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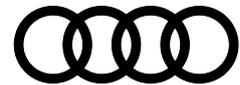
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The new Audi R8

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The equipment, data and prices specified in this document refer to the model range offered in Germany. Subject to change without notice; errors and omissions excepted.



Condensed information

The new Audi R8

“Born on the track, built for the road.” The volume-production model now follows after the world premiere of the significantly improved R8 LMS GT3 at the Paris Motor Show. Apart from the sportier design, the performance of the Coupé and Spyder has been enhanced. The power of the two V10 naturally aspirated engines is updated to 419 kW (570 metric horsepower) and 456 kW (620 metric horsepower). The models will go on sale in Europe in early 2019.

“The R8 occupies a unique position for Audi in every respect,” says Michael-Julius Renz, Managing Director of Audi Sport GmbH. “It’s now even more powerful and faster,” adds Oliver Hoffmann, Technical Managing Director of Audi Sport GmbH: “Motorsports are part of our DNA. With around 50 percent shared parts with the R8 LMS GT3, no other automobile is as close to motor racing as the R8.”

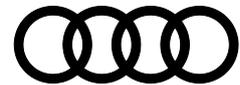
Even more power and torque: the engines

Instant response, lightning-fast high-revving and a unique sound – the V10 naturally aspirated engine is the heart of the Audi R8. With the basic engine, the 397 kW (540 metric horsepower) of power has been increased to 419 kW (570 metric horsepower), the torque boosted by 20 Nm (*14.8 lb-ft*) to 560 Nm (*413.0 lb-ft*), which is on tap at 6,200 revolutions per minute. The Audi R8 V10 quattro accelerates from 0 to 100 km/h (*62.1 mph*) in 3.4 seconds (Coupé) and 3.5 seconds (Spyder) before going on to a top speed of 324/322 km/h (*201.3/200.1 mph*).

The 5.2 FSI in the Audi R8 V10 performance quattro generates 456 kW (620 metric horsepower) instead of the previous 449 kW (610 metric horsepower), with a peak torque of 580 Nm (*427.8 lb-ft*) substituting the previous 560 Nm (*413.0 lb-ft*). The increase here is primarily the result of an optimized valve train with components made of titanium. The Coupé sprints to 100 km/h (*62.1 mph*) in 3.1 seconds, and the Spyder takes 3.2 seconds. The propulsive power ends at 331/329 km/h (*205.7/204.4 mph*). The two V10 naturally aspirated engines with 5.2 liters (*0.2 cu ft*) of displacement come with a particulate filter.

Razor-sharp precision: the suspension

Modifications to the suspension provide increased precision and response. The assistance has been retuned both with the optional dynamic steering and the electromechanical power steering. The steering response is more direct and precise throughout the entire speed range. This ensures optimum steering sensitivity with continuously good road contact in every driving situation.



Dynamic steering uses a superposition gear to change the gear ratio between 10.5:1 and 15.8:1 depending on the driving speed; the steering is very direct during maneuvering, while it is calm and smooth on the freeway. In Performance mode, the characteristic is on a considerably more direct level than the characteristic in the Comfort or Auto modes. To ensure particularly precise handling in the threshold range, the gear ratio is constant ($i = 14:1$) in Performance mode as from approx. 140 km/h (*87.0 mph*).

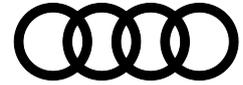
In addition to the well-known Audi drive select modes, the three additional programs dry, wet and snow form part of the Performance mode on the R8 V10 performance quattro. They adapt the key dynamic parameters to the friction coefficient of the road. Thanks to the enhanced Electronic Stabilization Control (ESC), the Audi R8 V10 performance brakes from 100 km/h (*62.1 mph*) to a standstill up to 1.5 meters (*4.9 ft*) earlier; the stopping distance from 200 km/h (*124.3 mph*) is up to five meters (*16.4 ft*) shorter – in each case depending on the exterior conditions.

The new Audi R8 is equipped with factory-installed 19-inch wheels. 20-inch fully milled wheels in five-V dynamic design with new summer and sport tires, which convey even more precise handling, are available as an option. For the standard-fit steel disks Audi supplies red as opposed to black painted calipers as an option. The calipers for the ceramic brakes generally come with a gray or red finish. The stabilizer at the front axle is optionally made from carbon fiber-reinforced polymer (CFRP) and aluminum, which cuts weight at the front axle by around two kilograms (*4.4 lb*).

Sharper and tauter: the design

The honed character of the new R8 models also becomes clear visually. The Singleframe radiator grille is even wider and flatter. In combination with the dimmed headlights and adjoining design elements, the R8 looks even sharper. Winglets at the side divide the large air inlets and the flat slits above the Singleframe radiator grille are reminiscent of the Audi Sport quattro. The new front splitter is now wider, underscoring the sporty look. The air inlet grille spans the entire width of the rear end. The diffuser is even more dominant and frames the new oval exhaust tailpipes. The air filter is situated in the engine compartment under a new three-part cover. It is available in a choice of plastic or carbon fiber.

