

Mercedes-Benz at the 2009 IAA

Press Information

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From the SLS AMG to the three-litre S-Class: Mercedes is making its mark as the driving force behind innovation for fascinating and sustainable mobility.

Stuttgart/Frankfurt – Mercedes-Benz is once again demonstrating its capability as the driving force behind innovation in the automobile industry at the 63rd International Motor Show in Frankfurt, Germany. With the Vision S 500 Plug-in HYBRID, which is also making its debut in Frankfurt, Mercedes-Benz shows that there is a future for large and luxurious automobiles. The technology vehicle for the innovative plug-in hybrid drive enables fuel consumption of only 3.2 litres of petrol per 100 kilometres and a range of 30 kilometres solely on electric power. Two other Mercedes milestones on the road to zero-emission mobility are the B-Class F-CELL, which uses clean fuel cell technology to achieve a range of roughly 400 kilometres and will go into production before the end of 2009, and the BlueZERO E-CELL PLUS concept car, which has a total range of 600 kilometres thanks to the range extender. Rounding out the program are new additions to the GLK family as well as innovations in the Guard program and in relation to the Viano. Mercedes-Benz is picking up where it left off after its well-received appearance at the 2007 IAA and is sending numerous positive signals regarding the future of the automobile.

“No other car maker is as well positioned overall when it comes to meeting the customers' expectations for the individual, sustainable mobility of the future,” says Dr. Dieter Zetsche, Chairman of the Board of Management of Daimler AG and Head of Mercedes-Benz Cars. “Our aim is to remain the driving force behind innovation in the automobile industry. In keeping with this aim, we continue to invest large sums in research and development. We have the strategy and the appropriate technology, and we already have a large number of fascinating and environment-friendly vehicles on the market today.”

From November 2009, Mercedes-Benz will be expanding its family of E-Class vehicles by adding another striking model: the new E-Class estate. Just like the saloon and coupe, the new estate combines individualistic design with exemplary safety and outstanding comfort, quality and functionality. The new E-Class marks the debut of a number of technical innovations which no other car in the world in this category is able to offer – from drowsiness detection to automatic emergency braking when an accident is recognised as imminent, and from Adaptive Highbeam Assist to the Active Bonnet. Naturally the new estate features all these innovations. In addition, it also features air suspension with self-levelling at the rear as standard as well as unique innovations with regard to the further optimisation of load compartment management features.

Dieter Zetsche says: “The renewal of the E-Class family – the ‘heart’ of the Mercedes-Benz brand – couldn’t have happened at a better time. Its success shows that Mercedes brand values such as safety and extraordinary comfort combined with timeless elegance and maximum efficiency and are particularly attractive, especially in turbulent economic times. The E-Class is thus a versatile and persuasive ambassador for the innovative power of the Mercedes-Benz brand.”

Says Dr. Klaus Maier, Executive Vice President Sales and Marketing Mercedes-Benz Cars: “The E-Class estate has been the most practical way to drive a luxury-segment Mercedes since 1977, with more than one million customers having chosen our premium estate since then. With its innovative safety technology, clear advances in fuel efficiency and exemplary functionality, the fifth generation of the estate will write a new chapter in this success story.

E 63 AMG estate: The high-performance estate

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The new E 63 AMG estate occupies pole position in the premium estate segment. Its AMG 6.3 litre V8 engine puts out 386 kW/525 hp and accelerates the estate car from zero to 100 km/h in 4.6 seconds. With a boot capacity of 1,950 litres, the new E 63 AMG estate is an extraordinary combination of dynamic performance, great utility and high efficiency.

SLS AMG: The new Gullwing model from Mercedes-Benz

The Mercedes-Benz SLS AMG embodies automotive fascination and high tech of the highest order. The super sports car boasts a purist design, systematic lightweight design, superior driving dynamics and exemplary safety. All this is made possible by an unparalleled technology package comprising a lightweight aluminium space-frame bodyshell with gullwing doors; the AMG 6.3 litre, front-mid V8 engine with 420 kW/571 hp peak output, 650 Nm of torque and dry sump lubrication; the seven-speed dual-clutch transmission in a transaxle configuration; and the sports chassis with aluminium double-wishbone suspension. This combination guarantees driving dynamics of the highest order. The car's ideal weight distribution between the front and rear axles (47 to 53 percent respectively) and its low centre of gravity emphasize the outstanding sports car concept. The Gullwing model accelerates from 0 to 100 km/h in 3.8 seconds and has a top speed of 317 km/h. The combined fuel consumption stands at 13.2 litres per 100 kilometres (all values provisional).

Mercedes-Benz SLS AMG with electric drive

Mercedes-Benz is also presenting the electric SLS AMG eDrive concept car with a zero-emission high-tech drive at the IAA 2009. The Mercedes-Benz SLS AMG with electric drive transforms the vision of powerful and locally emission-free super sports cars into reality thanks to an innovative drive system. Powerful forward thrust is provided by four electric motors with a combined peak output of 392 kW and a maximum torque of 880 Nm. The four electric motors are positioned near the wheels, substantially reducing the unsprung masses compared to wheel-hub

motors. One transmission per axle transmits the power. This intelligent all-wheel drive system allows dynamically optimised power transmission without any losses by means of torque vectoring – in other words the specific, targeted acceleration of individual wheels. In its first phase, the SLS AMG with electric drive incorporates a liquid-cooled, high-voltage lithium-ion battery of modular design with an energy content of 48 kWh and a capacity of 40 Ah. The 400-volt battery is charged by means of targeted regeneration during braking whilst the car is being driven. The “electric” Gullwing model accelerates from zero to 100 km/h in around 4 seconds, putting it on the same high level as the SLS AMG with the 420 kW/571 hp AMG 6.3-litre V8 engine.

Vision S 500 Plug-in HYBRID: The luxury class on the road to the three-litre car

Shortly after the successful market launch of the S 400 HYBRID, currently the most fuel-efficient luxury saloon with a petrol engine, Mercedes-Benz will be presenting a “three-litre car” in the luxury segment, the Vision S 500 Plug-in HYBRID, at the 63rd IAA in Frankfurt. The technology vehicle demonstrating the future of the modular hybrid system from Mercedes-Benz boasts NEDC fuel consumption of only 3.2 litres of petrol per 100 kilometres. The vehicle can even cover up to 30 kilometres solely on electric power and thus entirely free of local emissions. With CO₂ emissions of only 74 grams per 100 kilometres according to the NEDC, the test platform of the Mercedes development engineering in Sindelfingen demonstrates the viability of future S-Class generations. The outstanding values are achieved through the combination of a plug-in hybrid drive with efficiency-enhancing BlueEFFICIENCY measures implemented in the vehicle. At the same time, the S 500 Plug-in HYBRID has all of the strengths that are typical of the S-Class: premium comfort, extraordinary safety and superior performance. The drive system consists of three main components: a powerful V6 petrol engine with direct injection, a hybrid module with roughly 44 kW/60 hp and a lithium-ion battery with more than 10 kWh of storage capacity that can be recharged at charging stations. The Vision S 500 Plug-in HYBRID accelerates from 0 to 100 km/h in 5.5 seconds.

“The Vision S 500 HYBRID is a new milestone on our path toward zero-emission mobility,” says Dr. Dieter Zetsche, Chairman of Daimler AG and Head of Mercedes-Benz Cars. “It is a luxurious and safe S-Class vehicle that offers superior driving performance while at the same time consuming less fuel than current compacts. All of this shows that our top models will also be able to combine automotive fascination with responsibility for the environment.”

Mercedes-Benz B-Class F-CELL: 100 percent driving pleasure, zero emissions

Mercedes-Benz is putting its first series-produced fuel cell car on the road before the end of the year: the B-Class F-CELL. The environmentally friendly electric car boasts superior performance comparable to a 2.0 litre petrol engine while still being practical enough for daily use. The zero-emission drive system consumes the energy equivalent of 3.3 litres of diesel per 100 kilometres (NEDC). Production of the B-Class F-CELL will commence in late 2009 on a small scale.

The fuel cell vehicle offers everything that people expect from a Mercedes-Benz: High comfort and safety as well as no reduction in interior space and boot capacity. Customers still get to have fun driving, too, as the electric motor puts out 100 kW/136 hp and peak torque of 290 Nm. It has a range of roughly 400 kilometres.

BlueZERO E-CELL PLUS: Piggy-backed for more range

The near-series Mercedes-Benz Concept BlueZERO E-CELL PLUS electric car combines environment-friendly electric mobility in the city with unrestricted suitability for long-distance driving. This is made possible by the combination of the battery-electric drive with a combustion engine. Putting out 50 kW, the compact three-cylinder turbocharged petrol engine is installed in the area of the rear axle and can charge the battery while the car is being driven. The efficient layout of the system as a whole together with the CO₂ bonus for the battery-electric driving mode reduces the vehicle's emissions to only 32 grams of CO₂ per kilometre. The range extender gives the BlueZERO E-CELL PLUS a total range of

up to 600 kilometres, with 100 kilometres thereof solely under electric power and thus free of local emissions. Page 7

The 100 kW electric motor (70 kW continuous) with a maximum torque of 320 Nm accelerates the BlueZERO E-CELL PLUS from zero to 100 km/h in less than eleven seconds. Top speed is electronically limited to 150 km/h in the interest of optimal range and energy efficiency.

Measuring only 4.22 metres in length, the BlueZERO model combines compact exterior dimensions with a spacious and versatile interior and cargo space. The vehicle's five full-size seats, approximately 450 kilograms of payload, and more than 500 litres of cargo capacity make it a suitable family car.

The BlueZERO E-CELL PLUS employs the unique sandwich floor concept known from the A-Class and the B-Class. The key drive components are installed in the vehicle's underbody in such a way that they take up little space, ensure a good centre of gravity, and are maximally protected. "Our modular system permits different drive configurations for each customer requirement," says Dr. Thomas Weber, the Daimler Board of Management Member responsible for Group Research and Mercedes-Benz Cars Development. "The improved sandwich floor platform serves as the perfect basis for a diverse range of vehicles with electric drives."

New additions to the GLK family

With the all-wheel drive GLK 250 CDI 4MATIC Blue EFFICIENCY and the rear-wheel drive GLK 220 CDI BlueEFFICIENCY, Mercedes-Benz has added two attractive new vehicles to its line of compact SUVs and now has a total of six versions. The GLK 250 CDI 4MATIC Blue EFFICIENCY is equipped with the most powerful four-cylinder diesel engine (150 kW/204 hp, 500 Nm), permanent all-wheel drive and the 7G-TRONIC automatic transmission. It accelerates from zero to 100 km/h in 8.5 seconds on its way to a top speed of 213 km/h, yet the diesel boasts NEDC average fuel consumption of only 6.7 litres of diesel per 100 kilometres (combined consumption, preliminary figure). At the same time, it

not only meets the EU5 emissions standard but also has the potential to fulfil the EU6 limits as well as the BIN 5 requirements in the USA. Page 8

The rear-wheel drive GLK 220 CDI BlueEFFICIENCY consumes even less fuel – from 6.0 litres of diesel per 100 kilometres. The version equipped with a six-speed manual transmission boasts good pulling power and, like the more powerful variant, displays an exemplary degree of cultivation for a four-cylinder diesel engine. Peak torque of 400 Nm is available over a wide rev range from 1,400 to 2,800 rpm. In everyday driving situations, the vehicle can therefore be operated very economically at low engine speeds. The rear-wheel drive vehicle sprints from zero to 100 km/h in 8.5 seconds and reaches a top speed of 205 km/h.

Mercedes-Benz InCar Hotspot: wireless Internet access in a vehicle

Mercedes-Benz offers for the first time wireless and unrestricted Internet access in a vehicle. With the Mercedes-Benz InCar Hotspot, the data signals are received via the vehicle antenna. A special WLAN router and a data-enabled SIM card process the signals and provide wireless Internet access also during the drive. Up to three WLAN-enabled end devices (e.g. laptop, mobile) can be connected to the Internet simultaneously. The users thus have access to the “World Wide Web” with no site restrictions. The Mercedes-Benz InCar Hotspot system supports the particularly fast HSDPA transmission standard, as well as UMTS and GSM/EDGE. From October 2009, the Mercedes-Benz InCar Hotspot will be available in the new E-Class and S-Class*. A vehicle featuring this equipment is on display at the Mercedes stand at the IAA.

*S-Class from December 2009

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The new Gullwing model from Mercedes-Benz

Automotive fascination and high tech of the highest order – these are the characteristics embodied by the new Mercedes-Benz SLS AMG. The super sports car boasts a purist design, consistent lightweight design, superior driving dynamics and exemplary safety.

The new super sports car from Mercedes-Benz and AMG dazzles with its unparalleled technology package: an aluminium space-frame bodyshell with gullwing doors; an AMG 6.3-litre, front-mid V8 engine with 420 kW/571 hp peak output, 650 Nm of torque, and dry sump lubrication; seven-speed dual-clutch transmission in a transaxle configuration; and sports suspension with aluminium double-wishbones. It's a unique combination that guarantees supreme driving dynamics. The car's ideal weight distribution between the front and rear axles (47 to 53 percent respectively), its low centre of gravity and DIN kerb weight of 1,620 kilograms emphasize the outstanding sports car concept. The Gullwing model accelerates from 0 to 100 km/h in 3.8 seconds and has a top speed of 317 km/h (electronically limited). The fuel consumption of 13.2 litres per 100 kilometres (combined) is best-in-class (all values provisional).

Design: Purist, distinctive, and passionate

The purist design of the new Mercedes-Benz SLS AMG dazzles with its passionate sportiness and reinterprets the breathtaking design of the Mercedes-Benz 300 SL. The stylistic highlight is without a doubt the gullwing doors, which impart the SLS AMG with incomparable charisma. The long bonnet, the low greenhouse positioned far back, and the short rear with the extendable rear spoiler symbolise dynamics, as do the long wheelbase, the wide track, and the large wheels. It is not just the gullwing doors that awaken reminiscences of the Mercedes-Benz 300 SL. The wide radiator grille with the large Mercedes star, the wing-like cross fin on the bonnet and the vehicle flanks are also reminiscent of the legendary sports car.

Aviation engineering provided the inspiration to the Mercedes-Benz designers for the interior. The characteristic styling feature is the dashboard, whose powerful and dramatic wing-shape makes for an impression of width. The four prominent dashboard air vents with their adjustable, cruciform nozzles are reminiscent of a jet's engines. The elongated centre console made of solid matt metal also takes up the plane cockpit theme. Among other things, the centre console incorporates the AMG DRIVE UNIT, which enables SLS owners to customise their vehicle set-up. The AMG SPEEDSHIFT DCT 7-speed sports transmission is operated by means of the E-SELECT lever, which resembles a jet's thrust control. Despite the low seating position typical of a sports car, the wide opening gullwing doors ensure easy entry and exit. The gullwing doors require less room to open than do conventional coupe doors and can be completely opened in standard sized garages.

Aluminium space frame for light weight and highest strength

The SLS is taking a new approach in its body concept. For the first time ever, Mercedes-Benz and AMG are presenting an automobile, whose chassis and body are made of aluminium. This leads to significant weight savings compared to the traditional steel construction, as shown by the car's DIN kerb weight of only 1,620 kilograms. The newly developed aluminium space-frame bodyshell combines intelligent, lightweight design with high strength – and thus benefits the excellent handling dynamics. The aluminium space frame is 45 per cent aluminium profiles, 31 per cent aluminium panelling, 20 per cent cast aluminium and four per cent steel. The use of ultra high-tensile, hot-rolled steel in the A-pillars provides a further increase in occupant safety. The shell weighs 241 kilograms – an absolute peak value in the super sports car segment. The highest possible degree of passive safety is guaranteed for the occupants by the vehicle's standard equipment, which includes three-point seatbelts, seat-belt tensioners, belt force limiters, and eight airbags.

Further-developed AMG 6.3-litre V8 engine with an output of 420 kW/571 hp

The heart of the SLS is a powerful eight-cylinder engine with dry sump lubrication. The AMG 6.3-litre V8 produces 420 kW/571 hp at 6,800 rpm and

develops a maximum torque of 650 Nm at 4,750 rpm. The SLS accelerates from 0 to 100 km/h in 3.8 seconds and has an electronically limited top speed of 317 km/h (all figures are preliminary). The SLS AMG consumes 13.2 litres per 100 kilometres (combined, preliminary figure). Efficiency-enhancement measures include not only the LDS cylinder bore linings but also a need-based fuel delivery and the recovery of braking energy.

The AMG 6.3-litre V8 engine delivers its power to the rear axle via a dual-clutch transmission permanently connected to the engine housing via a torque tube. A carbon shaft rotates at engine speed inside the torque tube. Power transfer is via the new AMG SPEEDSHIFT DCT seven-speed sports transmission. This dual-clutch transmission boasts fast gear changes with no interruption of tractive force and offers four driving modes. The mechanical differential lock guarantees optimum traction.

Sophisticated chassis layout with double-wishbone suspension

All four wheels are guided on dual A-arms with track rod. The A-arms, the steering knuckles and hub carriers at the front and rear axles are made of aluminium. The Gullwing model comes with a 3-stage ESP[®] as standard. The AMG high-performance brake system with composite brake discs on the front axle ensures short braking distances. Even better braking performance is offered by the optional ceramic-composite brake system. Weight-optimised AMG light alloy wheels in accordance with the new, innovative flow-forming principle, 9.5 x 19 inches at the front, and 11.0 x 20 inch at the rear, are fitted with 265/35 R 19 tyres up front and 295/30 R 20 tyres at the rear.

The reinterpretation of the Gullwing model will celebrate its market launch in spring 2010. The price will be 177,310 euros (incl. 19% VAT).

The electric Mercedes-Benz SLS AMG concept car – the exciting future of the super sports car

Affalterbach – Mercedes AMG is paving the way ahead. In the form of the new SLS AMG with electric drive, the performance brand within Mercedes-Benz Cars is developing an exciting super sports car with a zero-emission high-tech drive system. With this model, Mercedes-Benz and AMG are displaying their expertise in the development of alternative drive solutions for high-performance super sports cars, delivering further proof of their pioneering status in this market segment.

The Mercedes-Benz SLS AMG with electric drive transforms the vision of powerful and locally emission-free super sports cars into reality thanks to an innovative drive system. Powerful forward thrust is provided by four electric motors with a combined peak output of 392 kW and a maximum torque of 880 Nm. The four electric motors are positioned near the wheels, substantially reducing the unsprung masses compared to wheel-hub motors. One transmission per axle transmits the power. This intelligent all-wheel drive system allows dynamically optimised power transmission without any losses by means of torque vectoring – in other words the specific, targeted acceleration of individual wheels. In its first, pilot phase, the SLS AMG with electric drive incorporates a liquid-cooled, high-voltage lithium-ion battery of modular design with an energy content of 48 kWh and a capacity of 40 Ah. The 400-volt battery is charged by means of targeted regeneration during braking whilst the car is being driven.

Acceleration from zero to 100 km/h in around 4 seconds

When it comes to dynamics, the electrically driven SLS AMG delivers an unequivocal statement: The Gullwing model accelerates from zero to 100 km/h in around 4 seconds, putting it on the same high level as the SLS AMG with a 6.3-litre V8 engine developing 420 kW/571 hp.

“With the SLS AMG with electric drive, we wanted to redefine the super sports car. For us, it is not just an issue of responsibility. We attach just as much importance to fascination and classic AMG performance,” says Volker Mornhinweg, Chief Executive Officer of Mercedes-AMG GmbH.

Optimal weight distribution and low centre of gravity

The purely electric drive system was factored into the equation as early as the concept phase when the new Gullwing model was being developed by Mercedes-Benz and AMG. It is ideally packaged for the integration of high-performance, zero-emission technology. By way of example, the four electric motors and the two transmissions can be positioned near the wheels and very low down in the vehicle. The same applies to the modular high-current battery, whose modules are located in front of the bulkhead, in the centre tunnel and behind the seats. Advantages of this solution include the vehicle’s low centre of gravity and the balanced weight distribution – ideal conditions for optimum handling, which the electrically powered SLS AMG shares with its petrol-driven sister model.

Key data at a glance:

	Mercedes-Benz SLS AMG with electric drive
Peak output	392 kW
Torque	880 Nm
0-100 km/h	Approx. 4 sec.
Rated capacity	40 Ah (at 400 V)
Energy content	3x 16 kWh = 48 kWh

The installation of the drive components required no changes whatsoever to the Gullwing model’s aluminium space-frame bodyshell. And there were just as few constraints when it came to maintaining the excellent level of passive safety and high degree of long-distance comfort that are hallmarks of Mercedes cars.

Strategic alliance for fast electrification of the car

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With the electrically powered SLS AMG, Mercedes-Benz and AMG are continuing to pursue their aim of minimizing the amount of time it will take to bring about the electrification of the car. The strategic involvement in Deutsche Accumotive GmbH & Co. KG, a joint venture between Daimler AG and Evonik Industries AG, will provide the battery technology required in future. Daimler has the leading role in this joint venture, whose mission is to develop and produce batteries and battery systems for automotive applications.

