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The new Mercedes-Benz CLS-Class

CLS-Class:
Four-door Coupé a generation ahead

Stuttgart -- Mercedes-Benz is presenting the new CLS-Class four-door Coupé at the Geneva Motor Show. It is based on a unique vehicle concept which for the first time combines the elegance and dynamism of a coupé with the comfort and practicality of a saloon. Spaciousness, luggage capacity and day-to-day practicality are at the level of a saloon, while the design lines possess the emotionally charged character of a coupé. With this currently unique combination, the new CLS-Class is one coupé generation ahead.

The technical specification also points the way to the future: in addition to adaptive front airbags, sidebags and windowbags, the preventive occupant protection system PRE-SAFE is available for the new Mercedes Coupé. The engine range includes two powerful petrol units: in the CLS 350 a newly developed V6 with 200 kW / 272 hp and in the CLS 500 a muscular eight-cylinder unit with 225 kW / 306 hp. Both engines are partnered by the new seven-speed automatic transmission, 7G-TRONIC, as standard. In the top CLS 500 model features such as AIRMATIC DC air suspension and THERMOTRONIC four-zone climate control provide S-Class levels of comfort.

The precursor to the new CLS-Class was a coupé study which Mercedes-Benz presented at the Frankfurt Motor Show in autumn 2003. The enthusiastic public response to this four-door coupé encouraged the management in Stuttgart to give the green light for series production.

As a unique synthesis of a coupé and a saloon, the new CLS-Class offers a great deal more added value than other coupés. In this way Mercedes-Benz is once again emphasising its role as a trendsetter for new ideas in the automotive world. The sophisticated aesthetics of this coupé design, the exclusive appointments and the

trailblazing technology are particularly aimed at people who have a passion for motor cars and motoring.

Comfort and spaciousness to saloon standards

The four-door coupé concept even allows passengers in the rear convenient access and egress. They have the benefit of two comfortable single seats and enjoy generous freedom of movement. There is a distance of 829 mm between the front and rear seats, which together with the shoulder and elbow-level width (1422 and 1464 millimetres respectively in the rear) puts the CLS-Class firmly in saloon territory. Newly developed seats with electric adjustment as standard are available for the driver and front passenger; on request these can be equipped with active ventilation or as a dynamic multicontour seat.

Furthermore, the boot of the new CLS-Class holds up to 505 litres (VDA measuring method) – much more than any other coupé and even many a saloon.

Choice of powerful six and eight-cylinder engines

Both the engines available for the CLS-Class exhibit effortless performance and exemplary torque characteristics, providing the best possible conditions for dynamic driving pleasure. The CLS 350 is equipped with a newly developed V6 engine which has an output of 200 kW / 272 hp and delivers its maximum torque of 350 Newton metres from a mere 2400 rpm. Both are peak values in this displacement class.

The six-cylinder Coupé accelerates from standstill to 100 km / h in 7.0 seconds and reaches a maximum speed of 250 km / h (provisional figures). The lively V6 engine harmonises with the likewise new 7G-TRONIC seven-speed automatic transmission, which is standard equipment. This is the world's first passenger car transmission of this type, and makes a major contribution to the strong acceleration and exemplary fuel consumption of the CLS 350 – 10.1 litres per 100 kilometres (NEDC combined consumption, provisional figure).

Standard appointments in the six-cylinder Coupé include THERMATIC automatic climate control, a stereo radio, speed-sensitive power steering, a leather-covered steering wheel, 17-inch light-alloy wheels and 245/45 R 17 wide-base tyres.

With the 5.0-litre V8 engine the new CLS 500 need fear no performance comparison with thoroughbred sports cars, while offering the eight-cylinder comfort typical of a luxury-class saloon. This power unit has an output of 225 kW/306 hp and an impressive 460 Newton metres of torque. Once again the standard seven-speed automatic transmission plays its part here. The CLS-Class V8 Coupé accelerates from standstill to 100 km/h in 6.1 seconds. The fuel consumption is 11.3 litres per 100 kilometres (NEDC combined consumption, provisional figures).

The additional standard equipment in the CLS 500 (as compared with the CLS 350) includes AIRMATIC DC air suspension, THERMOTRONIC luxury climate control and 18-inch light-alloy wheels with 245/40 R 18 wide-base tyres.

Occupant protection with adaptive airbags and PRE-SAFE

The new CLS-Class is equipped with the latest safety systems such as adaptive front airbags, windowbags and sidebags, as well as belt tensioners and belt force limiters on all seats, offering an extremely high level of occupant protection. In future the prize-winning Mercedes safety system PRE-SAFE will be available. This is able to recognise critical driving situations in advance and activate precautionary measures for the vehicle occupants. These include split-second tensioning of the seat belts, which brings the driver and front passenger into a more favourable seating position even before a potential collision. This enables the airbags to protect the occupants more effectively if an impact occurs.

Leading-edge Mercedes technology for handling safety and superb comfort

In the field of handling safety Mercedes-Benz emphasises its technological leadership among car brands in the new CLS-Class with Sensotronic Brake Control SBC™ and the latest-generation Electronic Stability Program (ESP®) as standard. A number of other innovations are also optionally available for the four-door Coupé to make driving even safer. These include powerful bi-xenon headlamps with Headlamp Assist, which Mercedes-Benz now combines with cornering lights.

DISTRONIC proximity cruise control, LINGUATRONIC voice control, the control and display system COMAND APS with Europe-wide DVD navigation and the access and drive authorisation system KEYLESS-GO are further optional Mercedes innovations which guarantee even greater comfort and even more driving pleasure.

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New avant-garde

- **Unique four-door Coupé concept**
- **Coupé aesthetics with the comfort and practicality of a saloon**
- **Extensive standard equipment to meet the most demanding highest comfort requirements**

Developing new vehicle concepts – to set trends and influence automotive development – has always been a major aspect of the Mercedes-Benz philosophy. Throughout its more than 100-year history, the Stuttgart-based manufacturer has always displayed the courage, expertise and leadership needed to go one step further and be the pacemaker in development.

The many innovative vehicle concepts first implemented by Mercedes-Benz provide ample evidence of this. Back in 1901, the first model to be given the fine-sounding Mercedes name was one of many cars that have stood for something entirely new and set the standards for automotive development as a whole. It was followed by icons such as the 540 K Roadster in 1934, the 300 SL "Gullwing" (1954) and the 220 model with the first ever safety bodyshell (1959). In the modern era, cutting-edge concepts have paved the way for model series such as the Mercedes-Benz 190 (1982), the A-Class and the M-Class (both 1997), providing the impetus for the creation of new and successful market segments.

The CLS-Class is the latest in an illustrious line of forward-looking car concepts: this four-door Coupé is further proof that Mercedes-Benz is always a step ahead of the field – a coupé generation ahead in this case.

Never before have two such entirely different ideas – the stylistic appeal and strong emotive charisma of a coupé and the comfort and practicality of a saloon – been so elegantly blended together to form a single automotive entity. All of which makes the

CLS-Class a truly shining coupé specimen. A valuable one-off that arouses pure desire.

The concept, design and technology of this new Mercedes model series reflect the aspirations of modern people who lead active lives and are open to new trends. People who attach great importance to individuality, stylish aesthetics and sheer excitement. In other words: the new CLS-Class is a Coupé for the connoisseur -- for the passionate motorist who seeks and appreciates those really special things in life.

Passion and practicality are equally high on the list of priorities for this most discerning of customer groups, since a love of elegant forms and the finest of materials always goes hand in hand with a desire for the very latest in no-holds-barred technology. The CLS-Class provides the very best of both worlds by displaying distinctive aesthetics in every detail and showcasing leading-edge technology. All backed by the high quality associated with Mercedes-Benz. Not to mention the renowned reliability which, alongside many other virtues, underpins the brand's impeccable reputation.

CLS 350: plenty of power from six cylinders

The new Mercedes model series initially has two variants, which are mainly distinguishable by their engines, wheel and tyre sizes and the level of specification.

With the newly developed Mercedes six-cylinder engine (200 kW / 272 hp) the **CLS 350** offers an ideal combination of sporty handling dynamics and great comfort. In terms of output and torque this engine is one of the most powerful in its displacement class. Together with the standard-fitted 7G-TRONIC seven-speed automatic transmission, it forms a formidable team which achieves top-class values for acceleration and fuel consumption: 7.0 seconds for a sprint from standstill to 100 km / h and 10.1 litres of premium petrol per 100 kilometres (NEDC combined consumption).

The standard equipment of the CLS 350 also meets the highest expectations. It includes:

- 17-inch light-alloy wheels
- 245 / 45 R 17 wide-base tyres
- 7G-TRONIC seven-speed automatic transmission
- Adaptive front airbags with two-stage deployment according to impact severity
- Ambient interior lighting
- Armrest between the seats with compartment below
- ASSYST service indicator
- Audio 20 CD radio
- Automatic comfort-fit belts
- Automatically dimming rear-view and exterior mirrors
- Belt force limiters at front and rear
- Belt tensioners at front and rear
- Central display in instrument cluster with trip computer
- Central locking system
- Cruise control with SPEEDTRONIC
- Electrically adjustable front seats
- ESP® with tyre pressure loss warning, ABS, acceleration skid control and Brake Assist
- Headlamp Assist
- Heated, electrically adjustable and automatically dimming exterior mirrors
- Key-based remote boot lid unlocking
- Leather-covered multifunction steering wheel
- Outside temperature display
- Power windows
- Projection-type headlamps
- Rain sensor
- Rear and brake lights with LED technology
- Rev counter
- Sensotronic Brake Control (SBC™)
- Sidebags for driver and front passenger
- Silk matt burr walnut wood trim
- Speed-sensitive power steering
- THERMATIC automatic climate control
- TIREFIT tyre repair kit
- Tyre pressure loss warning based on ESP®
- Windowbags
- Fabric / leather seat upholstery

CLS 500: coupé excitement to perfection

Eight-cylinder comfort and sports car-like performance are offered by the top model **CLS 500**. Its V8 engine (225 kW / 306 hp) also powers the Mercedes-Benz S-Class and the SL Roadster. With a torque of 460 Newton metres it accelerates the four-door Coupé from standstill to 100 km / h in just 6.1 seconds, interacting perfectly with the standard seven-speed automatic transmission. Driving enjoyment is also enhanced

by standard AIRMATIC DC air suspension system, which constantly adapts the springs and shock absorbers to the current driving situation, and the THERMOTRONIC four-zone climate control system. The standard equipment in the CLS 500 includes the following in addition to that in the CLS 350:

