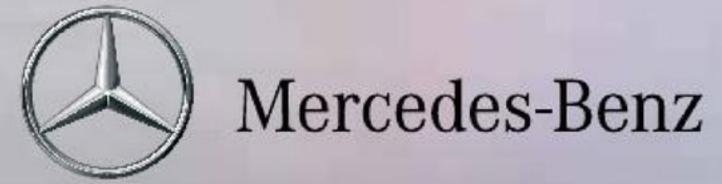
Mercedes-Benz Classic

# S-Class – always ahead of its time







### Tradition and future - from the Simplex to the S-Class

Being a role model means leading the way. Since the earliest days of the automobile, the top-of-the-line models from Mercedes-Benz have been the most well-known and famous ambassadors of German automotive engineering. With groundbreaking innovations, they have set the standards for passenger car development in general. This tradition is still alive today and will, from the summer of 2013, find its continuation in a model series that carries forward the prestigious name of the S-Class into the future.

The roots of this model series date back to the origins of the Mercedes brand: in 1903, Wilhelm Maybach, chief designer at Daimler-Motoren-Gesellschaft, developed the Mercedes Simplex 60 hp, a new top-of-the-range model that was available also in the form of a luxurious touring saloon. It was an automobile worthy of every superlative elegant and exclusive, stately and fast - an automobile that opened up new perspectives for the high society of the day and which, thanks to its lavish spaciousness, seats in the style of comfortable armchairs and fully

enclosed passenger compartment, offered a degree of motoring comfort unattained by conventional "motor carriages". In short, the Simplex 60 hp transformed the automobile into a form of conveyance acceptable in polite society. Emperors and kings, industrialists and celebrities placed their orders with the Stuttgart-based company the name Mercedes became a byword for luxury and comfort on wheels.

This reputation spurred generations of designers and engineers always to give their best - from the early years of the motor car through to the new S-Class: over 110 years of brand history, packed with innovations, patents and ideas that have revolutionised the motor car.

And the story is set to continue: just like each of its predecessor models, the future S-Class will once again be more than a car's length ahead of its time, setting new standards in many areas of automotive engineering because being a role model means leading the way.



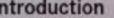


#### Access additional information and videos on the various S-Class ranges.

Here's how:

- 1. Download the junaio augmented reality app onto your mobile device for free from the App Store or Google Play.
- 2. Launch junaio once installed.
- 3. Scan in the QR code opposite to launch the Mercedes-Benz Classic channel.
- 4. Hold your mobile device over the pages marked with the symbol [ in order to start the video.







Unveiled at the 1963 IAA

International Motor Show,

the 600 model (W 100)

became the new flagship

saloon of the Mercedes-

Benz brand. It was also

a vehicle worthy of every

superlative: its 6.3-litre

extremely impressive per-

V8 engine offered an

formance as well as a

200 km/h.

top speed in excess of



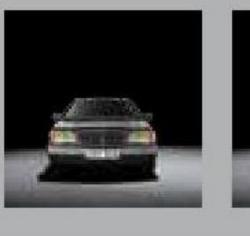


1972 - 1980

Mercedes-Benz S-Class

(116 model series)





1998 - 2005

Mercedes-Benz S-Class

troduction of the new

adverse driving conditions.

(220 model series)



2005 - 2013

Mercedes-Benz S-Class

(221 model series)



From 2013

Mercedes-Benz S-Class

(222 model series)

1963 - 1981 1965 - 1972 Mercedes-Benz 600 (W 100)

Mercedes-Benz 250 S to 300 SEL 6.3 (W 108/W 109)

The saloons of model series W 108 and W 109, which replaced the 6-cylinder "fintails" in 1965, were characterised by their timelessly elegant styling and generously proportioned windows. they were available in a ver- concept with numerous sion with a 10-cm-longer

Alongside the five- to six- was launched in 1968. seater version, which was aimed predominantly at highly discerning private customers, there was also a seven- to eight-seater variant with a 70-cmlonger wheelbase, which world as an official state formance. or ceremonial saloon.

In 1972, the luxury-class In 1979, the 126-series saloons with which Mercedes-Benz had been its aerodynamically optisetting automotive standards for a number of decades were given their own name. The new 116-series S-Class was characterised detail innovations In 1978, the Mercedes-Benz S-Class became

automotive industry.

wheelbase. A special highlight was the 300 SEL 6.3, which the world's first seriesproduced vehicle to be This new top-of-the-line equipped with the ABS model featured the powanti-lock braking system, erful V8 engine from the which was designed to Mercedes-Benz 600 and provided its proud owners not only with the ultimate braking conditions. in comfort and luxurious appointments but also with sports-car-like perequipment throughout the

S-Class impressed with mised form and systematic weight savings through the use of, for ex- engineers and technicians ther enhancements in ample, new light alloy V8 engines. The new S-Class was also a trendsetter in

1979 - 1991

Mercedes-Benz S-Class

(126 model series)

made its debut in the S-Class of 1981, thereby finding its way into series production. The driver's airbag was initially commaintain vehicle steerabil- bined with a pyrotechnic a front-seat passenger airbag.

The 140-series S-Class Mercedes-Benz brand. In but also with weight on maximum comfort - not saw the introduction of least through larger dimen- the PRE-SAFE anticipafor optimised acoustic in- system, which prepares

1991 - 1998

Mercedes-Benz S-Class

(140 model series)

terms of design. ment of automotive safety, of the S-Class also intro- imminent collision by auduced a pioneering safety tomatically initiating meaautomotive engineering: Programme, which has ity even under emergency belt tensioner for the front- This innovative system re- was optionally available seat passenger. From 1988 duces the risk of skidding with intelligent 4MATIC all- the first series-produced A global sensation at the onwards, Mercedes-Benz in critical driving situations wheel drive, which helps to passenger car to use a time, ABS is now standard also offered its customers by means of selective brake application on indiatal times, including in vidual wheels.

