Mercedes-Benz

Mercedes-Benz S 63 AMG and S 65 AMG

Press Information

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Mercedes-Benz – A Daimler Brand

Exclusive top-of-the-line AMG S-Class models now boast even greater appeal

Affalterbach – The Mercedes-Benz S 63 AMG and S 65 AMG, the powerful top-of-the-line S-Class models, are now even more appealing: thanks to a series of subtle yet extremely effective fine-tuning measures, the two performance saloons are even more striking and priceless than ever before. The updated technology is aimed at ensuring a more dynamic driving experience as well as optimum active and passive safety.

Exclusivity and dynamism, effortless superiority and high tech – both of the top-of-the-line S-Class models from Mercedes-AMG embody all of these characteristics. Since its market launch some three years ago, the S-Class made by AMG has won the hearts of over 8000 customers around the world – turning it into the undisputed market leader in the small yet highly exclusive high-performance luxury saloon segment.

Volker Mornhinweg, Chairman of Mercedes-AMG GmbH: "Our discerning clientele appreciate the synthesis of uncompromising performance and dynamic, exclusive equipment, a unique proposition in this market segment. We have raised the bar further in terms of driving dynamics, safety and passenger comfort with the extensively updated new series of the S 63 AMG and S 65 AMG."

High-revving V8 engine and effortlessly superior biturbo V12 engine

The S 63 AMG, with its powerful, high-revving 386-kW/525-hp AMG 6.3-litre V8 naturally aspirated engine developing 630 newton metres of torque, is capable of accelerating to a speed of 100 km/h in 4.6 seconds. The S 65 AMG, meanwhile, demonstrates even greater superiority: its AMG 6.0-litre biturbo V12 engine delivers maximum power of 450 kW/612 hp and maximum torque of 1000 newton metres, accelerating from 0 to 100 km/h in just 4.4 seconds. Both AMG saloons

are electronically limited to 250 km/h. Despite no changes having been made to the engine data and performance values, it has still been possible to reduce fuel consumption and CO_2 emissions by up to 3 percent.

Contributing to the even more exceptional status of the models is the new, more pronounced arrow-shaped radiator grille, featuring twin chromed louvres in the case of the S 65 AMG. The new front apron incorporates striking, AMG-specific LED daytime driving lights and two transverse air outlets on each side. Further striking features include the "6.3 AMG" or "V12 Biturbo" lettering on the front wings, and redesigned exterior mirrors.

Side sill panels emphasise the elegant line of the front apron through to the rear of the vehicle, where the new rear apron features yet another highlight: the centre section of the black diffuser insert is now painted in the same colour as the vehicle body. New tail lights with 52 LEDs in the form of a double "C" also give the S-Class an unmistakable appearance from behind. A distinctive element of both models comes in the guise of the AMG sports exhaust with two chromed twin tailpipes, featuring a V12 design in the case of the S 65 AMG. Visual aspects which distinguish the V8 from the V12 model also include the attractive AMG light-alloy wheels: the S 63 AMG has 19-inch AMG multi-spoke wheels painted titanium grey with a high-sheen finish and fitted with 255/40 (front) and 275/40 (rear) tyres. The S 65 AMG, on the other hand, comes with 20-inch AMG forged wheels painted titanium grey with a mirror finish and fitted with 255/35 (front) and 275/35 (rear) tyres.

Crosswind stabilisation, Torque Vectoring Brake and Direct-Steer system

The AMG sports suspension based on Active Body Control (ABC) provides crosswind stabilisation as standard equipment for the first time: thanks to this function, influences caused by crosswinds are compensated for, or – in the case of strong gusts – reduced to a minimum. ABC compensates against the effect of crosswinds by adjusting the wheel load distribution within milliseconds, using the yaw-rate and lateral acceleration sensors of the Electronic Stability Program ESP®.

Also making up the standard equipment is the new Torque Vectoring Brake: when cornering, brief direct application of the brakes has an effect on the vehicle's inner rear wheel so that the saloon corners precisely and under control at all times. The Torque Vectoring Brake is an additional feature of the Electronic Stability Program ESP® and not only noticeably improves responsiveness but also active handling safety in critical conditions. The driving experience is further heightened thanks to the Direct-Steer system: with its variable ratio depending on steering angle, it helps to ensure a more direct response when cornering, and therefore more responsive handling – in brief: enhanced driving pleasure at the wheel of the Mercedes-AMG S-Class.

Based on the ADAPTIVE BRAKE system, the AMG high-performance braking system continues to provide optimum fade resistance, deceleration and sensitivity. The front axle features a double floating brake caliper. This exclusive technology combines the advantages of a sliding-caliper disc brake – reduced heat transfer to the brake fluid and clear advantages in terms of comfort thanks to the brake lining guide mechanism – with the efficiency of an extra large fixed caliper brake.

Extensive range of standard equipment with exclusive flair

The interior appointments are every bit as exclusive as the high-tech package: as soon as its door is opened, the S 65 AMG welcomes the driver with large, animated "AMG V12 BITURBO" lettering in the instrument cluster's central display. The AMG main menu provides the driver with information about engine oil temperature, current gear range and the battery voltage. In the case of the S 63 AMG, the extensive range of standard equipment includes not only PASSION leather appointments, with natural leather in the seat side bolsters, but also front AMG sports seats with climate control, massage, multicontour and dynamic handling function. The Exclusive PASSION leather upholstery in the S 65 AMG, meanwhile, with its AMG V12 diamond pattern design, exudes an air of even greater refinement. Ample use of trim elements and the AMG-specific analogue clock, featuring an IWC design, are a given in both AMG models. Both the AMG SPEEDSHIFT 7G-TRONIC of the S 63 AMG, as well as the five-speed automatic AMG SPEEDSHIFT transmission of the S 65 AMG, are fitted with DIRECT SELECT gearshift.

