

# Mercedes-Benz

Press Information June 20, 2023

# Functional, intelligent and with a dynamic look: the new E-Class Estate

# Contents

The essential information and innovations	4
The new E-Class Estate: the key points at a glance	
Interesting facts & figures	7
The new E-Class Estate: at a glance	
Functional, intelligent and with a dynamic look: the new E-Class Estate:	9
The new E-Class Estate: short version	
Sporty beau with dynamic rear design	16
The new E-Class Estate: the exterior design	
Ideal lighting conditions in various driving situations	18
The new E-Class Estate: DIGITAL LIGHT (optional extra)	
Even more spacious in the rear	19
The new E-Class Estate: dimensional concept	
Hooking up: ideal for caravaners & co. thanks to high trailer loads	20
The new E-Class Estate: the characteristics as a towing vehicle	
Analogue and digital sensory experience	21
The new E-Class Estate: the interior design	
New MBUX generation for a holistic digital experience	23
The new E-Class: MBUX (Mercedes-Benz User Experience)	
Digital Vehicle Key is now available for iPhone and Apple Watch	26
The new E-Class Estate: Digital Vehicle Key for iPhone or Apple Watch as part of the KEYLE Package	

 $Mercedes-Benz\ AG\ |\ 70546\ Stuttgart\ |\ T\ +49\ 711\ 17\ 0\ |\ F\ +49\ 711\ 17\ 2\ 22\ 44\ |\ dialog@mercedes-benz.com\ |\ www.mercedes-benz.com\ |\ www.mercedes-benz.co$ 

Mercedes-Benz AG, Stuttgart | Registered Office and Registry Court: Stuttgart; HRB No.: 762873 Chairman of the Supervisory Board: Bernd Pischetsrieder

Board of Management: Ola Källenius, Chairman; Jörg Burzer, Renata Jungo Brüngger, Sabine Kohleisen, Markus Schäfer, Britta Seeger, Hubertus Troska, Harald Wilhelm

More information on the official fuel consumption and the official specific  $CO_2$  emissions of new passenger cars can be found in the "Leitfaden über den Kraftstoffverbrauch, die  $CO_2$ -Emissionen und den Stromverbrauch neuer Personenkraftwagen" [Guide on the fuel economy,  $CO_2$  emissions and power consumption of all new passenger car models], which is available free of charge at all sales outlets and from Deutsche Automobil Treuhand GmbH at www dat de

Artificial intelligence will relieve the burden of everyday processes in the future	27
The new E-Class Estate under the microscope: the routines	
For more app variety	29
The new E-Class Estate under the microscope: the in-car apps	
Intelligent image filtering	30
The new E-Class Estate under the microscope: the privacy function of the passenger screen	
With a new perspective	31
The new E-Class Estate under the microscope: the cameras in the interior	
Extensive wellness programme	32
The new E-Class Estate: ENERGIZING COMFORT	
Virtual surround-sound, specially mixed for Mercedes-Benz	34
The new E-Class Estate: the sound systems	
Sound becomes visible	36
The new E-Class Estate under the microscope: Sound Visualisation	
More climate comfort, intuitive operation and efficient technology details	37
The new E-Class Estate: climate control	
Efficiently and quietly through the wind	39
The new E-Class Estate: aerodynamics and aeroacoustics	
Comfort meets agility	41
The new E-Class Estate: the suspension	
All combustion engine models are mild hybrids	42
The new E-Class Estate: drive system	
Latest hybrid technology and intelligent operating strategy	44
The new E-Class Estate under the microscope: the plug-in hybrid model	
Additional safety and situation-related support	46
The new E-Class Estate: the driving assistance systems	
Parking made easy	48
The new E-Class Estate under the microscope: the parking assistants	
Intelligently designed body and modern restraint systems	49
The new E-Class Estate: passive safety	
Important building blocks on the way to sustainable mobility	51
The new E-Class Estate: a commitment to sustainability	
Highly flexible and digitised assembly system	53
The new E-Class Estate: production	
Tourism, transport and top models	54
The new E-Class Estate: History	
Technical data	57

The descriptions and information in this press kit apply to the international model range of Mercedes-Benz. Details may vary from country to country. Further, country-specific information about the vehicles offered, including the WLTP figures, can be found at https://www.mercedes-benz.com.

# The essential information and innovations

#### The new E-Class Estate: the key points at a glance

#### Even more rear space than its predecessor

Compared to its predecessor, the E-Class Estate has increased in width by 28 millimetres. This gives the rear passengers even more space: Elbow room in the rear is increased to 1519 millimetres. The wheelbase has increased by 22 millimetres to 2961 millimetres. As a result, those sitting in the back enjoy more knee room and leg room. The load compartment can be expanded from 615 litres to up to 1830 litres. In the plug-in hybrid model, the luggage capacity is 460–1675 litres.

#### Sporty beau with dynamic rear design

Although the roofline is more dynamically designed compared to its predecessor, the new E-Class Estate scores again with functionality and load compartment volume. Combined with the raked rear window, the overall appearance is progressive. The connection between tradition and modernity is made particularly clear by a feature at the front: A black panel-like surface connects the radiator grille with the headlamps. This insert in high-gloss black is visually reminiscent of the Mercedes-EQ models.

# MBUX Superscreen with large glass surface

The dashboard makes for the digital experience in the interior. If the E-Class Estate is equipped with the optional front passenger screen, the large glass surface of the MBUX Superscreen extends to the central display. Visually detached from this is the high-resolution driver display in the driver's field of vision. The main icons on the central and optional passenger displays are now simpler, and also colour-coded to match smartphone tiles.

#### New electronics architecture

The electronics architecture is more software-driven and less hardware-driven. The computing functions of previously separate domains take place in a single processor. Screens and the MBUX infotainment system thus share a new, very powerful central onboard computer. This form of networking improves the performance and speed of the data streams.

## The Digital Vehicle Key<sup>1</sup> is now available for the iPhone and Apple Watch

With the Digital Vehicle Key, the E-Class Estate can be started and locked simply by the driver carrying a compatible device<sup>2</sup> with them. Key sharing is also possible: Various digital channels can be used to invite family members or friends to use the E-Class Estate. In doing so, the vehicle owner can assign different rights, granting only access to the vehicle or also allowing it to be driven. The vehicle can recognise several users at once, and the Digital Vehicle Key can be shared by up to 16 persons. In those markets where Mercedes me connect services are available, Pre-installation for the Digital Vehicle Key forms part of the KEYLESS GO Comfort Package<sup>3</sup>. This equipment combination is available in the new E-Class from the Premium Package onwards.

<sup>&</sup>lt;sup>1</sup> A personal Mercedes me ID and agreement to the Terms of Use for the Mercedes me connect services are required to use the Mercedes me connect services. In addition, the vehicle must be paired with the corresponding user account. Upon expiry of the initial term, the services can be renewed on payment of a fee, provided they are still offered for the corresponding vehicle at that point. First activation of the services is possible within one year from first vehicle registration or commissioning by the customer, whichever comes first. Use of the Digital Vehicle Key also requires the customer's own data volume.

<sup>&</sup>lt;sup>2</sup> At market launch, the Digital Vehicle Key is compatible with the iPhone 11 and later (excludes iPhone SE) and Apple Watch 6 and later (excludes Apple Watch SE). The prerequisite is UWB capability. Mercedes-Benz is working steadily to expand compatibility with other devices.

<sup>&</sup>lt;sup>3</sup> In addition to the KEYLESS-GO access and drive authorisation system and the pre-installation for the Digital Vehicle Key, this includes the features flush-mounted door handles, convenience opening and closing and remote boot closing.

#### Sound visualisation

With the new Active Ambient Lighting (optional extra) with Sound Visualisation, occupants can also "see" music tracks and the sounds of films or apps. Visualisation takes place on the light band of the Active Ambient Lighting. For example, fast sequences of beats can cause rapid light changes, while flowing rhythms can create softly merging lighting moods.

#### New third-party apps plus selfie and video camera

The entertainment programme in the E-Class Estate is more interactive than ever. The software experts at Mercedes-Benz have developed a new compatibility layer that allows the installation of third-party apps<sup>4</sup>. At market launch, the following apps are available on the central display<sup>5</sup>: the entertainment platform "TikTok", the game "Angry Birds", the collaborative application "Webex" and the office application "Zoom" as well as the browser "Vivaldi" and the podcast app "Pocket Casts". Another new feature is a selfie and video camera (part of the optional MBUX Superscreen) on top of the dashboard<sup>6</sup>.

#### Automated comfort functions with routines7

Mercedes-Benz is working on the use of artificial intelligence (AI) so that the car learns which comfort systems vehicle occupants use repeatedly. Given the same circumstances, the aim is for AI to automate such functions. Mercedes-Benz uses the term 'routine' for this innovation. When the new E-Class Estate is launched, customers will be able to use templates for standard routines. They also have the option of creating routines themselves.

#### New with ENERGIZING COMFORT and ENERGIZING COACH

The Anti-Travel Sickness programme<sup>8</sup> of ENERGIZING COMFORT can help affected passengers to alleviate symptoms. A bio-feedback function is planned for the ENERGIZING COACH in the medium term. This can reduce the feeling of stress with breathing exercises. Another new feature of the ENERGIZING COACH in the E-Class Estate is the integration of additional wearables and expansion of the vital data shown in the central display.<sup>9</sup>

## Automatic air vents

With THERMOTRONIC automatic climate control (optional extra), Digital Vent Control enhances the comfort experience. It automatically adjusts the front air vents to a desired ventilation scenario. This can be done for each seat via the user profile, for example. However, the nozzles can also be aligned by hand as usual.

## Intelligent blocking concept of the passenger screen

In Europe and in more and more countries, the front passenger can watch dynamic content such as TV or video streaming on the display during a journey. This is subject to the requirement that the driver is protected from distraction. The camera-based system in the E-Class Estate uses a further improved filtering concept that is even more intelligent than the previous solution. The driver can no longer see dynamic content on the passenger screen while driving.

<sup>&</sup>lt;sup>4</sup> A personal Mercedes me ID and agreement to the Terms of Use for the Mercedes me connect services are required to use the Mercedes me connect services. In addition, the vehicle must be paired with the corresponding user account. Upon expiry of the initial term, the services can be renewed on payment of a fee, provided they are still offered for the corresponding vehicle at that point. First activation of the services is possible within one year from first vehicle registration or commissioning by the customer, whichever comes first. Use of the entertainment package also requires the customer's own data volume. In order to use certain apps via the Mercedes me connect service, a separate customer-specific contract with app provider may be required.

<sup>&</sup>lt;sup>5</sup> An app package is planned for the market launch. The apps may vary over the life cycle of the E-Class. A personal Mercedes me ID and agreement to the Terms of Use for the Mercedes me connect services are required to use the services. In addition, the vehicle must be paired with the corresponding user account. Upon expiry of the initial term, the services can be renewed on payment of a fee, provided they are still offered for the corresponding vehicle at that point. First activation of the services is possible within one year from first vehicle registration or commissioning by the customer, whichever comes first

<sup>&</sup>lt;sup>6</sup> New technologies must always meet the legal requirements of the different markets, and must therefore be adapted accordingly. We are currently looking into the approval situation in various countries.

<sup>&</sup>lt;sup>7</sup> The functions described are visions for the future, some of which are not yet available at market launch of the E-Class and will depend on the respective vehicle model, the individual configuration and the respective market. At a later date, camera functions will also be possible for the front passenger.

<sup>8</sup> The prerequisite for the function is a vehicle specification that includes ENERGIZING COMFORT and seat adjustment with memory function. The antitravel sickness function cannot be used in conjunction with child seats, and is not available in the USA and Canada.

Compatible wearables are a prerequisite.

## Very good aerodynamic properties

With a  $c_d$  figure from  $0.26^{10}$ , the new E-Class Estate performs very well in its vehicle segment. It thus undercuts the value achieved by its facelifted predecessor (0.27). At 2.38 m<sup>2</sup>, the frontal area A of the new E-Class Estate is slightly larger than that of its predecessor (2.35 m<sup>2</sup>).

#### Air-sprung rear axle as standard

The new E-Class Estate features the AGILITY CONTROL suspension and single-chamber air suspension on the rear axle as standard. The latter features a compact design, maintains ride comfort even with a full load on board and ensures that the vehicle remains horizontal even when laden. The all-round AIRMATIC air suspension with ADS+ continuously adjustable damping is available as an option.

# A plug-in hybrid is already available at launch

Thanks to systematic electrification and intelligent downsizing, the new E-Class sets new standards in efficiency. In addition to turbocharging, both the diesel and petrol engines feature intelligent support from an integrated starter-generator (ISG). They are therefore mild hybrids. Thanks to a new battery, the power of the electric motor has been increased from 15 to 17 kW and the boost torque to 205 Nm. A fourth-generation plug-in hybrid is already available at launch, and further models with this technology will follow.

## Planned for the future: driverless parking and unparking

With the optional pre-installation for INTELLIGENT PARKING PILOT, the E-Class Estate is prepared for Automated Valet Parking (SAE level 4). With the Parking Package with remote parking functions (optional for the plug-in hybrid model) and the Mercedes me connect service<sup>11</sup> INTELLIGENT PARKING PILOT (country-dependent), the new E-Class has the onboard technology to park and unpark fully automatically without a driver.<sup>12</sup> The prerequisite is that national laws allow operation of Automated Valet Parking, car parks are equipped with the necessary infrastructure and the corresponding Mercedes me connect service for the E-Class is available and booked.

## Resource-conserving materials

Numerous E-Class Estate components are made partly from resource-saving materials (recyclates and renewable raw materials). Upholstery made of undyed alpaca wool combined with a recycled material is used for the basic seat. For the first time, certified recycled raw materials are used in the foam of the seats according to the "mass balance approach". In terms of their properties, they do not differ from raw materials produced from crude oil.

<sup>&</sup>lt;sup>10</sup> Depending on the vehicle specification

<sup>&</sup>lt;sup>11</sup> A personal Mercedes me ID and agreement to the Terms of Use for the Mercedes me connect services are required to use the Mercedes me connect services. In addition, the vehicle must be paired with the corresponding user account. Upon expiry of the initial term, the services can be renewed on payment of a fee, provided they are still offered for the corresponding vehicle at that point. First activation of the services is possible within one year from first vehicle registration or commissioning by the customer, whichever comes first.

<sup>&</sup>lt;sup>12</sup> This function is not yet available for use.

# Interesting facts & figures

## The new E-Class Estate: at a glance

The load compartment can be expanded from 615 litres to up to 1830 litres. In the plug-in hybrid model, the luggage capacity is 460-1675 litres.

The generous dimensions of the passenger compartment are partly due to the wheelbase, which is 22 millimetres longer than that of the preceding model (2961 millimetres). The elbow room in the rear is 1519 millimetres – 25 millimetres more than before.

The E-Class Estate has a braked towing capacity of up to  $2100\,$  kilograms. The maximum unbraked towing capacity is  $750\,$  kilograms. Thanks to a tongue weight of up to  $84\,$  kilograms, the carrying of e-bikes is allowed.

The illuminated surround of the radiator grille (optional extra) has **two** optical fibres behind the chrome strips. Light is fed into the glass-fibre bundles via LED modules.

With two display styles (Classic and Sporty) and three modes (Navigation, Assistance, Service), the graphics of the screens can be individualised. The new MBUX is accompanied by a change in the presentation of the main icons on the displays. They are presented in a simpler way, and based on the colours used for smartphone tiles.

Depending on the market, a communication module with 5G as the transmission technology is used. This mobile phone standard makes much faster data rates possible than LTE/UMTS.

With the Digital Vehicle Key¹, the iPhone and Apple Watch become the car key. If the driver is carrying a compatible device², it can be used to start and lock the E-Class Estate. Key sharing is also possible: The Digital Vehicle Key can be shared with up to 16 persons. In those markets where Mercedes me connect services are available, Pre-installation for the Digital Vehicle Key forms part of the KEYLESS GO Comfort Package³. This equipment combination is available in the new E-Class from the Premium Package onwards.

The blocking function of the passenger screen operates in **two** stages: first of all, the seat occupancy recognition system registers whether the seat next to the driver is occupied. If this is the case, the touch surface of the display can be used from the front passenger seat via MBUX. If the front passenger seat is not occupied, the screen becomes a digital decorative feature.

In the new E-Class, customers can create their own routines in MBUX. In doing so, they can link conditions and functions with each other. For example, "Switch on the seat heating and set the ambient lighting to warm orange if the interior temperature is below twelve degrees Celsius".

Many passengers have experience of car sickness. The new anti-travel sickness program of ENERGIZING COMFORT can help alleviate the front passenger's symptoms or delay their onset, reduce the perceived severity and generally increase well-being.

<sup>&</sup>lt;sup>1</sup> A personal Mercedes me ID and agreement to the Terms of Use for the Mercedes me connect services are required to use the Mercedes me connect services. In addition, the vehicle must be paired with the corresponding user account. Upon expiry of the initial term, the services can be renewed on payment of a fee, provided they are still offered for the corresponding vehicle at that point. First activation of the services is possible within one year from first vehicle registration or commissioning by the customer, whichever comes first. Use of the Digital Vehicle Key also requires the customer's own data volume.

<sup>&</sup>lt;sup>2</sup> At market launch, the Digital Vehicle Key is compatible with the iPhone 11 and later (excludes iPhone SE) and Apple Watch 6 and later (excludes Apple Watch SE). The prerequisite is UWB capability. Mercedes-Benz is working steadily to expand compatibility with other devices.

<sup>&</sup>lt;sup>3</sup> In addition to the KEYLESS-GO access and drive authorisation system and the pre-installation for the Digital Vehicle Key, this includes the features flush-mounted door handles, convenience opening and closing and remote boot closing.

In the E-Class Estate, acoustics can be experienced with a **third** sense: the active light strip at the top of the instrument panel and in the front door panels can be used to produce a visual interpretation of any content from any of the sources of entertainment sound.