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More about the SLS-AMG can be found at:

www.mercedes-benz.com/sls-amg

Intelligent (E)state-of-the-art

- **Functional: top values for load capacity and ease of operation**
- **Safe: nine airbags as standard, plus innovative driver assistance systems**
- **Comfortable: adaptive damping and self-levelling rear suspension**
- **Powerful: ten engines with more output and lower consumption**

From November 2009, Mercedes-Benz will be expanding its family of E-Class vehicles by adding another highly distinctive model: the new estate. Just like the saloon and coupe, the new estate combines unique design with leadership in safety, comfort, quality and practicality. The new E-Class marks the debut of a number of technical innovations which no other car in the world in this category is able to offer – from drowsiness detection to automatic emergency braking when an accident is recognised as being imminent, and from Adaptive Highbeam Assist to the Active Bonnet. Naturally the new estate also features all these innovations. In addition, it also features air suspension with self-levelling at the rear as standard as well as unique innovations with regard to load compartment management features.

Design: New Mercedes hallmarks combined with E-Class styling features

The new estate immediately makes an athletic and practical, but also effortlessly superior and safe impression. The profile displays many new elements and leaves no room for doubt about the new estate's identity. The B and C-pillars appear to merge into the background thanks to glossy, black trim panels, making the entire side window area look like a single entity. The intriguing design of the door sill panels, which are visually understated in the centre but feature a prominent light-catching contour towards the wheel arches, accentuates the dramatic overall effect of the side aspect. This is additionally emphasised by the muscular, sweeping line on the rear side panel in front of the rear wheels.

When shaping the rear end, the Mercedes designers concentrated on highlighting the estate's high levels of practicality. They did this by emphasising horizontal lines, for example the band formed by the tail lights and the chromed tailgate handle. The new LED tail lights are based on a two-piece design and create a visual continuation of the side wall into the tailgate. Both by day and night, their distinctive design makes it easy to recognise the E-Class estate. Page 16

Practicality: Top marks for load capacity and ease of operation

If the vehicle has to be loaded from the rear, the standard EASY-PACK tailgate can be opened automatically using the ignition key or manually by pressing the handle. The innovative “Quickfold” system enables the rear seat backrests to be folded down from the load compartment. Neither the head restraints nor the rear-seat cushions need to be adjusted beforehand in order to do this. The two backrest sections are unlocked and folded down by a cable pull, creating a level loading surface. As another useful feature, either the left or right backrest sections, or both together, can be folded down. This enables the rear seat unit to be used by passengers even when long and bulky items are being carried. The backrest sections can also be unlocked and folded down from the side.

The new E-Class estate sets a new standard in its class for the size of its load capacity, which has a volume of up to 1,950 litres (length/width/height: 4,895/1,854/1,471 millimetres). An exemplary load management system is specified as standard. Examples of this system include the automatically opening and closing EASY-PACK tailgate and the EASY-PACK folding load compartment floor. The latter considerably increases the usable height of the load compartment. It can be folded up and secured in various positions. Standard equipment also includes the EASY-PACK load compartment cover with a load securing net. The optional folding bench seat for the load compartment is also unique in this vehicle segment.

Suspension: Automatic self-levelling at the rear as standard

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Outstanding long-distance driving comfort is ensured in the estate by the all-new DIRECT CONTROL suspension with adaptive damping system as standard. Thanks to the likewise standard self-levelling rear suspension, the estate always remains at the same level, even when fully laden. The tuning of the estate's chassis has been adapted to the modified body geometry. The shock absorbers and the torsion bar stabilisers have been somewhat upgraded, making the vehicle just as agile as the saloon without sacrificing rolling comfort.

Engines: Considerable reduction in fuel consumption and emissions

A range of new engines and numerous improvements to, for example, aerodynamics, weight, energy management and rolling resistance, have substantially reduced the new estate's fuel consumption and emissions. An overview of all the available engines at the market launch:

Diesel

- E 220 CDI BlueEFFICIENCY: 4-cylinder in-line, 2143 cm³, 125 kW/170 hp, 5.8 l/100 km, 150 g/km, 6-speed manual transmission, from €44,803.50
- E 250 CDI BlueEFFICIENCY: 4-cylinder in-line, 2143 cm³, 150 kW/204 hp, 5.8 l/100 km, 150 g/km, 6-speed manual transmission, from €47,719.00
- E 350 CDI Blue-EFFICIENCY: V6, 2987 cm³, 170 kW/231 hp, 7.0-7.3 l/100 km, 185-192 g/km, 7-speed automatic transmission, from €54,204.50

Petrol

- E 350 CGI BlueEFFICIENCY: V6, 3498 cm³, 215 kW/292 hp, 8.6-8.9 l/100 km, 200-208 g/km, 7-speed automatic transmission, from €55,156.50
- E 500: V8, 5461 cm³, 285 kW/388 hp, 11.1-11.2 l/100 km, 258-260 g/km, 7-speed automatic transmission, from €70,150.50

The following engines will be available in the first quarter of 2010:

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Diesel

- E 200 CDI BlueEFFICIENCY: 4-cylinder in-line, 2143 cm³, 100 kW/136 hp, 5.7-n/a l/100 km, 150-n/a g CO₂/km, 6-speed manual transmission, from €41,947.50
- E 350 CDI 4MATIC BlueEFFICIENCY: V6, 2987 cc, 170 kW/231 hp, 7.6-7.7 l/100 km, CO₂ 200-203 g/km, 7-speed automatic transmission, from €56,941.50

Petrol

- E 200 CGI BlueEFFICIENCY: 4-cylinder in-line, 1796 cc, 135 kW/183 hp, 7.7-n/a l/100 km, CO₂ 179-n/a g/km, 6-speed manual transmission, from €42,721
- E 250 CGI BlueEFFICIENCY: 4-cylinder in-line, 1796 cc, 150 kW/204 hp, 8.0-8.2 l/100 km, CO₂ 185-191 g/km, 5-speed automatic transmission, from €47,719
- E 350 4MATIC: V6, 3498 cc, 200 kW/272 hp, 10.2-10.3 l/100 km, CO₂ 238-241 g/km, 7-speed automatic transmission, from €56,941.50

(All prices inclusive of 19% VAT)

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Additional information from Mercedes-Benz is available on the Internet at:

www.media.daimler.com

The new high-performance estate with dream figures

Pole Position for the new E 63 AMG estate: The performance estate car with an AMG 6.3-litre V8 engine delivers 386 kW/525 hp, accelerates from zero to 100 km/h in 4.6 seconds and offers a load capacity of 1,950 litres – and that with a relatively low fuel consumption of 12.8 litres per 100 km (combined, preliminary figures). With these dream figures, the new E 63 AMG estate is an extraordinary combination of dynamic performance, great utility and high efficiency.

The top-model of the E-Class not only features a unique design, but also an extremely responsive AMG SPEEDSHIFT MCT 7 seven-speed sports transmission, a completely newly developed AMG RIDE CONTROL sport chassis including electronically controlled damping and a new front axle. A ceramic-composite brake system is also available as an optional extra with the E 63 AMG estate. The unique combination of driver assistance systems raises the estate to a new level of active and passive safety.

A boot with a huge load volume and a high degree of functionality

With a volume of between 695 and 1,950 litres, the luggage area has not only been expanded but is also way ahead of the competition in terms of the most important load compartment capacity dimensions and load compartment volume. Standard equipment includes the major components from the EASY-PACK system, including the folding load compartment floor with two loading levels and folding box, the load compartment cover, the Quickfold system for convenient folding down of the rear seats with its 1/3–2/3 division and the electric EASY-PACK tailgate.

The market launch of the new E 63 AMG estate will be in February 2010 at a price of 108,409 euros (incl. 19 % VAT).

Mercedes-Benz Vision S 500 Plug-in HYBRID: The luxury class on the road to the three-litre car

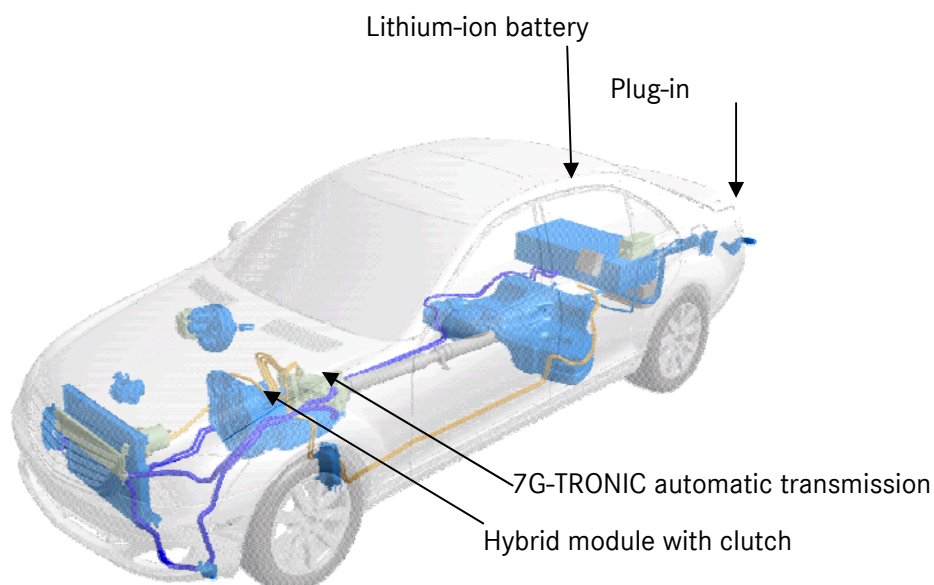
Shortly after the successful market launch of the S 400 HYBRID, currently the most fuel-efficient luxury-segment saloon with a petrol engine, Mercedes-Benz will be presenting the first “three-litre car” in the premium class – the Vision S 500 Plug-in HYBRID – at the 63rd IAA in Frankfurt. The technology vehicle will display the future of Mercedes-Benz’ modular set of hybrid systems. The Vision S 500 Plug-in HYBRID can drive for up to 30 kilometres solely on electricity and therefore without producing any local emissions. The efficient drive system combined with the CO₂ bonus for the battery-electric driving mode enables the vehicle to achieve a certified consumption of only 3.2 litres of petrol per 100 kilometres. With CO₂ emissions of only 74 grams per kilometre in the NEDC (New European Driving Cycle), the experimental vehicle developed in Sindelfingen demonstrates the long-term viability of future S-Class generations. The outstanding values are made possible by the combination of a plug-in hybrid with the efficiency-boosting BlueEFFICIENCY measures. At the same time, the Vision S 500 Plug-in HYBRID has all of the strengths that are typical of the S-Class: top comfort, outstanding safety and masterful performance. The drive system in the concept car consists of three main components: a powerful V6 petrol engine with a next-generation direct injection system, a 44 kW/60 hp hybrid module and a lithium-ion battery with more than 10 kWh of storage capacity that can be recharged at charging stations. The Vision S 500 Plug-in HYBRID accelerates from 0 to 100 km/h in 5.5 seconds.

“The Vision 500 Plug-in HYBRID is a new milestone on our path toward zero-emission mobility,” says Dr. Dieter Zetsche, Chairman of Daimler AG and Head of Mercedes-Benz Cars. “It is a luxurious and safe S-Class that offers superior driving performance while at the same time consuming less fuel than current compacts. All of this shows that our top models will also be able to combine automotive fascination with responsibility for the environment.”

“Although it will take some time before this model can go into series production, our engineers will be working full steam to carry out the necessary integration measures and ensure that all components can meet the tough everyday demands required of a luxury long-distance saloon,” says Dr. Thomas Weber, member of the Board of Management of Daimler AG with responsibility for Group Research and Mercedes-Benz Cars Development. “We already have all the key technology we need for such a dream car, which is why I see it being included in the next generation of the S-Class. The important thing now is that our development work be accompanied by the establishment of a full-coverage infrastructure that will allow the potential of this innovative drive system to be fully exploited.”

The electrical drive components of the Vision S 500 Plug-in HYBRID demonstrate the versatility of Mercedes-Benz’ intelligently organised set of hybrid systems, which has a widely scalable range of performance. The hybrid module’s design does not differ much from the compact, disc-shaped 15-kW electric motor of the S 400 HYBRID, even though it is three times as powerful. As a result, the hybrid module can be elegantly incorporated into the housing of the 7G-TRONIC seven-speed automatic transmission, allowing this model variant as well as the S 400 HYBRID to retain the S-Class’ spacious interior. Future model generations will orient themselves on this system architecture.

Vision S 500 Plug-in HYBRID: Compact full hybrid system architecture



Whereas the extremely compact lithium-ion battery in the S 400 HYBRID (0.9 kWh) can be housed in the vehicle's engine compartment, the significantly higher-performing lithium-ion unit in the Vision S 500 Plug-in HYBRID (over 10 kWh) requires more installation space. The battery is located behind the rear seats in the boot. The lithium-ion battery's location above the rear axle provides crucial benefits, since it ensures that the vehicle has a balanced weight distribution and that the petrol tank remains adequate for long-distance cruising. In addition, the protected position of the tank ensures it is as safe as possible during crashes.

Additional clutch decouples the hybrid module and combustion engine

In accordance with the modular concept, the powertrain design for the Vision S 500 Plug-in HYBRID is basically the same as that for the S 400 HYBRID. One system-specific attribute is the presence of an additional clutch integrated between the combustion engine and the electric motor. This device decouples the two components in the pure electric drive mode, thereby ensuring the highest level of efficiency in the latter. Moreover, because it is fully integrated into the vehicle's converter housing, the clutch does not take up any additional space.

Electrical outlet as a filling station: Powerful plug-in battery

Another key difference between the S 500 Plug-in HYBRID and conventional hybrids involves the plug-in battery, which can be charged at charging stations, thereby enabling the S 500 Plug-in HYBRID to travel up to 30 kilometres on electric power. The rapid charge cycle takes less than 60 minutes with a charging capacity of 20 kW. A standard charge cycle at a conventional household socket with 3.3 kW takes about four-and-a-half hours to recharge a completely discharged battery.

The model is also equipped with a compact onboard charger: Housed behind the side boot wall, this unit controls the recharging process and is protected against short circuits, voltage reversal, and voltage surges. The charging system also protects the battery by monitoring voltage, the charging level and charging time.

The total weight of the electrical components in the current experimental vehicle is 215 kilograms, whereby the lithium-ion battery weighs approximately 130 kg. That's much less than a conventional NiMH battery with the same capacity, as the weight of such batteries ranges from 180 - 200 kg.

The vehicle's hybrid module also provides additional energy when the car is in motion through regenerative braking – the recovery of energy when braking. Here, the clutch enhances efficiency as well, as it enables complete energy regeneration without engine drag losses.

Range of up to 30 kilometres with all-electric driving

The high-performance battery and the 44 kW/60 hp hybrid module enable the vehicle to drive up to 30 kilometres purely on electricity. That is completely sufficient for many trips within cities, where the Vision S 500 Plug-in HYBRID is quick and very comfortable without producing any local emissions. The petrol engine automatically adds its power to that of the electric motor when travelling at high speeds or driving up steep inclines. Before closing the clutch in such cases, the vehicle electronics synchronises the engine speed with the hybrid module's rotational speed so that the engine is activated extremely smoothly without the driver noticing.

What's more, the hybrid module's sophisticated interplay with the combustion engine enables numerous additional functions that positively impact fuel consumption, emissions and vehicle agility. Like the system employed in the S 400 HYBRID, the hybrid module in the Vision S 500 Plug-in HYBRID also comes with the ECO start/stop function. This feature also enhances safety and driving pleasure because of its boost effect, which has the electric motor providing powerful support to the combustion engine during the high-consumption acceleration phase. This system has already proved its practical viability in a slightly different configuration in the Mercedes-Benz Sprinter.

The lithium-ion battery not only serves as an energy storage device for the electric motor in the S 500 Plug-in HYBRID; it is also linked via a DC-DC converter to the 12-volt on-board network, which provides power to standard consumers such as the headlamps and various comfort devices. To ensure a consistently high level of electrical efficiency, the voltage transformers are water-cooled via an additional low-temperature circuit.

Special power electronics are required for operating the three-phase AC electric motor in the high-voltage direct current grid, and the inverter for this task is housed in the engine compartment. Because the power electronics system itself is heated by the electric current thus created, it too is integrated into the low-temperature cooling circuit. Mercedes-Benz employs standardised components for the power electronics system as well, enabling them to be efficiently combined with different electric motors and battery types across all model series.

On the road to plug-in hybrids: Diesel-hybrid concepts

An important milestone on the road to plug-in hybrids is the recently unveiled Vision E 300 BlueTEC HYBRID diesel hybrid. Like the S 400 HYBRID and the Vision S 500 Plug-in HYBRID, it is based on the Mercedes-Benz modular hybrid concept. This near-series vehicle study combines a new 2.2-litre, four-cylinder diesel engine with the 15 kW/20 hp hybrid module that is also used in the S 400 HYBRID, but which here also enables pure electric driving. This drive system configuration enables the Vision E 300 BlueTEC HYBRID to travel 100 km on only 4.5 litres of fuel (preliminary value). This corresponds to CO₂ emissions of 119 grams per kilometre with an output of 165 kW/224 hp and superior torque of 580 - 600 newtonmetres (combined in both cases), more or less the same performance as today's six-cylinder diesel engines. Exhaust gas treatment is handled by the combination of an oxidizing catalytic converter, a diesel particulate filter and BlueTEC mit AdBlue® injection. The Vision E 300 BlueTEC HYBRID thus also has the potential to meet the world's most stringent emission standards.

Combustion engine (petrol)

No. of cylinders/arrangement: V6, 4 valves per cylinder
Displacement: 3.5 l

Hybrid module

Type: Permanently excited synchronous machine
Rated output: approx. 44 kW/60 PS
Rated torque: 250 Nm

Performance and fuel consumption

Acceleration 0–100 km/h: 5.5 s*
Top speed: 250 km/h
Fuel consumption: 3.2 l/100 km (combined)*
CO₂ emissions: 74 g/km (combined):

*preliminary values

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New fuel cell car from Mercedes-Benz: 100 percent driving pleasure, zero emissions

Mercedes-Benz is launching its first series-produced fuel cell car on the road: the B-Class F-CELL. The environmentally friendly electric car has better performance than a 2,0-litre petrol car and is fully suited for everyday driving. The zero-emission drive system consumes the equivalent of 3.3 litres of diesel per 100 kilometres in the NEDC (New European Drive Cycle). Production of the B-Class F-CELL will commence in late 2009 with a small lot. The first roughly 200 vehicles will be delivered to customers in Europe and the USA early next year.

The new fuel cell vehicle offers everything that people expect from a Mercedes-Benz: High comfort and safety as well as no reduction in interior space and boot capacity. Customers will not have to sacrifice any driving pleasure either, because the electric motor has a peak performance of 100 kW/136 hp and a maximum torque of 290 Nm, which is available from the first rotation. It ensures that the B-Class F-CELL, whose impressive dynamic handling properties are in some cases far better than those of a two-litre petrol car, gets off to an excellent start. Despite these qualities, the zero-emission fuel cell drive consumes the equivalent of only 3.3 litres of diesel fuel per 100 kilometres (NEDC). Thanks to its great range of roughly 400 kilometres and short refuelling times of around three minutes, the B-Class F-CELL ensures local zero-emission mobility even for long stretches.

“2009 is the year in which we will establish additional milestones in sustainable mobility,” says Dr. Thomas Weber, member of the Board of Management of Daimler AG with responsibility for Group Research and Mercedes-Benz Cars Development. “The B-Class F-CELL will take on a pioneering role here as the world’s first fuel cell automobile manufactured under series production conditions.”

The vehicle's technological heart is the new generation of the compact, high-performance fuel cell system, in which gaseous hydrogen reacts with atmospheric oxygen at 700 bar to generate a current for the electric motor. The fuel cell system of the B-Class F-CELL distinguishes itself with very good cold-start capability even at temperatures as low as minus 25 degrees Celsius. The vehicle's drive system has been completely redeveloped in comparison to the version presented in 2004 in the F-CELL A-Class, and Mercedes-Benz engineers have made substantial improvements in terms of output, torque, range, reliability, starting behaviour and comfort. As such, the B-Class F-CELL now offers driving fun and everyday practicality at the high level of quality typical for a Mercedes – and does so without producing local emissions.

As in hybrids with combustion engines, the fuel-cell car uses a lithium-ion battery with an output of 35 kW and a capacity of 1.4 kWh to boost power and recover braking energy. Lithium-ion technology offers several advantages over conventional batteries, including compact dimensions, high performance, great recharge efficiency and a long service life.

The B-Class F-CELL employs the unique sandwich floor architecture known from the A-Class and the B-Class. The advantage of this design is that the drive components are located in the sandwich floor, where they are protected and don't take up much space so that the vehicle's interior remains fully usable with 416 litres of boot capacity available.

The B-Class F-CELL also stands out through outstanding appointments: Immediately noticeable is the special paint finish in Bonamite Silver, as well as the model's exclusive light-alloy wheels in ten-spoke design. The interior, for its part, boasts leather coverings, seat heating, automatic climate control, the COMAND system and other features that guarantee the same high level of comfort.

Same high level of safety as in other Mercedes cars

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No matter what the conditions, the operational reliability of the B-Class F-CELL is of the same high level as in Mercedes vehicles with conventional combustion engines. The B-Class F-CELL's integrated safety concept takes the specific characteristics of the innovative drive system into account. The concept incorporates the expertise from the many years of experience Mercedes-Benz has had with fuel cell drives and high-voltage applications. Mercedes engineers have tested and optimised the drive-specific components' safety in more than 30 additional crash tests.

