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The new A3 Cabriolet – open for sporty driving pleasure

Summary	2
At a glance	6
Full version – Body and exterior design	7
Convertible top	10
Interior	11
Engines	14
Drivetrain	18
Chassis	19
Equipment and trim	22
Driver assistance systems	23
Infotainment systems and Audi connect	26

Annex: Technical Data

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.

Summary

Instantly at the top of its class – the new Audi A3 Cabriolet

Sporty, versatile and elegant – the new A3 Cabriolet is appealing at first glance with its flowing lines and soft top. The open-top four-seater is also at the top of its class technically – with systematic lightweight design, highly efficient engines and high-performance assistance systems.

The new Audi A3 Cabriolet has a sporty stance on the road. The new Audi A3 Cabriolet is significantly larger compared to the previous model: its length increased from 4.24 to 4.42 meters (*13.91 to 14.50 ft*), its wheelbase from 2.58 to 2.60 meters (*8.46 to 8.53 ft*) and its width from 1.77 to 1.79 meters (*5.81 to 5.87 ft*). Yet, the base version of the A3 Cabriolet weighs just 1,345 kilograms (*2,965.22 lb*); that is around 60 kilograms (*132.28 lb*) lighter than before. In the occupant cell, many components are made of ultra-high-strength steel, and the engine hood is made of aluminum. Audi lightweight design competence was also applied to the design of engines and the chassis.

The extended rear overhang plays a key role in the harmonious proportions of the two-door car. Aluminum trim strips wrap around the windshield frame and the edge of the body; the car's sides are defined by precise lines and athletically taut surfaces. The flat headlights give the face of the car a resolute look, just as the air intakes and bumper emphasize the width of the A3 Cabriolet. Audi also offers the headlights in LED technology as an option.

The new A3 Cabriolet is available with a lightweight soft top. With the standard electrohydraulic drive, the top opens or closes, even while driving at speeds up to 50 km/h (*31.07 mph*). When the top is down, it rests in a variable tray. An acoustic top is available as an alternative; it has a thicker inner foam layer which further reduces the already low interior noise level of the A3 Cabriolet. A wind deflector is standard in the Ambiente equipment line, and head-level heating for the front seats is an option for all equipment lines. An active rollover protection system protects occupants in the event of a rollover.

The interior of the open-top four-seater features a light and clean design. The instrument panel is lean, and the center console is angled towards the driver. The three-dimensional trim strips, large round air vents and elegant control panel for the climate control system give a full-size-class feel to the interior.

As with every Audi, user controls in the new A3 Cabriolet are simple and intuitive; the quality workmanship sets standards. The 320 liter (*11.30 cubic ft*) luggage compartment can be expanded by folding down the rear seat backs; its volume is 275 liters (*9.71 cubic ft*) when the top is down.

Up to 132 kW (180 hp): three engines at launch

The new Audi A3 Cabriolet rolls off the assembly line with a choice of two TFSI engines or a TDI; all engines conform to limits of the Euro 6 emissions standard. Engine displacement is 1.4, 1.8 or 2.0 liters, and output ranges from 103 kW (125 hp) to 132 kW (180 hp). All three engines have been newly developed; they consume up to thirteen percent less fuel than the engines of the previous model while delivering improved driving performance. One highlight is cylinder on demand (COD) technology in the 1.4 TFSI; it shuts down two cylinders at low load. Other engines are in preparation.

The new Audi A3 Cabriolet also features state-of-the-art transmission technology. The 1.8 TFSI is coupled with a seven-speed S tronic; together with the Audi drive select dynamic driving system (standard in Ambition), this lightning-fast dual-clutch transmission offers a free-wheeling function that further reduces fuel consumption. The 1.4 TFSI cylinder on demand and 2.0 TDI clean diesel transfer power to the front wheels via a manual transmission. The new quattro all-wheel drive system for the A3 Cabriolet will also be available.

The sporty character of the open-top four-seater is due, to a great extent, to its finely balanced axle load distribution – with the quattro drive system it is 56:44. This is an effect of the modular transverse matrix (MQB), upon which the Audi A3 Cabriolet is based. In the MQB, all engines have the same mounting position, and compared to the previous model, the front axle has been shifted forward by 40 millimeters (*1.57 inches*).

Concentrated know-how is also evident in the car's chassis technology. Many of the components of the McPherson front suspension are made of aluminum; the four-link rear axle handles longitudinal and transverse forces separately. The power steering system features an efficient electromechanical drive. At the limit, the electronic limited slip differential, a function of the electronic stabilization control (ESC), makes handling even more fluid and safe. Wheels range from 16 to 19 inches (the latter only in conjunction with the sport suspension or Audi magnetic ride); tires range up to 235/35 in size. A sport suspension and S line suspension are available to choose from.

As an option, the Audi A3 Cabriolet can come equipped with the Audi drive select system; it is a standard feature of the Ambition equipment line. The driver can use this system to modify engine management, power steering, S tronic and air conditioning operation over several modes. Audi drive select also incorporates multiple optional systems into its operation: Audi magnetic ride shock absorber control, adaptive cruise control, adaptive light and progressive steering, which modifies its gear ratios in response to steering input.

High-end technology: the MMI navigation plus

A whole modular system of infotainment components is available to customers of the open-top four-seater. At the very top are the Bang & Olufsen Sound System and MMI navigation plus. Its flat seven-inch monitor extends electrically from the instrument panel. The user terminal has a rotary/push button control and MMI touch, which together form the touchwheel – the top of which is a touch-sensitive pad for inputting letters and numbers.

The Audi connect system supplements MMI navigation plus. It connects the new Audi A3 Cabriolet to the Internet – via the fast LTE transmission standard, which enables download speeds of up to 150 MBit per second. The integrated WLAN hotspot lets passengers surf and email freely. The driver can use customized Internet services ranging from navigation with Google Earth images and Google Street View to Facebook and Twitter.

