20 years, four generations – Audi RS 6: Superior performance with an everyday look

- **Combination of pioneering performance and outstanding everyday usability have always been trademark features of an RS 6**
- **The current RS 6 Avant – now available in the US for the first time – is the global market leader in its segment with a uniquely wide body**
- **From the C5 to the C8, Dynamic Ride Control suspension ensures first class driving dynamics**

Ingolstadt, July 25, 2022 – One car has been exciting Audi Sport GmbH and a worldwide fanbase like no other for 20 years: across four generations, the Audi RS 6 has set the tone for high-performance station wagons with impressive performance and outstanding everyday usability. It owes the success of its underlying concept from 2002 to its double-charged engine and all-wheel drive. The basic concept has been the same across every generation of the RS 6. Again and again, it sets new standards in its competitive environment as well. Technical *Vorsprung* also turns up in other places, such as Dynamic Ride Control suspension. It has been used in other RS models from Audi for a long time.

The C5: a desire for performance in the upper mid-range

Shortly after the start of the new millennium, what was then quattro GmbH (now Audi Sport GmbH) was faced with the question of which car the staff would give a sporty renovation to after the RS 4. It was an opportune moment for the Audi A6. The first generation (C5) underwent a product enhancement in 2001 and Audi also wanted to add more power under the hood in its upper mid-range.

The brand was self-aware and motorsports were in high demand. Audi drove its way to the winners stand on the first try at its premiere in the legendary 24-hour Le Mans in 1999. The company with the four rings made history again in 2000, 2001, and 2002. With 13 wins, it is now the second-most successful team of all time in Le Mans after Porsche. The Audi engineers at quattro GmbH put a great deal of effort into making the A6 a sportscar. That meant not only adapting the engine, suspension, and transmission. Audi also shifted its appearance into a higher gear: it grew four centimeters (*1.6 in*) in both length and width. New skirts, wider sills, a spoiler for the Avant, a distinctive breakaway edge for the Sedan, 18” or 19” wheels, and two oval tailpipes emphasized its sporty ambitions.

In 2002, no other Audi had more power

The objective was to add an eight cylinder to the basic design of the A8, series D2. The engine was already on the job in the S6, giving it 340 PS without charging. Nonetheless, it needed a lot of detail work: a powerful engine that from then on was double-turbocharged and had 4.2 liters of displacement did not fit in the body of the A6 at first. As a result, quattro GmbH extended the front end and gave the V8 four centimeters (*1.6 in*) more installation space. The engine that drove the first RS 6 was not fine-tuned in Ingolstadt or Neckarsulm, but in England. Together with quattro GmbH, British engine manufacturer Cosworth, which was a subsidiary of AUDI AG until 2004, was also responsible for the impressive 450 PS output and 560 Nm of torque. That put it at the top of the segment. The V8 in the RS 6 sent a real message to the competition. As a comparison, at the time, the DTM Audi from the ABT team, which Laurent Aïello used to bring home the 2002 title, also had 450 PS.

A lot of power requires good control. The era of the manual transmission was over. For the first time, a torque-converter transmission gave an RS model shorter shifting times for gear shifts. Five driving modes enabled acceleration to 100 km/h (*62 mph*) in 4.7 seconds. To make sure that the RS 6 Avant and Sedan impressed with their ideal spread between comfort and sportiness even in everyday driving, Audi now turned to the newly developed Dynamic Ride Control (DRC) suspension. Stephan Reil, who has been in charge of developing all the RS 6 series and is now Head of Technical Development at the Neckarsulm site, summarizes by saying that “the DRC reduces roll and pitch movements in sporty driving, both on straightaways and in curves.” In concrete terms, it binds the car more closely to the road and constantly ensures agile handling, particularly in dynamic cornering. Dynamic Ride Control consists of steel springs that have two diagonally opposite hydraulic shock absorbers. These counteract the motion in the body of the vehicle without any time lag and they do it without electronics. When the car is turning into or traveling around a bend, the damper response is altered so that the vehicle’s movements are significantly reduced along the longitudinal axis (roll) and the transverse axis (pitch).