The THERMOTRONIC automatic climate control system (optional extra) uses a new type of air vent: all the nozzles in the front area can be adjusted electrically as if by magic. The new comfort function is called Digital Vent Control. It is technically implemented with actuators. Two of these small electric drive units are located in each ventilation duct.

With a  $c_d$  value from  $0.26^4$ , the new E-Class Estate performs very well in its vehicle segment. The frontal area A of  $2.38~\text{m}^2$  is slightly larger than that of the preceding model (2.35 m<sup>2</sup>).

The standard Active Parking Assist can now be started intuitively via the touchscreen. Furthermore, automated parking and unparking is much faster than before, as the speed has been increased to up to  $4 \, \text{km/h}$ .

<sup>&</sup>lt;sup>4</sup> Depending on the vehicle specification

Functional, intelligent and with a dynamic look: the new E-Class Estate:

The new E-Class Estate: short version

- Distinctive side profile with dynamic roof line
- The familiar high utility value and generous space
- Sales start in autumn in Europe

Schlieren. As functional as its predecessor, as intelligent and customisable as never before: The new E-Class Estate, model series 214, impresses in many areas. The design has also changed: The roofline is more dynamically designed compared to its predecessor, and at the same time the new E-Class Estate scores again with functionality and load compartment volume. Combined with the raked rear window, the overall appearance is progressive.

Like the Saloon before it, the Estate not only continues the long model history of the classic E-Class, but also bridges the gap to the avant-garde trendsetters from Mercedes-EQ with its new design. Balanced proportions are part of the appearance of a classic estate car. They are defined by the short front overhang, the long bonnet with powerdomes, the longer wheelbase and the balanced rear overhang.

With its distinctive side profile, the Estate clearly sets itself apart from the competition. The two character lines familiar from the Saloon create a powerfully stretched car body and give the Estate a sporty and stylish appearance. Sophisticated, three-dimensional and optimised down to the last detail, the surface finish exudes elegance.

A black panel-like surface connects the radiator grille with the headlamps. This insert in high-gloss black is visually reminiscent of the Mercedes-EQ models. The three-dimensionally designed radiator grille is either progressive or classic, depending on the equipment line. A chrome-framed radiator grille backlit by optical fibres is optionally available for all lines (Avantgarde, Exclusive and AMG Line). The new E-Class Estate features LED High Performance headlamps as standard. As an optional extra, DIGITAL LIGHT is available without and with a projection function. All headlamp variants offer a distinctive day and night design. As a typical feature of the brand, the daytime running lights take the shape of an eyebrow.

Precisely designed chrome elements as well as the progressively styled, two-part rear lamps characterise the rear-end design. Thanks to its large opening, the load compartment can be used in a variety of ways. The design team has reinterpreted the rear lamps in terms of their contours and inner workings. With great depth of detail and partly animated functions, the interior design contributes to the vehicle's high value appeal. The unique star motif makes the day and night design of the rear lamps unmistakable. The two light sections in the side wall and boot lid are visually connected. This further emphasises the width of the rear. The reflectors have been relocated to the bumper. Because this allowed the load compartment opening to be particularly large, this increases the utility value on the one hand and makes the rear view look even wider on the other.

## Even more spacious in the rear and the familiar high utility value

Compared to its predecessor, the E-Class Estate has increased in width by 28 millimetres. This gives the rear passengers even more space: The elbow room in the rear is 1519 millimetres – 25 millimetres more than before. The wheelbase has increased by 22 millimetres to 2961 millimetres. As a result, rear-seat passengers enjoy more knee room (84 millimetres; plus 9 millimetres) and leg room (934 millimetres; plus 15 millimetres). The load compartment can be expanded from 615 litres to up to 1830 litres. In the plug-in hybrid model, the luggage capacity is 460–1675 litres, and the load compartment is level there, too.

The seat backrests can be split and folded down in a 40:20:40 ratio. Operation is by two push buttons on the left and right side of the rear seat backrest. The Estate model features the EASY-PACK tailgate as standard. The tailgate opens and closes conveniently at the touch of a button: using the button on the ignition key, the

switch in the driver's door or the release handle on the tailgate. The retractable luggage cover and dividing net (both standard) have a two-piece design. Each has its own roller cassette.

#### MBUX Superscreen as a highlight of the interior design

The dashboard makes for the digital experience in the interior. If the E-Class Estate is equipped with the optional front passenger screen, the large glass surface of the MBUX Superscreen extends to the central display. Visually detached from this is the driver's display in the driver's field of vision. The models without a passenger display feature a large trim element that extends to the centre. Visually detached, the central display appears to float above the concave surface of this trim element.

The front section of the instrument panel is illuminated by the light strip of the Active Ambient Lighting. This runs in a wide arc from the windscreen, past the A-pillars and into the doors. This creates a generous feeling of space. An apparently free-floating control array in the upper section of the door panels matches the look of the glass surfaces of the screens.

The centre console is designed as a homogeneous unit and merges in a straight line into the lower section of the dashboard. At the front, a stowage compartment with lid and cup holders is integrated into the three-dimensionally shaped trim element. There is a soft padded armrest in the rear part of the centre console.

The door centre panel merges seamlessly into the armrest with a concave sweep. The front section here is designed as a metallic high-tech element. It serves as a grab and closing handle, and incorporates the switches for the power windows. Another highlight is the free-floating control array incorporating the door opener and the controls for the seat functions.

The contours of the seat surface and backrest flow elegantly from the inside to the outside, and appear to float above the base of the seat thanks to their layer design. Indented vertical lines follow the outer contour, widening out towards the top.

## A plug-in hybrid is already available at launch

Thanks to systematic electrification and intelligent downsizing, the new E-Class sets new standards in efficiency. The combustion engines are four and six-cylinder units from the current modular Mercedes-Benz engine family FAME (<u>Fa</u>mily of <u>M</u>odular <u>E</u>ngines). Accordingly, the engine range plays a major role in the flexibility of the international production network, with needs-based electrification.

In addition to turbocharging, both the diesel and petrol engines feature intelligent support from an Integrated Starter-Generator (ISG). They are therefore mild hybrids. Thanks to a new battery, the power of the electric motor has been increased from 15 to 17 kW and the boost torque to 205 Nm. Further mild hybrid models will follow.

With the E 300 e (combined fuel consumption, weighted (WLTP): 0.9-0.6 l/100 km, combined  $CO_2$  emissions, weighted (WLTP): 20-13 g/km, combined power consumption, weighted (WLTP): 21.4-19.1 kWh/100 km) a plug-in hybrid is also available at market launch already. With an electric output of **95** kW (129 hp) and an all-electric range of up to over 100 kilometres (WLTP), this model will on many days be on the road purely electrically, without the use of the petrol engine. More plug-in hybrids with diesel combustion engines will follow.

#### The model range at market launch in Europe:

		E 200	E 220 d	E 300 e
Displacement	СС	1999	1993	1999
Rated output, combustion engine	<b>kW</b> /hp	<b>150</b> /204	<b>145</b> /197	<b>150/</b> 204
at	rpm	5800	3600	6100
Additional power (boost)/ e-motor rated power	<b>kW</b> /hp	<b>17</b> /23	<b>17</b> /23	<b>95</b> /129
Rated torque, combustion engine	Nm	320	440	320
at	rpm	1600-4000	1800-2800	2000-4000
Add. torque (boost)/e-motor rated torque	Nm	205	205	440
System output	kW	-	-	230
System torque	Nm	-	-	550
Acceleration 0-100 km/h	S	7.8	7.9	6.5
Top speed	km/h	231	230	227
Combined fuel consumption (WLTP)	l/100 km	7.6-6.71	5.7-5.0 <sup>2</sup>	0.9063
Combined CO <sub>2</sub> emissions (WLTP)	g/km	173-152 <sup>1</sup>	149-131 <sup>2</sup>	20-13 <sup>3</sup>
Combined power consumption, weighted (WLTP) <sup>2</sup>	kWh/100 km	-	-	21.4-19.1 <sup>3</sup>
Electric range (EAER, WLTP) <sup>2</sup>	km	 	-	95-113³

#### Air-sprung rear axle as standard, AIRMATIC available as an option

The agile handling of the new E-Class Estate is due in large part to precise guidance of the front wheels by four control arms each. At the rear axle, an optimised multi-link independent rear suspension with five links ensures excellent wheel control and excellent straight-line stability. At both axles, the springs and dampers are combined in a single strut and are not involved in wheel guidance tasks, therefore the suspension responds with corresponding sensitivity. The front subframe and rear axle carrier decouple the suspension and body from vibrations and noise. As standard, the mild hybrid models are equipped with AGILITY CONTROL steel spring suspension with selective damping system and air-sprung rear axle.

As an option, the new E-Class is available with all-round AIRMATIC air suspension with ADS+ continuously adjustable damping. The AIRMATIC suspension with air springs and adaptive ADS+ dampers responds very sensitively. The all-round level control is another feature of AIRMATIC. It keeps the ground clearance constant irrespective of the vehicle load, but also makes changes when needed.

# Impressive, immersive entertainment experience

Music, games and streaming content can be experienced with almost all senses in the E-Class Estate<sup>4</sup>. Thanks to digital innovations in the interior, the E-Class is now more intelligent, achieving a new dimension of personalisation and interaction. At the same time, the electronic architecture is more software-driven and less hardware-driven.

 $<sup>^{1}</sup>$  The figures shown are the WLTP CO<sub>2</sub> figures measured according to Art. 2 No. 3 of Implementing Regulation (EU) 2017/1153. The fuel consumption figures were calculated on the basis of these figures.

 $<sup>^2</sup>$  The figures shown are the WLTP CO<sub>2</sub> figures measured according to Art. 2 No. 3 of Implementing Regulation (EU) 2017/1153. The fuel consumption figures were calculated on the basis of these figures.

<sup>&</sup>lt;sup>3</sup> The figures shown are the WLTP CO<sub>2</sub> figures measured according to Art. 2 No. 3 of Implementing Regulation (EU) 2017/1153. The fuel consumption figures were calculated on the basis of these figures. Power consumption [and range] was [were] determined on the basis of Directive 2017/1151/EC. <sup>4</sup> To use the Mercedes me connect services, a personal Mercedes me ID and agreement to the terms of use for the Mercedes me connect services are required. In addition, the vehicle must be paired with the corresponding user account. Upon expiry of the initial term, the services can be renewed on payment of a fee, provided they are still offered for the corresponding vehicle at that point. First activation of the services is possible within one year from first vehicle registration or commissioning by the customer, whichever comes first.

The computing functions of previously separate domains take place in a single processor. Screens and the MBUX infotainment system thus share a new, very powerful central onboard computer. This form of networking improves the performance and speed of the data streams.

The Entertainment Package (MBUX Entertainment Plus) will be available for the new E-Class Estate. It includes Mercedes me connect services and a data package from a third-party provider. Depending on the market, a communication module with 5G as the transmission technology is used. The mobile phone standard 5G makes much faster data rates possible than LTE/UMTS<sup>5</sup>.

## The Digital Vehicle Key<sup>6</sup> is now available for the iPhone and Apple Watch

With the Digital Vehicle Key, the E-Class Estate can be started and locked simply by the driver carrying a compatible device<sup>7</sup> with them. Key sharing is also possible: Various digital channels can be used to invite family members or friends to use the E-Class Estate. In doing so, the vehicle owner can assign different rights, granting only access to the vehicle or also allowing it to be driven. The vehicle can recognise several users at once, and the Digital Vehicle Key can be shared by up to 16 persons. In those markets where Mercedes me connect services are available, the pre-installation for the Digital Vehicle Key forms part of the KEYLESS GO Comfort Package<sup>8</sup>. This equipment combination is available in the new E-Class Estate from the Premium Package onwards.

#### Music becomes visible: Sound Visualisation

With the new Active Ambient Lighting with Sound Visualisation, occupants in the new E-Class Estate can experience music with three senses: pieces of music and sounds from films or apps can be heard (with Dolby Atmos® technology if desired), felt (by means of sound resonating transducers in the optional Burmester® 4D surround sound system) and now also "seen". Visualisation takes place on the light strip of the Active Ambient Lighting (optional extra). For the first time, this applies throughout in the E-Class. For example, fast sequences of beats can cause rapid light changes, while flowing rhythms can create softly merging lighting moods.

The entertainment experience for the front passenger is always impressive. On their optional screen, the front passenger can watch dynamic content such as TV or video streaming even when the driver at the wheel is looking over at them. This is because the display is switchable. The advanced camera-based privacy function automatically reduces its brightness and therefore the risk of driver distraction.

## New third-party apps plus selfie and video camera

The software experts at Mercedes-Benz have developed a new compatibility layer that allows the installation of third-party apps. The following apps are available on the central display in the E-Class Estate at market launch: the entertainment platform "TikTok", the game "Angry Birds", the collaborative application "Webex" and the office application "Zoom" as well as the browser "Vivaldi" and the podcast app "Pocket Casts". In

<sup>&</sup>lt;sup>5</sup> The speed and availability of the data connection will vary depending on such factors as the network coverage at the vehicle's location.

<sup>&</sup>lt;sup>6</sup> A personal Mercedes me ID and agreement to the Terms of Use for the Mercedes me connect services are required to use the Mercedes me connect services. In addition, the vehicle must be paired with the corresponding user account. Upon expiry of the initial term, the services can be renewed on payment of a fee, provided they are still offered for the corresponding vehicle at that point. First activation of the services is possible within one year from first vehicle registration or commissioning by the customer, whichever comes first. Use of the Digital Vehicle Key also requires the customer's own data volume.

<sup>&</sup>lt;sup>7</sup> At market launch, the Digital Vehicle Key is compatible with the iPhone 11 and later (excludes iPhone SE) and Apple Watch 6 and later (excludes Apple Watch SE). The prerequisite is UWB capability, Mercedes-Benz is working steadily to expand compatibility with other devices.

<sup>&</sup>lt;sup>8</sup> In addition to the KEYLESS-GO access and drive authorisation system and the pre-installation for the Digital Vehicle Key, this includes the features flush-mounted door handles, convenience opening and closing and remote boot closing.

<sup>&</sup>lt;sup>9</sup> A personal Mercedes me ID and agreement to the Terms of Use for the Mercedes me connect services are required to use the Mercedes me connect services. In addition, the vehicle must be paired with the corresponding user account. Upon expiry of the initial term, the services can be renewed on payment of a fee, provided they are still offered for the corresponding vehicle at that point. First activation of the services is possible within one year from first vehicle registration or commissioning by the customer, whichever comes first. Use of the entertainment package also requires the customer's own data volume. In order to use certain apps via the Mercedes me connect service, a separate customer-specific contract with app provider may be required.

required.

An app package is planned for the market launch. Usage only possible if the optional MBUX Entertainment Plus is specified. The apps may vary over the life cycle of the E-Class. A personal Mercedes me ID and agreement to the Terms of Use for the Mercedes me connect services are required to use the services. In addition, the vehicle must be paired with the corresponding user account. Upon expiry of the initial term, the services can be renewed on payment of a fee, provided they are still offered for the corresponding vehicle at that point. First activation of the services is possible within one year from first vehicle registration or commissioning by the customer, whichever comes first.

addition, the ZYNC entertainment portal<sup>11</sup> (optionally) offers video streaming, on-demand content, interactive experiences, local video programmes, sports, news, games and much more on the central and passenger displays, via one user interface.

Another new feature is a selfie and video camera (part of the optional MBUX Superscreen) on top of the dashboard<sup>12</sup>. When the vehicle is stationary, the driver<sup>13</sup> can participate in online video conferences via e.g. "Webex", and take personal photos and videos.

More operating convenience is also available with MBUX. With the "Just Talk" function, the intelligent voice control can now be activated without the keyword "Hey Mercedes". When the function is activated, a red microphone symbol appears in the display. This indicates that the vehicle is ready and waiting for commands.

## Added day-to-day convenience: the routines

Mercedes-Benz is working on the use of artificial intelligence (AI) so that the car learns which comfort systems vehicle occupants use repeatedly. Given the same circumstances, the aim is for AI to automate such functions<sup>14</sup>. The result is personalised automation. Mercedes-Benz uses the term 'routine' for this innovation, the development of which is already well advanced.

When the new E-Class Estate is launched, customers will be able to use templates for standard routines. They also have the option of creating routines themselves. In doing so, the occupants can link several functions and conditions. For example, "Switch on the seat heating and set the ambient lighting to warm orange if the interior temperature is below twelve degrees Celsius".

# For enhanced well-being: ENERGIZING COMFORT and THERMOTRONIC with Digital Vent Control (both optional)

Soothing sounds, mobilising massage, activating light - Mercedes-Benz offers a comprehensive wellness programme with the variously configured ENERGIZING COMFORT programmes and the individual recommendations of the ENERGIZING COACH. The new E-Class generation marks the debut of two innovations: The anti-travel sickness programme<sup>15</sup> of ENERGIZING COMFORT can help affected passengers to alleviate symptoms. A bio-feedback function<sup>16</sup> is planned for the ENERGIZING COACH in the medium term. This can reduce the feeling of stress with breathing exercises.

With THERMOTRONIC automatic climate control (optional extra), Digital Vent Control enhances the comfort experience. It automatically adjusts the front air vents to a desired ventilation scenario. This can be done for each seat via the user profile, for example. However, the nozzles can also be aligned by hand as usual.

# Numerous driving assistance systems, some of which have been developed further

The standard equipment of the E-Class Estate with driving assistance systems<sup>17</sup> includes Active Distance Assist DISTRONIC, ATTENTION ASSIST, Active Brake Assist, Active Lane Keeping Assist, Parking Package with reversing camera and Speed Limit Assist. The status and activity of the driving assistance systems are shown as a full-screen view in the Assistance mode of the driver's display.