Network of filling stations required for car's widespread use

With more than 100 test vehicles and a combined total of over 4.5 million kilometres of trial testing, Daimler and Mercedes-Benz have the most extensive experience with fuel cell electric vehicles of any manufacturer worldwide. The B-Class F-CELL is further testimony of this technology's high level of development for automotive use. However, a comprehensive network of hydrogen filling stations still has to be set up before locally zero-emission driving can become a widespread reality. To make this possible, Daimler is cooperating with government authorities, energy utilities and oil companies in joint projects in places such as Hamburg, Stuttgart and California.

Mercedes-Benz views the development of electric cars with battery and fuel cell drives for local zero-emission driving as a means of supplementing vehicles with high-tech internal combustion engines. Advanced diesel and petrol engines will remain important for automotive applications for a long time to come – not only for individual mobility in passenger cars – especially over long distances – but, more importantly, for freight transport in trucks. Electric vehicles, on the other hand, will increasingly be used in urban transport.

Mercedes-Benz B-Class F-CELL technical data

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Drive	Electric motor with fuel cell
Rated output (kW/hp)	100/136
Rated torque (Nm)	290
Maximum speed (km/h)	170
Consumption (NEDC) (l of diesel equivalent/100 km)	3.3
Total CO ₂ (g/km min.-max.)	0.0
Range (km)	385
Capacity of lithium-ion battery (kWh/kW)	1.4/35
Cold-start capability	to -25 °C

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Mercedes-Benz BlueZERO *E-CELL PLUS*: Piggy-backed for more range

The near-series Mercedes-Benz Concept BlueZERO *E-CELL PLUS* electric car combines environment-friendly electric mobility in the city with unrestricted suitability for long-distance driving. This is made possible by the combination of the battery-electric drive with a combustion engine. The range extender gives the BlueZERO *E-CELL PLUS* a total range of up to 600 kilometres, with 100 kilometres thereof solely under electric power and thus free of local emissions.

The BlueZERO *E-CELL PLUS* is part of a family of modularly constructed electric cars, which will enable Mercedes-Benz to meet all customer requirements for sustainable mobility in the future. In this variant of the concept vehicle, the electric motor of the purely battery-powered BlueZERO *E-CELL* is combined with an additional three-cylinder, turbocharged petrol engine. Putting out 50 kW, the compact combustion engine is installed in the area of the rear axle and can charge the battery while the car is being driven. The CO₂ bonus for the battery-electric driving mode reduces the vehicle's emissions to only 32 grams of CO₂ per kilometre. The range extender enables the BlueZERO *E-CELL PLUS* to drive for up to 600 km, of which up to 100 km can be driven in electric mode with zero local emissions. The long combined range makes the BlueZERO *E-CELL PLUS* fully suitable for everyday use and assures that the customer will reach his or her destination even with a depleted battery. After all, the car can be refuelled quickly and easily at any normal filling station.

Battery with superior lithium-ion technology

During rapid charging with a charging capacity of 20 kW, the high-performance, 18 kWh lithium-ion battery of the BlueZERO *E-CELL PLUS* can store enough power within around 30 minutes for a 50 kilometre cruising range. The complete electric range of 100 kilometres requires a charging time of somewhat more than an hour.

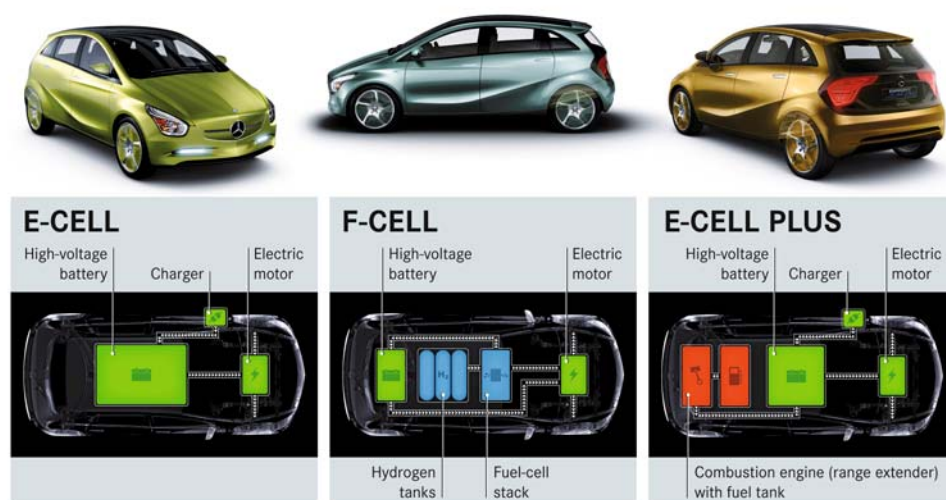
Charging time with a standard charge cycle at a conventional household outlet with 3.3 kW is approximately 6 hours. Special on-board electronics support the intelligent charging stations and billing systems used by electric fuelling stations. Advantages of lithium-ion batteries compared to other battery technologies include their compact dimensions, high output and energy density, high charge efficiency and long service life.

Concept BlueZERO – the triad of electric mobility

Mercedes-Benz is showing the way to environmentally compatible electric mobility with the near-series Concept BlueZERO. The vehicle's intelligent modular concept enables a single vehicle architecture to be used to create three models with different drive system configurations.

- The BlueZERO *E-CELL PLUS* is equipped with an electric drive and a supplemental combustion engine with an electrical generator (range extender). The car has a total range of up to 600 kilometres, of which up to 100 kilometres can be covered solely on electricity.
- Originally presented in Detroit at the beginning of the year, the BlueZERO *E-CELL* is propelled exclusively by a battery-powered electric drive that allows the car to travel up to 200 kilometres on a single battery charge and completely free of local emissions.
- The third drive version is the fuel cell powered BlueZERO *F-CELL*, with a range of about 400 km on electric power and therefore also without any local emissions.

Concept BlueZERO – Modular concept for electromobility



Mercedes-Benz

All three BlueZERO models feature front-wheel drive, which is typical for this class of car. The drive components have been modularly organised by the Mercedes engineers and can be combined as needed. These include state-of-the-art liquid-cooled lithium-ion batteries with up to 35 kWh capacity, and a compact electric motor with a maximum output of 100 kW (sustained output: 70 kW). The maximum torque of 320 Nm is available from the electric motor's first revolution, and it surpasses the value attained by today's V6 petrol engines at 2,500 rpm. Like its two sister models, the BlueZERO *E-CELL* and the BlueZERO *F-CELL*, the BlueZERO *E-CELL PLUS* can accelerate from 0 to 100 km/h in less than eleven seconds. To ensure optimum range and energy efficiency, the top speed is electronically limited to 150 km/h.

"The Concept BlueZERO offers a triple demonstration of the technical maturity of alternative drive systems from Mercedes-Benz. Electric vehicles with battery electric or fuel cell drive systems will not truly be on an equal footing with today's combustion engine drive systems until the customers are confident that there is a

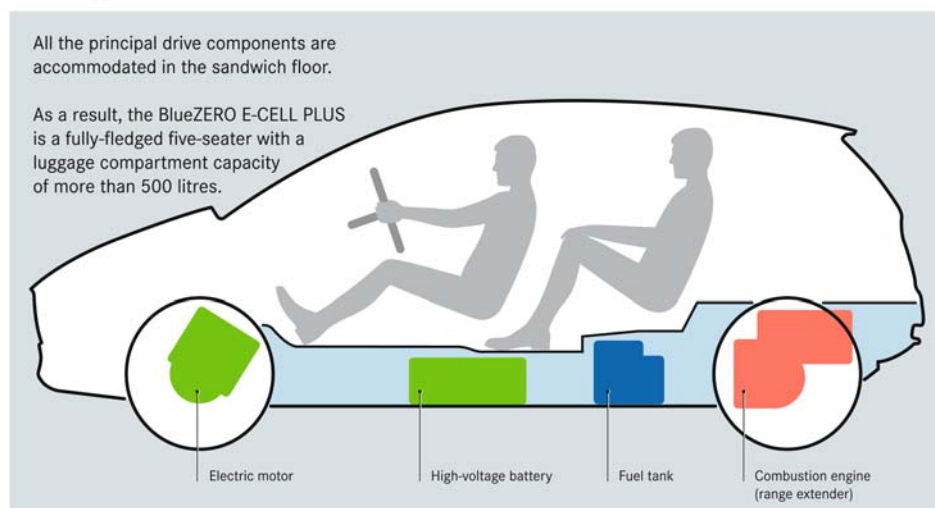
sufficient infrastructure of electricity and hydrogen refuelling stations,” says Prof. Herbert Kohler, Head of E-Drive and Future Mobility and also Chief Environmental Officer at Daimler.

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Concept BlueZERO: Modular architecture for flexibility and efficiency

The three BlueZERO variants were developed on the basis of the unique sandwich-floor architecture known from the A-Class and B-Class. The advantage of the enhanced design is that the key drive components are installed in the vehicle’s underbody in such a way that they take up little space, ensure a good centre of gravity, and are maximally protected. The BlueZERO models therefore differ considerably from conventionally designed electric cars, which have heavy and voluminous storage batteries installed in the boot, for example, or in the area of the backseat. All three BlueZERO variants share key technological components and have identical designs and vehicle dimensions. Even though they have compact exterior dimensions, the 4.22 metre-long BlueZERO models have a spacious and versatile interior and cargo space. The vehicles’ five full-size seats, approximately 450 kilograms of payload, and more than 500 litres of cargo capacity make them suitable family cars.

Concept BlueZERO E-CELL PLUS



Mercedes-Benz

“Our modular system permits different drive configurations for each customer requirement,” says Dr. Thomas Weber, the Daimler Board of Management Member responsible for Group Research and Mercedes-Benz Cars Development. “The improved sandwich floor platform serves as the perfect basis for a diverse range of vehicles with electric drives. We are currently developing an additional platform for future compact models that have drive systems using optimised internal combustion engines. The smart linking of both architectures will allow us to expand our product range in an extremely flexible and efficient manner. Beginning in 2009, we will manufacture the first small batch of Mercedes fuel cell cars. In 2010, they will be followed by a small batch of Mercedes-Benz vehicles that run solely on electric power supplied by a battery. Thanks to these measures, we are excellently positioned for the future.”

Electric powered vehicles are fun to drive

Mercedes-Benz vehicles will continue to combine environmental awareness and driving fun in future. One way in which the Mercedes-Benz designers have emphasised this aspiration is by introducing paint finishes in three new ALU-BEAM colours. Each of the three variants makes its individual mark:

Confident ALU-BEAM Copper was chosen for the BlueZERO *E-CELL PLUS*. The BlueZERO *E-CELL* is painted a fresh ALU-BEAM yellow; the BlueZERO *F-CELL* appears in ALU-BEAM green.

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Mercedes-Benz feels it won't be just one technology that paves the way to sustainable mobility in the future, however. Instead the company is responding with solutions that are every bit as varied as the demands. The individual technologies are being used in specific applications where they can provide the greatest advantage with respect to optimal consumption and emission values. Mercedes-Benz views the development of electric cars with battery and fuel cell drives for local zero-emission driving as a means of supplementing the extremely clean and economical BlueEFFICIENCY and hybrid vehicles already available today. However, the unrestricted and convenient operation of electric cars still faces a series of challenges, including high system costs, insufficient infrastructure and short cruising ranges. Advanced diesel and petrol engines will remain the driving force for automobiles for a long time to come – not only for individual mobility in passenger cars (especially over long distances), but, more importantly, for freight transport in trucks. Despite all the progress that Mercedes-Benz has once again so emphatically documented with the Concept BlueZERO, electric cars will not be replacing vehicles with combustion engines any time soon. The electrification of modern, high-tech engines will, however, play an increasingly important role in the drive system mix of the future.

Concept BlueZERO E-CELL PLUS

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- Electric powered concept car with a battery-electric range of up to 100 kilometres
- A combustion engine that serves as an electrical generator (range extender) extends the range to up to 600 kilometres (total)
- The concept vehicle can be recharged simply and conveniently at a common household outlet
- With a charging capacity of 20 kW, the Concept BlueZERO *E-CELL PLUS* can be recharged within around half an hour for a 50 kilometre range
- The liquid-cooled lithium-ion batteries used as an energy source have an energy content of up to 17.50 kWh
- Front-wheel drive

Electric drive

CO ₂ emissions:	0 g/km
Range:	up to 100/600 km
Battery:	Lithium-ion
Rated output:	100 kW/136 hp
Max. torque:	320 Nm
Top speed:	150 km/h
Acceleration 0–100 km/h:	< 11.0 seconds

Range extender

Cylinders	3
Displacement	1.0l turbo
Output	50 kW at 3500 rpm

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New additions to the GLK family

Stuttgart – While the first car boasts outstanding driving performance and high fuel efficiency, the second has high fuel efficiency and good handling. What is the difference between the two? In the all wheel drive GLK 250 CDI 4MATIC BlueEFFICIENCY, the world's most powerful four-cylinder diesel engine motor for an SUV ensures outstanding acceleration and agility. The rear-wheel drive GLK 220 CDI BlueEFFICIENCY consumes even less fuel (as low as 6.0 l/100 km) while at the same time providing top performance.

The new models underscore the leading position of the distinctive yet compact GLK. The GLK 250 CDI 4MATIC augments the world of top-of-the-range compact SUVs, featuring permanently engaged all-wheel drive, 7G-TRONIC transmission and the segment's most powerful four-cylinder diesel engine. The new engine has two-stage supercharging and 2,143 cc of displacement, generating 150 kW/ 204 hp and a maximum torque of 500 Nm. This results in outstanding driving performance, including fast acceleration (0-100 km/h in 8.5 s), a high top speed (213 km/h) and good agility. Thanks to its high torque, which is already available at 1,600 rpm, the GLK 250 CDI 4MATIC only takes 7.0 seconds to accelerate from 80 to 120 km/h. In spite of its great performance, this powerful, fun SUV is very economical to drive, consuming only 6.7 litres of diesel fuel on average per 100 kilometres (combined NEDC consumption, preliminary value). At the same time, it not only meets the EU5 emissions standard but also has the potential to fulfil the EU6 limits as well as the BIN 5 requirements in the USA.

In combination with a tried and tested six-speed manual transmission and rear-wheel drive, the engine of the GLK 220 CDI BlueEFFICIENCY exudes a lot of power and responds to the driver's wishes with a great deal of agility. It boasts good pulling power and, like the more powerful variant, is extremely smooth running for a four-cylinder diesel engine. In addition to good performance, the engine generates an impressive torque at low engine speeds: Peak torque of 400 Nm is available over a wide range from 1,400 to 2,800 rpm. In everyday driving situations, the vehicle can therefore be operated very economically at low

engine speeds, consuming only 6.0–6.4 litres of diesel fuel per 100 kilometres. The rear-wheel drive vehicle accelerates from 0 to 100 km/h in 8.5 seconds and attains a top speed of 205 km/h. As an option, the GLK 220 CDI BlueEFFICIENCY can also be delivered with the 7G-TRONIC seven-speed automatic transmission.

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Attractive model range: A choice of six GLK models

The GLK is a powerful and distinctive compact SUV. The striking, multi-talented vehicle sets itself apart from its competitors through its functional and appealing body shape while also combining formerly completely contradictory attributes: Thanks to its AGILITY CONTROL chassis with variable damping, the vehicle brings together impressive handling with great driving safety and outstanding ride comfort.

The ultramodern engine line-up in all GLK-Class models provides superlative drive comfort and compelling performance coupled with superior fuel efficiency and low emissions. Besides the two new models GLK 220 CDI BlueEFFICIENCY and GLK 250 CDI 4MATIC BlueEFFICIENCY, the vehicle is also available in four other versions: The range of diesel models is supplemented by the 4MATIC version of the GLK 220 CDI BlueEFFICIENCY and the tried and tested GLK 350 CDI 4MATIC V6 diesel model.

The GLK model range is rounded off by the two V6 petrol models GLK 300 4MATIC and GLK 350 4MATIC. Like the three four-cylinder diesels, the petrol engines meet the EU5 emissions standard. All of the all wheel drive GLK models are equipped with the 7G-TRONIC seven-speed automatic transmission as standard.

Original bodysell with a network of integrated protective features

Shortly after launching its new E-Class, Mercedes-Benz is also offering the world's most successful business saloon as a specially protected E-Guard model. It differs from the series model primarily through its network of intelligently conceived protective features, such as special steel and aramid, which are invisibly integrated beneath the otherwise identical body. The protective cocoon also features polycarbonate glazing all-round. The new E-Guard saloons thus offer occupants effective protection against the steadily increasing danger of street crime worldwide. In its new Guard model, Mercedes-Benz is continuing to build on eight decades of expertise in the development and production of special protection vehicles.

As is usual at Mercedes-Benz, the special requirements of the special protection versions of the new E-Class were already taken into account in the specifications during the vehicle's development. Like any series-produced vehicle, the new E-Guard goes through all body production stations, thus ensuring that its structural strength, dimensional accuracy, corrosion protection and paintwork are of the same high quality as those of the series-produced automobile.

The new large state limousine from Mercedes-Benz

The top-of-the-line vehicle of the Mercedes-Benz Guard family is the S 600 Pullman Guard with maximum integrated protection. With this vehicle, the world's oldest automaker continues its unique tradition of building large, armoured government limousines. More than 80 years ago, Mercedes-Benz became the world's first automotive brand to develop and manufacture Pullman limousines with special protection.

This unique experience and the technical leadership in constructing special protection limousines that has been confirmed time and again over the years gives the Stuttgart-based premium brand an outstanding position in this demanding segment. For dignified appearances, many governments, heads of state and royalty all over the world therefore use Mercedes-Benz limousines that justifiably bear the designation "Pullman". Like the famous Pullman rail cars, the state limousines from Stuttgart offer a luxurious interior and the very best in comfort. The original Pullman cars were manufactured by the U.S. Pullman Palace Car Company and had spacious luxury interiors. Beginning in the 1920s, the word was also used in Germany to refer to large, comfortable automobiles sporting a partition between the driver's seat and the passenger compartment. Since then, Mercedes-Benz has been offering its customers "Pullman" limousines that have an extremely spacious passenger compartment in the rear. The seating conditions for four passengers sitting facing other each are especially regal in the Pullman limousines with very long wheelbase that have been offered since 1963.

The luxurious Mercedes-Benz Pullman limousines not only offer their passengers the highest levels of comfort, but also provide opulent surroundings for discreet discussions and all important communication and entertainment facilities. The result is that you are confidently in full control of every situation, while also enjoying your comfortable, individual world at all times.

Exclusive, higher quality, more dynamic: Sporty appearance for the Viano

The unique look of the Viano X-CLUSIVE conveys a feeling of dynamism and sportiness. The top-of-the-line Viano shows an individual profile with its radiator grille in silver look, specially developed design bumpers, side skirts, a chrome exhaust and distinctive light-alloy wheels.

The interior of the X-CLUSIVE pampers its occupants with a high level of comfort. Illuminated door treads and a soft carpet welcome the travellers, who can take their places in the six individual seats with anthracite-coloured leather. Both sliding doors are electrically operated and open and close at the touch of a button.

The dynamism and comfort of the Viano X-CLUSIVE are also expressed by the vehicle's engine and chassis. Underneath the bonnet, the van is equipped with one of two high-performance six-cylinder engines, unique in the Viano's class. The best possible safety is, of course, as much a feature of the Viano X-CLUSIVE as of any Viano.

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The new Gullwing model from Mercedes-Benz

Stuttgart/Affalterbach – Automotive fascination and high tech of the highest order: These are the traits embodied by the new Mercedes-Benz SLS AMG, which is making its world premiere at the International Motor Show (IAA) in Frankfurt/Main on 15 September 2009. The super sports car boasts a purist design, the systematic incorporation of lightweight engineering and superior handling dynamics. At the same time, the SLS delivers the high everyday utility and exemplary safety that typifies Mercedes, making the new Gullwing model the ideal synthesis of the strengths of Mercedes-Benz and AMG.

The new super sports car from Mercedes-Benz and AMG dazzles with its unparalleled technology package: an aluminium space-frame bodyshell with gullwing doors; an AMG 6.3-litre, front-mid V8 engine with a top power of 420 kW/571 hp, 650 Nm of torque, and dry sump lubrication; seven-speed dual-clutch in a transaxle configuration; a sports chassis with aluminium double-wishbone suspension; and a DIN kerb weight of 1,620 kilograms. It's a combination that guarantees supreme handling dynamics. The car's ideal weight distribution between the front and rear axles (47 to 53 percent respectively) and its low centre of gravity emphasise the outstanding sports car concept. The Gullwing model accelerates from 0 to 100 km/h in 3.8 seconds and has a top speed of 317 km/h (electronically limited). The fuel consumption of 13.2 litres per 100 kilometres (combined) is best-in-class (all values provisional).

“With the new SLS AMG, Mercedes-Benz is presenting a fascinating super sports car that will quicken the pulse of any car fan. The SLS AMG bolsters both the Mercedes-Benz and AMG brands equally, and will surely become one of the most alluring sports cars of all time,” says Dr. Dieter Zetsche, Chairman of the Board of Management of Daimler AG and Head of Mercedes-Benz Cars.

