# Audi MediaCenter



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# The new Audi S8

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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 S8 – exhilarating performance in the luxury class

The new Audi S8\*\* combines progressive luxury with dynamic athleticism while honing its reputation as the benchmark for Vorsprung durch Technik with innovative suspension systems. Its 4.0 TFSI engine – a biturbo eight-cylinder unit – produces 420 kW (571 hp) and an opulent 800 Nm (590 lb-ft) of torque (combined fuel consumption in l/100 km: 11.4–11.3\* (20.6–20.8 US mpg); combined CO<sub>2</sub> emissions in g/km: 260–258\* (418.4–415.2 g/mi)). It is combined with MHEV technology for the perfect symbiosis of efficiency and comfort with exhilarating performance. The predictive active suspension, dynamic-all-wheel steering and quattro drive with sport differential provide for outstanding vehicle dynamics straight from the factory. The new Audi S8\*\* uses specific design elements to express the sporty elegance of the sophisticated luxury sedan with pinpoint precision.

#### Impressive performance: the drive system

As a V8 engine with mild hybrid technology, the high-performance powerplant in the Audi S8\*\* offers not only maximum smoothness, but with an output of 420 kW (571 PS), 800 Nm (590.0 lb-ft) of torque (combined fuel consumption in l/100 km: 11.4–11.3\* (20.6–20.8 US mpg); combined CO<sub>2</sub> emissions in g/km: 260–258\* (418.4–415.2 g/mi)) and two turbochargers also the certainty that ample power is available for any situation. Top speed is electronically limited to 250 km/h (155.3 mph) it takes just 3.8 seconds to accelerate from zero to 100 km/h (62.1 mph). Iron-lined cylinder barrels in the aluminum crankcase reduce friction for exceptionally smooth running. Automatically actuated flaps in the exhaust system underscore the impressive sound.

Sports car-level emotion and performance are paired with comfort and efficiency. The mild hybrid system (MHEV) works continuously to reduce fuel consumption. Its 48-volt belt alternator starter and the additional lithium-ion battery enable coasting with the engine switched off, fast restart and an extended start-stop range. Fuel savings of up to 0.8 liters per 100 kilometers are possible in everyday driving. The cylinder on demand system, which deactivates individual cylinders in low-load operating situations, provides for additional efficiency. The vehicle's sound system features active noise cancellation to eliminate intrusive cabin noise for the ultimate in comfort.

<sup>\*</sup> Information on fuel consumption and CO<sub>2</sub> emissions as well as efficiency classes in ranges depending on the tires and alloy wheel rims used.

*<sup>\*\*</sup> The collective fuel consumption values of all models named and available on the German market can be found in the list provided at the end of this press information.* 



# Vehicle dynamics: active suspension, dynamic all-wheel steering, and quattro with sport differential

The unique combination of innovative suspension components enables the flagship to cover the entire range from the velvety cruising of a luxury sedan to the dynamically taut handing of a sports car. The new S8\*\* comes standard with the predictive active suspension. The high-tech system, which works in combination with the air suspension, can lift or push down each wheel separately via electromechanical actuators. It is therefore possible for the first time to actively control the trim of the body in any driving situation and thus greatly reduce pitch or roll during acceleration or braking. The front camera, which detects larger road surface irregularities, enables this to be done predictively. The new Audi S8\*\* can be a highly comfortable luxury sedan or a truly dynamic sports car - it's entirely up to the driver. The Audi drive select system offers five profiles from which to choose. "Comfort +" mode is a new profile. It makes even cornering a comfortable experience: The body leans into curves by as much as 3 degrees to reduce the lateral acceleration acting on the occupants. In "dynamic" mode, the S8\*\* turns in precisely. The maximum roll angle during fast cornering is just roughly 2.5 degrees. With the standard suspension, it is around 5 degrees. The situational distribution of roll moments enables selfsteering that is neutral or minimally oversteering. The position of the S8\*\*'s body can be altered even when it is stationary. It is quickly raised by as much as 50 mm (2.0 in) when the door handle is actuated, making getting into the car even easier and more comfortable.

The Audi S8\*\* is redefining the limits of physical possibility thanks to the dynamic-all-wheel steering. This allows the independent adjustment of the steering angles at the front and rear axles. It therefore combines direct, sporty steering response at low and medium speeds with supreme stability on the highway and a tight turning circle, thus resolving a long-standing conflict of objectives. The sport differential actively transfers torque between the rear wheels during fast cornering. When turning into or accelerating in a curve, most is directed to the outside wheel. This literally pushes the car into the curve and nips any hint of understeer in the bud. In the case of oversteer, the sport differential on the rear axle transfers the drive torque to the inside wheel to stabilize the S8\*\*. Dynamic all-wheel steering, the sport differential and the predictive active suspension are all standard equipment. The interplay of these systems is unique in its class and ensures composed and sporty handling in all situations. The customer has the option of choosing high-performance brake discs made from carbon fiber ceramic. They have a diameter of 420 millimeters (16.5 in) at the front axle and 370 millimeters (14.6 in) at the rear axle. The ceramic brake discs are internally ventilated and low-wear. Including the brake calipers, the ceramic brake system is also 9.6 kilograms (21.2 lb) lighter than the standard brake system with brake discs made from cast iron. Each of the front calipers has ten pistons.