The new 220-series S-Class 
The pioneering technical 
The best car in the world of 1991 was presented of 1998 impressed not only innovations of the 221as the new flagship of the with its coupé-like styling series S-Class launched in S-Class has earned itself developing this model, the savings combined with fur- ity of assistance systems, "perfection down to the such as the new and imfocused their attention safety and comfort. 2002 proved DISTRONIC PLUS again the challenge that adaptive cruise control and Brake Assist Plus, sions and double glazing tory occupant protection which brought the S-Class series. another step closer to The airbag, now a key ele- sulation. This generation passengers for a possibly realising the vision of safe, This new luxury saloon accident-free motoring.

> HYBRID of 2009 was the their optimum protection. the ESP Electronic Stability Concurrently with the in- first luxury-class automobile with efficiencybeen available since 1995. safety system, the S-Class enhancing, eco-friendly hybrid drive as well as guarantee optimum traction lithium-ion battery.

each generation of the 2005 included a multiplic- this epithet anew. Thus, faced the developers of

from Mercedes-Benz will merge top-flight mobility innovation to the world of sures designed to ensure The Mercedes-Benz S 400 with responsibility at the highest level. Numerous innovative and optimised driving assistance systems which have been summarised under the name "Mercedes-Benz Intelligent Drive" combine comfort with safety to open up a new dimension of motoring.

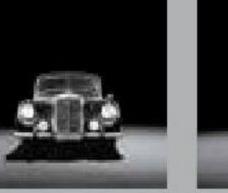
#### The evolution of Mercedes-Benz luxury saloons











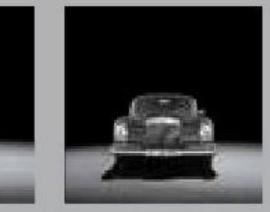
1951 - 1954

(W 187)

Mercedes-Benz 220

Alongside the spectacular





1903 - 1905 Mercedes Simplex 60 hp

The Mercedes Simplex

of Mercedes-Benz's

60 hp is an early example

unique tradition of luxury-

class automobiles. This

spacious and luxurious

is from the private col-

lection of Emil Jellinek,

gave her name to the

tive brand.

Stuttgart-based automo-

Mercedes-Benz Nürburg (W 08)

1928 - 1933 1930 - 1938

Mercedes-Benz 770 "Grand Mercedes" (W 07)

Presented in 1903, the Mercedes Simplex 60 hp followed in the innovative footsteps of the Mercedes the Nürburgring. started to develop at the beginning of 1900. Today the name Mercedes still ranks as the first modern motor car.

The Nürburg 460 (W 08) In 1930, Mercedes-Benz Launched in 1937, the made its debut in 1928 as unveiled the 770 "Grand the first Mercedes-Benz series-produced passenger ultimate in automotive car to feature an 8-cylinder engine. The name prestige saloon for the "Nürburg" was a refermost discerning clientele ence to the Nürburgring race track, which had 8-cylinder compressor whose daughter Mercedes been inaugurated just one engine designed to deliver year earlier. The backeffortlessly superior perground to this choice of formance. name was a spectacular endurance trial in which a 460 model covered a

This new model, which represented a continuadistance of 20,000 kilotion of Mercedes-Benz's metres in 13 days round decades-long tradition of luxury automobiles, was 35 hp, which Jellinek had 
The elegant and luxurious custom-manufactured Pullman saloon version at the Mercedes-Benz was one of the most pop- production facility in ular variants of the 8-cylin- Sindelfingen, where every der Nürburg, which was customer wish was comavailable from 1934 to 1939 as the Nürburg 500. dated.

Mercedes-Benz 320 Mercedes" (W 07) as the (W 142) was a modern luxury-class touring car. engineering. This luxurious 
Its swing axle chassis with independent wheel suspension made for safe was fitted with a powerful driving and a comfortable From 1939, an additional

1937 - 1942

(W 142)

Mercedes-Benz 320

overdrive unit reduced sumption while enhancing both travel comfort and efficiency. At the same time, a so-called exterior case for luggage was added to the standard equipment specification of the most spacious variant of this luxury model, the seven-seater Pullman

Mercedes-Benz 300 (W 186 and W 189) The Mercedes-Benz 300

1951-1962

300 model, Mercedes-(W 186) is today known primarily by its nickname, Benz presented a second the "Adenauer Mercedes". luxury-segment saloon Konrad Adenauer, the first at the 1951 International chancellor of the Federal Motor Show in Frankfurt: Republic of Germany, the 220, which likewise was among the first usfeatured a cutting-edge ers of this new flagship Mercedes-Benz model of enthusiastically embraced Benz had launched just 1951 and was henceforth by the market. only ever to be seen being engine speed and fuel con- chauffeured around in a Its impressive performance offered hitherto unknown

> Mercedes-Benz 300. caused the specialist press to make reference On being launched at the to the vehicle's "sports first IAA International Mocar credentials", while its tor Show in Frankfurt in handling characteristics April 1951, six years after were deemed to merge the end of World War II, comfort with safety in the Mercedes-Benz 300 equal proportion. The heralded, like scarcely any lavishly appointed interior other vehicle, Germany's also contributed to the return to the international popularity of this luxuryclass model. automotive market.

1954 - 1959 Mercedes-Benz 220/ 220 S/220 SE (W 180/W 128)

mid-range 180 model,

standards of spacious-

With the launch of the re-

220 S in 1956, the letter

"S" became a permanent

fixture in the names of

models, underlining the

inder "ponton" saloon.

vised and more powerful

ness and comfort.