“In the SLS AMG, our customers benefit first-hand from the expertise gleaned by Mercedes-AMG from more than 40 years of motor sports experience. The

unparalleled technology package provides for extraordinary handling dynamics with moderate fuel consumption—another hallmark of AMG today,” says Volker Mornhinweg, Chairman of Mercedes-AMG GmbH.

“It is more than just the exclusive gullwing doors that make the design of the new Mercedes-Benz SLS AMG so special. Our aim with this interpretation is to create the classic car of the future and put the most beautiful sports car of the 21st century on the road. Another of our goals is to create a new design icon that, like other Mercedes models such as the CLS and the SL, will help shape the incomparable myth of our brand. At the same time, the new SLS is a harbinger of the design philosophy of future Mercedes-Benz sports cars,” says Gordon Wagener, Head of Design at Mercedes-Benz Cars.

Design: Purist, distinctive, and passionate

The distinctive design of the new Mercedes-Benz SLS AMG dazzles with its passionate sportiness and reinterprets the breathtaking design of the Mercedes-Benz 300 SL, one of the brightest design icons of the Mercedes-Benz brand. With its purist design, the new SLS AMG reflects the teachings of modern sports car design: The nearly two-metre long-bonnet, the low greenhouse positioned far back, and the short rear with the extendable rear spoiler symbolise dynamism, as do the long wheelbase, the wide track, and the large wheels. The proportions are determined by the short overhangs and the design of the super sports car, with a low-slung, front-mid engine mounted well back and a dual-clutch transmission in a transaxle configuration. The stylistic highlight is without a doubt the gullwing doors, which impart the SLS AMG with incomparable charisma and make a unique statement in this vehicle segment.

It is not just the gullwing doors that awaken reminiscences of the Mercedes-Benz 300 SL. The characteristic wide radiator grille with the large Mercedes star and the wing-like fin are also reminiscent of the face of the legendary sports car. The three-dimensional, sculptured front with the low, v-shaped front skirt with lateral indentations gives the Gullwing model a powerful stance on the road. The car’s dominance is underscored by six large air intakes and the wide-set, vertical

headlamps with intriguing internals: The central bixenon low-beam headlamps with metallic wing element are framed by two LED blinkers above and two LED daytime running lights below.

Influences from aircraft construction

Echoes of aircraft construction are stirred by the exposed Mercedes star, whose cone in profile resembles the air intake of a jet engine, and the long bonnet. The farther the viewer's eye wanders to the front, the greater the curvature of the bonnet. The same visual effect is produced by the design of the four "Silver Shadow" fins gracing the two air vent grilles on the end of the bonnet. These lines, which are typical for aircraft, also optically accelerate the air flowing past, giving the SLS AMG an extremely dynamic appearance even when standing still.

The fins on the bonnet are revisited on the vehicle's flanks. Aficionados will recognize this as another typical styling element of the 300 SL. The "6.3" badge integrated between the fins provides a direct reference to the large displacement, naturally aspirated V8 engine. Extending from the lateral air outlet is a style-defining character line, which together with the convex inclination and the exciting surface treatment combines aesthetics with power. The compact passenger compartment is extremely attractive and unmistakable, and with its high waistline, low side windows and steep windshield resembles a visor. The B-pillar, which is inclined to the front and transitions to the rear window with an elegant curve, gives the impression of pure dynamics.

Muscle and shoulder dominate the side view

The pronounced shoulder of the SLS, which extends from the front to the rear like a taut muscle, is striking when the car is viewed from the side. The wheel arches that extend powerfully from the sidewall are filled by striking 19-inch (front) and 20-inch (rear) light alloy wheels. Three different styles of wheels all provide a view of the large, AMG high-performance composite brakes. When viewed from above, an unbroken line extends along the muscle from the headlamps to the rear.

This stylistic device is also found on the bonnet, where the eye follows a striking contour extending over the roof between the gullwing doors to the third brake light.

Rear view with wide appeal

The rear view of the SLS suggests dynamics and power. The gently sloping boot lid, the pronounced shoulder and the flat tail lights all give the car a wide appearance. Sporting LED technology, the horizontally split lights provide interesting insights. LED lighting elements in the shape of a wing impart a fascinating and distinctive night design. The LED fog lamp/backup light is mounted low and in the middle, Formula 1 style. The black diffuser insert and the two chrome tailpipe baffles of the sports exhaust system are also inspired by motor sports. The sharp indentations of the rear skirt allow a clear view of the wide rear tyres and give the Gullwing model a self-assured road stance. The spoiler integrated into the boot lid extends automatically at a speed of 120 km/h and provides outstanding stability at high speeds.

New colours: “AMG Alubeam silver” and two matt paints

The colour pallet for the SLS comprises a total of nine exclusive shades. The highlight has to be the unique “AMG Alubeam silver” paintwork. The new process used nowhere else in the world lets the paint shine like liquid metal. The paint covers the body like a metallic skin, emphasizing the Gullwing model’s fascinating design lines more strongly than any other paintwork and makes them livelier by means of targeted light reflections. This effect would not be possible without tiny pigments measuring 30 to 50 nanometres.

The matt paints “designo magno Alanite Grey” and “AMG magno Sylvanite Grey” are just as attractive. Their silk matt surface emphasises the sporty character of the two-seater by sharply defining the contours of the edges.

Drivers who raise the gullwing doors of the Mercedes-Benz SLS AMG and sit down in the sports seats will experience a very special interior. In its conception, the Mercedes-Benz designers took their cue from aircraft construction to create an ambience that immediately evokes associations with plane cockpits. The defining stylistic element is the dashboard, whose powerfully extended wing-like profile creates the impression of great width. The dashboard incorporates “silver shadow” electroplated air vents with an adjustable set of nozzles, whose shape vividly calls to mind jet engines. The instrument cluster with its shift-up LED display and two white illuminated circular instruments also appears very sporty in the metallic silver shadow look. The silver dials have red pointers and a 360-km/h scale. The main feature between the dashboard’s two centre air vents is the COMAND APS multi-media system with its 7-inch screen.

The elongated centre console made of real matt metal also takes up the plane cockpit theme. Among other things, the centre console incorporates the AMG DRIVE UNIT, which is aligned towards the driver’s seat and enables SLS owners to customise their vehicle set-up. The AMG SPEEDSHIFT DCT 7-speed sports transmission is operated by means of the E-SELECT lever, which is styled like a jet’s thrust regulator. All of the control elements are of real metal, boasting a shiny silver shadow surface.

The cockpit impression is rounded off by the concave interior trim of the gullwing doors, the high waistline clearance and the muscular side skirts, all of which also convey the feeling of sports car ergonomics. The high craftsmanship of the SLS interior is demonstrated by the use of refined materials such as nappa leather, real metal, and, as an option, real carbon appliqués. All of these features also express a great attention to detail. To help customise the interior, the leather is available in five *designo* colours: black, classic red, sand, porcelain and light brown.

Wide-opening gullwing doors for easy entry

Despite the low seating position typical of sports cars, which means the seats are located only 369 millimetres above the road surface, the wide opening gullwing doors ensure easy entry and exit. The designers made sure that the doors had as large an opening angle as possible, which is why they swing up by 70 degrees. Another consideration that is just as important is that the distance between the opened doors and the road surface is an ample 1.50 metres, while the size of the passage between the opened doors and the upper edge of the side skirts is a generous 1.08 metres. By contrast, the entry height (the distance between the road surface and the upper edge of the side skirts) is a low 45 centimetres. Another important criterion for ensuring an elegant entry and exit is that the opening and closing of the doors requires little effort even when it's very cold, because of two gas-dampers next to the door hinges.

The gullwing doors require less room to open than do conventional coupe doors and can be completely opened in standard sized garages. The gullwing doors can be opened from the interior by means of a silver shadow opening handle. Thanks to the linkage system in the door's armrest, the door is easy to handle when closing. The buttons for the power windows, the central locking system and the exterior mirror adjustment are also easily accessible in the interior trim. The interior has a spacious feeling, due primarily to the large shoulder room of 1483 millimetres and the wide elbow width of 1606 millimetres. In conjunction with the generous headroom of 990 millimetres and the driver's effective legroom of 1058 millimetres, the deep seating position is also relaxing. The passengers benefit from a relatively steep windscreen that provides a good view.

Sports seats with magnesium backrests

The backrests of the sports seats are made of magnesium, a high-tech material that is strong as well as light. This results in substantial benefits with regard to the vehicle's weight balance and the lowering of its centre of gravity. The sports seats have two-zone seat cushions. Large side bolsters filled with harder foam ensure optimum lateral support, while the inner zones of the seats and backrests

have purposefully been made softer for high long-distance driving comfort. The optional Memory Package enables the user to electrically adjust the seat's lateral position and height as well as the tilt of the backrest, seat cushion, and steering column. In addition, the package allows the user to save up to three individual settings.

Four-way lumbar supports provide effective support for the spine, while adjustable side bolsters in the backrests substantially improve lateral support when driving around bends at high speeds. Other standard features include a three-stage seat heating system as well as seat occupancy and child safety seat detection for the front seat passenger.

The sports seats with integrated headrests and sporty transverse piping are covered with *designo* leather. Two-tone seats are also available in the colours classic red, sand and porcelain. Cars with the interior colour light brown use natural leather with especially high quality braided leather for the centre fields of the seats. Depending on the colour combination selected, the sporty feeling is further enhanced through the use of fluorescent or black piping.

The three-spoke performance leather steering wheel with a 365-millimetre rim, gearshift paddles and a real metal bar emphasize the vehicle's authentic hand-crafted character and provide the best possible assistance in maintaining control of the car.

Multiple stowage spaces for ensuring the car's suitability for everyday use that is a hallmark of Mercedes

Other impressive features of the SLS AMG interior are conveniently designed stowage areas for ensuring the car's suitability for everyday use that is a hallmark of Mercedes. The dashboard on the front passenger's side contains a 3.7-litre glove compartment and a space for glasses. To the right of the E-SELECT lever, passengers will find a small stowage area with a 12 volt socket or an ashtray with a lighter. The armrest behind the centre console not only serves for operating the COMAND controller; it can also be shifted in two stages at the push of a button to

provide access to a storage bin located underneath. Here, users will find two cup holders and the recess for the telephone (optional equipment). Additional storage space is provided by the stowage system between the seats at the back and the mesh side pocket in the front passenger footwell. Two clothing hooks are fixed to the backrests. Their counterparts in the roof lining can be folded out and have silicone damping.

The button for unlocking the rear hatch can be found underneath the light switch. In addition, the hatch can also be opened by using the car keys. The luggage compartment has a volume of 176 litres.

The SLS' extensive range of standard equipment includes (excerpts):

- COMAND APS
- Floor mats with AMG logo
- *designo* leather for interior appointments
- Break-in and theft warning system
- Electric parking brake
- Headlamp Assist
- KEYLESS-GO start function
- PARKTRONIC
- Rain sensor
- Heated sports seats
- Sports pedals made of brushed stainless steel with rubber studs
- Cruise control with SPEEDTRONIC
- THERMOTRONIC

Optional extras include the following:

- 6 disc DVD changer
- Bang & Olufsen BeoSound AMG surround sound system
- Break-in and theft alarm system with tow-away protection and interior protection
- One-tone exclusive *designo* leather for interior appointments

- Two-tone exclusive *designo* leather for interior appointments
- Exclusive *designo* light brown natural leather/braided leather for interior appointments
- AMG Alubeam Silver paintwork
- AMG magno Sylvanite Grey paintwork
- AMG magno Alanite Grey paintwork
- Media interface
- Memory Package with power-adjustable seating and steering wheel settings

The AMG Performance Studio also offers its full range of top-quality features for meeting individual customer preferences for the SLS AMG:

- Carbon exterior mirror
- Carbon bonnet
- Carbon ornamental trim (for front and rear storage bins and lids, cover for AMG DRIVE UNIT, covers for the cluster gears and rear of the centre console, ornamental trim for the centre console and the door armrests)
- Interior Carbon Package (carbon ornamental trim, side panels for backrests and seats, door sills)
- Performance chassis with updated tuning for optimised dynamic transverse movement
- Forged 10-spoke wheels
- Sports bucket seats
- Performance sports steering wheel covered with Alcantara/leather

Aluminium space frame for light weight and highest strength

The SLS is also taking a new approach in its body concept. For the first time ever, Mercedes-Benz and AMG are presenting an automobile, whose chassis and body are made of aluminium. This leads to significant weight savings compared to the traditional steel construction, as shown by the car's DIN kerb weight of only 1,620 kilograms.

The vehicle's all-new body consists of an aluminium space frame, which combines intelligent, lightweight design with the highest strength and thus further boosts the SLS' excellent handling properties. Light aluminium profiles combine the force nodes to create a stable structure. The large, low-lying cross-sections of these aluminium profiles exhibit high resistance torques, thereby ensuring the desired direct transfer of drive, braking and chassis forces. Undesired flexibility is reduced by the structure; the vehicle responds rigidly, directly and as if it was almost free of torsion.

The intelligent aluminium space frame, which has been optimised in terms of weight, is 45 per cent aluminium profiles, 31 per cent aluminium panelling, 20 per cent cast aluminium and four per cent steel. Ultra high-tensile, hot-rolled steel is used in the A-pillars to further improve occupant protection. The bodyshell weight is 241 kilograms – and given that the maximum power is 420 kW/571 hp, represents a top value in the super sports car segment.

Lower centre of gravity and transverse reinforcing struts for perfect dynamics

The overall vehicle concept has been designed with the lowest possible centre of gravity. That means a low connection between the drive train and the axles, as well as the lowest possible arrangement of the bodyshell components that contribute to rigidity. Examples include the connections between the front and rear sections and the occupant safety cell, which are resistant to bending and torque. These connections have been consistently designed to run along the lowest possible force paths. The result is not only a low centre of gravity but also a harmonious, and thus efficient, transfer of force within the vehicle's structure.

Another hallmark of the lightweight construction is the transverse reinforcing struts that are integrated into the bodyshell structure at the front and rear axles. The profiles connect the side members exactly at the points where the strongest forces act on the bodyshell when the vehicle is taking a fast bend. The advantages of this painstaking solution are a matchless degree of transverse rigidity and the avoidance of heavy secondary stiffeners or consoles.

The aluminium space frame forms the basis for outstanding passive safety. The comprehensive range of safety equipment includes three-point seatbelts, seat-belt tensioners, belt force limiters, and up to eight airbags: adaptive front airbags, a kneebag each for the driver and front passenger, two sidebags integrated into the seats and two windowbags that trigger out of the door waistline.

Advanced AMG 6.3-litre V8 engine with an output of 420 kW/571 hp

The heart of the new SLS is a high-powered eight-cylinder engine manufactured by Mercedes-AMG. The advanced 6.3-litre V-8 engine, which has an output of 420 kW/571 hp at 6,800 rpm, makes the Gullwing vehicle one of the most powerful sports cars in its segment. In conjunction with the low vehicle weight, this results in a weight-power ratio of 2.84 kg/hp. The naturally aspirated engine provides its maximum torque of 650 Nm at 4,750 rpm. The Gullwing vehicle accelerates from 0 to 100 km/h in 3.8 seconds and has an electronically limited top speed of 317 km/h (all figures are preliminary). The high-torque V8 engine, which is called the M159 within the company, has a displacement of 6,208 cm³. It has been completely restructured compared to the basic M156 engine, and it displays the typical characteristics of high-performance racing engines.

The most important measures taken to boost its performance were the development of a completely new intake manifold system, the restructuring of the valve gear and the camshaft, the use of streamlined steel-pipe fan-type exhaust pipes and a detuning of the exhaust system. As a result, the designers have achieved significantly improved cylinder charging that boosts performance by almost nine per cent. The eight-cylinder engine reacts nimbly to movements of the accelerator pedal and responds extremely well. Thanks to the change to dry sump lubrication, it has been possible to achieve a much lower installation position for the engine. The consequent lowering of the vehicle's centre of gravity enables high transverse acceleration, which results in handling dynamics that drivers love.

The use of high-strength components compensates for the increased burden on the engine resulting from its higher output. Forged pistons, a strengthened crankshaft mounting, an optimized crankcase structure, and improved lubrication by means of a need-regulated high-powered oil pump ensure maximum stability. In spite of the increased demands placed on it, the engine weight of the M159 has been further reduced. The forged pistons, as oscillating masses, make a particularly valuable contribution to this reduction. This results in a dry weight of 205 kg, and thus a weight-power ratio of 0.36 kg/hp – a value that is unmatched by any competitors. Sophisticated catalytic converter technology makes it possible to comply with current and future emissions limits such as EU5, LEV2 and ULEV.

Reaching ambitious fuel consumption targets

In spite of its uncompromisingly sporty character, the vehicle has reached ambitious fuel consumption targets. The SLS AMG consumes 13.2 litres of fuel per 100 km (combined; preliminary figure), which makes it the front runner in its competitive field. It boasts efficiency-boosting measures such as the AMG-exclusive, friction-optimised LDS cylinder-bore lining, an oil supply that is regulated according to the characteristic map, and smart generator management. During every coasting phase of the vehicle and every braking action, kinetic energy is used to charge the battery rather than being uselessly transformed into heat, as normally happens. Conversely, the generator is switched on without a load during acceleration and thus eases the burden on the engine.

Dual-clutch transmission in the transaxle configuration with the Torque Tube

The AMG 6.3-litre V-8 engine transmits its tremendous power to the rear axle via an especially lightweight drive shaft made of carbon – similar to the DTM C-Class touring car. The dual-clutch transmission is located on the rear axle (in line with the transaxle principle) and is tightly connected with the engine housing by means of a Torque Tube. In the Torque Tube, a carbon camshaft rotates with the same speed as

the engine. The advantages of this sophisticated solution include the rigid connection between the engine and the transmission, which results in an optimal response to forces and torques.

The new AMG SPEEDSHIFT DCT seven-speed sports transmission is responsible for the power transmission. This dual-clutch transmission is characterized by quick shifting without any interruption of traction – minimum speeds of 100 milliseconds are possible. The driver has a choice of four different driving programmes: C (Controlled Efficiency), S (Sport), S+ (Sport plus) and M (Manual), as well as a RACE START function. During the Sport, Sport plus and Manual driving programmes, the automatic double-declutching function is active; all of these modes can be comfortably managed via the torque regulator in the AMG DRIVE UNIT. Optimal traction is guaranteed by the mechanical differential lock, which is integrated into the compact transmission housing.

Sophisticated chassis layout with double wishbone suspension

The solution that was chosen, a front-mid engine plus transaxle configuration, ensures an ideal weight distribution of 47 percent in the front and 53 percent in the rear. Mounting the engine behind the front axle provided optimal conditions for perfect handling dynamics with precise steering behaviour, top class agility, low inertia during sudden changes of direction and outstanding traction. The aim of Mercedes-Benz and AMG – to build a desirable super sports car and combine flawless race circuit performance with the long distance comfort typical of Mercedes – led to a sophisticated chassis layout. All four wheels are guided on dual A-arms with track rod, a technique that has proven itself in motor racing up to the Formula 1 level. In a double wishbone suspension, the wheel location and suspension function are separated from each other, and the spring struts/damper struts are supported on the lower transverse link. With its high shatter strength and directional stability, the double wishbone concept decisively controls the wheel, with minimal springy movements, and gives the driver optimal contact with the road surface even in extreme situations.

The A-arms, steering knuckles and hub carriers at the front and rear axles are made entirely of forged aluminium – which helps to substantially reduce the unsprung masses; and this in turn improves the responsiveness of the suspension. At 2,680 millimetres, the long wheelbase results in not only a stable straight-line stability, but also a low dynamic wheel load shift, which significantly reduces the vehicle's tendency to roll during acceleration and deceleration. The wide tread – 1,682 millimetres in the front, and 1,653 millimetres in the rear – ensures a lower dynamic wheel load transfer from the inside wheel to the outside wheel on bends, which gives the tyres more grip. When driving around bends, the big castor angle of 11.5 degrees results in a large increase in the negative camber, in addition to improving the tyres' grip – and lending high stability when braking suddenly in bends.

Direct steering, differential lock and three-stage ESP®

With a constant mechanical gear ratio of 13.6 : 1, the rack-and-pinion steering gear delivers a consistently direct steering feel, thereby meeting drivers' high expectations of a super sports car. The parameter power steering works with speed-dependent support and improves feedback for the driver as driving speed increases, a crucial factor when driving straight ahead at high speed. The mounting of the steering gear in front of the engine, on the frame-type integral support, allows a particularly low engine position. The Gullwing car features a 3-stage ESP®, giving the driver a choice of the three modes “ESP ON”, “ESP SPORT” and “ESP OFF” at the push of a button. Even in “ESP OFF” mode, simply applying the brake pedal makes all ESP® functions accessible again.

The traction logic of the acceleration skid control ASR is active in all three ESP® modes. If a drive wheel begins to lose traction, a targeted activation of the brakes supplies a considerable improvement in traction – especially in combination with the mechanical multiple-disc limited-slip differential lock, which is standard equipment. During particularly dynamic driving, this allows more effective transfer of the engine output to the road.

