

Corporate Communications Department
Audi Australia Pty Ltd
895 South Dowling St
Zetland NSW 2017

Anna Burgdorf
Tel: 02 9695 6250 / 0401 990 230
Email: anna.burgdorf@audi.com.au

Shaun Cleary
Tel: 02 9695 6252 / 0478 493 389
Email: shaun.cleary@audi.com.au

July 2015

The new Audi TT Roadster – sporty dynamics where the sky's the limit

Compact

Summary

At a glance

Full version – Exterior design

Soft top

Body and lightweight construction concept

Engine

Transmission

quattro permanent all-wheel drive

Chassis

Interior

Audi virtual cockpit and MMI

Compact

Dynamic performance where the sky's the limit

The Audi TT success story began in the mid-1990s with a roadster – the very first design model of the compact sports car had a lightweight soft top. The TT Roadster went into production in 1999; its successor debuted in 2007. Audi now presents the third generation of the open-topped two-seater. The new TT Roadster boasts a pronouncedly sporty character and groundbreaking technology.

The sporty character of the TT Roadster is immediately apparent when entering the vehicle. Open the doors and the Audi virtual cockpit – the fully digital instrument cluster – comes to life. It presents all information in brilliant, 3D graphics, including the navigation map. Another innovation is the operating concept in the MMI. It supports free text search and natural speech control.

The new open-topped two-seater from Audi is a driving machine: powerful, efficient, uncompromising. The handling is sporty. The Roadster turns eagerly into corners, guided by the sensitive and direct-ratio progressive steering.

The newly developed quattro permanent all-wheel drive unites driving pleasure and stability thanks to the electrohydraulic multi-plate clutch. It distributes the power optimally between the front and rear axles as a function of the driving situation, road properties and driver type.

The TT Roadster is equipped with a 2.0 TFSI engine that develops 169kW and 370Nm. Its fuel consumption is just 6.7 litres per 100 kilometres. With CO₂ emissions of just 154 grams per kilometre, the TT Roadster sets a new benchmark in the sports car segment.

Summary

Sports car for the senses – the new Audi TT Roadster

A sports car for the senses: Audi is launching the third generation of the TT Roadster. The open-topped two-seater demonstrates the engineering expertise of the brand in its lightweight construction, engines, quattro permanent all-wheel drive and the new Audi virtual cockpit.

The result is pure emotion – the joy of open-topped driving. This is due in part to the generous list of standard features in the new TT Roadster. The seat belt microphone provides for good audio quality even with the top down. The S sport seats in the two-seater offer optimal hold and comfort, including optional neck-level heating.

All-new: the Audi virtual cockpit and MMI

The new TT generation features a new display and operating concept. It is driver-focused and with its intuitive structure imparts a novel “joy of use.” The most noticeable innovation is the Audi virtual cockpit. The digital instrument cluster with its 12.3-inch TFT monitor presents all information in the form of tack- sharp, high-contrast 3D graphics and allows the driver to switch between various levels.

The MMI terminal on the centre tunnel console also follows the new operating logic. Flat hierarchies replace branched menu trees; nearly all entries are completed in just a few steps, often using free text search and natural speech control. When combined with the optional connectivity package or MMI navigation plus, the surface of the rotary pushbutton features a touchpad, the MMI touch.

The driver can use it to enter characters, scroll and zoom.

Alternate control elements include two versions of the multifunction steering wheel and a highly advanced voice control system. It also understands everyday language, such as “I want to call Peter” or “Where is the closest petrol station?” In the past, the wording of the commands was predefined.

Athletic and masculine: the exterior design

The new TT Roadster is 4.18 metres long with a wheelbase of 2.51 metres. Its overhangs are short. It has an athletic, focused and seamless road stance. The Audi designers retained the timelessly puristic lines of the original TT. Nevertheless, many elements have been reinterpreted and the design enhanced with distinctive facets. Customers can choose from 11 exterior colours, one of which is exclusively for the S line. Seven of the colours in the palette are new for the TT, and two of these are completely new for Audi: Nano Grey with its technological air and the dramatic tango red. The S line exterior package can be recognised by particularly sharp details such as the sportily distinctive air inlets and the aerodynamic side sills.