#### Precise expression of sporty elegance: the design

The progressive, elegantly flowing exterior design of the model series gets some new accents with the new Audi S8\*\*. Bold interior and exterior design elements finely hone the sporty character. Wheels up to 21 inches in diameter are available for the 5.18 meter (17.0 ft) long sports sedan. Details on the front bumper, side sills and the exterior mirror housings as well as the two S-typical twin oval exhaust tailpipes emphasize the car's sporty and progressive character. The black styling package is also available as an option. With this, all chrome elements - right down to the tailpipe trims - come in high-gloss black. Customers can choose from nine sophisticated color and design worlds, including the Audi design selection pastel silver, for the spacious interior, which conveys the relaxed atmosphere of a luxurious lounge. Here the upper inlay – new and available exclusively in the Audi S8\*\* – is made of Carbon Vector and impresses with a special 3D depth effect. Directly below that is an inlay of dark, brushed matt aluminum. Lighting options range up to HD matrix LED headlights with Audi laser light and OLED rear lights. In the major markets China, USA, Canada and South Korea, the Audi S8\*\* will be available for the first time and exclusively with an extended wheelbase. The increased vehicle length and height means a significant increase in comfort for the occupants thanks to greater head and leg room.

#### Progressive and state-of-the-art: the equipment

Every detail of the new Audi S8\*\* reflects its character as a sporty luxury model. One particular highlight are the standard comfort customized contour seats in sport look. They feature wide-ranging power adjustment, pneumatically adjustable side bolsters and separate three-stage heating for each seat. What is more, they are optionally available with ventilation and massage functions. Customers can choose between the top leather grades Valcona and Unikat. The rear seats also offer numerous features for outstanding comfort and provide for a first-class atmosphere in the Audi S8\*\*.

The 38 driver assistance systems that Audi provides for the new S8\*\* are divided into the City and Tour packages. Adaptive cruise assist – the central system in the "Tour" package – stands out among the comprehensive range of assist systems. It combines the functions of adaptive cruise control, traffic jam assist and lane tracking. In conjunction with predictive efficiency assist, adaptive cruise assist brakes and accelerates the Audi S8\*\* in anticipation of the conditions ahead. In the City assist package, Audi pre sense side joins the systems pre sense front and pre sense rear to create Audi pre sense 360°. If the system detects an impending side impact, it can operate together with the predictive active suspension to instantly raise the body by as much as 80 millimeters (*3.1 in*). This brings the sill into a better position to absorb the impact energy, mitigating the potential consequences of the accident for the occupants.



The brain behind the driver assistance systems in the new S8\*\* is a high-performance processing unit, the central driver assistance controller (zFAS). It continuously computes a differentiated model of the vehicle's surroundings based on the data provided by the sensors. Fully equipped, there are five radar sensors, six cameras, twelve ultrasound sensors and a laser scanner on board.

#### Digital and intelligent: controls and connectivity

The new Audi S8\*\* offers a progressive technology experience with new digital services and state-of-the-art connectivity. The MMI touch response operating concept is fully digital. The driver controls nearly all functions via two large displays. The driver can also use natural speech control, which offers virtually unlimited freedom when formulating questions and commands. The answers are provided either from information stored on board or from the cloud. Alexa, Amazon's cloud-based voice assistant, is also available as an option. All driving-relevant displays appear in the Audi virtual cockpit, which can be switched between two views. While the tachometer and speedometer are displayed as large dial-type gages in driving mode, the map is the center of attention in infotainment mode. Both views have

S-specific red graphical details. A special S-performance layout for the Audi virtual cockpit where the central focus is the tachometer, displayed as a square graph, and the output and torque are shown as percentages can also be selected in the MMI. The optional head-up display can display important information on the windshield.

MMI navigation plus serves as the infotainment and media center in the new S8\*\*. Besides the integration of the Amazon Alexa voice assistant, the extensive Audi connect range includes numerous car-to-X services that draw on the swarm intelligence of the Audi fleet. Traffic light information is a new feature that Audi is adding successively in selected European cities. Thanks to the interconnection with the city's infrastructure, the vehicle receives information from the central traffic light computer via a server, which allows the driver to select a speed to match the next green-light phase. The Audi virtual cockpit displays an individual speed recommendation as well as the remaining time until the next green-light phase if the driver is already waiting at a red light. The system thus contributes to a predictive and efficient driving style and facilitates a steady flow of traffic. Online traffic sign information, hazard alerts and on-street parking round out the range of car-to-X services. The myAudi app connects the car to the customer's smartphone so that they can easily send destinations to the car from their couch. The Audi smartphone interface brings Android Auto and wirelessly Apple Car Play on board. High-end components such as the Bang & Olufsen 3D Advanced Sound System and the Audi phone box round out the infotainment lineup in the new S8\*\*.