- AIRMATIC DC air suspension
- 18-inch light-alloy wheels
- 245 / 40 R 18 wide-base tyres
- THERMOTRONIC luxury automatic climate control

Optional equipment: the best of everything

Innovative high-tech systems from the Mercedes luxury class make the new CLS Coupé even more desirable. The range of available options includes the following:

- "Alustyle" basic carrier bars for the roof
- 18-inch light-alloy wheels in multi-spoke design with mixed-size tyres
- AIRMATIC DC (for CLS 350)
- Anti-theft warning system
- Audio 50 APS radio with navigation
- Bi-xenon headlamps with cornering lights and headlamp cleaning system
- Bottle holder
- COMAND control and display system, also with Europe-wide navigation
- DISTRONIC proximity control
- Dynamic multicontour seat
- Exclusive leather upholstery
- Glass tilting / sliding sunroof
- Heated steering wheel
- High-gloss or silk matt "laurel" wood trim
- Infra-red reflecting glass all-round
- KEYLESS-GO access and drive authorisation system
- LINGUATRONIC voice control
- Luxury seats with active ventilation and heating
- Memory function for seats, mirrors and steering wheel
- Nappa leather upholstery
- PARKTRONIC parking aid
- Rear window blind
- Remote boot lid locking
- Sidebags in the rear
- Ski-bag
- Sound system with surround sound
- Steering-wheel gearshift buttons and manual shift program
- THERMOTRONIC luxury automatic climate control (for CLS 350)
- Tyre pressure monitoring
- Wood / leather steering wheel

The Mercedes-Benz **designo** range offers a further, extensive choice of options for further personalisation of the CLS Coupé.

Design

Subtle difference

- **Lines that awaken excitement and passion**
- **New Mercedes face full of empathy and power**
- **Discreet elegance and high-quality appointments in the interior**

Fascination at first glance – that was the aim of the designers when they created their drawings for the CLS-Class and made use of the potential offered by the lines of a coupé. In other words, there were (almost) no limits imposed on their imagination and creativity. The concept of a four-door coupé provided the designers with the scope to give their formal language a decidedly emotional emphasis, and therefore to create an automobile personality with special characteristics.

From every perspective this four-door coupé shows how thoroughly this opportunity has been used. On the basis of familiar family features it presents a design line that smoothly reconciles seemingly contradictory characteristics such as dynamism and size, power and elegance, aesthetic appeal and practicality. In this way the design convincingly reflects the emotional, experience-focused character of the CLS-Class.

It is the unique proportions of the body that mainly characterise the exciting appearance: dynamically formed front and rear overhangs elegantly extend the bodywork, contrasting with the strikingly curved, low-profile roof of a thoroughbred coupé. Viewed from the side, the large, calm surfaces of the doors and rear wing provide a formal counterpoint to the frameless side windows and low-lying look typical of a coupé.

The front-end design of the CLS Coupé appears both new and familiar: new because the headlamps create a different and interesting Mercedes face, and familiar because of the brand's typical slatted radiator grille with a centrally positioned Mercedes star. These features and the pronounced wedge-shape of the bonnet and front bumper emphasise the athletic attributes of this four-door coupé – suggesting forward-flowing energy, power and performance – with additional visual reinforcement by the muscular curve of the wings. The long slats of the radiator grille lend a broad, powerful appearance to the front end.

Side view: harmonious lines and surfaces

The interplay between tightly drawn lines and soft, naturally rounded surfaces has become the trademark of today's Mercedes design. The CLS-Class perfects this design theme: the high waistline of the Coupé, which suggests safety and security, is emphasised by a striking shoulder line. It rises from the dynamic, rounded form of the front wheel arch, extends across the entire body side and ends in the attractively contoured rear light cluster, which gently continues the flowing line into the rear bumper. With this feature the designers have created a fine balance between lines and surfaces. At the same time it helps to extend the bodywork in visual terms and emphasises its sporty elegance.

The roof line of the four-door Coupé is even more striking. It extends above the muscular body in a sweeping arc, with a transition into the attractive C-pillar configuration which gently dips into the rear end in a softly flowing line.

At the rear the deep rear bumper emphasises the width of the vehicle body and characterises the beefy appearance of the Coupé in concert with the two chromed exhaust tailpipes.

With this sophisticated design line the CLS-Class accentuates a new, particularly experience-focused aspect of driving, namely sheer driving pleasure.

Interior: luxurious surroundings and the finest materials

This impression is reinforced by the interior, whose attractive colours and high-quality materials are an invitation to enter and enjoy the stay on board. Leather and wood are the principal design elements in the interior: the steering wheel and selector lever are leather-covered as standard, while the seats are attractively upholstered in a black fabric / leather combination. There is a choice of three leather types suited to the chosen interior colour: black, basalt grey, sunset red and cashmere beige.

Like leather, fine wood has always been an important material which lends a particular elegance and feeling of quality to the interior of a Mercedes-Benz. In the CLS-Class it takes the form of hand-crafted burr walnut as a decorative feature which extends across almost the entire fascia of the dashboard. This creates a decidedly elegant feel which is accentuated by the silk matt surface varnish. As an alternative, dark, exotic "laurel" wood trim is available as optional equipment, with either a high-gloss or silk matt surface.

The flowing lines of the dashboard also characterise the transitions to the doors and rear section, creating a balanced, harmonious impression of spaciousness. The centre console and transmission tunnel reinforce this impression, for they too form an attractive unit which sweeps back and divides the two comfortable single seats in the rear. Compartments beneath the soft, leather-covered armrest between the front seats and in the rear of the centre console provide stowage space, also accommodating cup and bottle holders.

Cockpit: elegance and precision in harmony

The instrument cluster combines both classic and modern stylistic features. As a large dial instrument, the centrally located speedometer is flanked by two smaller instruments for the engine speed and time of day, as well as two outer graphic displays showing the fuel level and coolant temperature. Black dials and instrument

trim with shining chrome surrounds emphasise the high-quality chronometer-look of the instruments.

Ergonomics typical of a Mercedes simplify operation of the different onboard systems and ensure that the driver can enjoy every kilometre. The centrepiece of the ergonomic concept is the four-spoke steering wheel, whose illuminated buttons allow information to be accessed or certain functions to be controlled by thumb pressure. The radio, telephone, navigation system and other units can be easily operated without distraction in this way.

Stable conditions

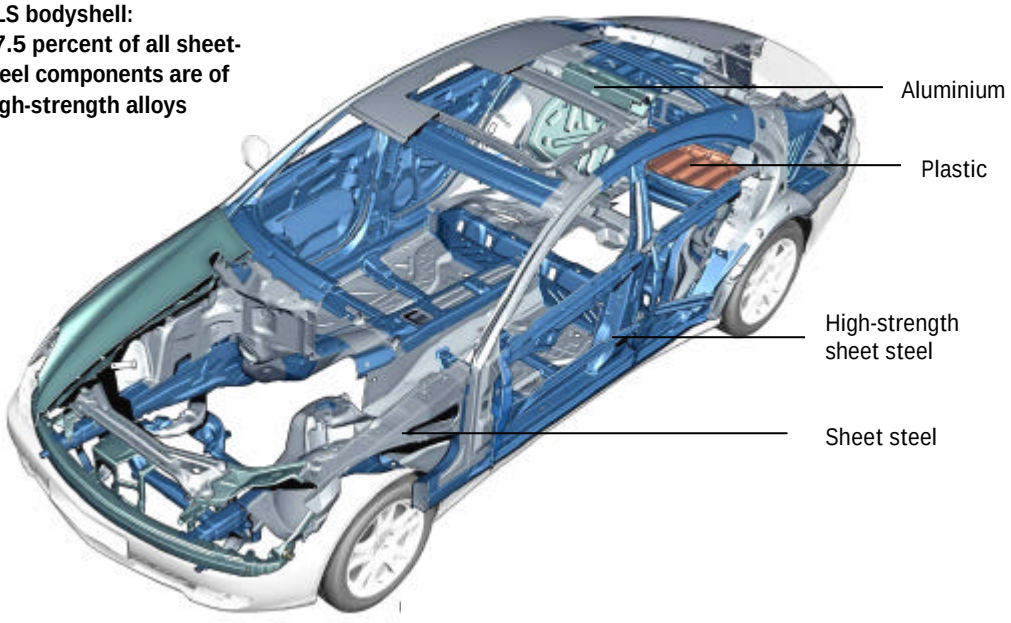
- **Modern lightweight construction of high-strength steel and aluminium**
- **High long-term quality owing to more scratch-resistant paintwork based on nano-technology**
- **Aerodynamic body with a C_d figure of 0.30**
- **Bi-xenon headlamps with Active Light System and cornering lights**

High-strength steel and aluminium are the major lightweight materials used for the CLS bodyshell. Aluminium is used wherever it has the most advantages over steel, namely for the bonnet, parcel shelf, front-end module member and the panel behind the rear seat backrests.

All the other components of the bodyshell are of sheet steel, with high-strength alloys accounting for 47.5 percent by weight. Among these is an innovative dual-phase steel, which has a special two-phase microstructure for high dynamic strength and resistance to extremely high loading forces. Various parts of the underbody and the reinforcements around the bumpers and suspension springs are of this high-tech material. The spare wheel recess of fibre-reinforced plastic makes a further contribution to weight-saving.

The engineers in Sindelfingen have also adopted the well-proven modular concept for the front and rear end used in other Mercedes models, thereby improving ease of repair and at the same time simplifying the body assembly process. The front and rear-end modules are bolted to the body structure, therefore they can be replaced without lengthy welding operations when accident repairs are called for.

CLS bodyshell:
47.5 percent of all sheet-steel components are of high-strength alloys



The **front-end module** mainly consists of a robust cross member which is not only used to attach the bumper, but also carries out an important function during an offset frontal impact by diverting the forces to the unaffected side of the vehicle and thereby significantly helping to dissipate the impact energy. Two special crash boxes of high-strength steel create a connection to the front side members and absorb most of the impact energy in the event of a frontal collision at up to 15 km/h. The structural members behind them remain unaffected as a result.