Depending on the engine variant, R8 customers can choose between three exterior packages. They place different emphasis on the front splitter, the sill trims and the diffuser. Standard specification for the R8 V10 quattro with 419 kW (570 metric horsepower) is high-gloss black; the top-of-the-line version R8 V10 performance quattro with 456 kW (620 metric horsepower) comes off the production line with a matte titanium look. The high-gloss carbon package is available for both engine

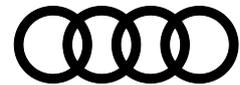


variants. As an option, the Audi rings and badges on the exterior are painted in high-gloss black; the new metallic colors Kemora gray and Ascari blue are recent additions to the paint range.

The new look also includes the Audi R8 interior with its driver focus. New options here include the colors pastel silver with rock gray contrasting stitching, palomino brown with steel gray stitching, and black with utopia blue stitching. The R8 performance design package with leather/Alcantara upholstery, highlights in Mercato blue and carbon-fiber trim is available for the top-of-the-line engine variants. The Audi exclusive range gives customers the opportunity to customize many details of their Audi R8 – inside and out.

New model designations

The models will go on sale in early 2019. The new Audi R8 models will be arriving at dealerships in Germany and other European countries in the course of the first quarter of 2019. Audi is introducing new model designations with the upgrade of the R8. The R8 Coupé/Spyder V10 will become the R8 Coupé/Spyder V10 quattro models; the Audi R8 Coupé/Spyder V10 plus are now called Audi R8 Coupé/Spyder V10 performance quattro – an analogy to the most powerful RS models from Audi Sport.



Facts and figures

The new Audi R8

Exterior design

- Characteristic taut mid-engined sports car design with new accents
- Wider and flatter Singleframe radiator grille; slits in the hood are reminiscent of the Audi Sport quattro; new air inlets
- [LED headlights](#) as standard, optional [Audi laser light](#) and dynamic turn signals, also at the front
- New sill trims, new cover in the engine compartment, air inlet grille at rear
- Diffuser moved upward, exhaust system with elliptical tailpipes
- Three exterior packages, two new paint colors and black Audi rings available

Engine

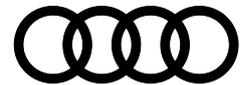
- Naturally aspirated 5.2 liter (*0.2 cu ft*) high-speed V10 engine with higher output and torque
- Two versions with 419 kW (570 metric horsepower) and 456 kW (620 metric horsepower), 560 or 580 Nm (*413 or 427.8 lb-ft*) of torque at 6,200 or 6,500 rpm, respectively
- Dry sump lubrication like in motor racing, top-of-the-line engine variant with optimized valve train with components made of titanium
- Instant response characteristics, extremely lively, characteristic V10 sound
- [Cylinder on demand](#) (COD), dual injection, coasting mode, gasoline particulate filter
- 0–100 km/h (*62.1 mph*) in 3.1 seconds, top speed of 331 km/h (*205.7 mph*) (R8 Coupé V10 performance quattro)

Transmission

- Lightning-fast and compact [seven-speed S tronic](#) mounted behind the engine
- [quattro drive](#) with electro-hydraulically activated and electronically controlled multi-plate clutch, fully variable drive torque distribution, rear axle with mechanical locking differential

Suspension

- All-round double wishbones, R8 V10 quattro with [Audi magnetic ride](#) technology
- High-performance brakes on all four wheels, top-of-the-line version with carbon fiber ceramic disks, optionally with red brake calipers
- Production steering and [dynamic steering](#) (optional) with even more precise response characteristics
- 19-inch wheels as standard, new milled 20-inch wheels available upon request



- New 20-inch summer tires and sport tires
- Dynamic handling system [Audi drive select](#) with four modes as standard; the R8 V10 performance quattro has three additional special performance programs

Audi Space Frame (ASF)

- Audi Space Frame made of aluminum and carbon fiber-reinforced polymer (CFRP), weight 200 kilograms (*440.9 lb*) (for Coupé), vehicle curb weight 1,595 kilograms (*3,516.4 lb*) (for R8 Coupé V10 performance quattro)
- Audi R8 Spyder with 44 kilogram (*97 lb*) electro-hydraulic fabric top
- Aerodynamic concept focuses on high downforce figures, wide diffuser

Interior

- Clean lines, monoposto arch in cockpit, hovering instrument panel
- R8 performance quattro equipped with lightweight design bucket seats as standard
- Three new colors in interior
- R8 performance design package available with leather/Alcantara upholstery for the first time