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The Facts

# The new Audi S8

## Drive

- > Twin-turbo 4.0 V8 TFSI featuring aluminum crankcase with iron-coated barrels
- Performance data: 571 PS / 420 kW, 800 Nm (590.0 lb-ft) of torque (combined fuel consumption in l/100 km: 11.4–11.3\* (20.6–20.8 US mpg); combined CO<sub>2</sub> emissions in g/km: 260–258\* (418.4–415.2 g/mi))
- One high-pressure injection pump up to 250 bar and one twin-scroll turbocharger per cylinder bank
- Mild-hybrid system (MHEV) and 48-volt main electrical system; enables gliding with the engine switched off, fast restart and an extended stop/start range
- > Cylinder on demand system for temporarily shutting off four of the eight cylinders
- Eight-speed tiptronic and quattro permanent all-wheel drive
- Exhaust system with catalytic converters close to the engine, gasoline particulate filter and electric sound flap

# Vehicle dynamics

- Three standard systems on board for a wide spread between comfort and sportiness, and outstanding driving dynamics. All set via <u>Audi drive select</u> (New: "comfort +" mode):
  - Predictive active suspension for precise body control in any situation via electromechanical actuators on all four wheels
  - Dynamic all-wheel steering for high agility at low and medium speeds and supreme stability on freeways
  - Sport differential for transferring drive torque between the rear wheels for exhilarating driving dynamics
- Upon request from the customer: High-performance brake discs made from carbon fiber ceramic with a diameter of 420 millimeters (16.5 in) on the front axle and 370 millimeters (14.6 in) on the rear axle. Including the brake calipers, the ceramic brake system is
   9.6 kilograms (21.2 lb) lighter than the conventional brake system with brake discs made from cast iron

<sup>\*</sup> Information on fuel consumption and CO<sub>2</sub> emissions as well as efficiency classes in ranges depending on the tires and alloy wheel rims used.

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# Design

- Exterior with striking design details on Singleframe, bumper, exterior mirrors, sills and rear; exhaust system with two S-typical twin oval tailpipes; black styling package available as an option
- > 20-inch (standard) or 21-inch (optional) alloy wheels from Audi or Audi Sport GmbH
- > <u>HD Matrix LED headlights</u> with <u>Audi laser light</u> as well as <u>OLED rear lights</u> upon request
- > Spacious interior designed for quiet with the character of a lounge
- > Nine color and design worlds available, including Audi design selection pastel silver
- > New exclusive Carbon Vector inlay with special 3D depth effect
- Hand-built character: Comfort customized contour seats in sport look, upholstery in the top leather grades Valcona and Unikat featuring rhomboid quilting with square perforations
- The S8\*\* will be offered exclusively with a long wheelbase in China, the USA, Canada and South Korea for the first time

# Control system and networking

- Digital <u>MMI touch response</u> control system with two displays plus natural-language voice control, multifunction steering wheel and, on request, a <u>head-up display</u>
- > Audi virtual cockpit with S-specific display graphics
- Intelligent navigation functions, <u>Audi connect</u> with <u>Car-to-X</u> services such as on-street parking and traffic light information for selected European cities
- > Audi smartphone interface brings Android Auto and wirelessly Apple Car Play on board
- > Optional Bang & Olufsen 3D Advanced Sound System also for the rear

# Driver assist systems

- 38 assist systems available, including <u>adaptive cruise assist</u>, <u>efficiency assist</u> and <u>Audi pre</u> <u>sense 360°</u>, which will also lift the body in conjunction with the active suspension prior to a side impact
- Fully equipped sensor set with five radar sensors, six cameras, twelve ultrasound sensors and a <u>laser scanner</u>



#### The Car in Detail

# The new Audi S8: Exhilarating performance in the luxury class

The S8<sup>\*\*</sup> is the sporty top model in the full-size class from Audi. It combines progressive luxury with dynamic athleticism and innovative suspension systems, thus honing its reputation as the benchmark for Vorsprung durch Technik. Its 4.0 TFSI engine – a biturbo eight-cylinder unit – produces 420 kW (571 hp) and an opulent 800 Nm (*590 lb-ft*) of torque (combined fuel consumption in l/100 km: 11.4–11.3\* (*20.6–20.8 US mpg*); combined CO<sub>2</sub> emissions in g/km: 260–258\* (*418.4–415.2 g/mi*)). The new predictive active suspension, the dynamic all-wheel steering and the quattro drive with sport differential as standard guarantee sporty, taut handling or exquisite comfort, entirely according to the driver's wishes. Striking design details lend the S8<sup>\*\*</sup> a sporty elegance that is precisely expressed.

## **Drive system**

420 kW (571 PS), 800 Nm *(590 lb-ft)* of torque between 2,000 and 4,500 rpm ((combined fuel consumption in l/100 km: 11.4–11.3\* *(20.6–20.8 US mpg)*; combined CO<sub>2</sub> emissions in g/km: 260–258\* *(418.4–415.2 g/mi)*) – the four-liter V8 with its twin turbochargers provides concentrated power, awesome power delivery and exhilarating performance. Its specific power output is 142.9 PS per liter of displacement, meaning that each PS has to move only around 4 kilograms *(8.8 lb)* of unladen weight. The specific torque is also impressive: For each kilogram of weight, there are 2.855 Nm *(2.1 lb-ft)* available for dynamic acceleration. Top speed has been electronically limited to 250 km/h (*155.3 mph*). As a result, the high-performance powerplant offers not only maximum smoothness, but also the certainty that ample power is available for any situation.

The V8 has a conventional 90-degree bank angle and a displacement of 3,996 cc (bore x stroke: 86.0 x 86.0 millimeters (3.4 in x 3.4 in)). Its crankcase is made of cast aluminum and weights just 39.1 kilograms (86.2 lb). A fully variable pump drives the oil circuit that is split into separate galleries for the engine block and the cylinder heads. This innovative layout guarantees a reliable supply of oil even under extreme lateral and longitudinal acceleration.