The line-up of assistance systems also highlights the leading role of the new A3 Cabriolet. The driver information system with rest recommendation is standard in the Ambition and Ambiente lines. Options include adaptive cruise control, Audi side assist, Audi active lane assist, camera-based traffic sign recognition, park assist with selective display and the Audi pre sense safety system.

Audi is supplying the new A3 Cabriolet in three equipment lines. The base line is called Attraction; the Ambition and Ambiente lines will appeal to customers who like an especially sporty and comfortable car. The interior colors are also adapted to the equipment lines. Customers can choose from fabric, leather and Alcantara upholstery options, and in some cases they may also be combined. The Audi design selection lasso brown conveys an exclusive look. Many of the options come directly from the full-size class, such as the convenience key.

In Germany, the new Audi A3 Cabriolet, which comes off the assembly line at the plant in Győr, Hungary, will be delivered to customers from the beginning of 2014. The price for the 1.4 TFSI with 92 kW (125 hp), which will follow a little later, is €30,500, while the 1.4 TFSI with 103 kW (140 hp) is available at a price of €31,700.

At a glance

The new Audi A3 Cabriolet

Body and design

- Intelligent multimaterial construction, occupant cell has large proportion of high-end steels, engine hood is made of aluminum
- Unladen weight approximately 60 kilograms (*132.28 lb*) lighter than the previous model
- Length 4.42 meters, balanced proportions due to 17 millimeters (*0.67 in*) longer wheelbase
- LED headlights and LED tail lights available as option

Convertible top and interior

- Lightweight soft top with fast electrohydraulic drive; acoustic top as option
- Folding rear seat backs, 320 liter (*11.30 cubic ft*) luggage capacity
- Logical controls, elegant design and superb workmanship

Drivetrain

- 1.4 TFSI COD with 103 kW (140 hp) and cylinder deactivation under part load
- 2.0 TDI clean diesel with 110 kW (150 hp)
- 1.8 TFSI with 132 kW (180 hp)
- Power transmission via manual transmission or S tronic, quattro drive

Chassis

- Electromechanical power steering, progressive steering optional
- Some aluminum front axle components, four-link rear axle
- Audi drive select, Audi magnetic ride as well as a sport suspension and S line suspension available
- ESC stabilization control with electronic limited slip differential is standard
- Alloy wheels sized 16 to 19-inch, powerful brakes

Equipment and trim

- Assistance systems such as adaptive cruise control and Audi pre sense available
- Wide range of infotainment components, including MMI navigation plus with MMI touch and seven-inch monitor, as well as Bang & Olufsen Sound System
- Optionally Audi connect with LTE technology and Audi phone box

Full version

Sporty, elegant and open – The new Audi A3 Cabriolet

The new Audi A3 Cabriolet is instantly at the top of its class. The compact four-seater with its elegant soft top fascinates with new engines, systematic lightweight design, multifaceted networking and highly advanced assistance systems.

Body and exterior design

Lightweight design is one of the core competences of the Audi brand – and the new A3 Cabriolet sets impressive standards here. In the version with a 1.4 TFSI with 92 kW (125 hp), which will follow somewhat later, the unladen weight (without driver) is just 1,345 kilograms (*2965.22 lb*), around 60 kilograms (*132.28 lb*) lighter than the previous model. The open-top four-seater has grown substantially – its length by 183 millimeters (*7.20 in*) to 4,421 millimeters (*174.06 in*), its width by 28 millimeters (*1.10 in*) to 1,793 millimeters (*70.59 in*) and its wheelbase by 17 millimeters (*0.67 in*) to 2,595 millimeters (*102.17 in*). Only its height (1,409 millimeters [*55.47 in*]) was reduced by 15 millimeters (*0.59 in*).

In the lightweight design concept for the new Audi A3 Cabriolet, the body is the most important factor; its weight was reduced by 30 kilograms (*66.14 lb*). The engine hood, the crash absorber profile behind the front bumper and the subframe of the front axle are made of aluminum. Together these components reduce the car's weight by 13.3 kilograms (*29.32 lb*) – progress that also benefits axle load distribution. The front end frame is made of high-strength plastic, which saves another 3 kilograms (*6.61 lb*).

A large contribution towards the car's low weight is made by the hot-shaped steels that give the occupant cell its high strength. They are used in the transition to the front section, in the A pillars, center tunnel and parts of the floor. In many other areas, such as the side members, Audi utilizes high-strength and ultra-high-strength steels. At the A pillars, windshield frame, sills, B pillars bases and what is known as the heel plate of the rear seats, reinforcements compensate for the lack of a rigid metal roof.

In manufacturing the body of the new A3 Cabriolet, Audi uses a wide variety of joining technologies at its plant in Győr, Hungary. The results of these sophisticated methods are excellent torsional rigidity, superior manufacturing precision, good vibrational comfort and a high level of crash safety. In a frontal collision, the front cross member distributes forces to the side members. The strong sills and B pillars protect occupants in the event of a side impact. In a rear-end collision, the bumper cross members transfer loads to the side members.

With a drag coefficient of 0.30, the new Audi A3 Cabriolet glides smoothly through the wind. The underbody, which encounters a major share of total air drag, is covered with glass-fiber-reinforced plastic shields up to the B pillars. To stiffen the front end, the underbody shields for the engine room are made of aluminum (aluminum nose capsule). The aerodynamic underbody reduces overall air drag by around twelve percent.

Concentrated and taut – the exterior design

The new Audi A3 Cabriolet is precise and expressive in every detail; even the front expresses the car's determined character. The Singleframe radiator grille with tapered upper corners is stone gray; its cross fins and the Audi rings protrude in a three-dimensional look. A slender, chrome frame surrounds the grille. The wedge-shaped headlights with their wave-like lower edges are cut with a flat profile; a chrome-plated wing contours its interior.

