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The Audi TTS

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Summary

The Audi TTS

Audi has taken the wraps off a new sports car model. From this month, the top model of the TT line, the TTS, will be appearing in dealer showrooms in both Coupe and Roadster guise. Its two-litre TFSI engine develops an awesome 200 kW that catapults the Coupe with S tronic dual-clutch transmission from 0 to 100 km/h in just 5.2 seconds and up to a governed top speed of 250 km/h.

Designed to appeal towards a particularly young and dynamic audience, the TTS represents Audi's *Vorsprung durch Technik* in its very latest form. This sports car owes its superior performance to a whole raft of innovative concepts. quattro permanent all-wheel drive translates its sheer power efficiently into motion, with the Audi magnetic ride shock absorber system guarantees precise handling. The optional high-tech S tronic transmission can take charge of power transmission as well, shifting faster than even a highly skilled driver. The TTS Coupe starts at \$92,900 and the Roadster at \$97,100.

The two-litre TFSI: the perfect sport engine

The TFSI engine in the TTS takes the two petrol direct injection and turbo charging technologies from Audi and blends them to form a perfect partnership for a sports car. It is not only the 200 kW of output that makes the TFSI so scintillating, there is also its hefty pulling power – the maximum torque of 350 Nm is constantly on tap from 2,500 to 5,000 rpm.

Compared to the engine it was derived from, the two-litre power unit has been fundamentally re-engineered and uprated to ready it for operation in the TTS. Thanks to its excellent efficiency, the sporty-sounding TFSI has an average fuel consumption of just 8.0 litres of fuel per 100 kilometres in the Coupe when paired with the six-speed manual transmission, while the figure for the Roadster averages 8.2 l/100 km. The optional S tronic dual-clutch transmission brings these figures down to 7.9 l/100 km and 8.0 l/100 km respectively.

S tronic, which operates with six speeds and two clutches, changes gear at high load and engine speed in a fraction of a second. This, coupled with its dynamic starting performance, knocks two-tenths of a second off the sprint to 100 km/h for both the Coupe and Roadster. Virtually loss-free transfer of power to the road is the task of the standard-specification quattro permanent all-wheel drive, which enables the TTS to accelerate sooner and more reliably than its challengers. At the heart of this system is a hydraulic multi-plate clutch, which now works faster than ever thanks to a new pressure reservoir.

Audi magnetic ride: high-tech damping

The TTS rolls off the production line equipped with yet another high-tech module – the Audi magnetic ride adaptive damping system. Circulating inside its damper pistons is a special fluid containing minute magnetic particles. When electrical voltage is applied, the fluid's flow properties change, altering the damping characteristics as well. The driver can choose between two mapped characteristics – Normal and Sport. Normal mode is designed for a well-balanced, comfortable ride, whereas in the Sport program the TTS harnesses all of the potential of its sport suspension – which lowers the body by 10 millimetres – to deliver uncompromisingly crisp handling.

The front suspension is made of aluminium, thereby reducing the unsprung masses. The efficient technology behind the responsive electro-mechanical steering notably reduces fuel consumption and the four-link rear suspension handles longitudinal and transverse forces separately, making a big contribution to its dynamic impression. The sports car is safely brought to a standstill by the high-performance braking system with its large 17-inch disks. Audi has devised a second, sporty level for the ESP stabilisation program which enables controlled drifting.

One of the factors behind the supreme performance of the TTS is the hybrid construction of its body. Steel is used only at the rear end, while the front and centre sections of the body are built from light-weight aluminium.

ASF (Audi Space Frame) technology guarantees superb rigidity and safety by optimising axle load distribution and reducing overall weight. The manual version of the Coupe weighs in at just 1,395 kilograms, equating to a power-to-weight ratio of 5.1 kilograms per hp.

It is clear at first glance that the Audi TTS is a dynamic top model within the TT line. The standard-fit 18-inch aluminium wheels are a highlight of the special design, as are the headlights, comprising newly designed Bi-Xenon units with LED daytime running lights. Inside, occupants are treated to deep-set sports seats trimmed in Silk Nappa leather upholstery, available in four different colour combinations. The grey background of the instrument panel, as well as the leather multi-function steering wheel, add further styling touches. For mobile entertainment, there is a 140 watt Symphony stereo system complete with 6-disc CD changer, iPod and MP3 compatibility.