In addition to the repair-friendly front-end module, the new CLS-Class features highly resistant structural members which make a major contribution to the exemplary occupant protection provided by the four-door Coupé. The **integral member**, to which parts of the front axle, the steering gear and the engine mountings are attached, also deforms during a severe frontal collision and absorbs impact energy.

The mainstay of the **rear-end module** is a high-strength flexural cross member connected to the rear-end structure by two crash boxes. Here too, damaged components can be quickly and therefore inexpensively replaced following an accident.

The foam impact absorbers of the plastic bumpers are made from energy-absorbing polypropylene which deforms during a collision and absorbs the entire impact energy up to a maximum speed of 4 km/h, leaving the downstream metal components undamaged. After such a collision the plastic automatically reverts to its original shape.

Boot lid: opened and closed at the touch of a button

Mercedes-Benz offers a convenient remote control function for the boot lid: pressing a button on the electronic ignition key or in the switch array on the interior panel of the driver's door unlocks the boot lid, which automatically swings open with the assistance of two electric motors and two springs. To close it, the driver operates a key in the boot lid or interior door panel to set the electric motor in motion again. This causes the boot lid to lower slowly and engage the lock under its own weight, after which it is secured by a servo locking system.

Paintwork: more scratch-resistant and shiny thanks to nano-technology

With its innovative, more scratch-resistant **clearcoat** based on nano-technology, Mercedes-Benz has made a major contribution to long-term quality and outstanding value retention. This innovative paint system is standard on the new CLS-Class, and is used for both metallic and non-metallic paint finishes.

Thanks to remarkable advances in the science of nano-technology it has been possible to integrate ceramic particles measuring less than one millionth of a millimetre into the molecular structure of the paint binder. These particles initially float freely in the clear liquid paint, but form a network during the drying process in the paintshop, creating a very dense, regular structure on the surface of the paintwork. These nano-particles achieve a three-fold increase in the scratch-resistance of the paint finish, ensuring a visibly improved and lasting sheen.

Corrosion protection: 70 percent of all sheet metal galvanised

The 30-year MobiloLife warranty which Mercedes-Benz offers its customers in many European countries is based on a sophisticated system of corrosion protection: galvanised sheet metal accounts for 70 percent of the bodyshell weight.
The electrolytically galvanised sheets are additionally coated with an organic paint containing rust-resistant zinc pigments. This paint has a layer thickness of only two to four micrometres, however it stands up to the stresses arising during pressing and spot-welding and provides lasting protection.

For the front end, side members, A-pillars and the inner shells of the doors, bonnet and boot lid Mercedes-Benz even uses sheet metal with an organic coating on both sides, and also preserves the cavities in the body structure by means of a special wax.

Thanks to full plastic cladding of the underbody it is possible to dispense with the PVC underbody protection used previously. This effectively protects the body against stone chipping and also has an important aerodynamic effect, as it allows the airstream to pass beneath the vehicle body with practically no turbulence.

Aerodynamics: successful fine-tuning in the wind tunnel

The underbody cladding therefore contributes to the good **C_d figure** of only 0.30 for the vehicle body. At 0.66 square metres the wind resistance of the body is also extremely favourable, with resulting beneficial effects on fuel consumption and performance.

Aerodynamic data for the CLS-Class

	CLS-Class
Coefficient of drag C_d	0.30
Frontal area A	2.22 sq. m.
Wind resistance (Cd x A)	0.66 sq. m.

These good results are not only due to painstaking, detailed work in the wind tunnel, but also to intensive cooperation between the designers and aerodynamics engineers which began right back at the early styling phase for the new four-door Coupé. This meant that the design specialists were able to take major factors into consideration from the very start when creating the body lines, leading to a highly respectable overall result. Examples:

- The shape of the **front and rear aprons** not only characterises the sporty, elegant nature of the new CLS-Class, but also proves to be very aerodynamically efficient.

- The design of the **bonnet** allows a practically unimpeded airflow around the windscreen wipers.

- The designers and aerodynamics specialists precisely coordinated the recessed **C-pillars** – a typical Mercedes design feature – with the shape of the rear end, ensuring optimal guidance of the airstream.

- The attractively integrated spoiler lip at the rear of the **boot lid** makes hardly any visual impact, however it has a very positive aerodynamic effect in reducing both wind resistance and lift.

In addition the Mercedes specialists have developed a number of technical features which contribute to the good aerodynamics of the new CLS-Class:

- The smooth **panelling** on the engine compartment, transmission and underbody directs the airstream beneath the vehicle and prevents turbulence.

- Aerodynamically shaped plastic elements in front of the front **wheel arches** improve the airflow across the front axle linkages. In addition the **spring links** on the rear axle feature aerodynamic cladding.

- **Mini-spoilers** in front of each wheel reduce dynamic pressure at the tyres and improve the airflow around the wheels.

The engineers in Sindelfingen have achieved a two-fold benefit with many of these detailed aerodynamic measures, namely reducing wind resistance while at the same time improving **handling stability** at high speeds or when braking. By means of the underbody cladding, wheel spoilers, air deflectors in front of the front wheel arches and the spoiler lip on the boot lid, the specialists have influenced the aerodynamic forces acting perpendicular to the direction of travel, which tend to lift the body on its springs at high speed. The result is a favourable **coefficient of lift** at the front and rear axle, namely C_{AV} 0.10 to 0.13 (front) and C_{AH} 0.11 to 0.13 (rear, provisional figures).

The speed-related **body lowering function** of AIRMATIC DC (standard in the CLS 500) also improved handling stability: at higher speeds the air suspension system automatically lowers the body by 15 millimetres at both axles, ensuring even better roadholding – and a more favourable fuel consumption.

Headlamps: projection technology with high lighting power

In the field of lighting technology the new CLS-Class shines with one of the most efficient headlamp systems available: as standard equipment, H7 halogen lamps provide low-beam lighting behind clear plastic lenses.

The headlamps are based on the latest projection technology, which occupies less space in the front end than a conventional reflector system, allows the designers more latitude and also offers perceptibly more lighting power.

On request **bi-xenon** headlamps are available in which only one lamp is required for main and low beam: in contrast to main-beam lighting when the full light output is used, whenever low-beam is selected, a shutter is inserted between the lamp and the lens which obscures part of the beam of light. With bi-xenon headlamps on their main-beam setting, the H7 spotlights also come into play. A dynamic headlamp range adjustment unit automatically adapts the angle of the light beam to the prevailing body attitude and also compensates for brief dips and rises caused whenever the vehicle brakes or accelerates: this forms part of the optional bi-xenon equipment package.

In both versions -- halogen and bi-xenon technology – the standard **Headlamp Assist** function automatically switches on the headlamps whenever the CLS Coupé drives into a tunnel or underground car park – provided the rotary light switch is in the "Auto" position.

Road safety: significant advances with Active Light System and cornering light function

Mercedes-Benz combines bi-xenon headlamps with the newly developed cornering light function and steering-dependent lighting, making a further important contribution to visibility and safety in the hours of darkness:

- Thanks to the automatic **cornering light function**, cyclists, pedestrians and other road users can be seen more clearly when cornering, and even tight bends are more efficiently illuminated when driving slowly. Whenever the low-beam headlamps are on, and up to a maximum speed of 40 km / h, the cornering lights switch on automatically when the driver uses the indicators or turns the steering

wheel. When turning right or taking a right-hand bend the right cornering light is switched on, and vice versa.

Without cornering light **With cornering light**

At this point, the cornering light illuminates the area to one side of the vehicle to an angle of up to 65 degrees and a distance of up to 30 metres, thereby lighting up areas of the road which would normally not be visible with conventional headlamp technology. The intelligent electronic control unit does not switch the cornering lights on or off abruptly: instead they fade in or out with a dimmer function. This operates more rapidly when fading in than when fading out. This gives the human eye time to adapt to a change in lighting conditions. There is intelligence at work again in the design of the cornering lights. This skilful arrangement enables Mercedes-Benz to combine two lighting functions in a single housing: the halogen lamp in the cornering light also acts as a fog lamp.

- The **Active Light System** causes the headlamps to follow the steering movements made by the driver, immediately pivoting the light beam to the relevant side when entering a bend. This improves road illumination by up to 90 percent: whereas the normal illumination range when entering a bend with a radius of 190 m is approx. 30 m, this increases to 55 m with the Active Light System. The system operates in both the low and high-beam functions and continuously adapts itself to the vehicle speed. A microprocessor integrated into the electronic data network of the Coupé controls the Active Light System on the basis of continuous information concerning on steering angle and vehicle speed.

The attractively styled rear light clusters of the new CLS-Class also use the latest lighting technology: a total of 54 **light-emitting diodes (LEDs)** ensure instant attention when braking, while modern **HP bulbs** are used for the rear lights. HP stands for High Performance and indicates that these bulbs have a particularly long operating life. While conventional bulbs need to be replaced after an average of approx. 70,000 kilometres, HP bulbs last much longer.

The standard features of the CLS-Class also entry / exit lights integrated into the exterior mirror housings, which are switched on when the doors are opened or the central locking system is operated by remote control and illuminate the ground area next to the Coupé -- a helpful feature that increases the safety and convenience of passengers when entering or leaving the vehicle.

Windscreen wipers: aero system with continuously variable wipe intervals

Mercedes engineers have developed an efficient **two-arm wiper system** with special kinematics for the new CLS-Class: while the wiper arm on the driver's side moves around a fixed axis, its counterpart on the passenger side executes an additional lifting movement to wipe an even larger area of the windscreen. The system is powered by a reversing motor whose drive shaft periodically changes its direction of rotation, thereby also driving the wipers on the reverse sweep. This means that the wiping frequency and intervals can be continuously varied according to need – either manually or with the help of the standard rain sensor.

The two wiper blades were developed in the wind tunnel and are therefore known as **aero wipers**. Instead of the articulated retention system used for conventional wiper blades, in which the rubber blades are claw-mounted, the aero wiper consists of a one-piece rubber section with an integral spoiler and externally mounted spring rails. The advantages are significantly better wiping quality and less noise, which is particularly noticeable when driving at high speed.

Comprehensive concept

- **Occupant protection on three levels during a frontal crash**
- **Adaptive airbags and belt force limiters**
- **PRE-SAFE preventive occupant protection system**

The innovative occupant protection systems in the new CLS-Class also underpin the traditional Mercedes-Benz claim to leadership in the field of car safety. This means that thanks to a comprehensive concept, the four-door Coupé is prepared for virtually every conceivable eventuality and offers its occupants an outstanding level of **all-round protection**.