<sup>&</sup>lt;sup>11</sup> To use ZYNC, an active Mercedes-Benz me account and the MBUX Entertainment Plus package are required. This is currently available for one year free of change from the original booking, and can subsequently be renewed on payment of a fee via the Mercedes me Portal (country-specific variations possible).

<sup>12</sup> New technologies must always meet the legal requirements of the different markets, and must therefore be adapted accordingly. We are currently looking into the approval situation in this respect.

<sup>&</sup>lt;sup>13</sup> At a later date, camera functions will also be possible for the front passenger.

 <sup>14</sup> The functions described are visions for the future, some of which are not yet available at market launch of the E-Class and will depend on the respective vehicle model, the individual configuration and the respective market.
 15 The prerequisite for the function is a vehicle specification that includes ENERGIZING COMFORT and seat adjustment with memory function. The anti-

<sup>&</sup>lt;sup>19</sup> The prerequisite for the function is a vehicle specification that includes ENERGIZING COMFORT and seat adjustment with memory function. The anti-travel sickness function cannot be used in conjunction with child seats, and is not available in the USA and Canada.

<sup>16</sup> This function is not yet available at the market launch of the E-Class.

<sup>&</sup>lt;sup>17</sup> The Mercedes-Benz driving assistance and safety systems are aids, and do not relieve the driver of their responsibility. Please note the information in the Owner's Manual and the system limits which are described therein.

The Driving Assistance Plus package is also offered as an optional extra, for example as part of the Premium package. Components include Active Steering Assist, which assists with lane-keeping. As already on motorways, the E-Class can now also restart automatically in city traffic and on country roads after a longer standstill. Another new feature: If Active Steering Assist is no longer available because the lane markings are not clearly visible, it signals this to the driver by means of vibration on the steering wheel.

## Sophisticated body concept and coordinated restraint systems

The safety concept of the E-Class Estate is based on a body with a particularly rigid passenger cell and specifically deformable crash structures. The restraint systems, e.g. seat belts and airbags, are specifically adapted to this. In the event of an accident, they can be activated in such a way that their protective effect for the occupants is adapted to the situation.

In addition to driver and front passenger airbags, a knee airbag on the driver's side is also standard. It can protect the legs from contact with the steering column or instrument panel in a severe frontal crash. The standard windowbags can reduce the risk of head injuries. In the event of a serious side-on collision, the window airbag on the side of the impact extends from the A- to the C-pillar like a curtain over the front and rear side windows. If a rollover is detected, the window airbags can be activated on both sides. In addition to the head protection system, side airbags can also protect the thorax area in the event of a severe side impact – including on the outer rear seats as an option.

In addition, the vehicles are equipped with a centre airbag, depending on the country. Pyrotechnic belt tensioners and force limiters are standard on all outer seats, as are seat belt height adjusters.

## Resource-conserving materials

Numerous E-Class Estate components are made partly from resource-saving materials (recyclates and renewable raw materials). Upholstery made of undyed alpaca wool combined with a recycled material is used for the basic seat. For the first time, certified recycled raw materials are used in the foam of the seats according to the "mass balance approach". These have the same properties as raw materials produced from petroleum. In this way, the need for fossil resources can be reduced while maintaining product quality.

## Neutral CO<sub>2</sub> balance in production at the Sindelfingen plant

Since 2022, Mercedes-Benz has been producing with a neutral  $CO_2$  balance in all of its own plants worldwide. The externally sourced electricity comes exclusively from renewable energies, and is therefore  $CO_2$ -free. In addition, the company aims to increase the generation of renewable energy at its locations. Investments will be made in a further expansion of photovoltaics at the entire Sindelfingen location by the end of 2024. Another focus at the Sindelfingen location is on constantly reducing water consumption and the amount of waste produced.

## The E-Class Estate as a long-standing success story

Mercedes-Benz has produced more than 16 million upper mid-range vehicles since 1946. In August 1966, the Mercedes-Benz Universal made its debut in the official sales programme. It was an estate car built by Belgian partner IMA on the basis of the 200 D to 230 S tail fin versions – the first official Mercedes-Benz estate car.

In April 1978, the Estate 123 model series entered production and a long success story began – well over a million estate models have been built to date. In Germany, the Estate is known as the "T-Modell" and although the "T" suggests tourism and transport, it also stands for trendsetter. For Mercedes-Benz, the estate model is now an integral part of the luxury segment and has a loyal fan base, particularly in Germany. There has been an estate in every successive generation of the E-Class (S 124, S 210, S 211, S 212, S 213, as well an All-Terrain version since 2017).

# Contacts Mercedes-Benz Switzerland

Roger Welti, <a href="mailto:roger.welti@mercedes-benz.com">roger.welti@mercedes-benz.com</a>
Livia Steiner, <a href="mailto:livia.l.steiner@mercedes-benz.com">livia.l.steiner@mercedes-benz.com</a>

Further information on Mercedes-Benz in Switzerland is available <a href="here">here</a>. Press releases and digital services for journalists and multipliers can be found on our <a href="Media Site Switzerland">Media Site Switzerland</a> or on the <a href="Mercedes me media">Mercedes me media</a> online platform.

# Sporty beau with dynamic rear design

# The new E-Class Estate: the exterior design

- Distinctive side profile with dynamic roof line
- Balanced proportions with short front overhang and long wheelbase
- Distinctive two-piece rear lamps with unmistakable star motif

As functional as its predecessor, as intelligent and customisable as never before: The new E-Class Estate, model series 214, impresses in many areas. The design has also changed: The roofline is more dynamically designed compared to its predecessor, and at the same time the new E-Class Estate scores again with functionality and load compartment volume. Combined with the raked rear window, the overall appearance is progressive.

Like the Saloon before it, the Estate not only continues the long model history of the classic E-Class, but also bridges the gap to the avant-garde trendsetters from Mercedes-EQ with its new design. Balanced proportions are part of the appearance of a classic estate car. They are defined by the short front overhang, the long bonnet with powerdomes, the longer wheelbase and the balanced rear overhang.

With its distinctive side profile, the Estate clearly sets itself apart from the competition. The two character lines familiar from the Saloon create a powerfully stretched car body and give the Estate a sporty and stylish appearance. Sophisticated, three-dimensional and optimised down to the last detail, the surface finish exudes elegance. The E-Class Estate is equipped with the flush-fitting door handles familiar from the Mercedes-Benz luxury-class models. They extend electrically when the driver approaches or strokes the outer surface of the door handle. The attached roof rails combine form and utility. Light-alloy wheels with high-quality surfaces and up to 21 inches in size round off the expressive side view.

Precisely designed chrome elements as well as the progressively styled, two-part lamps characterise the rearend design. Thanks to its large opening, the load compartment can be used in a variety of ways. The design team has reinterpreted the rear lamps in terms of their contours and inner workings. With great depth of detail and partly animated functions, the interior design contributes to the vehicle's high value appeal. The unique star motif makes the day and night design of the rear lamps unmistakable. The two light sections in the side wall and boot lid are visually connected. This further emphasises the width of the rear. The reflectors have been relocated to the bumper. Because this allowed the load compartment opening to be particularly large, this increases the utility value on the one hand and makes the rear view look even wider on the other.

## Black-panel-like element at the front and illuminated radiator grille surround

The connection between tradition and modernity is made particularly clear by a feature at the front: A black panel-like surface connects the radiator grille with the headlamps. This insert in high-gloss black is visually reminiscent of the Mercedes-EQ models. The three-dimensionally designed radiator grille is either progressive or classic, depending on the equipment line. In the Avantgarde version, the central star is integrated into the grille. Other design features of this line include a single louvre, grilles in a chrome star motif and chrome surrounds. In the Exclusive version, on the other hand, the radiator grille has three horizontal twin louvres. In addition, this version has an upright star on the bonnet.

An illuminated radiator grille is optionally available for all lines (Avantgarde, Exclusive and AMG Line). It extends the side lights. At night or at dusk, white light is fed into the conductor via four LED modules. The two bundles consist of more than 1000 fine glass fibres. While driving, the radiator frame is illuminated in combination with the low beam. When stationary, the radiator grille adds another level of staging to the Coming Home and Leaving Home scenarios.

The new E-Class has high-performance LED headlamps as standard. As an optional extra, DIGITAL LIGHT is available without and with a projection function (for further information, see separate chapter). All headlamps offer a distinctive day and night design. As a typical feature of the brand, the daytime running lights take the shape of an eyebrow.

# Ideal lighting conditions in various driving situations

The new E-Class Estate: DIGITAL LIGHT (optional extra)

- Intelligent, powerful lighting system with 1.3 million pixels per headlamp
- DIGITAL LIGHT with projection function supports with warning symbols on the roadway
- Animated Welcome and Leaving light shows "Digital Rain" and "Star Wave"

The new E-Class Estate features LED High Performance headlamps including Adaptive Highbeam Assist as standard. DIGITAL LIGHT and DIGITAL LIGHT with projection function are available as optional extras. Each headlamp contains a module with three extremely powerful LEDs whose light is refracted and directed by 1.3 million micro-mirrors. The micro-mirrors occupy the area of a thumbnail. A control unit with a powerful graphic processor uses an HDMI-like connection to generate a continuous video stream to the mirrors.

The beam, divided into 1.3 million pixels, makes absolutely precise light distribution possible. Highbeam Assist Plus is highly accurate when masking out oncoming traffic or traffic signs. The light-dark boundaries and the light distribution for all other adaptive light functions are also displayed very precisely with DIGITAL LIGHT. This optimises the illumination of fog, motorway or city lights, for example. Based on data from the navigation maps, the topographic light takes driving up and down hills into account, especially crests and dips. For example, when driving over crests, the dazzling of oncoming traffic is reduced by early lowering of the light cone. When driving through dips in the road, the light cone can be raised to obtain the desired light range.

If the E-Class Estate is equipped with DIGITAL LIGHT, DIGITAL LIGHT with projection function can also be subsequently activated as an on-demand feature via the Mercedes me Store<sup>1819</sup>. The system also includes these assistance functions<sup>20</sup>:

- Guiding lines: Assistance on narrow road lanes at roadworks by projecting dynamic markings onto the road surface
- Wrong way warning: No-entry sign indicated by projection of a warning symbol onto the roadway
- Lane departure warning and directional guidance: when Lane Keeping Assist detects a hazard

Starting with the new E-Class, Mercedes-Benz has redesigned these warning symbols so that drivers can recognise them even more intuitively on the road.

DIGITAL LIGHT with projection function also communicates with the driver. When the vehicle is unlocked or locked, or when the engine is switched off, the headlamps and tail lamps react with a short light show. The animation function can be switched on and off via MBUX. The "Digital Rain" and "Star Wave" projections are available at market launch.

With the DIGITAL LIGHT Custom Animations<sup>21,</sup> individual welcome and goodbye animations will be possible. This will also include market-specific and seasonal animations, for example at Thanksgiving in the USA. The general and seasonal animations, stored in the back end, are selectable in the Mercedes me App.

<sup>&</sup>lt;sup>18</sup> A personal Mercedes me ID and agreement to the Terms of Use for the Mercedes me connect services are required to use the Mercedes me connect services. In addition, the vehicle must be paired with the corresponding user account. Upon expiry of the initial term, the services can be renewed on payment of a fee, provided they are still offered for the corresponding vehicle at that point. First activation of the services is possible within one year from first vehicle registration or commissioning by the customer, whichever comes first.
<sup>19</sup> Not available at market launch.

<sup>&</sup>lt;sup>20</sup> Due to the approval regulations, the availability and scope of functions may be restricted depending on the market.

<sup>&</sup>lt;sup>21</sup> Not available at market launch. The car needs to be equipped with DIGITAL LIGHT with projection function and the Individualisation Package (free for 12 months following activation when buying a new E-Class). To use the Mercedes me connect services, customers must create a Mercedes me ID and agree to the Terms of Use for the Mercedes me connect services.

# Even more spacious in the rear

## The new E-Class Estate: dimensional concept

- Wider than its predecessor and with a longer wheelbase
- More room in the rear as a result
- Equipped as standard with EASY-PACK tailgate

Compared to its predecessor, the E-Class Estate has increased in width by 28 millimetres. This gives the rear passengers even more space: The elbow room in the rear is 1519 millimetres – 25 millimetres more than before. The wheelbase has increased by 22 millimetres to 2961 millimetres. As a result, rear-seat passengers enjoy more knee room (84 millimetres; plus 9 millimetres) and leg room (934 millimetres; plus 15 millimetres). The load compartment can be expanded from 615 litres to up to 1830 litres. In the plug-in hybrid models, the luggage capacity 460–1785 litres, and the load compartment is level there, too.

Here are the most important dimensions:

E-Class Estate	New	Predecessor (S	Difference
	Estate	213 facelift)	
Exterior dimensions (mm)			
Length	4.949	4.945	+4
Width	1880	1852	+28
Width incl. exterior mirrors	2065	2065	0
Height	1469	1.468	+1
Wheelbase	2961	2939	+22
Track, front <sup>1</sup>	1.634	1.604	+30
Track, rear <sup>1</sup>	1.651	1.613	+38
Interior dimensions (mm)			
Max. headroom, front, driver	1065	1.060	+5
Headroom, rear	1006	1.005	+1
Legroom, front	1059	1.058	+1
Legroom, rear	934	917	+15
Elbow room, front	1.509	1499	+10
Elbow room, rear	1.519	1494	+25
Shoulder room, front	1.468	1.468	0
Shoulder room, rear	1460	1.450	+10
Boot capacity acc. to VDA (L)	615-1.830/	640-1.820/	-25; +10/
Combustion engine models/plug-in hybrids	460-1.675	480-1.660	-20; +15

The seat backrests can be split and folded down in a 40:20:40 ratio. The middle section can be folded down not only individually but also in conjunction with the outer section on the driver's side. Operation is by two push buttons on the left and right side of the rear seat backrest. An electric folding system is standard. It is operated by switches in the left and right sidewalls of the load compartment.

The Estate model features the EASY-PACK tailgate as standard. The tailgate opens and closes conveniently at the touch of a button: using the button on the ignition key, the switch in the driver's door or the release handle on the tailgate. The retractable luggage cover and dividing net (both standard) have a two-piece design. Each has its own roller cassette.

<sup>&</sup>lt;sup>1</sup> With 225/60 R 17 tyres on 7.5 J x 17 ET 30 rims

Hooking up: ideal for caravaners & co. thanks to high trailer loads.

The new E-Class Estate: the characteristics as a towing vehicle

- · All models have a braked towing capacity of over two tonnes and 84 kg tongue weight
- Fully electric folding and unfolding trailer hitch available on request
- Useful additional functions such as trailer mode in MBUX and Trailer Manoeuvring Assist (option)

Whether caravans, trailers for leisure or work, or bicycle racks – the E-Class Estate has always been a proven towing and transport vehicle. The new generation will also score points with trailer towers. On the one hand, the high towing capacities of 2100/750 kilograms (braked/unbraked) contribute to this. They apply to all models, including those with plug-in hybrid drive. On the other hand, numerous practical functions such as the optional Trailer Manoeuvring Assist and the Trailer Mode in the MBUX system make manoeuvring easier. The tongue weight is 84 kilograms – so the carrying of e-bikes is allowed.

The optional trailer hitch can be folded in and out fully electrically. Operation is fully electric via the button in the tailgate or via the central display. As soon as the button light goes out, the hitch is correctly engaged and ready for use.

In combination with the trailer hitch, the Estate is equipped with ESP® trailer stabilisation as standard. The safety system can intervene automatically in critical situations when driving with a trailer. The vehicle recognises the trailer automatically as soon as the electrical connector plug is connected. The ESP® stabilisation functions are automatically active from a speed of 65 km/h. If undesired weaving is detected, the trailer stabilisation system actively counteracts this with the help of wheel-specific, reciprocal braking interventions. In most cases, this is already enough to reduce dangerous vibrations. If necessary, the system reduces the vehicle speed as well: for this, the engine torque is reduced and the vehicle is braked via all four wheels.

## Adjust speed limits: Trailer mode in MBUX

In a menu on the central display, the trailer type can be selected and the maximum permitted speed can be specified. This allows the vehicle to adapt the Speed Limit Assist functions for trailer operation.

Depending on the market, the practical trailer route planner also takes into account restrictions for driving with trailers when navigating and avoids narrow roads or city centres – if possible.

# Manoeuvre more easily: Trailer Manoeuvring Assist (optional)

Trailer Manoeuvring Assist (360° camera additionally required) handles reverse manoeuvring confidently and smoothly – even in difficult situations. This means that trailer towers benefit from the assisted control. It automatically regulates the steering angle on the towing vehicle at low speeds.

Trailer Manoeuvring Assist is connected to MBUX and can be operated intuitively via its menu. At the beginning of the manoeuvring process, the user simply specifies the desired manoeuvre: a direction specification by entering the target articulation angle (max. 90°) or the function "Pull straight". The driver can view the manoeuvring process from different camera perspectives. Dynamic guidelines make it easier to gauge the travel path, vehicle width and distances.

# Analogue and digital sensory experience

The new E-Class Estate: the interior design

- Sporty, high quality, digital: these three attributes describe the interior
- The combination of digital and analogue luxury was previously reserved for top-of-the-range models
- Newly designed icons on the screens can be recognised even more intuitively by drivers

The dashboard makes for the digital experience in the interior. If the E-Class Estate is equipped with the optional front passenger screen, the large glass surface of the MBUX Superscreen extends to the central display. Visually detached from this is the high-resolution driver display in the driver's field of vision.

The contour of the cover glass is dynamic in design. For the central display, the glass surface is extended downwards accordingly. The profile becomes flat towards the outer edges. A narrow nozzle band nestles against the upper contour of the glass surface, connecting the central nozzle with the outer nozzles to form a single unit.

The models without a passenger display feature a large trim element that extends to the centre. Visually detached, the central display appears to float above the concave surface of this trim element.

