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PRESS INFORMATION

The new Audi A8

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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. Fuel consumption and emission figures are indicated from page 6 on.



Condensed information

The new Audi A8: ‘Vorsprung’ redefined

The new Audi A8 presents the future of the luxury class. In its fourth generation, the brand’s flagship model again provides the benchmark for ‘Vorsprung durch Technik’ – with a new design language, an innovative touchscreen operating concept and a systematically electrified drive. The Audi A8 is also the first production automobile in the world to have been developed for conditionally automated driving.

New line for the brand: the exterior design and body

Sporty elegance, sophistication and progressive status – the exterior design of the Audi A8 marks the start of a new era for the entire brand. The front with its broad, upright Singleframe grille, the flowing and muscular body design and the rear with its full-length light strip radiate a powerful presence – in the 5.17 metre long normal version as well as in the A8 L with its 13 centimetre longer wheelbase. The new A8 is 1.95 metres wide and 1.47 metres tall (1.49 metres in the case of the A8 L).

The progressive character of the new Audi flagship becomes especially clear in the side view. The flat roof dome lends the sedan a sporty touch, while stretched lines underscore its length. The upright front end combined with the gently inclined rear creates visual excitement. The proportions equally highlight the front and rear wheels, while subdued muscularity via the wheel arches signifies the quattro drive. The lighting is also state-of-the-art, especially in the top-of-the line version with HD Matrix LED headlights including Audi laser light and rear lights with OLED technology. The result is a dynamic light show as the driver approaches and leaves the car.

The body of the new A8 follows the Audi Space Frame principle. The body consists 58 percent of aluminium parts, whose strength has significantly increased compared with the predecessor model. The cabin consists of hot-formed steel components, complemented by an ultra-high-strength, torsionally extremely rigid rear panel made of carbon fibre-reinforced polymer. A magnesium strut-tower bar completes the lightweight construction concept. With its combination of four different materials, the luxury sedan embodies a new level of multi-material design, to the customer’s direct benefit – and not just in terms of weight reduction. The superior rigidity of the body provides the foundation for the precise handling, the excellent ride comfort and the acoustic tranquility on board.

Spacious, clearly defined, progressive: the interior

The interior of the A8 resembles a lavish, spacious lounge. Compared to its predecessor, it has grown in length by 32 millimetres in both body versions. The interior has been deliberately reduced in form, and its architecture oriented strictly horizontally. In darkness, contour and ambient lighting elegantly outlines the striking design lines. New for the rear



compartment are precisely controllable Matrix LED reading lights. The range of equipment and materials is extensive, with every detail radiating superlative bespoke quality – from the perforation in the seat upholstery to the electrically opening and closing decorative shutters on the air vents and the satiny leather of the comfort head restraints.

The most elegant place in the new Audi flagship is the rear left-hand seat – this is the optionally available relaxation seat in the A8 L and features many options for adjustment as well as a footrest on the backrest of the front-passenger seat where passengers can massage and warm the soles of their feet in several levels. Included in the relaxation seat package are a back massage feature, electrically height-adjustable comfort head restraints, footrests, a long centre console and, as optional features, folding tables with two-stage adjustable inclination and the Rear Seat Entertainment system comprising two Audi tablets. Rear-seat passengers can use the touch control on this new operating unit to run 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 centre armrest.

Sensitive, with understanding: operation

In the A8, Audi conveys its claim to high quality to the digital age with a revolutionary operating concept. The A8 dispenses with the rotary/push-button control and touchpad of its predecessor – MMI touch becomes MMI touch response. At the centre of the instrument panel is a 10.1-inch touchscreen display which, when off, blends almost invisibly into the high-gloss black surround thanks to its black-panel look. When the system is started, the user interface appears, featuring new, concise graphics. The menu structure is intuitive and flat, as with a modern smartphone and the user can freely arrange the icons according to their importance.

The driver controls the infotainment system on the large display, while a second touchscreen display on the console of the centre tunnel is used to operate the climate control and convenience features, as well as enter texts through handwriting recognition. When the driver activates a function in one of the two displays by touch control, they hear and feel a click by way of confirmation. This pulse is created by means of an electromagnet moving the spring-mounted display minimally to the side by roughly the width of a human hair. At the same time a small loudspeaker emits a click sound. Audi is opening up a new chapter in user experience here.

The A8 can also engage in intelligent conversation, with the driver able to activate an array of functions in the vehicle using a new, natural form of voice control. Information on destinations and media is either available on board or is delivered from the cloud at LTE speed. The driver can freely formulate spoken commands – the voice recognition system understands such sentences as “Please take me to the Hyatt Hotel in Sydney”. The ingenious dialogue manager asks questions if necessary, allows corrections, offers choices and also



defers to the speaker when interrupted. A multifunction steering wheel and head-up display round off the operating concept.

Plenty of new solutions: infotainment

MMI Navigation plus serves as a high-end media centre, resting on the modular infotainment platform in its latest version, the MIB 2+. It integrates a cutting-edge K1 processor from the Audi partner, NVIDIA. A second K1 chip generates the graphics in the digital Audi virtual cockpit, which offers a full HD resolution of 1920 x 720 pixels.

The greatly optimised navigation system of the new A8 is able to learn on the basis of routes that have already been driven, so that the system can thus make intelligent suggestions to the driver. The calculation is performed online on the servers of the map and navigation provider HERE, with real-time data concerning the overall traffic situation also being taken into account. Also included in the map view are detailed 3D models of many cities in Australia.

And the Bang & Olufsen Advanced Sound System delivers a new spatial experience: For the first time the rear seats are included in its fascinating 3D sound with height information. The music unfolds exactly as it was recorded in the concert hall.

Mild-hybrid technology for even greater efficiency: the drive systems

The new A8 will be launched with two extensively re-engineered V6 turbo engines: a 3.0 TDI, the A8 50 TDI and a 3.0 TFSI, the A8 55 TFSI. The diesel develops 210kW and the petrol version 250kW.

The new Audi A8 will, for the first time, be equipped with an electrified drivetrain as standard. The engines are equipped for this purpose with mild-hybrid technology: a belt alternator starter (BAS) and a lithium-ion battery with 10 Ah electrical capacity. The new A8 can then coast at speeds between 55 and 160km/h with the engine off, and as a result, the vehicle can then travel with zero emissions for up to 40 seconds. As soon as the driver touches the accelerator again, the BAS prompts a swift, very smooth restart. The new 48-volt system, which in the new A8 functions for the first time as a main vehicle electrical system, allows a high recuperation power of up to 12kW plus start-stop operation from 22km/h. The combined effect of these measures is to bring down the fuel consumption by as much as 0.7 litres per 100 kilometres in customer operation.

All engines operate in conjunction with a fast and gently shifting eight-stage tiptronic. The latter combines an rpm-adaptive torsion damper allowing low engine speeds, as well as a new electrical oil pump for changing gears while coasting. The quattro permanent all-wheel drive system with self-locking centre differential is standard and, in the case of all MHEV model variants, it can be supplemented by the optional sport differential. It actively distributes the drive torque between the rear wheels depending on where it is needed, for even sportier driving and more stable handling.



