The Mercedes-Benz S-Class

Press Information

Summer 2017

The automotive benchmark in efficiency and comfort

The descriptions and information in this press kit apply to the international model range of Mercedes-Benz. They may vary from country to country.

Key facts

Sales success: The flagship model from Mercedes-Benz was the world's best-selling luxury sedan in 2016 too. Since 2013 the company has sold well over 300,000 sedans.

Exterior design: Status and technological competence are now even more tangible. All models are fitted with a new radiator grille as well as the newly redesigned sporty front bumper with pronounced air intakes.

Control and display concept: Under a shared glass cover, the two high-resolution displays, each with a 12.3-inch screen diagonal, blend together to form a Widescreen Cockpit. The S-Class has touch-sensitive Touch Control Buttons on the new steering wheel. The operation of DISTRONIC and cruise control via controls directly on the steering wheel is another new feature. The infotainment system can be operated via the touchpad, using the controller in the center console and by LINGUATRONIC voice control, which now obeys over 450 commands.

Driver assistance systems: Active Distance Assist DISTRONIC and Active Steering Assist now provide even more comfortable support for the driver when keeping a safe distance and steering. The Driver Assistance Systems use substantially more map and navigation data, and can support the driver based on the route, conveniently adjusting the vehicle speed.

Lights: Further unique features of the S-Class in its segment include the LED Intelligent Light System with Ultra Wide High Beam Assist and three prominent light torches as an exclusive design feature of the headlamps.

Suspension: MAGIC BODY CONTROL with CURVE tilting uses ROAD SURFACE SCAN to recognize road bumps in advance and compensate for them. The curve inclination function is another comfort enhancement that is available for the S-Class for the first time.

Wellness: ENERGIZING Comfort connects different onboard comfort systems and allows a specific wellness setup according to the mood or needs of the

driver. The extended ambient lighting creates interior lighting moods like a work of art by composing color worlds from different colors.

Infotainment: With the help of Near Field Communication, compatible smartphones can be charged wirelessly. The mbrace® Concierge service puts a host of individual services at the disposal of mbrace® subscribers: from making restaurant reservations, gathering information on movie times or sporting events and obtaining route guidance.

The automotive benchmark in efficiency and comfort

Stuttgart. The undisputed leader in the premium segment with regard to comfort and wellness continues to set new standards. Among the highlights of the newly refreshed S-Class Sedan are its new generation of engines, new Intelligent Drive technologies that take another step towards autonomous driving and new features in the interior.

The top-of-the-range model of Mercedes-Benz takes another big step towards autonomous driving and elevates Intelligent Drive to the next level. Active Distance Assist DISTRONIC and Active Steering Assist now provide even more comfortable support for the driver to keep a safe distance and steer. The speed is now adjusted automatically ahead of bends, junctions or roundabouts, for example (country-specific variations may occur in terms of the individual functions).

ENERGIZING Comfort is being launched in the market as a world first from September 2017: this feature links various onboard comfort systems together—climate control, ambient lighting, massage and fragrancing functions—and allows customers to configure a specific wellness set-up to suit their mood or need. This enhances physical comfort and performance on the road.

The development work on the S-Class was extremely extensive, with over 1,600 new components. "With a whole series of new features and functions, the S-Class remains the technological pioneer," says Ola Källenius, Member of the Daimler AG Board of Management responsible for Group Research and Mercedes-Benz Cars Development.

The flagship from Mercedes-Benz was the best-selling luxury sedan in the world in 2016. Since 2013 the company has sold well over 300,000 sedans.

Three torches of light as an exclusive exterior design feature

Modern luxury in the refreshed S-Class is manifest in maximum quality of materials and workmanship. Status and technological competence are now even more tangible. All models are fitted with a new radiator grille: The versions with six and eight-cylinder engines sport three twin louvres in

chrome as well as vertical bars in a high-gloss black finish in the radiator grille.

The upgraded front with extensive chrome trim underscores the exceptional status of the Mercedes-Maybach. Also new is the Maybach logotype between the louvres of the radiator grille on the driver's side. Additionally, the V8 and V12 Maybach grilles feature the high-gloss chrome VERTICAL bars.

In conjunction with the new LED Intelligent Light System, the S-Class features three distinctive accents of light as an exclusive design element, as well as the newly redesigned sporty front bumper with pronounced air intakes. The new LED taillamps, reminiscent of crystal jewels, stand out at the rear and ensure a characteristic design both by day and by night.

All models are fitted with a redesigned lower bumper section with an integrated visible tailpipe trim. The tailpipes are framed by a chrome trim element, which spans the entire width of the vehicle. Two new 20” alloy wheels are also available.

Control and display concept with wide-screen cockpit and new generation of steering wheels

The interior of the S-Class is characterized by the two new high-resolution displays, each with a screen diagonal of 12.3 inches. Visually, the two displays under one shared glass cover blend into a wide-screen cockpit and as a central element consequently emphasize the horizontal orientation of the interior design.

Like the instrument cluster, this wide-screen cockpit contains a large display with virtual instruments in the direct field of vision of the driver, as well as a central display above the center console. Because the cockpit is fully digital, the driver can choose from three different display styles (Classic, Sporty and Progressive) and also configure the information and views relevant to them at will.

The S-Class has touch-sensitive Touch Control buttons in the steering wheel. They respond to swiping motions like the screen of a smartphone. They enable the driver to control the entire infotainment system without having to take their hands off the steering wheel.

Authentic materials and meticulous detail design

High-quality materials define the interior of the S-Class. These include, for example, open-pore woods as well as leather-trimmed door linings and waistlines, depending on the equipment level. Another Mercedes hallmark clearly in evidence is the high-quality look and feel created through meticulous attention to detail and craftsmanship. The material and color concept has also been carefully composed, and features a wide range of brown tones, including new color combinations such as Magma Grey/Espresso Brown and Mahogany/Silk Beige.

Lighting atmosphere with 64 colors

As before, the interior lighting uses only long-lasting, energy-saving LED technology. With 64 colors, the optional extended ambient lighting offers a wealth of individual settings. It adds lighting highlights, for example, on the trim elements, the central display, the stowage facility at the front of the center console, the handle recesses, the door pockets, in the front and rear footwells, on the overhead control panel when the vehicle is equipped with the Burmester® High-End 3D surround sound system.