Horizontal lines dominate the front of the new Roadster. The Singleframe grille is similarly wide and flat as on the Audi R8 high-performance sports car. Audi also offers LED headlights or the innovative Matrix LED technology. The latter uses small, controllable, individual LEDs to generate the high beam. The daytime running lights shine from bars that divide the headlights. Dynamic turn signals are another Audi innovation.

Many elements in the profile of the open-topped two-seater are also reminiscent of the first generation of the design icon. The wide wheel arches form distinct geometric entities. The front arch intersects the hood join, which continues over the door as the tornado line and extends all the way to the rear. The tank flap is a classic circle, and as in racing there is no cap beneath it. Six bolts adorn the ring of the tank flap.

Horizontal lines also underscore the width of the car at the rear. The bars in the LED tail lights light up together with the daytime running lights. The third brake light, a strip on the lip of the luggage compartment lid, connects the two units. At speeds above 120 km/h, a spoiler extends from the luggage compartment lid. With the top closed, the new TT Roadster achieves a drag coefficient of 0.30. The unmistakable design goes hand-in-hand with excellent aerodynamics.

Latest technology: the body and the soft top

The body of the new compact sports car is a new evolution of the Audi Space Frame (ASF) based on the modular transverse platform (MQB). Ultra-high-strength components of hot-shaped steel reinforce the floor of the occupant cell. Aluminium in the form of the classic wrought components cast nodes, extruded sections and Aluminium panels is used in the cell and for all exterior skin and bolt-on parts.

The Audi engineers reinforced key areas of the Roadster's body compared with the Coupé in the interest of safety and torsional strength. These include the A-pillars, the sills and areas below the front and rear ends. A solid wall separates the occupant cell from the luggage compartment. Its upper section houses the steel roll-over bars. With the 2.0 TFSI engine and manual transmission, the kerb weight of the TT Roadster (without driver) is only 1,425 kilograms.

The cloth soft top tips the scales at just 39 kilograms. As it opens, it folds together into a flat package that hardly reduces the available volume of the 280-litre luggage compartment. The standard electric drive opens and closes the top in ten seconds, even when driving at speeds up to roughly 50 km/h.

The soft top sits low over the sheet metal body and remains taut even at high speeds. Because of its very good acoustic insulation thanks to a fleece layer, it is referred to as an acoustic soft top for the S sport seats.

Powerful and highly efficient: the engines

At launch, Audi is offering a TFSI forced-induction, two-litre, four-cylinder 169kW engine that is considerably more efficient than the engines used previously. A start-stop system is standard. A sound actuator is also on board as a function of the standard Audi drive select dynamic driving system.

The 2.0 TFSI produces 169 kW and 370 Nm. With its standard S tronic transmission, the TT Roadster model accelerates from 0 to 100 km/h in just 5.6 seconds. Switchable exhaust flaps provide for an even fuller engine sound during the sprint.

Regardless of the engine version, the power flows to the sporty six-speed S tronic. The dual-clutch transmission shifts gears lightning-quick without any noticeable interruption in traction, and in manual mode the driver can

control it using the paddles on the steering wheel. In efficiency mode in the Audi drive select system, the S tronic coasts when the driver takes their foot off the petrol. The system thus helps to reduce fuel consumption.

Latest evolution: quattro permanent all-wheel drive

Audi has also taken a large developmental step with the quattro permanent all-wheel drive, which is standard. The electrohydraulic multi-plate clutch distributes the power optimally between the front and rear axles as a function of the driving situation, road properties and driver type.

The electronic controller for the clutch unites driving pleasure and safety at a new level. During sporty driving, it sends more power to the rear axle. On low-friction surfaces, the quattro drive system together with the Electronic Stabilization Control (ESC) allows safe, controlled drifts.

For the first time Audi has integrated management of the quattro clutch into the optional Audi drive select system, which offers various driving modes. The system controls the function of the petrol pedal and steering boost, and integrates multiple optional modules, including the adaptive damping system Audi magnetic ride.