Audi is offering more options for the headlights, including adaptive light for the xenon plus units. Its computer controls the swiveling modules so that they always project the right light for the city, country roads and highways; they also create a special turning light, cornering light and all-weather light. The driver can control adaptive light operation via the optional Audi drive select system (standard in the Ambition line). Together with MMI navigation plus, which is also optional, the adaptive light can utilize predictive route data for many purposes – such as for activating the highway light while still on the entrance ramp.

Another function of the adaptive light offered by Audi is variable headlight range control. Based on image data from a video camera, it can recognize other vehicles and built-up areas. Its control unit adapts the range of its own light accordingly.

Technology from the full-size class: the LED headlights

The high-end alternative in the new A3 Cabriolet is the LED headlights – a technology that comes directly from the full-size class. Their light, with a color temperature of around 5,500 Kelvin, resembles daylight, which is less tiring for the eyes. The light-emitting diodes have been designed to last the lifetime of the vehicle and are highly efficient. The LED headlights also offer special functions for intersections, country roads, highways, driving on the left and bad weather, some involving interaction with MMI navigation plus.

Nine high-performance LED chips in two free-form reflectors generate the low-beam headlight, while eight other high-performance LEDs produce the high beam that radiates through a matt aluminum trim. A dedicated module combines the turning light and all-weather light. The daytime running lights, sidelights and turn signals, which are generated by a light guide, accentuate the design lines.

An additional 18 centimeters (7.09 in): the rear overhang

When compared to the previous model, the new proportions of the Audi A3 Cabriolet are eye-catching. Like all A3 models, the open-top four-seater is based on the Modular Transverse Matrix; it provides a uniform mounting position for all engines, which involved shifting the front axle four centimeters (1.57 in) forward. In addition, the wheelbase is now longer, and the rear overhang has grown by 18 centimeters (7.09 in) – giving the new A3 Cabriolet an elongated sporty stance on the road.

The large tail lights have the shape of a wedge that narrows internally to a sharp edge. In conjunction with the xenon plus and LED headlights, Audi largely delivers them in LED technology. Inside the lights there is the adaptive brake light, which pulses with a frequency of four hertz in emergency braking.

Customers can choose from 14 exterior colors. A special highlight is customized painting (available starting February 2014) as part of the Audi exclusive program – customers can have paints mixed according to their personal wishes.

The look of the new Audi A3 Cabriolet is made even sportier by the S line exterior package. The Singleframe grille is painted in high-gloss black in this package. Powerful contours extend around the air intakes; they are filled with screens in honeycomb look that are subdivided by forked cross braces. The sill extensions on the sides of the car are eye-catching. The diffuser is designed in platinum gray and has a honeycomb screen insert; the exhaust tailpipes are chrome-plated – as in the Ambition and Ambiente lines. The door sill plates have aluminum inserts with S line logos; S line badges also decorate the fenders.

Convertible top

Like every open-top Audi, the new A3 Cabriolet has a fully automatic top made of cloth, which fits in harmoniously with the car's design lines. The top opens or closes even while driving at speeds up to 50 km/h (*31.07 mph*). When the top is down, it takes up very little space in the trunk and it is lighter than a comparable folding steel roof; this reduces the overall weight of the open-top four-seater and is advantageous in lowering its center of gravity.

Together with its hydraulic drive, the convertible top only weighs around 50 kilograms (*110.23 lb*). The large roof peak is made of magnesium. The parts that give the roof its shape – the tensioners at the rear and the bows that are joined to the roof fabric – are made of aluminum. High-strength steel is used in parts such as the tensioning rods, which provide stability.

The top consists of three layers of material and a headliner. In the optional acoustic roof, the foam, which absorbs low-frequency noise up to around 500 hertz, weighs around 30 percent more than the standard version. The acoustic top sets new standards in its class with its excellent noise insulation abilities. Precisely designed joints and seals reduce high-frequency noise considerably.

The new centrifugal piston pump is 1.5 kilograms (*3.31 lb*) lighter than in the previous engine; it supplies six hydraulic cylinders with up to 160 bars of pressure. Four of them move the roof, while the other two activate the hinged cover of the roof tray. The variable roof tray is manually folded down before retracting the soft top, and it only reduces trunk space slightly. The top is folded together so that the inside of the roof peak lies at the top – this is what is known as a K-fold. At the press of a button, opening and closing can even be done while driving at speeds up to 50 km/h (*31.07 mph*).

On the outside of the roof, the seams run in a longitudinal direction – a sophisticated solution that emphasizes the extended lines of the new Audi A3 Cabriolet. A large heated rear window ensures good rear visibility. In addition to the standard Black roof color, the acoustic top is also available in Gray and Brown as well as the additional headlining color lunar silver, along with black.

The wind deflector is standard with the Ambition equipment line. There is optional head-level heating for the front seats, which directs warm air from the upper areas of the seat backs. An active rollover protection system protects occupants. It consists of two spring-loaded plates that are recessed into the body. In case of a rollover or a frontal collision, magnetic actuators open the mechanical lock. Within just a few milliseconds, the plates spring upward in order to protect occupants, together with the windshield frame.

Interior

The interior of the new Audi A3 Cabriolet continues the sporty and elegant lines of the exterior. The slender instrument panel with its curved front conveys an impression of vastness and spaciousness. The center console is angled towards the driver.

The four large round air nozzles are styled in a classic jet design. The driver and passenger can adjust their air flow by pulling on the central axis – this varies the air flow from broadly dispersed and draft-free to a focused stream. The air nozzles are highly sophisticated. Each of them consists of over 30 individual parts that are precisely manufactured and installed to within hundredths of a millimeter.

The three-dimensional inlays are small highlights. The standard inlays are micrometallic silver, but they are also available in several aluminum versions, 3D-design "Black" (S specific) and 3D-design "Optic" (standard in the Ambiente line). Functioning as the core here is a plastic base element that is covered with a transparent film made from polycarbonate. The film is printed with a pattern of tiny triangles five times, which gives it a very intensive effect of visual depth. The front of the strip is oversprayed with liquid polycarbonate – it reinforces the 3D effect and gives it a glass look. Sealing with a UV coating protects against scratches.

