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The new Audi A5 and S5 Coupé

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At a glance

The new Audi A5 and S5 Coupé

Exterior design

- Elegant sportiness: further development of a design highlight
- Emotional and sporty proportions
- Sporty and athletic coupé front end with wide, flat Singleframe, hood with power dome visualisation
- Sharp, precise shoulder line in the form of a wave emphasises the sculpturally expressed quattro visualisation
- Finely contoured headlights, LED and optional Matrix LED headlights with dynamic indicator
- Elegant three-dimensional LED rear lights and long brake lights at the upper edge of the rear window

Engines

- New TFSI and TDI engines with up to 9 percent more power and up to 15 percent lower fuel consumption
- 2.0 TFSI with 140kW and 320Nm
- 2.0 TFSI with 185kW and 370Nm
- 3.0 TFSI with 260kW and 500Nm
- 2.0 TDI with 140kW and 400Nm

Drivetrain

- New versions of the S tronic and tiptronic transmission
- Option for S5 3.0 TFSI 260kW: quattro with sport differential

Chassis

- Five-link suspension arrangement: Chassis even more dynamic and precise while simultaneously offering greater comfort
- Newly developed electromechanical power steering for better road feedback and steering precision; optionally with dynamic steering for improved driving feel and greater comfort
- Audi drive select dynamic chassis system standard
- Optional suspension with damper control featuring wider adjustment range of the individual Audi drive select modes
- Audi A5: Suspension with low ride height as standard, sport suspension and suspension with damper control as options
- Audi S5: S-specific sport suspension standard, with damper control

Interior

- New, horizontally oriented architecture with continuous air vent strip creates a feeling of spaciousness
- Perfect workmanship with optimal functionality
- Use of high-quality materials and new colours
- Interior with 17 millimetres added length; more shoulder, head and knee room
- Pneumatic massage function on S5)
- Deluxe automatic air conditioning for particularly high air quality and with new user interface
- Seat belt height adjustment for the front seats with power belt feeds
- Best-in-class luggage compartment: 465 litres – 10 litres more than the previous model
- Full-surface, retractable panoramic glass sunroof for a light-flooded interior (optional)

Operation

- Completely redesigned MMI operating concept including intuitive free text search function
- Operation also with the multifunction steering wheel and natural language voice control
- Audi virtual cockpit and optional head-up display

Infotainment and Audi connect

- MMI navigation plus with MMI touch, including 8.3-inch MMI monitor and Audi connect, LTE data transmission, Wi-Fi hotspot
- Audi smartphone interface for integrating Apple and Android cell phones into the Audi MMI colour display
- Audi phone box with inductive charging available
- High-end option: Bang & Olufsen Sound System with innovative 3D sound, 19 loudspeakers and 755 watts of power

Driver assistance systems

- Next step toward piloted driving: intelligent interaction between various driver assistance systems
- adaptive cruise control with Stop&Go function, including traffic jam assist for driving in slow-moving traffic

- Predictive efficiency assistant helps with anticipatory driving to save fuel and reduce CO₂
- Audi active lane assist and Audi side assist
- Also new: park assist, cross traffic assist rear, exit warning, turn assist, collision avoidance assist and camera-based recognition of traffic signs
- Safety systems: Audi pre sense city, basic and rear, multicollision brake assist system

Body

- Length 4673 millimetres, wheelbase 2764 millimetres, width 1846 millimetres, height 1371 millimetres
- Lightweight construction: Weight reduced as much as 60 kilograms versus previous version
- Best c_d value in its class: 0.27

Equipment

- Comprehensive standard equipment: LED headlights with daytime running lights, LED rear lights, belt feeds with height adjustment, LED interior lighting, Audi drive select dynamic chassis system, Audi pre sense city and more.
- Optional large panoramic glass sunroof can be almost fully opened
- S sport seat with pneumatic massage function and side bolster adjustment (standard on S5)

Audi S5 Coupé

- Newly developed 3.0 TFSI engine combines sports car performance with a new level of efficiency
- 260kW of power and 500Nm of torque
- Powerful acceleration: 0 to 100km/h in 4.7 seconds
- More power, : 7.5 litres of per 100 kilometres
- 60 kilograms lighter than its predecessor.
- Sharper exterior design and S-specific details in the interior
- Audi virtual cockpit with S-specific display for a sportier look; ability to show tachometer in the middle

Full version

The new Audi A5 Coupé – the aesthetic athlete from Ingolstadt

A design highlight embarks into the future. The new A5 Coupé combines emotional design with sporty handling characteristics and progressive technology. The mid-size model is fully networked and offers the latest infotainment solutions from the brand with the four rings. The intelligent interaction between various driver assistance systems represents the next step in the direction of piloted driving. Up to 40 kilograms less weight, a top value for aerodynamics plus very efficient and even more powerful engines – these facts and figures also speak for themselves.

Exterior design

The Audi designers combined dramatic shapes and athletically taut surfaces in the design of the new A5 Coupé. The two-door coupé clearly exhibits sporty, perfectly balanced proportions. The stretched wheelbase, the short overhangs and the long, encompassing engine hood with power dome underscore the dynamics of the model.

Side view

The sharply drawn, wave-like shoulder line gives the Audi A5 Coupé a unique expression of dramatic elegance. The characteristic wave was already the defining design element that characterised the previous model. It is now even more precisely formed and captivates with its three dimensionality allowing for an exciting play between light and shadow. The sweeping line with the pronounced bulges over the wheel arches underscore the quattro DNA. At the transition from the front wheel arch to the doors, a three-dimensional chrome trim element underscores the sporty ambitions of the new Audi A5 Coupé. The exterior mirrors are sportily mounted on the top shoulders of the doors. From the A-pillar, which has been shifted far to the rear, the roof extends over the athletic body as a flat, flowing dome. The side windows are framed by a matt, aluminium silver trim strip. From the forward-inclined C-pillar, it becomes steadily wider and runs in a curve.

Sporty coupé front end

The pronounced sportiness of the front end is another identifying feature of the new Audi A5 Coupé. The three-dimensionally designed Singleframe grille

is significantly flatter and wider than in the previous model. The radiator grille is a light and sporty matt twilight grey with matt aluminium silver horizontal slats in the trim line A5 sport. The side air intakes have bold edges, and with the optional S line exterior package honeycomb grilles and sporty, horizontal trim strip in matt aluminium silver extending across the entire width of the automobile.

Headlights

The finely contoured headlights in the new Audi A5 Coupé harmonise perfectly with the horizontal lines of the front end. They are positioned slightly above the top edge of the Singleframe grille, which is drawn down quite far – a surprising design detail and a first in the A5 model line.

The LED headlights and optional Audi Matrix LED headlights have all lighting functions in LED technology. The new light signature of the Audi Matrix LED headlights has a characteristic and focused four-eyed face, with the low and high beam giving the impression of a double eye.

18 LEDs shine through two lenses to produce the high beam of the Matrix LED headlights. Provided with information from the camera on the interior mirror, the LED control unit switches them on and off individually or dims them in 64 steps as necessary. This enables the Matrix LED headlights to produce several million light distribution variants. They always light the road with the optimal distribution of a light similar to daylight, but without blinding other road users with glare. To prevent the driver from being blinded by glare from highly reflective traffic signs, these are specifically illuminated with reduced power.

The cornering light of the Matrix LED headlights is produced by shifting the focal point of the light. Thanks to predictive route data provided by the optional MMI navigation plus, it is activated before the steering wheel is turned. The dynamic turn signals, which are produced by a row of sequentially activated light-emitting diodes, run from the inside out in the direction the driver is turning to send clear and intuitively understood signals to the surroundings.