World first: Wellness while driving

ENERGIZING Comfort is being launched onto the market as a world first in September 2017: this optional feature links various comfort systems in the vehicle together. It systematically uses the functions of the climate control system (including fragrancing) and the seats (heater, ventilation, massage), the wall heating as well as lighting and musical atmospheres, and enables a specific wellness set-up tailored to the mood and need of the customer. As a result, well-being and performance levels are enhanced. ENERGIZING Comfort can be experienced in all seats, depending on the equipment level.

These six programs can be selected:

- Refresh
- Warmth
- Vitality
- Joy
- Well-being (Comfort)

- Training (three training modes – muscle relaxation, muscle activation and balance - each with several exercises)

The programs all run for ten minutes. They are visualized on the head unit with color graphics, and backed by suitable music. Five songs are already stored in the program. The key function in the "Vitality" program, for example, is fast music with many beats per minute. The S-Class repertoire therefore features "Feelin' Good" by Leon Riskin, for instance. If personal music selections are available, e.g. via the Media Interface, the system analyses them in the background and assigns them to a program based on the beats per minute. Individual functions of the programs can be deactivated.

ENERGIZING Comfort also incorporates the ambient lighting, which is harmoniously tailored to each of the individual screen designs. The light stages the interior like a work of art by composing color worlds from different colors.

The color worlds can be temporarily replaced with special effects – for example, a special lighting atmosphere welcomes the driver. In addition, the climate control system indicates whether the temperature is adjusted up or down through the color of the ambient lighting. The brightness of the LEDs adapts equally variably and can be set in five levels and four zones: wide-screen cockpit, area of front seats, rear compartment, and all. As a result, the ambient lighting harnesses the positive effects of light on well-being while on the road. This makes this equipment feature a key part of ENERGIZING comfort control with its tailor-made programs.

In addition, the ambient lighting creates emotionally appealing contrasts and structures the interior into levels. 64 colors and ten color worlds allow an avant-garde lighting display with spectacular color changes.

Powertrain: new generation of engines

Mercedes-Benz S450 and **S450 4MATIC**: The Mercedes-Benz S450 is equipped with a 3.0L V6 biturbo engine that develops **362 hp** and **369 lb-ft.**

Mercedes-Benz S560 4MATIC and **Mercedes-Maybach S 560 4MATIC**: The new V8 comes to the starting line with **463 hp** and **516 lb-ft**. The biturbo engine is among the most economical V8 gas engines in the world, and consumes about ten percent less fuel than the eight-cylinder predecessor model. To lower the fuel consumption, four cylinders of the new V8 are

deactivated simultaneously under partial load with the help of the CAMTRONIC valve-lift adjustment system. This reduces the pumping losses while improving the overall efficiency of the remaining four cylinders by shifting the operating point towards higher loads. The turbochargers positioned in the V of the cylinder banks represent another special feature.

Mercedes-Maybach S 650: The new top-of-the-line Mercedes-Benz is the V12 producing **621 hp** and **738 lb-ft.**

Mercedes-AMG S63: For superior performance with significantly reduced fuel consumption, the handcrafted AMG 4.0L V8 biturbo engine with cylinder deactivation replaces the previous 5.5L V8 biturbo. Despite a lower displacement, the new engine generates **603 hp** and **664 lb-ft**.

The **Mercedes-AMG S65** is equipped with a handcrafted AMG twelve-cylinder engine developing **621 hp** and **738 lb-ft**.

Intelligent Drive: the next step in driving assistance systems

The S-Class takes another major step towards autonomous driving, elevating Mercedes-Benz Intelligent Drive to the next level. The range of driving assistance and safety systems features a modular design and as standard includes Active Braking Assist, Crosswind Assist, ATTENTION ASSIST, Traffic Sign Assist and also the occupant protection system PRE-SAFE®. New and also part of the standard specification is PRE-SAFE® Sound (prepares human hearing for the anticipated accident noise when there is a risk of a collision).

Active Distance Assist DISTRONIC and Active Steering Assist now provide even more comfortable support for the driver to keep a safe distance and steer. The speed is now adjusted automatically ahead of bends or junctions. This is complemented by a considerably improved Active Lane Changing Assist and additional functions of the Active Emergency Stop Assist (country-specific variations may occur in terms of the individual functions).

Thanks to enhanced camera and radar systems, the S-Class has an even better view of the surrounding traffic: In addition, for the first time it makes use of map and navigation data to calculate driving behavior.

Ride quality: MAGIC BODY CONTROL improved and now with a curve inclination function

The S-Class made a technological statement of superiority in 2013 with ROAD SURFACE SCAN. The system recognizes road bumps in advance and compensates them. The S-Class Sedan's curve inclination function is another comfort enhancement. The body tilts to the inside of the bend by up to 2.65 degrees, thereby reducing the lateral forces acting on the passengers.

Wireless charging of smartphones and new Concierge Service

The new headunit generation expands telephone options. With the help of Near Field Communication, compatible smartphones can be charged wirelessly (wireless charging works with all mobile devices that support or can be retrofitted to support the Qi wireless charging standard). The charging pad is integrated into the stowage compartment at the front of the center console.

The available Burmester® High-End 3D Surround Sound System with an output of 1520 watts was expanded even further with a speaker in the overhead control panel and two speakers in the sides.

The mbrace® Concierge service puts a host of individual services at the disposal of mbrace® subscribers: from making restaurant reservations, gathering information on movie times or sporting events and obtaining route guidance. Subscribers can establish a direct connection to mbrace® Concierge through the i-button in their vehicle. The personal concierge takes care of everything else.

Automated driving functions and exemplary safety

The S-Class takes another major step towards autonomous driving, elevating Mercedes-Benz Intelligent Drive to the next level. Within the system's limits, Active Distance Assist DISTRONIC and Active Steering Assist now support the driver even more conveniently in keeping a safe distance and steering, and the vehicle speed is now also automatically adjusted on bends and at road junctions. Also on board are Active Emergency Stop Assist and a considerably improved Active Lane Changing Assist.

The S-Class has an even better view of the traffic situation: improved camera and radar systems allow it to see further ahead. It also makes substantially greater use of map and navigation data. The driver is also able to see at a glance which assistance functions have been selected, and to which situations the systems are reacting at present. Clearly understood icons – e.g. a steering wheel with hands on both sides – give information both on the screen and in the head-up display. All functions are now controlled from the steering wheel.