The front section of the instrument panel is illuminated by the light strip of the Active Ambient Lighting. This runs in a wide arc from the windscreen, past the A-pillars and into the doors, so creating a spacious feeling in the way the door panels merge with the collar of the instrument panel to form a single unit. An apparently free-floating control array in the upper section of the door panels matches the look of the glass surfaces of the screens.

The centre console is designed as a homogeneous unit and merges in a straight line into the lower section of the dashboard. At the front, a stowage compartment with lid and cup holders is integrated into the three-dimensionally shaped trim element. There is a soft padded armrest in the rear part of the centre console. USB ports are located in the compartment below.

The door centre panel merges seamlessly into the armrest with a concave sweep. The front section here is designed as a metallic high-tech element. It serves as a grab and closing handle, and incorporates the switches for the power windows. Another highlight is the free-floating control array incorporating the door opener and the controls for the seat functions.

The contours of the seat surface and backrest flow elegantly from the inside to the outside, and appear to float above the base of the seat thanks to their layer design. Indented vertical lines follow the outer contour, widening out towards the top. The association made here by the interior designers was with the organic beauty of shells. If the customer opts for leather upholstery, the seats are designed with elaborate longitudinal fluting, created in individual panels. The nappa leather seats feature quilted and perforated diamond patterns that follow the shape of the seat. The seat with MICROCUT offered as part of AMG Line interior is also perforated.

#### Extensive range of interior colours and decorative trim

The colour & trim concept conveys a technoid character. E-Class Estate buyers can choose between numerous interior colour combinations. The palette ranges from light beige combined with space grey, including a classy pearl effect, to the sophisticated tonka brown and the cool and technical-looking grey.

The interior surfaces have a new fine-grain finish from the base trim level upwards, underlining the contemporary character. The interplay between analogue and digital sensory experience is further exemplified by the wide range of trims with innovative, natural or technoid surfaces. Exclusive to the E-Class is interior trim of open-pore wood - dark ash - which is backlit by the Mercedes-Benz pattern.

In addition to other trim panels featuring open-pore woods, the "MANUFAKTUR piano lacquer black flowing lines" variant familiar from the S-Class is also available. Another highlight is interior trim in a silver-coloured metal-mix material. Its high-gloss finish gives it a very futuristic look.

#### Customisable UI design

The main icons on the central and optional passenger displays are now more clearly displayed, and also colour-coded to match smartphone tiles. This enables the driver to recognise them even more intuitively.

With two display styles (Classic and Sporty) and three modes (Navigation, Assistance, Service), the graphics of the screens can be individualised. In the "Classic" style, the driver is greeted by the familiar display layout with the look of two dial instruments. Varying content with vehicle-related information is displayed between the two tubes.

The "Sporty" style is dominated by the colour red, with a dynamically designed central rev counter. A holistically impressive colour experience is created in the interior by the optional seven colour themes of the ambient lighting.

# New MBUX generation for a holistic digital experience

The new E-Class: MBUX (Mercedes-Benz User Experience)

- The basis for an impressive, immersive entertainment experience
- New display of icons and intelligent functions
- Even more powerful Hey Mercedes voice assistant

Every generation of MBUX to date has triggered a revolution in the cockpit: In 2018, the world premiere of the infotainment system focused on the user experience more consistently than ever before. In 2021, generation number two debuted with the MBUX Hyperscreen, the largest human-machine interface built by Mercedes-Benz to date. And with the new E-Class, Mercedes-Benz is now taking the third significant development step in MBUX. The latest generation with the optional MBUX Superscreen is even more intelligent and capable of learning.

The electronics architecture is more software-driven and less hardware-driven. This forms the basis for more individual updating of the interior systems in the future. The computing functions of previously separate domains take place in a single processor. Screens and the MBUX infotainment system thus share a new, very powerful central onboard computer. This form of networking improves the performance and speeds up transmission of the data streams.

E-Class Estate buyers have the choice between the MBUX multimedia system Premium and the optional MBUX multimedia system Premium Plus. The latter additionally includes the passenger display. In this case the large glass surface of the MBUX Superscreen extends from the A-pillar on the passenger side to the central display. For the first time in this class, at the touch of a button, the optional 3D driver display allows spatial scene perception with a real depth effect. The system uses autostereoscopy for the 3D effect: here, the LCD display combines a special pixel structure with a controllable LCD aperture grill. The result is that the left and right eye see different pixels of the LCD, creating the illusion of depth.

Here are some more highlights of the new MBUX generation:

- The new MBUX is accompanied by a change in the presentation of the main icons on the displays. They are presented in a simpler way, and based on the colours used for smartphone tiles (see section on interior design).
- The software experts at Mercedes-Benz have also developed a new compatibility layer that allows the installation of third-party apps<sup>1</sup>. For example, the driver can use the vehicle's own selfie and video camera (optional) for the collaborative app "Webex" and the video conferencing app "Zoom"<sup>2</sup> (see separate section for details).
- Another special feature in combination with MBUX are the so-called routines. In principle,
   Mercedes-Benz understands this to mean the automation of functions. When the new E-Class Estate
   is launched, customers will be able to use templates for standard routines. They also have the option
   of creating routines themselves. Mercedes-Benz is already working on the next expansion stage: in
   future, the car will use artificial intelligence (AI) to learn which comfort systems the drivers repeatedly

<sup>&</sup>lt;sup>1</sup> An app package is planned for the market launch. Usage only possible if the optional MBUX Entertainment Plus is specified. The apps may vary over the life cycle of the E-Class. A personal Mercedes me ID and agreement to the Terms of Use for the Mercedes me connect services are required to use the services. In addition, the vehicle must be paired with the corresponding user account. Upon expiry of the initial term, the services can be renewed on payment of a fee, provided they are still offered for the corresponding vehicle at that point. First activation of the services is possible within one year from first vehicle registration or commissioning by the customer, whichever comes first.

<sup>&</sup>lt;sup>2</sup> New technologies must always meet the legal requirements of the different markets, and must therefore be adapted accordingly. We are currently looking into the approval situation in various countries.

use. Given the same circumstances, the aim is for AI to automate such functions<sup>3</sup>. Here too, more information can be found in a separate section.

The Entertainment Package (MBUX Entertainment Plus) will be available for the new E-Class Estate. It includes Mercedes me connect services<sup>4</sup> and a data package from a third-party provider. Depending on the market, a communication module with 5G as the transmission technology is used<sup>5</sup>. The mobile phone standard 5G makes much faster data rates possible than LTE/UMTS<sup>6</sup>.

#### Zero Layer and MBUX Augmented Reality

With adaptive software, the MBUX display and operating system makes personalised suggestions for numerous infotainment, comfort and vehicle functions. With the zero-layer design, the user does not have to scroll through submenus or give voice commands. Situationally and contextually, applications appear at the top level in the field of view. This relieves the driver of a number of operating steps. MBUX Augmented Reality for navigation is available as an optional extra. The system superimposes graphic navigation and traffic information on live images.

#### Hey Mercedes: very powerful voice assistant

The Hey Mercedes voice assistant is highly capable of dialogue and learning by activating online services in the Mercedes me App<sup>7</sup>. With the new "Just Talk" function, the intelligent voice control can now also be activated without a keyword. To do this, the customer must be alone in the vehicle. When the function is activated, a red microphone symbol appears in the display, i.e. the vehicle is waiting for voice commands.

Hey Mercedes also explains vehicle functions and e.g. helps an occupant wishing to connect a smartphone via Bluetooth. If compatible home technology and household devices are present, they can also be networked with the vehicle thanks to the smart home function and controlled from the vehicle by voice.

# MBUX Interior Assistant: always at your service

The optional MBUX Interior Assistant can automatically execute interior functions, and thus support the driver according to the situation. The system detects the front occupants via infrared cameras in the roofliner. The cameras are located in the overhead control panel. The MBUX Interior Assistant interprets the movements of the occupants and their body language in order to provide suitable support with appropriate vehicle functions. The cameras detect interactions by the vehicle occupants. The system interprets natural hand, head and body movements contextually or at the passengers' request.

#### Streaming services for music and video

With the "Online Music" service<sup>®</sup> Mercedes-Benz has now fully integrated the major music streaming services - Spotify, Amazon Music, Tidal and Apple Music - into the MBUX infotainment system. MBUX allows access to the personal user profile with the linked music providers. This way, customers can access their favourite

<sup>&</sup>lt;sup>3</sup> The functions described are visions for the future, some of which are not yet available at market launch of the E-Class and will depend on the respective vehicle model, the individual configuration and the respective market.

To use the Mercedes me connect services, a personal Mercedes me ID and agreement to the terms of use for the Mercedes me connect services are required. In addition, the vehicle must be paired with the corresponding user account. Upon expiry of the initial term, the services can be renewed on payment of a fee, provided they are still offered for the corresponding vehicle at that point. First activation of the services is possible within one year from first vehicle registration or commissioning by the customer, whichever comes first.

<sup>&</sup>lt;sup>5</sup> To use 5G, the optional Entertainment package including comfort data volume from a third-party provider (valid for 12 months) or the customer's own data volume is required.

<sup>&</sup>lt;sup>6</sup> The speed and availability of the data connection will vary depending on such factors as the network coverage at the vehicle's location.

<sup>7</sup> To use the Mercedes me connect services, a personal Mercedes me ID and agreement to the terms of use for the Mercedes me connect services are required. In addition, the vehicle must be paired with the corresponding user account. Upon expiry of the initial term, the services can be renewed on payment of a fee, provided they are still offered for the corresponding vehicle at that point. First activation of the services is possible within one year from first vehicle registration or commissioning by the customer, whichever comes first.

<sup>&</sup>lt;sup>8</sup> To be able to use the Online Music service, customers require a separate personal contract with a selected streaming provider.

songs and playlists and discover millions of songs as well as curated playlists. Through the integration of ZYNC<sup>9,10</sup>, passengers can enjoy a seamless digital entertainment experience (see section on apps and sound).

#### Personalisation is simple and convenient

Customers can create their personal profile directly in the E-Class Estate and synchronise it with existing profile data in the Mercedes me account. By scanning a QR code with the Mercedes me App, the vehicle is automatically connected to the Mercedes me account.

Personal preferences such as the favourite radio station and presets can be transferred to the car via the personal Mercedes me profile. Up to seven different profiles with a total of around 800 parameters are possible in the vehicle. As the profiles are stored in the cloud as part of Mercedes me, the profiles can also be used in other Mercedes-Benz vehicles with the corresponding MBUX generations.

#### Customisation via the Mercedes me Store

The new E-Class Estate also offers the option of activating additional vehicle functions as on-demand features via over-the-air technology (OTA) in a number of functional areas. This means that after purchase and the original new car configuration, some of the equipment can be adapted according to personal preferences. The on-demand features are available in the Mercedes me Store<sup>10</sup> as a one-off purchase option, or also as a subscription model, and the range is being successively expanded.

If the E-Class Estate is equipped with DIGITAL LIGHT, DIGITAL LIGHT with projection function can also be enabled via OTA<sup>11</sup>. This enables the projection of auxiliary markings or warning symbols onto the road surface (see separate chapter)<sup>12</sup>. If equipped with a trailer coupling and 360° camera, Trailer Manoeuvring Assist can be subsequently activated via OTA. It facilitates reversing manoeuvres with the car/trailer combination by automatically controlling the steering angle of the towing vehicle up to a speed of 7 km/h and up to a gradient of 15 percent. Other on-demand features include Active Distance Assist DISTRONIC (in markets where basic DISTRONIC is not standard), Traffic Sign Assist, MBUX Augmented Reality for Navigation and ENERGIZING COMFORT/ENERGIZING COACH.

<sup>&</sup>lt;sup>9</sup> To use ZYNC, an active Mercedes-Benz me account and the MBUX Entertainment Plus package are required. This is currently available for one year free of change from the original booking, and can subsequently be renewed on payment of a fee via the Mercedes me Portal (country-specific variations possible).

possible).

To use the Mercedes me connect services, a personal Mercedes me ID and agreement to the terms of use for the Mercedes me connect services are required. In addition, the vehicle must be paired with the corresponding user account. Upon expiry of the initial term, the services can be renewed on payment of a fee, provided they are still offered for the corresponding vehicle at that point. First activation of the services is possible within one year from first vehicle registration or commissioning by the customer, whichever comes first. The use of the OTA features is subject to certain technical conditions.

<sup>&</sup>lt;sup>11</sup> Not available at market launch.

 $<sup>^{12}</sup>$  Country restrictions apply.

Digital Vehicle Key is now available for iPhone and Apple Watch

The new E-Class Estate: Digital Vehicle Key<sup>1</sup> for iPhone or Apple Watch as part of the KEYLESS GO Comfort Package

- Digital Vehicle Key can fully replace the conventional car key
- Can be shared with up to 16 people, with the possibility of assigning different rights to users
- · High security standard thanks to ultra-wideband technology

With the Digital Vehicle Key, the E-Class Estate can be started and locked simply by the driver carrying a compatible iPhone or Apple Watch<sup>2</sup>. Key sharing is also possible: Various digital channels can be used to invite family members or friends to use the E-Class Estate. In doing so, the main user of the Mercedes me account can assign different rights, granting only access to the vehicle or also allowing it to be driven.

The vehicle can recognise several users at once, and the Digital Vehicle Key can be shared with up to 16 people. Sharing is possible via AirDrop®, iMessage® and other messaging services. The recipient can then add it to his/her own Apple Wallet.

Another advantage is that the main user always retains the ability to revoke other user rights, for example in the event of the key-enabled device being lost. This can also be done via Apple Wallet or the MBUX infotainment system.

In those markets where Mercedes me connect services are available, Pre-installation for the Digital Vehicle Key forms part of the KEYLESS GO Comfort Package<sup>3</sup>. This equipment combination is available in the new E-Class Estate from the Premium Package onwards.

<sup>&</sup>lt;sup>1</sup> A personal Mercedes me ID and agreement to the Terms of Use for the Mercedes me connect services are required to use the Mercedes me connect services. In addition, the vehicle must be paired with the corresponding user account. Upon expiry of the initial term, the services can be renewed on payment of a fee, provided they are still offered for the corresponding vehicle at that point. First activation of the services is possible within one year from first vehicle registration or commissioning by the customer, whichever comes first. Use of the Digital Vehicle Key also requires the customer's own data volume.

<sup>&</sup>lt;sup>2</sup> At market launch, the Digital Vehicle Key is compatible with iPhone 11 and later (except iPhone SE) as well as Apple Watch 6 and later (except Apple Watch SE). The prerequisite is UWB capability. Mercedes-Benz is working steadily to expand compatibility with other devices.

<sup>&</sup>lt;sup>3</sup> In addition to the KEYLESS-GO access and drive authorisation system and the pre-installation for the Digital Vehicle Key, this includes the features flush-mounted door handles, convenience opening and closing and remote boot closing.

# Artificial intelligence will relieve the burden of everyday processes in the future

The new E-Class Estate under the microscope: the routines

- This allows the E-Class Estate to be adapted to personal habits
- First of all, templates and self-created routines will relieve the workload during everyday driving
- In the next stage of development, AI-generated routines for the driver will follow

Stop at the company gate shortly before 8 o'clock in the morning, lower the side window and present your company pass to be allowed to drive onto the premises - many working people start their working day like this, or similarly. There are also recurring processes during leisure time, for example if a driver usually switches on the seat heating on the way home every Tuesday evening after tennis practice in winter<sup>1</sup>. These are just two of the many applications where Mercedes-Benz wants to make everyday tasks easier for its customers with the help of so-called routines.

At market launch of the new model series, the following options will be available:

- 1. Templates: With the help of these templates, customers can try out what types of routines are basically possible. Examples of this include "Heat me up" (switching on the seat heating at a certain outside temperature) or "Date night" (music is played via Bluetooth audio, the ambient lighting turns pink). The templates are mostly stored in the backend. Some are stored locally in the vehicle, so they can be used even if there happens to be no connectivity. The templates are operated via the vehicle's central display and are arranged in carousel-style on the screen.
- 2. Self-created routines: Conditions can be attached to actions on the central display. For example, "If the interior temperature is below twelve degrees Celsius, switch on the seat heating and set the ambient lighting to warm orange." Drivers can also assign a name to such self-created routines, such as "Warm me up". Under this personally chosen name, the routine then appears on the screen under the menu item "My routines". This routine category can be recognised by the blue tab in the menu bar. Routines can be created and edited in the vehicle, on the central display.
- 3. AI-generated routines: In the future, the aim is for the E-Class Estate to fully automate recurring routine tasks if desired. Artificial intelligence (AI) will make this possible. The vehicle's ability to also learn and evolve with the customer will represent a new level of intelligence. In the first expansion stage, Mercedes-Benz will offer the AI-generated routines Massage, Seat heating and Seat ventilation for the driver's seat. Other interior systems are to be successively integrated and further routines made possible.

## Equally adaptive: in-app suggestions and "Magic Modules"

Mercedes-Benz is already using AI as part of MBUX: on the one hand, the apps for navigation, radio and phone already suggest actions. These are based on how likely an application is and include the suggestion of a specific phone number or navigation destination. On the other hand, more than 20 additional functions – from ENERGIZING COMFORT to massage to assisted parking or opening and closing the load compartment – are offered automatically with the help of AI if they are relevant to the particular customer. Internally, the developers have christened these modules "Magic Modules". They are displayed on the so-called zero-layer interface of MBUX.

<sup>&</sup>lt;sup>1</sup> The functions described represent visions of the future, some of which are not yet available and will depend on the respective vehicle model, the individual configuration and the particular market.

With the "Just Talk" function, the intelligent voice control can now be activated without the keyword "Hey Mercedes". When the function is activated, a red microphone symbol appears in the display, This means that the vehicle is ready and waiting for commands such as "Navigate me to Berlin, to the Brandenburg Gate" or "Please turn on the seat heating". Furthermore, with the voice control, several commands can now be linked by "and".