The Roadster comes with an electro-hydraulic drive for the soft top, a power-operated wind deflector, plus a load-through facility for added practicality. The rear seats in the Coupe have a split-folding design, allowing luggage capacity to be increased from 290 to 700 litres.

Audi has reached a special milestone with the TTS: It was ten years ago that the TT Coupe first took to the road, swiftly acquiring the status of a design icon. The TT has been increasing in popularity ever since, in both hard-top and open-top form. It has now reached new heights with the TTS.

At a glance

The Audi TTS

Drivetrain

- Two-litre TFSI developing 200 kW and 350 Nm
- 0 – 100 km/h in 5.2 seconds (Coupe with S tronic), top speed 250 km/h
- quattro all-wheel drive as standard, S tronic dual-clutch transmission optional

Chassis

- Audi dynamic suspension with four-link rear suspension
- Audi magnetic ride adaptive damping system
- High-performance brake system with 17-inch disks
- Sporty alloy wheels, 18 inches in diameter

Body and interior

- Hybrid-design body for both Coupe and Roadster
- Aluminium forward structure (Audi Space Frame ASF)
- Driving area oriented toward the driver, instruments with grey dials
- Variable luggage area in Coupe, optional load-through facility on Roadster
- Two-colour seat upholstery, extended aluminium package

Equipment

- Bi-Xenon headlights with LED daytime running lights
- Fully automatic soft top and electrically extended wind deflector on TTS Roadster
- Sport seats with Silk Nappa leather upholstery

Full version

Built for fun at the wheel

The Audi TTS

Strong character, striking appearance, impressive power – the Audi TTS is a fascinating sports car. A persuasive combination of ultra-modern technologies makes it truly stand out from the competition: The two-litre TFSI engine developing 200 kW, the quattro permanent all-wheel drive and the optional high-tech S tronic transmission make the TTS a superior driving machine that is clearly built for fun.

Its suspension is easily up to the task of harnessing its performance and the Audi magnetic ride electronic damping system means drivers can exploit its characteristics however they like. Audi builds the TTS as a 2+2-seater Coupe and as a two-seater Roadster. It will be available for customer delivery this month, with a starting price of \$92,900 for the Coupe variant and \$97,100 for the open top version.

Performance

5.2 seconds for the sprint from 0 to 100 km/h and a top speed governed at 250 km/h – these two key figures for the Coupe with S tronic dual-clutch transmission clearly spell out just how much performance the Audi TTS has to offer. The sports car with the four-ring badge is a classic driving machine – powerful, fast and light, rigorously faithful to its concept and to applying it systematically.

The high efficiency of the TFSI engine is typical of Audi. The two-litre power unit mobilises all of 200 kW, yet the average fuel consumption in the Coupe version is a very lean 8.0 litres in manual mode. In the Roadster, the figure is 8.2 litres per 100 km. In combination with S tronic, consumption is cut by a further one-tenth and two-tenths of a litre respectively.

When driven in laid-back style, the ultra-powerful TFSI engine shows stunning poise – its 350 Nm available constantly from 2,500 to 5,000 rpm gives it a broad torque plateau.

When the supercharged direct-injection unit is put to the test, however, it gladly displays its sport engine credentials. It responds to the accelerator directly and with plenty of bite, revving up to 6,800 rpm with playful ease. Yet throughout, the powerful TFSI delivers a sound that blends power with harmony thanks to the elaborate fine-tuning work that went into its intake and exhaust system.

The manual six-speed transmission of the TTS harmonises perfectly with this dynamic character. Audi can also supply the dynamic S tronic as an option, also with six speeds. With its two clutches, the high-tech transmission changes gear even faster than the sportiest driver. Plus it trims two-tenths of a second off the sprint from 0 to 100 km/h – reducing the figure to 5.2 seconds for the Coupe and 5.4 seconds for the Roadster.

quattro: even more grip, even more driving enjoyment

The quattro permanent all-wheel drive that distributes power between all four wheels if need be makes the TTS a genuine exception in the compact sports car segment. The latest version of this system responds even faster when the grip beneath the wheels changes. quattro technology continues to transfer the engine's entire power to the road where competitors with only two driven wheels start to find it difficult to maintain traction – whether on slippery surfaces or when accelerating early out of a bend.