The individual functions in detail:

Active Distance Assist DISTRONIC: the speed preset in DISTRONIC is predictively reduced according to the route ahead of bends, junctions, roundabouts or toll trunkhs, then increased back up. If the route has been selected using the navigation system, the S-Class also responds accordingly: if the car is in the slow lane, it is decelerated when approaching the desired motorway exit. The same applies to junctions where the navigation route prescribes a turn-off or ahead of which the driver activates the turn indicator.

The reduction in speed is in varying degrees, depending on the selected transmission mode (ECO, COMFORT or SPORT). In ECO mode, the cornering speed is configured to harmonize with Active Steer Assist. This means that automated driving for longer periods is also a reality on country roads. On highways and motorways, **Active Distance Assist DISTRONIC** controls the distance from the vehicle ahead and keeps the car on track.

Coasting characteristics, e.g. on downhill gradients, can now also be taken into account. In the interests of smooth and efficient driving, the speed is reduced in good time. If the vehicle is equipped with a drive system suitable for "gliding" (coasting with the engine off), this mode is automatically activated when the ECO transmission mode is active.

Active Lane Changing Assist: When the driver wishes to change lanes on multi-lane roads (recognized by the navigation system), it is now sufficient to nudge the indicator stalk. Within the next ten seconds, the sensor system checks together with the driver whether the next lane is clear in front of, alongside and behind the vehicle, also taking into account the speed of any other vehicles. When there is no other vehicle within the relevant safety zone, the driver is supported in changing lane. The initiated lane change is indicated in the instrument cluster and on the head-up display. The system is available in certain countries depending on certifiability.

Active Speed Limit Assist: Active Speed Limit Assist - an engageable subfunction of Traffic Sign Assist - is also able to recognize sign gantries and road works signs. Active Distance Assist DISTRONIC adapts the vehicle's speed to the recognized speed limits automatically. In certain cases, the speed can be adapted in anticipatory mode on the basis of map data. The desired maximum speed is always adopted in the course of the journey when the speed limit is lifted. It remains preset until the vehicle leaves the motorway or until the engine is switched off.

Active Emergency Stop Assist: Active Emergency Stop Assist brakes the vehicle to a standstill in its lane if it detects that the driver is no longer actively driving the vehicle while it is on the move with Active Steering Assist switched on. If there is no steering wheel movement over a predefined period, the system gives the driver a visual and audible prompt to place his or her hands on the wheel. If the driver fails to respond after repeated visual and audible prompts by moving the steering wheel, accelerating, braking or pressing a Touch Control button on the steering wheel, the car will be slowed down in the identified lane until it comes to a standstill. When the vehicle comes to a standstill, the parking brake is engaged automatically and the Mercedes-Benz emergency call system is activated. The vehicle is also unlocked, to allow first responders access to the interior. The functions are aborted as soon as the driver takes control of the vehicle again.

Active Braking Assist: Active Braking Assist with cross-traffic function is able to help the driver avoid impending collisions with vehicles ahead, stationary or crossing vehicles and with people if the driver fails to take any action to defuse the dangerous situation. This assistance takes the form of

- a distance warning from a warning lamp in the instrument cluster, if the distance from a vehicle in front is inadequate
- an additional audible warning when a danger of collision is identified
- autonomous emergency braking to avoid a collision with moving stationary or crossing vehicles ahead
- autonomous emergency braking for pedestrians
- situation-related braking assistance as soon as the driver applies the brakes

Evasive Steering Assist: Evasive Steering Assist can support the driver in taking evasive action when pedestrians are detected in the danger zone in front of the vehicle and the driver initiates such action. The system then applies additional steering torque in the direction in which the driver is performing an evasive maneuver. This helps the driver to evade the pedestrian in a controlled manner and to stabilize the vehicle on its evasive course.

Active Lane Keeping Assist: This system is able to warn the driver by means of pulsed vibrations at the steering wheel when the vehicle is unintentionally drifting out of its lane. If the vehicle passes over a continuous line, it can pull the vehicle back into lane by applying the brakes on one side. In the case of a broken line, such intervention takes place only when there is a danger of collision with a vehicle in the next lane (including danger from oncoming traffic).

Active Blind Spot Assist: When a turn indicator is actuated, the system is able to provide the driver with a visual alert plus an audible alarm to warn of a danger of side collisions with other vehicles, motorcycles or bicycles. Automatic braking on one side of the vehicle can additionally be applied to help avoid a side collision at the last moment.

Traffic Sign Assist: Image recognition and information from the digital road map in the navigation system allow the permitted maximum speed and any restrictions on overtaking for the current route section and zebra crossings to be computed and shown in the instrument cluster. Additional restrictions such as speed limits in wet conditions (warning when the windscreen wipers are

switched on) or speed limits for trucks only are also taken into account or ignored as appropriate in the individual case concerned. The vehicle speed is compared with the speed limit. If set to do so by the driver, a visual/visual-acoustic warning is given if the speed limit is exceeded. No-entry signs are also recognized and the driver is prompted to check the vehicle's direction of travel. A warning additionally appears in the instrument cluster and on the head-up display when persons are detected in the area of zebra crossings.

Car-to-X Communication: Information concerning hazardous situations which a vehicle on the road has detected is made available to all other Car-to-X users to give drivers an early warning. As with Live Traffic Information, reports transmitted by Car-to-X are shown on the COMAND map display. Depending on the situation, a warning by voice output can be given when approaching a hazard.

Active Parking Assist: Active Parking Assist with reversing camera supports the driver in searching for a parking space and when entering or leaving parallel or end-on parking spaces. In the case of end-on parking spaces it is active in both forward and reverse direction. It maneuvers the vehicle into the selected parking space and out again. In addition to operation of the accelerator and brake, changing gear is also carried out automatically. In conjunction with Blind Spot Assist, Rear Cross Traffic Alert can warn the driver of cross traffic when reversing out of end-on parking spaces and can also initiate automatic braking if necessary. In the case of Active Parking Assist with 360° camera, all-round vision is made possible by the reversing camera and three additional cameras. The information is presented clearly in full HD in a choice of different views on the central display.

Easy operation, numerous possibilities

Touch Control Buttons on the steering wheel, touchpad, direct access keys or voice input: the control concept of the S-Class offers a variety of options. Drivers are able to choose the control method they prefer, which enhances both comfort and safety.