# For more app variety

The new E-Class Estate under the microscope: the in-car apps<sup>1</sup>

- Third-party apps optimised for the vehicle for a better user experience
- Popular apps such as the entertainment platform "TikTok" and the game "Angry Birds", among others<sup>2</sup>
- Part of the optional Entertainment package, download possible directly in the E-Class

Until now, apps found their way into the car mainly by being mirrored from the user's smartphone into the infotainment system. Apple Car Play or Android Auto are such systems, which allow some functions of the mobile device to be used on the central and passenger display while the car is moving. The software experts at Mercedes-Benz have developed a new compatibility layer that allows the installation of third-party apps. In addition, the new software architecture means that apps will find their way into the vehicle much more quickly in future.

For example, the driver can use the vehicle's own selfie and video camera (optional) for the collaboration app "Webex" and the video conferencing app "Zoom"<sup>3</sup>. In order to prevent driver distraction, image transmission is deactivated when on the move.

A new App Store has been integrated into the Mercedes me Store, with a gradually expanding portfolio of apps. In this way, the E-Class remains up-to-date and can be extensively personalised.

The following apps are part of the portfolio at the launch of the new E-Class Estate:

- "TikTok"
- "Angry Birds" game
- Cloud-based collaboration platform "Webex by Cisco"
- Video conference system "Zoom"
- "Vivaldi" browser
- "Pocket Casts" podcast app

The entertainment portal ZYNC<sup>4</sup> is also on board. On a user interface on the central and passenger displays (optional), it offers video streaming, on-demand content, interactive experiences, local video programmes, sports, news and much more. More than 30 streaming services from well-known global, regional and local partners are already available, while further partners and channels are continually being integrated.

The in-car calendar also has new features. Compared to the previous version, as part of In-Car-Office, it is now even more compatible with public (i.e. non-corporate) calendars.

<sup>&</sup>lt;sup>1</sup> A personal Mercedes me ID and agreement to the Terms of Use for the Mercedes me connect services are required to use the Mercedes me connect services. In addition, the vehicle must be paired with the corresponding user account. Upon expiry of the initial term, the services can be renewed on payment of a fee, provided they are still offered for the corresponding vehicle at that point. First activation of the services is possible within one year from first vehicle registration or commissioning by the customer, whichever comes first. Use of MBUX Entertainment Plus also requires the customer's own data volume.

<sup>&</sup>lt;sup>2</sup> An app package is planned for the market launch. The apps may vary over the life cycle of the E-Class.

<sup>&</sup>lt;sup>3</sup> New technologies must always meet the legal requirements of the different markets, and must therefore be adapted accordingly. We are currently looking into the approval situation in various countries.

<sup>&</sup>lt;sup>4</sup> To use ZYNC, an active Mercedes-Benz me account and the MBUX Entertainment Plus package are required. This is currently available for one year free of change from the original booking, and can subsequently be renewed on payment of a fee via the Mercedes me Portal (country-specific variations possible).

# Intelligent image filtering

The new E-Class Estate under the microscope: the privacy function of the passenger screen

- Further improved concept reduces the risk of distraction for the driver
- The front passenger can still see dynamic content on the screen
- In many countries, the use of headphones is no longer a requirement

In Europe and in more and more countries, the front passenger can watch dynamic content such as TV or video streaming on the display during a journey. This is subject to the requirement that the driver is protected from distraction. The camera-based system in the E-Class Estate uses an advanced filtering concept that is even more intelligent than the previous solution in other Mercedes-Benz model series. The driver can no longer see dynamic content on the passenger screen while driving. This has been verified in extensive trials with test subjects. In addition, the authorities in the EU, the USA, China, Norway, the UK and Switzerland allow free audio enjoyment of dynamic content with this system. The pairing of headphones is not a mandatory requirement in this respect.

The concept works in two stages: first of all, the seat occupancy recognition system registers whether the seat next to the driver is occupied. If this is the case, the touch surface of the display can be used from the front passenger seat via MBUX. If the front passenger seat is unoccupied, the screen becomes a digital decorative image. The customer can choose from various motifs. Among them is a starry sky, for example, i.e. the Mercedes-Benz pattern.

The passenger display's dual light control (DLC) technology reduces the risk of the person behind the wheel being able to see dynamic content such as films peripherally. This privacy function developed by Mercedes-Benz can be switched on and off. Based on the content, the system can thus switch the visibility for the driver on or off.

A camera (either in the driver's display or in the dashboard, depending on the equipment) also records the driver's eye movements. The intelligent system can detect whether the eyes are looking at the front passenger screen. This takes into account, for example, how the driver steers and how often and for how long they look over to the passenger side. If necessary, the system reduces the brightness of the passenger screen. The passenger can therefore continue to follow the graphic content while it is not visible to the person behind the wheel. This reduces the potential for distraction to a minimum.

# With a new perspective

The new E-Class Estate under the microscope: the cameras in the interior

- The interior of the E-Class Estate is equipped with several cameras
- With the selfie and video camera (option), photos and videos can be taken while at a standstill
- The images can be used for conferences, for example

The new selfie and video camera (part of the optional MBUX Superscreen) is located on top of the dashboard<sup>1</sup>. When the vehicle is stationary, the driver<sup>2</sup> can participate in online video conferences via e.g. "Webex", and take personal photos and videos. These can be saved on a USB flash drive. Thanks to its wideangle perspective, areas of the interior including the front side windows and, depending on the equipment, the panoramic sunroof can also be seen. This allows special images and films with a whole new perspective.

The cameras no longer work with individual control units. The computing functions of previously separate domains take place in a single processor. Screens and the MBUX infotainment system thus share a new, very powerful central onboard computer. This form of networking improves the performance and speed of the data streams.

Depending on the equipment and country-dependent operating approval, the following cameras can be found in the new E-Class Estate:

	Item	Technology	Used by	Miscellaneous
Mono driver	Top centre	Infrared	Driver recognition and	Infrared technology to allow
camera (standard)	of the		identification, passenger display	recognition even in the dark
	instrument		blocking logic	
	panel			
Stereo driver	In the 3D	Infrared	As above, plus pre-adjustment of	Alternative to the mono driver
camera (optional)	driver		exterior mirrors, 3D driver display	camera
	display		and ATTENTION ASSIST,	
			passenger display blocking logic	
Gesture cameras	Overhead	Infrared	MBUX Interior Assistant	One camera each for driver
(optional)	control			and front passenger
	panel			
Selfie and video	Top centre	RGB	Apps (see chapter of the same	To save images on separate USB
camera (optional)	of the		name)	stick
	instrument			
	panel			
Dashcam	behind the	RGB	Augmented reality	
(optional)	rear-view			
	mirror			

<sup>&</sup>lt;sup>1</sup> New technologies must always meet the legal requirements of the different markets, and must therefore be adapted accordingly. We are currently looking into the approval situation in this respect.

<sup>&</sup>lt;sup>2</sup> At a later date, camera functions will also be possible for the front passenger.

# Extensive wellness programme

The new E-Class Estate: ENERGIZING COMFORT

- New ENERGIZING COMFORT Anti-travel sickness<sup>1</sup> programme
- The ENERGIZING COACH<sup>2</sup> can be linked to more wearables
- In the medium term, a new biofeedback function<sup>3</sup> will be added to alleviate feelings of stress

Soothing sounds, mobilising massage, activating light - Mercedes-Benz offers a comprehensive wellness programme with the variously configured ENERGIZING COMFORT programmes and the individual recommendations of the ENERGIZING COACH. The new E-Class generation marks the debut of several innovations: ENERGIZING COMFORT now has an anti-travel sickness programme for the passenger seat that can help alleviate symptoms. The ENERGIZING COACH can now also be linked to more wearables, and in the medium term will have a bio-feedback function that can reduce feelings of stress by means of breathing exercises.

#### ENERGIZING COMFORT: for inner serenity and physical fitness

ENERGIZING COMFORT is part of the holistic well-being philosophy of Mercedes-Benz. The aim is to maintain the fitness of the driver and thus enhance road safety. Synced comfort systems in the vehicle can be experienced by touch input or voice command, and bundled into programmes to create all-round experiences. At the same time, a matching atmosphere in the interior promotes well-being by means of music, light and animations – for example, invigorating in case of fatigue or relaxing in case of an elevated stress level.

The ENERGIZING COMFORT range has been further developed for the new E-Class generation and includes

- the new Anti-travel sickness programme,
- the revised programmes Freshness, Warmth, Vitality, Joy and Comfort
- the three ENERGIZING NATURE programmes Forest Glade, Sound of the Sea and Summer Rain,
- training and ENERGIZING tips
- and, for plug-in hybrid models, the Power Nap programme.

Many passengers have experience of car sickness – otherwise known as motion sickness or kinetosis. Symptoms include fatigue, sweating, paleness, drowsiness, nausea, headache and vomiting. In this case, the new anti-travel sickness program of ENERGIZING COMFORT can help alleviate the front passenger's symptoms or delay their onset, reduce the perceived severity and generally increase well-being.

As with all ENERGIZING COMFORT programmes, several comfort systems work together in this new function: The system prompts the front passenger to incline the seatback slightly to the rear. The seat cushion is adjusted automatically. Fresh air is supplied from the air conditioning system in intermittent bursts. The Active Ambient Lighting is animated in accordance with the speed, while the audio system and, if required, the ionisation and fragrancing of the optional AIR BALANCE package are likewise activated. A reduced, atmospheric video animation appears on the front passenger or central display. The ENERGIZING COMFORT program can be used either while the vehicle is on the move or when it is stationary. When the approximately ten-minute program ends, the front passenger seat returns to its original position automatically.

<sup>&</sup>lt;sup>1</sup> The prerequisite for the function is a vehicle specification that includes ENERGIZING COMFORT and seat adjustment with memory function. The anti-travel sickness function cannot be used in conjunction with child seats, and is not available in the USA and Canada.

<sup>&</sup>lt;sup>2</sup> To use this Mercedes me connect service, a personal Mercedes me ID and agreement to the Terms of Use for the Mercedes me connect services are required. In addition, the vehicle must be paired with the corresponding user account. Upon expiry of the initial term, the services can be renewed on payment of a fee, provided they are still offered for the corresponding vehicle at that point. First activation of the services is possible within one year from first vehicle registration or commissioning by the customer, whichever comes first.

<sup>&</sup>lt;sup>3</sup> Expected to be available from mid-2024

Other new features: A massage programme is now also activated in each of the ENERGIZING Nature programmes. in the Vitality programme, the ENERGIZING seat kinetics are now active throughout and support the muscles with small changes to the inclination of the seat surface and backrest. The music of the ENERGIZING COMFORT programmes has also been updated. Depending on the equipment level, the system in the E-Class Estate now also uses Dolby® Surround 7.1. Depending on the equipment, both the deep-effect massage and the structure-borne sound transmission of the Burmester® 4D surround sound system are integrated into the ENERGIZING comfort programmes. Low tones can be experienced even more intensively thanks to two tactile transducers in each of the front seats. Inspired by the principle of singing bowl massage, it promotes a feeling of relaxation.

During a break in the journey, e.g. at a rest stop or charging station, the Power Nap programme can also be selected in the plug-in hybrid model. The programme has three phases – falling asleep, sleeping, waking up – which can increase the driver's performance.

#### ENERGIZING COACH: with more wearables and bio-feedback

A new feature of the ENERGIZING COACH in the E-Class Estate is the integration of additional wearables and expansion of the vital data shown in the central display.<sup>4</sup> The ENERGIZING COACH is based on an intelligent algorithm. It recommends the Freshness, Warmth, Vitality or Joy programme depending on the situation and individual. If compatible wearables are integrated, vital data such as stress level or quality of sleep optimise the accuracy of the recommendation. The Mercedes me ENERGIZING app<sup>5</sup> transmits the vital data to the ENERGIZING COACH via a smartwatch. The recommended comfort programme can be started directly via the recommendation in the MBUX system. The aim is to ensure that the driver feels well and relaxed even during demanding or monotonous journeys. In the E-Class, in addition to pulse and stress level, the number of steps taken per day and the calories burned are now also shown on the central display.

Mercedes-Benz will soon be adding the bio-feedback function to the ENERGIZING COACH in the E-Class Estate. This means that breathing exercises, for example, can help reduce the stress levels of the front passengers during the journey. The programme provides detailed and interactive guidance: the ideal inhalation and exhalation intervals are indicated on the central display with the help of the bio-feedback. Feedback supports the six-second breathing phases. Depending on the equipment of the E-Class, the bio-feedback includes slight adjustment of the backrest angle to facilitate deeper breathing. A light cone in the Active Ambient Lighting and a wave sound assist controlled, rhythmical breathing.

Two ENERGIZING packages are available for the E-Class Estate. The ENERGIZING package includes ENERGIZING COMFORT and ENERGIZING COACH, and can also be purchased as an on-demand function at a later date. The ENERGIZING package Plus allows a fully comprehensive experience. In addition to the ENERGIZING package content, it includes the AIR-BALANCE package, driver and front passenger seat climate control, Warmth Comfort package and multi-contour front seats.

<sup>&</sup>lt;sup>4</sup> Compatible wearables are a prerequisite.

<sup>-</sup>

<sup>&</sup>lt;sup>5</sup> A personal Mercedes me ID and agreement to the Terms of Use for the Mercedes me connect services are required to use the Mercedes me connect services. In addition, the vehicle must be paired with the corresponding user account. Upon expiry of the initial term, the services can be renewed on payment of a fee, provided they are still offered for the corresponding vehicle at that point. First activation of the services is possible within one year from first vehicle registration or commissioning by the customer, whichever comes first.

# Virtual surround-sound, specially mixed for Mercedes-Benz

The new E-Class Estate: the sound systems

- Up to 17 loudspeakers and four structure-borne sound transducers
- Immersive sound with Dolby Atmos®
- Music specially tuned to Mercedes-Benz passenger cars

Two sound systems are available for the new E-Class Estate. The optional Burmester® 4D surround sound system offers multi-dimensional surround-sound in the car. The 3D surround-sound is generated with the help of special Burmester® algorithms and two loudspeakers integrated into the roofliner. Direct reproduction of the sound resonance in the seats adds another level to the three-dimensional listening experience – 4D sound. The music becomes even more emotional thanks to this tangible component. For this purpose, two tactile transducers are integrated into the backrest of each front seat. Together with the new sound visualisation (see separate section), entertainment sound can be experienced with three senses in a Mercedes-Benz for the first time.

The MBUX Entertainment function is on board as standard. This allows streaming services to be operated via the central display, the steering wheel or the "Hey Mercedes" voice assistant.

Here are the differences in the hardware of the two sound systems:

	Amplifier	Speakers <sup>1</sup>
Standard sound system	5 channels, 125 watts	Seven:  • Front bass in passenger footwell  • Two tweeters in the mirror triangle of the front doors  • A midrange speaker in all four doors
Burmester® 4D surround sound system	15 channels, 730 watts	<ul> <li>21 including tactile transducers:</li> <li>Two front bass speakers in the front footwells</li> <li>One midrange speaker per door</li> <li>One tweeter in each front door and one in each rear door</li> <li>Two surround speakers in the D-pillar area</li> <li>One centrefill speaker in the middle of the dashboard</li> <li>Two 3D speakers in the front roofliner</li> <li>Two exciters (tactile transducers) per seat in the backrest of the front seats</li> <li>Two ear-level speakers in the driver's seat</li> </ul>

## Dolby Atmos® and Spatial Audio

The Burmester® 4D surround sound system takes the audio experience to a new level with native integration of Spatial Audio with Dolby Atmos® into the E-Class Estate. Individual instruments or voices in the studio mix can be positioned all around the listening area. This makes a new kind of sound animation possible: while conventional stereo systems usually have a left-right dynamic, Dolby Atmos® can use the entire space and

 $<sup>^{</sup>m 1}$  For the signals and the Mercedes-Benz emergency call, one loudspeaker each is located on the dashboard.

create a 360-degree experience. Dolby Atmos is available<sup>®</sup> in conjunction with the Burmester<sup>®</sup> 4D surround sound system.

Since the end of 2022, Spatial Audio with Dolby Atmos® from Apple Music has been integrated into Mercedes-Benz passenger cars. Mercedes-Benz drivers who have an Apple Music subscription² therefore have access to an ever-growing selection of songs and albums available in Spatial Audio with Dolby Atmos®. With this new audio standard, the world's largest music label Universal Music Group (UMG) also enables its artists to base the processes for recording their songs on how the final mix sounds in a Mercedes-Benz. To this end, UMG has introduced the new "Approved in a Mercedes-Benz" seal as a "Gold" standard for the implementation of Dolby Atmos® in vehicles.

<sup>2</sup> In order to use the online music service "Apple Music", a personal Mercedes me ID and agreement to the Mercedes me connect terms of use are required. A mobile data connection is also required. Customers can purchase the required data volume from a mobile network operator (MNO) via the Mercedes me portal, or use it via their smartphone data tariff by tethering.

# Sound becomes visible

The new E-Class Estate under the microscope: Sound Visualisation

- Sound is interpreted in visual terms on the light strip of the Active Ambient Lighting system
- This in-house development works with any source of entertainment sound
- For the first time, the light strip takes the form of a continuous line in the cockpit

For a long time, it was only possible to listen to music in the car. Starting with the current S-Class generation and the Burmester® 4D surround sound system, the sound has also been 'feelable' for a few years now. Structure-borne sound transducers ("exciters") in the seat backrests translate sounds into vibrations. Now, in the new E-Class generation, acoustics can be experienced with a third sense: the active light strip at the top of the instrument panel and in the front door panels can be used to produce a visual interpretation of any content from any of the sources of entertainment sound. This extends, for example, to music tracks and the sound from films and apps. For example, fast sequences of beats can cause rapid light changes, while flowing rhythms can create softly merging lighting moods.