Controls, display and infotainment

- Controls are fully focused on the driver; all key functions are on the steering wheel
- Two steering wheel variants with two or three satellite buttons
- [Audi virtual cockpit](#) with 12.3-inch display
- MMI navigation plus with [MMI touch](#) as standard, [Audi connect](#) with LTE module and [Wi-Fi hotspot](#) as well as [Audi phone box](#) available upon request, Bang & Olufsen sound system with head restraint speakers as standard in the Audi R8 V10 quattro

Models

- New model designations depending on engine variant: R8 V10 quattro and R8 V10 performance quattro, both available as Coupé and Spyder
- The models will go on sale in early 2019

The car in detail

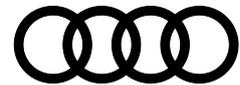
The new Audi R8: Updated dynamics for the high-performance sports car

No other Audi is closer to motor racing: The R8 is the dynamic spearhead and the fastest volume-production model of the Audi Sport brand. The revised version of the high-performance sports car as a Coupé and Spyder is even sharper and more powerful. Its naturally aspirated V10 engines now have an output of 419 kW (570 metric horsepower) and 456 kW (620 metric horsepower), respectively; this is complemented by modifications to the suspension and an even more striking exterior design. Sales in Europe will begin in early 2019.

Exterior design

A highly advanced passenger cell, strongly accentuated wheel wells, a wheelbase of 2.65 meters (*8.7 ft*) and a long rear – no other production vehicle from Audi is closer to a racing car in both concept and appearance than the 4.43-meter (*14.5 ft*) new R8. The designers further sharpened the striking exterior as part of the revision.





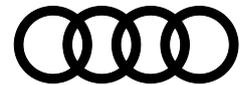
Horizontal lines make the front of the high-performance sports car appear extremely wide. The Singleframe radiator grille with its honeycomb structure insert is even broader and flatter, and the chrome frame was omitted. The large air inlets, which are divided into two sections by the vertical winglets, are located above the widened front splitter. Flat slits in the hood are reminiscent of the Audi Sport quattro brand icon. [LED headlights](#) with 37 light-emitting diodes each are the standard and partially dimmed. The [Audi laser light](#) is available as an option; it doubles the range of the high beam lights and a blue LED makes it visible from the outside. The laser light is combined with the front dynamic turn signals.

The side view of the new Audi R8 appears taut and concentrated, and sharp lines delineate athletically curved surfaces. The contours above the wheels reference the [quattro drive system](#). The shoulder line connects the wheels with one another; on the Coupé, it divides the sideblade into two visual elements – an upper and a lower half. If the customer so desires, the blades can bear a logo of their choice. The top layer of the material is roughened slightly, which gives it a special matte effect. The side trims form a visual continuation of the front splitter and make the R8 appear even more flat and sporty. The air filter is situated in the engine compartment under a new three-part cover, which is available in a choice of plastic or carbon fiber.

The soft top of the Audi R8 Spyder is integrated perfectly into the design line; it flows into two fins that tension the material. Weighing just 44 kilograms (*97 lb*), it contributes to the vehicle's low center of gravity. An electro-hydraulic drive opens and closes the soft top in 20 seconds at speeds up to 50 km/h (*31.1 mph*). When it opens, it folds into a Z-shape on a flat shelf with a covering flap made of CFRP, which is located above the engine. The rear window is sunk into the CFRP bulkhead separately from the soft top and can be retracted and extended electrically. Two strong steel sections pretensioned by steel springs serve as roll-over protection.

Horizontal lines also dominate the rear end of the new Audi R8. The honeycomb-structured air inlet grille of the engine compartment now extends across the entire width. The diffuser with its striking ribs is drawn up higher. It frames the new elliptical tailpipes of the exhaust system. These come in different designs – chrome-plated on the R8 V10 quattro as standard or in gloss black on the R8 V10 performance quattro.

Each rear light integrates 118 LEDs that create homogeneous light together. The dynamic rear turn signal lights are a standard feature. The rear spoiler of the R8 Coupé V10 quattro extends electrically at a speed of 120 km/h (*74.6 mph*). The R8 Coupé V10 performance quattro has a large fixed blade made of carbon fiber-reinforced polymer (CFRP). The R8 Spyder V10 performance quattro has a fixed rear



spoiler also made of carbon fiber-reinforced polymer (CFRP).

Individuality is a characteristic feature of the Audi R8; its paint range includes eleven colors, including the new metallic colors Kemora gray and Ascari blue. The latter is reserved exclusively for the R8 Coupé V10 performance quattro. The Audi exclusive program allows customers to have any paint colors blended according to their wishes. There are five variants and the customized paint finish to choose from for the sideblades, and there are three colors for the fabric top of the Spyder.

Depending on the engine variant, customers can choose between three exterior packages. They accentuate the front splitter, the sill trims, the sideblades and the diffuser. Standard specification for the R8 V10 quattro with 419 kW (570 metric horsepower) is high-gloss black; the R8 V10 performance quattro with 456 kW (620 metric horsepower) comes off the assembly line with a matte titanium look. The high-gloss carbon package is available for both engine variants. The Audi rings and badges on the exterior can be painted in high-gloss black upon request; on the Spyder, the windshield frame and the air outlets on the soft top compartment cover are also painted in this color.