The interior of the S-Class is characterized by the two new high-resolution displays, each with a screen diagonal of 12.3 inches. The two displays visually blend into a wide-screen cockpit beneath a shared glass cover.

Like the instrument cluster, this wide-screen cockpit contains a large display with virtual instruments in the direct field of vision of the driver, as well as a central display above the center console. Because the cockpit is fully digital, the driver can choose from three different display styles (Classic, Sporty and Progressive) and also configure the information and views relevant to them at will.

The S-Class has touch-sensitive Touch Control Buttons in the steering wheel. They respond to swiping motions like the screen of a smartphone. They enable the driver to control the entire infotainment system without having to take their hands off the steering wheel. The operation of DISTRONIC and cruise control with control elements directly on the steering wheel is another new feature.

Numerous functions can also be operated using the touchpad with controller in the center console. A touch-sensitive telephone keypad is integrated into the touchpad. Thanks to haptic impulses and audible feedback from the onboard speakers, the driver can use the touchpad without taking their eyes off the road. The input options are rounded off by direct access keys for frequent control operations in front of the rotary pushbutton, and by the control array for the driving assistance systems to the left of the steering wheel.

With the head-up display, the driver has all the important information to hand without taking their eyes off the road. The head-up display projects a virtual image into the driver's field of vision. In the driver's perception, it appears to float above the hood around two meters in front. The image is high-resolution

and in color. Depending on the equipment level, it shows e.g. navigation instructions, vehicle speed, speed limits or the settings for cruise control or Active Distance Assist DISTRONIC. A special light sensor adjusts the brightness of the display to the ambient light conditions. This ensures good legibility even on sunny days or at night. The height of the image can be varied to suit drivers of any size. The height setting is stored in combination with the memory function for the seats. The display content and brightness can also be selected individually.

The Smartphone Integration package with Apple CarPlay™ and Android Auto integrates the smartphone into the vehicle's control and display concept.

In the wireless charging system for smartphones, they are connected by NFC (Near Field Communication) when the NFC logo (touchpoint) is touched.

All S-Class models are equipped with the KEYLESS-START function as standard. The engine can be switched on and off simply by pressing the KEYLESS start/stop button while simultaneously applying the brake pedal. KEYLESS-GO is a convenient access system where the driver only needs to carry the electronic key on their person. All the doors can be unlocked and locked by touching the door handle, without having to hold the key. In addition, the convenience function HANDS-FREE ACCESS allows hands-off, fully automatic opening and closing of the trunk lid by performing a kicking movement under the rear bumper. This is particularly useful if e.g. coming from a shopping trip with hands full when the key is in one's pocket. Another advantage of the KEYLESS-GO package is the handle recess illumination. This makes the door handles immediately recognizable in poor lighting conditions.

New engines with trailblazing technology and efficiency

A new generation of engines have their debut in the refreshed S-Class. The new biturbo is among the world's most economical V8 gas engines, and consumes up to six percent less fuel than its predecessor. To lower the fuel consumption, four cylinders of the new V8 are deactivated simultaneously under partial load with the help of the CAMTRONIC valve-lift adjustment system. This reduces the pumping losses while improving the overall efficiency of the remaining four cylinders by shifting the operating point towards higher loads. The turbochargers positioned in the V of the cylinder banks represent another special feature. The new V8 develops 463 hp and 516 lb-ft and is installed in **the Mercedes-Benz S560 and Mercedes-Maybach S560.**

Nine gears for comfortable and efficient gear shifts

In all variants of the S-Class (with the exception of the twelve-cylinder models), power is transferred by the 9G-TRONIC automatic transmission. The broad ratio spread of gears one to nine allows a clearly perceptible reduction in engine speed and is a decisive factor behind the high level of energy efficiency and ride comfort. Shortened shift and response times ensure optimum spontaneity combined with outstandingly smooth gear changes. In manual mode and the S mode in particular, the 9G-TRONIC responds significantly more spontaneously and enhances driving pleasure.

The outstanding shift comfort of the world's first nine-speed automatic transmission for premium cars with rear, all-wheel, hybrid or plug-in hybrid drive is ensured by an extensive package of measures. These include the novel direct control system which enables short, barely perceptible gear changes. The combination of twin-turbine torsional damper and centrifugal pendulum technology in the torque converter ensures outstanding drive comfort. Compact lightweight construction was another area of emphasis during development: Despite two additional gears and a maximum transferable torque of up to 1000 newton meters, the new automatic transmission requires as little installation space as its predecessor and is also lighter in weight.

Wellness while driving

ENERGIZING Comfort is a world first entering series production from September 2017: This optional feature links various comfort systems in the vehicle together. It systematically uses the functions of the climate control system (including fragrancing) and the seats (heater, ventilation, massage), the wall heating as well as lighting and musical atmospheres, and enables a specific wellness set-up tailored to the mood and need of the customer. This enhances physical comfort and performance while driving and during a break.

At the Consumer Electronics Show (CES) show in January 2017, the company presented the concept car "Fit & Healthy" as a vision of how society's increasing health consciousness can be intelligently combined with future mobility. Just a few months later, ENERGIZING Comfort in the S-Class is being launched onto the market as a world first: with the help of networked comfort systems, the vehicle is able to enhance the well-being and performance of its occupants. Rather than just sporadically using a few (favorite) systems, customers with ENERGIZING Comfort are able to benefit even more from the multi-faceted comfort features in their S-Class.

These six programs can be selected:

- Freshness
- Warmth
- Vitality
- Joy
- Comfort
- Training (three training modes – muscle relaxation, muscle activation and balance - each with several exercises)

The programs all run for ten minutes. They are visualized on the head unit with color graphics, and backed by suitable music. Five songs are already stored in the program. The key function in the "Vitality" program, for example, is fast music with many beats per minute. The S-Class repertoire therefore features "Feelin' Good" by Leon Riskin, for instance. If personal music selections are available, e.g. via the Media Interface, the system analyses them

in the background and assigns them to a program based on the beats per minute. Individual functions of the programs can be deactivated.

ENERGIZING Comfort also incorporates the ambient lighting, which is harmoniously tailored to each of the individual screen designs. The light stages the interior like a work of art by composing color worlds from different colors (more about this in the next chapter).