This in-house development by Mercedes-Benz is available in conjunction with Active Ambient Lighting. Software analyses the audio signals based on the parameters of frequency (bass/mid-tones/treble tones) and direction (right/left). The visual representation is beat-synchronous, in other words with practically no time lag. Depending on the preferred colour of the Active Ambient Lighting, the bass, mid tones and high tones are visualised locally in coordinated colour tones and levels of brightness. To use the function, the customer only needs to activate the "Sound visualisation" button on the central display. When a telephone call is accepted, the playback and visual display of the music are automatically stopped. System prompts from the driving assistance systems¹ naturally have a higher priority within the Active Ambient Lighting than the sound visualisation function, and therefore temporarily overlay it.

In the E-Class Estate, the light strip in the cockpit takes the form of a continuous line and is no longer interrupted by the driver's display. In addition to the sound visualisation, the functional scope of the Active Ambient Lighting is supplemented and expanded by further new features:

- Information from the parking assistant is visualised.
- In the anti-car-sickness function of ENERGIZING COMFORT (see corresponding section), the Active Ambient Lighting is also actuated.
- And the intersection start-off function of Active Brake Assist<sup>2</sup>, which provides additional safety when approaching junctions with crossing traffic, can use Active Ambient Lighting to provide a visual warning if necessary.

<sup>&</sup>lt;sup>1</sup> The Mercedes-Benz driving assistance and safety systems are aids, and do not relieve the driver of their responsibility. The driver should follow the instructions in the Owner's Manual and the system limits described therein.

<sup>&</sup>lt;sup>2</sup> Part of the optional Driving Assistance Plus package

More climate comfort, intuitive operation and efficient technology details

The new E-Class Estate: climate control

- Effective two-stage filter system with ENERGIZING AIR CONTROL (optional equipment)
- Electric refrigerant compressor for diesel models is particularly efficient
- The air vents of THERMOTRONIC with Digital Vent Control adjust themselves

The new E-Class Estate is equipped with THERMATIC with two climate zones as standard. A four-zone THERMOTRONIC is available as an option. With Digital Vent Control, this system has an innovation: for extra climatic comfort, the front air vents adjust automatically (see below for details).

Both of these air conditioning systems operate very intelligently: one example is the onboard window misting sensor. It determines the temperature of the windscreen and the humidity in the interior. It also assesses the humidity level of the intake air. In this way, at cool temperatures and depending on the nature of the outside air, the energy requirement of the compressor can be reduced or misting-up can be avoided.

The recirculation function also thinks for itself: when route guidance is active, the system automatically switches to recirculation mode before reaching a tunnel. The same applies if the air quality sensor reports poor outside air quality. All windows and, if applicable, the sunroof close at the same time<sup>1</sup> – and move back to the previous position when returning to fresh air mode. They are also closed if the air recirculation switch is pressed for longer than two seconds.

With ENERGIZING AIR CONTROL, Mercedes-Benz offers its customers a high-quality filter system that removes particles and pollutants from the air. ENERGIZING AIR CONTROL intelligently networks sensor data and thus detects nitrogen oxides (NOx) and carbon monoxide (CO), as well as particulate matter of particle size PM2.5, in the outside and interior air. A two-stage filter concept with fine dust pre-filter and interior air filter reduces a large proportion of these pollutants before they enter the interior. When the readings reach a certain range, the air conditioner automatically switches between fresh air and recirculation mode, taking into account the overall control system for climatic comfort. A special air quality menu in MBUX even makes cleaning a visual experience. It clearly displays the internal and external values measured by the two fine dust sensors.

The E 220 d (WLTP: combined fuel consumption: 5.7-5.0 l/100 km; combined  $CO_2$  emissions: 149-131 g/km)<sup>2</sup> with the four-cylinder diesel engine (OM 654 M) has an electric refrigerant compressor for the air conditioning system. Functions such as ECO start/stop and stationary air conditioning can be controlled as needed, independently of the engine. This contributes to the further reduction of  $CO_2$  emissions.

As part of the optional AIR-BALANCE package, the intensity of the fragrancing can be set in three stages. A special fragrance was composed for the new E-Class: SPORTS MOOD expresses vitality and joie de vivre. The fragrance combines aromas of lime blossom and fresh light-green leaves. At the heart of the fragrance, the lime blossom is embedded in light floral scents such as magnolia, gardenia and violets, The green complement is light and radiant with aspects of grapefruit and watermelon. A touch of moss serves as the base.

The fragrance flask is located in the glove compartment. An ioniser is integrated into the air duct of the side air vent in the dashboard. When activated, it enriches the interior air with negatively charged oxygen ions.

<sup>&</sup>lt;sup>1</sup> Standard for the ECE version of the E-Class

 $<sup>^2</sup>$  The figures shown are the WLTP CO $_2$  figures measured according to Art. 2 No. 3 of Implementing Regulation (EU) 2017/1153. The fuel consumption figures were calculated on the basis of these figures.

These can promote the well-being of the occupants. The ENERGIZING COMFORT programmes also use fragrance and ionisation.

#### THERMOTRONIC with Digital Vent Control: nozzle adjustment as if by magic

If the customer opts for the THERMOTRONIC automatic climate control system (optional extra), the E-Class Estate comes with a new type of air vent: all the nozzles in the front area can be adjusted electrically as if by magic. The new comfort function is called Digital Vent Control. It is technically implemented with actuators. In each ventilation duct there are two of these small electric motors, one for the vertical and one for the horizontal louvres.

The operating concept is hybrid. Adjusting the nozzles by hand is still possible. Visually, the intelligent air outlets are indistinguishable from the purely manual versions in the base model, and the operating force required for both variants is also the same.

Three functions increase climatic comfort: Customers can select presets for the air vents in MBUX ("Head", "Upper body", "Even" and "Averted"). Seat-related personalisation of the nozzle position is also possible. If the nozzles are adjusted manually, the menu item jumps to "Individual" The system saves this individual setting and stores it in the user profile. With Active Defrost for the side windows, the nozzles are set in the direction of the side windows.

# Efficiently and quietly through the wind

The new E-Class Estate: aerodynamics and aeroacoustics

- Very good aerodynamics with a C<sub>d</sub> figure from 0.26 and a frontal area A of 2.38 m<sup>2</sup>.
- A great deal of detailed development work, with some innovations adopted from Mercedes-EQ models
- Extensive measures against wind noise, measurement procure using almost 500 microphones

With a  $c_d$  figure from  $0.26^{\circ}$ , the new E-Class Estate performs very well in its vehicle segment. It thus undercuts the very good value achieved by its facelifted predecessor (0.27). The fact that this high level has been maintained with only a slight spread between the individual variants is remarkable. This is because certain factors make aerodynamic performance more difficult: This includes, for example, the large wheel portfolio from 17 to 21 inches. At 2.38 m², the frontal area A of the new E-Class is slightly larger than that of its predecessor (2.35 m²).

Many computer simulations at an early stage increased the degree of maturity. This made fewer optimisation loops necessary in the wind tunnel. In close cooperation with their design colleagues, the aerodynamics team has specifically improved the E-Class Estate in numerous areas. Some details such as wheels with cladding inserts were adopted from the famously efficient Mercedes-EQ models. Here are the most important measures:

- Optimised contours: even including the tyres
- Innovative sealing of the front section: for the first time with side-sealing of the bonnet and an aerolip in the radiator grille
- Wheels with claddings: so-called "aeroblinds"
- Special spoilers ahead of the front and rear wheels
- Flush, retractable door handles
- Underbody: new materials (2-component main floor with moulded-on sealing lips) and improved shape (ramp-shaped spoiler lips, aerodynamic cladding on suspension components)

## "Acoustic camera and acoustic holography" with almost 500 microphones

When it comes to aeroacoustic development, Mercedes-Benz always takes a dual approach: on the one hand, as little noise as possible should be generated at the source, i.e. when the air flows around the outer skin of the vehicle with all its mounted parts. And on the other hand, the quality of the sealing and sound insulation help to ensure that unavoidable wind noises are hardly perceptible in the interior, or not perceptible as disturbing.

During the early development phase, the engineering team began to configure the geometric dimensions of the A-pillar and the exterior mirrors, which are particularly relevant for noise generation, accordingly. Advanced development methods using flow simulations and noise measurements were combined when optimising shapes: For the latter, a special microphone array was used in the acoustic wind tunnel. The extensive interior measurements are also called "acoustic holography". In this process, Mercedes-Benz uses 64 double microphones in the interior (hand array), which can locate problem areas in low-frequency ranges. Including the devices for outside measurements ("acoustic camera"), Mercedes-Benz uses almost 500 microphones.

The high-frequency components of the wind noise were reduced by a variety of measures in the door seals, side windows and exterior mirrors. The structural rigidity of the doors was increased in the relevant areas. At very high driving speeds, this results in less wind noise. Cavities are foam-protected to improve the acoustic

 $<sup>^{\</sup>mathrm{1}}$  Depending on the vehicle equipment

insulation in the body-in-white. This affects the structure of the cockpit cross-member and areas of the transmission tunnel and the A and C-pillars.

In the panoramic sliding sunroof, many detailed improvements were made to the wind deflector and by adding side wind deflectors to the glass roof. The result is better noise comfort and reduced draughts. In the tilt position, the glass panel is lowered depending on the vehicle speed. This also ensures pleasant interior acoustics and reduces actual aerodynamic drag.

# Comfort meets agility

The new E-Class Estate: the suspension

- Air-sprung rear axle as standard
- AIRMATIC available on request

The agile handling of the new E-Class Estate is due in large part to precise guidance of the front wheels by four control arms each. At the rear axle, an optimised multi-link independent rear suspension with five links ensures excellent wheel control and excellent straight-line stability. At both axles, the springs and dampers are combined in a single strut and are not involved in wheel guidance tasks, therefore the suspension responds with corresponding sensitivity. The front subframe and rear axle carrier decouple the suspension and body from vibrations and noise, and are part of the sophisticated comfort concept.

All E-Class Estate models have single-chamber air suspension on the rear axle. This features a compact design, maintains ride comfort even with a full load on board and ensures that the vehicle remains horizontal even when laden. As standard, the mild hybrid models are equipped with an AGILITY CONTROL steel spring suspension. The rear-wheel-drive versions also have a selective damping system as standard.

### The AIRMATIC air suspension system: All-round level control included

As an option, the new E-Class Estate is available with all-round AIRMATIC air suspension with ADS+ continuously adjustable damping. The AIRMATIC suspension with air springs and adaptive ADS+ dampers responds very sensitively. The damping characteristics are controlled fully automatically for each individual wheel, and separately during rebound and compression. While driving, a sophisticated sensor system and algorithms set the dampers according to the quality of the road to ensure that, for example, driving over a bump with just one wheel is not transmitted to the entire axle and the interior.

The all-round level control is another feature of AIRMATIC. It keeps the ground clearance constant irrespective of the vehicle load, but also makes changes when needed. To reduce air resistance and thus fuel consumption, the vehicle level is automatically lowered by 15 millimetres from a speed of 120 km/h in the COMFORT driving mode. At the same time the vehicle's centre of gravity is lowered, which improves driving stability.

# All combustion engine models are mild hybrids

The new E-Class Estate: drive system

- Plug-in hybrid available at Estate market launch
- Mild hybrids with ISG now have 17 rather than 15 kW boost output

Thanks to systematic electrification and intelligent downsizing, the new E-Class sets new standards in efficiency. A fourth-generation plug-in hybrid will already be available at market launch. Others will follow (for the plug-in hybrid model, see separate chapter).

The combustion engines are four and six-cylinder units from the current modular Mercedes-Benz engine family FAME (<u>Family</u> of <u>Modular Engines</u>). Accordingly, the engine range plays a major role in the flexibility of the international production network, with needs-based electrification.

In addition to turbocharging, both the diesel and petrol engines feature intelligent support from an integrated starter-generator (ISG). They are therefore mild hybrids. Thanks to a new battery, the power of the electric motor has been increased from 15 to 17 kW and the boost torque to 205 Nm.

The ISG uses a 48 volt on-board electrical system that ensures functions such as gliding, boosting or energy recovery, and makes significant fuel savings possible. The engines also start very rapidly and comfortably as a result, so that the start/stop function is almost as imperceptible to the driver as the transition from gliding with the engine switched off to strong acceleration under engine power. When idling, the intelligent interaction between the ISG and the combustion engine ensures outstandingly smooth running.

#### Petrol models: with many innovations compared to the preceding power units

The four-cylinder petrol engine (M 254) is initially available with 150 kW as the E 200 (WLTP: combined fuel consumption: 7.6-6.7 l/100 km; combined  $CO_2$  emissions: 173-152 g/km)<sup>1</sup> Further output levels will follow. In the M 254, Mercedes-Benz has combined all the innovations of the FAME modular engine family in a single unit. They include NANOSLIDE\* cylinder coating, CONICSHAPE\* cylinder honing (trumpet honing) and the exhaust aftertreatment system positioned directly at the engine.

A top model with an electrified in-line six-cylinder will round off the engine range at the top end.

#### Diesel: current development level

The E 220 d (WLTP: combined fuel consumption: 5.7-5.0 l/100 km; combined  $\text{CO}_2$  emissions: 149-131 g/km)<sup>2</sup> is powered by the OM 654 M. The electrification also includes the use of an electric refrigerant compressor for the air conditioning system.

The OM654M in the E 220 d is charged by a single-stage turbocharger with variable turbine geometry and friction-optimised roller bearings. The turbocharger is tuned so that the engine responds quickly and delivers its power smoothly. The four-cylinder diesel is also up to date in terms of exhaust gas aftertreatment. Its components include:

- a close-coupled NOx storage catalytic converter for reducing nitrogen oxides
- a DPF (diesel particulate filter with special coating for reducing also the amount of nitrogen oxides)
- an SCR catalytic converter (selective catalytic reduction with metered injected quantity of AdBlue\*)
   and

 $<sup>^{1}</sup>$  The figures shown are the WLTP CO<sub>2</sub> values measured according to Art. 2 No. 3 of Implementing Regulation (EU) 2017/1153. The fuel consumption figures were calculated based on these figures.

<sup>&</sup>lt;sup>2</sup> The figures shown are the WLTP CO<sub>2</sub> figures measured according to Art. 2 No. 3 of Implementing Regulation (EU) 2017/1153. The fuel consumption figures were calculated on the basis of these figures.

 an additional SCR catalytic converter in the vehicle's underbody, with a separately metered injected quantity of AdBlue<sup>®</sup>

A more powerful variant with a six-cylinder engine will also follow in the diesel range.

## The model range at market launch in Europe:

_	,			
		E 200	E 220 d	E 300 e
Displacement	СС	1999	1993	1999
Rated output, combustion engine	<b>kW</b> /hp	<b>150</b> /204	<b>145</b> /197	<b>150/</b> 204
at	rpm	5800	3600	6100
Additional power (boost)/	<b>kW</b> /hp	<b>17</b> /23	<b>17</b> /23	
e-motor rated power				<b>95</b> /129
Rated torque, combustion engine	Nm	320	440	320
at	rpm	1600-4000	1800-2800	2000-4000
Add. torque (boost)/e-motor rated torque	Nm	205	205	440
System output	kW	-	-	230
System torque	Nm	-	-	550
Acceleration 0-100 km/h	S	7.8	7.9	6.5
Top speed	km/h	231	230	227
Combined fuel consumption (WLTP)	l/100 km	7.6-6.73	5.7-5.0 <sup>4</sup>	0.9-0.65
Combined CO <sub>2</sub> emissions (WLTP)	g/km	173-152 <sup>3</sup>	149-1314	20-13 <sup>5</sup>
Combined power consumption, weighted (WLTP)	kWh/10 0 km	-	-	21.4-19.1 <sup>5</sup>
Electric range (EAER, WLTP)	km	-	-	95-113 <sup>5</sup>

#### Transmission: automatic as standard

The 9G-TRONIC transmission has been further developed and is used in all E-Class models. The electric motor, power electronics and transmission cooler have now moved into or to the transmission. Previously required lines are eliminated, which offers advantages with regard to installation space and weight. In addition, the efficiency of the transmission has been increased. Amongst other things, the optimised interplay with the electric auxiliary oil pump reduces the delivery rate of the mechanical pump by 30 percent compared with the predecessor – good for efficiency. Furthermore, it uses a new generation of the fully integrated transmission control with multi-core processor and new design and connectivity technology. In addition to the increased computing power, the number of electric interfaces has been drastically reduced, and the weight of the transmission controls have been cut by 30 percent compared with the predecessor.

 $<sup>^3</sup>$  The figures shown are the WLTP CO<sub>2</sub> values measured according to Art. 2 No. 3 of Implementing Regulation (EU) 2017/1153. The fuel consumption figures were calculated based on these figures.

<sup>&</sup>lt;sup>4</sup> The figures shown are the WLTP CO<sub>2</sub> figures measured according to Art. 2 No. 3 of Implementing Regulation (EU) 2017/1153. The fuel consumption figures were calculated on the basis of these figures.

<sup>&</sup>lt;sup>5</sup> The figures shown are the WLTP CO<sub>2</sub> figures measured according to Art. 2 No. 3 of Implementing Regulation (EU) 2017/1153. The fuel consumption figures were calculated on the basis of these figures. Power consumption [and range] was [were] determined on the basis of Directive 2017/1151/EC

# Latest hybrid technology and intelligent operating strategy

The new E-Class Estate under the microscope: the plug-in hybrid model

- Up to over 100 kilometres purely electric range possible according to WLTP
- Intelligent operating strategy using e.g. information from the navigation system
- Battery can be fully charged in around 30 minutes with optional DC charger

With an electric output of **95 kW** (129 hp) and an all-electric range of up to over 100 kilometres (WLTP), the E 300 e will in many cases and on many days be on the road purely electrically, without the use of the petrol engine. The system output is up to **230 kW** (312 hp). More plug-in hybrids with diesel and petrol combustion engines will follow.