Rear end

The short rear end of the new Audi A5 Coupé features clearly horizontal lines. The luggage compartment lid ends in a distinctive spoiler lip.

Separate reflectors in the lower section of the rear apron, which is painted in the body colour, emphasise the width of the two-door coupé.

Depending on the engine, the exhaust system is either a single or dual-branch system. It terminates either in a twin exhaust tailpipe on the left (TDI) or two separate tailpipes (TFSI), which with the trim lines sport chrome tips.

The slim, three-dimensional rear lights are implemented in LED technology as a standard feature. Their sculpted geometry is underscored by the LED light signature. The outer vertical edge emphasises the full width of the rear end. The delicate brake light sits below the luminaries, and the dynamic turn signal (LED headlights and above) from a strip in the upper section. The third brake light, which uses light guide technology, is a very delicate element at the upper edge of the rear window spanning its entire width.

The new A5 Coupé is available with the S line exterior package for a custom, particularly dynamic appearance. It includes such bold, sporty accents as:

- sporty, boldly styled front and rear bumpers
- matt titanium black air inlet grilles in honeycomb look
- a sporty, horizontal trim strip in matt aluminium silver that spans entire width of the front end and connects the air inlets with one another
- sill trims painted in body colour with black textured side sill strips
- the matt twilight grey diffuser with integrated, black textured honeycomb grille

The illuminated door sill trims bear an S rhombus symbol and the chrome trim element above the front fenders has an S line logo.

Colour palette and dimensions

A choice of 15 paint finishes is available for the new Audi A5 Coupé. The solid paint finishes are brilliant black and ibis white; the metallic finishes are Argus brown, cuvée silver, Daytona grey (S line sport package and S line exterior package), floret silver, glacier white, Gotland green, Manhattan grey, matador red, moonlight blue, monsoon grey, mythos black, scuba blue and tango red.

The new Audi A5 Coupé has gained 47 millimetres in length and now measures 4673 millimetres. Width is 1846 millimetres (minus 8mm) and the height 1371 millimetres (minus 1mm) – that is the sportiest ratio in the premium segment. The wheelbase measures 2764 millimetres, an increase of 13 millimetres.

Engines

The new Audi A5 Coupé is available with a choice of two TFSI and one TDI engine. They produce between 140kW and 185kW. Compared with the previous model, their fuel consumption has been reduced by as much as 15 percent while power output has increased by up to 9 percent.

All engines satisfy the limits of the Euro 6 emissions standard. There is a 24-litre tank for the AdBlue additive in addition to the standard tank. The standard, updated start-stop system includes changes that further reduce fuel consumption. When the driver approaches a red light, it can already deactivate the engine at speeds below 7km/h.

The new Audi S5 Coupé is in a league of its own. Its newly developed 3.0 TFSI engine combines sports car performance with a new level of efficiency. From its 2995cc of displacement, the turbocharged six-cylinder engine produces 260kW, which is 15kW more than the engine in the previous model.

2.0 TFSI engines

Two versions of the 1984cc, 2.0 TFSI engine are available in the new Audi A5 Coupé. Technical highlights include the exhaust manifold integrated into the cylinder head, the rotating core module for the thermal management system, the Audi valvelift system (AVS) for the exhaust valves, the turbocharger's electric waste gate and dual injection, in which indirect manifold injection supplements FSI direct injection.

The top version of the 2.0 TFSI produces 185kW. 370Nm of torque is available between 1600 and 4500rpm. Performance is sporty: with quattro all-wheel drive, the Audi A5 Coupé sprints from 0 to 100km/h in 5.8 seconds on its way to an electronically limited top speed of 250km/h. The unit consumes 6.5 litres of fuel per 100 kilometres, which corresponds to 149 grams CO₂ per kilometre.

The second variant of the 2.0 TFSI puts out 140kW, with 320Nm of torque available between 1450 and 4200rpm. Performance is extremely agile here, as well: 7.3 seconds from 0 to 100km/h and a top speed of 240km/h (with S tronic). The unit consumes 5.5 litres of fuel per 100 kilometres, which corresponds to 125 grams CO₂ per kilometre.

Innovative combustion process and rightsizing

Behind these values is a new strategy: Audi is taking the successful downsizing of its engines a step further with rightsizing. The groundbreaking efficiency of the 2.0 TFSI with 140kW is the result of an innovative combustion process. Rather than a handicap, the relatively large displacement is a prerequisite here. Customers of the new Audi A5 Coupé enjoy the advantages of a small-displacement engine when driving at moderate speeds, but without having to compromise when it comes to sporty driving.

The new combustion process with a shortened compression stroke and a long power stroke as well as an increased compression ratio has been specially designed for part load operation, by far the most common operating mode. The intake valves close much sooner than usual. In combination with increased pressure in the intake manifold, this reduces throttle losses during intake.

The shortened compression stroke made it possible to increase the compression ratio from 9.6 to 11.7:1. During the compression stroke, the engine therefore only has to compress the same amount of gas as a 1.4 TFSI. During the power stroke, in which the engine takes full advantage of its two litres of displacement, it benefits once again from the high compression ratio. The resultant higher pressure during combustion further increases efficiency.

So that the charge sufficiently swirls despite the short inlet time, the combustion chambers, piston recesses and inlet ducts as well as the turbocharging of the new 2.0 TFSI are specially tuned to the new combustion method. At higher loads, the Audi valvelift system delays opening of the intake valves to achieve a higher fill and thus good power and torque development. Injection pressure has been increased to 250 bar.

2.0 TDI

The 1968cc, four-cylinder TDI in the new Audi A5 Coupé produces 140kW. Peak torque of 400Nm is available between 1750 and 3000rpm. The powerful four-cylinder diesel offers superior performance and maximum efficiency. With quattro all-wheel drive and the seven-speed S tronic, from 0 to 100km/h takes 7.2 seconds. Top speed is 235km/h. It consumes just 4.6 litres of fuel per 100 kilometres, a CO₂ equivalent of 121 grams per kilometre.

The 2.0 TDI is packed with clever technical solutions: separate coolant circuits, two balance shafts in the crankcase, a cylinder pressure sensor, greatly reduced internal friction and a common rail injection system that keeps the fuel at a maximum pressure of 2000 bar. High and low-pressure exhaust gas recirculation and sophisticated exhaust gas treatment including an SCR system (SCR: selective catalytic reduction) provide for low emissions.

Drivetrain

Seven-speed S tronic and eight-speed tiptronic, front- and quattro all-wheel drive: in the new Audi A5 Coupé, there is a tailored drivetrain technology for each engine variant.

The new seven-speed S tronic is standard with all engines except the S5. The S tronic, which replaces the continuously variable multitronic, offers impressively high efficiency. The most important improvements are further reductions in friction, the low weight, a highly efficient oil supply and dual-mass flywheel with a centrifugal force pendulum, which allows for very low engine speeds while driving.

To reduce drag torque, the two compact multi-plate clutches of the new seven-speed S tronic are arranged axially one behind the other rather than radially one above the other as was the case with the predecessor. The clutches operate two independent sub-transmissions, which are constructed like manual gearboxes. They are continuously active, but only one is connected to the engine at any given time. Gear changes are performed within a few hundredths of a second and with virtually no interruption in the power flow by changing the clutches. With the quattro transmissions, the power flows from the output shaft to the front-axle differential via a spur gear stage and via a propshaft to the rear-axle differential.

Eight-speed tiptronic

The eight-speed tiptronic makes its debut in the S5. The smooth, rapid and spontaneously shifting torque-converter transmission has been completely redeveloped. Its high number of gears enables the engine to operate close to the ideal load point very often. An rpm-adaptive torsion damper balances out undesired engine vibrations to enable efficient driving at particularly low engine speeds. The layout of the gear sets and shifting elements provide for low drag torques and thus high efficiency.