The control unit for the optional deluxe automatic air conditioning is mounted on a panel in piano finish black. The instrument cluster fascia is also black. Many of the controls can optionally be ordered in an aluminum look. The optional lighting package (standard in the Ambiente line) adds further highlights to the interior. Small LED lights are located in the reading lights, vanity mirrors, doors, footwell and on the cupholders; surround lighting illuminates the center console. The switch for the reading lights – another innovation from Audi – reacts to just a slight touch.

Excellent support: the front seats

Based on their ergonomic fit and fine adjustment options, the front seats offer ideal body support. The center armrest (standard in the Ambiente line) is adjustable. Seat options include power lumbar supports, power adjustment and sport seats with high side bolsters and pull-out thigh supports (standard in the Ambition line). S sport seats with integrated head restraints and embossed S line logo are available in the Ambition line. Depending on the version, the steering wheel has three or four spokes, a flattened bottom, multifunction buttons and/or shift paddles for the S tronic.

The interior colors of the new A3 Cabriolet are coupled with the specific equipment and trim line. In the Attraction line, the interior is designed in black or titanium gray; the interior of the sporty Ambition line is styled either all in black or in black with additional silver, blue or yellow contrasting elements. The colors pashmina beige and chestnut brown are also in the color line-up of the luxurious Ambiente line. The two-tone Audi design selection lasso brown, which can be ordered for the Ambition line, adds an exclusive touch.

The interior materials provide for further differentiation. As an option, Milano leather is available in black, pashmina beige, titanium gray or chestnut brown, as is a combination of Pearl Nappa leather and Alcantara in black or titanium gray (for the sport seats). In sport seats with Milano leather, the shoulder area is made from velvet leather; it has a soft, velvety surface, which is reminiscent of suede. A special infrared-reflecting color pigment used on the leather upholstery resists heating by the sun's rays.

The S line sport package is available for the Audi A3 Cabriolet Ambition; it immerses the interior entirely in black. Upholstery materials range from sporty fabric to elegant Fine Nappa leather. The seat backs of the sport seats (optional S sport seats) are embossed with the S line logo. Silver stitching provides accents, even in the floor mats. The trim inlays are designed in either matt brushed aluminum or 3D-design "Black". A special sport leather steering wheel – optionally with a flattened bottom – and a gear shift grip with perforated leather complete the sporty look.

A clear layout: the user controls

The new A3 Cabriolet has clearly structured, intuitive ergonomics. Starting with the MMI radio system, the MMI operating system has an electrically extending screen. The MMI control terminal is on the console of the center tunnel; the electromechanical parking brake, which is operated by a button, replaces the hand-brake lever here.

Located between the two large round instruments, which can be read quickly and reliably, is the 3.5-inch display of the driver information system (DIS). Its efficiency program gives tips on economical driving; it also has a rest recommendation feature. The DIS with color display is standard in the Ambition and Ambiente lines; the color display is optional in the Attraction line.

The new Audi A3 Cabriolet offers space for four adults; its easy entry feature simplifies access to the rear seats. The trunk has a luggage capacity of 320 liters (*11.30 cubic ft*), which can be increased to 680 liters (*24.01 cubic ft*) by folding down the split rear seat backs. As options, Audi also offers a ski and snowboard bag and a storage and luggage compartment package.

Engines

Audi is sending the new A3 Cabriolet to its market launch with three newly developed four-cylinder engines: one TDI and two TFSI engines. Shortly after the market launch, another TFSI will follow as an entry-level engine. Displacements range from 1.4 to 2.0 liters and their power from 103 kW (140 hp) to 132 kW (180 hp). All engines are turbocharged with direct injection; they impress with their high power, ample torque and low fuel consumption. All engines already satisfy the limits of the Euro 6 emissions standard. Driving performance is even better than in the previous model, while CO₂ emissions are up to 13 percent lower.

Playing a large role here are technologies from the Audi modular efficiency platform. The start-stop system lowers fuel consumption by as much as 0.3 liters per 100 kilometers (*0.08 US gallons per 62.14 miles*). The innovative thermal management system helps the engine to reach its operating temperature quickly after a cold start – this shortens the phase of elevated friction losses.

The mounting position is identical for all engines. Their intake side is at the front of the car, and the upper axis is tilted twelve degrees to the rear. This solution, which comes from the Modular Transverse Matrix, offers great benefits together with the compact dimensions of the new engines. Developers shifted the front axle of the new Audi A3 Cabriolet far forward, which improves crash behavior, design and the distribution of axle loads.

The lightweight design philosophy of Audi also expresses itself in the engines. The new 1.4 TFSI with 92 kW (125 hp) weighs just 107 kilograms (*235.89 lb*). In the 1.8 TFSI, the thin-wall technology of the crankcase reduces weight by 2.4 kilograms (*5.29 lb*). In the 2.0 TDI clean diesel, relocating the balancer shafts into the engine block saves 3.0 kilograms (*6.61 lb*).

Audi A3 Cabriolet: Engines

	Displacement	Power output	Torque
1.4 TFSI	1,395 cc	92 kW (125 hp)	200 Nm (<i>147.51 lb-ft</i>)
1.4 TFSI COD	1,395 cc	103 kW (140 hp)	250 Nm (<i>184.39 lb-ft</i>)
1.8 TFSI	1,798 cc	132 kW (180 hp)	250 Nm (<i>184.39 lb-ft</i>)
2.0 TDI clean diesel	1,968 cc	110 kW (150 hp)	340 Nm (<i>250.77 lb-ft</i>)