Mercedes-Benz 220 to 300 SE long (W 111/W 112) Launched in 1959, the

1959 - 1965

Introduced in 1954, the 220 model, also known 220, 220 S and 220 SE internally as the 220 a "fintails" (W 111) owed (W 180), was the first their nickname to their Mercedes-Benz 6-cylindistinctive rear fins. These der model to feature a were officially known as unitised-body design. Its "sight lines" on account modern, spacious "ponton of their function as a park-6-cylinder engine and was body", which Mercedes- ing aid. six months earlier in the This new generation of

luxury-segment saloons marked quite a special milestone in automotive history, as these were the first series-produced motor vehicles to feature the safety body conceived by Béla Barényi. In the event of an accident, front and rear crumple zones high-end Mercedes-Benz absorbed the energy of the impact to protect the special status of the 6-cyl- occupants.

Overview

### Luxury on wheels

Covering long distances, enjoying every kilometre, arriving safe and relaxed at a journey's end – these are the qualities offered by Mercedes-Benz luxury-class saloons. Get in, lean back and experience another world – a world of fine things, characterised by beautiful styling, high-grade materials and technological excellence. In short: sheer luxury.

The historical roots of these automobiles date back to imperial times in Berlin and Vienna. The foundation stone was laid by the businessman Emil Jellinek, whose daughter Mercedes gave the brand its name. In 1904, Jellinek ordered a Mercedes Simplex 60 hp in the form of a touring saloon that afforded its five passengers every conceivable comfort. This top-of-the-line Mercedes was thus the Stuttgart brand's first luxury touring car – and the beginning of a great automotive tradition.





"Indeed, the Mercedes is the main theme in the great symphony of innumerable automotive designs. The English have already enriched their vocabulary with an expression denoting the automobilistic values embodied by Daimler: they refer, most fittingly, to 'Daimlerfication'."

From a report in "Allgemeine Automobil-Zeitung" on the exhibition of the Mercedes Simplex at the 1902 Paris Motor Show.

#### Travelling in style

Mercedes-Benz luxury saloons as ambassadors of European culture and lifestyle.

The "Grand Mercedes" of 1930 was not just Germany's most powerful passenger car but also the most exclusive saloon of its age. At a price of 41,000 Reichsmarks each, only 117 units of this luxury model were produced – six of them being ordered by the Emperor of Japan.

The boot lid on this saloon boasts the number "300" which is a synonym for the first luxury-class vehicle to be produced in postwar Germany. From 1951 onwards, Konrad Adenauer insisted on the travel comfort and prestigious aura afforded by the Mercedes-Benz 300.



Jellinek's touring saloon, bearing the melodious brand name Mercedes, became a topic of conversation in the ranks of high society and aroused desires in an age when the upper classes still mostly travelled by horse-drawn carriage or open-top motorised "Phaeton".

It was thus that the grand Mercedes-Benz saloons became established in the highest echelons of society and, over a period of many years, acquired a status that they have, to this day, both consistently and credibly upheld: a status as ambassadors of European luxury – an ideal that, then as now, stands the world over for elegance, beauty, comfort, innovation, safety, durability and lifestyle.



Each model series in the long tradition of Mercedes-Benz luxury-class saloons has been a representative of that style. The tone has been set in particular by the brand's top-of-the-line models – such as the stately 770 model of 1930, which in every way did justice to its name "Grand Mercedes", measuring 5.60 metres in length, weighing in at a kerb weight of 2.7 tonnes and delivering 200 hp from Mercedes-Benz's first series-produced 8-cylinder compressor engine – an automobile worthy of every superlative and with a radiator as grand and imposing as the owners of this vehicle.

Equally unforgettable are the luxury saloons of the 1950s and 1960s: the legendary 300 "Adenauer Mercedes", which made its debut in 1951 as Germany's largest and fastest series-produced motor car, and the



The Mercedes-Benz 600 of 1963 represented a pinnacle of German automotive engineering. The air suspension, adjustable shock absorbers and Mercedes-Benz's first 8-cylinder petrol-injection engine allowed the occupants to glide safely and comfortably along the autobahn at a top speed in excess of 200 km/h.

Mercedes-Benz 600 of 1963, which indulged its passengers with exquisite interior appointments and a multiplicity of technical innovations designed to provide the ultimate in travel comfort.

Stylish and luxurious motoring in the 1970s was typified by the 116 series, with which the name "S-Class" was made the official designation of Mercedes-Benz luxury-class saloons. This was also the model series that conferred respectability on the use of the diesel engine in top-flight passenger cars, albeit initially only in the USA. Boasting a 12-cylinder power unit, an abundance of space and the finest of engineering, the 140 model series was the "big event" on the roads of the 1990s: a saloon with which Mercedes-Benz raised the bar to a new height in terms of automotive comfort and luxury.

Luxury on wheels: from the summer of 2013, the new S-Class will fulfil the wishes of discerning customers while carrying forward a philosophy that dates back as far as the start of the 20th century.

6 I. Luxury

### Always ahead of its time

What will driving be like tomorrow? What will the car of the future offer us? The Mercedes-Benz S-Class gives the answers to these questions. The S-Class has for decades been ahead of its time, acting as a trendsetter for technical innovation - and not just to the benefit of its owners. Virtually every other model series has in due course benefited from the advances embodied in the S-Class - yet another Mercedes-Benz tradition.

The new top-of-the-line model from Mercedes-Benz carries forward this pioneering role.