Gear changes are carried out by means of AMG aluminium shift paddles on the new AMG sports steering wheel.

New standards in active and passive safety

In addition, both of the top-of-the-line AMG models set new standards when it comes to active and passive safety through an unrivalled combination of innovative camera and radar-based driver assistance systems. These include the ATTENTION ASSIST drowsiness detection system, Adaptive Highbeam Assist, Lane Keeping Assist, and the PRE-SAFE® Brakes, which are linked to the proximity regulating radar and intervene independently in the event of an impending accident to act like an invisible crumple zone. Night View Assist with infrared camera also features a novel pedestrian detection system. The pictures from the windscreen camera are also used by the new Speed Limit Assist, available as an option. The Brake Assist PLUS and DISTRONIC PLUS proximity control support the driver in the event of emergency braking. The PRE-SAFE® positioning function and NECK-PRO luxury head restraints in the front are now also included as standard.

New infotainment systems, including COMAND APS with new SPLITVIEW display, which shows different images for driver and front passenger simultaneously, enhance occupant comfort even further.

Exclusive optional extras are also available from the AMG *PERFORMANCE STUDIO*:

- 20-inch AMG twin-spoke forged wheels, painted in titanium grey with a mirror finish and fitted with 255/35 R 20 front and 275/30 R 20 rear tyres (only S 63 AMG)
- AMG trim in black piano lacquer/carbon fibre

While the S 63 AMG is available in short or long-wheelbase versions, the S 65 AMG is only available as a long-wheelbase version. Both top-of-the-line AMG models will have their market launches from the end of June 2009.
Prices at a glance:

- S 63 AMG (short wheelbase): EUR 115,700 (excl. VAT) / EUR 137,683 (incl. 19% VAT)
- S 63 AMG (long wheelbase): EUR 121,700 (excl. VAT) / EUR 144,823 (incl. 19% VAT)
- S 65 AMG: EUR 185,900 (excl. VAT) / EUR 221,221 (incl. 19% VAT)

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V8 naturally aspirated engine and biturbo V12 engine: high tech from the world of motorsport for unrivalled performance

Powerful eight and twelve-cylinder engines are a traditional strength of AMG – and no less so than with the S 63 AMG and the S 65 AMG, the S-Class top-of-the-line models. The S 63 AMG is powered by a high-revving V8 naturally aspirated engine developing 386 kW/525 hp, the S 65 AMG comes with a biturbo V12 engine that delivers 450 kW/612 hp. Despite no changes having been made to the engine and performance values, it has still been possible to reduce fuel consumption and CO_2 emissions of the two high-performance saloons.

Developing a peak output of 386 kW/525 hp at 6800 rpm and maximum torque of 630 newton metres at 5200 rpm, the S 63 AMG ranks among the most powerful series-production saloons with an eight-cylinder engine. These impressive figures translate into a high level of driving pleasure and exceptional performance. The S 63 AMG accelerates from 0 to 100 km/h in 4.6 seconds before going on to a top speed of 250 km/h (electronically limited). The V8 naturally aspirated engine with its displacement of 6208 cubic centimetres offers an exhilarating mix of high power from low engine speeds, instantaneous responsiveness and pronounced high-revving flexibility – up to a maximum engine speed of 7200 rpm.

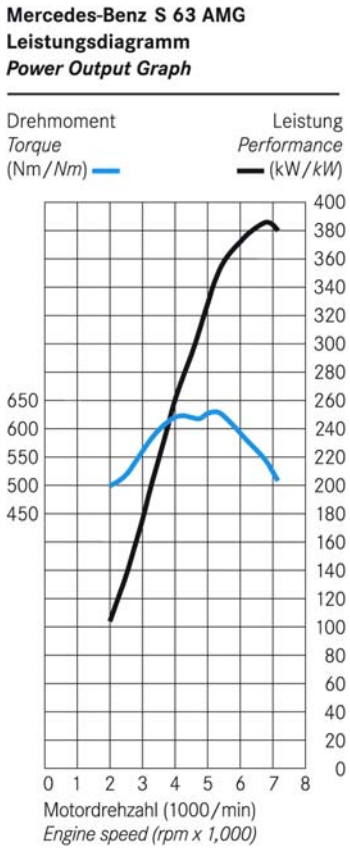
Precise fine-tuning of the engine and transmission setup, aerodynamics and rolling resistance has reduced fuel consumption by 0.5 litres/100 km – without compromising driving dynamics. NEDC combined fuel consumption for the new S 63 AMG is now 14.4 litres/100 km (long wheelbase: 14.5 l/100 km), equivalent to CO_2 emissions of 344 g/km (long wheelbase: 347 g/km).

The technical basis for the dynamic DNA comes courtesy of the thoroughbred motorsport technology of the AMG 6.3-litre V8 engine. This includes the light-weight, extra-rigid aluminium bedplate crankcase with closed-deck technology and the twin-wire-arc-sprayed coating on the cylinder walls used exclusively by AMG. The streamlined design of the intake and exhaust ducts together with the magnesium variable intake manifold featuring two parallel-action internal throttle flaps results in superlative cylinder charging and high power output.