Dynamic and highly precise: the chassis

The sophisticated chassis and taut setup give the open-topped two-seater dynamic, highly precise handling. Parts of the front wheel suspension are made of Aluminium. The electromechanically boosted progressive steering is standard; its rack makes the steering ratio more direct with increasing steering input. The four-link rear suspension can process the longitudinal and transverse forces separately. The body is lowered ten millimetres with Audi magnetic ride.

The Audi TT Roadster comes standard with particularly lightweight 18-inch wheels and 245/40 tyres. Wheel sizes up to 20 inches are available as options.

The highlight of the sporty handling is provided by the Electronic Stabilisation Control (ESC), which can be partly or completely deactivated. During fast cornering, its torque vectoring function minimally brakes both inside wheels (with quattro all-wheel drive). Due to the difference in traction forces, the Roadster turns slightly into the corner, making handling even more precise, neutral and stable.

Sporty look: the interior design

With its sinewy lines, top-quality workmanship and new colours and materials, the interior is a tangible expression of the sports car character of the new TT generation. Seen from above, the slender instrument panel resembles the wing of an aircraft; the round air vents – a classic TT feature – are reminiscent of jet engines. They house the controls of the air conditioning or the optional deluxe automatic air conditioning.

The low-mounted sport seats with integrated head restraints – another new development – together weigh five kilograms less than the seats in the previous model. All seats include power adjustment, with pneumatic adjustment for the S sports seats. The luggage compartment of the open-topped two-seater has a capacity of 280 litres.

At a glance

The new Audi TT Roadster

Concept, exterior design, body and soft top

- Two-seat roadster, length 4.18 metres, wheelbase 2.51 metres, short overhangs, kerb weight from 1,425 kilograms, luggage capacity 280 litres
- Athletically puristic design with hints of the first-generation TT
- Optionally available with LED headlights or Matrix LED headlights
- Composite construction ASF body of steel and Aluminium
- Lightweight acoustic soft top made of cloth with electric drive

Interior design, operating concept and equipment

- Flowingly light lines, new palette of colours and materials
- Systematic focus on the driver, newly developed, sporty seats
- Climate controls in the air vents
- Digital Audi virtual cockpit, redesigned MMI controls, high-performance voice control system
- State-of-the-art, flexible technology architecture for infotainment
- Optional state-of-the-art driver assistance systems available

Drivetrain

- 2.0-litre four-cylinder engine producing 169kW
- Six-speed S tronic transmission standard
- quattro permanent all-wheel drive standard, newly developed multi-plate clutch for maximum driving pleasure and safety

Chassis

- Sophisticated wheel suspensions, four-link rear suspension
- Progressive steering with electromechanical servo boost as standard
- Audi drive select dynamic handling system and Audi magnetic ride adaptive damping
- Deselectable Electronic Stabilization Control (ESC) with torque vectoring
- 18-inch lightweight wheels, optionally up to 20 inches

Full version

Dynamic performance where the sky's the limit – the new Audi TT Roadster

A modern classic relaunched: Audi introduces the third generation of the TT Roadster. The open-topped two-seater fascinates with its puristic sports car character, distinctive design, excellent dynamics and groundbreaking technology. One highlight is the Audi virtual cockpit, the digital instrument cluster.

Exterior design

The TT success story began 20 years ago when development of the first model began. Although the original TT debuted as a coupe, the first design model was a roadster. Even then the circle was the central motif – the arcs around the wheel arches at the front and rear were in exciting contrast to the strictly horizontal lines. This timeless architecture quickly earned the TT and TT Roadster a reputation among automobile fans as a design icon – a powerful driver for the further development of the Audi brand.

Just slightly larger than the original TT, the third generation of the TT Roadster also has a powerful and compact road stance. It is 4,177 millimetres long and has a wheelbase of 2,505 millimetres. The overhangs are short. Width and height are 1,832 and 1,355 millimetres, respectively. Compared with its predecessor, the new Roadster is 21 millimetres shorter and 10 millimetres narrower. Its wheelbase, however, has grown by 37 millimetres.