All first generation RS 6 vehicles (C5) were made both on the production line and by hand. Driveable, but far from complete. For instance, they lacked the filled suspension, RS-specific components, and individual decor elements in the interior. That is why they went from the plant in Neckarsulm to an adjacent hall. There quattro GmbH workers finalized each car individually over about 15 hours on the hydraulic lift.

To date, the C5 is the only RS 6 that is also a racing car from the start. The RS 6 Competition, which Champion Racing uses, outperformed its competitors with equal displacement in the 2003 SPEED GT World Challenge with Randy Pobst at the wheel. The V8 biturbo offered 475 PS, had a manual shift, and won on its first attempt.

**The collective fuel/electric power consumption and emissions values of all models named and available on the German market can be found in the list provided at the end of this text.*

At the end of the series, quattro GmbH added a shot of additional power and augmented the name with a “plus” as it went from 450 to 480 PS while the torque remained at 560 Nm. Now, a top speed of 280 km/h (*174 mph*) was possible, rather than 250 km/h (*155 mph*). Previously optional equipment became standard.

The C6: the history of the crowning achievement in engine construction continues

In 2008, six years after the first RS 6, the second generation followed. Audi increased not only power and displacement, but also the number of cylinders for a total of ten. There were still two turboloaders, and now five liters of displacement. Altogether, that meant 580 PS and 650 Nm of torque, available starting at 1,500 rpm. At the time, those numbers even exceeded the R8, which had a maximum of 560 PS in the R8 GT. For three years, Audi produced the largest RS engine ever. The V10 is a force of nature. It weighed 278 kg (*613 lbs*). To ensure the oil supply when driving through curves at high speeds, Audi turned to dry sump lubrication – a principle borrowed from motorsports: the separate oil tank allowed the V10 engine to sit in a low position, giving the whole car a low center of gravity. The system was designed for racing; it supplied up to 1.2 g of oil for longitudinal and lateral acceleration. Stephan Reil remembers well how systematic the Audi developers were in their use of every centimeter of installation space: “With its two turbochargers and manifolds, the V10 already looks like a work of art. And it's powerful. I don’t know of any engine compartment that is filled better than the one in the RS 6 C6.”

As was already the case with the C5, the ten-cylinder also needed a transmission that could handle power. The six-gear automatic that it used was substantially reworked to meet that need. Cooling, shifting speed, power distribution – all of it was improved. With this combination of engine and transmission, Audi achieved a top speed of over 300 km/h (*186 mph*) – 303 km/h (*188 mph*), to be precise – for the first time with the RS 6 plus. Acceleration in the regular RS 6 topped out at 250 km/h (*155 mph*) with 280 km/h (*174 mph*) available as an option for an additional charge. Hardly any other car in the series could touch the C6 on a straightaway. The Sedan needed 4.5 seconds to reach 100 km/h (*62 mph*); the Avant took 4.6 seconds. That kind of propulsion needed braking power to match. The first ceramic brakes (420 mm (*16.5 in*) discs front, 356 mm (*14 in*) rear) were optional in the RS 6 and stopped this dynamic car extremely reliably. In order to give passengers a sporty and comfortable ride to their destinations, Audi relied on the DRC suspension for the second time, something that customers now get as standard equipment in the Avant and the Sedan. For more everyday comfort across the whole spectrum of driving situations, the DRC suspension could be equipped for the first time with an additional adjustment unit on the shock absorbers that offered three-stage settings, for an additional price.