Both automatic transmissions in the new Audi A5 Coupé are state of the art. They are distinguished by a broad spread of gears: Their lower gears feature short, sporty ratios, while the upper gears are long to reduce revs and fuel consumption. The S tronic and tiptronic transmissions are integrated into the engine's thermal management and designed for start-stop operation. Drivers can choose between the modes D, S and E, and change gears manually at any time using either the selector lever or the standard shift paddles on the steering wheel. All commands are passed purely electrically – by wire – to the transmission. A brief tap against the selector lever triggers the shift command.

There is another efficiency function added in combination with the new cruise control, the predictive efficiency assistant or the adaptive cruise control Stop&Go including traffic jam assist. As soon as fuel can be saved, the automatic transmission switches to freewheeling mode in a speed range between 50 and 160km/h.

quattro all-wheel drive

The ultimate plus in dynamics, traction, driving safety and straight-line stability: for more than three decades, that has been the promise of quattro permanent all-wheel drive from Audi.

Heart of the matter: limited-slip centre differential

Two engine variants of the Audi A5 Coupé with S tronic continue to be equipped with quattro permanent all-wheel drive. It is an extremely reliable mechanical system. Designed as a planetary gear, the self-locking centre differential funnels 60 percent of engine torque to the rear axle and 40 percent to the front during normal driving. When it redistributes the power, up to 70 percent can go to the front and up to 85 percent to the rear.

These high locking figures enable a clearly defined distribution of drive torque and precise interplay with control systems.

Sport differential

As an option for the S5, Audi will complement quattro all-wheel drive with another dynamic technology component – the sport differential. It distributes torque between the rear wheels via two superposition gears. The latest generation of the differential is roughly one kilogram lighter. During fast driving, the sport differential literally pushes the car into the curve, nipping understeer in the bud. A software function integrated into the central chassis control unit (electronic chassis platform ECP) continuously computes the ideal torque split for dynamic driving. When turning into or accelerating in a curve, most of the torque is directed to the outside wheel.

Before the rear end can break out, the vehicle is stabilised by the distribution of torque and thus easily controlled. The control unit for the sport differential is tightly networked with Audi drive select so that the driver can influence the torque split.

Wheel-selective torque control

The new Audi A5 Coupé includes the updated wheel-selective torque control system, which is active on any surface. During dynamic cornering, the software function brakes both inside wheel minimally while cornering, before they can slip. This intervention also occurs even if the driver does not press the accelerator pedal. Due to the difference in propulsive forces at the wheels, the car turns into the curve ever so slightly. Self-steering behaviour remains neutral longer, making handling even more precise, agile and stable.

Driving dynamics

One of the primary character traits of the new Audi A5 Coupé is the sporty and agile handling. In its segment, both sporty driving pleasure and comfort are decisive criteria when tuning the chassis. The Audi A5 Coupé succeeds in bridging the gap between being fun to drive in winding passages and offering excellent comfort over long distances.

The new front and rear suspensions, each of which have five links, and the precise electromechanical steering are perfectly matched. Drivers can also chose an optional variable suspension that supports a dynamic driving style.

Ride comfort can also be adapted to any situation. The Audi drive select system enables the driver to influence the characteristics of the power steering boost and the accelerator as well as the optional variable suspension as needed for an even more customised driving feel.

Chassis

The all-new chassis is among the strengths of the Audi A5 Coupé, including with respect to systematic lightweight construction and precise response. From dynamic handling to comfortable cruising – the two-door coupé has luxury-class qualities.

The broad track – 1587 millimetres up front and 1568 millimetres in the rear – and a wheelbase that is relatively long for this segment are the foundation for a suspension tuning that is both sporty and balanced. The wheelbase measures 2764 millimetres.

An updated five-link suspension is used on the front axle. The axle principle enables optimal absorption of longitudinal and transverse forces. Its mounts are sporty-stiff in a lateral direction and supple and soft longitudinally. Vibrations are consistently eliminated with the use of a hydromount, which ensures excellent comfort along with a high degree of agility.

Unlike on the previous model, the Audi engineers integrated the upper links directly into the body for optimal stiffness. All suspension control arms, the pivot bearing and the damper stilts are forged aluminium. The lightweight concept is completed with the use of monotube dampers and high-strength, thin-wall tubular stabiliser bars and segmented wheel hubs. Compared with the previous model, the weight of the front axle has been reduced by more than six kilograms. The lower link level is attached with newly designed rubber mounts to a hybrid subframe made of high-strength steel and aluminium consoles. The stiff connection of the subframe to the front end enables high vibrational comfort and provides the foundation for optimal agility.

Electromechanical power steering

The electromechanical power steering, a compact, new development from Audi, saves 3.5 kilograms compared with the previous model. It consumes

little energy and has a direct, sporty ratio of 15.9:1. Power assistance is based on the vehicle's speed.

The steering provides very exact feedback from the road, responds spontaneously and is very precise. The new electromechanical power steering is functionally connected with some of the new driver assistance systems, such as the Stop&Go adaptive cruise control including traffic jam assist.

Dynamic steering

The optional dynamic steering uses a superposition gear to vary its ratio by up to 100 percent, depending on the car's speed and the mode selected in the Audi drive select driving dynamics system. Vehicle stabilisation is also supported by lightning-fast steering impulses, further enhancing stability and safety.

Rear suspension

In the rear of the new Audi A5 Coupé, a five-link axle replaces the trapezoidal-link axle of the previous model. Audi has used an intelligent mix of materials to reduce the weight of the axle components by an additional five kilograms. Low unsprung mass provides a sporty driving experience, and together with the new damper and elastomer tuning, it allows a smooth ride, a reduction in body movements and improved wheel damping.

The reduced-weight alloy wheels also contribute to this. Depending on the model, they weigh less than 13 kilograms per wheel, even the 19-inch versions. Monotube shock absorbers have been used for the first time, resulting in a further weight reduction and improves responsiveness, which in turn improves body control. The axle is insulated from the body with hydraulically damped axle mounts. They reduce the shocks from the road surface significantly without adversely affecting lateral guidance. Friction-optimised wheel bearings reduce rolling resistance, and aero-deflectors on the floor pan reduce aerodynamic drag.

Central chassis control unit – the electronic chassis platform (ECP)

A central chassis control unit has been applied to achieve ideal interaction between the various driving dynamics systems. Developed for the new Audi A5 Coupé, this highly integrated control device – the electronic chassis platform (ECP) – processes all the information relevant for driving dynamics,

from which it computes the driving situation and the current road surface frictional coefficient. This information enables optimal control of the systems for highly precise, dynamic handling and maximum ride comfort.

Suspension with damper control

As an alternative to the standard suspension with highly sensitive monotube shock absorbers, the new A5 Coupé can also be equipped with a suspension with damper control. Sensors measure the movements of all four wheels plus lateral and longitudinal acceleration. The damper characteristic is then adjusted accordingly to the road surface conditions and driving situation. The result is enhanced driving dynamics with even more comfort. Furthermore, the driver can push a button to choose the default setting of the suspension in the Audi drive select system and thus call up the desired handling characteristics at any time.

The variable suspension works with newly developed CDC dampers (CDC = continuous damping control) with electromagnetically actuated valves in their pistons. They allow hydraulic fluid to flow faster or more slowly as required. A new actuation concept makes them very energy efficient. The central chassis control unit processes all sensor signals within milliseconds and controls each damper individually. Together with the wide range of the damper valves, this ensures a wide spectrum between a soft ride and firm handling.

The A5 Coupé already has a sporty, low ride height in the standard version (from standard suspension).