	0 – 100 km/h (62.14 mph)	Vmax	ECE fuel consumption	CO₂ emissions
1.4 TFSI	10.2 s	211 km/h (131.11 mph)	5.4 l/100 km (43.56 US mpg)	126 g/km (202.78 g/mile)
1.4 TFSI COD	9.1 s	218 km/h (135.46 mph)	5.0 l/100 km (47.04 US mpg)	114 g/km (183.47 g/mile)
1.8 TFSI	7.8 s	242 km/h (139.19 mph)	5.8 l/100 km (40.55 US mpg)	133 g/km (214.04 g/mile)
2.0 TDI clean diesel	8.9 s	224 km/h (150.37 mph)	4.2 l/100 km (56.00 US mpg)	110 g/km (177.03 g/mile)

The 1.4 TFSI has 1,395 cc displacement (bore x stroke 74.5 mm x 80.0 mm [2.93 in x 3.15 in]). It is available in two versions. In the base version, which will follow shortly after the market launch, it produces 92 kW (125 hp); its 200 Nm (147.51 lb-ft) of torque is available from 1,400 to 4,000 rpm. The sprint from 0 to 100 km/h (62.14 mph) takes 10.2 seconds, and the car has a top speed of 211 km/h (131.11 mph). Combined fuel consumption is just 5.4 liters per 100 kilometers (43.56 US mpg) (126 grams of CO₂ per kilometer [202.78 g/mile])

In the version with COD, the 1.4-liter engine offers 103 kW (140 hp) and 250 Nm (184.39 lb-ft) of torque, the latter from 1,500 to 3,500 rpm. The compact four-cylinder engine enables sporty driving performance with 9.1 seconds for the standard sprint from 0 to 100 km/h (62.14 mph) and a top speed of 218 km/h (135.46 mph). Combined fuel consumption is just 5.0 liters per 100 kilometers (47.04 US mpg), which equates to 114 g CO₂ per kilometer (183.47 g/mile). At market launch, the 1.4 TFSI COD will be available with the six-speed manual transmission.

Make two from four: COD technology in the 1.4 TFSI

A cutting-edge innovation is the cylinder on demand (COD) system in the more powerful of the two 1.4 TFSI engines. In the ECE cycle, it reduces fuel consumption by around 0.4 liters per 100 kilometers (0.11 US gallons per 62.14 miles), and in a moderate style of driving it offers as much as 20 percent fuel savings. It is an advanced development of the Audi valvelift system, and its operation is similar to that of engines in the brand's large S and RS models.

At low and moderate load, and in coasting, the COD technology shuts down the second and third cylinders by closing their valves and deactivating fuel injection and ignition to them. To do so, the engine speed must be between 1,400 and 4,000 rpm and torque must be less than 100 Nm (*73.76 lb-ft*). Pins, which are extended electromagnetically, activate the so-called cam pieces – sleeves that each have two different cam profiles – on the camshafts. Then the so-called zero-lift profiles rotate over the valves; they do not activate the valves, and the valve springs hold the valves closed.

The switchover process takes just milliseconds. This increases efficiency in the active cylinders 1 and 4, because their operating points are shifted to higher loads. Even with a firing interval of 360 degrees, vibration of the 1.4 TFSI is still very low and the engine is quiet. When the driver pushes the pedal for fast acceleration, the cam pieces retract, and the shut-down cylinders are reactivated.

132 kW (180 hp): the 1.8 TFSI

At the sales launch of the new A3 Cabriolet, the 1.8 TFSI will be the most powerful engine – it too demonstrates the high-tech competence of Audi with numerous innovations. Its power output is 132 kW (180 hp), and its maximum torque of 250 Nm (*184.39 lb-ft*) is available between 1,250 and 5,000 rpm. The 1.8-liter engine, paired with the seven-speed S tronic, accelerates the open-top four-seater from a standstill to 100 km/h (*62.14 mph*) in 7.8 seconds, and it boasts a top speed of 242 km/h (*150.37 mph*). Its combined fuel consumption is 5.8 liters of fuel per 100 kilometers (*40.55 US mpg*), which corresponds to 133 grams of CO₂ per kilometer (*214.04 g/mile*).

One of the key innovations in the 1.8 TFSI is the addition of indirect fuel injection. Under part load, it injects the fuel at the end of the induction manifold in the vicinity of the tumble flaps, where it is swirled intensively with the air. The improved mixture formation boosts fuel economy and reduces particulate emissions. FSI direct petrol injection, which develops up to 200 bars of pressure, is active at engine start and at higher loads.

Clean and Euro-6-conformant: the 2.0 TDI clean diesel

The 2.0 TDI clean diesel has been thoroughly redesigned in the new Audi A3 Cabriolet. It produces 110 kW (150 hp) and transfers 340 Nm (*250.77 lb-ft*) of torque to the crankshaft at engine speeds from 1,750 to 3,000 rpm. It accelerates the A3 Cabriolet from 0 to 100 km/h (*62.14 mph*) in 8.9 seconds and to a top speed of 224 km/h (*139.19 mph*). The average fuel consumption of the Euro-6 diesel engine, which will be paired with a six-speed manual transmission at market launch, is just 4.2 liters per 100 kilometers in the NEDC (*56.00 US mpg*), CO₂ emissions are 110 g/km (*177.03 g/mile*).

In developing this engine, which has 1,968 cc displacement, the focus was on reducing emissions and optimizing for low friction. Among other actions, this was achieved by using roller bearings for the balancer shafts and reducing piston ring stress.

As in the 1.4 TFSI, the valve train is designed as a separate module, and the shafts are pressed into a separate bearing frame here. The camshaft adjuster can adjust the intake shaft by a crank angle of as much as 50 degrees. This activates one intake valve and one exhaust valve per cylinder via the valve star that is rotated 90 degrees, which enables variability of timing.

The crankcase and cylinder head have separate coolant circulation loops, each independently controlled. In the warm-up phase, for example, only a micro-circulation loop is active, which ensures quick warm-up of the engine block. Oil supply by the oil pump is regulated efficiently over two pressure levels. They are adapted to the engine's demand for oil in its various load states and are switched according to demand.

The common rail system injects fuel at up to 2,000 bars of pressure via the 8-hole nozzles of the injectors. The higher pressure compared to the EU5 version results in even finer dispersion of the fuel in the combustion chambers, and this ensures efficient and low-emission combustion.