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As with its predecessor, Audi kept this model visually subdued. Protruding fenders that set it apart from the base model and large wheels and tires (19" and 255/40; 20" and 275/35 optional) offered plenty of room, widening the car by only 3.5 centimeters (*1.38 in*) total to 1.89 meters (*6.2 ft*). The C6 also went from the production line directly to the adjacent quattro GmbH hall for extensive refinement. There, workers finalized the car like they did its predecessor model. For its finale, the C6 ended as an RS 6 plus Sport or an RS 6 plus Audi Exclusive. In all, 500 limited vehicles rolled out of the plant in Neckarsulm. It came with a numbered badge on the interior, special alloy wheels with a five-spoke design, leather on the instrument panel, and floor mats with the RS 6 logo.

The C7: making more from less

Fewer cylinders? That can't be right! That is one critique that not only customers raised when Audi moved away from the ten-cylinder biturbo in 2013 and returned to a double-turbocharged eight-cylinder with four liters of displacement – the smallest engine in the history of the RS 6. Additionally, the classic Sedan was discontinued without a replacement; the Audi RS 7 Sportback took over in the US. Yet the critics were soon silenced. Audi had put together a package that left the previous RS 6 models far behind it in terms of driving dynamics and efficiency. Above all, this made it possible to systematically reduce weight. Among other things, a significantly higher portion of aluminum, including all of the attached parts, reduced the weight of the C7 generation by a good 120 kg (*265 lbs*). At the same time, the Avant was six centimeters (*2.4 in*) wider on the street than a conventional A6. While about 60 percent of the total mass still lay on the front axle in the C6, Audi now reduced that to 55 percent, which amounts to saving about 100 kg (220 lbs). One other reason: the engine sat about 15 centimeters (5.9 in) further back. The RS 6 made it clear on the road that dropping two cylinders and 20 PS did not harm performance at all. With 700 Nm of torque and the new 8-speed tiptronic, the C7 only needed 3.9 seconds to reach 100 km/h (62 mph), half a second less than its predecessor. Its instrument panel showed a top speed of 305 km/h (190 mph). At the same time, the fact that it had fully 30 percent lower fuel consumption than its predecessor was a result not only of the reduced weight, but also the cylinder deactivation that makes the RS 6 into a four-cylinder when it has a light load. Once more, ceramic brakes with discs (420 mm (16.5 in) diameter, 365 mm (14.3 in) rear), which ensure maximum negative acceleration and are particularly beneficial in moments of high endurance stress, were available.

One novelty for the third generation of the RS 6: customers wanted a little bit more comfort, so air suspension became a standard feature for the first time. Now 20 millimeters (0.79 in) lower and with sportier tuning, adaptive air suspension increased day-to-day driving enjoyment. Another convenience for quickly transporting belongings was, for the first time, a trailer hitch as an option. On the other hand, the DRC suspension was well established. Opinions were unambiguous: the RS 6 C7 stood apart from its predecessors in every area, be it the drive system, suspension, comfort, or efficiency. What it had in common with other generations is that, like its predecessors, the C7 also switched halls during assembly in Neckarsulm.

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Audi coaxed more and more power from its four liter, eight-cylinder engine over the years. The RS 6 performance reached over 600 PS (605, to be specific) for the first time. With the overboost function, 750 Nm briefly processed the powertrain.

Despite the initial criticism about the reduced power and fewer cylinders in the C7, it was precisely this generation of the RS 6 that became a bestseller and market leader in the high-performance station wagon segment. It was a top position that its successor still holds today. The RS 6 C7 Avant resonated around the world. One market that traditionally favored sedans, namely the United States, pressed for it on its domestic market, but it would have to wait a little longer.

The C8: the best to date, but the work is never done

In 2019, three years before its 20th birthday, the fourth generation of the RS 6 (C8) rolled out to dealerships and stayed faithful to its heritage. Four liters displacement, biturbo, 600 PS, and now 800 Nm of torque. For the first time in its history, this car is supported by a 48 volt mild hybrid system, improving efficiency even further. Although it is a bit heavier, the RS 6 Avant* races to 100 km/h (62 mph) in a brisk 3.6 seconds; it only needs twelve seconds to reach 200 km/h (124 mph). On straightaways, the C8 leaves little doubt. It also sets a new standard for itself in terms of lateral acceleration and cornering.