New dimension: the chassis

Dynamic all-wheel steering, Audi AI active suspension (expected arrival in 2019), electronic chassis platform – Audi has rethought every aspect of the chassis of its new flagship. Revolutionary technologies and control systems make it even more comfortable, sporty and safe. The dynamic all-wheel steering redefines the limits of the physically possible in allowing the steering angles at the front and rear axles to be set independently of one another. It combines nearly delay-free response and steering behaviour with superior driving stability.

The second new technology, Audi AI active suspension (available in 2019), is a fully active electromechanical suspension system. It uses electric actuators to increase or decrease the load on each wheel individually as a function of the driver's wishes and the driving situation for active and optimal control of the body. The characteristics range from the gentle rolling of a classical luxury sedan to the dynamics of a sports car. The Audi AI active suspension receives the signals for its regulating operation from the electronic chassis platform, the central control unit for the chassis that also manages the dynamic all-wheel steering, the sport differential and the air suspension system. The drive energy comes from the new 48-volt main electrical system.

On A8 vehicles equipped with the pre sense 360° system with central sensor data merger in the central driver assistance controller, the Audi AI active suspension also increases passive safety. In the event of an impending side impact at more than 25km/h, the body is raised by up to 80 millimetres within half a second. As a result, the other party of the accident collides with a more resistant zone of the sedan. 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.



Facts and figures

The new Audi A8

Exterior design

- premiere for the new Audi design language: flowing, muscular vehicle body, upright, very wide Singleframe grille
- side view with elongated lines: quattro drive emphasised by prominent muscular shapes above the wheels
- gently inclined rear end with wide light strip
- optional [HD Matrix LED headlights](#) in latest version, [Audi laser light](#) and homogeneous-beam [OLED rear lights](#)
- dynamic light animation at headlights and rear lights upon locking and unlocking, interior lighting scenario and welcome sound for engine start

Body

- length: 5172mm (A8) (+37mm compared with predecessor)
5302 mm (A8 L) (+37mm compared with predecessor)
- width: 1945mm (A8 and A8 L) (-4mm compared with predecessor)
- height: 1473mm (A8) (+13mm compared with predecessor)
1488mm (A8 L) (+17mm compared with predecessor)
- wheelbase: 2998mm (+6 mm compared with predecessor)
3128mm (A8 L) (+6 mm compared with predecessor)
- Audi Space Frame with multi-material design with CFRP (rear wall), magnesium (suspension brace), hot-formed steel (passenger cell) and aluminium
- body rigidity up to 24 percent higher than predecessor model, low noise level
- high passive safety, optional innovative [centre airbags](#)

Interior design

- interior design with clear design language, reduction as aesthetic design principle, fusion of architecture and operating concept
- calm surface design: visually seamlessly integrated 10.1-inch display, number of buttons kept small, electric shutters for air vents
- ambient and contour lighting, Matrix LED reading lights
- wide selection of authentic, near-natural materials, new colours, finished with meticulous craftsmanship
- numerous material and colour constellations, Audi design selection as top-end equipment



Interior

- sense of spaciousness, interior length increased by 32 millimetres, more headroom and leg room, plus larger entries than on predecessor model
- panoramic glass sunroof (two-part in the Audi A8 L)
- luxurious comfort: electric door handles, new seats with further improved massage function and extra-soft leather on the comfort head restraints
- optionally available relaxation seat with a wide range of adjustment options in the A8 L including footrest with heating and massage function, plus long centre console and [Rear Seat Entertainment](#)
- armrests in the doors, centre armrest at front and rear, plus optionally heated steering wheel
- optional [Air quality package](#) with ioniser and fragrances to improve the air quality
- additional sun sensor on rear shelf to optimise air conditioning when sunlight shining into car from behind
- scope for personalizing around 400 functions in six user profiles and one guest profile

User operation and displays

- new [MMI touch response](#) operating and display concept: two touchscreens and other controls with haptic and acoustic feedback, intelligent handwriting input with whole-word and multifinger recognition
- [natural language voice control](#) with intelligent combination of on-board and cloud search information; dialog manager allows progressive voice dialogs
- main functions can be controlled from steering wheel
- [Rear Seat Remote](#) control unit for the rear to operate numerous functions
- [Audi virtual cockpit](#) with Full HD resolution (1920 x 720 pixels) and NVIDIA K1 chip
- [head-up display](#)

Infotainment

- new generation of the [modular infotainment platform \(MIB 2+\)](#) with NVIDIA K1 processor; MMI Navigation plus with connect data transfer module including [Wi-Fi hotspot](#)
- navigation with self-learning function based on driver preferences; online route planning, detailed 3D city models, four map updates per year
- [Bang & Olufsen Advanced Sound System with 3D sound](#) also for the rear

Audi AI and driver assistance systems

- the Audi A8 – the world's first production model to have been developed for conditional automation (level 3)
- up to 40 driver assistance systems, including new systems such as crossing assist to detect crossing vehicles as well as manoeuvring assist and curb warning



- powerful sensor set: laser scanner as a world first, plus long-range radar, front camera, four mid-range radars, 360 degree cameras and up to 12 ultrasound sensors
- continual merging of all sensor data in the [central driver assistance controller](#)

Drive system

- two V6 turbocharged engines available from market launch: 3.0 TDI (A8 50 TDI) with 210kW and 3.0 TFSI (A8 55 TFSI) with 250kW
- all engines feature 48-volt main electrical system and mild hybridisation using belt alternator starter; supports coasting with engine switched off, extended start-stop mode and high recuperation output
- [Efficiency assist](#) to promote an economical driving style
- some engine versions with [active engine mounts](#) to absorb vibration
- all engines coupled with eight-speed tiptronic with electric oil pump
- [quattro permanent all-wheel drive](#) as standard

Suspension

- five-link design for front and rear axle, [progressive steering](#) as standard
- optionally available [dynamic all-wheel steering](#) with variable ratio at the front axle, and rear wheels that steer in the same/opposite direction
- [adaptive air suspension](#) with hydraulically controlled dampers as standard, four selectable ride height levels
- Available in 2019, the [Audi AI active suspension](#) with electromechanical actuators on all wheels, providing a wide spread between comfort and sportiness, and enhanced passive safety in the event of a side impact in conjunction with [pre sense 360°](#)

The car in detail

The fourth generation of the Audi A8: heading into a new era

Audi has fundamentally re-engineered the A8 in its fourth generation. With its stylistically defining design, top-rate suspension solutions, touchscreen operating concept and the electrification of all drive systems, the luxury sedan demonstrates ‘Vorsprung durch Technik’ right across the board.

Exterior design

The Audi A8 is stylistically defining the dawning of a new design era for the entire brand. It stands for sporty elegance, progressive status and sophistication, perfectly expressing the basic values of Audi – lightweight construction, sportiness and quattro permanent all-wheel drive.