ENERGIZING Comfort is available from September 2017 in combination with the AIR BALANCE package and extended ambient lighting. ENERGIZING comfort can be experienced on all seats, depending on the equipment level.

Avant-garde lighting scene with spectacular color changes

With 64 colors, the optional extended ambient lighting offers a wealth of individual settings. It adds lighting highlights, for example, on the trim elements, the central display, the stowage facility at the front of the center console, the handle recesses, the door pockets, in the front and rear footwells, on the overhead control panel, and on the tweeters when the vehicle is equipped with the Burmester® High-End 3D surround sound system.

The extended ambient lighting creates interior lighting moods like a work of art by composing color worlds from different colors. This creates emotive contrasts and structures the interior into levels. 64 colors, ten color worlds and three different lighting zones (footwells, trim element level and Widescreen Cockpit) allow an avant-garde lighting scene with spectacular color changes.

A color world is assigned to each of the display styles of the Widescreen Cockpit: "Glacier Blue" for the classic display style, "Red Moon" for the sporty style and "Dawn Blue" for the progressive style. Eight color worlds each consist of two colors, with the Widescreen Cockpit and footwells in the same color while the trim element level is color-contrasted. This color distribution changes in the sporty mode. Two further color worlds even group five colors (two of them visible) together – these slowly replace each other to create a continuous color change in the interior.

The color worlds can be temporarily replaced with special effects – for example, a special lighting atmosphere welcomes the driver. In addition, the climate control system indicates whether the temperature is adjusted up or down through the color of the ambient lighting. The brightness of the LEDs adapts equally variably and can be set in five levels and four zones: Widescreen Cockpit, front seat area, rear and overall dimming zone. As a result, the ambient lighting harnesses the positive effects of light on well-being while on the road. This makes this equipment feature a key part of ENERGIZING Comfort with its tailor-made programs.

The S-Class is particularly kind to allergy sufferers

Like all Mercedes-Benz model series, the S-Class carries the seal of the European Center for Allergy Research Foundation (ECARF). The seal confirms that the values measured inside the vehicle meet the Foundation's stringent requirements, and that this has been confirmed in tests. A new testing procedure developed by Mercedes-Benz, for which a patent application has been filed, has shown that even the minutest of allergenic particles are trapped by the activated charcoal filter in the vehicle.

Allergies are now the most common form of chronic illness in industrialized countries. In Europe, around 30 percent of the population are affected. Not only airborne pollen from spring until autumn, but also emissions given off by materials, or skin contact with them, can lead to a strong immune reaction with symptoms such as swelling of the nasal passages and bronchial tubes or swollen, itching eyes.

Motorists with allergies can breathe a sigh of relief in a Mercedes-Benz car, as numerous interior components are tested for inhalation allergens before the vehicle goes into production. In addition, the pollen filter is tested for correct functioning in both the new and used condition.

Patent pending: Mercedes-Benz laboratory testing procedure

"For many years, we have been testing the efficiency of filters in air conditioners," explains Dr. Andreas Wiegers, Design for Environment, Interior Emissions at Mercedes-Benz. "We design these filters so that, whether in fresh-air or air-recirculation mode, they allow virtually no particulate matter or pollen into the interior of the vehicle. The anti-allergenic effect of our filters in relation to pollen was scientifically confirmed many years ago. Unfortunately, it was previously impossible to measure especially small allergenic particles." The minutest particles include fragmented birch pollen, cat hair allergens and molds. These are up to 1 μm in size, i.e. 50 to 100 times thinner than a human hair.

The experts at Mercedes-Benz therefore developed a sophisticated laboratory testing procedure, for which a patent application has been filed. The procedure uses a filtration apparatus with a vacuum suction flask. Small test particles are sucked into a flask through a tube. The flask contains a filter medium - an approx. 5 cm circular piece from the air conditioner filter. The solution is collected in a test tube at the bottom of the suction flask.

The efficiency of the filter is measured by means of a before/after comparison, with the concentration of allergens before and after the filter being determined. In tests with fungus spores, the Mercedes-Benz researchers formed a dilution series and counted the number of spores in a Petri dish. In the case of cat fur epitheliums and fine particles, the concentration of allergens was determined as the average outgoing quality in the ELISA test (Enzyme Linked Immunosorbent Assay). Depending on the concentration of allergens, the color reaction of a liquid differs in intensity.

The outcome of the sophisticated laboratory tests is that the fine particle filter in Mercedes-Benz vehicles traps even the minutest of allergenic particles. The activated charcoal fine particle filter (standard in the S-Class, optionally available in many model series) offers optimal filtering of the outside and inside air; the activated charcoal also keeps odors out of the interior.

A medical study conducted by ECARF Institute GmbH with asthmatics as test subjects has confirmed the anti-allergenic effect of the filters. The tests were carried out using a section of the air conditioner from the current S-Class in the mobile pollen chamber in the grounds of the Charité university hospital in Berlin.

New Era in Connectivity

All S-Class models are equipped with the latest-generation COMAND® system, starting a new era in digital connectivity.

Voice Control has for the first time been extended to include vehicle functions. Voice commands can now also be used to control the air conditioning and seat heating/ventilation, interior lighting (ambient lighting, reading lights, lighting in the rear cabin), fragrancing/ionization, seat massage function and head-up display. Depending on the language version and equipment level, up to 450 individual voice commands are now possible – among them e.g. commands such as "Ambient lighting violet" or "Fragrancing medium level". If the voice command is spoken without the addition of "front passenger," it refers only to the driver's side.

Another new feature lends a friendly, almost human touch to the Mercedes-Benz system. Initially only in the German and English versions, Voice Control uses so-called "Varying Voice Prompts" by virtue of which, the system no longer responds to commands with the same acknowledgement each time, but rather with a variation and uses up to four sentences with a similar meaning.

Rear Seat Entertainment: personal entertainment program

Films on Blu-ray or DVD, internet, video games, music –Rear Seat Entertainment gives rear cabin passengers a completely personal entertainment program. In combination with high-quality RF headphones (optional), two 25.9 cm (10.2-inch) displays on the front seat backrests ensure brilliant video and audio quality. The system is conveniently controlled via the COMAND remote control. It includes a Blu-ray player, is networked with COMAND and has connections for external devices. This means that passengers are independently able to access the entertainment source of their choice. The content of MP3 players, game consoles, USB sticks, iPods® or iPads® is also available via connections in the rear armrest.