#### Overview of technical data:

		E 300 e
Displacement	СС	1999
Rated output, combustion engine	<b>kW</b> /hp	<b>150/</b> 204
Rated torque, combustion engine	rpm	320
Rated output, electric motor	<b>kW</b> /hp	<b>95</b> /129
Rated torque, electric motor	Nm	440
System output	kW	230
System torque	Nm	550
Top speed	km/h	227
Acceleration 0-100 km/h	S	6.5
Combined fuel consumption, weighted (WLTP) <sup>1</sup>	l/100 km	0.9-0.6
Combined power consumption, weighted (WLTP) <sup>1</sup> ,	kWh/100 km	21.4-19.1
Combined CO <sub>2</sub> emissions, weighted (WLTP) <sup>1</sup>	g/km	20-13
Electric range (EAER, WLTP) <sup>1</sup>	km	95-113

The high power density of the hybrid traction head is achieved using a permanently excited synchronous motor with internal rotor. The 440 Nm peak torque of the electric motor is available right from the start, resulting in high agility when moving off, along with dynamic driving performance. The full electric power is available up to 140 km/h, at which point it is softly capped.

Overall, the driving experience is much more electric than in the preceding model. In view of the increase in electric range to over 100 kilometres (WLTP)¹ drivers can cover most of their everyday journeys without using the combustion engine. Based on the information from the route guidance of the navigation system, the hybrid driving programme provides the electric driving mode for the most appropriate route sections in each case. Electric driving is prioritised on journeys in urban areas, for example. The operating strategy takes into account factors such as navigation data, topography, speed limits and the traffic conditions for the entire planned route.

The operating strategy communicates with the sensors of the assistance systems and thus efficiently supports the driver in many driving situations. Two additional driving modes enable the driver to make particularly advantageous use of the plug-in powertrain:

 $<sup>^1</sup>$  The figures shown are the WLTP CO<sub>2</sub> values measured according to Art. 2 No. 3 of Implementing Regulation (EU) 2017/1153. The fuel consumption figures were calculated based on these figures. Power consumption [and range] was [were] determined on the basis of Directive 2017/1151/FC.

- BATTERY HOLD: Maintaining the charge state of the high-voltage battery is given priority, e.g. when intending to drive in a city centre or green zone later on; selection of the most suitable drive configuration by the hybrid powertrain system, depending on the driving situation and route.
- ELECTRIC: Electric driving up to 140 km/h, adaptation of Active Distance Assist DISTRONIC for electric driving, activation of the combustion engine using a pressure point of the accelerator pedal

The energy recovery function allows kinetic energy to be recuperated during deceleration or downhill driving, a process that has now been improved in interaction with the hydraulic brake. The recuperation power can be as much as 100 kW. In D<sup>Auto</sup> mode, the system automatically selects the level of recuperation power according to the traffic situation. A driver wishing to influence the energy recovery rate can do so directly in three stages controlled by rocker switches behind the steering wheel. This is possible in all driving modes except SPORT. In driving mode D-, for example, the driver can experience the "one-pedal feeling": when the driver's foot leaves the accelerator the vehicle slows down purely electrically, to an extent that the hydraulic service brake is often not needed.

Another high-tech feature is the intelligent, electromechanical brake booster. It ensures that the braking system very efficiently combines electric recuperation with the hydraulic service brake. In addition, the automatic transmission performs several gearchanges during deceleration. Depending on the driving situation and the braking requirements of the driver, the vacuum-independent braking system automatically controls the flexible transition between hydraulic braking and recuperation. This allows the maximum recuperation power to be achieved more frequently and over a longer period of time. For this purpose, the system variably reduces the braking power of the hydraulic brake, even at constant pedal pressure, so that the high recuperation power is maintained as speed decreases. The driver is not aware of this automatic change.

The high-voltage (HV) battery has been developed in-house by Mercedes-Benz AG. It is part of a fourth-generation family of batteries and represents a logical evolution of the previous generation. It consists of 96 cells in a so-called pouch configuration. The battery energy content is 25.4 kWh. To account for the high energy density, the HV battery has an internal cooling system.

The thermal management system can therefore control the operating temperature irrespective of the climate control in the vehicle interior. In addition to continuous operation in hot and cold regions, this also allows quick charging with direct current. Even when the battery is completely discharged, it can be fully charged in around 30 minutes with the optional 55 kW DC charger. A standard-fit 11 kW charger (depending on the market) is available for three-phase charging at a Wallbox connected to the domestic AC mains.

# Additional safety and situation-related support

The new E-Class Estate: the driving assistance systems

- Extensive standard equipment with many driving assistance systems, some of which have been further developed
- Innovative systems such as the junction start-off function relieve the driver's workload
- · High level of tangibility through assistance display in the driver's display

The driving assistance systems with which the E-Class Estate is equipped as standard <sup>1</sup> include ATTENTION ASSIST, Active Brake Assist, Active Lane Keeping Assist, Parking Package with reversing camera and Speed Limit Assist. The status and activity of the driving assistance systems are shown as a full-screen view in the Assistance mode of the driver's display.

Active Distance Assist DISTRONIC is standard equipment In Western Europe. The system relieves the driver by regulating the speed to match that of slower vehicles ahead. The desired safety distance can be set in several increments. In an easy-to-understand way, the Get Started app in MBUX explains how Active Distance Assist DISTRONIC works.

#### With extended functionality: the Driving Assistance Plus package

The Driving Assistance Package Plus is available as an optional extra. Components include Active Steering Assist, which assists with lane-keeping. As previously on motorways, the E-Class Estate can now also start off automatically in city traffic and on country roads after coming to a standstill. This is possible in a time window of 30 seconds when the hands are on the steering wheel. Another new feature: if Active Steering Assist is no longer available because the lane markings are not clearly visible, it signals this to the driver by vibrations in the steering wheel. As before, if Steering Assist is not available, the steering wheel symbol in the driver display also changes from green to grey.

Other features of this assistant include lane detection at low speeds additionally with 360° camera, very high availability and cornering performance on rural roads and improved lane centring on motorways. Depending on the situation, a driving position which is off the centre of the lane (e.g. formation of an emergency corridor, but also orientation via the edge of the carriageway on rural roads without centre markings) can be used.

The other components of the Driving Assistance Plus package:

- Active Distance Assist DISTRONIC offers more functions than the standard system. These include reaction to stationary vehicles, automatic restart and automatic speed resumption up to 210 km/h.
- The junction start-off function ensures additional safety when moving off at junctions with crossing traffic. The system uses intuitive arrows in the driver's display to indicate from which direction cross-traffic is approaching. If the driver nevertheless attempts to move off, an audio-visual collision warning is triggered. The vehicle is prevented from moving off by automatically applying the brake. The driver can cancel this at any time by fully depressing the accelerator pedal.
- Active Lane Change Assist cooperatively assists the driver in changing to the adjacent lane. A lane
  change to the right or left is only assisted if the sensors detect that the adjacent lane is separated

<sup>&</sup>lt;sup>1</sup> The Mercedes-Benz driving assistance and safety systems are aids, and do not relieve the driver of their responsibility. Please note the information in the Owner's Manual and the system limits which are described therein.

from the present lane by broken lane markings, and no other vehicles are detected in the relevant danger zone.<sup>2</sup>

- Active Emergency Stop Assist brakes the vehicle to a standstill in its own lane if it recognises that the
  driver is no longer responding to the traffic situation for a longer period. If the E-Class Estate is
  travelling at less than 60 km/h, the assistant warns following traffic with the hazard warning lights. In
  addition, the doors unlock when the vehicle is stationary and the assistant calls for assistance via
  Mercedes-Benz Emergency Call.
- Active Brake Assist with cross-traffic function can use the onboard sensors to register whether there
  is a risk of collision with a vehicle ahead or crossing or oncoming traffic. If a collision is imminent, the
  system can warn the driver visually and audibly. If the driver's braking is too weak, it is also possible
  to support the driver by increasing the braking torque according to the situation and to initiate
  emergency braking if there is no reaction from the driver.
- Evasive Steering Assist can assist the driver when seeking to avoid another road user detected by the system in a critical situation. In the new E-Class Estate, the system not only recognises stationary and crossing pedestrians, but now also takes account of pedestrians and vehicles alongside, as well as cyclists. The speed range is up to 110 km/h.
- From speeds above 60 km/h, Active Lane Keeping Assist uses a camera to detect when road markings
  or road edges are crossed, helping the driver to avoid leaving the driving lane unintentionally. If there
  is a risk of collision with detected road users in the adjacent lane, for example overtaking or oncoming
  vehicles, the system can also react with steering intervention and warnings.
- Active Blind Spot Assist can give a visual warning and if the indicators are operated, also an audible
  warning of potential side collisions at speeds exceeding around 10 km/h. If the driver ignores the
  warnings and still tries to change lanes, the system can take last-moment corrective action by onesided braking intervention at speeds over 30 km/h. When the vehicle is stationary, the exit warning
  function can warn against exiting because a vehicle (or even a bicycle) is passing within the critical
  area.
- PRE-SAFE® PLUS can take action in the event of an imminent rear-end impact. The system warns the driver in the vehicle following behind by activating the rear hazard warning lights with increased frequency. In addition, the preventive PRE-SAFE® occupant protection measures, including the reversible belt tensioners, are triggered. If the vehicle is stationary, PRE-SAFE® PLUS locks the brakes. Reducing forward motion can significantly reduce the loads acting on occupants, including the risk of whiplash.
- Only a limited crumple zone is available in a side impact. PRE-SAFE® Impulse Side can move the
  affected front occupant away from the danger towards the middle of the vehicle even before the
  crash, as soon as the system detects that a side-on collision is immediately imminent. For this
  purpose, air chambers in the side bolsters of the front seat backrests inflate in fractions of a second.

<sup>&</sup>lt;sup>2</sup> In the USA and Canada, the automatic lane changing function provides additional convenience on certain freeways: If there is a slower vehicle ahead, the Mercedes can automatically change lanes and overtake.

## Parking made easy

The new E-Class Estate under the microscope: the parking assistants

- · Faster parking and unparking with Active Parking Assist
- Convenient remote parking and memory parking optionally possible
- Fully automated parking available with pre-installation for INTELLIGENT PARK PILOT

Active Parking Assist PARKTRONIC is part of the Parking Package and therefore standard in the new E-Class Estate. It has been improved in several respects: the starting process is now possible intuitively via the touch screen. Furthermore, automated parking and unparking is much faster than before for the driver, as the speed has been increased to up to 4 km/h. Moreover, the warning tones are not sounded during the automated parking process.

In addition, further innovative parking systems are available within the Parking Package with remote parking functions<sup>12</sup>:

With Remote Parking Assist, the driver can manoeuvre the vehicle into and out of parking spaces from close by, using a smartphone, for example to drive into a garage. This means more comfort when getting in and out, and protects against damage when opening the doors. The driver is outside the vehicle, holds down the touch panel on the smartphone tilted by 90 degrees and monitors the automated parking process. With the latest generation of Remote Parking Assist, many parking manoeuvres are possible in both end-on and parallel spaces.

Memory Parking Assist (SAE Level 2) can remember parking procedures such as how to get to and from the garage at home. The driver sits at the wheel and demonstrates the parking procedure once. When the vehicle approaches the learned start position, the automated parking process can be started conveniently via the touchscreen. The driver monitors the parking process. If obstacles are detected, the vehicle stops until they are removed. Memory Parking Assist can remember individual parking procedures in up to 5 different locations. Both parking and unparking can be learned at each location, a maximum of 100 metres each, and a maximum of 500 metres in total.

With the pre-installation for **INTELLIGENT PARKING PILOT**, the E-Class Estate is prepared for Automated Valet Parking (SAE Level 4). With the Parking Package with remote parking functions (optional for the plug-in hybrid model) and the Mercedes me connect service INTELLIGENT PARKING PILOT (country-dependent), the new E-Class Estate has the onboard technology to park and unpark fully automatically without a driver.<sup>3</sup> The prerequisite is that national laws allow operation of Automated Valet Parking, car parks are equipped with the necessary infrastructure and the corresponding Mercedes me connect service for the E-Class is available and booked.

<sup>&</sup>lt;sup>1</sup> Available for the plug-in hybrid models.

<sup>&</sup>lt;sup>2</sup> A personal Mercedes me ID and agreement to the Terms of Use for the Mercedes me connect services are required to use the Mercedes me connect services. In addition, the vehicle must be paired with the corresponding user account. Upon expiry of the initial term, the services can be renewed on payment of a fee, provided they are still offered for the corresponding vehicle at that point. First activation of the services is possible within one year from first vehicle registration or commissioning by the customer, whichever comes first.

<sup>&</sup>lt;sup>3</sup> This function is not yet available for use.

# Intelligently designed body and modern restraint systems

The new E-Class Estate: passive safety

- · Numerous airbags and other restraint systems for many accident scenarios
- Warnings if a seat belt is not fastened in the rear
- PRE-SAFE® systems with precautionary protective measures available

The safety concept of the E-Class Estate is based on an intelligently designed body with a particularly rigid passenger cell and specifically deformable crash structures. The restraint systems, e.g. seat belts and airbags, are specifically adapted to this. In the event of an accident, they can be activated in such a way that their protective effect for the occupants is adapted to the situation.

With the aid of numerous numerical simulations, the safety experts at Mercedes-Benz have designed the vehicle structure for a high level of occupant protection. For the aspects of the vehicle configuration that are relevant in an accident, they not only took account of the legal requirements and the criteria of consumer protection organisations; they also considered internal requirements and test criteria derived from real-life accident findings.

### Modern restraint systems: protection for all passengers

In addition to driver and front passenger airbags, a knee airbag on the driver's side is also standard. It can protect the legs from contact with the steering column or instrument panel in a severe frontal crash.

The standard windowbags can reduce the risk of head injuries – due to contact with the side window, for example. In the event of a serious side-on collision, the window airbag on the side of the impact extends from the A- to the C-pillar like a curtain over the front and rear side windows. If a rollover is detected, the window airbags can be activated on both sides. In addition to the head protection system, side airbags can also protect the thorax area in the event of a severe side impact – including on the outer rear seats as an option.

In addition, the vehicles are equipped with a centre airbag, depending on the country. This is integrated into the backrest of the driver's seat towards the centre console. It can position itself between the driver and the front passenger in the event of a severe side impact, depending on the direction of the impact, the severity of the accident and the occupancy status. Pyrotechnic belt tensioners and force limiters are standard on all outer seats, as are seat belt height adjusters.

The E-Class Estate has i-Size child seat attachments as standard on the two outer seats in the second row. With two anchors each between the seat backrest and the seat cushion, corresponding child seats can be installed particularly quickly and securely. Top-tether attachment points on the rear of the rear seat backrests provide additional support. If a rear-facing child seat is placed in the front passenger seat, the vehicle can automatically deactivate the passenger airbag as required, depending on the market.

#### Warnings: if the belt is not worn and people and animals are forgotten

The European version of the E-Class Estate not only has a seat belt status indicator for the rear, but also a sophisticated seat belt warning system. This warns the driver if the seat belt is not fastened when the seat is occupied.

The occupancy reminder can help to indicate people or animals that may have been overlooked in the rear of the vehicle. It activates and deactivates itself automatically if prolonged opening of a rear door indicates that persons or animals have got in and are in the rear seats.

When the vehicle is switched off, the driver receives the text message "Do not leave persons or animals behind" on the driver's display if the system has activated automatically beforehand. The customer has the option to deactivate the system. An indicator light shows the status of the system.

## PRE-SAFE® system: precautionary protection

In Europe, the PRE-SAFE® preventive occupant protection system is standard in the E-Class Estate as part of the Advanced Package. This includes the known precautionary measures in the event of a recognised impending accident, including pre-conditioning of the hearing with PRE-SAFE® Sound.

In conjunction with the Driving Assistance Plus package, PRE-SAFE® Impulse Side forms a kind of virtual crumple zone on the vehicle sides. As there is only a limited crumple zone available in a severe side impact, PRE-SAFE® Impulse Side can move the affected driver or front passenger away from the danger towards the centre of the vehicle even before the crash. To do this, as soon as the system detects that a side collision is imminent, air chambers in the side bolsters of the front seat backrests are inflated in fractions of a second before the collision.

# Important building blocks on the way to sustainable mobility

The new E-Class Estate: a commitment to sustainability

- Plug-in hybrid at market launch
- Neutral CO<sub>2</sub> balance in production at the Sindelfingen plant
- Holistic understanding of sustainability also includes supply chains

## Mild hybrids and plug-in hybrids

As a classic Mercedes-Benz model series, all engine variants of the new E-Class are electrically assisted, either as mild hybrids with 48-volt technology and integrated starter-generator or as plug-in hybrids. Thanks to its highly efficient battery system, it achieves an electric range of over 100 kilometres (WLTP¹) as a plug-in hybrid. Since 2022, Mercedes-Benz has been offering battery-electric vehicles (BEVs) in all segments in which the brand is represented.

## Climate agreement

As a stakeholder in the transport sector, Mercedes-Benz AG supports the Paris Climate Agreement and has made climate protection a core element of its business strategy. The ambition of the Mercedes-Benz Group is this: by 2039, the entire Mercedes-Benz new vehicle fleet is to have a neutral CO2 balance across all stages of the value chain - from the supply chain and the company's own production to use and disposal of the vehicles.

#### Detailed 360° environmental check

To be able to assess how environmentally compatible a vehicle is, Mercedes-Benz prepares life cycle assessments. Mercedes has published product-related environmental information according to the ISO 14021 standard since 2005 The "360° Environmental Check" documentation, verified by external experts, is based on a comprehensive life cycle assessment of the respective vehicle.

## Production with a neutral CO<sub>2</sub> balance

Since 2022, Mercedes-Benz has been producing with a neutral  $CO_2$  balance in all of its own plants worldwide. Including the Sindelfingen plant, where the E-Class is produced. The externally sourced electricity comes exclusively from renewable energies, and is therefore  $CO_2$ -free. In addition, the company aims to increase the generation of renewable energy at its locations. Investments will be made in a further expansion of photovoltaics at the entire Sindelfingen location by the end of 2024. Another focus at the Sindelfingen location is on constantly reducing water consumption and the amount of waste produced.