The 32 valves in the cylinder heads are operated by bucket tappets for a rigid valve train and high engine speeds. Continuous adjustment of the camshafts on the intake and exhaust sides ensures an optimal supply of fuel/air mixture to the eight combustion chambers.

Key data at a glance:

Cylinder arrangement	V8
Cylinder angle	90°
Valves per cylinder	4
Displacement	6208 cc
Bore x stroke	102.2 x 94.6 mm
Cylinder spacing	109 mm
Compression ratio	11.3 : 1
Output	386 kW/525 hp at 6800 rpm
Max. torque	630 Nm at 5200 rpm
Maximum engine speed	7200 rpm



Engine weight (dry)	199 kg
Fuel consumption	14.4 (14.5) l/100 km
CO_2 emissions	344 (347) g/km
Acceleration 0-100 km/h	4.6
Top speed	250 km/h*

Figures in brackets refer to long-wheelbase version; * electronically limited.

Electronically controlled fuel supply for outstanding agility

Outstanding agility and instantaneous responsiveness are the undoubted strengths of the AMG 6.3-litre V8 engine, thanks in no small part to the electronically controlled fuel supply. It operates with an on-demand system pressure of 3.8 to 5.0 bar. According to power requirements and external temperature, fuel pressure is adjusted and regulated almost instantly. The engine management system translates the command from the accelerator within milliseconds into the corresponding fuel pressure setting. Such control ensures rapid vehicle response and a sporty thrust across all load ranges and at all engine speeds.

In the interests of optimal reliability, the S 63 AMG has a particularly efficient water cooling system and large engine and transmission oil coolers. Located behind the apertures in the AMG front apron, these coolers ensure non-critical operating temperatures at all times – even under the extreme stress of the racetrack. The AMG sports exhaust system with two oval twin chromed tailpipes delivers the telltale eight-cylinder vocals.

S 65 AMG: exclusive effortless superiority

A twelve-cylinder engine has always been the pinnacle of the engine builders' craft. The V12 powerpack on the S 65 AMG is regarded by engine experts as a prime example of this rare art: thanks to its displacement of 5980 cc, twin turbochargers and powerful air/water intercooler, the AMG V12 delivers maximum power of 450 kW/612 hp between 4800 and 5100 rpm and maximum torque of 1000 newton metres. The torque has been reduced from 1200 to 1000 newton metres out of

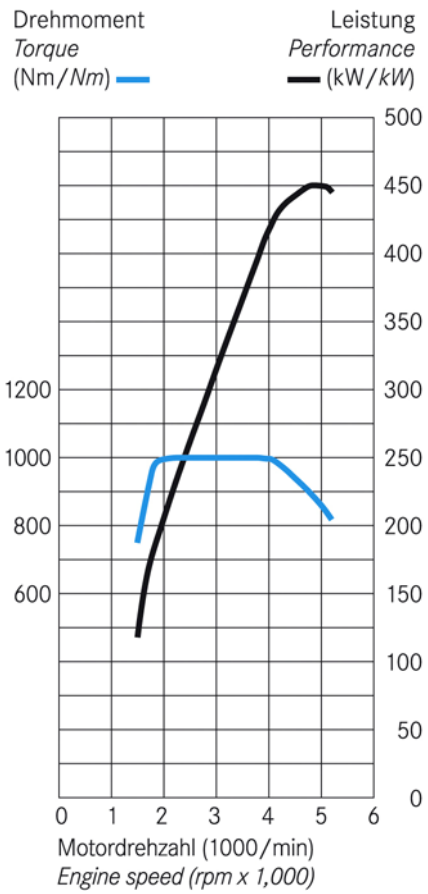
consideration for the drivetrain and is available between 2000 and 4000 rpm. At a mere 1000 rpm, the AMG 6.0-litre biturbo V12 engine delivers 570 newton metres of torque to the crankshaft, while 750 newton metres are on tap at 1500 rpm. The performance figures are impressive testimony to the phenomenal power harnessed by the AMG twelve-cylinder unit: the S 65 AMG accelerates from 0 to 100 km/h in just 4.4 seconds; the top speed is 250 km/h (electronically limited).

Key data at a glance:

Cylinder arrangement	V12
Cylinder angle	60°
Valves per cylinder	3
Displacement	5980 cc
Bore x stroke	82.6 x 93.0 mm
Cylinder spacing	90 mm
Compression ratio	9.0 : 1
Output	450 kW/612 hp at 4800-5100 rpm
Max. torque	1000 Nm* at 2000-4000 rpm
Maximum engine speed	6000 rpm
Engine weight (dry)	221 kg
Fuel consumption	14.5 l/100 km
CO_2 emissions	346 g/km
Acceleration 0-100 km/h	4.4
Top speed	250 km/h*

* electronically limited.

Mercedes-Benz S 65 AMG
Leistungsdiagramm
Power Output Graph



The S 65 AMG leaves you in no doubt about the effortless superiority of the 12-cylinder engine, kilometre after kilometre: the powerful, effortless acceleration in the highest engine speed range is another strength of the AMG 12-cylinder unit along with its relaxed cruising at low engine speeds. Just as impressive as the phenomenal flexibility is the smooth and refined running characteristics which guarantee the high level of touring comfort traditionally associated with Mercedes.

Like its stablemate the S 63 AMG, fuel consumption and CO_2 emissions on the new S 65 AMG have been reduced thanks to optimisation of the engine and transmission setup as well as improvements to the aerodynamics and rolling resistance – all despite no changes having been made to the engine data and performance values. The NEDC consumption of the S 65 AMG is now 14.5 litres per 100 kilometres (CO_2: 346 g/km), an equivalent reduction of 0.3 l/100 km.