Engine

With its high-performance character, the naturally aspirating 5.2 FSI engine lets the driver really experience the motorsport genes of the new Audi R8. It responds almost instantaneously and easily revs up to 8,700 rpm; at the engine speed limiter, the pistons cover a distance of 26.9 meters (*88.3 ft*) per second. Under load, the V10 develops a very unique sound – a throaty hissing and roaring sound.

The performance and torque of the Audi R8 were further improved in the course of the revision. The R8 V10 quattro offers 419 kW (570 metric horsepower) at 8,000 rpm, which constitutes an increase of 22 kW (30 metric horsepower). The maximum torque of 560 Nm (*413.0 lb-ft*) is available at 6,200 rpm. For the R8 V10 performance quattro, the values at the same rotational speeds are 456 kW (620 metric horsepower) and 580 Nm (*427.8 lb-ft*), an increase of 7 kW (10 metric horsepower).

The ten-cylinder engine draws from 5,204 cm³ (*0.184 cu ft*) of displacement. Its specific output in the top-of-the-line version is 119.1 metric horsepower per liter. Each unit of metric horsepower has to move a weight of only 2.57 kilograms (*5.7 lb*) because the curb weight of the Audi R8 Coupé V10 performance quattro is just 1,595 kilograms (*3,516.4 lb*). The Spyder V10 performance quattro weighs 1,695 kilograms (*3,736.8 lb*) empty and 1,587 kilograms (*3,498.7 lb*) dry. This



results in explosive performance figures: The fastest volume-production Audi of all time catapults itself from 0 to 100 km/h (*62.1 mph*) in 3.1 seconds, and from 0 to 200 km/h (*124.3 mph*) in 9.8 seconds. Its top speed is 331 km/h (*205.7 mph*). The R8 Coupé V10 quattro accelerates from 0 to 100 km/h (*62.1 mph*) in 3.4 seconds and keeps achieves a top speed of 324 km/h (*201.3 mph*). The values for the Spyder are 3.2 and 3.5 seconds, respectively, and 329/322 km/h (*204.4/200.1 mph*).

Audi R8 V10 quattro	5.2 FSI
	V10 cylinder gasoline engine with combined intake manifold and gasoline direct injection
Displacement in cc	5,204
Max. power output in kW (metric horsepower) at rpm	419 (570) at 8,000
Max. torque in Nm (<i>lb-ft</i>) at rpm	560 (<i>413.0</i>) at 6,200
Top speed in km/h (<i>mph</i>)	324 (<i>201.3</i>) (Spyder: 322 [<i>200.1</i>])
Acceleration 0–100 km/h (<i>62.1 mph</i>) in s	3.4 (Spyder: 3.5)
Powertrain	quattro drive
Transmission	7-speed S tronic

Audi R8 V10 performance quattro	5.2 FSI
	V10 cylinder gasoline engine with combined intake manifold and gasoline direct injection
Displacement in cc	5,204
Max. power output in kW (metric horsepower) at rpm	456 (620) at 7,900
Max. torque in Nm (<i>lb-ft</i>) at rpm	580 (<i>427.8</i>) at 6,500
Top speed in km/h (<i>mph</i>)	331 (<i>205.7</i>) (Spyder: 329 [<i>204.4</i>])
Acceleration 0–100 km/h (<i>62.1 mph</i>) in s	3.1 (Spyder: 3.2)
Powertrain	quattro drive
Transmission	7-speed S tronic

A fine specimen of a naturally aspirated engine: the V10

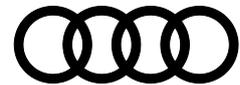
The V10, whose cylinder banks face each other at 90 degree angles, is a fine specimen of a naturally aspirated engine. The crankshaft that rotates in its lightweight aluminum cylinder housing is designed as a common pin shaft: The rods of the pistons on the opposite side engage with a shared crank pin, which results in alternating firing intervals of 54 and 90 degrees. The cylinder firing sequence of 1 – 6 – 5 – 10 – 2 – 7 – 3 – 8 – 4 – 9 creates a unique pulse. This creates the characteristic sound of the R8. For even more intensity the flaps in the exhaust

system open as the load and rpms increase.

The 5.2 FSI is characterized by classic high-performance technologies. Its engine oil is supplied from a dry sump. This allows the engine to be installed in an extremely low position. The four camshafts can be adjusted up to a crankshaft angle of 42 degrees. The compression ratio of 12.7:1 is very high and the valve timing is designed for good cylinder charge at high rotational speeds. In the top-of-the-line engine, the 40 valves, their springs, and the roller-type rocker arms are now made of ultralight and ultra-high-strength titanium.