Just how well the new Audi design line has been received by the experts is apparent from two awards the TT Coupé received shortly after its debut. The 2+2-seater was named “Innovation of the Year” in the “Automotive Brand Contest” initiated by the prestigious German Design Council. Shortly thereafter, the compact sports car was honored with the “German Design Award” – which is also sponsored by the German Design Council – in the category “Transportation and Public Design”.

In Australia, the TT Coupé was also a recipient of a 2015 Good Design Award in the ‘Automotive and Transport’ product category.

Classic: motifs from the original TT Roadster

The Audi designers took up many ideas from the first TT Roadster and refined them. On the flanks these are the muscularly arched shoulders, the light-refracting edge on the sculpted side sills, and the wheel arches, which seem to be superimposed. The front wheel arch intersects the edge of the engine hood, which continues over the door as a shoulder line. At the rear, the lights organically integrated into the design and the side-by-side tailpipes of the exhaust system evoke the original TT.

Above the right rear wheel is the round tank flap, another classic TT feature. The driver opens it by pressing the embossed logo, then inserts the nozzle directly into the opening. As in racing, there is no cap to unscrew.

New facets: the front end

The fusion of typical TT elements with the new, dynamic line results in a progressive design character. With its emphatically horizontal design the front end conveys athletic energy. The small triangles between the Singleframe grille and the headlights are attractive facets. The wide, low grille and the rings on the front hood are reminiscent of the Audi R8 high-performance sports car. Vertical, slightly inclined bars divide the air inlets, and a flat opening below the Singleframe joins them together.

The new TT Roadster comes standard with xenon plus headlights, with LED headlights or Matrix LED headlights available as an option. With the latter, 12 small, individually controllable light-emitting diodes per headlight generate the high beam. The traffic situation is analyzed using a camera on the interior mirror. On the basis of this information, the controller switches the individual diodes on or off, or dims them in 64 steps.

In this way the new headlight system can produce several million light patterns. It prevents other road users from being dazzled by glare and ensures that the road is always brightly illuminated.

In combination with MMI navigation plus, the Matrix LED headlights offer another high-end function: The predictive cornering light is activated on the basis of the route data before the steering wheel is turned.

400 millisecond cycle time: the dynamic turn signals

With the optional headlights, the daytime running lights comprise three bars arranged as a grille. Light-emitting diodes illuminate them via thick-wall optics. The dynamic turn signals are another Audi innovation contributing to road safety. They move with a 400 millisecond cycle time in the direction the driver intends to turn, providing other road users with additional information. In combination with the LED headlights, dynamic turn signals are used in the rear; they are also used up front in combination with the Matrix LED units.

Horizontal lines also underscore the width of the open-topped sports car at the rear. The bars in the standard LED lights, which adopt the motif of the headlights, are permanently illuminated. During strong braking, the adaptive brake light blinks rapidly. The third brake light connects the two units as a strip on the lip of the luggage compartment lid. A diffuser integrates the exhaust tailpipes. At speeds above 120 km/h, a spoiler extends electrically from the luggage compartment lid to generate downforce on the rear axle.

Even sharper: S line

The new TT Roadster S line adds additional sharp accents at the front, on the flanks and at the rear, such as the sportily distinctive air inlets and the aerodynamic side sills.

The choice of paint finishes is more colourful than before. The solid colours are brilliant black, ibis white and Vegas yellow; the metallic paint finishes Florett Silver, Glacier White, Monsoon Grey, Mythos Black, Nano Grey, Scuba Blue and Tango Red.

Soft top

The soft top of the new TT Roadster generation is an automatic acoustic soft top. It sits low and flows smoothly over the body. The side window is short. If the top loses tension, it is pulled taut again by the two electric motors used to open and close it. There is a choice of three colours – black, grey and beige; the interior colour is black.

Like all open-topped cars from Audi, the TT Roadster also has a cloth top. It fits more harmoniously into the design line than a steel roof, and is also much lighter. With its substructure components of magnesium, Aluminium,

steel and polymer, the soft top weighs just 39 kilograms, three kilograms less than on the previous model. This benefits the total weight and centre of mass of the open-topped two-seater.