As in the 1.4 TFSI, the intercooler is integrated in the induction manifold – this solution enables short gas paths, good response, high control quality and good efficiency levels. The newly developed components for emissions control, DeNOx storage catalytic converter and diesel particulate filter, have been placed directly on the engine. Significantly shortened gas paths have improved emissions control response substantially. Also integrated in this subassembly is a low-pressure exhaust gas recirculation system; it reduces pressure losses to a minimum in exhaust gas recirculation.

The 1.6 TDI will follow somewhat later. The four-cylinder engine produces 81 kW (110 hp) and 250 Nm (*184.39 lb-ft*) of torque. Another engine that will follow is the 2.0 TDI clean diesel in a version with 135 kW (184 hp) and 380 Nm (*280.27 lb-ft*) of torque.

Drivetrain

At market launch, Audi is offering the new A3 Cabriolet with two different transmissions: the 1.4 TFSI COD and 2.0 TDI have manual six-speed transmissions, while the 1.8 TFSI uses the seven-speed S tronic. Like all Audi transmissions, the manual transmission is also widely spread – the lower gears have sporty short ratios, while the highest gear has a long ratio to reduce engine speed. The six-speed manual transmission features precise shifting with short paths.

The seven-speed S tronic consists of two sub-units; two multi-plate clutches service the gears. While driving, only one sub-unit of the A3 Cabriolet is coupled to the engine at any given time, but both are continually active. For example, when the driver accelerates in third gear, the fourth gear is already engaged in the second sub-unit. The shifting process takes place by switching clutches; this takes place in just a few hundredths of a second and with no detectable interruption of propulsive power.

The seven-speed S tronic can be manually shifted too with the gear selector lever or optionally with shift paddles on the steering wheel. Revs are somewhat higher in the automatic S mode, whereas the map for D mode prioritizes longer gear ratios. When combined with the optional Audi drive select dynamic driving system (standard in the Ambition line), there is an additional "E" shifting map in the efficiency mode and a free-wheeling function that further reduces fuel consumption.

Newly developed: quattro permanent all-wheel drive

At its market launch, the new Audi A3 Cabriolet will be available with front-wheel drive; quattro permanent all-wheel drive will follow for the more powerful engines. At its core is a newly developed hydraulic multi-plate clutch with electronic control. To improve load distribution to the axles, the clutch is placed directly in front of the differential, i.e. at the end of the prop shaft.

In normal driving, the clutch transfers most of the engine's power to the front wheels; when traction drops there, power can be variably redirected to the rear wheels within just a few milliseconds. The clutch is able to operate without the pressure reservoir that was used in the previous unit; it is considerably more compact and 1.4 kilograms (*3.09 lb*) lighter.

Chassis

Elaborately constructed, sporty and balanced in its tuning – the chassis of the new Audi A3 Cabriolet sets standards. Axle load distribution is finely balanced; in the version with the 1.4 TFSI COD with manual transmission the ratio is 56 percent (front) to 44 percent (rear).

The front suspension is a McPherson design with lower wishbones. Like the subframe, the pivot bearings for engines from 125 kW (170 hp) are made of aluminum. As with the rear axle, a stabilizer is used here too.

Many components of the four-link rear axle are made of high-strength steel. The sword-shaped longitudinal links absorb the propulsive and braking forces; their bearings are large and relatively soft to ensure a comfortable ride. On the other hand, the three transverse links of each wheel are rigidly joined to the steel subframe; this lets them handle lateral forces precisely. The shock absorbers and the compact coil springs are kept separate – this solution enables finely-tuned response and a large luggage compartment. In the quattro versions, the wheel carriers are made of aluminum.

Audi is offering a sport suspension as an option for the new A3 Cabriolet (standard in the Ambition line). It sets the body 15 millimeters (*0.59 in*) lower; in the sport chassis that is available as an option in the S line it is 25 millimeters (*0.98 in*) lower. This decidedly taut setup can either be ordered individually or as part of the S line sport package.

The power steering of the new Audi A3 Cabriolet lets the driver feel the contact to the road intensively and precisely. Its electromechanical drive is mounted directly to the steering rack, and it instantly transfers steering forces to the tie rods. When driving a straight course, it does not consume any energy – this reduces fuel consumption. The power assistance is reduced with increasing speed.

The electrically assisted progressive steering system is also available as an option for engines from 103 kW (140 hp). Its steering rack is designed so that the steering ratio becomes increasingly direct when turning. The result is reduced steering effort when parking and when in city traffic, as well as on winding country roads and hairpin bends, thanks to noticeably greater agility. Speed-dependent steering assistance ensures excellent steering characteristics for every driving situation.

312 millimeters (*12.28 in*) diameter: the front brake discs

Also contributing to the sporty character of the new Audi A3 Cabriolet are its powerful brakes; they convey a taut, finely metered pedal feeling. The internally ventilated front brake discs are 288 millimeters or 312 millimeters (*11.34 in or 12.28 in*) in diameter, while the rear discs are all 272 millimeters (*10.71 in*). The electromechanical parking brake is integrated in the rear axle brake system; if necessary it can also serve as an emergency brake.

In the new A3 Cabriolet with front-wheel drive, the electronic limited slip differential is standard; it is a sub-function of the further developed electronic stabilization control (ESC); it makes handling even more agile, stable and precise. When the front wheel on the inside of the curve has excessively reduced load, a minimal brake intervention is made there, and the excess torque flows to the wheel at the outside of the curve. The difference in propulsive forces ensures that the car turns slightly into the curve – this supports the driver.

The new Audi A3 Cabriolet comes off the assembly line on alloy wheels with 17- or 16-inch wheels. 18-inch aluminum wheels are fitted with the S line sport package. Audi offers a wide selection – the top wheels are 8 J x 19 in a machine-polished bicolor design with size 235/35 tires. They are coupled to the sport suspension and Audi magnetic ride options.