AMG high-performance, ceramic-composite brakes, new “flow forming” wheels

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The AMG high-performance composite brakes on the front axle ensure the vehicle quickly comes to a stop even under an enormous load. Even better braking performance is provided by the newly developed, optional ceramic-composite brake system with larger brake discs. Thanks to their increased hardness, the ceramic brake discs offer greater safety at high temperatures and are also impressive by virtue of their weight, which has been reduced by about 40 percent. Through the reduction of the unsprung masses, they further optimise the Gullwing model's handling – which becomes especially apparent during motorway driving around bends at high speed.

Lighweight engineering also played a key role with regard to the wheels: Weight-optimised AMG light alloy wheels in accordance with the new “flow forming” principle, 9.5 x 19 inches in the front, and 11.0 x 20 inches in the rear, reduce the unsprung masses and boost handling dynamics and suspension comfort. In addition to the standard AMG light alloy wheels with a seven-spoke design, customers can choose as options wheels with five double-spokes or forged wheels in a ten-spoke design. Tyres developed exclusively for the SLS AMG – 265/35 R 19 at the front, and 295/30 R 20 at the rear, ensure top performance. The standard equipment includes a tyre pressure monitoring system that continuously checks the pressure of all four wheels and displays the individual values for each tyre.

The reinterpretation of the legendary Gullwing model will celebrate its market launch in spring of 2010. The sale price will be €177,310 (incl. 19% VAT).

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Mercedes-Benz SLS AMG

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Engine

No. of cylinders/arrangement		8/V, 4 valves per cylinder
Displacement	cc	6208
Bore x stroke	mm	102.2 x 94.6
Rated power output	kW/hp	420/571 at 6800 rpm
Rated torque	Nm	650 at 4750 rpm
Compression ratio		11.3 : 1
Mixture preparation		Microprocessor-controlled fuel injection, HFM

Power transmission

Drive		Standard drive
Transmissions		AMG SPEEDSHIFT DCT seven-speed sports transmission
Ratios	Final drive	3.67
	1st gear	3.40
	2nd gear	2.19
	3rd gear	1.63
	4th gear	1.29
	5th gear	1.03
	6th gear	0.84
	7th gear	0.72
	Reverse	-2.79

Chassis and suspension

Front axle	Aluminium double wishbone suspension, anti-dive, coil springs, gas-filled shock absorbers, stabiliser
Rear axle	Aluminium double wishbone suspension, anti-squat and anti-dive systems, coil springs, gas-filled shock absorbers, stabiliser
Braking system	Composite disc brakes, internally ventilated and perforated at the front; disc brakes, internally ventilated and perforated at the rear; electric rear parking brake; ABS; Brake Assist; 3-stage ESP [®]
Steering	Rack-and-pinion power steering with parameter function, steering damper
Wheels	Front: 9.5 J x 19; rear: 11 J x 20
Tyres	Front: 265/35 R 19; rear: 295/30 R 20

Dimensions and weights*

Wheelbase	mm	2680
Tread front/rear	mm	1682/1653
Overall length	mm	4638
Overall width	mm	1939
Overall height	mm	1262
Turning circle	m	11.9
Boot capacity**	l	176
Kerb weight acc. to DIN	kg	1620
Payload (basis ready-to-drive according to EC)	kg	240
Perm. gross vehicle weight	kg	1935
Tank capacity/incl. reserve	l	85/14

Performance and fuel consumption*

Acceleration 0-100 km/h	s	3.8
Top speed	km/h	317***
Fuel consumption NEDC comb. l/100 km		13.2
CO ₂ emissions	g/km	314

* provisional figures; ** according to VDA measuring method; *** electronically limited

Intelligent (e)state-of-the-art

- **Functional: top values for load compartment and ease of operation**
- **Safe: nine airbags as standard, plus innovative driver assistance systems**
- **Comfortable: adaptive damping and self-levelling rear suspension**
- **Powerful: choice of ten engines with more output and lower consumption**

From November 2009, Mercedes-Benz is launching the estate version as another highly distinctive member of the E-Class family. Like the saloon and coupé, the estate, which is now available for order, combines unique design with leadership in safety, comfort, quality and practicality. The new E-Class marks the debut of a number of technical innovations which no other car in the world in this category is able to offer – from drowsiness detection to automatic emergency braking when a collision is recognised as being imminent, and from Adaptive Highbeam Assist to the Active Bonnet. Naturally the new estate features all these innovations. In addition, it also features air suspension with self-levelling at the rear as standard as well as unique innovations with regard to load compartment management features.

The E-Class estate is seen as the progenitor of the premium lifestyle estate segment more than 30 years ago. Since the launch of the first estate in 1977, more than one million customers have discovered their enthusiasm for this most practical way of driving a luxury-segment Mercedes vehicle. This success story is set to be continued by the fifth generation of the E-Class estate – following up on the successful launch of the saloon. The performance of the saloon and coupé in the 2009 *AutoBild* Design Awards shows how well the striking lines of the E-Class have been received: More than 100,000 readers of this German motoring publication recently voted the four-door model the most beautiful car in the world, and gave the two-door model first place in the coupé/convertible category.

The new estate immediately makes an athletic and practical, but also effortlessly superior and safe impression. Its distinctive design character is based on the new Mercedes style, which has been influenced by the S-Class and is now also represented by the C-Class. One of its main features is the interplay between concave and taut surfaces, which are delimited by dynamic edges and structured contours.

The side view reveals many new elements, leaving no doubt about the identity of the new estate. The B and C-pillars appear to merge into the background thanks to glossy, black trim panels, making the entire side window area look like a single entity. This leads to a taut arch leading from the filigree A-pillar to the dramatic roof line and the downward-tapering D-pillar, all resting on the athletic shoulder line of the estate. The intriguing design of the door sill panels, which are visually understated in the centre but feature a prominent light-catching contour towards the wheel arches, accentuates the dramatic overall effect of the side aspect. This is additionally emphasised by the muscular, sweeping line on the rear side panel in front of the rear wheel.

When shaping the rear end, the Mercedes designers took care to give expression to the high practicality of the new model. They did this by emphasising horizontal lines, for example the band formed by the tail lights and the chromed tailgate handle. The new LED tail lights are based on a two-piece design and create a visual continuation of the side wall into the tailgate. Both by day and night, their distinctive design makes it easy to recognise the E-Class estate. This is the largest estate car in the premium segment, and it makes no secret of the fact.

Practicality: top marks for load capacity and ease of operation

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One particularly special feature of the load compartment management system is the option of opening the standard-fit EASY-PACK tailgate automatically by using the ignition key or pressing the handle if the car needs to be loaded from behind. The innovative “Quickfold” system enables the rear seat backrests to be folded down from the load compartment. Neither the head restraints nor the rear-seat cushions need to be adjusted beforehand in order to do this. The two backrest sections are unlocked and folded down using a cable pull, creating a level loading surface. As another useful feature, either the left or right backrest sections, or both together, can be folded down. This enables the rear seat unit to be used by passengers even when long and bulky items are being carried. The backrest sections can also be unlocked and folded down from the side.

It is now also much easier to use the combined load compartment cover and retaining net, which is attached at waistline level for the first time, making it far simpler to install and remove in various positions.

The new E-Class estate sets a new standard in its class for the size of its load capacity, which has a volume of up to 1,950 litres (length/width/height: 4,895/1,854/1,471 millimetres). Apart from the load compartment capacity itself, other dimensions of great practical importance – such as the rear aperture, load compartment sill and maximum load compartment length – demonstrate the expertise of Mercedes-Benz when it comes to estate car engineering.

It is not only in the load compartment that the generous dimensions of the preceding model have been improved even further in many respects. Two examples in the interior illustrate this: The elbow width in the rear has been increased by 50 millimetres to 1505 millimetres. Rear headroom with the large tilting/sliding sunroof installed has also improved by 50 millimetres to 1,010 millimetres, and is almost as generous as in versions with no sunroof (1,012 mm).

An exemplary load management system is specified as standard – for example, the automatically opening and closing EASY-PACK tailgate with automatic raising

of the load compartment cover, or the EASY-PACK folding load compartment floor. The latter considerably increases the usable height of the load compartment. It can be folded up and secured in various positions. Standard equipment also includes the EASY-PACK load compartment cover with a load securing net. When extended, the load compartment cover can be hooked into electrically powered carriers on the D-pillars. When the tailgate is opened, the load compartment cover is automatically raised to allow unobstructed loading and unloading. The optional folding bench seat for the load compartment is also unique in this vehicle segment.

Safety: nine airbags as standard, plus innovative driver assistance systems

Mercedes-Benz has consolidated its leadership in safety even further with the new E-Class. Around one dozen new or modified driver assistance systems help to prevent road accidents or at least reduce the severity of the impact. These include the standard ATTENTION ASSIST drowsiness detection system, the optional DISTRONIC PLUS proximity control and the optional PRE-SAFE® Brake, which is able to initiate partial and full emergency braking autonomously. For the first time, PRE-SAFE® is also able to use only the information received from the short-range sensors in the front bumper to tension the front seat belts at the last moment before an accident has been recognised as being unavoidable. This reduces the loads exerted on the driver and front passenger during the crash.

With nine airbags fitted as standard, four belt tensioners and belt force limiters, and NECK-PRO crash-responsive head restraints for the driver and front passenger, the new E-Class offers an even more extensive package of safety equipment than its predecessor. The airbags, which can deploy in a matter of milliseconds in the event of an accident, include two adaptive airbags for the driver and front passenger, a kneebag for the driver, two sidebags in the front-seat backrests and two large windowbags which extend from the A-pillar to the C-pillar during a side impact. Pelvisbags for the front occupants are also included for the first time. These reduce the loads acting on the torso and pelvic area during a side impact.

Sidebags for the rear seat passengers can also be installed as optional extras. As a further safety innovation, Mercedes-Benz also offers optional, self-adaptive belt force limiters for the rear. These adjust to the size and weight of the passengers, and also become available for the saloon with the introduction of the estate. Page 62

Suspension: Automatic self-levelling at the rear as standard

Outstanding comfort on long journeys in the estate is ensured by the newly developed DIRECT CONTROL suspension, which features the adaptive damping system as standard. The likewise standard self-levelling rear suspension ensures that the estate always remains level, even when fully laden. The tuning of the estate's chassis has been adapted to the modified body geometry. The shock absorbers and the torsion bar stabilisers have been somewhat upgraded, making the vehicle just as agile as the saloon without sacrificing rolling comfort.

Engines: Considerable reduction in fuel consumption and emissions

The fuel consumption and emissions of the new estate have been considerably reduced by new engines and numerous optimisation measures (aerodynamics, weight, energy management, driving resistances). One prime example is the E 250 CDI with an output of 150 kW and a peak torque of 500 Nm, whose fuel consumption is only 5.7 litres per 100 km, with CO₂ emissions of 150 g per km.

The engine line-up available for the new estate at launch comprises five units developing between 125 kW/170 hp and 285 kW/388 hp. Though exhibiting a lower displacement, the new and modified engines generate more output than their predecessors, while impressing with fuel consumption figures that were previously only normal in the compact class. This was made possible by numerous innovations, for example spray-guided direct injection for the E 350 CGI BlueEFFICIENCY petrol model. The four-cylinder CDI engines partly owe their exceptional status to newly developed piezo injectors and two-stage turbocharging. All the powerplants meet the requirements of the EU5 emissions standard.

The E-Class estate is now available for order. All of the engines available at launch, the accompanying transmissions installed as standard and the basic prices at a glance:

Diesel

- E 220 CDI BlueEFFICIENCY: 4-cylinder in-line, 2143 cc, 125 kW/170 hp, 5.7-5.8 l per 100 km, CO₂ 150-153 g/km, 6-speed manual transmission, from €44,803.50
- E 250 CDI BlueEFFICIENCY: 4-cylinder in-line, 2143 cc, 150 kW/204 hp, 5.7-5.8 l/100 km, CO₂ 150-153 g/km, 6-speed manual transmission, from €47,719
- E 350 CDI BlueEFFICIENCY: V6, 2987 cc, 170 kW/231 hp, 7.0-7.3 l/100 km, CO₂ 185-192 g/km, 7-speed automatic transmission, from €54,204.50

Petrol

- E 350 CGI BlueEFFICIENCY: V6, 3498 cc, 215 kW/292 hp, 8.6-8.9 l/100 km, CO₂ 200-208 g/km, 7-speed automatic transmission, from €55,156.50
- E 500: V8, 5461 cc, 285 kW/388 hp, 11.1-11.2 l/100 km, CO₂ 258-260 g/km, 7-speed automatic transmission, from €70,150.50

The following additional models are expected to be available from the first quarter of 2010 onwards:

Diesel

- E 200 CDI BlueEFFICIENCY: 4-cylinder in-line, 2143 cm³, 100 kW/136 hp, 5.7-n/a l/100 km, 150-n/a g CO₂/km, 6-speed manual transmission, from €41,947.50
- E 350 CDI 4MATIC BlueEFFICIENCY: V6, 2987 cc, 170 kW/231 hp, 7.6-7.7 l/100 km, CO₂ 200-203 g/km, 7-speed automatic transmission, from €56,941.50

Petrol

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- E 200 CGI BlueEFFICIENCY: 4-cylinder in-line, 1796 cc, 135 kW/183 hp, 7.7-n/a l/100 km, CO₂ 179-n/a g/km, 6-speed manual transmission, from €42,721
- E 250 CGI BlueEFFICIENCY: 4-cylinder in-line, 1796 cc, 150 kW/204 hp, 8.0-8.2 l/100 km, CO₂ 185-191 g/km, 5-speed automatic transmission, from €47,719
- E 350 4MATIC: V6, 3498 cc, 200 kW/272 hp, 10.2-10.3 l/100 km, CO₂ 238-241 g/km, 7-speed automatic transmission, from €56,941.50

(All prices inclusive of 19% VAT)

High-performance estate with dream figures

Affalterbach – Pole position for the new E 63 AMG estate: The high-performance estate's engine delivers 386 kW/525 hp, accelerates from zero to 100 km/h in 4.6 seconds and offers a maximum cargo space of 1,950 litres – and that with a relatively low fuel consumption of 12.8 litres per 100 km (combined, preliminary figures). With these dream numbers, the new E 63 AMG estate represents an extraordinary combination of dynamic performance, great utility and high efficiency. The top-model of the E-Class series not only features a unique design, but also the completely new AMG RIDE CONTROL sport chassis that includes electronically controlled damping and a new front axle. A ceramic-composite brake system is also available as an optional extra for the first time with the E 63 AMG estate. Finally, its unique combination of driver assistance systems raises the estate to a new level of active and passive safety.

The E 63 AMG estate sets new standards in terms of maximum boot space and the lowest possible fuel consumption. With a luggage compartment volume ranging from 695 to 1,950 litres and fuel consumption of 12.8 litres of super plus per 100 kilometres in the NEDC total, the new high-performance estate from AMG is most definitely in pole position. No competitor can offer the model's extraordinary combination of performance, utility and efficiency. Its AMG 6.3-litre V8 engine produces 386 kW/525 hp of power output, for example, which is 8 kW/11 hp more than the predecessor model delivered. Yet, despite this performance improvement, consumption has been reduced by nearly 12 per cent. This was made possible by an extensive range of efficiency enhancement measures, including a fuel supply that adjusts to the given driving situation, a generator management system with brake energy recovery during coasting and utilisation of the AMG SPEEDSHIFT MCT 7-speed sports transmission. Instead of a conventional torque converter, the latter uses an oil-bath wet start-up clutch.

Moreover, the consumption-optimised “Controlled Efficiency” driving programme keeps engine speeds as low as possible by shifting to the next highest gear at the earliest possible time.

The new E 63 AMG estate is a fascinating vehicle for two completely different reasons: It offers the smooth ride of a long-distance business-class estate model just as perfectly as it delivers the high-performance driving dynamics of a race car. The AMG high-rpm naturally aspirated engine with 6,208 cubic centimetres displacement and 630 newtonmetres of torque ensures agile responsiveness, powerful output and tremendous flexibility. With this high-performance engine, the E 63 AMG estate goes from zero to 100 km/h in just 4.6 seconds, while its maximum speed is 250 km/h (electronically limited). The “newly composed” V8 sound is a thrill across every kilometre driven, while the engine’s low-vibration operation provides for typical Mercedes comfort. In addition, a newly designed water cooling system ensures maximum durability even at high loads.

Key data at a glance:

	Mercedes-Benz E 63 AMG Estate*
Cylinder arrangement/valves per cylinder	V8 4
Displacement	6208 cc
Bore x stroke	102.2 x 94.6 mm
Output	386kW/525 hp at 6800 rpm
Max. torque	630 Nm at 5200 rpm
Total fuel consumption according to NEDC	12.8 l/100 km
CO₂ emissions	299 g/km
Acceleration 0-100 km/h	4.6 sec.
Maximum speed	250 km/h**

* all values are preliminary; ** electronically limited

The AMG SPEEDSHIFT MCT 7-speed sports transmission meets the most diverse requirements of any driver: Its four different driving programmes – C (Controlled Efficiency), S (Sport), S+ (Sport plus) and M (Manual) – can be set via an electronic turn-switch on the AMG DRIVE UNIT. The consumption-optimised Controlled Efficiency programme ensures especially smooth gear shifting, as the transmission control unit intentionally shifts to the next highest gear at the earliest possible opportunity in order to keep engine speed as low as possible.

The Sport Plus and Manual modes, on the other hand, enable the 7-speed sports transmission to shift gears in just 100 milliseconds. When gears are changed under full load, a partial cut-off of individual cylinders brought about by the short-term deactivation of cylinder firing and fuel injection results in significantly shorter shifting times. Rapid and spontaneous multiple gear downshifts ensure extreme agility, as do the double-declutching and RACE START functions. The latter enables E 63 AMG drivers to automatically engage the vehicle's maximum acceleration potential.

Driving dynamics and comfort – The E 63 AMG estate delivers both

Like the engine and power transmission, the all-new AMG RIDE sports chassis also provides for the highest degree of automobile individuality, as its exceptional driving dynamics and typical Mercedes long-distance capability blend into an optimal synthesis in the E 63 AMG estate. The front axle is equipped with new steel spring struts and the rear axle features special AMG air springs. The advantage of this solution is that the steel springs in the front make for a more sensitive response, while the automatic self-levelling rear suspension ensures that the rear air spring struts keeps the vehicle at a constant height, regardless of its payload.

There's also a new electronically controlled damping system that automatically varies the damping behaviour and reduces the roll angle of the bodyshell. The result is a lightning-fast transition from a high ride comfort mode to one that delivers the greatest possible agility. Drivers can also choose between the three chassis modes of Comfort, Sport and Sport Plus with just the push of a button. In

addition, the E 63 AMG estate is equipped with a newly developed independent front axle with a 56-millimetre track width, a torsion stabiliser, new cross struts, new elastokinematics and new hub carriers for greater negative camber, thereby providing more grip when cornering at high speeds. This sophisticated axle design has already proved its worth in principle in the C 63 AMG estate. Meanwhile, greater stability in extreme situations is ensured by the rear axle, which also offers more negative camber through optimised elastokinematics and a new suspension subframe carrier.

New power steering system and individualised three-stage ESP®

A greater feeling of direct steering is provided by the newly developed rack-and-pinion power steering system with parameter functions. The steering ratio of 14: 1 is 22 per cent more direct than in the corresponding series production version, and the stiffer steering column and new aligned characteristic of the speed-dependent power steering support make for greater steering precision and better road contact. The three-stage Electronic Stability Programme ESP®, already known from the SL 63 AMG and C 63 AMG series, enables individualised settings, and thus significantly greater driving pleasure. Drivers can use the AMG DRIVE UNIT's ESP® switch to select from the ESP ON, ESP SPORT and ESP OFF modes, whereby a central display on the instrument panel shows the currently activated mode. Perfect braking despite exceptionally dynamic handling is ensured by AMG's high-performance braking system featuring 360-millimetre ventilated and perforated discs all round. The front axle uses especially durable, motor sport-proven composite technology, whereby even better braking performance and a longer brake lifespan is guaranteed by the newly developed, optional ceramic-composite brake system with larger brake discs. Thanks to their increased hardness, the ceramic brake discs offer greater reliability at high temperatures and are also impressive by virtue of their weight, which has been reduced by about 40 per cent. The reduced unsprung mass provides for even more agile handling, especially during fast highway cornering.

Optimal grip is guaranteed by 255/40 R 18 tyres at the front and 285/35 R 18 tyres at the rear. These are mounted on titanium grey, high-gloss 18-inch AMG five-spoke light-alloy wheels with a width of nine and 9.5 inches respectively. AMG 19-inch forged light-alloy wheels with 255/35 R 19 tyres at the front and 285/30 R 19 tyres at the rear are also available as an option.

AMG styling and wider front wings

The newly developed front axle with a greater track width necessitated a 17-millimetre widening of the front wings. The attractively designed “6.3 AMG” lettering integrated into the wings indicates to those in the know just how exceptional this high-performance estate is. AMG styling elements in the E 63 AMG estate also include a front apron with large air intake vents, side air outlets and the AMG-specific LED daytime driving lights. If the optional Intelligent Light System (ILS) is selected, the E 63 AMG estate will also be equipped with tinted headlamps. A distinctive appearance is further ensured by side skirts and the rear apron with a black insert. Both design elements blend together masterfully with the sweeping line over the rear wheel housing, which lend a clear contour to the muscular form of the rear wing. Standard appointments also include taillights and indicators that utilise exceptionally rapid LED technology. Finally, a lasting impression – both optically and acoustically – is made by the sports exhaust system with newly designed chrome-plated twin exhaust tailpipes.