Space-saving: the Z-fold

While opening, the top forms a Z shape as it folds together into a flat package. Lying in its Aluminium compartment, it does not reduce the available volume of the 280-litre luggage compartment. The standard electric drive opens and closes the top in ten seconds, even when driving at up to around 50 km/h. Graphics in the Audi virtual cockpit illustrate the procedure.

The thermal and acoustic insulation of the TT Roadster is excellent. The fleece layer above the headlining plays an important role here. The five-layer structure has a total thickness of 15 millimetres (plus headlining). Interior noise has been reduced compared with the previous model, most noticeably in the frequency range of the slipstream. Options include an electrically retractable wind deflector and neck-level heating for the S sport seats.

Body and the lightweight construction concept

The body of the new TT Roadster represents the latest version of the ASF (Audi Space Frame) technology in a new composite construction of steel and Aluminium. It thus follows the classic Audi motto “The right material at the right place for optimal function.”

The substructure uses numerous components from the Volkswagen Group’s Modular Transverse Matrix (MQB), primarily a strong structure of hot-shaped panels in the floor and for the rear longitudinal members. Their extreme strength makes it possible to reduce the cross-sections and thus the weight of the add-on parts, which lowers the centre of mass of the entire car.

Large superstructure components, such as the A- and B-pillars and the Aluminium sills, are cast nodes and extruded profiles – typical Audi wrought components. The exterior skin and all add-on parts are stamped entirely from Aluminium sheet. Altogether, aluminium and hot-shaped steel in the body-in-white account for 42 percent of the weight.

Maximum safety: targeted reinforcements

Compared with the Coupé, targeted reinforcements have been made to the occupant cell of the Roadster. The side sills, which are produced by means of hydroforming, have interior ribbing of steel. The A-pillars enclose steel pillars, which in turn contain solid steel tubes. V-shaped struts reinforce the zones beneath the engine and luggage compartments and tether the subframes. A solid wall made up of two box sections separates the interior from the luggage compartment. The steel roll-over bars are integrated into the top section of this wall. A through-load facility is inset into the rear wall.

Crash safety is above the level of the previous model. Targeted structural measures enabled the good vibrational comfort of the predecessor to be maintained. The drag coefficient of 0.30 is outstanding. Audi has combined characteristic design with aerodynamics that exceed those of the previous model. Aerodynamic highlights include the front capsule, the aero underbody and the rear spoiler. The vertical bars in the air inlets precisely direct the flow of air to the flanks. In 2.0 TFSI models with manual transmission and front-wheel drive, the lower section of the Singleframe is firmly enclosed.

In the base version with the 2.0 TFSI engine, the TT Roadster has a kerb weight (without driver) of just 1,425 kilograms, less than any competing vehicle.

Besides the body, all fields of technology contribute to the weight reduction. The electrical system, for instance, weighs 2.6 kilograms less, due in part to a main battery lead of Aluminium. The Aluminium window lifters save one kilogram, the new sport seats together save five kilograms. A lightweight lining for the door panels contributes half-a-kilogram. In the chassis, the standard 18-inch wheels reduce precisely those unsprung masses that are particularly important when driving.

Engine

The new Audi TT Roadster launches with a single TFSI engine. In keeping with the specifications of the modular transverse platform, it is installed with the inlet side facing front and inclined twelve degrees to the rear. This allowed the developers to reposition the front suspension much closer to the vehicle's front end, to the benefit of crash safety and the design.

The engine is a brand-new, two-litre, four-cylinder unit with turbocharging and direct fuel injection. Emissions classification is Euro 6.

Advanced efficiency technologies are applied to the new 2.0 TFSI. First and foremost is the start/stop system, a recuperation system, friction-reducing measures and the innovative thermal management system, which provides highly precise, demand-based regulation of the coolant circuits for the cylinder head and the crankcase. Another feature common to all three engines is a sound actuator, which comes standard along with Audi drive select. If the driving dynamics system is in dynamic mode, the engine sound becomes even sportier.