COMAND® offers 3D hard-drive navigation with topographical map display, photo-realistic 3D buildings and 3D map rotations. The system presents its content interactively and includes features such as an animated compass.

Comprehensive information is displayed on the navigation map; in addition to real-time traffic density information, it can e.g. include Car-to-X Communication warning messages, weather and POI overlays, current fuel prices and parking spaces locations.

Live Traffic allows the reception of precise traffic information which is updated by the system every two minutes. Taking the current vehicle location into account when requesting traffic information also ensures that the enquiring vehicles receive all the traffic information of relevance to them.

Smartphone: wireless charging and extended messaging

The features relating to smartphone connectivity have also been expanded: With the Smartphone Integration package, Apple's smartphone-based infotainment system CarPlay™ and Google's Android Auto can be used. If a corresponding smartphone is connected by USB, the customer can, if desired, switch to the CarPlay™ or Android Auto interface.

With the help of Near Field Communication, the smartphone transforms into the digital vehicle key and the controller for parking.

Mobile phones can be charged as standard, wirelessly and without a telephone holder. Wireless charging works with all mobile devices that support or can be retrofitted to support the Qi standard. The charging pad is integrated into the stowage compartment at the front of the center console. Wireless charging is optionally also available in the center console in the rear.

Aluminum hybrid body shell with high crash safety

High crash safety, lightweight construction, outstanding rigidity for superb driving performance while ensuring quiet-running and vibration comfort – these are the hallmarks of the S-Class body shell. The lightweight construction quality of the aluminum hybrid body shell – the torsional rigidity in relation to weight and vehicle dimensions – sets standards.

The body shell structure of the S-Class achieves top marks for dynamic rigidity thanks to its structural concepts and special NVH measures for the body shell. These include:

- Integral NVH front section concept consisting of side members of extruded aluminum sections, cast aluminum elements at the transition between the front section and passenger cell and at the damper dome, plus integral carriers as a contributing element in reducing vibrations
- The use of struts for targeted increases in rigidity
- Rear panel and cockpit cross-member of hybrid metal/plastic construction
- The use of rigidifying foam sections in the A/B/C-pillars.

The proportion of aluminum exceeds 50 percent. The entire outer skin of the S-Class, including the roof and the front end of the body, is made of aluminum. In addition, structural foam is used acting at certain nodal points. The safety passenger cell uses an extremely high percentage of high-strength steel.

This lightweight design by material and geometrical optimization, coupled with highly complex joining technology, allows the S-Class to further raise the bar in the demanding luxury sedan segment – without adding weight. With a torsional rigidity of 40.5 kNm/degree, the S-Class achieves a new record in its segment.

Combination: sophisticated joining techniques for steel and aluminum

The area of the firewall is of sheet steel construction. In addition to optimally meeting the functional requirements, it was possible to integrate the sophisticated hybrid joint between the aluminum front section and the steel

passenger cell. The aluminum hybrid construction led to additional mechanical joining techniques. These made it possible to e.g. join high-strength sheet steel and aluminum, and to reduce the sheet thicknesses of the components.

As well as the front section, the integral carriers are of aluminum and have the lowest weight in their class. The integral carriers have numerous functions: as their name implies, they are the carriers for a large number of major assemblies. In addition the integral carrier is a central component in the front end structure to meet crash and NVH requirements. The side members of the integral carrier also form the third impact energy dissipation path in the front section. To meet these varied requirements while keeping the weight low, it was necessary to realize a complex aluminum hybrid construction of die cast/chill cast sections, extruded sections and sheet steel.

One of the special lightweight construction methods was the use of structural foam sections at functionally critical nodal points to achieve a high NVH performance. The working principle of these foam sections makes it possible to position them in exactly the right places. This is because production engineering considerations, e.g. limitations on joining techniques or the component joining sequence, do not need to be taken into account. Moreover, cross-sections with several chambers can be permanently connected.

Safety first: passenger cell of high-strength steel alloys

The safety passenger cell consists primarily of steel. Ultra high-strength, hot-formed steel alloys which are weight-optimized as tailored products with different sheet thicknesses are used in the areas of the B-pillars, roof frame and tunnel reinforcement. In the lower side member area, an ultra high-strength steel (CP 1000) is used as a roll-profiled component. This material-based lightweight construction is also supported by lightweight structures. These include e.g. the permanent joint between the C-pillar and the rear center section, which efficiently supports the rear side members during deformation of the rear end.

Restraint systems: optimization of every detail

Maximum occupant protection is assured not only by the exemplary crash behavior of the body shell, but also by the state-of-the-art restraint systems and the PRE-SAFE® system.

As standard, in addition to reversible electronic belt tensioners, driver and front passenger seats are also fitted with PRE-SAFE® Impulse. This is a three-point seat belt with innovative pyrotechnic three-way tensioning and special belt force limiter system. Three-point seat belts with inertia-reel tensioners and self-adaptive belt force limiters are fitted for the rear passengers in the two outer seats. The center seat is fitted with a conventional three-point seat belt. As optional extras, seat belt buckle extenders with PRE-SAFE® function, beltbag, sidebag in the rear and cushionbag are available to enhance the level of safety in the rear seats even further.

Aerodynamics: still the leader

For three decades now, the aerodynamic specialists at Mercedes-Benz have been breaking one record after another. In practically all vehicle segments, the brand's models have meanwhile achieved the leading position for aerodynamics. The S-Class also leads its segment in terms of aerodynamics and aeroacoustics. The drag coefficient (Cd = 0.24) of the S-Class sets a new standard in this segment.

A number of aerodynamic measures, both major and minor, are responsible for this result:

- Aerodynamically and aeroacoustically optimized exterior mirrors
- Complete sealing of the front end with sealing of the headlamp section, improved sealing of the radiator section and air-flow guidance to make efficient use of the available cooling air
- Cooling air control: the use of a two-piece AIRPANEL with adaptive closing function for the air inlets in the radiator grille and under it in the bumper below the license plate bracket for certain models is a new feature. Depending on certain factors, e.g. the coolant and charge air temperature, the AIRPANEL control unit sends information to the panel actuators. When the vehicle is on the move, the panels are rotated by a few degrees so that cooling air can flow through the openings. Even in this so-called ECO position, aerodynamic drag can already be noticeably reduced after reaching a certain road speed. The opening angle of the panels increases with the cooling air requirement
- Lowering the vehicle by up to 20 mm from 120 km/h
- Aerodynamically optimized underbody with extensive engine compartment and underbody paneling up to a point below the tank, also further minimizing the penetration of road noise
- Aerodynamically shaped multifunction recess cover

- Special wheel spoilers at the front wheels
- Aerodynamically optimized wheels and tires
- Large area of cladding on the rear axle.