Boot offers maximum volume and a high degree of functionality

A 20-millimetre longer wheelbase provides not only for greater riding comfort in the E 63 AMG estate but also for more space and cargo volume than was the case with the predecessor model. With a volume between 695 and 1,950 litres, the luggage area has not only been expanded but is also way ahead of the competition in terms of the most important cargo space dimensions and cargo volume measurements. Its high degree of functionality also opens up numerous possibilities for transporting sporting equipment, luggage or furniture.

The standard equipment of the E 63 AMG estate includes major components from the EASY-PACK system, including the folding load compartment floor with two loading levels and folding box, the luggage compartment cover, the Quickfold system for convenient folding down of the rear seat backs with their 1/3 : 2/3 division and the electric EASY-PACK tailgate.

Sporty and comfortable interior

The newly designed interior of the high-performance estate car offers a fascinating combination of high-quality materials and functional sportiness. Exclusive equipment features include independent, electrically adjustable sport seats with optimised side support and a sport steering wheel in four-spoke design with integrated aluminium gearshift paddles. The AMG DRIVE UNIT allows drivers to program the MCT sport transmission, the 3-stage Electronic Stability Program ESP®, the suspension setup and the AMG Programme. New to the DRIVE UNIT is the E-SELECT selector lever in the centre console, which enables the driver to rapidly switch between R, N and D at a touch using the drive-by-wire system, while the push of just one button is all it takes to put the vehicle into Park and activate the parking lock. Also standard in the interior are exquisite leather upholstery in three different colour tones, an instrument cluster featuring the AMG main menu, door entry sills adorned with AMG lettering and sport pedals, both of which are made of brushed stainless steel.

The following optional equipment from the AMG *Performance Studio* is also available ex-works:

- AMG forged 19-inch light-alloy wheels, with size 255/35 R 19 tyres at the front and 285/30 R 19 at the rear
- AMG ceramic-composite brake system
- Brake callipers, painted red
- Rear axle locking differential with 40 per cent locking action
- AMG Performance steering wheel in three-spoke design with Alcantara inserts in the grip areas
- AMG carbon trim elements

- Illuminated AMG door entry sills
- AMG Driver's Package (maximum speed increased to 280 km/h, eligibility for participation in an AMG Driving Academy driver training program)
- AMG floor mats

Additional optional extras include:

- The AMG Exclusive package: Nappa leather appointments for the AMG sports seats, top section of the dashboard, the beltlines, the door armrests, the centre console and door centre panels. Roof liner, A, B and C-pillars and sun visors in Alcantara, AMG floor mats
- COMAND APS
- designo programme: Ten colour tones and nine leather upholstery options
- EASY-PACK cargo rails for secure cargo storage, incl. the EASY-PACK load sill protection
- Driving assistance package
- KEYLESS-GO package
- Media interface
- Reversing camera for PARKTRONIC
- Surround-sound system

A whole new level of active and passive safety

Like the E 63 AMG saloon, the new estate from AMG also meets the highest expectations with regard to passive and active safety. Standard appointments include the new drowsiness detection system known as ATTENTION ASSIST, the unique preventive occupant protection system PRE-SAFE[®], seven airbags and the crash-active NECK-PRO head restraint. Safety features can also be further enhanced to unprecedented levels in this vehicle class through the optional addition of the lane-keeping and blind spot assistant, the PRE-SAFE[®] Brake[®] with an automatic emergency braking function, the adaptive high-beam assist system, Night View Assist and Speed Limit Assist.

The new E 63 AMG estate will celebrate its market launch in February 2010.

Near series-production S-Class technology vehicle with plug-in hybrid

Mercedes-Benz Vision S 500 *Plug-in HYBRID*: The luxury class on the road to the three-litre car

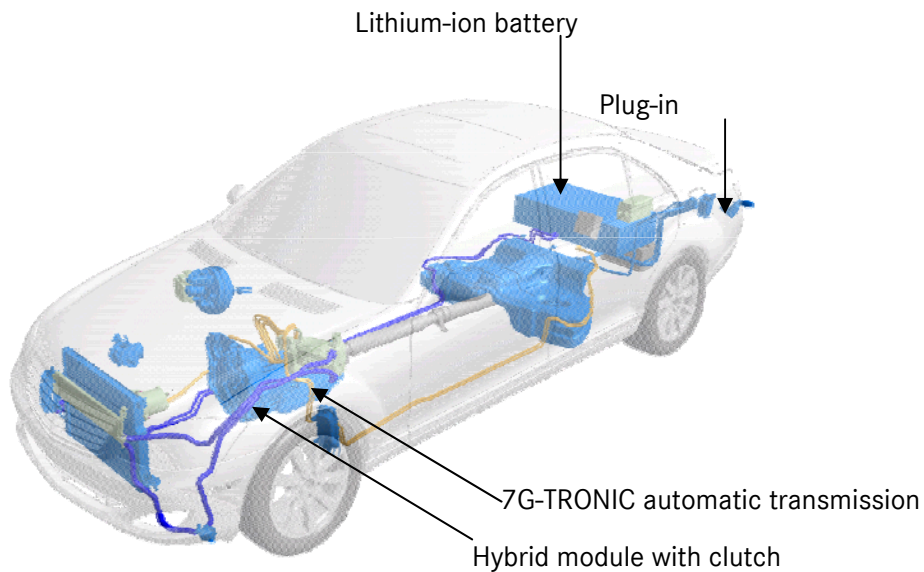
Shortly after the successful market launch of the S 400 HYBRID, currently the most fuel-efficient luxury-segment saloon with a petrol engine, Mercedes-Benz is presenting the first “three-litre car” in the luxury segment, the Vision S 500 *Plug-in HYBRID*, at the 63rd IAA in Frankfurt. This technology vehicle points the way to the future of Mercedes-Benz’ modular hybrid system. The Vision S 500 Plug-in Hybrid can drive for up to 30 kilometres solely on electricity, and therefore without producing any local emissions. The efficient drive system combined with CO₂ bonus for the battery-electric drive mode enables the vehicle to achieve a certified consumption of only 3.2 litres of petrol per 100 kilometres. With CO₂ emissions of only 74 grams per 100 kilometres according to the NEDC (New European Driving Cycle), the experimental vehicle developed in Sindelfingen demonstrates the viability of future S-Class generations. These outstanding values are achieved through the combination of a plug-in hybrid drive with efficiency-enhancing BlueEFFICIENCY measures implemented in the vehicle. At the same time, the Vision S 500 *Plug-in HYBRID* exhibits all the strengths typical of an S-Class, as it offers premium comfort, extraordinary safety and superior performance. The drive system in the concept car consists of three main components: a powerful V6 petrol engine with a next-generation direct fuel injection system, a hybrid module with approx. 44kW/60 hp and a lithium-ion battery with more than 10 kWh of storage capacity. With this package, the Vision S 500 *Plug-in HYBRID* accelerates from zero to 100 km/h in 5.5 seconds.

“The Vision S 500 Plug-in HYBRID is a new milestone on our path toward zero-emission mobility,” says Dr. Dieter Zetsche, Chairman of Daimler AG and Head of Mercedes-Benz Cars. “It is a luxurious and safe S-Class vehicle that offers superior driving performance while at the same time consuming less fuel than

current compacts. All of this shows that our top models will also be able to combine automotive fascination with responsibility for the environment.”

“Although it will take some time before this model can go into series production, our engineers will be working full steam to carry out the necessary integration measures and ensure that all components can meet the tough everyday demands required of a luxury long-distance saloon,” says Dr. Thomas Weber, member of the Board of Management of Daimler AG with responsibility for Group Research and Mercedes-Benz Cars Development. “We already have all the key technology we need for such a dream car, which is why I see it being included in the next generation of the S-Class. The important thing now is that our development work be accompanied by the establishment of a full-coverage infrastructure that will allow the potential of this innovative drive system to be fully exploited.”

The electric drive system components in the Vision S 500 *Plug-in HYBRID* offer evidence of the great versatility of the intelligent, widely scalable Mercedes-Benz modular hybrid system. In terms of design, the hybrid module employed in the vehicle displays only minor differences from the compact disk-shaped 15-kW electric motor used in the S 400 HYBRID, despite the fact that the former is three times more powerful. As a result, it can be elegantly integrated into the housing of the 7G-TRONIC seven-speed automatic transmission, which is why the interior of the test platform remains just as spacious in this model variant as is the case in the S400 HYBRID. Future model generations will also be oriented on this system architecture.



Whereas the extremely compact lithium-ion battery in the S 400 HYBRID (0.9 kWh) can be housed in the vehicle's engine compartment, the significantly higher-performing lithium-ion unit with a capacity of over 10 kWh in the Vision S 500 *Plug-in HYBRID* requires more installation space. For this reason, the battery is mounted behind the rear seats in the boot. Moreover, the positioning of the lithium-ion battery above the rear axle offers decisive additional benefits in that it balances weight distribution in the vehicle and ensures that the petrol tank remains adequate for long-distance cruising. In addition, the battery's location makes for the best possible crash protection.

Additional clutch decouples the hybrid module and combustion engine

In accordance with the modular concept, the powertrain design for the Vision S 500 *Plug-in HYBRID* is basically the same as that for the S 400 HYBRID. One system-specific attribute is the presence of an additional clutch integrated between the combustion engine and the electric motor. This device decouples the

two components in the pure electric drive mode, thereby ensuring the highest level of efficiency in the latter. Moreover, because it is fully integrated into the vehicle's converter housing, the clutch does not take up any additional space.

Electrical outlet as a filling station: High-performance plug-in battery

Another key difference between the S 500 *Plug-in HYBRID* and conventional hybrids involves the S 500's plug-in battery, which can be charged at charging stations, thereby enabling the vehicle to travel over long distances on electric power. The energy-storage unit for the electric motor in the Vision S 500 *Plug-in HYBRID* is a high-performance lithium-ion battery with a storage capacity of more than 10 kWh and maximum output of approximately 60 kW. The battery can be recharged at charging stations in order to increase the vehicle's electric range. The rapid charge cycle takes approximately 60 minutes. It takes about four-and-a-half hours to recharge a completely discharged battery via a conventional household socket.

The model is also equipped with a compact onboard charger: Housed behind the side boot wall, this unit controls the recharging process and is protected against short circuits, voltage reversal, and voltage surges. The charging system also protects the battery by monitoring voltage, the charging level and charging time. The total weight of the electrical components in the current experimental vehicle is 215 kilograms, whereby the lithium-ion battery weighs approximately 130 kg – much less than a conventional NiMH battery with the same capacity, as the weight of such batteries ranges from 180 to 200 kg.

The vehicle's hybrid module also provides additional energy when the car is in motion through regenerative braking – the recovery of energy when braking. Here, the clutch enhances efficiency as well, as it enables complete energy regeneration without engine drag losses.

Range of up to 30 kilometres in the pure electric mode

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The high-performance battery and the approximately 44 kW/60 hp hybrid module enable pure electric driving over a distance of up to 30 kilometres, which is more than enough for many urban trips. As a result, the *Vision S 500 Plug-in HYBRID* offers a fast and very comfortable way to get around cities without producing any local emissions. When the electric motor's output is no longer sufficient (i.e. at high speeds or on very sharp inclines), the petrol engine is automatically started and connected to the power train. Before the clutch is closed, the vehicle electronics synchronise the speed of the combustion engine and the hybrid module, thereby ensuring that the engagement of the former occurs without any jerks, and in a manner unnoticeable to the driver.

What's more, the hybrid module's sophisticated interplay with the combustion engine enables numerous additional functions that positively impact fuel consumption, emissions and vehicle agility. Like the system employed in the *S 400 HYBRID*, the hybrid module in the *Vision S 500 Plug-in HYBRID* also comes with the ECO start/stop function. This feature also enhances safety and driving pleasure because of its boost effect. Here, the electric motor provides powerful support to the combustion engine during the high-consumption acceleration phase. This system has already proved its practical viability in a slightly different configuration in the Mercedes-Benz Sprinter.

Extensive electronic safety and control components

The lithium-ion battery not only serves as an energy storage device for the electric motor in the *S 500 Plug-in HYBRID*; it is also linked via a DC-DC converter to the 12-volt on-board network, which provides power to standard consumers such as the headlamps and various comfort devices. To ensure a consistently high level of electrical efficiency, the voltage converters are water-cooled via an additional low-temperature circuit.

Special power electronics are required for operating the three-phase AC electric motor in the high-voltage direct current grid, and the inverter for this task is

housed in the engine compartment. Because the power electronics system itself is heated by the electric current thus created, it too is integrated into the low-temperature cooling circuit. Mercedes-Benz employs standardised components for the power electronics system as well, enabling them to be efficiently combined with different electric motors and battery types across all model series. Page 77

On the road to plug-in hybrids: Diesel-hybrid concepts

An important milestone on the road to plug-in hybrids is the recently unveiled Vision E 300 BlueTEC HYBRID diesel hybrid. Like the S 400 HYBRID and the Vision S 500 Plug-in HYBRID, it is based on the Mercedes-Benz modular hybrid concept. This near-series vehicle study combines a new 2.2-litre, four-cylinder diesel engine with the 15 kW/20 hp hybrid module that is also used in the S 400 HYBRID, but which here also enables pure electric driving. This drive system configuration enables the Vision E 300 BlueTEC HYBRID to travel 100 km on only 4.5 litres of fuel (preliminary value). This corresponds to CO₂ emissions of only 119 grams per kilometre – with an output of 165 kW/224 hp and superior torque of 580–600 newtonmetres (combined in both cases), more or less the same performance as today's six-cylinder diesel engines. Exhaust gas treatment is handled by the combination of an oxidising catalytic converter, a diesel particulate filter and BlueTEC with AdBlue® injection. As a result, the Vision E 300 BlueTEC HYBRID also has the potential to meet the world's most stringent emission standards.

Combustion engine (petrol)

No. of cylinders/arrangement:	V6, 4 valves per cylinder
Displacement:	3.5 l

Hybrid module

Type:	Permanently excited synchronous machine
Rated output:	circa 44 kW/60PS
Rated torque:	250 Nm

Performance and fuel consumption

Acceleration 0–100 km/h:	5.5 sec*
Top speed:	250 km/h
Fuel consumption:	3.2 l/100 km (combined)*
CO ₂ emissions:	74 g/km (combined)*:

*preliminary values

New fuel cell passenger car from Mercedes-Benz: 100 per cent fun to drive, zero emissions

The new B-CLASS F-CELL will be the first fuel cell automobile manufactured by Mercedes-Benz under series conditions. The environmentally friendly electric car boasts superior performance comparable to a similar model equipped with a 2.0-litre petrol engine, while still being completely suitable for daily use. The zero-emission drive delivers NEDC fuel economy corresponding to 3.3 litres per 100 kilometres (diesel equivalent). Production of the B-Class F-CELL is scheduled to begin with a limited run in late 2009, and the first of the approximately 200 units to be produced will be delivered to customers in Europe and the USA at the beginning of next year.

The new fuel cell vehicle offers everything one expects from a Mercedes-Benz: great comfort and safety coupled with generous interior and boot space. Customers will not have to sacrifice any driving pleasure either, because the electric motor has a peak performance of 100 kW/136 hp and a maximum torque of 290 Nm, which is available from the first rotation. These factors ensure that the B-Class F-CELL, whose impressive dynamic handling properties are in some cases far better than those of a two-litre petrol car, gets off to an excellent start. Despite these qualities, the zero-emission fuel cell drive consumes the equivalent of only 3.3 litres of diesel fuel per 100 kilometres (NEDC). What's more, its great range of approximately 400 km, and its short refuelling time of only around three minutes, will ensure that local emission-free mobility will become a reality over long distances as well with the B-Class.

“2009 is the year in which we will establish additional milestones in sustainable mobility,” says Dr. Thomas Weber, member of the Board of Management of Daimler AG with responsibility for Group Research and Mercedes-Benz Cars Development. “The B-Class F-CELL will take on a pioneering role here as the world's first fuel cell automobile manufactured under series production conditions.”

The vehicle's technological heart is the new generation of the compact, high-performance fuel cell system, in which hydrogen gas stored onboard at a pressure of 700 bars reacts with oxygen from the air. This generates the electricity needed for the electric motor, as well as pure water vapour as a byproduct. The B-Class F-Cell stands out through its very good cold-start capability even at temperatures as low as minus 25 degrees Celsius. The vehicle's drive system has been completely redeveloped in comparison to the version presented in 2004 in the F-CELL A-Class, and Mercedes-Benz engineers have made substantial improvements in terms of output, torque, range, reliability, starting behaviour and comfort. As a result, the B-Class F-CELL now offers driving fun and everyday practicality at the high level of quality typical for a Mercedes – and does so without producing local emissions.

Like a combustion engine-hybrid model, the B-Class F-CELL also comes with a lithium-ion battery (35 kW output; 1.4 kWh capacity) for booster functions and brake energy recovery. Lithium-ion technology offers advantages over conventional batteries in that it is more compact, boasts a higher output and charge efficiency and a long service life.

The B-Class F-CELL employs the unique sandwich floor architecture that Mercedes-Benz introduced ten years ago, partly to prepare for the integration of alternative drive systems into the first-generation A-Class. The advantage is that the drive components are located in the sandwich floor, where they are protected and don't take up much space so that the vehicle's interior remains fully usable with 416 litres of boot capacity available.

The B-Class F-CELL also stands out through outstanding appointments: Immediately noticeable is the special paint finish in Bonamite Silver, as well as the model's exclusive light-alloy wheels in ten-spoke design. The interior, for its part, boasts leather coverings, seat heating, automatic climate control, the COMAND system and other features that guarantee the same high level of comfort.

No matter what the conditions, the operational reliability of the B-Class F-CELL is of the same high level as in Mercedes vehicles with conventional combustion engines. The B-Class F-CELL's integrated safety concept takes the specific characteristics of the innovative drive system into account. The concept incorporates the expertise from the many years of experience Mercedes-Benz has had with fuel cell drives and high-voltage applications. Mercedes engineers have tested and optimised the drive-specific components' safety in more than 30 additional crash tests.

Network of filling stations required for car's widespread use

With more than 100 test vehicles and a combined total of over 4.5 million kilometres of trial testing, Daimler and Mercedes-Benz have the most extensive experience with fuel cell vehicles of any manufacturer worldwide. The B-Class F-CELL is further testimony of this technology's high level of development for automotive use. However, a comprehensive network of hydrogen filling stations still has to be set up before local zero-emission driving can become a widespread reality. To make this possible, Daimler is, among other things, cooperating with government authorities, energy utilities and oil companies in joint projects in places such as Hamburg, Stuttgart and California.

Mercedes-Benz views the development of electric cars with battery and fuel cell drives for local zero-emission driving as a means of supplementing vehicles with high-tech internal combustion engines. Advanced diesel and petrol engines will remain important for automotive applications for a long time to come, not only for individual mobility in passenger cars – especially over long distances – but, more importantly, for freight transport in trucks. Electric vehicles, on the other hand, will increasingly be used in urban transport.

Drive	Electric motor with fuel cell
Rated output (kW/hp)	100/136
Rated torque (Nm)	290
Maximum speed (km/h)	170
Consumption (NEDC) (l of diesel equivalent/100 km)	3.3
Total CO ₂ (g/km min.-max.)	0.0
Range (km) NEDC	385
Capacity/output of lithium-ion battery (kWh/kW)	1.4 / 35
Cold-start capability	to -25 °C

Mercedes-Benz BlueZERO *E-CELL PLUS*: Piggy-backed for more range

The near-series Mercedes-Benz Concept BlueZERO *E-CELL PLUS* electric car combines environment-friendly electric mobility in the city with unrestricted suitability for long-distance driving. This is made possible by the combination of the battery-electric drive with a clean and efficient combustion engine. This “range extender” gives the BlueZERO *E-CELL PLUS* a total range of up to 600 kilometres, with 100 kilometres thereof solely under electric power and thus free of local emissions.

The BlueZERO *E-CELL PLUS* is part of a family of modularly constructed electric cars that will enable Mercedes-Benz to meet all customer requirements for sustainable mobility in the future. In this variant of the concept vehicle, the electric motor of the purely battery-powered BlueZERO *E-CELL* is combined with an additional three-cylinder, turbocharged petrol engine. Generating 50 kW, the compact combustion engine is installed in the area of the rear axle and can charge the battery while the car is being driven. The CO₂ bonus for the battery-electric driving mode reduces the vehicle's emissions to only 32 grams of CO₂ per kilometre. The range extender enables the BlueZERO *E-CELL PLUS* to be driven for up to 600 km, up to 100 km in electric mode with zero local emissions. The long combined range makes the BlueZERO *E-CELL PLUS* fully suitable for everyday use and assures that the customer will reach his or her destination even with a depleted battery. After all, the car can be refuelled quickly and easily at any conventional filling station.

