below the magical three-second barrier for the sprint from 0 to 100 km/h. Since 2020 the 427 kW (580 PS) Turbo has also built on a great legacy – just as with its predecessors. Each generation before had lived up to the claim of being a global benchmark for high-performance sports cars. The latest generation of the 2+2 seater was more than twice as powerful as the original Turbo, which was powered by a 3.0-litre flat-six with a single turbocharger producing 191 kW (260 PS). Compared to its direct predecessor, the latest 911 Turbo was more muscular in its styling: 20 mm wider at the front and 45 mm wider across the rear. The active front spoiler and variable rear spoiler were also bigger. The charge-air coolers were positioned in the airflow under the rear lid, and the sports car now drew process air instead of – as previously – cooling air via the air intakes in the rear side sections. Although the 911 Turbo has become faster, larger and more comfortable over the years, it has always held onto its fundamental character. It combines high performance with everyday usability, passion with reliability, and dynamism with efficiency. It continues to embody the Porsche DNA with which the sports car manufacturer has made history. Time after time.

MEDIA ENQUIRIES



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Consumption data

911 Turbo (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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