Audi drive select dynamic handling system

The damper controller is integrated into the standard Audi drive select dynamic handling system. In the basic configuration, the driver can use it to switch between multiple modes for the function of the throttle valve, automatic transmission, steering, cruise control or adaptive cruise control (ACC) as well as the automatic air conditioning. The modes are 'comfort', 'auto', 'dynamic', 'efficiency', and 'individual', with which the driver can further customise the individual systems such as the steering and suspension.

Lightweight and efficient: the wheels and tyres

The base version of the new Audi A5 Coupé is factory-equipped with 18-inch cast aluminium wheels. Audi and quattro GmbH offer a number of different models as options, ranging from 18-inch to 19-inch wheels.

All Audi wheels for the new A5 Coupé are characterised by their low weight. The low unsprung mass contributes to the sporty driving experience. All tyres have been optimised for rolling resistance, which significantly reduces CO₂ emissions by an average of 2.8 grams per kilometre. A tyre pressure loss indicator and ultra-compact spare wheel are standard.

A wide range of brakes are also used. The TFSI with 140kW has 16-inch floating caliper brakes on the front axle. Models with other engines are stopped by particularly lightweight, 17-inch aluminium fixed caliper brakes. Compared with the previous model, the brakes weigh a total of five kilograms less.

The front axle is equipped with internally-vented discs up to 338mm in diameter. The electromechanical parking brake is integrated into the rear axle and features new holding and starting functions.

Many aspects of the Electronic Stabilisation Control (ESC) have been updated; it is now even more precise and sensitive than on the previous model. In the ESC sport mode, engine intervention is largely deactivated and braking intervention slightly reduced.

Interior

Perfect workmanship with optimal functionality – the new A5 Coupé takes these Audi-typical properties to the highest degree. High-quality materials are painstakingly crafted and can be showcased by the optional ambient lighting with 30 adjustable colours (standard on 2.0 TFSI quattro and S5). The horizontal architecture of the instrument panel creates a wide sense of space.

The new A5 Coupé has become even more generous in virtually every dimension. The interior of the new Audi A5 Coupé has gained 17 millimetres in length. Shoulder room (plus 26 millimetres) and headroom (plus 12) for both the driver and front passenger have also increased. Knee room in the back has even increased by 23 millimetres. The luggage compartment offers

10 litres more volume than before. It now holds a best-in-segment 465 litres.

Seats

The seats in the Audi A5 Coupé have been redeveloped from the ground up. One standard feature offering additional convenience to the driver and front passenger is the seat belt height adjustment for the front seats, including power belt feeds. With the S line package, the head restraints of the anatomically correct front seats are not only height-adjustable, their distance to the back of the head is also variable. Power adjustment of both the seats and the lumbar support is also standard. Audi offers heating for many of the seat choices, and the sport seats are available with optional ventilation.

There is a front centre armrest – sliding and with a storage compartment – large door pockets, two cup holders and a new, closed storage compartment beneath the rotary light switch. The new Audi A5 Coupé has two seats in the rear plus a centre armrest.

Functional and sporty: steering wheels

The steering wheels have also been redesigned. Because the driver airbag is a compact micromodule, the steering wheel allows a better view of the instrument cluster. There is a broad range of steering wheels, beginning with the three-spoke multifunction plus steering wheel with a round impact absorber. Customers can choose a rim flattened at the bottom (standard on 2.0 TFSI quattro and S5). Shift paddles are standard. All steering wheels have a frame of weight-saving magnesium.

Weight savings in the interior

Lightweight construction is used throughout the interior. For example, the substructure of the front seats is made of high-strength steel. The support structure for the through-loading facility in the rear seat is made of magnesium. Compared with the previous model, the weight of the seats has been reduced by eight kilograms. A weight-optimised carpet, an aluminium brake pedal and foamed defroster ducts make the car a total of a further four kilograms lighter.

Numerous choices: interior equipment

The new A5 Coupé comes standard with At night, the optional interior lighting package or the optional ambient lighting set small accents in the interior. With the latter, the MMI can be used to choose from 30 colours, in several profiles and in separate zones, including the cup holders. If desired, the colours can also change depending on the mode chosen in Audi drive select. In the door trim, narrow LED light guides generate dramatic contour lighting. The driver can operate the reading lights via sensors.

A choice of materials and colours emphasise the generous dimensions and elegance of the interior. The palette offers numerous new shades and combinations. Besides black, the instrument panel can be divided into two colour zones with the trim line design: a dark upper area and a light lower zone, such as granite grey-atlas beige or granite grey-rock grey. The colours of the lower zone of the instrument panel can be found again in the seat upholstery.

The standard upholstery is a robust leather and artificial leather combination. Milano leather is an elegant alternative. The fine Nappa leather with contrasting stitching and piping is the top equipment version.

The large, three-dimensional decorative surfaces are a significant feature of the interior's appearance. Alternatives are a variety of aluminium inlays as well as dark walnut, oak natural grey and black piano finish. The generous use of high-quality inlays across the entire width with a smooth transition to the long doors gives the driver and front passenger the sense of being embraced without being constrained. At the same time, the horizontal application strips clearly align the interior and divide the instrument panel.

S line sport package and Audi design selection

With the S line sport package, the interior is black or rotor grey. The sport seats are covered with fine Nappa leather. The front seat backrests are embossed with the rhombus S. The decorative surfaces are made of brushed aluminium or piano finish. The three-spoke sport leather steering wheel with flatbottom and the illuminated door sill trims bear rhombus S emblems. The stainless-steel pedals and footrest as well as the floor mats with contrasting stitching round out the sporty appearance.

Comfortable climate: the continuous air vent strip

A continuous air vent strip and the plunging centre console underscore the impression of a floating instrument panel in the new Audi A5 Coupé. With the deluxe automatic air-conditioning, the broad band of air vents allows indirect ventilation while increasing the volume of air circulated. The interior can be air-conditioned in three separate zones; the rear passengers have their own control unit with a digital display.

The triple-zone deluxe automatic air conditioning has been completely redesigned. It consumes little energy thanks to efficient solutions for the fan motor and fresh air supply, an efficient cooling circuit and highly flexible controls. It provides extremely high air quality: in both fresh air and recirculating operation, an active-carbon combination filter removes the smallest particulate matter. The control panel of the automatic air conditioning is another highlight, particularly with the optional deluxe automatic air conditioning, which has the digital temperature displays integrated into the control dials. Just a few buttons and dials are sufficient for convenient control. When a finger approaches one of the capacitive rocker switches, its function is shown enlarged on the dark LCD display and selected.

Audi offers a panoramic glass sunroof for even more fresh air. In the new A5 Coupé, it spans the entire width of the roof. It is nine percent larger than the previous model, and for the first time it can be opened with a tilt-and-slide function (752 x 278 millimetres = size of opening).

Spacious and practical: the luggage compartment

The combination of aesthetic design and good use of space plays an important role in the new Audi A5 Coupé, too. In the base configuration, the luggage compartment offers a volume of 465 litres, 10 litres more than with the previous model.

The standard rear seat backrest is split 40:20:40 and can be folded down to the seat cushions using a lever on the side of the luggage compartment. The load-area width measures exactly one metre. The cuboid dimensions make the luggage compartment outstandingly practical.

Audi also offers the two-door coupé with a sensor control for opening the luggage compartment lid: a proximity sensor in the rear bumper reacts to a

kicking motion. The hatch unlocks and opens automatically if the convenience key is detected.

The new Audi A5/S5 Coupé is certified to tow loads of between 1500-1900 kilograms.

Display and controls

The Audi virtual cockpit and MMI touch are standard equipment in the new Audi A5 Coupé. The driver can intuitively use a wealth of functions via the two central components of the innovative MMI display and control concept.