The TTS Coupe and TTS Roadster weigh in at a very light unladen weight of 1,395 and 1,455 kilograms respectively, and their power-to-weight ratio is 5.1 and 5.3 kilograms per hp. Their highly rigid, predominantly aluminium bodies are the basis for excellent handling – giving the TTS the dynamism of a top athlete in this respect as well.

This Audi model, built for fun at the wheel, heads eagerly into curves thanks to its 18-inch wheels. Directed with precision by its responsive steering, the TTS takes every curve with stoic calm and at high speed. The handling limits are a long way up the range and make their presence felt in the form of subtle understeering – this effortless ease of control seems to be intrinsic to this Audi sports car's character.

The technically highly advanced chassis that supports the body ten millimetres lower on its shortened springs has acquired an even sportier edge thanks to the adaptive shock absorber control system known as Audi magnetic ride. The operating characteristics of the electronically controlled dampers can be changed at the push of a button, giving the driver the choice of insistently dynamic or balanced/comfortable driving.

The drivetrain

200 kW and 350 Nm of torque – the two-litre TFSI hits top form in its new guise in the TTS. At Audi, the abbreviation FSI denotes direct injection of the fuel into the combustion chambers. The T prefix indicates that performance is boosted by a turbocharger.

Direct injection and turbo charging are core Audi technologies, and a compelling combination for abundant driving pleasure and impressive efficiency. The Audi R8 racing car demonstrated how well they harmonise with one another. The two-litre TFSI is proving similarly successful in production use – since 2005 it has been voted “Engine of the Year” in its class by an international jury of automotive journalists for four successive years.

The TFSI in the Audi TTS is a high-performance sport engine. It generates an output of 200 kW from a displacement of 1,984 cm³ and peak torque of 350 Nm from as low as 2,500 rpm, maintaining the latter figure right up to 5,000 rpm.

It accelerates the Coupe with six-speed manual transmission up to 100 km/h in 5.4 seconds, with the same exploit taking the Roadster just two-tenths of a second longer. With the high-tech S tronic automatic transmission it accomplishes this feat even faster – in a mere 5.2 (Coupe) or 5.4 seconds (Roadster).

The electronic limiter calls a halt to this propulsion at a speed of 250 km/h in both models. Thanks to the engine's mighty torque, the manual Coupe version accomplishes the flexibility discipline – accelerating from 80 to 120 km/h in fourth gear – in 4.4 seconds (4.6 seconds for the Roadster). Passing manoeuvres are a mere footnote.

The *Vorsprung durch Technik* that Audi has demonstrated with the TFSI principle is also evident in the fuel efficiency of the TTS. The manual transmission Coupe needs just 8.0 litres per 100 km; the figure with the high-tech S tronic automatic transmission is even lower at 7.9 litres per 100 km. The Roadster achieves 8.2 and 8.0 l/100 km respectively – yet more evidence of its impressive efficiency.

Strong basis: the 2.0 TFSI

The 2.0 TFSI in the Audi TTS incorporates key technical components of its 147 kW base engine. Its intake camshaft can be adjusted through 42 degrees for optimum cylinder charging and the two balancing shafts rotate at double the speed of the crankshaft to compensate for the second-degree inertial forces.

To equip it for use in the TTS, the undersquare engine was given a whole raft of radically re-engineered features. The cylinder block has been reinforced at the main-bearing pedestals and the main-bearing cap. The piston pins, rings and connecting rods have also been adapted to the higher forces. The camshafts and annular valve seats, too, have been upgraded and the cylinder head consists of a new aluminium-silicon alloy.

The intake tract incorporates flaps that induce rolling movement in the incoming air. Special injectors inject the fuel into this “tumble” at pressures of up to 110 bar generated by a redesigned pump. The mixture has a lambda ratio of one – meaning one part fuel per 14.7 parts air. The compression ratio of 9.8:1 is in the same league as naturally aspirated engines, further enhancing the engine’s thermodynamic efficiency.