The valves are operated via chains that are driven by the crankshaft via an intermediate shaft. The engine features concentrated high-tech solutions in all areas. To ensure that the cylinders are filled to the optimum degree at all times in every operating situation, intake and exhaust camshafts can be adjusted by 50 degrees. Each cylinder bank is supplied with fuel by a separate pump that builds up pressure of up to 250 bar. The injectors, located in the center of the combustion chamber, spray the fuel out of seven holes, following special injection strategies depending on the requirements, from cold start to full load.

\* Information on fuel consumption and CO<sub>2</sub> emissions as well as efficiency classes in ranges depending on the tires and alloy wheel rims used.



#### Powerful: the two twin-scroll turbochargers

The immense torque that the 4.0 TFSI already produces at low engine speeds is all thanks to the two twin-scroll turbochargers. Each turbo supplies a cylinder bank with a relative boost pressure of 1.8 bar. The cylinder heads have the intake side on the outside and the exhaust side on the inside. Accordingly, the two turbos are housed near to the exhaust valves in the engine's inner V, with the intercooler housed upstream of the engine. The preliminary and main catalytic converters are located very close to the engine so that they reach their operating temperature swiftly after the engine is started. The new Audi S8\*\* is equipped with two gasoline particulate filters and is certified in accordance with the latest emission standard EU6DG.

#### Efficient and comfortable: the mild hybrid system

The 4.0 TFSI is the perfect blend of emotion, performance and efficiency. Its <u>mild-hybrid system</u> (<u>MHEV</u>) that is based on the 48-volt main electrical system of the new S8\*\* can reduce fuel consumption by up to 0.8 liters (0.2 US gal) per 100 kilometers (62.1 mi) while also increasing the ride comfort. The core of the MHEV system is a belt alternator starter (BAS) connected to the crankshaft. During deceleration, it can recuperate up to 8 kW of energy. This electrical energy is stored in the additional lithium-ion battery, from where it is dynamically distributed to the consumers in the electrical system. The lithium-ion battery is located in the luggage compartment under the loading floor of the S8\*\* and has an energy content of 0.47 kWh.

If the driver takes their foot off the accelerator at a speed between 55 and 160 km/h (*34.2 and 99.4 mph*), the drive management selects one of three solutions depending on the driving situation and the current setting of <u>Audi drive select</u>: The new Audi S8\*\* can recuperate, roll at idle or coast with the engine deactivated for 40 seconds. The BAS restarts the engine for acceleration. This can be particularly fast-acting or very harmonious depending on the situation. MHEV technology allows for start/stop operation from as low as 22 km/h (*13.7 mph*). When stopped, the engine also restarts while the brake pedal is still depressed as soon as the vehicle in front of the Audi S8\*\* begins to move. The <u>cylinder on demand</u> system, which deactivates individual cylinders in low-load operating situations, is another efficiency element. It can reduce fuel consumption by several tenths of a liter per 100 kilometers in real-life use.

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Audi S8	4.0 TFSI	
Displacement		
in cc	3,996	
Max. power output	420 (571)	
in kW (PS) at rpm	At 6,000	
Max. torque	800 <i>(590)</i>	
in Nm <i>(lb-ft)</i> at rpm	From 2,000 to 4,500	
Top speed		
in km/h <i>(mph)</i>	250	
Acceleration 0-100 km/h	3,8 s	
<i>(62.1 mph)</i> in s		
Drive	quattro drive	
Transmission	Eight-speed tiptronic	

#### Highly emotional: the sound

Its unusual 1-3-7-2-6-5-4-8 ignition sequence gives the 4.0 TFSI a sound that is at once highly sophisticated and sportily voluminous. In typical S model style, the dual-branch exhaust system terminates in two tailpipes on both the left and right. The driver can influence it via the Audi drive select system. In the "dynamic" profile, the electric flap that is positioned in front of the left auxiliary silencer opens, and the sound becomes even more full-bodied and impressive. So that the engine sound remains highly emotional at all times, the Audi S8\*\* is equipped with the Active Noise Cancellation system as standard.

#### Fast and precise: the eight-speed tiptronic

In the new Audi S8<sup>\*\*</sup>, power is transmitted via an <u>eight-speed tiptronic</u>. The automatic torque converter transmission changes gears quickly and almost imperceptibly and impresses thanks to a high degree of efficiency. The driver can choose to have it operate automatically in modes E, D and S or intervene himself or herself, in which case the selector lever commands are transmitted purely electrically. The revised transmission control detects stop-and-go traffic and prevents unnecessary gear changes in these situations.

For operation in conjunction with MHEV technology, some modifications have been made to the tiptronic. When the new S8\*\* is coasting or rolling at idle, a clutch in the central transmission opens and interrupts the power connection. An electric oil pump enables the tiptronic to engage the gear while coasting that will be needed at restart. Narrow springs at the multi-plate brakes in the gear sets separate the plates from one another and thus reduce drag torque.

\* Information on fuel consumption and CO<sub>2</sub> emissions as well as efficiency classes in ranges depending on the tires and alloy wheel rims used.



# Handling

The Audi S8\*\* offers outstanding handling straight from the factory – with a bundle of top technologies that comes as standard: <u>predictive active suspension</u>, <u>dynamic all-wheel steering</u> and <u>quattro with sport differential</u>. This unique combination opens up an unprecedented spectrum of possibilities for the driving experience. The characteristics range from the gentle rolling of a classical luxury sedan to the dynamic, taut handling of a sports car.