MMI navigation plus brings an 8.3-inch Audi MMI display on board.

Audi virtual cockpit

For the new A5 Coupé, there is the Audi virtual cockpit works in an integrated fashion with MMI navigation plus with MMI touch. The various display options offer the driver added convenience and numerous customisation possibilities. Thanks to its resolution of 1,440 x 540 pixels, the large TFT monitor (12.3-inch) displays richly detailed graphics.

The image is refreshed 60 times per second so that the virtual needle of the tachometer spins smoothly and very precisely. Scrolling operations in lists are based on a physical model that considers such factors as inertia, elasticity and damping.

The Audi virtual cockpit presents comprehensive and diverse information, from navigation arrows to the dynamic animation of the navigation map and infotainment content (including Audi connect services) to the graphics of some assistance systems. The display changes its context-related colour scheme according to the main menu selected. In the Media menu, for example, it glows orange, while green is used for the Phone menu. At the lower edge are permanent displays of outside temperature, time of day and odometer readings as well as warning and information symbols.

The driver operates the Audi virtual cockpit with the optional multifunction steering wheel plus. The switches on the left spoke are used to move through the menus of the audio system, onboard computer, navigation system and telephone. Located on the right side of the steering wheel are

the volume roller, the voice control button, telephone express controls and the skip function for quickly changing the radio station or song.

The driver can switch between two user interfaces by pressing the 'View' button on the multifunction steering wheel plus. The infotainment mode is dominated by a central window – it offers plenty of space for items such as the navigation map or lists from the telephone, radio and audio functions. The tachometer and speedometer are presented here as round instruments. In the classic view, the instruments are approximately the same size as analog instruments, and the centre window is correspondingly smaller.

Always in view: the head-up display

The optional head-up display in the new Audi A5 Coupé projects relevant information onto the windshield as easily comprehensible symbols and digits, thus enabling the driver to keep his or her eyes on the road. A TFT monitor with white LED backlighting generates the colour image. Two aspherical mirrors enlarge and reflect it, as well as compensating for distortion caused by the geometry of the windshield.

The information appears to hover around two metres in front of the driver within a window area measuring 200 x 80mm. The human eye registers the information extremely quickly – there's no need to switch from the accustomed long-range vision. The driver can use the Audi MMI to specify which information should be shown in the head-up display; the height and brightness can also be adjusted here.

Slim tablet look: the new Audi MMI display

The new Audi MMI monitor embodies Audi's innovative technology and design expertise. With its slightly rounded, black glass surface, it looks like a premium tablet computer. The monitor is just 13 millimetres thick. It has a discreet silver-coloured magnesium frame. The brilliantly resolved animations shown on its 8.3-inch surface are of unmatched quality.

MMI control element

The system is controlled via the Audi MMI control elements on the wide, asymmetrically split centre console. Its design and position vary according to the car's transmission. The terminal is placed close to the instrument panel; the low automatic selector lever offers the wrist a comfortable resting place, the volume dial and a storage tray are located on the right of

the MMI control terminal. This arrangement makes the philosophy of the new Audi A5 Coupé clear. Although the cockpit is rigorously tailored to the driver, the Audi MMI display can be used equally well by the front passenger.

The focal point of the terminal is the round rotary pushbutton, whose ring is illuminated in white with the optional MMI touch. Its surface is home to the touch-sensitive touchpad. The touchpad is used to input characters and also for multifinger gestures, enabling the driver to zoom in on the map, for example.

Toggle switches for the most important basic menus, the general Menu button, the Back button and eight freely-programmable favourite buttons supplement the terminal. Two further buttons to the left and right of the rotary pushbutton provide access to the Function and Option menus, which supplement many areas of operation. For example, the driver can select the frequency band of the desired station in the Radio menu or call up traffic information in the Map menu. With these functions and options, the driver can get directions to an entered destination and display nearby parking lots or save the destination to the Favourites list.

Flat hierarchies: new menu structure

The menu structure of the Audi MMI has also been redesigned from the ground up: With its flat hierarchies, operation is based on modern smartphones. An intelligent, easy-to-understand logic replaces static menu trees, and frequently used functions can be reached with just a few clicks.

A particular highlight is MMI search, which is available for all basic menus and like a search engine uses free text entry. It generally answers queries after just a few letters, taking into consideration the car's current location. When searching for a place to eat, for instance, simply enter the name of the restaurant and the first letters of the city and a list of hits throughout Europe appears together with the addresses. Searching for songs, albums and radio stations also works this way.

Voice control system: "Where can I refuel?"

The voice control system has also been extensively updated. It now understands a large number of everyday expressions. To call a contact, the driver can just say "I would like to call Peter Miller." The navigation system also responds to natural language inputs ("Where can I refuel?", "Where is

the closest Italian restaurant?”). The new voice control system, which also permits dictation of text messages, is also available without an Internet connection and works with the Radio and Media menus as well.

Infotainment and Audi connect

The standard Audi sound system has ten loudspeakers and includes a DVD drive, 2x SDXC card reader, 10GB flash memory for media storage, an AUX jack, a USB connection, Bluetooth and voice control for telephone and radio. The A5 also comes standard with Audi connect and up to five free navigation updates (available at six-month intervals), an even more comprehensive voice control system for the navigation functions and an 8.3-inch monitor with a resolution of 1,024 x 480 pixels. Audi MMI navigation plus works in close cooperation with many of the assistance and safety systems. It packs the power of Audi's second-generation modular infotainment platform (MIB).

Online with LTE: Audi connect

The hardware module Audi connect with LTE is the ideal complement to Audi MMI navigation plus with MMI touch. An LTE/UTMS module provide the fastest connection to the Internet available today, with download speeds up to 100 MBit/s. The integrated Wi-Fi hotspot enables passengers to freely surf, stream and email with up to eight mobile devices.

Audi connect offers features including navigation with Google Earth, Google local search and Google Street View.

Optimally connected: the Audi smartphone interface

Apple Car Play and Android Auto – the familiar smartphone environment can be brought on board the new Audi A5 Coupé. Smartphone content such as navigation, telephony, music and selected third-party apps appear with the accustomed smartphone look in a separate MMI window. Audi MMI or the voice control system provide the customer with convenient access to the content of their iOS or Android device (iOS 7.1 and above, Android at least 5.0 Lollipop) connected via the USB port.

Further components round out the infotainment program, including a digital tuner with DAB+ for radio. The Audi phone box light with wireless charging enables inductive charging according to the Qi standard. The

current flows from a coil in the base of the Audi phone box to the receiver coil in the smartphone.

Audiophile delights: 3D B&O Sound System

The new Audi A5 Coupé also sets entirely new standards for high fidelity audio in segment. The optional 3D Bang & Olufsen Sound System offers a fascinating innovation – a sound that includes the spatial dimension of height. It utilises four additional loudspeakers, two each in the instrument panel and the A-pillars. The 3D sound creates something that is completely new in a car: a concert hall-type listening experience.

Behind the new technology is an algorithm that Audi developed in collaboration with the Fraunhofer Institute for Integrated Circuits (IIS) in Erlangen. The program uses stereo or 5.1 recordings to calculate the information for the third dimension and processes it for the additional loudspeakers.

The heart of the 3D Bang & Olufsen Sound System is a 755-watt, 16-channel amplifier that drives 19 loudspeakers. The speaker covers feature a new design with long aluminium strips harmonising with the lines of the A5 interior. White light guides illuminate the woofers in the front doors.

Driver assistance systems

An intelligent combination of different technologies enhances the safety, comfort and efficiency of the new Audi A5 Coupé. At the same time, Audi is also taking the next step toward piloted driving. The broad choice of innovative driver assistance systems sets new standards in the segment. Compared with the previous model, nearly all of the systems are either completely new or have been extensively updated. Some of the solutions are standard features, whereas others are bundled together in the Assistance package.