It operates with a larger turbine wheel so that the re-engineered turbocharger can deliver a particularly large quantity of air. The turbocharger is an integral module made from thermally high-strength cast steel that also incorporates the exhaust manifold. It very rapidly achieves its maximum relative boost pressure of 1.2 bar.

An intercooler lowers the temperature of the compressed air, increasing the engine’s thermodynamic efficiency as a result. The intercooler is made entirely from aluminium, making it even more efficient than a conventional component with plastic casing. The entire admission tract of the TTS has been optimised for minimum pressure loss. The development engineers successfully reduced the exhaust backpressure in the exhaust tract.

Audi’s powerful 2.0 TFSI engine weighs just 153 kilograms, much less than the equivalent power unit of a key competitor. This benefits the overall weight of the TTS and is also a big advantage for its axle load distribution and thus handling. The engine measures just 652 millimetres in length, 648 millimetres in width and 666 millimetres in height, making it ideal for transverse installation.

Manual or automatic – the transmissions

A manual six-speed transmission is the standard solution for power transmission between the engine and wheels on the TTS. Both highly compact and ultra-light thanks to its magnesium casing; it perfectly reflects the characteristics of the top TT model. Its shafts and gears have been reinforced with an eye to the high engine torques, and gearshift travel is shorter. Gear changes are performed swiftly, with precision and ease – just as you would expect of an Audi.

Alternatively, the TTS is available with S tronic as an option – the dual-clutch transmission combines the strengths of an automatic with the benefits of a manual. It can change its six gears within just a few hundredths of a second without interrupting the power flow. S tronic responds with dynamic precision or serene poise depending on the requirements, making it the ideal partner for the TFSI engine. Its impressive efficiency is another factor that makes it ideal for the turbocharged four-cylinder engine.

The technical principle on which S tronic is based is as simple as it is brilliant: Two subsidiary transmissions, each with a multi-plate clutch, are integrated into a single casing. The first clutch serves the odd-numbered gears and reverse, and the second one serves the even-numbered gears.

The two input shafts share the same axle, with a solid shaft running inside a hollow shaft. Both subsidiary transmissions are continuously active, but only one is powered by the engine at any given time. If a gear is engaged by one of the subsidiary transmissions, the next is already preselected by the other; the gear change is accomplished by switching to the other clutch.

S tronic can be operated by the one-touch lever or – in motor racing style – via the shift paddles on the steering wheel. For added driver convenience, there are also two automatic operating modes: D (Drive) and S (Sport). S tronic's clutches also have an adaptive feature and permit a variety of different starting characteristics. On slippery surfaces, they are engaged cautiously. When grip is good, the power is engaged forcefully if the driver so wishes.

Unbeatable: quattro drive

quattro permanent all-wheel drive, like S tronic, underscores the unique position of the TTS in the compact sports car segment. In both areas of technology, its competitors are unable to offer anything comparable.

The nerve centre of the quattro drive system, developed specially for transverse-mounted engines, is a multi-plate clutch that is electronically controlled and hydraulically actuated.

The clutch is located at the end of the propshaft, in front of the rear axle differential – an installed position that improves the axle load distribution. Inside is a package of plates, running in an oil bath, which can be pressed together by controlled hydraulic power. As this hydraulic pressure increases, the amount of torque diverted to the rear axle rises.

The clutch's control unit permanently analyses the driving conditions using a wide range of data. If necessary, an electrically driven axial piston pump with five pistons almost instantaneously generates the oil pressure needed by the clutches to divert the drive torque almost entirely from the front to the rear wheels. Thanks to a pressure reservoir, this process is completed twice as fast as it used to be – in a matter of milliseconds. All important stages of the drive line have been reinforced, from the propshaft through the differentials to the drive shafts.

Again in the TTS, the quattro principle delivers the supreme capabilities that have become an Audi hallmark – greater traction, slip-free acceleration, dynamic driving, safety and directional stability, together making up Audi's proverbial *Vorsprung durch Technik*. The TTS handles dynamically and with supreme stability in all weather conditions.