The fuel is supplied by a dual system. In the lower partial-load range, only injection into the intake manifold (MPI) takes place. In the intermediate load range, intake manifold and direct injection (FSI) share the work in equal parts, and in full-load operation, the FSI-system takes on roughly 85% of the work. The [cylinder on demand](#) (COD) technology also contributes to the engine's efficiency. Under low to intermediate load conditions – when one of the four upper gears is engaged – it shuts down the cylinders of one bank by deactivating their injection and ignition processes. The driver does not notice the transition; at stronger acceleration the cylinder bank is activated again immediately.





Transmission

In both R8 engine variants, the forces are transmitted to the lightning-fast seven-speed [S tronic](#). Drivers can switch gears themselves or let the dual-clutch transmission do the work in programs D and S. At the push of a button, the driver can start off with launch control, which engages the clutch at around 4,500 rpm – it applies the power of the V10 to the road with perfectly controlled tire slip. When the [Audi drive select](#) dynamic handling system is operating in Comfort mode and the vehicle is traveling at a speed above 55 km/h (*34.2 mph*), the seven-speed S tronic switches to freewheeling, also known as coasting, when the accelerator pedal is released. It disengages both clutches, and the high-performance sports car coasts relaxed.

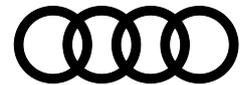
Based on its three-shaft layout with one dual drive shaft and two output shafts, the seven-speed S tronic mounted behind the engine is very compact. The mechatronics operates and lubricates the transmission; an oil pump is sufficient for supplying the gear sets, clutches and integrated mechanical locking differential. The propeller shaft runs through the bedplate of the dry sump oil pan to the front axle. An electro-hydraulically activated multi-plate clutch is mounted there, forming a unit with the front differential.

Fully variable torque distribution with the quattro drive

The [quattro drive](#) gives the Audi R8 a crucial advantage in terms of traction, dynamics and driving safety. It is tailored specially to the mid-engine concept. Its management permanently determines the ideal torque distribution for the respective driving situation, driver commands, ambient conditions and the mode of the Audi drive select system. The multi-plate clutch is integrated in the thermal management of the engine and transmission for the purpose of maximum performance and carries out a fully variable transmission of the calculated torque to the front wheels. There is no fixed basic distribution; up to 100 percent can be transmitted to the front or rear axle.

Wheel-selective torque control, a software function of the refined Electronic Stabilization Control (ESC), serves as an addition to the quattro drive. In fast cornering, it minimally brakes the inside wheels, which are under a reduced load. The difference in propulsive forces causes the high-performance sports car to turn into the curve very slightly, making its handling even more precise, sporty and stable.

The purely mechanical rear differential further improves traction and dynamic handling – it builds up a 25 percent locking effect in traction and 45 percent in thrust. This results in turn-in behavior that practically eliminates understeer. The mid-engine is positioned very near the vertical axis of the car's center of gravity, so the inertia of



its mass hardly comes into play in fast changes of direction. The axle load distribution is 42:58.

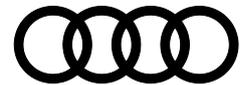
Suspension

The suspension of the new Audi R8 also makes use of motorsport technologies. Aluminum double wishbones guide all four wheels. The set-up varies depending on the engine variant. The springs and dampers are more taut in the top-of-the-line version. The regulated damping system Audi magnetic ride is available upon request for both the basic and performance variants of the R8. The system adapts the mode of operation of the shock absorbers to the road profile and the driver's style continuously and at millisecond intervals for each individual wheel. A synthetic oil in the pistons of the shock absorbers has very small magnetic particles embedded in it. When a voltage is applied to a coil, a magnetic field is generated in which the particles align themselves transverse to the direction of flow. They thereby restrict the flow of oil through the piston channels.

In connection with the Audi magnetic ride and the performance sport suspension, there is a new option available that comes straight from motor racing: A stabilizer at the front axle that consists of coiled layers of carbon fiber-reinforced polymer (CFRP). These layers form its pipe, and the sides consist of red anodized aluminum. This innovative material concept reduces the weight at the front axle by roughly two kilograms (*4.4 lb*), which corresponds to 35 percent.

Electromechanical rack-and-pinion power steering is standard equipment in the new Audi R8. Upon request, Audi can install [dynamic steering](#) with an integrated superposition gear. It changes the gear ratio between 10.5:1 and 15.8:1 depending on the driving speed. The steering is very direct during maneuvering, while it is calm and smooth on the freeway. In the Performance programs, which are standard in the R8 V10 performance quattro, the ratio is fixed to approximately 14.0:1. Thanks to the newly adjusted steering assistance, the driver experiences even more precise response characteristics and a very exact response from the road across the entire speed range.