Greater safety: Audi pre sense

The A5 Coupé comes standard with the safety system Audi pre sense city. At speeds of up to 85km/h, the system scans the road for other vehicles and pedestrians using a windscreen-mounted front camera with a range of over 100 metres. If it detects an impending collision, the driver receives a series of warnings, and if necessary the car initiates maximum braking. At speeds up to 40km/h accidents can be avoided completely within the system limits.

At higher speeds (up to 85km/h), warnings and brake intervention reduce the impact velocity.

The standard Audi pre sense basic uses information from a variety of different vehicle systems. Once it detects an unstable driving condition, it initiates preventive measures to protect the occupants. The front seat belts are tightened electrically, and the windows and the sunroof close. The hazard flashers are also activated. If a collision cannot be avoided and an accident is detected on the basis of contact, the multi-collision brake assist system supports the driver with controlled application of the brakes. This can help to prevent the car from skidding, which in turn prevents additional collisions.

Fewer traffic tickets thanks to the speed limiter

Another standard feature in the new Audi A5 Coupé is attention assist. A component of the driver information system, it analyses driver behaviour and issues a warning when it detects that the driver is becoming inattentive.

The adjustable speed limiter, a standard feature, can be set to a particular speed ranging from 30 to 250km/h – a very helpful tool for maintaining speed within city limits, in construction sites, and so on.

Adaptive cruise control (ACC) Stop&Go including traffic jam assist

A highlight among the optional systems is the adaptive cruise control (ACC) Stop&Go including traffic jam assist. It relieves the driver and is a major plus with respect to convenience and safety. The ACC maintains a specified distance between the new Audi A5 Coupé and the car ahead; the driver can choose one of five distances and use Audi drive select to adjust the rate of acceleration and control dynamics.

The system, which relies primarily on the signals from the two front radar sensors and the camera, interacts with the S tronic and the tiptronic to cover the full range of speeds from 0 to 250km/h; with manual transmissions, it starts at 30km/h.

The Stop&Go function of the ACC (in conjunction with automatic transmissions) brakes the new A5 Coupé to a full stop and lets it resume driving again at the driver's request. When the system is deactivated, the

distance display shows the distance to the car ahead and warns drivers when they are tailgating. Its operating range is at speeds of 60km/h and above.

In combination with automatic transmission, an extension of the ACC called traffic jam assist can take over steering at speeds of up to 65km/h on well-developed roads when traffic is congested. The system uses the radar and ultrasound sensors as well as the front camera, guiding the car by gently adjusting the steering and following the traffic ahead within system limits. The traffic jam assist orients itself to the lane markings and the other vehicles on the road.

When traffic jam assist reaches its system limits – such as when the traffic thins out or there is a sharp curve ahead – the driver has to take over again. If the driver does not, the system warns the driver in several stages. As a final measure, it safely and autonomously brings the Audi A5 Coupé to a full stop.

ACC Stop&Go including traffic jam assist means that the Audi pre sense front safety system is also on board. It can prevent rear collisions or help minimise their consequences. In dangerous situations, the system prompts the driver to apply the brakes according to a complex warning concept – with visual and acoustic signals as well as a sharp tap on the brakes. If the driver does not respond, the car first starts to brake while simultaneously closing the windows and the sunroof as well as activating the hazard flashers. The A5 Coupé is the only car in its class to perform maximum braking thereafter. The system also tightens the seat belts at this point.

Anticipatory: the predictive efficiency assistant

Also included in the Tour assistance package is the predictive efficiency assistant. Unique in its class, the system works in close conjunction with the Audi adaptive cruise control (ACC) and the Audi navigation. When ACC is active, the system predictively and automatically adjusts the preselected speed to conditions – the route topography and the traffic ahead.

Regardless of whether route guidance is active or not, the predictive efficiency assistant uses the route data to alert the driver about situations that call for lower speeds. The system recognises curves, traffic circles, intersections, gradients, – in many cases long before the driver sees them. A corresponding warning appears in the instrument cluster and/or the Audi

virtual cockpit and head-up display. If the assistant screen is active, detailed graphics can be seen.

If the driver wishes, the system can control the freewheeling of the automatic transmission under defined parameters. This form of coasting is only activated if it can last for at least five seconds. When it ends, the car automatically accelerates to the speed the driver has selected provided the ACC is activated. The predictive efficiency assistant can reduce fuel consumption on country roads by up to 10 percent.

Other assistance systems

From a speed of 65km/h, Audi active lane assist – part of the Assistance package tour and also available separately – helps drivers stay in their lanes. It receives its signals primarily from the front camera, which detects lane markings. If the new Audi A5 Coupé approaches a marking without the turn signal being activated, the system makes a gentle adjustment to the electromechanical power steering to bring the car back into its lane.

Using the Audi MMI system, drivers can decide whether this support should be active at all times or only take place before the lane marking is crossed. If the driver opts for early intervention, the system guides the car to the centre of the lane. There is also the optional setting of making the steering wheel vibrate.

The collision avoidance assist is yet another high-end feature in the Assistance package tour. It activates when an obstacle must be avoided to prevent an accident. Within fractions of a second, it uses data from the front camera, the ACC and radar sensors to calculate the distance of the car ahead as well as its width and degree of offset. Its first warning is a tap on the brakes to alert drivers to the potential danger. As soon as the driver starts steering, the system offers support with the necessary lane changes with controlled interventions in the power steering.

Another Audi innovation is turn assist, which at speeds between two and 10km/h monitors oncoming traffic when turning left. In dangerous situations, it brings the car to a complete stop. The system becomes active in the background as soon as the driver turns on the left turn signal.

Audi side assist is standard equipment on the new Audi A5. At speeds of 15km/h and above, it uses the two rear radar sensors with a scanning range of some 70 metres to support drivers when changing lanes. If a vehicle approaches rapidly or is located in the blind spot, a warning LED in the housing of the respective exterior mirror lights up. If the driver activates the turn signal anyway, the LED flashes brightly several times in succession.

Audi pre sense rear warns about potential collisions from behind and takes preventive measures, such as activating Audi pre sense basic. The hazard lights also flash rapidly as a warning to traffic behind the car. It remains active in the background at every speed even if the Audi side assist is turned off, unless a trailer is in use.

The new cross traffic assist rear is enabled when the parking system is activated. When this occurs, drivers who are slowly driving backwards, such as when leaving a parking spot at right angles to the road, are warned about approaching vehicles in critical range. There are different levels of warnings: visual, acoustic and a short jolt of the brakes. The back radar sensors provide the necessary data.

The exit warning helps the new Audi A5 Coupé move more safely through urban traffic. It is activated when the car comes to a stop. If other vehicles are approaching from behind, it warns occupants as they open the doors. The system warns drivers by means of LED light guides above the inside door handles (contour lighting). In situations that are assessed as dangerous, special high-output red LEDs blink and light up. The exit warning stays on for approximately three minutes after the ignition is turned off.

Additional systems round out the new A5 offering: the reversing camera as well as the acoustic and visual parking system plus. They activate automatically when an obstacle is detected while manoeuvring.

FlexRay: networking

A fully equipped new Audi A5 Coupé has some 90 control units on board, all of which exchange data with each other. This high degree of networking, especially among the driver assistance systems, would not be possible without a brand new approach to the car's electronic architecture.

The new FlexRay bus system connects multiple control units with each other and guarantees extremely fast and reliable data transfer. The most important components are the engine, the automatic transmission, the central chassis control unit, electronic stabilisation control (ESC), the power steering control unit, adaptive cruise control Stop&Go including traffic jam assist, the image processing control unit and the safety computer, which controls the safety systems.

