

Product and Technology Communications

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High-Performance. Full of Character. Individual. Audi Sport Is Celebrating 25 years of the Audi RS Models

- Since their launch back in 1994, 25 RS models have been added to the product range
- Six product innovations, of which two are completely new models, in 2019 alone
- Basic philosophy: performance, prestige and exclusiveness with full everyday practicality
- Anniversary exhibition of RS rarities in the Audi Forum at Neckarsulm

Ingolstadt/Neckarsulm, July 15, 2019 – 25 years ago, the first Audi RS model was launched on the market in the form of the Audi RS 2 Avant, marking the beginning of a success story. With their proximity to motor racing and their exclusiveness, the Audi RS models have always held a particular fascination. To date, Audi Sport GmbH, formerly quattro GmbH, has presented a total of 25 RS models. In 2019, six further product innovations are being presented, of which two are completely new RS models.

At Audi, the designation "RS" stands for a philosophy that is driven by a quest for top performance and perfection. "Every RS model expresses the passion that we put into developing our high-performance cars," said Oliver Hoffmann, Managing Director of Audi Sport GmbH. "For 25 years, our customers have been experiencing the RS models as masterful companions for everyday life that convey pure emotion and maximum driving enjoyment."

The RS models are the spearheads of their respective product lines. They stand for performance, prestige and exclusiveness at the limit of what is technically feasible without any loss of everyday usability. Many of them are pioneers in their market segments and trailblazers for technical innovations – that applied to the Audi RS 4 Avant with its barnstorming biturbo V6 19 years ago and it applies just as much to the TT RS (combined fuel consumption in l/100 km*: 8.0–7.9 [29.4–29.8 US mpg]; combined CO₂ emissions in g/km: 181 [291.3 g/mi]) and its multi-award-winning, forceful five cylinder in its latest evolutionary stage.



RS 2 Avant to RS 4 Cabriolet: Dynamism rooted in tradition

The RS models have been making a splash for a quarter of a century – five milestones merit particular mention.

In 1994, the Audi RS 2 Avant (232 kW/315 metric horsepower) with its four-valve, five-cylinder engine, long since in use, wrote the first chapter of the RS story. With this car, the company established the segment of the dynamic high-performance station wagons. The quattro drive with its self-locking center differential that had proven itself in motor racing and rallying made it possible to masterfully transfer this high performance to the road.

In 1999, the Audi RS 4 Avant based on the S4 of the time introduced a new dimension in terms of power to the medium-size class. Under the hood, a V6 engine with displacement of 2.7 liters, five valves per cylinder and biturbo charging does all the work – just like in the S4. The engineers at what was then quattro GmbH developed the power unit, which was already very powerful, to give it even more vibrancy and even higher torque for use in the RS 4. In collaboration with Cosworth Technology, the cylinder head was newly developed, the intake and exhaust ports were revised and the cross section of the air ducts were enlarged on the suction and compression sides. Furthermore, the turbochargers are larger and the boost pressure is increased compared with the S4. As a result, the RS 4 engine develops maximum power of 280 kW (380 metric horsepower) instead of 195 kW (265 metric horsepower).

The second generation of the RS 4 followed in 2005. Numerous innovations, many of which originated in motorsports, characterize this generation. A standout among these was the V8 engine with 309 kW (420 metric horsepower). It was the first time that a manufacturer had relied on the combination of gasoline direct injection and a high-rev concept that allowed up to 8,250 rpm. The gasoline direct injection engine enabled improved power output through more effective production of the fuel/air mixture. In the R8, which enjoyed success at Le Mans, the FSI technology had already proven its performance in impressive style. In 2007, the engine was also used in the first generation of the Audi R8. The suspension offered the latest generation of permanent all-wheel drive as well as the Dynamic Ride Control damper system that was first used in 2002 in the RS 6. With its asymmetric dynamic torque distribution in the ratio of 40 percent front to 60 percent rear, the refined quattro drive with self-locking center differential ensured optimum traction. The first and, to date, only RS 4 Cabriolet provided open-top driving pleasure with the background music of the sonorous V8 aspirated engine.