Aeroacoustics: scarcely perceptible noise level in the interior

The aeroacoustic specialists also took measures to counter wind noise during the aerodynamic development work. The sealing system for the windows and door handles makes a key contribution to reducing high-frequency wind noise. In addition, the exterior mirrors and correspondingly designed A-pillars with a minimized upstand for the carefully directed drainage of dirty water impacting the windscreen prevent the airflow from separating at these points, and therefore noises that might penetrate into the interior via the windscreen and side windows. In addition to reducing the sound pressure level, the focus of the acoustic development work was on achieving the well-balanced and pleasant overall impression that is a hallmark of the S-Class.

The first suspension system with "eyes" now sees even better

In 2013 the S-Class made a technological statement of superiority with ROAD SURFACE SCAN. The system recognizes road bumps in advance and compensates.

The S-Class Sedan's curve inclination function is another comfort enhancement available for the first time. The body tilts to the inside of the bend by up to 2.65 degrees, thereby reducing the lateral forces acting on the passengers.

Comfortable, sporty, efficient or individual handling characteristics can be selected at the touch of a button in the center console with DYNAMIC SELECT. This modifies parameters such as the characteristics of the engine, transmission, suspension and steering according to the driving mode selected.

The default setting is the well-balanced and fuel-efficient "Comfort" mode. More agility and dynamism is provided by "Sport" driving mode, with more progressive steering characteristics, a sporty, taut suspension setup, fast throttle response and modified shift points. This further increases the car's sportiness. The suspension and powertrain have a more dynamic setup.

The "Eco" driving program is designed to keep fuel consumption to a minimum. It includes modified accelerator characteristics, shift points and suspension setup. Depending on the model, the gliding function and recuperation are also controlled (see "Under the microscope: ECO Assist").

"Individual" mode allows the driver to vary the individual parameters – from the steering and powertrain to the suspension.

AIRMATIC: enhanced comfort and driving dynamics

The standard-fit full air suspension system AIRMATIC with continuously adaptive damping control allows the spring travel to be maintained whatever the vehicle load, by means of continuous level adjustment. Depending on speed, the vehicle level is automatically regulated and lowered. Aerodynamic drag is reduced, and handling stability is improved by the car's low center of gravity.

The fully automatic adaptive damping system included as standard adjusts the damping at each wheel to the current requirements. The single-tube dampers have two valves for the rebound and compression stages. The ideal operating point can be selected at all times on the basis of a broad scope of information relating to acceleration, vehicle level or vehicle speed, for example.

MAGIC BODY CONTROL: the world's first suspension system with "eyes"

The S-Class is even better able to recognize road bumps in advance. The MAGIC BODY CONTROL suspension system optionally available for the eight-cylinder models comprises ACTIVE BODY CONTROL, ROAD SURFACE SCAN and, for the first time in the Sedan, the curve inclination function.

The "eyes" for the ROAD SURFACE SCAN function are provided by a stereo camera fitted behind the windscreen, which scans the road ahead of the vehicle and delivers a precise image of the road contours. Based on the camera pictures and driving status information, the control unit constantly calculates the best control strategy for overcoming unevenness such as prolonged bumps.

This means that the vehicle can make the right force available in advance, and for each individual wheel. The suspension is adapted to the relevant situation within fractions of a second, enabling body movements to be considerably reduced. The result is unprecedented ride comfort.

In the ACTIVE BODY CONTROL system of Mercedes-Benz, the four suspension struts are fitted with hydraulic cylinders in order to adjust the force in each strut individually. This means that the system can almost completely compensate for lifting, rolling and pitching movements of the body. The control unit receives information on the current driving situation from various acceleration sensors and then compares these data with those from the pressure sensors in the spring struts and the level sensors on the control arms. The system then computes the control signals for the servo-hydraulic valves at the front and rear axle to ensure precisely metered oil flows.

Once oil flows into the plunger cylinders, this modifies the tracing point of the steel springs integrated into the spring struts, generating the necessary force to counteract the body movements. Thanks to a constantly available hydraulic pressure of up to 200 bar, ACTIVE BODY CONTROL is able to stabilize the body within fractions of a second.

Adjustment of the suspension strut base points is also used for the curve inclination function, which is available in the S-Class Sedan for the first time. The vehicle leans into bends in a similar way to motorcyclists or skiers. The lateral acceleration acting upon occupants is reduced in a way akin to driving on a banked curve, and passengers sit more firmly. On country roads in particular, the new curve tilting function heightens motoring enjoyment and comfort. The aim is not to achieve higher cornering speeds, but a new driving experience: The S-Class glides elegantly through bends.

With the curve tilting function, the base points of the steel springs integrated into the ABC suspension struts are raised by plunger cylinders on one side of the vehicle, and lowered on the other, depending on the bend being negotiated. This allows the vehicle to incline automatically and continuously in fractions of a second on bends – depending on the road angle and vehicle speed. The effect is felt much more, since the vehicle would normally tilt outwards.

This innovative system recognizes bends with the help of a stereo camera behind the windscreen, and of the lateral acceleration sensor of the ACTIVE BODY CONTROL suspension. The curve inclination function is activated together with ROAD SURFACE SCAN in the "Comfort" setting of DYNAMIC SELECT, and can be separately selected in the "Individual" setting.

Exclusivity perfected

Mercedes-Maybach stands for the ultimate in exclusivity and individuality. The luxury brand combines the perfection of the Mercedes-Benz S-Class with the exclusivity of Maybach. With great success: in 2016 more than 1 in 10 S-Class models sold was a Mercedes-Maybach. The main markets are China, Russia and Korea.

With a length of 215 inches and a wheelbase of 132.5 inches, the flagship of the Mercedes-Benz model range exceeds the long-wheelbase S-Class Sedan by nearly 10 inches in both dimensions. In the rear, the Mercedes Maybach S-Class is also the world's quietest production sedan car.