The chassis

The front suspension of the TTS, with a track of 1,555 millimetres, adheres to a design principle that has already proved highly effective: a McPherson structure with triangular lower wishbones. The pivot bearings, the subframe and the wishbones are made from aluminium. This measure has cut the unsprung weight of the transverse links alone by 2.5 kilograms. To increase the rigidity, the subframe is bolted to the body at six points.

The level of servo assistance for the rack-and-pinion steering falls as the speed rises; its characteristics have been adapted to the dynamic overall character of the TTS.

Because the electromechanical system does not tap the power supply when the car is driving in a straight line, in contrast to hydraulic power steering, it operates very efficiently and saves an average of 0.2 litres of fuel per 100 kilometres. With its precise, analytical operating principle, the steering provides good road feedback yet exhibits minimal sensitivity to excitation from the road surface. Its ratio of 16.9:1 gives it a sporty character.

The four-link rear suspension has a track width of 1,546 millimetres. Its design principle offers major benefits in terms of driving dynamics, because it separates the cushioning of longitudinal and transverse forces. The longitudinal links absorb the driveline and braking forces, and their relatively soft mounts permit good ride comfort. On the other hand, the three wishbones per wheel – the spring link, the upper wishbone and the tie rod – are attached very rigidly to the subframe, benefiting the handling characteristics.

All links are made from high-strength steel grades. Separate coil springs and dampers provide vertical support.

The Audi TTS comes as standard with 18-inch cast aluminium wheels that sport the five-arm parallel-spoke S design and are shod with 245/40-size tyres as standard.

The large wheels conceal high-performance sport brakes. The ventilated disks on the front wheels measure 340 millimetres in diameter and 310 mm at the rear. The brake callipers are painted black, with special TTS badges at the front. Their sport brake pads guarantee high friction.

For sport enthusiasts: two-stage ESP

The ESP electronic stabilisation program is optimised for dynamic driving. A brief press of a button at lower speeds – e.g. when driving on snow chains – is all it takes to increase wheel slip. When the button is pressed longer, the TTS driver enters a second, sporty operating mode in which the ESP permits controlled sideslip angles. The brakes intervene somewhat later than in normal operation and the engine manipulation is suppressed.

The elastokinematic behaviour of the chassis links on the TTS has been slightly modified compared with the basic technical configuration; sporty springs hold the body ten millimetres lower. This built-for-fun Audi is equipped with the high-tech Audi magnetic ride as standard – the shock absorbers' electronic control resolves the conflict between comfort and drivability.

The shock absorber pistons contain a synthetic hydrocarbon fluid in which microscopically small magnetic particles measuring between three and ten microns (a micron is one-thousandth of a millimetre) are enclosed. When voltage is applied to a coil, a magnetic field is created in which the alignment of the particles changes.

They arrange themselves transversely to the direction of flow of the fluid, thus inhibiting its flow through the piston channels. This alters the damping characteristic within a matter of milliseconds, much faster than is possible with conventional adaptive dampers.

The magnetic ride system's control unit constantly monitors the properties of the road surface and the driver's style, adjusting the response accordingly. The driver can change between the Normal and Sport modes at the touch of a button. In Normal mode, when the fluid is able to flow readily, the TTS offers a well-balanced, comfortable ride. In the Sport mode it is uncompromisingly crisp, hugging the road; any hint of body roll is nipped in the bud. The steering response becomes even more precise and specific stabilisation of each wheel imparts even more neutrality to the self-steering behaviour.

The body

An unladen weight of just 1,395 kilograms for the manual TTS Coupe and 1,455 kilograms for the Roadster version – low weight is the bedrock of both TTS versions' dazzling performance. The power-to-weight ratio of 5.1 kg/hp for the Coupe and 5.3 kg/hp for the Roadster is a fitting reflection of Audi's expertise in sports car construction.

The key factor is the design of both body versions. In each case, the forward structure is made from lightweight aluminium components assembled with Audi Space Frame technology (ASF) – a principle with which the brand kicked off a revolution in vehicle manufacturing in the early 1990s. Extruded sections, pressure die-castings and load-bearing aluminium panels together form a light, extremely rigid and ultra-safe structure that offers good vibrational comfort. On the Coupe, the seam between the roof and the side sections is welded by laser – this “invisible joint” gives visible expression to the extremely high standards of precision embodied by the Audi brand.