2008 saw the arrival of the RS 6 Avant, a sports car in the form of an unobtrusive business station wagon. With a completely newly developed V10 engine with FSI direct injection, biturbo charging, dry sump lubrication like in motorsports as well as the quattro permanent all-wheel drive, the RS 6 Avant put itself ahead of the competition. With the impressive V10 force complete with 426 kW (580 metric horsepower) of power and 650 Nm (479.4 lb-ft) of torque, the RS 6 Avant was the most powerful series production Audi to date. The crankcase of the V10 power unit was made in a low-pressure chill casting process from an aluminum alloy – a high-tech material that combines low weight with high strength. The cylinder liners of the connected crankcase were mechanically exposed, with the result that the entire engine weighed only 278 kilograms (612.9 lb). In order to meet the most exacting demands in terms of vehicle dynamics at the same time, the engine's oil circuit was developed with dry sump lubrication, which was tried and tested in motorsports. The external oil container and the oil pump module, which operates with numerous suction stages, ensured that all engine components and the two turbochargers were lubricated at all times. Today, this highperformance technology is used in the Audi R8 (combined fuel consumption in I/100 km*: 13.1–12.9 [18.0–18.2 US mpg]; combined CO₂ emissions in g/km*: 297–293 [478.0– 471.5 g/mi]).

In 2011, RS 3 Sportback with 250 kW (340 metric horsepower), which in turn had a five-cylinder engine, brought the RS philosophy to the compact class. In 2013, the RS Q3 opened up another market segment as the first compact SUV. It was powered by the transversely installed 2.5-liter five-cylinder engine, as used in the TT RS and RS 3. At less than 50 centimeters (19.7 in) long, the engine was very compact. This made the long-stroke engine (bore x stroke 82.5 x 92.8 millimeters [3.2 x 3.7 in]) perfect for transverse installation. Initially, it produced 228 kW (310 metric horsepower), but this increased to 250 kW (340 metric horsepower) from late 2014. The RS Q3 performance that followed in 2016 even reached 270 kW (367 metric horsepower).

The current RS models: powerful, exclusive and composed

Audi Sport GmbH currently has seven RS models in its range:

- Audi TT RS Coupé and Roadster (Combined fuel consumption in l/100 km*: 8.1–7.9 [29.0–29.8 US mpg]; Combined CO₂ emissions in g/km*: 183–181 [294.5–291.3 g/mi])
- Audi RS 3 Sportback and Sedan (Combined fuel consumption in l/100 km: 8.5 [27.7 US mpg]; Combined CO₂ emissions in g/km*: 195-194 [313.8-312.2 g/mi])
- Audi RS 4 Avant (Combined fuel consumption in l/100 km: 9.2 [25.6 US mpg]; Combined CO₂ emissions in g/km: 208 [334.7 g/mi])
- Audi RS 5 Coupé
 (Combined fuel consumption in l/100 km*: 9.1–9.0 [25.8–26.1 US mpg];
 Combined CO₂ emissions in g/km: 206 [331.5 g/mi])
- Audi RS 5 Sportback (Combined fuel consumption in l/100 km: 9.1 [25.8 US mpg]; Combined CO₂ emissions in g/km*: 207-206 [333.1-331.5 g/mi])

^{*} Fuel consumption and CO₂ emission figures given in ranges depend on the tires/wheels used as well as the selected equipment



The RS models have extraordinary turbo engines under the hood, with the inexorable fivecylinder that has a strong tradition with the four rings leading the way. During the 1980s, they powered the Audi rally cars, touring cars and production models to the front of the pack. The first RS model, the RS 2 from 1994, also had such an engine. The five-cylinder made its comeback in 2009 in the Audi TT RS; it made its way into the RS 3 Sportback in 2011 and two years later into the RS Q3. Today the 2.5 TFSI runs not only in the TT RS (combined fuel consumption in l/100 km*: 8.5-8.2 [27.7-28.7 US mpq]; combined CO₂ emissions in q/km*: 195-187 [313.8-300.9 g/mi]), but also in the RS 3 (combined fuel consumption in l/100 km: 8.5 [27.7 US mpg]; combined CO₂ emissions in g/km*: 195–194 [313.8–312.2 g/mi]). Following its revision, the five-cylinder is 26 kilograms (57.3 lb) lighter than the previous version. Its crankcase is made of aluminum, which alone saves 18 kg (39.7 lb). Elaborate measures reduce internal friction while at the same time increasing power output. The cylinder barrels are plasma-coated; the crankshaft main bearings are six millimeters (0.2 in) smaller in diameter. The crankshaft is hollow bored and is therefore 1 kg (2.2 lb) lighter, while the aluminum pistons have integrated channels for oil cooling. In the short warm-up phase after a cold start, the switchable water pump does not circulate the coolant in the cylinder head – the 2.5 TFSI engine thus reaches its operating temperature more quickly. This lowers the coefficient of friction and reduces fuel consumption. The ignition sequence 1-2-4-5-3, supported by the geometry of the intake and exhaust system, provides the unmistakeable engine sound that made Audi popular back in the 1980s.