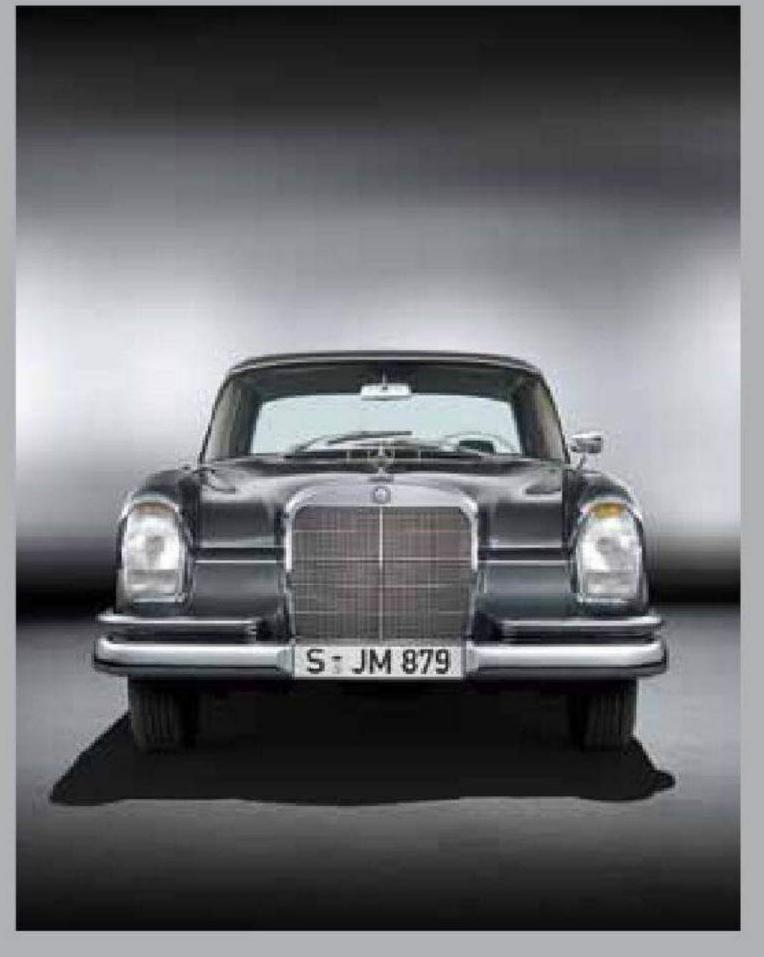


"No other vehicle has moulded our company's reputation in the same way as

#### Ideas move the world

Innovation is a key element of the Mercedes-Benz philosophy. The brand's luxury saloons are living proof.

The Mercedes-Benz "fintail" luxuryclass saloons of 1959 (111 model series) were the world's first seriesproduced vehicles to feature the safety body and crumple zones designed by Béla Barényi.



"The love of inventing never ends." With this statement of belief, automotive pioneer Carl Benz left a legacy to future generations of engineers which has driven developers for decades. Curiosity, creativity, the courage to embrace new ideas and a passion for the motor car – these are the traditional, and future, values of Mercedes-Benz.

This much is demonstrated by the history of the S-Class and its predecessor models, which bear impressive witness to the technological leadership of the Stuttgart-based brand. From the very beginning, these vehicles have served as a platform for groundbreaking innovations in terms of safety and comfort – new advances that have to this day enriched the entire world of passenger car engineering.

Automotive safety has always been a prime concern of Mercedes-Benz. This commitment is borne out by a host of innovations that, while starting out in the S-Class, were later to find their way into large-scale production: the crumple zone, anti-lock braking system (ABS), airbag, Electronic Stability Programme (ESP), to name but a few examples of such innovations. Mercedes-Benz engineers are equally committed to research and development in the field of vehicle body technology, where they have for years made constant advances. Consider the example of aerodynamics: with a drag coefficient (Cd value) of 0.36, the S-Class of 1979 (126 model series) was the most aerodynamically efficient motor car of its age – today's new S-Class once again sets the pace with a Cd value of just 0.24.

Innovations in chassis technology, which migrate from Mercedes-Benz luxury saloons to other model series, result in increased comfort and driving safety: the "ponton" Mercedes of 1954 (W 180) incorporated the same single-joint swing axle that had already been successfully used in Formula 1 racing cars, resulting in improved wheel location and handling performance; the 300 SE "fintail" (W 112) of 1961 was the first Mercedes-Benz saloon to feature air suspension as standard on both the front and rear axles; in 1965, the company's engineers developed a hydropneumatic compensating spring for the rear axle of the brand's luxury-class saloons (W 108/W 109). After more than 20 years of development, the S 600 of 1999 (220 model series) reached a muchacclaimed milestone in chassis technology: Active Body Control (ABC).

A host of recent innovations are based on advances in microelectronics.

Also in this area, the S-Class has for decades been a pace-setter: the
140-series saloons of 1991 were the first series-produced motor cars
to feature a digital data network that laid the groundwork for numerous innovations in the successor model (220 model series) – from the
Keyless-Go access system to the COMAND control and display system to
DISTRONIC adaptive cruise control. More than 30 innovations meant that
the S-Class of 1998 represented a pinnacle of automotive engineering –
and, like all Mercedes-Benz cars with an "S" in their name, a role model
for future vehicle generations.





Its holistic safety concept with numerous detail solutions made the 116-series S-Class an innovation driver. In 1978, it was the first vehicle in the world to be available with the ABS anti-lock braking system.

The electronic control units in the 140-series S-Class of 1991 were the first to be interconnected by a data bus system. This laid the groundwork for new safety innovations such as the Electronic Stability Programme (ESP).

10 II. Innovation 11

### Comfort Mercedes-Benz style

Comfort has many different facets, each highly complex and extremely individualised – because comfort is perceived, experienced and judged with all the senses. Although there are objective indicators to provide information on the existence of typical comfort features, such as agreeable air quality or quietness or balanced suspension, none of these values is able to truly reflect the subjective, i.e. human, sensation of comfort.