Know-how from the world of motorsport also with the AMG biturbo V12 engine

The AMG 6.0-litre biturbo V12 engine also leverages the vast know-how amassed by Mercedes-AMG from the world of motorsport. The V12 engine has a precision-balanced crankshaft made out of high-strength materials, forged pistons made out of special material which is extremely resistant to temperature and pressure, a more effective oil-spray cooling system with a separate individual nozzle for each piston plus larger piston pins. The main and big-end bearings are also made out of improved materials to compensate for temperature and pressure peaks more effectively.

The charge cycle in the cylinder heads benefits from optimised combustion chambers and longer opening times of the intake camshafts. A modified oil pump ensures that all lubrication points are supplied with oil - even in highly demanding conditions. An engine oil cooler is integrated into the AMG front apron, with an additional engine coolant radiator located in the wheel arch.

Air/water intercooler for optimum engine efficiency

A typical feature of the AMG biturbo V12 engine is the sophisticated air/water intercooler. A large cooler at the front of the vehicle effectively cools down the intake air – which has been compressed by the turbochargers – before it enters the combustion chambers. The water-cooled low-temperature cooler results in a 25 percent reduction in intake temperature at full throttle and guarantees high power and torque output under all operating conditions and regardless of the outside temperature. The housings of the compressor and turbine in both turbochargers as well as the turbine and compressor wheels have been enlarged, resulting in a maximum charge pressure of 1.5 bar.

The electronically controlled AMG-specific fuel supply operates with a variable system pressure of between 3.6 and 5.0 bar. According to power requirements and external temperature, fuel pressure is variably controlled almost instantly. The engine management system translates the command from the accelerator within milliseconds, delivering an extremely fast response from the engine in all load situations. The sports exhaust system with two sets of twin chromed tailpipes in the V12 design provides the telltale AMG twelve-cylinder vocals on the new S 65 AMG.

Engine production at Mercedes-AMG: tradition of hand-built excellence

Traditionally all engines are built by hand at Mercedes-AMG in Affalterbach – just like the AMG 6.3-litre V8 engine in the S 63 AMG and the AMG 6.0-litre biturbo V12 engine in the S 65 AMG. In the state-of-the-art AMG engine workshops, which were opened in 2002, a highly qualified engineer assembles each engine according to the company's philosophy of "one man, one engine" in compliance with the most stringent quality standards. The engineer's signature on the AMG engine plate is testimony to the highest standards of workmanship. It takes around three hours to produce the V8 engine; the V12 unit normally takes somewhere in the region of six-and-a-half hours.

To match the wide engine speed range of the AMG 6.3-litre V8 engine, the S 63 AMG teams up with the AMG SPEEDSHIFT 7G-TRONIC, while the high-torque S 65 AMG is paired with the AMG SPEEDSHIFT 5-speed automatic transmission. The driver can nudge the DIRECT SELECT shift lever on the steering column to select the transmission settings "P", "N", "R" and "D". In typical AMG style, individual gears can be shifted using the AMG shift paddles on the steering wheel, rather like in a Formula 1 car.

Three different drive modes are available in the two AMG saloons: these shift modes - "C" (Comfort), "S" (Sport) and "M" (Manual) are selected using a switch in the centre console and differ in terms of their gearshift characteristics and speed. In the manual "M" mode the transmission reliably remains in the selected gear, enabling the driver to ideally harness the immense pulling power. Automatic downshift under full throttle or during kickdown is similarly prevented as is an upshift when reaching the engine speed limit. This allows drivers with a particularly sporty streak to make even better use of the high power at their disposal. The AMG instrument cluster displays the currently engaged gear and recommended upshifts in "M" mode.

In line with the exceptional 1000 Nm torque, the S 65 AMG comes with a systematically reinforced drivetrain. In the automatic transmission this includes purpose-built clutch plates with a high-quality metallic coating and the modified shift and torque converter logic. Redesigned drive shafts, larger hub carriers as well as strengthened steel spring links supplement these measures.

New standard in driving dynamics thanks to Direct-Steer system, Torque Vectoring Brake and Active Body Control with crosswind stabilisation

The AMG sports suspension and ADAPTIVE BRAKE high-performance braking system are every bit a match for the effortlessly superior drive units: the two top-of-the-line models, the S 63 AMG and S 65 AMG, raise the bar in terms of driving dynamics thanks to new high-tech systems.

Less steering effort, more agile handling with the same outstanding straight-line stability – the new Direct-Steer system in a nutshell, which is now fitted as standard on the S 63 AMG and S 65 AMG. A key feature of the Direct-Steer system is the variable-ratio steering rack that operates using purely mechanical means. While the power steering around the central position utilises an indirect ratio to promote excellent straight-line stability, this alters from a steering angle of around five degrees: really small steering angles are all it takes to perform precise cornering, noticeably improving handling on winding country roads. The steering angle requirements have also been modified, enabling the driver to steer the AMG saloons far more easily, particularly on urban roads. Compared with a steering system with a constant ratio, the number of revolutions from lock to lock is reduced by around 25 percent with the Direct-Steer system.

Purely mechanical Direct-Steer system with a host of benefits

Another advantage of the purely mechanical Direct-Steer system is the absence of any elaborate actuators and complex sensors – with associated benefits in terms of weight, installation space and susceptibility to faults. The constant steering response is also advantageous compared with other variable steering systems that sometimes require the driver to adapt quickly to what are fast changing situations on the road.