## A new chapter for technology: predictive active suspension

With the <u>predictive active suspension</u>, the brand with the four rings is opening a new chapter in the history of suspension technology. The high-tech system works in combination with the air suspension featuring controlled damping and exerts a special influence on the handling. The active suspension can raise or press down each wheel of the new S8\*\* at any point of the suspension. It is therefore possible for the first time to actively control the position of the body in any driving situation. During dynamic driving, the sedan turns in precisely, body movements are significantly reduced, almost without rolling or pitching during acceleration or braking. If, on the other hand, the driver chooses the "comfort +" mode via Audi drive select, the new Audi S8\*\* glides smoothly over any surface irregularities like a classical luxury sedan.

Even negotiating sweeping curves on country roads and freeways becomes a comfortable experience: Thanks to the new curve tilting function, the body leans into curves by as much as 3 degrees, thus reducing the forces acting on the occupants. The system allows for the greatest perceptible comfort at speeds between 80 and 130 km/h *(49.7 and 80.8 mph)* and lateral acceleration of up to 0.4g. In the "dynamic" drive select mode, the S8\*\* turns in precisely. The maximum roll angle during fast cornering is just roughly 2.5 degrees compared with around 5 degrees with the standard suspension. The situational distribution of roll moments enables self-steering that is neutral or minimally oversteering. This makes the S8\*\* feel extremely safe and easy to steer, and allows it to go around bends with great precision as if it were on rails. For straight-line travel in the "comfort +" mode, the predictive active suspension can equally reduce the forces acting on the human body. When accelerating hard or braking up to a moderate level, it equalizes the body's pitching movements. The slight overcompensation that it realizes means the occupants are pushed very gently into their seats during braking.

Another new function that the predictive active suspension brings with it is convenience entry. Here, the body is quickly raised by up to 50 mm (2.0 in) when the doors are opened to make getting in and out even more comfortable.

<sup>\*</sup> Information on fuel consumption and CO<sub>2</sub> emissions as well as efficiency classes in ranges depending on the tires and alloy wheel rims used.

*<sup>\*\*</sup> The collective fuel consumption values of all models named and available on the German market can be found in the list provided at the end of this press information.* 



A small electric motor that is supplied by the 48-volt main electrical system is placed on the wheel suspension of each wheel on the new Audi S8\*\*. A belt drive and a compact strain wave gearing step up the electric motor's torque almost 200-fold to 1,100 Nm (*811.3 lb-ft*) and apply it to a steel rotary tube. This is permanently attached to a preloaded titanium rod located inside it. The rod is more than 40 centimeters (*15.7 in*) long, around 22 millimeters (*0.9 in*) thick and, despite its high strength, can be turned through more than 20 degrees. From the end of the rotating rod, the force is transmitted to the suspension via a lever and a coupling rod. On the front axle, it acts on the suspension strut, and on the rear axle, it acts on the transverse link. Whenever driving physics attempts to push the body into the wheel, the predictive active suspension counteracts this.

It obtains its information from the <u>electronic chassis platform (ECP)</u> every five milliseconds – two sets of power electronics prepare it for the electric motors. The ECP is the central suspension control unit that also manages the dynamic all-wheel steering, the sport differential, the controlled damping and the air suspension. From the driving-relevant data that it gathers via various sensors, it calculates the optimal function of these systems and instantly and precisely coordinates them. For its part, the ECP uses the images from the onboard camera to detect significant irregularities in the road surface. The range for the predictive function in front of the vehicle extends to around 15 meters *(49.2 ft)*. In poor visibility conditions, snow or at particularly high speeds, the system operates without the predictive element.

In the event of an impending side impact at more than 25 km/h (15.5 mph), the predictive active suspension in conjunction with the pre sense 360° safety system very quickly raises the body by up to 80 millimeters (3.1 in) on the side of the impact. As a result, the other party in the accident collides with a lower, more resistant zone of the sedan. The side sills and floor structure accommodate a large portion of the impact forces. Deformation of the cabin and the loads acting on the occupants, above all in the chest and abdominal areas, can thus be reduced by up to 50 percent compared with a lateral collision in which the suspension is not raised.

#### Redefining limits: dynamic all-wheel steering

<u>Dynamic all-wheel steering</u> is the perfect partner for the predictive active suspension. This allows the steering angles at the front and rear axles to be adjusted independently of one another. In conjunction with the active suspension, the system provides an almost instantaneous steering response with outstanding stability and conveys intense, finely differentiated feedback from the road to the driver at all times.

\* Information on fuel consumption and CO<sub>2</sub> emissions as well as efficiency classes in ranges depending on the tires and alloy wheel rims used.



At the front axle of the new Audi S8<sup>\*\*</sup>, <u>dynamic steering</u> features strain wave gearing with a ratio that changes depending on the driving situation and speed – as the speed increases, it becomes increasingly indirect. The rear wheels are turned by an electric spindle drive via two track rods, which makes maneuvering and steering on tight bends significantly easier and reduces the turning circle by about one meter (3.3 ft). At medium and high speeds, the rear wheels are turned by up to 1.5 degrees in the same direction as the front wheels. Thanks to this coordinated steering, the new Audi S8<sup>\*\*</sup> is stable and masterful on the road even in the event of a sudden lane change or avoidance maneuvers.