That's why automobile developers have for many years had only one genuinely reliable benchmark by which to measure the ultimate in driving comfort: the luxury saloons made by Mercedes-Benz.



"Now and again, a small number of automotive manufacturers succeed in developing and producing a vehicle that [...] ranks in its entirety as a milestone in the history of automotive engineering. The new Mercedes-Benz 300 will take its place in this select pantheon of automobiles."

From a test report in the Swiss "Automobil Revue" on the Mercedes-Benz 300 (W 186) in 1952.

Later, in the early 1950s, passengers in the Mercedes-Benz 300 (W 186) were the first to experience the benefits of a standard-fit heater blower and from 1958 an optionally available air conditioner, which cost almost as much as a brand-new VW "Beetle". The 220-series "Ponton" (W 180) of 1954 introduced a heating system that was separately controllable for driver and front-seat passenger. The ultimate in comfort was reserved for the occupants of the Mercedes-Benz 600 (W 100) of 1963, which featured a "convenience hydraulic system" that not only set the seats, window lifters and sliding sunroof to the desired position at the touch of a button but also closed the doors. With a special emphasis on reducing noise, the 140-series S-Class of 1991 was the first saloon to come with noise-insulating double glazing.

As automotive technology becomes ever more powerful, yet also increasingly complex, engineers are faced with an additional challenge: fewer switches for more functions. With regard to ease of operation, the S-Class of 1998 (220 model series) was the first Mercedes-Benz to feature the innovative COMAND system, which unites various vehicle functions in a single unit and uses menu navigation to make those functions much easier to control. Carrying on from there, the successor model (221 model series) introduced a comprehensive control and display concept that is now available in all Mercedes-Benz passenger cars.



The 220-series S-Class of 1998 featured air suspension as standard. Driver and front-seat passenger were treated to seats with active ventilation and program-controlled back massage.

#### Ergonomics

Motoring in first-class comfort - guaranteed by spaciousness and technology based on human needs.

In its Pullman version, the Nürburg saloon (W 08) offered comfortable seating for six people inside its spacious and elegant coachwork.

The luggage compartment on the Mercedes-Benz 600 not only offered extensive stowage space, but its unique convenience hydraulic system also allowed the compartment to be opened and closed at the press of a button.



"How much car does a person need?" This is a question that precedes the design of each new Mercedes-Benz model. And rightly so, because spatial planning is one of the key criteria for determining the well-being of the occupants of a car. In other words: people need space in which to unwind and relax - including in a motor vehicle.

Each Mercedes-Benz luxury saloon addresses this basic need. The length, width, height and wheelbase of the body create the basis for a spacious interior. What's more, as comfort is a highly personal matter, Mercedes-Benz has always offered the option of adapting the available space to suit the individual needs of the owner. Model variants with a longer wheelbase have been available ex factory since as early as the beginning of the 1960s, when the long-wheelbase version of the Mercedes-Benz 300 SE



(W 112) made its appearance, offering an extra 10 centimetres of legroom in the rear. In the 1920s and 1930s, the spacious Pullman saloons with up to eight seats were among the most popular variants of the luxuryclass Nürburg (W 08) and "Grand Mercedes" (W 07) models.

Yet space isn't everything. For enhanced comfort, it is also necessary to adapt technology to meet the needs of the driver and make life easier for him or her, as testified by the name "Simplex", which was given to the first Mercedes models. The name stood for a simplified mode of operation that made it easier for the driver to engage and disengage the clutch when changing gear, something that in those days still demanded a considerable amount of effort. In the 1930s, the 770-series "Grand Mercedes" (W 07) was among the first automobiles to feature a "servo foot brake".

III. Comfort

### Rationality and emotion

For Mercedes-Benz, design means more than just beauty of form and optical effects. Design is a trademark of quite special importance. It moulds the brand image and reflects its values: effortless superiority, innovation, sportiness, progressiveness ... Yet design must also arouse passion – passion for the motor car and desire for a model.

This intriguing symbiosis of rationality and emotion is made especially evident in the S-Class and its predecessor models. These vehicles are not just the highest representatives of the Mercedes-Benz brand but also fascinating dream cars; they are technology trendsetters and design icons, prestige objects and character types.





200 ST

#### Signs of the times

The designs of luxury saloons reflect different stylistic periods, design concepts and visions of the future.

"The elegant lines, emphasising the horizontal, lend the vehicle an elongated, squat exterior appearance", is how the sales brochure for the W 180 described the completely new design idiom of the "Ponton" Mercedes. This model brought an end to the era of classic coachwork design with its sweeping fenders, running boards and short notch back.



The 126-series S-Class of 1979 was the first Mercedes-Benz passenger car to dispense with traditional chrome bumpers, replacing them with deformable plastic bumpers capable of withstanding minor impacts without damage.