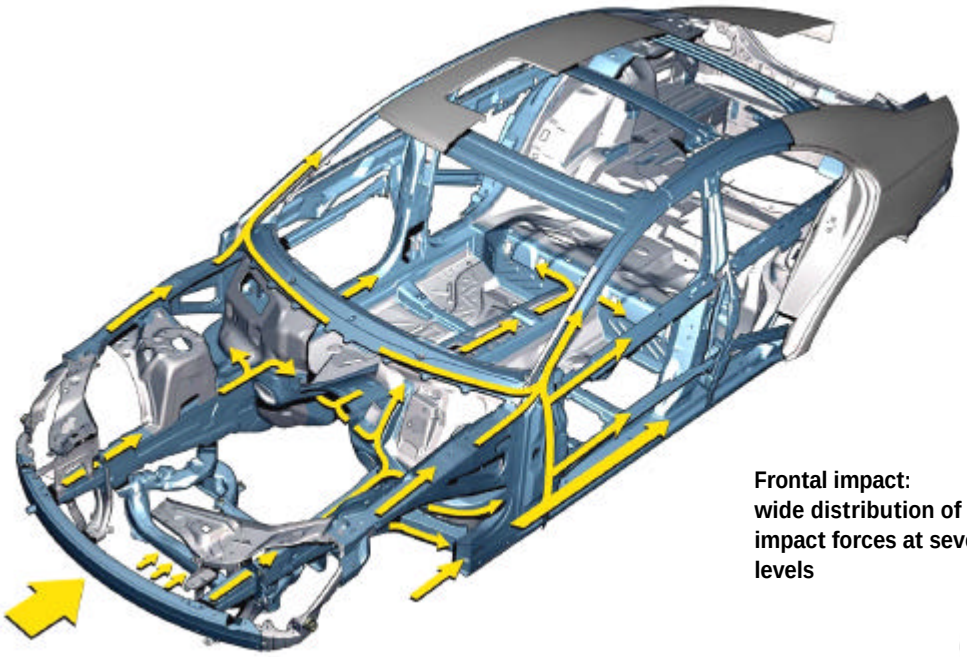
Large deformation zones at the front end optimise the flow of forces during a collision, leaving the passenger cell substantially undamaged even during severe accidents. As in all recent Mercedes car models, impact protection is based on a three-stage concept which is wholly or only partly initiated depending on the severity of the accident:

- Up to approx. **4 km / h impact speed** the plastic bumpers and foam elements absorb the impact energy and regain their original shape after the crash.

- Up to approx. **15 km / h impact speed** the front cross members and the crash boxes on the front-end module absorb the energy, so that the structure behind them remains undamaged. Thanks to repair-friendly connections, the elements making up the front-end module can be replaced at low cost.

- At more than **15 km / h impact speed**, occupant protection is assured by a sophisticated system of structural members. These include the robust steel sections above the wheel arches, which form a second tier of side members and ensure efficient load distribution during an offset collision. They are braced against

the A-pillars. The lower side members in the front-end structure feature an additional, third skin on the inside surface. These direct the impact forces into the robust firewall cross member, which acts together with the pedal floor members to ensure that the energy is widely distributed right to the transmission tunnel and outer side members. Like the lower elements of the front axle, the integral member, to which parts of the front axle, the steering gear and engine mountings are attached, is also involved in energy absorption during a severe frontal impact. If the Coupé is in a frontal collision with a one-sided overlap, the special impact-absorbing elements in front of the side members perform an important function. They brace the wheels at an early stage in the collision, so that impact forces can also be transferred to the lateral body structure along this path.



Frontal impact: wide distribution of the impact forces at several levels

The fact that 47.5 percent of all the sheet metal components in the bodyshell are of high-strength steel alloys is a further indication of the high safety level in the new CLS-Class. These high-strength components provide maximum dynamic resistance despite a low material thickness.

Passenger cell: effective all-round occupant protection

The passenger cell is designed to withstand all kinds of accident situations – frontal or rear collisions, side impacts or roll-overs – and provides a very robust structure for a very high level of occupant protection even at high impact speeds. The sophisticated floor structure, robust longitudinal and cross members, flexurally rigid struts, three-walled A, B and C-pillars and tubular reinforcements in the B-pillars form the strong backbone of this "protection zone".

In the event of a rear-end collision, the same three-phase, speed-related safety concept as is found in the front-end structure of the new CLS-Class take effect, based on the plastic bumper, a flexing cross member and deformable crash boxes. The rear side members consist of a continuous, closed box section with specifically graduated material thicknesses, and are able to absorb large forces. The plastic fuel tank is installed in a crash-protected location in front of the rear axle.

Front airbags: two-stage control depending on accident severity

Mercedes-Benz has already been making a major contribution to improved occupant safety for many years, with intelligent restraint systems which adapt to the current occupant and accident situation. The new CLS-Class likewise features such an adaptive protection concept. The aim of these measures is to reduce the loads acting on the occupants even further during serious accidents, and to optimise the protective function during accidents in the medium speed range.

The sensors of the restraint system are supplemented with two **upfront sensors** on the radiator cross member. Their remote positioning in the front end of the body enables them to detect the severity of a collision even earlier and with greater accuracy than the central crash sensor on the transmission tunnel. The information from the upfront sensors is used by the electronic control module to shorten the time that elapses between the moment of impact and the deployment of the **belt tensioners**, to adapt the operation of the **belt force limiters** to the severity of the collision and to trigger the **airbags** both earlier and in two stages, depending on the

situation. During a minor frontal impact the electronic control unit only ignites one stage of the two-stage airbag gas generators, and the airbag inflates more gently. Should the control unit detect a severe frontal collision, however, it deploys the second stage of the gas generator after a slight delay. As a result, the airbag inflates at a higher pressure to provide the occupants with the level of protection required in a collision of this severity.

Side airbags: combination of windowbags and sidebags

The restraint system in the new CLS-Class offers two further, highly effective systems with standard-fitted sidebags in the front seat backrests as well as windowbags. These complement each other in their protective effect: while the **sidebags** mainly protect the thorax area of the occupants, the **windowbags** deploy from the front to the rear roof pillar like a large curtain, providing head protection over a wide area. The windowbags and belt tensioners are also activated in the event of a roll-over.

PRE-SAFE: pioneering system for preventive occupant protection

The preventive occupant protection system PRE-SAFE will also be available for the new Mercedes Coupé in future. This is based on the principle of **prevention**: PRE-SAFE is able to detect critical driving situations in advance and intervenes to prepare both the occupants and the vehicle for an impending collision:

- The **seat belts** of the driver and front passenger are tensioned as a precaution.

- If the **front passenger seat** is in an unfavourable position in terms of longitudinal adjustment and cushion / backrest angle, it is moved to a better position.

- The **sunroof** is automatically closed.

Thanks to these precautionary PRE-SAFE measures the vehicle occupants are in a better seating position even before the accident occurs, enabling the seat belts and

airbags to work more efficiently. If the accident is avoided, the preventive tensioning of the seat belt is automatically relaxed and the front passenger is able to adjust the seat to its previous position.

With this unique system Mercedes-Benz has responded to accident research findings which indicate that more than two thirds of all traffic accidents follow critical driving situations – skidding, emergency braking or sudden evasive action – which allow the conclusion to be drawn that a collision is imminent. This valuable time before a crash, which can be several seconds, has previously been wasted for passive occupant protection purposes – well-proven protective systems such as seat belts, airbags or belt tensioners have only gone into action during an impact.

In contrast, PRE-SAFE is able to detect impending accident situations in good time, and uses the time before a possible collision to put preventive safety measures in place. In other words, PRE-SAFE gives the vehicle "reflexes". Just as every living being reacts reflexively to the threat of danger and takes preventive measures, this innovative safety technology activates systems almost instantly to reduce the risk of injury to the occupants.

Early accident detection is possible because PRE-SAFE represents a so far unique synergy of active and passive safety. It is linked to the anti-lock braking system, Brake Assist and the Electronic Stability Program ESP®, whose sensors constantly send information concerning the current driving situation to the control units. The micro-processors use these data to recognise hazardous driving manoeuvres and respond within milliseconds by issuing the appropriate commands. Mercedes-Benz also uses these sensor data for the preventive occupant protection system PRE-SAFE, opening up a new dimension in car safety.

For Mercedes-Benz this system is the logical continuation of its long-pursued philosophy of practically focused car safety. Based on the knowledge and experience of the in-house accident research department, PRE-SAFE builds a bridge between active and passive vehicle safety.

The occupant restraint system in the new CLS-Class

	Front seats	Rear seats
Inertia-reel seat belts with automatic comfort-fit and height adjustment	o	o
High-performance belt tensioners	o	o
Belt force limiters	o adaptive	o
Head restraints	o adjustable for height and angle	o
PRE-SAFE preventive occupant protection	optional *	--
Front airbags	o with adaptive control depending on accident severity	--
Sidebags	o	optional
Windowbags	o	o

o = standard; *available from the beginning of 2005

Elegant surroundings

- **Saloon-like space and comfort**
- **Sensor-controlled THERMATIC automatic climate control as standard**
- **Versatile programme for individual seating comfort**
- **Innovative auxiliary systems for high driver-fitness safety**

With this unique, four-door coupé concept Mercedes-Benz has been able to combine the excitement of a coupé shape with the practicality, comfort and everyday practicality of a saloon. This is not only confirmed by the body design, but also by the interior dimensions. This is where the new CLS-Class offers significant added value compared with other coupés: the **headroom** (front 975 millimetres, rear 924 millimetres), **shoulder-height width** (front 1429 millimetres, rear 1422 millimetres) and **elbow-height width** (front 1472 millimetres, rear 1464 millimetres) easily exceed the dimensions normally found in this vehicle class. At 829 millimetres the **distance between the seats** is also at the level of a saloon car.

A glance into the **boot** also shows that the CLS-Class is a fully-fledged touring car for four occupants. Positioning the fuel tank beneath the rear seats and using the spare wheel recess as an additional luggage box means that it offers a capacity of up to 505 litres (CLS 350) according to the VDA measuring method – plenty of luggage space for suitcases, golf bags and other items. With this luggage capacity the CLS-Class beats many a saloon car and any other coupé. The new Mercedes model series is equipped with the tyre sealing kit TIREFIT as standard, allowing space for the practical luggage box in the spare wheel recess. This is separated from the main boot area by a robust cover and has a capacity of 42 litres.