With both steering systems working together, the overall steering ratio varies within a range of 9.5 to 17.0. Via Audi drive select, the driver can set the ratio and the characteristics of the dynamic all-wheel steering to a choice of three levels.

#### Active torque vectoring: the sport differential

Another standard feature of the new Audi S8<sup>\*\*</sup> is the <u>sport differential</u>. It ensures exhilarating driving dynamics in all situations and is part of the quattro permanent all-wheel drive. During dynamic cornering, it distributes drive torque between the wheels on the rear axle as required. This active torque vectoring improves traction, dynamics and stability. To do so, it integrates a transmission stage on each side that is engaged via an electro-hydraulic multi-plate clutch.

When turning into or accelerating in a curve, most of the torque is directed to the outside wheel. The car is literally turned into the curve and thereby nips any hint of understeer in the bud. In case of oversteer, the sport differential stabilizes the new S8\*\* by shifting torque to the wheel on the inside of the curve. The wheel-selective torque control functions via the wheel brakes and perfects the action of the sport differential by gently braking the front wheel on the inside of the curve that is under less load. This ensures near perfect steering behavior when cornering at high speed in the Audi S8\*\*.

The <u>Audi drive select</u> dynamic handling system also comes as standard in the new Audi S8\*\*. This allows the driver to determine how systems like the sport differential, the predictive active suspension with adaptive air suspension, dynamic all-wheel steering, the engine and the eight-speed tiptronic should work. With Audi drive select, there are five profiles to choose from: comfort + (new), auto, dynamic, efficiency and individual.

<sup>\*</sup> Information on fuel consumption and CO<sub>2</sub> emissions as well as efficiency classes in ranges depending on the tires and alloy wheel rims used.



# The Design

From the very first glance, it is clear that the new Audi S8\*\* boasts a sporty elegance and strong presence. Its athletic character is precisely expressed through specific design elements. The front end with the wide, upright Singleframe grille, the flowing and muscular body with the flat roof dome and the rear end tilted slightly forward with the continuous light strip visualize its progressive character. Sophisticated interior and exterior details exude prestige and craftsmanship.

Below the Singleframe is an aluminum strip that also extends along the flanks and across the rear. Powerful contours surround the air inlets, while honeycomb grilles and a vertical blade define their inner structure. The side sills with their bold design are wider towards the wheels than on the A8 and ensure a sporty presence. The sculptured rear bumper contains a rhomboid pattern insert and a clearly contrasting diffuser. Like the radiator protective grille and the air inlet grilles, it is finished in titanium black matt. The black styling package is available to order for customers who wish to add an even more customized look to their Audi S8\*\*. With this, attachments such as the surrounding trim strip and the window slot trims have a high-gloss black finish. The brake calipers behind the 20-inch wheels are also black. The new S8\*\* comes with 20-inch alloy wheels with 265/40 tires as standard. On request, Audi and Audi Sport GmbH supply alternative 20 and 21-inch wheels, with the latter equipped with 265/35 tires.

Besides the large wheels, the classic S design solutions catch the eye – the twin slats in the Singleframe, the exterior mirror housings in aluminum look and the four oval exhaust tailpipes. For an even sportier look, the brake calipers are also available in a red paint finish on request. The range of paint finishes for the S8\*\* offers a choice of twelve colors as standard, including the popular Daytona gray, pearl effect. A customized paint finish according to the customer's taste offers a special alternative as part of the Audi exclusive program.

## 138 LEDs and one laser spot: the lights

With their refined play between metallic slats and chrome lines, the headlights of the new Audi S8\*\* also have the appearance of technical works of art. Topping the range are the <u>HD Matrix</u> <u>LED headlights</u> with <u>Audi laser light</u>. Each headlight contains 138 light-emitting diodes, including 32 small, separately adjustable LEDs that share a single housing and radiate the high beam. The low beam is also variably controlled. The laser spot can be recognized by an X-shaped trim and a blue ambient light. The laser spot is activated from a speed of 70 km/h *(43.5 mph)* and doubles the range of the high beam. Together with the HD Matrix LED headlights, Audi supplies <u>OLED rear lights</u> that emit homogeneous light. When the driver unlocks the S8\*\* using a remote control key, a dynamic lighting sequence runs at the front and rear.

\* Information on fuel consumption and CO<sub>2</sub> emissions as well as efficiency classes in ranges depending on the tires and alloy wheel rims used.



#### Sporty, sophisticated and stripped back to the essentials: the interior

Compared to the previous model, the interior is now 32 millimeters (1.3 in) larger. It receives the driver and front passenger like a spacious, airy lounge. Its design is clean and reduced yet progressive, while the architecture has a strict horizontal layout. The standard contour/ambient lighting package lends the surfaces an atmospheric look with its indirect surface lighting. The front door sill trims bear a rhombus with the S logo and are illuminated. At the same time, light guides elegantly trace the striking lines of the interior design.