The hexagonal Singleframe grille dominates the sedan’s upright front end. Set low and very broad, it determines all adjacent lines and surfaces, as well as the contours on the bonnet and the headlight graphics. With the optional HD Matrix LED headlights, the daytime running lights are a visual extension of the grille’s top slat, forming a horizontal line of separation in the lights. Substantial chrome frames surround the air inlets, with a flat centre inlet connecting them.

All terms in blue in the text are explained in detail in the technology lexicon at www.audi-mediacyenter.com/en/technology-lexicon.



The side view with the coupe-like silhouette and the flat roof dome that drops again quickly underscores the sporty character of the new A8. The proportions equally accentuate the front and rear wheels – elegant muscular shapes above the wheels are pointers to the brand’s quattro DNA. The low shoulder line begins at the corners of the headlights and continuously runs from the wheel arches across the door handles to the tail lights. Above it runs a second contour, beginning as the bonnet edge and also extending across the entire side. The sill edge rises to the rear in typical Audi style to lend the new A8 dynamics worthy of a sporty luxury sedan.

The deeply sculpted rear end is inclined slightly in the direction of travel, appearing to push the new A8 along even when stationary. Across its entire width extends a light band radiating high quality through an embedded chrome strip and creating a link between the two rear lights. Another chrome strip in the lower part of the bumper integrates the trapezoidal trims of the exhaust system. All chrome elements on the new Audi A8 are part of the vehicle’s sculpture.

There is a choice of 12 colours for the A8, including the new Audi colours Terra Grey, Vesuvius Grey and Seville Red. Via the Audi exclusive program, customers can also have the luxury sedan supplied in a colour of their personal choice. The optional chrome exterior package makes an even more forceful statement.

Dynamic functions: the headlights and tail lights

Audi is the leading brand in light design and technology. In the new A8, lighting interacts intelligently with the surroundings. For example, [Audi laser light](#) is used here for the first time with [HD Matrix LED high beams](#). The laser spot located in the upper part of the headlight is identifiable by the X-shaped surround, with the scene set by a blue ambient light. The laser spot is activated from a speed of 70km/h and doubles the range of the high beam. The horizontal daytime running lights with their vertical segments form a characteristic light signature.

Each HD Matrix LED high beam unit contains 32 small, separately adjustable light-emitting diodes. They are located in a shared housing next to the laser spot and emit the light in two rows. Thanks to this new arrangement and the equally variably controllable low beam in the bottom part of the headlight, the A8 illuminates the road with the utmost dynamism and precision. The light cone blanks out other road users, so as not to dazzle them. The LEDs also act as cornering lights, created through a displacement of the light concentration following the contour of the bend. This occurs shortly before the wheel is turned, based on the predictive route data from MMI Navigation plus. The junction light also goes on predictively just before a junction is reached. In addition, the segmented turning light goes on dynamically in three stages up to a maximum angle of 90°.



With all its functions complete with dynamic turn signals, each HD Matrix LED headlight incorporates 138 LEDs and one high-performance laser diode. With its refined play of metallic slats and chrome lines, the housing also underscores the status of the headlights as technological works of art. The innovative automatic lighting prevents incorrect operation and is controlled from a new light switch module with proximity sensors and touchscreen surface.

Together with the high-end headlights, Audi provides **OLED rear lights**, which emit an extremely homogeneous light and stand for the lightness and precision of Audi. Each unit contains four upright OLEDs of less than a millimetre in thickness. They are subdivided into four separately controllable segments – two for the angular tail light and two for the brake light. Below the OLEDs there is an LED light strip that adapts to ambient brightness when the brakes are applied. The same applies to the dynamic turn signals along the bottom of the tail lights. 135 light-emitting diodes operate in each rear light.

The dynamic light functions underscore the exceptional appearance of the new Audi A8 – unlocking with the remote key triggers a spectacular light show. First a point of light moves in the headlights from the outside inwards, then the blue LED on the laser spot lights up, and finally the side lights come on from the inside outwards. Two loops with the same dynamic aesthetics run in parallel in the OLED rear lights: The light runs in a circle, initially dimmed and then at full brightness. The light show continues inside when the door is opened. At the same time, a brief jingle plays through the sound system – light and sound harmonise perfectly with one another, and the customer can adjust the volume. When the driver leaves the sedan, the light show continues in reverse order in the headlights and rear lights.

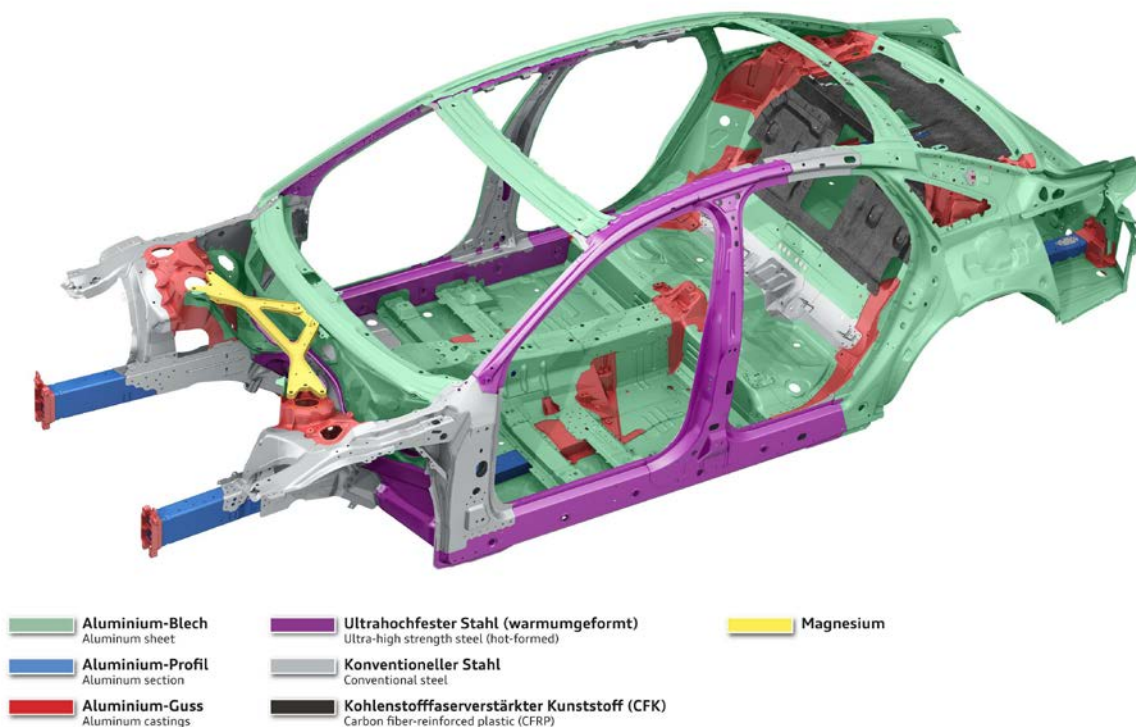
Body

The presence of the new Audi A8 on the road is formidable. It is 5172 millimetres long, 1945 millimetres wide and 1473 millimetres tall. This makes the flagship 37mm longer and 13mm higher than its predecessor, while the width is less by 4 millimetres. The wheelbase is 2998 millimetres – an increase of 6 millimetres. In the long-wheelbase version of the A8, this dimension and the overall length gain 130 millimetres, while the height increases 15 millimetres. On both body versions the track width is 1644 millimetres in front and 1633 millimetres in the rear.