By contrast, the rear section of the floor assembly, the doors and the rear lid of the TTS are made from steel. This gives the car a balance that harmonises perfectly with the quattro drive's characteristics. 58 percent of the Coupe's weight with manual transmission rests on the front wheels and 42 percent on the rear wheels.

Thanks to this hybrid design, the Coupe body shell weighs just 206 kilograms. This is comprised of 140 kilograms of aluminium (68 percent) and 66 kilograms of steel (32 percent); an all-steel structure would have weighed one and a half times as much. The body of the TTS Roadster weighs in at 251 kilograms; it incorporates special components such as the steel bulkhead behind the passenger compartment and intensively ribbed side sills.

In the event of a rollover, passengers are protected by the windshield frame, which is reinforced with a super-strength steel tube, and the two rigid rollover bars with aluminium trim. The Roadster and Coupe come complete with front airbags that are activated in two stages, depending on the severity of an accident.

The belt tensioners and belt force limiters protect the driver and passenger. In a rear-end collision, the Audi backguard system uses the head restraints to support the back of the head. Both cars are equipped with head/thorax side airbags for protection in the event of a side impact.

The TTS Coupe and Roadster are assembled at the Győr plant; the ready-painted bodies arrive by rail from Ingolstadt. Győr serves as the home plant of the TT – the first generation of this sports car went into production in the city in northwest Hungary back in 1998.

The exterior design

A compact, muscular body that appears to be straining at the leash even when stationary, an expressive nose end, a prominent tail and of course the famous aluminium tank cap – the Coupe and Roadster have engaging, charismatic styling. Bold lines serve to emphasise the highly dynamic character of the TT.

The front end is dominated by the large platinum grey single-frame grille that sports a silver and red TTS badge. The front apron has been reshaped; the air inlets have been made larger and extend uninterrupted across the entire width, their abruptly downward-pointing corners reinforcing the striking look. The lower edging panel, or blade, is painted in the body colour.

The redesigned headlights combine Bi-Xenon units with LED daytime running lights, a major safety innovation from Audi. The twelve white light-emitting diodes on each side are arranged in a straight line along the lower edge of the housing, combining with the plastic wings to give the brand an unmistakable design feature. The headlights are more than just lights – their design elevates them to the status of miniature technical works of art.

When viewed in profile, it is not only the large 18-inch wheels which stand out; the widened, deeper side sills are equally eye-catching. The exterior mirror housings are in gleaming aluminium. A chunky rear bumper, a diffuser trim in platinum grey and a TTS badge help the TTS make an even more imposing exit. The twin tailpipes on the left and right hint at the potential of the most powerful four-cylinder engine in the Audi range.

As on the TT, the spoiler of the TTS extends automatically at a speed of 120 km/h and is retracted again at 80 km/h; in conjunction with the smooth underbody, it reduces lift. The Coupe boasts a drag coefficient of 0.31 with a frontal area of 2.09 m²; the Roadster achieves $c_D = 0.33$ (with the soft top up) with the same frontal area.

Both cars measure 4,198 millimetres in length and 1,842 millimetres in width. The Coupe version of the TTS stands 1,345 millimetres tall and the Roadster 1,350 millimetres.

Audi provides a choice of twelve body colours. The solid colours are Ibis White, Brilliant Red, Brilliant Black, Solar Orange and Imola Yellow. The metallic hues bear the names Ice Silver, Sahara Silver and Condor Grey, and the pearl effect paint finishes are Meteor Grey, Phantom Black, Deep Sea Blue and Sprint Blue. Solar Orange, Imola Yellow and Sprint Blue have been created exclusively for the TT range.

The TTS Roadster's soft top is available in beige, black or dark grey. It incorporates a large, heated glass rear window and folds down in a Z-pattern when the roof is open, making a lid or tonneau cover unnecessary. An electro-hydraulic drive opens and closes the soft top in twelve seconds at the push of a button, even when on the move at speeds of less than 50 km/h. Additional matting between the headlining and outer skin provides outstanding soundproofing and thermal insulation, and an electrically extended and retracted wind deflector reduces draughts at neck level with the soft top open.