There are nine color and design worlds to choose from, with Audi design selection pastel silver topping the range. The seat upholstery, the Alcantara headlining, the lower instrument panel area, the armrests on the doors and the center console are all presented in this color. The contrasting stitching and piping on the seats, the upper section of the instrument panel, the center console and the carpet are granite gray. Customers can choose from a variety of trim strips made from fine wood that are open-pored and therefore have a natural feel to them. The (standard) Carbon Vector upper inlay that impresses with its special 3D depth effect has been created exclusively for the Audi S8\*\*. Alternatively, there is the upper inlay with glossy piano finish, for example. Dark brushed matt aluminum lends the interior an elegant sportiness and is immediately adjacent to the upper inlay. The gear selector lever contains carbon applications. Extended aluminum sections and glass-look buttons also represent sportiness and prestige in the interior. The pedals and footrest are made from stainless steel, while the engine start-stop button is adorned with a red ring. The S-specific twin-spoke steering wheel with shift paddles bears a rhombus with the S logo as well as an elegant chrome trim.

The character of the new Audi S8<sup>\*\*</sup> as a sporty, exclusive top model shines through in every detail. For example, comfort customized contour seats with visually integrated, electrically height-adjustable head restraints and pronounced backrest side bolsters are part of the standard equipment. Each seat features three-stage heating – with ventilation as an option – and multiple massage functions that can be set to any one of seven programs and three intensity levels. The seats' functions allow you to adjust 16 air pockets in the backrests of the front seats and 18 in those in the rear.

The seat cushion and backrest feature a rhomboid pattern and are perforated with square holes, while there are S logos embossed under the head restraints. The hand-crafted character of the Audi S8\*\* is evident here too. For the upholstery, customers can choose from the top leather grades Valcona and Unikat.

<sup>\*</sup> Information on fuel consumption and CO<sub>2</sub> emissions as well as efficiency classes in ranges depending on the tires and alloy wheel rims used.

*<sup>\*\*</sup> The collective fuel consumption values of all models named and available on the German market can be found in the list provided at the end of this press information.* 



Passengers on the rear seats are also provided with outstanding comfort. This is thanks to features such as ventilation and massage, the heat comfort package, the Matrix LED reading lamp, four-zone deluxe automatic air conditioning with ionizer and fragrancing, Rear Seat Entertainment and the <u>Rear Seat Remote</u> control unit. Rear-seat passengers can use its touch control facility to operate numerous convenience and infotainment features as well as make discreet phone calls. The Rear Seat Remote with its OLED display is approximately as big as a smartphone and can be removed from where it is stored in the rear center armrest.

#### Tailored: the Audi S8 also as a long-wheelbase version for the first time

The top model's dimensions contribute to its dynamic character: 5.18 meters (*17.0 ft*) long, wheelbase of 3.00 meters (*9.8 ft*), 1.95 meters (*6.4 ft*) wide – but only 1.47 meters (*4.8 ft*) high.

In the important markets China, the USA, Canada and South Korea, the new S8\*\* will be available for the first time and exclusively with a long wheelbase. With this measure, Audi is addressing the particular requirements of the customers in these markets. In the long-wheelbase version of the S8\*\*, the overall length increases by 130 millimeters (5.1 in), while the height puts on 15 millimeters (0.6 in). That is a significant boon in terms of comfort for the occupants due to the increased head and leg room.

#### Intelligent mix of materials

The front and rear axles of the new Audi S8\*\* are mounted on subframes and have a five-link design, with many parts made from aluminum. Customers can opt for internally ventilated high-performance brake discs made from lightweight, abrasion-resistant carbon fiber ceramic with a diameter of 420 millimeters (*16.5 in*) on the front axle and 370 millimeters (*14.6 in*) on the rear axle. Together with the calipers, they are a total of 9.6 kilograms (*21.2 lb*) lighter than standard brakes made from steel. This weight saving has a positive effect on the unsprung masses, thereby ensuring more dynamic handling. Each of the calipers has ten pistons. As standard, the new S8\*\* is fitted with brake discs measuring 400 millimeters (*15.7 in*) in diameter that are grasped by black six-piston fixed calipers made from aluminum.

The lightweight body also contributes to the dynamic nature of the new S8\*\*. Designed as the Audi Space Frame, it comprises up to 58 percent aluminum parts. The cabin consists of hot-formed steel components, complemented by an ultra-high-strength, torsionally extremely rigid rear panel made of carbon fiber-reinforced polymer (CFRP). This contributes 33 percent of the whole vehicle's torsional rigidity. A magnesium strut-tower bar completes the lightweight construction concept. The rigidity of the body provides the foundation for the precise handling, the excellent ride comfort and the tranquility on board.

<sup>\*</sup> Information on fuel consumption and CO<sub>2</sub> emissions as well as efficiency classes in ranges depending on the tires and alloy wheel rims used.

*<sup>\*\*</sup> The collective fuel consumption values of all models named and available on the German market can be found in the list provided at the end of this press information.* 



# **Controls and Connectivity**

The <u>MMI touch response</u> operating concept of the new Audi S8\*\* is fully digital. The driver controls almost all functions via two large screens. A second operating logic is <u>the natural-language voice control</u>, which makes the S8\*\* an intelligent dialog partner. The driver can use the view button on the multifunction steering wheel to switch between two views in the Audi virtual cockpit: While the tachometer and speedometer are displayed as large dial-type gages in driving mode, the map is the center of attention in infotainment mode. Both views have S-specific red graphical details. An S-performance layout for the Audi virtual cockpit where the central focus is the rev counter, displayed as a graph, and the output and torque are shown as percentages can also be selected in the MMI. When the large navigation map is shown, the torque and speed are displayed as small bar graphs. In addition, there is an optional <u>head-up</u> display that projects important information onto the windshield.