There are other data networks in addition to the FlexRay bus. CAN (controller area network) buses are the standard networking technology. CAN is used for such things as the air conditioning, convenience electronics and assistance systems (Audi side assist). Furthermore, CAN is used for communication between the infotainment system and the central display and control components, such as MMI and Audi virtual cockpit

LIN (local interconnect network) buses complement the CAN buses by operating less complex integrated systems such as interior lighting. The 3D Bang & Olufsen Sound System, the TV tuner and the Audi virtual cockpit use MOST (media oriented systems transport) technology.

The electrical system also contributes to lightweight construction in the new A5 Coupé: enhanced topology, new aluminium cables and a fleece battery lower the weight by six kilograms compared with the previous model.

Body

The new Audi A5 Coupé is an athlete; despite the greater dimensions, the model weighs up to 60 kilograms less than the previous model. The entry-level TFSI, the 2.0 litre TFSI, has a kerb weight of 1420 kilograms.

The body of the new Audi A5 Coupé is among the lightest in the segment. Thanks to geometrical lightweight construction and an intelligent mix of materials, it weighs 15 kilograms less than the body of the previous model. For example, the module cross-member under the instrument panel is made of aluminium extruded sections and aluminium sheets, while the front cross-member is an extruded section.

The front suspension strut domes are highly integrated aluminium castings. Compared with components made of sheet steel, which are welded together from multiple individual parts, they reduce weight by a total of eight

kilograms. This construction allows a very stiff connection between the upper links and the body for excellent steering response – optimal conditions for handling.

In the new Audi A5 Coupé, hot-shaped components form the high-strength, crash-proof backbone of the occupant cell. They strengthen the transition from the front end to the interior, the front zone of the roof frame, the B-pillars, the side sills and parts of the floor. Hot-shaped components constitute 17 percent of the body structure.

Peace and quiet on board: top acoustic marks

With its excellent torsional rigidity, the body lays the foundation for highly precise handling and a quiet interior. The new Audi A5 Coupé surpasses its competitors in this respect. Switchable engine mounts ensure exemplary comfort at idle. The sealing concept for the doors is complex, and an acoustic windshield is standard. Audi offers tinted privacy glass for the rear doors as an option.

The low drag coefficient contributes to efficiency. Particularly at high speeds, the sophisticated aerodynamics pay off in the form of low fuel consumption. And with a drag coefficient of 0.27 Cd, the new A5 Coupé leads the competition.

The new Audi A5 Coupé also scores top marks for passive safety. In the interior, the adaptive occupant restraint system for the front seats offers outstanding protection. It adjusts the effect of the front airbags and the seat-belt force limiters to the seating position of the driver and front passenger as well as to the type of frontal collision.

The all-new Audi S5 Coupé

From 0 to 100km/h in 4.7 seconds. The new Audi S5 Coupé combines dramatic design with the performance of a sports car. Its newly developed, turbocharged V6 engine produces 260kW and consumes just 7.6 litres of fuel per 100km. Empty, the car weighs 60 kilograms less than the previous model and has a total weight of 1615 kilograms. The precision-honed exterior design and the numerous S-specific details in the interior underscore the dynamic character of the Audi two-door sports coupé.

Strong heart: 3.0 V6 TFSI

The completely redesigned, turbocharged 3.0 TFSI engine for the Audi S5 Coupé offers powerful performance: high power, ample torque, spontaneous response and a sonorous sound. All of that paired with a new level of efficiency.

From its 2995 cc of displacement, the V6 TFSI produces 260kW, which is 15kW more than the previous engine. A constant 500Nm (plus 60 Nm) of torque is available from a low 1370 all the way to 4500rpm. The new 3.0 TFSI in the S5 Coupé consumes just 7.5 litres per 100 kilometres – a CO₂ equivalent of 171 grams per kilometre. Fuel consumption has dropped by three percent compared with the predecessor engine.

New combustion process: higher efficiency

The decisive success factor for the efficiency of the V6 3.0 TFSI is the new combustion process from Audi. It is based on what is known as the B-cycle, which is similar to the process used in the Audi A4 2.0 TFSI with 140kW and utilises the high-pressure injection valves that are arranged centrally in the combustion chambers.

The shortened compression stroke of the updated combustion process enables the use of an engine process with a significantly higher geometric compression ratio in the V6 TFSI. Combined with a power stroke that, while normal, is longer relative to the compression stroke, this allows for more efficient combustion and increased engine efficiency.

This measure normally significantly reduces the fill of the cylinders, however, and the high compression ratio increases the engine's tendency to knock, which significantly limits the maximum achievable output. The Audi valvelift system resolves this conflict between efficiency and output orientation. Under part load, it enables a very short intake aperture duration of 130 degrees of camshaft angle coupled with the early closure of the intake valve. At higher loads, the engine can switch to a camshaft contour with a longer aperture duration and greater intake valve lift, with which the engine achieves its maximum output.

Turbocharger: separate exhaust gas flows

The turbocharger, which replaces the mechanical compressor of the previous engine, operates according to the twin-scroll principle. The exhaust

branches of the two cylinder banks run separately in the exhaust manifold and in the turbocharger housing, and only merge before the turbine wheel. This technology avoids undesirable interactions between the two gas columns, and it makes a major contribution toward early and powerful torque build-up.

The turbocharger is located within the 90-degree V of the cylinder banks. It normally sits on the outside next to the crankcase. Accordingly, the exhaust side is on the inner side of the cylinder heads and the intake side on the outer side. This layout enables compact construction and short gas flow paths with minimal flow losses – the 3.0 TFSI responds extremely spontaneously and directly.

Weight reduction: minus 14 kilograms

Thanks to a thorough redesign, the V6 TFSI has shed 14 kilograms and now weighs 172 kilograms. Made with an aluminium alloy using the complex sand casting process, the cylinder crankcase features integrated, thin-walled cylinder liners of grey cast iron. In combination with the newly developed rings for the aluminium pistons, this reduces friction.

Another efficiency module is the thermal management system. The crankcase and the cylinder head have separate coolant circuits. After a cold start, the switchable water pump controls the flow of coolant through the engine so that the oil comes up to its operating temperature as quickly as possible. The exhaust manifold is integrated into the cylinder head and coolant circulates around it, which helps to heat up the engine quickly. When the engine is warm the system reduces the exhaust gas temperature, which reduces fuel consumption, particularly during sporty driving.

Eight-speed tiptronic

The drivetrain of the Audi S5 Coupé has also been completely updated. This also applies to the smooth, rapid and spontaneously shifting, eight-speed tiptronic. The layout of its gear sets and shifting elements results in low drag torques and thereby to a high efficiency level. Its large number of gears makes it possible to operate the engine close to its ideal load point very frequently. Their lower gears have short, sporty ratios, while the upper gears are long to reduce revs and fuel consumption.

The torque-converter transmission is integrated into the engine's thermal management system and is designed for start-stop operation (from 3km/h residual speed). The driver can select the D, S or E mode and can use shift paddles on the steering wheel for manual gear changes. All commands are transmitted to the transmission electrically – by wire.

As soon as the driver lifts off the accelerator at speeds between 55 and 160km/h, the transmission begins freewheeling mode if this will save fuel (exception: S mode). With the systems predictive efficiency assistant and adaptive cruise control Stop&Go including traffic jam assist, coasting is managed in a very anticipatory manner.