The Audi R8 is equipped with the dynamic handling system [Audi drive select](#) as standard. The system accesses important technical elements such as the quattro drive, accelerator, steering and S tronic. The Dynamic mode is programmed to provide maximum driving pleasure – it assists with spontaneous turning and offers handling with slight oversteer. In the auto mode, on the other hand, traction has priority – this translates into high speed and fast lap times on the race track.



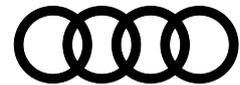
The Audi R8 V10 performance quattro offers even more precise handling that is adapted to the respective route conditions. Here, Audi drive select has three additional programs – dry, wet, and snow – that the driver controls via a satellite button that includes a setting dial on the steering wheel. They too are configured for maximum dynamic performance, and they take the friction coefficient of the road surface into consideration. Audi drive select also accesses the mode of operation of the ESC here. When the road surface is wet or covered in snow, for example, the control thresholds are adapted accordingly. In “wet” mode, for example, traction control starts regulating earlier and more gently. The goal is to achieve maximum traction. Independently of this, the driver can set the Electronic Stabilization Control ESC to ESC Sport or deactivate it completely. In performance mode, the top-of-the-line model switches to ESC Performance Mode automatically. The refined ESC reduces the braking distance to 1.5 meters (*4.9 ft*) when decelerating from 100 km/h (*62.1 mph*) to a standstill. The braking distance from 200 km/h (*124.3 mph*) is even up to five meters (*16.4 ft*) shorter, depending on the exterior conditions in each case.

High grip level: wheels and tires

The standard version of the new Audi R8 comes off the production line with 19-inch wheels with 245/35 tires mounted at the front and 295/35 tires at the rear. Newly designed milled 20-inch wheels in five-V dynamic design with three different surfaces are available as an alternative. They are fitted with tires with the dimensions 245/30 and 305/30, respectively. New and longer lasting 20-inch summer and sport tires are also available for a particularly dynamic driving style of the Audi R8 and further increased performance.

The standard-fit steel disks of the new Audi R8 V10 quattro are internally ventilated and pierced. For reasons relating to lightweight design, they have wave-shaped contours, also known as wave design. Operating at the front wheels are eight-piston fixed calipers and disks 365 mm (*14.4 in*) in diameter; at the rear wheels, four-piston calipers and disks 356 mm (*14.0 in*) in diameter are used. Audi can replace the black brake calipers with red ones upon request.

The Audi R8 V10 performance quattro decelerates with carbon fiber-reinforced ceramic disks that are extremely heat-resistant and durable. Their cooling ducts ensure that heat is dissipated quickly and the friction rings are screwed in with forged aluminum bowls. They are 380 mm (*15.0 in*) in diameter at the front (with six-piston fixed calipers) and 356 mm (*14.0 in*) at the rear (with four-piston calipers). The ceramic disks are eleven kilograms (*24.3 lb*) lighter in weight than their steel counterparts. The brake calipers come in anthracite gray as standard and are available in red as an option.



Audi Space Frame (ASF)

The body is designed as an ASF structure (Audi Space Frame) and forms the basis for the strict lightweight design concept of the Audi R8. The body of the Coupé weighs just 200 kilograms (*440.9 lb*), that of the Spyder weighs eight kilograms (*17.6 lb*) more. Large parts made of carbon fiber-reinforced polymer (CFRP), such as the rear panel, the center tunnel, and the three-piece B-pillars, form the ultra-high-strength and almost torsion-free backbone of the passenger cell. They account for a 14 percent share of the ASF.

The front and rear body modules of the new Audi R8 are constructed of aluminum (79 percent share of the ASF) from semi-finished goods that include castings, profiles and sheets. The cast nodes can absorb great forces and offer great versatility and design freedom. The extruded sections form the framework of the front and rear body modules. The floor of the luggage compartment is made of sheet aluminum, and it serves as a shear area that improves crash properties. The outer skin of the new Audi R8, including doors and lids, is produced entirely of sheet aluminum.

The high torsional rigidity of the multi-material ASF forms the basis for the precise handling, high crash safety and smooth vibration characteristics of the high-performance sports car. The side sills, A-pillars and windshield frame of the R8 Spyder in the ASF were given targeted reinforcements.

Aerodynamics

The c_d value of the new Audi R8 V10 performance quattro is 0.36; its frontal area is just 2.01 m² (*21.6 sq ft*). However, the decisive factor in the aerodynamics concept is the force that presses the vehicle onto the road and enables high cornering speeds: The Audi R8 Coupé V10 performance quattro achieves 140 kilograms (*308.6 lb*) of power output, 100 kilograms (*220.5 lb*) of which are achieved at the rear axle. Its blade, firmly mounted on the rear end, works together with the diffuser.