#### State of the art: Infotainment, Audi connect and new Car-2-X services

The high-end media center in the new S8\*\* is no less than the top system MMI Navigation plus, with a wide range of functions from <u>Audi connect</u> – including Car-2-X services that use the swarm intelligence of the Audi fleet. New to the offering are on-street parking and traffic light information, which Audi is offering for selected European cities for the first time: The car receives information from the traffic light central computer via a server so that the driver can choose their speed to match the next green light. The Audi virtual cockpit displays a personal speed recommendation as well as the remaining time to the next green light whenever the driver is waiting at a red traffic light. As a result, the system promotes an anticipatory driving style and aids the flow of traffic.

The <u>myAudi app</u> connects the car with the customer's smartphone – and thus with their everyday life. The customer can conveniently send navigation destinations to the car's MMI Navigation plus system from their couch. Real-time information concerning the vehicle, such as the fuel level, range and service dates, can also be called up at any time. The auxiliary heating and climate control can be remotely controlled, too, as well as the opening and closing of the vehicle's doors.

In addition, the S8\*\* can be equipped with Amazon's Alexa voice service upon request. The digital assistant is fully integrated into the car's MMI operating system – no smartphone is necessary. With Alexa on board, the customer can use a host of functions and services that their Alexa-enabled end devices allow them to at home – to obtain information services (news, weather, sport), order groceries, stream music or control their smart home, for example.

\* Information on fuel consumption and CO<sub>2</sub> emissions as well as efficiency classes in ranges depending on the tires and alloy wheel rims used.



The <u>Bang & Olufsen Advanced Sound System</u> delivers an acoustic experience: Now the rear seats also benefit from its fascinating 3D sound. Thanks to the <u>Audi phone box</u> and voice-over-LTE function, even telephony in the S8\*\* reaches a new level – both in terms of operation and the quality of the sound and connection. The infotainment program is rounded off by features such as a TV tuner with "CI+" module, Digital Audio Broadcasting or the <u>Audi smartphone interface</u> – this brings Android Auto and wirelessly Apple Car Play on board.

# Driver assist systems

A total of 38 assist systems contribute to the supreme, safe and relaxed driving experience. They are divided into the Tour and City packages. The central system in the Tour package is <u>adaptive</u> <u>cruise assist</u>, which combines the functions of <u>adaptive cruise control</u>, traffic jam assist and <u>Audi</u> <u>active lane assist</u>. The system maintains the desired distance between the new S8\*\* and the car in front at speeds from 0 to 250 km/h (*155.3 mph*) by accelerating and braking and helps the driver to stay in their lane through minor torque interventions in the steering. Narrowed road assist, a sub-function of adaptive cruise assist, provides longitudinal guidance in road construction sites and similar areas. In conjunction with <u>efficiency assist</u>, it brakes and accelerates the Audi S8\*\* predictively, whereby it exploits the energy-saving potential of the 48-volt mild hybrid technology in a targeted manner.

The Tour package also includes <u>turn assist</u> and <u>collision avoidance assist</u>. Turn assist monitors the lane of oncoming traffic when turning across it, thus helping to avoid collisions with oncoming vehicles. It also monitors oncoming vehicles turning across the lane in which it is driving. It is the only model in its field of competitors to feature collision avoidance assist that also offers individual wheel braking as well as steering assistance, for more precise avoidance of obstructions. Camera-based <u>traffic sign recognition</u> and <u>emergency assist</u>, which brings the automobile to a standstill if the driver is no longer able to do so, complete the range.

In the assist package City, the <u>Audi pre sense 360°</u> system offers preventive all-round protection. It incorporates three subsystems that monitor the areas in front of, behind and beside the car. One of them, <u>Audi pre sense side</u>, reacts in the event of an impending side impact and, in doing so, activates the predictive active suspension. It very quickly raises the body of the new S8\*\* by up to 80 millimeters (*3.1 in*). This brings the sill into a better position to absorb the impact energy, mitigating the potential consequences of the accident for the occupants.

– End –

\* Information on fuel consumption and CO<sub>2</sub> emissions as well as efficiency classes in ranges depending on the tires and alloy wheel rims used.





#### Fuel consumption of the model listed

(Information on fuel consumption and CO<sub>2</sub> emissions as well as efficiency classes in ranges depending on the tires and alloy wheel rims used)

Audi S8 Combined fuel consumption in l/100 km: 11.4–11.3 *(20.6–20.8 US mpg)*; Combined CO<sub>2</sub> emissions in g/km: 260–258 *(418.4–415.2 g/mi)*)





The specified fuel consumption and emission data have been determined according to the measurement procedures prescribed by law. Since September 1, 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<sub>2</sub> emissions. Starting on September 1, 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 tire 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,  $CO_2$  emissions and the performance figures for the vehicle.

Fuel consumption and CO<sub>2</sub> emissions figures given in ranges depend on the tires/wheels used and chosen equipment level. Further information on official fuel consumption figures and the official specific CO<sub>2</sub> emissions of new passenger cars can be found in the "Guide on the fuel economy, CO<sub>2</sub> 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, Germany, or under <u>www.dat.de</u>.

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  $\in$ 59.2 billion and an operating profit before special items of  $\notin$ 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.