Standard: quattro drive

The quattro permanent all-wheel drive system with its asymmetrically dynamic layout makes a major contribution toward sporty and stable handling of the new Audi S5 Coupé. During normal driving, its all-mechanical centre differential directs 60 percent of the torque to the rear axle and 40 percent to the front. If slip occurs at one axle, most of the forces are rapidly redirected to the other axle – up to 85 percent to the front or up to 70 percent to the rear axle. These high locking figures enable a clearly defined torque distribution and precise interplay with control systems.

Wheel-selective torque control – an intelligent software function – complements the work of the quattro drive system. In dynamic cornering, it applies minimal brake interventions at the wheels on the inside of the curve before they begin to spin. These interventions are made even if the driver does not press the accelerator pedal. The difference between propulsive forces at the wheels makes the car turn into the curve ever so slightly – making handling even more precise, agile and stable.

Wheel-selective torque control at the rear axle: the sport differential
The optional sport differential provides for even more dynamic response when steering and accelerating. It distributes torque between the rear wheels via two superposition gears. The latest generation of the differential is roughly one kilogram lighter.

During fast driving, the sport differential literally pushes the car into the curve, nipping understeer in the bud. A software function integrated into the

central suspension control unit continuously computes the ideal torque split for dynamic driving. When turning into or accelerating in a curve, the majority of the torque is directed to the outside wheel, pushing the car into the curve. Before the rear end can break out, the car is stabilised and thus easily controlled. The control unit for the sport differential is tightly networked with Audi drive select so that the driver can influence the torque split.

The S sport suspension

The Audi S5 Coupé features a newly developed S sport suspension with five-link suspensions front and rear. The axle principle enables optimal absorption of longitudinal and transverse forces. Its mounts are sporty-stiff in a lateral direction and supple and soft longitudinally. Together with the updated electromechanical power steering with direct steering ratios, the mounts lay the foundation for dynamic handling, good comfort and a high degree of stability. With their low weight, the new parts also reduce fuel consumption. Audi also offers optional dynamic steering, which adapts its steering ratio to the vehicle's speed and the steering angle.

Audi also offers S sport suspension with highly sensitive monotube shock absorbers and damper control for the new S5 Coupé as standard. The driver can push a button to choose the default setting of the suspension in Audi drive select and thus call up the desired handling characteristics at any time. The variable S sport suspension works with newly developed CDC dampers (CDC = continuous damping control) with electromagnetically actuated valves in their pistons. They allow hydraulic fluid to flow faster or more slowly as required. A new actuation concept makes them very energy efficient. The central suspension control unit processes all sensor signals within milliseconds and controls each damper individually. Together with the wide range of the damper valves, this ensures a wide spectrum between a soft ride and firm handling.

The brakes are dimensioned to be large. At the front wheels, the internally-vented discs are 350mm in diameter. They are gripped by red painted six-piston fixed calipers with rhombus S logos. Electronic Stabilisation Control (ESC) operates even more precisely and sensitively than in the previous model. The driver can choose to deactivate it partially or entirely over two stages.

The new S5 Coupé comes standard with 19-inch wheels in a five-spoke 'cavo' design. A number of alternative wheels are available as options.

Body and exterior

The new Audi S5 Coupé spans a length of 4692 millimetres. It is 1846 millimetres wide and 1371 millimetres high. The long wheelbase of 2764 millimetres emphasises the dynamic silhouette of the two-door sports coupé.

The intelligent combination of materials makes the body very torsionally stiff, safe and lightweight. The new Audi S5 Coupé with standard quattro all-wheel drive weighs 1615 kilograms, 60 kilograms less than the previous model.

Audi equips the new S5 Coupé standard with LED headlights. The lower edge of the wide Singleframe extends much farther upward than in the previous model. The striking bumper is expressively shaped. The flat air inlet below is adorned by a matt aluminium silver trim strip and spans the entire width of the vehicle. The side air inlets have bold edges and honeycomb grilles in matt titanium black as well as vertical bars evoking the blades of a racing car. At the front end, the new Audi S5 Coupé expresses its independence with additional sporty details, such as the S-specific radiator grille in matt twilight grey with double slats in matt aluminium silver.

When viewed from the side, the new Audi S5 Coupé exhibits a characteristic, wave-shaped shoulder line. The sweeping line with pronounced bulges over the wheel arches is a visual cue to the quattro all-wheel drive. At the transition from the front wheel arch to the A-pillar, a three-dimensional trim element in matt aluminium silver with an integrated S5 logo underscores the supreme sportiness of the new Audi S5 Coupé. As with a racing car, the aluminium-look exterior mirrors are mounted on the top shoulders. Chrome inserts for the door handles and powerfully contoured sill trims in the body colour with textured black sill top strips also contributed to the honed exterior.

The rear end sports slim LED rear lights with dynamic turn signals. A distinctive spoiler in the body colour on the luggage compartment lid improves the aerodynamics. Integrated into the boldly shaped rear bumper is a flat, black honeycomb grille. The matt twilight grey diffuser with vertical

struts and a matt aluminium silver clasp frame the two dual chrome tailpipes.

The three-dimensional trim elements on the flanks, the radiator grille and the luggage compartment lid bear S5 logos with a red rhombus. The 11-shade colour palette includes two colours exclusive to the S model: Navarra blue and Misano red.

Interior

The new Audi S5 Coupé also features cultivated sportiness in the interior. The clean design with its strong horizontal orientation makes the spaciouly designed interior – which seats four – appear even larger. With a volume of 465 litres the luggage compartment of the S5 Coupé offers everyday practicality.

A broadly extended band of air vents, an elegant air conditioning panel and a large decorative surface define the instrument panel layout. The Audi MMI display welcomes the driver and passengers with a screen featuring the S5 logo. At night, LED light guides trace the contours of the doors and the centre console – in 30 colours with the standard ambient light package. The illuminated door sill strips, the three-spoke sport leather steering wheel with multifunction plus and flat bottom and the chrome clasp on the tiptronic selector lever bear the S logo with a red rhombus (as do the welcome screens of the Audi virtual cockpit and the MMI display).

Thanks to the vehicle's excellent aeroacoustics, the interior noise level is exceptionally low. The workmanship quality is on the high level that distinguishes an Audi. As is typical for an S model, the colour black dominates. For example on the headlining and the instrument panel. The decorative inlays provide elegant contrasts. They come standard in carbon Atlas,

The S sport seats have integrated head restraints, adjustable bolsters and a pneumatic massage function. Fine Nappa leather in the colours black, rotor grey or magma red with diamond pattern, contrasting stitching and an S badge is the standard upholstery.

The Audi virtual cockpit offers a unique capability in the new S5, with an additional view available to the driver: a sport mode centred around the tachometer.

History

The A5/S5 models from Audi have enjoyed tremendous success ever since their introduction in 2007. The Sportback and Cabriolet followed in 2009. Over 320,000 units of the Coupé alone have been sold to date since the market launch.

In 2007, the S5 Coupé was equipped with the 4.2 litre V8 engine producing 260kW and 440Nm of torque. The S5 Sportback and S5 Cabriolet, which followed somewhat later, already had a new 3.0 litre V6 engine with supercharging under the hood. The two-door Coupé followed suit in 2011. Its output data: 245kW and 440Nm.

Numerous top placements in reader and expert polls underscored the strong position of the A5/S5 model family. In 2010, the renowned German Design Council honoured it with the Design Award of the Federal Republic of Germany. Customers are fascinated by the design of the A5/S5 models. It is by far their most important reason for buying.

The Audi RS 5 Coupé as the model athlete and the RS 5 Cabriolet as an open-top, high-performance model have been fascinating customers with supreme performance since 2010 and 2012, respectively. Their 4.2 FSI engine, a high-revving, naturally aspirated V8, catapults them from 0 to 100km/h with 33kW in 4.5 seconds. Top speed can be optionally increased to 280km/h.