The underbody of the high-performance sports car, including the propeller shaft, is almost completely covered with smooth paneling. Two small diffusers in the front area send air through the wheel wells; this also helps to cool the brakes. Upstream of the rear axle, the paneling integrates what are known as NACA vents, which transport cooling air to the engine and S tronic. The wide diffuser beneath the rear end ensures that the accelerated air is reduced to ambient speed again without swirling too much. This suction effect enables a faster flow and thereby increases the power output. The V10 draws its inlet air through openings in the vehicle rear and through two long connecting pieces that lead to the sideblades. The temperature in the engine

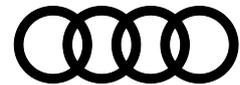
compartment is regulated in multiple ways but mainly via the large opening in the rear end. In the front body, the cooling air flows optimized through enclosed channels – this solution also comes from motorsports.

Interior

The taut body lines of the new R8 can also be seen in the interior. The monoposto is its most striking feature. The large curved section encircles the area in front of the driver seat and conveys the atmosphere of a racing car cockpit. The [Audi virtual cockpit](#) is enclosed in a free-standing housing, giving the entire instrument panel a lean and light look. The controls of the deluxe automatic air conditioning bear a visual resemblance to the jet engine turbines of an airplane, while the air vents with their vertical lamellas are reminiscent of a racing car.



In the Audi R8 V10 quattro, the driver and front passenger sit on electrically and pneumatically adjustable, heated sport seats. The R8 V10 performance quattro is equipped with bucket seats with electrical height adjustment and manual fore-and-aft adjustment. The pedals and footrest are made of stainless steel and the inlays are made of carbon. There is a stowage space with a volume of 226 liters (*8.0 cu ft*) behind the seats, which provides space for a golf bag, for example. It complements



the luggage compartment under the hood, which holds 112 liters (*4.0 cu ft*).

Both the sport seats and bucket seats are covered with fine Nappa leather. New options here include the colors pastel silver with rock gray contrasting stitching, palomino brown with steel gray stitching, and black with utopia blue stitching, matching the exterior color Kemora gray. The R8 performance design package with leather/Alcantara upholstery, highlights in Mercato blue and high-gloss carbon trim (standard in the R8 V10 performance quattro) is available for the top-of-the-line engine variants. Customers can order sport seats with a rhombus pattern instead of the bucket seats here. In addition, they can choose from different leather upholstery and trim designs and packages, and many interior elements are available in materials such as carbon and Alcantara. The Audi exclusive individualization program allows Audi Sport to fulfill almost every wish.

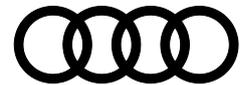
The optional convenience features of the new Audi R8 include an interior lighting package, the high-beam assist, a storage package, and the [parking system plus](#) with reversing camera. Deluxe automatic air conditioning, the anti-theft alarm, LED interior lighting, the convenience key, and cruise control are fitted as standard.

The operating concept, the Audi virtual cockpit and the MMI

The driver sits in the new Audi R8 like in a race car. The entire operating concept focuses on the driver alone, who can operate all key functions without having to take their hands off the steering wheel or look away from the road. The multifunction steering wheel plus integrates two satellite buttons in addition to its push-buttons for the MMI. One is used to start and stop the engine, while the other is used to select the basic modes of Audi drive select. The steering wheel of the Audi R8 V10 performance quattro has a further button for the performance programs.

In the operating concept of the new Audi R8, two standard-fit high-tech modules are merged into one unit: The information from the MMI navigation plus is shown in the revised Audi virtual cockpit. It has a 12.3-inch display and the driver can use the “View” button on the steering wheel to switch between views. The performance screen is dominated by a large tachometer. Different gages can be positioned around it, for example for output, torque, G-forces, lap times, engine and transmission oil temperatures, tire pressure and temperature.

The MMI operating system is characterized by a flat menu structure that is easy to understand. The [MMI search](#) operates with free text input and the voice control system understands many phrases used in everyday language. It is operated via the



MMI terminal, using the rotary push-button on the console of the center tunnel. The [MMI touch](#), which is positioned on its surface, is used for inputting characters, scrolling, and zooming. The driver can also control almost all functions via the steering wheel.

Infotainment and Audi connect

MMI navigation plus with MMI touch is a versatile media center. It integrates two SD card readers, the Audi Music Interface (AMI), a DVD drive, aux-in port and Bluetooth interface. The spectrum is completed by 10 GB of flash memory for music data and the Audi sound system. The updates for the navigation map are provided every six months; the first five are free. The standard-fit seat belt strap microphones for the driver and passenger are used for phone calls and the voice control function for the MMI. Three small microphones integrated into each seat belt ensure top quality.

Always online: Audi connect

The optional [Audi connect](#) hardware module is the ideal complement to MMI navigation plus. It establishes a connection to the Internet and supports the fast LTE data transmission standard. The front passenger can connect their mobile device to the [Wi-Fi hotspot](#). The portfolio of Audi connect services ranges from navigation via Google Earth to online media streaming. The [myAudi app](#) connects the smartphone with the car.