This growth benefits the passengers, with the interior gaining an extra 32 millimetres compared with the predecessor model. The A8 L also has more headroom, shoulder room and leg room. The boot has a capacity of 505 litres in both the A8 and the A8 L.

Light and rigid: the Audi Space Frame in a multi-material design

In the new A8 aluminium, steel, magnesium and carbon fibre-reinforced polymer (CFRP) form a strong, rigid and impact-proof combination – the body structure combines more types of materials than ever before in an Audi production model.



In terms of its overall dimensions, an ultra-high-strength, torsionally rigid rear panel made of CFRP is the largest component in the occupant cell of the new Audi A8, and it contributes 33 percent to the torsional rigidity of the total vehicle. To optimally absorb longitudinal and transverse loads as well as shearing forces, between six and 19 fibre layers are placed one on top of the other, ensuring a load-optimised layout. These individual fibre layers consist of tapes 50 millimetres wide and can be placed individually in a finished layered panel, with any desired fibre angle and minimal trimming of the fibres. Using a newly developed process, this is wetted with epoxy resin and cured within minutes.

A high-strength combination of hot-formed steel components make up the occupant cell, which comprises the lower section of the front bulkhead, the side sills, the B-pillars and the front section of the roof line. Some of these sheet metal blanks are manufactured in varying thicknesses by means of so-called tailoring technologies – they are tailor-made in other words – and others also undergo partial heat treatment. That reduces weight and increases the strength, especially in areas of the vehicle that are particularly critical for safety.

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Aluminium components in the form of cast nodes, extruded profiles and sheets – elements characteristic of the ASF design – make up the biggest share of the new Audi A8 body, at 58 percent. New heat-treated cast alloys, for example, attain a tensile strength of over 230 MPa (megapascals). The corresponding yield strength in the tensile test is over 180 MPa, and for the profile alloys it is higher than 280 and 320 MPa – significantly higher values than seen previously.

The largest cast parts form the connections between the side sills and rear longitudinal members – their highly complex geometry, which would not have been manufacturable with steel, made the increased length possible to begin with. The strut brace in the engine compartment is magnesium, saving weight by 28 percent. Aluminium bolts provide the connections to the strut domes.

Audi uses 14 different joining techniques to assemble the multi-material body, including hemming for the door sills. This technology is used to join the aluminium side wall frame to the hot-formed steel sheets at the B-pillar, roof line and sills. It is the very basis for their use. It also results in very narrow flanges and in correspondingly large, convenient entries. The CFRP rear wall module – already fitted with all installed parts like speakers, rear blinds or seat belts – enters the car during final assembly. A robot guides the module through the rear window cutout into the body. Rivets as well as an adhesive preventing contact corrosion join the module to the metallic ASF.

The multi-material ASF of the new A8 is not only extremely lightweight, it is also impressive with regard to all other criteria. The flagship's torsional rigidity – the critical parameter for precise handling, pleasing acoustics and top workmanship – surpasses its predecessor model's rigidity value by up to 24 percent. Another contributing factor is the structural front end, which increases the transverse rigidity in the front end. The crash safety as well as occupant and pedestrian protection of the large sedan are also at the highest level. In a head-on collision, the three stress planes in the front end absorb the forces.

For further increasing the level of passive safety in the A8, safety package plus contains innovative [centre airbag](#) located between the front seats. The centre airbag affords additional protection in a side collision and in a rollover. Crash-active head restraints in combination with the comfort seats also increase safety in a rear-end collision. Reversible seat belt tensioners in the front minimise displacement of occupants to the front or sides during emergency or hazard braking.

The new A8 leads its class with intensive finesse in every area of aeroacoustics, too – especially at the mirrors and door seals – never before has an Audi been so quiet. Here the glazing also plays a crucial role. Acoustic glazing is standard equipment.

The windscreen wipers have also been newly developed for the A8 and are intelligently controlled. The spray nozzles lie in their arms, and the water is sprayed directly in front of the blades, always at the correct wiping angle. This uniform wetting, which also takes into account the driving speed, the outside temperature and the degree of dirt, cleans the windscreen fast and reliably, so that the driver always has a clear view.

Interior

Tranquility and reduction are fundamental aesthetic values in the brand's new flagship model. The A8 receives the driver and passengers with a holistic spatial experience. The architecture blends seamlessly with the new touch operating concept, which has virtually eliminated buttons and controls. The clean, expansive surfaces convey the relaxed atmosphere of a luxury lounge, with elegantly tensed lines producing clearly defined, horizontally oriented volumes and accentuating the freedom that the new A8 offers.





The instrument panel appears sculpted and sleek. The applications in its upper part form the wrap-around – the large arc running across the door trims into the rear. It integrates the air vents, which are concealed by decorative shutters when not in use. If the automatic air conditioning is set directly to the interior, the shutters are slid up and away electrically while the air vents extend out a few centimetres.

Below the wrap-around, the central 10.1-inch touchscreen display with black panel technology blends almost invisibly into the high-gloss black trim. The horizontal decorative strip above comes in either fine-finish slate gray or aluminium. All icons, graphics and textual information appear against a black background. On the centre tunnel console, which continues the black-panel look, there is a second touchscreen display measuring 8.6 inches diagonally. The switch panel along the bottom edge is integrated in the black look. As with conventional switches, the full-length touchscreen surface emits a tactile and acoustic signal when a function is pressed. The same applies to the light switch module and even the air vents can be controlled by means of touch.

Two optional LED light guides each on the centre tunnel, instrument panel and in the doors create an elegant lighting atmosphere in the interior. They provide contour and ambient lighting that can be separately controlled as to brightness and colour and which harmonises with the styling lines. Light strips in the roof members visually define the interior. On the A8 L, the backs of the comfort customised contour front seats also incorporate a contour light strip. For the rear there are the newly developed Matrix LED reading lamps, each of which integrates seven LEDs. Besides the brightness, passengers can also adjust the size and focus of the cone of light.

A two-piece panoramic glass sunroof brings more light into the interior. It fills out the entire roof surface and protects against direct sunlight through tinting. It comes with an electric sunblind with lightproof material, so that the headlining is nearly fully darkened.