Major dimensions for the CLS-Class

Overall length	4913 mm
Overall width	1851 mm
Overall height	1381 mm
Wheelbase	2854 mm
Overhang front / rear	891 / 1165 mm
Headroom front / rear	975 / 924 mm
Shoulder-height width front / rear	1429 / 1422 mm
Elbow-height width front / rear	1472 / 1464 mm
Distance between seats	829 mm
Boot capacity*	CLS 350: 505 litres CLS 500: 495 litres

*acc. to VDA measuring method

Dashboard: luxurious materials and outstanding precision

The attractive and sophisticated dashboard of the new CLS-Class is a prime example of typical Mercedes quality and value. It is of modular construction, with an upper section and several lower sections. Its eye-catching centrepiece is the large, one-piece trim panel of fine **burr walnut**, whose silk matt finish makes for a very special appearance. It dominates almost the entire front area of the dashboard and characterises the elegance of the interior. The centre ventilation vents and the control unit for the standard THERMATIC automatic climate control are harmoniously recessed into the wood surface.

The **instrument cluster** is also inset into the trim panel. A chrome surround defines this area and leads the eye to the dial instruments lower down, which are in turn accentuated by shining chrome surrounds. The instrument covers are of special mineral glass to ensure a particularly brilliant display. The speedometer (centre), rev counter (right) and clock (left) are in the driver's direct line of vision, and additional information is provided by a central display located within the speedometer. This shows plain text information in the event of a fault. Two bar-chart displays in the outer areas of the instrument cluster show the fuel level (left) and coolant temperature (right).

The centrepiece of the operating concept is the leather-covered, four-spoke steering wheel, whose illuminated buttons allow information to be accessed or certain functions to be controlled by thumb pressure. The radio, telephone, navigation system and other units can be easily operated in this way. The relevant information appears in the speedometer's **central display**.

The lower section of the dashboard features a knee bolster, the glove compartment lid and the side panels. The illuminated glove compartment has a stowage capacity of approx. seven litres. Its lid opens slowly and comes to rest gently thanks to a damper element filled with silicone oil.

Centre console: stylish transition to the rear

The centre console houses the standard radio or the optionally available radio / navigation units Audio 50 APS and COMAND APS. Beneath this, fine wood trim embellishes the surfaces of the ashtray and the movable switch array, behind which a stowage compartment or the CD-changer (optional) is concealed. Depending on the level of appointments, the switch array has illuminated keys for the central locking system, ESP®, hazard warning flashers, heated seats, rear head restraints, rear window blind and seat ventilation system. The selector lever of the 7G-TRONIC seven-speed automatic transmission and the control buttons for the AIRMATIC DC air

suspension (standard in the CLS 500) form a further control array with a stylish chrome surround on the transmission tunnel trim.

The centre console and tunnel trim form an attractive unit which extends to the rear in a sweeping line, where it separates the two **single seats**.

The centrepiece of the front tunnel trim is the large, soft armrest, which conceals a stowage compartment with two sections. A mobile phone holder can be integrated on the left of the top section, while the lower compartment is linked to the air conditioning system and can be ventilated. The lid hinges open to either the left or right as required, ensuring that the driver has optimal access to the compartment. The rear face of the stowage compartment between the front seats features two pivoting ventilation ducts and the rear control unit for the THERMOTRONIC luxury automatic climate control system (standard in the CLS 500). This is followed by a seamless transition to the rear tunnel trim, which has two stowage compartments. One of these accommodates a bottle holder if required, while the larger compartment features a twelve-volt electric socket. The compartments have retractable lids with fine wood trim.

Seats: dynamic multicontour function and active ventilation on request

The newly developed seats also make a major contribution to the high level of ride comfort and luxurious atmosphere on board the new CLS-Class. They are upholstered in a high-quality fabric / leather combination as standard, with electric adjustment for reach, height and angle which can be optionally combined with a memory function. This enables the individual settings for the steering wheel, exterior mirrors, seat and head restraint to be stored; they are also transferred to the electronic ignition key of the Mercedes Coupé and are recalled whenever the engine is started.

The front seats are based on a steel frame with a spring mat, rubber liner and lined upholstery. The steel frame of the backrest features large rubberised hair mats and

foam padding for a high level of seating comfort. A manually adjustable lumbar support in the driver's seat is also standard equipment.

On request Mercedes-Benz will also provide the well-proven **multicontour seat** familiar from other model series in the new CLS-Class, with an additional technical innovation for even more seating comfort: the dynamic variant of the multicontour seat. This is equipped with various air chambers – one at the front of the seat cushion, two in the lumbar region and one each in the side bolsters of the backrest – which are automatically inflated or deflated depending on the driving situation. This is controlled electro-pneumatically by a microprocessor in the seat, using data such as the steering angle, lateral acceleration and vehicle speed. It varies the internal pressure and volume of the air chambers according to the situation. When taking a left-hand bend, for example, the system automatically inflates the air chambers on the right of the backrest to provide the occupant with more lateral support. The driver and front passenger are able to choose between two stages in this dynamic support system.

In addition this optional item includes a **massage function** which noticeably relaxes the back muscles and improves the metabolism of the vertebrae: after pressing the "Pulse" button, the two lower air chambers in the lumbar area begin to pulsate as they are inflated and deflated according to a precisely defined sequence by the system, which constantly alternates between medium and high air pressure settings. This "back massage" – specialists refer to it as "dynamic lumbar support" – lasts for five minutes and can be repeated at any time.

A pleasant seating climate, especially on hot summer days, is assured by the active **seat ventilation** system in the CLS-Class (optional). Five miniature ventilators in each front seat take in cool air from the footwell and allow this to flow uniformly from the perforations in the seat surface via special plastic ducts and a permeable woven liner. This cools down seat surfaces which have been exposed to strong sunshine; the airflow rate can be controlled in three stages.

The two passengers in the rear benefit from comfortable single seats. A cup holder for two cans or cups and a stowage compartment are integrated into the centre armrest. On request Mercedes-Benz will equip the rear seat unit with a ski-bag holding up to four pairs of skis.

Interior lighting: discreet ambient lighting while on the move

To ensure that occupants aboard the new CLS-Class continue to feel completely at ease after nightfall, Mercedes-Benz has developed a sophisticated lighting system for the interior. This not only includes indirect illumination of all important switches and controls, but also what is termed ambient lighting which ensures a pleasant atmosphere during a journey. The illuminated areas enclose the front and rear roof consoles, and a light-emitting diode directed at the centre console from the rear-view mirror is also part of the ambient lighting system.

The diffused lighting for the front section can be dimmed in six stages, and is individually adjusted using the buttons on the multifunction steering wheel and the central display in the instrument cluster. The ambient lighting is regulated by two buttons in the roof console.

Climate control: THERMATIC as standard

Climatic comfort on board the new CLS-Class is perfected by an efficient system included in the standard appointments - **THERMATIC**. This automatic climate control system already attracts visual attention by virtue of its attractive control panel harmoniously integrated into the upper section of the dashboard. This enables the driver and front passenger to make many numerous individual adjustments to the temperature, air distribution and fan speed. All the other climate-related functions are also consolidated here: air recirculation, residual engine heat utilisation, demisting and the heated rear window.

THERMATIC processes information from different sensors relating to the interior and ambient temperature and the humidity level. In conjunction with an infinitely adjustable refrigerant compressor, the dewpoint sensor measuring the humidity level enables the automatic climate control system to be precisely and economically controlled as required. This variable control is by means of a solenoid valve, which varies the swept volume of the compressor according to requirements.

The automatic climate control system also controls the air recirculation function on a variable basis: at high ambient temperatures the microprocessor automatically varies the recirculated proportion of the incoming air to cool the interior down more rapidly and reduce the power requirement of the system. The so-called tunnel function is a further special feature: if the driver presses the air recirculation button down for a longer period (approx. two or three seconds), this not only closes the air recirculation flap in the air conditioner but also any open windows and the sliding roof. If the key is depressed again they return to the previous position.

A compound filter which retains dust particles, pollen and odours is also standard equipment in the new CLS-Class.

Climatic comfort at the highest level is guaranteed by the THERMOTRONIC **four-zone climate control system**, which is standard in the CLS 500. "Four-zone" means that the microprocessor individually calculates and controls the temperature for the driver, front passenger and occupants in the rear. Each of the occupants can select a personally preferred temperature. In addition the system registers the position of the sun and uses an automatic temperature and air volume control system to ensure that the desired values are kept constant at every seat.

The four-zone THERMOTRONIC control panel has a number of functions in addition to that of THERMATIC. Here not only the temperature, but also the air distribution can be separately adjusted for the driver and front passenger; the set temperature values appear in a display. Thanks to a special sensor, THERMOTRONIC automatically

switches to air recirculation mode if the outside air has a too high concentration of pollutant gases.

Like the driver and front passenger, the passengers in the rear have a control panel to regulate the required temperature and meter the air volume. This is located on the rear face of the tunnel trim and likewise features two digital temperature displays. In line with the four-zone principle, separate adjustments can be made for both sides.

Support systems: high-tech electronics for driver-fitness safety

The dimensional concept, seat design and climate control are major factors contributing to the high standard of long-distance comfort in every Mercedes passenger car. Specialists refer to this as **driver-fitness safety**, which means the ability of a car to maintain and to an extent even improve the mental and physical alertness of the driver. This enables him to give more attention to the traffic situation, and maintains his performance reserves so that he can respond safely and confidently in critical circumstances.

Driver-fitness safety is one of the characteristic features of a Mercedes-Benz and makes it unmistakable. No other automobile manufacturer devotes as much attention to this aspect of vehicle development as Mercedes-Benz. The new CLS-Class is the latest to benefit from this commitment.

In addition to outstanding seating and climatic comfort, the four-door Coupé is equipped with a number of driver support systems which make a significant contribution to driver-fitness safety: modern "co-pilots" such as proximity cruise control, a parking aid and voice control.

DISTRONIC proximity control, which has already proved highly successful in the Mercedes-Benz E, S, CL and SL-Classes, is also available for the CLS-Class on request. A digital signal processor (DSP) instantly interprets the signals of a radar sensor in the radiator grille which monitors the traffic situation in front of the vehicle.