Lean and powerful: the 2.0 TFSI

The 2.0 TFSI, which weighs just over 140 kilograms, delivers 169 kW. The two-litre engine has received numerous improvements compared with the previous engine, which an international panel of journalists named “Engine of the Year” in its category five years in a row. Virtually the only thing left unchanged is the displacement of 1,984 cc (bore x stroke 82.5 x 92.8 millimetres).

Additional indirect injection supplements FSI direct injection under partial load, which reduces emissions. The Audi valvelift system varies the lift of the exhaust valves, thus improving petrol exchange. A compact rotating core module for the thermal management system and the exhaust manifold integrated into the cylinder head make major contributions to efficiency. Operation of the turbocharger’s electric bypass valve is extremely fast and precise.

Just 6.7 litres per 100km: the TT Roadster 2.0 TFSI

In the new TT Roadster, the 2.0 TFSI produces 370 Nm of torque over a broad range from 1,600 to 4,300 rpm. With the six-speed S tronic and quattro permanent all-wheel drive, the key figures are 5.6 seconds for the standard sprint, top speed is also 250 km/h, consumption of 6.7 litres per 100 kilometres and 154 grams CO₂ per kilometre.

Transmissions

The TT roadster comes standard with the six-speed S tronic transmission. It switches gears comfortably within just a few hundredths of a second with no perceptible interruption of pulling power. In manual mode, it is controlled via the selector lever or the paddles on the steering wheel. In automatic mode, the position D prioritises lower rpm for lower fuel consumption; the shift strategy is sportier and engine speed level higher in the characteristic for the position S.

Attractive features: freewheeling and launch control

Another strength of the six-speed S tronic besides the ultra-compact packaging is the fuel-saving freewheeling. It is activated when the Audi drive select system is set to efficiency mode and the driver lets off the accelerator. All TFSI engine versions feature the launch control start program, which enables full acceleration from a standstill with controlled wheel slip.

Like all dual-clutch transmissions, the six-speed S tronic comprises two independent transmission structures operated by two radially arranged multi-plate clutches. Both transmission structures are continuously active, but only one of them is connected to the engine at any one time. The fast shifts are performed by switching the clutches. Every transmission speed is assigned a conventional switching unit, as a result of which it is also possible to change directly from sixth to fourth gear, for instance.

quattro permanent all-wheel drive

quattro permanent all-wheel drive is a powerful unique selling point in the segment for the new TT Roadster. Many aspects of the quattro technology for transverse-mounted engines have been redesigned for even better dynamics, even greater safety and even more driving pleasure.

The heart of the quattro drivetrain, the electrohydraulically actuated and electronically controlled multi-plate clutch, eliminates the pressure accumulator used in the previous generation, making it 1.4 kilograms lighter. To the benefit of the axle load distribution, the clutch is located at the end of the propshaft, in front of the rear axle differential. An electrically driven axial piston pump forces the packages of plates inside the clutch together on demand with a maximum pressure of 38 bar. The higher the oil

pressure, the more engine power is transferred steplessly from the front to the rear axle.

To ensure the rapid development of pressure, the pump continuously circulates a certain volume of oil during normal driving. This pre-supply is switched off, however, if is not needed, such as when the driver selects efficiency mode in Audi drive select. Temporarily switching it off reduces CO₂ emissions by up to 1.5 grams per kilometre. It is immediately reactivated if the grip level on the road decreases or the driver adopts a sportier driving style.

Oriented toward the driving dynamics: management of the quattro drivetrain

The electronic management of the multi-plate clutch is precisely tailored to the new compact sports car. It works together with torque vectoring, a function of the Electronic Stabilisation Control (ESC), and is also networked with the Audi drive select system. The controller is strongly oriented on handling parameters such as steering angle.

If Audi drive select is set to dynamic and the ESC is set to Sport, the quattro drivetrain reveals its full dynamic potential. The clutch now transfers a portion of the power from the front to the rear axle upon turn-in. As soon as the driver steps on the accelerator, the forces press the Roadster into the bend – spontaneously, with no initial understeer.

Safe drifts are possible under load on low-friction road surfaces. The front axle straightens out the car when exiting the bend. On dry roads, up to 50 percent of the power is transferred to the rear axle. When the front axle has very little grip, this can be as much as 100 percent.