Natural and authentic: the colours and materials

The materials in the new A8 will fascinate the beholder. The majority of the fine-wood inlays are in open-pore wood and thus have a natural feel to them. In the case of leather, Audi generally dispenses with chrome tanning – the ‘one-of-a-kind’ top quality is particularly natural, breathable and soft thanks to sustainable processing. The comfort head restraints in the rear are enveloped in soft, velvety Cocoon leather, a new upholstery of the highest grade. The harmony of the materials and their naturalness create a new, contemporary impression of luxury. They radiate craftsmanship down to the finest detail, giving them bespoke character; the same applies to the perforation in the seat upholstery. In the case of the comfort customised contour seats this perforation follows the new styling idiom, with fine adjustment of the distances between holes, made possible by a new procedure that perforates the leather with a hydraulic press.



The tool with its several thousand needles is specially fabricated for each individual design.

The new A8 comes with numerous constellations of materials and colours. For the upholstery, the choices are Valcona and Unicum. New in the colour range are pearl beige, Merlot red, metropolis grey and tourmaline blue. In some equipment packages contrast stitching and cording create colourful accents.

The instrument panel is two-toned depending on the version. For the inlays Audi offers a choice of different veneers, from beech, eucalyptus and walnut to black piano finish. Customers wishing to make their A8 even more individualistic will find a vast selection of other veneers, colours and materials inlays, colours and leather appointments in the Audi exclusive range.

With all possible comfort: entry and personalisation

The new A8 makes every operational step easy, even opening the doors. Your hand merely needs to pull the exterior handle five millimetres – a microswitch then releases the catch. A few millimetres is likewise all that is required to open a door from the inside. In an emergency, the doors can be opened mechanically from either inside or outside by pulling Bowden cables vigorously. Audi supply's the electric door lock with a power-latching feature as standard equipment. The boot lid swings up by itself when unlocked. The electrical drive with opening and closing at the push of a button or by foot movement – in combination with the convenience key.

The five possible drivers of the new A8 can save their preferred settings under up to seven user profiles. This [personalisation](#) involves up to 400 parameters, from the driver seat position and the preferred air conditioning settings to navigation destinations previously used and favourite media. The sedan identifies the individual user from the key signal as soon as the vehicle is unlocked, and activates the user's personal profile.

Lounge character: the seats

The lounge character presented by the interior of the new A8 owes much to the newly developed seats. At both the front and rear, the structure of the seat cushions and backrests with a variety of shaped, comfort and flexible foam layers afford excellent comfort and good lateral support. The new seats are considerably lighter in weight than in the predecessor model. The front seats alone save over four kilograms in weight, while rear seats employ glass-fibre reinforced plastic (GFRP).

Audi supplies the top of the line comfort customised contour seat as standard equipment. In addition to pneumatic seat and backrest side bolster adjustment, it also comes with heating and optional ventilation, each with separate three-stage control.

The optional massage feature has become even more efficient. In each seat backrest, as many as 16 bubble-shaped air chambers can be actuated. They massage the entire back up to the shoulders in a choice of seven programs and three intensity levels. In each seat a small compressor that takes in the necessary air from the footwell builds up a pressure of up to 0.5 bar. In developing the wellness massage feature Audi collaborated with physical therapists, osteopaths and physicians.

The rear of the flagship contains a three-seat system as a standard feature, standard with a load-through facility or optional cooler. The outer seats can also be supplied optionally with heating, along with electrical adjustment of the fore/aft position, seat angle and backrest angle. In this case, the lumbar support is pneumatically adjustable. Other options are the massage feature with 18 triple air chambers per seat, the especially soft-upholstered comfort headrests and blinds for the rear. The same adjustment options are also available for the single-seat system in the A8 L. It includes a long, full-length centre console together with armrest and spacious stowage compartments.

As a first-class solution in the new A8, Audi offers the relaxation seat in the rear left. The occupant can recline it and rest their feet on an electrically folding surface on the backrest of the front passenger seat. This provides the option of having the feet warmed and massaged with multiple settings. The customer can choose between three intensity levels, three foot sizes and two programs – the rolling motion of the eight air chambers also stimulates the foot reflex zones.





The relaxation seat package contains other luxury features besides the comfort customised contour seats with ventilation and massage: electrically height-adjustable comfort headrests, footrests, a long centre console and a [rear seat entertainment](#) system consisting of two Audi tablets. Two-stage inclining folding tables are optionally available. The thermal comfort packages, a supplementary option, heat the armrests in the doors, the front and rear centre armrests, as well as the steering wheel.

The new A8 also treats its passengers when it comes to the interior air quality – especially if the optional [air quality package](#) is on board. It comprises an ioniser and a fragrancier with adjustable intensity. It feeds either a summer or winter fragrance into the interior – the first with a Mediterranean note recalling sea air and the second with alpine fragrance suggesting mountain air. The standard air quality sensor also detects harmful gases and activates the recirculated air mode as necessary. The sedan comes with four-zone comfort automatic air conditioning. Its filter eliminates the bulk of these gases and particulates, and also neutralises many allergens.

User operation and displays

As the flagship of the brand, the A8 always presents top-of-the-line technologies – this also when it comes to operation. In the second generation of the sedan Audi presented the first MMI system in 2002, the third generation in 2010 featured MMI touch. The next level of technology has now entered production – [MMI touch response](#).

Virtual click: MMI touch response

At the centre of the instrument panel is a 10.1-inch touchscreen display which, when off, blends almost invisibly into the high-gloss black surround thanks to its black-panel look. On the display the driver controls the infotainment system. With a resolution of 1540 x 720 pixels, the now gently curved TFT screen provides very sharp images and high contrast, even when viewed from an angle. A second touchscreen display with a 8.6-inch diagonal and a resolution of 1280 x 660 pixels on the centre tunnel console allows control of the air conditioning and the comfort features. When starting a function on either of the two touchscreen displays, the driver senses a mechanical pulse as confirmation. The pulse is created by means of an electromagnet moving the spring-mounted display minimally to the side by roughly the width of a human hair. At the same time a small loudspeaker emits a click sound. Audi is opening up a new chapter in user experience here.

MMI touch response technology makes operation easier and more reliable, while at the same time conveying the sense of quality in the digital world. The surface of the display contains an anti-fingerprint coating and an anti-glare layer that refracts the reflected light to make reflections fuzzy and therefore not annoying. The outermost layer is tempered, similar to the glass used on high-quality smartphones.

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Clever detailed solutions make handling the new technology even more attractive. When your finger touches an icon, the software gives direct feedback in the form of animated graphics or a colour change. Pressing with your finger with such force as to start the function briefly lights up the icon or list entry. As on a smartphone, many icons come with long-touch or long-push functions. For example, to insert a new tile in the main menu, press it for eight tenths of a second – a brief vibration will then occur and movement becomes possible. Swiping, scrolling and multi-finger gestures are also supported. Text input on the lower display accommodates successively drawn letters, in addition to entire words – in each case accompanied by acoustic feedback. This allows the driver to always keep their eyes on the road.