Battery with superior lithium-ion technology

With a charging capacity of 20 kW, the high-performance, 18 kWh lithium-ion battery of the BlueZERO *E-CELL PLUS* can store enough power within around 30 minutes for a 50 kilometre cruising range. The complete electric range of 100 kilometres requires a charging time of somewhat more than an hour. Charging time is doubled when the charging capacity is at the usual household

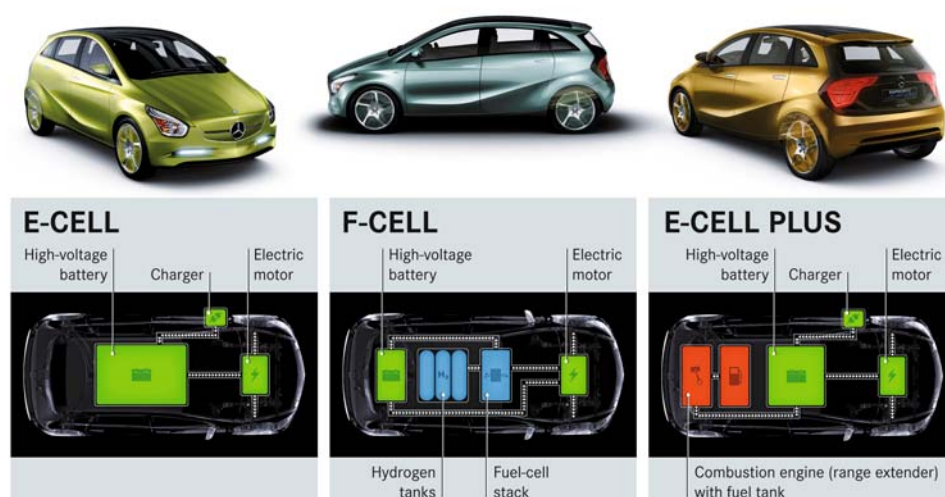
level of 3,3 kW. Special on-board electronics support the intelligent charging stations and billing systems used by electric fuelling stations. Advantages of lithium-ion batteries compared to other battery technologies include their compact dimensions, high output and energy density, high charge efficiency and long service life.

Concept BlueZERO – the triad of electric mobility

Mercedes-Benz is showing the way to environmentally compatible electric mobility with the near-series Concept BlueZERO. The vehicle's intelligent modular concept enables a single vehicle architecture to be used to create three models with different drive system configurations:

- The BlueZERO *E-CELL PLUS* is equipped with an electric drive and a supplemental combustion engine as a power generator (range extender). The car has a total range of up to 600 kilometres, of which up to 100 kilometres can be covered solely on electricity.
- Originally presented in Detroit at the beginning of the year, the BlueZERO *E-CELL* is powered exclusively by a battery-electric drive that allows the car to travel up to 200 kilometres on a single battery charge and completely free of local emissions.
- The third drive version is the fuel cell powered BlueZERO *F-CELL*, with a range of roughly 400 kilometres on electric power and therefore also without any local emissions.

Concept BlueZERO – Modular concept for electromobility



Mercedes-Benz

All three BlueZERO models feature front-wheel drive, which is typical for this class of car. The Mercedes engineers have put together a modular system comprising several flexibly combinable drive components. These include state-of-the-art, liquid-cooled lithium-ion batteries with a storage capacity of up to 35 kWh and the compact electric motor with a maximum output of 100 kW (sustained output: 70 kW). The maximum torque of 320 Nm is immediately available once the electric motor is turned on, and it surpasses the value attained by today's V6 petrol engines at 2500 rpm. As with its two sister models, the BlueZERO *E-CELL* and the BlueZERO *F-CELL*, the BlueZERO *E-CELL PLUS* can accelerate from zero to 100 km/h in less than 11 seconds. To ensure an optimum range and energy efficiency, the top speed is electronically limited to 150 km/h.

"The Concept BlueZERO offers a triple demonstration of the technical maturity of alternative drive systems from Mercedes-Benz. Electric vehicles with battery electric or fuel cell drive systems will not truly be on an equal footing with today's combustion engine drive systems until the customers are confident that there is a sufficient infrastructure of electric and hydrogen refuelling stations," says

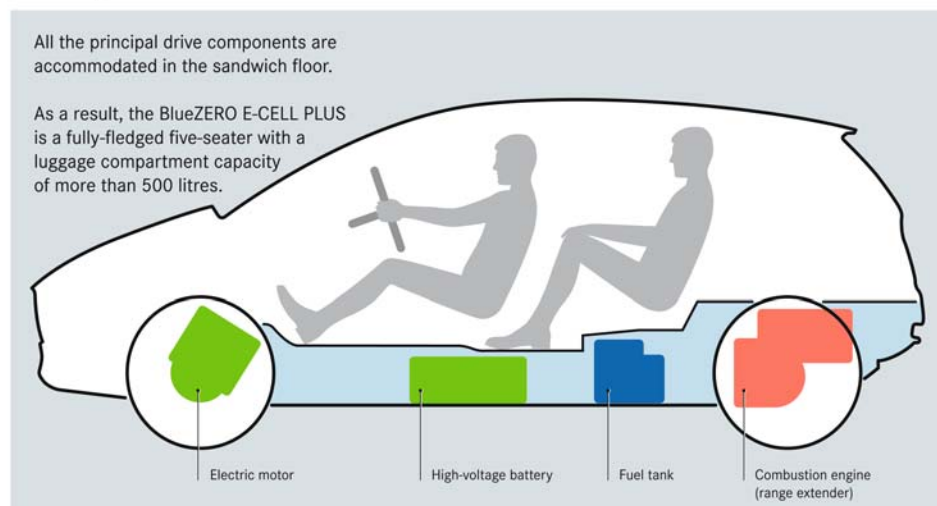
Prof. Herbert Kohler, Head of E-Drive and Future Mobility and also Chief Environmental Officer at Daimler.

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Concept BlueZERO: Modular architecture for flexibility and efficiency

All of the three BlueZERO variants employ the unique sandwich floor that Mercedes-Benz introduced ten years ago, also with an eye to integrating alternative drive systems into the first-generation A-Class, and which was refined for the B-Class. Advantages of the modified design include the space-saving location as well as the fact that the major drive components are positioned at the centre of gravity and are extremely well protected within the vehicle underbody. The BlueZERO models therefore differ considerably from conventionally designed electric cars, which have heavy and voluminous storage batteries installed in the trunk, for example, or in the area of the backseat. All three BlueZERO variants share key technological components and have identical designs and vehicle dimensions. Even though they have compact exterior dimensions of only 4.22 metres, the BlueZERO models have a spacious and versatile interior and cargo space. The vehicles' five full-size seats, approximately 450 kilograms of payload, and more than 500 litres of cargo capacity make them suitable family cars.

Concept BlueZERO E-CELL PLUS



Mercedes-Benz

“Our modular system permits different drive configurations for each customer requirement,” says Dr. Thomas Weber, the Daimler Board of Management Member responsible for Group Research and Mercedes-Benz Cars Development. “The improved sandwich floor platform serves as the perfect basis for a diverse range of vehicles with electric drives. We are currently developing an additional platform for future compact models that have drive systems using optimised internal combustion engines. The smart linking of both architectures will allow us to expand our product range in an extremely flexible and efficient manner. Beginning in 2009 we will manufacture the first small batch of Mercedes fuel cell cars. In 2010 they will be followed by a small batch of Mercedes-Benz vehicles that run solely on electric power supplied by a battery. Thanks to these measures, we are excellently positioned for the future.”

Electric powered vehicles are fun to drive

Mercedes-Benz vehicles will continue to combine environmental awareness and driving fun in future. The Mercedes-Benz designers have emphasised this aspiration by introducing paint finishes in three new ALU-BEAM colours. Each of

the three variants makes its individual mark: Confidence-oozing ALU-BEAM Copper was chosen for the BlueZERO *E-CELL PLUS*; the BlueZERO *E-CELL* is painted a fresh ALU-BEAM yellow; and the BlueZERO *F-CELL* appears in ALU-BEAM green.

Mercedes-Benz believes that it won't be just one technology that paves the way to sustainable mobility in the future, however. Instead the company is responding with solutions that are every bit as varied as the demands. The individual technologies are being used in specific applications where they can provide the greatest advantage with respect to optimal consumption and emission values. Mercedes-Benz views the development of electric cars with battery and fuel cell drives for local zero-emission driving as a means of supplementing the extremely clean and economical BlueEFFICIENCY and hybrid vehicles already available today. However, the unrestricted and convenient operation of electric cars still faces a series of challenges, including high system costs, insufficient infrastructure and short cruising ranges. Advanced diesel and petrol engines will remain the driving force for automobiles for a long time to come – not only for individual mobility in passenger cars (especially over long distances), but, more importantly, for freight transport in trucks. Despite all the progress that Mercedes-Benz has once again so emphatically documented with the Concept BlueZERO, electric cars will not be replacing vehicles with combustion engines any time soon. The electrification of modern, high-tech engines will, however, play an increasingly important role in the drive system mix of the future.

Concept BlueZERO *E-CELL PLUS*

- Electric powered concept car with a battery-electric range of up to 100 kilometres
- A combustion engine that serves as an electrical generator (range extender) extends the range to up to 600 kilometres (total)
- The concept vehicle can be recharged simply and conveniently at a common household outlet
- With a charging capacity of 20 kW, the Concept BlueZERO *E-CELL PLUS* can be recharged within around half an hour for a 50 kilometre cruising range

- The liquid-cooled lithium-ion batteries used as an energy source have an energy content of up to 17.50 kWh
- Front-wheel drive

Electric drive

CO ₂ emissions:	0 g/km
Range:	up to 100/600 km
Battery:	Lithium-ion
Rated output:	100 kW/136 hp
Max. torque:	320 Nm
Top speed:	150 km/h
Acceleration 0–100 km/h:	< 11.0 seconds

Range extender

Cylinders:	3
Displacement:	1.0l turbo
Output:	50 kW at 3500 rpm

New additions to the GLK family

Stuttgart – While one car boasts outstanding driving performance and high fuel efficiency, the other offers high fuel efficiency and good handling. What is the difference between the two? The sporty handling dynamics set the tone in the all-wheel drive GLK 250 CDI 4MATIC BlueEFFICIENCY: The modern, four-cylinder diesel with 150 kW (204 hp) and an impressive 500 Nm of torque guarantees top acceleration and flexibility. In fact, this model has the most powerful four-cylinder diesel engine in the SUV world. The rear-wheel drive GLK 220 CDI BlueEFFICIENCY with the familiar 125 kW (170 hp) diesel engine, on the other hand, impresses with even better fuel economy (consumption as low as 6.0 l/100 km) while at the same time delivering great performance.

The new models underscore the leading position of the distinctive yet compact GLK. Whereas the GLK 250 CDI 4MATIC featuring permanently engaged all-wheel drive, 7G-TRONIC transmission and the segment's most powerful four-cylinder diesel engine augments the world of top-of-the-range compact SUVs, the GLK 220 CDI with rear-wheel drive and six-speed manual transmission offers maximum fuel economy. It consumes only between 6.0 and 6.4 litres of diesel fuel per 100 kilometres and combines these low consumption values with good performance. The rear-wheel drive vehicle accelerates from zero to 100 km/h in 8.5 seconds and reaches a top speed of 205 km/h. The GLK 250 CDI 4MATIC completes the sprint to the 100 km/h mark in 7.9 seconds and doesn't stop accelerating until reaching 213 km/h. This sports car-like performance does not come at the typical cost of higher consumption. The diesel consumes only 6.7 litres per 100 kilometres on average.

The GLK 250 CDI 4MATIC BlueEFFICIENCY brings the world's most powerful four-cylinder diesel engine for an SUV to the Mercedes-Benz range. The new 2143 cc diesel engine with direct fuel injection produces 150 kW/204 hp and 500 Nm of torque in the GLK for outstanding performance. Just as impressive as the sprint times and the top speed is the GLK's top-gear acceleration. Thanks to its high torque, which is already present at 1600 rpm, the GLK 250 CDI 4MATIC accelerates powerfully when overtaking, requiring only 7.0 seconds for the sprint from 80 to 120 km/h. In spite of its great performance, this GLK model is very economical to drive, consuming only 6.7 litres of diesel fuel on average per 100 kilometres (combined NEDC consumption, preliminary value). This makes the GLK significantly more fuel efficient than comparable models in this performance class. The vehicle produces CO₂ emissions of 176 grams per kilometre. Furthermore, it not only meets the EU5 emissions standard but also has the potential to fulfil the EU6 limits as well as the BIN 5 requirements in the USA.

Diesel engine with advanced common-rail technology

One of the hallmarks of the new diesel engine in the GLK 250 CDI 4MATIC BlueEFFICIENCY is the increased maximum rail pressure of 2000 bar. This increase in pressure potential is a prerequisite for increasing engine output and torque while at the same time significantly reducing untreated emissions. Newly developed piezo injectors take advantage of the fact that piezoceramics change their crystal structure – and therefore their thickness – in a matter of nanoseconds (one nanosecond = one billionth of a second) when electrical voltage is applied. The new injectors are equipped with a stack of thin piezoceramic layers (called the “piezo stack”) to enable them to achieve a sufficient overall stroke from the very small stroke per layer. The injector needle is actuated directly, so that the fuel injection can be adjusted even more precisely in line with the current load and engine speed situation. Another key factor behind the low emissions, low fuel consumption at full load and peak output is the ignition pressure of 200 bars, which puts the four-cylinder diesel at the head of the field when it comes to diesel engines for passenger vehicles.

A two-stage supercharging system comprising a small high-pressure (HP) turbocharger and a large low-pressure (LP) turbocharger ensures that the optimum charging pressure is always available. The two turbochargers are connected in series, and each has a turbine and a compressor driven by this turbine for the combustion air. The HP turbine is located directly at the exhaust manifold and initially allows exhaust gas to flow through it, causing it to rotate at up to 215,000 revolutions per minute. The HP turbine housing features an integral bypass duct, which can be opened or closed by means of a wastegate triggered by a vacuum unit. If the flap is closed, the entire exhaust stream flows through the HP turbine so that the exhaust gas energy is initially available to drive the HP turbine. This allows the optimal boost pressure to be developed even at low engine speeds. As the engine speed increases, the wastegate opens, distributing the exhaust gas energy to the turbines with optimum efficiency. Downstream of the HP turbine, the two exhaust gas streams reconverge, and the remaining exhaust gas energy drives the LP turbine at a maximum speed of up to 185,000 revolutions per minute. At intermediate engine speeds, the wastegate of the HP turbine is opened so wide that the HP turbine ceases to perform any appreciable work. This allows the full exhaust gas energy to be directed with low losses into the LP turbine, which then does all of the turbine work.

The two compressors are likewise connected in series and are in addition connected to a bypass duct. The combustion air from the air filter first flows through the low-pressure compressor, where it is compressed as a function of the LP turbine's driving power. The compressed air then flows into the high-pressure compressor, which is coupled to the HP turbine, where it undergoes further compression for a genuine two-stage supercharging process.

The key benefit of this intelligent, on-demand control is the improved cylinder charging and, consequently, high torque even at low engine speeds. What's more, fuel consumption is reduced. During normal operation, the advantages of this concept can be seen in the harmonious driving characteristics with no turbo lag, a good torque curve across the entire engine speed range, spontaneous throttle response and noticeably improved performance. As a logical supplement to the turbocharger system, Mercedes-Benz installs a larger intercooler that reduces the

temperature of the compressed and heated air by as much as 140 degrees Celsius so that a larger volume of air can enter the combustion chambers. Page 93

The newly developed exhaust gas recirculation valve (EGR valve) works like a rotary disc valve and precisely controls the quantity of fresh air and recirculated exhaust air to effectively reduce emissions of nitrogen oxides.

Sacrifice without detriment: The GLK 220 CDI BlueEFFICIENCY with rear-wheel drive and six-speed manual transmission

The powerful, yet economical four-cylinder diesel engine in the GLK 220 CDI BlueEFFICIENCY is another unit from this same generation of engines. It produces 125 kw/170 hp and, depending on the equipment level, consumes only between 6.0 and 6.4 litres of diesel fuel per 100 kilometres (combined NEDC consumption, preliminary value). CO₂ emissions are from 158 to 168 grams per kilometre. Not only does it meet the current EU5 emissions standard, this version also has the potential to fulfil the EU6 limits as well as the BIN 5 requirements in the USA.

In combination with a tried and tested six-speed manual transmission and rear-wheel drive, the engine of the GLK 220 CDI BlueEFFICIENCY exudes a lot of power and responds to the driver's commands with a great deal of agility. It boasts good pulling power and, like the more powerful variant, is extremely smooth running for a four-cylinder diesel engine. In addition to good performance, the engine generates an impressive torque at low engine speeds: Peak torque of 400 Nm is available over a wide rev range from 1400 to 2800 rpm, making it possible to drive very fuel efficiently at low engine speeds in everyday driving situations. The rear-wheel drive vehicle sprints from zero to 100 km/h in 8.5 seconds and reaches a top speed of 205 km/h.

The GLK 220 CDI BlueEFFICIENCY is also available with the 7G-TRONIC seven-speed automatic transmission as an option.

BlueEFFICIENCY: Efficient measures for reducing fuel consumption

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Like all BlueEFFICIENCY models from Mercedes-Benz, the two new GLK models also feature an extensive package of measures that help to reduce fuel consumption. Measures besides the diesel engine with direct injection and the low-friction powertrain include weight savings achieved through the use of high strength and ultra high strength steels in the bodyshell and weight-optimised alloy wheels. Aerodynamic side mirrors and underbody panels lower the air resistance, and newly developed 235/60 R 17 V tyres reduce rolling resistance. A regulated fuel pump and the energy-saving electric power steering system further reduce the GLK's fuel consumption. Thanks to a fuel-consumption computer and a display showing current fuel consumption, GLK drivers can check their fuel consumption at any time and adjust their driving behaviour accordingly.

New equipment details for the new model year

New equipment options are available for the distinctive compact SUV. These include convenience features such as KEYLESS GO or – in combination with the COMAND APS multimedia system – a reversing camera with static help lines that make it easier to manoeuvre in tight quarters. Effective immediately, all COMAND infotainment systems are able to receive digital radio (DAB). Passive safety was further improved by the standard pelvisbag*, which provide additional protection to the pelvis in the event of a collision. The crash-responsive exit assistant is a new function of the Memory equipment package that makes it easier to exit the vehicle after an accident by automatically moving the power-adjustable steering wheel to its highest position. The optional Intelligent Light System (ILS) now includes LED* daytime running lights, and 19 inch winter wheels have been added to the portfolio for the coming cold season.

Customers can choose ARTICO, a particularly robust, yet breathable synthetic leather for the interior of the GLKs. Also available is the luxurious designo line of two-colour leather appointments in black/light brown and black/corteccia.

Drivers with sporting ambitions can select EXTERIOR*, a new AMG sports package based on the existing sports package. The scope of supply includes, in addition to the standard sports package, AMG-specific front and rear aprons with optical underbody protection in chrome, body-colour side skirts, a radiator grille with two smooth chrome louvres, a chrome rub strip and 20 inch, twin-spoke AMG alloy wheels asymmetrically shod with 235/45 R20 tyres up front and 255/40 R20 tyres at the rear.

* available from December 2009

Attractive model range: A choice of six GLK models

The GLK is a powerful and distinctive compact SUV. The striking, multi-talented vehicle sets itself apart from its competitors through its functional and appealing body shape while also combining attributes that previously were completely contradictory: Thanks to its AGILITY CONTROL chassis with variable damping, the vehicle brings together impressive handling with great driving safety and outstanding ride comfort.

The ultramodern engine line-up in all GLK models provides superlative drive comfort and compelling performance coupled with superior fuel efficiency and low emissions. Besides the two new models GLK 220 CDI BlueEFFICIENCY and GLK 250 CDI 4MATIC BlueEFFICIENCY, the vehicle is also available in four other versions: The new diesel models are supplemented by the 4MATIC version of the GLK 220 CDI BlueEFFICIENCY and the tried and tested GLK 350 CDI 4MATIC V6 diesel model. The GLK model range is rounded off by the two V6 petrol models, GLK 300 4MATIC and GLK 350 4MATIC. They and the three four-cylinder diesel models meet the strict EU5 emissions standard.

All GLK models with all-wheel drive come standard with the 7G-TRONIC seven-speed automatic transmission.