Chassis

The Audi drive select system is the mastermind for dynamic driving. The driver chooses between the modes comfort, auto, dynamic and efficiency as well as individual mode with the push of a button. Audi drive select influences the function of the accelerator and power steering and incorporates multiple auxiliary modules, including the S tronic and quattro drivetrain, the cruise control system, the deluxe automatic air conditioning system, the LED and Matrix LED headlights.

Another component under the control of Audi drive select is the adaptive damping system Audi magnetic ride (optional). It uses a special hydrocarbon oil with microscopically small magnetic particles to vary the damping in three stages. In dynamic mode, the system makes the car hug the road more closely. The wheels are precisely braced during cornering, and body roll is largely suppressed – making steering response and handling even more spontaneous. Audi magnetic ride counters body pitch during braking.

Sporty gearing: the progressive steering

The technological expertise behind the new Audi TT Roadster also includes the chassis. Major components of the front axle are made of Aluminium. The rack of the standard progressive steering is geared so that the ratio changes with the steering angle – somewhat less direct around the centre position; very direct when the wheel is turned far.

The electromechanical power assistance harmonizes perfectly with this sporty characteristic, decreasing as speed increases. The progressive steering works in close conjunction with three assistance systems – the standard attention assist and the optional Audi active lane assist and park assist systems.

The rear suspension of the open-topped two-seater uses three steel transverse links and one trailing link in order to absorb the lateral and longitudinal forces separately. Their springs and dampers are separate from one another and respond very precisely. The body is lowered ten millimetres with Audi magnetic ride.

All tyres offer better performance compared with the previous model, yet rolling resistance has been reduced significantly. A tyre pressure loss indicator and a repair kit are standard.

The large wheels provide room for powerful brakes. The front discs are internally ventilated and measure 312 in diameter. The electromechanical parking brake, another innovation, acts on the rear wheels.

Exact handling for everyday sporty driving: the ESC

The likewise newly developed Electronic Stabilisation Control (ESC) rounds off the handling characteristics perfectly. During fast cornering, torque vectoring

– a software function of the ESC – minimally brakes the inside front wheel (with front-wheel drive) or both inside wheels (with quattro all-wheel drive).

This enables

both wheels on the axle to transfer more lateral force. Due to the difference in traction forces, the Roadster turns slightly into the corner, making handling even more precise, neutral, sportier and stable.

The ESC leaves the choice to the driver: In Sport mode, the system remains active and enhances driving pleasure. In combination with the quattro drivetrain, it facilitates spontaneous turn-in and controlled drifts via active engagement and light braking interventions when understeering. If the driver pushes the button for longer than three seconds, the ESC turns off completely to allow sporty handling.

Interior

The two-seat interior envelops the driver of the new TT Roadster like a tailored suit. With its high belt line, it comes across as intimate and protective, particularly with the top closed, but never restrictive.

The newly developed sport seats with the integrated head restraints are mounted even lower than in the previous model, and also weigh 5 kilograms less.

Modern, smart, clean: the interior design

The design of the interior makes the puristic, modern character of the new TT Roadster tangible. Emphasized horizontals convey the impression of generous width. The individual volumes are clearly separated; their surfaces taut and clean; the lines are light and almost seem to float. The taut arcs of the armrests in the door trims correspond with the centre tunnel console, which in classic TT style supports the calves.

When viewed from above, the instrument panel resembles the wing of an aircraft. Its middle zone is strongly inclined toward the driver. The round air vents – another TT characteristic – are reminiscent of jet engines. They house all of the air conditioning controls. The controls for the heated seats, temperature, recirculation mode, air flow distribution and air flow strength are located on their axes. With the standard deluxe automatic air conditioning, small displays

show the selected settings. The highly precision-manufactured air vents illustrate the demanding requirements that Audi has for the function, design and workmanship of the entire interior.