Mercedes-Maybach S650: absolutely top-of-the-range

The top-of-the-range model is the Mercedes-Maybach S650. Its V12 biturbo engine now has an output of 621 hp. The engine displacement is 5,980 cc for a maximum torque of 738 lb-ft. The V8 biturbo engine in the Mercedes-Maybach S560 4MATIC generates an output of 463 hp from a displacement of 3,982 cc. Maximum torque is 516 lb-ft.

Exterior design: elegant and exclusive

The side contours of the Maybach are a major distinguishing feature versus the Mercedes-Benz S-Class: Compared to the long version of the S-Class, the rear door has been shortened and discreetly integrated into the exterior design. The door has no triangular window. This has been relocated into the C-pillar. As a result, the rear seats are situated beyond the door cutout, which creates a feeling of exceptional privacy and exclusivity. The triangular windows and other glass areas alike have chrome surrounds. The B-pillar is also covered in chrome. The elegant Maybach Manufaktur logo – a double M inside an arched triangle – adorns the C-pillars on both sides.

The following measures have been applied to the exterior:

- Vehicle length increased
- Maybach lettering in the radiator grille on the driver's side

- New bumper configuration below the headlamps for better cooling of the new V12 engine
- A chrome trim strip and chrome trim on the lower bumper section underline the exceptional status of the Mercedes-Maybach
- Mercedes-Maybach specific chrome trim strip on the lower section of the rear bumper
- New, crystal-look LED taillamps with three prominent light flares and light show when unlocking and unlocking the vehicle

Interior design: the essence of modern luxury

In the interior of the Mercedes-Maybach S-Class, passengers are enveloped in lounge-style, modern luxury. With its clear architecture, refined materials and stylish controls, the vehicle embodies a sensuous elegance. Naturally the Mercedes-Maybach models also share the upgrades in the general S-Class facelift, including e.g. the Widescreen Cockpit, the new steering wheel generation, new upholsteries and trim, ENERGIZING Comfort and extended ambient lighting.

As standard the Mercedes-Maybach S-Class is fitted with a panorama sunroof. This roof system and its large glass areas make for an especially bright and friendly ambient in the interior. It consists of a fixed panoramic glass roof in the rear section and a top-sliding power sunroof so that the interior can be ventilated as desired.

Small roller sunblinds for the triangular windows in the C-pillar reflect the great attention to detail. Together with the electric roller sunblinds in the rear doors, they protect passengers in the rear from prying eyes and direct sunlight if desired. When not in use, the roller sunblinds for the triangular windows are concealed out of sight in the side panels. In conjunction with the electric roller sunblind for the rear window, the roller sunblinds for the triangular windows and the rear doors form part of the standard-fit Sun Protection package.

A clear indication that the owner of the Mercedes-Maybach S-Class will typically be found seated in the rear are the standard-fit Executive seats on the left and right. These rear seats offer a unique level of comfort thanks to a special adjustment kinematics system. In contrast to the norm, the backrest is adjusted separately while the legroom and seat reference point remain unchanged. The cushion can be adjusted separately, while the seat angle and

height adjustment are combined. The Mercedes-Maybach S-Class is also standard-equpped with Nappa Leather Exclusive Upholstery.

Did you know that...

...the S650 is named the S680 in China? 8 is a lucky number in Chinese cultural circles. "ba" in Chinese sounds similar to "fa," and means something like "becoming rich" or "achieving affluence." Car registration numbers and mobile phone numbers with numerous eights are correspondingly sought-after and high in price.

...the S-Class was the world's first series production car to use only LEDs as light sources? Over 500 LEDs are responsible for illuminating the road, the vehicle, the interior and the trunk. Depending on the equipment level, there are up to 84 LEDs per headlamp, 35 LEDs per rear light (plus 4 for the rear fog lamp) and around 300 LEDs in the interior (incl. ambient lighting).

...the S-Class is the world's first car able to detect road bumps in advance? If ROAD SURFACE SCAN detects such undulations with the help of the stereo camera, MAGIC BODY CONTROL adjusts the suspension in advance to suit the situation.

...over 100 electric actuator motors ensure comfort just in the interior of the S-Class Sedan? These include e.g. a maximum of 21 electric helpers for perfect climate control, up to nine actuator motors per front seat and twelve per rear seat. Other helpers include e.g. five motors for exterior mirror lens adjustment, folding and parking position for the front passenger mirror and another five motors for silent closing of the doors and trunk lid.

...14 pneumatic massage cells per seat can enhance the well-being of passengers? The cells are individually actuated by solenoid valves, and together with the seat heating function they provide a massage on the hot-stone principle. Passengers are able to choose between six different ENERGIZING massage functions – on request also in the rear.

...various radar systems and a stereo multi-purpose camera are used for the driving assistance systems? A long-range radar scans the road ahead of the vehicle across a distance of approx. 250 m in various ranges and beam angles and is able to detect relevant vehicles in bends even on multi-lane roads via linking with the steering angle. Multi-mode radar sensors scan the directly

surrounding area alongside and behind the vehicle at a larger angle. They are able to scan asymmetrically approx. 40 meters into the blind spot at the side, while at the same time covering a range of approx. 80 m directly behind the vehicle to detect e.g. overtaking vehicles. The stereo camera is able to cover a range of approx. 90 meters in 3D; it is also used as a multi-purpose camera over a range of up to 500 m, e.g. to control Adaptive Highbeam Assist.

...the heatable windscreen (optional) is able to dispense completely with distracting heating wires? The windscreen is heated by a sheet of invisible silver foil embedded within it. This ultra-thin, infrared-reflecting foil is subjected to a voltage of 42 volts with the help of a DC/DC converter. Thanks to an output of 900 watts, an iced-up windscreen can be thawed in approx. 3.5 minutes to the extent that any remaining ice is easily removed by the windscreen wipers.

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About Mercedes-Benz USA

Mercedes-Benz USA (MBUSA), headquartered in Atlanta, is responsible for the distribution, marketing and customer service for all Mercedes-Benz products in the United States. MBUSA offers drivers the most diverse lineup in the luxury segment with 15 model lines ranging from the sporty CLA-Class four-door coupe to the flagship S-Class and the Mercedes-AMG GT S.

MBUSA is also responsible for Mercedes-Benz Vans and smart products in the U.S. More information on MBUSA and its products can be found at www.mbusa.com, www.mbsprinterusa.com and www.smartusa.com.

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