New also are the graphics of the displays and of the [Audi virtual cockpit](#) with an incisive, cool look. All pictograms are accurately proportioned and in part exhibit subdued animated graphics – the radio wave in the main menu slightly undulates, for example, to show start readiness. The 12.3-inch, digital instrument cluster with a full HD resolution of 1920 x 720 pixels offers the choice between two user interfaces: the classical view and infotainment mode. A [head-up-display](#) is also standard that projects important information as quickly accessible icons and figures on the windscreen, right in the driver's direct field of vision.

Other control levels: Free text search, natural voice control, Rear Seat Remote

To the intuitive menu structure Audi adds the [MMI search](#), based on free text input. When looking for a Chinese restaurant, for instance, a hit list appears as soon as the user enters just a few letters. Another improvement is that the content of Audi connect is no longer located in a separate area, but directly in the respective function menus.

The new, [natural language voice control](#) makes the A8 an intelligent conversation partner. It understands many turns of phrase from everyday usage and can conduct a dialogue with the driver. The voice control system responds to commands and questions in two ways: from the information stored on-board about preferred destinations. The on-board information is accessible extremely fast and reliably – even in places lacking a mobile phone signal.

Besides the MMI touch response displays and hybrid voice control, the new A8 has a third control level, the newly designed multifunction steering wheel. With its buttons and rollers the driver can access all trip and vehicle information as well as primary infotainment functions.

Audi has created the compact [Rear Seat Remote](#) especially for the rear compartment. Like a smartphone, this device allows passengers to control an array of climate control, seat, lighting, adjustment and media functions via its touchscreen – from the HD matrix reading lights to seat and foot massage, the rear window blinds and music.



Infotainment

Infotainment is another area where the new A8 sets standards. The standard-equipped MMI Navigation plus use the [modular infotainment platform](#) of the latest generation, the MIB 2+.

The navigation likewise offers an array of new features – both optical and functional. The map view now includes detailed 3D models of many major cities in Australia. In route planning the self-teaching navigation system makes suggestions to the driver based on previously driven routes, taking into account experiences with time and traffic congestion. The route is calculated online on the servers of the map and navigation provider HERE, whereby real-time data concerning the overall traffic situation is also taken into account. Should the data connection be lost during driving, the navigation system changes to on-board mode, which continues running in the background. Via the expanded point-of-interest display the driver can access from the navigation system places like fueling stations and parking garages.

The two [Audi tablets](#) of the Rear Seat Entertainment are equally exclusive and sturdy. Their users can enter navigation destinations, select media or surf over a Wi-Fi hotspot. After a journey, they can continue to be used away from the car on any Wi-Fi network.

Audi has three sound system offerings: the Audi sound system, the Bang & Olufsen Sound System with 3D sound in front and the [Bang & Olufsen Advanced Sound System with 3D sound](#) in front and, for the first time, in the rear as well. Of the 23 loudspeakers, two each in the A-pillars and in the roof line take care of the high-level spatial dimension. The interior becomes a world of acoustic experience where the music unfolds exactly how it was recorded in the concert hall. To do this, the system draws on an algorithm that Audi developed jointly with the Fraunhofer Institute. Drives for CDs and DVDs as well as a threefold tuner for the DAB and DAB+ digital radio standards complete the infotainment program.

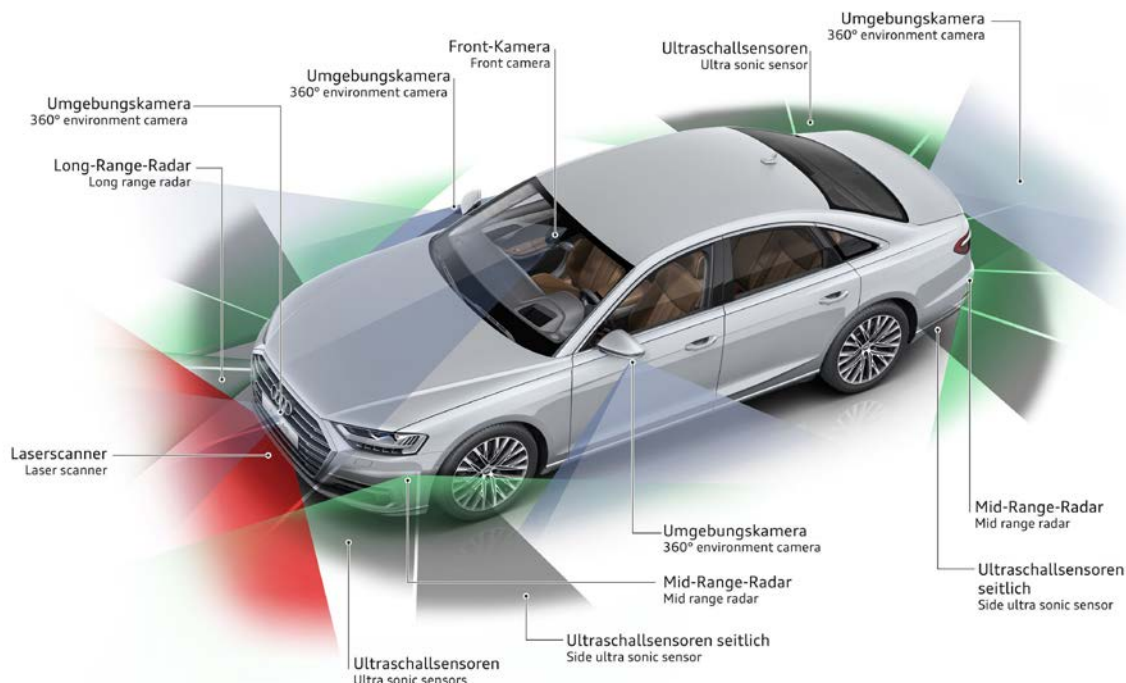
Driver assistance systems

Picture of the surroundings: the central driver assistance controller

Backing up these new high-end systems is the [central driver assistance controller \(zFAS\)](#), which is making its debut in the new A8. About the size of a tablet, it continually merges the signals from all sensors into a differentiated model of the surroundings through its high-powered processors. Fully equipped, the new A8 has 24 sensors:

- 12 ultrasonic sensors on the front, sides and rear,
- four 360-degree cameras on the front, rear and exterior mirrors,
- one front camera on the top edge of the windscreen,
- four mid-range radar sensors at the vehicle's corners,
- one long-range radar sensor on the front,
- one laser scanner on the front,
- one infrared camera (night vision assist) on the front.

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The **laser scanner**, employed by Audi for the first time in the A8, fans over an area of about 80 metres in length, with a wide aperture of 145 degrees. Within this range, the scanner detects the exact contours of objects, even in conditions of darkness. In bad weather, the windscreen is automatically cleaned and heated. The special capabilities of the laser scanner and the central environmental model in the central driver assistance controller benefit the navigation system, in addition to the Audi AI systems, since the sensor data merger locates the car to within its exact lane. The driver assistance systems react to objects with even greater precision and earlier than in the previous model when they detect the end of a traffic backup and initiate braking, for example.