New all-wheel steering improves stability at high speeds, given that the rear wheels now turn in the same direction as the front wheels in those situations. When maneuvering at low speeds, they turn in the opposite direction as the front wheels in order to reduce the turning radius and make parking easier. But hassle-free parking isn't the only thing that's important to customers. As in the earlier models, they also want to be able to take a trailer with them. "By now, more than half of our European customers order a trailer hitch," says Stephan Reil. "That shows that customers don't only want a sporty drive, they also want to meet everyday challenges." Audi responded to customer demand and continued to offer those options, now with air as well as DRC suspension.

And the design? Where the C5, C6, and C7 generations of the RS 6 only stood out as power station wagons on the second look, the C8 creates a different impression: even lay people will recognize right away that this is no normal A6. The roof, front doors, and tailgate are the only things that the RS 6 Avant shares with the A6 Avant base model. The other components were altered specifically for the RS and the body was widened by a noticeable eight centimeters (*3.15 in*). Very few people know that the fastest of all A6 models also has an independent hood for the first time and that all these alterations mean that it can have the Matrix LED Headlights with laser lights from the RS 7. The wheels and tires also stand out as wider and taller. The 21" diameters (275/35) are standard equipment for the series; 22" (285/30) are available as an option for the first time. Unlike its predecessors, the C8 is not manufactured in separate halls – which have since been renamed Audi Sport GmbH – but rather roll off the assembly line in Neckarsulm ready for the showroom.

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That's an indication of how flexible these production sites are. And, in response to high demand, the C8 is available in the US for the first time as the
RS 6 Avant. The RS 6* C8 is definitively evolving from a niche car into a success story that is in demand around the world.

Product and Technology Communications
Eva Stania
Spokesperson Audi A6, Audi A7, Audi S6,
Audi S7, Audi RS 4, Audi RS 5, Audi RS 6,
Audi RS 7, Audi R8, Audi R8 Spyder,
Suspensions, Audi quattro
Phone: +49 152 57767044
Email: eva.stania@audi.de
www.audi-mediacenter.com

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Fuel/electric power consumption and emissions values of the models named above:**

Audi RS 6
Combined fuel consumption in l/100 km: 11.5–11.6 (20.5 – 20.3 US mpg);
combined CO_2 emissions in g/km: 263–265 (423.3 – 426.5 g/mi)

***The indicated consumption and emissions values were determined according to the legally specified measuring methods. Since September 1, 2017, type approval for certain new vehicles has been performed in accordance with the Worldwide Harmonized Light Vehicles Test Procedure (WLTP), a more realistic test procedure for measuring fuel consumption and CO2 emissions. Since September 1, 2018, the WLTP has gradually replaced the New European Driving Cycle (NEDC). Due to the more realistic test conditions, the consumption and CO2 emission values measured are in many cases higher than the values measured according to the NEDC. Additional information about the differences between WLTP and NEDC is available at www.audi.de/wltp.*

At the moment, it is still mandatory to communicate the NEDC values. In the case of new vehicles for which type approval was performed using WLTP, the NEDC values are derived from the WLTP values. WLTP values can be provided voluntarily until their use becomes mandatory. If NEDC values are indicated as a range, they do not refer to one, specific vehicle and are not an integral element of the offer. They are provided only for the purpose of comparison between the various vehicle types. Additional equipment and accessories (attachment parts, tire size, etc.) can change relevant vehicle parameters, such as weight, rolling resistance and aerodynamics and, like weather and traffic conditions as well as individual driving style, influence a vehicle's electric power consumption, CO2 emissions and performance figures.

Further information on official fuel consumption figures and the official specific CO2 emissions of new passenger cars can be found in the "Guide on the fuel economy, CO2 emissions and power consumption of all 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, 73760 Ostfildern-Scharnhausen, Germany (www.dat.de).