Attractive solutions round out the infotainment options. These include a tuner for digital audio broadcasting, the [Audi smartphone interface](#), the [Audi phone box](#) for wireless connection of a mobile phone to the car antenna, and the [Bang & Olufsen Sound System](#) (standard with the R8 V10 performance quattro). Its amplifier actuates 13 loudspeakers, including two in each of the head restraints of the sport or bucket seats.

The models

The new Audi R8 will go on sale on the European markets in early 2019. Audi is introducing new model designations with the upgrade of the R8. The R8 Coupé/Spyder V10 will become the R8 Coupé/Spyder V10 quattro models. The Audi R8 Coupé/Spyder V10 plus are now called Audi R8 Coupé/Spyder V10 performance quattro – an analogy to the most powerful RS models from Audi Sport.

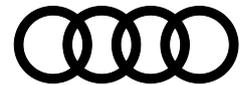
Production

The Audi R8 is being produced under the responsibility of Audi Sport GmbH at the “Audi Böllinger Höfe” location in Heilbronn, near the Neckarsulm plant. As many as 500 highly qualified employees work in the body shop and assembly areas at the production site, which has 30,000 m² (322,917 sq ft) of production floor area. Production is organized as a flexible production facility.

In the body shop, the initial focus is on the aluminum parts of the ASF. In the first step, experts weld the front body, center floor, and rear body together from cast parts and extruded sections. Then they join the three modules to create the substructure. Robots perform joining processes that involve cold joints such as rivets and screws, while workers execute welding tasks. The body continues to grow with the addition of the greenhouse and the roof. Humans and robots work closely together in installing the CFRP parts.



The finished body is transferred to the assembly area on a self-propelled assembly skid, which is known as a driverless transport system (DTS). The DTS utilizes high-power storage capacitors as its energy storage medium, and uses a laser scanner and RFID (Radio Frequency Identification) chips to navigate through the production floor areas. In the assembly area, which is laid out as a U-shaped chain, employees perform a large share of the work done by hand in 15 cycles.



Flexibility is a top priority at “Audi Böllinger Höfe.” In addition to the production vehicles, the employees also produce the R8 LMS racing cars in the body shop. Given the complex work procedures, this requires ongoing technology transfer from motorsports as well as a high level of qualification. The assembly area is also designed for quick modifications. The cars move through many areas of the hall on the DTS. There are no overhead conveyors or a classic “marriage” station. Instead, the drive unit and axles are preassembled and installed separately from one another.

Initial operation of the newly produced R8 is performed at the testing center and comprises six separate cycles. Afterwards, each new R8 must successfully complete a stringent quality approval lap on the plant’s own test track. After this, an approximately one-hour test drive that also includes freeway driving is conducted on public roads.

Racing cars

For the Audi R8, the development of production models and racing cars goes hand in hand – in keeping with the principle that the racetrack is the best laboratory for volume production. In parallel with the volume production high-performance sports car, the Audi R8 LMS GT3 – the GT3-category racing car for customer sports activities – was updated.

The Audi engineers made improvements to the aerodynamics, brake cooling, clutch and transmission. The GT3 racing car from Audi Sport customer racing shares just under 50 percent of its parts with the production vehicle; the V10 engine is virtually identical in both cars. The Audi R8 LMS GT4, which has complemented the range since 2017, is even more closely related.

The success story of the GT3

Audi entered the world of customer motorsports nine years ago, with the predecessor of the Audi R8 LMS GT3. More than 200 specimens of the first and second generations of the GT3 racing car have been produced and delivered to customers all over the world since 2009.

The track record shows that Audi’s strategy is proving successful in the tough field of motor racing. Until October 2018, the pilots of the Audi R8 LMS won 59 overall driver rankings and 72 further titles in class rankings. The GT3 racing car has proven its endurance qualities at the world’s toughest long-distance competitions. The Audi pilots have achieved the overall victory in 24-hour races eleven times. Seven victories at 12-hour races and three wins at 25-hour races round off the track record of the GT3



sports car so far. It is also the racing car used in the Audi Sport R8 LMS Cup, with which the brand has won many new customers in Asia since 2012.

Growth spurt: the Audi R8 LMS GT4

The Audi R8 LMS GT4 brought a new boost to Audi Sport customer racing. It has been available to customers all over the world since the 2018 season. With more than 60 percent of shared parts, it is even more closely related to the road sports car than the GT3 variant. The V10 engine of the Audi R8 LMS GT4 can output up to 364 kW (495 metric horsepower) – depending on its classification in the context of the valid balance of performance, which is to enable balanced competition between all racing cars. Attractive markets for the Audi R8 LMS GT4 already exist in North America, Europe and Asia. The GT4 model also competes in the two brand cups, the Audi Sport R8 LMS Cup and the Audi Sport Seyffarth R8 LMS Cup.