The Direct-Steer system is based on the familiar speed-sensitive power steering system which reduces the power assistance as the road speed increases. Easy manoeuvrability on urban roads where large steering angles and thus a great deal of power assistance is required, is coupled with reduced support at high speeds, say on the motorway – all of which improves straight-line stability and handling safety.

Torque Vectoring Brake optimises driving dynamics and handling safety

A further improvement in driving dynamics as well as active handling safety comes courtesy of the new Torque Vectoring Brake. If the Electronic Stability Program ESP® detects the onset of understeer, short one-sided braking intervention on the vehicle's inside rear wheel generates a specific yawing moment around the vehicle's vertical axis within a fraction of a second. Consequently, the AMG S-Class handles precisely and remains under control at all times as well as also bolstering active handling safety by reducing the tendency to understeer. The Torque Vectoring Brake is standard on the S 63 AMG and S 65 AMG.

Crosswind stabilisation as new Active Body Control function

The AMG sports suspension now comes as standard with automatic crosswind stabilisation based on Active Body Control (ABC). The ABC control electronics vary the wheel load distribution so that the effect of crosswinds is virtually compensated or reduced to a minimum. If the S-Class is affected by a crosswind, the ABC control unit utilises the yaw-rate, lateral acceleration, steering angle and speed sensors of the Electronic Stability Program ESP® to trigger diagonal wheel load distribution instantly – for instance on the left front and right rear wheel. The associated steering effect reduces the effect of the crosswind. Crosswind stabilisation is activated at speeds above 80 km/h while travelling in a straight line or on slight bends. The function is deactivated if the driver himself makes heavy, brusque steering corrections.

The active suspension on the S 63 AMG and S 65 AMG all but entirely eliminates the body movements that occur when moving off, cornering and braking. Bends

are negotiated with far less roll; the body roll caused by fast evasive manoeuvring is effectively suppressed. Other notable features of Active Body Control are the variable roll moment distribution between the front and rear axles, which the system carries out automatically according to the speed. The computer uses various acceleration sensors to obtain information on the current driving situation and compares this data with those from the pressure sensors in the spring struts and the level sensors on the control arms. The system then computes the control signals that the servo-hydraulic valves at the front and rear axle transform into precisely metered flows of oil.

The load adjustment system enables the current vehicle weight to be factored into the calculation processes for the active suspension. As such the S 63 AMG and S 65 AMG handle just as dynamically even when the car is fully laden. Briefly pressing the Sport button next to the AMG instrument cluster changes the characteristics of the AMG sports suspension: the roll angle through fast corners is reduced further, the shock absorbers and springs also respond firmer to promote agility. At speeds of between 65 and 100 km/h, ABC automatically lowers the body by as much as 15 millimetres to reduce wind resistance. If more ground clearance is needed when driving on poor road surfaces, the driver can raise the level of the vehicle by 40 millimetres at a speed up to 30 km/h by simply pressing a button.

AMG high-performance braking system based on ADAPTIVE BRAKE

Based on the ADAPTIVE BRAKE system, the AMG high-performance braking system continues to set the benchmark for stopping power, sensitivity and fade resistance. The front axle features a double floating brake calliper; this technology combines the advantages of a sliding-calliper disc brake – reduced heat transfer to the brake fluid and clear advantages in terms of comfort thanks to the brake lining guide mechanism – with the efficiency of an extra large fixed calliper brake. At the rear, braking is handled by a large sliding frame-type calliper. Internally ventilated, perforated composite brake discs at the front and rear with a diameter of 390 and 365 millimetres respectively ensure the shortest stopping distances, remarkable resistance to fading and outstanding sensitivity.

The hydraulic dual-circuit braking system is controlled electronically, permitting the inclusion of numerous driver assistance functions that improve safety and comfort – such as "priming" the braking system in critical situations: if the driver suddenly switches from the accelerator to the brake pedal before emergency braking, ADAPTIVE BRAKE increases the pressure in the brake lines and applies the pads to the brake discs, so that they can grip instantly with full force when the brake pedal is pressed. In wet weather, the system injects regular, short brake impulses to ensure that the film of water on the brake discs is wiped off and the brakes can work as effectively as possible. This automatic brake-drying function is always activated when the windscreen wipers on the S-Class have been in operation for a certain time; the driver does not notice the finely metered braking impulses.

After the S-Class has been braked to a standstill, briefly pressing the brake pedal a little further is all that is required to activate the HOLD function. The car is then held by the brakes, even if the driver's foot comes off the brake pedal. In this way ADAPTIVE BRAKE prevents the car from rolling forward inadvertently when stopped at traffic lights or stuck in stop-and-go traffic, and from rolling back when facing a slope. The HOLD function is deactivated automatically when the car moves off.

Eye-catching light-alloy wheels in 19 and 20-inch format

High-sheen 19-inch AMG four-spoke light-alloy wheels painted titanium grey provide the contact between the road and the S 63 AMG. 255/40 R 19 tyres are fitted on 8.5-inch-wide wheels at the front, while 275/40 R 19 tyres combine with 9.5-inch-wide wheels at the rear. The S 65 AMG comes with 20-inch AMG twin-spoke forged wheels, painted in titanium grey with a mirror finish, measuring 8.5 and 9.5 inches wide. 255/35 R 20 tyres are fitted at the front, while 275/35 R 20 tyres feature at the rear.