If the distance to the vehicle ahead lessens, DISTRONIC automatically closes the throttle or – if necessary – applies the brakes to maintain the set distance. Once the distance between the two vehicles increases again, the system accelerates the CLS-Class back to the speed originally set or restores the set distance.

At slow manoeuvring speeds of up to 16 km / h another support system automatically warns the driver when things are getting tight in front of or behind the CLS-Class: **PARKTRONIC** (optional). This system operates on the principle of the echo-sounder. Six sensors on the front bumper and four on the rear bumper send out ultrasonic signals which are reflected by other vehicles or obstacles. Using the time difference between sending and receiving, a microprocessor calculates the distance and informs the driver by means of a visual and / or acoustic signal. In this way PARKTRONIC makes parking or manoeuvring easier in tight spaces.

The **LINGUATRONIC** voice control system, another Mercedes-Benz development, also controls the navigation system in the new CLS-Class. A few words from the driver are sufficient to make the radio automatically search for or store a different station in the memory, skip to the next CD track or programme a new destination into the navigation system. With this technology Mercedes-Benz has made a further important contribution to traffic safety, as drivers no longer need to take their hands from the wheel to operate the telephone or audio equipment. LINGUATRONIC therefore allows drivers to give their full attention to the road while offering considerably more comfort.

Audio systems: radios as the operating centre for various functions

The latest high-tech audio equipment ensures that passengers in the CLS-Class are provided with information and entertainment. The four-door Coupé is equipped with the **Audio 20 CD** unit as standard, which has features including speed-dependent volume control, an integral telephone keypad and convenient operation using the multifunction steering wheel. It provides FM, medium, long and short-wave reception and plays audio CDs.

The optional **Audio 50 APS** unit is equipped with a twin-tuner receiver for FM, as well as a medium, long and short-wave tuner. It differs from the basic Audio 20 CD unit in having an integral navigation system with dynamic route guidance by RDS-TMC, a cassette player and a 4.9-inch colour display. The CD drive reads both the data CDs for the navigation system and audio CDs. The entire European road network is stored on the navigation CD supplied with the system.

The **COMAND** control and display system (optional) developed by Mercedes-Benz features a large colour display (6.5") in modern TFT technology and a 16:9 screen format. The integral DVD drive is also suitable for playing audio CDs. For radio reception the unit is equipped with a VHF-RDS twin-tuner and aerial diversity. Long, medium and short-wave reception is also possible.

The **COMAND APS** version also includes a navigation computer with a second DVD drive. Both components are accommodated in the boot. The European road network and a range of tourist information is stored on the navigation DVD.

Sound system: surround sound for every seat

The ten loudspeakers included in the standard specification of the CLS-Class ensure superb hi-fi sound. On request the Coupé can be equipped with a multi-channel sound system, which is precisely configured to the acoustic conditions in the interior and takes the prevailing level of travel noise into account during sound reproduction. What is more, the system converts every stereo signal into surround sound and thereby ensures a near-perfect listening experience on every seat.

The compact CD- hanger (optional) is located in the centre console – behind the switch array, which pivots upwards at the touch of a button with the help of an electric motor. This makes the unit particularly easy and convenient to operate; it holds six compact discs.

Strong team

- **Eight-cylinder engine for sports car performance and outstanding comfort**
- **Newly developed V6 engine with a unique technology package**
- **7G-TRONIC seven-speed automatic transmission as standard**

Whether the driver wants a dynamic driving experience with a fulminating performance or comfortable cruising at low engine speeds – both the engines available for the new CLS-Class meet these requirements. Just as the mood takes him or her, both the 5.0-litre V8 engine and the new 3.5-litre V6 engine will oblige whether the driver prefers brisk progress or a more relaxed, enjoyable style of driving.

The V8 engine generates 225 kW / 306 hp from a displacement of 4966, and puts the **CLS 500** on a par with thoroughbred sports cars in terms of handling dynamics and performance. The eight-cylinder Coupé accelerates from standstill to 100 km / h in just 6.1 seconds and will sprint from 60 to 120 km / h in only 5.6 seconds (provisional figures) thanks to its exemplary torque characteristics – this illustrates the capabilities of the V8 power unit and shows how efficiently this high performance potential is used by the newly developed seven-speed automatic transmission, 7G-TRONIC, which is standard equipment in the CLS 500.

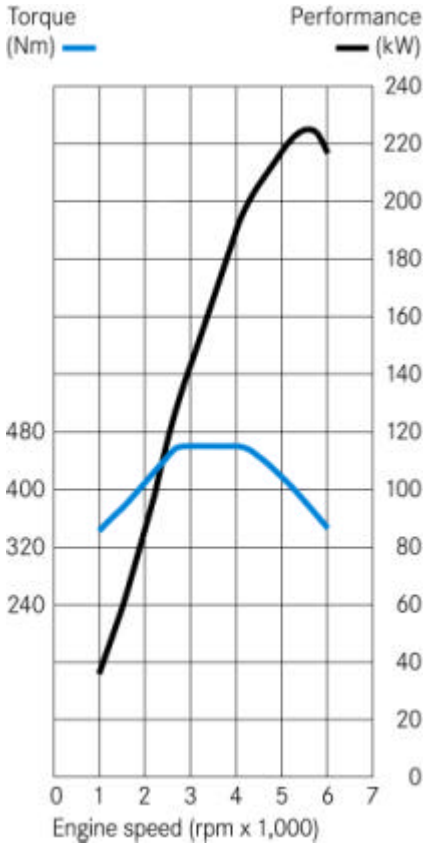
An electronically controlled **intake module** increases the available torque in the lower engine speed range and ensures that the engine is always able to respond immediately to the power requirements of the driver, either in town or on country roads. More than 400 Newton metres of torque are already available from 2000 rpm. This is almost 90 percent of the maximum **torque** of 460 Newton metres, which the eight-cylinder powerplant makes available from 2700 rpm and maintains up to 4250 rpm.

The smooth interaction between the V8 engine and 7G-TRONIC is also noticeable in terms of **fuel consumption**: 11.3 litres per 100 kilometres (NEDC combined

consumption, provisional figure) is likewise a value that makes its mark in this vehicle and output class.

CLS 500

Cylinder arrangement	V8
Valves per cylinder	3
Displacement	4966 cc
Bore / stroke	97.0 / 84.0 mm
Compression ratio	10.0 : 1
Output	225 kW / 306 hp at 5600 rpm
Max. torque	460 Nm at 2700-4250 rpm
0–100 km / h	6.1** s
Maximum speed	250 km / h*
NEDC fuel consumption	11.3 l / 100 km / h**



*electronically limited; **provisional figures

Six-cylinder unit: 200 kW / 272 hp of output and 350 Newton metres of torque

The newly developed V6 engine of the **CLS 350** also features a number of technical innovations, achieving highly respectable performance levels in its displacement class.

With an output of 200 kW / 272 hp and 350 Newton metres of torque, the new Mercedes V6 is one of the most powerful in its displacement class. The maximum torque is already available from 2400 rpm and remains constant over a wide engine

speed range up to 5000 rpm, providing powerful acceleration and rapid sprints. The CLS 350 accelerates from standstill to 100 km / h in 7.0 seconds and sprints from 60 to 120 km / h in 6.9 seconds when overtaking (provisional figures).

The variable, continuous **camshaft adjustment** system controls the 24 valves in the aluminium cylinder heads. It helps to ensure that the valves open and close at the most favourable time in any driving situation, significantly improving the charge cycle in the cylinders and reducing energy losses. As a result this technology reduces fuel consumption under partial load, while ensuring an optimal supply of fresh gas to the combustion chambers under full load. The new Mercedes six-cylinder engine is the world's first V6 to have variably adjustable intake and exhaust camshafts.

Mercedes engineers have configured and optimised all the air ducting components with the help of sophisticated airflow simulations. The magnesium **intake module** has likewise been optimised in terms of flow characteristics. The length of the intake manifold can be varied according to the engine speed to achieve the best possible torque and output. From 1500 rpm the new V6 engine already develops approx. 87 percent of its maximum torque of 350 Newton metres.

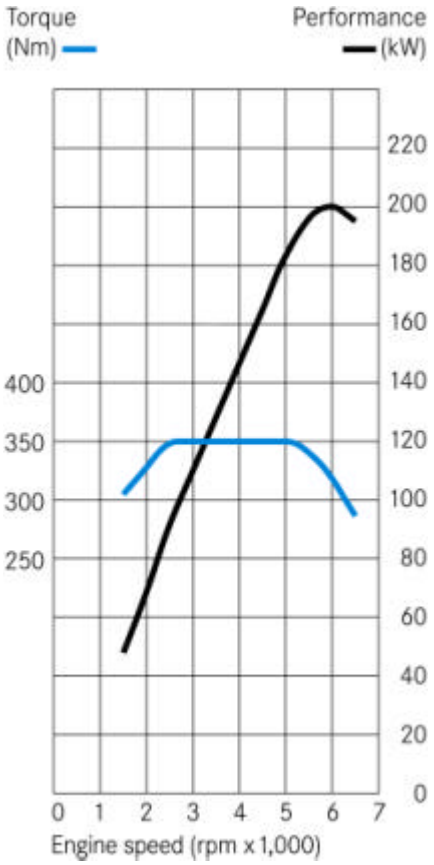
The intake ducts are equipped with newly developed **tumble flaps** which improve the intake process and combustion of the fuel-air mixture. These pivot upwards under partial load, increasing the turbulence of the gas flow in the combustion chambers. Under higher engine loads the tumble flaps are completely recessed into the intake manifold. Thanks to the use of these innovative tumble flaps, the fuel consumption of the V6 engine is reduced by up to 0.2 litres per 100 kilometres depending on engine speed – with a significant improvement in smoothness. In the NEDC the CLS 350 manages on 10.1 litres of premium petrol per 100 kilometres (provisional figure).

An intelligent heat management system also contributes to fuel economy. Mercedes engineers have developed a new, logic-controlled thermostat which is active in all engine operating situations. It directs the heat flows inside the engine in such a way that the engine oil and coolant are always at the best possible temperatures.