An all-time best: broad offering of driver assistance systems

With up to 40 driver assistance systems, the fourth generation of the A8 scores an all-time best in class – from the parking space to the highway, they make driving even more comfortable, with greater confidence and safety.

The central system in the assist package is the **adaptive cruise assist (ACA)**. It is a progression from the **adaptive cruise control (ACC)** of the previous model and also integrates a lane assist function. The system keeps the new A8 within the speed range of zero to 250km/h by accelerating and decelerating to the desired following distance and helps the driver keep within the lane through slight torque interventions in the steering. The constriction assist, a subfunction of the ADA, guides the vehicle longitudinally through construction sites and similar zones.

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Combining the adaptive drive assist with the [efficiency assist](#) promotes an economical driving style. The [Audi pre sense front](#) safety system helps avoid front-end collisions and minimise the severity of their consequences.

It incorporates a warning and braking function for vehicles, pedestrians and cyclists.

The Tour package also includes the [turn assist](#) and [collision avoidance assist](#). Turn assist monitors the lane of oncoming traffic when turning across it, thus helping to avoid a collision with an oncoming vehicle. It also detects any oncoming vehicles turning across the lane being used by the A8. It is the only model in its class to feature collision avoidance assist that also offers individual wheel braking as well as steering assistance, for more precise avoidance of obstructions. [Emergency assist](#), which brings the vehicle to a standstill if the driver is no longer able to do so, complete the range.

The wide-angle [360 degree cameras](#) make manoeuvring safer. The driver can have various views of the car's immediate surroundings displayed on the on-board monitor, to some extent with superimposed guide lines. To protect the alloy wheels, the A8 also includes a [curb warning](#).

The newly developed [crossing assist](#) is part of the standard assist package. If the mid-range radars (with a measuring range of about 75 metres) at the vehicle's corners detect critical cross traffic in front of the car, the system warns the driver and makes a brake application if need be. The new A8 also alerts the driver to risks when changing lanes. The [exit warning](#) system indicates vehicles or cyclists approaching from the rear when opening the door, with light guides in the doors indicating the danger optically. The [cross traffic assist rear](#) kicks in when the new Audi A8 is reversing out of a right-angle parking space or garage way.

Another feature available in 2019 is the [pre sense 360°](#) safety system. It detects collision hazards all around the car and initiates targeted preventive measures – whether a full brake application, adjusting the seats or tightening the belts. If Audi AI active suspension is on board and the system registers an impending side collision with the mid-range radars, it raises the body a few centimetres on the endangered side almost instantaneously to direct the acting forces specifically to the crash-active structures. This mitigates the possible effects of the accident for the occupants.

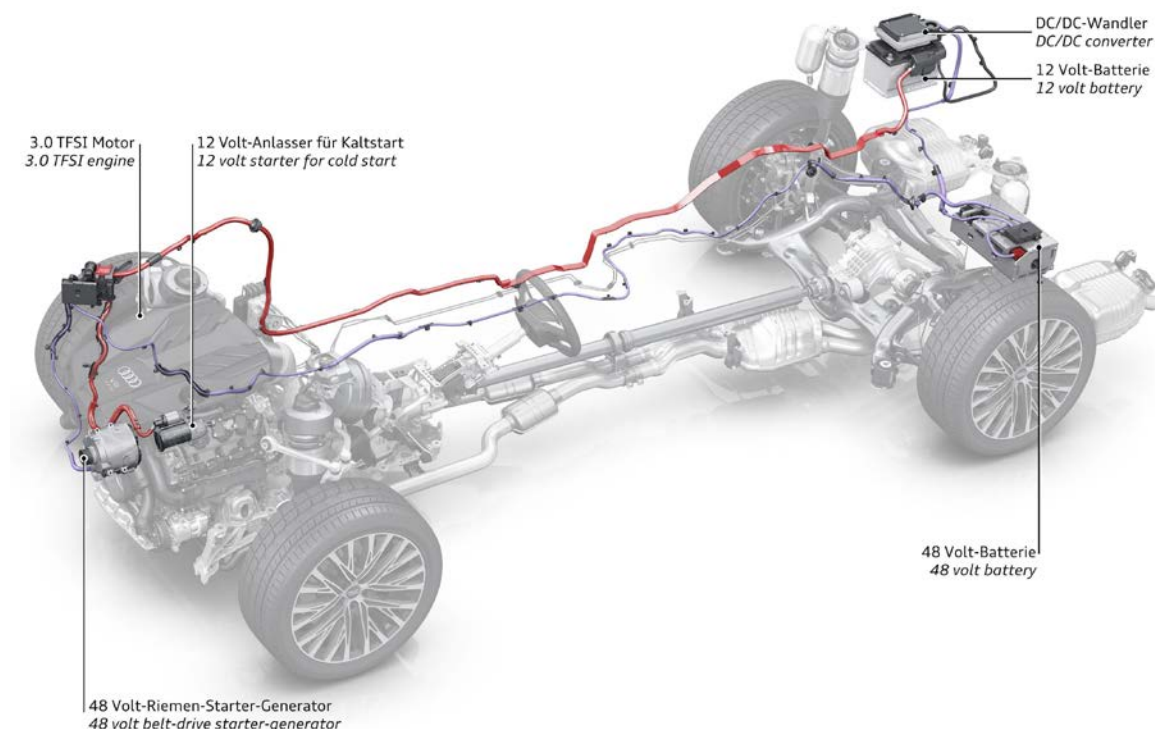
[Night vision assist](#) is available as a stand-alone option. It uses an infrared camera to detect pedestrians and larger wild animals at long distances in the dark and warns the driver of their presence.

Drive systems

Audi is launching the new A8 with two V6 turbocharged engines that have undergone intensive further development. The 3.0 TDI (A8 50 TDI) outputs 210kW the 3.0 TFSI (A8 55 TDI) outputs 250kW. All engines combine refined running characteristics with a lush performance and high efficiency.

The new **mild-hybrid technology** (MHEV = mild hybrid electric vehicle) is standard with all A8 engines. It reduces fuel consumption by up to 0.7 litres per 100 kilometres in actual driving. The MHEV technology from Audi is based on a newly developed 48 volt main vehicle electrical system. It comprises a compact lithium-ion battery with an electrical capacity of 10 Ah, located in the luggage compartment underneath the loading floor of the A8, as well as a belt alternator starter (BSG) connected to the crankshaft.

The effects are impressive: in the speed range of 55 to 160km/h the new A8 can coast with the engine off, if the driver releases the accelerator. The vehicle can then travel with zero emissions for up to 40 seconds. As soon as the driver uses the accelerator again, the BAS prompts a swift, very smooth restart. The new 48-volt system allows a high recuperation power of up to 12kW plus start-stop operation from 22km/h.