Technical data of the GLK model range at a glance

Model Emission standard	Cyl.	cc	kW/hp at rpm	Nm at rpm	Trans.* Drive**	0-100 (s)	km/h	l/100 km NEDC comb.**** CO ₂ g/km
GLK 220 CDI BlueEFFICIENCY EU 5	4-cyl. inline	2143	125/170 3200-4800	400 1400-2800	MT6 RWD	8.8	205	6.0-6.4 158-168
					AT7 RWD	8.7	205	6.3-6.7 158-168
GLK 220 CDI 4MATIC BlueEFFICIENCY EU 5	4-cyl. inline	2143	125/170 3200-4800	400 1400-2800	AT7 4MATIC	8.8	205	6.7-6.9 176-182
GLK 250 CDI 4MATIC BlueEFFICIENCY EU 5	4-cyl. inline	2143	150/204 4200	500 1600-1800	AT7 4MATIC	7.9****	213****	6.7**** 176-183****
GLK 350 CDI 4MATIC EU 4	V6	2987	165/224 3800	540 1600-2400	AT7 4MATIC	7.5	220	7.9-8.4 208-220
GLK 300 4MATIC EU5	V6	2996	170/231 6000	300 2500-5000	AT7 4MATIC	7.6	210	10.2-10.5 239-246
GLK 350 4MATIC EU5	V6	3498	200/272 6000	350 2400-5000	AT7 4MATIC	6.7	230	10.5-10.8 245-251

*AT 7 = 7G-TRONIC seven-speed automatic transmission; MT6 = six-speed manual transmission ** 4MATIC = permanent all-wheel drive, RWD = rear-wheel drive, *** preliminary values, **** depending on equipment package

Original bodyshell with a network of integrated protective features

Stuttgart – Shortly after the market launch of the new E-Class, Mercedes-Benz is also offering the world's most successful business saloon as a specially protected E-Guard model. It differs from the series model primarily due to its network of intelligently conceived protective features made of special steel and aramid, which are invisibly integrated beneath the otherwise identical outer skin. The protective cocoon also features a polycarbonate glazing all-round. The new E-Guard saloons thus offer occupants effective protection against the steadily increasing danger of street crime worldwide. In its new Guard model, Mercedes-Benz is continuing to build on eight decades of expertise in the development and production of special protection vehicles.

As is usual at Mercedes-Benz, the special requirements of the special protection versions of the new E-Class were already taken into account in the specifications during the vehicle's development. Like any series-produced vehicle, the new E-Guard goes through all body production stations, thus ensuring that its structural strength, dimensional accuracy, corrosion protection and paintwork are of the same high quality as those of the series-produced automobile.

All-road protection against criminal attack in the street

During the next stage, highly experienced and specially trained experts install the precisely formed protective elements, which exactly fit the contours of the bodyshell without encroaching on the interior space. The result is a comprehensively protected passenger cell of special, high-strength steels and aramid components, which are complemented with highly resistant polycarbonate glazing with an attractive appearance. All these measures are invisible to the naked eye. The extremely stringent Mercedes-Benz guidelines are observed by the production specialists to ensure complete quality control at all times.

Despite the high level of special protection, the comfort-related advantages of the new E-Class are fully retained. This applies equally to the generous spaciousness of this full-fledged five-seater, the spatial acoustics, the sun protection and the lighting/control functions. The rear window is heated, and the power windows on the driver and front passenger sides are fully retractable as standard. Efficient power windows are also available for the rear. Optional extras include an emergency alarm system that causes the headlamps to flash and sounds an alarm at the touch of a button in the event of a threat. An intercom system allows communication between the protected passenger cell and the outside world. In addition, the new E-Guard features the numerous, innovative assistance systems of the new E-Class.

The new E-Guard meets the stringent requirements for High Protection according to protection class VR4 (formerly B4) and more. This means the vehicle is able to withstand handgun bullets of up to .44 Magnum in calibre – at random angles of fire, to provide the most realistic protection possible. The E-Guard therefore offers outstanding protection against criminal attacks in the street, as has been verified and certified by an internationally recognised test institute. Underbody armour is also available on request. This makes the entire underfloor area of the passenger cell resistant to attack with a DM51 hand grenade.

Modified suspension plus adapted control and restraint systems

The suspension and brakes are adapted to suit the increased weight caused by the protection features. The E-Guard is equipped with a special Level II version of the AIRMATIC air suspension system as standard. The electronic control and restraint systems that assist the driver in critical situations have been specifically adapted to suit the different parameters compared to the standard model. The car is fitted with 17-inch wheels and run-flat tyres designed for a maximum speed of 240 km/h as standard. With the tyres deflated, the vehicle is still able to cover up to 50 kilometres at a speed of 80 km/h to enable its occupants to escape from the danger area in the event of a corresponding attack.

Extensive test marathon

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Like all the series-production vehicles, the new E-Guard Saloon was subjected to extensive testing under tough conditions during its development. This included endurance testing on simulated rough tracks, braking tests on Alpine passes, climatic tests at extreme temperatures, long-term corrosion tests and crash tests.

Like all Guard models, the E-Guard is covered by the full Mercedes-Benz warranty and service terms – in addition to the integrated, ex factory protection, this is another important advantage over vehicles with retrofitted special protection.

Family-friendly saloon with special protection

The new E-Guard is available with three engine variants, with an option of the basic ELEGANCE line or the AVANTGARDE line. The E 500 and E 350, as well as the diesel-powered E 350 CDI BlueEFFICIENCY, are designed as five-seaters with a boot capacity of 540 litres and a high payload of up to 550 kilograms, which means they are entirely suitable for day-to-day and family use.

The High-Protection package for the E-Guard costs €45,000 (German list price excluding VAT).

The new large state limousine from Mercedes-Benz

- **Luxuriously spacious and superbly comfortable**
- **12-cylinder engine with 380 kW/517 hp**
- **Stylish interior with electrotransparent partition**
- **Advanced entertainment system for rear passengers**
- **Integrated Highest Protection rated to level VR6/VR7**

Mercedes-Benz is proud to present a prestigious new luxury limousine – the S 600 Pullman Guard with integrated Highest Protection. This new model is the latest in a long and unique tradition of large, armoured, prestige limousines from the world's oldest automaker. More than 80 years ago, Mercedes-Benz became the world's first automotive brand to develop and manufacture Pullman limousines with special protection.

Mercedes-Benz' unique wealth of experience as well as its role as a technical pioneer in the construction of prestigious special-protection limousines – a role which has been demonstrated time and time again over the years – puts the Stuttgart-based premium brand in a class of its own in this demanding segment. For dignified appearances, many governments, heads of state and royalty all over the world therefore use Mercedes-Benz limousines that justifiably bear the designation “Pullman”. Like the famous Pullman railway coaches, the state limousines from Stuttgart are luxuriously spacious and outstandingly comfortable.

The original Pullman cars were manufactured by the Pullman Palace Car Company in the USA and had spacious luxury interiors. As early as the 1920s, this name began to be used in the car industry to designate large, comfortable touring cars and prestige limousines with a partition between the driver's seat and the passenger compartment. Since then, Mercedes-Benz has been offering its customers “Pullman” limousines with an extremely spacious passenger

compartment in the rear. The seating conditions for four passengers sitting facing each other are especially regal in the Pullman limousines with very long wheelbase, which have been offered since 1963. Page 101

The luxurious Mercedes-Benz Pullman limousines not only offer their passengers the highest levels of comfort; they also provide opulent surroundings for discreet discussions and all important communication and entertainment facilities. The result is that you are confidently in full control of every situation, while also enjoying your comfortable, individual world at all times.

12 cylinders and majestic proportions

The technical basis for the new Pullman limousine is provided by the S 600 Guard, the top of the Mercedes-Benz Guard range. The vehicle is powered by a silky smooth 12-cylinder biturbo engine displacing 5513 cc. It delivers 380 kW/517 hp and achieves an impressive torque of 830 Nm. As these figures suggest, the S 600 Pullman Guard can call on effortlessly superior power delivery, enabling it to leave a danger zone rapidly should the need arise.

The vehicle owes its remarkably spacious interior to its 4315-millimetre wheelbase (115 centimetres longer than that of the long version of the S-Class). Indeed, with an overall length of 6356 millimetres, the S 600 Pullman Guard is a vehicle of truly majestic proportions which are enhanced by the harmonious design. Furthermore, the more steeply raked rear window allows a 60-millimetre increase in roof height which makes for more generous headroom in the rear compartment. As a result, the latter is now slightly higher than that of Mercedes-Benz' top-of-the-range S 600 model. Moreover, the vehicle's ride height can be raised pneumatically by some 40 millimetres. In conjunction with correspondingly larger door cutouts, these characteristics ensure even greater comfort and dignity when getting in and out of the vehicle.

Extensive modifications to the body and suspension

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Although the Pullman version is based on the S 600 Guard, both the suspension and basic vehicle structure of the latter had to be modified extensively to ensure that the high Mercedes quality standards would not be compromised in any way by the extra-long wheelbase. It would be impossible to guarantee the long-term overall stability of the vehicle if the lengthening process consisted simply of inserting an additional body section. Measures to reinforce the vehicle structure were therefore included right from the design stage. Along with the armour steel in the protective cell, high-alloyed special steels are used in the sidewalls and floor assembly. These measures provide a sound structural basis for installation of the heavy special-protection elements.

The Mercedes engineers have revised the air suspension system and chassis to cope with the extra loads associated with the protective elements. Notable details include:

- Reinforcement of the links between the suspension components and the bodyshell
- Specifically targeted modification of the suspension components themselves
- An additional brace (strut tower brace) between the front suspension struts
- Two additional steel springs at the rear to complement the air suspension
- Larger twin-calliper front brake discs for optimum deceleration at all times
- Run-flat wheels developed by Michelin (PAX), featuring an inner supporting ring on a special wheel rim and offering outstanding run-flat properties even when the tyres are completely deflated

Furthermore, the suspension is designed to ensure that the excellent level of comfort typical of Mercedes is maintained despite the increased weight of the vehicle.

Even the electronic control systems such as ESP® have been adapted by the chassis specialists to optimise them for the changed requirements. This is particularly important in order to ensure that the driver can always count on the

support of these assistance systems, not least in emergency situations.

In addition, the S 600 Pullman Guard is fitted with the full complement of airbags as well as a new windowbag, which was specially developed for the Pullman in order to protect all passengers in the extended rear compartment.

It goes without saying that the new S 600 Pullman Guard has been through an extensive test programme and has undergone comprehensive quality testing like all other Mercedes-Benz vehicles.

Stylish and elegant interior

Fine woods and exquisite leather – with each detail crafted to perfection – lend a stylish and elegant ambience to the interior of the new Mercedes-Benz S 600 Pullman Guard. Characterised by sheer luxury in a way which is both unobtrusive and unmistakable, it is designed to offer the maximum degree of comfort. In keeping with the Pullman tradition, the rear compartment is nothing less than a lounge on wheels where four passengers can enjoy the journey in comfortable face-to-face seats.

A standard-fit electrotransparent partition with an advanced lightweight structure provides a sight and sound barrier between the high-ranking passengers and the driving area – allowing the former to engage in conversation, make phone calls or use the standard-fit rear entertainment system without being disturbed. The partition becomes opaque at the touch of button. This effect is possible thanks to a layer of liquid crystal film made from electrically conductive polymer material, which is integrated in the glass and whose crystals rearrange themselves to make the glass transparent when an electric current is applied. As soon as the electric current is switched off, the liquid crystals lose their clear-glass arrangement and the panel becomes opaque. Of course, the upper section of the partition can also be lowered electrically. A standard-fit intercom ensures that the driver and passengers can communicate at all times.

As one would expect, the new state limousine comes with a very high level of standard equipment. This includes a powerful, specially optimised, rear-

compartment air conditioning system and a unique, state-of-the-art infotainment system which is able to play all popular media formats in outstanding quality. The visual centrepiece of the system is a newly developed 19-inch flat-screen display with a 16:9 aspect ratio (widescreen format) and outstanding contrast and colour depth. It is housed behind the rear-facing seats and deploys when required. The system can show DVDs, digital TV and other video sources in excellent quality and offers connectivity for USB memory sticks and MP3 players. It is operated by means of a convenient, high-quality control unit with an integrated 6.1-inch touch-screen display and DVD drive housed in the centre console between the rear-facing seats. An extra remote control can be used as an alternative. Outstanding sound reproduction is provided by high-quality loudspeakers in the doors and rear shelf. An interface for Internet access and a high-performance refrigerator compartment are also included as standard equipment.

Improved multi-contour seats and soothing back massage

The standard-fit V12-design individual rear seats offer a high level of comfort. In addition to their more comfortable geometry (their backrest angle is less upright than that found in the standard S-Class), they are equipped with massage and multi-contour functionality as well as active ventilation. The individual facing seats featuring electric fore/aft adjustment and seat heating have the same high-quality design.

A particularly striking feature of the interior is the centre console, which is structured both functionally and visually to form several sub-consoles. The individual fine-wood elements have leather-trimmed lids:

- The console between the rear seats is equipped as standard with a thermostat-controlled refrigerator compartment (down to 4 degrees Celsius) and cupholders.
- Between the backrests of the rear seats, two touch-opening compartments provide stowage space for a mobile phone and two beakers.
- The rear-facing individual seats are also separated by a console with a large stowage compartment for beakers or bottles. In addition, the face of

the console which is inclined towards the rear seats accommodates the air-conditioning controls and the control unit for the rear entertainment system with a 6.1-inch touchscreen display.

- Situated between the rear-facing seats are cupholders, an analogue clock and air outlets for the separate, powerful rear air-conditioning system.
- The remaining space at foot level is occupied by another compartment with a wooden cover which can be used to hold a telephone, for example.

Electric roller blinds for unrestricted all-round vision

Newly developed electric roller blinds for the windows in the rear compartment provide protection from prying eyes. Compared with curtains, this sophisticated roller-blind solution has the advantage that the rear passengers can enjoy almost unrestricted all-round vision when the blinds are rolled up, whereas curtains limit the field of vision, even when open. Furthermore, the roller blinds reinforce the sense of interior space. Ambient lighting in the rear creates a welcoming atmosphere in the dark while pivoting lighting with spotlights for all rear passengers provides ideal conditions for reading and working in the new S 600 Pullman Guard. What's more, the rear compartment lighting units comprising reading and interior lights are housed discreetly in the grab-handle module.

Safety of the very highest calibre

The driver and front passenger of the S 600 Pullman Guard as well as the occupants of the VIP individual seats in the rear compartment benefit from all the restraint functions which can be found in the S 600. These include front airbags which deploy in one or two stages, depending on the situation, sidebags, specially developed windowbags for the longer rear compartment, belt tensioners and NECK-PRO luxury head restraints. The rear-facing seats are equipped with classic head restraints and three-point seat belts. The response behaviour and reaction times of all the restraint systems have been adapted in line with the extra weight of the new Pullman limousine. This ensures that the occupants benefit from the highest Mercedes-Benz standards of safety.

The S 600 Pullman Guard offers most of the technical innovations which make the Mercedes-Benz S-Class the number-one trailblazer in passenger car development and the world's best-selling luxury saloon. These include important developments such as the new COMAND APS system.

Mercedes-Benz' night view assist system reduces the risk of accidents during the hours of darkness. This system uses infrared light, which is invisible to the human eye and will therefore not dazzle oncoming traffic. Two infrared headlamps illuminate the road, significantly extending the driver's range of vision when on low beam. An infrared camera mounted on the inside of the windscreen picks up the reflected image of the road ahead and displays this in the instrument cluster.

Integrated special protection for outstanding safety

Furthermore, the new Mercedes-Benz S 600 Pullman Guard offers its demanding passengers effective protection from terrorist attacks. Its Highest Protection status means that it has been engineered to protection level VR6/VR7, as tested and certified by state-approved organisations, and also meets additional requirements which are not stipulated by any standard but which are tested by public and independent organisations. Its armour resists military-standard small-arms projectiles and provides protection against fragments from hand grenades and other explosive charges. Additional safety features include run-flat tyres, a self-sealing fuel tank and a fire-extinguishing system.

To ensure that the vehicle offers effective protection, specialists with many years of experience in this field apply the principle of integrated special protection to the Pullman limousine. In effect this means that, rather than retrofitting the protective elements in the doors, rear wall, side panels, roof lining and firewall etc. of a vehicle which has already been built, they fully integrate them into the bodyshell during the assembly process, an approach which provides additional reinforcement for the body structure. The resulting vehicle offers hallmark

Mercedes-Benz production quality combined with comprehensive Highest Protection characteristics, even in areas where retrofitting would be all but impossible. The basis for this is the long-standing, continuous and close cooperation with nationally and internationally recognised security authorities. For decades, this has ensured that the Mercedes specialists have been able to continuously increase their expertise in the fields of development and manufacturing while also applying their vast experience in vehicle protection technology and ballistics to meet the highest standards. Thanks to the seamless integration of the special protection features, the paint quality and corrosion protection match the high standards of Mercedes-Benz series-production vehicles.

Fully equipped for emergencies

The special-protection equipment package for the new S 600 Pullman Guard also incorporates a number of additional features, including:

- A pneumatic emergency control system for the power windows, which operates independently of the on-board electronics
- A special-protection fuel tank that reseals itself if perforated by shrapnel
- A panic alarm system which can be activated from anywhere in the vehicle. It locks the doors to create a protected zone and alerts the outside world by means of visual and audible alarm signals. It also allows communication with the outside world via an intercom
- An optional rear camera which monitors the area behind the vehicle
- A heated windscreen and heated front windows (in the area of the mirror triangle), and this despite the use of special glass
- An infinitely adjustable doorhold system for all four doors
- Rear doors that are pulled shut automatically over the last few millimetres

Meeting individual requirements

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The new S 600 Pullman Guard is, of course, a Mercedes-Benz through and through – with all that that implies in terms of the scope it offers for individualisation with a wide range of paint finishes, leather appointments and wood trim elements. Even unusual customer requests can be met with the designo range, which allows the most specific of requirements to be turned into reality.

With its generous spaciousness and comfort, as well as its top-flight technology and appointments, the new S 600 Pullman Guard is a worthy successor to the long line of state limousines from Mercedes-Benz. It all began with the special-protection variant of the "Nürburg" 460 (W08) series of 1928. At the beginning of the 1930s this was followed by the 770 (W07) "Grand Mercedes" – which provided protection befitting the status of Japanese Emperor Hirohito, to name but one prominent user – and by further special-protection variants of the 500 (W08) and 770 (W 150) model series. In the 1960s the legendary Mercedes-Benz 600 took on the mantle of state limousine for a period of almost 30 years, which saw it serve as an official vehicle not only for the German government, but also for many other countries' leaders and royal houses. Further special-protection Pullman versions of the Mercedes-Benz S-Guard followed their distinguished predecessors.

Uncomplicated service and comprehensive support

It goes without saying that all Mercedes-Benz Guard vehicles can be serviced or repaired at any Mercedes-Benz service outlet anywhere in the world – a key component of the brand's comprehensive, uncomplicated, high-level service concept.

Comfort and dynamic performance: The Viano X-CLUSIVE special model

- **A dynamic exterior and maximum interior comfort**
- **Powerful six cylinder engines**
- **Special model available in two paint finishes and two lengths**

The roomy feeling one has in a van combined with the exclusive appointments of a saloon and the technical and visual attributes of a sports car – the Viano X-CLUSIVE is the realisation of this unusual combination. The name says it all: The Viano special model emphasises the fundamental Viano attributes – spaciousness and the highest degree of versatility.

A dynamic, sporty exterior

The unmistakable look of the Viano X-CLUSIVE conveys dynamic energy and sporty flair. The top-of-the-line Viano displays individual flair with a silver-look radiator grille, specially developed designer bumpers in the front and rear with fully integrated spoilers, designer side skirts, a chromed exhaust pipe and distinctive 18 inch light-alloy wheels with 245/45 tyres.

Maximum comfort to spoil occupants

Occupants will be spoiled by the high degree of comfort in the X-CLUSIVE interior. Illuminated entries and soft carpeting welcome drivers and passengers, who enjoy the comfort of six individual seats upholstered in anthracite-coloured leather. As is usual with the Viano, the seats in the rear can be slid back and forth in 25 millimetre increments, and they can also be positioned so that passengers sit facing one another. Both of the sliding doors are electrically powered and can be opened and closed at the push of a button. Also covered in leather are the standard multifunction steering wheel, the gearshift lever and parts of the door panelling. Elegant decorative trim in two burr walnut design variants underlines the top class ambience.

Also ensuring the highest level of comfort in the Viano X-CLUSIVE are the automatic climate control system THERMOTRONIC and air suspension at the rear axle with automatic self-levelling function. Providing driver support are the standard-fitted PARKTRONIC and headlamp cleaning system.

Powerful six cylinder engines

The dynamism and comfort of the Viano X-CLUSIVE are also expressed by the vehicle's engine and chassis. Underneath the bonnet, the van is equipped exclusively with high-performance six-cylinder engines, unique in the Viano's class. There is the ultramodern V6 CDI with an output of 150 kW (204 hp) from three litres of displacement and an impressive maximum torque of 440 Nm, or a V6 petrol engine with 3.5 litres of displacement and 190 kW (258 hp) and 340 Nm.

Unsurpassed safety is guaranteed in the Viano X-CLUSIVE, as in every Viano. Additional thorax sidebags for the driver and front seat passenger supplement the effect of the front airbags. The vehicle features a highly effective braking system as well as the latest generation of ESP[®]. The range of standard equipment has been expanded: In combination with a trailer coupling or its installation fitting, ESP[®] trailer stabilisation is included at no extra charge. The trailer stabilisation system is a further feature of the Electronic Stability Programme (ESP[®]) and dampens possible fishtailing of the vehicle and trailer. And other motorists on the road also benefit from the enhanced safety. For example, during emergency braking, flashing brake lights – the adaptive brake light – warn drivers following behind.

Special model available in two paint finishes and two lengths

The Viano X-CLUSIVE features the high quality AMBIENTE design and appointments line. The vehicle is available in two lengths, 4.75 m and 4.99 m, and comes exclusively with an elegant metallic paint finish. Customers have a choice of brilliant silver or obsidian black.