CLS 350

Cylinder arrangement	V6
Valves per cylinder	4
Displacement	3498 cc
Bore / stroke	92.9 / 86.0 mm
Compression ratio	10.7 : 1
Output	200 kW / 272 hp at 6000 rpm
Max. torque	350 Nm at 2400-5000 rpm
0–100 km / h	7.0* s
Maximum speed	250 km / h
NEDC fuel consumption	10.1 l / 100 km / h*

*provisional figures



The crankcase and cylinder head of the new Mercedes V6 are made of aluminium. The state-of-the-art, lightweight engine also has weight-reduced connecting rods, pistons and balancer weights which contribute to the exemplary smoothness of the unit. Between the cylinder walls, a balancer shaft counter-rotates with the crankshaft and compensates the inherent vibration moments of the V6 unit. The cylinder liners are in aluminium-silicon technology for particularly low friction, distortion and weight.

The **acoustic** properties were a further focus of the development work. The aim of the Mercedes engineers was a specific reduction in engine noise, followed by the achievement of a sporty and sonorous six-cylinder exhaust note. Very considerable technical effort was devoted to acoustic tests on practically all of the approx. 210

components in the new V6 engine. An innovative intake manifold made of sound-absorbent woven nylon, a twin-cartridge air filter with integral resonators and numerous other refinements contribute to the exemplary level of noise comfort. The acoustic specialists have achieved the typical sports car engine note by careful configuration of the exhaust system.

Emission control: values below the EU-4 limits

The CLS 500 and CLS 350 meet the stringent EU-4 exhaust emission limits which come into force from 2005. In the CLS 350 the emission control system is based on **catalytic converters** located close to the engine, each with two **oxygen sensors** -- a control sensor and a diagnostic sensor – with linear control. This means that the oxygen sensors are already active immediately after a cold start, supplying information about the exhaust gas constituents for the electronic engine management system to process when controlling the warm-up phase. It is also due to the air-gap-insulated exhaust manifolds that the catalytic converters reach their normal operating temperature particularly rapidly.

In the CLS 500 the twin-pipe emission control system features a total of four catalytic converters and four oxygen sensors. The exhaust gases flow to the catalytic converters at the firewall via air-gap-insulated exhaust manifolds.

In all the models of the new CLS-Class the exhaust system and silencer housing are of high-grade stainless steel. Components of the engine and exhaust system whose correct operation is necessary for low exhaust emission values are monitored by an **onboard diagnosis system**.

Automatic transmission: seven gears as standard

The CLS 350 and CLS 500 are equipped with the newly developed **7G-TRONIC** seven-speed automatic transmission, the world's first car transmission of this type. It offers a number of technical innovations which ensure more powerful acceleration, extra-fast mid-range sprints, lower fuel consumption and a higher level of shift comfort in conjunction with the up-to-date engines.

The seven-speed automatic has several design measures to thank for its outstanding qualities, foremost among them the increase in forwards gears from the previous five to seven. This allows a wider spread of ratios, as well as further reducing the differences in engine speed between the individual gears achieved by the five-speed transmission. As a result, the driver can rely on having the optimum ratio at his or her disposal for virtually any driving situation. In addition, the electronic control unit has even more scope with which to optimise the shift processes to achieve lower fuel consumption and greater comfort. For example, at 100 km / h the engine speed will be on average – depending on the driving situation -- around twelve percent lower than with a five-speed automatic. This impressive engine speed adjustment system opens the door to lower noise, as well as improved fuel economy.

Mercedes engineers have achieved further advances as far as shift control is concerned. If the driver needs to accelerate quickly and therefore change down rapidly through several gears – i.e. kick-down -- 7G-TRONIC avoids having to move through the gears in strict order. Instead, the transmission uses its **direct downshift** capability, shifting down by as many as four gears – as the situation demands – rather than just one at a time. Shift times have been reduced significantly below the levels of the five-speed automatic transmission fitted up to now.

The new seven-speed automatic transmission also boasts a **torque converter lock-up clutch**. This is located in the hydrodynamic torque converter and largely eliminates slip between the pumps and the turbine wheel in many operating conditions. It manages this by establishing – where possible – a virtually rigid connection between

the engine and transmission shafts, thus preventing power losses. In contrast to conventional automatic transmissions, where the converter can only be locked up in higher gears, the lock-up clutch in the Mercedes-Benz seven-speed automatic is already active in first gear. In addition, in the interests of comfort, the torque converter lock-up clutch features slip control, which allows it to run extremely smoothly. This is just another way in which Mercedes engineers have achieved unbeatable levels of shift quality.

In order to tap into the remarkable performance of the engines rapidly and smoothly in any driving situation, 7G-TRONIC can be equipped with a **manual shift program** on request. In this "M" mode the driver is able to change gear using the shift buttons on the steering wheel or by nudging the shift lever. Only when the upper and lower engine speed limits are reached, or during kick-down, are gearshifts carried out automatically. The gear currently selected is highlighted in the central display of the instrument cluster.

In addition to manual mode, drivers can also make use of the "C" (Comfort) and "S" (Sport) settings, in which the gears are shifted automatically. The "S" mode is configured for a particularly sporty driving style, and the movements of the accelerator pedal are transmitted more directly. In "C" mode a comparatively lower gearshift frequency intentionally brings about a particularly calm, relaxed style of driving.

Solid basis

- **AIRMATIC DC air suspension as standard in the CLS 500**
- **SBC™ braking system with convenient support functions**

With the latest chassis technology innovations by Mercedes-Benz the new CLS-Class achieves a level of ride comfort and handling safety that is unprecedented in this market segment. The AIRMATIC DC air suspension system (standard in the CLS 500) and the Sensotronic Brake Control (SBC™) electro-hydraulic braking system are two of the outstanding highlights in the four-door Coupé.

AIRMATIC DC is a further development of the air suspension system which Mercedes-Benz has used in the S-Class since the end of 1998. The suffix "DC" stands for "Dual Control" and emphasises the dual function of the system, which now uses the latest micro-electronics to control springing and damping. The latter is controlled by the well-proven **Adaptive Damping System** (ADS II), which regulates the shock absorber forces as required while taking the road conditions, driving style and vehicle load into account. The function of **springs** is carried out by rubber bellows in the spring struts, which are filled with compressed air. The result is a softer, i.e. more comfortable, suspension action on the wheels and body than with a conventional steel spring suspension system.

AIRMATIC DC makes it possible to actively control the air volume while on the move. When taking a bend at speed or under other demanding dynamic conditions, for example, the system cuts off part of the air volume for a brief period, thereby stiffening the suspension to reduce the rolling and pitching movements of the vehicle and improving the handling stability of the Coupé in these situations. During normal driving the entire air volume remains active, achieving maximum comfort with a softer suspension setting.

This rapid adjustment of the air volume and automatic adaptation of the shock absorber action is controlled by a microprocessor on the basis of various sensor signals providing information about e.g. the steering and yawing movements of the vehicle, linear and lateral acceleration, vehicle attitude and driving style. The control unit compares these current data with target values in its memory and starts a programmed calculation process (algorithm) to determine the optimal characteristic curve for the adaptive shock absorbers and control of the air volume. The computer's instructions are then carried out in various ways:

- **Springs:** With a brisk style of driving, valves in the spring struts switch off the comfort-related portion of the air volume which is stored in the spring struts at the front axle. Additional air reservoirs are attached to the front cross member of the subframe at the rear axle, and connected to the spring struts by braided hoses.

- **Damping:** Solenoid valves in the shock absorbers allow the compression and rebound damping to be adjusted according to the situation, significantly reducing body movements. Thanks to this precise adjustment for each individual wheel, the two front wheels can for instance be damped more strongly than the rear wheels when braking, reducing the tendency of the front end to dive. Depending on the control impulse, the valves are able to select one of four different characteristic curves within an extremely short time of 0.05 seconds.

In addition the driver is able to influence the transition thresholds between the four ADS stages and the spring action by pressing the level control button on the centre console: normally (switch position 0) the comfort-oriented setting is active, and the system changes from the softest shock absorber setting to a stiffer setting at a relatively late stage. The springs are likewise set for maximum comfort. By moving the switch to position 1 (an LED in the switch lights up) the driver can select a rather more sporty configuration in which the stiffer suspension and shock absorber settings are activated slightly earlier than in position 0.
Selecting the second switch position (two LEDs light up in the switch) immediately activates the sporty configuration in which the system regulates the springs and

shock absorbers with different parameters, providing sporty suspension characteristics at all times. In this switch position the body is automatically lowered by 15 millimetres.

AIRMATIC DC also includes an automatic all-round level control system, which ensures that the same spring travel remains available even when the vehicle is heavily laden. When on the move the system operates on a speed-related basis, lowering the vehicle body by 15 millimetres at both axles at speeds above 180 km/h to reduce wind resistance and improve handling stability.

Axles: four-link technology at the front, multi-link principle at the rear

Outstanding rolling and vibration comfort, safe handling characteristics up to the physical limits, sporty agility and precise directional stability – these dynamic virtues of the new CLS-Class are not just due to AIRMATIC DC, but also to further developments in axle technology.

- At the **front axle** Mercedes-Benz employs a sophisticated four-link system which is exemplary in terms of wheel location, steering precision and comfort. The CLS 350 is equipped with coil springs, single-tube shock absorbers and a torsion bar at the front axle -- AIRMATIC DC air suspension is also available for the six-cylinder model on request.

- At the **rear axle** the well-proven multi-link independent suspension system by Mercedes-Benz ensures precise wheel location, exemplary comfort and a high level of handling stability. If the CLS-Class is equipped with the AIRMATIC DC air suspension system, all five links on the rear axle are of forged aluminium, allowing a weight saving of more than 30 percent. In the steel-suspension CLS 350 four of the five links are of aluminium.

The major chassis data of the CLS-Class

Wheelbase	2854 mm
Track front / rear	1593 / 1603 mm
Turning circle	11.21 m
Wheel size	8.5 J x 17 ET 28 (front), ET 18 (rear)*
Tyre size	245 / 45 R 17*

*applies to CLS 350

Steering: speed-dependent function for convenient manoeuvring and parking

The steering gear of the **rack-and-pinion steering system** is located in front of the centre axis of the front wheels, and therefore in a position which supports the easily controlled tendency of the Coupé to understeer on bends. As an additional comfort-enhancing feature, Mercedes-Benz has equipped the CLS-Class with a power-assisted, speed-dependent steering system as standard, in which, at speeds below 100 km / h, the steering effort is gradually reduced as the speed drops. An electronically controlled valve makes this possible: the lower the speed, the greater the power assistance. This means that far less steering effort is required when parking than when driving at high speeds on a motorway, where the speed-sensitive steering provides good road contact.