The innovative Dynamic Ride Control damper control system is also exclusive for the models with a longitudinally installed engine – a pioneering innovation that was first used in 2002 in the RS 6. This integrated roll and pitch stabilizer consists of a special damper system that counteracts the movements of the vehicle body with no delay without the use of electronics. When the vehicle is turning into and traveling round a bend, the damper response is altered so that the vehicle's movements about the longitudinal axis (roll) and about the transverse axis (pitch) are significantly reduced. The dampers on one side of the vehicle are connected to the dampers diagonally opposite to them via two separate oil lines, each of which has a central valve. The valves mounted close to the rear axle provide the necessary compensating volume via internal pistons with the gas-filled compartment behind them. When the vehicle is steering into and traveling round a bend, an oil flow is generated between the diagonally opposite dampers via the central valve, thus creating additional damping force. When one side is cushioned, the damping characteristics are altered such that roll and pitch movements are eliminated almost entirely. As a result, this highly responsive damper system ensures that the RS models have particularly good track stability when negotiating bends.

^{*} Fuel consumption and CO2 emission figures given in ranges depend on the tires/wheels used as well as the selected equipment



The RS sport suspension available in the current RS 4 Avant (combined fuel consumption in l/100 km: 9.2 [25.6 US mpg]; combined CO₂ emissions in g/km: 208 [334.7 g/mi]) and RS 5 Coupé and Sportback models (combined fuel consumption in l/100 km*: 9.1–9.0 [25.8–26.1 US mpg]; combined CO₂ emissions in g/km: 206 [331.5 g/mi]), which features Dynamic Ride Control (DRC), has a three-stage variable damper response. With the aid of Audi drive select, the driver can influence the damper response and thereby personalize the driving experience. The new generation of dampers with integrated valve is more compact and lighter. In addition, it enables the damping forces to be spread even more widely between the comfort and dynamic modes as well as more precise suspension adjustment for high damping forces, which occur when cornering at speed in particular. The result: In the comfort mode, the RS sport suspension with Dynamic Ride Control (DRC) ensures amazing ride comfort. In the dynamic program, it delivers extraordinary driving precision even when cornering at high speed.

25 years of RS - Exhibition at the Audi Forum in Neckarsulm

On July 12, 2019, an exhibition opened at the Audi Forum in Neckarsulm to mark the anniversary. Besides the familiar production models, a total of 14 genuine RS rarities are presented. Among them is also the racing car version of the Audi TT RS from 2011 that was developed for the factory-backed commitment at the Nürburgring, the RS 5 DTM race touring car that was triumphant in the 2013 season as well as a prototype of an Audi RS 8 that did not go into production. Further, the exhibition also features an RS 4 Sedan that received a highly exclusive paint finish by the Brazilian pop artist Romero Britto.

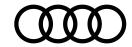
The RS models in chronological order:

- Audi RS 2 Avant (1994): 2.2-liter five-cylinder turbo, 232 kW (326 metric horsepower)
- Audi RS 4 Avant (2000): 2.7-liter V6 biturbo, 279 kW (380 metric horsepower)
- Audi RS 6 Sedan and RS 6 Avant (2002): 4.2-liter V8 biturbo, 331 kW (450 metric horsepower);

from 2004 - RS 6 plus, 353 kW (480 metric horsepower), limited to 999 cars

- Audi RS 4 Sedan (2005), RS 4 Avant (2006), RS 4 Cabriolet (2006):
- 4.2-liter V8, 309 kW (420 metric horsepower)
- Audi RS 6 Sedan and RS 6 Avant (2008): 5.0-liter V10 biturbo, 426 kW (580 metric horsepower),
 - from 2010 RS 6 plus with top speed adjusted to 303 km/h (188.3 mph)
- Audi TT RS Coupé and TT RS Roadster (2009): 2.5-liter five-cylinder, 250 kW (340 metric horsepower); from 2012 plus version with 265 kW (360 metric horsepower)
- Audi RS 5 Coupé (2010) and RS 5 Cabriolet (2012): 4.2-liter V8, 331 kW (450 metric horsepower),
- Audi RS 3 Sportback (2011): 2.5-liter five-cylinder, 250 kW (340 metric horsepower)
- Audi RS 4 Avant (2012): 4.2-liter V8, 331 kW (450 metric horsepower)
- Audi RS Q3 (2013): 2.5-liter five-cylinder, 228 kW (310 metric horsepower);
 from 2014 250 kW (340 metric horsepower); from 2016 performance version with 270 kW (367 metric horsepower)
- Audi RS 6 Avant (2013): 4.0-liter V8 biturbo with 412 kW (560 metric horsepower);
 from 2015 performance version with 445 kW (605 metric horsepower)