## Decarbonisation of the supplier network

In general, the supplier network is responsible for a considerable proportion of the value creation and is thus of crucial importance for the decarbonisation goals. A large proportion of the suppliers, who account for almost 90 per cent of the annual procurement volume, have signed an Ambition Letter. This declares their agreement to only supply parts produced in a CO<sub>2</sub>-neutral manner in the future. From 2039 at the latest, only production materials which have been produced as part of the eco-balance on a CO<sub>2</sub>-neutral basis at all value creation stages will be allowed through the Mercedes-Benz plant gates. A supplier declining to sign the Ambition Letter will not be eligible for new supply contracts.

#### Resource-conserving materials

Numerous E-Class Estate components are made partly from resource-saving materials (recyclates and renewable raw materials). One example of a sustainable material is MICROCUT microfibre. This consists of 47 percent recycled material. MICROCUT is used for various interior trim parts. In the basic seat of the

 $<sup>^{1}</sup>$  The figures shown are the WLTP CO<sub>2</sub> figures measured according to Art. 2 No. 3 of Implementing Regulation (EU) 2017/1153. The fuel consumption figures were calculated based on these figures.

E-Class, undyed alpaca wool combined with a recycled material is used for the upholstery. In the foam of the seats, certified recycled raw materials are used for the first time according to the "mass balance approach", and their properties do not differ from those of raw materials produced from crude oil. In this way, the need for fossil resources can be reduced while maintaining product quality.

#### For plug-in hybrid models: green power on the road

Mercedes me Charge aims to make charging as easy and convenient as possible for customers. In addition, Green Charging is an integral part of Mercedes me Charge in Europe, the USA and Canada. Green Charging uses Energy Attribute Certificates (EACs) to ensure that an equivalent amount of green electricity is fed into the grid for the charging processes. The fed-in green electricity bears the EKOenergie eco-label and is provided by certified energy producers.

For more information about sustainability, please see the <u>Sustainability Report published by Mercedes-Benz Group AG</u>.

# Highly flexible and digitised assembly system

### The new E-Class Estate: production

- The new E-Class will be produced in Building 46 in Sindelfingen, together with the GLC
- Production with a neutral CO<sub>2</sub> balance
- Further expansion of photovoltaics at the location

Like the Saloon, the new Mercedes-Benz E-Class Estate will be produced at the Sindelfingen location, in Building 46 together with the GLC. Like Factory 56, this has been modernised from the ground up and converted to the highly flexible and digitalised Mercedes-Benz assembly system. The batteries for the plug-in hybrid model are supplied by the Mercedes-Benz location in Jawor (Poland). A large number of components are assembled here to form a highly efficient overall system.

In addition to the E-Class, the CLS and the GLC, the fully electric EQS, all variants of the Mercedes-Benz S-Class, the Mercedes-Maybach S-Class, the S-Class Guard and the Mercedes-AMG 4-door GT are also produced in Sindelfingen. The production start-up of the new E-Class at the Beijing plant (China) is also planned for the next few months.

### Mercedes-Benz Sindelfingen plant in operation since 1915

The Mercedes-Benz Sindelfingen plant has been in existence since 1915, and with a history stretching back over a hundred years, it is the centre of excellence for the production of top-end luxury vehicles in the global production network. The location employs around 35,000 people and combines all areas related to vehicle production, as well as planning areas and central procurement and supplier management. Sindelfingen is also home to the corporate research, development and design departments of Mercedes-Benz Group AG.

#### Neutral CO<sub>2</sub> balance in production at the Sindelfingen plant

Since 2022, Mercedes-Benz has been producing with a neutral  $CO_2$  balance in all of its own plants worldwide. The externally sourced electricity comes exclusively from renewable energies, and is therefore  $CO_2$ -free. In addition, the company aims to increase the generation of renewable energy at its locations. Investments will be made in a further expansion of photovoltaics at the entire Sindelfingen location by the end of 2024. Another focus at the Sindelfingen location is on constantly reducing water consumption and the amount of waste produced.

## Tourism, transport and top models

The new E-Class Estate: History

- Continuous tradition since model series 123 in 1977
- Mercedes-Benz sets standards for sports and lifestyle estates with the body shape
- The history goes back to estates from body manufacturers since the 1950s
- Estate developed for the "Slash Eight", but not built

Since 1977, the Mercedes-Benz E-Class Estate models have been writing a continuous success story for estate cars in the upper mid-range and luxury class. The new E-Class Estate from model series 214 is the seventh generation in the line of these sporty space sensations.

### Precursor: "Universal" and "Slash Eight" estates

At the beginning of the 1950s, estate cars, or station wagons, which originated in North America, attracted increasing interest in Europe. The vehicles are based on saloons with the roof extended to the rear body end. This creates additional transport volume. Mercedes-Benz models in the upper mid-range were initially offered as estate cars by independent body manufacturers such as Binz, Lueg and Miesen. They were based on Mercedes-Benz chassis with partial bodywork.

In 1959, the Board of Management of the then Daimler-Benz AG decided that, for the "tail fin" four-cylinder W 110 models (1961 to 1968), "development should make 'station cars' ready for production as soon as possible". First of all, from 1966 Mercedes-Benz included the "Universal" estate cars from body manufacturer IMA in Mechelen, Belgium in its own sales programme. These were the first estate cars that the brand sold directly to its customers. In the following "Slash Eight" generation of the W 115 and W 114 model series (1968 to 1976), the development of an in-house station wagon progressed well. Although the harmonious-looking design was not produced in series, it provided important impetus for the first Mercedes-Benz Estate, which appeared in the 123 model series.

#### Mercedes-Benz Estate, model series 123

In the German word for estate, T-Modell, the T stands for tourism and transport – and so the model series 123 Estate presented in 1977 set standards in the segment of lifestyle estates for leisure and sport. Internally designated the S 123, it was the third body style in the series after the Saloon and the Coupé (both 1977). It was the first Mercedes-Benz model for which Bruno Sacco was responsible as head of design. The large model range extended up to the six-cylinder 280 TE model (130 kW/177 hp). The aerodynamics of the Estate were even better than those of the Saloon. The extensive range of optional extras, especially for transporting sports equipment, underlined the focus on sporty and luxurious leisure use.

## Mercedes-Benz E-Class Estate, model series 124

Mercedes-Benz presented the 124 model series Estate at the 1985 International Motor Show in Frankfurt under the slogan "The Elegance of Practicality". Like the Saloons presented in 1984, the Estate was characterised by more powerful and at the same time less polluting petrol and diesel engines, a new chassis with independent multilink rear suspension and a more streamlined body. Progress was also made in passive safety. In addition, the hydropneumatic suspension system with level control ensured optimum driving safety with low self-steering behaviour as standard on all Estate models. The self-activating 4MATIC all-wheel-drive system developed by Mercedes-Benz also made its debut in the S 124 in 1985. Following the introduction of the new nomenclature at Mercedes-Benz in 1993, it was called E-Class Estate. From the same year onwards, the Estate was also introduced as a body variant in the C-Class in model series 202. The E 36 AMG was the first

AMG Estate in the brand's official range from 1993 onwards. Its predecessor was the 320 TE with AMG technology package including a 3.6-litre engine (195 kW/265 hp).

#### Mercedes-Benz E-Class Estate, model series 210

The E-Class Estate in model series 210, which appeared in 1996, was a true load master. According to VDA standards, the boot capacity with the rear seat backrests folded down was 1975 litres instead of 600 litres in the normal configuration. For the first time, the three different design and equipment lines CLASSIC, ELEGANCE and AVANTGARDE were offered. Standard features now included seat belt force limiters, sidebags, a rain sensor for the windscreen wipers and the PARKTRONIC parking aid. In 1997, the newly developed second-generation 4MATIC made its debut in the E 280 4MATIC Estate. The E 55 AMG Estate became the new top model in 1998. Various innovations, the introduction of new engine versions and the facelift in 1999 kept the 210 model series Estate up to date until the end of production in 2002.

#### Mercedes-Benz E-Class Estate, model series 211

The Estate in model series 211 presented in Detroit in January 2003 was even more closely related to the Saloons than in the previous model series. The main differences were the side walls with C- and D-pillars, the roof panelling with frames and stiffeners, and parts of the rear-end floor. The Estate safety concept corresponded to that of the Saloons. A sloping roofline created a sportier silhouette, while there was a further increase in knee room and headroom in the rear seats. The engines ranged from the E 220 CDI to the E 55 AMG. The designo customisation option was added to the existing equipment variants. Technical innovations included the Active Light System (ALS) as an optional extra and the modified 4MATIC all-wheel-drive system, available from autumn 2003 onwards. It had a new drive force distribution ratio between the front and rear axles of 40 to 60 percent.

#### Mercedes-Benz E-Class Estate, model series 212

The 212 model series Estate premiered in autumn 2009. The dynamic design was characterised by the Saloon's front end with two pairs of twin rectangular headlamps, which was introduced in the same spring. Equipment variants were available from the basic version through the ELEGANCE and AVANTGARDE lines to the AMG Sports Package. The interior design options were also very extensive. Compared to the predecessor model, there was even more boot space: the boot capacity increased from 670 to 695 litres, the usable space to 1950 litres. The model range extended from the E 200 CGI BlueEFFICIENCY to the E 63 AMG with the AMG-developed 6.2-litre V8 M 156 engine (368 kW/525 hp). New features in the S 212 included DIRECT CONTROL steering (standard on V6 and V8 versions as well as 4MATIC) and a comprehensive range of assistance systems for active safety. In addition, there were numerous comfort and safety options. As of the facelift in 2013, the S 212 was the first E-Class Estate to be available in the AVANTGARDE equipment variant and, as an AMG model, also with the sporty central star in the radiator grille.

### Mercedes-Benz E-Class Estate, model series 213

Mercedes-Benz introduced the Estate alongside the most intelligent business saloon (W 213) in 2016. The sum of innovations, especially in the assistance systems, distinguished this generation of the E-Class Estate. The All-Terrain version was also derived from the S 213 in 2017. Expanding the load compartment was even easier than before thanks to the new "Quickfold" system. The luggage capacity was up to 1950 litres. A unique feature in the vehicle segment was the optional folding bench seat in the load compartment – already familiar from the previous model series. The Estate had air suspension as standard, including level control on the rear axle. With the 2020 facelift,

Mercedes-Benz introduced the next generation of driving assistance systems, among other things, and further enhanced comfort in the interior. There was also a focus on the electrification of the model range.

Further research and multimedia material: <a href="mailto:mercedes-benz-archive.com/museum">mercedes-benz-archive.com/museum</a>

# Technical data Mercedes-Benz E 220 d

Engine			
Number of		A.G. 12	
cylinders/arrangement		4/in-line	
Displacement	C	cc 1993	
Rated output	kW/h	p 145/197	
at engine speed	rpı	m 3600	
Add. elect. output (boost)	kW/h	p 17/23	
Rated torque	Nı	m 440	
at engine speed	rpı	m 1800-2800	
Add. torque (boost)	Nı	m 205	
Compression ratio		15.5:1	
Mixture formation		High-pressure injection	
Power transmission			
Drive system		Rear-wheel	
Transmission		9G TRONIC automatic transmission	
Gear ratios		-	
1st/2nd/3rd/4th/5th/6th/7th		F 35 /3 04 /0 05 /4 C4 /4 04 /4 00 /0 07 /0 70 /0 C0	
gear		5.35/3.24/2.25/1.64/1.21/1.00/0.87/0.72/0.60	
Reverse		4.80	
Suspension			
Front axle	Four-link front axle, coil springs, gas-pressure shock absorbers, stabiliser		
Rear axle	Five-link independent rear suspension, air springs, gas-pressure shock		
iteal axte		absorbers, stabiliser	
Braking system	Internally ventilated disc brakes at the front, electric parking brake, ABS, Brake Assist, ESP®		
Steering	Electrically assisted rack-and-pinion power steering		
Wheels	7.5 J x 17 H2 ET 30		
Tyres	225/60 R 17		
Dimensions and weights			
Wheelbase	mm	2961	
Front/rear track	mm	mm 1.634/1.651	
Length/width/height	mm	4949/1880/1469	
Turning circle	m	11.6	
Boot capacity, VDA	litres	615	
Kerb weight acc. to EC	kg	1915	
Payload	kg	615	
GVWR	kg	2530	
Tank capacity/of which reserve	litres	<del></del>	
Performance, consumption, emiss	ions		
Acceleration 0-100 km/h	seconds 7.9		
Top speed	km/h		
Combined consumption <sup>1</sup> (WLTP)	l/100 km		
Combined CO <sub>2</sub> emissions <sup>1</sup> (WLTP)	g/km	149-131	
, ,	-	Euro 6	

-

 $<sup>^{1}</sup>$  The figures shown are the WLTP CO $_{2}$  figures measured according to Art. 2 No. 3 of Implementing Regulation (EU) 2017/1153. The fuel consumption figures were calculated on the basis of these figures.

# Technical data Mercedes-Benz E 200

Engine			
Number of			Alin line
cylinders/arrangement			4/in-line
Displacement		СС	1999
Rated output	kW/	hp	150/204
at engine speed	rı	m	5800
Add. elect. output (boost)	kW/	hp	17/23
Rated torque	1	lm	320
at engine speed	rı	m	1600-4000
Add. torque (boost)	1	lm	205
Compression ratio			10.0:1
Mixture formation			High-pressure injection
Power transmission		•	
Drive system			Rear-wheel
Transmission			9G TRONIC automatic transmission
Gear ratios		•	
1st/2nd/3rd/4th/5th/6th/7th			E 25/2 24/2 25/1 64/1 21/1 00/0 97/0 72/0 60
gear			5.35/3.24/2.25/1.64/1.21/1.00/0.87/0.72/0.60
Reverse			4.80
Suspension			
Front axle	Four-link fr	ont axle	e, coil springs, gas-pressure shock absorbers, stabiliser
Rear axle	Five-link independent rear suspension, air springs, gas-pressure shock absorbers, stabiliser		
Braking system	Internally ven	ilated o	disc brakes at the front, electric parking brake, ABS, Brake Assist, ESP®
Steering	Electrically assisted rack-and-pinion power steering		
Wheels	7.5 J x 17 ET 30		
Tyres	225/60 R 17		
Dimensions and weights	1		
Wheelbase	mm		2961
Front/rear track	mm	1.634/1.651	
Length/width/height	mm	4949/1880/1469	
Turning circle	m	11.6	
Boot capacity, VDA	litres	615	
Kerb weight acc. to EC	kg	1825	
Payload	kg	625	
GVWR	kg	2450	
Tank capacity/of which reserve	litres	66/7	
Performance, consumption, emiss	1		
Acceleration 0-100 km/h	Seconds		7.8
Top speed	km/h	231	
Combined consumption <sup>2</sup> (WLTP)	l/100 km	7.6-6.7	
Combined CO <sub>2</sub> emissions <sup>2</sup> (WLTP)	g/km	173-152	
Emissions class			Euro 6
E11110010110 0(0000			Luio o

 $<sup>^2</sup>$  The figures shown are the WLTP CO $_2$  values measured according to Art. 2 No. 3 of Implementing Regulation (EU) 2017/1153. The fuel consumption figures were calculated based on these figures.

# Technical data Mercedes-Benz E 300 e

Engine				
Number of				
cylinders/arrangement			4/in-line	
Displacement		СС	1999	
Rated output, petrol engine	kW	//hp	150/204	
at engine speed		rpm	6100	
Rated torque		Nm	320	
at engine speed		rpm	2000-4000	
Compression ratio			10.0:1	
Mixture formation			High-pressure injection	
Rated output, electric motor		kW	95	
Rated torque, electric motor		Nm	440	
System output		kW	230	
System torque		Nm	550	
Power transmission		<u> </u>		
Drive system			Rear-wheel	
Transmission			9G TRONIC automatic transmission	
Gear ratios	1	1		
1st/2nd/3rd/4th/5th/6th/7th				
gear			5.35/3.24/2.25/1.64/1.21/1.00/0.87/0.72/0.60	
Reverse			4.80	
Suspension	•			
Front axle	Four-link front axle, coil springs, gas-pressure shock absorbers, stabiliser			
	Five-link independent rear suspension, air springs, gas-pressure shock			
Rear axle		absorbers, stabiliser		
Braking system	Internally ventilated disc brakes at the front, electric parking brake, ABS, Brake Assist, ESP®			
Steering	Electrically assisted rack-and-pinion power steering			
Wheels, front/rear	8.5 J x 19 ET 35.5 / 9.5 J x 19 ET 51			
Tyres, front/rear	245/40 R19, 275/35 R19			
Dimensions and weights				
Wheelbase	mm		2961	
Front/rear track	mm	1.623/1.609		
Length/width/height	mm	4.949/1.880/1.470		
Turning circle	m	11.6		
Boot capacity, VDA	litres	460		
Kerb weight acc. to EC	kg	2210		
Payload	kg	595		
GVWR	kg	2805		
Tank capacity/of which reserve	litres	50/7		
Performance, consumption, emis	1		·	
Acceleration 0-100 km/h	Seconds		6.5	
Top speed	km/h	227		
Combined consumption,				
weighted <sup>3</sup> (WLTP)	l/100 km		0.9-0.6	
Combined power consumption,			21 / 10 1	
weighted <sup>3</sup> (WLTP)			21.4-19.1	
Combined CO <sub>2</sub> emissions, weighted <sup>3</sup> (WLTP)	g/km	20-13		
Emissions class			Euro 6	

 $<sup>^3</sup>$  The figures shown are the WLTP CO $_2$  values measured according to Art. 2 No. 3 of Implementing Regulation (EU) 2017/1153. The fuel consumption figures were calculated based on these figures. Power consumption [and range] was [were] determined on the basis of Directive 2017/1151/EC.