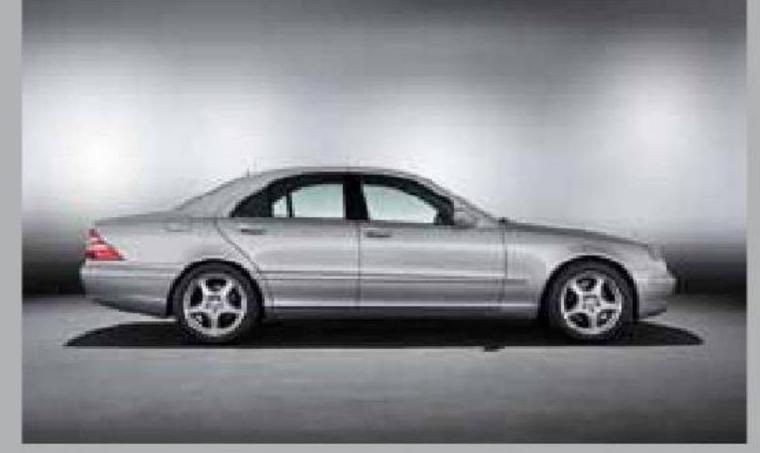
While the luxury cars of the 1920s and 1930s had a highly imposing appearance thanks to their angular bodies and prominent radiators, the models of the early 1950s bore witness to the spirit of an age that was in search of a new direction in formal design. Although the wings and headlamps of the 220 (W 187) and 300 (W 186) models were already integrated into the body, the extravagant, baroque forms, like many other products from that era, still conformed to pre-war ideals of beauty. A new beginning seemed to be required, and Mercedes-Benz answered the call on both the technical and formal fronts: the 220-series "Ponton" (W 180) of 1954 was not only the first luxury-class model to feature a self-supporting body, but it also made a mark with its modern "three box" design.

The next change of generation in terms of design came just five years later: "trapezoidal styling" was the name given to the elegant, elongated lines of the W 111 model series, which finally brought an end to the rounded body forms of earlier years and ushered in a new design era. This new direction in styling also brought forth the distinctive fintails that gave these saloons their famous nickname. This design detail, borrowed from the styling of US cars of the time, also had a functional aspect: the fintails, officially known as "sight lines", served as a parking aid when reversing. Other trendsetting design elements from Mercedes-Benz included vertical headlamps, horizontally arranged tail lights, a flatter radiator grille and modern "full-vision windows". The same elements were incorporated into the design idiom of the model series of the 1960s and 1970s, which are still today remembered for their clear, unadorned form and restrained elegance.

At the end of the 1970s, "aesthetics created in the wind tunnel" was one of the slogans used to promote the aerodynamically optimised 126-series saloon. In the 1980s, the 140 series was described as embodying a "new flow of forms" with gentle transitions, and the S-Class of 1998 (220 model series) was introduced by the designers as a "coupé-like saloon" reflecting Mercedes-Benz's new, progressive-dynamic brand image.

This led in 2005, with the 221 model series, to the development of a new style founded on the principle that "less is more", which meant focusing on the essentials of good product design: on the interplay between surfaces and lines. The designers came up with a deliberately purist design language characterised by large, smoothly profiled body surfaces defined by tight lines – a masterpiece on wheels.

This superior styling finds its continuation in the new S-Class, which at the same time incorporates some novel design elements pointing the way to the future of Mercedes-Benz's automobile design philosophy. These include a new flow of lines dynamically directed towards the rear end – where the new luxury saloon has its centre of force. This new direction in design is emphasised by the powerful proportions – elongated engine bonnet, long wheelbase, short rear end.



Lighter, more graceful, more dynamic – this was the design idiom with which the S-Class of 1998 (220 model series) symbolised Mercedes-Benz's new brand image. The flowing lines gave form to a saloon with the sporty flair of a coupé.



Purity of form – this was the focus of the designers when styling the 221-series S-Class. The new Mercedes style of 2005 thus conformed to the principles of modern purism, visualising the strong, self-assertive character of the S-Class.

18 IV. Design 19

### In the name of sport

Can a luxury saloon be characterised as "sporty"? Can such a vehicle compete with a thoroughbred sports car? In earlier years, automobile experts would have answered such questions with a resounding "no".

Yet they were then forced to revise their opinion: in 1968, with the 108/109 model series, Mercedes-Benz unveiled a new top-of-the-range model whose performance, handling and speed were to revolutionise this segment of the market, the legendary 300 SEL 6.3, which was the archetype of a new luxury-class car that Mercedes-Benz continues to offer to this day: the high-performance saloon.





"We tested one of the first examples, which had not yet been adorned with



"Biturbo" was the name used in 2002 to characterise the most powerful version of the 220 model series: the V12 engine of the S 600 was aspirated by two turbochargers, making for a maximum output of 368 kW/500 hp. Gentle pressure on the accelerator was all that was needed to propel the vehicle from 0 to 100 km/h in just 4.8 seconds with 800 Newton metres of torque, once again making the S-Class a match for many a thoroughbred sports car.

Since 1999, Mercedes-AMG has been a group member company and has carried forward the development of high-performance cars with a sporty flair, top-flight engineering and exquisitely appointed interiors.



Refined sportiness is the hallmark of the top-of-the-line models of the 221 model series. The 12-cylinder engines are equipped as standard with Active Body Control to guarantee agile handling and safe road holding.

Producing 335 kW/455 hp and a torque of 700 Nm, even at its market launch the new S-Class stands for masterful power delivery on all occasions.

Within the 221-series S-Class family, the S 65 AMG ranks as the highlight in this automotive firmament. Its 12-cylinder power plant delivers 463 kW/630 hp, i.e. 277 kW/380 hp more than the engine in the first "king of the autobahn".

Power and performance – both are once again on plentiful offer in the new S-Class with its powerful high-torque engines. Also optionally available is a hybrid drive combining dynamic response with efficiency, sportiness with environmental compatibility – a high-performance car in a contemporary form.

#### Power and performance

Luxury meets sport: since spring 1968, top-of-the-line models of the Mercedes-Benz S-Class have united two different worlds.

"World record. The 450 SEL 6.9 sets new standards at the top end of the automotive market" – these were the words with which "auto, motor und sport" began its test report of October 1975 on the top-of-the-range S-Class. The verdict on the title page was even more emphatic: "The best car in the world."