Unique combination provides consummate occupant protection

The high safety standard typical of the S-Class is further improved by a unique combination of new camera and radar-based driver assistance systems. Innovations such as Speed Limit Assist, ATTENTION ASSIST drowsiness detection and Adaptive Highbeam Assist or the PRE-SAFE® Brakes take occupant protection on board the S 63 AMG and S 65 AMG to a wholly new level.

A combination of ultra-modern assistance and protection systems turns the AMG S-Class into an "intelligent" partner that can see, feel, respond reflexively and act independently in relation to a perceived danger and so prevent accidents or mitigate their effects. For the first time cameras are also used that are able to look well ahead, monitor the car's surroundings and interpret typical critical situations. One example is the Adaptive Highbeam Assist (standard for S 65 AMG). This system recognises oncoming vehicles or vehicles ahead with their lights on, and then controls the headlamps to ensure the best possible beam range without dazzling other road users.

As a new feature, Night View Assist Plus with infrared camera (optional) is now equipped with a special pedestrian detection function: as soon as the system detects pedestrians on the road ahead, they are highlighted on the display to make them more readily noticeable.

Lane Keeping Assist is another system that "looks ahead" for even safer driving. The camera on the inside of the windscreen is able to recognise clear lane markings by evaluating the contrasting images of the road surface and the markings. If the vehicle leaves its lane unintentionally, the driver is prompted by short vibrations of the steering wheel to correct the situation. Unlike conventional systems of this kind, the Mercedes system is able to evaluate the driver's activities as well, and can reliably ascertain whether the car is leaving its lane intentionally or not.

There is therefore no warning if, for instance, the driver accelerates before overtaking or joining a motorway, brakes heavily or enters a bend.

The images supplied by the windscreen camera are also used by the new Speed Limit Assist, which recognises speed limit signs in passing and shows the relevant speed limit in the central display (standard for S 65 AMG).

Drowsiness detection on the basis of more than 70 parameters

Thanks to an innovative technology the S-Class has a very sensitive antenna for the attention level of its driver, and can warn him in time when he becomes drowsy. The ATTENTION ASSIST drowsiness detection system continuously monitors more than 70 different parameters. Once the evaluation electronics recognise the steering behaviour pattern that typically indicates the onset of drowsiness on the basis of information from the highly sensitive steering angle sensor, a warning signal is sounded and "ATTENTION ASSIST. Break!" appears in the instrument cluster. ATTENTION ASSIST is fitted as standard.

"Electronic crumple zone" for maximum occupant protection

Mercedes-Benz has also improved the long and medium-range radar used by the optional Brake Assist PLUS (BAS PLUS) and DISTRONIC PLUS proximity control. Mercedes-Benz also offers another radar-based system for the S-Class in the form of PRE-SAFE® Brakes. If the driver is distracted and fails to recognise the immediate danger of a rear-end collision, or the warning signals of an assistance system, this system can intervene and brake the vehicle independently. The S-Class makes use of the latest development stage of this safety system: if the driver fails to react even after automatic partial braking action, the PRE-SAFE® Brakes activate the maximum braking pressure around 0.6 seconds before what is now recognised as an unavoidable accident – an emergency braking action that can significantly mitigate the severity of the impact. The PRE-SAFE® Brakes therefore act as something like an "electronic crumple zone".

Exclusive effortless superiority with style

Dynamic, exclusive, self-confident and effortlessly superior – the new S-Class AMG models embody these attributes even more after the precise fine-tuning. Exterior and interior styling as well as the extensive standard-equipment package meet even the most discerning requirements. The first-class workmanship makes for a consummate feel-good atmosphere, while ensuring outstanding comfort on long journeys.

On the outside, the S 63 AMG instantly makes a statement with its discreet yet consciously more distinctive styling. New-look headlamps with standard-fit bi-xenon technology fit in perfectly with the striking, AMG-specific LED daytime driving lights. The LEDs are housed in the large new-look AMG front apron with its large cooling air intakes; the front apron also provides an extra sporty touch with its transverse air intakes.

The AMG bodystyling also includes the decidedly sportily shaped side sill panels which continue the line of the front apron through to the rear apron. At the rear, the eye is drawn to the AMG sports exhaust system with its two sets of chromed twin tailpipes, as well as to the diffuser-look rear apron painted in the vehicle colour. New tail lights with 52 LEDs in the form of a double "C" also form an unmistakable light signature. From the side, the high-sheen 19-inch AMG four-spoke light-alloy wheels painted in titanium grey add another veritable highlight. They not only fit snugly inside the flared wings but also direct the eye to the large brake callipers of the AMG high-performance braking system. The "6.3 AMG" lettering on the front wing is unmistakable testimony to the dynamic characteristics of the performance saloon.

S 65 AMG with subtle yet effective distinguishing features

The S 65 AMG differs from the S 63 AMG with its exclusive, more expressive radiator grille with three twin chromed louvres, the LED Light package including Intelligent Light System, the "V12 Biturbo" lettering on the front wings and with its 20-inch AMG twin-spoke forged wheels painted titanium grey with a mirror finish. At the rear the connoisseur will recognise the S 65 AMG with its two sets of chromed twin tailpipes featuring V12 styling of the AMG sports exhaust system and, of course, the model designation on the boot lid.

S 65 AMG impressively greets the driver

As soon as the driver's door is opened, the driver is welcomed with the "AMG V12 BITURBO" start screen in the AMG instrument cluster – a clear invitation to start the 450-kW/612-hp twelve-cylinder engine straightaway. But first why not savour the luxurious interior of the high-performance saloon with its first-class workmanship. Exquisite leather and select fine wood combine to provide the perfect feel-good atmosphere to guarantee consummate passenger comfort on long journeys.