The interior

The driving area of the built-for-fun TTS is tailored exactly to the driver, like a sports kit. The centre console is turned subtly towards the driver and all switches and controls are optimally arranged. The neat, sporty interior design with unique choice and build quality of the materials are also hallmarks of Audi. The domed structure above the instruments, the dials recessed in tubes, the round air vents and the chunky rotary controls of the automatic air conditioning have become established TT characteristics.

The designers created a raft of extra highlights in the TTS. The dials are in grey; when the ignition is switched on, the white needles of the speedo and rev counter move slickly across to the upper limit, then return to their rest position. The driver information system with a new, high-resolution white display brings together important information in the driver's field of view. It incorporates a timer for recording lap times on the racetrack.

The deep-set electric sport seats guide and support the body perfectly and come as standard with Silk Nappa leather upholstery.

Two-colour: seat covers in red and orange

The two-colour concept is a defining trait of the TTS. The contrasting colours available in the standard black Silk Nappa leather range are magma red, silver and signal orange; with matching seams. There is also the option of Impulse Black leather with special seam pattern in the Coupe. In the case of the Roadster, an optional Impulse Chennai Brown leather package, comprising black trim with silver stitching is available.

The predominant colour inside the TTS is sporty black, punctuated by a number of elements in pale grey. The standard specification includes trim surfaces in brushed aluminium; the footrest and pedals are in stainless steel. The door sill trims, the leather multi-function sport steering wheel with flat-bottomed rim and the gear knob display TTS logos. The selector lever on S tronic has been modified – the release catch is now on the front instead of at the side.

Like the TT, the TTS is a sports car that is perfectly suited to everyday driving. The backs of both rear seats fold down in the 2+2-seater Coupe, expanding the luggage capacity from 290 to 700 litres. The Roadster, which offers 250 litres of storage space no matter if the soft top is up or down, can also be supplied with the option of a load-through facility plus removable ski bag.

The equipment

As the dynamic top model in the TT line, the Audi TTS offers an extensive, sporty equipment specification as standard. Its highlights are quattro permanent all-wheel drive, the adaptive damping system Audi magnetic ride, and the large 18-inch alloy wheels. All these features have the same objective – to deliver competition-beating performance.

In addition to striking modifications to the body, the redesigned Xenon Plus headlights with LED daytime running lights lend the TTS's face an unmistakable expressiveness. For instantly accessible, undiluted open-air driving enjoyment the TTS Roadster has an electro-hydraulic soft top and an electric wind deflector.

Inside, both versions are dominated by the leather multifunction sport steering wheel, which comes complete with shift paddles on versions with the S tronic transmission. The extended aluminium styling and electric sport seats with their Silk Nappa leather upholstery are further highlights. Mobile entertainment comes in the form of the Symphony audio system, 6-disc CD changer with iPod and MP3 compatibility.

Generous storage facilities, electrically adjustable exterior mirrors, automatic air conditioning and an interior mirror with automatic anti-dazzle function add to the comfort and convenience when travelling in a TTS. For occupant safety, there are two-stage airbags for driver and front passenger, with head / thorax side airbags incorporated into the front seats.

Audi can supply a whole host of high-tech components as options. These include the competition-beating S tronic dual-clutch transmission, a Navigation Plus system and a 255 watt 8-channel amplifier Bose Surround Sound System. Hill-start assist, an LED interior lighting package and adaptive light, the dynamic cornering light system, add a note of luxury to this built-for-fun car.

Deliveries of the TTS to customers will begin this month. The Coupe starts at \$92,900 and the Roadster at \$97,100.

The Audi TT – ten years of success

The Audi TTS is based on the second-generation TT that appeared in Australia as a Coupe in August 2006 and a Roadster in mid-2007. Both models build on a success story that started ten years ago in 1998, when the first TT Coupe was unveiled.

But the real story began in the mid-90s. In a small studio outside the plant grounds, a die-hard band of designers came up with a design study that they believed was “visionary” and espoused a philosophy that they described as “absolute”.