The attractive **four-spoke steering wheel** has a diameter of 380 millimetres and can be electrically heated as an option. Like the seats, the driver is able to adjust the position of the steering wheel to his or her individual requirements with the help of electric motors. When he or she removes the electronic ignition key prior to leaving the car, the driver's seat automatically moves 60 millimetres to the rear and the steering column moves to its highest setting to provide significantly more legroom when getting out.

SBC™: High-pressure brakes for more safety and comfort

With the **Sensotronic Brake Control** (SBC™) electro-hydraulic braking system, the CLS-Class adds another milestone in automobile technology to the AIRMATIC DC, ESP® and Brake Assist systems – as standard. In this system the driver's braking action is electronically transmitted to a microprocessor which at the same time processes various sensor data about the current driving situation, allowing it to calculate and apply the best possible brake pressure for each wheel. Thanks to even faster and even more finely metered brake impulses, the system also improves the performance of the Electronic Stability Program (ESP®), enabling it to stabilise a vehicle which is on the point of entering a skid at an early stage.

The most important performance characteristics of Sensotronic Brake Control include the extremely fast build-up of brake pressure and precise monitoring of driver and vehicle behaviour by means of sensors. As a result this innovative system offers significant benefits in terms of handling safety. Examples:

- **Emergency braking:** SBC™ recognises the driver's sudden switch from the accelerator to the brake as an indication of an emergency situation, and is able to react automatically. In this case the system increases the pressure in the brake lines and positions the brake pads against the brake discs so that they can grip with full force the moment the driver steps on the brake.

- **In the wet:** through brief, regular application of the brakes, Sensotronic Brake Control ensures that the film of water on the brake discs is stripped away so that the brakes can always operate to full effect. This automatic drying function is activated whenever the windscreen wipers have been operating for a certain length of time. The finely metered brake impulses are not noticeable to the driver.

Additional support systems are also included to ensure even greater safety and improved comfort:

- **Start-Off Assist** (SBC™ Hold) prevents the car from unintentionally creeping forwards or rolling backwards on hills and steep gradients. Once the Coupé has been braked to a stop, a little extra pressure on the brake pedal is enough to activate this function. The CLS-Class is then held firm by SBC™ Hold – even if the driver takes his foot from the brake pedal. The letters "SBC H" light up in the instrument cluster. When the driver accelerates, Start-Off Assist releases the brake.

- **Tailback Assist** can be activated using the cruise control lever when the vehicle is at a standstill or travelling at a maximum of 15 km / h. The advantage of this is that in stop / go traffic up to speeds of 60 km / h the driver only needs to use the accelerator; when the driver takes his foot off the accelerator, SBC™ brakes the car to a standstill with constant deceleration. The letters "SBC S" appear in the instrument cluster.

Large front and rear **brake discs** provide the technical basis for safe and reliable braking with SBC™. Depending on the engine variant their diameter is 312 or 330 millimetres at the front, and 300 millimetres at the rear for both CLS models. The front brake discs are internally ventilated.

Wheels and tyres: light-alloy as standard

Both model variants in the new CLS-Class are equipped with 17 or 18-inch light-alloy wheels and tyres as standard. The tyre size in the case of the basic CLS 350 model is 245 / 45 R 17.

Thanks to an extensive **range of wheels and tyres**, Mercedes customers have various options for even more individualisation of the CLS Coupé:

The wheels and tyres of the CLS-Class

	CLS 350	CLS 500
Standard equipment **Front axle**	Five-twin-spoke wheel 8.5 J x 17 with wide-base tyres 245 / 45 R 17	Five-spoke wheel 8.5 J X 18 with wide-base tyres 245 / 40 R 18
Rear axle	Five twin-spoke wheel 8.5 J x 17 with wide-base tyres 245 / 45 R 17	Five-spoke wheel 8.5 J X 18 with wide-base tyres 245 / 40 R 18
Optional equipment	1) as CLS 500 2) Multi-spoke wheel 8.5 J x 18 with wide-base tyres 245 / 40 R 18 front and 275 / 35 R 18 rear 3) Multi-spoke wheel by Mercedes-AMG 8.5 J x 18 with wide-base tyres 245 / 40 R 18 front and 275 / 35 R 18 rear 4) Five-spoke wheel by Mercedes-AMG 8.5 J x 19 front and 9.5 J x 19 rear with wide-base tyres 255 / 35 R 19 front and 285 / 30 R 19 rear	1) Multi-spoke wheel 8.5 J x 18 with wide-base tyres 245 / 40 R 18 front and 275 / 35 R 18 rear 2) Multi-spoke wheel by Mercedes-AMG 8.5 J x 18 with wide-base tyres 245 / 40 R 18 front and 275 / 35 R 18 rear 3) Five-spoke wheel by Mercedes-AMG 8.5 J x 19 front and 9.5 J x 19 rear with wide-base tyres 255 / 35 R 19 front and 285 / 30 R 19 rear

Tyre pressures are monitored by the Electronic Stability Program ESP®, or optionally by a special system based on radio technology:

- **ESP®** continuously compares the wheel rotation speeds, which mainly depend on the vehicle speed, vehicle load and tyre pressures. Because the stability programme permanently monitors the wheel rotation speeds and compares these values, it is able to detect significant deviations. In addition the control unit automatically monitors other dynamic parameters such as the lateral acceleration, yaw rate and wheel torque in order to diagnose any pressure loss in a tyre reliably, though this system does not measure the actual air pressure in each tyre. If a loss of pressure is detected in a tyre, a warning appears in red in the cockpit's central display: "Tyre pressure, check tyres." This warning function for tyre pressure loss based on ESP® technology is standard equipment in the CLS-Class.

- In the **tyre pressure monitoring system** (optional), a sensor system measures both the air pressure and temperature inside the tyres and transmits this information to receptors in the wheel arches at regular intervals. These pass the information on by cable to a central control unit, which evaluates the signals from the four wheels. The wheel positions are automatically identified by intelligent software, enabling the driver to be given specific information about the air pressure in each tyre via the central display. A corresponding warning appears in the display if a pressure loss occurs.

To ensure mobility even in the case of a flat tyre, Mercedes-Benz offers optional **tyres with a run-flat capability**. These tyres feature self-supporting side walls and enable Mercedes customers to continue their journey for up to 100 kilometres at a maximum speed of 80 km/h despite a tyre puncture.

Mercedes-Benz CLS 350

Engine		
No. of cylinders / arrangement		6 / V, 4 valves per cylinder
Displacement	Cc	3498
Bore x stroke	mm	92.9 x 86
Rated output	kW / hp	200 / 272
Rated torque	Nm	350 at 2400-5000 rpm
Compression ratio		10.7 : 1
Mixture formation		Microprocessor-controlled petrol injection with hot-film air mass measurement (HFM)
Power transfer		
Transmission		Seven-speed automatic
Ratios	Final drive	3.27
	1st gear	4.38
	2nd gear	2.86
	3rd gear	1.92
	4th gear	1.37
	5th gear	1.0
	6th gear	0.82
	7th gear	0.73
	Reverse	3.42 / 2.23
Chassis		
Front axle		Four-link suspension, McPherson struts, anti-dive, coil springs, gas-filled shock absorbers, stabiliser
Rear axle		Multi-link independent suspension, anti-squat and anti-dive, coil springs, gas-filled shock absorbers, stabiliser
Braking system		Sensotronic Brake Control electrohydraulic braking system, front and rear disc brakes internally ventilated, drum-type parking brake at rear, ABS, Brake Assist, ESP®
Steering		Rack-and-pinion power steering, steering damper
Wheels		8.5 J x 17
Tyres		245 / 45 R 17
Dimensions and weights		
Wheelbase	mm	2854
Track front / rear	mm	1593 / 1603
Overall length	mm	4913
Overall width	mm	1851
Overall height	mm	1403
Turning circle	m	11.5
Boot capacity max.*	l	505
Kerb weight acc. to EC	kg	1730
Payload	kg	465
Gross vehicle weight	kg	2195
Tank capacity / reserve	l	80 / 9
Performance and fuel consumption		
Acceleration 0-100 km / h	s	7.0**
Maximum speed	km / h	250
Fuel consumption NEDC comb.	l / 100 km	10.1**

*acc. to VDA measuring method; **provisional figures

Mercedes-Benz CLS 500

Engine		
No. of cylinders / arrangement		8 / V, 3 valves per cylinder
Displacement	cc	4966
Bore x stroke	mm	97.0 x 84.0
Rated output	kW / hp	225 / 306 at 5600 rpm
Rated torque	Nm	460 at 2700-4250 rpm
Max. engine speed	rpm	6300
Compression ratio		10.0 : 1
Mixture formation		Microprocessor-controlled petrol injection with hot-film air mass measurement (HFM)
Power transfer		
Transmission		Seven-speed automatic
Ratios	Final drive	3.06
	1st gear	4.38
	2nd gear	2.86
	3rd gear	1.92
	4th gear	1.37
	5th gear	1.0
	6th gear	0.82
	7th gear	0.73
	Reverse	3.42 / 2.23
Chassis		
Front axle		Four-link suspension, AIRMATIC DC full air suspension system with level control, anti-dive
Rear axle		Multi-link independent suspension, AIRMATIC DC full air suspension system with level control, anti-squat and anti-dive
Braking system		Sensotronic Brake Control electrohydraulic braking system, front and rear disc brakes internally ventilated, drum-type parking brake at rear, ABS, Brake Assist, ESP®
Steering		Rack-and-pinion power steering, steering damper
Wheels		8.5 J x 18
Tyres		245 / 40 R 18
Dimensions and weights		
Wheelbase	mm	2854
Track front / rear	mm	1593 / 1603
Overall length	mm	4913
Overall width	mm	1851
Overall height	mm	1390
Turning circle	m	11,5
Boot capacity max.*	l	495
Kerb weight acc. to EC	kg	1810
Payload	kg	465
Gross vehicle weight	kg	2275
Tank capacity / reserve	l	80 / 9
Performance and fuel consumption		
Acceleration 0-100 km / h	s	6.1**
Maximum speed	km / h	250
Fuel consumption NEDC comb.	l / 100 km	11.3**

*acc. to VDA measuring method; **provisional figures