The S 65 AMG features exquisite Exclusive PASSION leather as standard: leather appointments cover not only the lower and upper sections of the dashboard, the entire door trim, the seat side and seatback coverings but also the ruffled pockets and the parcel shelf. In addition, Alcantara adorns the roof liner and the A, B and C-pillars. The 12-way electrically adjustable AMG sports seats come with the Memory package, distinctive seat fluting and leather upholstery in the AMG V12 diamond pattern design, which also extends over the rear seats and all four door centre panels. The S 65 AMG comes as standard with the Seat Comfort package, which includes front active multicontour seats with massage and dynamic handling function and NECK-PRO luxury head restraints and rear multicontour seats with massage function. All seats feature active ventilation and heating as well as the PRE-SAFE® positioning function.

Standard equipment on the S 63 AMG includes 12-way electrically adjustable AMG sports seats with Memory package, Seat Comfort package with front active multicontour seats including massage and dynamic handling function, with seat-heating and ventilation, PRE-SAFE® positioning function and NECK-PRO luxury head restraints. The PASSION leather upholstery boasts sporty, AMG-specific seat fluting and natural leather in the seat side bolsters.

The exclusive interior appointments on the S 63 AMG and S 65 AMG are available in three colour combinations: black/black, alpaca grey/basalt grey and cashmere beige/savanna beige. A selection of four wood trim finishes: dark eucalyptus wood (only S 63 AMG), dark burr walnut with a high-sheen finish, pale burr walnut with a high-sheen finish, and brown poplar (only S 65 AMG) provides ample opportunities for tailoring the vehicle to your own personal tastes.

AMG sports steering wheel with silver-coloured aluminium shift paddles

Both AMG saloons come with an AMG sports steering wheel with silver-coloured aluminium shift paddles, specially shaped grip area and perforated nappa leather around the steering wheel spokes. The multifunction buttons on the left and right enable the driver to select numerous settings and call up information, say in the AMG main menu: the activated transmission mode is displayed in the middle of the instrument cluster – the currently engaged gear and recommended upshifts are also shown in "M" mode.

The AMG main menu also provides the driver with information about engine oil temperature or the battery voltage, and the RACETIMER, which enables the driver to calculate lap times – on a private racing circuit, for instance. The RACETIMER records the time for the fastest lap, the average and maximum speeds and the lap distance. The AMG instrument cluster on the S 63 AMG comes with a 320 km/h speedometer scale; on the S 65 AMG the speedometer goes up to 360 km/h. One of the most eye-catching features in the interior of the S 63 AMG and S 65 AMG is the exclusive analogue clock with its "IWC Ingenieur" design in the centre console.

The extensive standard specification also includes (selection):

- Adaptive brake lights
- Ambient lighting, three colours can be selected (S 65 AMG)
- AMG door entry sills
- AMG floor mats
- AMG sports pedal cluster
- Navigation package (S 65 AMG)
- Front Entertainment package incl. SPLITVIEW, DVD changer and sound system (S 65 AMG)
- KEYLESS-GO package (S 65 AMG)
- Child Safety package
- Convenience Telephony (S 65 AMG)
- LED Light package incl. Intelligent Light System (S 65 AMG)
- Media interface (S 65 AMG)
- Electrically operated blind for rear window and rear doors (S 65 AMG)
- Tilting/sliding glass sunroof, electric, with PRE-SAFE® closure function
- Servo-locking mechanism for doors (S 65 AMG)

The wide range of optional extras includes (selection):

- DAB – digital radio
- Parking package (reversing camera and PARKTRONIC incl. Parking Guidance)
- Rear Seat Entertainment package
- Climate control for rear seats
- Refrigerated compartment in rear seat backrest
- LED Light package incl. Intelligent Light System (S 63 AMG)
- Heated steering wheel
- Tyre pressure monitoring system
- TV tuner

AMG *PERFORMANCE STUDIO* and designo reflect the owner's personal style

Optional extras from the AMG *PERFORMANCE STUDIO* and from designo – two bywords for exclusive style, superb individuality and uncompromising sportiness. Customers with their very own style can choose from a wide range of exclusive equipment and appointments for the S-Class AMG models.

The AMG *PERFORMANCE STUDIO*, which opened its doors in Affalterbach in 2006, aims to meet even the most discerning customer requirements – take for instance the newly developed AMG trim elements in black piano lacquer/carbon fibre available ex factory for the S-Class AMG model. While the dashboard and the door trim are adorned with dazzling, black wood trim, both the front centre console and the folding rear armrest are trimmed in genuine carbon fibre. The high-grade material mix lends the interior of the S 63 AMG and S 65 AMG a definite dynamic touch as an option – and subtly alludes to AMG's eminently successful motorsport heritage.

20-inch AMG forged wheels painted in titanium grey with a mirror finish are also available for the S 63 AMG. The eye-catching twin-spoke wheels are shod with 255/35 R 20 (front) and 275/30 R 20 (rear) tyres.