"King of the autobahn" – this characterisation, chosen by motoring journalists at the end of the 1960s to describe the 300 SEL 6.3 (109 model series), spoke volumes. It was a car worthy of every superlative: equipped with the V8 engine and automatic transmission from the "big" Mercedes-Benz 600, it was capable of outperforming top-class sports cars, acquiring for itself the reputation of the fastest and safest long-distance saloon of the age. The 8-cylinder engine produced 184 kW/250 hp, delivered a maximum torque of around 500 Newton metres and accelerated the vehicle from 0 to 100 km/h in just 8 seconds. Although the 300 SEL 6.3 boasted a top speed of 221 km/h, the visible signs of such brute power were confined to its wider tyres, twin halogen head-lamps and additional long-range beams – a wolf in sheep's clothing. In other words: understatement in the extreme.

The success of this exceptional car (over 6,500 units were sold) encouraged Mercedes-Benz product planners to continue along this path. Sporty performance allied with the ultimate in comfort: the same appealing combination was presented in 1975 by the 450 SEL 6.9 (116 model series), which was now propelled by a 210 kW/286 hp 8-cylinder power plant into hitherto uncharted territory: a top speed of 225 km/h with acceleration from 0 to 100 km/h in just 7.4 seconds. Thereafter, the trend in terms of power output was set on a steep upward trajectory, with the 560 SEL (126 model series) of 1985 producing 200 kW/272 hp. Six years later, the 600 SEL (140 model series) became the first Mercedes-Benz series-produced passenger car to be powered by a 12-cylinder engine with an output of 300 kW/408 hp – a new milestone in the long history of Mercedes-Benz luxury saloons.

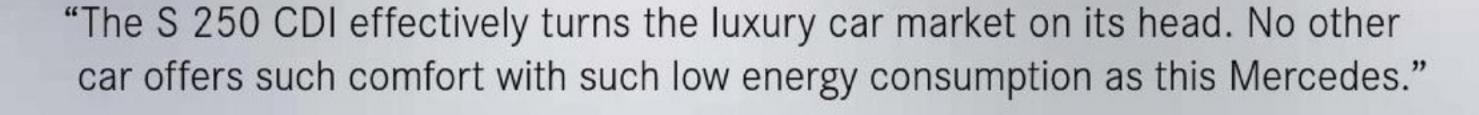
'. Sportiness 23

## Sustainability as a development goal

Downsizing, hybrid drive, environmental certificate – these terms describe some of the considerable advances made by Mercedes-Benz in recent years on the road to sustainable automobility: downsizing means lowering the fuel consumption of a luxury saloon to the level of a compact car, hybrid means combining the advantages of an electric drive with those of a petrol engine and the environmental certificate is one of the highest awards for environmentally focused automotive engineering.

With these and a host of other innovations, the 221-series S-Class crowns the Stuttgart-based automaker's many years of green commitment while pointing the way to the future





From a test report in "auto, motor und sport", issue 12/2011, on the Mercedes-Benz S 250 CDI.



### Design for environment

The S-Class has for decades been a role model on the road to sustainable automobility.

Five cylinders, turbocharged, 40 % more power with no increase in fuel consumption – in 1977, those were the outstanding characteristics of the world's first luxury-segment diesel model. Designed for the US market, the 300 SD (116 model series) delivered 82 kW/111 hp.



 $R_{cov} = R_{cyc} + m_{TE}/m_v \times 100 > 95 \%$ . This is one of the formulas used to characterise an environmentally compatible car. Quite simply, the goal is achieved if 95 % by weight of all materials can be recycled – with no more than 10 % being incinerated to recover energy. From 2015, this recycling rate will be required by the European Union for all passenger cars. The 221-series S-Class has satisfied this requirement since as far back as 2005, which is one of the reasons why this luxury saloon was the first car in the world to be awarded an ISO environmental certificate by a panel of independent experts.

"Design for Environment" – since the mid-1990s, this requirement has been an integral part of the development and manufacturing process for every Mercedes-Benz motor vehicle. Yet it was long before then that the company's engineers began to concern themselves in depth with the environmentally compatible design of passenger cars. This is yet a further area in which the S-Class has always been a trendsetter. For example, the 140-series S-Class was the first CFC-free passenger car, which is why it was awarded the 1992 environment prize by the US Environmental Protection Agency (EPA). Equally trendsetting is the application of high-grade recycled materials and renewable raw materials, which were used, for example, to produce the door panels and parcel shelf for the 1998 S-Class (220 model series).

Mercedes-Benz developers have also consistently worked hard to increase the fuel efficiency of the brand's saloons while reducing their exhaust emissions. Advanced engine technology plays a key role in this endeavour. In the summer of 1957, the model 300 (W 189) was the first



model to be equipped with manifold petrol injection. Since that time, this power-increasing and efficiency-improving technology has been applied without exception in all top-of-the-line models from Mercedes-Benz. In September 1977, the 300 SD (116 model series), which was designed for the US market, became the first luxury-segment saloon to be powered by a turbodiesel engine; from the end of 1999, advanced common-rail direct injection in the S 320 CDI (220 model series) achieved a fuel saving of around 15 % compared with previous prechamber engines; and, in the summer of 2000, Mercedes-Benz unveiled its first V8 diesel engine in the S 400 CDI. With a fuel consumption of just 9.6 litres per 100 kilometres, this luxury saloon was capable of covering the distance between Hamburg and Basel without refuelling – while affording customers the comfort they have come to expect from a top-of-the-line Mercedes-Benz saloon.



model to be equipped with manifold petrol injection. Since that time, this power-increasing and efficiency-improving technology has been applied without exception in all top-of-the-line models from Mercedes-Benz. In September 1977, the 300 SD (116 model series), which was designed In 2010, the S 250 CDI BlueEFFICIENCY was unveiled as a highly efficient 4-cylinder S-Class model. Its diesel engine delivered fuel consumption figures similar to those of a small car, something that had hitherto been considered unachievable for a luxury-class vehicle.