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The efficiency assist can also contribute to an economical driving style. The system instructs the driver when to release the accelerator, before entering a curve or behind a slow vehicle, for example. If desired, the system automatically regulates acceleration and deceleration. It utilises predictive route data from the navigation system.

Powerful and spontaneous: the V6 engines

Both six-cylinder versions draw their power from a displacement of three litres. The 3.0 TDI (A8 50 TDI) has undergone intensive development in many details compared with its predecessor, in particular regarding its especially elaborate thermal management. At a torque of 600Nm it develops high tractive power. In addition, the V6 TDI is fitted with [active engine mounts](#) that inhibit the transmission of vibrations to the vehicle body. They generate out-of-phase counter-pulses – their effect is particularly marked when idling.

The 3.0 TFSI (A8 55 TFSI) also develops its 500Nm of torque extremely early. Its exhaust end lies inside the 90° vee, so that the short gas paths and the twin scroll charger greatly promote responsiveness. The so-called [B-cycle combustion process](#), specially conceived for the partial-load range, makes the V6 spark ignition engine especially efficient. To support it, the [Audi valvelift system \(AVS\)](#) adjusts the intake valve opening times and stroke in two stages based on load and engine speed.

V6 engines

Audi A8/Audi A8 L	A8 55 TFSI (3.0 TFSI)	A8 50 TDI (3.0 TDI)
Displacement in cm ³	2995	2967
Max. power output in kW at rpm	250 at 5000 - 6000	210 at 3750 - 4000
Max. torque in Nm at rpm	500 1370 - 4500	600 1250 - 3250
Top speed in km/h	250	250
Acceleration 0 - 100 km/h in s	5.6	5.9
Drive system	quattro drive	quattro drive

Data for Audi A8 L in parentheses ()
* Figures depend on the tyres/wheels used



Stable and efficient: the power transmission

All engines transmit their power to the newly developed [eight-speed tiptronic](#). It changes gear swiftly and smoothly, with impressive efficiency. An rpm-adaptive torsion damper with a centrifugal force pendulum largely compensates for undesirable vibrations in the engine. This permits efficient driving from an engine speed range as low as 1000 revolutions per minute. The driver can let the automatic transmission do the work automatically in the E, D and S modes, or can take charge of controlling it in M mode. Selector lever commands are all transmitted electrically.

The tiptronic has undergone a few modifications for its interplay with MHEV technology. When the new A8 is coasting with the engine at idle speed or off, a clutch disengages in the central transmission and interrupts the power transmission. During coasting with the engine off, a novel electrical oil pump allows the driver to engage the gear required following the coasting phase. The shift sequence and the connection logic have been optimised for fast tractive force buildup. So-called plate separation further lowers the drag torque in the transmission; a plastic oil pan reduces the weight of the latter. The overhauled transmission control module detects stop & go traffic and in such situations avoids unnecessary shift operations or starting off in second gear.

[quattro permanent all-wheel drive](#) is standard in the new Audi flagship model. In normal driving conditions, its self-locking centre differential distributes torque between the front and rear axle in a 40:60 ratio. Should wheel slippage can occur, most of the drive torque goes to the axle with the better traction. Up to 70 percent can flow to the front wheels and up to 85 percent to the rear. For a sporty driving style, the [wheel-selective torque control](#), an intelligent software function, further benefits handling. It minimally brakes the two wheels on the inside of a bend before they can begin to spin.

Chassis

Audi AI active suspension (available 2019), dynamic all-wheel steering- electronic chassis platform – the new Audi A8 L employs wholly new technologies to make driving even more comfortable, sportier and safer. They convey a whole new breadth of characteristics – from the silky-smooth progress that befits a luxury sedan to the dynamically firm handling of a sports car.

The basic design alone is state-of-the-art. The front and rear axles take the form of high-precision five-link constructions made extensively from lightweight aluminium. They weigh a bit less than the predecessor model. Two subframes – the front one rigid, the rear one hydraulically mounted – join them to the body. The electromechanical [progressive steering](#) system operates more and more directly as the turning angle increases. Thanks to a new damping concept, it conveys a highly precise, sensitive feedback from the road.



Another standard feature is [adaptive air suspension](#) with controlled damping. The air suspension can be set via the dynamic handling system [Audi drive select](#) to the modes comfort, auto and dynamic, with a separate lift mode for rough roads. From a speed of 120km/h, the body is automatically lowered by 20 millimetres for improved aerodynamics. Prerequisite: the car must have been running in the auto or dynamic mode continuously for at least 30 seconds.

The adaptive air suspension already gives the A8 a wide spread of operating characteristics ranging from smooth ride comfort to sporty handling. The driving experience becomes even more intense with the fully active [Audi AI active suspension](#), available after market launch. As a fully active electromechanical suspension system it can stress or relieve each wheel separately depending on the driver's intention and the driving situation. The electromechanical actuators employed actively and optimally regulate the body motion and damping. They are powered by the 48-volt vehicle electrical system. The characteristic ranges from the gentle rolling of a classical luxury sedan to the dynamics of a sports car, according to the setting in the Audi drive select dynamic handling system.

In the event of an impending side collision at over 25km/h the Audi AI active suspension, in combination with the pre sense 360° safety system, raises the body by up to 80 millimetres on the side facing impact, almost instantaneously. The impacting vehicle will then strike the sedan in a lower and even more resistant zone. 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 abdomen areas, can thus be reduced by up to 50 percent compared with a lateral collision in which the suspension is not raised.

The new A8 will see Audi introduce [dynamic all-wheel steering](#) for the first time. It combines dynamic steering at the front axle with separate rear axle steering. The dynamic all-wheel steering redefines the limits of the physically possible in allowing the steering angles at the front and rear axles to be set independently of one another. It combines nearly delay-free response and steering behaviour with superior driving stability. At low speeds, rear wheels are turned as many as five degrees in the direction opposite to the front wheels, which not only facilitates manoeuvring and driving around tight curves but also reduces the turning circle by around one metre to 11.4 metres on the A8 and 11.8 metres on the A8 L. At medium and high speeds, the wheels are turned by as many as two degrees in the same direction as the front wheels. Thus, the new A8 offers more stable road-holding and carries out rapid lane changes and evasive manoeuvres both masterfully and serenely.

The driving safety of the new Audi flagship also benefits from the powerful, all-round internally ventilated brakes. The front disks combine grey cast iron friction rings with aluminium pots. The fixed calipers on the front axle – lightweight is standard – contain 10 brake pistons each, six pistons in the case of steel disks. Electronic Stabilisation Control (ESC) provides even more precise control than in the previous model.

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The wheel line begins with the aerodynamically optimised 19-inch wheels.. The 20-inch aluminium wheels with their 10-spoke Y design recall the Audi prologue show car from 2014. The largest wheels are size 9 J x 21 with 275/35 series tyres. Should any of the wheels not be properly tightened, a function integrated in the Electronic Stabilisation Control will alert the driver. This loose-wheel warning is a standard feature, and unique in the market.