New designo line-up with designo Selection

The entire designo range is available to provide further individualisation options for the S 63 AMG and S 65 AMG. Ten different designo paint finishes can be combined with ten designo aniline leather appointments options and four natural leather appointments variations – with the result that there are practically unlimited possibilities for customers to turn their personal preferences into reality. Particular highlights come courtesy of the three new matt paint finishes

designo magno platinum, designo magno allanite grey, designo magno cashmere white or the new high-sheen designo mystic brown paintwork, not to mention the designo aniline leather in deep white. The equally new designo aniline leather colours deep white, deep black and light brown provide customers with even more individualisation options. When it comes to designo the customer can choose from six different exclusive trim options: natural maple grain and matt natural oak grain as well as two high-sheen piano lacquer trim options in black or champagne white. The unique designo stone trim elements made from genuine granite are available in two versions for the S-Class: Labrador blue pearl and black Star Galaxy. To highlight the exclusivity of the designo trim elements, customers can adorn the rear air conditioning unit cover with handmade designo lettering in 925 sterling silver.

Mercedes-Benz is offering for the first time a high-end equipment package for the S 63 AMG with a long wheelbase and the S 65 AMG – all in the shape of designo Selection. Customers are able to configure their S-Class according to their personal preferences and taste from all the designo paint finishes, designo leather colours and designo wood trim options. Other components of the package include a black roof liner in nappa leather with special fluting, a matching designo wood/leather steering wheel and designo lettering in solid 18-carat gold – available for the first time and exclusively for the designo Selection – on the rear air conditioning unit cover.

Engine			
Number of cylinders/ arrangement		8/V, 4 valves per cylinder	
Displacement	cc	6208	
Bore x stroke	mm	102.2 x 94.6	
Rated output	kW/hp	386/525 at 6800 rpm	
Rated torque	Nm	630 at 5200 rpm	
Compression ratio		11.3 : 1	
Mixture preparation		Microprocessor-controlled petrol injection, HFM	
Power transmission			
Drive system		Standard drive system	
Transmission		AMG SPEEDSHIFT 7G-TRONIC	
Ratios	Final drive	3.06	
	1st gear	4.38	
	2nd gear	2.86	
	3rd gear	1.92	
	4th gear	1.37	
	5th gear	1.00	
	6th gear	0.82	
	7th gear	0.73	
	Reverse	-3.42	
Chassis and suspension			
Front		Four-link suspension, Active Body Control (active suspension system)	
Rear		Multi-link independent suspension, Active Body Control (active suspension system)	
Braking system		Hydraulic dual-circuit brakes ADAPTIVE BRAKE with brake booster and Brake Assist, internally ventilated and perforated composite disc brakes all-round, electric parking brake, ABS, ESP®	
Steering		Rack-and-pinion with speed-sensitive power assistance, steering damper	
Wheels		Front: 8.5 J x 19; rear: 9.5 J x 19	
Tyres		Front: 255/40 R 19; rear: 275/40 R 19	
Dimensions and weights			
		Short wheelbase	Long wheelbase
Wheelbase	mm	3035	3165
Track, front/rear	mm	1604/1606	1604/1606
Overall length	mm	5122	5252
Overall width	mm	1871	1871
Overall height	mm	1476	1476
Turning circle	m	11.8	12.2
Boot capacity*	l	560	560
Kerb weight (EC)**	kg	2070	2140
Payload (basis: ready-to-drive state as defined by EC)	kg	525	500
Perm. gross vehicle weight	kg	2610	2640
Tank capacity/incl. reserve	l	90/11	90/11
Performance and fuel consumption			
Acceleration 0 - 100 km/h	s	4.6	4.6
Top speed	km/h	250***	250***
Fuel consumption, NEDC comb.	l/100 km	14.4	14.5
CO_2 emissions	g/km	344	347

* acc. to VDA measuring method; ** incl. 75 kg for driver and luggage; *** electronically limited

Engine		
Number of cylinders/ arrangement		12/V, 3 valves per cylinder
Displacement	cc	5980
Bore x stroke	mm	82.6 x 93.0
Rated output	kW/hp	450/612 at 4800-5100 rpm
Rated torque	Nm	1000* at 2000-4000 rpm
Compression ratio		9.0 : 1
Mixture preparation		Microprocessor-controlled injection system, biturbo system
Power transmission		
Drive system		Standard drive system
Transmission		AMG SPEEDSHIFT 5-speed automatic
Ratios	Final drive	2.65
	1st gear	3.60
	2nd gear	2.19
	3rd gear	1.41
	4th gear	1.00
	5th gear	0.83
	Reverse	–3.17
Chassis and suspension		
Front		Four-link suspension, Active Body Control (active suspension system)
Rear		Multi-link independent suspension, Active Body Control (active suspension system)
Braking system		Hydraulic dual-circuit brakes ADAPTIVE BRAKE with brake booster and Brake Assist, internally ventilated and perforated composite disc brakes all-round, electric parking brake, ABS, ESP®
Steering		Rack-and-pinion with speed-sensitive power assistance, steering damper
Wheels		Front: 8.5 J x 20; rear: 9.5 J x 20
Tyres		Front: 255/35 R 20; rear: 275/35 R 20
Dimensions and weights		
Wheelbase	mm	3165
Track, front/rear	mm	1604/1606
Overall length	mm	5252
Overall width	mm	1871
Overall height	mm	1478
Turning circle	m	12.2
Boot capacity**	l	560
Kerb weight (EC)***	kg	2270
Payload (basis: ready-to-drive state as defined by EC)	kg	520
Perm. gross vehicle weight	kg	2705
Tank capacity/incl. reserve	l	90/11
Performance and fuel consumption		
Acceleration 0 - 100 km/h	s	4.4
Top speed	km/h	250*
Fuel consumption, NEDC comb.	l/100 km	14.5
CO_2 emissions	g/km	346

* electronically limited; ** acc. to VDA measuring method; *** incl. 75 kg for driver and luggage