BlueEFFICIENCY is the trademark for especially fuel-efficient and ecofriendly Mercedes-Benz models. Most 221-series saloons bear this emblem or feature an additional BlueTEC label to indicate that they are powered by a diesel engine using the currently best available emission control technology. BlueTEC models already today comply with tomorrow's stringent EU emission limits meaning that they have the future built in as standard.

An aerodynamically optimised body form coupled with new light alloy engines meant that the fuel consumption of the 126 series was 10 % lower than in the predecessor model. "The new S-Class: pioneering technology – contemporary fuel efficiency" was one of the advertising slogans used at the time.

The S-Class of 1991 (140 model series) ushered in the age of the CFC-free automobile. While paying systematic attention to the recyclability of materials, in 1992 Mercedes-Benz launched the 300 SD, the first luxury-class diesel model to be marketed worldwide.

26 VI. Sustainability

### Playing it safe

"It wasn't enough for us to build a first-class braking system. We wanted more, so that, in critical situations, the driver retains control over the vehicle." These were the words with which Professor Dr. Hans Scherenberg, member of the Daimler-Benz Board of Management, presented a milestone in the history of automotive engineering: the ABS anti-lock braking system, which was available as early as 1978 in the 116 model series and was the first modern assistance system. The new S-Class comes with over a dozen such electronic "co-pilots" designed to assist the driver. These are capable of warning the driver in critical situations and also of actively assisting him or her in case of acute danger so as to prevent an accident or at least to significantly reduce the severity of an accident. This enables the new model to live up to the pioneering credentials of the S-Class in terms of vehicle safety. "The super braking system is now here. With the ABS anti-lock braking system, Daimler-Benz has opened the door to a new age of automotive engineering."

Title of a test report in "stern", issue 35/1978, on the introduction of the anti-lock braking system.



### "S" as in safety

For over 50 years, the Mercedes-Benz S-Class has been a trendsetter and role model in automotive safety.

In the beginning, there was a vision. Béla Barényi, a Mercedes-Benz engineer since 1939, had the vision of a completely safe automobile – a body "surrounded by front and rear crumple zones". He was the first to realise that the energy of an impact in the event of a collision had to be absorbed by deformation. The metal had to bend in a controlled manner, thereby absorbing most of the forces that could otherwise act on the occupants and cause serious injury. In 1952, this vision was turned into a patent and, in 1959, the invention went into series production: the 220, 220 S and 220 SE models (W 111), better known as Mercedes "fintails", were the first cars in the world to feature this technology. Today, every modern passenger car is designed according to this principle.

Following in the footsteps of Béla Barényi, Mercedes-Benz engineers conducted further research and development aimed at improving passenger car safety. And, on each occasion, the S-Class was the technology pace-setter: the safety steering system went into series production in 1967, the first comprehensive security concept came in 1972; the anti-lock braking system was introduced in 1978, and in 1979 Mercedes-Benz presented a bodywork structure designed to cope with (particularly frequent) offset front impacts.

A short time later there was the next sensation: experts at Mercedes-Benz had spent around 14 years developing an air cushion that inflated instantaneously out of the steering wheel in the event of a collision to

This vehicle's occupants were as safe as in the bosom of Abraham:
Barényi's patented rigid passenger cell with energy-absorbing crumple zones made its series-production debut in 1959 in Mercedes-Benz's luxury-segment "fintail" models.



protect the driver. In 1981, the 126-series S-Class became the world's first automobile to be equipped with an airbag for the driver and a belt tensioner for the front-seat passenger. The front-seat passenger airbag followed in 1988.

Yet another important milestone in vehicle safety was presented by the Stuttgart-based brand at the beginning of 1994: the Electronic Stability Programme (ESP), which is capable of preventing skidding while cornering, thereby continuing to this day to make a key contribution to improved road safety. The system has been available in the S-Class since 1995.

Adaptive cruise control in the 220-series S-Class of 1998 rang in the age of anticipatory assistance systems, which today employ advanced radar and camera technology to warn of critical situations and, in case of acute danger, to intervene to brake the vehicle. Such modern, electronic assistance systems also include Active Blind Spot Assist and Active Lane Keeping Assist, available in the S-Class (221 model series) since 2010. Yet another anticipatory – or rather: preventive – assistance system based on an ingenious invention by Mercedes-Benz engineers was launched in the S-Class (220 model series) of 2002: PRE-SAFE, which uses sensor signals to detect critical situations and activates various occupant protection systems in advance of an impending collision. For, as we all know, prevention is better than ...





The 140-series 12-cylinder models of 1995 were the first saloons to be equipped with the Electronic Stability Programme (ESP). Brake Assist, sidebags and an automatic emergency call system have been standard equipment since 1996.

Comfort is merged with safety by a multiplicity of innovative, optimised assistance systems, known collectively as Mercedes-Benz Intelligent Drive. The S-Class of 2013 will thus introduce a new dimension in motoring.

30 VII. Safety 31

### Additional links

	Direct Link	QR-Code
Information on the various ranges, an image gallery and video content can all be found at:	www.mercedes-benz-classic.com/s-class	
Like Mercedes-Benz on Facebook!	www.facebook.com/mercedesbenzmuseum	
The Mercedes-Benz Classic apps can be downloaded for free from the App Store.	www.mercedes-benz-classic.com/app	

Mercedes-Benz S-Class (since 2013)
Fuel consumption urban/extra-urban/combined: 12.8-7.0/7.1-4.7/9.1-5.5 I/100 km;
Combined CO<sub>2</sub>-emissions: 213-145 g/km.

"What you see here is nothing compared with what you'll see next year."

Emil Jellinek at the presentation of the first Mercedes at the Nice Week in March 1901.