^{*} Fuel consumption and CO2 emission figures given in ranges depend on the tires/wheels used as well as the selected equipment



- Audi RS 7 Sportback (2013): 4.0-liter V8 biturbo with 412 kW (560 metric horsepower);
 from 2015 performance version with 445 kW (605 metric horsepower)
- Audi RS 3 Sportback (2015): 2.5-liter five-cylinder with 270 kW (367 metric horsepower)
- Audi TT RS Coupé and TT RS Roadster (2016): 2.5-liter five-cylinder with 294 kW (400 metric horsepower)
- Audi RS 3 Sedan (2017): 2.5-liter five-cylinder with 294 kW (400 metric horsepower)
- Audi RS 5 Coupé (2017): 2.9-liter V6 biturbo with 331 kW (450 metric horsepower)
- Audi RS 4 Avant (2017): 2.9-liter V6 biturbo with 331 kW (450 metric horsepower)
- Audi RS 5 Sportback (2018): 2.9-liter V6 biturbo with 331 kW (450 metric horsepower)

- End -

The specified fuel consumption and emission data have been determined according to the measurement procedures prescribed by law. Since 1st September 2017, certain new vehicles are already being type-approved according to the Worldwide Harmonized Light Vehicles Test Procedure (WLTP), a more realistic test procedure for measuring fuel consumption and CO_2 emissions. Starting on September 1st 2018, the New European Driving Cycle (NEDC) will be replaced by the WLTP in stages. Owing to the more realistic test conditions, the fuel consumption and CO_2 emissions measured according to the WLTP will, in many cases, be higher than those measured according to the NEDC. For further information on the differences between the WLTP and NEDC, please visit www.audi.de/wltp.

We are currently still required by law to state the NEDC figures. In the case of new vehicles which have been type-approved according to the WLTP, the NEDC figures are derived from the WLTP data. It is possible to specify the WLTP figures voluntarily in addition until such time as this is required by law. In cases where the NEDC figures are specified as value ranges, these do not refer to a particular individual vehicle and do not constitute part of the sales offering. They are intended exclusively as a means of comparison between different vehicle types. Additional equipment and accessories (e.g. add-on parts, different tyre formats, etc.) may change the relevant vehicle parameters, such as weight, rolling resistance and aerodynamics, and, in conjunction with weather and traffic conditions and individual driving style, may affect fuel consumption, electrical power consumption, CO₂ emissions and the performance figures for the vehicle.

Further information on official fuel consumption figures and the official specific CO_2 emissions of new passenger cars can be found in the "Guide on the fuel economy, CO_2 emissions and power consumption of new passenger car models", which is available free of charge at all sales dealerships and from DAT Deutsche Automobil Treuhand GmbH, Hellmuth-Hirth-Str. 1, D-73760 Ostfildern, Germany and at www.dat.de.

The Audi Group, with its brands Audi, Ducati and Lamborghini, is one of the most successful manufacturers of automobiles and motorcycles in the premium segment. It is present in more than 100 markets worldwide and produces at 18 locations in 13 countries. 100 percent subsidiaries of AUDI AG include Audi Sport GmbH (Neckarsulm), Automobili Lamborghini S.p.A. (Sant'Agata Bolognese, Italy) and Ducati Motor Holding S.p.A. (Bologna, Italy).

In 2018, the Audi Group delivered to customers about 1.812 million automobiles of the Audi brand, 5,750 sports cars of the Lamborghini brand and 53,004 motorcycles of the Ducati brand. In the 2018 fiscal year, AUDI AG achieved total revenue of €59.2 billion and an operating profit before special items of €4.7 billion. At present, approximately 90,000 people work for the company all over the world, more than 60,000 of them in Germany. Audi focuses on sustainable products and technologies for the future of mobility.