Centre of attention: the driver

The elimination of the traditional air conditioning control unit gave the Audi designers the freedom to implement the instrument panel as part of a slim, elegant architecture. The choice of the Audi virtual cockpit had a similar effect; it assumes the function of the central MMI monitor. The interior of the new Audi TT is entirely focused on the driver, with all of the controls arranged around him.

The three-spoke sport steering wheels have also been redesigned. The rim is flattened at the bottom, and the broad, open spokes are in Aluminium look.

Audi virtual cockpit and MMI

The Audi virtual cockpit in the new Audi TT Roadster sets new standards. Its 12.3-inch TFT display with 1,440 x 540 pixels produces tack sharp, brilliant and high-contrast images. Working in the background is a Tegra 30 chip from cooperation partner NVIDIA.

Driving with the soft top down represents a particular challenge for the Audi virtual cockpit. The digital instrument cluster in the new TT Roadster shines here with a luminous intensity of 800 candelas, twice as much as the previous norm in the automotive industry. Reflections were another challenge. The Audi engineers addressed this by tilting the upper edge of the Audi virtual cockpit toward the driver.

The driver can switch between two interfaces using the “View” button on the multifunction steering wheel. In “Infotainment” mode, a central window dominates the view – it offers a big stage for the navigation map or for lists in the Phone, Radio and Audio areas. The tachometer and speedometer are displayed as small dial instruments on the right and left. In the classic view, the centre window is smaller; the instruments are roughly the same size as analog displays.

The Audi virtual cockpit provides for the attractive and versatile display of all types of information, from the navigation arrows and dynamic

animations to the graphics for the assistance systems. Detailed effects round out the state-of-the-art look. The virtual dial instruments, for example, are rendered 60 times per second so that the needles move absolutely fluidly even under full acceleration. The colour design of the display changes as a function of the basic menu.

The Audi virtual cockpit already impressed the experts at its premiere in the TT. The jury for the “Automotive Interiors Expo Awards 2014” awarded it first place in the category “Interior Innovation of the Year – Production Vehicles”. The world’s best designers, suppliers, innovations and products for interior areas were celebrated at the awards ceremony.

Playfully easy: the new MMI

Just as groundbreaking as the Audi virtual cockpit is the new MMI system in the new Audi TT and the TT Roadster. It reveals its full potential as the top-of-the-line version MMI navigation plus with MMI touch. The controls on the centre tunnel console and its menu structure have been completely redesigned. The result is an operating system with flat hierarchies. As in a modern smartphone, an intelligent, easy-to-use logic replaces branched menu trees, and frequently used functions can be reached in just a few steps.

The focal point of the terminal is the round rotary pushbutton, its surface includes the touch-sensitive MMI touch. The touchpad is used for entering characters and multi-finger gestures. Drivers can scroll and zoom just like with their mobile phones. An optical sensor with a sensitivity of one-hundredth of a millimeter monitors the rotary motions of the highly precise dial.

The toggle switches for the most important basic menus Navigation/Map, Phone, Radio and Media are located above the rotary pushbutton. The main menu button and back button are located centrally beneath the dial. The buttons to the left and right of it open intelligently linked function and context menus.

“Where can I get petrol?”: MMI search with free text entry and natural speech control

A particular highlight of the new system 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, the driver only has to 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 works similarly.

Voice control has also undergone intensive further development so that the system now understands many phrases from everyday language usage.

Commands like

"I would like to talk to Peter" or "Connect me with Peter" are now sufficient to call a contact. The navigation system also now reacts to natural speech ("Where can I get petrol?", "Take us to the closest Italian restaurant."). The same applies in the Radio ("Play Radio Galaxy") and Media ("I would like to listen to music from my iPod.") areas. The seatbelt microphone provides for good audio quality when using the phone, even when the top is down.

The multifunction steering wheel plus with its buttons and rollers is another control instrument. Other than touch gestures, the driver can perform the same steps here as with the MMI terminal, all without taking his eyes off the road.

The optional Bang & Olufsen Sound System drives 12 loudspeakers with 680 watts of power. Rather than small holes, their bezels feature fine grooves. The woofers have anodized Aluminium elements bearing the logo of the Danish hi-fi specialists. At night narrow LED light guides emit white light.