A tire pressure monitoring indicator and a repair set are standard, and a space-saving spare tire is available as an option.

Standard in the Ambition line: Audi drive select

The Audi drive select dynamic driving system is standard equipment in the Ambition line. In the base version, this system integrates the throttle valve, power steering or progressive steering and S tronic (with the 1.8 TFSI).

A switch lets the driver vary the functionality of these components between comfort, auto, dynamic and efficiency modes. In efficiency mode, the optional modules deluxe automatic climate control and adaptive cruise control operate in a fuel-economizing manner. The individual mode is added starting with the MMI radio system.

For engines from 103 kW (140 hp), customers can also select Audi magnetic ride, an electromagnetic shock absorber control system; it too is managed by Audi drive select. Circulating inside its shock absorber pistons is a synthetic oil containing tiny magnetic particles. When a voltage is applied to a coil, the particles align perpendicular to the direction of oil flow, impeding flow through the channels in the pistons. The system control unit constantly analyzes the road conditions and the driving behavior, continually adapting shock absorber forces within milliseconds.

Regardless of this, the driver can select the comfort, auto and dynamic modes. In comfort mode, the new Audi A3 Cabriolet offers a balanced and comfortable ride. In dynamic mode, on the other hand, the car responds tightly to the road. Steering response is more spontaneous, rolling motion is largely suppressed, and targeted support of the individual wheels in fast driving through curves, which makes the car's self-steering behavior even more dynamic. When braking, Audi magnetic ride counteracts diving behavior of the body, which is 15 millimeters (0.59 in) lower.

Equipment and trim

The new Audi A3 Cabriolet will be manufactured at the plant in Győr, Hungary, which Audi has expanded with an investment of €900 million. Deliveries begin in the first quarter of 2014. The base price for the 1.4 TFSI COD is €31,700.

Audi A3 Cabriolet: prices

Audi A3 Cabriolet 1.4 TFSI	€30,500
Audi A3 Cabriolet 1.4 TFSI COD	€31,700
Audi A3 Cabriolet 1.8 TFSI	€33,900
Audi A3 Cabriolet 2.0 TDI clean diesel	€34,300

The line-up of standard features is generous. The package of restraint systems includes an integral head restraint system; along with the two full-size airbags, two head-thorax side airbags and a knee airbag for the driver are ready if needed. Other safety features include the Isofix anchor for children's seats on the rear seats, the adaptive brake light, tire pressure monitoring indicator and ESC stabilization-control with electronic limited slip differential.

Standard features include the power windows, height adjustable front seats and electromechanical parking brake. The folding split rear seat backs, manual air conditioning system and exterior mirrors with LED side turn signals round out the package.

Additional features of the Ambition line are the sport suspension, 17-inch alloy wheels, Audi drive select dynamic driving system, fog lights, sport seats (optional S sport seats), aluminum door sill plates and three-spoke leather sport steering wheel. The exceptionally comfortable Ambiente line offers a four-spoke leather steering wheel, cruise control, LED interior lighting package, front center armrest, wind deflector and rear parking system. Inlays here are in 3D-design "Optic"; on the exterior, 16-inch alloy wheels provide accents. Both lines also have the driver information system with rest recommendation and color display.

Many other convenience options are available to choose from. For the interior, they include the deluxe automatic climate control system, head-level heating, convenience key, storage and luggage compartment package, automatically dimming rear-view mirror with light and rain sensor as well as heated and folding exterior mirrors. For the front seats, Audi offers lumbar supports, seat heating and power seat adjustment.

There is also a wide variety of headlights to choose from – they range from xenon plus units to adaptive light and variable headlight range control as well as LED headlights and LED tail lights.

Driver assistance systems

In the new A3 Cabriolet, Audi is making driver assistance systems available that come directly from the full-size class. Adaptive cruise control (ACC) is the most complex of the optional driver assistance systems. At speeds between 30 km/h and 150 km/h (*18.64 mph and 93.21 mph*), the radar-based cruise control system – whose sensor is placed in the lower section of the Singleframe grille – maintains a desired distance to the vehicle ahead in the new open-top Audi. In many situations, the system accelerates and brakes autonomously; the driver can set the distance and dynamic control behavior over four stages.

In the 1.8 TFSI with its S tronic, a Stop&Go function extends the control range of the ACC downward. When the vehicle ahead stops, the system stops the Cabriolet behind it. If the vehicle ahead drives off again within three seconds, it automatically drives off to follow the vehicle in front. If the assistance package is ordered, which bundles multiple systems, the ACC control range is extended upward to a vehicle speed of 200 km/h (*124.27 mph*).

Audi side assist helps the driver when changing lanes. From a speed of 30 km/h (18.64 mph), its radar sensors monitor the road to the rear up to a distance of around 70 meters (229.66 ft). As soon as the system detects another vehicle that might be in the blind spot or approaching rapidly, it classifies the lane change as critical, and it warns the driver via an illuminated LED on the relevant exterior mirror. If the driver still activates the turn signal in such a situation, the indicator flashes brightly several times.

Autonomous steering: the park assist

Audi offers several systems for convenient parking that range up to the park assist with selective display, which can reverse the new A3 Cabriolet into a parking space. At moderate speeds, the system measures the parking spaces using its ultrasonic sensors. A notification appears in the driver information system display when the system finds a suitable spot. When the driver now puts the car in reverse, the system takes over steering control via the electromechanical steering system – the driver only has to accelerate, shift gears and brake.

When the system has detected a suitable parallel or perpendicular parking space, the park assist steers into it, if necessary in several forward and reverse maneuvers. It provides similar assistance when leaving parallel parking spaces. The park assist can be supplemented by a reversing camera, which is located in the handle of the trunk lid.

Starting at around 65 km/h (40.39 mph), Audi active lane assist is activated, and it detects lane lines on the road with its video camera. If the new A3 Cabriolet begins to approach one of the lane lines without a turn signal being activated, it guides the driver back into the lane with a gentle pulse of the electromechanical steering system. In the MMI user control system, it is possible to configure a vibration in the steering wheel as feedback and define the time of the intervention. In the "early" setting, the system assists the driver in steering down the center of the lane.