The purist shape of the first TT drew on the Bauhaus style of the 1920s in its rigorous consistency. It created an impression of seamlessness and unassailability – a design icon. The substantial, striking tail end, the flat, slender greenhouse with its low windows, the strict geometry of the shoulder line and arcs, the large wheels and the aluminium tank cap came together to create a compelling presence of incredible intensity. A new statement by the technology brand Audi.

The silver-grey study car that went on display at the Frankfurt Motor Show in September 1995 resonated with the public. A few weeks later Audi took the wraps off a dark grey Roadster at the Tokyo Motor Show, once again sending the press and public into raptures.

Three years elapsed between the show car and the production launch, during which period the developers gave this design dream plenty of high-performance technical content. The floor assembly of the Audi A3, with its shorter wheelbase, proved to be a suitable basis as expected.

The front suspension comprised a wishbone structure with McPherson spring struts. Its design engineers gave it torsion-beam rear suspension with separate springs and dampers, with the quattro versions featuring double-wishbone suspension on two trailing links. This elaborate technology gave the new Audi sports car dynamic handling properties, true to its slogan “TT – driven by instinct”.

While the TT was a 2+2-seater Coupe with a large boot lid and a luggage capacity of up to 490 litres, the Roadster that followed in 1999 was an out-and-out two-seater.

The interiors of both cars were as pure and reductive as the exterior design – sporty seats positioned low down, and a functionally elegant driving area. Here again the circle, the classic motif of the TT’s design, played a leading role, featuring in the styling of the air vents and many of the controls.

Under pressure: the turbo engines for the TT

The TT arrived in Australia with two versions of a powerful engine – the 1.8-litre four-cylinder power unit with turbocharger. In its basic version the five-valve engine developed 132 kW; its more powerful counterpart with a larger turbo and two intercoolers produced 165 kW. Both engines delivered their torque to a manual transmission – with five speeds on the front-wheel-drive version and six on the quattro, which featured an electronic-control hydraulic multi-plate clutch.

The 132 kW TT was available with both drive principles; with front-wheel drive it dashed from 0 to 100 km/h in 7.5 seconds and on to a top speed of 228 km/h. Its quattro counterpart with 165 kW engine reached 100 km/h in 6.4 seconds and a top speed of 243 km/h.

From 2001 on, Audi started to expand the range of drivetrain options. The range was extended with the addition of a 110 kW turbo version. A new top engine in the guise of the 3.2-litre V6 developing 184 kW appeared from the first half of 2003. It was available optionally with the S tronic dual-clutch transmission, at that time still known as the DSG.

The six-speed tiptronic transmission became available for the 132 kW four-cylinder model with front-wheel drive. In 2005, the two lower-powered four-cylinder engines were boosted to 120 kW and 140 kW. Production of the Coupe and Roadster versions of the first TT model series ended in 2006 and 2007.

The Audi S models and their customers

The concept outwardly identified by the letter S represents an established philosophy at Audi; it has been the embodiment of sports power for over two decades. The S1 from 1985, the legendary final stage in the evolution of the Sport quattro for the Rally World Championship, came to epitomize triumphs in competition racing.

After this, S2 Coupe was the first production car allowed to use the letter as part of its name, making its first appearance with a 147 kW five-cylinder turbo engine as the successor to the “Ur-quattro” in 1990. The S2, too, now featured quattro four-wheel drive.

This combination of a turbo engine and quattro still enjoys immense appeal. A direct line of evolution can be traced between the S2, with its dynamic but refined character, and the first-ever new TTS, which now spearheads the thoroughbred compact sports car line. The new TTS is rigid and precise in focusing on maximum sports performance. Alongside the S3, S4, S5, S6 and S8, it rounds off the successful S range.

On the growing market for high-powered compact cars, the new TTS is aimed at customers who express a keen interest in technical innovations.

They are young – with an average age of 38 – generally male, and with a relatively high income. On top of the driving fun and performance that the TT offers, these customers are looking for a car offering considerable everyday utility for sport and leisure activities, but suitably differentiated by its exclusive TT design, top level of equipment and visual finish.