Working together with the MMI navigation plus, Audi active lane assist offers an additional function – camera-based traffic sign recognition. Based on image data from the camera, and comparing this to data from the navigation system, it shows speed limits and signs such as "no passing" zones. A third feature of Audi active lane assist is the high beam assistant – which is available separately – which autonomously switches between high beam and low beam headlights.

A number of versions available: Audi pre sense

The Audi pre sense safety system is available in a variety of versions. Audi pre sense basic, which is available as a stand-alone subsystem, detects an unstable driving state via sensors of the electronic stabilization control (ESC) system. In this case, it pretensions the front seat belts, and if the Cabriolet begins to skid, it closes the windows.

The Audi pre sense front version is included as part of adaptive cruise control. It helps the driver avoid an impending collision or at least minimize its severity. In a critical situation, the system preconditions the brake system and warns the driver via visual and acoustic signals.

In the second stage, a brief braking pulse occurs – a warning jolt. If the driver now brakes, the system helps to avoid a collision. If the driver remains passive, Audi pre sense front initiates braking. If a collision occurs, a function becomes active that is a standard feature of the new Audi A3 Cabriolet – the multicollision brake assist. In many situations, it prevents the car from continuing to roll in an uncontrolled manner, and it activates the car's interior lighting and hazard warning system. If the Audi connect system is installed, it initiates an emergency phone call when a cell phone is connected or a SIM-Card is in usage.

At speeds under 30 km/h (*18.64 mph*), City Emergency Braking function is ready to assist – another feature of Audi pre sense front. If the driver does not initiate any reaction to an impending collision with a vehicle driving ahead, or a stationary vehicle, the brake system is preconditioned. If the driver brakes with insufficient force, the system assists with maximum braking force. If necessary, the function automatically initiates full braking. At speeds under 20 km/h (*12.43 mph*) the new function can prevent an accident altogether in some situations. In others, it significantly reduces the vehicle's speed at impact.

Infotainment systems and Audi connect

In its infotainment systems, the new A3 Cabriolet showcases the concentrated expertise of Audi. The base system is the standard Audi radio, which has four loudspeakers and can be folded out from the top of the instrument panel. The next level up is the MMI radio, which drives eight loudspeakers; it comes with an electrically extending 5.8-inch color monitor and the MMI user interface terminal. The connectivity package can be added, which offers many interfacing and playback options. If the customer later buys an SD card with navigation data or chooses the navigation package when ordering the car, the MMI radio serves as a navigation system.

The high-end solution is the MMI navigation plus with MMI touch. It offers an internal flash memory with 64 GB capacity, a DVD drive, a radio with three tuners, two card readers, the Audi music interface (AMI) and a Bluetooth interface. A speed limit display based on navigation data rounds out the program.

The MMI terminal on the console of the center tunnel serves to control the many functions. Its large rotary/push switch, together with the touchwheel, becomes a touchpad – the top of which is a touch-sensitive surface. The driver writes the letters or numbers he or she wishes to input for navigation or a phone call on the touch-sensitive screen pad by fingertip; the system then provides acoustic feedback after each character.

Arranged around the touchwheel are a main menu button and a back button, four softkeys for navigating through the menus and two rocker switches which cover the areas of navigation, telephone, radio and media. The volume control has a skip function for skipping to different titles. Many functions can also be controlled via the optional multifunction steering wheel with its buttons, rocker switches and rollers.

At the system start, the 7-inch color monitor extends electrically from the instrument panel. Its high-gloss black magnesium housing is only 11 millimeters (*0.43 in*) thick – as thin as a high-end cell phone. With its 800 x 480 pixel resolution, the display delivers razor-sharp images in brilliant colors, while efficient LEDs create its backlighting.

Data transfer via LTE: Audi connect

The MMI navigation plus system becomes even more appealing with the supplemental system Audi connect – a data transmission module that establishes a connection to the Internet. It utilizes the 4G LTE (Long Term Evolution) standard whenever possible. Audi is the world's first manufacturer to implement it in cars.

Passengers in the new A3 Cabriolet can surf and email freely over the WLAN hotspot that comes with the module – with up to eight mobile devices. The system uses LTE to deliver the customized services of Audi connect to the driver – from navigation with Google Earth and Google Street View to Audi music stream web radio and online traffic information. The online community services Facebook and Twitter have also been integrated in a car-friendly way.

Audi connect uses the car's antenna, which ensures optimal reception. A digital speech processor delivers excellent hands-free call quality, outputting voice signals over the car's sound system. Encryption via the WPA2 standard makes data transmission secure. All the driver needs to do to use Audi connect is insert a data-capable SIM card. The connection can also be established using the SIM Access Profile of a compatible cell phone. There are no extra charges for this, and the customer does not need to sign a separate contract

Attractive components round out the infotainment options. They include a tuner for digital radio reception (DAB+) and the Audi Phone Box, which conveniently establishes a wireless interface between the cell phone and the car's antenna. At work in the Audi sound system is a six-channel amplifier with ten loudspeakers.

The top system in the new Audi A3 Cabriolet is the Bang & Olufsen Sound System. Its amplifier, located under the driver's seat, has 625 watts of acoustic power and 13 channels, and it drives 13 loudspeakers including a center speaker and two kick-bass loudspeakers. The sound processor analyzes noise levels inside the car with a microphone to optimize the sound. In combination with the DVD drive of the MMI navigation plus, the sound is also output in 5.1 surround format.

The Bang & Olufsen Sound System also has a fascinating visual appearance. Running along the upper border of the woofers in the doors is a boomerang-shaped trim strip of anodized aluminum, in which the logo of the Danish hi-fi specialist is laser-engraved. Located between the trim strip and the loudspeaker screen is a narrow light guide that radiates white LED light.